



# Helping the Water Industry

## Experience

Rotork specialise in producing actuators and related equipment for every part of the water industry.

We have over 50 years experience in serving the industry, and we understand the challenges you face.

Rotork valve actuators are widely recognised as being the most technically advanced, reliable, long life, watertight, and user-friendly actuators in the business.

Our operations are backed by huge resources, and our service is exceptional, always meeting our customers' deadlines whatever the circumstances.

## Precise control

Actuators help control everything that happens in a water plant. So they're vital.

We have a full range of actuators, all designed to meet the stringent requirements of the water industry. They are accurate, robust and efficient, and provide the exacting levels of durability and reliability that you require.

They also provide a number of unique cost saving benefits that particularly help water industry customers.

So you have precise control, lower costs, lower emissions, and a safe environment.

## Support

Rotork actuators are backed by full service support, including retrofit and maintenance. Rotork products and service are available worldwide, wherever you are located.

That's why the water industry worldwide specifies Rotork

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# Understanding your challenges

Whether you are managing a water company, or operating an individual plant, you face many challenges.

We understand what they are, and we are here to help you



## 1 Specifying and Planning

Effective planning for future installations and upgrades.

## 2 Cost efficiency

The most efficient equipment with the lowest cost of ownership.

## 3 Central control

Monitoring and control of operations over a wide area from a central point.

## 4 Information

A constant flow of information about the operation of the plant, to guide the control and the maintenance.

## 5 Water safety

A completely reliable operation that always delivers water that meets environmental standards.

## 6 Durability and Reliability

Equipment that you can completely rely on, with real durability, complete reliability, and very low maintenance requirements.

## 7 Ongoing support

Suppliers that will support you at every stage, wherever you are in the world.

Let's look at these core needs...





# Helping to meet your challenges

As a specialist in the water industry, Rotork is dedicated to meeting these 7 core needs with the actuators that we design and manufacture, and the services we provide.

## Specifying and Planning<sup>1</sup>

- ▶ A full range of actuators
  - a wide choice of different types and sizes
  - different duties and applications
- ▶ Working with you and your contractors to define the specifications of your actuators and control systems
- ▶ Technical support in the design stage

### Providing you with...

a full choice of actuators designed for the water industry, correctly specified for your needs

## Cost Efficiency<sup>2</sup>

- ▶ The right actuator for each application and environment.
- ▶ All actuators are environmentally sealed to reduce long term maintenance requirements
- ▶ Standard interfaces for every type of application (valves and sluice gates)
- ▶ Easy to install and commission with infrared setting tool

- ▶ Full monitoring and control functionality within standard cost

### Providing you with...

low cost completely reliable operation of all your valves

## Central Control<sup>3</sup>

- ▶ Able to isolate or control the flow
- ▶ Simple integral controls for remote operation
- ▶ Digital electronics that respond quickly and reliably
- ▶ Remote control and reporting through Fieldbus Systems for every application
- ▶ Alternative of hard wiring and proportional control for some locations
- ▶ Actuator electronics can be used to facilitate control of other equipment
- ▶ Manual control in event of failure of central controls

### Providing you with...

efficient remote control of the flow in every part of your operations

## Information<sup>4</sup>

- ▶ Information on status of valves and actuators is available centrally and locally
- ▶ Full data capture of history of valve and actuator, for diagnosis and management
- ▶ Valve torque profiles and events log to help diagnose valve and control problems
- ▶ Valve, control system and actuator information to guide maintenance plans

### Providing you with...

complete information to manage your maintenance efficiently

## Water Safety<sup>5</sup>

- ▶ Our actuators are designed to meet international, national and industry standards for water safety
- ▶ TÜV approval for SIL 2 applications available
- ▶ Working together with process control instrumentation, our actuators have many features that are designed for water safety...
  - reliable remote operation
  - accurate positioning of valves and repeatability of valve position
  - immediate electronic feedback by actuator to confirm that action is in progress
- ▶ Configurable alarms
- ▶ Failsafe operation
- ▶ Manual override in event of power failure

### Providing you with...

reliable operation that will operate continuously and help you achieve your standards

## Durability and Reliability<sup>6</sup>

- ▶ Designed to survive extreme weather and temperature conditions
- ▶ Long operating life with very low maintenance requirements. Depending on their usage, many of our actuators are still operational after 30 years or more, even in the most demanding environments and with minimal or no maintenance
- ▶ IP68 environmentally sealed from the factory
- ▶ With non-intrusive setting, so the covers do not ever need to be removed, even for commissioning
- ▶ Our watertight actuators have double O-ring sealed terminal compartments that can survive being submerged or water ingress through a conduit, so that actuator components are protected from environmental ingress

### Providing you with...

robust, long lasting equipment with minimal maintenance even in extreme environments

## Ongoing support<sup>7</sup>

- ▶ We provide technical support worldwide, via Rotork offices or Rotork representative companies
- ▶ We provide training on installation, commissioning, operation and maintenance
- ▶ We provide long term asset management

### Providing you with...

reliable support and long term security





# Choosing the right actuator

There are many different types of installation in the water and waste water industry.

In these installations there are many different applications for actuators, based on different local needs.

There are also different types of power supply available.

That is why Rotork have such a wide range of actuators, that are all designed with specific requirements in mind.

**We have actuator solutions for every type of application...**

- Electric • Pneumatic
- Hydraulic • Electro-hydraulic

So you can select the most appropriate actuator for every application, and make sure that you have the most cost efficient solution.

**We will help you decide**



## What are the main factors to consider ?

### Power supply

The availability of electric, hydraulic or pneumatic power.

### Limitations on size and weight

Electric actuators do not require ancillary equipment, so their overall footprint is less.

### Space

Hydraulic actuators are often smaller, but they are driven by systems that require more space, especially for hydraulic lines, power packs, and oil storage.

### Type of valve

The type of valve, whether multi-turn, quarter turn or modulating, and the characteristics of its performance, will help to determine the type of actuator.

### Force required to operate valve

Hydraulic and pneumatic actuators can provide a greater force.

### Maintenance requirements

The maintenance requirements of complete pneumatic and hydraulic systems need to be considered.

### Fail-safe requirement

This normally requires pneumatic, hydraulic, or electro-hydraulic actuators.

In the event of a power failure or an emergency, the fail-safe mode can be open, close, or stay-put.

