



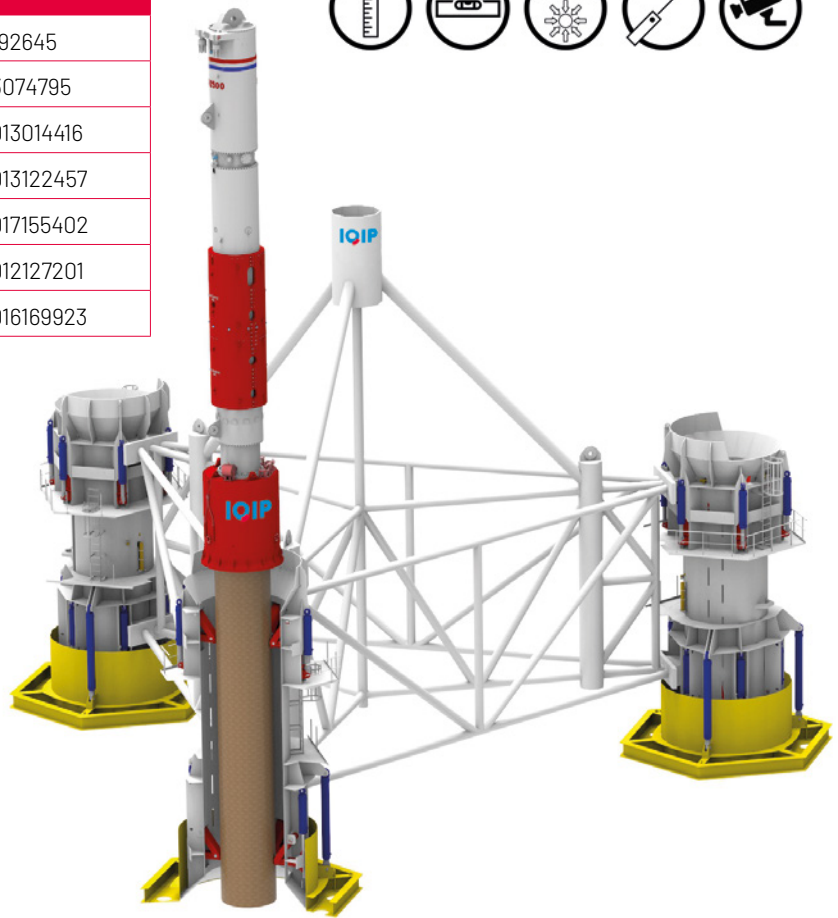
TEMPLATE INCLINATION STICK-UP (TIS)

At IQIP, we know you are facing multiple challenges during the installation of your offshore wind foundations. Installing the piles for the jackets with the right inclination, top-level and foot print is a vital part of the installation process of your wind turbines. With this in mind, IQIP developed a new and innovative Template (TIS). The Template assures accurate

footprints for 3 or 4 leg jacket types, accommodates various pile diameters up to 3,000mm, installs piles on the demanded footprint and combines inclination and stick up height in an efficient and safe way. Besides that, the TIS is equipped with multi built-in survey systems to secure all launch and recovery operations.

TEMPLATE INCLINATION STICK-UP (TIS)

INCLUDED PATENTS	
Finned Frame Follower	W00192645
Pile Orientation Control	W003074795
Dual Pivo & Removeable Spacer	W02013014416
Template Inclination Stick-Up (Tis)	W02013122457
Retractable Jacket Guides for Sleeves	W02017155402
Pile Guide Rollers	W02012127201
Active Hydraulic Guiding	W02016169923



The template is based on our 35 years of piling, handling and seabed positioning experience. The design incorporates the essential disciplines for secure, fast and above all, safe installation of pre-installed jacket foundations. Besides delivering the template, IQIP also supports you throughout the project with: engineering design, soil and stability checks, handling, piling up to seabed approach and recovery of the equipment to and from the installation vessel.

OPERATING WITH TIS - AN INNOVATIVE SOLUTION FOR ACCURATE PILING

Once the template is landed, all pile foundation will be horizontally aligned and positioned by operated mud mats to ensure a correct jacket foundation footprint. Besides that, the inclination and heading will be verified by on-board sensor systems. The leg mud mats can adjust template seabed inclination up to five degrees in all directions with the use of our levelling system that's incorporated on the alignment sleeves at each pile corner. During the piling operations the top level of the pile is measured and monitored continuously.

After piling, a pile top level (stick-up length) survey will be executed on each pile position to enable efficient stabbing of the jacket without shimming and/or adjustments to the jacket

construction. After installing all piles, the template can be disconnected from the installed piles enabling a smooth recovery of the template to continue the installation process. All systems are designed with full redundancy with remote access by ROV ensuring the continuation of operations.

HANDLING & PILING

The overboarding and recovery of the template can be executed with an Internal Lifting Tool (ILT) where the same ILT is used for upending and stabbing of piles into the template. The dual application of the ILT contributes to an efficient installation sequence. Pile stabbing is guided by camera's located in each sleeve of the template.

MORE INFORMATION?

The template can accommodate three or four leg jacket types with piles up to 3,000mm diameters. Do you have other requirements? No problem, we can make a custom-made template according to your needs. Do you need more information or are you interested in our template solution TIS? Please contact us at info@iqip.com or visit our website www.iqip.com. The Template Inclination Stick-up is available for rent or purchase.