Rotork Gears is a specialist supplier of gearboxes, adaptations and accessories to the international valve and actuator industry with manufacturing plants in the UK, the Netherlands, Italy, China, the USA and India.

Rotork Gears delivers the following product ranges:

- Manual and motorised multi-turn gearboxes
- Manual and motorised quarter-turn gearboxes
- Worm gear quarter-turn gear operators
- Subsea quarter-turn gear operators
- Override quarter-turn gear operators
- Mounting kits and accessories

Engineering and Working Capabilities

Rotork Gears delivers innovative solutions to suit individual needs, backed by Rotork quality and after-sales care.

Our products are world-class in design and meet or exceed national and international standards. Our specialist application engineering, continuous testing of materials and the life testing of completed gearboxes ensures quality.

Testing Facilities

Rotork Gears has extensive multi-turn and quarter-turn gearbox test facilities at its manufacturing locations including torque testing, life testing, overload testing and environmental testing in-house.

Reliability and Quality Assurance

Rotork is committed to fully understanding customer needs and expectations, and meeting or exceeding these needs. Rotork Gears has an established quality management system that meets the requirements of BS EN ISO 9001.

Rotork Gears is committed to:

- Building business success through customer satisfaction
- The promotion and full understanding of customer needs within the organisation
- Continuous improvement of products and customer service operations
- Creating a quality culture by making continuous improvement and quality a fundamental part of every employee’s performance and responsibility

Gearboxes and operators designed to withstand harsh environments including subsea and nuclear installations.

Mounting brackets, extension shafts, pedestals and accessories for the valve and actuator industry.
Quarter-turn Products

232 range

Light-duty worm gear operators
Light-duty cast aluminium quarter-turn gearboxes suited for HVAC, fire protection, and general industrial applications.
Torque range up to 1,500 Nm (1,106 lbf.ft).
7 sizes. Ratios from 37:1 to 45:1.
• Lightweight
• Rugged construction
• Removable output drive sleeves
• IP65
• High pressure aluminium cast housing
• Protected input shaft

242 range

Quarter-turn worm gear operators
Robust and light weight quarter-turn cast iron gearbox for low torque manual applications. Suited for ball, plug and butterfly valves.
Torque range up to 2,100 Nm (1,549 lbf.ft).
6 sizes. Ratios 40:1 to 60:1.
• Worm gear
• Manual drive
• Designed using the latest analytical design tools

AB range

Quarter-turn worm gear operators
Heavy-duty cast iron quarter-turn gearboxes suited for ball, plug and butterfly valves serving the water, gas, chemical, power, and demanding industrial applications.
Torque range up to 32,000 Nm (23,600 lbf.ft).
15 sizes. Ratios from 34:1 to 729:1.
• Cast iron
• Axial needle bearings
• Rugged construction for all environments
• IP67

242P range

Nuclear rated manual worm gear operators
The 242P is a range of nuclear safety related gearboxes, qualified for outside containment and passive duty. The 242P gearboxes are intended for the operation of ball, butterfly, plug and any other quarter-turn valves.
Torque range up to 1,000 Nm (8,851 lbf.in).
5 sizes. Ratios of 40:1 to 60:1.
**Quarter-turn Products**

**ABM range**

**Motorised quarter-turn gearboxes**

Quarter turn devices for the motorised operation of plug, ball and butterfly valves and power & process dampers.

Torque range up to 2,000 Nm (1,475 lbf.ft).

4 sizes. Ratios 40:1 to 198:1.

- Supports electric actuator weight up to 46 kg (101 lbs) and a speed up to 96 rpm
- Input: F/FA10
- Ductile iron housing and protected steel input shaft
- Axial thrust bearings
- Removable insert
- IP67 and ATEX approved
- **Options:** High and low temperatures, Firesafe to ISO 10497, IP68 marinised and buried service.

**IW range**

Heavy-duty cast and ductile iron quarter-turn worm gearboxes suited for plug, ball and butterfly valves serving the water, gas, chemical, power, and general industrial applications.

