



Floating Ball Valve
Series EB - Bolted Body
Series ES - Screwed Body

TECHNICAL BULLETIN



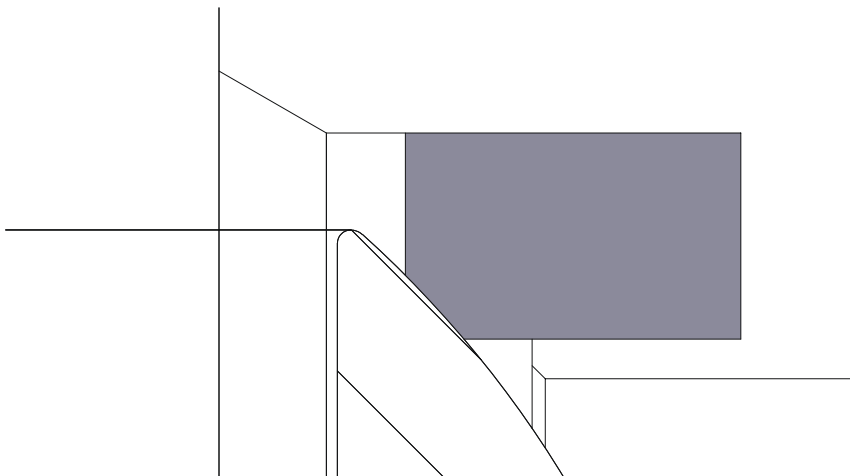
KEY FEATURES

- ▶ Made in USA
- ▶ Buy American Act
- ▶ Made in USA
- ▶ **Progressive Seal Technology™ ***
Evolutionary Seat Design with Enhanced Ball to Seat Interface
- ▶ Forged Bodies and Adapters
- ▶ Every Valve 100% High-Pressure and Low-Pressure Tested
- ▶ Designed and tested to exceed ASME B16.34
- ▶ Advanced Actuator Mounting System Patent Pending
- ▶ Low Torques
- ▶ Robust External Stop Plate System
- ▶ Optimized Stem Shaft Drivetrain System
- ▶ Precision-Engineered Seals
- ▶ Up to CLASS 1500 ANSI Rating
- ▶ Next Generation Easy Grip handle **

EVOLUTION OF THE FLOATING BALL VALVE

EDI has revolutionized the **Floating Ball Valve** with our new Patented **Progressive Seal Technology™ *** design.

The **Original Floating Ball Valve Seat** relies upon an interference fit to compress a solid plastic seal ring. The elastic properties of the plastic resist the induced compression and provide a seal against upstream pressure.

