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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

Features
• 3 Piece Swing out 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

Sizes
• ¼” - 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
• API 607 Fire Test

Get more information:
Product catalog: Wcabr1050
IOMs WCAIM2030
See pages 2.

SERIES 59

Features
• 3 Piece Swing out 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

Sizes
• ¼” - 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
• API 607 Fire Test

Get more information:
Product catalog: Wcabr1050
IOMs WCAIM2030 for Miser
WCAIM2046 for large 59
WCENIM2054 for FM
See pages 2.

SERIES 45

Features
• 3 Piece Full Port 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.

Sizes
• 2½”, 3”, 4”, 6”
• Screwed end
• Socket weld
• Butt weld

Materials
• Carbon Steel
• Stainless Steel

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

Get more information:
Product catalog: Wcabr1050
IOMs WCAIM2046
See pages 2.
SERIES 51/52

Features
• Flanged Unibody Design
• ASME class 150/300
• Tight shut-off
• ASME class 150/300
• Multiple soft and metal seat options
• Wide variety of Body, Seat and Seal materials 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
• Cavity Filled Designs

Sizes
• 1/2” - 10” Flanged
• ASME 150# and 300# class

Materials
• Carbon Steel
• Stainless Steel

Standards
• ASME B16.34
• API 607 Fire Test

Get more information:
Product catalog:
WCABR1013

IOMs
WCENIM2014 (for small valves)
WCENIM2015 (for large valves)
WCENIM2054 (for FM)

See page 2.

SERIES 82 & 83
AF 82 & 83

Features
• Flanged Full-Port Unibody Design
• ASME class 150/300
• “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”-7/8”1”1.5”2.5”7/10”
For 2” and 3” to 8”, See Series 818
• ASME 150# and 300# class

Materials
• Carbon Steel
• Stainless Steel

Standards
• ASME B16.34
• API 607 Fire Test

Get more information:
Product catalog:
WCABR1016

IOMs
WCENIM2020 (for std. valve)
WCENIM2057 (for fugitive emission)

See page 2.

SERIES 818 / 828

Features
• Split Body, Full-Port Design
• 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
• Cavity Filled Designs

Sizes
• 2", 3”- 8”
• ASME 150# and 300# class

Materials
Carbon Steel
Stainless Steel

Standards
• API 6D
• API 607 4th Edition
• NACE MR01-75
• BS 5500 Pressure Vessel Code

Get more information:
Product catalog:
WCABR1015

IOMs
WCENIM2020 (for std. valve)
WCENIM2057 (for fugitive emission)

See page 2.
**Series 151 and 301**

**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”, 4”, 6”
- ASME 150# and 300# class
- Rated at 720 CWP

**Materials**
- Bronze
- Ductile iron

Get more information:
- Product catalog: WCAB1041
- IOMs WCENIM2015

See page 2.

**Series D44/D4, D51, 18/19**

**Features**
- Multi-port Diverter Valves
- Three-piece or flanged design
- Bottom entry or side entry
- Full port or standard 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
  - standard or full port
  - Optional fugitive emission design
  - Class 150 or 300
  - Screwed, socket or butt weld and slip-on flanges

**Sizes**
- ½” - 2” for D44/D4 3-piece valve
- For 2” - 8” for D51 flanged valve
- 1” - 6” for Series 18 & 19 valve

**Materials**
- Carbon Steel
- Stainless Steel

**Standards**
- ASME B16.34
- API 607 Fire Test

Get more information:
- Product catalog: WCAB1052
- IOMs WCENIM2030 (for Miser)
  WCENIM2015 (for large valves)

See page 2.

**Series 94, 94-150, 94-300, 94-600**

**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” - 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 catalog: WCAB1023
- IOMs WCENIM2003 (for std. valve)
  WCENIM2057 (for fugitive emission)

See page 2.
**Series CL94, CL44, CL 51/52**

**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” - 2” 3 piece design
- Screwed end
- Socket weld
- Butt weld
- ½” to 4” Flanged design

**Materials**
Carbon Steel/Monel Trim

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

Get more information:
Product catalog: WCABR1039

**IOMs**
WCENIM2009 (for series 94)
WCENBR2014 (for small 51/52)
WCENBR2015 (for large 51/52)
WCENBR2030 (for Miser)

See page 2.

