

Excellent  
Engineering  
Solutions

**WEIR**

# Engineered Valves for Nuclear Power Generation



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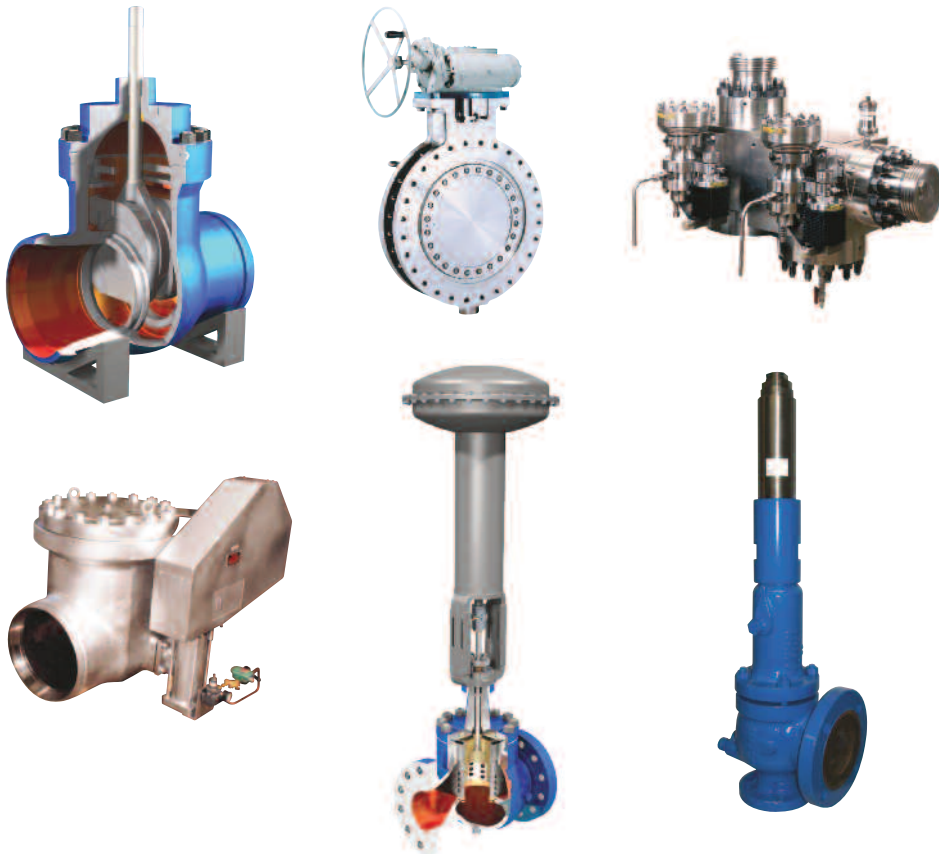
**Weir has been supplying engineered valves to nuclear power plants throughout the world for over 50 years. Today, our valves are industry renowned brands, each with an established reputation for quality engineering and reliability.**

Our expertise spans the design and manufacture of critical isolation and safety valves on the nuclear island, through to general isolation and control applications for balance of plant.

We are proud of our extensive global installed base on the early generation of nuclear reactors, and are now growing an equally impressive base on the 3rd and 4th generation of reactor design.

Weir's nuclear valve aftermarket solutions are based on our OEM engineering and design heritage. We apply our engineering expertise to maintenance strategies, station outages, power uprate and life extension projects, with the know-how to work on our own and other OEM equipment.

*Critical service and safety valves for nuclear applications and balance of plant*



**ATWOOD & MORRILL™**  
Engineered Isolation & Check Valves

**BATLEY VALVE®**  
High Performance Butterfly Valves

**BLAKEBOROUGH®**  
Control & Severe Service Valves

**HOPKINSONS®**  
Parallel Slide Gate & Globe Valves

**SARASIN-RSBD™**  
Pressure Safety Devices

**SEBIM™**  
Nuclear Valves

**TRICENTRIC®**  
Triple Offset Butterfly Valves

**Portfolio of engineered service solutions and aftermarket support**



## Health, safety and the environment

The Weir Group's policy on health and safety requires that all our companies take a proactive responsible attitude to the protection of their employees' health and safety. The driving force behind our performance continues to be our emphasis on behaviour, networking and sharing of best practice and the active involvement of senior management to promote and audit safety programmes.

All our locations fully integrate environmental management into their operational systems and procedures. Weir's proactive approach ensures that these processes reduce our environmental impact year on year.

## Quality assurance

Weir operates quality programmes to cover the full scope of our activities, and deploys quality systems that have been developed specifically to serve the nuclear market.

Weir is qualified to industry standards and working practices including:

- ASME BPVC Section III (N and NPT Stamp)
- ASME BPVC Section VIII (UV Stamp)
- NQA-1 Quality system
- 10CFR50 App. B
- 10CFR 21
- RCC-E
- RCC-M
- CSA Z299
- OTT 87
- Performance testing and qualification to:
  - ASME QME-1
  - ASME B16.41
  - IEEE 323
  - IEEE 344
  - IEEE 382
- ISO 9001
- ISO 14001
- ISO 17025
- PED 97/23/CE
- API Q1 TO API LICENCES:
  - API 6D (6D-0182)
  - API 6A (6A-0445)
- TUV - AD MERKBLATT WRD HP 0
- ATEX 94/9/CE
- Lean manufacturing practices



