

# Rotary Control Valve Selection Guide



Figure 1. Rotary Control Valves

- Select from a Broad Range of Valve Types, Sizes and Materials (see table 1)

Table 1. Rotary Control Valves

<b>ēdisc® Valves</b> – High performance butterfly valves for throttling or on-off applications	<b>Type 8560</b> (see figure 2) <b>Type 8510/8510B</b> (see figure 2) <b>Type 8532</b> (see figure 3) <b>Type DSV</b> (see figure 3)
<b>Vee-Ball Valves®</b> – high capacity, low friction, non-clogging, valves for precise control of gas, steam, clean and dirty fluids and abrasive chemicals – for throttling or on-off applications	<b>Design V150</b> (see figure 4 and 5) <b>Design V200</b> (see figure 4) <b>Design V300</b> (see figure 4)
<b>POSI-SEAL® Butterfly Valves</b> – outstanding performance under extreme pressure and temperature conditions – available for a variety of on-off or throttling applications	<b>Type A11</b> (see figure 6) <b>Type A31A</b> (see figure 6) <b>Type A41</b> (see figure 7)
<b>Lined Butterfly Valve</b> – general purpose high-performance butterfly valve for on/off and throttling service	<b>Type 9500</b> (see figure 8)
<b>Baumann Lo-T® Butterfly Valves</b> – low noise, low cavitation, throttling butterfly valves	<b>21000 Series</b> (see figure 9) <b>25000 Series</b> (see figure 9)
<b>ēplug™ Valves</b> – combines rotary valve efficiency with globe valve ruggedness, well suited to erosive, coking and other hard to handle fluids, as well as many less-severe general service applications – for throttling or on-off applications	<b>Design V500</b> (see figure 11) <b>Design CV500</b> (see figure 11) <b>Design BV500</b> (see figure 12)
<b>Pipeline Ball Valves</b> – full or reduced bore ball valves for throttling and severe service flow applications in gas transmission lines, gas distribution or liquid pipelines	<b>Design V250</b> (see figure 10) <b>Design V260</b> (see figure 10)

- ENVIRO-SEAL® Packing systems are available to help ensure compliance with environmental emissions requirements
- Spring-return pneumatic diaphragm, double-acting piston, electrohydraulic, or electric actuators
- FIELDVUE® digital valve controllers offer digital control and remote diagnostics. The traditional proven line of Fisher positioners, controllers, transmitters, and switches is also available
- Contact your nearest sales office for details



# Rotary Valve Selection Guide

## Disc Valves

### Type 8560 (see figure 2)

**Style and Application:** General purpose high-performance ANSI design butterfly valves for a variety of liquids and gases. Excellent shutoff. Splined shaft ensures high performance throttling. Fire-tested seal available. Flangeless (wafer-style) or single-flange for special piping needs. Temperatures to 200°C or 232°C (392°F or 450°F) with soft seal; 538°C (1000°F) with metal or NOVEX™ metal seal.

**Sizes:** 2- through 12-inches

**Ratings:** ANSI Class 150 or 300 (Class 150/300/600 for 2-inch only)

**End Connections:** Compatible with raised-face flanges and with schedule 80 or lighter welding-neck and slip-on flanges

**Body Materials:** Steel and stainless steel (to ASME or ASTM specifications)

**Seal Materials:** PTFE, UHMWPE (ultra-high molecular weight polyethylene), NOVEX metal seal, Phoenix III® metal, and Phoenix III Fire-Tested metal seal

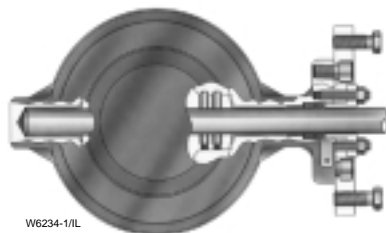
**Disc, Plug or Ball Material:** S31600 or S31700 (316 or 317 stainless steel)

**Flow Coefficients:** Maximum  $C_v$  from 80.2 to 5400

**Rangeability (Flow Coefficient Ratio):** 100 to 1

#### Shutoff Class (ANSI/FCI 70-2 and IEC 60534-4):

*Soft Seals:* Bi-directional, Class VI or better  
*NOVEX Seal:* 1/10 of Class IV (standard), Class V (optional)  
*Phoenix III Seal:* Class VI



W6234-1/L

TYPE 8560

### Type 8510/8510B (see figure 2)

**Style and Application:** General-purpose high-performance DIN or ANSI design eccentric-disc valve for a variety of liquids and gasses. DIN versions have DIN face-to-face dimensions. 2- through 12-inch 8510B ANSI sizes available with either a splined shaft or a Double D shaft. Alloy 20 and Monel available. Excellent shutoff. Flangeless. Temperatures to 232°C (450°F) with PTFE parts and packing; 538°C (1000°F) with metal parts and graphite packing.

