FROM THE SEA TO THE LANDS. OUR WORKS DOCK TO SOLVE YOUR NEEDS

Absolute expertise, absolute accuracy, absolute reliability. Nothing else.

M.E.P.
PELLEGRINI®
MARINE EQUIPMENTS

SPECIAL EQUIPMENT

SPECIAL EQUIPMENT

Pellegrini's name became firmly established with Italian shipyards/owners and the Italian navy for the supply of its range of **high performance marine equipment**, such as **cranes**, **winches**, **capstans**, **davits** and **all types of hoisting machinery**. Over the years, **Pellegrini Marine Equipment** has become increasingly involved in the innovative manufacture of equipment for tankers, gas carriers, military and container vessels, cruise ships, offshore platforms and other specialist needs.
For this reason **Pellegrini** has a proven pedigree in **designing and building to the most stringent international specifications** to satisfy the most demanding requirements. This applies not only to its standard range of products but to competitive tailor-made equipment specially produced to suit individual needs. These are our "special products", marine equipment shaped to fit the needs of our customers.

M.E.P. Pellegrini Marine Equipment has a wide experience also in the supply of offshore cranes for LNG carriers, Gas and oil platforms, Floating degasification/gasification Plants, ammunition vessel in compliance with customer requirements. Consequently **M.E.P. Pellegrini** Marine Equipment is able to provide specific solution for LNG terminals: Jib cranes, special gantry cranes, travelling hoist.

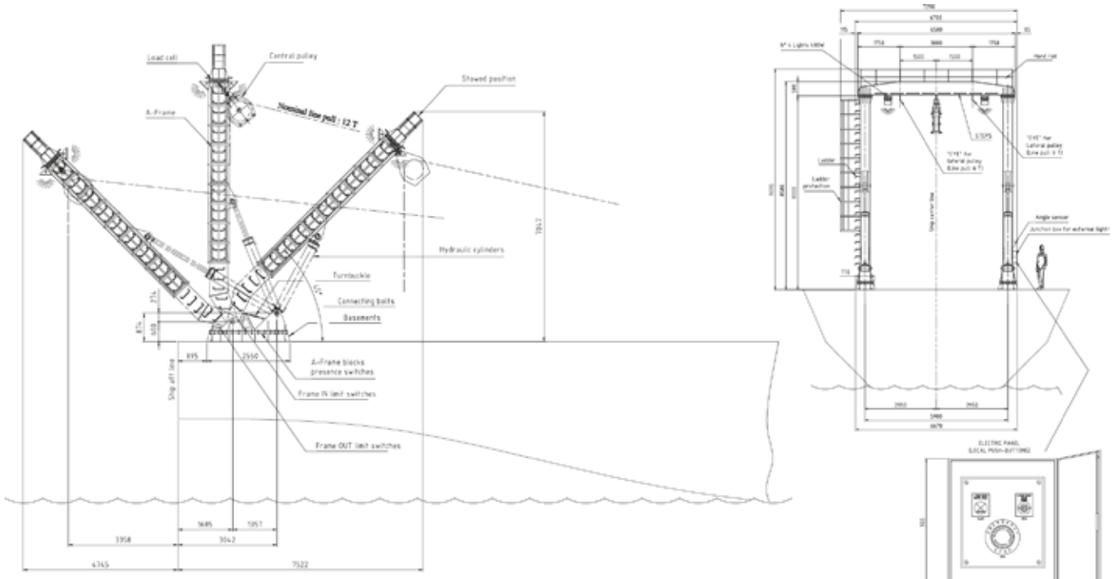
100%
CUSTOMIZED EQUIPMENT

MEP designs and manufactures customized ship equipment meeting the requirements of International Conventions and Rules of Marine Classification Societies.

MEP products can be customized to work:

- EEX AREA
- LOW TEMPERATURES (I.E. -40°C)
- SUBSEA (AHC CRANES)

