



Plant Maintenance Services



YOUR CHALLENGES

Improving asset reliability and equipment uptime through total plant maintenance is a source of competitive advantage for many operators. In recent times, there has been much more emphasis on proactive maintenance techniques that aim to monitor and predict when intervention is necessary rather than correcting failures when they occur to maximise productivity and reduce long-term maintenance costs.

OUR PLANT MAINTENANCE SERVICES

We are vastly experienced at providing total plant maintenance services across the asset-intensive industries, with in-depth knowledge and solutions to deal with the planned and unplanned issues that can occur. We have the processes, systems, advanced equipment and trained specialists to cope with all types of planned maintenance (PM), corrective work, pit stops, shutdowns, minor upgrades,

revamps and emergencies to ensure each task is planned and executed with a maximum focus on safety, whilst eliminating interface issues and minimising cost.

HOW WE SUPPORT YOUR BUSINESS

We deliver your planned maintenance routines on time and on budget through our multi-disciplinary approach and project management capability, leading to significantly fewer maintenance staff on site and minimal repeat work.

Unplanned or emergent work is quickly scheduled, resourced, and actioned, ensuring back-logs are maintained at manageable levels.

Our multi-skilled workers along with advanced systems and superior technology, deliver significant returns and continuous improvements in process safety, reliability, and equipment effectiveness.

THE CR3 DIFFERENCE

CR3's large in-house team of highly trained technicians is subject to regular audits and a stringent safety passport scheme. We invest heavily in the latest equipment and SMART systems to maintain our reputation as the region's leading one-stop provider of specialised maintenance services.

Innovative equipment and techniques

Our regular investments in the latest equipment, tools and systems, operating under a single project management team to ensure optimal safety, quality and schedule efficiency, to support customers in their everyday operations across the full range of services.

Outstanding QHSE performance

Our investment in training, equipment and SMART systems combined with our focus on rigorous planning, preparation and execution of work ensures we can deliver a best-in-class performance that continually exceeds our clients' expectations for safety and quality.



Unrivalled experience

Our planning and workflow management systems bring improved transparency and allow us to track compliance with operational and contractual objectives, which are crucial in meeting schedules and achieving desired quality and customer satisfaction targets. We can track available resources across multiple plants, the status of jobs, including

those completed and billed, employee overtime, absenteeism, and employee turnover as well as manage our payroll. These systems have delivered significant productivity gains and are being used on multiple sites to track hundreds of jobs every day.

Exceptional service

We pride ourselves on being able to mobilise personnel at short notice and to deploy a multi-skilled and effective workforce ready to address any maintenance task, whether planned or not. Together, with our strategic partnerships boosting our in-house capabilities in key areas, we ensure the highest levels of competence and professionalism are present on every job.



OUR SOLUTIONS

- Scaffolding and other access solutions
- Static and rotating equipment maintenance
- Mechanical services for all plant and equipment including removal, reinstallation, and operational alignment
- Routine and specialist rigging requirements
- Fabrication and installation of all pipework and steelwork including special alloys
- Machining workshop services
- Heat exchanger repairs and retubing
- Storage tank cleaning and maintenance
- Stores and stock management
- Non-destructive testing (NDT) & post-weld heat treatment (PWHT)
- Procurement services
- Insulation / refractory / painting
- Valve maintenance
- Online leak sealing
- Industrial cleaning
- Pipeline and process services
- Basic and detailed engineering services via specialist partners
- Shutdowns and turnarounds
- Pre-commissioning and commissioning services
- Operations & Maintenance manpower support
- Daily housekeeping and fabric maintenance services (FM)
- Drivers and road machinery operators

YOUR BUSINESS BENEFITS

Increase productivity – by having a single point of contact we can deploy a multi-skilled and effective workforce ready to address any maintenance task, whether planned or not.

Save time and money – by eliminating interface issues with our multi-disciplinary approach and project management capability, leading to significantly fewer maintenance staff on site.

Ensure high safety standards – by working with a partner that is committed to delivering the highest safety standards in the industry. We offer the latest equipment, tools and systems, operating under a single project management team to ensure optimal safety.

CR3 IN ACTION

The challenge

A refiner wanted to change their approach to plant maintenance and select a single umbrella contractor to improve safety, quality and productivity.

The solution

We developed a multi-skilled workforce from scratch, implemented a workflow management system to track performance and improved safety and quality through incentive programs.

The outcome

Productivity rose sharply with significantly less manpower on the back of deploying a multi-skilled workforce with access to advanced automated equipment.

CR3 is a leading provider of energy engineering solutions. Established in 1991, we provide specialised maintenance, plant upgrade, revamp and engineering services with a sharp focus on **Energy Efficiency**, **Engineering Excellence**, and Sustainable **Solutions**.

To learn more, visit [CR3.Group](https://www.cr3group.com)

Leading one-stop provider of specialised maintenance services

CR3 supports your business with extensive contracting experience in the delivery of catered service packages, 'blind to blind' jobs and turnkey maintenance services during major shutdowns and turnarounds. Our business upholds a culture and track record of integrated management systems that are certified to multiple international standards.

