

# Worcester Controls Product Catalog









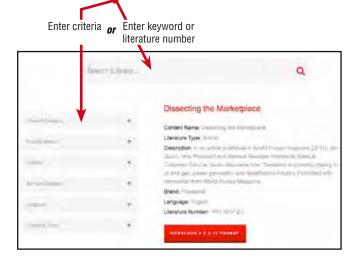


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Flowserve rotary valves offer easy maintenance and automation backed by market-friendly expertise and quality heritage brands





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# Series 44 3-Piece Regular Port

# Series 59 3-Piece Full Port

# Series 45/59 3-Piece Larger Sizes







#### Features

- 3 Piece Regular Port design Ball Valve
- ASME class 600 design
- Meets ASME B16.34 requirements (consult Pressure/Temperature Charts)
- "Live loaded" stem seal design
- · Multiple soft and metal seat options
- Tight Shut off and Bi-Directional sealing
- Cavity Filled Designs
- Special Service Applications: UL, FM, USCG and other Special service approvals
- · Locking Device as standard

#### Sizes

- 1/4" to 2"
- Screwed end
- Socket weld
- Butt weld, Solder ends (Brass only)

# Materials

- · Carbon Steel
- Stainless Steel
- Brass
- Monel
- Alloy 20
- Hastelloy-C

# Standards

- ASME B16.34
- S.E. to ASME B 2.1
- S.W. to ASME B 16.11

#### Get more information:

Product brochure:

• WCABR1050

IOM:

WCENIM2030

See page 2.

# Features

- 3 Piece Full Port design Ball Valve
- · ASME class 600 design
- Meets ASME B16.34 requirements (consult Pressure/Temperature Charts)
- "Live loaded" stem seal
- Multiple soft and metal seat options
- Tight Shut off and Bi-Directional Sealing
- Cavity Filled Designs
- Full Port design minimizes pressure drop across the valve and maintains a high efficiency, reducing pumping cost.
- · Locking Device as standard

#### Sizes

- ¼" to 2"
- Screwed end
- Socket weld
- Butt weld, Solder ends (Brass only)

# Materials

- · Carbon Steel
- · Stainless Steel
- Brass
- Monel
- Alloy 20
- Hastelloy C

## Standards

- ASME B16.34
- S.E. to ASME B 2.1
- S.W. to ASME B 16.11

#### Get more information:

Product brochure:

• WCABR1050

#### IOM:

- WCENIM2030 (for Miser)
- WCENIM2054 (for FM)

See page 2.

# Features

- · Large-diamater, 3 Piece design Ball Valve
- ASME Class 300 design
- Three piece design allows valve to act as a valve and union
- Large diameter bore for O.E.M. equipment and packaging systems
- · Compact design with multiple options
- · Tight Shut off and Bi-Directional sealing
- · Cavity Filled Designs

#### Sizes

- 45 Series 2½" to 6" 59 Series 2½ to 4"
- Screwed end
- Socket weld
- Butt weld

#### Materials

- Carbon Steel
- Stainless Steel

#### Standards

- ASME B16.34
- S.E. to ASME B 2.1
- S.W. to ASME B 16.11

#### Get more information:

Product brochure:

• WCABR1050

#### IOM:

• WCENIM2046



# Series 51/52 Flanged Regular Port



#### Features

- Flanged Regular Port Unibody Design
- ASME class 150/300
- · Tight shut-off
- "Live loaded" stem seal
- Multiple soft and metal seat options
- Wide variety of Body, Seat and Seal materi als means dependable, high cycle control on Steam, Petroleum products, Chemicals and abrasive liquids
- Pre-drilled mounting holes for actuation
- · Tight Shut off and Bi-Directional sealing

#### Sizes

- 1/2" to 10" Flanged
- ASME 150# and 300# class

#### Materials

- · Carbon Steel
- · Stainless Steel

#### Standards

• ASME B16.34

#### Get more information:

Product brochure:

• WCABR1013

#### IOM:

- WCENIM2014 (for smallvalves)
- WCENIM2015 (for large valves)
- WCENIM2052 (for FM)

See page 2.

# Series F519/F529 Flanged Full Port



#### Features

- Flanged Full Port Unibody Design
- ASME class 150/300
- ISO 5211 mounting
- · "Live loaded" stem seal
- Multiple soft and metal seat options
- Full Port design minimizes pressure drop across the valve and maintains a high efficiency, reducing pumping cost.
- Wide variety of Body, Seat and Seal materials means dependable, high cycle control on Steam, Petroleum products, Chemicals and abrasive liquids
- · Firesafe by design

#### Sizes

- ½" to 1½"
- ASME 150# and 300# class

# Materials

- · Carbon Steel
- · Stainless Steel

## Standards

- ASME B16.34
- API 607 Fire Test

# Get more information:

Product brochure:

• WCENBR0032

#### IOM:

WCEIM0519

See page 2.

