

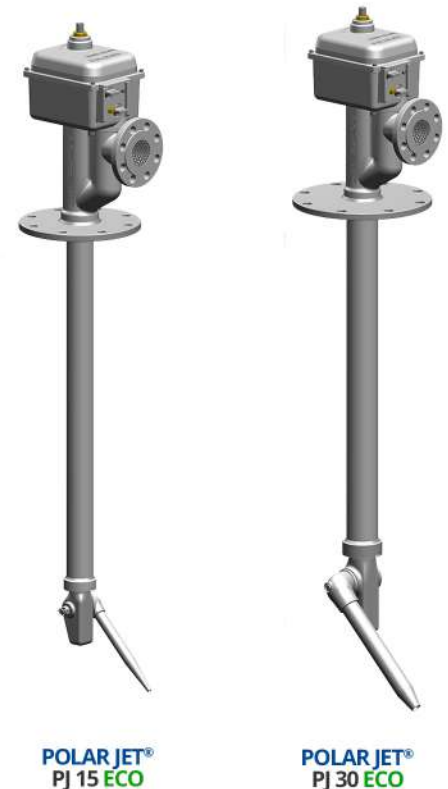
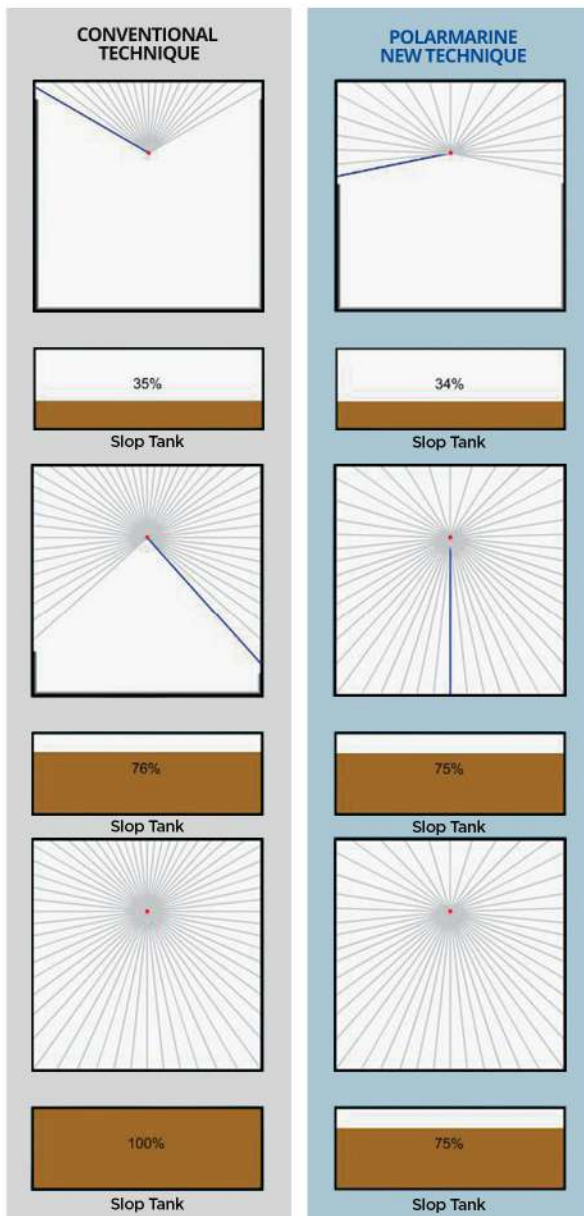
# Polar Jet® Eco

## Polar Jet® PJ 15 Eco & Polar Jet® PJ 30 Eco

Polarmarine has in close cooperation with users developed a new generation of tank cleaning machines with the tank geometry in focus, Polar Jet® Eco. The basic principle of the new and improved tank cleaning machine is that the cleaning media is spread as equal as possible inside the tank. All tank cleaning machines in the market until now are designed for a fixed cleaning pattern without consideration to the design of the tank.

The PJ 15 Eco & PJ 30 Eco can also be equipped with a magnetic transmission which prevents the risk of exposing the tank to the outside environment. Thus, allowing the Control Unit to be removed without accidental leakage since the Turbine Shaft does not directly go through the Inlet Housing. (Note: For the Performance Data, please refer to PJ 15 and PJ 30.)

The images show conventional tank cleaning compared with:



## POLAR JET® ECO:

### Time saved = 25%

When tank cleaning with Polar Jet® Eco is done (100%), the conventional tank cleaning is only 75% finished.

