Nettuno

DUPLEX®

motorpumps

CENTRIFUGAL MOTORPUMPS FOR CLEAN WATERS

www.nettuno-irrigazione.com

EN 2015
The range of Nettuno® motor pumps DUPLEX series for irrigation is created to solve the problem of water lifting related to the suction of water from a significant depth of standard centrifugal pumps. DUPLEX allows the water suction up to 18 metres deep, distributable in adjustable pressure surface.

**HOW DOES IT WORK**

Duplex can be supplied in standard version with dual pump, i.e. a submersible pump that is made to fall into a pit (18mt) by means of an electric winch (12 VDC). Connected to a SOFT-START system which allows the upwelling of water through the pipes (to blitz), till the surface pump raises the water under pressure. The pump is connected to an inverter that provides an accurate pressure regulation and high energy saving. If there is no need to use the submersible pump, Duplex also allows the use of single surface pump.
STRENGTHS IN COMPARISON WITH A CENTRIFUGAL PUMP

The depth of draft often limits the water supply operations for irrigation. Standard centrifugal pumps allow to draw water from a maximum depth of 6 Mt. To work around this you can look up to submersible pumps, whose lifting capacity is superior, but they cannot be moved easily and require external power.

DUPLEX solves this problem, thanks to the double pumping system: two pumps (one pump of depth and other is surface pump), working in a coordinated manner, ensuring a depth of up to 18mt and outbound delivery until 2789 lt/min and 7.6 bar pressure.

The dual system is powered by a diesel engine coupled to an enclosed alternator to limit noise and trolley transportation. Nettuno DUPLEX: all-in-one practical and intelligent solution!
High Depth Pump

Robustness, user-friendliness, compact size, power and high competitiveness. These pumps are enclosed in a few centimetres of their volume, all the qualities that you can ask for a submersible pump.

Made by innovative hydraulic project to create a very compact machine and structural elements are casted in stainless steel, these pumps are equipped with special devices designed to protect both the pump and its motor from corrosion.

These pumps are placed at the top of the flow category class, an essential feature to achieve depth of draught to elevate.

Surface pump

Vertical multistage centrifugal electric pumps: silent and efficient, perfect to be used in water supply systems.

They are Reliable, sturdy and simple maintenance machines in accordance with Directive 2009/125/EC (EcoDesign - ErP).

Surface pumps supplied with the DUPLEX are always selected from the best manufacturers of pumps to give customers the reliability and maintenance security.
SYSTEMS FOR PUMPING AND IRRIGATION

DUPLEX is available with a range of capacities from 40 to 85kVA designed with the goal of providing maximum strength, contains the boundary dimensions which is perfect for mobile use.

Like any Visa product, prior to delivery, the machine is subjected to a severe test of all components with more than 30 checks to give our customers the highest quality and efficiency.

**Main Features**
- Draught at high depths.
- Low voltage gear with stainless steel cable
- SOFT-START system allows a boot and a slow shutdown of submersible pump. This helps to prevent water hammer and reduces the power consumption of the pump at start-up.
- Inverter connected to the pump for speed control and flow variation
- Electric Panel with automatic or manual cycle and with overload protection (turnstile).
- Ability to leverage used energy to power the pumps even for external equipment or equipment through the electrical outlet kit (optional).

**Engines**

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ELECTRICAL PANEL IS AMONG THE INDUSTRY’S MOST ADVANCED & TOP QUALITY COMPONENTS

A FURTHER ADDED VALUE OF THIS MOTOR IS THE POSSIBILITY OF REMOTE CONTROL.

VIA SIMPLE SMS, YOU CAN START THE AUTOMATIC CYCLE WITHOUT MONITORING THE MACHINE.

THE ELECTRIC FRAMEWORK/PANEL

1. Duplex motor pumps are equipped with a latest generation unit for control and visualization of motor parameters, alternator and surface pump.
2. Emergency Button
3. Potentiometer for frequency control Inverter
4. Electric Power winch
5. Main switch
6. Pump controls
7. Keypad for the inverter control and setting
8. SOFT-START Controls of submersible pump
9. Connection Socket for remote control

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SYSTEMS FOR PUMPING AND IRRIGATION

- 12 VDC ELECTRIC WINCH WITH INOX CABLE
- SURFACE PUMP
- ROTATING ARM FOR IMMERSION OF THE PUMP
- SUBMERSIBLE PUMP
SPECIAL VERSION FOR CONSTRUCTION SITE

SIDE SUPPORT FOR HOT GALVANIZED PIPE

DRAWBAR WITH SMALL WHEEL (ROTATABLE)

DRUM WITH AUTOMATIC REWIND FOR ELECTRIC CABLE (ALIMENTATION OF SUBMERSIBLE PUMP)

STABILIZER FOOT

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**SOFTSTART - Submersible pump**

The Softstart is an electronic starter that enables starting and stopping of the engine gradually acting on basic voltage and current parameters but, after start up it feeds the engine to a fixed frequency of 50 Hz.
INVERTERS - Surface pump Control

The inverter is a device that allows you to manage the change in engine speed through frequency control. Allows adjustment of speed and then the pump flow rate variation by allowing gradual start and stop which reduces the stress on mechanical, electrical and plumbing components other than obtaining significant energy savings because the pump is used for the actual requirements of the hydraulic system.