**Sizes:** DN 50 through DN 300 DIN and 2- through 24-inches ANSI

**Ratings:** PN10 through 100 DIN and ANSI Class 150, 300, 600 (depending on size)

**End Connections:** Compatible with raised-face flanges and with schedule 80 or lighter welding-neck and slip-on flanges (depending on size)

**Body Materials:** Steel and stainless steel (to DIN, ASME, or ASTM specifications), alloy 20, M35-1 (Monel)

**Seal Materials:** PTFE or 316 stainless steel

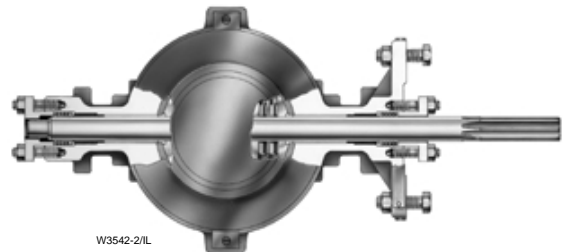
**Disc, Plug or Ball Material:** WCC steel, 316L stainless steel, 317 stainless steel, M35-1 (Monel), CN7M (alloy 20). Stainless steel discs are available with or without chrome plating

**Flow Coefficients:** Maximum  $C_v$  from 80.2 to 50,000

**Rangeability (Flow Coefficient Ratio):** 100 to 1

#### Shutoff Class (ANSI/FCI 70-2 and IEC 60534-4):

*PTFE seal:* 2 mL/minute of air per inch of valve size at 3.4 bar pressure drop (standard), Class VI (optional)  
*316 stainless steel seal:* 1/10 of Class IV (0.001% of maximum valve capacity)



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TYPE 8510B/8510

Figure 2. 8560 and 8510B/8510 Disc Valves

### **Type 8532 (see figure 3)**

**Style and Application:** General-purpose high-performance ANSI design butterfly valve for a variety of throttling and on-off applications in the various process industries. Excellent shutoff. Fire-tested seal available. Flangeless (wafer-style) or single-flange for special piping needs. Temperatures to 204°C (400°F) with PTFE seal ring; 232°C (450°F) with Phoenix III and/or fire-tested construction; and 538°C (1000°F) with NOVEX metal seal.

**Sizes:** 14- through 24-inches

**Ratings:** ANSI Class 150 or 300

**End Connections:** Compatible with raised-face flanges and with schedule 80 or lighter welding-neck and slip-on flanges

**Body Materials:** Steel and stainless steel (to ASME or ASTM specifications)

**Seal Materials:** PTFE, UHMWPE (ultra-high molecular weight polyethylene), NOVEX (S31600 or Nitronic 60) Phoenix III metal, and Phoenix III Fire-Tested metal seal

**Disc, Plug or Ball Material:** CF8M (316 stainless, STD). Steel and special alloys are available

**Flow Coefficients:** Maximum  $C_v$  from 4550 to 21,500

**Rangeability (Flow Coefficient Ratio):** 100 to 1

**Shutoff Class (ANSI/FCI 70-2 and IEC 60534-4):**

*Soft Seals:* Class VI

*NOVEX Seal:* Class V (standard), Class VI (optional)

*Phoenix III Seal:* Class VI



A7093 / IL

**TYPE 8532**

### **Type DSV (see figure 3)**

**Style and Application:** Specially designed Type 8510 with Type 1061 actuator for rapid on-off high cycle applications. Flangeless. Temperatures to 232°C (450°F)

**Sizes:** 14- through 24-inches

**Ratings:** ANSI Class 300

**End Connections:** Compatible with welding-neck and slip-on flanges (schedule 80 or lighter for 4- through 12-inch valves; schedule 40 or lighter for 14-inch valves).

