



# **POLAR JET®**

## **Tank Cleaning Machine**



## TANK CLEANING EQUIPMENT



### POLAR JET® PJ 120

#### Standard

The Polar Jet® PJ 120 is a deck mounted, fully programmable, single nozzle Tank Cleaning machine equipped with speed and angle limit controls. Movement of the nozzle can be set to work continuously between any angles from 0 to 180 degrees.

For example, the PJ 120 can be set to work between 0 to 45 degrees with reverse direction for concentrated bottom cleaning – or any other angle parameters of 30 degrees or more

Nozzle movement is controlled by the integrated turbine driven control unit providing a controlled rotation in the horizontal plane, combined with a slow, controlled vertical movement. This means that the nozzle performs helical wash patterns.

The Turbine driven with automatic nozzle pitch for the PJ 120 is 3 degrees. Adjustable guide vanes located in front of the turbine control speed, which should be between 1 and 2.5 rpm.

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 PJ 120

**SMALLEST DECK OPENING 190 mm.**

## INLET FLANGE

### CONNECTION TO FIT

JIS STANDARD

PCD 160 mm.  
8 Holes Ø23 mm.

### CONNECTION TO FIT

DIN STANDARD

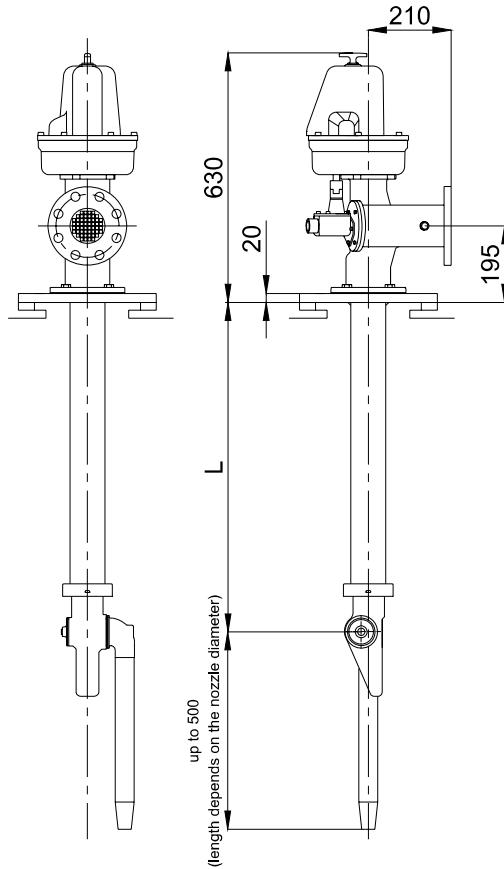
PCD 160 mm.  
8 Holes Ø19mm.

### CONNECTION TO FIT

ANSI STANDARD

PCD 6.0 in.  
4 Holes Ø3/4 in.

APPROX. WEIGHTS	
L (m)	Weight (Kg)
1.0	90
2.0	105
3.0	120
4.0	135
5.0	150



## DECK FLANGE

### CONNECTION TO FIT

JIS STANDARD

O.D. 320 mm.  
PCD 280 mm.  
8 Holes Ø23 mm.

### CONNECTION TO FIT

DIN STANDARD

O.D. 340 mm.  
PCD 295 mm.  
12 Holes Ø23 mm.

### CONNECTION TO FIT

ANSI STANDARD

O.D. 13 1/2 in.  
PCD 11 3/4 in.  
8 Holes Ø7/8 in.

## SHIPYARD SUPPLY

DECK FLANGE CONN.  
GASKETS  
STUDS  
NUTS  
WASHERS

## PERFORMANCE DATA FOR POLAR JET® PJ 120

PRESSURE, NOZZLE DIAMETER, THROUGHPUT AND JET LENGTH

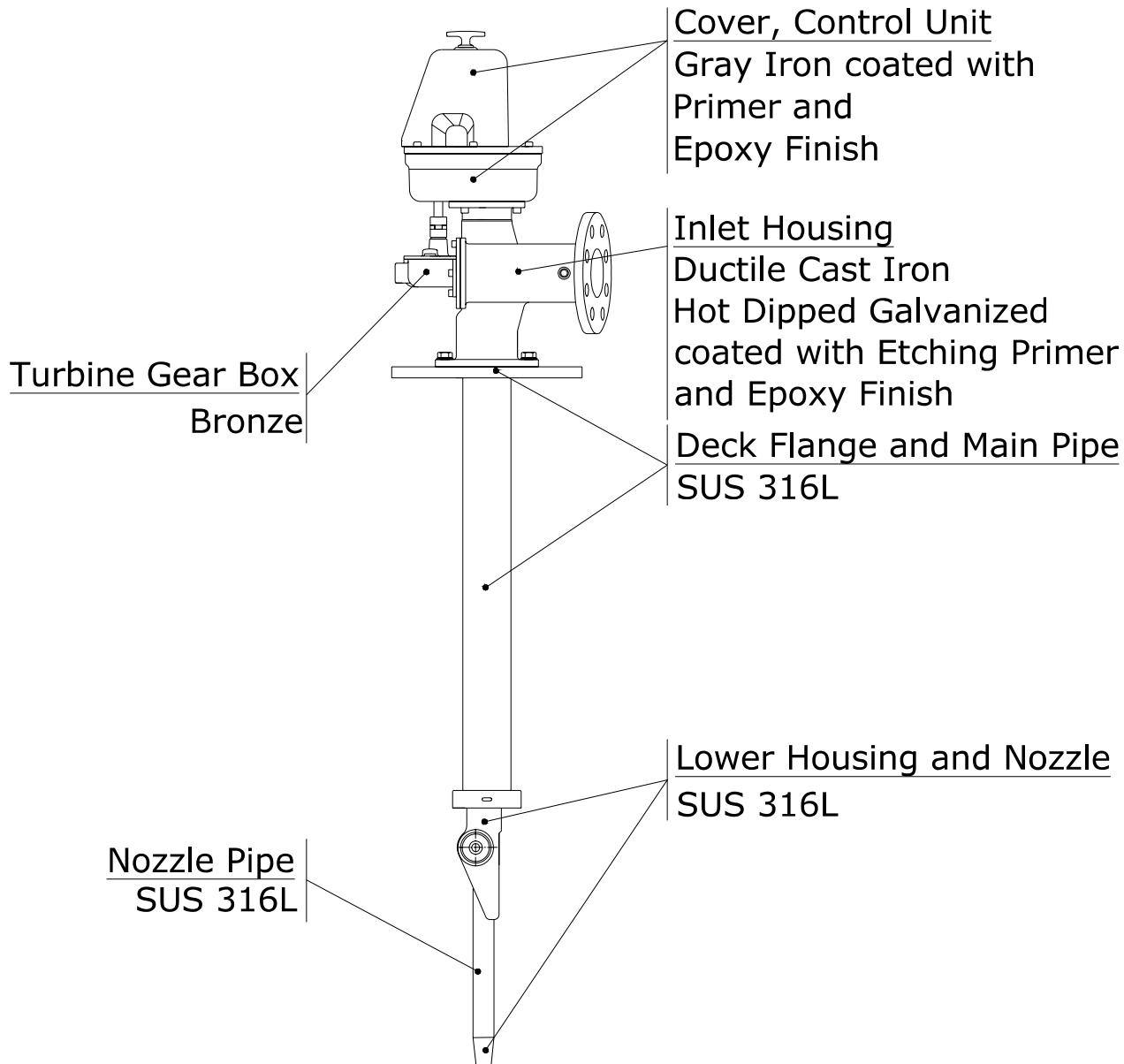
Pressure	Nozzle Diameter Ø25 mm.		Nozzle Diameter Ø26 mm.		Nozzle Diameter Ø28 mm.		Nozzle Diameter Ø29 mm.	
	Bar	m³/h	meter	Bar	m³/h	meter	Bar	m³/h
12	74.0	40.0	80.0	41.0	89.0	42.5	97.0	43.5
11	70.0	39.5	76.0	40.5	84.5	42.0	92.0	43.0
10	66.0	39.0	72.0	40.0	80.0	41.5	87.5	42.5
9	62.5	38.0	66.0	39.0	76.0	40.5	82.5	41.5
8	59.0	37.0	64.0	38.0	72.0	39.5	78.0	40.5
7	55.0	35.5	60.0	36.5	68.0	38.0	73.0	39.0
6	51.0*	34.0	56.0	35.0	63.0	36.5	68.5	37.5

