



Korea Quick Response Center

Nuclear Services • Maintenance and Repair • On-Site Services
Parts and Components • Pump Retrofits and Upgrades



Experience In Motion



High Quality and Service Excellence From Korea QRC / Nuclear Service Center

The Flowserve Korea Quick Response Center (QRC) has aimed to best serve Korean end user markets in various industries since it was expanded in 2009.

The Korea QRC complies with Flowserve Global Aftermarket Business Policy and Strategy and is fully supported by the Flowserve QA program and global engineering resources in various market demands, including manufacturing aftermarket parts sales, repair services, upgrades, technical services, turnkey field services, and duplicate spare pumps for the full range of Flowserve legacy product lines.

As an exclusive representative serving Korean end users, the Korea QRC will continue to supply genuine Flowserve products and services in accordance with Flowserve sales and operational policies and quality programs. We consider this is the safest and best way to serve our customers.

Premier, Value-added Products and Services

The dynamic range of services includes:

- OEM parts and pump manufacturing and supply
- Pump shop / field repair and services
- Pump upgrades, re-rates and retrofits
- Field installation and commissioning services
- Contract maintenance
- Field technical assistance

Industries Served

- Nuclear power
- Power (thermal / combined cycle)
- Refinery
- Petrochemical / chemical
- General industries
- Utilities



Serve. It's in everything we do.

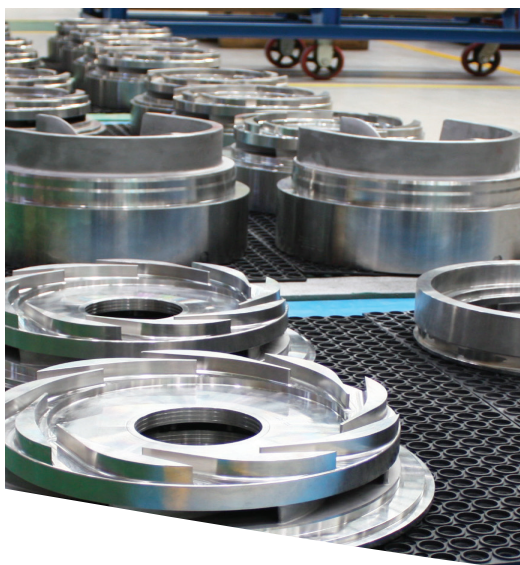
신속한 대응

품질

일정 준수

주인 의식





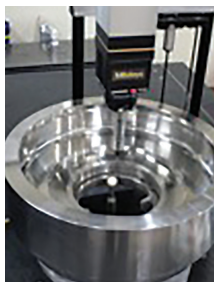
Parts and Components

ASME Code & Safety Related for Nuclear and Commercial Grade for All Industries

Quality parts in compliance with OEM specifications for the entire range of Flowserve product brands are readily available through the Korea QRC. As all parts conform to original design and materials specifications, customers are ensured reliable operation and the lowest equipment ownership costs.

All parts are manufactured in accordance with ASME Code & 10CFR50 App B / 10CFR21 complying with the Flowserve Nuclear Quality Program for nuclear parts and ISO 9001 for commercial grade parts.

The Korea QRC can also re-engineer and produce non-Flowserve components for obsolete equipment or when the original equipment manufacturer cannot be located.



The Flowserve Advantage

Flowserve manufactured parts offer significant benefits to customers. As an OEM, Flowserve understands the critical elements involved in designing and producing high-quality parts. Whether cast or machined, Flowserve manufactured parts and components result in lower total operating costs and increased personnel safety.

- Flowserve casting quality is superior. Surface finishes, tolerances and material compositions are maintained within defined specifications.
- Flowserve parts incorporate the latest design changes, which improve operating efficiency and extend equipment life.
- Customers benefit from ongoing research to develop new materials, overlay techniques -and mechanically improved components.

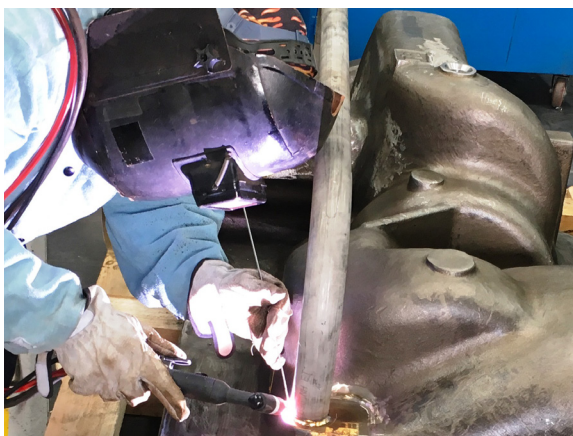


Manufacturing and Service Capabilities

Flowserve owns and operates several pieces of heavy machinery to produce key nuclear components.