Battery back-up is available for some actuators, and it can also be supported by the storage of compressed gas for emergency operation of the valve.

### Leakage

The ongoing supervision of hydraulic and pneumatic actuators, and their power lines, is essential to prevent any possibility of leakage.

### Speed of operation

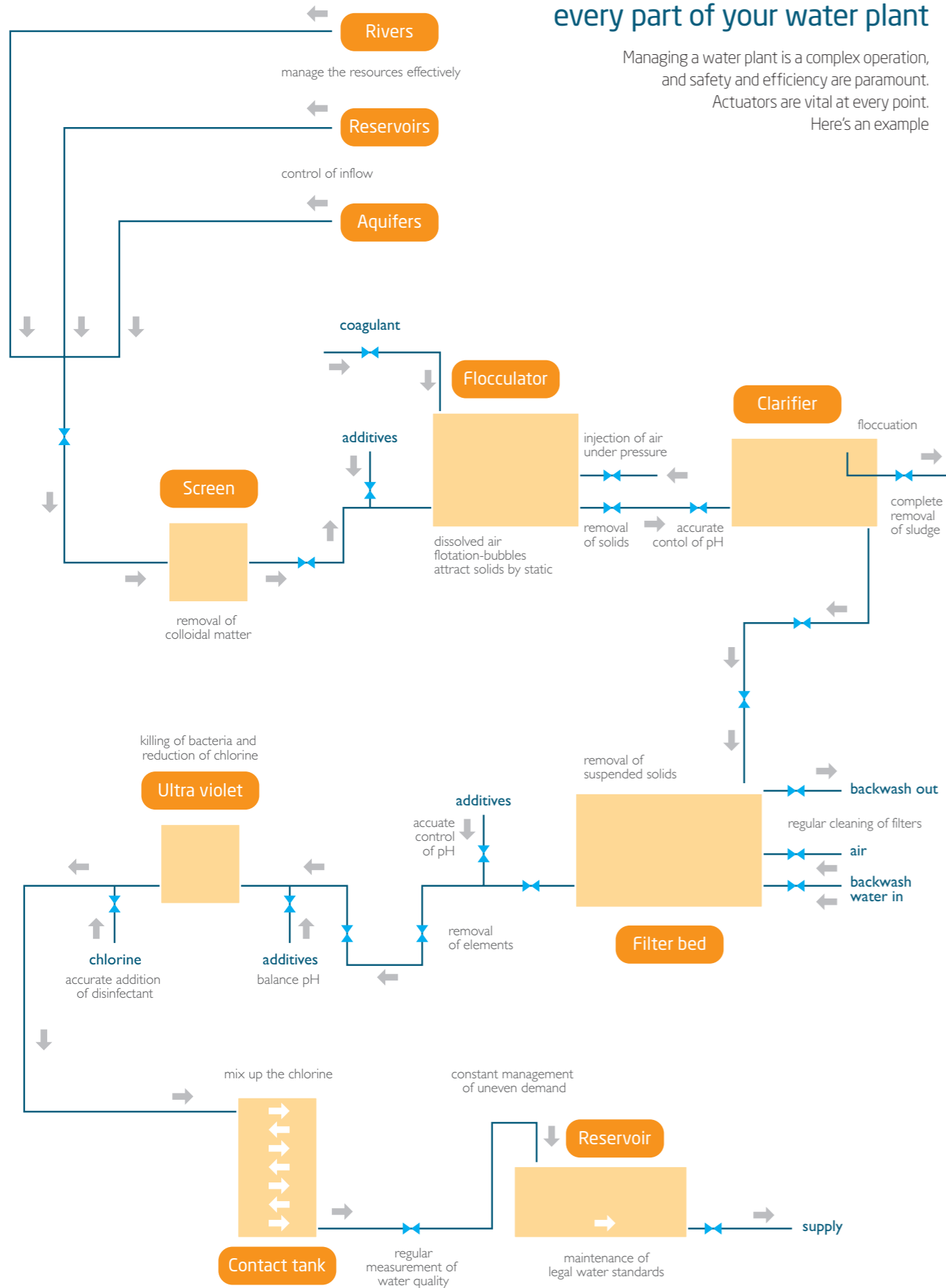
The speed of operation needs to be considered. Pneumatic and hydraulic actuators can normally operate more quickly than electric.

### Cost

Overall installations involving pneumatic and hydraulic tend to cost more than electric, because of the cost of the pipework and pumps.

