

SYSTEMS FOR PUMPING AND IRRIGATION



Nettuno **DUPLEX** motorpumps

CENTRIFUGAL MOTORPUMPS
FOR CLEAN WATERS

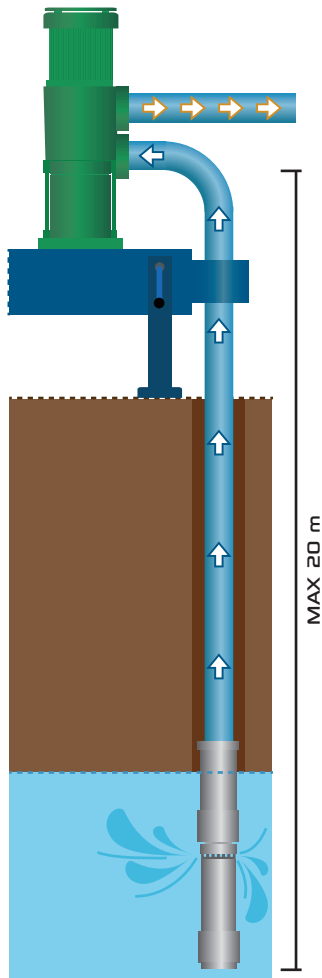


www.nettuno-irrigazione.com

 EN 2015

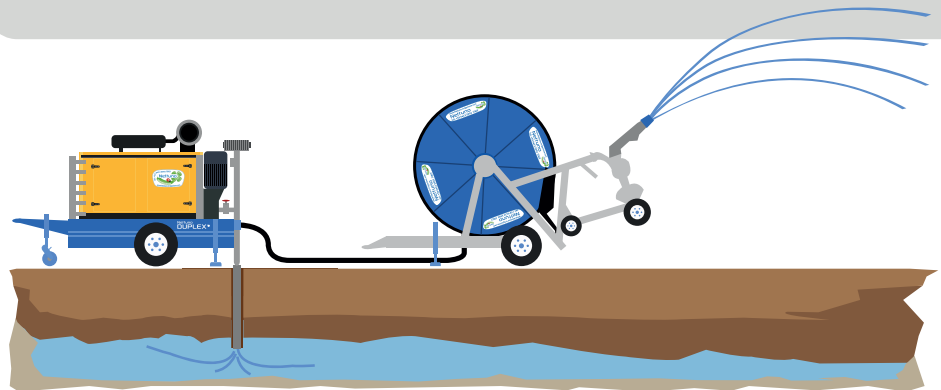


The range of Nettuno® motor pumps DUPLEX series for irrigation is created to solve the problem of water lifting related to the suction of water from a significant depth of standard centrifugal pumps. DUPLEX allows the water suction up to 18 metres deep, distributable in adjustable pressure surface.



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



SURFACE
PUMP

+



SUBMERSIBLE
PUMP

DUPLEX SYSTEM

vs



STANDARD CENTRIFUGAL PUMP

HIGH DRAUGHT DEPTH

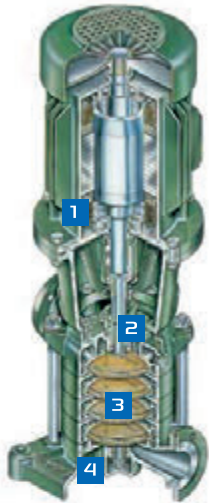
The depth of draft often limits the water supply operations for irrigation.

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!



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.

- | | |
|-------------------------|------------------------|
| 1 Electric motor | 4 Compass |
| 2 Delivery body | 5 Suction Mount |
| 3 Impeller | |



