



Municipal Water Treatment Aftermarket Program

Do More with Less



Maximize OPEX in CAPEX Constrained Environments

Aftermarket Services Help Water Treatment Plants

“Do More with Less”

In the United States alone, almost 15,000 municipal water treatment plants treat more than 220 billion gallons of water each year. According to the EPA, the U.S. needs to invest over \$470B over the next 20 years to improve its infrastructure with \$83B of that investment specifically dedicated to water treatment – as more than 50% of assets are quickly approaching the “end-of-useful-life” stage.

But in today’s post-COVID world, CAPEX budgets for water treatment plants are also being reduced, or suspended altogether – at a time when more people are working, studying and spending more time at home (and using more water). This scenario forces water treatment plants to “do more with less.” One of the best ways to do that is to optimize the performance of existing equipment through aftermarket services.

This white paper looks at several aftermarket services and highlights how they can help water treatment plants maximize OPEX budgets and get more out of their existing equipment.



FIELD SERVICE



MAINTENANCE



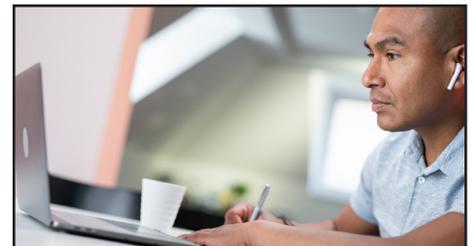
TECHNICAL SUPPORT



SPARE PARTS



IN-HOUSE REPAIRS



TRAINING

Companies applying aftermarket best practices operate efficiently and save more of their bottom line by reducing unplanned downtime.

Milton Roy’s aftermarket Services help customers optimize their pumps & mixers in a manner that provides the following benefits:

- Increased productivity
- Increased equipment efficiency
- Decreased production downtime
- Lower future costs associated with equipment failures
- Decrease consumption of parts
- Decrease energy consumption – and lower energy costs

Milton Roy’s designers, engineers, and service technicians understand how important Milton Roy equipment is to your business - and they care about it as much as you do.

Service & Support

Milton Roy pumps & mixers are designed to run for many years, and each product comes with a detailed warranty. It is important to note that services performed by unauthorized service centers can void a product's warranty. Fortunately, Milton Roy offers an expansive network of locations around the world to address any repair, maintenance or service need for pumps, mixers, controllers, skids, systems or accessories.



Strategic Service Network

OVER 200 Service Engineers
OVER 60 Countries

Each Milton Roy ASC (Authorized Service Center) is trained to rigorously-high factory standards and backed by Milton Roy's first-class technical support for any issue or concern.

1) Milton Roy Authorized Service Centers (ASCs):

- Provide local, on-site support to customers anywhere around the globe
- Offer quick answers for technical inquiries and liaise with Milton Roy as needed
- Perform equipment maintenance and/or repairs on-site or at the ASC workshop
- Manage the inventory of existing equipment at an end user's plant site
- Train a plant's users on all Milton Roy products
- Provide quick response to emergency repair requests.

2) Maintenance Services Include:

- Installation, start-up & commissioning
- Auditing of equipment and spares
- On-site health checks
- Repair of damaged equipment
- Modifications and upgrades
- Operation and equipment training
- Ongoing Maintenance – and optional long-term service contracts.



3) Annual Maintenance Contracts:

Milton Roy offers 3-year agreements, which are free for the first year and chargeable (in advance) for subsequent years via annual renewals. Each maintenance contract can be tailored to meet each customer's specific requirements. Milton Roy will replace worn parts only with genuine Milton Roy spare parts to maintain the equipment's efficiency.

The Milton Roy Maintenance Contract provides year-round assurance and first-rate care, offering:

- Extended warranty guarantees
- Expert engineers who understand your equipment
- Genuine Milton Roy spare parts
- Upgrades and critical spares backup availability
- 24 Hour Service.

The key benefits of Maintenance Contracts are reduced downtime, lower overall maintenance costs and assurances that equipment will function as expected.

Extended Maintenance Contracts are ideal for organizations that have a large or small installed base, but do not have the resources, the time or the expertise to handle maintenance on dosing pumps or mixers.