## CONTENTS

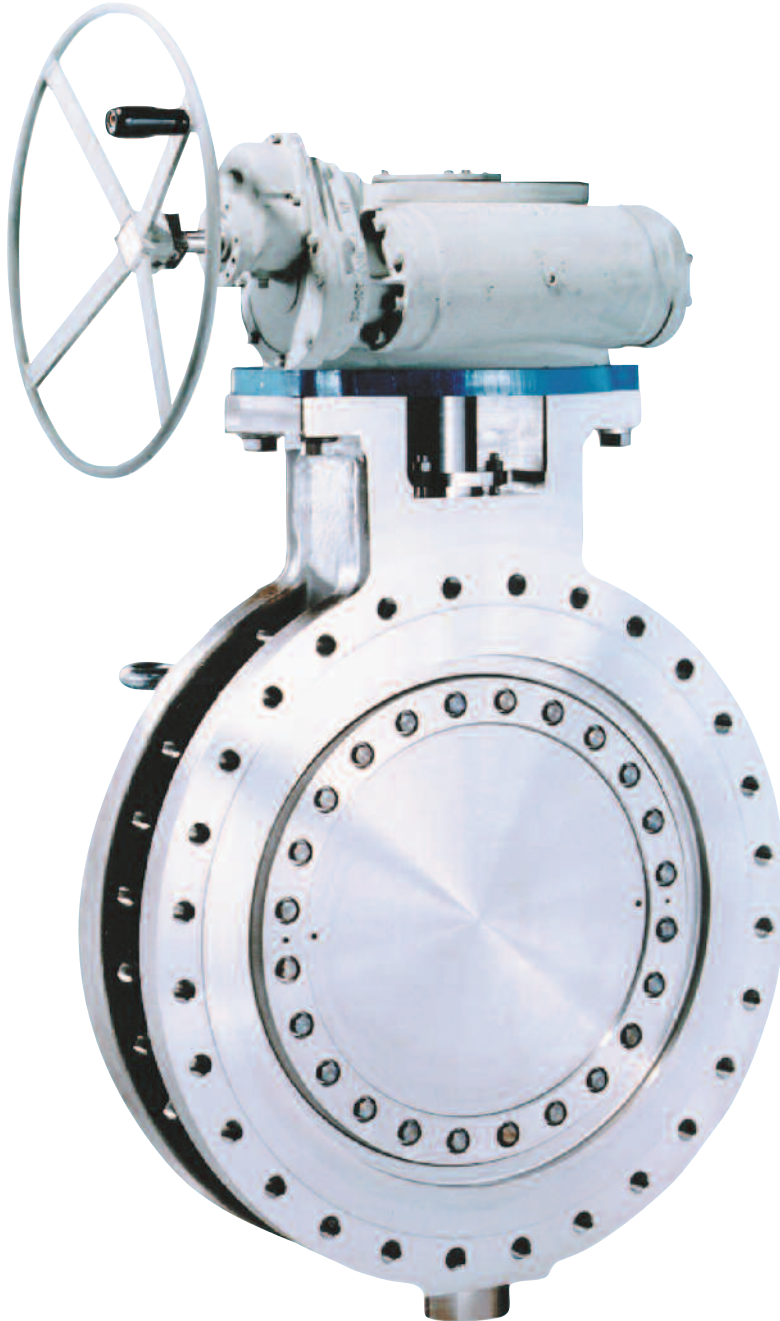
Introduction	2-3
Butterfly valves	4-5
Check valves	6-7
Control valves	8
Gate valves - Parallel slide	9
Gate valves - Wedge design	10
Globe valves - T pattern	11
Globe valves - Y pattern	12
Safety valves	13

## Special Applications

Main steam isolation valves	15-16
Compact integrated safety valves	17
Integrated single safety relief valves	18
Isolation, safety and relief valves	19
Main steam safety valves	20
Tandem safety relief valves	21
Nuclear valve service	22

**Butterfly valves - Triple offset**

Exceptional seating for demanding applications



- Triple offset metal seated butterfly valves

**Design standards:**

- ASME Section III
- ASME B16.34

**Sizes:** 3-42 inch (DN 73-1067)

**Pressure class:** Class 150-600

**Applications:**

- Containment isolation, vent and purge
- Equipment isolation
- Service water
- Condensate
- Circulating water

**Features:**

- Metal to metal seating uses no elastomers, allowing for high temperature service and resistance to radiation
- Triple offset design creates no rubbing, galling or wear, leading to long life and low maintenance
- Valve is torque seated in the closed direction, resulting in tight shut-off
- Bi-directional tight sealing

**Materials of construction:**

- Carbon steels
- Alloy steels
- Stainless steels
- AL6XN

**End connections:**

- Flanged
- Lugged
- Wafer
- Special

**Actuator options:**

- Pneumatic
- Electric motor
- Gas-hydraulic
- Manual gear
- Bare stem

**Options:**

- Position indication
- Stem instrumentation

## Butterfly valves - High performance

### Tight shut-off and process control

- High performance butterfly valves

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#### Design standards:

ASME B16.34

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**Sizes:** 3 - 80 inch (DN 80-2600)

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**Pressure class:** 150-600

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#### Applications:

- Process control
- Equipment isolation

#### Features:

- Resilient seated, metal seated, firesafe and swingthrough options
- Single and double offset shaft design
- Varidiff anti-cavitation trim

#### Materials of construction:

- Body and vane:
  - Carbon and alloy steels
  - Stainless and duplex stainless steels
  - Copper, nickel alloys and titanium

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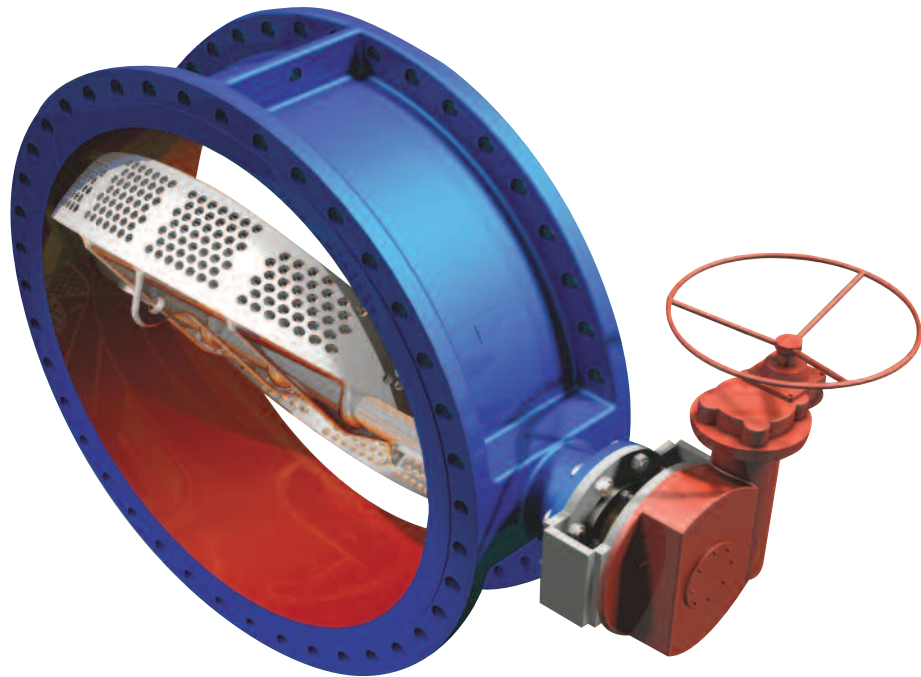
#### End connections:

- Flanged
- Lugged
- Wafer
- Butt weld

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#### Actuator options:

- Pneumatic
- Electric motor
- Hydraulic
- Manual gear



*Butterfly valve with anti-cavitation cowel*

**Check valves - FREE FLOW™ Reverse Current Valves**  
Maximum flow reversal protection for steam turbines



□ FREE FLOW™ Reverse Current Valves

**Design standards:** ASME B16.34

**Sizes:** 3-44 inch (DN 77-1118)

**Pressure class:** 150-600+

**Applications:**

- Steam turbine protection
- Extraction steam non-return
- Turbine non-return
- Bleeder trip and bled steam non-return

**Features:**

- Free swinging disc allows independent movement of the disc with assured closure upon loss or reversal of flow
- Inclined seat design optimises performance with low pressure drop and fast closure
- Self aligning disc and disc arm assures repeatable tight sealing

**Materials of construction:**

- Body and disc:
  - Carbon steels
  - Alloy steels
  - Stainless steels
- Seat:
  - Stainless steel overlays
  - Hardfacing alloys

**Cover seal design:**

- Bolted bonnet

**End connections:**

- Butt weld
- Flanged

**Options:**

- Pneumatic or hydraulic power cylinder
- Limit switches
- Disc counterweight
- Manual test

## Check valves - Swing check and lift check

Exceptional protection from flow reversal

- Swing check valves
- Lift check valves

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### Design standards:

- ASME Section III
- ASME B16.34

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**Sizes:** 3-36 inch (DN 80-915)

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**Pressure class:** 150-2500

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### Applications:

- Feedwater
- Emergency core cooling system
- Containment isolation
- Balance of plant

### Features:

- Swing check:
  - Two disc-arm designs available: Single piece disc-arm and disc ensures that disc will not flutter or loosen over time. Two piece disc-arm and disc promotes repeatable tight sealing
  - Optional internal shelf bracket design eliminates body penetrations and potential leak paths
- Lift check:
  - Available in 'T'-pattern or lower pressure-drop 'Y'-pattern configuration
  - One piece poppet design with hardfacing on guide surfaces
  - Valves sized on seat bore to ensure full lift in open position

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### Materials of construction:

- Carbon steels
- Alloy steels
- Stainless steels

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### Cover seal designs:

- Bolted bonnet
- Pressure seal
- Body/cover joint

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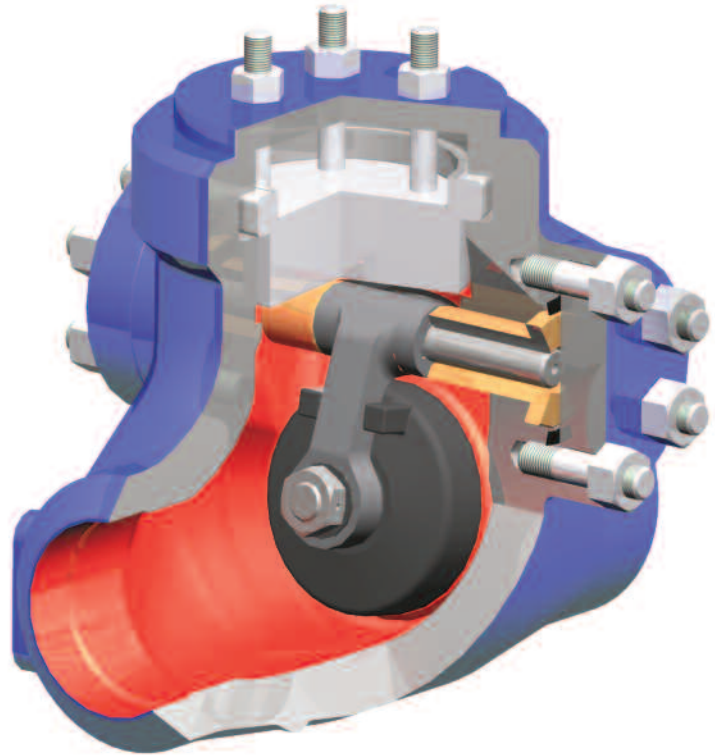
### End connections:

- Butt weld

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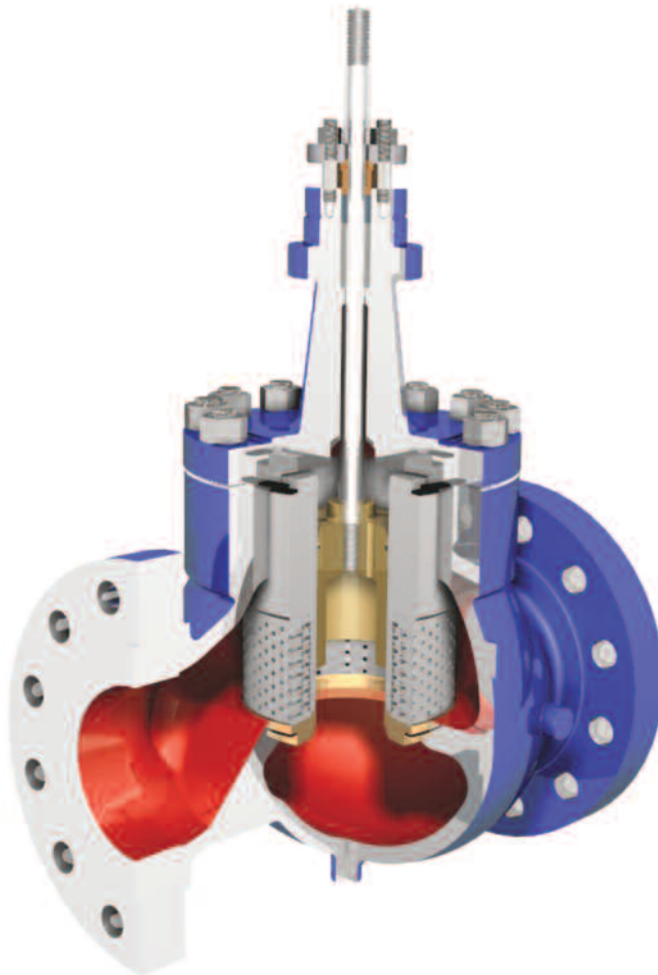
### Options:

- Pneumatic test options (testable check)
- Position indication
- Seal weld (bolted bonnet)
- Canopy seal (pressure seal)
- Manual stroke



**Control valves**

High performance and reliability



Control valves

**Design standards:**

- ASME section III
- ASME B16.34
- RCC-M

**Sizes:** ½ - 36 inch (DN 15-900)

**Pressure class:** 150-4500

**Applications:**

- Process control

**Features:**

- Single and multi stage pressure drop
- Severe service trims
- Stable cage guiding

**Materials of construction:**

- Body and bonnet:
  - Carbon steels
  - Alloy steels
  - Stainless steels
  - Any other specified materials
- Plug and seats: Hardfacing #6 overlay/hardened material depending on pressure drop

**Seal design:**

- Bolted bonnet with spiral wound gaskets
- Pressure seal

**End connections:**

- Flanged or butt weld

**Actuator options:**

- Pneumatic
- Electric motor
- Hydraulic

**Other options:**

- Fast operation
- Angle and 3-way designs



## Gate valves - Parallel slide design

### Freedom from sticking and binding

#### Parallel slide gate valves

##### Design standards:

- ASME section III
- ASME B16.34
- RCC-M

**Sizes:** ½ - 36 inch (DN 15-900)

**Pressure class:** 150-2500

##### Applications:

- High pressure system isolation
- Equipment isolation

##### Features:

- Position seated - stops on limit not torque
- Wide, flat seating surface
- No thermal binding issues
- Bi-directional operation
- Non galling
- Consistent thrust
- Addresses GL 89-10 issues

##### Materials of construction:

- Body:
  - Carbon steels
  - Alloy steels
  - Stainless steels
- Seat and wedge:
  - Hardfaced with stellite or cobalt free materials

##### Seal design:

- Bolted bonnet (seal weld provision available)
- Pressure seal

##### End connections:

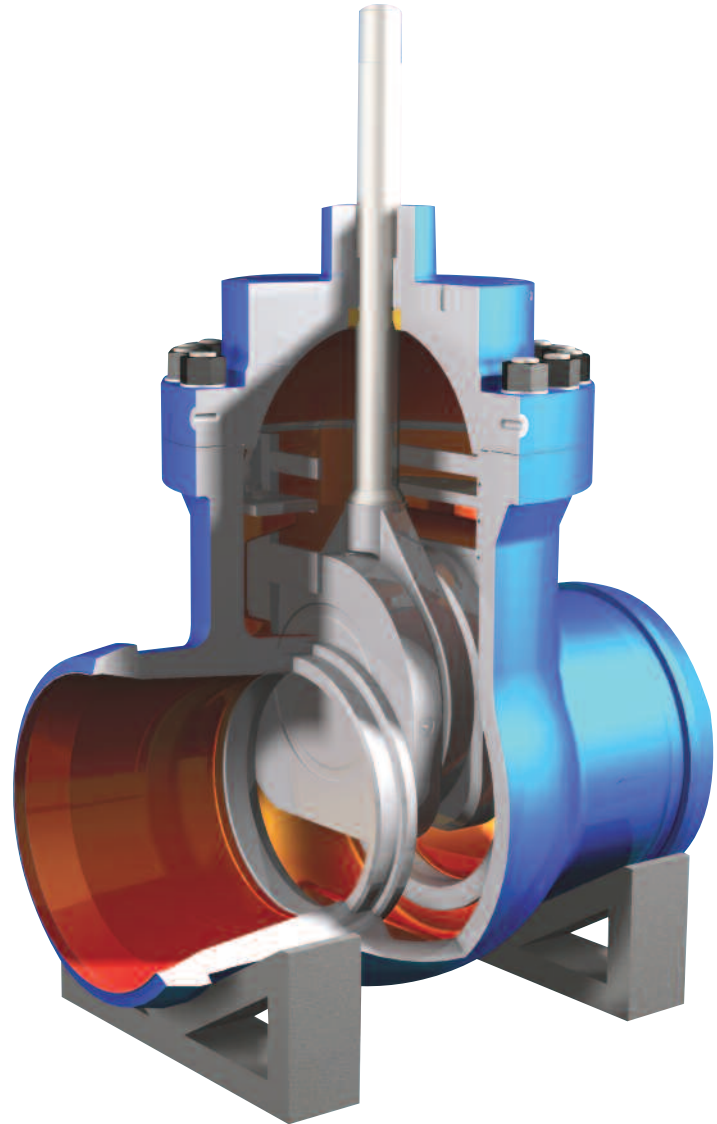
- Butt weld
- Flanged

##### Actuator options:

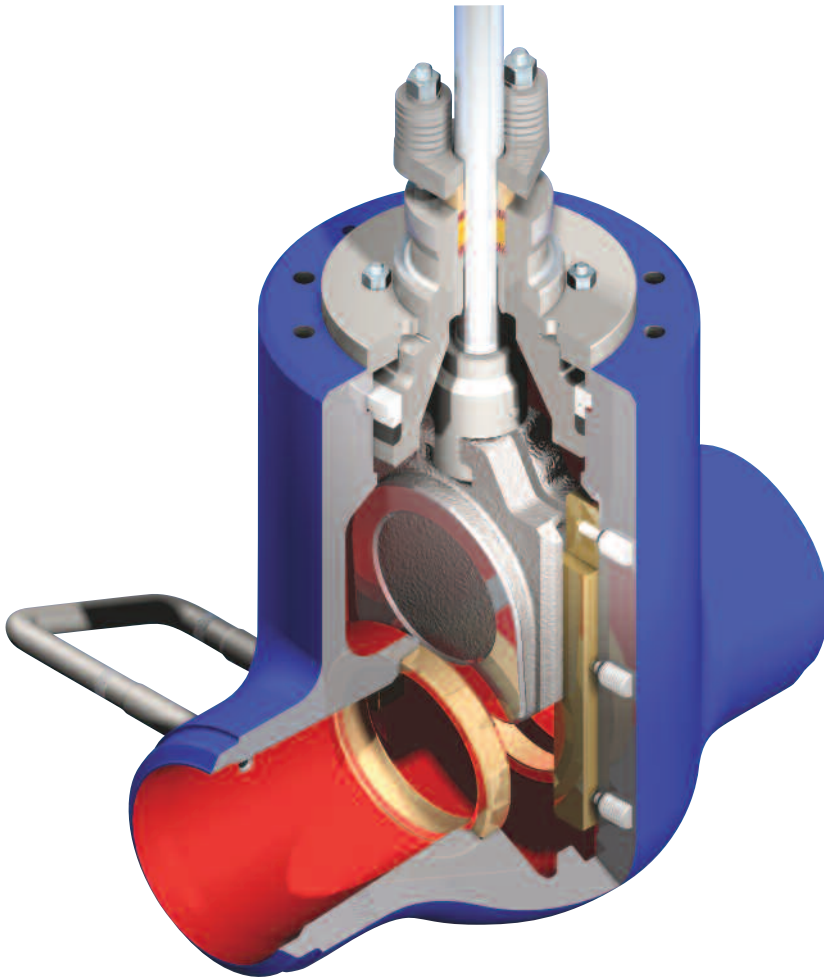
- Pneumatic
- Electric motor
- Gas-hydraulic
- Manual gear
- Bare stem