**Body Materials:** S31600 (316 SST)

**Seal Materials:** Flow Ring

**Disc, Plug or Ball Material:** S31700 (317 SST) with chrome edge

**Flow Coefficients:** Maximum  $C_v$  from 434 to 7040

**Rangeability (Flow Coefficient Ratio):** 100 to 1

**Shutoff Class (ANSI/FCI 70-2 and IEC 60534-4):**

5% of valve capacity



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**TYPE DSV**

Figure 3. 8532 and DSV edisc Valves

# Rotary Valve Selection Guide

## Vee-Ball Valves

### **Design V150 and V300 (see figures 4 and 5)**

**Style and Application:** Flanged V-notch ball valves. High capacity and high rangeability. Excellent for fibrous slurries as well as liquids, gas, and steam. Shearing V-notch ball for smooth, non-clogging action. Temperatures to 232°C (450°F) with composition seals, 288°C (550°F) with HD (heavy-duty) metal seals, and to 427°C (801°F) with flat metal seals

**Sizes:** *Design V150:* DN 25 through 500 DIN and 1- through 20- inches ANSI

*Design V300:* DN 25 through 100 DIN and 1- through 16- inches ANSI

**Ratings:** *Design V150:* PN10/16 DIN or Class 150 ANSI

*Design V300:* PN25/40 DIN or Class 300 ANSI

**End Connections:** Compatible with raised-face flanges

**Body Materials:** Steel and stainless steel (to DIN, ASME, or ASTM specifications) or CW2M (Hastelloy)

**Seal Materials:** TCM+ composition, 316 stainless steel, HD (heavy-duty) metal, or flow ring (no seal)

**Disc, Plug or Ball Material:** CF3M, CG8M or CW2M

**Flow Coefficients:** Maximum  $C_v$  from 8.4 to 10,300

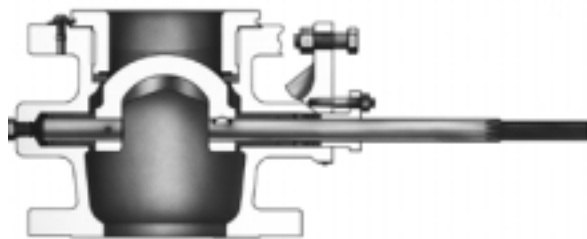
**Rangeability (Flow Coefficient Ratio):** 300 to 1

**Shutoff Class (ANSI/FCI 70-2 and IEC 60534-4):**

*Composition Seals:* Class VI

*Metal Seals:* Class IV

*Flow Ring Construction:* 5% of wide-open capacity



DESIGN V150 AND V300

### **Design V200 (see figure 4)**

**Style and Application:** Flangeless V-notch ball valves. High capacity and high rangeability. Excellent for fibrous slurries as well as liquid, gas, and steam. Shearing V-notch ball for smooth, non-clogging action. Temperatures to 232°C (450°F) with composition seals, 288°C (550°F) with HD (heavy-duty) metal seals, and to 427°C (801°F) with flat metal seals

