

INFORMATION FOR OPERATORS

Hydraulic Accumulator

Function: Supplies the “burst” of hydraulic force needed in a brief second to the changeover cylinders, which in turn will ensure the “switch over” of the S Tube function.

How it works: The accumulator is made up of a steel housing and has a “rubber bladder” located inside the housing. The effective functioning of an accumulator relies on two separate charges, one in the form of a gas, and one in the form of a liquid:

- A pre charge of pressure is set into the bladder of the accumulator. Nitrogen is used for this purpose.
- During operation of the concrete pump, a hydraulic charge is constantly supplied from a committed hydraulic pump. This charge is supplied in the form of hydraulic oil and will enter between the walls of the steel accumulator housing and the pre charged bladder. This is referred to as M3 pressure on Putzmeister equipment.

The basic functioning of the accumulator is that the hydraulic charge supplied from the hydraulic accumulator charge pump enters the accumulator at a higher charge pressure than the already existing pre charge that has been set beforehand within the bladder of the Accumulator. (Always check your Putzmeister manuals to confirm the charge pressure and pre charge pressure for your specific machine).

This higher charge of hydraulic oil essentially encompasses the outside of the accumulator bladder and as the charge of hydraulic pressure builds up, this compresses the charged rubber bladder within it. In the moment of change over, the hydraulic 3 position change over valve shifts into the relevant position to allow the pressurized hydraulic oil from the accumulator to be diverted to the change over cylinders. This sudden flow of oil to the change over cylinders is made possible by the compressed bladder quickly expanding and displacing all the oil that was surrounding it. This burst of oil into the changeover cylinder forces the cylinder to open and in turn causes the S tube to switch over via the swing lever. With the change over cylinder full of oil, the procedure begins again as new hydraulic oil starts entering the accumulator from the hydraulic charge pump.

Maintenance Tips: Aside from normal daily hydraulic oil level checks, cleanliness of HD oil checks and water tap off checks, be sure to learn how to correctly read your M3 hydraulic gauge on your Putzmeister equipment. This ensures that you are able to regularly check both Accumulator pre charge and main charge pressure.

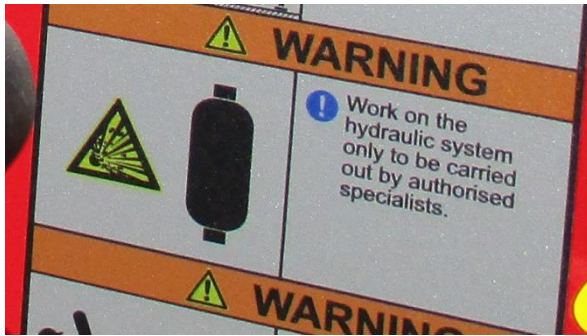
Watch the Putzmeister video below to see how the pressure is checked.

Health & Safety:

- Check daily that when any E stop is activated on your Putzmeister machine, all accumulator charge pressure is relieved and “dumped” within the system.
- Monitor the pre charge and main hydraulic charge pressure regularly. (Should you not know what these pressure readings should be for your Putzmeister machine, please contact CPENZ with your machine model number and machine serial number and we will advise you accordingly)
- Should there be a pressure reading that is not corresponding to the required / specified reading for your machine, please contact CPENZ for us to arrange a service technician to address this matter.

- Please remember that Hydraulic accumulators are charged vessels, and only authorised / trained personal are permitted to carry out repair / maintenance work on them.
- Safety regulations are clearly outlined within section 2.9 of your Putzmeister operating instructions.

Relevant safety stickers:



Link to Putzmeister Hydraulic Accumulator Test Video - This 2-minute video is an example of testing the accumulator pre-charge. <https://www.youtube.com/watch?v=pTVf4RXTKZE>

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Our experienced team at CPENZ are here to help. We run detailed training courses at your premise, on your pump tailored to your requirements. These can cover:

- Operating your pump
- Health & Safety when using your pump
- Trouble-shooting
- Maintenance
- Servicing.

[CLICK HERE](#) to let us know what type of training you're wanting or contact Kelly on 0276576444 or kelly@cpenz.co.nz for more information.