

APPLICATION SHEET ARSENIC REMOVAL

CUSTOMIZED SOLUTION

We combine different technologies to achieve the most efficient and economical way to remove/reduce arsenic level to potable water drinking standards.

NETWORK READY

We provide an Ethernet port in our PLC so you can connect and pull all the information you need.

LOW CHEMICAL CONSUMPTION

Due to the fact that getting chemicals has been an issue for some customers we use technologies that require a less chemicals.

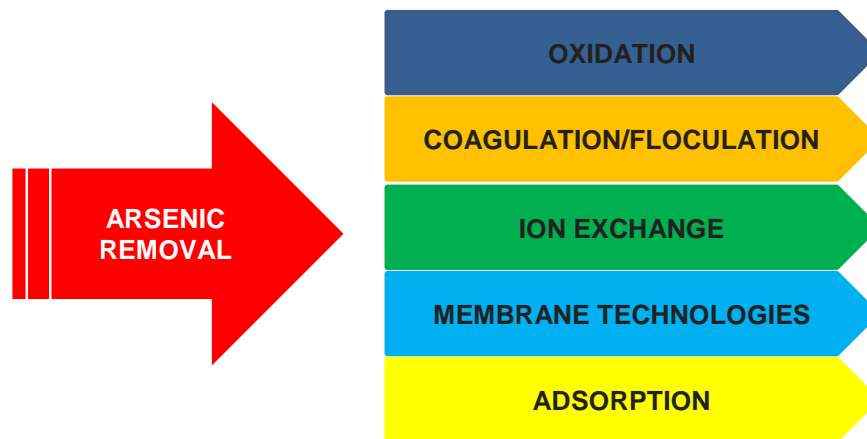
CONTAINERIZED OPTION:

System is build inside the standard ISO 40 feet container, proving a robust and reliable housing for the delicate equipment inside and expediting the deployment and commissioning of the system substantially.

Arsenic is a naturally occurring element found in soils and groundwater. Arsenic concentrations vary in accordance with geographic location. When arsenic levels are found to be too high at a specific location, it may be necessary to treat water to remove it. Arsenic usually exists in two different forms, or valences, in a natural setting depending on the amount of oxygen available in groundwater. In more shallow aquifers with higher levels of oxygen, arsenic will usually exist as arsenate, As (V). In deeper, anaerobic ground waters, arsenic usually occurs as arsenite, As (III). In the pH range of 4 to 10, the predominant As (III) compound is neutral in charge, while As (V) species are negatively charged. Removal efficiencies for As (III) are usually less than those of As (V) because of As (V)'s negative charge. In many cases, pretreatment of As (III) to oxidize it to As (V) may be necessary to efficiently remove arsenic from drinking water.

SOLUTION:

In general the most effective steps to remove arsenic to achieve potable water admissible levels are:



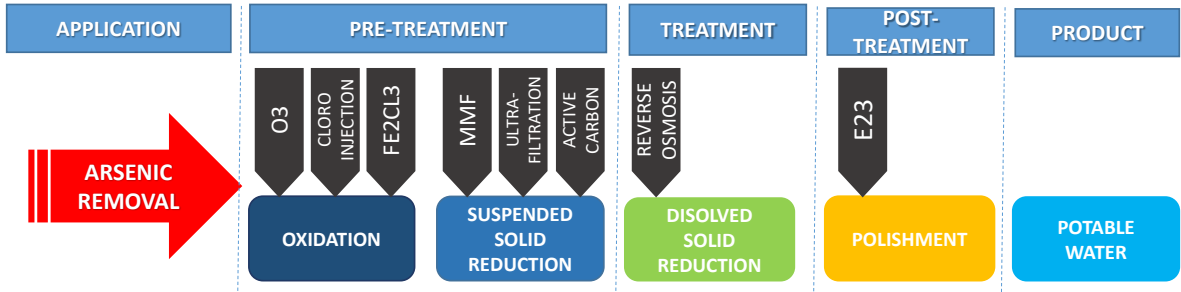
OPERATING PARAMETERS:

Since every water source has different composition, we strongly recommend to perform a complete water analysis to properly size the arsenic removal solution that meet the customer's criteria. These are the basic parameters to know in order to properly size the solution

- Total dissolved solids (TDS)
- Iron content (Fe)
- Hardness (Ca and Mg)
- Sulfate (SO₄)
- BOD
- Turbidity
- Heavy metals content (Pb) , (Cd), Cr, (Sb) and (Mo)
- Incoming Power
- Incoming feed flow and source

OUR SOLUTION

Typically we recommend the following steps:



TECHNICAL SUPPORT

Commissioning, Start-up, operators training, maintenance training, retrofits and modernization are available.

ZERO DOWNTIME

We supply all the basic two years critical spare parts with our units. Also we use very well know and proved components in all of our systems.

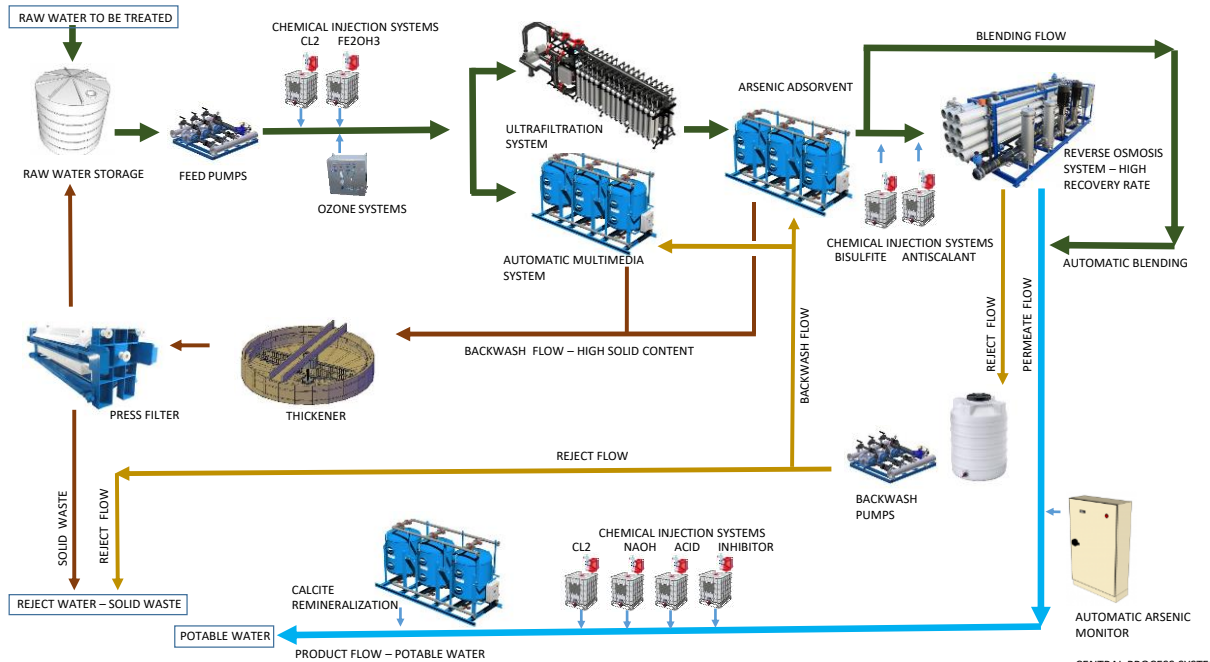
TURNKEY SOLUTIONS

We can provide the basic RO systems plus all pretreatment and Post treatment such us:

- Chemical injection systems
- Multimedia systems.
- Calcite contact tanks
- Ozono generators
- UV disinfection
- H₂S removal

For more information on any of our products or services please visit us on the Web at: www.advances.com

Complete flowchart for arsenic removal below showing the ADVANCEES system. This flowchart vary based on raw water quality and customer's requirement. Many options and combinations are possible, the best solution needs to accommodate the minimum life cycle cost such as low operating cost, low maintenance, easy to operate and monitor.