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**Series: AF 44, FZ 44, AF 51/52, FZ 51/52, FM 51/52, AF 94, FZ 94 AF 818/828, EAF 818/828**

**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” - 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
- BS 6755-PT2
- FM 7440

Get more information:
Product catalog: WCABR1029

**IOMs**
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.

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**Series C4, C44, and C51**

**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” - 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 catalog: WCABR1040

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

See page 2.
WK44 HIGH PURITY VALVES

Features
• High Purity, Cast 316L
• Class 100 Clean Room Assembly
• 30Ra interior surface finish
• Diverter and Three-way porting
• Aseptic purge connections
• Quick disconnect & Extended weld ends

Specifications
• Size Range: ½˝ – 2.0˝
• Body Styles: 2-way and 3-way

Materials:
• ASTM A351-CF3M, ASTM A479
• Interior Surface Finish: 30Ra std, 15Ra electropolished
• Seats/Seals: PTFE, UHMWPE, Polyfill

Agency Approvals
• FDA(21CFR), USDA, USP

Applications
• Sterile steam, cosmetics and creams, oils, detergents, food processing

Get more information:
Product catalog: WCABR1035
IOMs WCAIM2030
See page 2.

WK74 HIGH PURITY VALVES

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

Specifications
• Size Range: ½˝ – 4.0˝
• Body Styles: 2-way and 3-way

Materials:
• ASTM A351-CF3M, ASTM A479
• Interior Surface Finish: 20Ra std, 10Ra electropolished
• Seats/Seals: PTFE, TFM, Polyfill

Agency Approvals
• ASME BPE, FDA(21CFR), USP Class 6, USDA

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

Get more information:
Product catalog: WCABR1037
IOMs WCAIM2018
See page 2.

WK70 HIGH PURITY VALVES

Features
• High Purity, Forged F316L - Tube bore
• Class 100 Clean Room Assembly
• 20Ra interior surface finish
• Controlled ferrite <5% (<1% optional)
• Controlled sulfur for orbital welding
• CMTRs

Specifications
• Size Range: ½˝ – 4.0˝ (6.0˝ optional)
• Body Styles: 2-way and 3-way

Materials:
• ASTM A182 F316L, ASTM A479
• Interior Surface Finish: 20Ra std, 10Ra electropolished
• Seats/Seals: PTFE, TFM, Polyfill

Agency Approvals
• ASME BPE, FDA(21CFR), USP Class 6, USDA

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

Get more information:
Product catalog: WCABR1036
IOMs WCAIM2018
See page 2.
Series: 4, H44,PT
High-per Mizer
H71 Hydromizer

TANK BOTTOM VALVES

Features
• High-Pressure Valves
• Resilient seated valves for High pressure and
Temp applications
• High Pressure above ASME 600 to 5000 psi and
ASME Class 2500
(Consult Brochure for PT curves and limitations)
• Used in Steam, Hydraulics, gasses and fluids, CNG and Subsea

Sizes
• ½” - 2” 3 piece design
• Screwed end
• Socket weld, Butt weld
• ½” to 6” Flanged design
• Wafer 3”-6”

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 catalog:
WCABR1051

IOMs
WCENIM2015 (for large 51/51)
WCENIM2024 (for std. valve)
WCENIM2030 (for Miser)

See page 2.

Series CPT
CONTROL VALVE

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 600

Sizes
• 1” - 4” 3 piece design
• Screwed end
• Socket weld, Butt weld

Get more information:
Product catalog:
WCENB1028

Installation instructions:
WCENIM2001

See page 2.
**SERIES 36 ELECTRIC 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 deg F to 150 deg F maximum ambient

**Supply Voltage**
- 120 VAC 50/60, 240 VAC 50/60

**Standards**
- Type 1, 4 and 4X

**Applications**
- Industrial quarter-turn ball valves

**OEM installations**
- Air Drying Equipment
- Sampling systems
- Compressor installations
- Condensate draining
- Tank draining

Get more information:
Product catalog: WCABR1006 or WCABR1007

IOM
WCAIM2007

See page 2.

