

SEDIVAC

Operations Manual

July 2024 - Issue 3



**Pumps &
Equipment**

DESIGNERS OF HIGH-PRESSURE SYSTEMS
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TABLE OF CONTENTS

<u>System Specifications</u>	3
<u>System Footprint</u>	4
<u>Electrical Panel & Schematic</u>	5
<u>Electrical Installation</u>	6
<u>Plumbing Installation</u>	6
<u>Initial Setup / Filter Purge</u>	7
<u>Method of Operation</u>	8
<u>Preventative Maintenance</u>	8
<u>Troubleshooting</u>	8
<u>Filter Change Procedure</u>	9
<u>Pump - JE 1-110 G10 NT20</u>	10
<u>Installation Kit</u>	14
<u>Fault Report Form</u>	15
<u>Filter Bag Order Form</u>	16
<u>Notes</u>	17



SYSTEM SPECIFICATIONS

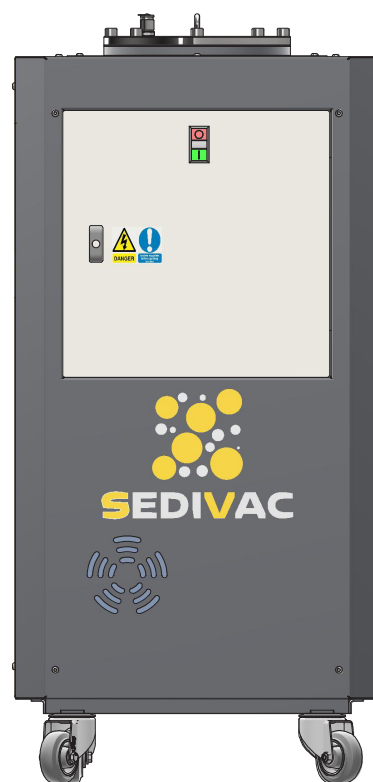
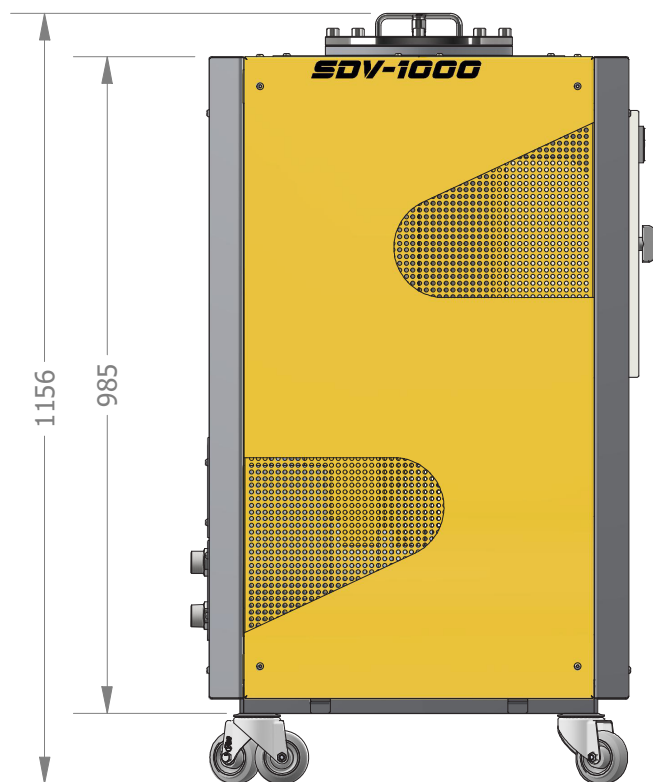
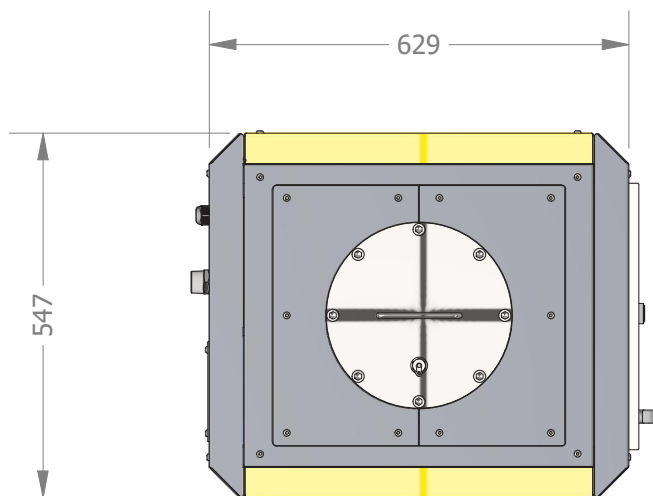
- Inlet Pressure -	Flooded Suction
- Maximum Pressure -	1.5 Bar MAX.
- Maximum Flow -	60 Litres MIN.
- Coolant Volume -	10 Litres
- RPM -	2900
- Voltage -	415V 3ph
- Power -	10 Amps
- Kilowatts -	1.2kW
- Filter -	15 micron
- Integrated Control Panel	