# Series F819/F829 Flanged Full Port



#### Features

- · Flanged Full Port Split Body Design
- ASME class 150/300
- ISO 5211 mounting
- Full Port design minimizes pressure drop across the valve and maintains a high efficiency, reducing pumping cost.
- Wide variety of Body, Seat and Seal materials means dependable, high cycle control on Steam, Petroleum products, Chemicals and abrasive liquids

#### Sizes

- 2" to 8"
- ASME 150# and 300# class

#### Materials

Carbon Steel Stainless Steel

#### Standards

- API 6D
- API 607 4th Edition
- ASME B16.34
- NACE MR01-75

#### Get more information:

Product brochure:

• WCENBR0032

#### ION

- WCENIM0013 (for std. valve)
- WCENIM2057 (for fugitive emission)

# Series 151 and 301 Wafer Pattern



# Features

- Wafer Design
- Designed for light weight.
- Symmetrically balanced to avoid side loads from actuation 40-60% less weight than conventional ball valves
- Suitable for Steam processes including vegetable peelers, Steam ejectors, Distilleries, and more.

#### Sizes

- 3" to 6"
- ASME 150# and 300# class
- · Rated at 720 CWP

#### Materials

- Bronze
- Carbon Steel
- Stainless Steel
- Ductile iron

# Get more information:

Product brochure:

WCABR1041

# IOM:

• WCENIM2015

See page 2.

# Series D44/D4, D51, 18/19 Directional



#### Features

- Multi-port Diverter Valves
- Three-piece or flanged design
- · Bottom entry or side entry
- Full port or regular port
- 90 or 180 degree operation
- The D51 cast flanged have similar operations as the D44/D4 but for larger sizes
- The D44/D4 3-piece diverter valve is designed to accept media through a bottom inlet port and direct it to either of two outlet ports
- ASME 150 flanges
- The 18/19 Series is extremely adaptive
- . Up to 5 ports
- . multiple seat and body materials
- . regular or full port
- . Optional fugitive emission design
- . Class 150 or 300
- . Screwed, socket or butt weld and slip-on flanges

#### Sizes

½" to 2" for D44/D4 3-piece valve 2" to 8" for D51 Flanged valve 1" to 6" for Series 18 & 19 valve

#### Materials

Carbon Steel Stainless Steel

## Standards

ASME B16.34 API 607 Fire Test

# Get more information:

Product brochure:

• WCABR1052

#### IOM

- WCENIM2030 (for Miser)
- WCENIM2015 (for large valves)
- WCENIM0009 (for 18/19)

See page 2.

# Series 94, 94-150, 94-300, 94-600 Fugitive Emission



#### Features

- Specially designed to control and minimize fugitive Emissions.
- Outstanding performance on high-cycle applications, where no stem leakage is allowed
- Double "live loaded" Stem seal design
- High Vacuum capability
- High cycle capability
- Suitable for Category M services
- Pressure classes to ASME 600

#### Sizes

- ½" to 2"3 piece design
- Screwed end
- Socket weld
- Butt weld
- ½" to 8" Flanged design

#### Materials

- · Carbon Steel
- Stainless Steel
- · Hastelloy-C trim option

#### Standards

- ASME B16.34
- S.E. to ASME B 2.1
- S.W. to ASME B 16.11
- API 607 Fire Test

# Get more information:

Product brochure:

• WCABR1023

#### IOM.

- WCENIM2003 (for Series 94)
- WCENIM2057 (for Series E818/828)



# Series CL94, CL44, CL 51/52 Cholrine



#### Features

- Special for Chlorine Service
- Liquid and gas
- Relief vent in ball vents to the high pressure side
- Constructed in accordance with the recommendations of the Chlorine Institute including special testing, cleaning and packaging
- Available with 94 FEM stem design
- · Assembled in Class 1000 clean room
- Pressure classes to ASME 600

#### Sizes

- ½" to 2"3 piece design
- · Screwed end
- · Socket weld
- Butt weld
- 1/2" to 4" Flanged design

#### Materials

Carbon Steel/Monel Trim

## Standards

- ASME B16.34
- Chlorine Institute Pamphlet 6
- MSS-SP-72, B31.1, B31.3

# **Series** AF44, FZ44, AF51/52, FZ51/52, FM51/52, AF94, FZ94, F519/529, F819/829 **Firesafe**



#### Features

- · Fire-Safe Valves
- Ensure operational integrity before, during, and after a fire.
- Tight Shut off, Anti static, no external leakage
- Available with 94 FEM stem design
- Pressure classes to ASME 600