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**SERIES 75 ELECTRIC ACTUATOR**

**Features**
- Two Year Warranty
- Baked Epoxy Coated
- Permanently Lubricate Gear Train
- Manual override
- Thermal Overload Protection
- Reversible Rotary Operation

**Optional Features**
- Extended Duty Cycle Motors
- Fail Safe Capability
- Positioners and P.I.D. Controllers
- RTU Solar Power Interface

**Torque Range**
- 150 - 3000 in-lbs

**Temperature Range**
- -40 F to 150 F

**Supply Voltage**
- 120 & 240 VAC, 12 & 24 VDC

**Standards**
- Type I, 4, 4X
- 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

Get more information:
Product catalog: WCABR1014

IOM
WCAIM2013

See page 2.

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**SERIES 72 ELECTRO-HYDRAULIC ACTUATOR**

**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

**Standards**
- Type 4, 4X
- Class 1, Div 1, Groups B,C,D

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

Get more information:
Product catalog: WCABR1025

IOM
WCAIM2049

See page 2.
SERIES 34 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
• 24,120, 240, 480 VAC; 12,24VDC

Standards
• Type1, 4, 4x
• Class1, Div1, Groups A,B,C,D

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

Get more information:
Product catalog: WCENBR1004
IOM WCAIM2008
See page 2.

SERIES 39 PNEUMATIC ACTUATOR

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
• Dual male output shafts
• End cap air supply ports
• End mount solenoid/switch accessories

Torque Range
• Up to 60,000 in-lbs @ 120 psi input

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

Pressure Range
• 30-120psi DA, 40-120psi SR

Standards
• Type1, 4, 4x
• Class1, Div1, Groups A,B,C,D

Applications
• Chemical, Petrochemical & Refining,
  • Power, Oil & Gas, Food & Beverage

Get more information:
Product catalog: WCABR1003
IOM WCAIM2036
See page 2.

ACCESS ACTUATOR PNEUMATIC ACTUATOR with PROCESS INTERFACE

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 Fieldbus networks

Torque Range
• Up to 60,000 in-lbs

Enclosure
• Type 4, 4X; U.L.; CSA approved
• Class1, Div1, Groups B,C,D
• Intrinsically Safe, NRTL/C approved

Position Switch
• SPDT/DPDT, Gold Contact, Proximity

Temperature Range
• 0 F to 160 F

Supply Voltage
• 12, 24 VDC, 24,120, 240 VAC

Pressure Range
• 40 to 120 psi

Standards
• 4, 4x, 7, 9 and 12

Applications
• Digital Fieldbus Netowrks, Chemical,
  • Petrochemical & Refining, Oil & Gas,
  • Food & Beverage, Pharmaceutical

Get more information:
Product catalog: WCABR1024
IOM WCAIM2027 WCAIM2028 WCAIM2023 WCAIM2032
See page 2.
**SERIES ELK9 END MOUNT POSITION SWITCH**
- Features:
  - End mount versus top mount
  - Reduced assembly height
  - Reduced installation envelope
  - Eliminates mounting kits
  - Multiple switch options
  - Aluminum enclosure
  - U.L., CSA & FM Approvals
- Enclosure:
  - Die cast aluminum, epoxy coated
- Standards:
  - Type 4, 4X; CSA approved
  - Class I, Division 1, Groups C,D
  - Class I, Division 2, 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, 24VDC
  - DPDT-10 Amp, 24, 120, 240 VAC; 1/2A, 24VDC
  - Proximity Sensor - (5-200mA, 20-140VAC, 10-140VAC, UL listed, CSA Certified)
- Applications:
  - Remote position indication
  - Relay device for pumps
  - Alarms and indicator lights
  - Industrial, Chemical, Petrochemical installations

Get more information:
Product catalog: WCABR1027
IOM WCAIM2051

See page 2.

**ACCESS Actuator END MOUNT POSITION SWITCH**
- 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 Fieldbus networks
- Enclosure:
  - Die cast aluminum, epoxy coated
- Standards:
  - Type 4, 4X; CSA approved
  - Class I, Division 1, Groups C,D
  - Class I, Division 2, Groups E,F, G
  - Intrinsically Safe, NRTL/C approved
- Position Switch:
  - SPDT/DPDT, Gold Contact, Proximity
- Temperature Range:
  - 0 to 160 F
- Switch Ratings:
  - SPDT - 15 Amp, 24, 120, 240 VAC; 1/2A, 24VDC
  - DPDT - 10 Amp, 24, 120, 240 VAC; 1/2A, 24VDC
  - I.S. - (Gold Contacts), 1 Amp, 120 VAC, 1 Amp, RES (0.5A IND) 24 VDC
  - Proximity Sensor - (5-200mA, 20-140VAC, 10-140VAC, UL listed, CSA Certified)
- Applications:
  - Digital Fieldbus Networks, Chemical, Petrochemical & Refining, Oil & Gas, Food & Beverage, Pharmaceutical

Get more information:
Product catalog: WCABR1024
IOM WCAIM2027 (standard)
WCAIM2028 (intrinsically safe)
WCAIM2023 (DeviceNet)
WCAIM2032 (AS-i)

See page 2.