**Sizes:** 1- through 10-inches

**Ratings:** ANSI Class 150, 300, or 600 (depending on size)

**End Connections:** Compatible with raised-face flanges

**Body Materials:** Steel and stainless steel (to ASME, or ASTM specifications) or CW2M (Hastelloy)

**Seal Materials:** TCM+ composition, 316 stainless steel, HD (heavy-duty) metal, or flow ring (no seal)

**Disc, Plug or Ball Material:** CF3M, CG8M or CW2M

**Flow Coefficients:** Maximum  $C_v$  from 8.4 to 3000

**Rangeability (Flow Coefficient Ratio):** 300 to 1

**Shutoff Class (ANSI/FCI 70-2 and IEC 60534-4):**

*Composition Seals:* Class VI

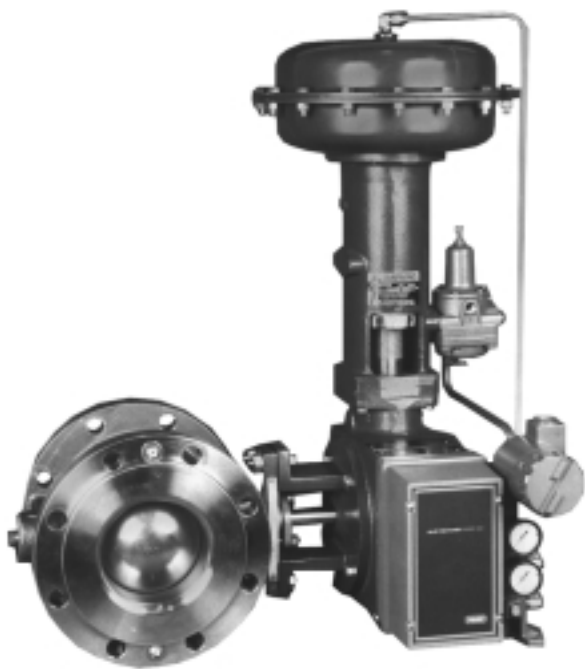
*Metal Seals:* Class IV

*Flow Ring Construction:* 5% of wide-open capacity



DESIGN V200

Figure 4. Design V150, V200 and V300 Vee-Ball Valves



**Other Ball Valves**

**Noise Attenuator Ball** for DN 100 DIN and 4- through 20-inch Design V150, V200, and V300 valves.

*Figure 5. V150 Vee-Ball Valve with Type 1052 Actuator and 3620J Positioner*

# Rotary Valve Selection Guide

## POSI-SEAL Butterfly Valves

### Type A11 (see figure 6)

**Style and Application:** High performance butterfly valve for on-off service under extreme pressure and high temperature, can be specified for cryogenic applications. Excellent shutoff. Flangeless (wafer) or single-flange (lugged) style. Temperatures to 204°C (400°F) with soft seal; 232°C (450°F) with Phoenix III seal; and 538°C (1000°F) with NOVEX metal seal.

**Sizes:** 3- through 48-inches

**Ratings:** *Class 150, 150/150 or 300:* 30- through 48-inches *Class 600:* 3- through 24-inches. Also available in Class 900 and 1500

**End Connections:** Compatible with raised-face flangeless wafer style or single-flange (lugged) body designed to fit between raised-face mating flanges or appropriate class pressure rating. 2- through 24-inch flanges comply with ANSI B16.5, 30- through 60-inch comply with MSS-SP-44.

**Body Materials:** Steel, stainless steel, nickel alloys

**Seal Materials:** PTFE, UHMWPE (ultra-high molecular weight polyethylene, metal or NOVEX metal seal, Phoenix III metal, and Phoenix III Fire-Tested metal seal

**Disc, Plug or Ball Material:** CF8M (316 SST) (ASTM A351)

**Flow Coefficients:** Maximum  $C_v$  from 182 to 106,000

**Rangeability (Flow Coefficient Ratio):** 100 to 1

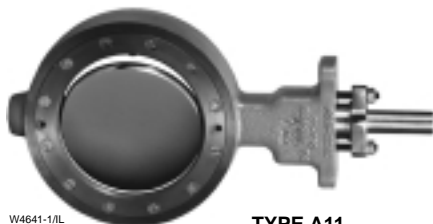
#### Shutoff Class (ANSI/FCI 70-2 and IEC 60534-4):

*Soft Seals:* Bi-directional bubble-tight (Class VI or better)

*NOVEX Seal:* Class V (standard), Class VI (optional)

*Metal Seal:* 20% of Class IV (standard)

*Phoenix III Seal:* Class VI



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TYPE A11

### Type A31A (see figure 6)

**Style and Application:** High performance butterfly valve provides outstanding performance for on-off applications under extreme pressure and temperature conditions. Excellent shutoff. Available in a fire-tested version, can be specified for cryogenic applications. Temperatures to 204°C (400°F) with PTFE seal ring; 232°C (450°F) with Phoenix III and for fire-tested construction; and 538°C (1000°F) with NOVEX metal seal.

**Sizes:** 14- through 24-inches

**Ratings:** ANSI Class 150 or 300

**End Connections:** Compatible with raised-face flangeless, wafer-style or single-flange valve body

**Body Materials:** Steel and stainless steel (to ASME or ASTM specifications)

**Seal Materials:** PTFE, UHMWPE (ultra-high molecular weight polyethylene, NOVEX metal seal, Phoenix III metal, and Phoenix III Fire-Tested metal seal, Cryogenic seal ring

**Disc, Plug or Ball Material:** CF8M (316 stainless, STD), Steel and special alloys are available

**Flow Coefficients:** Maximum  $C_v$  from 4550 to 21,500

**Rangeability (Flow Coefficient Ratio):** 100 to 1

#### Shutoff Class (ANSI/FCI 70-2 and IEC 60534-4):

*Soft Seals:* Bi-directional bubble-tight (Class VI or better)

*NOVEX Seal:* Class V (standard), Class VI (optional)

*Phoenix III Seal:* Class VI



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TYPE A31A

Figure 6. Type A11 and A31A POSI-SEAL Butterfly Valves

## **Type A41 (see figure 7)**

**Style and Application:** General-purpose high performance ANSI design butterfly valve for a variety of liquids and gasses. Excellent shutoff. Fire-tested seal available. Flangeless (wafer style) or single flange for special piping needs. Double D drive shaft connection for a rack-and-pinion actuator or hand lever. Temperatures to 200°C or 232°C (392°F or 450°F) with soft seal; 538°C (1000°F) with metal or NOVEX metal seal.