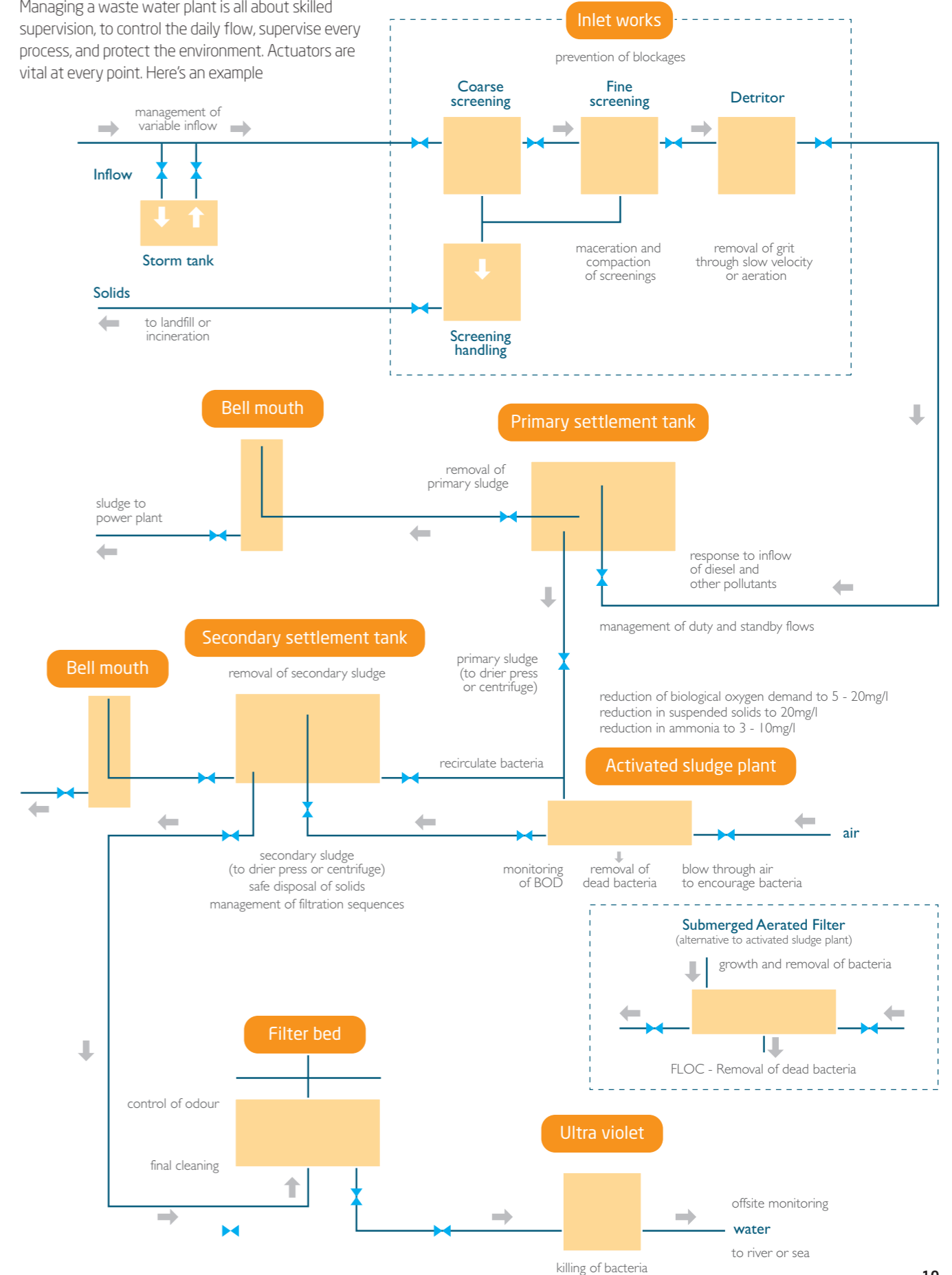
## Actuators are vital in controlling every part of your water plant

Managing a water plant is a complex operation, and safety and efficiency are paramount. Actuators are vital at every point. Here's an example



## Actuators are vital in controlling every part of your waste water plants

Managing a waste water plant is all about skilled supervision, to control the daily flow, supervise every process, and protect the environment. Actuators are vital at every point. Here's an example

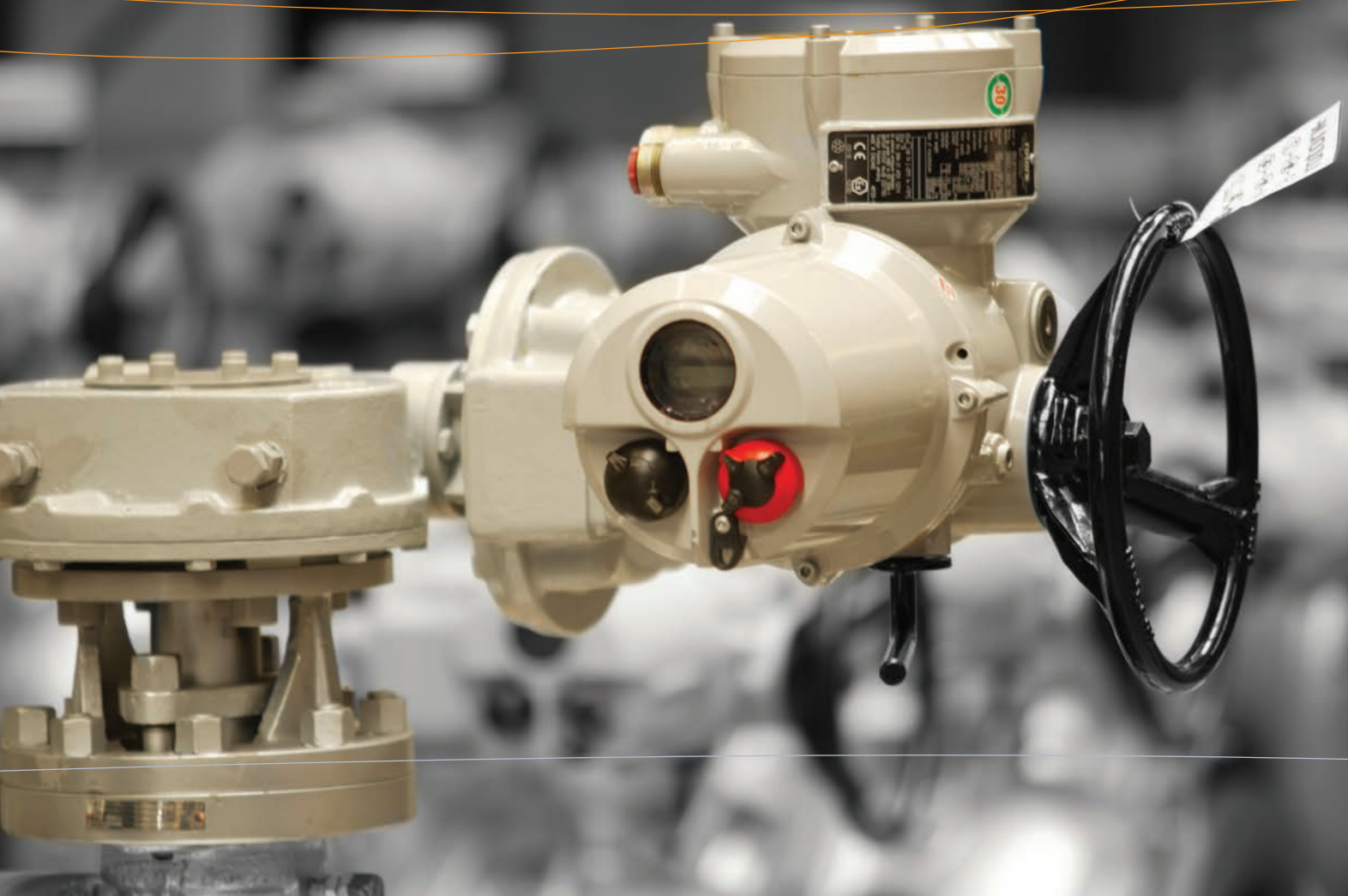






# rotork® Products

Our range of actuators are completely watertight, and are specially designed for the water and waste water industries, with a wide range of specifications to suit every application in every part of your plant.