High Depth Pump

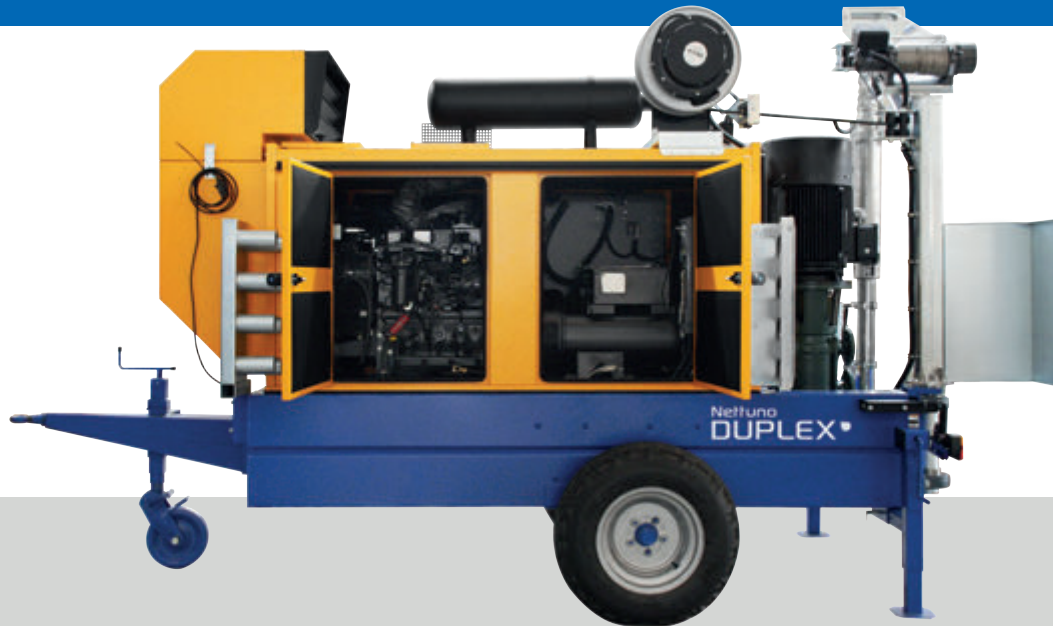
Robustness, user-friendliness, compact size, power and high competitiveness. These pumps are enclosed in a few centimetres of their volume, all the qualities that you can ask for a submersible pump.

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.

- | | |
|----------------------------|------------------------|
| 1 Hydraulic Stages | 3 Suction Mount |
| 2 EASY pump closure | |





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

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.



