



# Industrial Products



As being BAYSU Water Treatment, the main aim of Research and Development works carried out with the specialists in our team is to please our dear valued customers.

Recently, global warming has not only been a statement told by the scientists, but it also has become a threat to all living beings. Depleted water supplies due to the global warming, the quality problem of tap water, and distrust for brands... Aside from fresh water, as even getting water in some areas has become almost impossible, we are conscious of the necessity of using our supplies in the most proper way. Therefore, we offer a better life quality by filtering the harmful substances in our existing supplies with eco-friendly systems.

To meet various demands about water treatment systems, we closely follow the sectoral development at home and abroad. Whether in your home or in your workplace, we offer full service and professional solutions with our water treatment systems developed for you to consume healthy water wherever you want.

BAYSU Water Treatment Systems, providing service in many areas like sites, villas, schools and cafés in the domestic area; textiles, food, and health in the industrial area, has internationally recognized NFS document. With the strength, we have taken from our co-partners providing service for over 140 years in abroad, we are maintaining our domestic activities with trust, quality and professional manner.

As our ancestors said, "Health comes first". The past shapes the future. Therefore, we are proud of contributing to building healthy generations thanks to the membrane and alkaline filters we have used in our systems.

As being BAYSU Water Treatment, we aspire to be the perfection in your colors, health in your body and the beauty in your face...



## our vision

To provide our dear customers with healthy and high-quality water by following national and international innovations.

## our mission

As being BAYSU Water Treatment, the main aim of Research and Development works carried out with the specialists in our team is to please our dear valued customers.

## solutions & applications

As being BAYSU Water Treatment, we offer different solutions for domestic and industrial plants. With our expert engineers and technical staff, we carry out the measurement of wanted water quality of preservative purification and chemical dosing systems based on the flow, which will enable the water treatment projects to work with high efficiency.

# Our applications;

- Industrial and Domestic Reverse Osmosis Systems
- The Processes of Fresh Water Production from Sea Water
- Industrial and Domestic Filtration Systems – Water Softening Systems
- Nanofiltration and Ultra Filtration Solutions
- Waste Water and Recycling Applications
- Dosing and Disinfection Systems
- Degassing and Deionisation Systems
- Water Treatment Chemicals and Minerals



# Our Team

As being BAYSU Water Treatment, we founded our company in 1996 for the sake of bringing healthy water to you, meeting demands of our dear customers with our focus on the awareness of social responsibility and human health and for the sake of developing quality, scientific and economical solutions. Within our organization, there are 2 environmental engineers, 1 electrical and electronic engineer, 2 industrial engineers, 2 mechanical engineers, 4 electrical and automation technicians, 1 environmental technician, 2 mechanical technicians, 12 teams of mechanical installers, 5 field-assembly and commissioning teams and employees working in other departments. We try to provide prestigious service to our valued customers with the sense of management believing the stability created as a result of long-termed teamwork.

## water treatment specialist

The BAYSU Water Treatment Systems Cc.Ltd. is maintaining to work with it's efficient permanent staff located in different cities of Turkey in considering complete customer satisfaction as always to be considered to give it's priority. Our company is specialized to create the professional solutions both in manufacturing and importing from abroad many of devices & equipments as per some various demands of water treatment area

The importance of water quality has being increased day by day in last decades up to this time both in globe and our Country by the reason of global warming, decreasing of clean water sources besides troubles of their quality as well. Therefore, our company aims to provide as in quality water in our country appropriate fort he human health both domestic and as industrial to remove such as odour, heavy metals, inorganic contaminants like arsenic and scale besides particle contaminant of sediment which the same removals are guaranteed by official analysis.

Further, our company helps to promote in production and quality standart with using of big projects of the water treatment related healt and hotel business sectors in addition to the Industrial areas of textile, food, construction, naturel Stone quarry.

## integrated quality management

Calculation of protected treatment and chemical dosage which will be created to work high efficiency depending on quality and water flow are made on the field by our hot stuff of engineers as well as technical staff.

# Corporate Profile

Hope to become always healty with not forgotten to share the missions of us in order to create more viable and clean world in this universe in which clear water sources contaminate consistantly by our mankind at the same time.

- Industrial and Domestic Reverse Osmosis Systems
- Procurement of Fresh Water from the Sea Water
- Industrial and Domestic Filtration Systems
- Water Softening Systems
- Solutions related Nano and Ultra Filtration
- Applications of Waste Water and Recovery
- Dosage and Disinfection Systems
- Desagor and Deionasition Systems
- Chemicals and Minerals for Water Treatment



Aquabay is a Registered Brand of BAYSU



# Industrial Reverse Osmosis Systems

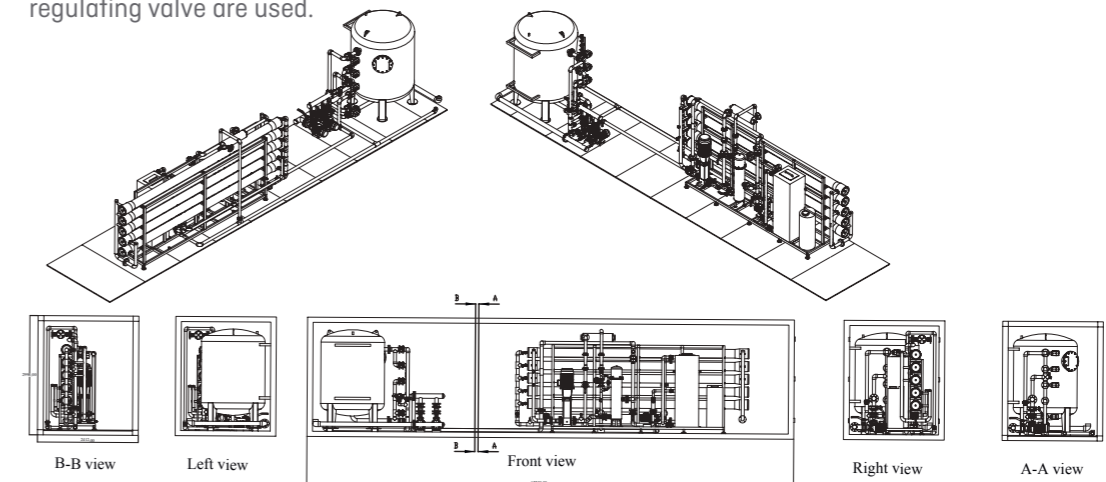
The Reverse Osmosis Systems are the newest and the quickest developing water purification technology today. Since it was very new and expensive in the past days, while the reverse system was being used in only dry areas to obtain drinking water from sea water and in companies like pharmaceutical and cosmetic sectors in need of high-quality water, now, the usage of reverse osmosis systems are more common with the simplification of operating systems and the affordable prices thanks to the new technologies.