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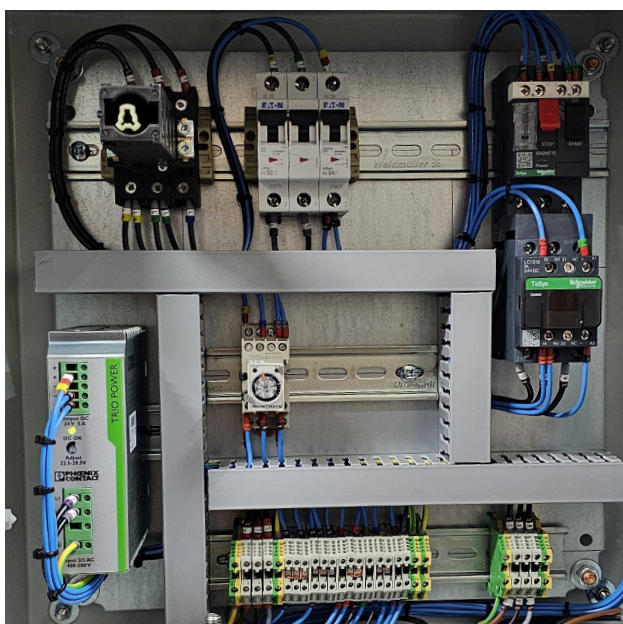
SEDIVAC FILTRATION SYSTEM

SYSTEM FOOTPRINT



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ELECTRICAL PANEL & SCHEMATIC

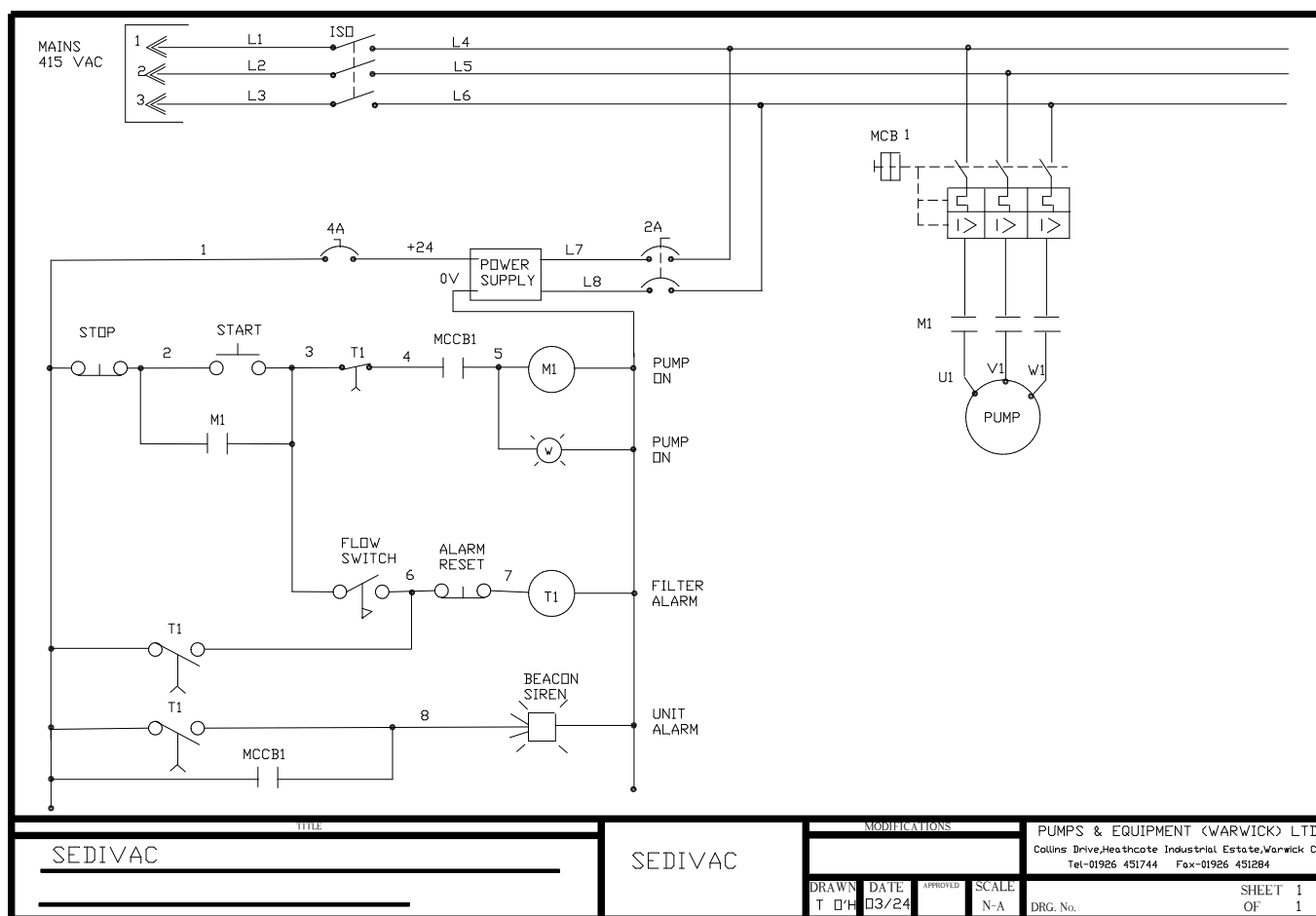


Main Electrical Board

CIRCUIT BREAKER / CONTACT / OVERLOAD CODES:

MCB1 - MAIN PUMP CIRCUIT BREAKER 415V

MCCB1 - MAIN PUMP 24V CIRCUIT



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ELECTRICAL INSTALLATION

Please comply with all local and national electrical codes and safety guidelines when making electrical connections to the Sedivac system.