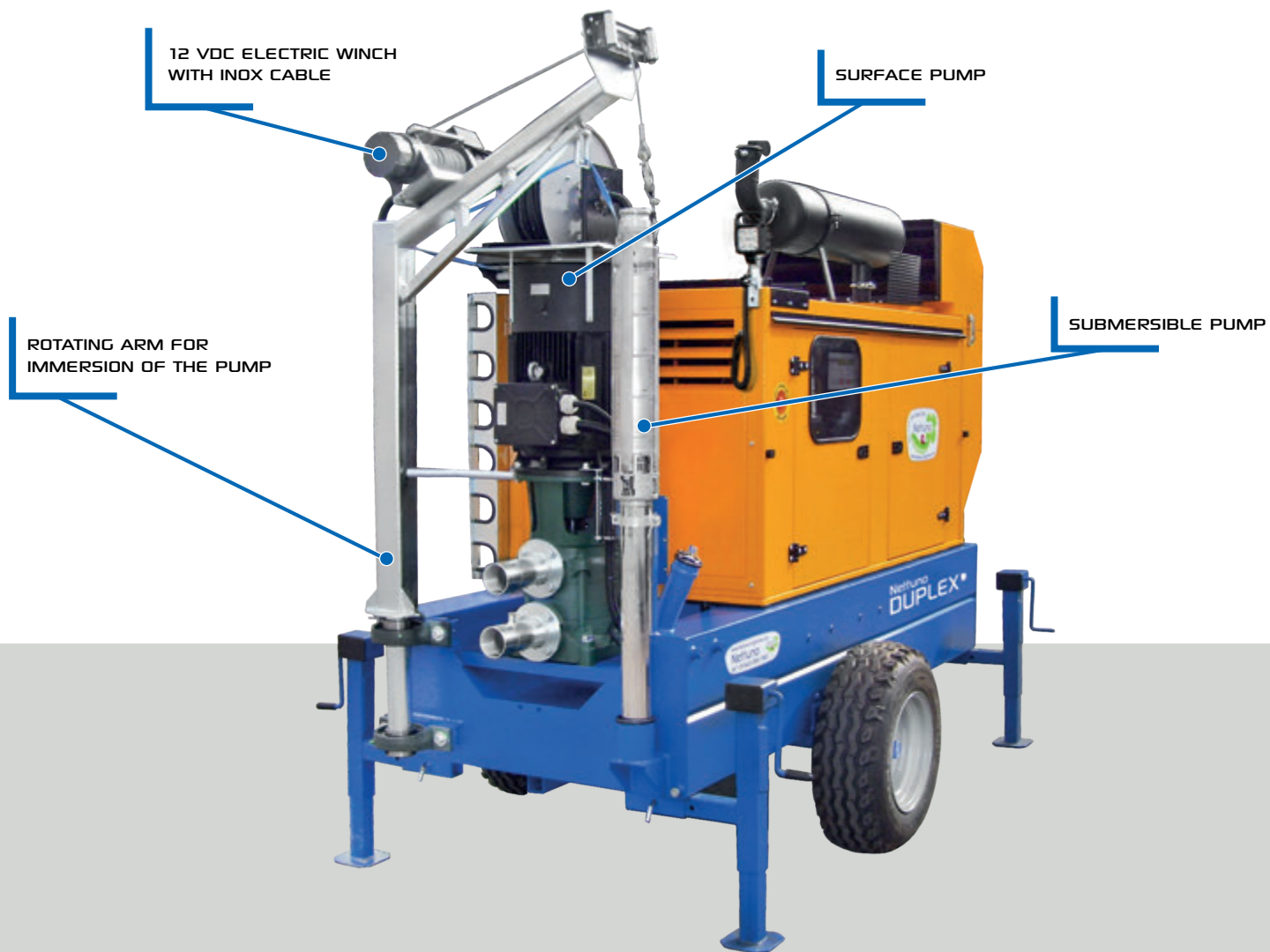
ELECTRICAL PANEL IS AMONG THE INDUSTRY'S MOST ADVANCED & TOP QUALITY COMPONENTS

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



SIDE SUPPORT FOR
HOT GALVANIZED PIPE

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

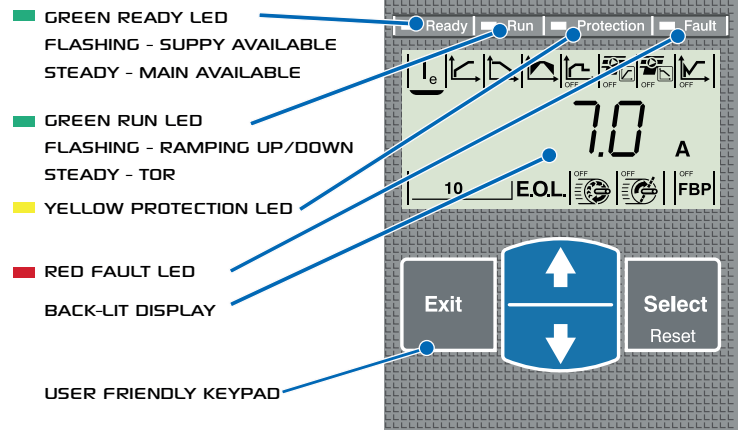
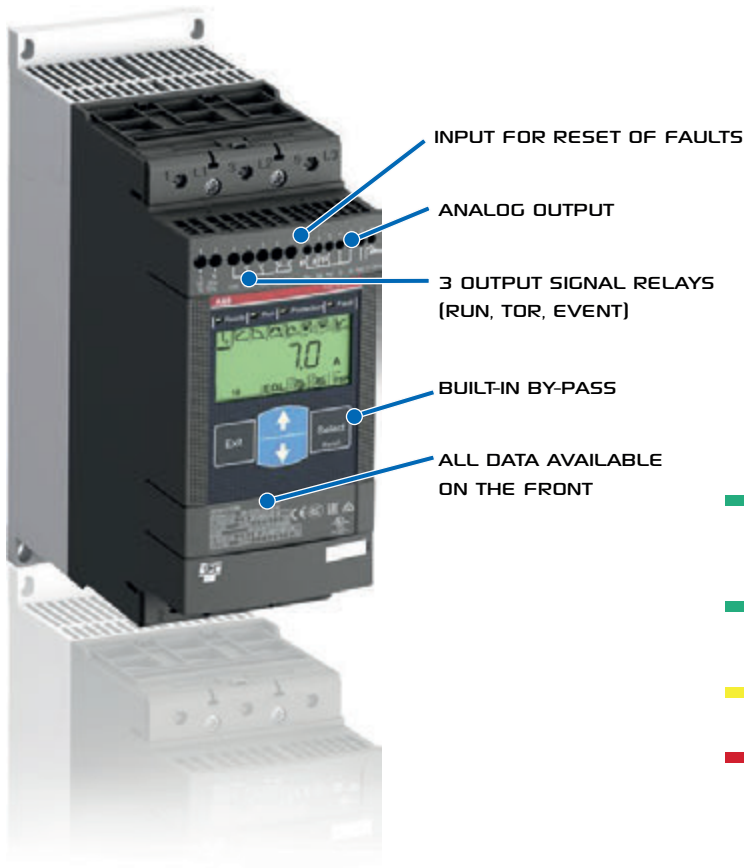
DRAWBAR WITH SMALL
WHEEL (ROTATABLE)