4) Milton Roy Repair Centers:

For major overhauls, Milton Roy repair centers can return equipment to its optimum condition:

Before:



After:



For more information, visit:

<https://www.miltonroy.com/aftermarket-services/service-and-technical-support>

Predictive Maintenance

For water treatment plants running operations around the clock, downtime is to be avoided at all costs. One of the best ways to keep pumping and mixing equipment up-and-running is to monitor continuously and analyze data to identify potential issues before they become problems.

Milton Roy and LMI offer pumps that are equipped with communications capabilities that alert operators to performance deviations. These capabilities provide an early-warning signal that in many cases can be remedied easily without impacting the process.

Many of Milton Roy's and LMI's customers are large and small municipal facilities with strict corporate security policies. Any plant can benefit from smart-pump capabilities, via Milton Roy's and LMI's proprietary plug & play solutions that connect to a plant's SCADA system.



On-site Health Check Ups

Companies with a large cross-section of various brands of dosing pumps or mixers, or an installed base that is spread out over a large area are ideal candidates for Milton Roy On-site Health Check-ups.

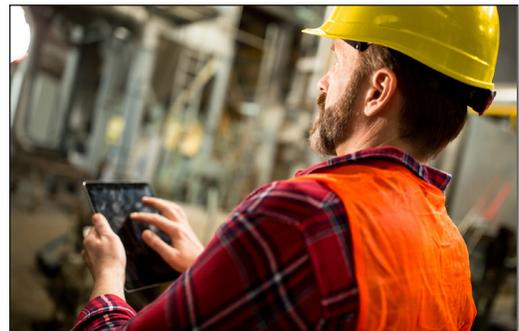
These site visits are usually scheduled for plants prior to, or as part of annual or semi-annual turnarounds. The detailed inspections include “in-service” condition reports for production equipment that covers the following:



	Condition Reports for Pumps	Condition Reports for Mixers
1	Chemical consumption	Inspection for excess movement of support structure
2	Are rated flow & pressures being achieved?	Oil condition and level
3	Oil level and condition of oil	Vibration of gearbox and bearing
4	Vibration on motor	Noise level
5	Noise within the gear housing	Temperature
6	Seal integrity	Power Consumption
7	Safety valve passes oil	Run-out – Output shaft
8	Packed plunger design – packing leaks	

Asset Mapping Services

Milton Roy’s **Asset Mapping Services** provide a comprehensive audit of critical process equipment that paints a complete picture of equipment conditioning, maintenance and pending obsolescence – helping to ensure that plants are operating at optimal levels.



Services include:

- Detailed mapping and recording of all on-site equipment – which is ideal for companies with various brands of dosing pumps and mixers.
- Full Audit of spare parts inventories – and parts requirements for 2 years of maintenance.

Milton Roy’s experienced and highly capable field service technicians ensure a total plant focus for optimum performance.

Spare Parts

Keeping unique spare parts and RPM kits on hand ensures quick turnaround on maintenance and repairs.



Milton Roy spare parts can be delivered quickly to any plant, anywhere around the globe.

Routine Preventative Maintenance (RPM) Kits:

RPM kits are easy to order, with a single part number – and they include all of the components that wear during a pump or mixer's lifecycle. Quick & easy to install, RPM kits give operators confidence that they have all of the parts needed to keep equipment operating in an optimal manner.

Commissioning Spares:

Spares are often required during the startup & commissioning of new equipment.

To order RPM kits, or other parts: <https://www.miltonroy.com/modals/aftermarket>

Planning Ahead Promotes Savings and Enhances Peace-of-Mind:

- **Spares Agreements:** Proactive spare parts contracts save time & money by delivering spare parts at predetermined intervals. Prices are published for the next 5-to-7 years for customers under contract, and procurement processes are simplified.
- **Better Planning:** Lead time for spare parts is known in advance, which helps to avoid a last-moment rush.
- **Updated Records:** Knowing the common parts that need to be replaced saves time & effort, and helps to avoid panic situations.

