



SUCTION PUMP SPREAD  
**SAPS-007(L)**



The SAPS-007L suction skid is part of our high-performance shallow-water suction systems. The SAPS-007 series are in particular suitable for the simultaneous installation of multiple suction piles like suction pile jacket foundations or suction pile cluster installations up to water depths of 150m. The individual control of the suction pressure and subsequent penetration in each pile makes accurate leveling possible. The main characteristics are:

- a high flow capacity up to 250m<sup>3</sup>/hour
- differential pressure up to 3.7 bar
- integrated vent valves and installation sensors,

The SAPS-007 series are powered and controlled from a control container located on the deck of the installation vessel. One control container is capable of the combined operation of up to four individual suction skids.

### Pump performance

For establishing pressure difference and subsequent suction pile penetration, water needs to be discharged from the suction pile. Our SAPS-007L suction skid is equipped with a single electrically powered suction spread, allowing for flow rate maximization up to 250m<sup>3</sup>/hour or pressure optimization up to 3.7 bar. The result is a robust and light weight system for suction pile installation and short suction durations.

### Integrated systems

The connection and subsea disconnection of the SAPS-007L is done swiftly with remotely operated hydraulic pins. Vent valves are required to release air and water from the suction pile when lowering the suction pile through the splash zone up to self-weight penetration in the seabed. We integrated a 20" vent valve in our skid.

The integrated monitoring equipment provides live data on suction pressures, and penetration, which can be evaluated against the client's survey data.

Our low-cost skid interface consists of a standard 20" pipe attached to the suction pile. For the eventual closing of the suction interface we use ROV installable hatches are optional.

### Electrical umbilicals

Unique are the suction skid's electrical power supply using umbilicals, which are deployed with powered sheaves or umbilical winches.

The SAPS-007 skids and umbilical racks or umbilical winches are transported in 20ft standard offshore containers. The 20ft control container is equipped with a workshop and spare parts.



**SPT OFFSHORE OWNS AND OPERATES REMOTELY CONTROLLED SUCTION PUMPS FOR WATER DEPTHS FROM 10M UP TO 3,000M. THESE PUMPS ARE PURPOSELY BUILT FOR THE INSTALLATION OF SINGLE PILES, SUCTION PILE CLUSTERS (SPCS), PLATFORM FOUNDATIONS OR SUBSEA STRUCTURE FOUNDATIONS.**



#### SPECIFICATIONS SUCTION PUMP SPREAD SAPS-007(L)

##### ● Pump Skid

- Weight: 2.5mT
- Dimensions: 2.9 x 1.1 x 1.55m
- max. water depth: 100m
- max. water flow: 250m3/hr
- max. diff. pressure: 3.7 bar

- vent valves: 1 no's x 20"
- suction inlet size: 20"

##### ● Umbilical

- Standard length: 100-150m
- diameter: 50mm
- hosebundel: 2x100m and 3x 150m

##### ● Power requirements

- pumps: 440V  
max flow 60Hz  
max. diff pressure 65Hz

##### ● Control software

- installation data storage in log files
- monitoring capabilities
  - pressure ambient
  - pressure internal
  - differential pressure
  - internal soil plug by echo sounder
- spare computer for full redundancy

##### ● Control container

- control room (for max 4 pump skids)
- electrical switch board
- 440V and 230V separator transformer
- workshop
- full set of spares