Refer to electrical drawing during installation.

Refer to foot print drawing for recommended work clearance.

NOTE:

This Sedivac is a standalone / offline system with a closed loop circuit.

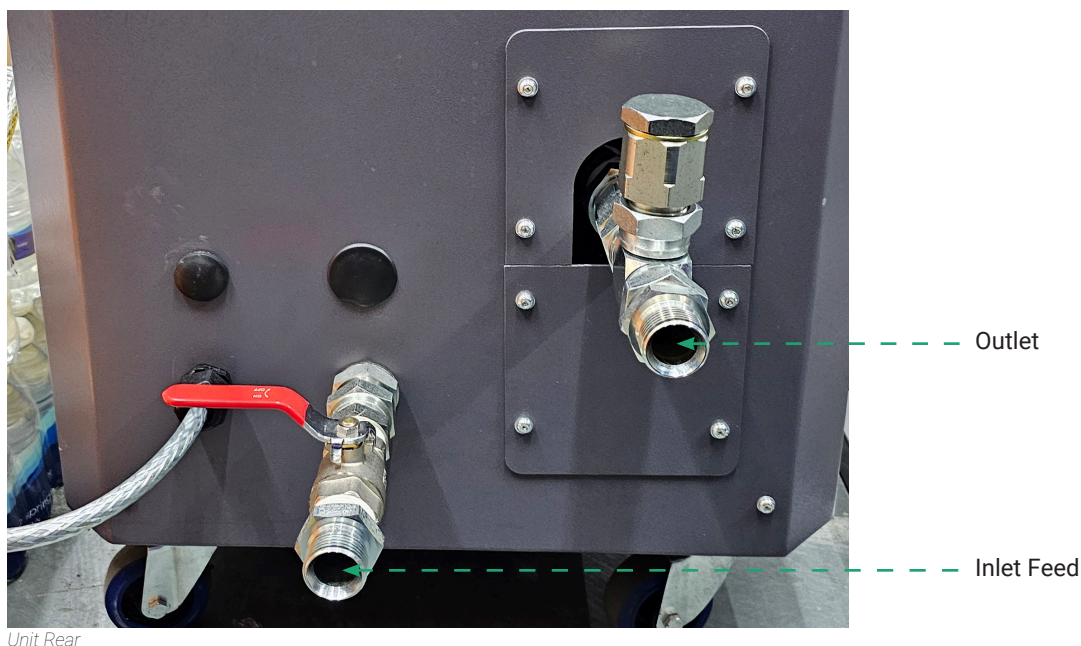
The unit is factory tested using 110vAC. L1,L2 and L3 are 3-phase supply voltage.

See drawing supplied.

PLUMBING INSTALLATION

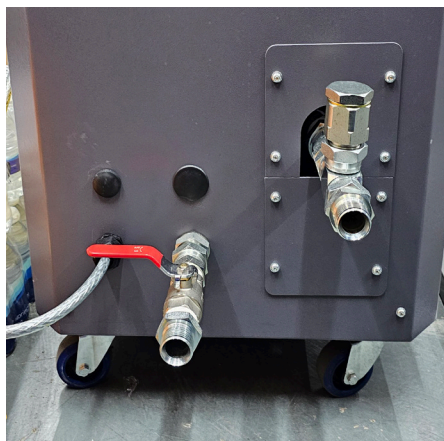
Connecting Sedivac to the Machine Tank:

- Connect Inlet feed to the machine tank vacuum hose.
- Connect to the Outlet to the machine tank agitator hose.

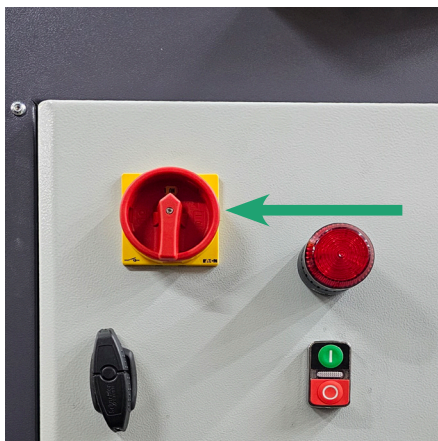


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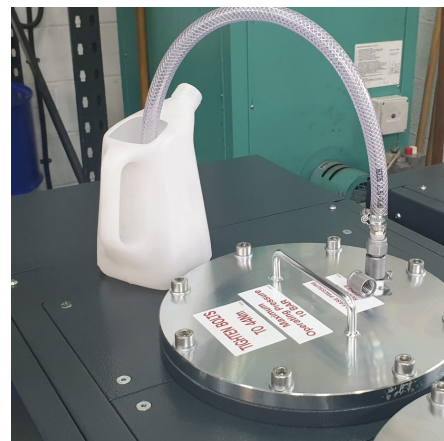
INITIAL SETUP / FILTER PURGE



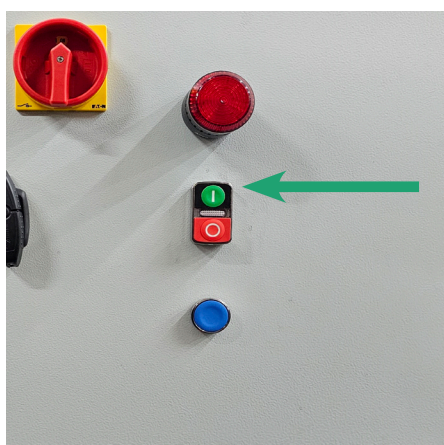
Step 1: Ensure the Sedivac system is connected to the machine tank and that power is connected.