Pressure	Nozzle Diameter Ø30 mm.		Nozzle Diameter Ø31 mm.		Nozzle Diameter Ø32.5 mm.		Nozzle Diameter Ø35 mm.	
	Bar	m³/h	meter	Bar	m³/h	meter	Bar	m³/h
12	105.0	44.5	114.0	45.5	126.0	46.5	149.0	48.0
11	100.0	44.0	108.0	45.0	119.0	46.0	141.0	47.5
10	94.0	43.5	102.0	44.5	112.0	45.5	132.0	47.0
9	89.0	42.5	96.0	43.5	105.0	44.5	123.0	46.0
8	84.0	41.5	90.0	42.5	98.0	43.5	114.0	45.0
7	78.5	40.0	84.0	41.0	91.0	42.0	104.0	43.5
6	73.0	38.5	78.0	39.5	84.0	40.5	95.0	42.0

\* At this low capacity for Polar Jet PJ 120 machine has, we suggest considering using PJ 30. Refer to Data Sheet of PJ 30.



# PJ 120 – Material Specification



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

\*\*Also available with SUS316L Inlet Housing upon request and subjected to additional charge.

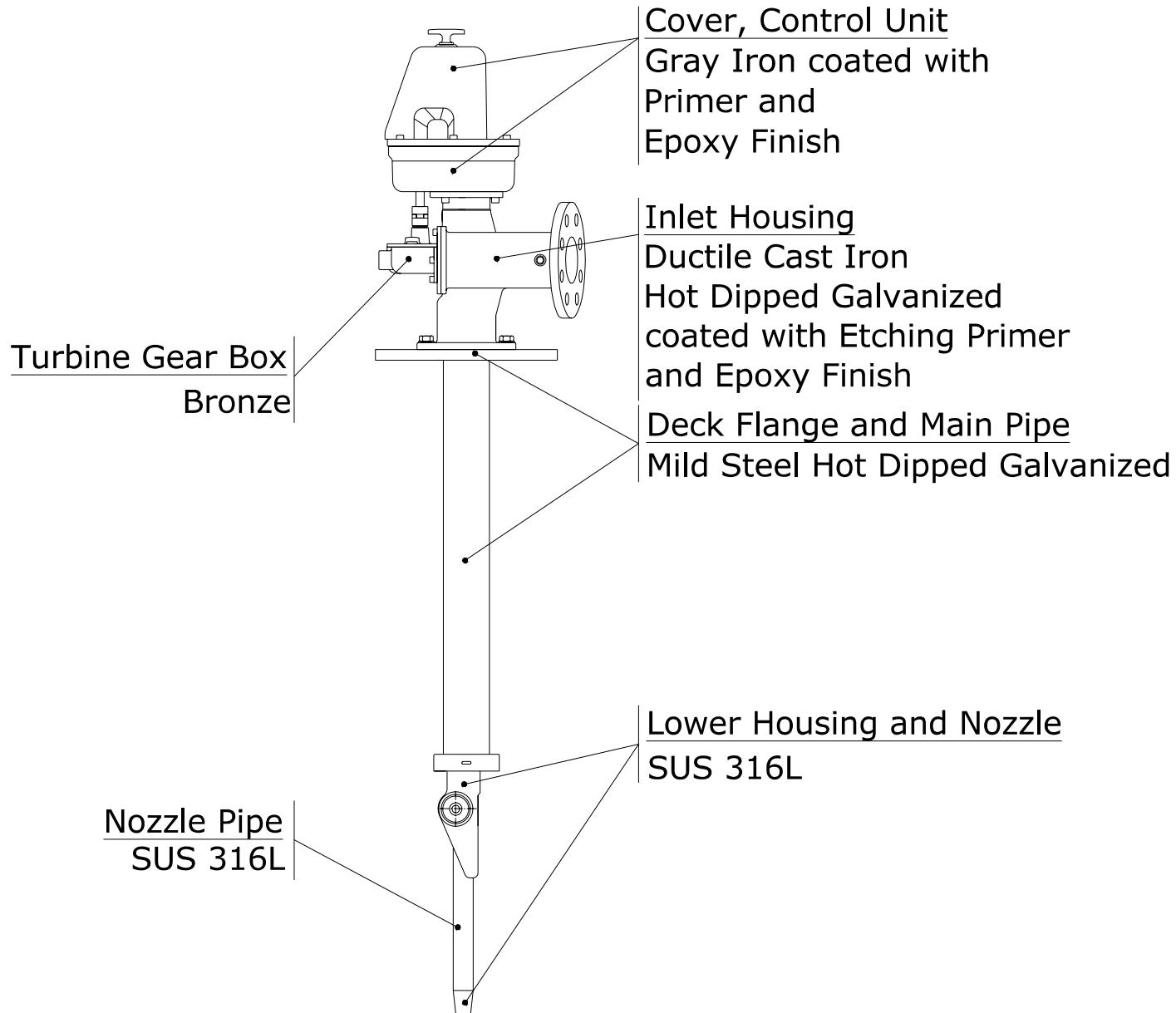
\*\*\* We can also supply Bronze Washing Unit as Optional

+ PJ 120 equipped with magnetic coupling also available upon request subjected to additional charge.