**Motorised quarter-turn gearboxes**

Complete range of heavy-duty cast and ductile iron quarter-turn worm gearboxes suited for plug, ball and butterfly valves serving the water and waste water, gas, chemical, power, and general industrial applications.

Torque range up to 850,000 Nm (626,890 lbf.ft).

21 sizes. Ratios from 40:1 to 9,600:1.

- Comprehensive gear ratios with a selection of input reducers
- High efficiency
- Angular contact bearings
- Removable output drive sleeves
- IP67
- **Options:** Ductile iron. IP68. AWWA. Nuclear. All types of environment. High and low temperatures. Lever arms. Travelling nut for applications requiring more or less 90 degrees travel. Buried service.

**IW range**

Heavy-duty cast and ductile iron quarter-turn worm gearboxes suited for plug, ball and butterfly valves serving the water, gas, chemical, power, and general industrial applications.

Torque range up to 2,000 Nm (1,475 lbf.ft).

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- Supports electric actuator weight up to 46 kg (101 lbs) and a speed up to 96 rpm
- Input: F/FA10
- Ductile iron housing and protected steel input shaft
- Axial thrust bearings
- Removable insert
- IP67 and ATEX approved
- **Options:** High and low temperatures, Firesafe to ISO 10497, IP68 marinised and buried service.

**IW range**

**Manual quarter-turn operators**

Torque range up to 850,000 Nm (626,890 lbf.ft).

21 sizes. Ratios from 40:1 to 9,600:1.

- Comprehensive gear ratios with a combined selection of input reducers
- High efficiency
- Removable output drive sleeves
- IP67
- Angular contact bearings
- **Options:** Ductile iron. IP68. AWWA. Nuclear. All types of environment. High and low temperatures. Padlockable handwheels. Limit switches. Lever arms. Travelling nut for applications requiring more or less than 90 degrees travel. Buried service.

**MOW range**

**Worm gearboxes**

Heavy-duty quarter-turn modulating gearboxes suited for control valves.

Torque range up to 47,000 Nm (34,500 lbf.ft).

9 sizes. Ratios from 40:1 to 3,000:1.

- Up to 1,200 starts per hour
- Ground and polished worm shaft
- Aluminium bronze worm wheel
- Comprehensive gear ratios combined with a selection of spur input reducers
- Angular contact bearings
- Removable output drive sleeves
- **Options:** All types of environment.
Quarter-turn Products

**IWN range**

**Nuclear rated worm gearboxes**

Heavy-duty quarter-turn gearboxes suited for plug, ball and butterfly valves in nuclear installations. Built to exceed the IEEE 382 specification and the 10CFR50 quality standard. Fully tested for inside containment and active duty but can also be used for outside containment, passive duty.

Torque range up to 48,809 Nm (36,000 lbf.ft).

7 sizes. Ratios from 40:1 to 70:1

- Ductile iron cast body
- Viton o-rings
- Special bearings
- Nuclear grease

**300 range**

**Stainless steel gear operators**

Light-duty pressed stainless steel quarter-turn gearboxes suited for pharmaceutical, wash down, and corrosive environments.

Torque range up to 1,000 Nm (738 lbf.ft).

3 sizes. Ratios from 37:1 to 45:1.

- 304 stainless steel housing and input shaft
- Aluminium bronze worm wheel
- Lightweight
- Suitable for corrosive environments
- IP65
- Removable output drive sleeves

**AB-SS range**

**Stainless steel gear operators**

Heavy-duty stainless steel 316 housing quarter-turn gearboxes suited for plug, ball and butterfly valves serving the water, gas, chemical and power industries in corrosive environments.

Torque range up to 26,000 Nm (19,177 lbf.ft).

14 sizes. Ratios from 37:1 to 592:1.

- Worm gear
- Manual drive
- Stainless steel 316 housing
- Stainless steel 316 input shaft
- Stainless steel 316 fasteners

**WG-SS range**

**Stainless steel gearboxes**

Heavy-duty stainless steel 316 housing quarter-turn gearboxes suited for plug, ball and butterfly valves serving the water, gas, chemical and power industries in corrosive environments.