**Sizes:** 2- through 12-inches

**Ratings:** ANSI Class 150 or 300 (Class 150/300/600 for 2-inch only)

**End Connections:** Compatible with raised-face flanges and with schedule 80 or lighter welding-neck and slip-on flanges

**Body Materials:** Steel and stainless steel (to ASME or ASTM specifications)

**Seal Materials:** PTFE, UHMWPE (ultra-high molecular weight polyethylene, NOVEX metal seal, Phoenix III metal, and Phoenix III Fire-Tested metal seal

**Disc, Plug or Ball Material:** S31600 or S31700 (316 or 317 stainless steel)

**Flow Coefficients:** Maximum  $C_v$  from 80.2 to 5400

**Rangeability (Flow Coefficient Ratio):** 100 to 1

**Shutoff Class (ANSI/FCI 70-2 and IEC 60534-4):** *Soft Seals:* Bi-directional bubble-tight (Class VI or better)

*NOVEX Seal:* 1/10 of Class IV (standard), Class V (optional)

*Phoenix III Seal:* Class VI

*2 inch metal seal:* 1/10 of Class IV



Figure 7. Type A41 POSI-SEAL Butterfly Valve

## **Lined Butterfly Valve**

### **Type 9500 (see figure 8)**

**Style and Application:** Fully lined butterfly valve for off/on and throttling service for tight shut-off applications. Flangeless (wafer-type) valve. Nitrile or PTFE liner. Optional Fishtail® Disc. Temperatures to 121°C (250°F).

**Sizes:** 2- through 12-inches

**Ratings:** ANSI Class 150

**End Connections:** Wafer / Class 125 or 150

**Body Materials:** Cast Iron, Steel, Stainless steel (S31600)

**Seal Materials:** Fully lined Nitrile or PTFE

**Disc, Plug or Ball Material:** Aluminum bronze, S31600 stainless steel

**Flow Coefficients:** Maximum  $C_v$  from 434 to 7040

**Rangeability (Flow Coefficient Ratio):** 100 to 1

**Shutoff Class (ANSI/FCI 70-2 and IEC 60534-4):** Class VI

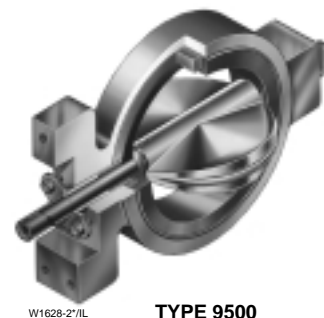


Figure 8. Type 9500 Line Butterfly Valve

# Rotary Valve Selection Guide

## Baumann Lo-T Butterfly Valves

### **Baumann 21000 Series (see figure 9)**

**Style and Application:** Low noise, low cavitation throttling valve. Flangeless (wafer style). Angled seating, aerodynamic vane. Temperatures from  $-12.2$  to  $82.2^{\circ}\text{C}$  ( $10$  to  $180^{\circ}\text{F}$ ) for Buna N-Liner and  $-28.9$  to  $121^{\circ}\text{C}$  ( $-20$  to  $250^{\circ}\text{F}$ ) for EPDM Liner.

**Sizes:** 2- through 6-inches, DN 50 through DN 150 DIN

**Ratings:** ANSI Class 150 and PN 10 through 25 DIN

**End Connections:** Wafer (flangeless) design installs between ANSI Class 150 or DIN PN10 flanges.

**Body Materials:** Ductile Iron

**Seal Materials:** Metal reinforced Liner, Buna-N or Nordel EPDM

**Disc, Plug or Ball Material:** 316 Stainless Steel

**Flow Coefficients:** Maximum  $C_v$  from 0.25 to 975

**Rangeability (Flow Coefficient Ratio):** greater than 200 to 1

**Shutoff Class (ANSI/FCI 70-2 and IEC 60534-4):** Class VI



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21000 SERIES

### **Baumann 25000 Series (see figure 9)**

**Style and Application:** Low noise, low cavitation throttling valve. Flangeless (wafer style). Angled seating, aerodynamic vane. 3 way versions available. Temperatures limited to  $218^{\circ}\text{C}$  ( $450^{\circ}\text{F}$ ) ( $163^{\circ}\text{C}$  [ $325^{\circ}\text{F}$ ] for stainless steel bodies) due to Teflon lubricated packing and bearings, unless special materials are specified.

