

# PulseEight Intelligent Control Valve

Tendeka’s re-deployable Intelligent Control Valve (ICV) can provide a multitude of flow control functionalities without the need of cables or control lines.

The PulseEight ICV is an inline tool designed to permit intelligent, infinitely variable control of flow from discrete zones or entire wellbores.

The ICV can be deployed as part of the upper or lower completion, for example, when used in new wells and workovers or in multilateral wells allowing the control of individual bores. Alternatively, it can be easily retrofitted into existing wells, deployed by all conventional intervention means and mounted via lock mandrel, packer or retrievable bridge plug to be positioned at the most appropriate depth.

The all-electric system is microprocessor driven and can respond to commands from surface, or autonomously to changes in the well environment. The device can be reconfigured whilst in the well using wirelessly transmitted instructions from surface. The wireless communication uses Tendeka’s Fluid Harmonics telemetry system, suitable for multi-phase fluid environments, and in many cases can utilise the existing wellhead equipment to interface with the downhole valve. An infinitely variable choke mechanism can create a tuned wellbore production profile not otherwise possible with conventional systems.

The depth of functionalities results in a wide range of applications for the PulseEight ICV; from controlling water coning and ingress, to helping manage surface pressure drops associated with hydrate mitigation. The potential for flow control without the use of wires can be truly maximised.

Each PulseEight ICV comes with the capability of two-way Fluid Harmonics communication to provide information on tool status, wellbore pressure, temperatures and pressure drops associated with varying production rates providing essential information for the effective management of well production.

## Features

- Easily deployed on slickline / e-line for new or retrofit installations
- Infinitely variable choke configuration for limitless control of wellbore flow
- Can function based on surface commands or autonomously
- Single trip installation
- Re-deployable asset

## Applications

- Multilateral bore control
- Water coning control and shut off
- Zonal control
- Gas hydrate prevention
- Pressure and temperature monitoring

## Technical Specification

|                       | 3½" tool        | 7" tool   |
|-----------------------|-----------------|-----------|
| Max OD                | 2.50"           | 5.00"     |
| Max flow rate         | 10,000BPD       | 30,000BPD |
| Max length            | 30ft            |           |
| Body pressure rating  | 10,000psi       |           |
| Static seal rating    | 5000psi         |           |
| Unloading seal rating | 1500psi         |           |
| Operating temperature | 110°C           |           |
| Power                 | Lithium battery |           |

