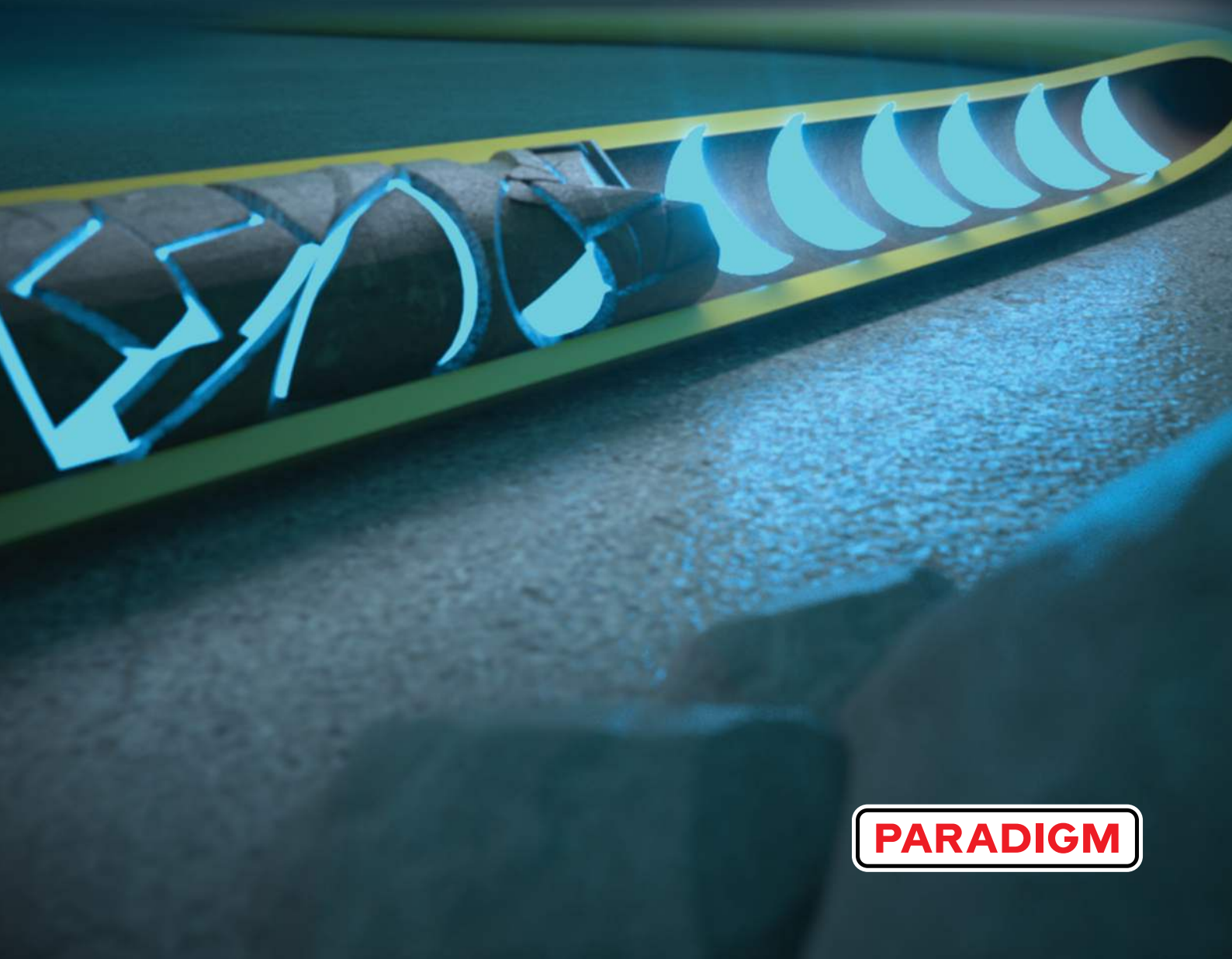


# PIPE-PULSE<sup>®</sup>

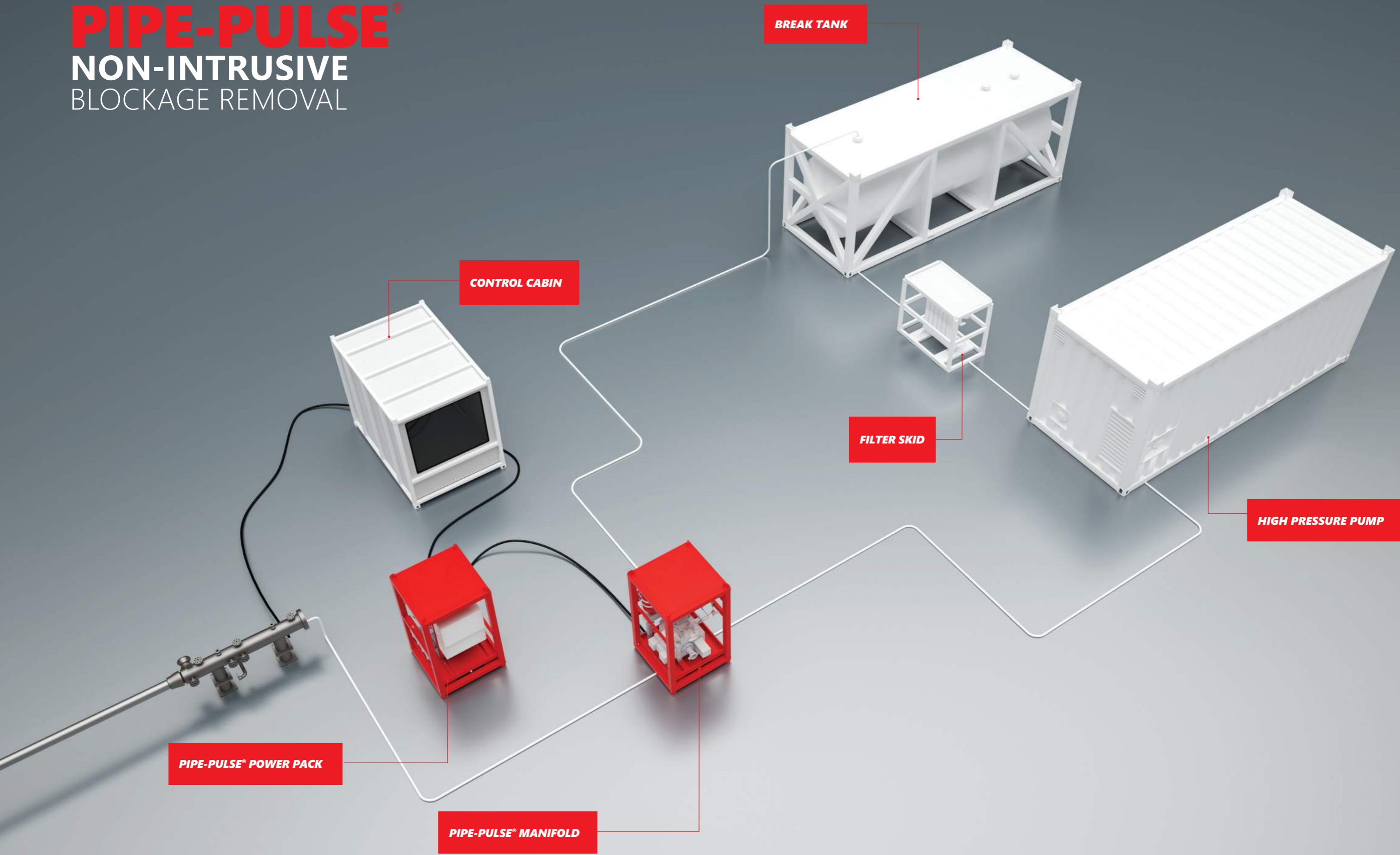
NON-INTRUSIVE  
BLOCKAGE REMOVAL



**PARADIGM**

# PIPE-PULSE<sup>®</sup>

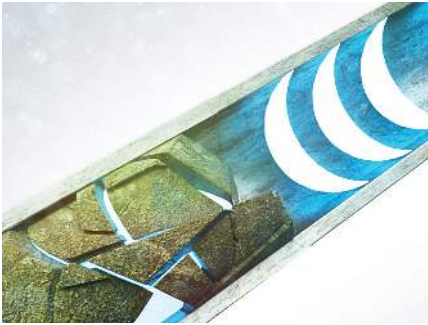
NON-INTRUSIVE  
BLOCKAGE REMOVAL



**PARADIGM**

# PIPE-PULSE®

## NON-INTRUSIVE BLOCKAGE REMOVAL



### What is Pipe-Pulse®?

Pipe-Pulse® is a non-intrusive pressure pumping technology that creates controlled pressure surges in high pressure liquid piping systems to remove full bore blockages.

### How does the system work?

Pipe-Pulse® has a computerized control system that varies the frequency, wavelength and amplitude of the pressure surges (pulses) that are released in to the affected system. Each pulse creates a dynamic force at the face of the blockage that breaks its cohesive structure or its adhesion to the pipe-wall. Once communication or movement has been achieved, residual solids can be removed from the system by applying chemical treatment or by running cleaning PIGs prior to returning the system to service.

### Applications

Pipe-Pulse® can be used to remediate full bore blockages caused by paraffin, asphaltene and plastics in upstream, midstream and downstream pipe systems and has been successful in applications in excess of 50km in distance. Paradigm's propriety pressure transient analysis software is used during pre-job engineering to simulate the pulse profile (pressure wave attenuation) in the affected pipe system to determine the force at the blockage face and to identify a Possibility of Success; the optimal application parameters are:

- Pipe ID from 2 – 12"
- Pipe MAOP >3,000psi
- Minimal ID change
- Liquid filled with little or no gas content

### Features & Benefits

- Non-intrusive
- No construction work, working at height or breaking containment
- No vessel requirements for offshore applications
- Mobilized globally by air



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