Torque range up to 125,000 Nm (92,195 lbf.ft).

2 sizes. Ratios up to 3,795:1.

- Worm gear
- Manual or electric actuator drive
- Stainless steel 316 housing
- Stainless steel 316 input shaft
- Stainless steel 316 fasteners
**Quarter-turn Products**

**ILG-D range**

**Override quarter-turn gear operators**

Complete range of manual declutchable sandwich override quarter-turn gearboxes for double-acting pneumatic actuators.

Torque range up to 17,000 Nm (13,000 lbf.ft).

9 sizes. Ratios from 35:1 to 468:1.

- Protected input shaft
- Cast iron housing
- Axial needle bearings
- IP65

**ILG-S range**

**Override quarter-turn gear operators**

Complete range of sandwich manual override quarter-turn gearboxes for spring-return pneumatic actuators.

Torque range up to 32,000 Nm (23,600 lbf ft).

10 sizes. Ratios from 34:1 to 729:1.

- Protected input shaft
- Cast iron housing
- Axial needle bearings
- IP65
- Options: High and low temperature. ISO drive coupling.

**Lever Arm range**

**Lever arms for damper operation**

Used on dampers to transfer the 90° operation from the worm gearbox to the damper spindle.

- Option for IW range: This is an optional feature on all our IW and MTW ranges of worm gearboxes.

**WGS range**

**Subsea quarter-turn gearboxes**

The WGS range of quarter-turn gearboxes are designed for heavy-duty subsea applications at any depth with carefully chosen materials to offer the highest level of reliability required in this very harsh environment. The operator is equipped with membrane or piston type pressure compensators to balance the pressure and allow them to work at any depth.

Torque range from 2,200 to 500,000 Nm (1,623 to 368,800 lbf.ft).

- Worm shaft supported on taper roller bearings
- High strength alloy steel worm screw hardened and ground
- Vertical or horizontal carbon steel ROV input (class 2 to 7)
- Stroke: 0 to 90° (± 5° adjustable)
Quarter-turn Products

**ABLX (FM-UL) range**

Cast iron quarter-turn gearboxes with integrated limit switches for remote position indication suited for fire protection.

Torque range up to 1,620 Nm (1,196 lbf.ft).

- 4 sizes. Ratios from 34:1 to 46:1.
- Cast iron housing
- Rugged construction
- Removable output drive sleeves
- IP67
- Different types of position indicators
- Suitable for FM/UL/APSAD applications

**232LX range**

Light-duty cast aluminium quarter-turn gearboxes with integrated limit switches for remote position indication suited for fire protection.

Torque range up to 500 Nm (366 lbf.ft).

- 2 sizes. Ratios 37:1 to 45:1.
- High pressure aluminium cast housing with stainless steel input shaft
- Light weight
- Suitable in corrosive environments
- IP65
- Removable output drive sleeves
- Powder coated
- Different types of position indicators

**FB range**

Quarter-turn worm gear operators suitable for use with fire protection (i.e. sprinkler) systems, includes limit switches to be incorporated into a supervisory electrical circuit. Designed and tested specifically to meet UL1091 specification and FM1112 Approval.

Torque range up to 1,000 Nm (737 lbf.ft).

- 5 sizes. Ratios from 40:1 to 60:1.
- Worm gear
- Manual drive
- 3 x overload capacity
- 1,000 cycles

**BR range**

Worm gear operators

Quarter-turn cast iron gearbox suitable for use with fire protection (i.e. sprinkler) systems, includes limit switches to be incorporated into a supervisory electrical circuit. Designed and tested specifically to meet UL1091 specification and FM1112 Approval.

Torque range up to 1,000 Nm (737 lbf.ft).