#### Sizes

- ½" to 2"3 piece design
- Screwed end
- Socket weld
- Butt weld
- ½" to 10" Flanged design

#### Standards

- ASME B16.34
- API 607 Fire Test
- EXES 3-14-1-2A
- FM 7440

# Series C4, C44, and C51 Cryogenic



#### Features

- Cryogenic Services
- High-performance, shutoff valves for intermittent and continuous flow applications with temperatures to -425°F
- Positive Ball/Cavity relief with V3 vent hole
- · Zero Leak packing
- Effective Bonnet Extensions
- Valves designed for low thermal stress, automation and Fire Safety
- Assembled in Class 1000 clean room
- Pressure classes to ASME 600

#### Sizes

- ½" to 2"3 piece design
- · Screwed end
- · Socket weld
- Butt weld
- ½" to 6" Flanged design

#### Materials

- Brass
- · Stainless Steel

#### Standards

- ASME B16.34
- API 607 Fire Test

# Get more information:

Product brochure:

• WWCABR1039

#### IOM:

- WCENIM2003 (for series 94)
- WCENIM2014 (for small 51/52)
- WCENIM2015 (for large 51/52)
- WCENIM2030 (for Miser)

See page 2.

# Get more information:

Product brochure:

• WCABR1029

#### IOM

- WCENIM2003 (for series 94)
- WCENIM2014 (for small 51/52)
- WCENIM2015 (for large 51/52 & 151/301)
- WCENIM2020 (for series 818/828)
- WCENIM2030 (for Miser)
- WCENIM2047 (for series 82/83)
- WCENIM2052 (for 51/52 FM)
- WCENIM2054 (for O&G shutoff FM)
- WCENIM2057 (for fugitive emissions)

See page 2.

Swanson Flo www.swansonflo.com 800-288-7926

# Get more information:

Product brochure:

WCABR1040

#### ION

- WCENIM2006 (for R12/R6 or earlier)
- WCENIM2038 (for std. valve)

# Series WK70 High Purity



# Series TB59 Tank Bottom







# Features

- High Purity, Forged F316L Tube bore
- · Class 100 Clean Room Assembly
- · 20Ra interior surface finish
- Controlled ferrite <1%
- · Controlled sulfur for orbital welding
- CMTRs

#### Sizes

- ½" to 2" 3 piece design
- Extended butt weld
- · Hygienic Clamp

#### Materials:

- ASTM A182 F316L, ASTM A479
- Interior Surface Finish: 20Ra standard, 15Ra electropolished
- · Seats/Seals: PTFE, Polyfill

#### Standards

- ASME BPE
- FDA(21CFR)
- USP VI
- USDA

# **Applications**

 Pharmaceutical/Biotech, microelectronics, steam distribution and distillation, fermentation, lyophilization, food and beverage

#### **Features**

- High Purity, Cast 316L Tube bore
- Class 100 Clean Room Assembly
- · 20Ra interior surface finish
- Controlled ferrite <5%
- · Controlled sulfer for orbital welding
- CMTRs standard

#### Sizes

- 3" to 4" 3 piece design
- Extended butt weld
- · Hygienic Clamp

#### Materials:

- ASTM A351-CF3M, ASTM A479
- Interior Surface Finish: 20Ra standard, 15Ra electropolished
- · Seats/Seals: PTFE, Polyfill

#### Standards

- ASME BPE
- FDA(21CFR)
- USP VI
- USDA

### **Applications**

 High purity and aseptic processes, sterile steam, high purity water, fermentation, lyophilization, food processing

#### Features

- Flush, Tank-bottom Drain valve
- For Biotech, Pharmaceutical, Food, Chemical and Cosmetic Processing
- Worcester 3 pc design advantages with a tank bottom end piece design.
- Available prepared for O2 and vacuum services
- Pressure classes to ASME 300

#### Sizes

- 1" to 4" 3 piece design
- Screwed end
- · Socket weld, Butt weld

# Get more information:

Product brochure:

• WCABR1036

#### IOM:

• WCAIM2018

See page 2.

# Get more information:

Product brochure:

• WCABR1037

# IOM:

• WCAIM2018

See page 2.

