



LET'S BUILD  
**IQIP**

## **PULSE PILING**

### **REDUCING ENVIRONMENTAL IMPACT**

The IQIP Hydrohammer® has demonstrated to be successful in the Renewables Offshore Wind Market, meeting the ever increasing sizes and weights of the new generation wind turbines. To assure the continuous growth of the offshore wind industry, a new step our development program is the

innovative piling method 'PULSE'. The modular add-on PULSE unit can upgrade every standard Hydrohammer® to the next generation of impact hammers. Thus, the 'PULSE' system is easy to implement into the current 'known' installation method.

[www.IQIP.com](http://www.IQIP.com)

**LET'S BUILD WINDFARMS**

# PULSE PILING

## REDUCING ENVIRONMENTAL IMPACT

PULSE is extending the impact of each blow of a Hydrohammer® resulting in reduced fatigue and noise levels without compromises.

### PULSE UNIQUE FEATURES:

- Reduced noise level in water and air during installation which allows contractors to meet legislation regardless to increasing pile sizes and installation energy
- Reduced installation fatigue, enabling engineering companies to optimize structure designs and contribute to the ever existing need to lower the LCoE
- Reduced installation time by efficient penetration per blow
- Fall back scenario

S-90	PULSE RESULTS
Weight PULSE	1 Ton
Height PULSE	1 m
Noise reduction (SEL)*	6 - 10 dB
Noise reduction (SPL)	10 - 12 dB
Fatigue*	up to -60% improvement**
Installation efficiency / blow	up to 10 % (depending on soil/pile)

\* Compared on an installed Monopile and soil with actual noise measurement

\*\* Improvement decreasing in last half of the pile (less critical)

S-3000 / S-4000	PULSE EXPECTATIONS
Weight PULSE	125 Ton
Height PULSE	3.6 m
Noise reduction (SEL)*	6 - 10 dB
Noise reduction (SPL)	5 - 12 dB
Fatigue*	up to -60 % improvement**
Installation efficiency / blow	up to 10% (depending on soil/pile)

\* Compared on an installed Monopile and soil with actual noise measurement

\*\* Improvement decreasing in last half of the pile (less critical)

SEL reduction 6 - 10 dB\*

SPL reduction 5 - 12 dB\*

\* Values are based on calculations by a third party, and proven by prototype measurements. Values may differ based on project specific pile design, water depth, hammer choice, etc. Please contact IQIP for a detailed project specific calculation of the estimated sound reduction.



↑ 0 TO MAXIMUM PULSE ↓