##### Other options:

- Position indication
- Instrumented stem
- Bonnet overpressure protection
- Seal weld
- Canopy weld
- Integral bypass arrangements/optional



**Gate valves - Flexi wedge design**  
 Designed for containment isolation duties



Wedge gate valves

**Design standards:**

- ASME section III
- ASME B16.34
- RCC-M

**Sizes:** 3-24 inch (DN 80-600)

**Pressure class:** 150-2500

**Applications:**

- Containment isolation
- Equipment isolation

**Features:**

- Flexible wedge design
- Bi-directional operation
- Precision body guides
- Tight shut-off
- Addresses GL 89-10 concerns

**Materials of construction:**

- Body:
  - Carbon steels
  - Alloy steels
  - Stainless steels
- Seat and wedge:
  - Hardfaced with stellite or cobalt free materials

**Seal design:**

- Bolted bonnet (seal weld provision available)
- Pressure seal

**End connections:**

- Butt weld
- Flanged

**Actuator options:**

- Pneumatic
- Electric motor
- Gas-hydraulic
- Manual gear
- Bare stem

**Other options:**

- Position indication
- Bonnet overpressure protection
- Seal weld (bolted bonnet)
- Canopy seal (pressure seal)
- Integral bypass arrangements/option
- Instrumented stem

## Globe valves - T-pattern

Designed for tight shut-off

### □ T-pattern globe valves

#### Design standards:

- ASME section III
- ASME B16.34

**Sizes:** 3-24 inch (DN 77-610)

**Pressure class:** 150-2500

#### Applications:

- Containment isolation
- Equipment isolation requiring tight shut-off

#### Features:

- 45 degree seats
- Precision guides with wear resistant coating
- Large seat bore for reduced pressure drop

#### Materials of construction:

- Body and poppet:
  - Carbon steels
  - Alloy steels
  - Stainless steels
- Seat:
  - Stainless steel overlays
  - Alloy: Hardfacing #21

#### Seal design:

- Bolted bonnet
- Pressure seal

#### End connections:

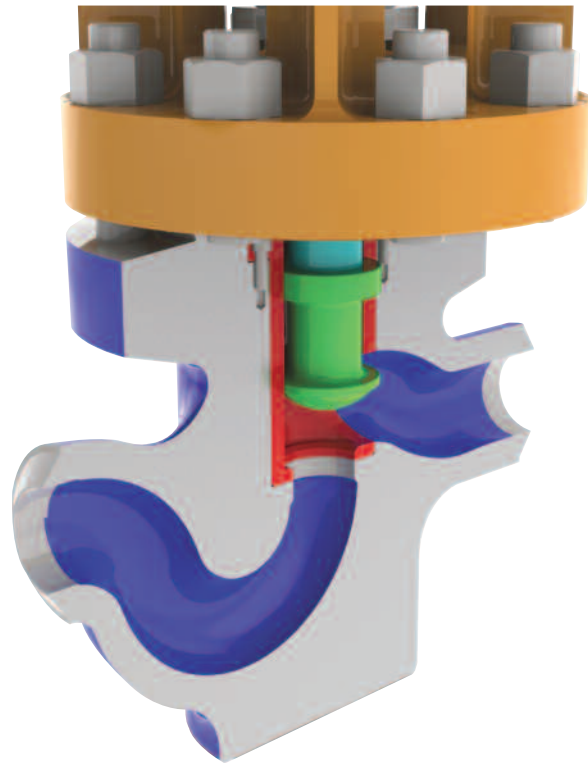
- Butt weld
- Flanged

#### Actuator options:

- Pneumatic
- Electric motor
- Gas-hydraulic
- Manual gear
- Bare stem

#### Other options:

- Position indication
- Stop check design available
- Angle design available
- Seal weld (bolted bonnet)
- Canopy seal (pressure seal)
- Instrumented stem
- Non-cobalt hardfacing materials available



**Globe valves - Y-pattern**

Designed for tight shut-off with low pressure drop



Y-pattern globe valves

**Design standards:**

- ASME section III
- ASME B16.34

**Sizes:** 3-24 inch (DN 77-610)

**Pressure class:** 150-2500

**Applications:**

- Containment isolation
- Equipment isolation requiring tight shut-off

**Features:**

- Y-pattern for lower pressure loss
- Bevelled seats for tight sealing
- Large seat bore for reduced pressure drop

**Materials of construction:**

- Body and poppet:
  - Carbon steels
  - Alloy steels
  - Stainless steels
- Seat:
  - Stainless steel overlays
  - Hardfacing alloys

**Seal design:**

- Bolted bonnet (seal weld provision available)
- Pressure seal

**End connections:**

- Butt weld
- Flanged

**Actuator options:**

- Pneumatic
- Electric motor
- Gas-hydraulic
- Manual gear
- Bare stem

**Other options:**

- Position indication
- Instrumented stem
- Non-cobalt hardfacing materials available

## Safety valves

### Over pressure and protective solutions

- Spring loaded safety relief valves (Starflow™, Series 9)
- Damped spring loaded relief valves
- Atmospheric relief valves
- Pilot operated safety relief valves
- Changeover valves