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# PJ 120 – Material Specification



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

\*\*Also available with SUS316L Inlet Housing upon request and subjected to additional charge.

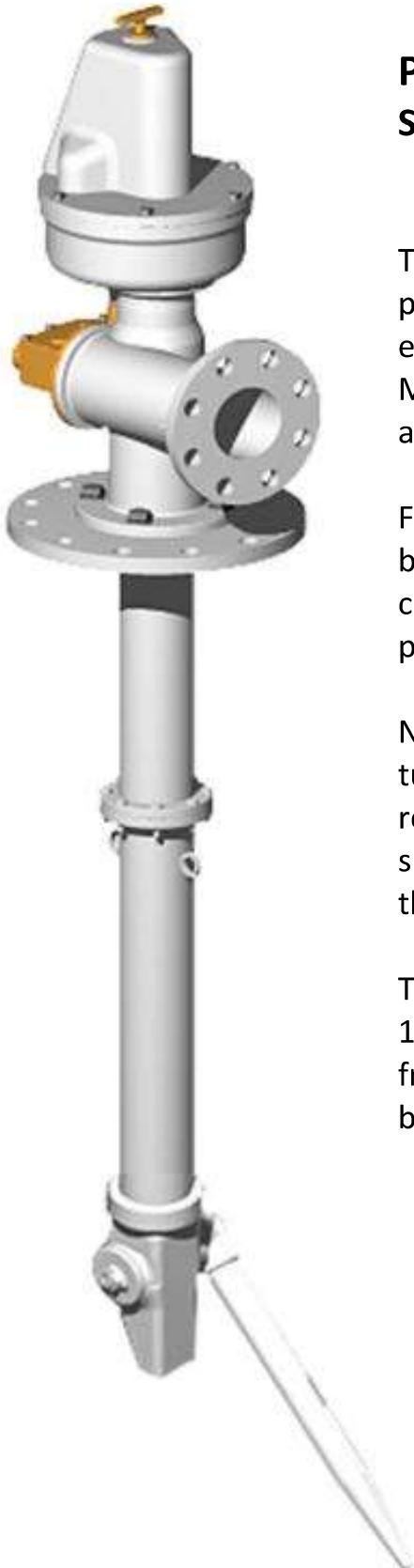
\*\*\* We can also supply Bronze Washing Unit as Optional

+ **PJ 120 equipped with magnetic coupling** also available upon request subjected to additional charge.

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## TANK CLEANING EQUIPMENT



### POLAR JET® PJ 120 SPLIT TYPE

The POLAR JET® PJ 120 is a deck mounted, fully programmable, single nozzle Tank Cleaning machine equipped with speed and angle limit controls. Movement of the nozzle can be set to work between any angles from 0 to 180 degrees.

For example, the PJ 120 can be set to work only between 0 to 45 degrees with reverse direction for concentrated bottom cleaning – or any other angle parameters of 30 degrees or more.

Nozzle movement is controlled by the integrated turbine driven control unit providing a controlled rotation in the horizontal plane, combined with a slow, controlled vertical movement. This means that the nozzle performs helical wash patterns.

The Turbine driven automatic nozzle pitch for the PJ 120 is 3 degrees. Adjustable guide vanes located in front of the turbine control speed, which should be between 1 and 2.5 RPM.



## DATA SHEET PJ 120

**SMLLEST DECK OPENING 190mm.**

**INLET FLANGE**

**CONNECTION TO FIT**

JIS STANDARD

PCD 160 mm.  
8 Holes Ø23 mm.

**CONNECTION TO FIT**

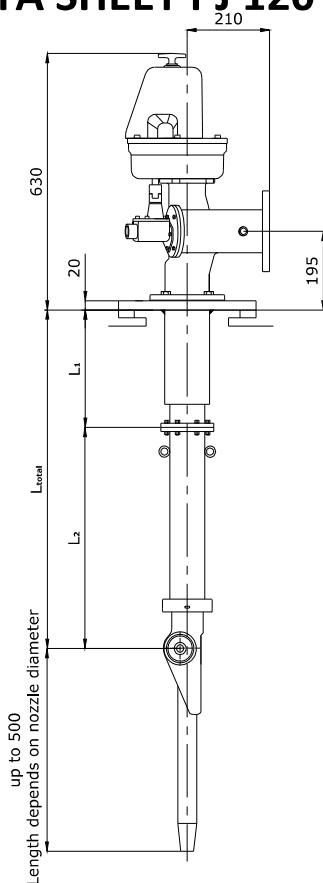
DIN STANDARD

PCD 160 mm.  
8 Holes Ø19mm.

**CONNECTION TO FIT**

ANSI STANDARD

PCD 6.0 in.  
4 Holes Ø3/4 in.



**DECK FLANGE**

**CONNECTION TO FIT**

JIS STANDARD

O.D. 320 mm.  
PCD 280 mm.  
8 Holes Ø23 mm.

**CONNECTION TO FIT**

DIN STANDARD

O.D. 340 mm.  
PCD 295 mm.  
12 Holes Ø23 mm.

**CONNECTION TO FIT**

ANSI STANDARD

O.D. 13 1/2 in.  
PCD 11 3/4 in.  
8 Holes Ø7/8 in.