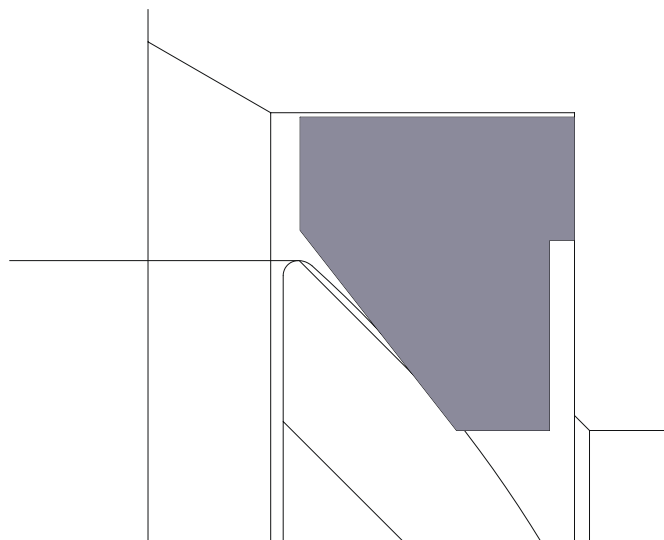


*Patent No. US 10,801,626 B2 / International DM/212755

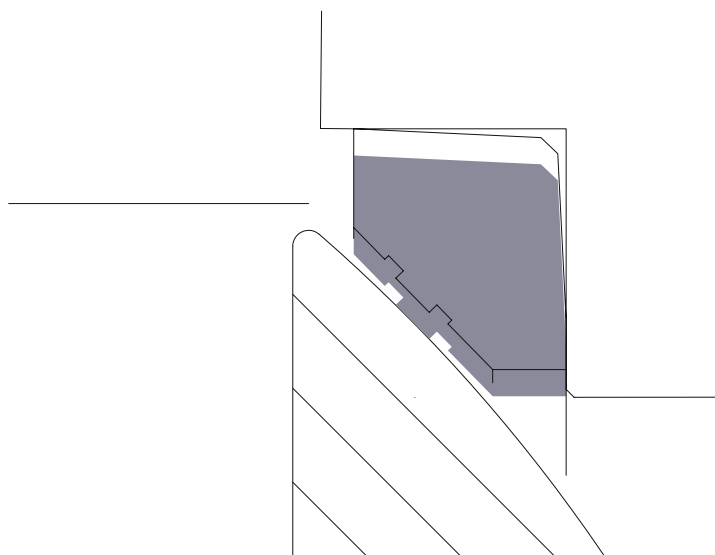
**Patent No. US D880,658 S



Reliefs added to the **Original Floating Ball Valve Seat** design allowed the seat to react in a more spring like manner advancing seat performance and efficiency.



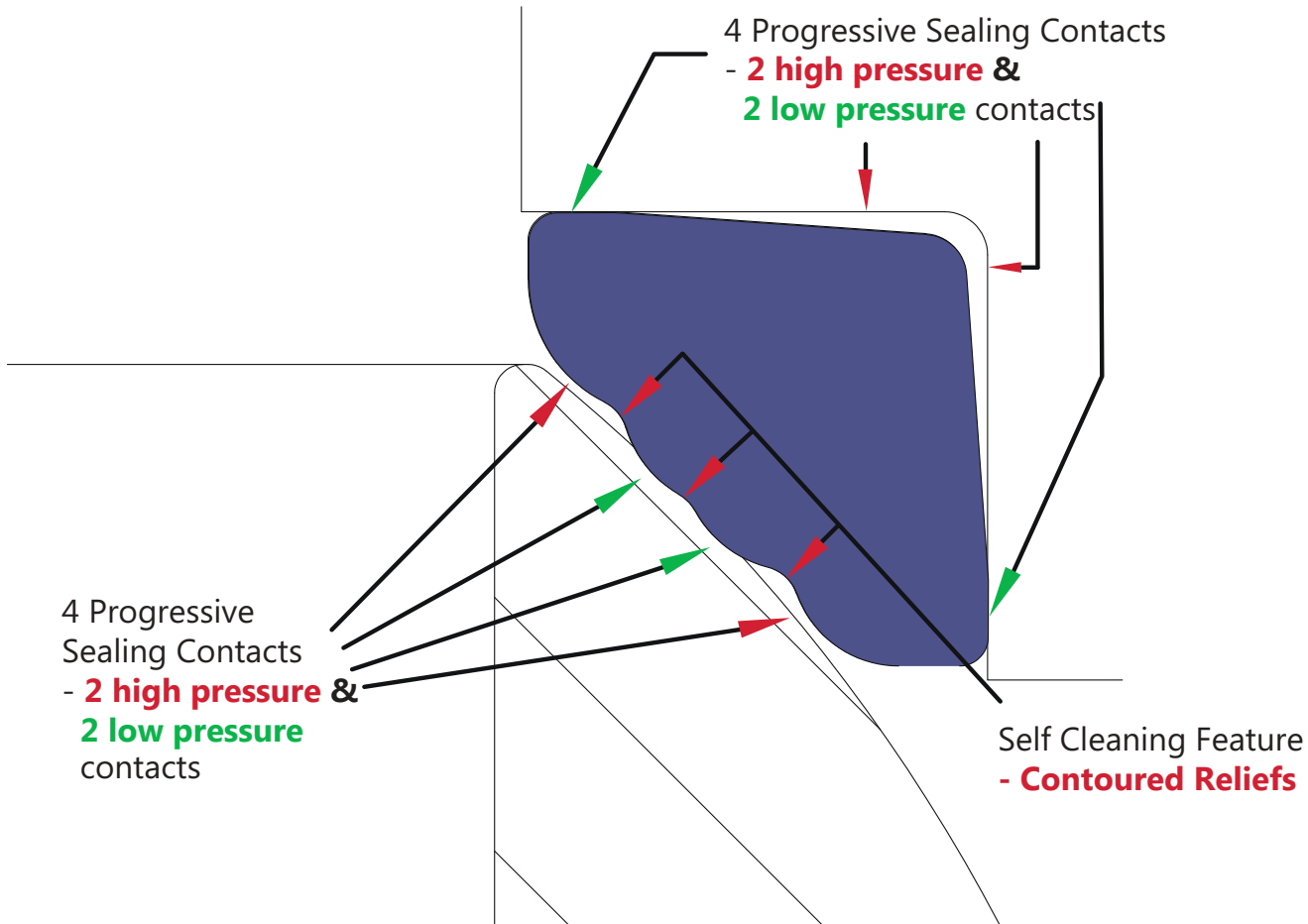
In the late 1960's the introduction of patented **Multi-Seal Technology** continued the advancement of seat design introducing auxiliary blunt edged sealing faces that provided 1 low pressure and up to 2 high pressure sealing contacts. The blunt edged auxiliary faces allowed for grooves to collect and trap particulates for removal over multiple open and close cycles.



