

SOLUTIONS FOR THE POWER GENERATION INDUSTRY



Water Treatment Conditioning/RO/Dealkalyzer

Controls:

- **Stager & Controller** - GE PentAir Water (AquaMatic)

Flow Metering:

- **Mag Flow** - Badger
- **Open Channel** - Greyline
- **Ultra-Sonic** - Greyline
- **Vortex** - VorTex Instruments
- **Paddle** - Gems Sensors
- **Turbine** - Gems Sensors, Badger

Valves:

- **Ball & Butterfly** - Jamesbury, SVF
- **Solenoid** - Parker Skinner, Spartan, Gems Sensors, PreDyne
- **Diaphragm** - GE PentAir Water (AquaMatic), Parker Sinclair Collins
- **Instrumentation** - Ham-Let, SVF



Powerhouse Automation

Automation - Control - SCADA:

- **Automation** - Advantech, Opto 22, M-System, Precision Digital, Aaxeon, Nematron, PACLinkMasterSuite
- **Pump Control** - Gems Warrick
- **Wireless Data** - CalAmp(Dataradio), Adalet



Steam Turbine Generators

Lube Oil System:

- **Heat Exchangers** - ITT Standard, Elanco

Pressure Monitoring:

- **Pressure Switches** - Gems Sensors
- **Differential Pressure** - Midwest Instrument
- **Pressure Gauges** - Tel-Tru

Temperature:

- **Gauges & Switches** - Tel-Tru, Gems Sensors

Gas Analysis:

- **Hydrogen Analysis** - Teledyne Analytical



Solar Power

Temperature Monitoring:

- **Pressure Gauges** - Tel-Tru
- **Temperature Gauges** - Tel-Tru
- **Temperature Switches** - Gems Sensors

Flow Monitoring:

- **Mag Flow** - Badger
- **Ultra-Sonic** - Greyline
- **Vortex** - VorTex Instruments
- **Paddle** - Gems Sensors
- **Turbine** - Gems Sensors, Badger

Pressure Monitoring:

- **Transducers** - Gems Sensors
- **Switches** - Gems Sensors
- **I/P & E/P** - ControlAir
- **Gauges** - Precision Digital, Tel-Tru

Solar Separation System:

- **Brazed Plate** - ITT Standard

Valves:

- **Solenoid** - Parker Skinner, Spartan, Gems Sensors, PreDyne
- **Diaphragm** - GE PentAir Water (AquaMatic)
- **Instrumentation** - Ham-Let, SVF



Boiler Stack Gas

NoX - O2 - CO - VOC Monitoring:

- **TOC** - Teledyne Analytical, Analytical Process Systems



Fuel System

Gas & Oil Valves:

- **Control** - Jamesbury, SVF, Parker Sinclair Collins
- **On/Off** - Jamesbury, SVF, Parker Sinclair Collins

Damper Drive Motors:

- **Electric Control** - Indelac Controls



Wind Turbines

Bearing Pressure:

- **Transducers** - Gems Sensors
- **Switches** - Gems Sensors
- **I/P & E/P** - ControlAir
- **Gauges** - Precision Digital, Tel-Tru

Oil Temperature Monitoring:

- **Gauges & Switches** - Tel-Tru, Gems Sensors

Oil Cooling:

- **Brazed Plate** - ITT Standard



Chilled & Hot Water

Water - Drain - Valves:

- **Ball & Butterfly** - Jamesbury, SVF
- **Solenoid** - Parker Skinner, Spartan, Gems Sensors, PreDyne
- **Diaphragm** - GE PentAir Water (AquaMatic), Parker Sinclair Collins
- **Instrumentation** - Ham-Let, SVF

Water - By-Pass - Valves:

- **Ball & Butterfly** - Jamesbury, SVF
- **Solenoid** - Parker Skinner, Spartan, Gems Sensors, PreDyne
- **Diaphragm** - GE PentAir Water (AquaMatic), Parker Sinclair Collins
- **Instrumentation** - Ham-Let, SVF

Level Monitoring:

- **Continuous** - Gems Sensors, Greyline
- **Float Type** - Gems Sensors
- **Site Level** - Gems Sensors
- **Ultra Sonic** - Gems Sensors, Greyline
- **Bubblers** - ControlAir
- **Conductivity Sensors** - Gems Warrick

Flow Metering:

- **Mag Flow** - Badger
- **Open Channel** - Greyline
- **Ultra-Sonic** - Greyline
- **Vortex** - VorTex Instruments
- **Paddle** - Gems Sensors
- **Turbine** - Gems Sensors

Hot Water Convertors:

- **Heat Exchangers** - ITT Standard, Elanco

Pressure Monitoring:

- **Pressure Switches** - Gems Sensors
- **Differential Pressure** - Midwest Instrument
- **Pressure Gauges** - Tel-Tru

Temperature:

- **Gauges & Switches** - Tel-Tru, Gems Sensors





Boiler System

Automation - Control - SCADA:

- **Automation** - Advantech, Opto 22, M-System, Precision Digital, Aaxeon, Nematron, PACLinkMasterSuite

Make-Up Water - Flow Metering:

- **Mag Flow** - Badger
- **Open Channel** - Greyline
- **Ultra-Sonic** - Greyline
- **Vortex** - VorTex Instruments
- **Paddle** - Gems Sensors
- **Turbine** - Gems Sensors, Badger

Make-Up Water - Valves:

- **Ball & Butterfly** - Jamesbury, SVF
- **Solenoid** - Parker Skinner, Spartan, Gems Sensors, PreDyne
- **Diaphragm** - GE PentAir Water (AquaMatic), Parker Sinclair Collins
- **Instrumentation** - Ham-Let, SVF

Blow-Down - Valves:

- **Ball & Butterfly** - Jamesbury, SVF
- **Solenoid** - Parker Skinner, Spartan, Gems Sensors, PreDyne
- **Diaphragm** - GE PentAir Water (AquaMatic), Parker Sinclair Collins
- **Instrumentation** - Ham-Let, SVF

Blow-Down Heat Recovery:

- **Shell & Tube** - ITT Standard
- **Plate & Frame** - ITT Standard
- **U-Tube** - ITT Standard
- **Air Liquid** - ITT Standard
- **Spiral** - Elanco

Deaerator - Pressure:

- **Transducers** - Gems Sensors
- **Switches** - Gems Sensors
- **I/P & E/P** - ControlAir
- **Gauges** - Precision Digital, Tel-Tru

Deaerator - Level:

- **Continuous** - Gems Sensors, Greyline
- **Float Type** - Gems Sensors
- **Site Level** - Gems Sensors
- **Ultra Sonic** - Gems Sensors, Greyline
- **Bubblers** - ControlAir
- **Conductivity Sensors** - Gems Warrick

Deaerator - Flow:

- **Mag Flow** - Badger
- **Ultra-Sonic** - Greyline
- **Vortex** - VorTex Instruments
- **Paddle** - Gems Sensors
- **Turbine** - Gems Sensors, Badger

Drum Level Control:

- **Continuous Level** - Gems Sensors, Greyline
- **Site Level** - Gems Sensors
- **Mag Flow** - Badger
- **Ultra-Sonic Flow** - Greyline
- **Vortex Flow** - VorTex Instruments
- **Control Valves** - Jamesbury, SVF, HamLet, Parker Sinclair Collins

Combustion Air - Preheat:

- **Heat Exchangers** - ITT Standard, Elanco

Steam Valves:

- **Control** - Jamesbury, SVF, Parker Sinclair Collins
- **On/Off** - Jamesbury, SVF



Boiler System, continued

Steam / Hot Water - Pressure:

- **Transducers** - Gems Sensors
- **Switches** - Gems Sensors

Steam / Hot Water - Temperature:

- **Thermometers & Switches** - Tel-Tru, Gems Sensors

Steam / Hot Water - Flow:

- **Mag** - Badger
- **Ultra-Sonic** - Greyline
- **Vortex** - VorTex Instruments

Controls:

- **Feedwater Pump & Level** - Gems Warrick

Pressure - Temperature - Level Gauges:

- **Pressure Gauges** - Tel-Tru
- **Temperature Gauges** - Tel-Tru
- **Site-Level Gauge** - Gems Sensors



Cooling Tower

Level Monitoring:

- **Continuous** - Gems Sensors, Greyline
- **Float Type** - Gems Sensors
- **Site Level** - Gems Sensors
- **Ultra Sonic** - Gems Sensors, Greyline
- **Bubblers** - ControlAir
- **Conductivity Sensors** - Gems Warrick

Make-Up Water - Valves:

- **Ball & Butterfly** - Jamesbury, SVF
- **Solenoid** - Parker Skinner, Spartan, Gems Sensors, PreDyne

Water Drain - Valves:

- **Ball & Butterfly** - Jamesbury, SVF
- **Solenoid** - Parker Skinner, Spartan, Gems Sensors, PreDyne
- **Diaphragm** - GE PentAir Water (AquaMatic), Parker Sinclair Collins
- **Instrumentation** - Ham-Let, SVF

Water By-Pass - Valves:

- **Ball & Butterfly** - Jamesbury, SVF
- **Solenoid** - Parker Skinner, Spartan, Gems Sensors, PreDyne
- **Diaphragm** - GE PentAir Water (AquaMatic), Parker Sinclair Collins
- **Instrumentation** - Ham-Let, SVF



Special Services

- *Heat exchanger sizing and selection.*
- *Flow meter sizing and selection.*
- *Valve automation (certified Jamesbury Matchmaker distributor).*
- *Custom hose assemblies while you wait.*
- *Cable assemblies and custom connectors.*
- *Custom assemblies, packaging and integration.*
- *Control valve sizing*



OPTO 22
Automation made simple.