The Industrial Reverse Osmosis Systems are preferred for obtaining drinking water from the municipal and bitter well water, at the processes making production by using water with poor conductivity, in the waste water recovery processes, for filtering the water with the high amount of metal ions and for obtaining drinking water from the sea water.

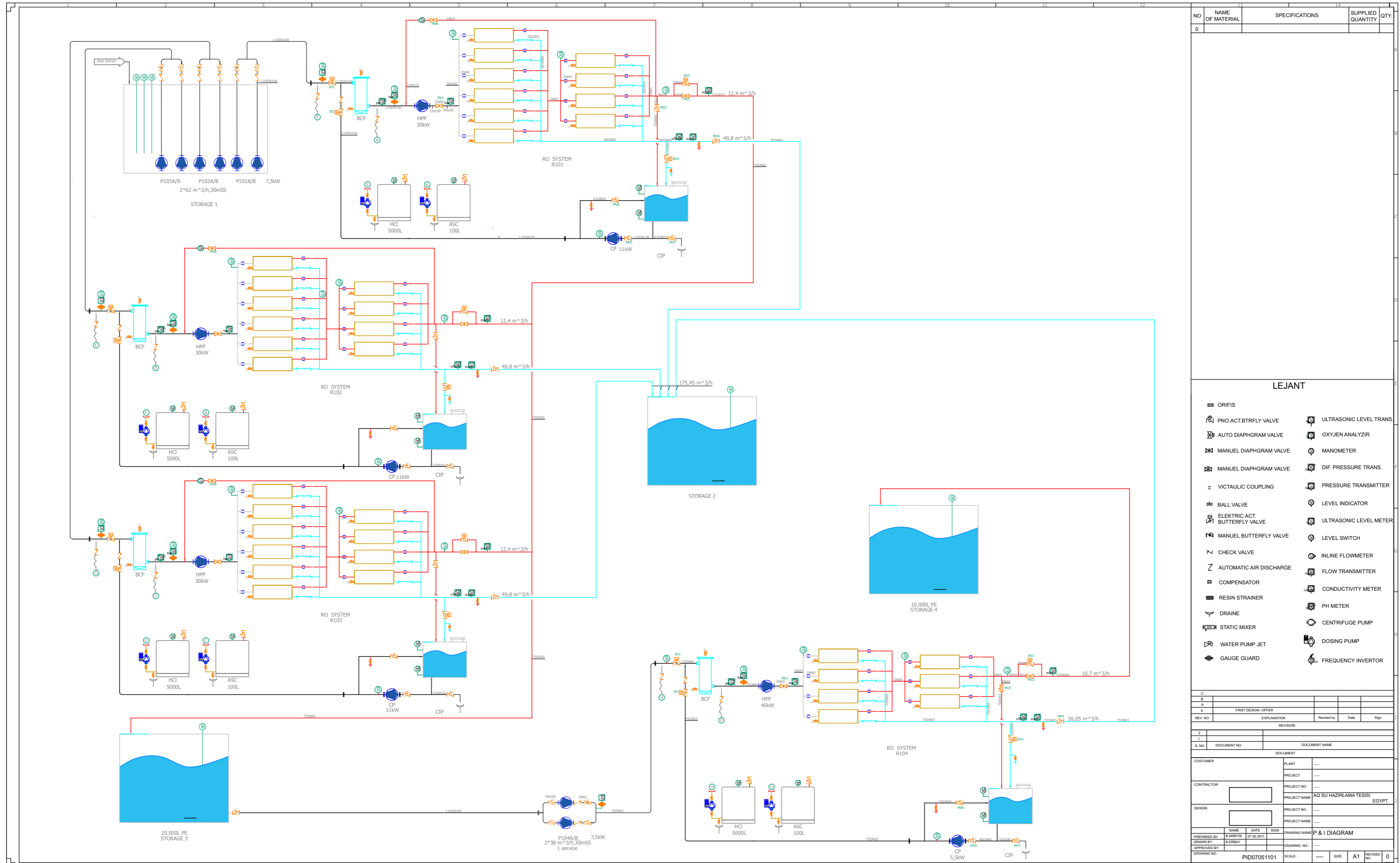
There are semi-permeable membranes at the heart of RO treatment system. The semi-permeable pore structure on these membranes has bigger structure than the diameter of pure water molecules, but has smaller structure than the diameters of solutes in water. When the high-pressure water is given to the membrane, only the pure water molecules and %1-3 of melts in water can penetrate into the membrane pores. Thus, while melts in water are being kept minimum at the rate of %98 depending on their diameters, the suspended particles, microorganisms like bacteria and virus are filtered. Not being able to pass from the pores, while the water with denser molecules is being drained, the congestion of membrane is prevented at the same time. As the operation is totally physical, it is eco-friendly.

Baysu Industrial RO systems are PLC controlled, fully automatic and their use is practical. It was produced from stainless steel construction to serve long times and to minimize the maintenance and protection costs. The membrane cover can be chosen as either stainless or FRP optionally. The high-pressure pump is centrifuge with the vertical shaft and AISI 304 OR 316 steel. Accessories like flowmeter and TDS meter, instantly showing system performance, are used.

The RO treatment system has inlet pressure sensor to make RO system run perfectly under all conditions and to protect the pump against the influent cut, and it has a level control system to close the system when the reserve tank is full. To make membrane run longer, auto flush (automatic washing valve which retards possible blockage in the system), CIP system (chemical washing), membrane rinsing system, and to provide system recovery and pump flow stabilization, recycling regulating valve are used.



# P&I DIAGRAM



NO	NAME OF MATERIAL	SPECIFICATIONS	SUPPLIED QUANTITY	QTY.
0				

NO	NAME OF MATERIAL	SPECIFICATIONS	SUPPLIED QUANTITY	QTY.
0				

**LEJANT**

ORIFIS	ULTRASONIC LEVEL TRANS.
PNO ACT. BTRFLY VALVE	OXYJEN ANALYZIR
AUTO DIAPHRAM VALVE	MANOMETER
MANUEL DIAPHRAM VALVE	DIF. PRESSURE TRANS.
MANUEL DIAPHRAM VALVE	PRESSURE TRANSMITTER
VICTAULIC COUPLING	LEVEL INDICATOR
BALL VALVE	ULTRASONIC LEVEL METER
ELEKTRIC ACT. BUTTERFLY VALVE	LEVEL SWITCH
MANUEL BUTTERFLY VALVE	INLINE FLOWMETER
CHECK VALVE	FLOW TRANSMITTER
AUTOMATIC AIR DISCHARGE	CONDUCTIVITY METER
COMPENSATOR	PH METER
RESIN STRAINER	CENTRIFUGE PUMP
DRAINE	DOSING PUMP
STATIC MIXER	FREQUENCY INVERTOR
WATER PUMP JET	
GAUGE GUARD	

