

The DAB ESYBOX is shipped with a default set point (SP) of 3 bar, a default restart pressure differential (RP) of 0.3 bar and a pressure tank with a default pre-charge of 2 bar.

If the set point is changed, and/or the restart pressure differential is changed, then pre-charge of the pressure tank needs to change.

If this is not done, premature failure of the tank and subsequent damage to the pump from cycling can occur **with the failure not being covered by warranty.**

As per the DAB ESYBOX manual, the formula for calculating the correct pressure tank pre-charge for the DAB-ESYBOX is:

$$\text{Pre-charge (bar)} = \text{SP (bar)} - \text{RP (bar)} - 0.7 \text{ bar}$$

where

SP = Set Point (adjustable between 1.0 and 6.0 bar, default 3.0 bar)

RP = Restart Pressure Differential (adjustable between 0.1 and 1.0 bar, default 0.3 bar)

0.7 bar is a constant.

Some examples are shown below.

SP (bar)	RP (bar)	constant (bar)	Tank Precharge (bar)
6.0	0.1 - 0.3* - 1.0	0.7	5.2 - 5.0 - 4.3
5.5	0.1 - 0.3* - 1.0	0.7	4.7 - 4.5 - 3.8
5.0	0.1 - 0.3* - 1.0	0.7	4.2 - 4.0 - 3.3
4.5	0.1 - 0.3* - 1.0	0.7	3.7 - 3.5 - 2.8
4.0	0.1 - 0.3* - 1.0	0.7	3.2 - 3.0 - 2.3
3.5	0.1 - 0.3* - 1.0	0.7	2.7 - 2.5 - 1.8
3.0 *	0.1 - 0.3* - 1.0	0.7	2.2 - 2.0* - 1.3
2.5	0.1 - 0.3* - 1.0	0.7	1.7 - 1.5 - 0.8
2.0	0.1 - 0.3* - 1.0	0.7	1.2 - 1.0 - 0.3
* = default value			