**Size:** ½ - 12 inch (DN 15-305)

**Pressure:**  
From 7 to 14500 PSI (0.05 to 100 Mpa)

**Class:**  
ASME Class 150# – 2500# or customised

**Applications:**

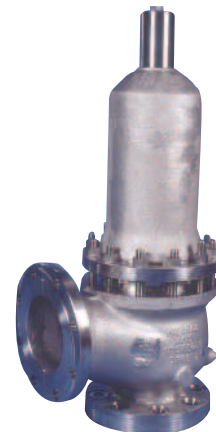
- Suitable for all types of nuclear reactors (PWR, BWR, CANDU PHWR, RBMK LWGR, HTGR)
- High and low pressure overpressure protection on steam, water and gas lines
- Nuclear steam supply system (NSSS) and balance of nuclear island
  - Steam generator blowdown system
  - Electrical building chilled water system
  - Spent fuel pit cooling and treatment system
  - Reactor coolant system
  - Chemical and volumetric control system
  - Reactor boron and water make up system
  - Nuclear sampling system
  - Safety injection system
  - Nuclear island vent and drain system
  - Reactor heat removal system
  - Component cooling system
  - Instrument compressed air distribution system
  - Nuclear island demineralised water distribution
  - Gaseous waste treatment system
  - Boron recycling system
  - Waste auxiliary components cooling system



Starflow™ series with damping system



Forged stainless steel safety valves



Cast Starflow™ safety valves

- Features:**
- Full lift
  - Semi or full nozzle design
  - Metal or soft seat
  - Cast or forged body
  - Carbon, alloy or stainless steel
  - Flange, threaded, welded
  - Available with a damping system (GRAB) to prevent acoustic vibration phenomena



*Largest ever main steam isolation valves designed and built at Weir's UK plant, recently shipped to a nuclear power plant in China*

**Special Applications - Main steam isolation valves/  
Main feedwater isolation valves (gate design)**  
Fast closing for critical protection

**Gate design**

- Main steam isolation valves (MSIV)
- Main feedwater isolation valves (MFIV)

**Design standard:**

- ASME section III
- RCC-M

**Sizes:** 14-42 inch (DN 356-1067)

**Pressure class:** 600-1500

**Applications:**

- Main steam isolation
- Main feedwater isolation

**Features:**

- Gate design reduces pressure drop
- Quick closure design (typically 3-5 seconds)
- Available as parallel slide or wedge gate design

**Materials of construction:**

- Body:
  - Carbon steels
  - Alloy steels
  - Stainless steels
- Seats and precision guides: Hardfacing #6 overlay

**Seal design:**

- Bolted bonnet (seal weld provision available)
- Pressure seal

**End connections:** Butt weld



*Main steam isolation valve*

**Actuator options:**

- Pneumatic
- Electric motor
- Gas-hydraulic

**Other options:**

- Position indication
- Stem instrumentation

**Special Applications - Main steam isolation valves  
(Y-pattern globe design)**  
Fast closing for critical protection

Globe design

- Main steam isolation valves (MSIV)

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**Design standard:** ASME section III

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**Sizes:** 4-38 inch (DN 100-950)

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**Pressure class:** 600-1500

**Applications:**

- Main steam isolation

**Features:**

- Globe design ensures tight shut-off
- Quick closure design (typically 3-5 seconds)
- Simple and effective design - process and springs assist closure
- Compact valve and actuator design - low centre of gravity
- Advanced flow path design for minimal pressure loss
- Nose guide for tight seating
- Back seated for stability and resistance to vibration

**Materials of construction:**

- Body and poppet:
  - Carbon steels
  - Alloy steels
  - Stainless steels
- Seats and precision guides: alloy Hardfacing #21 overlay




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**Seal design:**

- Bolted bonnet (seal weld provision available)

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**End connections:** Butt weld

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**Actuator options:**

- Pneumatic with spring assist
- Electric motor

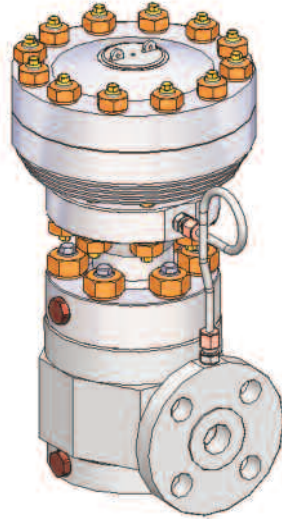
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**Other options:**

- Position indication
- Stem instrumentation



**Special Applications - Compact integrated safety valves**  
 High safety protection level on smaller dimensions



*Integrated upstream flange DSM*

□ DSM 3000

**Sizes:** ½- 1½ inch (DN 15-40)

**Pressure:**  
 From 70 to 2900 Psi (0,5 to 20 MPa)

**Temperature:**  
 High temperature applications to 576°C (1069°F)

**Class:**  
 ASME Class 150# – 2500# or customised

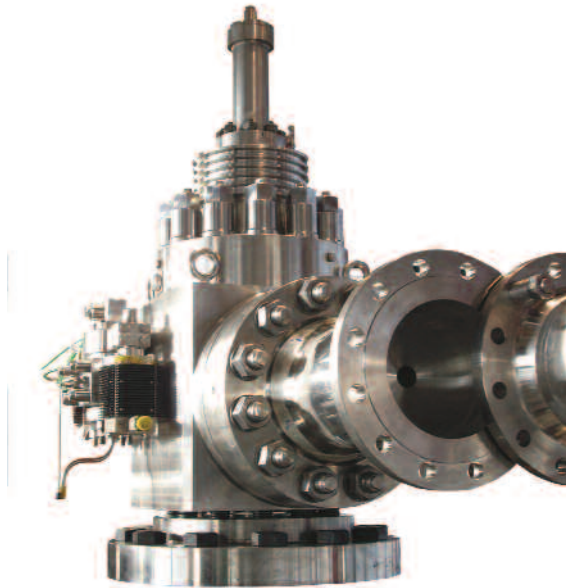
**Applications:**

- Suitable for all types of nuclear reactors (submarines, scaled down reactors, experimental reactors, PWR, CANDU PHWR, HTGR)
- High and low pressure overpressure protection on liquid, steam, gas, and steam/water mix
- Small capacity, high speed pressure transient
- Primary coolant safety valves for submarines
- Experimental reactors coolant overpressure protection

**Features:**

- Excellent operation irrespective of the type of fluid: steam, gas, liquid or two-phase
- Leak tightness up to the set-pressure maximizes the operating pressure and output power
- Non-flowing pilot valve minimizes ageing of the mechanism
- Accuracy of pilot set pressure opening value with repeatability better than 1%
- Soft opening/closing decreases the loads to the installation
- Low or high pressure in-situ test during operation for preventive maintenance
- Maintained stability even when flow capacities are well below the maximum rate - no chattering
- Reduced maintenance
- Proven and accurate repeatability and reliability
- Available remote control - power supply 48, 110, 220 V DC/AC – IP 65 – 100% operating factor
- K1 - 1 E qualified for applications within the containment area of nuclear plants
- Compact design
- Customised interfaces (upstream and downstream pipes)
- Forged stainless steel body – special material on request