APPROX. WEIGHTS	
L (m)	Weight (Kg)
1.0	90
2.0	105
3.0	120
4.0	135
5.0	150

### SHIPYARD SUPPLY

DECK FLANGE CONN.  
GASKETS  
STUDS  
NUTS  
WASHERS

## PERFORMANCE DATA FOR POLAR JET® PJ 120

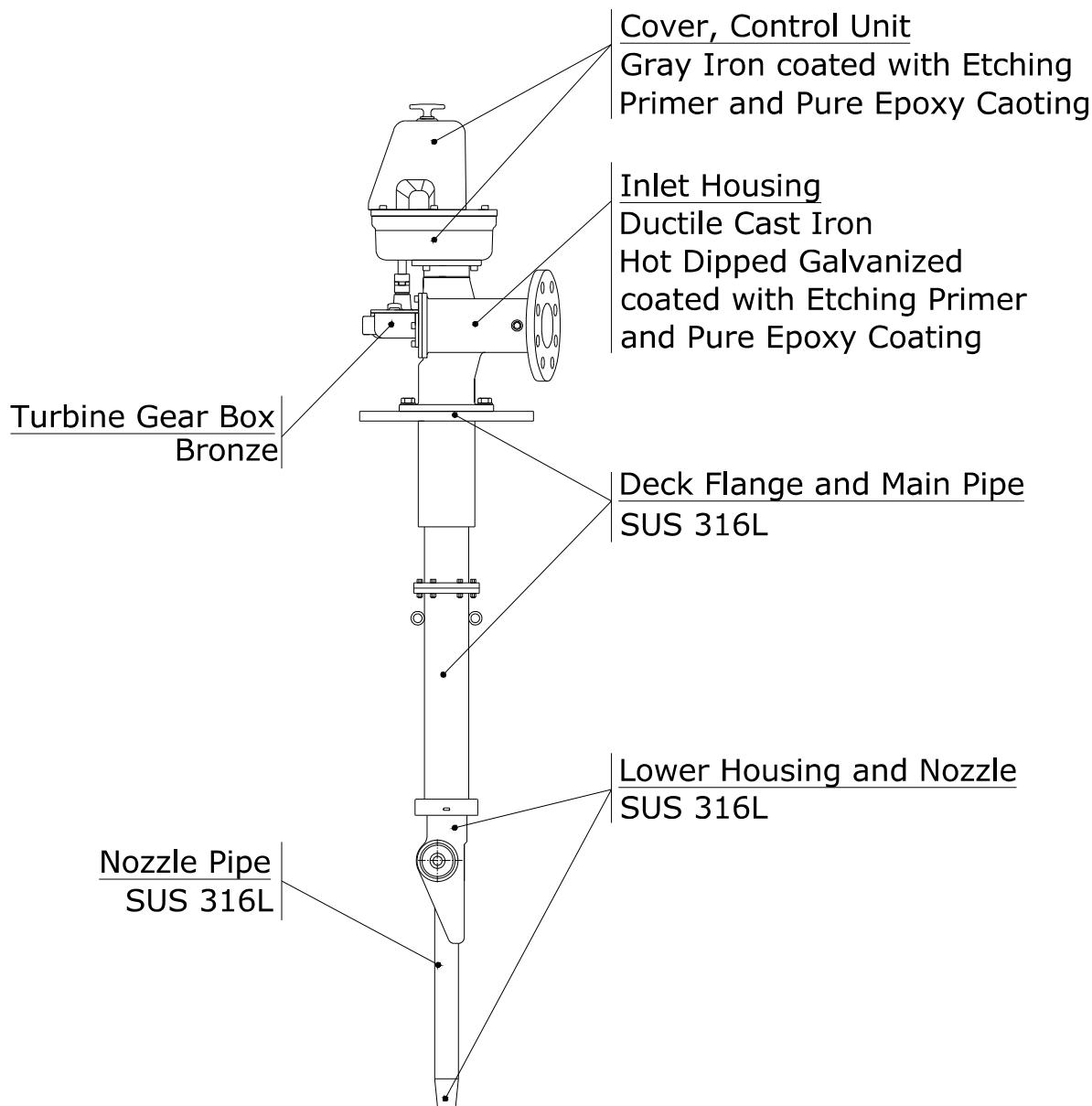
PRESSURE, NOZZLE DIAMETER, THROUGHPUT AND JET LENGTH

Pressure	Nozzle Diameter Ø25 mm.		Nozzle Diameter Ø26 mm.		Nozzle Diameter Ø28 mm.		Nozzle Diameter Ø29 mm.	
	Bar	m³/h	meter	m³/h	meter	m³/h	meter	m³/h
12	74.0	40.0	80.0	41.0	89.0	42.5	97.0	43.5
11	70.0	39.5	76.0	40.5	84.5	42.0	92.0	43.0
10	66.0	39.0	72.0	40.0	80.0	41.5	87.5	42.5
9	62.5	38.0	66.0	39.0	76.0	40.5	82.5	41.5
8	59.0	37.0	64.0	38.0	72.0	39.5	78.0	40.5
7	55.0	35.5	60.0	36.5	68.0	38.0	73.0	39.0
6	51.0	34.0	56.0	35.0	63.0	36.5	68.5	37.5

Pressure	Nozzle Diameter Ø30 mm.		Nozzle Diameter Ø31 mm.		Nozzle Diameter Ø32.5 mm.		Nozzle Diameter Ø35 mm.	
	Bar	m³/h	meter	m³/h	meter	m³/h	meter	m³/h
12	105.0	44.5	114.0	45.5	126.0	46.5	149.0	48.0
11	100.0	44.0	108.0	45.0	119.0	46.0	141.0	47.5
10	94.0	43.5	102.0	44.5	112.0	45.5	132.0	47.0
9	89.0	42.5	96.0	43.5	105.0	44.5	123.0	46.0
8	84.0	41.5	90.0	42.5	98.0	43.5	114.0	45.0
7	78.5	40.0	84.0	41.0	91.0	42.0	104.0	43.5
6	73.0	38.5	78.0	39.5	84.0	40.5	95.0	42.0



## PJ 120 Split Type – Material Specification



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

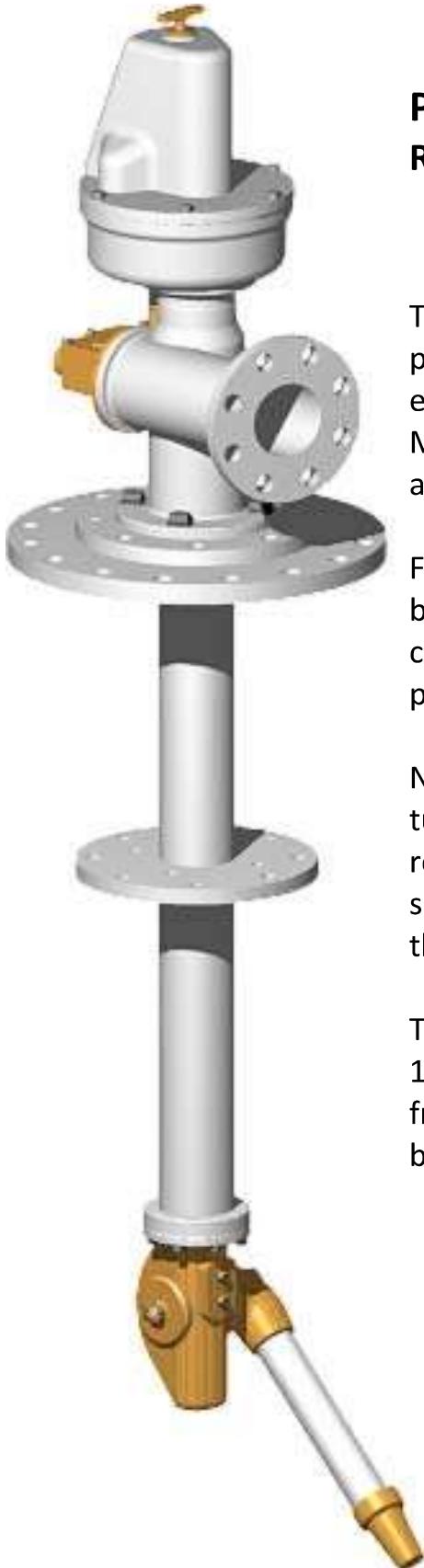
\*\*Also available with SUS316L Inlet Housing upon request and subjected to additional charge.