STABILIZER FOOT



SOFTSTART - Submersible pump

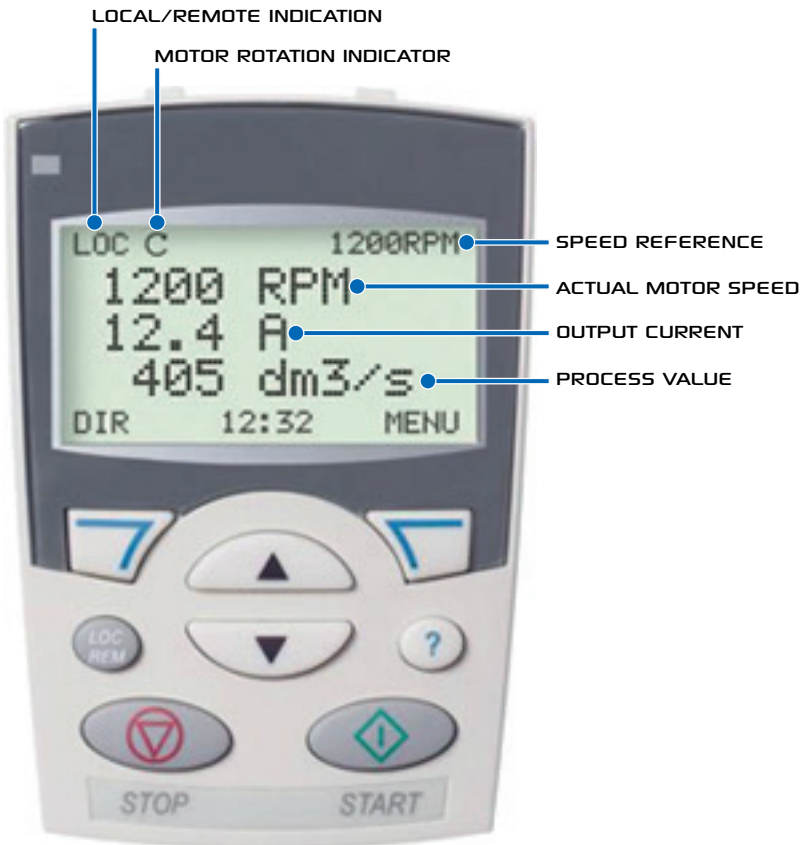
The Softstart is an electronic starter that enables starting and stopping of the engine gradually acting on basic voltage and current parameters but, after start up it feeds the engine to a fixed frequency of 50 Hz.



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.