**Special Applications - Integrated single safety relief valves**  
 Innovative compact design for over-pressure protection in cooling circuit



*PRG 3090 Class 1  
 Safety Valve*

□ PRG

**Sizes:** 1-16 inch (DN 25-400)

**Pressure:**

From 7 to 4300 PSI (0.05 to 30 Mpa)

**Temperature:**

High temperature applications to 576°C (1069°F)

**Class:**

ASME class 150# – 2500# or customised

**Applications:**

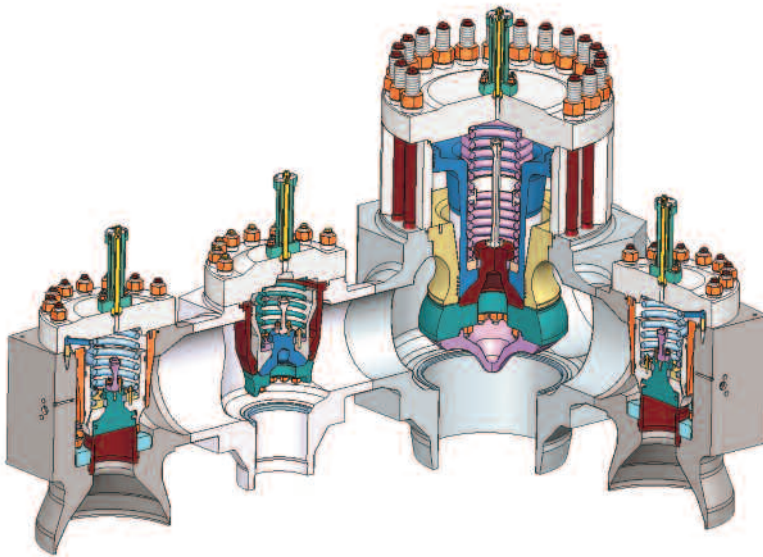
- Suitable for all nuclear reactor designs (PWR, BWR, CANDU PHWR, RBMK LWGR, HTGR)
- High and low pressure overpressure protection on steam, water, gas or steam/water mix
- Qualified for inside and outside reactor containment
- Safety functions during accidental conditions (feed & bleed)
- Pressuriser safety valves
- Steam generator safety valves
- Main steam safety valves
- Bleed condenser relief valves
- Reactor heat removal safety valves
- Reactor volumetric and chemical control circuit overpressure protection

**Features:**

- Excellent operation irrespective of the type of fluid: steam, gas, liquid or two-phase
- Leak tightness up to the set-pressure maximises the operating pressure and output power
- Non-flowing pilot valve minimises ageing of the mechanism
- Accuracy of pilot set pressure opening value with repeatability better than 1%
- Soft opening/closing decreases the loads to the installation
- Low or high pressure in-situ test during operation for preventive maintenance
- Maintained stability even when flow capacities are well below the maximum rate
- No erosion of sealing faces, no chattering
- Reduced maintenance
- Proven and accurate repeatability and reliability
- Available remote control - power supply 48, 110, 220 V DC/AC – IP 65 – 100% operating factor
- K1 - 1 E qualified for applications within the containment area of nuclear plants
- Protection against cold overpressure (nuclear vessel protection within the NDTT curve)
- Compact design reduces size and weight
- Customised interfaces (upstream and downstream pipes)
- Prevention of LOCA (Loss of Coolant Accident): the unique feature guarantees reliable closing (Emergency Shut-Off (ESO))

## Special Applications - Isolation, safety & relief valves

### Medium operated isolation & relief function for compact design



Steam Block Unit (SVU)

- Steam block unit (SVU)**  
Combines several functions with one main steam isolation valve (SIG series), two pilot operated safety valves (GVG series), and one isolation check valve (CVG series)
- System medium operated quick closing steam isolation valves: SIG series**
- System medium operated isolation check valves: CVG series**

- The Steam Block Unit (SVU) combines several functions
  - One system medium operated quick closing steam isolation valve (SIG series) intended for steam cut-off in unlikely accidental modes (pipe breaking, primary/secondary leaks)
  - Two pilot operated safety valves (GVG series) intended for protection of steam generators against overpressure
  - One isolation check valve (CVG series) intended for cut-off of steam in case of non closing of downstream dump relief valve

**Size:** 4-34 inch (DN 100 - 800)

**Pressure**

From 70 to 2900 Psi (0,5 to 20 MPa)

**Temperature**

High temperature applications to 600°C (1112°F)

**Class**

ASME Class 600# – 900# or customised

**Applications**

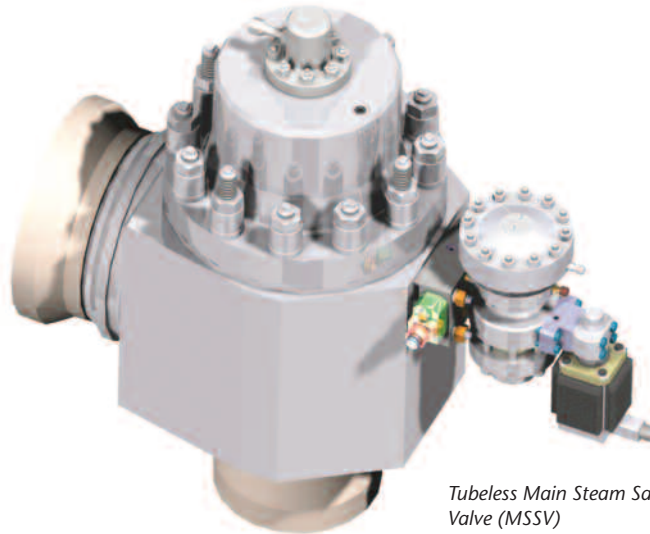
- Suitable for all types of nuclear reactors (PWR, BWR, CANDU PHWR, RBMK LWGR, HTGR)
- High and low pressure live steam pipeline leading to the turbine
- Main steam isolation valves
- Main steam relief isolation valves