REV. NO.	EXPLANATION	Revised by	Date	Sign
0	FIRST DESIGN-OFFER			
1				
2				

CUSTOMER	PLANT	.....
CONTRACTOR	PROJECT	.....
DESIGN	PROJECT NO.	.....
	PROJECT NAME	AQ SU HAZIRLAMA TESISI EGYPT

PREPARED BY	NAME	DATE	SIGN	DRAWING NAME
DRAWN BY	BANKIYK	27.05.2011		P & I DIAGRAM
APPROVED BY	BERBATY			DRAWING NO. ....
DRAWING NO.	PID07051101	SCALE:	SIZE:	A1
				REVISED NO. 0

# Fresh Water Production from Sea Water with Reverse Osmosis

SWRO



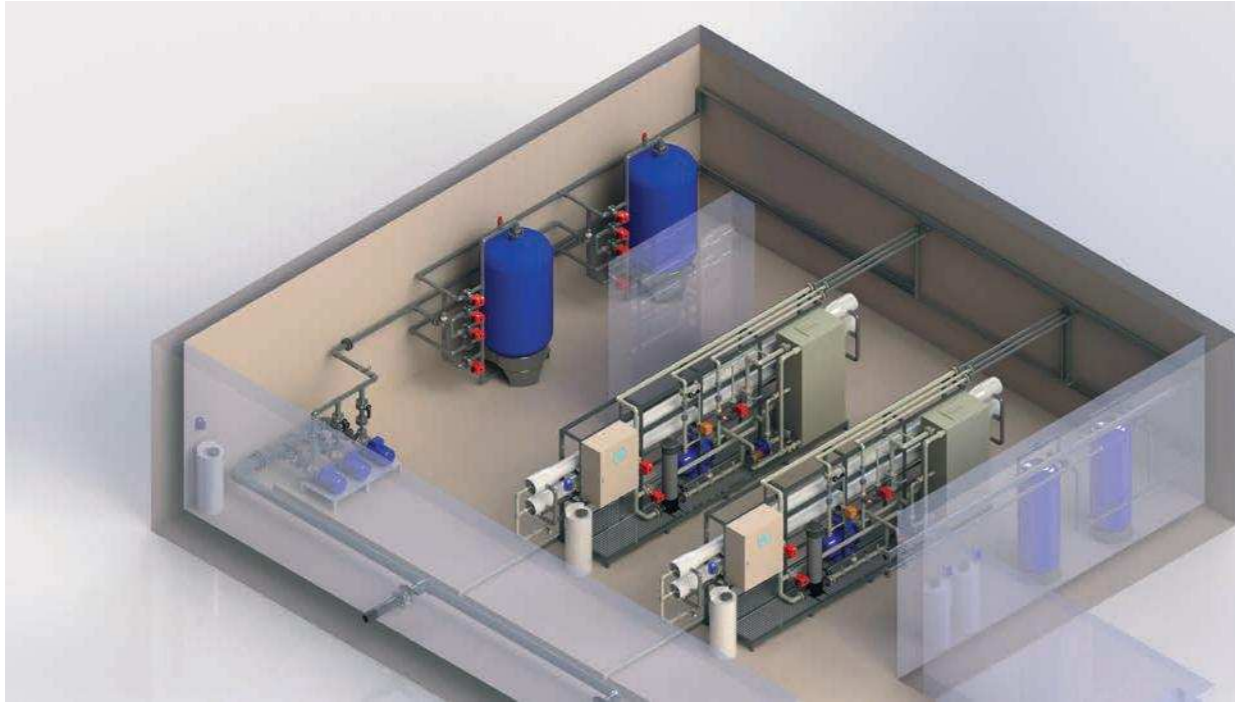
4200m<sup>3</sup>/d



## Our projects

# SWRO

300m<sup>3</sup>/d



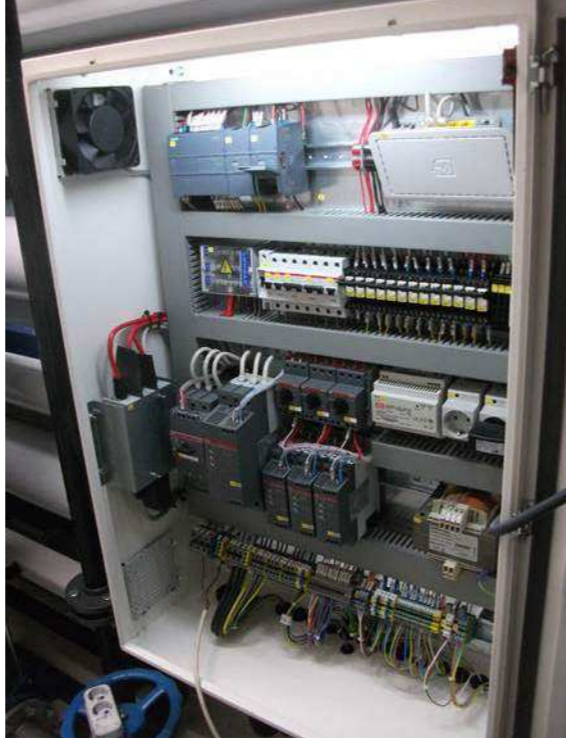
# BWRO - IRAN

1000m<sup>3</sup>/d





SWRO - EGYPT





## the ultrafiltration systems

Aquabay ultrafiltration Units are basically a filtration process. UF uses membranes with a pore size of 0.01 micron and this acts as a barrier for bacteria, virus and other micro organisms without using chemicals.

Aquabay ultrafiltration Units are basically a filtration process. UF uses membranes with a pore size of 0.01 micron and this acts as a barrier for bacteria, virus and other micro organisms without using chemicals. Any particle greater than 0.01 microns will be removed and turbidity can be reduced to below 0.1 NTU.

Chlorine is the best known method for removing microbiological contamination from water and it is effective, though not 100%, particularly for spore forming organisms such as Cryptosporidia. Such organisms can resist treatment with Chlorine but are removed by UF. In addition organic compounds in water can react with chlorine to form DBP's (disinfectant by products) which can be toxic themselves. UF does not add anything to water and does not produce undesirable chemicals in the water.

UF modules are perfect for filtration of surface water, pre-treatment of sea water before RO desalination, treatment of recycled waste water and can replace conventional and biological treatment of water for feed to RO systems.

Moreover UF systems are used successfully for sea water treatment, food sector and beverage process, natural drinking water factories, removing bacteria and disinfection of water indirectly and lots of special projects. It constitutes a key part of systems of special design for waste water recycling and process of recycling of water origin MBR.