For more information on parts, visit:

<https://www.miltonroy.com/aftermarket-services/spare-parts>

Training

Milton Roy's global network brings more than 80 years of real-world application experience to its training programs.



Milton Roy offers customer training courses on-site at customer locations, at Milton Roy training facilities and training is also offered via virtual classrooms. Classes are tailored to each customer's specific needs. They can accommodate any sized group, and the courses cover all aspects of Milton Roy's product range.

Courses include:

- Theory of operation/technical counsel
- Applications training
- Preventative maintenance
- Troubleshooting
- Repair
- Testing
- Modification

Milton Roy also offers comprehensive e-learning programs designed to suit any-sized company with varying degrees of training requirements.

Standard training programs at Milton Roy's facility are four-day courses covering the entire portfolio of products. Milton Roy's trainers provide specific, hands-on training to end users, covering the installation, use and maintenance of pumps and mixers.

Milton Roy on-site training programs are unique one-offs that are tailored to the equipment at each customer's facility. These programs are designed to equip maintenance staff, engineers and operators with the knowledge and skills they need to properly maintain pump systems.

- Visit our website for a list of classes: <https://www.miltonroy.com/aftermarket-services/training>
- To register for a class, visit: <https://www.miltonroy.com/modals/training-registration>
- For a quote regarding any training need: <https://www.miltonroy.com/aftermarket-services/training> to discuss your specific requirements.

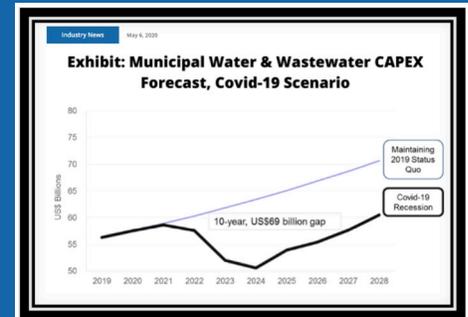


Address the CAPEX Gap by Getting More out of Aftermarket Services

In today's CAPEX-averse environments, municipal and industrial water treatment plants need to manage their assets properly and get the most out of aftermarket services, to optimize the performance of pumps & mixers – and to extend their service life.

Numerous analysts are forecasting a widening CAPEX gap that is expected to reach \$69 billion* over the next ten years, as some businesses slowly recover from COVID-19 and many more shift to a work (and learn)-from-home model. A slow and lengthy recovery will reduce commercial water use, while continuing to increase residential water use.

Historically, CAPEX budgets take time to recover following downturns. This was the case with the macro-economic downturns in the years 2001, 2008, and numerous analysts are predicting a similar pattern for 2021. With shrinking (or disappearing) CAPEX budgets, and a heavy percentage of pumps & mixers (that have been working dutifully in the field for decades) getting closer to their “end-of-useful-life” stage – it's apparent that plants need to maximize their OPEX budgets and get the most out of their maintenance & aftermarket services – to keep their existing equipment functioning at optimum levels.



* Source: www.bluefieldresearch.com

Companies that apply aftermarket best practices operate more efficiently and save on total maintenance efforts when compared to reactive maintenance – and the savings increase exponentially by sustaining the reliability that prevents unplanned downtime. The benefits associated with the aftermarket services presented in this white paper include:

- Increased productivity
- Increased equipment efficiency
- Decreased production downtime
- Lower future costs associated with equipment failures
- Decrease consumption of parts
- Decrease energy consumption – and lower energy costs.

Contact Milton Roy today – to optimize the performance of pumps & mixers with aftermarket services that maximize your OPEX budget, and boost your bottom line in the process. Visit: <https://www.miltonroy.com/aftermarket-services/global-service>.

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About Ingersoll Rand

Ingersoll Rand (NYSE:IR), driven by an entrepreneurial spirit and ownership mindset, is committed to helping make life better. We provide innovative and mission-critical industrial, energy, medical and specialty vehicle products and services across 40+ respected brands designed to excel in even the most complex and harsh conditions where downtime is especially costly. Our employees connect to customers for life by delivering proven expertise, productivity and efficiency improvements. For more information, visit www.IRCO.com.