“Operational and Environmental demands challenging the Energy Industry are driving the need for an improved floating ball valve seat design that provides progressive sealing surfaces in both low and high pressure applications ”



INTRODUCING EDI PROGRESSIVE SEAL TECHNOLOGY™ *



EDi's **Progressive Seal Technology™*** introduces 4 Contoured Front Sealing Faces and 4 Flat Backside Sealing Faces that dramatically improve low and high pressure bubble tight sealing in floating ball valve applications. The dynamically energized seat is designed to be self relieving on the upstream side reducing operating torques.

Seats with blunt-edge grooves can capture and retain particulate during repeated open and close cycles potentially damaging the ball surface. EDi's **Progressive Seal Technology™*** introduces 4 independent seal faces separated by contoured reliefs that ensure particulates are readily swept away during opening and closing cycles.

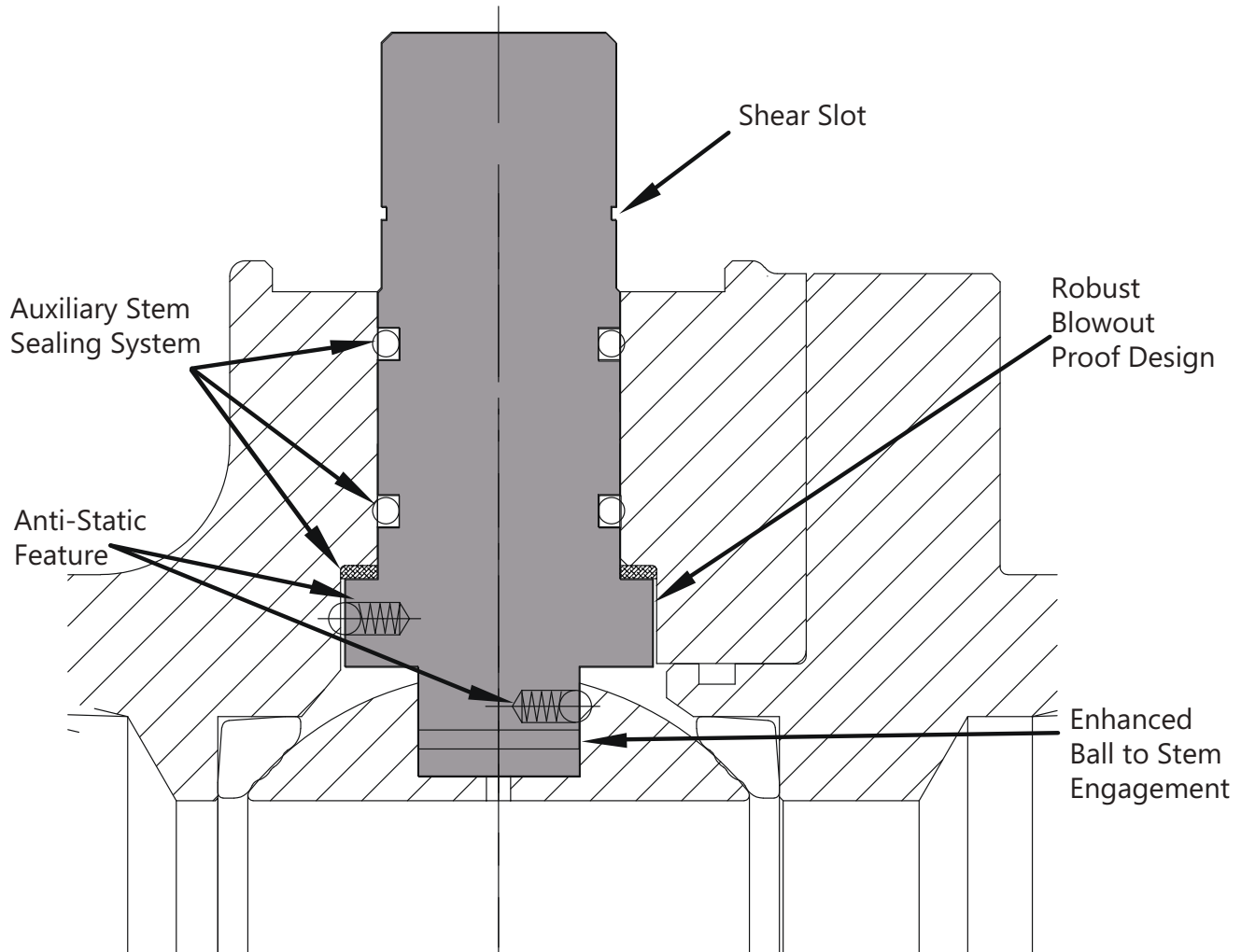
The 4 Flat Backside Sealing Faces protect the seat pocket from particulate by isolating the seal surface on the backside of the seat ensuring optimum seat performance and efficiency.