## ROM / ROMpak

- Quarter Turn
- Torque range 30 - 650Nm
- Wide range of supply voltages available
- Watertight IP68
- Compact & Lightweight
- ROMpak version includes local controls, local indicators and optional Bus Systems
- Remote Control Capability

## K-TORK

- A true quarter-turn rotary vane actuator
- High torque output in a compact size
- Double-acting and spring-return configurations
- No stress on valve body and stem
- Extremely accurate modulating of 0.25% or better

## Gearboxes

Our gearboxes are designed to adapt IQ actuators (both multi-turn and quarter-turn) for the high torque requirements of very large valves and penstocks



# IQ range

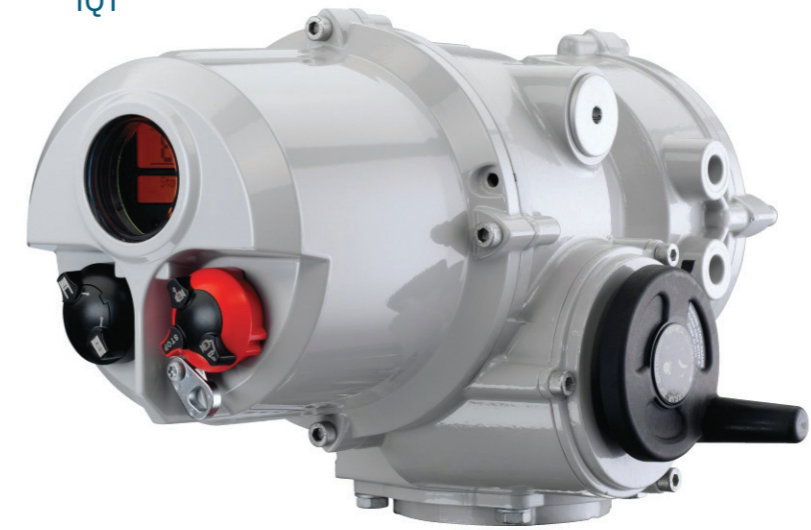
Look at these 10 key benefits...

IQ



The infra red setting tool provides full control without removing the access covers

IQT



## 1 Models for every application

- Multi-turn or quarter-turn
- Isolating duty, regulating or modulating duty
- Range of sizes
- Wide range of torques, using gearboxes for larger applications

## 2 Easy to install

- Power supply options
  - single phase, three phase or DC
- 2 wire digital system simplifies control cabling
- Actuator can be mounted in any orientation
- Rotatable display

## 3 Accurate and reliable

- Accurate setting of open-close limits
- Digital control using contactless torque and position sensing provides reliable, accurate and repeatable valve operation
- Double sealed to IP68 (7days, 45metres)

## 4 Easy to commission

- Simple commissioning set-up using hand held setting tool
- On screen text instructions
- No need to remove any covers
- Future proof Rotork firmware
- Dry working conditions not required
- Electrical safety for operators
- Easy storage of commissioning settings for future reference
- Language options

## 5 Easy diagnosis and predictive maintenance

- On-board data logger stores historical operating data including valve torque profiles, starts and alarms
- On-board help screens
- Information can be downloaded using setting tool
- Events log can be analysed and presented using Rotork's free IQ-Insight software
- Data can help to optimise plant performance by identifying potential problems and guiding predictive maintenance

## 6 Operation of tight valves

- Torque can be controlled to protect valve and actuator, including hammer-blow effect and variations in torque levels

## 7 Tough and durable in all environments

- Double sealed with spigot and O ring to prevent ingress of water, dirt or chemicals
- Tough polyester powder coated finish
- Non-intrusive set up
- Local controls operate via non-penetrating magnetic connections
- Completely sealed for life
- Withstands water and humidity
- Withstands chemicals, including chlorine and ozone
- Withstands temperatures from -30°C to +70°C
- Oil lubrication for life
- Tested in extreme environments
- Bearings are sealed for life, and do not require periodic maintenance

## 8 Safety and security

- Explosion proof (certified models available for working in hazardous areas)
- Hand wheel can operate valve in event of power failure
- Food grade oil available for specified applications
- Self test diagnostics at every power up
- Highway termination module allows removal of actuator without disrupting the highway
- Detachable thrust base allows removal of actuator without disturbing valve or penstock (IQ model only)
- Vandal proof kit to prevent unauthorised operation

## 9 Easy to monitor and operate locally

- Non-intrusive infra-red setting tool for local monitoring
- Actuator screen shows current status and recent alarms
- Hand wheel size is optimised between speed of operation and force required

## 10 Central control

- Compatible with network protocols
  - Rotork Pakscan
  - Profibus
  - DeviceNet
  - Foundation Fieldbus
  - Modbus



# Networks

Modern facilities require up to date communications right down to plant level.

Plant managers demand more information quicker than ever before.

Process operators need full control facilities at all times of the day and night.

Maintenance managers want information so that their services can be scheduled economically.

To meet these requirements, design engineers include field communications networks to allow every piece of critical plant to be controlled and monitored by computer.

These computers are assigned to management operations and maintenance tasks within their own network, exchanging data about the equipment and processes under their control.

Integration of the plant controls by use of network connectivity has been a hallmark of Rotork actuator products for many years.

The use of network bus systems makes commissioning of the plant and the subsequent control and monitoring a simple, quick and reliable task.

Rotork actuators are compatible with a wide range of communication and process control systems by including the appropriate network option card during manufacture.

Our own Pakscan system offers advanced actuator network control similar to network control from Profibus, Foundation Fieldbus, Modbus and DeviceNet open systems. Innovative technology together with expert bus system knowledge ensures that Rotork can always provide the ideal solution for the control system.

**Bus networks work well with Rotork actuators. They are easy to set up, easy to operate, and highly efficient.**



## Bus Networks

The advantage of using a wired network has long been known and Rotork have been providing wired networks since the introduction of Pakscan in 1986. Approximately 30% of the actuators we ship are now specified with a network card fitted.