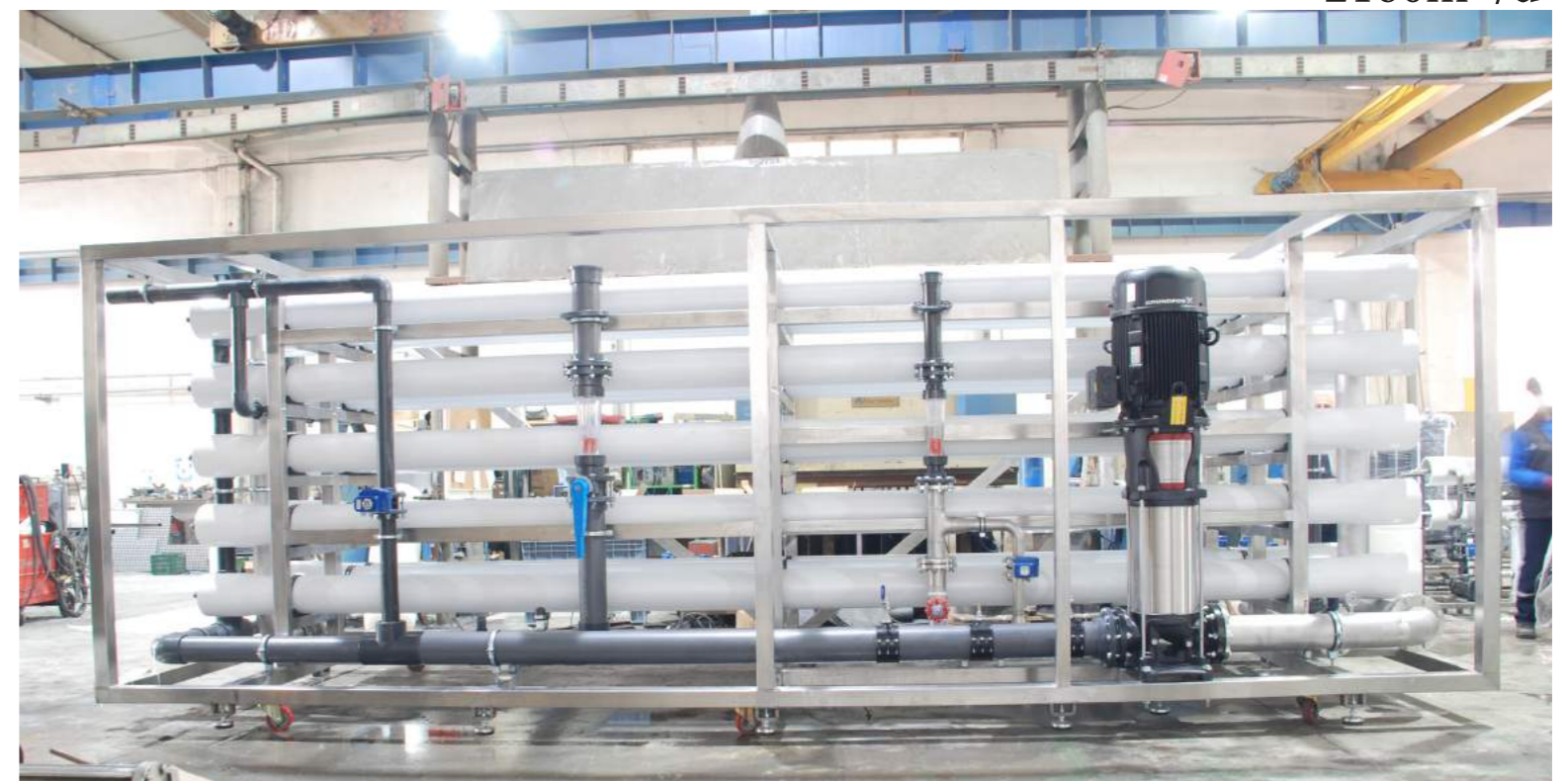


## UF/R.O - MOROCCO

3360m<sup>3</sup>/d



2160m<sup>3</sup>/d





## the multi media filters

The Multi Media Filters are used to remove suspended solids, turbidity and other particles in the water. System granulometry degrees are constituted with different and more than one layer are placed in interbody. Second duty of the Multi Media Filter in addition to separate solids from water is to protect equipment that will be located after itself. Lifespan of equipments will be longer and productivity of them will be increased, as the load, which will go to the other treatment filters in a system whose filtration is good, will be minimized. The Multi Media Filters are used in treatment of process water and drinking water as pretreatment or in removing the turbidity of treated water which is from waste water treatment systems. For high quality flows, the Multi Media Filter systems with surface tubing are preferred. Sand filters work full automatically. It does automatic back washing process for 15-20 minutes a day.

- Surface Tubing Multimedia Sand Filter
- The Multi Media Filter Optional Equipment and Features
- Valves with electric, pneumatic actuator or diaphragm
- Differential pressure- time controlled backwash
- Filter design specific to application
- Flow monitor and sensor
- Air stripping before backwash

## cartridge and bag filters

The Cartridge Filter Systems consist of the filter body and cartridges. Filter body is housing the main cartridge elements that will treat the water. The filter bodies can be produced from stainless steel or AISI 136 and AISI 306. Cartridges that are used in Cartridge Filter Systems have various micron sensitivities. Therefore, it is possible to make cartridges for various capacities with suitable sensitiveness, in appropriate amount and with suitable features and also to make delicate filtration in the order of micron. The features of raw water that enters the filter and life cycle of filters are the criterions which affect the pollution time of cartridges. Polluted cartridges must be changed as they would increase the loss of pressure of the filter and decrease the filtering sensitivity.

The bag filters consist of the filter body and bag filters. Filter body is housing the bag filter that is main element treating the water. The filter bodies can be produced from stainless steel or carbon steel. With the liquid flow from inside to outside, all the particles and dusts remain inside of the bag filter. The bag filter can be washed when it is polluted.



12000m<sup>3</sup>/d



1500m<sup>3</sup>/d



3600m<sup>3</sup>/d



3600m<sup>3</sup>/d

# “ active carbon filters

Active carbon filters are used for refinement of molten gases, wastes and organic substances that give unwanted chlorine, color, taste and scent in the water. Active carbon is a material like coal, but has very large surface (1000-1500m<sup>2</sup>/gr). Productivity of active carbon filter is designated by features of active carbon that is used in filter bed and by choosing the filtration speed of water properly. In Active Carbon Systems, during the treatment of water, beside filtration mechanism, absorption mechanism is also working. Therefore, Active Carbon Filters are systems that make physico-chemical treatment. Active Carbon Filters work full automatically without the need of human interference. Active Carbon Filter that makes automatic backwash for 15-20 minute a day renovates itself in this way. Another subject that is significant about active carbon is that its capability of creating proper environment for bacterial reproduction of mineral bed. Because, active carbon accumulates organic materials in its structure and if there is bacteria in the water, bacteria can reproduce by using this organic material as nutrition. In the situations like that, bacterial leakage growth is possible. That's why it is important to deodorize the water before and after the active carbon.