Machines and Equipment

- Mazak vertical CNC (950 mm dia. turret)
- Mazak horizontal CNC (300 mm head swing)
- Horizontal CNC lathe (4 m x 1.2 m swing)
- 4 m / 1 m manual lathes
- Vertical milling machine
- Radial drill
- Key way slot machine
- Welding machines (GTAW / SMAW)
- Certified ASME welder
- Two dynamic balancing machines
- Sand blaster
- Electric oven

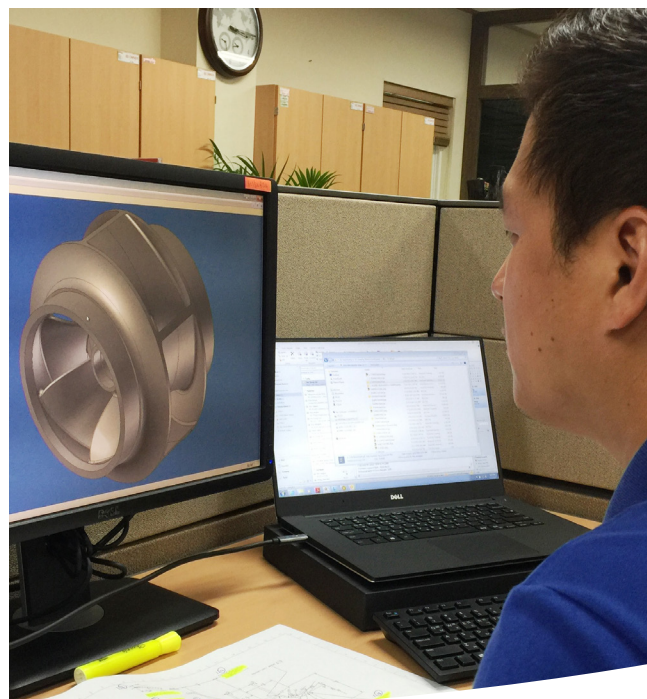


Operational Excellence / Safety / Ethics and Compliance

In order to best serve customers, Flowserve implements Operational Excellence programs in Continuous Improvement to provide quality products and services on time.

- DMAIC^{Lite} Problem Solving Program
Define > Measure > Analyze > Improvement > Control
- SHEA (Safety / Health / Environment / Affair)
- Ethics and Compliance
- Continuous Improvement Programs





Repair and Services

The Korea QRC has shop and field service resources with extensive experiences and skill sets to provide integrated repair and services. With worldwide central engineering supports, the QRC offers quick responses to customer needs, including:

- Pump disassembly, cleaning and inspection
- Shop / field repair services
- Field removal and handling
- Field installation, startup and commission
- Field technical assistance / supervision
- Field alignment with ROTALIGN® laser alignment tool
- Field vibration measurements and analysis
- Maintenance activities

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Upgrades, Re-rates and Retrofits

The QRC offers an extensive range of upgrade products and services based on professional Root Cause Analysis with problem-solving solutions from its worldwide central engineering team.

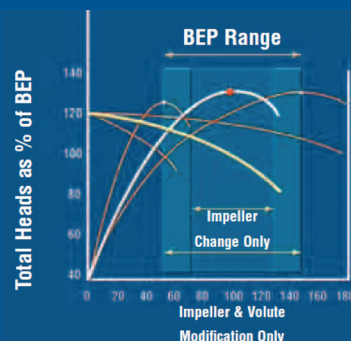
Technical services and solutions from the QRC include:

- Hydraulic upgrade and re-rates
- RVX bearing housing and bearings
- Material upgrades, metallic / non-metallic
- API 682 compliance sealing system upgrades
- Structural upgrade / coupling upgrade
- Surface hardening / corrosion resistance

Hydraulic Upgrades and Retrofits

Hydraulic re-rates can be provided to cover changes in flow or TDH, or increase efficiency for power savings.

- Optimization of lip and shroud clearances (A/B/C gap)
- Impeller modifications
- High-efficiency rotors
- Lower NPSHR impeller
- Low-flow modifications
- Re-bowling
- De-staging or upstaging
- Optimized hydraulics to reduce erosion / abrasion





Quality Management

The Korea QRC operates in compliance with different quality management programs to serve various industrial expectations and requirements such as:

- ASME NPT certificate for Pressure Vessel QA program for pressure-retaining code products
- 10CFR50 App. B / 10CFR21 Nuclear Safety Related QA Program for non-pressure retaining safety related products
- ISO 9001 Quality Program for commercial grade products



ASME NPT Certificate



ISO9001 Certificate

Quality Control

Flowserve uses state-of-the-art measurement instruments as part of its Precision Quality Control system. A partial listing is provided below. Inspectors are fully experienced and certified by recognized national codes and standards.