Nettuno DUPLIX	DPX F40-22	DPX F60-30	DPX F60-37	DPX F85-45
SUBMERSIBLE PUMP				
model	LOWARA:Z660-04 - L4CT	LOWARA:Z660-04 - L4CT	LOWARA:Z875 02/15-L6W	LOWARA:Z8125 02-L6W
power (electric motor)	7,5 KW	7,5 KW	9,3 KW	15 KW
Q	1300 l/min	1301 l/min	1668 l/min	2789 l/min
H	14 mt	14 mt	20 mt	18 mt
SURFACE PUMP				
model	CAPRARI: HVU 50/3C	Caprari: HVU 50/3A	Caprari: HVU 65/2E	Caprari: HVU 80/1B
power (electric motor)	22 KW	30 KW	37 KW	45 KW
Q	1300 l/min	1301 l/min	1668 l/min	2760 l/min
H	59 mt	84 mt	85 mt	76 mt
GENERATING SET				
engine	IVECO F325M1A	IVECO N455M1A	IVECO N455M1A	IVECO N45TM1A
kVA	40kVA	60kVA	60kVA	85kVA
alternator	MARELLI	MARELLI	MARELLI	MARELLI
kVA	42kVA	62kVA	62kVA	85kVA
canopy	ONIS VISA - Powerfull C20	ONIS VISA - Powerfull C20	ONIS VISA - Powerfull C20	ONIS VISA - Powerfull C20
fuel tank capacity	950lt	950lt	950lt	950lt
CONTROL UNIT				
Control Panel	ELCOS CEM-120	ELCOS CEM-120	ELCOS CEM-120	ELCOS CEM-120
soft start device - submersible pump	ABB Soft-start	ABB Soft-start	ABB Soft-start	ABB Soft-start
Inverter- surface pump	ABB Inverter 22 kW	ABB Inverter 30 kW	ABB Inverter 37 kW	ABB Inverter 45 kW
Modem	Modem GSM	Modem GSM	Modem GSM	Modem GSM