Active Carbon Filter Optional Equipment and Features

- Valves with electric, pneumatic actuator or diaphragm
- Differential pressure- time controlled backwash
- Flow monitor and sensor
- Air stripping before backwash



# cartridge and bag filters

The Cartridge Filter Systems consist of the filter body and cartridges. Filter body is housing the main cartridge elements that will treat the water. The filter bodies can be produced from stainless steel or AISI 136 and AISI 306. Cartridges that are used in Cartridge Filter Systems have various micron sensitivities. Therefore, it is possible to make cartridges for various capacities with suitable sensitiveness, in appropriate amount and with suitable features and also to make delicate filtration in the order of micron. The features of raw water that enters the filter and life cycle of filters are the criteria which affect the pollution time of cartridges. Polluted cartridges must be changed as they would increase the loss of pressure of the filter and decrease the filtering sensitivity.

The bag filters consist of the filter body and bag filters. Filter body is housing the bag filter that is main element treating the water. The filter bodies can be produced from stainless steel or carbon steel. With the liquid flow from inside to outside, all the particles and dusts remain inside of the bag filter. The bag filter can be washed when it is polluted.



# DOMOFIRE-E DOMOFIRE-D

Fire  
Booster Set

## Designation of Fire Booster Set

### DOMOFIRE - EE - 90/80

EN 50-250/30  
EN 50-250/30

### DOMOFIRE - EEJ - 90/80

EN 50-250/30  
EN 50-250/30  
DOMO-J-MV 708/3

### DOMOFIRE - ED - 90/80

EN 50-250/30  
EN 50-250/EKM 380/29

### DOMOFIRE - EDJ - 90/80

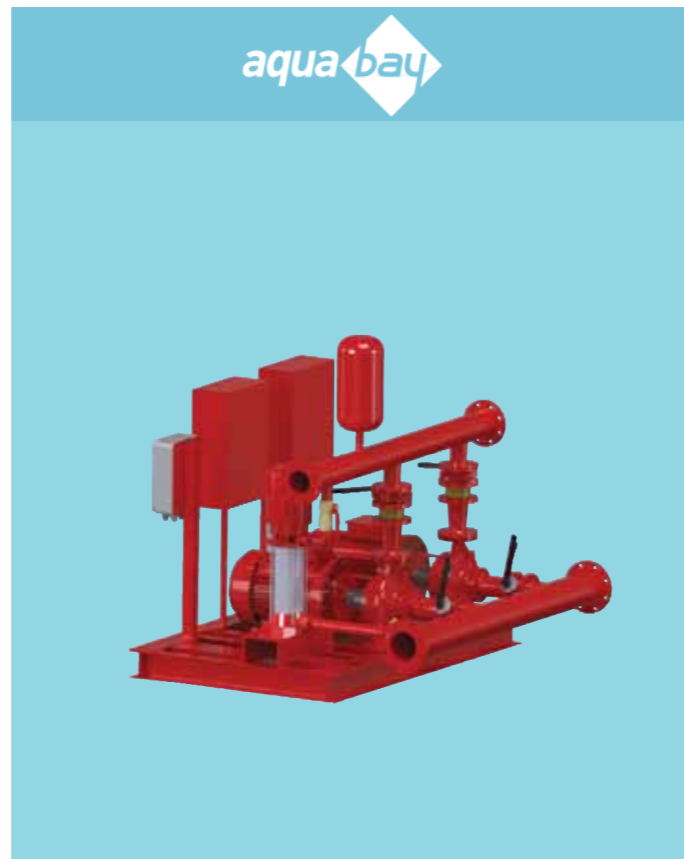
EN 50-250/30  
EN 50-250/EKM 380/29  
DOMO-J-MV 708/3

### DOMOFIRE Domestic Type Fire Booster Set

**EE:** Electrical Main Pump + Electrical Stand-By Pump  
**ED:** Electrical Main Pump + Diesel Driven Stand-By Pump  
**EEJ:** Electrical Main Pump + Electrical Stand-By Pump + Jockey Pump  
**EDJ:** Electrical Main Pump + Diesel Driven Stand-By Pump + Jockey Pump  
**90/80:** Flow (m<sup>3</sup>/h) / Pressure (Hm): 90 m<sup>3</sup>/h / 80 m  
**EN:** EN733 Monoblock Centrifugal Pump  
**EL:** EN733 Long-Coupled Centrifugal Pump  
**DOMO-J:** Domestic Type Jockey Pump Set

## Construction

Domofire booster sets are constructed for feeding water and pressurization of fire cabinets, hydrants and sprinklers.



## Delivery Scope

All pumps in Domofire sets are being mounted on a common baseplate complete with suction and discharge manifolds. Each pump has its own suction isolating valves and discharge closing valves, and check valves mounted on pump. Pressure switches for each pump, control panels and weekly timer system included. 8 lt / 16 bar absorber expansion tank mounted at discharge manifold.

### • Diesel Control Panel

DOMOFIRE-D, Single battery and starter type built in alarms and warning, engine oil and temperature measurement, engine rpm display, engine hours counter programmable parameters, MODBUS communication.

### • Electric Control Panel

- Electric fire pump panel is used to control pump set according to pressure.
- In automatic mode; when the pressure drops the pumps starts, when the pressure reaches at cut-off valve, the pump stops.
- In manual mode, pump is being started and stopped with the button on the control panel.
- Waterproof panel casing, IP55.
- 380-400 VAC 3P+N+PE power supply.
- Motor protection circuit breakers included

## Electric Motors

2 pole, 50 Hz, n=2900 rpm,  
IEC standardized,  
TEFC type  
Three phase 230/400V +/- 10%, 400/690V +/- 10%  
F Isolation Class,  
IP55 Protection Class  
IEC 60034 constructed

## Diesel Engines

Direct injection, electric type starter panel, fuel tank, rechargeable one battery, air or water cooled type of engines are being used.

# AUE-AUD-AU2E AU2D-AUED

EN12845 Fire  
Pump Stations

## Designation of EN12845 Fire Pump Stations

### AUE 120 / 100 - EL 80-250/75 + DJ MV 708

**AUE:** One electric main pump + jockey  
**120:** Rated Flow (m<sup>3</sup>/h)  
**100:** Rated Pressure (Hm)  
**EL 80-250/75:** Electric Driven Main Pump  
**DJ MV 708:** Jockey Pump Set

### AU2E 90/80 EL 65-250/45 + EL 65-250/45 + DJ MV 708

**AU2E:** Two electrical main pump + jockey  
**90:** Rated Flow (m<sup>3</sup>/h)  
**80:** Rated Pressure (Hm)  
**EL 65-250/45:** Electric Driven Main Pump  
**EL 65-250/45:** Electric Driven Stand-by Pump  
**DJ MV 708:** Jockey Pump Set

### AUD 230/100 EL 100-250/JU4H-NLK4 + DJ MV 708

**AUD:** One diesel driven main pump + jockey  
**230:** Rated Flow (m<sup>3</sup>/h)  
**100:** Rated Pressure (Hm)  
**EL 100-250/JU4H-NLK4:** Diesel Engine Driven Main Pump  
**DJ MV 708:** Jockey Pump Set

### AUED 120/90 EL 80-250/55 + EL 80-250/JU4H-NL14 + DJ MV 708

**AUED:** One electric + One diesel driven + jockey Pump Fire Pump Station  
**120:** Rated Flow (m<sup>3</sup>/h) per main pump  
**90:** Rated Pressure (Hm)  
**EL 80-250/55:** Electric Driven main Pump  
**EL 80-250/JU4H-NL14:** Diesel Engine Driven Main Pump  
**DJ MV 708:** Jockey Pump Set

## Construction

EN12845 Fire pump stations constructed for feeding water to automatic fire fighting systems and units with hydrants and sprinklers. Units are composed of 1 or 2 main pumps and one jockey pump set with which the system pressure level can be maintained without having to start the main pump(s).