# Get more information:

Product brochure:

• WCENBR1028

# IOM:

WCENIM2001



# Series 4, H44 and PT High-per Mizer

# Series H71 Hydromizer









# Features

- High-Pressure Valves
- · Resilient seated valves for High pressure and
- High Temperature applications
- Pressures above ASME 600 to 5000 psi
- Used in Steam, Hydraulics, gasses and fluids and CNG

#### Sizes

- ½" to 2"3 piece design
- Screwed end
- · Socket weld, Butt weld
- ½" to 6" Flanged design
- 3" to 6" Wafer design

#### Standards

- ASME B16.34
- S.E. to ASME B 2.1
- S.W. to ASME B 16.11 (Consult product catalog)

# Features

- High-Pressure Valves
- · Resilient seated valves for High pressure and
- High Temperature applications
- ASME Class 1500 (1" to 2")
- ASME Class 2500 (½" & ¾") (Consult Brochure for PT curves and limitations)
- Used in Steam, Hydraulics, gasses and fluids, CNG and Subsea

#### Sizes

- ½" to 2"3 piece design
- Screwed end
- · Socket weld, Butt weld

## Standards

- ASME B16.34
- S.E. to ASME B 2.1
- S.W. to ASME B 16.11 (Consult product catalog)

# Features

- The CPT is a characterized seat Control Valve with a revolutionary design
- · Precision Control, high capacity
- Zero external leakage
- High Cycle Capacity
- Custom-cut Characterized Seats
- · High Rangeability
- Efficient Shearing Action

#### Sizes

- ½" to 2" 3-piece design
- Screwed end
- · Socket and Butt weld
- ½" to 4" Flanged design3" to 6" Wafer design
- Pressure classes to ASME 600 (Consult Literature)

# Standards

- ASME B16.34
- S.E. to ASME B 2.1
- S.W. to ASME B 16.11 (Consult product catalog)

# Get more information:

Product brochure:

• WCABR1051

#### IOM:

- WCENIM2015 (for large 51/51)
- WCENIM2030 (for Miser)

See page 2.

# Get more information:

Product brochure:

WCABR1051

# IOM:

• WCENIM2024

See page 2.

# Get more information:

Product brochure:

WCABR1001

#### ION

- WCENIM2009 (for series 94)
- WCENIM2040 (for series 44,51,52)

# Series 36 Electric Actuator

# Series 75 Electric Actuator

# Series F72 Electro-Hydraulic Actuator







#### Features

- · Compact size
- Permanently lubricated and sealed gear train
- Thermal overload protection
- Simple mounting and installation
- · Additional output switch
- Solid-State timer option for automatic cycling

# **Torque Range**

• 150 in-lb and 550 in-lb output torques

# Temperature Range

• 0 F to 150 F

# Supply Voltage

• 120, 240 VAC

## Enclosure

• NEMA 1, 4 and 4X

# **Applications**

• Industrial quarter-turn ball valves

## **OEM** installations

- Air Drying Equipment
- Sampling systems
- Compressor installations
- · Condensate draining
- · Tank draining

# Features

- · Two year warranty
- · Baked epoxy coated
- · Permanently lubricate gear train
- Manual override
- Thermal overload protection
- Reversable rotary operation

#### **Optional Features**

- Extended duty cycle motors
- · Fail safe capability
- Positioners and P.I.D. controllers
- · Hard anodised coating

#### Torque Range

• 150 - 3000 in-lbs

# Temperature Range

• -40 F to 150 F

# Supply Voltage

• 120, 240 VAC, 12, 24 VDC

#### Enclosure

• NEMA 4, 4X

# Hazardous Area Classification

· Class 1, Div 1, Groups C, D

# **Applications**

- Process control for rotary valves, dampers and multi-turn chokes
- · Boiler feed water
- Temperature control (steam, thermal fluid)
- Chemical, Power, Water/Waste Water, Food & Beverage, HVAC

#### Features

- Fail-safe on power failure
- · Fast moving valve closure
- Long operational life
- No hydraulic reservoir- mounts in any position
- No clutches, battery packs or clock springs
- Simple 2-wire control
- Two Year Warranty
- · FM Approved
- · Cost-effective

# Torque Range

• Up to 900 in-lbs (end of spring)

#### Temperature Range

• 0 F to 150 F

# Supply Voltage

• 120, 240 VAC, 24 VDC

# Enclosure

• NEMA 4. 4X

#### Hazardous Area Classification

- · Class 1, Div 1, Groups B, C, D
- FM 7411

#### **Applications**

- Oil & Gas Safety Shut Off
- Tank Farms
- · Water/Waste Water
- · Burner Management
- Oil Field Steam Generators
- Dampers

# Get more information:

Product brochure:

- WCABR1006 (36 Series)
- WCABR1007 (36T Series)

# IOM:

• WCAIM2007

See page 2.

#### Get more information:

Product brochure:

WCABR1014

### IOM:

• WCAIM2013

See page 2.