Serial field networks have improved valve control in a number of ways over previous hardwired input control or manual operation via local controls. When comparing network systems to hardwired controls:

- The initial design costs are lower, due to a simplified plant cabling
- Installation and commissioning costs are reduced significantly, as there are fewer connections to make and test
- Maintenance and fault finding is simplified due to the additional diagnostic data available via the highway
- Cable costs are reduced due to less cable being used
- Fewer marshalling cabinets are required as I/O racks are not needed
- Device upgrades are easier to incorporate as additional wiring runs are not needed
- Much more data is available to the user; which can be used for asset management and predictive maintenance
- Bus networks are more versatile than conventional wiring, and allow for additional functionality in the future
- With Rotork, additional non-networked devices can be hard wired through the actuators enabling the devices to be controlled and monitored
- The IQ setting tool makes it easy to set up the actuator, without needing to remove the access covers
- Additional network enabled devices can easily be added to the system, with minimal wiring
- Rotork provides full control and monitoring of the actuators, and enables remote configuration
- Valuable torque information can be accessed over the network, for use in predictive maintenance of the valve

Pakscan and Profibus are examples of Bus networks used in the water industry.

## Profibus

Rotork actuators are certified to operate with Profibus, and are ideally suited to the Profibus communication system.

A network using Profibus-DP provides a cost-effective method for connecting multi-vendor devices in any location to a central control system simply and efficiently.

The Profibus-DP network can operate over a range of communication speeds and provides the mechanism for control of the actuator and feedback of data about the valve.

The Rotork Profibus-DP option cards support standard DP-V0 cyclic data exchange and DP-V1 acyclic data exchange used for diagnosis, set-up and historical data.

## Pakscan

The Rotork Pakscan system is a world leader in actuation control automation. Pakscan should always be considered where multiple actuators are involved. It is ideal for new installations, and when an existing site is being converted from manual valve operation.

Pakscan was designed exclusively to be an actuator control and monitoring system and is tailored for Rotork products.

First launched in 1986, Pakscan has been at the forefront of network technology since its inception, helping to control over 100,000 field units.

Pakscan network systems offer the customer field proven control, reliability and customer support.

The Pakscan system provides the vital link between valve actuator and supervisory control. It is an intelligent, reliable, high integrity, fast and easy to install network between equipment and the control room.

With their high reliability and efficiency, coupled with low maintenance costs, Pakscan networks have proved to be the unrivalled leader in valve actuator communications.

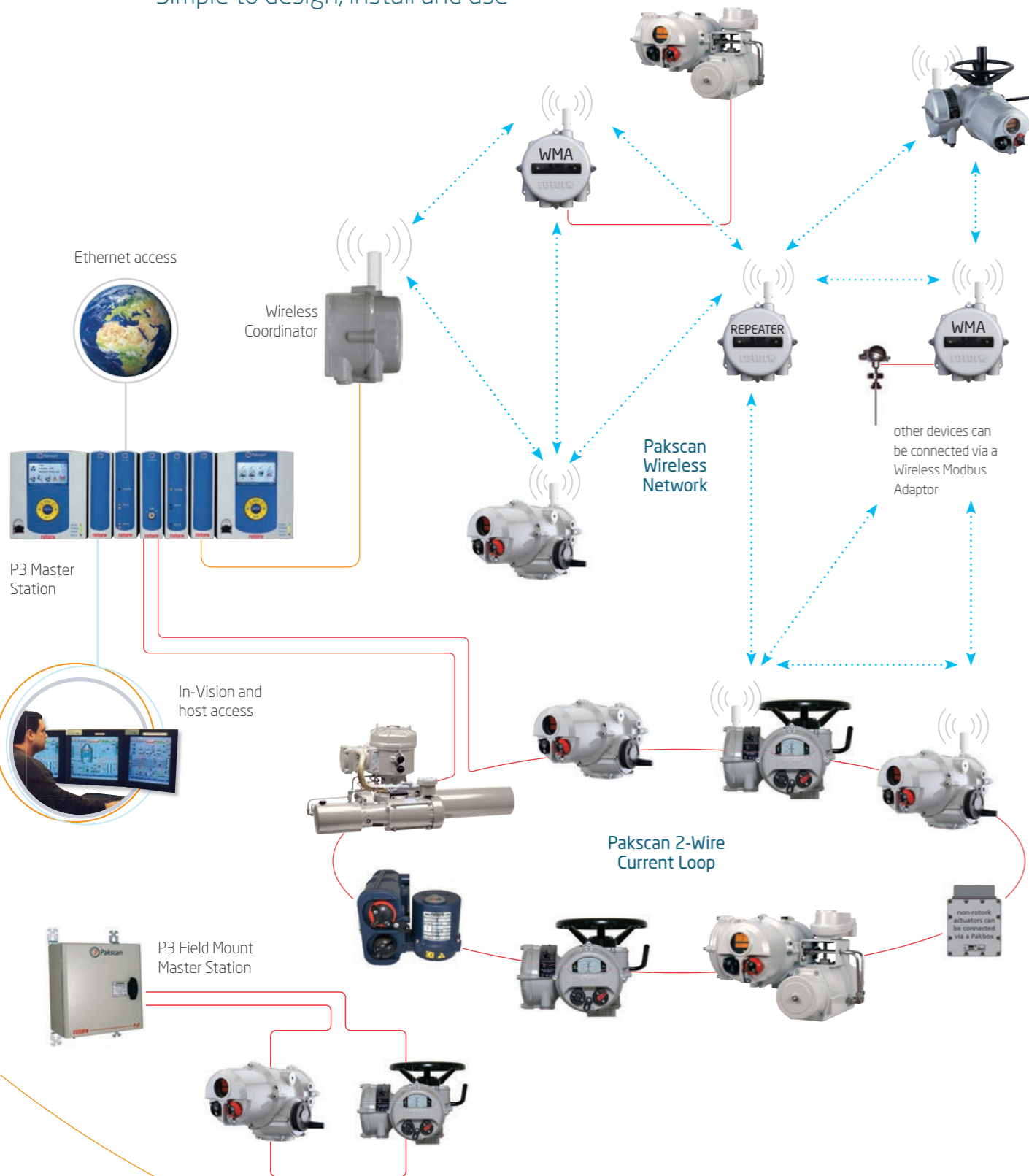
Additional features with Rotork Pakscan overleaf







