

# Metso

LCS for pumps

## Life Cycle Services

3 programs  
for maximizing  
uptime and  
performance





# Services tailored to your needs



When you run pumps in your processes, you also run into familiar challenges. These can include things like higher than expected wear rates, turbulence and leaks, as well as issues with getting the right parts on time and getting the right expertise when you need it. Although pumps may be a small part of your process, they need to work reliably to ensure that your operations run smoothly.

## **Get more from your pumps to get more from your process**

With Metso Life Cycle Services, we help you overcome these challenges. We have years of experience in designing, building, delivering and maintaining pumps, so we know how to get the most from them throughout their entire life cycle. By choosing Metso's Life Cycle Services, you can simplify your maintenance, improve your pump reliability, minimize downtime and maximize pump life.

## **Unlock the value in your plant**

With over 350 Life Cycle Services contracts around the world, we have the experience to deliver consistent value to our partners through our service agreements. Metso's track-record also includes the development of many modern mining technologies, so we know how to extend results beyond individual pump performance to ensure that your pumps work in synergy with your other equipment for optimal production and minimized downtime.

## Life Cycle Services for pumps

With our Life Cycle Services (LCS) we bundle our services into convenient, customizable and easily manageable programs, ranging from the basics to complete solutions, depending on the scale of your needs. These programs cover everything from scheduled inspections to more complex long-term process optimization. Metso can act as a supplement to your team, or manage all aspects of your maintenance planning for you.

Each package adds additional features, and no matter how basic or how complex your needs, our LCS programs can be customized to help you meet your goals.

### Three options to keep your pumps running

We offer three different levels of service program, which can be customized to meet your specific needs and aims.



#### Rotable program

##### For simplicity and predictability

Simplify maintenance and make maintenance costs more predictable.



#### Inspection and inventory services

##### For higher availability

Maximize uptime by identifying issues early and having spares ready in your inventory.



#### Equipment maintenance services

##### For maximum pump life

Ensure extended pump life with maintenance and maintenance planning, pump adjustments and reliability engineering.

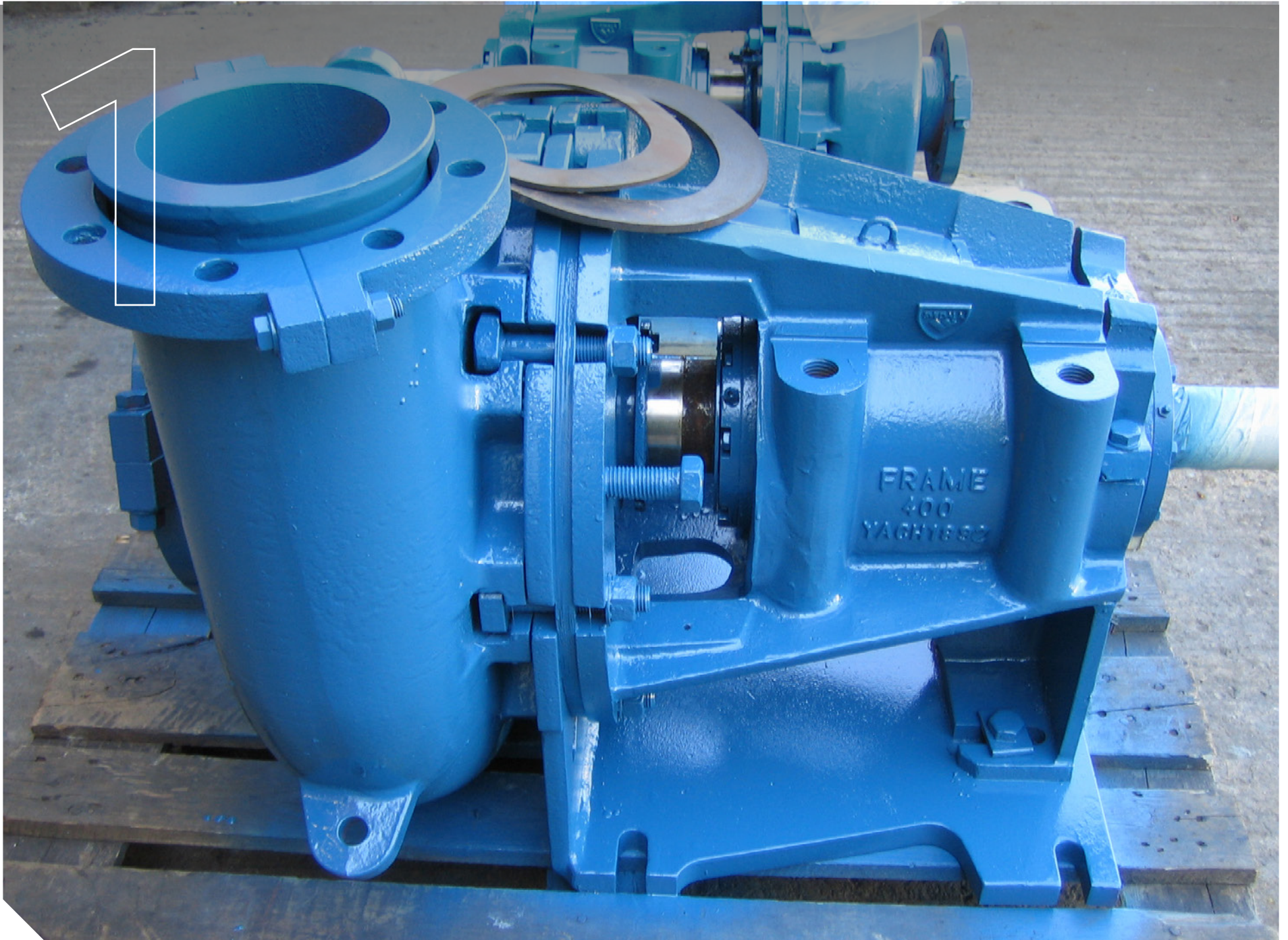
### Additional Life Cycle services program benefits:

Financial and costing programs

Access to Metso's global service network

High parts availability through Metso distribution centers





# Program 1: Rotable program

## Simplicity and predictability

Our Rotable pump program optimizes your labor resources, simplifies maintenance, makes maintenance costs predictable and minimizes downtime. With this program, you keep refurbished pumps (or bearing assemblies) on consignment on your site, so they can be easily changed out when needed. Consignment inventory can also be stored at a Metso distribution center in some cases, ready for fast delivery. Metso will take care of each complete pump (rebuilt to OEM specifications), the consignment inventory, wear and spare component replacement labor, as well as pump installation and removal.

## Recommended options

The program can be customized to include additional services, and we recommend that our customers take advantage of these. They include scheduled inspections with gland monitoring and adjustment, condition monitoring (vibration, bearing temperature, balance), pump performance monitoring, motor and v-belt drive advisory services, as well as pump adjustments.



## Typical benefits of LCS program 1

- Simplified maintenance – refurbished pumps ready for installation
- More predictable costs – easier to forecast costs, with pumps being rotated into service
- Higher uptime – less time lost on time consuming repairs







# Program 2: Inspection and inventory services

## For availability

The Inspection and Inventory program improves pump availability and minimizes downtime by identifying issues earlier and ensuring the right spares are available in your inventory.

With this program, Metso takes care of wears and spares consignment inventory and/or supply, scheduled inspections including gland monitoring and adjustment condition monitoring (vibration, bearing temperature, balance), pump performance monitoring, motor and v-belt drive advisory services, as well as extended warranty coverage.

## Typical challenges facing processes and pumps

- Higher than expected wear rates
- Leaking glands
- Not having the needed expertise available
- Not having the right parts in time
- Higher than expected power consumption
- Changing production flows
- Turbulence and recirculation
- Maintaining multiple brands of pumps



## Typical benefits of LCS program 2

- Higher pump availability
- Reduced maintenance costs
- Increased hours of operation
- Improved reliability through preventive maintenance.





# Program 3: Equipment maintenance services

## For maximum pump life time

Our Equipment maintenance services is a complete package that ensures the longest possible working life for your pumps. Metso experts will perform the maintenance planning, service work including pump adjustments and engineering.

This program includes everything in the Inspection and inventory services program. The program also adds CMMS and maintenance planning, reliability engineering tools, monitoring of Key Performance Indicators (KPIs), wear and spare component replacement labor, pump adjustments, preventive and corrective labor, and HSE Planning.

## Recommended options

An equipment maintenance services program can be customized to include additional elements including conversion kits, maintenance slide bases and pump wear components and optimization.

### Conversion kits

We offer a range of wet end conversion kits to tackle challenging slurry applications. These kits convert 3rd party pumps to allow the use of Metso wear and spare parts.

### Maintenance slide base

With this option, maintenance staff can slide back the entire rotating assembly and motor. This makes maintenance easier and improves physical access to wear components for service work. It also shortens downtime significantly because there is no need to remove piping, and it reduces the need for lifting devices and cranes, increasing personnel safety and reducing the risk of damage to equipment.