Technical Data:

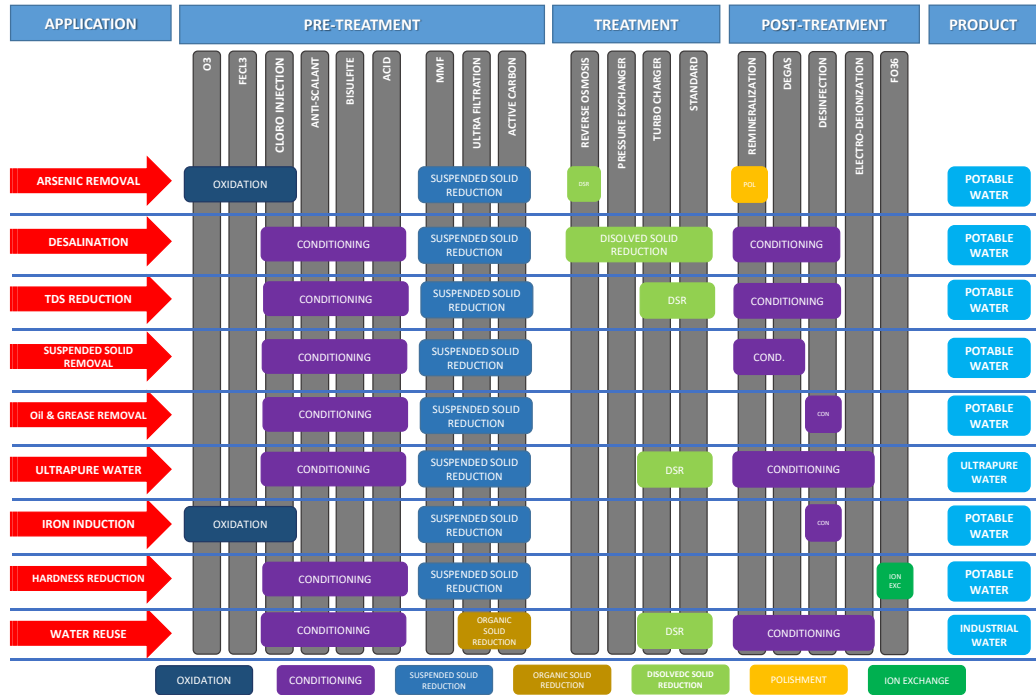
Component	Brand	Model
Feed pumps	Ampco Goulds Grundfos	AZC HSS - ESV CRN
MMF	Fluidra Waterco	MSS HPW
Injection pumps	Prominent Pulsafeeder	
UF modules	Qua Polycera	Qua-sep Titan
RO membranes	Lg H2Onano Lewabrane	SWR SWRO
HMI (touch screen)	C-more	EA9 – 7”
Back wash pumps	Goulds Grundfos	HSS – ESV CRN
High pressure piping	Zenon	Super duplex
Low pressure piping	Gf	Sch 80 – Gray
High pressure switch	Prosense	MPS – 150 PSI
Low pressure switch	Prosense	MPS – 1500 PSI
Variable frequency drive	Powtran	P19000
Filters media	Turbidez	Zeolite
Cartridge filter 5 micros	Hmd	7-40
Inlet Valve actuator	Valworx	45554
Conductivity meter	Hm-digital	PS-150
Flow meter digital product	Gf-signet	2536
Flow meter digital reject	Gf-signet	2536
Adsorbent arsenic media	Lanxees	FO-36

CUSTOMIZATION

We customize any of our system to your needs, please send us your inquiry for a quick proposal
sales@advancees.com

For more information on any of our products or services please visit us on the Web at:
www.advancees.com

Other Applications Offered:



You can find more detailed information of the different applications at www.advances.com/applications

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