EDi's **Progressive Seal Technology™*** offers an evolution in sealing performance that is at the very heart of floating ball valve design. Delivering advanced sealing performance, lower torques, and enhanced operational characteristics, EDi products are at the forefront of valve innovation

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OPTIMIZED STEM SHAFT DRIVETRAIN SYSTEM



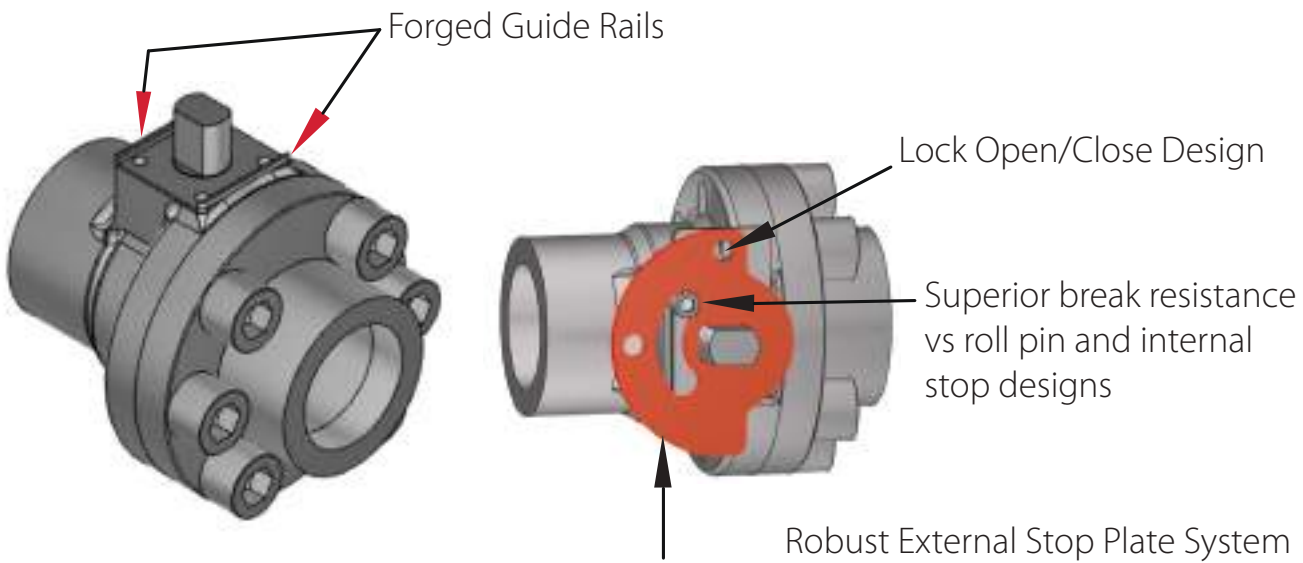
Key Features

- Extra Large Stem for strength, operation and safety
- Enhanced Ball to Stem Engagement
- Auxiliary Stem Sealing
- Integrated Safety Shear Slot
- Anti-Static feature to ensure continuity and eliminate electrostatic discharge