**Sizes:** 2- through 8-inches

**Ratings:** ANSI Class 150 body

**End Connections:** Wafer (flangeless) design installs between ANSI Class 150 and 300 or DIN PN 10 and 25 line flanges.

**Body Materials:** Carbon Steel or 316 Stainless Steel

**Disc, Plug or Ball Material:** *Carbon Steel Construction:* 316 SST (2-inch), Cast Steel (3-through 6-inch) and Ductile Iron (8-inch). *Stainless Steel Construction:* 316 Stainless Steel

**Flow Coefficients:** Maximum  $C_v$  from 2.1 to 1595

**Rangeability (Flow Coefficient Ratio):** greater than 100 to 1

**Shutoff Class (ANSI/FCI 70-2 and IEC 60534-4):** Less than Class II



W7625

25000 SERIES

Figure 9. Baumann Butterfly Valves



## Rotary Valves for Pipeline and Severe Service

### Design V250 (see figure 10)

**Style and Application:** Flangeless ball valve with single ball seal, flow ring, or dual ball seal construction, typically used for throttling and controlled flow applications in gas transmission lines, gas distribution or liquid pipelines. Temperatures to 82°C (180 °F) with single and dual-seal construction; 93°C (200°F) with flow ring w/ nitrile o-ring and 204°C (400°F) w/ fluoroelastomer o-ring.

**Sizes:** 4- through 24-inches

**Ratings:** ANSI Class 600 or 900

**End Connections:** Compatible with raised-face or ring-type joint flanges

**Body Materials:** Steel and stainless steel

**Seal Materials:** Delrin or Flow Ring

**Disc, Plug or Ball Material:** Chrome-plated steel

**Flow Coefficients:** Maximum  $C_v$  from 499 to 18,300

**Rangeability (Flow Coefficient Ratio):** 100 to 1

**Shutoff Class (ANSI/FCI 70-2 and IEC 60534-4):**  
*Single and Dual Delrin:* Less than 1% of Class IV  
*Flow Ring:* 1% of valve capacity

### Design V260 (see figure 10)

**Style and Application:** Flanged ball valve with special energy-dissipating capability for demanding applications. Used in gas and liquid service to reduce noise and cavitation and the resulting pipeline vibration. Temperatures to 82°C (180 °F); constructions for temperatures to 232°C (450°F) can also be provided.

**Sizes:** 8- through 20-inches

**Ratings:** ANSI Class 300 or 600

**End Connections:** Compatible with raised-face flanges

**Body Materials:** Steel

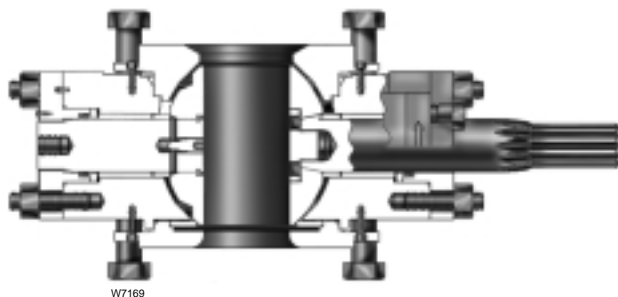
**Seal Materials:** PEEK/PTFE or Delrin

**Disc, Plug or Ball Material:** Chrome-plated steel

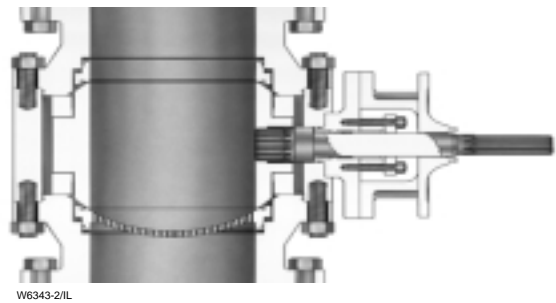
**Flow Coefficients:** Maximum  $C_v$  from 4960 to 31,000

**Rangeability (Flow Coefficient Ratio):** 100 to 1

**Shutoff Class (ANSI/FCI 70-2 and IEC 60534-4):**  
*PEEK/PTFE Seal:* Less than 10% of Class IV  
*Delrin Seal:* Less than 10% of Class IV



DESIGN V250 VALVE



DESIGN V260 VALVE

Figure 10. Design V250 and V260 Rotary Valves for Pipeline and Severe Service

# Rotary Valve Selection Guide

## ēplug Valves

### Design V500 (see figure 11)

**Style and Applications:** Rugged rotary valve for highly erosive and severe operating conditions. Flanged DIN or ANSI constructions and flangeless ANSI constructions to 260°C (500°F) with PTFE packing; to 427°C (800°F) with graphite packing.

**Sizes:** *Flanged:* DN 250 through 200 DIN and 1-through 8-inches ANSI.

*Flangeless:* 1- through 8-inches ANSI

**Ratings:** *Flanged:* PN10/16, 25/40 or 63/100 DIN and Class 150, 300, or 600 ANSI;

*Flangeless:* Class 150, 300, or 600 ANSI.