### Pump wear components and optimization

Service and wear parts optimization to ensure plant safety and maintain performance, to get the most life out of your pump.



# Commercial and financial considerations

## Fixed monthly fee

Paying a fixed monthly rate is the standard method available. We mutually predetermine your payment schedules to allow better predictability. Once we've defined the scope of your LCS program (how much in terms of services, parts, etc.), we'll set up an amortization schedule, laying out invoice amounts on a monthly basis.

## Capex deferral

Planning your annual cost outlays can be challenging. Purchasing new pumps can result in large upfront cash expenditures which must be carried for long time frames before revenues or benefits are generated. Deferral plans let you make payments for items like capital equipment, capital tools, wear and spare parts and setup costs at a later date, rather than the date of purchase. This allows you to better manage cash flows.

Together, we will agree upon either a designated amount of time in which to pay back, or work on a system of smaller payments over that same period. This gives you the flexibility to extend your budget and acquire the right elements for your project at the right time.

## Cost per hour

Maintenance events and emergencies are unpredictable. Luckily, Cost per hour payment plans take cost spikes out of the picture and allow you to be charged based on your operating time during a given month. This allows you to better predict costs and manage your cash flow. It also ensures that your interests and ours are perfectly aligned to maximize operation time, because it's in our mutual interest to ensure that your pumps run at their optimal level.

Instead of receiving multiple invoices for maintenance, you'll only receive one invoice per month based on a rate calculated according to your actual hours of operation. This rate takes into account all associated costs for maintaining the pump, including wear and spare parts, labor, supervision and any other Metso services needed.

## Extended warranty

With many of the LCS package options, extended warranties are available, covering the replacement of designated main components. This gives you peace of mind knowing that many major parts have additional coverage, which also helps you plan maintenance costs.



# LCS programs for pumps

## Service offerings

Program 1  
Rotable  
programme

Program 2  
Inspection and  
inventory services

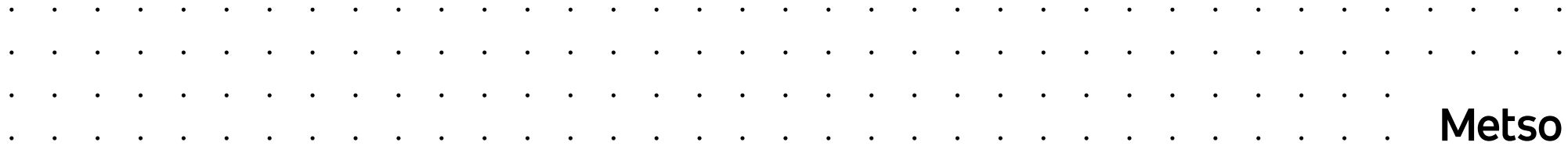
Program 3  
Equipment  
maintenance services

	Program 1 Rotable programme	Program 2 Inspection and inventory services	Program 3 Equipment maintenance services
<b>Supply Chain Management</b>			
Complete pump consignment inventory	●		
Wears and spares consignment inventory	Recommended	●	●
Wear and spare parts supply		●	●
<b>Inspections</b>			
Scheduled inspections	Recommended	●	●
Condition monitoring (vibration, temperature, etc)	Recommended	●	●
Pump performance monitoring	Recommended	●	●
Motor and gear box advisory services	Recommended	●	●
V-belt drive services	Recommended	●	●
Gland monitoring and adjustment	Recommended	●	●
<b>Maintenance</b>			
Maintenance Management System (CMMS)		Recommended	●
Maintenance planning		Recommended	●
Wear and spare component replacement labor			●
Pump adjustments			●
Preventive and corrective labor			●
Service for non Metso pumps Recommended	Recommended		●
Reliability engineering tool			●
Key Performance Indicators (KPI) monitoring			●
HSE planning			●
<b>Optimization</b>			
Pump wear components and optimization			Recommended
Upgrade non Metso pumps (conversion kits)			Recommended
Maintenance slide base upgrade			Recommended
<b>Financial, costing and warranty programs</b>			
Capex deferral	Recommended		
Fixed monthly fee		Recommended	
Cost per hour payment plan			Recommended
Extended warranty coverage		●	●

Select any combination of above listed LCS Service Offerings and build a custom program that better fits your needs.

Metso is a frontrunner in providing sustainable technologies, end-to-end solutions and services for the aggregates, minerals processing and metals refining industries globally. By helping our customers increase their productivity, improve their energy and water efficiency and environmental performance with our process and product expertise, we are the **partner for positive change**.

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