Integrated Boom Lock Valve Uses Pressure Control
To Protect Excavators from Hose Burst

When excavators or backhoe loaders are doing heavy lifting, it can put a strain on the hydraulic system. An unexpected spike in pressure or flow could cause a hose to rupture, endangering the load and the operator. To protect against this possibility, a lowering control device can be used to prevent boom or arm drop and ensure controlled lowering of the load in the event of a hydraulic line failure. Equipment safety regulations now require the use of such devices.

Conventional hydraulic lowering controls typically employ a pilot-operated proportional poppet valve to control the hydraulic flow between the boom and the main control valve. The poppet controlled via remote pilot pressure that can come from a pilot-operated joystick or an electroportional pressure-reducing/relieving valve. That solution succeeds at controlling flow - volume or displacement - but what about pressure?

How to Handle the Pressure

The HydraForce EBLV boom lock valve takes a unique approach by controlling pressure rather than flow. It has a poppet seat for low leakage and spool-type metering for improved control. It is internally piloted, without the need for additional pilot lines or sources. The pressure control valve has an integrated housing that also contains a built-in check valve that provides free reverse flow.

The EBLV boom lock valve can be used for a sequence function or a relief function, depending on how it is plumbed. Using it as a sequence valve can help to reduce the effect of back pressure from the main control valve and hydraulic plumbing.

**Features - EBLV Boom Lock Valve**

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<th>Flow Rating</th>
<th>248 lpm/ 66 gpm</th>
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<tr>
<td>Pressure Rating</td>
<td>420 bar/ 6091 psi</td>
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The single-piece housing of the EBLV valve provides a number of advantages.

- **Compact Size** - body with integrated valves is more compact than custom manifolds or valve packages
- **Light Weight** - fewer parts add up to lower weight
- **Multi-Function** - two functions - proportional pressure control and reverse check - in a single body
- **Low Leakage** - fewer seals and hydraulic lines

For more information on the EBLV boom lock valve, contact your HydraForce representative or distributor or visit www.hydraforce.com.

**ALL IN ONE - The EBLV boom lock valve is an integrated assembly that features a proportional pressure control cartridge valve in a single-piece housing that also contains a check valve.**