# Get more information:

Product brochure:

• WCENBR1022

#### IOI

WCAIM2049



# Series 34 Pneumatic Actuator

# Series F39 Pneumatic Actuator









#### Features

- · Compact Scotch-Yoke design
- · Baked epoxy coating
- Minimum air consumption
- Adjustable speed control
- Single external air and electrical connections
- Fail-safe spring return option
- Built-in solenoid air pilot
- · High temperature option

#### Torque Range

• Up to 1000 in-lbs @ 100 psi input

# Temperature Range

• -25 F to 160 F, Optional to 250 F

# Supply Voltage

• 12, 24 VDC, 24, 120, 240, 480 VAC

#### Enclosure

• NEMA 1, 4, 4x

## Hazardous Area Classification

• Class 1, Div 1, Groups A, B, C, D

#### **Applications**

- Industrial Qtr-Turn valve automation
- · Automative, OEM, Chemical & Water

# Features

- High Performance, High Cycle Design
- · Two-Year warranty
- Twin piston, double rack & pinion
- Extruded, anodized aluminum body
- NAMUR, ISO mounting
- · Polished stainless steel guide rods
- Multi-spring force transfer
- End cap air supply ports
- End mount solenoid/switch accessories
- · Limit stops

# Torque Range

•Up to 60,000 in-lbs @ 120 psi input

# Temperature Range

• -40 F to 212 F; (high temp option 300F)

#### Supply Voltage

• 12, 24 VDC, 24,120, 240 VAC

# Pressure Range

• 30-120psi DA, 40-120psi SR

#### Enclosure

• NEMA 1, 4, 4x

## Hazardous Area Classification

· Class 1, Div 1, Groups A, B, C, D

# **Applications**

- · Chemical, Petrochemical & Refining,
- Power, Oil & Gas, Food & Beverage

#### Features

- Integral solenoid & position switch
- Single electrical connection
- · High flow spool valve
- Manual override and speed control
- No mounting brackets
- · Diagnostic LED circuit board
- Digital bus networks

# Torque Range

• Up to 60,000 in-lbs @ 120 psi input

#### **Position Switch**

SPDT/DPDT, Gold Contact, Proximity

# Temperature Range

• 0 F to 160 F

# Supply Voltage

• 12, 24 VDC, 24,120, 240 VAC

# Pressure Range40 to 120 psi

\_ .

# Enclosure

• NEMA 4, 4X

## Hazardous Area Classification

- Class 1, Div 1, Groups B, C, D
- Intrinsically Safe, NRTL/C approved UL CSA approved

#### **Applications**

- Digital Bus Networks, Chemical,
- Petrochemical & Refining, Oil & Gas,
- Food & Beverage, Pharmaceutical

# Get more information:

Product brochure:
• WCENBR1004

IOM:

WCAIM2008

See page 2.

## Get more information:

Product brochure:

• WCENBR1003

#### IOM.

• WCENIM2036

See page 2.

# Get more information:

Product brochure:

• WCABR1024

### IOM:

- WCAIM2027 (standard)
- WCAIM2028 (intrisically safe)
- WCAIM2023 (DeviceNet)
- WCAIM2032 (AS-i)

# Series ELK39 End Mounted Switch Box

# Series WWS/WWM Top Mounted Switch Box

# Series WPS/WPM Top Mount Switch Box







#### Features

- End mount versus top mount
- · Reduced assembly height
- Reduced installation envelope
- Eliminates mounting kits
- Multiple switch options
- Aluminum enclosure
- CSA & FM Approvals

## Housing Material

· Die cast aluminum, epoxy coated

#### Enclosure

• NEMA 4, 4X; CSA approved

#### Hazardous Area Classifications

- Class1, Div1, Groups C,D
- Class1, Div2, Groups E,F, G

#### **Position Switch**

• SPDT/DPDT, Gold Contact, Proximity

## Temperature Range

• 0 to 160 F

# Switch Ratings

- SPDT-15 Amp, 125, 250, 480 VAC; 1/2A, 24 VDC
- DPDT-10Amp, 125, 250 VAC; 0.3A,125 VDC
- Proximity Sensor (5-200mA, 20-140 VAC, 10-140 VAC, UL listed, CSA Certified)

# **Applications**

- Remote position indication
- · Relay device for pumps
- · Alarms and indicator lights
- Industrial, Chemical, Petrochemical installations

## Features

- UltraDome visual position indicators for high contrast, wide angle viewing
- Compliance to NAMUR VDI/VDE 3845 mounting specifications eliminates coupler and maximizes interchangeability
- · Captive stainless steel cover screws
- · Prewired multipoint terminal strip
- Quick-Set spring loaded cams are extra wide and splined to permit tool-free limit switch calibration
- Extensive switch offering for a wide range of applications including mechanical, proximity and solid state feedback options

#### Description

Provides a compact and economical globally certified weatherproof, non-incendive or intrinsically safe package for visual and remote electrical indication of valve position.