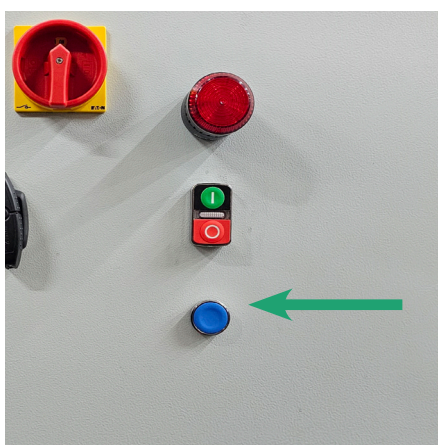
Step 2: Switch the power isolation switch to the 'on' position.



Step 3: Unscrew the test port on the Filter lid and connect the supplied purge hose. Insert the end of the hose in the supplied jug.



Step 4: Activate the pump by pressing the green pump activate button. The filter will fill - liquid will be visible through the purge hose.



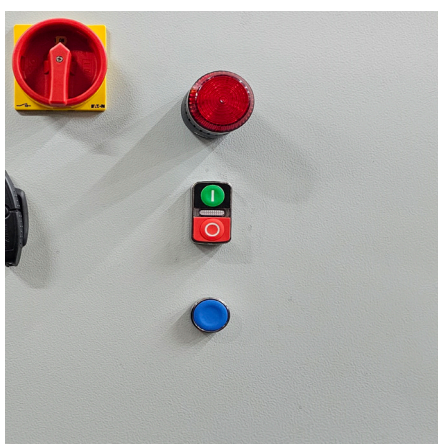
NOTE: If the filter alarm sounds, press the blue reset button (filter alarm reset), then re-activate the pump with the green activate button.



Step 5: When the jug has started filling, press the red standby button (below the green button). The filter has now been purged successfully.



Step 6: Ensure the pump has stopped before removing the purge hose. Replace the protective filter port cap.



Step 7: Activate the pump by pressing the green pump activate button. The system will now agitate and filter the machine tank fluid.



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METHOD OF OPERATION

When properly connected the Sedivac system will operate in the following way.

- 1 Fluid is pulled from the machine tank through the Sedivac filter.
- 2 The integrated pump returns the filtered fluid to the machine tank.
- 3 The tank agitator lifts sediment and directs it towards the suction tube.
- 4 The alarm sounds if the filter bag is full. Replace filter bag.
- 5 Alarm still engaged, consult Pumps and Equipment.

PREVENTATIVE MAINTENANCE

Power down and check the suction tube, agitator tube and all hoses monthly.

Ensure the power cable is free from abrasion.

If in doubt, call the helpline to ensure the system is running safely and efficiently.

TROUBLESHOOTING

The information listed below is for guidance only. If in doubt, call the helpline. Only qualified individuals are permitted to inspect the system or follow the suggested actions.

FAULT	CAUSE	SOLUTION
Unit not functioning	Power supply not connected.	Turn on power Check harting plug is connected.
Motor not rotating pump	Coupling is slipping	Tighten grub screw
Not producing required flow	Feed pump blocked Hoses blocked Filter blocked	Clear pump. Clear hoses. Change over filter.
Filter alarm sounding.	Blocked filter or system fault.	Check the filter, as described in the 'Filter Change Procedure' section. If clean, check for suction tube blockages - ENSURE POWER IS OFF WHEN CHECKING SUCTION. Press the blue 'Filter Alarm Reset' button before pressing the green pump activate button.
Pump not priming	Drawing air from suction hose and fittings. Feed pump not running.	Seal and tighten fittings. Turn on feed pump.

Customer Helpline: 01926 451744



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FILTER CHANGE PROCEDURE

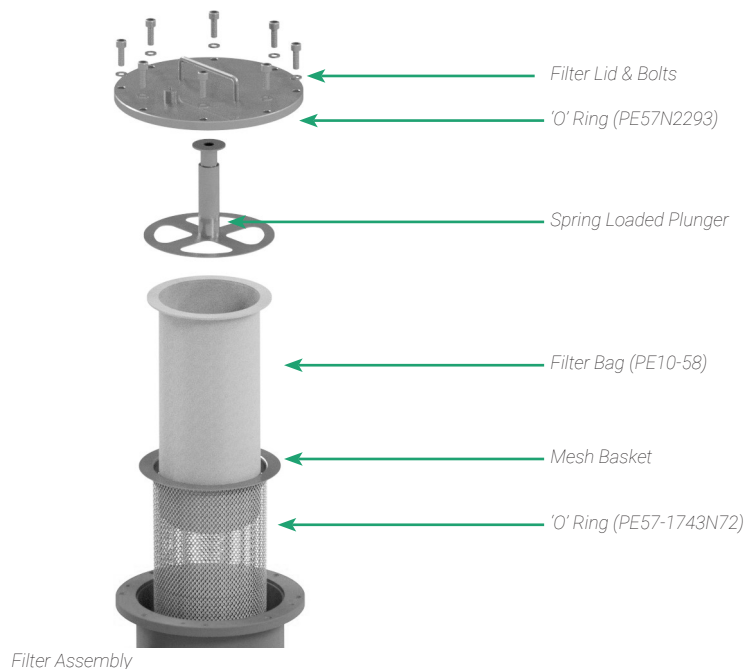
The following procedure can be used to replace a filter on the Sedivac.
The filter block alarm will sound when a filter needs changing.