**UltraSwitch WGL Series TOP MOUNT POSITION SWITCH**
- Features:
  - Pharos 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
  - Pre-wired 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 sensor options
- Description:
  - Provides a compact and economical package for NEMA 4 visual and remote electrical indication of valve position
- Housing Material:
  - Die cast aluminum; electrostatic powder coated
- Standards:
  - NEMA 4, 4x
- Hazardous Area Classifications:
  - Class I, Division 2 - Groups A, B, C, D approvals when supplied with hermetically sealed magnetic proximity switches.
  - ATEX II 2G Ex em II T4-T6 with Phazer II and BRS switches.
  - Class II Division 2 Groups F&G

Get more information:
Product catalog: WCNBR1057
Product Specification WCNPS1054
IOM WCAIM2075

See page 2.
**UltraSwitch WPL Series**

**TOP MOUNT POSITION SWITCH**

**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 for harsh corrosive environments

**Housing Material**
- Non-metallic engineered resin

**Standards**
- NEMA 4, 4x

**Hazardous Area Classifications**
- Class I, Division 2, Groups A, B, C, D approvals when supplied with hermetically sealed magnetic proximity switches Atex II 2 G Ex e II T4-T6 with Phazer II and BRS switches.
- Class II Division 2 Groups F&G

Get more information:
- Product catalog: WCENBR1057

Product Specification
WCENPS1055

IOM WCENIM2075

See page 2.

**UltraSwitch WXCL Series**

**TOP MOUNT POSITION SWITCH**

**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

**Standards**
- NEMA 4, 4x, 7, 9 IP66/IP67

**Hazardous Area Classifications**
- Explosion-Proof (UL/CSA/ATEX) mechanical switch options
- Class I, Divisions 1, Groups C and D
- Class II, Divisions 1, Groups E, F and G
- ATEX II 2 G Ex e II T4-T6
- Explosion-Proof (UL/CSA/ATEX) proximity/solid state switch options (except NJ)
- Class I, Division 1, Groups C and D
- Class I, Division 2, Groups A, B, C and D with select hermetically sealed proximity switches
- Class II, Divisions 1 and 2, Groups E, F and G
- ATEX II 2 G Ex e II T4-T6

Get more information:
- Product catalog: WCENBR1057

Product Specification
WCENPS1056

IOM WCENIM2076

See page 2.

**Aviator Integrated Valve Controller**

**TOP MOUNT POSITION**

**Features**
- 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.

**Housing Material**
- Aluminum (XV and CV models)
- Engineered Resin (WR model)

**Standards**
- NEMA 4, 4x, 7, 9 IP66/IP67 (XV model)
- ATEX EEx d IIB (CV model)
- NEMA 4, 4x (WR model)

**Hazardous Area Classifications**
- Class I, Division 1, Groups C, D
- Class II, Division 1, Groups E, F, G
- Class II, Division 2 Groups F&G
- Class I, Division 2, Groups A, B, C and D
- ATEX II 2 G Ex e II T4-T6
- ATEX II 3 G Ex nC II T4-T6 with R4 P1,PP and B4 switch options.

Get more information:
- Product catalog: WCENBR1057

See page 2.
**BUSwitch Integrated Valve Controller**

**TOP MOUNT POSITION**

**Description**
- Designed for use with pneumatic rotary industrial valve actuators in hazardous locations with digital fieldbus communications. With the same features as the Aviator, 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 fieldbus protocols: AS-i, DeviceNet, FOUNDATION Fieldbus and PROFIBUS DP.

