

PRESSURE WAVE VALVE (PWV)

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.

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 value, the valve will open and provide a large through-bore.

"Intervention-free, open-on-demand"



Annulus Version

PRODUCT FEATURES

- 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

The operation of the valve is non-time dependent. The first two 'waves' can be carried out within minutes of each other and the remainder several months, or even years later. The operating parameters of the PWV are not affected by changes in the wellbore pressures below.



Production Version

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

PRESSURE WAVE VALVE (PWV)



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

Visit the Oilenco website to read how the pressure wave valve was used to support **well abandonment operations** for an oil and gas operator.



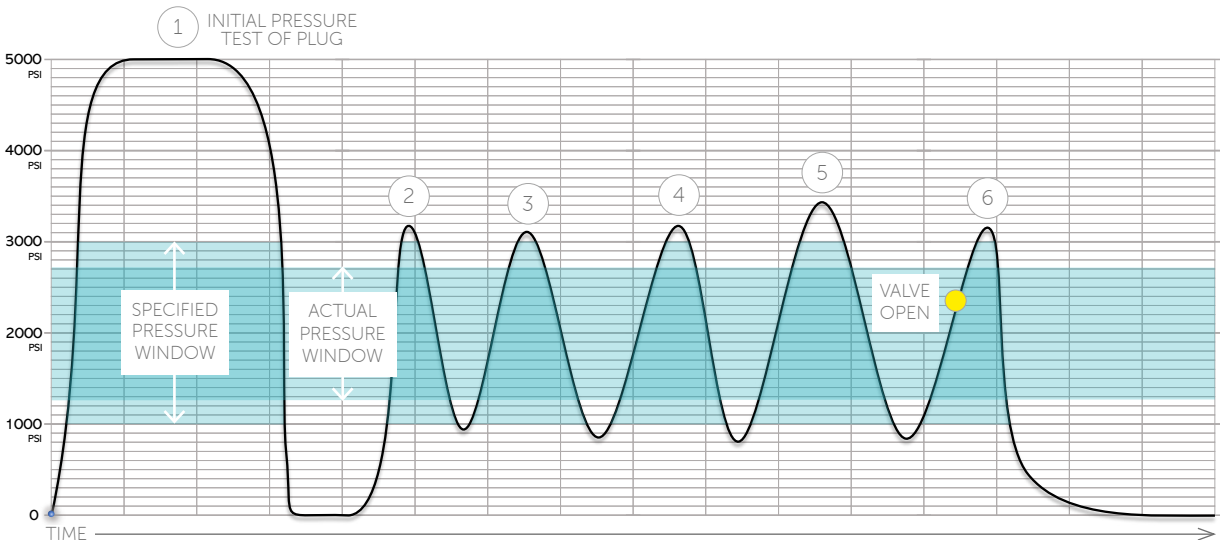
1-1/2" Version

TECHNICAL DATA

| VERSION | ACTUAL OD | MIN ID | FLOW AREA | PRESSURE CYCLES | PWV LENGTH | MAX WORKING PRESSURE | PRESSURE CYCLE RANGE* | JUNK CATCHER | CONNECTION |
|------------|-------------------|-------------------|-----------|-----------------|------------|----------------------|-----------------------|--------------|---------------------------|
| Annulus | 1.500" 38.1 mm | 0.512" 13.0 mm | 0.206in² | Up to 12 | 4.0' | 5,000 psi | Adjustable | Integral | 1-9/32" - 10TPI SA Box |
| | 1.539" 39.1 mm | | | | 6.2' | 9,000 psi | | | |
| Production | 2.875" 73.0 mm | 1.382" 35.1 mm | 1.500in² | | 3.4' | 5,000 psi | | | 2-1/2" - 12TPI UN |
| | 3.000" 76.2 mm | | | | 3.6' | 7,000 psi | | | |
| | 3.250" 82.6mm | | | | | 10,000psi | | | |
| | 3.700" 94.0mm | 1.882" 47.8mm | 2.782in² | | 4.0' | 5,000psi | | | |

* Pressure cycle range can be altered to suit well limitations

EXAMPLE OF PRESSURE WAVES TO ACTIVATE VALVE (6 CYCLE)



FURTHER INFORMATION

To speak to one of our engineers about the PWV or to discuss your application, call **+44 (0)1224 548700** or email **info@oilenco.com**.