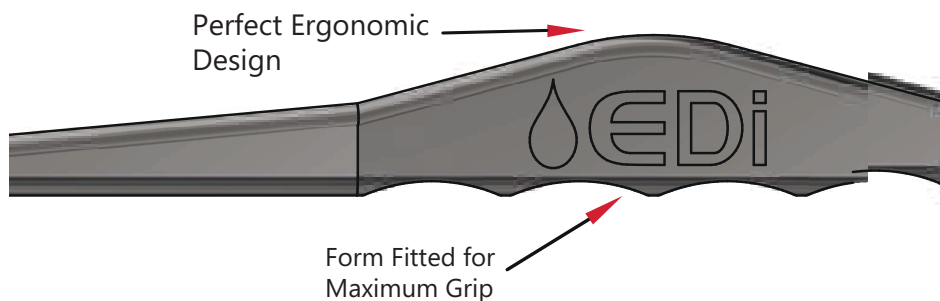
ADVANCED “NEVER SLIP” ACTUATOR MOUNTING SYSTEM

- ▶ Forged integrated Guide Rails
- ▶ Strong Torque Transmission
- ▶ Off the shelf bracketing pre-fabricated to ISO-5211
- ▶ Set it and forget it with Never Slip Design
- ▶ 100% Actuator Ready



NEXT GENERATION EASY-GRIP HANDLE**

- ▶ Perfect Ergonomics for a more natural fit & support
- ▶ 4 Non-Slip, Form Fitted Gripping Points



** Patent No. US D880,658 S





DESIGN AND MANUFACTURING STANDARDS

Series EB & ES

| Design & Manufacturing Standards | API 6D/6A/608, ASME B16.34 ASME BPVC Sec. VIII DIV 1 & 2 |
|---------------------------------------|--|
| Pipe Thread | ANSI B1.20.1 / API-5B |
| Valve Bore | API 6D/608 |
| Valve Butt-weld Ends/Socket Weld Ends | ASME B16.11 |
| Pressure Tests | API 6D/API 598/ASME B16.34 |
| Fire Safe Design | API 607 |
| NACE Compliance | NACE MR-01-75 / ISO 15156 |
| Quality System | ISO 9001-2015 |
| Fugitive Emission Design | ISO 15848-1/API/ANSI/ISA S 93.00.01 |
| Markings | MSS - SP - 25 / ASME B16.34 |

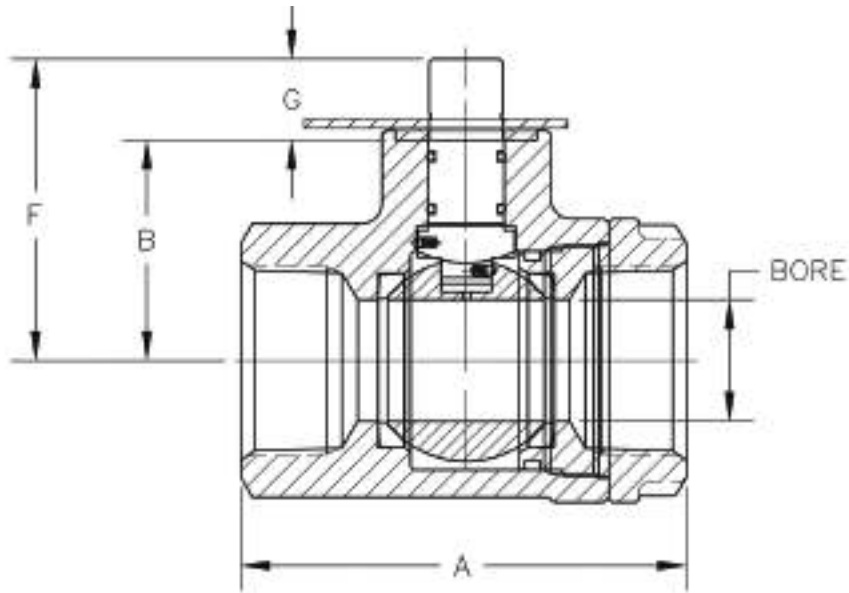
STATE-OF-THE-ART 2K PAINT SYSTEM

- ▶ 2 component paints offer a High Level of Corrosion Resistance by combining a base paint and a hardener. The high solid content in 2 component paint creates increased corrosion resistance and durability.