**Housing Material**
- Aluminum (XV and CV models)
- Engineered Resin (WR model)

**Standards**
- NEMA 4, 4x, 7, 9 IP66/IP67 (XV model)
- ATEX EEEx d IIB (CV model)
- NEMA 4, 4x (WR model)

**Hazardous Area Classifications**
- Class I, Division 1, Groups C, D
- Class II, Division 1, Groups E, F, G
- Class II, Division 2, F&G
- Class I, Division 2, Groups A, B, C and D
- Class I, Divisions 1 and 2, Groups A, B, C and D Intrinsically safe for FOUNDATION Fieldbus protocol only
- ATEX II 2 G Ex d IIB T4-T6
- ATEX II 3 G Ex nC II T4-T6 with Foundation Fieldbus only

Get more information:
- Product catalog: AXENBR0006
- Installation instructions: AXENIM0032 or for non-metallic AXENIM0097
- Product specification: AXENPS0059 or for non-metallic AXENPS0098
- Installation instructions: AXENIM0087 for AS-i protocol
- Installation instructions: AXENIM0048 for FOUNDATION Fieldbus protocol
- Installation instructions: LML0012 for PROFIBUS DP protocol

See page 2.

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**PM15 & PM15E Positioner**

**Pneumatic & Electropneumatic**

**TOP MOUNT POSITION**

**Description**
- Simple calibration
- Modular design
- External I/P module
- High gain, high capacity spool valve
- Gold plated spool valve
- Stainless internals
- Gauge ports
- Multiple feedback accessories
- NAMUR output shaft
- ISO mounting

**Enclosure**
- Die cast aluminum, epoxy paint

**Ingress Protection**
- IP66, NEMA 4

**Approvals**
- ATEX - EEEx d, EEEx ia, EEEx nl
- CSA - Class1, Div1, Groups BCDEFG
  I.S. - Class1, Div1, Group A,B,C,D
- FM - Class1, Div1, Groups B,C,D
  I.S. - Class1, Div1, Group A,B,C,D

**Temperature Range**
- -40F to 185F

**Accessories**
- Position indication, fail freeze, remote mount

**Applications**
- Accurate and reliable control of linear and rotary pneumatic actuators for modulating control

**Industries served:** All

Get more information:
- Product catalog: WCABR1032
- IOM
- WCAIM2016
- WCAIM2017

See page 2.

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**L93 Pulsair Positioner**

**Analog and Digital**

**TOP MOUNT POSITION**

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

**Enclosure**
- Die cast aluminum, epoxy paint

**Ingress Protection**
- IP66, Type 4x

**Approvals**
- ATEX - EEEx, EEEx ia, EEEx nl
- CSA - Class1, Div1, Groups BCDEFG
  I.S. - Class1, Div1, Group A,B,C,D
- FM - Class1, Div1, Groups B,C,D
  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

**Industries served:** All

Get more information:
- Product catalog: WCABR1019
- IOM
- WCAIM2055

See page 2.
### AF17 Positioner

**Positioners - Electric Actuation**

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

**Enclosure**
- Die cast aluminum, epoxy paint

**Supply Voltage**
- 120VAC, 240VAC, 12VDC, 24VDC

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

**Temperature Range**
- -40°F To 150°F

**Accessories**
- Analog output module

**Applications**
- Position control for rotary electric actuators to control valves and dampers.

**Industries served:** All

Get more information:
Product catalog:
WCABR1027

IOM
WCAIM 2031
WCAIM 2050

See page 2.

### DFP17 - DataFlo Positioner

**Positioners - Electric Actuation**

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

**Enclosure**
- Die cast aluminum, epoxy paint

**Supply Voltage**
- 120VAC, 240VAC, 12VDC, 24VDC

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

**Temperature Range**
- -40°F To 150°F

**Accessories**
- Analog output module

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

**Industries served:** All

Get more information:
Product catalog:
WCABR1024

IOM
WCAIM 2037

See page 2.

### DFC17 - DataFlo Controller

**Controllers - Electric Actuation**

**Features**
- Microprocessor PID control
- Autotuning
- Local process control
- Pushbutton calibration
- Performance monitoring
- Multiple I/O options
- Modbus network communications
- RS485 network communications
- Desk top software

**Enclosure**
- Die cast aluminum, epoxy paint

**Supply Voltage**
- 120VAC, 240VAC, 24VDC

**Standard Inputs**
- 4-20mA, RTD, Thermocouple

**Temperature Range**
- -40°F To 150°F

**Accessories**
- Analog output, 24VDC power supply

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

Get more information:
Product catalog:
WCABR1024

IOM
WCAIM 2026

See page 2.
To find your local Flowserve representative, visit www.flowserve.com or call USA 1 800 225 6989