## Operation

The pumps start operating after a fall in the pressure level in the fire extinguishing system.

The first pump to be triggered is the jockey pump in the station. If this pump cannot restore the pressure level, then the main pumps starts. When there is more than one main pump, the pumps start in cascade sequence with the starting pressure switches set at different pressure levels.

The pressure switches of the main pumps are used for automatic starting as the pumps must be stopped manually as per EN12845 standards. The test loop or recirculation diaphragm allows for operation of the main pumps also when the delivery port is closed (with no consumption of water in the system), avoiding overheating of the water inside the pump body.

Weekly test system is included in fire pump stations.

The membrane type of expansion tank with the capacity of 24 liters-16 bar execution is being mounted in fire pump set for absorption of water hammer.

## Pumps

EL series of main pumps are being used. Horizontal, end-suction, single staged centrifugal pumps are being used in fire pump station. Standard delivery is cast iron execution with mechanical sealing. Optionally bronze fitted execution or soft gland packing sealings are being used.

### Couplings of main pumps are;

- Elastic couplings for electric driven sets (optionally spacer type couplings)
- Universal joints-cardan shafts for diesel driven sets.

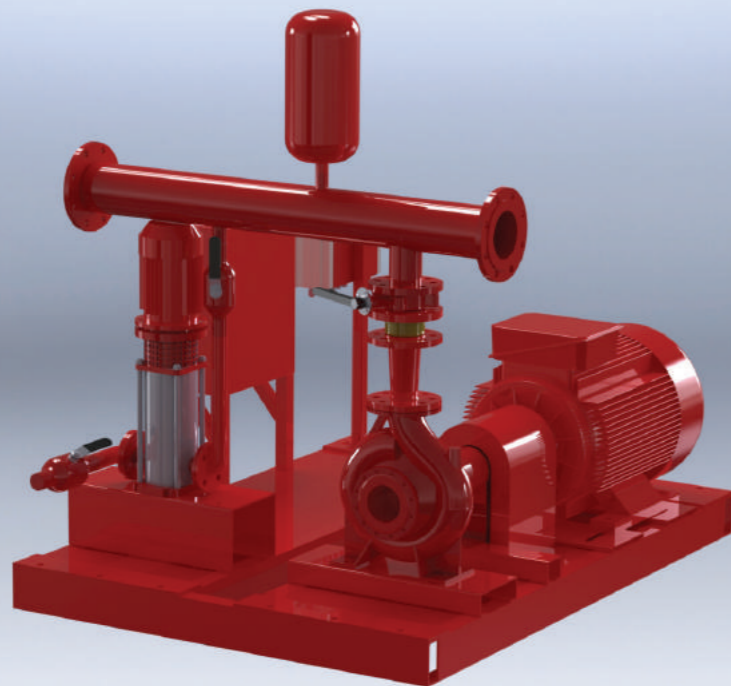
### Jockey Pumps are;

MV series: Vertical, multi-staged, stainless steel constructed off-line centrifugal pumps.  
XVM series: Vertical, multi-staged, stainless steel constructed inline centrifugal pumps.

# AUE-AUD-AU2E-AU2D-AUED

EN12845 Fire Pump Stations

## Specifications



AUE

All pumps are mechanical sealed. The maximum pressure developed by the jockey pump is always greater than the pressure of the main pumps.

### Electric Motors:

- 2-pole induction type, 50 Hz, n=2900 rpm, IEC standardized, TEFC Type
- Three-phase 230/400V +/-10% up to 3 kW, 400/690V +/-10% 4kW and higher
- Insulation Class F
- Protection Class IP55
- Construction in accordance with IEC 60034
- Other voltage and frequency ratings and ambient temperatures available on request.

### Diesel Engines:

Diesel engines are direct-injection types fitted with electric control box, fuel tank, 2 re-chargeable batteries, exhaust silencer and internal cooling system loop complete with wiring harness and cabling. Emission data, noise levels are complying to EN12845 standards, the sets are certified according to EN standards.

### Hydraulic Components

- All pumps in fire pump stations are being delivered on a common base plate with suction and discharge manifolds. The suction manifold is never

supplied as such execution is forbidden by the standard.

- Each main pump has its own eccentric reducer + butterfly valve with gear box + check valve at discharge side. Diesel driven main pump has additionally rubber expansion joint.
- Outlet manometer is fitted on discharge manifold.
- There are 2 Pressures switches (2 for each pump) in the unit.
- Manual test circuit with pressure switches, pressure gauge, non-return valve and ball valve and 24 liters expansion tank complete with pressure relief valve.
- Jockey pump is fitted with inlet/outlet valves and check valve
- All the pumps and control panel for each pump in the unit are fitted on the common base plate with internal cabling and jockey pump control panel has dry running protection float switch.

### Electric Boxes

Electric Fire Pump Controller as per EN12845

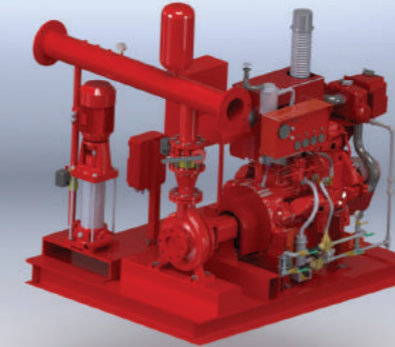
This equipment enables automatic or manual management of an electric Start-delta starting pump according to the standards UNI EN12845:2009. They are assembled in painted sheet metal housing with IP55 protection class and made in accordance with the CEI standards in force.

