

PULSE®

Reducing environmental impact both on and offshore

PULSE, a modular addition to the Hydrohammer®, minimises noise during pile driving to deliver an environmentally-friendly foundation installation. The elongated blow of PULSE is twice the duration of the blow of a conventional hammer, increasing piling efficiency while reducing pile fatigue and impact noise. PULSE can be adapted for different conditions, maximum PULSE to realize maximum of noise reduction, and minimize PULSE when maximum peak force is needed to overcome soil resistance.

Depending on the project the PULSE can also be utilized for the installation of anchoring piles or sub-sea pin piles. Even during sub-sea piling it's able to show consistent noise reduction result, while driving the pile to final penetration.

Whether your project is in the Offshore Wind, Coastal & Civil, Offshore Floating Wind or Oil & Gas market, PULSE is available to be used for noise mitigation on both onshore and offshore pile driving projects. Combine PULSE with the Hydrohammer for an efficient and environmentally-friendly installation with reduced noise, pile fatigue and operating costs.

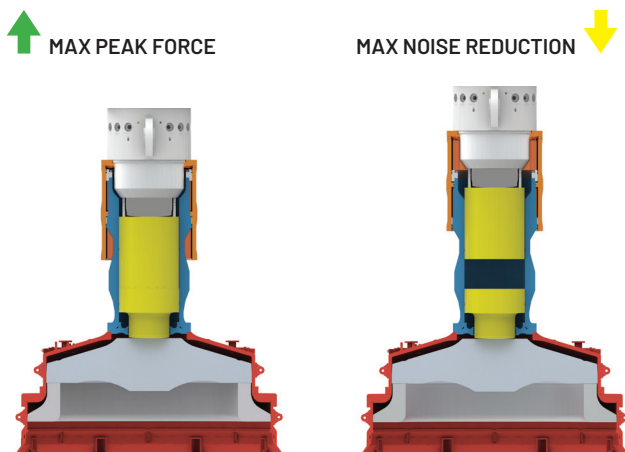
Unique features

- Reduced piling driving noise levels in water and air during installation which allows contractors to meet legislation regardless of pile sizes and installation energy levels
- Reduced installation pile fatigue, enabling engineers to optimize structure designs and contribute to the need to lower the Lcoe
- Reduced installation time by efficient penetration per blow
- Fall back scenario

Note

Values (SEL reduction 6 - 10 dB and SPL reduction 5 - 12 dB) 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.



	S-90	I02	I04	I06
Weight PULSE	1 ton	125 ton	125 ton	125 ton
Height PULSE (add)	1 m	3.6 m	3.6 m	3.6 m
Noise reduction (SEL)*	6 - 10 dB	6 - 10 dB	6 - 10 dB	6 - 10 dB
Noise reduction (SPL)	10 - 12 dB	5 - 12 dB	5 - 12 dB	5 - 12 dB
Fatigue*	up to -60% improvement**	up to -60 % improvement**	up to -60 % improvement**	up to -60 % improvement**
Installation efficiency / blow	up to 10 % (depending on soil/pile)	up to 10% (depending on soil/pile)	up to 10% (depending on soil/pile)	up to 10% (depending on soil/pile)

* Compared on an installed monopile and soil with actual noise prognoses

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