A-FRAMES



CHARACTERISTICS

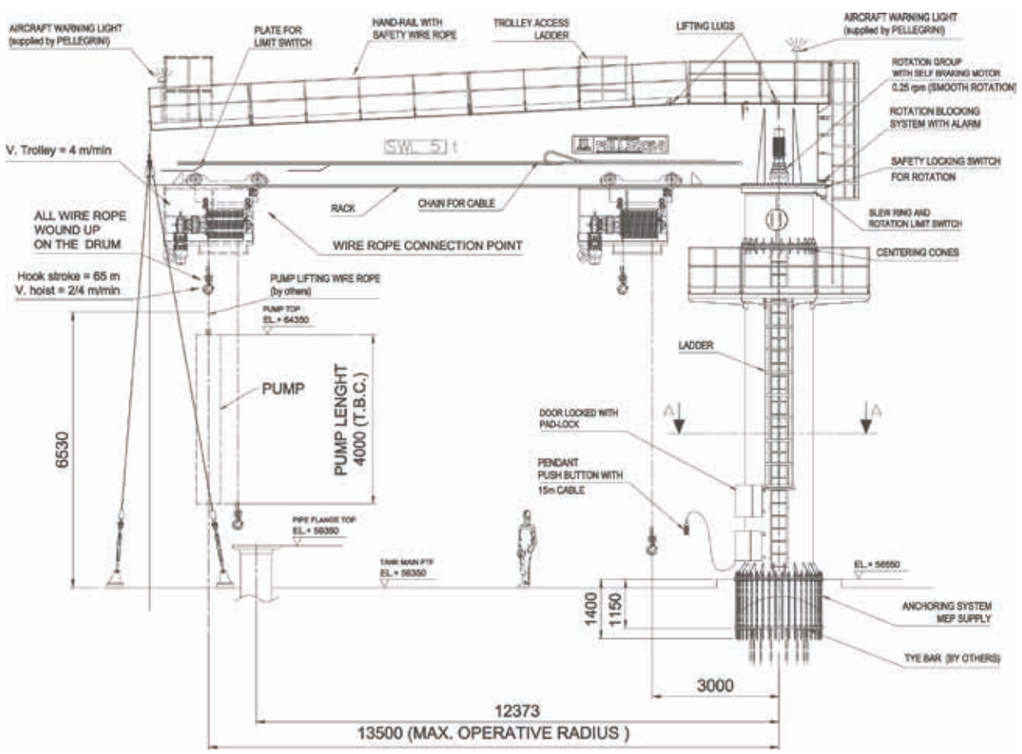
A-Frame structure to handle oceanographic/hydrographical equipment to be installed on Oceanographic Vessel.

The A-Frame is designed to lift a load of 60 tons in a sea state 5 conditions with a dynamic design factor of 2 in outward position and 1,4 in inward position and the maximum load capacity is based on a 60 ton.
The distinctive feature of the A-Frame design is the unusually large arc through which loads can be swung. The "A – Frame" can move from 55° outboard to 30° inboard with full load. This allows the A-Frame gantry to be brought to rest on pads on each base. The total angular movement of 85° obtained using two hydraulic cylinders working in pairs.

Rules and regulations	DNV Rules for Lifting Appliances
Capacity in hoisting mode or unlocked	60 tons
Design factor, dynamic	2.0 outward position 1.4 inward position
Pivot outreach outboard from the stern	6020 mm
Pivot outreach inboard from the stern	7200 mm
Sea state conditions: Wind force 5 on Beaufort scale equivalent to wave height of 2,5 mt with a period of 6,5 sec.	
Total height	11340 mm
Width between the inside of legs	12500 mm
Length of cross beam	13735 mm
Total movement angle	89°
Working angle from vertical outboard	49°
Straddle movement from the vertical onboard	40°
A-Frame movement time (inside-outside)	240 sec.(~0,5°/sec)
Min. temperature	-20°C
Max. temperature	+35°C
Relative humidity	95%
Weight	60.000 kg
Working pressure	Max. 250 Bar
Flow	intermittent max 250 l/m