- 5 sizes. Ratios from 40:1 to 60:1.
- Worm gear
- Manual drive
- 3 x overload capacity
- 1,000 cycles

**Bronze worm gear operators**

The BR series gear operators are manufactured from high quality cast aluminium bronze and stainless steel materials and designed for extended life operation of valves in corrosive man hole and vault steam distribution environments where road salts, standing water and elevated temperatures are common.

Torque range to 7,000 Nm (5,163 lbf.ft).

- 3 sizes. Ratios from 34:1 to 217:1.
- Temperature range up to +200 °C (+392 °F)
Multi-turn Products

MTW range

Worm gearboxes

The multi-turn worm gearboxes are used for applications such as sluice gates and dampers.

Torque range up to 162,000 Nm (119,000 lbf.ft).

11 sizes. Ratios from 40:1 to 5,760:1.

- Ground and polished worm shaft
- Aluminium bronze worm wheel
- Comprehensive gear ratios combined with a selection of spur input reducers
- Angular contact bearings supporting worm shaft
- Removable output drive sleeves
- Options: Travelling nut for applications requiring mechanical stops. Lever arms. AWWA. All types of environment.

IB range

Motorised multi-turn gearboxes

Complete range of heavy-duty cast iron multi-turn bevel gearboxes suited for the most demanding motorised applications for cast and fabricated sluice gates, gate valves and globe and pinch valves.

Torque range up to 8,135 Nm (6,000 lbf.ft).

Thrust range up to 1,320 kN (296,750 lbf).

13 sizes. Ratios from 1:1 to 120:1.


IBN range

Nuclear rated bevel gearboxes

Heavy-duty multi-turn bevel gearboxes suited for nuclear installations. Built to exceed the IEEE 382 specification and the 10CFR50 quality standard. Fully tested for inside containment and active duty but can also be used for outside containment, passive duty.

Torque range up to 8,135 Nm (6,000 lbf.ft).

Thrust range up to 1,320 kN (296,750 lbf).

6 sizes. Ratios from 2:1 to 8:1.

- Ductile iron cast body
- Viton o-rings
- Special bearings
- Nuclear grease

HOB/MPR ranges

Bevel gear operators

Cost effectively designed commodity hand operated bevel gears suited for sluice gates, gate, and globe valves.

Torque range up to 8,018 Nm (5,914 lbf.ft).

Thrust range up to 1,557 kN (350,028 lbf).

11 sizes. Ratios from 2:1 to 81:1.

- Cast iron body
- Maintenance free
- IP67
- Options: All types of environment. Position indicators. IP68.
Multi-turn Products

HOS/MPR ranges

Spur gear operators

Multi-turn devices intended for the manual operation of gate, globe, sluice and penstock valves. For use above and underground with upward or downward input orientation.

Torque range up to 15,917 Nm (11,740 lbf.ft). Thrust range up to 1,557 kN (350,000 lbf).

14 sizes. Ratios from 2.04:1 to 151.9:1.

- Totally enclosed gearing
- Cast iron gearcase
- IP67

Motorised multi-turn gearboxes

Complete range of heavy-duty cast iron multi-turn spur gearboxes suited for the most demanding motorised applications where the gearbox input shaft needs to be parallel with the valve stem for globe and gate valves and sluice gates.

Torque range up to 43,386 Nm (32,000 lbf.ft). Thrust range up to 2,900 kN (652,000 lbf).

20 sizes. Ratios from 1:1 to 360:1.


IS range

Nuclear rated spur gearboxes

Heavy-duty multi-turn spur gearboxes suited for nuclear installations. Built to exceed the IEEE 382 specification and the 10CFR50 quality standard. Fully tested for inside containment and active duty but can also be used for outside containment, passive duty.

Torque range up to 43,386 Nm (32,000 lbf.ft). Thrust range up to 2,224 kN (500,000 lbf).

3 sizes. Ratios from 6:1 to 24:1.

DSIR range

Dual speed gear operators

The Dual Speed Input Reducer is used to reduce the number of input turns required and therefore the operating time on manual gearbox applications. It can be used with any manual gearbox which can be fitted with an F14 or FA14 input flange.