DUPLEX MOTORPUMPS - STANDARD ACCESSORIES



ELECTRIC WINCH WITH 20MT STEEL CABLE



WINCH CONTROLLER



EMERGENCY STOP BUTTON



DRAWBAR WITH SMALL WHEEL ROTATABLE



BATTERY DISCONNECTER



WINCH OVERLOAD CONTROL DISPLAY



CABLE REELS



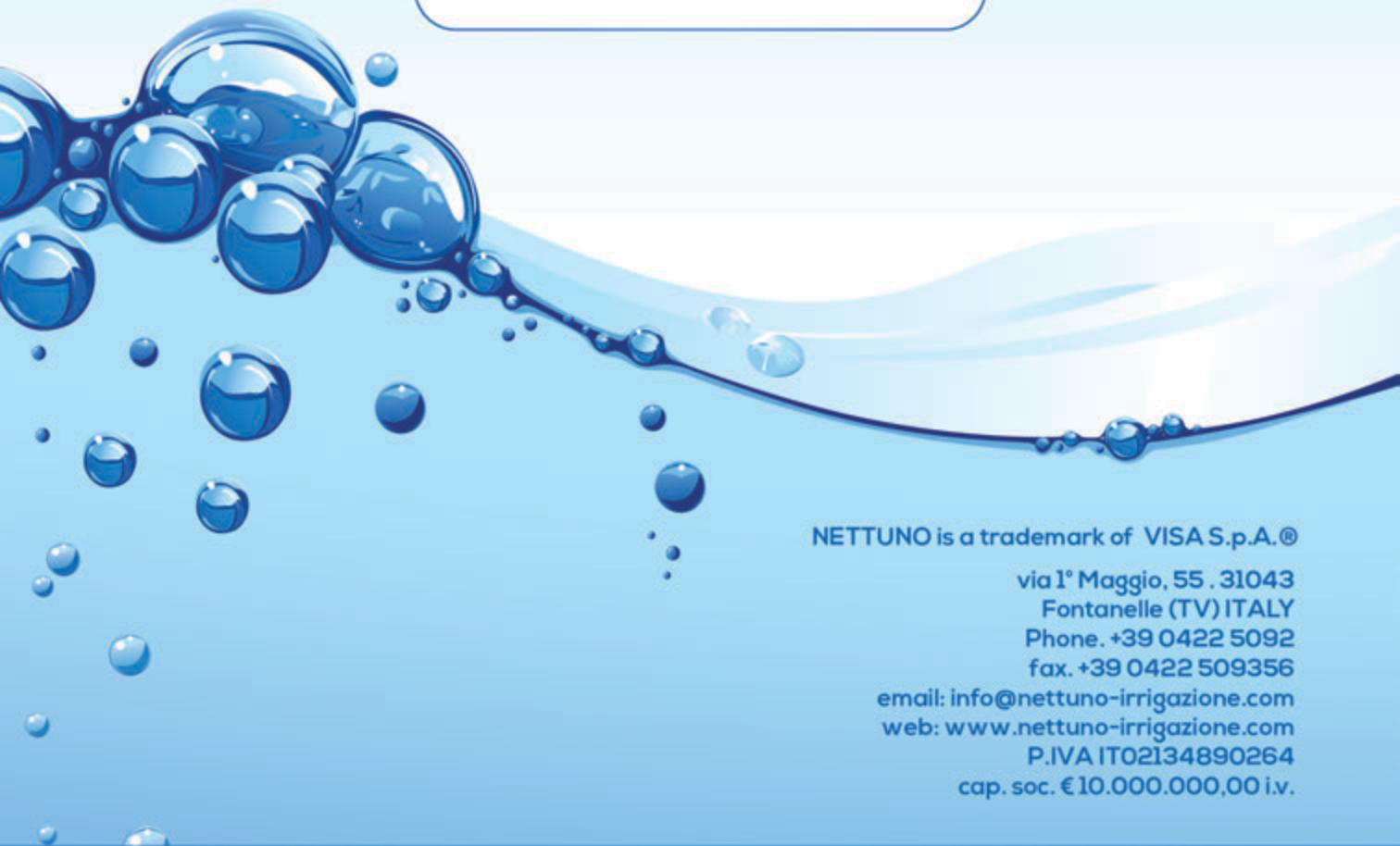
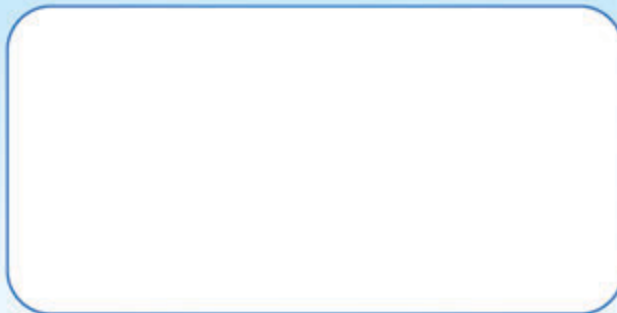
ARM HOLDER FOR THE LIFT UP OF THE SUB. PUMP



TUBES HOLDER







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via 1° Maggio, 55 . 31043

Fontanelle (TV) ITALY

Phone. +39 0422 5092

fax. +39 0422 509356

email: info@nettuno-irrigazione.com

web: www.nettuno-irrigazione.com

P.IVA IT02134890264

cap. soc. € 10.000.000,00 i.v.

MOTOPOMPE - IRRIGATORI - GRUPPI ELETTOGENI - TORRI DI ILLUMINAZIONE
MOTORPUMPS - HOSE REEL IRRIGATORS - GENERATING SETS - LIGHTING TOWERS
MOTORPUMPEAGGREGATE - BEREGNUNGSMASCHINEN - STROMAGGREGATE - LICHTMASTEN
MOTORPOMPEN - BEREGENINGSHASPELS - STROOMAGGREGATEN - LICHTMASTEN
НАСОСНЫЕ СТАНЦИИ - ДОЖДЕВАЛЬНЫЕ МАШИНЫ - ЭЛЕКТРОГЕНЕРАТОРЫ - ОСВЕТИТЕЛЬНЫЕ МАЧТЫ