- CMM
- 3-D scanning via FaroArm®
- Certified non-destructive examination
- Hydrostatic test facility
- Dynamic impeller / rotor balancing
- Hardness tester
- Surface tester
- Mechanical / electric shaft run-out check

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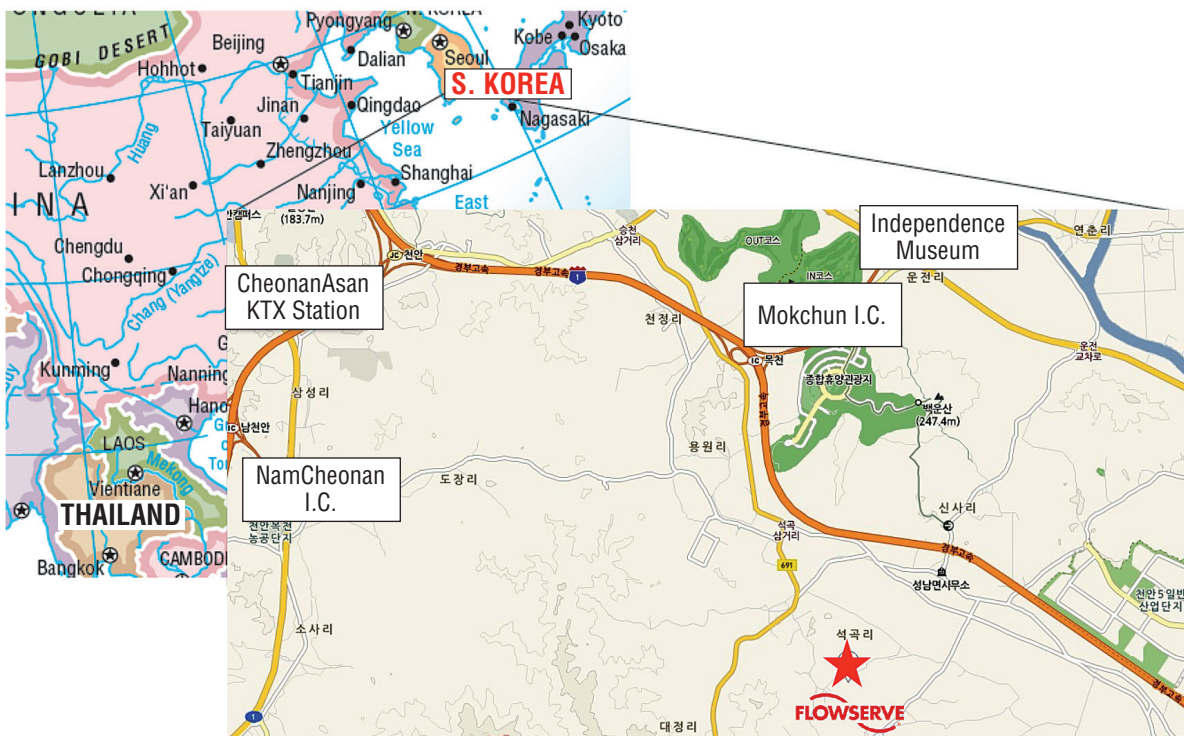




Global Footprint and Platform

Flowserve has a comprehensive aftermarket services and solutions platform committed to delivering value-added aftermarket services and solutions in collaboration with end users to achieve quantifiable business objectives.

Korea Quick Response Center / Nuclear Service Center



- 18 km from CheonanAsan KTX Station
- 8 km from Mokchun I.C.
- 8 km from NamCheonan I.C.

Navigator Key Words

Search by address: The address provided on page 8
 Search by name list: "Flowserve Korea Limited"
 Search by phone book: "041-553-5700"



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To find your local Flowserve representative:

For more information about Flowserve Corporation, visit www.flowserve.com or call +1 937 890 5839.

Korea

Flowserve Korea Ltd.
Korea Quick Response Center
77-36, Seokgok-3-gil,
Seongnammyeon,
Dongnam-gu, Cheonan-si
Choongcheongnam-do, 31247
South Korea
Telephone: 82 41 553 5700
Telefax: 82 41 553 5707

Sales Office

Room 4104, Leaders Mark Building,
APEC-ro 17, Haewoondae-ku,
Busan
South Korea
Telephone: 82 51 744 5005
Telefax: 82 51 745 9222

Taiwan

Kaohsiung QRC
No.133, Beiping Road,
Fengshan City,
Kaohsiung 830, Taiwan
Telephone: (886 7) 790 2800
Telefax: (886 7) 790 2921

Malaysia

Flowserve Pte Ltd
Lot A7, Jalan Gebeng 3/2,
Kawasan Perindustrian Gebeng,
26080, Kuantan, Pahang,
Malaysia
Telephone: (60 9) 583 3203
Telefax: (60 9) 583 3215

Thailand

Flowserve (Thailand) Limited
13 Soi G-14, Eastern Industrial
Estate, Pakornsongkorhrat Road,
Map Ta Phut, Muang, Rayong,
21150, Thailand
Telephone: (66 38) 673 888
Telefax: (66 38) 673 889

Indonesia

P.T. Flowserve
Jakarta Industrial Estate Pulogadung,
Jalan Pulokambing, Block OR No. 5,
Jakarta Timur, 13920, Indonesia
Telephone : (62 21) 4683 0105
Telefax : (62 21) 4683 0205

Singapore

Flowserve Pte Ltd
Tuas QRC
10 Tuas Loop,
637345, Singapore
Telephone: (65) 6771 0600
Telefax: (65) 6862 2329/6862 1846