\*\*\*Also available with Bronze Washing Unit upon request and subjected to additional charge.

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## TANK CLEANING EQUIPMENT



### POLAR JET® PJ 120 RETRACTABLE TYPE

The POLAR JET® PJ 120 is a deck mounted, fully programmable, single nozzle Tank Cleaning machine equipped with speed and angle limit controls. Movement of the nozzle can be set to work between any angles from 0 to 180 degrees.

For example, the PJ 120 can be set to work only between 0 to 45 degrees with reverse direction for concentrated bottom cleaning – or any other angle parameters of 30 degrees or more.

Nozzle movement is controlled by the integrated turbine driven control unit providing a controlled rotation in the horizontal plane, combined with a slow, controlled vertical movement. This means that the nozzle performs helical wash patterns.

The Turbine driven automatic nozzle pitch for the PJ 120 is 3 degrees. Adjustable guide vanes located in front of the turbine control speed, which should be between 1 and 2.5 RPM.



## DATA SHEET PJ 120

**SMALLEST DECK OPENING 300 mm.**

**INLET FLANGE  
CONNECTION TO FIT  
JIS STANDARD**

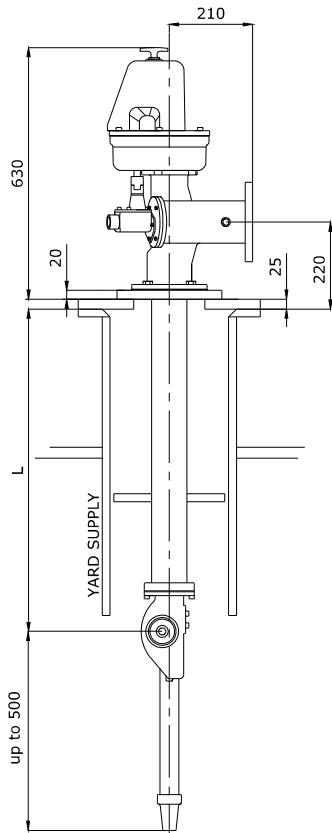
PCD 160 mm.  
8 Holes Ø23 mm.

**CONNECTION TO FIT  
DIN STANDARD**

PCD 160 mm.  
8 Holes Ø19mm.

**CONNECTION TO FIT  
ANSI STANDARD**

PCD 6.0 in.  
4 Holes Ø3/4 in.



**SLIP-ON FLANGE  
CONNECTION TO FIT  
JIS STANDARD**

O.D. 430 mm.  
PCD 380 mm.  
12 Holes Ø25 mm.

### APPROX. WEIGHTS

L (m)	Weight (Kg)
1.0	90
2.0	105
3.0	120
4.0	135
5.0	150

### SHIPYARD SUPPLY

DECK FLANGE CONN.  
GASKETS  
STUDS  
NUTS  
WASHERS

## PERFORMANCE DATA FOR POLAR JET® PJ 120

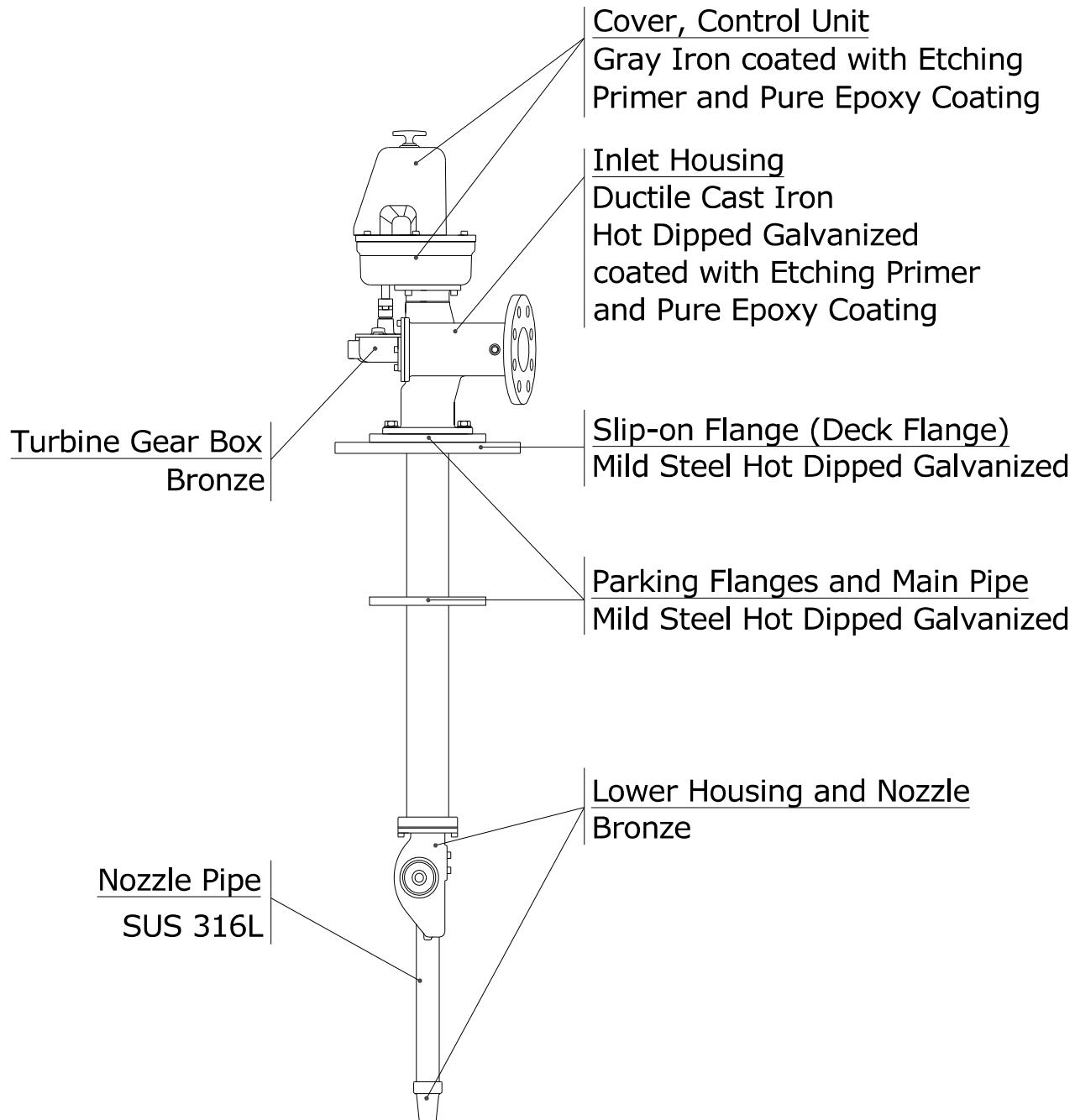
PRESSURE, NOZZLE DIAMETER, THROUGHPUT AND JET LENGTH

Pressure Bar	Nozzle Diameter Ø25 mm.		Nozzle Diameter Ø26 mm.		Nozzle Diameter Ø28 mm.		Nozzle Diameter Ø29 mm.	
	m³/h	meter	m³/h	meter	m³/h	meter	m³/h	meter
12	74.0	40.0	80.0	41.0	89.0	42.5	97.0	43.5
11	70.0	39.5	76.0	40.5	84.5	42.0	92.0	43.0
10	66.0	39.0	72.0	40.0	80.0	41.5	87.5	42.5
9	62.5	38.0	66.0	39.0	76.0	40.5	82.5	41.5
8	59.0	37.0	64.0	38.0	72.0	39.5	78.0	40.5
7	55.0	35.5	60.0	36.5	68.0	38.0	73.0	39.0
6	51.0	34.0	56.0	35.0	63.0	36.5	68.5	37.5