# **Housing Material**

Die cast aluminum; dichromate conversion undercoat; electrostatic powder top coat Engineered resin enclosure; 25-33% fiberglassfilled for harsh, corrosive applications

# Enclosure

• IP66, IP67, NEMA 4, 4x

#### Hazardous Area Classifications

- Intrinsically Safe ATEX II 1GD Ex ia IIC T4/ T5/T6
- Intrinsically Safe cCSAus, Cl. I, Div. 1, Gr. A,B,C,D, Cl. II, Div. 1, Gr. F,G, Cl. III T3
- 1, Gr. A,B,C,D, Cl. II, Div. 1, Gr. F,G, Cl. III T3
- Non-Incendive cCSAus, Cl. I, Div. 2, Gr. A,B,C,D, Cl. II, Div. 2, Gr E,F,G T3"

#### Features

- UltraDome visual position indicators for high contrast, wide angle viewing
- Compliance to NAMUR VDI/VDE 3845 mounting specifications eliminates coupler and maximizes interchangeability
- · Captive stainless steel cover screws
- Prewired multipoint terminal strip
- Quick-Set spring loaded cams are extra wide and splined to permit tool-free limit switch calibration
- Extensive switch offering for a wide range of applications including mechanical, proximity, solid state and analog feedback options

# Description

Engineered resin enclosure provides excellent protection in harsh, corrosive environments. Globally-certified weatherproof, non-incendive or intrinsically safe package for visual and remote electrical indication of valve position.

## Housing Material

Engineered resin enclosure; 25 - 33% fiberglass-filled for harsh, corrosive applications

# Enclosure

• IP66, NEMA 4, 4x

#### Hazardous Area Classifications

- Intrinsically Safe ATEX II 1G Ex ia IIC T4/ T5/T6
- Increased Safety ATEX II 2G Ex e mb IIC T6
- Intrinsically Safe IECEX Ex ia IIC T4/T5/T6
- Intrinsically Safe cFMus/cCSAus, Cl. I,II,III, Div. 1, Gr. A,B,C,D,E,F,G T5
- Non-Incendive cFMus/cCSAus, Cl. I, Div. 2, Gr. A,B,C,D, Cl. II, Div. 2, Gr E,F,G T5

#### Get more information:

Product brochure:

• WCABR1027

#### IOM:

• WCAIM2051

See page 2.

# FLOWSERVE

# Get more information:

Product brochure:

• WCENBR0135

#### IOM:

• WCENIM0135

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# Get more information:

Product brochure:

• WCENBR0134

#### ION

WCENIM2075

# Series WXCL Top Mounted Switch Box



#### Features

- UltraDome visual position indicators for high contrast, wide angle viewing
- Compliance to NAMUR VDI/VDE 3845 mounting specifications eliminates coupler and maximizes interchangeability
- · Captive stainless steel cover screws
- · Prewired multipoint terminal strip
- Quick-Set spring loaded cams are extra wide and splined to permit tool-free limit switch calibration
- Extensive switch offering for a wide range of applications including mechanical, proximity, solid state, and analog feedback options

# Description

 Provides a heavy-duty and rugged globally certified explosion-proof package for visual and remote electrical indication of valve position

#### Housing Material

• Die cast aluminum; dichromate conversion undercoat; electrostatic powder top coat

## Enclosure

• IP66, IP67, NEMA 4, 4X, 7 and 9

## Hazardous Area Classifications

- Flameproof ATEX II 2GD Ex d IIB T5, Ex tD A21 IP66/IP67
- Flameproof IECEX Ex d IIB T5, Ex tD A21 IP66/IP67
- Explosion-Proof cCSAus Cl. I, Div. 1, Gr. C & D, Cl. II, Div. 1, Gr. E,F,G, Cl. III, T3
- Non-Incendive cCSAus Cl. I, Div. 2, Gr. A,B,C,D T3
- Intrinsically Safe FM(US/CAN)/cCSAus, Cl. I,II,III, Div. 1, Gr. A,B,C,D,E,F,G T5
- KOSHA Ex d IIB T5
- INMETRO Ex d IIB T5 Gb, Ex tb IIIC T100 °C Db IP65

#### Get more information:

Product brochure:

• WCENBR1057

Product Specification: WCENPS1056

## IOM:

WCENIM2076

See page 2.

# Series DS/DM UltraSwitch™ Top Mounted Switch Box



#### Features

- Tool-free Quick-Set™ cams
- Switches available in a wide range of options
- Easily accessed pre-wired terminal strip
- Minimum two open terminals are provided
- Housing of aluminum or corrosion resistant stainless steel
- Optional 4-20mA feedback signal

#### Description

Compact housing in aluminium or corrosion resistant stainless steel can be directly and easily mounted onto actuators for both rotary and linear indication and can be used as a junction box for direct connection of solenoid valves. Up to three cable entries and pre-wired switches to enable easy installation.