The system will be in an alarm state - alarm beacon sounding / flashing, along with the control panel indicator.

Filter Replacement Procedure :- When machine is at stop condition.

- 1) Turn power off.
- 2) Remove lid off filter (see image below).
- 3) Remove spring loaded plunger assembly.
- 4) Remove dirty bag with handle and dispose of in accordance with local regulations.
- 5) Replace with new filter bag (PE10-58).
- 6) Refit spring loaded plunger.
- 7) Refit filter lid, ensuring 'O' ring is in correct position.
- 8) Re-tighten 8x bolts to specified torque (as per label).
- 9) Power on.
- 10) Follow Filter Purge guide to remove air from the system.

If the above procedure does not resolve the issue of filter blocked, refer to the troubleshooting guidelines.



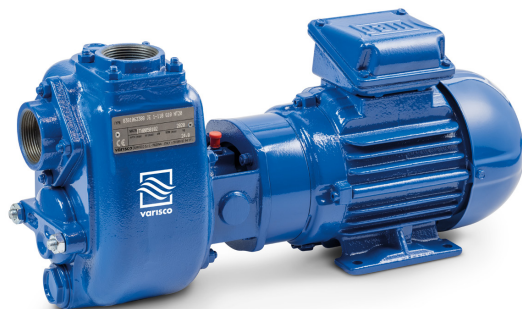
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PUMP - JE 1-110 G10 NT20

JE 1-110 G10 NT20

Electric - Qmax 24 m³/h (105 USgpm) - Hmax 16 m (52 ft)

Code 8381063388



Indicative picture of the product.

Product Data

Suction port
Threaded - 1 1/2" ISO 228 (BSP)
Delivery port
Threaded - 1 1/2" ISO 228 (BSP)
Qmax
24 m³/h - 400 l/min (105 USgpm)
Hmax
16 m (52 ft)
Solids handling
20 mm (0.8")
Motor power
1,1 kW - 1,5 HP
Motor type
IEC standard
Winding for inverters
Cast iron casing
Motor make
WEG W22 Premium
Weight
32 kg (67 lb)

Close-coupled self-priming centrifugal pump with electric motor

Characteristics

The J series self-priming centrifugal pumps are used in applications where a rapid priming capacity is required from demanding suction heights combined with the ability to transfer and manage polluted fluids, dirty and abrasives with suspended large diameter solids. The system is based on an inspectable pump casing which also acts as a water tank allowing a first quick priming without auxiliary systems, simplifying management of the system and reducing the time for maintenance. Within the physically permitted suction height limits, J pumps are a more comfortable and reliable solution than submersible pumps and vertical submersed impeller pumps.

Benefits

- 1) Rapid self-priming**
Without foot valve up to a height of 7.5 m (24.5 ft)
- 2) High resistance**
To abrasive liquids which are turbid and sandy
- 3) Semi-open impeller**
High thickness casting impact resistant
- 4) Wear plate**
Easily replaceable cast iron wear plate, front to the impeller
- 5) Easy maintenance**
Removable front cover for direct access to the impeller

Applications

Industry:

clean, dirty, sandy, muddy, neutral, alkaline, acidic liquids; low viscous petroleum products, solvents even if dirty; milk of lime, caustic soda; washing, cooling, recirculation, smoke scrubbing.

Treatment:

pumping polluted corrosive wastewater containing sand, mud or solids in suspension; dosing neutralizing liquids; pumping out settled sludge.

Naval:

loading and unloading; bilge pumping; washing, fire-fighting, stripping, sanitary duty and circulation.

Agriculture:

surface irrigation; liquid manure oxygenation; transfer and spraying liquid manure or fertilizers; distribution of liquid animal feed; transfer of wine must; washing.

Varisco S.r.l. has certified its Quality, Environment and Safety Management System in accordance with the requirements of the international standard ISO 9001-14001-45001, recognized by the Lloyd Register.