### 25% less slop

When tank cleaning is finished for both Polar Jet® Eco and conventional technique, it is 25% less slop with Polar Jet® Eco.

### 25% reduction of tank cleaning water (FW/TFW)

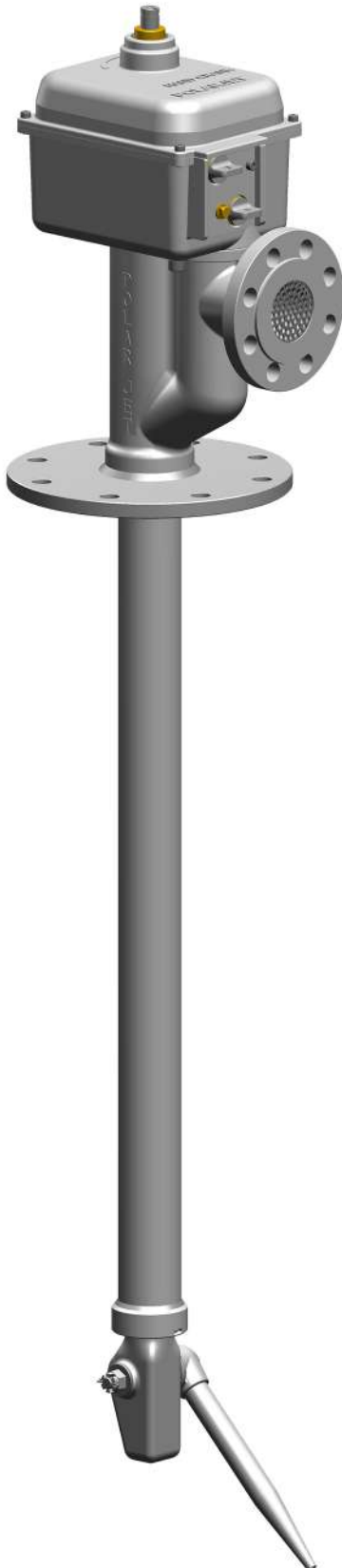
Since the time used is saved by 25%, also the amount of Fresh Water is 25% less as well.

Other features are:

- ✓ Easy to install (no need for dry docking)
- ✓ Quick payback of the investment
- ✓ Polar Jet® Eco is available as retrofit on all existing Polar Jet® PJ 15 and Polar Jet® PJ 30 installations.

This design is available upon request for new buildings and as spare part.

# POLARJET® PJ 15



The Polar Jet® PJ 15 is a fully programmable, single nozzle Tank Cleaning machine equipped with pitch and speed control.



A twin nozzle version of the PJ 15 is also available, (PJ 15CPT) which has dual nozzles mounted symmetrically opposed instead of one.



Nozzle movement is fully controlled by the integrated turbine driven control unit, which controls both the vertical pitch and rotation speed.



Nozzle movement is, in principle, a controlled rotation in the horizontal plane, combined with a slow, controlled vertical movement. This means that the nozzle performs helical patterns.



The PJ 15 comes with two controls for vertical Pitch and rotation Speed. There are two Speed Settings and three Pitch Settings of approximately 2, 4 and 9 degrees providing six basic cleaning programs.



Angle adjustment allows pre-setting of the Pitch at the start of either the upward or downward cycle for optimal cleaning of specific areas such as bottom only or side only cleaning requirements.



The PJ 15 can also be equipped with a magnetic transmission which prevents the risk of exposing the tank to the outside environment. Thus, allowing the Control Unit to be removed without accidental leakage since the Turbine Shaft does not directly go through the Inlet Housing.