Output torque 720 Nm (6,373 lbf.in). Ratio can be switched between 1:1 and 4.25:1.
Multi-turn Products

**NTB range**

Bevel gear operators

Cost effectively designed bevel gearboxes suited for valves which do not transfer thrust to the operator.

Torque range up to 700 Nm (516 lbf.ft).

- Cast iron body
- Maintenance free
- IP67
- **Options:** All types of environment. Various Position indicators. IP68. Approval to GOST standard ST CKBA 062-2009 "Valve Rotation & Actuator Mounting Dimensions".

**Non-thrust bevel GOST Standard**

Designed specifically to meet the requirements of valves complying with the Russian GOST standard ST CKBA 062-2009.

The NTBG series gearboxes are intended for the operation of gate and globe valves without a thrust capacity requirement.

Torque range up to 10,000 Nm (7,376 lbf.ft).

Various sizes. Ratios from 2:1 to 120:1.

**RAB range**

Bevel gear operators

The Radial Acceptance Bevel is suitable for AWWA and where side load movement is likely to happen on penstocks or gate valves.

Torque range up to 678 Nm (500 lbf.ft).

Thrust range up to 178 kN (40,000 lbf).

2 sizes. Ratios from 2:1 to 6:1.

- Comprehensive gear ratios combined with a selection of input reducers
- Removable drive sleeves designed to accommodate for heat build-up
- Tapered roller bearing to withstand side loading
- IP68
- **Options:** Various types of position indicators. All types of environment.

**DSB range**

Dual shaft bevel gear operators

Complete range of multi-turn bevel gearboxes with two shafts for use with dual stem sluice gates and penstocks.

Torque range up to 8,135 Nm (6,000 lbf.ft).

Thrust range up to 1,320 kN (296,750 lbf).

13 sizes. Ratios from 1:1 to 120:1.

- Ductile iron baseplates
- Comprehensive gear ratios combined with a selection of spur input reducers
- Pinions mounted on ball bearings
- IP67
- **Options:** All types of environment. Various position indications. IP68. Input shafts available at 90° & 180° to each other.
Valve Gear Operators and Accessories

Mounting kits
ball, butterfly and plug valve kits

![Mounting kits image]

- Construction materials will be carbon steel, supplied complete with fasteners, painted or natural.
  - Valves from 1/4" to 48"
  - F03 - F35 Flanges - ISO 5211/ DIN 3337
  - Welded to ASME 9 standards
  - Square, key or double D drive
  - 100 to 500 mm in length
  - **Options:** o-ring seals, stress calculations, material certification.

See PUB063-030 for further details.

Ball, butterfly and plug valve kits designed to order, precision CNC machined in stainless steel

Rotork has manufactured, designed and supplied standard and non-standard mounting brackets to the valve and actuator industry since 1987. ISO 9001 accreditation was achieved in 1992. Rotork supply the following components to the highest standards, with market leading delivery times:

- Mounting brackets and couplings
- Extensions
- Pedestals
- Locking devices
- Flexible drive technology
- Chainwheels, handwheels and spring-return handles

See PUB063-040 for further details.

Locking levers - secure and tamper proof

- Locking plates, for quarter-turn ball and butterfly valves
- Multi-turn locking flanges for valves and gearboxes
- Interlocked valves

See PUB063-040 for further details.

Spool and pedestal adaptors

Quarter-turn valve adaptation for rack and pinion or pneumatic actuators can be provided in the form of spool or pedestal type mounting kits.

These are fully enclosed adaptors with options of DD, square or keyed drives.

Construction materials will be carbon steel, supplied complete with fasteners, painted or natural.

- Valves from 1/4" to 48"
- F03 - F35 Flanges - ISO 5211/ DIN 3337
- Welded to ASME 9 standards
- Square, key or double D drive
- 100 to 500 mm in length
- **Options:** o-ring seals, stress calculations, material certification.