Data sheet: code 8381063388 © Varisco S.r.l. 2021

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PUMP - JE 1-110 G10 NT20

JE 1-110 G10 NT20

PERFORMANCE CURVES

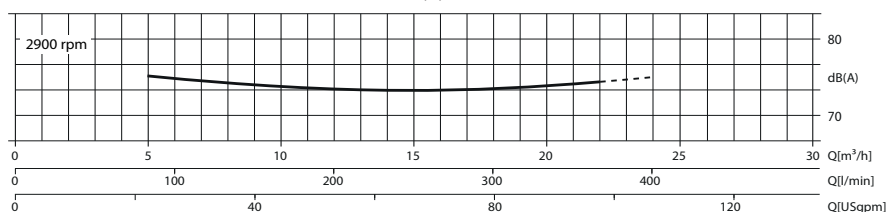


Test according to **UNI EN ISO 9906 standard - level 2B**
 Test liquid: **clean water, density 1.000 kg/m³**
 Spherical solids handling: **D.20 mm (0,8")**

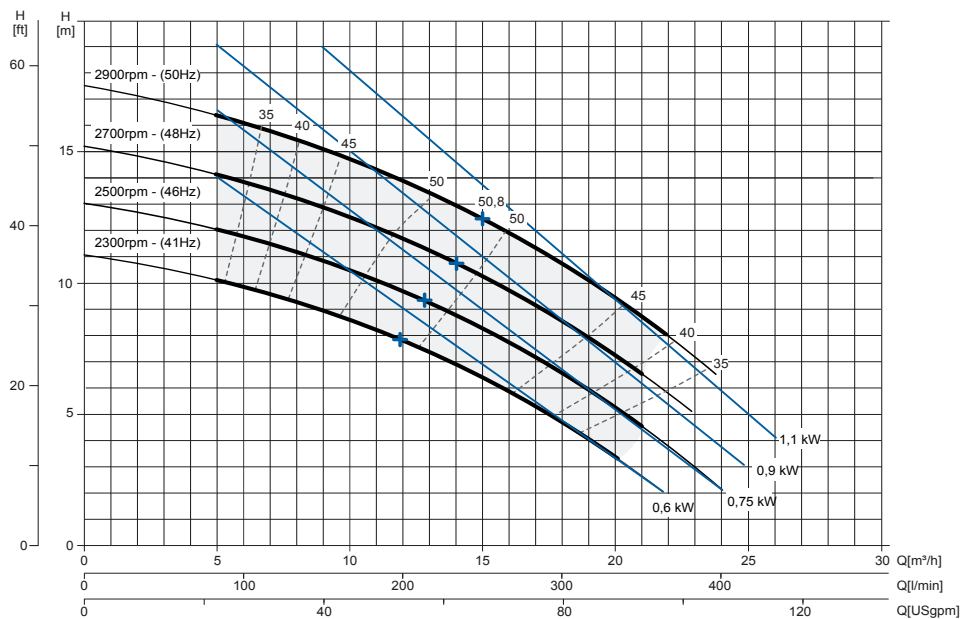
Priming time (2900 rpm): **26s from 1,5 m (5 ft)**
 Installed power: **1,1 kW – 1,5 HP (2.900 rpm)**

Noise curve

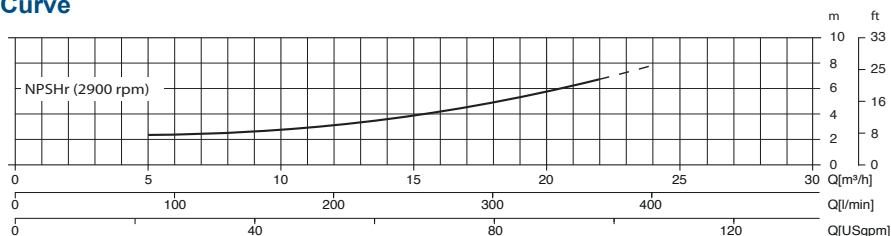
dB(A)=max noise level at 1 m



Multiple speed curve



NPSHr Curve



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PUMP - JE 1-110 G10 NT20

JE 1-110 G10 NT20



TECHNICAL DATA

Pump

Pump model	J 1-110 G10
Qmax [2.900 rpm]	24 m³/h - 400 l/min (105 USgpm)
Hmax [2.900 rpm]	16 m (52 ft)
Suction port	Threaded - 1 1/2" ISO 228 (BSP)
Delivery port	Threaded - 1 1/2" ISO 228 (BSP)
Impeller type	Semi-open, 3 vanes
Solids handling	20 mm (0.8")
Casing	EN 1561 EN-GJL-200 cast iron
Impeller	EN 1561 EN-GJL-200 cast iron
Wear Plate	EN 1561 EN-GJL-200 cast iron
Non-return valve	Check-valve, NBR
Shaft	C45E EN 10083-2 steel
Mechanical seal	Silicon carbide / Silicon carbide
Elastomers	NBR
Lubrication	Grease

Motor

Mains Supply (Three Phase)	220 VD/380 VV ± 5%	230 VD/400 VV ± 10%	240 VD/415 VV ± 5%
Frequency (Nominal Speed)		50 Hz ± 3% / 2.900 rpm	
Absorbed Current	4,21/2,43 A	4,23/2,43 A	4,06/2,35 A
Starting Current Is/In	6.6	6.8	7.7
Efficiency (100%)	82,7% (IE3)	82,7% (IE3)	83,4% (IE3)
Make		WEG W22 Premium	
Standards/Directives		IEC 60034-1	
Construction		Cast iron, TEFC	
Mounting Arrangement		IM 2101 B34	
No. poles		2	
Rated power		1,1 kW - 1,5 HP	
Degree of protection		IP55	
Markings		CE, UL, CSA, EAC	
Insulation Class/Temperature		F/80°K	
Duty Type		Continuous - S1	
Temperature Sensors		Variable - suitable for inverter use (30-50 Hz)	
		PTC, available as option	