Simple to design, install and use



**Additional features with Rotork Pakscan**

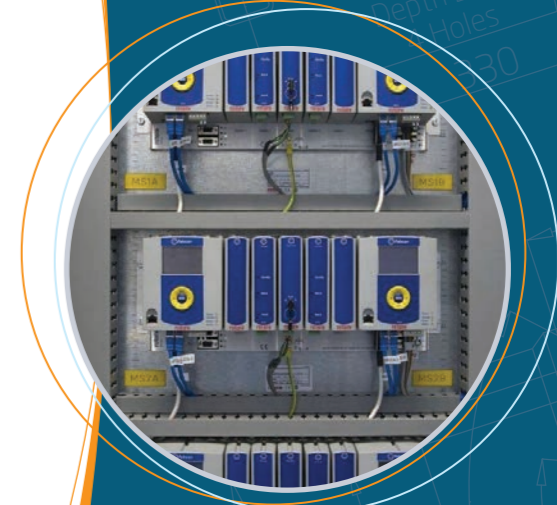
- Designed exclusively for actuator control
- Wired and wireless field networks available
- Fault tolerant redundancy as standard
- Wired network uses a low cost twisted pair cable loop
- Provides easy access to asset management data and configuration via the built-in web pages
- The Host or DCS communicates directly to the master station using Modbus messages
- Master station display shows system status and allows system configuration

**Pakscan Wireless Network**

**Wireless networks further increase the advantages of the wired networks.**

There are obvious savings to be made in plant cabling design and the removal of network cables, as each device now only needs to be supplied with power. Furthermore, due to the system bandwidth it is also possible to extract huge amounts of data from the actuators, very quickly. Entire actuator data logger records can be uploaded in a matter of seconds.

Wireless can be used as the sole communication network for a device, offering control and monitoring, but it is also possible to add the wireless modules to existing actuators. In this scenario, control is performed by a conventional hard-wired or copper cable bus network with the wireless option allowing the user to quickly extract additional monitoring data.



**Rotork In-Vision**

**Helping to plan effective maintenance**

Rotork's In-Vision is a user friendly PC based control and data acquisition software package that perfectly complements Rotork's Pakscan network control system.

In-Vision is able to monitor the torque required from the actuator to operate a valve.

Should the torque increase above a set level, an alarm is raised. The increase in torque may indicate a valve which is wearing out; this alarm can be used as an early warning system for planned maintenance of the valve.

In-Vision brings the computer animation and plant visualisation capabilities right to the fingertips of the technical operators and engineers.



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# Customer Service

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**LIFETIME**  
commitment



## Working with you

We'll help you at every stage, to fulfil your business and operational needs, and provide you with reliability, efficiency and safety.

We have highly skilled engineers who are fully trained in the latest developments to deliver you the highest possible standards of service.

With over 500 directly employed engineers and over 500 service technicians employed by our agents worldwide, we have the infrastructure required to effectively support all our customers' needs.

All our engineers and technicians hold all the appropriate safety qualifications.

We have workshops worldwide, with trained staff and full test facilities, equipped to overhaul, repair, upgrade, and modify your equipment.

We will always work closely with you to understand your needs exactly and to provide you with the very best solutions.

## Total commitment

Our lifetime commitment to our customers includes...

- An unrivalled understanding of actuation technology
- A global network of fully qualified, local service agents
- Lifetime customer care
- Fast effective solutions to the most challenging technical problems
- Long term savings, and reliability you can trust

## Dedicated support teams

We have dedicated support teams in every area, working together worldwide to provide you with the highest quality service and support, wherever you are...

- Project management and system design
- Technical support
- Network systems design and support
- Field service
- Spares
- Training

...and the Rotork worldwide network of subsidiaries, Centres of Excellence, distributors and local service agents

## We provide a complete service at every stage

### Concept

While you are planning for the future

- Initial planning
- Tailored service agreements

### Build

Designing and building

- Design
- Installation and Commissioning
- Warranty
- Training

### Product Support

Ongoing operations

- Technical Support
- Spares

### Site Services

Managing your assets for maximum returns

- Preventative Maintenance
- Field Service
- Workshop Services
- Retrofit and Site Projects
- Factory Fit

The following pages explain each stage...



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# Concept

While you are planning  
for the future



## Initial planning

Whether you are planning a new installation, or changes to an existing site, we can work closely with you and your partners, to discuss your objectives and your overall plans for the future

- We can look at your existing installation, advise you on any requirements, and make recommendations
- We will give you information and advice on specifications, and recommendations of the right actuator for each application
- We can offer a long term supply agreement
- We can offer a comprehensive service agreement
- We can prepare our proposals based on the whole life ownership and operating costs of the equipment

## Tailored service agreements

We can review your exact requirements and your plans for the future, and then provide a tailored service agreement with fixed prices for our products and services. We can even hold dedicated stocks of actuators and parts for immediate replacement.





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# Build

Designing and building your new installation



## Design

**We can provide full design services for your project**

- As you develop the design of your overall installation, we will provide the exact specifications for the actuators and for the systems at each location
- We will provide drawings and technical specifications, help with layout plans, and advise on integration with other equipment
- We will integrate with your existing systems and with new build projects
- We will work with your end users, designers, plant constructors, manufacturers and distributors

## Installation and commissioning

**We provide two alternative choices for installation and commissioning, according to your needs...**

- 1 We provide a complete installation and commissioning service by fully qualified engineers, wherever you are in the world**

  - We will provide installation and commissioning services ourselves, or provide training
  - We will integrate with your existing systems
  - We will provide all the necessary documentation for every actuator
  - We will integrate our actuators into your systems
  - We will undertake site acceptance testing, and capture all the performance data
  - All the work will be done by our fully qualified network engineers
  - All the work is covered by warranty

- 2 We can provide a complete on-site project management service**

Depending on your needs, our project management service can cover all of the installation phases (scoping, design, procurement, manufacturing, installation and commissioning) on the broad scopes of work that typically surround actuation projects.

This can include valve installation, power distribution, control cabling, control cabinet installation, field communications, and structure fabrication.

If you wish, it can also include where appropriate the management of other suppliers, and the coordination and supply of other materials, equipment and facilities.

## Warranty

**Every Rotork actuator is covered by our standard warranty programme.**

All new parts are fully guaranteed for 12 months.

We also provide a 12 month warranty on any actuators overhauled by Rotork. This covers the workmanship, and the parts that we replace.