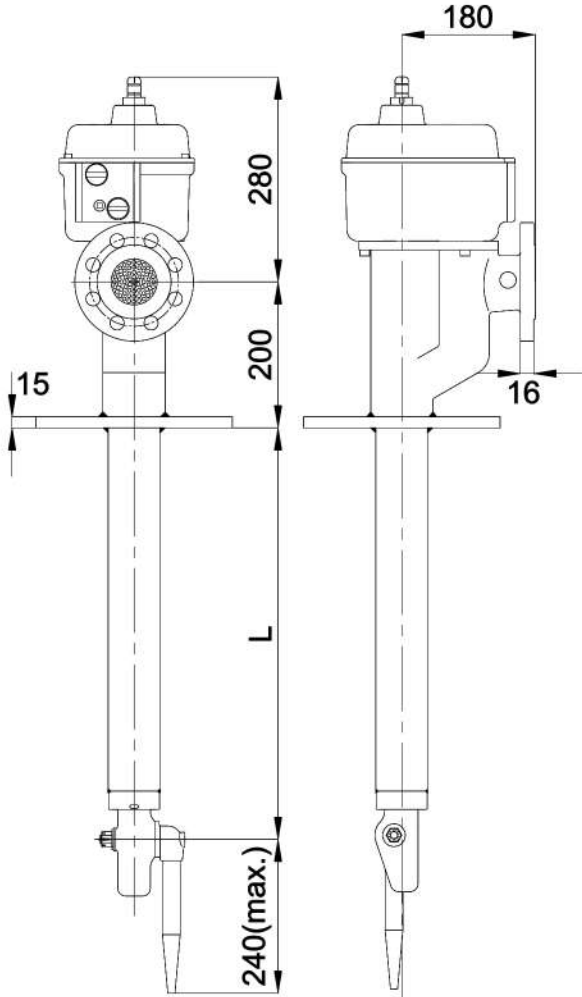


The PJ 15 can also be fitted for Industrial purposes, also known as PJ 15i. Thus, Polarmarine has developed new design main pipe to fit for the smallest opening, which is about 76.2mm.



Polarmarine provide in-house Shadow Diagrams using 3-Dimensional CAD for model Selection, Quantity, Positioning and Main Pipe Lengths to optimize cleaning coverage per unit.

## DATA SHEET POLAR JET® PJ 15



### SMALLEST DECK OPENING 130mm

#### INLET FLANGE

##### JIS STANDARD

PCD	120mm
8 Holes	Ø 19mm

##### DIN STANDARD

PCD	125mm
4 Holes	Ø 19mm

##### ANSI STANDARD

PCD	4 3/4 in
4 Holes	Ø 3/4 in

#### APPROX. WEIGHTS

L (m)	WEIGHT (kg)
1.0	42
2.0	49
3.0	56
4.0	63
5.0	70

#### DECK FLANGE

##### JIS STANDARD

OD	320mm
PCD	280mm
8 Holes	Ø 23mm

##### DIN STANDARD

OD	340mm
PCD	295mm
12 Holes	Ø 23mm

##### ANSI STANDARD

OD	13 1/2 in
PCD	11 3/4 in
8 Holes	Ø 7/8 in

#### SHIPYARD SUPPLY

DECK FLANGE CONN.  
GASKETS  
STUDS  
NUTS  
WASHERS

### PERFORMANCE DATA FOR POLAR JET PJ 15

PRESSURE, NOZZLE DIAMETER, THROUGHPUT AND JET LENGTH

PRESSURE	NOZZLE: Ø 8mm		NOZZLE: Ø 9mm		NOZZLE: Ø 10mm		NOZZLE: Ø 12mm		NOZZLE: Ø 13mm		NOZZLE: Ø 14mm		NOZZLE: Ø 16mm	
	BAR	m³/h	METER	m³/h	METER	m³/h	METER	m³/h	METER	m³/h	METER	m³/h	METER	m³/h
12	6.5	19.5	10.0	20.5	13.0	21.5	18.0	23.0	22.0	23.5	26.0	24.0	33.5*	26.0
11	6.0	18.5	9.0	20.0	12.0	20.5	17.0	22.5	21.0	23.0	25.0	23.5	32.5	25.5
10	5.5	18.0	8.0	19.0	11.0	20.0	16.0	21.5	20.0	22.5	23.0	23.0	31.0	24.5
9	5.0	17.0	7.5	18.0	10.5	19.0	15.0	20.5	18.5	21.5	22.0	22.0	29.0	23.5
8	4.5	16.0	7.0	17.0	10.0	18.0	14.0	19.5	17.0	20.0	20.5	21.0	27.0	22.5
7	4.0	15.0	6.0	16.0	9.0	17.0	13.0	18.5	16.0	19.0	19.5	20.0	25.5	21.5
6	3.5	14.0	5.5	15.0	8.0	16.0	12.0	17.5	15.0	18.0	18.0	19.0	24.0	20.5