# Housing Material

- Aluminum
- · Stainless steel

## Enclosure

IP66, NEMA 4, 4X, 7 and 9

#### Hazardous Area Classifications

- Flameproof ATEX II 2G Ex d IIC T4 Gb, Ex tb IIIC T113 °C Db IP66
- Flameproof IECEX Ex d IIC T4 Gb, Ex tb IIIC T113 °C Db IP66
- Explosion-Proof CSA Cl. I, Div. 1, Gr. B,C,D, Cl. II, Div. 1, Gr. E,F,G, Cl. III T4
- Explosion-Proof CSAus Cl. I, Div. 1, Gr. A,B,C,D, Cl. II, Div. 1, Gr. E,F,G, Cl. III T4

# Get more information:

Product brochure:

• WCENBR0136

#### IOM.

• WCENIM0136

See page 2.

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# Aviator BUSwitch Top Mount Integrated Valve Controller



## Description

Designed for use with pneumatic rotary industrial valve actuators in hazardous locations. With the same features as the UltraSwitch, the Aviator provides actuator/ valve control by receiving a direct solenoid voltage signal. Also provides remote indication of open and closed valve positions by completing separate electrical circuits. The BUSwitch provides actuator/valve control by receiving a direct solenoid voltage signal. Also provides remote indication of open and closed valve positions by completing separate electrical circuits. Available in the following CAN bus protocols: AS-i, DeviceNet, Foundation Fieldbus and Profibus DP.

# Housing Material

- Aluminum (WNXV models)
- Engineered Resin (WR model)

#### Enclosure

• IP65, NEMA 4, 4X, 7 and 9

## Hazardous Area Classifications

- Flameproof ATEX II 2G Ex d IIB T3/T4
- Flameproof IECEX Ex d IIB T3/T4 IP65
- Explosion-Proof cCSAus Cl. I, Div. 1, Gr. C & D, Cl. II, Div. 1, Gr. E,F,G, Div. 2 F,G, Cl. III
- Flameproof cCSAus Cl. 1, Zone 1, Gr. IIB, Ex d IIB T3/T4 IP65. Aex d IIB T3/T4 IP65
- Non-Incendive cCSAus Class I, Div. 2, Gr. A,B,C,D
- Intrinsically Safe FM(US/CAN)/cCSAus, Cl. I,II,III, Div. 1, Gr. A,B,C,D,E,F,G T5

#### Get more information:

Product brochure:

• WCENBR1057

## IOM:

• AXENIOM0100

# Series APEX W7000 Top Mount Positioner



#### Description

Compact, rugged design provides accurate valve positioning at a competitive price. Available with pneumatic and electropneumatic input options that can be field retrofitted.

## Housing Material

Die cast aluminum with electrostatic epoxy powder coating or TUFRAM® Severe Service Coating

#### Features

- Non-interactive zero and span adjustment greatly simplifies and reduces calibration.
- Interchangeable I/P Modules allow positioner to be field converted for 3-15 psi or 4-20 mA input signals
- Multiple cam options allow configuration of positioner characteristics to match valve requirements
- Gold-plated spool valves available in low or high flow versions to match actuator/valve load requirements
- Low-profile flat or optional UltraDome visual indicator provides full-area, wide angle viewing of valve position.
- Top-Mounted UltraSwitch optional for position feedback requirements

# Enclosure

NEMA 4, 4x

# Hazardous Area Classifications

- FM/CSA Class I, Divisions 1 and 2, Groups B,C,D
- FM/CSA Class II, Groups E, F, G
- ATEX II 2 G EEx d IIB + H2
- ATEX II 2 G EEx d IIC
- FM Intrinsically Safe ATEX II 2 G EEx ia IIC
- FM Intrinsically Safe Class I, Division 1, Groups A,B,C,D

#### Get more information:

Product brochure:

• AXENBR0006

See page 2.

# FLOWSERVI

# Series APEX W8000 Top Mount Positioner



#### Description

The APEX 8000 positioner provides extremely precise control for a wide range of valve and damper applications.

The two-stage pneumatic relay provides faster, more sensitive response characteristics to meet the most demanding control objectives. Pneumatic and electro-pneumatic input options available that can be field retrofitted. Also available with many advanced features such as limit switch feedback, analog feedback and UltraDome visual position indicators.