JIB AND GANTRY CRANES FOR LNG TANK

SPECIAL EQUIPMENT



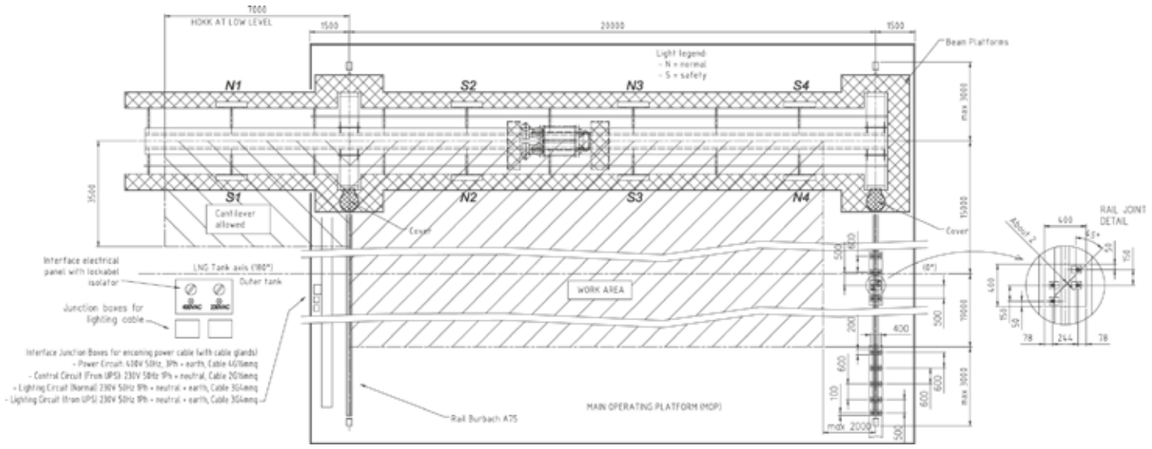
Jib and Gantry cranes are hoist equipment to be installed on the roof of LNG Storage Tanks for installation/removal of the In-Tank submerged pumps. The Hoist include all other device will be installed in a Hazardous Area.
This equipment for the LNG Terminal will be designed, manufactured, tested, inspected, delivered and guaranteed in complete accordance with the following data sheets, specifications and the remarks/comments hereunder, and all requirements included in all technical documents attached to the Material Requisition (MRQ).

The scope of supply will include all equipment, accessories, all structural, electrical, instrumentation, control devices and parts that are necessary for safe and proper control and operation of equipment and as necessary to reach required performances and guarantees.

DESCRIPTION	UNITS	
HOISTING		
Max capacity	ton	3 ton @ 13,5 m 1 ton from 13,5 to 16 m
Hoisting speed	m/min	2/4
Hook stroke	m	65
Winches	-	Included in the supply
Hooks and wire ropes	-	Included in the supply
N° of falls	-	1
LUFFING		
Maximum outreach (witch boom @ 0 deegrees)	m	16
Minimum outreach	m	2,5
Trolley speed	m/min	5
SLEWING		
Slewing range	Deg	360° limited
Rotation speed	rpm	0,25
DESIGN CRITERIA		
Working temperature	°C	-16,3/+41
Seismic calculation	-	YES
Explosive class norm EEX-D	-	Zone 1, II A, T3
Platforms	-	Included in the supply

JIB AND GANTRY CRANES FOR LNG TANK

SPECIAL EQUIPMENT



ENVIROMENTAL CONDITIONS

These cranes are suitable to withstand and correctly operate at following conditions:

WIND VELOCITY

Max wind speed operative	20 m/sec
10 second gost	23 m/sec

AMBIENT AIR TEMPERATURE

Minimum absolute	- 16,3° C (design)
Maximum absolute	+41° C (design)

AIR RELATIVE HUMIDITY

Average	71%

AIR QUALITY

High corrosive marine climate humidity- salty (salt fog)

GROUP CLASSIFICATION

FEM Class of utilization will be B (2x105 cycles), as minimum.

LIFETIME

The jib crane will be designed and manufactured for a lifetime not inferior to 25 years.

