

TREATMENT EDITION



Smith & Loveless Inc.



**Time to Retrofit Your WWTP.
See Many of our Options.**

ARTICLES

MODEL R OXIGEST® WITH TITAN MEM-BOX™ INSERT

3

RETROFITTING CLARIFIERS

4

INTRODUCING LIQUIDLIFT™

6

DIFFUSER SYSTEM

7

DO YOU HAVE EMERGENCY BACK-UP?

8

RETROFITTING DIFFUSERS

10

SMITH & LOVELESS MINI-JECT®

12

ADD FEATURES & MEMBRANES TO YOUR MODEL R OXIGEST®

The **Model R OXIGEST®** Treatment System provides stable operation and flexible process options for wastewater applications. Proven in hundreds of installations, it is the most popular treatment plant design for efficient treatment of complex waste streams. Best of all, it is located in one concentric footprint.

The **Model R OXIGEST®** smart-tank design encompasses complete aeration, clarification and advanced treatment technology in concentric tankage while allowing these unit processes to be individually separated and controlled. From design and engineering to a total turnkey field installation, Smith & Loveless' expertise comes with every **Model R OXIGEST®**.

In fact, more than 20 years after the equipment was originally designed customers frequently come to the Retrofit Division of Smith & Loveless and ask us to assist in not only rehabbing the equipment, but also switching zones around.

We often add in features for dewaterability and most recently the addition of the TITAN MEM-BOX™ and TITAN MEM-FRAME™ technology. Any BOD level, we can help you find a way to rehab your existing equipment to meet all of tomorrow's challenges.

MODEL R OXIGEST®



CLARIFIER REHABS? THINK SMITH & LOVELESS.