Pressure Bar	Nozzle Diameter Ø30 mm.		Nozzle Diameter Ø31 mm.		Nozzle Diameter Ø32.5 mm.		Nozzle Diameter Ø35 mm.	
	m³/h	meter	m³/h	meter	m³/h	meter	m³/h	meter
12	105.0	44.5	114.0	45.5	126.0	46.5	149.0	48.0
11	100.0	44.0	108.0	45.0	119.0	46.0	141.0	47.5
10	94.0	43.5	102.0	44.5	112.0	45.5	132.0	47.0
9	89.0	42.5	96.0	43.5	105.0	44.5	123.0	46.0
8	84.0	41.5	90.0	42.5	98.0	43.5	114.0	45.0
7	78.5	40.0	84.0	41.0	91.0	42.0	104.0	43.5
6	73.0	38.5	78.0	39.5	84.0	40.5	95.0	42.0



## PJ 120 – Material Specification



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

\*\*Also available with SUS316L Inlet Housing upon request and subjected to additional charge.

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## TANK CLEANING EQUIPMENT

### POLAR JET® PJ 120 SWINGABLE DESIGN



The POLAR JET® PJ 120 is a deck mounted, fully programmable, single nozzle Tank Cleaning machine equipped with speed and angle limit controls for cleaning of Bulk Carriers. Movement of the nozzle can be set to work between any angles from 0 to 180 degrees.

For example, the PJ 120 can be set to work only between 0 to 45 degrees with reverse direction for concentrated bottom cleaning – or any other angle parameters of 30 degrees or more.

Nozzle movement is controlled by the integrated turbine driven control unit providing a controlled rotation in the horizontal plane, combined with a slow, controlled vertical movement. This means that the nozzle performs helical wash patterns.

The Turbine driven automatic nozzle pitch for the PJ 120 is 3 degrees. Adjustable guide vanes located in front of the turbine control speed, which should be between 1 and 2.5 RPM.



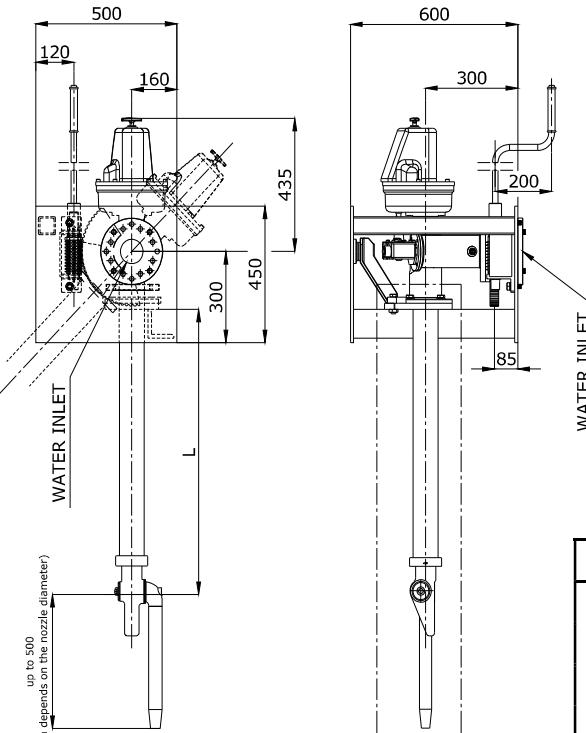
## DATA SHEET PJ 120

### INLET FLANGE

#### CONNECTION TO FIT

JIS STANDARD

PCD 160 mm.  
8 Holes Ø23 mm.



#### CONNECTION TO FIT

DIN STANDARD

PCD 160 mm.  
8 Holes Ø19mm.

#### CONNECTION TO FIT

ANSI STANDARD

PCD 6.0 in.  
4 Holes Ø3/4 in.

