

PWG ALFA PLUS

Reverse Osmosis



75%
RECOVERY

”

A compact & easy solution
for industrial water treatment.



ABOUT REVERSE OSMOSIS

If the traditional purification systems fail to eliminate undesirable minerals from the water (e.g. brackish or well water with high TDS, conductivity ...), reverse osmosis is the solution to obtain pure water. Reverse osmosis (RO) is a filtration method that removes many types of large molecules and ions from solutions by applying pressure to the solution on one side of a selective membrane, which will only allow the small water molecules to pass through.

The result is purified (permeate) water. The membrane surface is kept clean by the "Cross Flow" filtration method, whereas the pure, permeate water passes through the membrane, the "dirty" concentrate water flows parallel to the membrane surface carrying off the larger mineral particles.



RECOMMENDED FEED WATER LIMITS



ALFA PLUS 540

Feed water TDS	0-1,000 ppm
Feed water pressure	2 to 5 bar
Feed Water Ph range	6-8
Silica (SiO ₂) tolerance	25 ppm max.
Min. and max. feed water temperature	5° C - 40°C
Min. and max. ambient temperature	5° C - 40°C
Max. Iron (Fe) tolerance	0.05 ppm (without ASC dosing) 0,2 ppm (with ASC dosing)

Hydrogen Sulfide should be removed.
Turbidity should be removed. (NTU < 1)
Oil and Grease should be removed.
SDI < 5
Microbiological contamination
should be removed

TECHNICAL FEATURES

MODEL	FEED WATER FLOWRATE @ 20C LPH	PERMEATE WATER FLOWRATE @ 20C LPH	MEMBRANE SIZE	MEMBRANE QTY(pcs)	RECOVERY (%)	REJECTION (%)	MOTOR POWER (kw)	ARTICLE NUMBER
	L / day	L / day						

ALFA PLUS 140	6.700	5.000	4" x 40"	1	75	95	0.64	5113010049
ALFA PLUS 240	13.500	10.000	4" x 40"	2	75	95	1,1	5113010050
ALFA PLUS 340	20.000	15.000	4" x 40"	3	75	95	1,1	5113010051
ALFA PLUS 440	26.700	20.000	4" x 40"	4	75	95	1,1	5113010052
ALFA PLUS 540	33.500	25.000	4" x 40"	5	75	95	2.2	5113010053
ALFA PLUS 640	40.000	30.000	4" x 40"	6	75	95	2.2	5113010054

WARNING : If feed water temperature is lower than 15°C, the recovery will be lower and recirculation flow should be adjusted.

STANDARD FEATURES

- Membrane vessels FRP
- TFC Spiral wound membranes 4" diameter
- AISI304 stainless steel vertical centrifuge high pressure pump (Models ALFA PLUS 240 to ALFA PLUS 640)
- Brass body rotary vane type high pressure pump (Model ALFA PLUS 140)
- All Alfa Plus serie has AISI304 SS frame
- 5 micron cartridge filter
- Low and high pressure pipework in U-PVC
- Solenoid automatic valves or equivalent valve
- Pressure adjustment valves in Pump outlet and Concentrate water line
- Low and high pressure switches
- Permeate and Concentrate flowmeters (rotameters)
- Recirculation valve and flowmeters
- Glycerin Filled Pressure Gauges
- Product Water Conductivity Meter
- Autoflush System
- RO Electronic Control Card, Alarm and Position Indicators
- 220 V/50Hz/1ph (Model ALFA PLUS 140)
- 380 V/50Hz/3ph (Models ALFA PLUS 240 to ALFA PLUS 640)
- Antiscalant dosage system is not included



WHY PWG ALFA PLUS?

Applied where classical purification systems become insufficient (Brackish water) to separate all undesirable minerals. ALFA is a compact & easy to use Reverse Osmosis. A plug and play solution for any of your industrial water treatment projects.

- Compact design in industrial water purifying solutions
- Easy and automatic operation
- Plug & Play
- Short lead time
- Standard models on stock
- Special models on demand
- High quality materials: AISI304 skid, high pressure rotary pumps, stainless steel membrane housings, ...
- A PWG Product

APPLICATIONS



INDUSTRY

- Water purification for food and beverage industry
- Water treatment for cooling towers, boilers and turbines
- Desalination of brackish water
- Deionized water for pre-EDI in laboratories
- Car wash, aquariums, textile dyeing,