New Scrapers

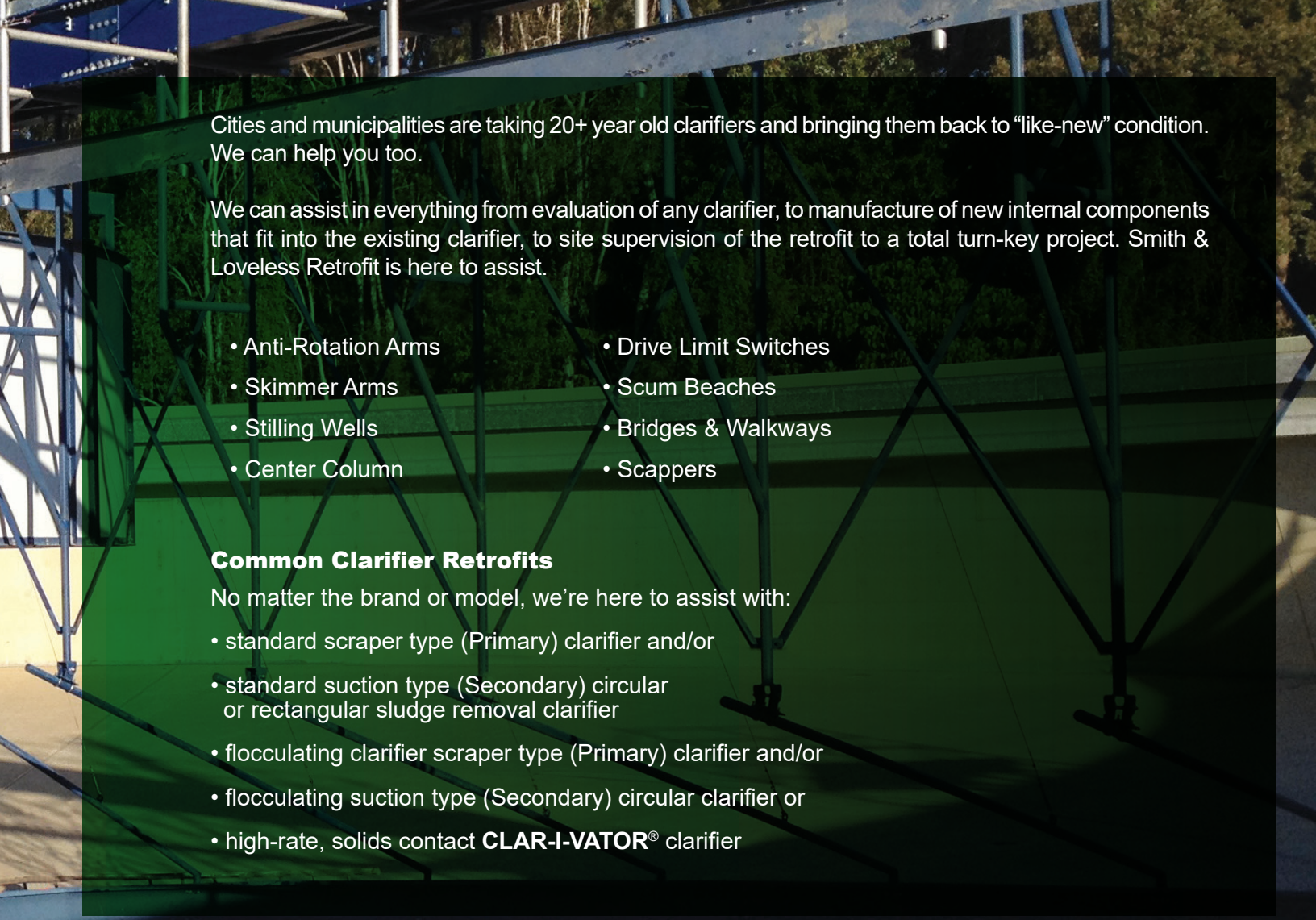


New Clarifier Drives



New Skimmer Arm





Cities and municipalities are taking 20+ year old clarifiers and bringing them back to “like-new” condition. We can help you too.

We can assist in everything from evaluation of any clarifier, to manufacture of new internal components that fit into the existing clarifier, to site supervision of the retrofit to a total turn-key project. Smith & Loveless Retrofit is here to assist.

- Anti-Rotation Arms
- Skimmer Arms
- Stilling Wells
- Center Column
- Drive Limit Switches
- Scum Beaches
- Bridges & Walkways
- Scappers

Common Clarifier Retrofits

No matter the brand or model, we’re here to assist with:

- standard scraper type (Primary) clarifier and/or
- standard suction type (Secondary) circular or rectangular sludge removal clarifier
- flocculating clarifier scraper type (Primary) clarifier and/or
- flocculating suction type (Secondary) circular clarifier or
- high-rate, solids contact **CLAR-I-VATOR®** clarifier

JOBSITE SUPERVISION

Customer’s have found that when they use Smith & Loveless’ construction management team for site supervision of the retrofit using a local contractor, the customer saves time and money because S&L knows how the equipment goes together and how it works - that’s our business.

The image shows a black, industrial-grade LIQUIDLIFT Automatic Anoxic Recycle System. It features a square hopper at the top with a central outlet, supported by a sturdy frame. A vertical pipe extends downwards from the hopper, with a small side connection near the bottom. The entire unit is constructed from 316 SST stainless steel. The background is a solid green color.

Introducing *LiquidLift™*

The **LIQUIDLIFT™** Automatic Anoxic Recycle System provides economic-yet-dependable sludge transfer for treatment processes that require Anoxic recycle. Eliminating transfer pumps, valves and instrumentation—and the maintenance that goes along with these items—the **LIQUIDLIFT™** system utilizes existing blower air and automated flow control to efficiently transfer sludge (including WAS and RAS lines) and maintain high levels of nitrification, even during low flow conditions.

Constructed of 316 SST stainless steel and utilizing one single automated air control valve, the **LIQUIDLIFT™** offers a more economical and dependable means of transferring sludge than multi-tank treatment systems utilizing separate pumps and flow control systems.



SMITH & LOVELESS DIFFUSER SYSTEM

The Smith & Loveless' drop-in pedestal diffuser system gives lateral support and allows assembly/removal of the diffuser without needing to remove fixed rigid supports.

The 3" diameter pipes are constructed of 316 SS SCH 10 Construction with 3" butterfly valve (cast iron body with 316 SS disc) and inlet piping 3" size.



DO YOU HAVE EMERGENCY BACK-UP?

When was the last time you thought about your blowers? How old are your blowers? Do they feature new green energy efficiencies that may allow you to lower your yearly energy consumption?

Smith & Loveless Retrofit can assist you with upgrades on your blowers, ranging from replacement to additional oxygen for improved D.O. (dissolved oxygen) levels. Smith & Loveless Retrofit can also add an additional backup blower to your system for emergencies with automatic switching valves - so if you have a blower go down it does not put you out of the treatment process business. We can also assist you with all size ranges of blowers, from small

blowers for on site treatment plants to large blowers for major municipal treatment plants.

