

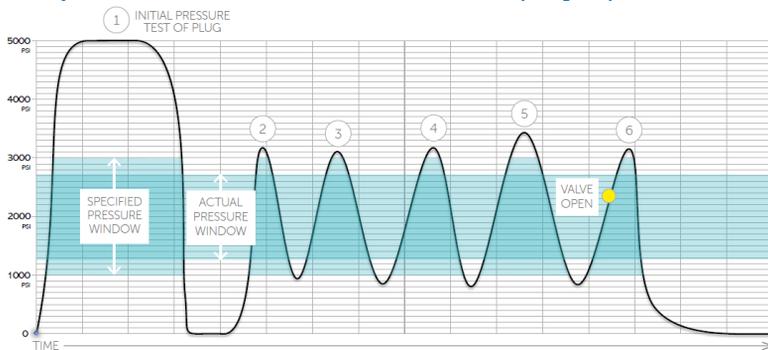
PRESSURE WAVE VALVE (PWV)

oilenco Tredwell

The pressure wave valve (PWV) is an intervention free, open-on-demand, equalising device that can be fitted to lock mandrels and bridge plugs to provide a large through-bore once activated. The application of PWV include plug and abandonment worksopes, mew completions and workovers.

With excellent pump-through capability, the system functions purely on a mechanical hydraulic principle. The internal mechanism operates only when it senses a 'wave' of applied pressure i.e. starting from a low pressure range, increasing to an upper pressure, and then returning back to a low pressure. This sequence counts as one 'wave'. By repeating this sequence several times to the pre-set values, the valve will open and provide a large through-bore.

Example of Pressure Waves to Activate Valve (6 Cycle)



Applications

- Plug and abandonment (P&A) worksopes.
- New completions
- Workovers

Features and Benefit

- Intervention-free method of opening a circulation path
- Activation pressure cycles can be minutes or years apart
- Equalising without wireline, reduces intervention runs - saves rig time and reduces risk
- No electrics, batteries or other time-limited components
- No well specific setups required
- Hydrostatic balanced
- Can be fitted to any flow control device
- Modular debris management system

Technical Features

- Provides a large through-bore when opened
- Functions purely on a mechanical hydraulic principle
- Activated by sending a 'wave' of applied pressure (low-high-low pressure)
- Integral debris management
- Different pressure cycle activation ranges available
- Flexible deployment options; Oilenco hybrid plug, lock mandrels or bridge plugs
- Can be pre-installed onshore for completion operations
- Can be retrieved with the tubing during workovers
- No dedicated personnel required on location to operate
- Available for production and annulus bores



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PRESSURE WAVE VALVE (PWV)

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Technical Specification

Annulus Version

Actual OD	1.500" (38.1 mm)	1.539" (39.1 mm)
Min ID	0.512" (13.0 mm)	
Flow Area	0.206 in ²	
Pressure Cycles	Up to 12	
PWV Length	4.0'	6.2'
Max Working Pressure	5,000 psi	9,000 psi
Pressure Cycle Range*	Adjustable	
Junk Catcher	Integral	
Connection	1-9/32" – 10TPI SA Box	

Production Version

Actual OD	2.875" (73.00 mm)	3.000" (76.3 mm)	3.250" (82.6 mm)	3.700" (94.0 mm)
Min ID	1.382" (35.1 mm)		1.882" (47.8 mm)	
Flow Area	1.500 in ²		2.782 in ²	
Pressure Cycles	Up to 12			
PWV Length	3.4'	3.6'	4.0'	
Max Working Pressure	5,000 psi	7,000 psi	10,000 psi	5,000 psi
Pressure Cycle Range*	Adjustable			
Junk Catcher	Integral			
Connection	2-1/2" – 12TPI			

*Pressure cycle range can be altered to suit well limitations

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