- Electric Star-Delta starting pump electromechanical panel.
- Mains input 3~50/60 Hz 400V+/-10%
- 400V/24V transformer for auxiliary circuits
- Very low voltage input for control via 2 caller/running pressure switches

# AUE-AUD-AU2E-AU2D-AUED

EN12845 Fire Pump Stations

## Specifications



AUD



AUED

- (NO contact with pressure system and electric pump stationary: on closure of the contact the pump starts up)
- Very low voltage input for signal from electric pump pressure switch in pressure/running (NO contact with pressure system and electric pump stationary)
- AUTOMATIC-0-MANUAL (EMERGENCY) key operated selector switch (key removable in AUT position): in AUTOMATIC position electric pump start-up via signals from caller pressure switches; in MANUAL(EMERGENCY) position electric pump start-up manual by means of START/STOP buttons; in "0" position, pump start-up disabled.
- Selector P1 DISABLED-"0"-P2 DISABLED : In position P1 DISABLED the caller pressure switch P1 DISABLED; in position 0 no caller pressure switch is disabled; in position P2 DISABLED caller pressure switch P2 is disabled
- Electronic control unit for electric pump management
- Pump START/STOP buttons for manual test
- Control unit indicator light test button
- Buttons to display electrical parameters
- Voltmeter, ammeter digital three-phase watt meter
- Green pump ON indicator (from pump running pressure switch signal)
- Power ON green indicator light
- Red indicator light for pump start request from caller pressure switch
- Yellow indicator light for pump start request from priming tank float
- Yellow indicator light for pump start-up failure
- Yellow indicator light for automatic start-up disabled
- Green indicator light for weekly test in progress
- Operating system according to UNI10779 with settable timed delay of pump shutdown
- Pump running detection (from pump running pressure switch) with settable delay
- Electric pump control contactors sized to AC3
- Timed, settable Star-Delta contactor switching
- Auxiliary protection fuses
- Motor overload cutout high capacity fuses
- General disconnect switch with door lock
- Alarm output with changeover contact (max 5A 250V AC1) for signal

"ELECTRIC POWER AVAILABLE"

- Alarm output with changeover contact (max 5A 250V AC1) for signal "PUMP RUNNING"
- Alarm output with changeover contact (max 5A 250V AC1) for signal "START-UP REQUEST"
- Alarm output with changeover contact (max 5A 250V AC1) for signal "START-UP FAILURE"
- Alarm output with changeover contact (max 5A 250V AC1) for signal "PRESSURE SWITCH DISABLED"
- Metal casing
- Tear-proof cable clamp output
- IP55 Protection rating
- Ambient temperature: -5/+40°C
- Relative humidity 50% at 40°C (condensate free)

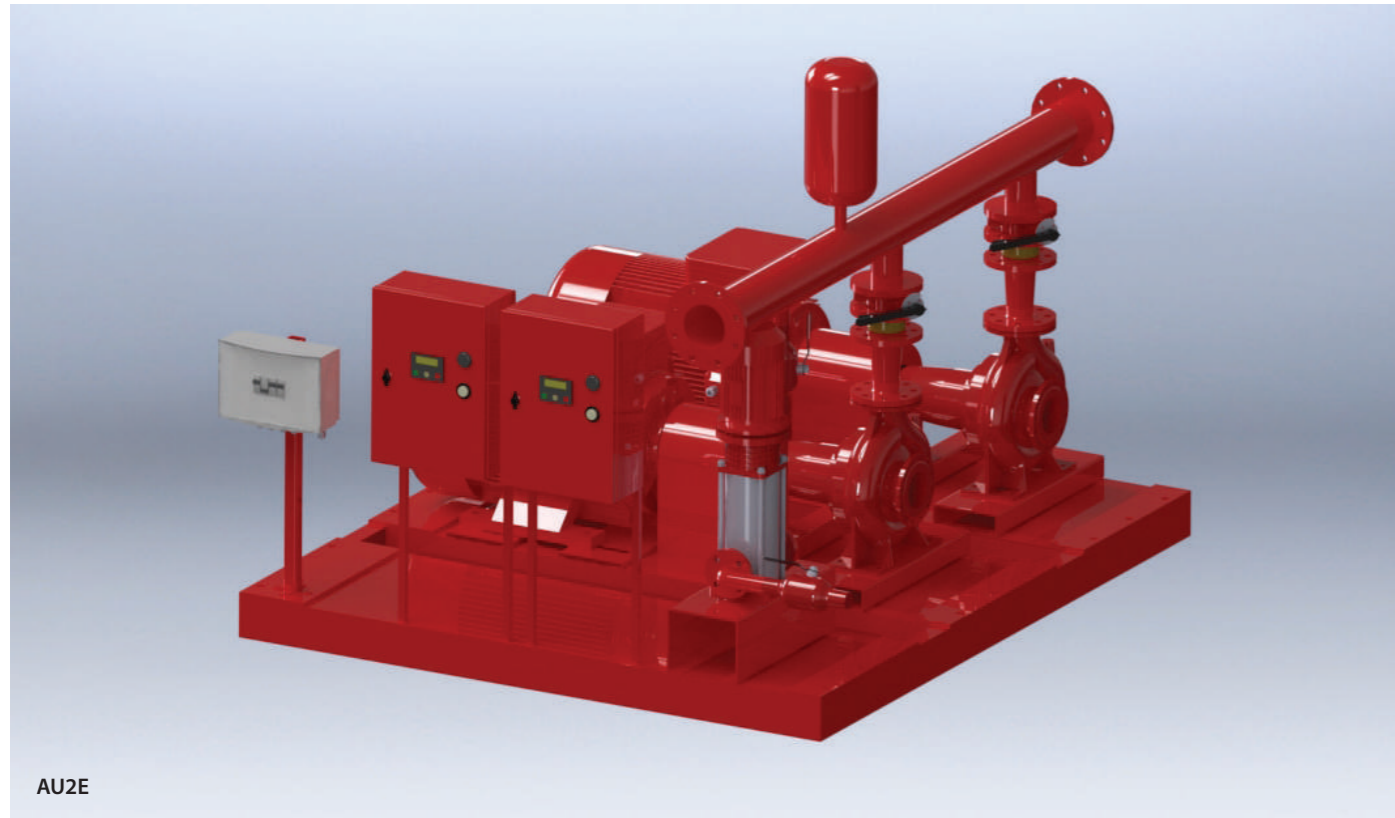
### Diesel Driven Pump Controller

- Electromechanical control panel for diesel pump
- Input voltage 1~50/60 Hz 230V +/- 10%
- Input from 2 pieces external lead batteries for control of the starting motor and supply of auxiliary circuits
- Very low voltage input for control from 2 pieces call/start pressure switches in series (NC contact with system in pressure and diesel pump stopped)
- Very low voltage input for control of the diesel pump from float switch in priming tank (NO contact with tank full of water)
- Very low voltage input for signaling of electric pump in pressure/on from pressure switch (NO contact with diesel pump control)
- Selector with key AUT-MAN in automatic position starting of the diesel pump by electronic unit in MANUAL position starting of the diesel pump by start push button of the electronic unit
- Pushbuttons for manual start of the diesel pump
- Pushbutton for restoring from anomalies
- Pushbutton for testing the manual shut off of the diesel pump
- Pushbutton for test of the electronic unit's lights
- Pushbutton for scrolling the functions of the unit
- Pushbuttons for Manual Emergency protected by "Safe crash"