Smith & Loveless Retrofit also offers replacement motors for most existing blowers. Don't forget that the functionality of your blower is vital for meeting required effluent limits. Make sure that you are prepared for emergencies. Contact your local Smith & Loveless Representative to review your system for preparedness today.



WHEN YOUR BLOWER GOES SO DOES YOUR TREATMENT PROCESS

Smith & Loveless Retrofit can assist you with all of your blower retrofit requirements, whether that includes adding a spare blower for emergency back-up, increasing the blower sizes for increased air demand for the treatment process, or looking at energy efficiency savings. Whatever your WWTP needs might be from small blower units for on site needs to large scfm requirements, think Smith & Loveless.



RETROFIT FROM COARSE BUBBLE TO FINE BUBBLE DIFFUSERS

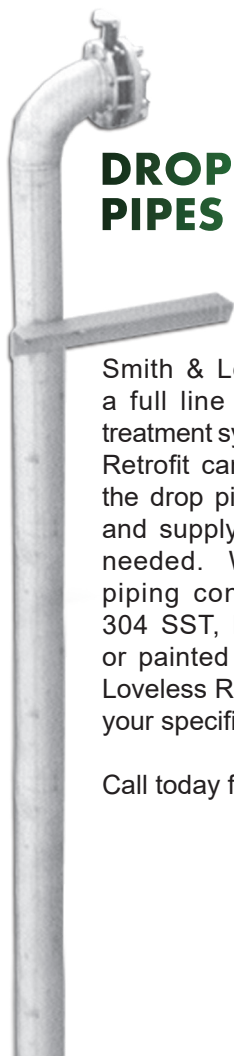


Close-up view of a circular fine bubble diffuser recently installed on a S&L retrofit project.

Outside of some mixing applications, aeration efficiencies greatly improve by upgrading from coarse bubble to fine bubble diffusers. No matter what type of diffuser or WWTP, Smith & Loveless Retrofit can provide you with the best type of fine bubble diffuser for your specific application. Call today!



Replacement circular fine bubble diffusers were installed during this S&L retrofit project.

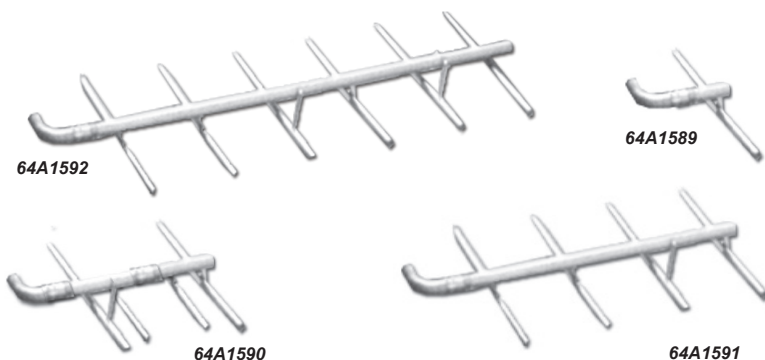


DROP PIPES

Smith & Loveless Retrofit offers a full line of drop pipes for any treatment system. Smith & Loveless Retrofit can also assist with tying the drop pipes into the air header and supplying new air headers if needed. Whether you want the piping constructed of 316 SST, 304 SST, hot dipped galvanized or painted carbon steel, Smith & Loveless Retrofit can assist you for your specific job site requirements.

Call today for more information.

DIFFUSER ASSEMBLIES



Smith & Loveless Retrofit offers a full range of diffuser assemblies for its field-erected and factory-built package treatment plants and WWTP by others. If your treatment plant's diffuser assemblies require replacement, call your local S&L Representative for assistance.

Includes: One Diffuser Assembly, associated Boots and Clamps.

Smith & Loveless, Inc.

14040 Santa Fe Trail Drive
Lenexa, KS 66215

MINI-JECT®

Throw Away Your Flow Equalization Zone's Submersible Pumps

The Smith & Loveless **MINI-JECT®** is the best and most efficient way to control levels in the flow equalization zone of smaller WWTP's.

This very energy efficient product ties into the existing plant air line and uses a minimal amount to control the flow. The **MINI-JECT®** uses air pressure to build up inside of the **MINI-JECT®** ejector and then discharges the flow. The fill cycle of the **MINI-JECT®** can be as low as 3 seconds, creating a consistent rate of discharge. You can also adjust the air flow as needed!

Especially when you consider power consumption savings, no guide rails or submersible pump maintenance, the Smith & Loveless **MINI-JECT®** is the obvious choice for your needs. Contact us today for more information.