Series ES Ball Valve

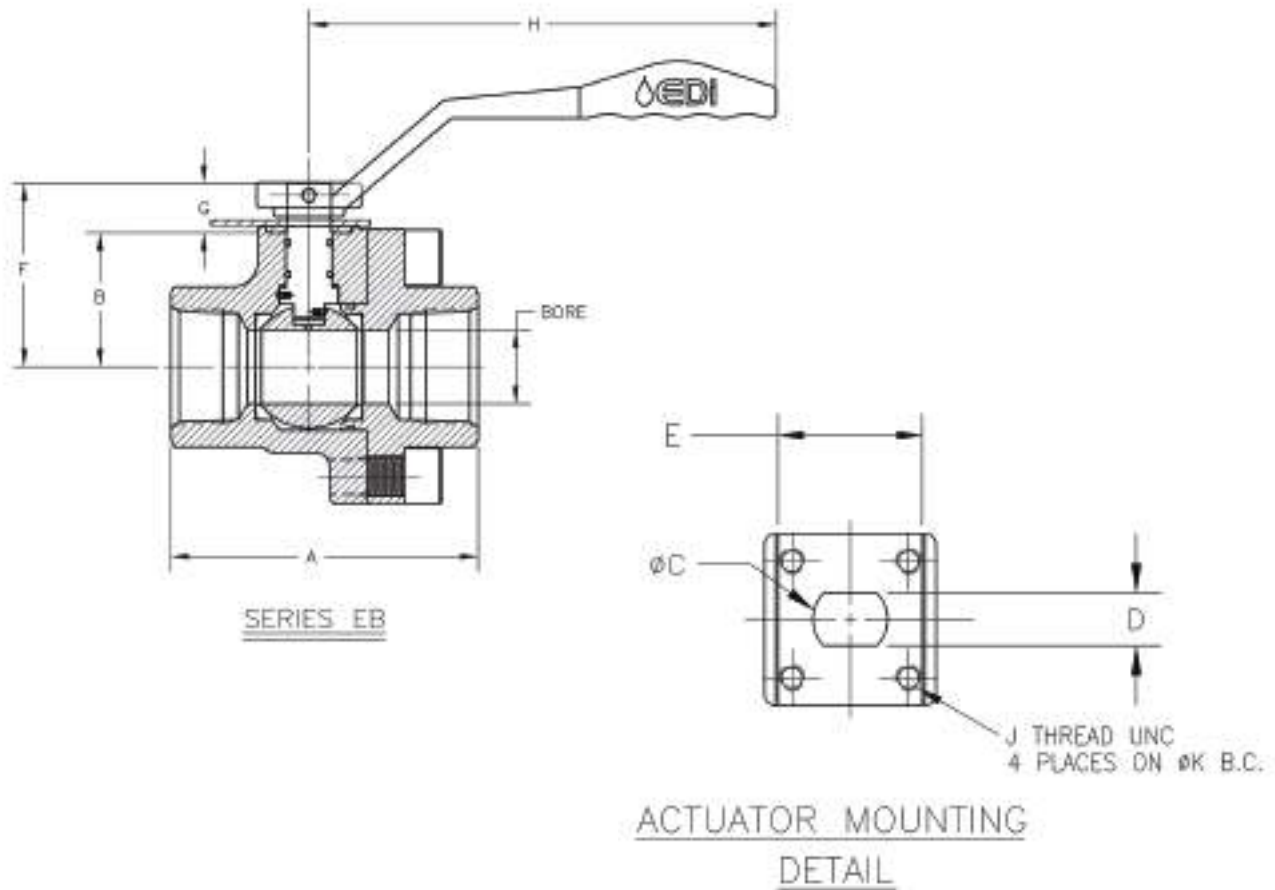


SERIES ES

| VALVE | SERIES ES BALL VALVE | | | |
|--------------|----------------------|----------|----------|----------|
| SIZE (in) | 1FP 6000 | 2RP 2000 | 2RP 3000 | 2RP 6000 |
| A | 4.25 | 5.50 | 5.50 | 5.75 |
| B | 1.78 | 2.72 | 2.72 | 2.72 |
| C | .73 | .91 | .91 | .91 |
| D | .465 | .636 | .636 | .636 |
| E | 1.55 | 1.75 | 1.75 | 1.75 |
| F | 2.72 | 3.73 | 3.73 | 3.73 |
| G | .945 | 1.05 | 1.05 | 1.05 |
| H | 6.75 | 9.5 | 9.5 | 9.5 |
| J | 1/4 | 5/16 | 5/16 | 5/16 |
| K | 1.75 | 2.00 | 2.00 | 2.00 |
| BORE (in) | 1.00 | 1.50 | 1.50 | 1.50 |
| VLV WT (lbs) | 5.25 | 11.0 | 11.0 | 16.0 |
| HDL WT (lbs) | 1.1 | 1.6 | 1.6 | 1.6 |
| CV | 60 | 125 | 125 | 125 |



Series EB Ball Valve



| VALVE | SERIES EB BALL VALVE | | | | | | | |
|--------------|----------------------|----------|----------|----------|----------|----------|----------|----------|
| SIZE (in) | 2RP 3000 | 2RP 6000 | 2FP 3000 | 2FP 6000 | 3FP 2000 | 3FP 3000 | 4FP 2000 | 4FP 3000 |
| A | 5.75 | 6.25 | 6.25 | 6.75 | 8.50 | 8.50 | 11.25 | 11.25 |
| B | 2.72 | 2.72 | 3.25 | 3.25 | 4.48 | 4.48 | 5.33 | 5.33 |
| C | .91 | .91 | .91 | .91 | 1.360 | 1.360 | 1.475 | 1.475 |
| D | .636 | .636 | .636 | .636 | .875 | .875 | .950 | .950 |