# Housing Material

Die cast aluminum with electrostatic powder coating or optional epoxy coating

## Enclosure

NEMA 4, 4x, 7 and 9

# Hazardous Area Classifications

- FM Class I, Divisions 1 & 2, Groups B,C,D, Class II, Divisions 1 & 2, E,F,G
- FM Intrinsically Safe Class I, Division 1, Groups A, B, C, D T4
- FM Class I Zone 0 AEx ia IIC T4
- FM Non-incendive Class I, Division 2, Groups A, B, C, D T4
- ATEX Intrinsically Safe II 1 G EEx ia IIC T6
- FM Class I, Division 2, IIC T4
- ATEX II 2 GD EEx d IIB + H2 T6

# Series L93 Pulsair Top Mount Positioner



#### Features

- · Linear and rotary actuator control
- Loop powered, microprocessor design
- · Simple user interface
- · High visability graphic display
- Auto calibration
- Two-stage air delivery
- Piezoelectric low power control
- "Zero" air bleed design
- Digital communication options
- · NAMUR output, ISO mounting

#### Housing Material

- · Die cast aluminum, epoxy paint
- · Stainless steel

#### Enclosure

• IP66. NEMA 4x

#### Hazardous Area Classification

- ATEX EExd, EEx ia, EEx nl
- CSA Class1, Div1, Groups BCDEFG
   I.S. Class1, Div1, Group A,B,C,D
- FM Class1, Div1, Groups B,C,DI. I.S. - Class1, Div1, Group A,B,C,D

# Temperature Range

• -22F to 185F

#### Accessories

· Position indication, fail freeze, remote mount

#### **Applications**

 High performance digital process control for linear and rotary actuators for modulating control

#### Get more information:

Product brochure:

• AXENBR0007

#### IOM:

• WCENIM2078

See page 2.

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#### Get more information:

Product brochure:

• AWCABR1019

#### IOM:

• WCAIM2055

# Series AF17 Electric Actuator Positioner



#### Features

- · Solid-state circuit board
- · Multiple signal inputs
- · LED calibration
- · Deadband control
- · Direct and reverse acting
- · Position feedback

#### Housing Material

· Die cast aluminum, epoxy paint

#### Supply Voltage

• 12, 24 VDC, 120, 240 VAC

#### Standard Inputs

 1-5mA, 4-20mA, 10-50mA, 0-135 ohm 0-1000 ohm, 0-5 VDC, 0-10 VDC

# Temperature Range

• -40F to 150F

# Accessories

· Analog output module

#### **Applications**

 Position control for rotary electric actuators to control valves and dampers.

# Series DFP17 DataFlo Electric Actuator Positioner



#### Features

- · Microprocessor control
- Pushbutton calibration
- Speed control
- · Electronic travel stops
- Adjustable dead band
- Multiple I/O options
- Digital network communications
- 20 programmable functions

#### Housing Material

· Die cast aluminum, epoxy paint

# Supply Voltage

• 12, 24 VDC, 120, 240 VAC

#### Standard Inputs

• 1-5mA, 4-20mA, 10-50mA, 0-135 ohm, 0-1000 ohm, 0-5 VDC, 0-10 VDC

# Temperature Range

• -40F to 150F

#### Accessories

Analog output module

### **Applications**

 High performance control for Qtr-turn and Multi-turn rotary electric actuators for modulating control of valves and dampers.

# Series DFC17 DataFlo Electric Actuator Controller



#### **Features**

- Microprocessor PID control
- Autotuning
- Local process control
- · Pushbutton calibration
- · Performance monitoring
- Mulitple I/O options
- Modbus network communications
- RS485 network communications
- · Desktop software

## Housing Material

· Die cast aluminum, epoxy paint

#### Supply Voltage

• 24 VDC, 120, 240 VAC

# Standard Inputs

• 4-20mA, RTD, Thermocouple

## Temperature Range

• -40F to 150F

#### Accessories

· Analog output, 24VDC power supply

# **Applications**

Direct process control (P.I.D.) for flow, temperature, pressure, level and Ph applications.
 Primary industires: Food & beverage, OEM, Industrial & Automotive

#### Get more information:

Product brochure:

• WCABR1000

## IOM:

- WCAIM 2031
- WCAIM2050

See page 2.

# Get more information:

Product brochure:

• WCENBR1021

## IOM:

• WCAIM2037

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# Get more information:

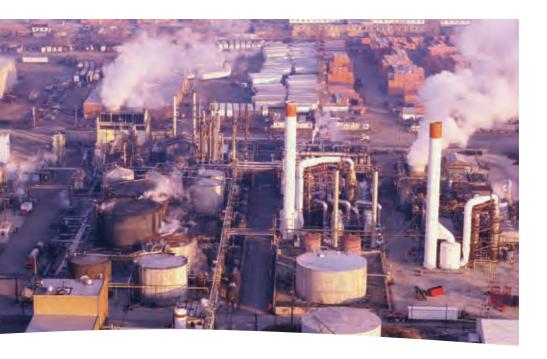
Product brochure:

WCENBR1021

## IOM:

• WCENIM2026





## **Flowserve Corporation**

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