Tailor-made warranties can be provided as part of a Planned Maintenance contract.

## Training

**We can train your Plant Operators and Maintenance Staff, and also your Foremen, Supervisory Management and Engineers**

All our courses are tailor made to suit the participants and are backed up with comprehensive literature to take away.

Each course introduces participants to a range of Rotork actuators and their design and application to all types of valve. The courses include design philosophy, strip down and usage, and fault finding and diagnostics. Particular attention is given to installation, commissioning, operation and maintenance.

The courses can be held anywhere in the world, and whatever language your staff speak, so will your Rotork engineer.

We now also offer a series of E-Learning modules on [www.rotork.com](http://www.rotork.com) aimed at anyone who has a requirement to commission and use Rotork actuators and associated equipment in the field.

The modules consist of interactive learning solutions that take around 30 minutes to complete and are equally useful as a refresher course for those who deal with the equipment infrequently.



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# Product Support

Operating your installation



## Technical Support

Whatever your enquiry, we can provide you with immediate technical information and advice on all applications for actuators and control systems.

We have full traceability of every Rotork actuator.

This means that we know the design, the exact specifications, and the history of every actuator we have ever built.

A team of Sales Support and Applications Engineers are able to offer you both technical and application support for all your products whether they are old or new, and we always aim to provide you with a quick and complete response.

We can advise you on parts, and on any servicing information that you require.

At the same time we will inform you of any relevant product updates that affect your actuators.

Comprehensive technical information is available on [www.rotork.com](http://www.rotork.com), which contains a detailed library of information on current equipment and services, together with technical specifications on all our products. We are happy to guide you through this library at any time so that you can find the information that you need.

## Spares

We stock a full inventory of spare parts, and our worldwide delivery service ensures you receive them quickly and efficiently - wherever you are.

### Complete service

We handle all aspects of the supply of spares, including technical support, quotations, order processing and shipping. We are always available to discuss any technical questions.

### Comprehensive stock

The majority of standard modules for our current range of products are held in stock to enable us to provide a fast turnaround on orders.

### Tailor-made packages

We can offer a tailor made recommended spares package to suit new and existing sites of all sizes and for all applications.

We can advise you on the stock levels that you should hold locally.

We have an extensive database of the actuators supplied over the past 50 years and can offer solutions to any actuators that may require spare parts.

### Full information

We have detailed manuals and CD-ROMs, to help you identify the parts you need.





# Site Services

Managing your assets for maximum returns



## Preventative maintenance

Once everything's up and running, we'll ensure your equipment remains in top condition.

Our customer base is global, and so too is our service and support network from Rotork offices and representative companies worldwide.

### 1 Health checks

We can undertake a health check, especially of your older equipment in key areas, surveying each actuator and reporting back to you on their condition. Then if you wish, we will repair or upgrade them to the required standard.

Based on the serial numbers, we can also give you a detailed inventory of all your actuators.

This involves a detailed assessment of each actuator and the creation or updating of an asset register.

Against this database we record inspection data and performance data, as well as historic information from our own manufacturing databases (eg build specification and date). Over time this helps to identify the start of any deterioration in any of your equipment.

### 2 Planned maintenance contracts

We provide customised maintenance contracts to suit individual needs, guaranteeing the efficiency of your equipment at minimum cost, and reducing your cost of ownership.

For most sites our engineers visit on an "as planned" or annual basis to complete the preventative and follow up maintenance. This ensures the maximum operational time for the plant and often the planned work is scheduled to coincide with plant outages.

The contracts can include...

- Fixed annual cost
- "All risks" actuator cover
- Our engineers working on your site
- Including planned visits by our engineers, and the cost of materials
- Comprehensive support for all equipment
- Protection against obsolescence through long term spares holding
- Rapid response emergency service

- Corrective actions
- Actuator overhaul on site or in workshop

For larger sites we can provide Rotork engineers to work alongside your own staff on a day to day basis.

All preventative maintenance contracts include tailor-made warranty packages.

### 3 Turnaround Service

We provide a full turnaround service, wherever you are in the world, always completing the work on time and to budget.

- We can do a full visual inspection of every actuator, leading to either a health check with replacement of selected parts, or to a full overhaul (either on-site or off-site in our workshops)
- Where possible, we undertake a torque test and provide a certificate
- We refit the actuator to the overhauled valve
- We commission locally and in your control room
- We will also do a visual inspection of all the actuators on your site, and provide a report

## Field Service

Rotork provides a worldwide field service response for all types of actuator

Our support can be planned or in response to an emergency situation.

We always aim to be reliable and quick, so that your downtime is minimal.

Our field technicians perform a number of different tasks for customers...

- Installation and commissioning of actuators to ensure they are correctly set up
- Upgrading actuators, such as the installation of additional cards
- Installation and commissioning of network/bus systems
- Inspection and repair of damaged/deteriorating actuators
- The emergency repair of actuators

All our engineers are fully qualified, working from fully equipped service centres. If possible, they will come with the spare parts required.

We provide a 12 month warranty on all the work we carry out.





## Workshop services

We offer a certified workshop overhaul capability to bring Rotork products back to full functionality and reliability.

The installed base of Rotork's actuator products around the world stretches back over 50 years. A large portion of these actuators are still in service.

Many Rotork products are operating in very harsh environments, and continue to operate reliably and dependably for many years.

However, depending on the environment and application, some actuators do eventually require refurbishment, which can be done by Rotork trained engineers in our fully certified workshops.

### Quick response

Within a week of receiving an actuator for overhaul we will strip it down and send you a report of what work is required to fully refurbish it, together with a quotation.

We then aim to complete the work and send the unit back to you within another week.

Quicker turnarounds can be achieved where required.

However, occasionally complete refurbishment can take up to 4 weeks due to the need for special coatings to be renewed or special original parts obtained.

### Complete service

The work will normally include...

- Completely stripping, cleaning and inspecting
- Replacing oil seals, O-rings, bearings, exterior bolts, and oil
- Completely functionally bench testing
- Re-certification through a production test rig so that a full one year warranty can be given

New Rotork standard paint will normally be applied or a specialist coating as required. For Rotork units that are powder painted, any blemishes in the original coating will be repaired to extend their protection.

