



Auto Dump Valve* (ADV)

The IPI Auto Dump Valve (ADV) is designed to allow inflatable packer inflation and deflation with a single control line regardless of the static water level in a well. It may also be used for operations that require surface controlled hydraulically actuated devices to be run in boreholes with deep static fluid levels (>30m below surface). Running surface hydraulic controlled equipment in these instances without a dump valve will most likely cause premature activation or insufficient dumping even with the pressure released at surface. This is due to the hydrostatic differential between the fluid in the control line and the fluid in the annulus.

The valve isolates the packer from the head of water in the control line until a certain pressure threshold is reached. At this point the packer will inflate as normal. Releasing the pressure in the control line causes the ADV to open and dump packer inflation fluid downhole.

APPLICATIONS:

- Operating inflatable packers (water inflated) in boreholes with low static levels - prevents premature inflation and ensures down hole deflation
- Convert traditional Gas Packer Systems to hydraulic inflation - don't need nitrogen tanks anymore! Eliminate the depth limitation and safety concerns with gas inflation.
- Operating surface controlled hydraulically activated devices in boreholes with deep static fluid levels.

FEATURES:

- Easy to use - pressure activated/in line design - no need for second control line to close/open dump valve
- Safer option using hydraulic inflation over gas!
- Slimline 30mm OD
- Can be housed within a carrier if required (see overleaf for details)

*Patent Pending



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Example from CIT

ADV Housings

IPI manufactures a range of housings to suit mounting and protection of ADVs.

The most compact version (shown on the right) has a O.D. of just 70 mm & is optimized for through-flow with minimal pressure loss.

For larger diameter packer systems, the ADV is more simply housed as shown on the left. This mounting system maximizes strength and flow area while still providing all the ADV benefits.

ADV Specifications

*ADV Outside Diameter	Ø30mm (1.18")
**Max Pressure Rating	10,000psi
***Max Temp Rating	80°C (176°F)
STANDARD SPRING OPENING	500psi
****STANDARD SPRING DUMP	350psi

*ADV is generally used enclosed inside a housing which is a nominal diameter.

** Max Pressure Rating – this is the rating of the ADV. The pressure limits of the packer system and downhole device must be taken into account.

*** Max Temp Rating - this applies to the standard ADV with standard nitrile and urethane seals. Higher temperature ratings can be provided by changing the seals.

**** Standard spring stack can be configured to suit higher pressures if required. This can involve simply rearranging the springs, or actually require extra springs to be added to the stack.



ADV in Housing