The ability to vary the frequency is not just limited to on-off phases but also during the whole period of operation of the engine.
## Systems for Pumping and Irrigation

### Submersible Pump

<table>
<thead>
<tr>
<th>Model</th>
<th>Power (Electric Motor)</th>
<th>Q</th>
<th>H</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOWARA Z660-04 - L4CT</td>
<td>7.5 kW</td>
<td>1300 l/min</td>
<td>14 mt</td>
</tr>
<tr>
<td>LOWARA ZB75 02/15-L6W</td>
<td>9.3 kW</td>
<td>1668 l/min</td>
<td>20 mt</td>
</tr>
<tr>
<td>LOWARA ZB125 02-L6W</td>
<td>15 kW</td>
<td>2789 l/min</td>
<td>18 mt</td>
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### Surface Pump

<table>
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<tr>
<th>Model</th>
<th>Power (Electric Motor)</th>
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<tbody>
<tr>
<td>Caprari HVU 50/3A</td>
<td>22 kW</td>
<td>1300 l/min</td>
<td>59 mt</td>
</tr>
<tr>
<td>Caprari HVU 65/2E</td>
<td>37 kW</td>
<td>1668 l/min</td>
<td>85 mt</td>
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<td>Caprari HVU 80/1B</td>
<td>45 kW</td>
<td>2760 l/min</td>
<td>76 mt</td>
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</table>

### Generating Set

<table>
<thead>
<tr>
<th>Engine</th>
<th>kVA</th>
<th>Alternator</th>
<th>kVA</th>
<th>Canopy</th>
<th>Fuel Tank Capacity</th>
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</thead>
<tbody>
<tr>
<td>IVECO F32SM1A</td>
<td>40kVA</td>
<td>MARELLI</td>
<td>42kVA</td>
<td>ONIS VISA - Powerfull C20</td>
<td>950lt</td>
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<tr>
<td>IVECO N45SM1A</td>
<td>60kVA</td>
<td>MARELLI</td>
<td>62kVA</td>
<td>ONIS VISA - Powerfull C20</td>
<td>950lt</td>
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### Control Unit

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<th>Control Panel</th>
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<tbody>
<tr>
<td>ELCOS CEM-120</td>
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<th>Soft Start Device - Submersible Pump</th>
<th>Inverter - Surface Pump</th>
<th>Modem</th>
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<tbody>
<tr>
<td>ABB Soft-start</td>
<td>ABB Inverter 22 kW</td>
<td>Modem GSM</td>
</tr>
<tr>
<td>ABB Soft-start</td>
<td>ABB Inverter 30 kW</td>
<td>Modem GSM</td>
</tr>
<tr>
<td>ABB Soft-start</td>
<td>ABB Inverter 37 kW</td>
<td>Modem GSM</td>
</tr>
<tr>
<td>ABB Soft-start</td>
<td>ABB Inverter 45 kW</td>
<td>Modem GSM</td>
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For more information, visit [www.nettuno-irrigazione.com](http://www.nettuno-irrigazione.com)
DUPLEX MOTORPUMPS - STANDARD ACCESSORIES

- Electric Winch with 20mt steel cable
- Winch controller
- Emergency stop button
- Drawbar with small wheel rotatable
- Battery disconnector
- Winch overload control display
- Cable reels
- Arm holder for the lift up of the sub. pump
- Tubes holder

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SYSTEMS FOR PUMPING AND IRRIGATION
NETTUNO is a trademark of VISA S.p.A.

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MOTOPOMPE - IRRIGATORI - GRUPPI ELETTROGENI - TORRI DI ILLUMINAZIONE
MOTORPUMPS - HOSE REEL IRRIGATORS - GENERATING SETS - LIGHTING TOWERS
MOTORPUMPEAGGREGATE - BEREIGNUNGMASCHINEN - STROMAGGREGATE - LICHTMASTEN
MOTORPOMPEN - BEREGENINGSHASPELS - STROOMAGGREGATEN - LICHTMASTEN
НАСОСНЫЕ СТАНЦИИ – ДОЖДЕВАЛЬНЫЕ МАШИНЫ – ЭЛЕКТРОГЕНРАТОРЫ – ОСВЕТИТЕЛЬНЫЕ МАЧТЫ