APPROX. WEIGHTS	
L (m)	Weight (Kg)
1.0	90
2.0	105
3.0	120
4.0	135
5.0	150

### SHIPYARD SUPPLY

DECK FLANGE CONN.  
GASKETS  
STUDS  
NUTS  
WASHERS

## PERFORMANCE DATA FOR POLAR JET® PJ 120

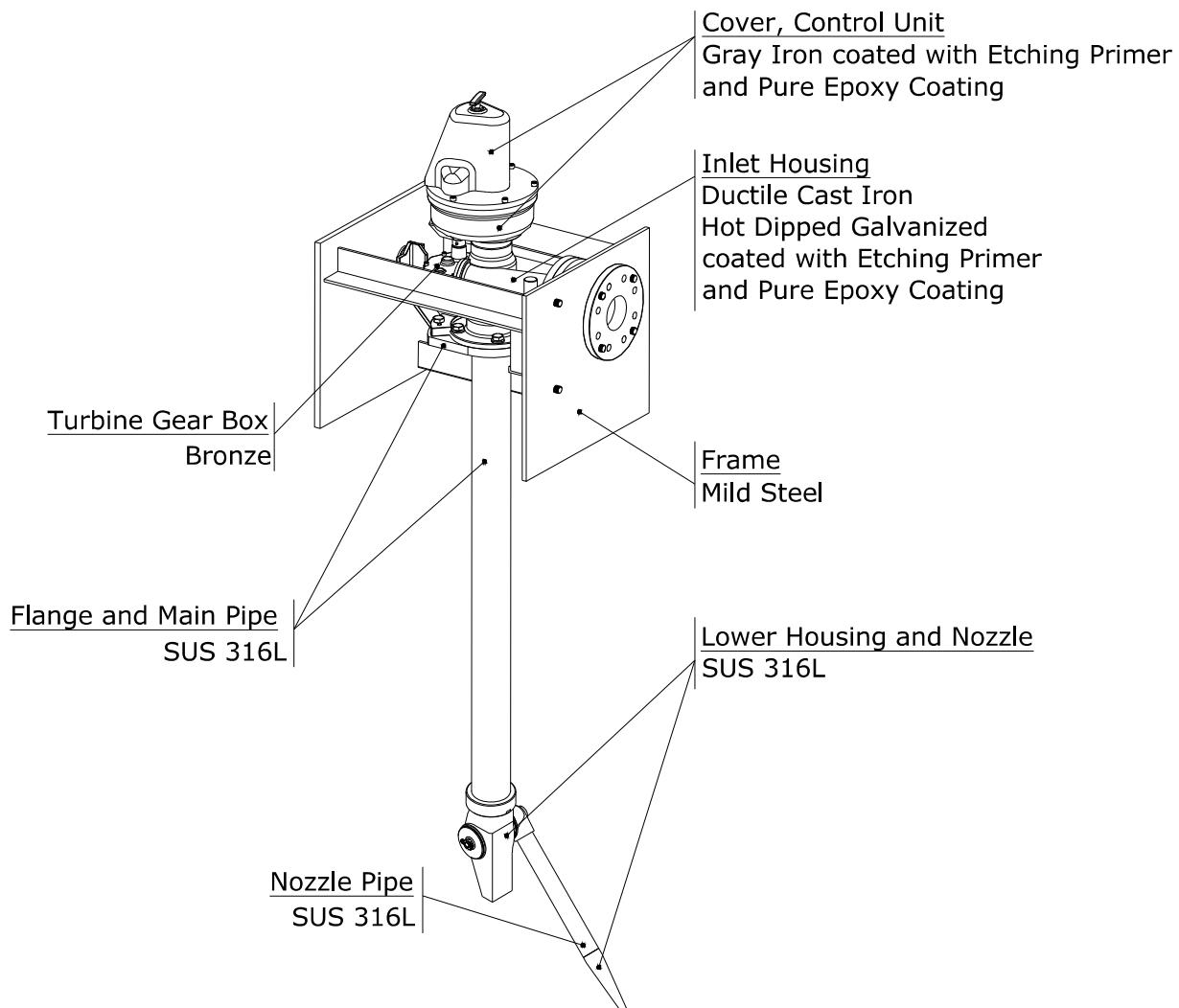
PRESSURE, NOZZLE DIAMETER, THROUGHPUT AND JET LENGTH

Pressure	Nozzle Diameter Ø25 mm.		Nozzle Diameter Ø26 mm.		Nozzle Diameter Ø28 mm.		Nozzle Diameter Ø29 mm.	
	Bar	m³/h	meter	Bar	m³/h	meter	Bar	m³/h
12	74.0	40.0	80.0	41.0	89.0	42.5	97.0	43.5
11	70.0	39.5	76.0	40.5	84.5	42.0	92.0	43.0
10	66.0	39.0	72.0	40.0	80.0	41.5	87.5	42.5
9	62.5	38.0	66.0	39.0	76.0	40.5	82.5	41.5
8	59.0	37.0	64.0	38.0	72.0	39.5	78.0	40.5
7	55.0	35.5	60.0	36.5	68.0	38.0	73.0	39.0
6	51.0	34.0	56.0	35.0	63.0	36.5	68.5	37.5

Pressure	Nozzle Diameter Ø30 mm.		Nozzle Diameter Ø31 mm.		Nozzle Diameter Ø32.5 mm.		Nozzle Diameter Ø35 mm.	
	Bar	m³/h	meter	Bar	m³/h	meter	Bar	m³/h
12	105.0	44.5	114.0	45.5	126.0	46.5	149.0	48.0
11	100.0	44.0	108.0	45.0	119.0	46.0	141.0	47.5
10	94.0	43.5	102.0	44.5	112.0	45.5	132.0	47.0
9	89.0	42.5	96.0	43.5	105.0	44.5	123.0	46.0
8	84.0	41.5	90.0	42.5	98.0	43.5	114.0	45.0
7	78.5	40.0	84.0	41.0	91.0	42.0	104.0	43.5
6	73.0	38.5	78.0	39.5	84.0	40.5	95.0	42.0



# PJ 120 Swingable Design– Material Specification



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\*\*Also available with SUS316L Inlet Housing upon request and subjected to additional charge.

\*\*\*Also available with Bronze Washing Unit upon request and subjected to additional charge.

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## TANK CLEANING EQUIPMENT



### **POLAR JET® PJ 120 CPA SPEED, PITCH AND ANGLE SECTOR CONTROL**

The Polar Jet PJ 120 is a deck mounted, fully programmable, single nozzle Tank Cleaning machine equipped with pitch, speed and angle limit controls. Movement of the nozzle can be set to work continuously any angles from 0 to 180 degrees.

**The pitch per revolution can be set to 1.5 or 3 degrees.**

**The nozzles can be set to work between any angle from 0 to 180 degrees.**

The PJ 120CPA can be set to work between 0 to 45 degrees with automatic reverse direction for concentrated bottom cleaning – or any other suitable angles. The nozzle angle can also be manually fixed for concentrated spot cleaning.

Nozzle movement is a variable rotation speed in the horizontal plane combined with a changeable vertical pitch

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



# DATA SHEET PJ 120

**SMALLEST DECK OPENING 190 mm.**

## INLET FLANGE

### CONNECTION TO FIT

JIS STANDARD

PCD 160 mm.  
8 Holes Ø23 mm.

### CONNECTION TO FIT

DIN STANDARD

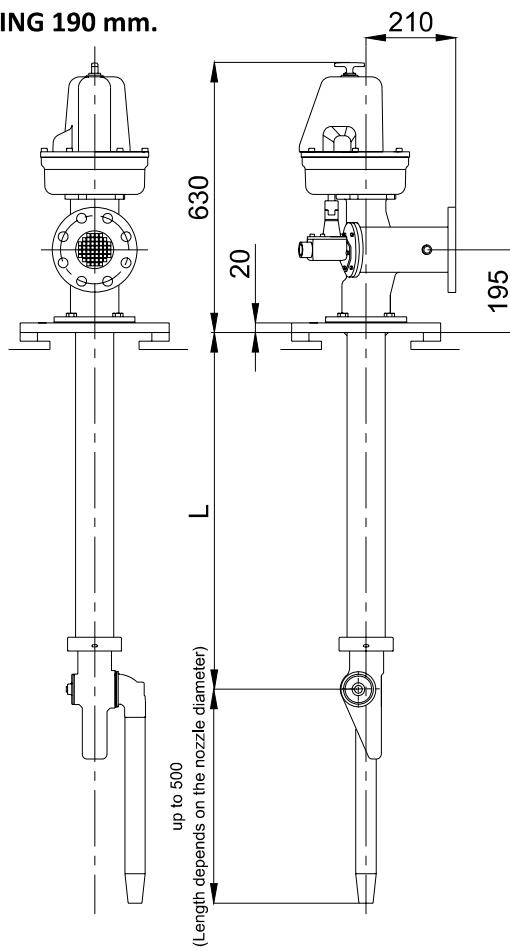
PCD 160 mm.  
8 Holes Ø19mm.