# AUE-AUD-AU2E-AU2D-AUED

EN12845 Fire Pump Stations

## Specifications

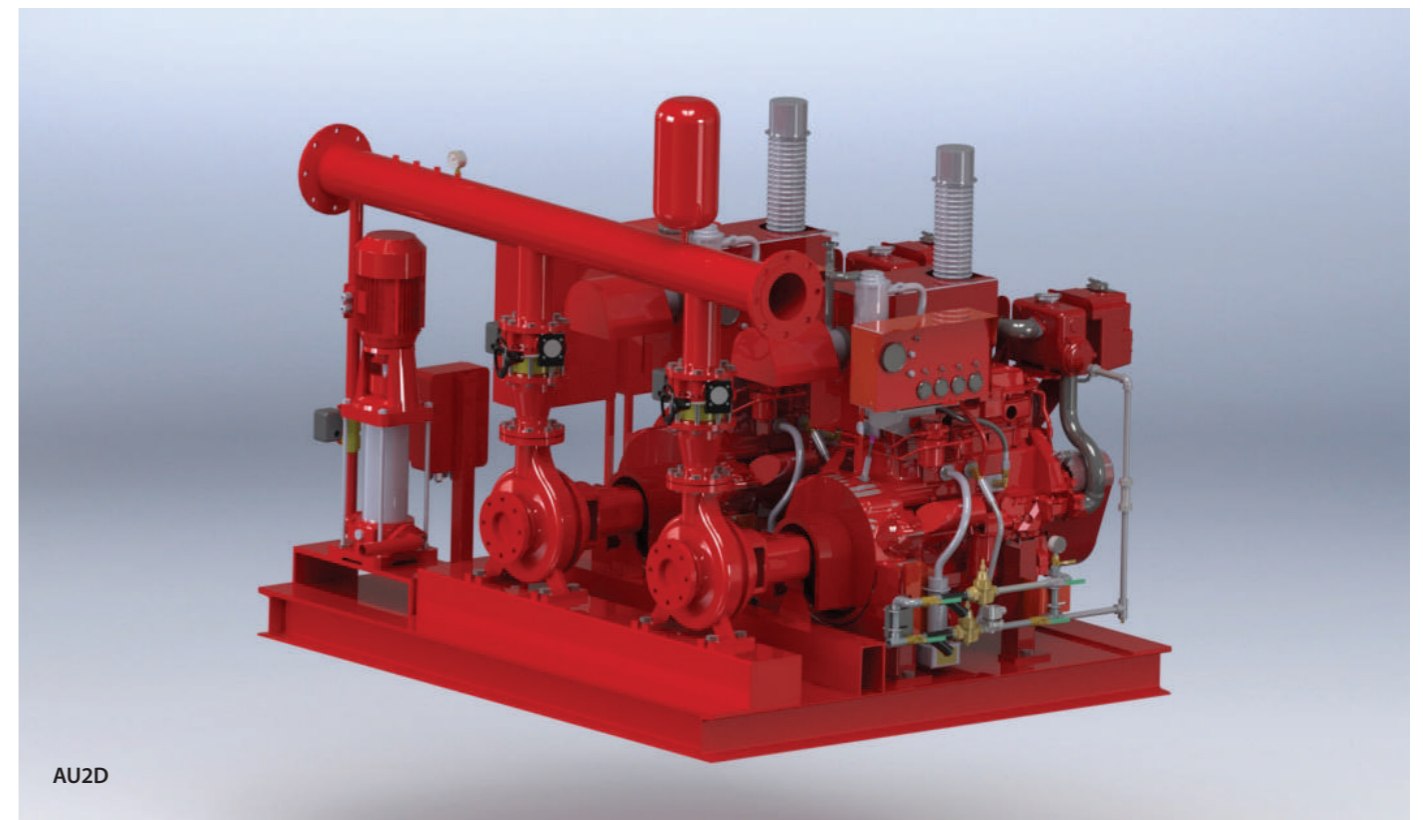


AU2E

- LCD Display for the visualization of 2 pieces batteries' voltmeters, 2 pieces batteries' ammeters, round meters, total run meter, partial run meter, indicator of fuel level, water thermometer, oil thermometer, oil manometer, batteries starting counter, history of the events
- Signaling lights
- Operation mode according to UNI10779 with timer for delay of stop of the pump adjustable from 1' to 30'
- Visualization of the display settable in 5 languages: Italian, English, Spanish, German, French
- Functions of delay and specific alarms settable from electronic unit
- 2 pieces battery charges 12Vdc 3A (24Vdc 3A for 24V)
- Auxiliary protection fuses
- Main switch with interlocking door
- Alarm output with exchangeable contact (max 5A 250V AC1) for signaling of "AUTOMATIC OPERATION EXCLUDED"
- Alarm output with exchangeable contact (max 5A 250V AC1) for signaling of "CONTROL PANEL BREAKDOWN"
- Alarm output with exchangeable contact (max 5A 250V AC1) for signaling of "DIESEL PUMP OPERATING"
- Alarm output with exchangeable contact (max 5A 250V AC1) for signaling of "START FAILED"
- Steel enclosure
- Output with cable holder
- Protection IP55
- Ambient temperature: -5°C/+40°C
- Relative humidity 50% at 40°C (not condensed)

### Jockey Pump Controller (DJ)

DJ is designed for controlling 1 jockey pump used. This cabinet contains the electronic control card with microprocessor, for managing pump operation. The microprocessor carries out continuous secure checks during all the various work phases of the pump and incorporates all necessary functions, thus reducing electrical and electronic components inside. The pump starts automatically when reaches at upper pressure set value and stops also when there is no water in the suction.



AU2D

## Technical Features

- Electronic control panel
- Power supply 3~50/60 Hz 400V +/- 10%
- Control input from NO contact (float/pressure switch)
- Input for motor winding thermal protection
- Sensors suitable for use with not flammable conductive fluids (not included)
- Incorporated sensor sensitivity adjustment
- Push buttons for operating motor in "Automatic-Off-Manual" modes
- "Mains power on" LED
- "Alarm" LED for min/max water level
- "Motor on" LED
- "Motor protection enabled" LED
- "Automatic" LED (this is on the automatic push-button)
- Restore protection button
- Adjustable motor protection (Motor Current Trimmer: 2<> 22A or 20<> 44A)
- Protection activation time 5"
- Incorporated dip-switch for overriding the "Motor cut-out"(dip-switch 4)
- Internal "Sensors alarm" cut off switch (jumper ESC. TIM. TA)
- Motor protection fuses
- Auxiliary protection fuse
- Alarm output with switching NO-C-NC contacts, capacity 16A 250V (resistive load)
- Single-phase version adapted for the insertion of a capacitor (not included)
- Main circuit-breaker with door lock
- Output with cable clamps
- ABS box
- Protection IP55
- Ambient temperature: -5/+40°C
- Relative humidity 50% at 40°C (condensate free)