Our Solutions

We offer a comprehensive portfolio of maintenance services that are grouped into six business lines. Our experts deliver these services – onshore and offshore – on time and on budget.

Our complete 'blind to blind' solution ensures more streamlined and efficient projects, as we maintain direct, single-source control of all critical path elements. We cater to projects of widely varying scope and complexity, and can deliver multiple shutdowns concurrently.

Related services:

- Static & Rotating Equipment Maintenance
- Industrial Scaffolding
- Mechanical Services
- Column Modifications & Repairs
- Total Heat Exchanger Maintenance
- Flare Tip Replacements & Repairs
- Cleaning & Decontamination Services
- Mercury Management Services
- Catalyst Handling Services
- Nitrogen Services
- Waste Handling
- Decommissioning Services
- Insulation Services
- Valve Maintenance
- Storage Tank Cleaning & Maintenance

Our experts meet your demands for shorter change-outs, leaner project teams and superior quality standards for all reactor types with end-to-end solutions that reduce downtime and increase profitability.

Related services:

- Catalyst & Adsorbent Handling Services
- Tubular Reactor Services
- Dense Loading
- 'Blind to Blind' Mechanical Services
- Reactor Internals Replacement & Repairs
- Nitrogen Services
- Waste Handling

We clean and inspect virtually all plant vessels, columns, drums and piping systems, both onshore and offshore, with services that can be tailored to requirements.

Related services:

- Pre-Commissioning & Commissioning Services
- Nitrogen Services
- Pipeline Cleaning (Chemical & Mechanical)
- Pipeline Flooding
- Pressure Testing
- Dewatering
- Drying
- Purging

Our investment in training, equipment and SMART systems combined with our focus on safety and rigorous planning, preparation and execution of work underpins our track record as a leading provider of mechanical & plant maintenance services.

Related services:

- Static Equipment Maintenance
- Rotating Equipment Maintenance
- Specialist Cutting Services
- Online Leak Sealing
- Controlled Bolting
- Reactor Repairs & Maintenance
- Plant Change & Piping Modifications
- In-situ Flange Facing & Machining
- Industrial Scaffolding
- Insulation Services
- Valve Maintenance
- Continuous Plant Maintenance
- Storage Tank Cleaning & Maintenance

Our extensive portfolio of cleaning services sets the benchmark in terms of technical, environmental and safety standards.

Related services:

- Chemical Cleaning Services
- Mercury Management Services
- Fin Fan Optimisation
- Hydro Jetting Services
- CR3 Decoking Technology (CDT)
- Decontamination Services
- Waste Handling

We deliver projects safely, on time and on budget by ensuring single-source control through our multi-disciplinary approach and project management capability.

Related services:

- Process Revamps, Rejuvenations & Retrofits
- Construction & Constructability Reviews
- Engineering, Procurement & Commissioning Services
- Operations & Maintenance
- Dismantling, Demolishing & Removal of Equipment
- Fabrication of structural, Carbon Steels & Pipe Systems
- Fabrication of Stainless Steels & Special Alloys
- Installation of Large Equipment & Pipe Systems
- Welding
- Hot & Cold Cutting
- Scaffolding & Insulation



CR3 is a leading provider of energy engineering solutions. Established in 1991, we provide specialised maintenance, plant upgrade, revamp and engineering services with a sharp focus on **Energy** Efficiency, **Engineering** Excellence, and Sustainable **Solutions**.

Contact us today to learn more

CR3 Group

17th Floor, Unit 1706
Two Pacific Place Building
142 Sukhumvit Road
Klongtoey, Bangkok 10110, Thailand
Tel: +66-2-653-3913-5
Fax: +66-2-653-3916
Email: cr3g@cr3.group

CR3 Thailand

15/1 Moo 3, Bankoh - Mabkha Road
Mabkha, Nikompattana
Rayong 21180, Thailand
Tel: +66-38-698-399
Fax: +66-38-698-398
Email: cr3t@cr3.group

CR3 Malaysia

P.T. 6068, Teluk Kalong Industrial Area
24000 Kemaman
Terengganu Darul Iman, Malaysia
Tel: +60-9-863-2325 to 26
Fax: +60-9-863-2328
Email: cr3m@cr3.group

CR3 Singapore

156 Gul Circle
Singapore 629613
Tel: +65-6268-0255
Fax: +65-6268-3369
Email: cr3s@cr3.group

CR3 (India) Private Limited

601, 6th Floor, Building No. 9, Gigaplex
Plot No. IT-5, Airoli West, MIDC
TTC Industrial Area
Navi Mumbai 400708, India
Tel: +91-22-6288-1000
Email: cr3i@cr3.group

CR3 Middle East

Musaffah, M19
Plot #1 DSV Solutions
Abu Dhabi, UAE
PO Box 132569
Tel: +971-2-583-4228
Email: cr3me@cr3.group

Or visit **CR3.Group**