EARTHQUAKE DATA

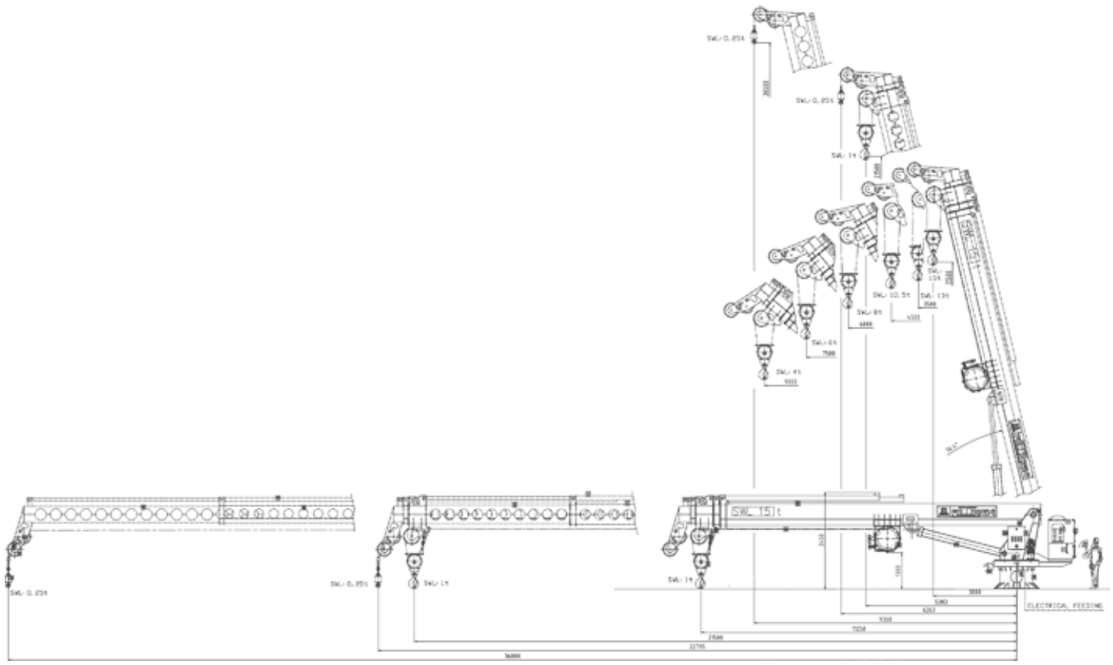
OBE Horizontal ACC	0.24 g
OBE Vertical ACC	0.16 g
SSE Horizontal ACC	0.39 g
SSE Vertical ACC	0.26 g

AREA CLASSIFICATIONS

The Jib and Gantry cranes are usually located in Hazardous Area. All electrical equipment installed on the jib cranes will be suitable for operation in **Hazardous Area Zone 1, Gas group II A, TEMPERATURE CLASSIFICATION T3 , IP 55.**

ATEX certification is provided.

THAMES BARRIER CRANES



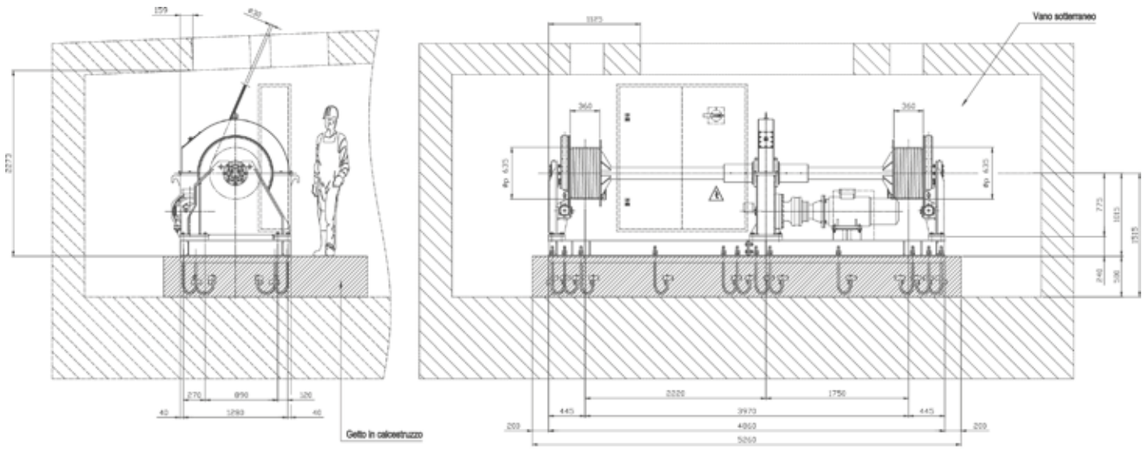
CHARACTERISTICS

Cranes supplied by MEP for the replacement of the old cranes installed on the piers of the Thames Barriers. The result was to provide the maximum load reduction to let the cranes stress the Piers as less as possible. The cargo cranes are also designed for the exceptional use as man riding in case of maintenance. The cranes are self contained and of two versions:

- Version A - basic version crane with maximum boom radius of 25 m - piers 3 and 9
- Version B - is an upgrading of the crane version A with the capability to reach a working radius of 36 m for man riding purpose only - piers from 4 to 8 inclusive