Arrangement

Model	Close-coupled N
Dimensions	171 x 484 x 236 mm (6.73 x 19 x 9.28")
Coatings	Polyurethane enamel, average thickness of 100 µm
Color	RAL 5010 Blue (standard)
Features	Close-coupled with rigid coupling "N"
Height connection	0,17 m (0,55 ft)

Optionals

Flanged ports DN40 PN16 EN1092-2 Type B	Cod. 10042259
Flanged ports 1 1/2" ANSI B16.1 Class 125 R.F.	Cod. 10042817
Automatic mechanical seal greaser	Cod. 10008316
Integrated VSD motor inverter	Available by 2021

Weight

Net weight	32 kg (67 lb)
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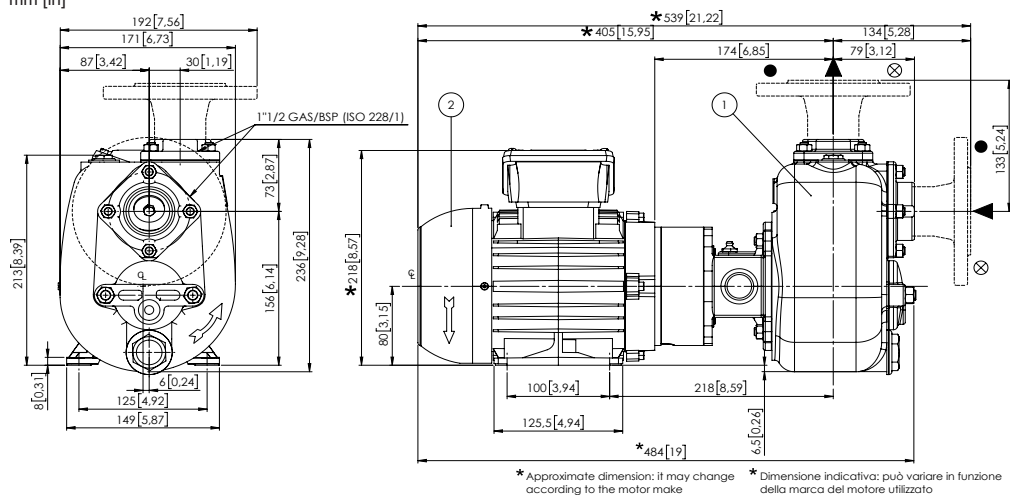
PUMP - JE 1-110 G10 NT20

JE 1-110 G10 NT20

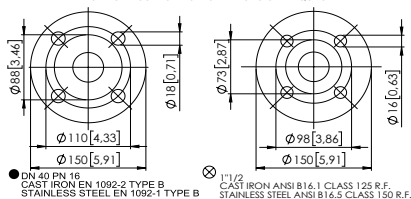
DIMENSIONS



mm [in]



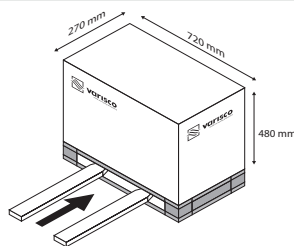
FLANGIATURA SU RICHIESTA / FLANGES ON REQUEST



PACKAGING DIMENSIONS

Dimensions

JE 1-110 G10 NT20 (L x W x H mm)	720 x 270 x 480 + BOX
Gross weight (pump + packing)	36 Kg



Data sheet: code 8381063388 © Varisco S.r.l. 2021

Specification is subject to change without prior notice. Please check with your Varisco representative for the latest specifications.

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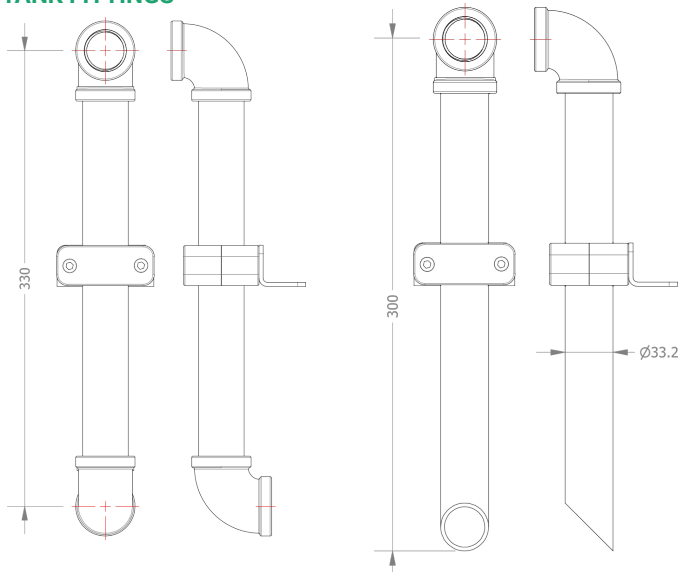