See PUB063-030 for further details.
Rotohammer Chainwheels

Chainwheels and valve extensions

Rotohammer offers the very best solutions for hard-to-reach and difficult to operate valves, with the purpose of protecting people and equipment with safe, dependable valve operation.

Rotohammer manufacture clamp-on-sprockets chainwheels to fit handwheels size from 4” to 40”. They are made with different materials (ductile, aluminium and stainless steel) and protections to cater for very harsh environments.

Rotohammer also make a variety of innovative custom solutions.

Remote mounting and extension spindles

Valve and actuator remote mounting and extension spindles.

Remote actuator mounting can be achieved using valve extension spindles or pedestal adaptors. Design and manufacture is done in house for specific applications. Lengths can be from 500 mm to 8 m, in stainless steel or carbon steel.

Extension spindle

- Underground applications
- Customer specified extension
- Welded construction for weight saving
- Position indication option
- Suitable for manual or actuated drives
- Options: Oil filled, environmental sealing, galvanised, plain or dynamic bearings, swivel joints.

Remote position indicator

Mechanical remote position indicators for buried service and shaft extension applications. 3 sizes. Ratios: ECL1 up to 35:1, ECL2 up to 120:1, ECL3 up to 394:1.

W100 1:1 bevel gearbox

1:1 bevel gearbox designed primarily to be used on AB and manual duty IW quarter series gearboxes to change the input shaft direction by 90° for underground applications.

Chainwheels range

Direct mount chainwheels

Direct mount chainwheels mount directly onto the gearbox input shaft by means of a pin or coupling and are suitable for use with every gearbox range in our product offering.

- Cast iron chainwheels from 135 to 330 mm (5.32 to 13 inch) diameter
- Chain guides and bearing are standard
- Chain and chainwheel sprockets are to DIN 766
- Galvanized or stainless steel chain available
- Epoxy coating for durability available
- Options: AISI316 chainwheel & chain, sheradisation protection, adaption design to suit application.

1 - Remote position indicator
2 - Extension spindle
3 - W100 90° bevel gearbox
4 - AB880 quarter-turn gearbox
**Valve Accessories**

**Dead Man's Handle**

Guarantee failsafe operation for ball valves, the Spring-Return Handle (SRH) will mount on any ball valve, either “direct on” or with a mounting kit designed to suit application.

- Ball valves with torque of 24 or 45.5 Nm
- F03, F05, F07 pcds
- Direct mount or with mounting kit
- Sealed for life, zero maintenance
- Stainless steel handle, shaft and fasteners, precision die cast body
- Durable powder coated finish

**SafeOperator™**

Rotork gearboxes combined with Elliott’s SafeOperator™ systems provide the flexible solution for the operation of valves located in hazardous or difficult to access locations. System components are available for almost all valve configurations to provide reliable, remote operation up to 30 m (100 feet) away.

**Lagging Extensions**

**Stainless steel lagging extensions**

- Butterfly, plug and ball valves from 1/4" to 10"
- 65 to 1,000 mm high
- Stainless steel, with stop and fasteners
- Designed to suit any valve mounting pad
- Optional locking facility
- Tee bar or lever operator
- **Options**: Environmentally sealed, oil filled, bearings, low cost carbon steel.

**Handwheels**

**Stainless steel and powder coated handles**

- 125 to 2,000 mm diameter
- Stainless steel or powder coated
- Keyed, pinned or square drive
- Fabricated or pressed design
- Oval or round designs for small valves
- Open and closed indication marking
- **Options**: Locking flange, handle, specials, galvanised, rotating handle, flat or dished.

**Indexed Levers**

**Indexed levers (notch plates)**

Indexed levers with stainless steel plates for butterfly valves. Indexed by degrees or open/closed. Supplied with all fasteners and engraved position indication. Padlock and Castell lock options.

**Solenoid Valves**

**High performance solenoid valves**

Rotork Valvekits has available a large range of quality solenoid valves to cover all the range of safe and hazardous areas. These include Exia and Exd in various materials with NAMUR and remote mount options.