



Valve Condition Monitoring Made Easy

Valve Condition Monitoring is known to reduce risks, and maximise efficiency and reliability in all processes where it is deployed. It is increasingly being seen as the only safe way of managing valve populations.

MIDAS® Valve Diagnostic products use proven acoustic emissions (AE) technology to identify through valve losses / leaks and then use proprietary algorithms to calculate and quantify any leaks found. Valve leakage represents major risks to plant operations. Score Diagnostics Limited has developed a number of valve condition monitoring products and services to address their existing customers' and the wider market's needs.

The MIDAS Meter® uses an acoustic emissions (AE) sensor to detect the high frequency sound signals emitted by leaks across valve seat to seal interfaces. It is a non-invasive inspection technique which requires the operator to place the sensor directly onto the outside surface of the valve body. Once in position, it is possible to see within a few seconds if there is any leakage across the valve seat(s).



The MIDAS® Sensor detects leaks within valves by the use of Acoustic Emission (AE) technology. Designed for permanent but non-intrusive installation to provide continuous on-line leakage monitoring in hazardous areas where intrinsically safe equipment is required. A 4 to 20 mA signal is provided for interface to the plant's automation system. The MIDAS® Sensor uses the same technology as Score developed for its portable valve leak detection system the MIDAS Meter®.

The MIDAS® Sensor detects the early onset of leakage so aiding Operations to identify, trend and quantify valve leakage and so enabling the appropriate operational and remedial actions to be put in place.

V-Map: Valve Monitoring for Analysis and Performance

The monitoring of the condition of Emergency Shutdown Valves (ESDVs), on both onshore and offshore Oil and Gas installations, is an essential part of ensuring the safety of personnel, protection of the environment and capital assets. The failure of an ESDV to operate on demand, or fail to provide a shut off will have major impact.

At Score Group plc, we provide engineering, research, design, supply, repair, manufacturing and training services throughout the world. We provide these services 24/7, 365 days a year. The principle products we work with are Valves and Industrial Gas Turbines and our total commitment to and unrelenting focus on quality service provision in Intelligent Valve and Gas Turbine Solutions™ makes us market leaders in our chosen field of operations.

Score's team of 1300+ personnel are committed to a safe working environment and providing a quality service to all our customers. We have an excellent track record - spanning 30 years - for making a positive impact in society, through our efforts to add value at all levels, to the benefit of all our stakeholders. We are principally able to do this by applying our knowledge and experience of working with the people, the products and services we provide and engaging in and developing close and mutually beneficial relationships.

Valve Services

- **Criticality**
- **Strategy**
- **Stock Management**
- **Tracking**
- **Sales**
- **Purchase**
- **Repair**
- **Integrity Testing**
- **Recertification**
- **Engineering Design**
- **Design Consultancy**
- **FEED - Valve & Materials Selection**
- **Drawing Production (2d)**
- **Drawing Production (3d)**
- **In-situ Repairs**
- **Shutdown Valve Management Team**
- **Valve Monitoring**
- **Specialised Valve Training**



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Score **TransCanada Limited**
Intelligent Valve Management™
www.score-group.com

Score TransCanada Limited



Score TransCanada has been established in Edmonton, Alberta for a number of years and is focused on providing Intelligent Valve solutions to the Oil & Gas, Power and General Industrial sectors within Alberta, British Columbia, Saskatchewan and other areas of Western Canada.

The regional headquarters in Edmonton has recently located to a new 41,000 sq ft facility which is dedicated to new Valve Supply, Valve Repair, Valve Upgrades, Valve Automation, Valve Asset Management, Acoustic Monitoring, Remote Valve Monitoring, Training and inventory management for clients. In addition to this we offer an Engineering consultancy service which is focused on system and process design as well as Valve failure analysis, re-engineering and upgrades.

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Service is available in the following areas:

- **Valve Automation & Control System Services**
- **Valve Sales, Service, Repair & Upgrade**
- **Engineering & Design Consultancy**
- **Surplus Stock Management**
- **Wellhead Services**
- **Asset Recovery**
- **Procurement Service**
- **Condition Monitoring Equipment**
- **Inspection & Expediting Services**
- **Wellbuk Intelligent Wellhead Control**
- **V-Scan™ Diagnostic Valve Health Control System**
- **V-Map™ Continous Valve & Actuator Monitoring System**
- **Midas Meter® Handheld Acoustic Leak Detection Equipment**




Intelligent Valve Management



Critical Stock

Score Group plc has the world's largest independent stock of valves and actuators. With a valve inventory in excess of £280,000,000 a necessary foundation is now in place to support our customers and provide integrated valve solutions. The holding of key insurance spares is one of the most important aspects of Valve Management. A balance must be found between providing the minimum number of spares and providing sufficient spares to keep the facility operating safely and with maximum availability. This balance is achieved using a cost analysis of the supply chain for the delivery, stocking levels and refurbishment of valves and their spares compared to the risk of plant unavailability.

Valve Strategy

The Valve Strategy provides a framework for plant maintenance, which ensures compliance with the applicable safety and statutory requirements and ensures best long term value and plant operability. The key is the identification of a valve's function and hence its criticality.

Valve Criticality

By identifying a valve's criticality, in terms of its importance to platform safety and plant operability, the valve can be assigned the following:-

- The Optimum Insurance Spares Holding
- Maintenance Routine covering :-
 - Inspection Frequency
 - Test Frequency
 - Preventative Maintenance Schedule



Preventative Maintenance Routines

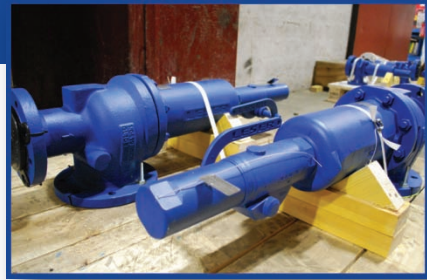
The Maintenance Routine is a means of providing written Maintenance Work Instructions and monitoring mechanisms to optimise valve, operator and instrumentation performance, increase safety and minimise the risk of production losses by reducing the risk of potential failures.

Pressure Safety Valve Division

Pressure safety valves are a critical part of any piping system and the owners of such systems need to know they can trust and rely on the provider of their pressure safety valve services.

Score offers a number of pressure safety valve services, including the following:

- Procurement of pressure safety valves & maintenance kits
- Overhaul
- Test & recertification
- Surveys & benchmarking of pressure safety valve populations
- On-site testing & recertification campaigns
- In-situ in-line testing
- Provision of PSV spares (including bolting & gaskets)



Our survey and benchmarking services can allow you to improve the effectiveness of your maintenance by determining accurate schedules for recertification of pressure safety valves based on specific parameters and known risk. Effective benchmarking of a pressure safety valve population could replace your maintenance activities but improve the results by focusing effort.

Score workshops provide comprehensive pressure safety valve overhaul and test services for all types of safety relief valve. Score has a team of over 100 Field Service Technicians capable of undertaking on-site test and recertification of pressure safety valves at onshore or offshore installations. During this work the valves will be removed from service, tested and recertified in one of our purpose-built mobile test workshops before being reinstated in line.

Saving you costs for Valve Certification and Maintenance

- Benchmarking through RBI (Risk Based Inspection) Processes
- Spares Strategies & Rationalisation
- Valve Registers
- Complete Repair & Testing Facilities
- Qualified & Competent Personnel
- Engineering & Design Consultancy
- In-Situ Testing