**Features:**

- Guaranteed leak tightness due to system operated principle
- Customised to special operational logic
- Possibility of redundancy of the actuator
- Low or high pressure in-situ test during operation for preventive maintenance
- Reduced maintenance
- Low power consumption of the actuator – power supply 48, 110, 220 V DC/AC – IP 65 – 100% operating factor
- K1 – 1 E qualified for applications within the containment area of nuclear plants
- Compact design reduces size and weight
- Customised interfaces (upstream and downstream pipes)
- Forged carbon steel body – special material on request

## Special Applications - Main steam safety valves

Reliable protection in all steam/fluid conditions



Tubeless Main Steam Safety Valve (MSSV)

- Main steam safety valves (MSSV4, MSSV10)
- Main steam tandem safety valves (MSTSV)
- GVG series

**Size:** 1-16 inch (DN 25-400)

**Pressure**

From 70 to 2900 Psi (0,5 to 20 MPa)

**Temperature**

High temperature applications to 576°C (1069°F)

**Class**

ASME Class 150# – 2500# or customised

**Applications**

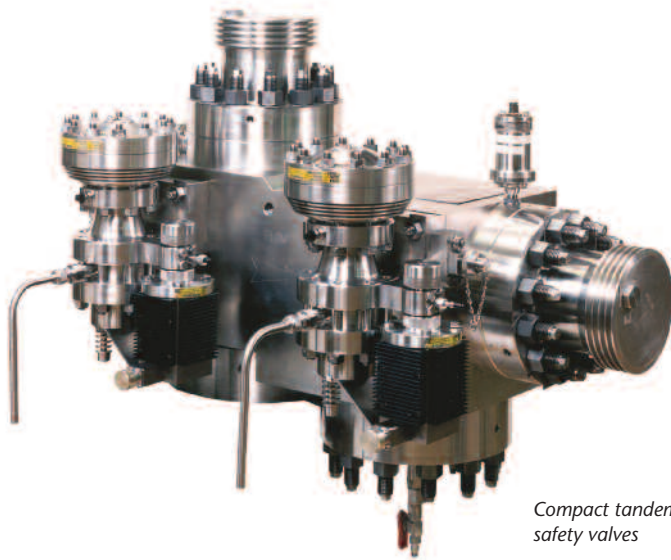
- Suitable for all types of nuclear reactors (PWR, BWR, CANDU PHWR, RBMK LWGR, HTGR)
- High and low pressure overpressure protection on steam, and steam/water mixtures
- Qualified for Nuclear Steam Supply System (NSSS)
- Safety functions during accidental conditions (feed & bleed)
- Steam generator safety valves

**Features:**

- Excellent operation irrespective of the type of fluid: steam, gas, liquid or two-phase
- Leak tightness up to the set-pressure maximises the operating pressure and output power
- Non-flowing pilot valve minimises ageing of the mechanism
- Accuracy of pilot set pressure opening value with repeatability better than 1%
- Soft opening/closing decreases the loads to the installation
- Low or high pressure in-situ test during operation for preventive maintenance
- Maintained stability even when flow capacities are well below the maximum rate
- No erosion of sealing faces, no chattering
- Reduced maintenance
- Proven and accurate repeatability and reliability
- Available remote control - power supply 48, 110, 220 V DC/AC – IP 65 – 100% operating factor
- K1 - 1 E qualified for applications within the containment area of nuclear plants
- Protection against cold overpressure (nuclear vessel protection within the NDTT curve)
- Compact design reduces size and weight
- Customised interfaces (upstream and downstream pipes)
- Cast or forged carbon steel body – special material on request
- The unique design guarantees reliable closing

## Special Applications - Tandem safety relief valves

Unique design for redundant safe closure in over-pressure protection of cooling circuit



Compact tandem safety valves

- Tandem safety valves, compact tandem safety valves, super compact tandem safety valves

**Sizes:** 2-16 inch (DN 50-400)

**Pressure:**

From 7 to 4300 PSI (0.05 to 30 Mpa)

**Temperature:**

High temperature applications to 576°C (1069°F)

**Class:**

ASME class 150# – 2500# or customised

**Applications:**

- Suitable for all nuclear reactor designs (PWR, BWR, CANDU PHWR, RBMK LWGR, HTGR)
- High and low pressure overpressure protection on steam, water, gas or steam/water mix
- Qualified for inside and outside reactor containment
- Safety functions during accidental conditions (feed & bleed)
- Pressuriser safety valves
- Steam generator safety valves
- Main steam safety valves
- Bleed condenser relief valves
- Reactor heat removal safety valves
- Reactor volumetric and chemical control circuit overpressure protection

**Features:**

- Excellent operation irrespective of the type of fluid: steam, gas, liquid or two-phase
- Leak tightness up to the set-pressure maximises the operating pressure and output power
- Non-flowing pilot valve minimises ageing of the mechanism
- Accuracy of pilot set pressure opening value with repeatability better than 1%
- Soft opening/closing decreases the loads to the installation
- Low or high pressure in-situ test during operation for preventive maintenance
- Maintained stability even when flow capacities are well below the maximum rate
- No erosion of sealing faces, no chattering
- Reduced maintenance
- Proven and accurate repeatability and reliability
- Low power consumption of the actuator - power supply 48, 110, 220 V DC/AC – IP 65 – 100% operating factor
- K1 - 1 E qualified for applications within the containment area of nuclear plants
- Protection against cold overpressure (nuclear vessel protection within the NDTT curve)
- Compact design reduces size and weight
- Customised interfaces (upstream and downstream pipes)
- Prevention of LOCA (Loss of Coolant Accident): the unique TANDEM design guarantees reliable closing



## Nuclear valve service

Professional repair, refurbishment and upgrade of valves worldwide

**Our valve and aftermarket solutions are based on our OEM engineering and design heritage. Because of our OEM expertise, we have complete working knowledge of valve design and operation - as well as a full system understanding. This enables us to provide the optimum level of service based on the current condition of your valve, with the know-how to work on our own and other OEM equipment.**

### Our valve aftermarket services include:

- Outage management
- Control valve service solutions
- In-situ valve seat replacement
- Actuation service solutions
- Online safety valve testing and analysis
- Diagnostic testing
- Spare parts support
- Customised training



**The core of any effective valve service program is the skill and experience of the technicians and supervisors who come to your site.**

### Benefits:

- Extensive references and proven track record
- Detailed and full system understanding
- Reliability-centred maintenance
- Up-to-date nuclear security badging for Weir valve technicians

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Excellent  
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