CRANE DATA	
Register	CE MARK
Sea state	n/a
Crane Classification (F.E.M.)	class A3
Hoisting mechanism Classification (F.E.M.)	class M5
Max wind design (operative)	15 m/s 7 m/s (exceptional use / personnel)
Max outreach	21,5 m 36 m (exceptional use / personnel)
Min outreach	3 m 6,3 m (exceptional use / personnel)
Hook speed (full load)	0÷10 m/min [2 falls] 0÷20 m/min [1 fall] (exceptional use / personnel)
Slewing speed	0÷0,5 rpm 0÷0,1 rpm (exceptional use / personnel)
Rotation angle	unlimited
Design temperature	-10° C + 40° C
Hook stroke (main)	50 m

WINCHES FOR SPECIAL APPLICATIONS

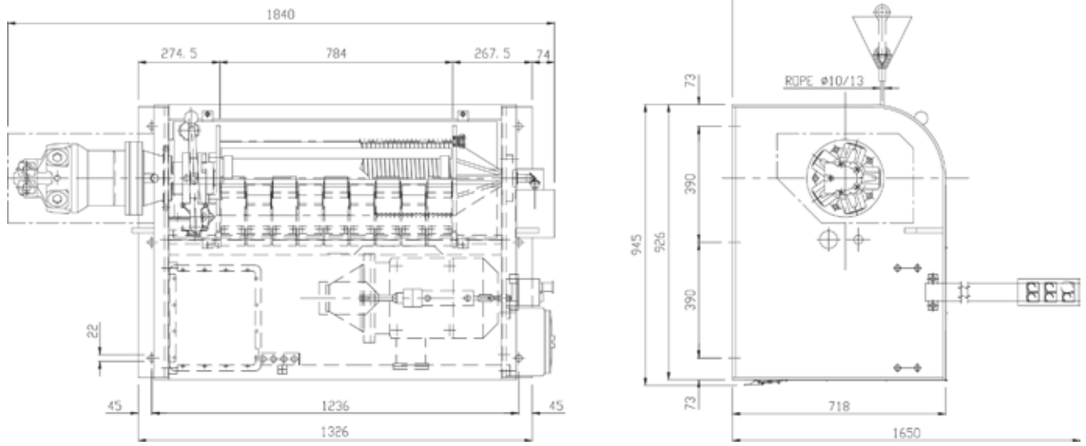


CHARACTERISTICS

Special winches expressly engineered for drawbridges lifting or other special applications.

Pulling capacity at first layer	10.000 kg + 10.000 kg
Static capacity with band brake activated	15.000 kg + 15.000 kg
Dynamic torque on the drum shaft	6.300 kg/mt
Static torque on the drum shaft	9.450kg/mt
Weight (rope excluded)	5.000 kg
DRUM DIMENSIONS	
primitive diameter	630 mm
length between the flanges	330 mm
flanges diameter	750 mm
Wire ropes: 6x36 type, dia. 30 mm, MBL 628 kN, with safety factor 5 on the dynamic capacity, anti-twisting.	
Winding rope capacity on each drum	13,5 m + 3 dead turns
Speed at first layer	variable from 0 to 10 m/min powered by inverter

WINCHES
FOR SPECIAL APPLICATIONS



CHARACTERISTICS

The winch is located inside shelter, near the back side along a lateral wall.
In the back side of the shelter, on the floor, it is foreseen a device for the guide and return of the cable towing the aircraft (return pulley).
Traction pull will be continuous and regular (without jerking) until the aircraft reaches its final position.
The configuration of the winch is resistant to aircraft fuel and to hot temperatures (It withstands high temperatures that can reach 175 °C for short periods).
It is also able to resist to the exhaust gases of the aircraft engines.

TECHNICAL DATA	
Direct pull	2000 kg (towing)
Resistance to a pull of 3000 Kg max (shooting stall)	
Unwinding speed	not controlled automatically (paying out), handmade with drum in idle position
Sheltering slow speed	from 0 to 4 m/min (slow hauling speed) automatically controlled
Cable winding speed	40 m/min idle and without automatic control
Sheltering fast speed	from 0 to 15 m/min (fast hauling speed) automatically controlled. Electrical power: 220/380 Volts – 50 Hz
Electrical power	220/380 Volts – 50 Hz

CERTIFICATIONS:

RINA ISO 9001:2008 Certified Quality System

RINA ISO 14001:2004 Certified Environmental System

RINA OHSAS 18001 Certified Health & Safety System

API Monogram®
license for Offshore Cranes

M.E.P. Pellegrini Marine Equipments

Via F. Busoni, 9
37050 Vallese di Oppeano · Verona · Italy
Tel. +39 045 508877 · Fax +39 045 508855
www.mepel.it