

KONTEK Ecology Systems Inc.

Wastewater Treatment & Recovery Technologies

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1400 Series Systems Feature:

- Corrosion proof neutralizations reactors, fabricated from fiberglass or polyethylene.
- Tandem solution transfer pumps and solution flow meters are standard on all systems.
- Automatic polymer feed systems.
- Pulse proportionally controlled additions of reagent chemistry.
- Redundant pH/ORP controllers, with calibration indication, for all PLC controlled systems.
- Kynar housed 4-20 mA non-contacting ultrasonic level controllers, for all PLC controlled systems.
- "On-line" troubleshooting is incorporated on PLC controlled systems.
- High surface area laminar flow clarifiers, fabricated from steel or stainless steel.
- In-house fabrication of filter presses, fabricated from steel or stainless steel.
- Sludge thickener systems, complete with pump and level control systems.
- Bulk waste storage tanks complete with level control systems and system interlocks.
- Automatic re-treatment of non-compliant effluent
- Final polishing of effluent, prior to sanitary sewer discharge.

Conventional Treatment Systems 1400 Series

Kontek's 1400 Series Wastewater Treatment Systems are integrated within each facility to meet the stringent effluent requirements that exist for finishers. For flow rates from 60 USGPM to 400 USGPM, each Kontek 1400 Series Wastewater Treatment Systems are meticulously manufactured for reliability and ease of function.

Preliminary plant inspection, and solution analysis, is the inception of each Kontek 1400 Series Wastewater Treatment System. After a thorough audit is completed for each process, preliminary P&ID and general arrangement drawings are reviewed with the appropriate plant personnel. After each specific operating detail is reviewed, and every function of the system has been scrutinized, manufacture of the system is commenced.

Throughout the design and manufacture of your system, progress reports and treatability studies are re-checked to ensure customer satisfaction. Installation, and commissioning of each system is performed by Kontek specialists.

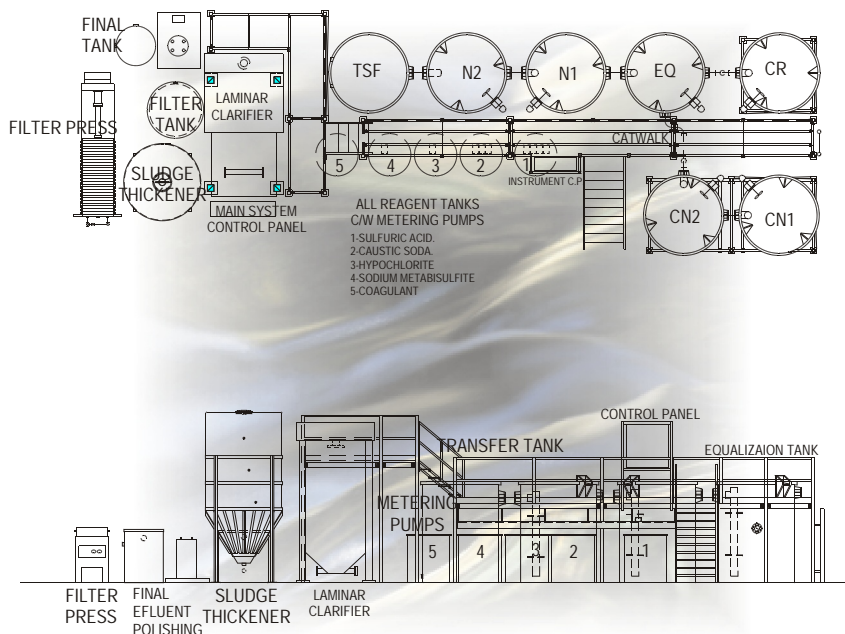
Regular service visits by a Kontek technician provide each customer with written verification on the operational status of the wastewater treatment system. On-line troubleshooting, and modem access by Kontek personnel, ensure each system is monitored as required.

Kontek 1400 Series Wastewater Treatment Systems are designed and manufactured to meet all of your plant requirements. Integration of all operating equipment, including the necessary interlocks to your process, will ensure years of satisfaction.

Kontek "Smart Logic" Advantages

Kontek "Smart Logic" control packages are available in several different platforms, and are designed to minimize manpower requirements, chemistry consumption, and operator error.