With explosion proof actuators we pay special attention to the flame paths to ensure the continued integrity of the equipment, and compliance with its original certification

## Retrofit and Site Projects

We can design, install and commission retrofit solutions for any application – from single valve installations to fully comprehensive turnkey contracts covering field communication systems, actuators, ground works and cabling.

### Retrofit

Retrofitting actuators to valves in the line is a safe and cost effective solution that minimises plant disruption.

Whether you are replacing obsolete actuators, changing power source or motorising manual valves we are able to offer tailor-made solutions designed to comply with your exact requirements.

Working from basic valve data we are able to offer a full sizing service that matches actuator models to the valves' requirements. We carry out full and detailed site surveys, collecting all the dimensions needed to design the mechanical components that will mount the new actuator to the existing valve.

Where space or access is an issue, safe remote-drive solutions can be engineered using extended spindles, pedestals and drive adaptors.

Ease of installation and maximum reliability of the whole installation are guaranteed, with all work covered by a full Rotork warranty.

Our design service is backed by a factory-trained installation team who are able to mechanically install, cable and commission the actuators, including working in confined spaces, and they can also assist with the integration into your plant control system.

Our retrofit service covers Rotork's complete range of actuators. We can also replace the actuators of any other brand and provide easy integration without the need to change your control system.

### Site Projects

Rotork, and its subsidiaries, carry out significant extended scope actuation projects throughout the world every year.

This is a growing requirement from our customers who are often looking for a "one stop shop" to automate part or all of their processes.

Our capabilities cover all of the installation phases (scoping, design, procurement, manufacturing, installation and commissioning) on the broad scopes of work that typically surround actuation projects.

This includes civil works, pipe works, valve installation, power distribution, control cabling, control cabinet installation, field communications and structure fabrication.



## Factory Fit

We help local valve distributors provide actuated valve solutions to their customers. We also manage the supply of large quantities of automated valves on major projects for contractors and end-users.

Our Factory Fit service undertakes the assembly of valves and actuators. Their careful assembly is critical to ensure that an automated valve performs correctly and reliably.

This service is often provided by a valve manufacturer, but there is a growing need for actuators to be installed on valves after they have left the valve manufacturer's factory.

We can automate all valve types regardless of the available power supply.

This service is provided at our network of service centres around the world.

### We normally undertake the following steps...

- We select the correct actuator type and size based on the basic valve data and the plant operational criteria
- The team at our local service centre designs the components needed to modify the valve so that the actuator can be mounted
- We produce drawings showing the complete valve and actuator assembly to enable our customer to verify the correct orientation and ensure that there is sufficient space available for installation
- We manufacture the adaption kit
- We install it onto the valve, and perform a full range of functional tests on the finished assembly
- Once the automated valves have been installed on site our field service technicians are available to assist with the final commissioning

Our actuators, adaption kits and installation service are all backed by the worldwide Rotork warranty.





# Complete team



## A complete team

### We work closely with end users, designers, equipment manufacturers and distributors

We always like to have good relationships with all of our partners and customers.

As an independent organisation, Rotork is able to work effectively with all related manufacturers.

We believe we understand the way they work and the pressures they face, and we try to help them honour their customer commitments.

We know that our partners and customers enjoy working with us too, and they often commend us on our service quality and product reliability. They also appreciate that our technological lead allows us to offer them the versatility they need for every application.

Our global, commercial and technical support services ensure that our partners and customers are totally supported.

We always try to make our partners' and customers' lives easier - for example with our fast quotation service, our back-up warranties and our international documentation.

And we have invested in manufacturing facilities around the world, so as to ensure that we can always produce our actuator and control systems within your project timescales.

## Keeping ahead

We continue to lead the way in every aspect of our business...

### Developing our products

We continually monitor market trends and listen to our water customers' needs, so as to improve the quality, value and performance of our products for the water industry.

### Committed to quality

We are dedicated to providing world class quality in our products and services, and we are independently assessed and approved to ISO9001:2000 standard.

### Certified for Health and Safety

The health and safety of our staff, and of those with whom we work, is of the utmost importance.

The design of our working practices and the training of our staff are all planned to achieve a safe working environment.

We are assessed and certified for health and safety by the nationally recognised authorities, both in our factories and on your sites.

### Protecting the environment

We are committed to protect the environment in every way we can, and to help our customers to achieve their own environmental objectives.

- At least 80% of the materials used to manufacture our current actuators are recyclable
- We give instructions on recycling, and mark components accordingly
- We design energy efficiency into our products
- We can give you guidance on environmentally friendly disposal
- We have independent certification to ISO14001
- We monitor our carbon footprint very closely and reduce it wherever we can
- We publish a full annual environmental report
- We are listed on the FTSE 4 Good index and we are a signatory to the Global Compact





# About Rotork

Providing actuators and site service around the world



As the world's largest independent valve actuator manufacturer, we specialise in actuation and nothing else, because it's all we do. We can focus fully on delivering the totally reliable products and services that our diverse customers and worldwide markets demand of us.

At **Rotork** we firmly believe our reputation is based on reliability, backed by a proven and successful track record over more than 50 years.

And as an **independent company**, we are able to work freely with every valve, damper and fan manufacturer without any constraints.

As a major manufacturer, we operate in **every sector** – **petro-chemical, water, sewage, power** and **marine**.

We're involved in all the key areas of the actuator field – **electrical, hydraulic** and **pneumatic** – as well as manual and automated gearboxes, mounting kits, control systems and other related services.

We don't mass produce actuators to meet potential market needs; rather, we manufacture them to satisfy our customers' individual specifications and requirements. As a result, our range includes products that are simple and functional through to those with the latest sophisticated technology. Large or small, every actuator is designed to the very highest standards of reliability.

Whatever you need, you have all the expertise available from one source

[www.rotork.com](http://www.rotork.com)





- Controls**
- Electric Actuators | Control Systems
- Fluid Systems**
- Fluid Power Actuators | Control Systems
- Gears**
- Gearboxes | Gear Operators
- Instruments**
- Precision pneumatic control devices
- Site Services**
- Projects | Services | Retrofit

Latest product information and a full listing of our worldwide sales and service network is available on our website

[www.rotork.com](http://www.rotork.com)

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YOUR LOCAL ROTORK AGENT

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HELPING THE

# Water

INDUSTRY



REDEFINING FLOW CONTROL