### CONNECTION TO FIT

ANSI STANDARD

PCD 6.0 in.  
4 Holes Ø3/4 in.

APPROX. WEIGHTS	
L (m)	Weight (Kg)
1.0	90
2.0	105
3.0	120
4.0	135
5.0	150



## DECK FLANGE

### CONNECTION TO FIT

JIS STANDARD

O.D. 320 mm.  
PCD 280 mm.  
8 Holes Ø23 mm.

### CONNECTION TO FIT

DIN STANDARD

O.D. 340 mm.  
PCD 295 mm.  
12 Holes Ø23 mm.

### CONNECTION TO FIT

ANSI STANDARD

O.D. 13 1/2 in.  
PCD 11 3/4 in.  
8 Holes Ø7/8 in.

## SHIPYARD SUPPLY

DECK FLANGE CONN.  
GASKETS  
STUDS  
NUTS  
WASHERS

## PERFORMANCE DATA FOR POLAR JET® PJ 120

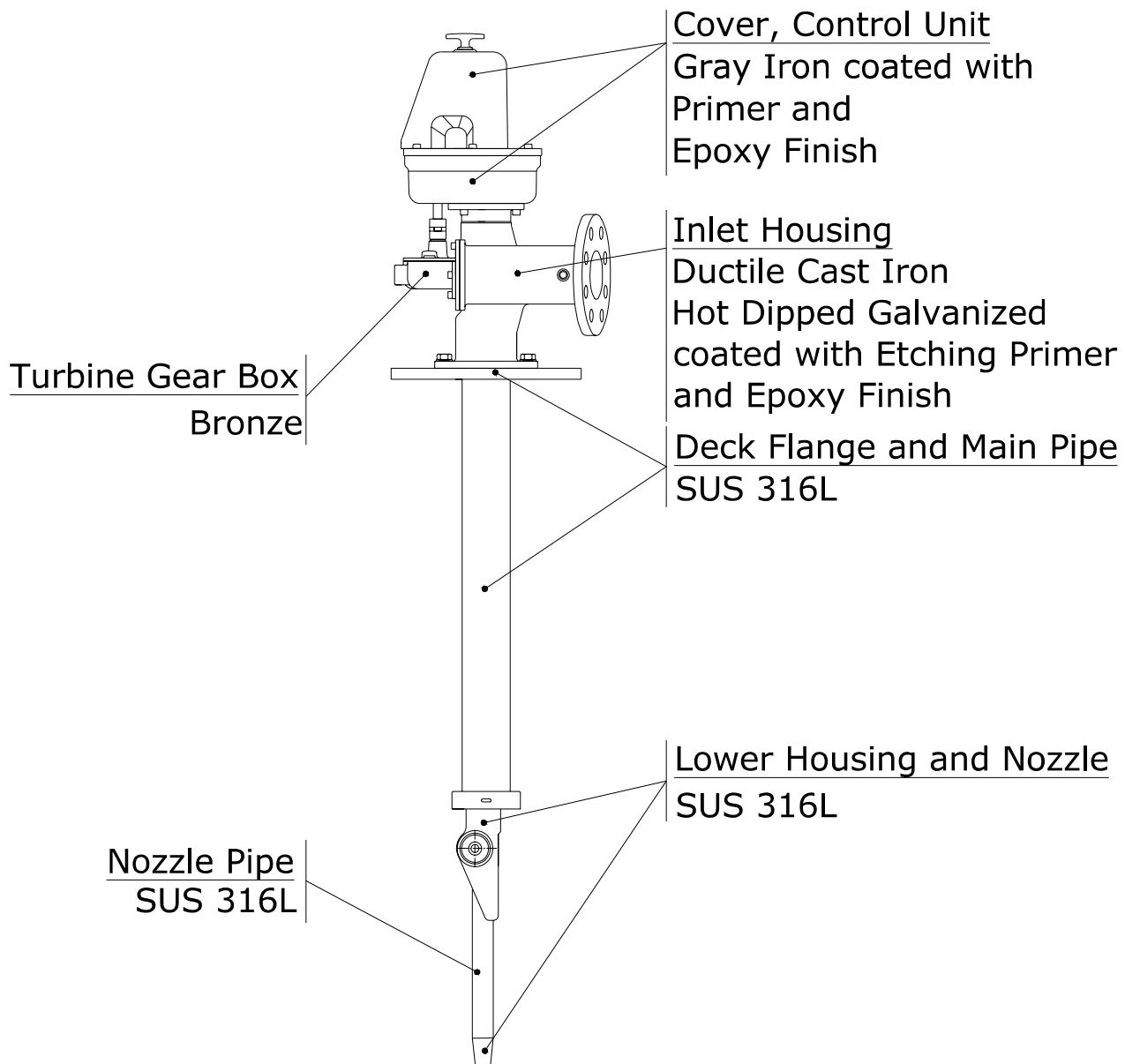
PRESSURE, NOZZLE DIAMETER, THROUGHPUT AND JET LENGTH

Pressure Bar	Nozzle Diameter Ø25 mm.		Nozzle Diameter Ø26 mm.		Nozzle Diameter Ø28 mm.		Nozzle Diameter Ø29 mm.	
	m³/h	meter	m³/h	meter	m³/h	meter	m³/h	meter
12	74.0	40.0	80.0	41.0	89.0	42.5	97.0	43.5
11	70.0	39.5	76.0	40.5	84.5	42.0	92.0	43.0
10	66.0	39.0	72.0	40.0	80.0	41.5	87.5	42.5
9	62.5	38.0	66.0	39.0	76.0	40.5	82.5	41.5
8	59.0	37.0	64.0	38.0	72.0	39.5	78.0	40.5
7	55.0	35.5	60.0	36.5	68.0	38.0	73.0	39.0
6	51.0	34.0	56.0	35.0	63.0	36.5	68.5	37.5

Pressure Bar	Nozzle Diameter Ø30 mm.		Nozzle Diameter Ø31 mm.		Nozzle Diameter Ø32.5 mm.		Nozzle Diameter Ø35 mm.	
	m³/h	meter	m³/h	meter	m³/h	meter	m³/h	meter
12	105.0	44.5	114.0	45.5	126.0	46.5	149.0	48.0
11	100.0	44.0	108.0	45.0	119.0	46.0	141.0	47.5
10	94.0	43.5	102.0	44.5	112.0	45.5	132.0	47.0
9	89.0	42.5	96.0	43.5	105.0	44.5	123.0	46.0
8	84.0	41.5	90.0	42.5	98.0	43.5	114.0	45.0
7	78.5	40.0	84.0	41.0	91.0	42.0	104.0	43.5
6	73.0	38.5	78.0	39.5	84.0	40.5	95.0	42.0



## PJ 120 – Material Specification



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\*\*Also available with SUS316L Inlet Housing upon request and subject to additional charge.

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