MODEL	SYSTEM DESCRIPTION
1400-60-R	60 GPM System complete with: Two-stage neutralization (40-minute retention time), proportional reagent feed systems, automatic polymer feed, 384 ft. ² Laminar plate clarifier, automatic effluent polishing system, and automatic filter press. The control panel is relay controlled.
1400-60-PLC	60 GPM System complete with: Two-stage neutralization (40-minute retention time), proportional reagent feed systems, Kontek "Smart-Logic" redundant pH/ORP controls, automatic polymer feed, 384 ft. ² Laminar plate clarifier, automatic effluent polishing system, and automatic filter press. The control panel is PLC/HMI Interface controlled.
1400-60-R-CN/CR	60 GPM System complete with: Single chrome redox reactor and or dual stage cyanide treatment, two-stage neutralization (40 minute retention time), proportional reagent feed systems, automatic polymer feed, 384 ft. ² Laminar plate clarifier, automatic effluent polishing system, and automatic filter press. The control panel is relay controlled.
1400-60-PLC-CN/CR	60 GPM System complete with: Single chrome redox reactor and or dual stage cyanide treatment, two-stage neutralization (40-minute retention time), proportional reagent feed systems, Kontek "Smart-Logic" redundant pH/ORP controls, automatic polymer feed, 384 ft. ² Laminar plate clarifier, automatic effluent polishing system, and automatic filter press. The control panel is PLC/HMI Interface controlled.
1400-80-R	80 GPM System complete with: Two-stage neutralization (40-minute retention time), proportional reagent feed systems, automatic polymer feed, 512 ft. ² Laminar plate clarifier, automatic effluent polishing system, and automatic filter press. The control panel is relay controlled.
1400-80-PLC	80 GPM System complete with: Two-stage neutralization (40-minute retention time), proportional reagent feed systems, Kontek "Smart-Logic" redundant pH/ORP controls, automatic polymer feed, 512 ft. ² Laminar plate clarifier, automatic effluent polishing system, and automatic filter press. The control panel is PLC/HMI Interface controlled.
1400-80-R-CN/CR	80 GPM System complete with: Single chrome redox reactor and or dual stage cyanide treatment, two-stage neutralization (40 minute retention time), proportional reagent feed systems, automatic polymer feed, 512 ft. ² Laminar plate clarifier, automatic effluent polishing system, and automatic filter press. The control panel is relay controlled.
1400-80-PLC-CN/CR	80 GPM System complete with: Single chrome redox reactor and or dual stage cyanide treatment, Two-stage neutralization (40-minute retention time), proportional reagent feed systems, Kontek "Smart-Logic" redundant pH/ORP controls, automatic polymer feed, 512 ft. ² Laminar plate clarifier, automatic effluent polishing system, and automatic filter press. The control panel is PLC/HMI Interface controlled.
1400-150-R	150 GPM System complete with: Two-stage neutralization (40-minute retention time), proportional reagent feed systems, automatic polymer feed, 960 ft. ² Laminar plate clarifier, automatic effluent polishing system, and automatic filter press. The control panel is relay controlled.
1400-150-PLC	150 GPM System complete with: Two-stage neutralization (40-minute retention time), proportional reagent feed systems, Kontek "Smart-Logic" redundant pH/ORP controls, automatic polymer feed, 960 ft. ² Laminar plate clarifier, automatic effluent polishing system, and automatic filter press. The control panel is PLC/HMI Interface controlled.
1400-150-R-CN/CR	150 GPM System complete with: Single chrome redox reactor and or dual stage cyanide treatment, two-stage neutralization (40 minute retention time), proportional reagent feed systems, automatic polymer feed, 960 ft. ² Laminar plate clarifier, automatic effluent polishing system, and automatic filter press. The control panel is relay controlled.
1400-150-PLC-CN/CR	150 GPM System complete with: Single chrome redox reactor and or dual stage cyanide treatment, Two-stage neutralization (40-minute retention time), proportional reagent feed systems, Kontek "Smart-Logic" redundant pH/ORP controls, automatic polymer feed, 960 ft. ² Laminar plate clarifier, automatic effluent polishing system, and automatic filter press. The control panel is PLC/HMI Interface controlled.
1400-200-PLC	200 GPM System complete with: Two-stage neutralization (40-minute retention time), proportional reagent feed systems, Kontek "Smart-Logic" redundant pH/ORP controls, automatic polymer feed, 1296 ft. ² Laminar plate clarifier, automatic effluent polishing system, and automatic filter press. The control panel is PLC/HMI Interface controlled.
1400-200-PLC-CN/CR	200 GPM System complete with: Single chrome redox reactor and or dual stage cyanide treatment, Two-stage neutralization (40-minute retention time), proportional reagent feed systems, Kontek "Smart-Logic" redundant pH/ORP controls, automatic polymer feed, 1296 ft. ² Laminar plate clarifier, automatic effluent polishing system, and automatic filter press. The control panel is PLC/HMI Interface controlled.

Note: For flow rates higher than 200 US gallons/minute, please contact your Kontek representative for model numbers and specifications.

OPTIONAL Equipment

Automatic Effluent Polishing Systems

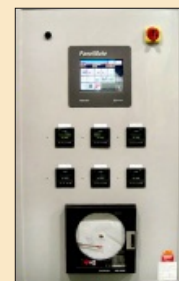
Maxi-Polish automatic effluent polishing systems feature:

- 2500-gallon (85" diameter x 115" high) polypropylene closed top tank, which includes a 4-position or ultrasonic level control system.
- Programmable Logic computer, which controls filtration, discharge and backwash functions.
- Fiberglass reinforced polypropylene vessel with full diameter opening for easy inspection.
- PVC Automatic control valves.
- An electronic flow meter to initiate the cleaning cycle by a preset low flow rate. The automatic backwash cycle includes an acid injection system into the water stream to prevent calcification of the media bed.
- A chemical resistant CPVC direct drive pump



Control Systems

Kontek offers a choice of control system options. 1400 series systems can be supplied complete with Kontek's "Smart logic" PLC/HMI interface control systems or a conventional "relay" control panel package.



Effluent Discharge Pumps

Final Effluent Discharge Tandem Pump Stations, supplied complete with tandem pumps, effluent collection tank, and level control systems



Sludge Thickening Tanks

For those applications that produce excessive quantities of sludge the 1400 Series system can be used in conjunction with a sludge tower for additional sludge thickening prior to sludge dewatering through the Kontek Filter Press

Bulk Concentrated Waste Feed and Bleed Systems.

Process waste solutions are stored in bulk storage tanks and delivered to the 1400 series systems on a feed and bleed basis. Solutions are proportionally delivered to the systems based on total flow rate through the 1400 series systems.