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INSTALLATION KIT

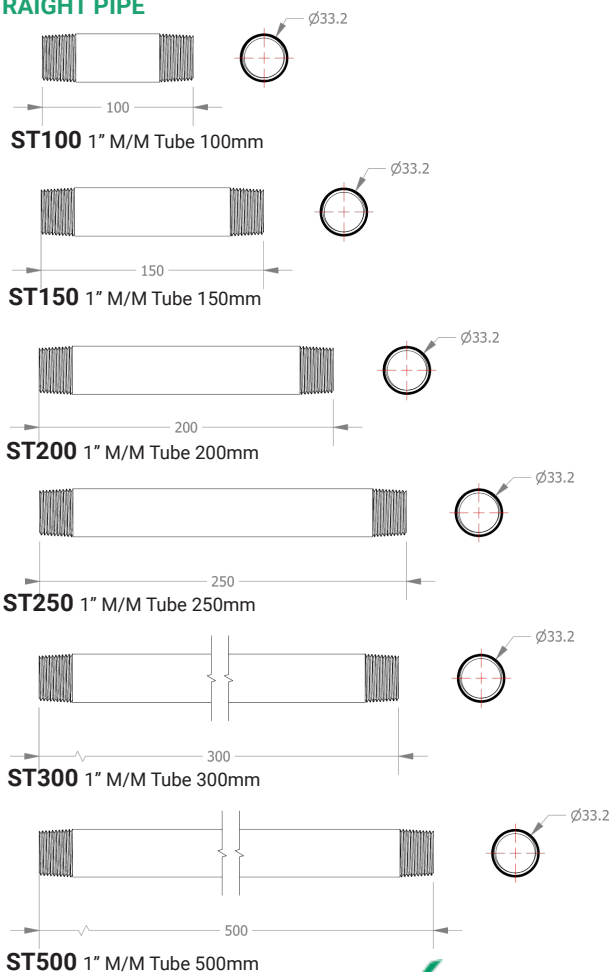
TANK FITTINGS



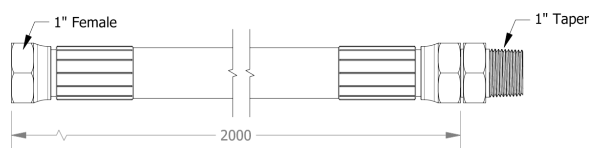
RT300
300mm Vertical return pipe
with two-part clamping boss.
90° Elbow at each end.

SU300
300mm Vertical suction pipe
with two-part clamping boss.
90° Elbow / angled cut.

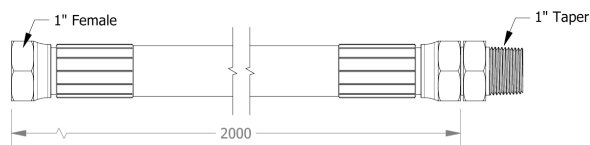
STRAIGHT PIPE



CONNECTION HOSES

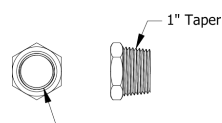


SUH2000 (Suction Hose)
1" Female to 1" Male Taper - 2m Length.

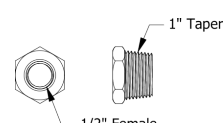


RTH2000 (Return Hose)
1" Female to 1" Male Taper - 2m Length.

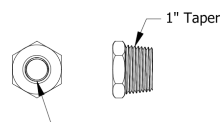
REDUCERS (NOZZLES)



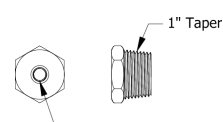
RD1-34
1" Taper to 3/4" Female



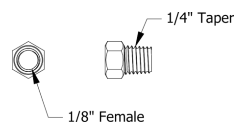
RD1-12
1" Taper to 1/2" Female



RD1-38
1" Taper to 3/8" Female

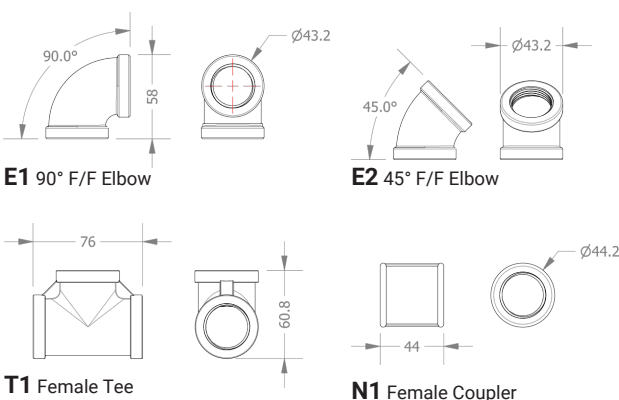


RD1-18
1" Taper to 1/8" Female



RD14-18
1/4" Taper to 1/8" Female

PIPE FITTINGS



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SEDIVAC FILTRATION SYSTEM

FAULT REPORT FORM

Photocopy and complete as required.

DATE OF FAULT:	
TIME OF FAULT:	
CONTACT NAME:	
CONTACT TELEPHONE NUMBER:	
SYSTEM SERIAL NUMBER:	
DESCRIPTION OF FAULT	
ACTION TAKEN:	

EMAIL TO: **sales@pumps-equip.co.uk**



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FILTER BAG ORDER FORM

Filter Bag Part Number 'PE1058'

Photocopy and complete as required.

Address to be Sent:

Ordered By:

Order Number:

Telephone:

Email:

Email to: **sales@pumps-equip.co.uk**



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NOTES



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