| E | 1.75 | 1.75 | 1.75 | 1.75 | 2.375 | 2.375 | 2.75 | 2.75 |
| F | 3.73 | 3.73 | 4.26 | 4.26 | 6.12 | 6.12 | 7.03 | 7.03 |
| G | 1.05 | 1.05 | 1.05 | 1.05 | 1.64 | 1.64 | 1.70 | 1.70 |
| H | 9.5 | 9.5 | 9.5 | 9.5 | 16 | 16 | 22 | 22 |
| J | 5/16 | 5/16 | 5/16 | 5/16 | 3/8 | 3/8 | 1/2 | 1/2 |
| K | 2.00 | 2.00 | 2.00 | 2.00 | 2.75 | 2.75 | 3.00 | 3.00 |
| BORE (in) | 1.50 | 1.50 | 2.00 | 2.00 | 3.00 | 3.00 | 4.00 | 4.00 |
| VLV WT (lbs) | 15.5 | 19 | 23 | 30 | 52 | 60 | 92 | 102 |
| HDL WT (lbs) | 1.6 | 1.6 | 1.6 | 1.6 | 5.0 | 5.0 | 8.0 | 8.0 |
| CV | 125 | 125 | 360 | 360 | 996 | 996 | 1893 | 1893 |



PART NUMBER KEY FOR EB & ES

EF - 21FR1SNHL

Series
 EF= Flanged Floating
 ES=Thrd Body
 EB=Bolted Body
 ET= DBB
 ET1= DIB1
 ET2=DIB2

Size
 1= 1"
 15=1.5"
 2=2"
 5=1/2"
 7=3/4"

ANSI
 1=150
 3=300/3000
 6=600/6000
 9=900
 15=1500
 2=2500

Port
 R=RP
 F=FP

Connection
 T=Threaded
 S=Socketweld
 M=Socket/Thrd
 R=RF
 J=RTJ
 B=BW

Body
 1=A105N/A350 LF2
 3=F316 SS
 4=ENC

Ball/Stem
 C=CS 1 mil ENP Ball /Zinc stem Non-NACE
 S=316SS
 1=CS 1mil ENP
 3= CS 3 mil ENP

Seats
 N=Nylon (NYL11)
 D=Delrin
 T=RTFM
 P=Peek

Seals
 H=HNBR
 V=Viton
 L= LT HNBR
 LV= LT Viton

Operator
 L=Lever
 G=Gear
 B=Bare





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