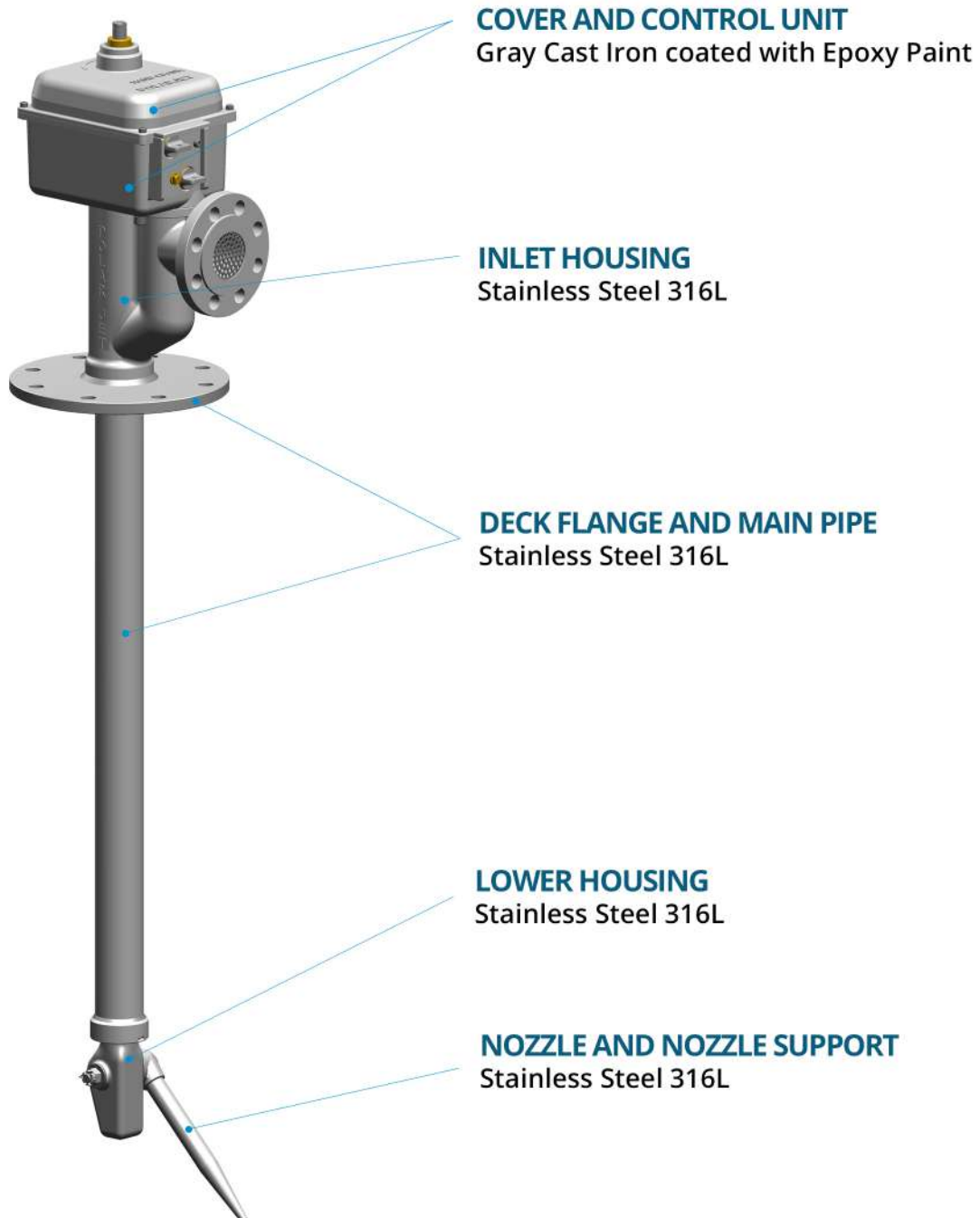
\* At this high capacity for Polar Jet PJ 15 machine has, we suggest considering using PJ 30. Refer to Data Sheet of PJ 30.

Note: Polarmarine can provide intermediate nozzle sizes based on customer's machine performance requirement. On the other hand, intermediate nozzle sizes could refer to performance data of the larger nozzle size (For instance, Ø 15.2 mm needs to apply performance data of Ø 16 mm).

POLARMARINE SCANDINAVIA AB • INDUSTRIGATAN 39 BOX 1035 SE-212 10 MALMÖ SWEDEN

• TEL +46-31-965900 • FAX +46-40-216513 • EMAIL info@polarmarine.se / sales@polarmarine.ph / engineering@polarmarine.ph • WEBSITE www.polarmarine.se

## MATERIAL SPECIFICATIONS POLAR JET® PJ 15



\*Paint specification is Polarmarine Standard. Modification of paint specification is subject for additional charge.

\*\*Also available with **Stainless Steel 316** Control Unit and Cover upon request and subject to additional charge.

\*\*\*PJ 15 equipped with magnetic coupling also available upon request and subject to additional charge.