**End Connections:** Compatible with raised-face flanges

**Body Materials:** Steel and stainless steel (to DIN, ASME, or ASTM specifications) or CW2M (Hastelloy)

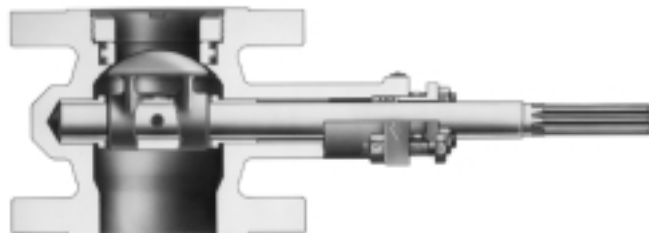
**Seat Ring or Seal Materials:** 316 stainless steel with or without CoCr-A hardfacing, solid alloy 6, or ceramic

**Disc, Plug or Ball Material:** Chrome-plated 316 stainless steel, solid alloy 6 or ceramic

**Flow Coefficients:** Maximum  $C_v$  from 12.2 to 1050

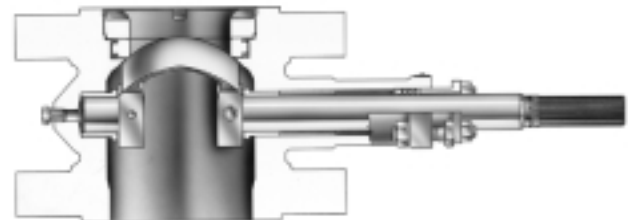
**Rangeability (Flow Coefficient Ratio):** 100 to 1

**Shutoff Class (ANSI/FCI 70-2 and IEC 60534-4):** Class IV



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DESIGN V500



W5793-1/IL

DESIGN CV500

### Design CV500 (see figure 11)

**Style and Applications:** Cam-Vee-Ball® valve for erosive and severe service that requires high capacity and rangeability. Flanged DIN or ANSI and flangeless ANSI constructions. Temperatures to 260°C (500°F) with PTFE packing; to 326°C (619°F) with graphite packing.

**Sizes:** *Flanged:* DN 80 through 300 DIN and 3-through 12-inches ANSI.

*Flangeless:* 3- through 12-inches ANSI

**Ratings:** *Flanged:* PN10/16, 25/40, or 63/100 DIN and Class 150, 300 or 600 ANSI;

*Flangeless:* Class 150, 300, or 600 ANSI.

**End Connections:** Compatible with raised-face flanges

**Body Materials:** Steel and stainless steel (to DIN, ASME, or ASTM specifications) or CW2M (Hastelloy)

**Seat Ring or Seal Materials:** CF3M or C8M with or without CoCr-A hardfacing or solid alloy 6

**Disc, Plug or Ball Material:** CF3M

**Flow Coefficients:** Maximum  $C_v$  from 181 to 3000

**Rangeability (Flow Coefficient Ratio):** 200 to 1

**Shutoff Class (ANSI/FCI 70-2 and IEC 60534-4):** Class IV

Figure 11. Design V500 and CV500 ēplug Valves

## Product Bulletin

40:002

December 2002

# Rotary Valve Selection Guide

### **Design BV500 (see figure 12)**

**Style and Applications:** Eccentric plug valve for less-severe general-service applications, including low-pressure steams and fluids. Flanged DIN or ANSI constructions. Temperatures to 427°C (800°F) for WCC steel body and 260°C (500°F) for 316 SST body.

**Sizes:** *Flanged:* 25 through 150 DIN and 1- through 6-inches ANSI

**Ratings:** *Flanged:* PN10, 16, 25 or 40, DIN and Class 150 or 300 ANSI

**End Connections:** Compatible with raised-face flanges

**Body Materials:** WCC or CF8M (316 SST)

**Seat Ring or Seal Materials:** 316 SST with or without CoCr-A seat or 316 SST with PTFE insert

**Disc, Plug or Ball Material:** Chrome-plated 316 SST (2- through 6-inch); Alloy 6 (1- and 1-1/2 inch)

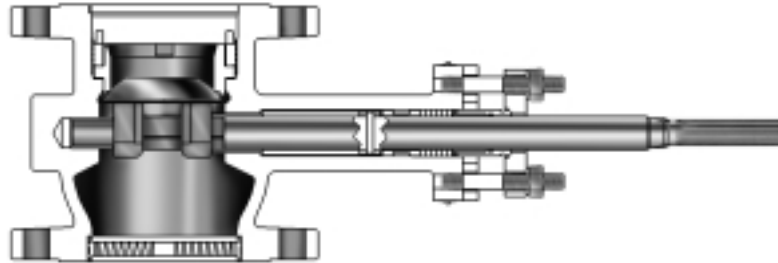
**Flow Coefficients:** Maximum  $C_v$  from 141 to 410

