

# Annulus Operated Tester Valve (AOTV)



## Description

The Annulus Operated Tester Valve (AOTV) is a multi-cycle ball valve used to shut in a well as close to the perforations as possible. It may be functioned open and closed as many times as required by the test conditions. Typical uses for the tester valve are:

- Bottom-hole shut-in during drill stem testing to help eliminate wellbore storage effects during buildup and fall-off tests, thereby getting cleaner, easier-to-analyze data and significantly reducing the required shut-in times, especially for tight gas formations.
- Safety shut-in valve for any situation where the workstring or tree connection may develop an integrity problem.
- Fluid-loss control tool when the formation is taking massive amounts of expensive completion fluid. In this case, it is typically used in conjunction with the Multi-Cycle Circulating Valve to adjust fluid weight, optimize well control and minimize formation damage.

The AOTV is annulus pressure operated and has a single ball with seats on either side so that pressure integrity may be maintained from above or below. Hydrostatic pressure compensation is accomplished by a nitrogen chamber and reference section that allows annulus pressure (fluid) to enter a port below a balance piston in the tool. This port is closed (and the hydrostatic reference trapped) when weight is stacked off on the tool, usually when the packer is set.



## Operating Specification

		STANDARD	SLIMHOLE
NOMINAL TOOL SIZE	OD	5.00 in.	3.125 in.
	ID	2.25 in.	1.125 in.
	Length	21.00 in.	21.00 in.
TEMPERATURE		350° F	350° F
TENSILE STRENGTH		340,000 lbs.	120,000 lbs.
CONNECTIONS		3-1/2 in. I.F. or 3-1/2 in. PHE6 As required by client	
PRESET ACTUATING PRESSURE		1,200-2,000 psi	1,200-2,000 psi
MAXIMUM OPENING DIFFERENTIAL		7,000 psi	5,000 psi