**Rangeability (Flow Coefficient Ratio):** 100 to 1

**Shutoff Class (ANSI/FCI 70-2 and IEC 60534-4):**

*PTFE Seat:* Class VI

*Metal Seat:* Class IV



W8080 / IL

**DESIGN BV500**

*Figure 12. Design BV500 eccentric plug Valve*

# Rotary Valve Selection Guide

## Actuators

### Type 1051 and 1052 (see figure 13)

**Style:** Spring-return pneumatic diaphragm actuator

**Features:** Heavy-duty actuator with enclosed linkage and splined actuator-valve connection for minimized lost motion

**Typical Operating Torque Range (Varies with Operating Pressure and Construction):** 85 to 1370 N•m (756 to 12,100 lbf•in)

**Accessories:** Pneumatic or electro-pneumatic valve positioners, FIELDVUE digital valve controller, limit switches, position transmitters, handwheels, travel stops, lock-out device to disable actuator during maintenance, supply pressure filter-regulator.

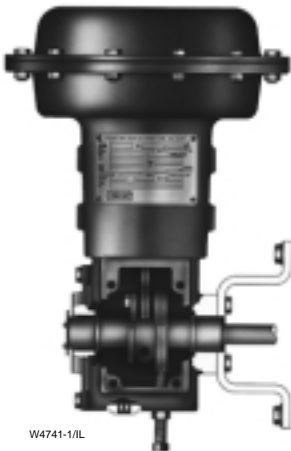
### Type 1061 (see figure 13)

**Style:** Double acting pneumatic piston actuator

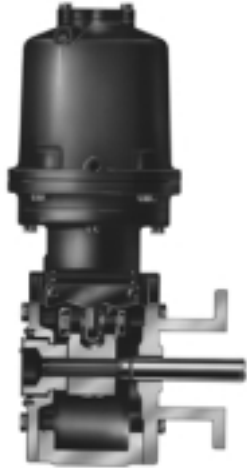
**Features:** Heavy-duty actuator with enclosed linkage and splined actuator-valve connection for minimized lost motion.

**Typical Operating Torque Range (Varies with Operating Pressure and Construction):** 282 to 19,000 N•m (2500 to 175,000 lbf•in)

**Accessories:** Pneumatic or electro-pneumatic valve positioners, FIELDVUE digital valve controller, limit switches, position transmitters, handwheels, travel stops, lock-out device to disable actuator during maintenance, supply pressure filter-regulator.



TYPES 1051 AND 1052



TYPE 1061

Figure 13. Type 1051, 1052 and 1061 Actuators

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# Rotary Valve Selection Guide

### **Type 1035 (see figure 14)**

**Style:** Double acting or spring-return pneumatic piston actuator

**Features:** Rugged, compact rack-and-pinion actuator for Type A41 and 8510B valves.

**Typical Operating Torque Range (Varies with Operating Pressure and Construction):** 11 to 1700 N•m (100 to 15,000 lbf•in)

**Accessories:** Limit switches, solenoids, pneumatic or electro-pneumatic valve positioner, 4 - 20 mA dc position feedback signal, and supply pressure filter-regulator.

### **Bettis G-Series (see figure 14)**

**Style:** Double acting or spring-return series single power module pneumatic actuator

**Features:** Scotch yoke type actuator for mounting to Fisher rotary valves, including the large and high pressure A11's, 14- through 24-inch A31A's and large Vee-Ball and V260 pipeline ball valves.

**Typical Operating Torque Range (Varies with Operating Pressure and Construction):** 531 to 5650 N•m (4700 to 500,000 lbf•in)

**Accessories:** Limit switches, solenoids, pneumatic or electro-pneumatic valve positioner, 4 - 20 mA dc position feedback signal, supply pressure filter regulator, M11 manual hydraulic override, manual override, and extended travel stops.



W6856/IL

**TYPE 1035**



W8305 / IL

**BETTIS G-SERIES**

*Figure 14. Type 1035 and Bettis G-Series Actuators*



Figure 15. Rotary Control Valves

## Accessories

- Select from a complete line of accessories for these rotary valves
- **FIELDVUE digital valve controllers are communicating microprocessor-based controllers that convert a current signal to a pressure signal to operate the actuator. Through the HART® communications protocol, the controller gives easy access to actuator-valve information that is critical to process operation.**
- Many electronic accessories are available with the CE Mark to EMC directive and with hazardous-area certifications.
- Contact you nearest sales office for details

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