We Look Forward to an **Opportunity to** Work for You!

# Industrial Controls



Delivering Engineering & Manufacturing Excellence



- **Precision Laser Cutting Technology**
- **Advanced CNC Punch / Turret Press Capabilities**
- Press Brake Forming / Bending
- MIG/TIG/Spot Welding
- **Plastic Extrusion**
- **Powder Coating**

- **Permanent Hardware Insertion**
- **Product Assembly**
- **CAD/CAM Capabilities**
- Engineering Design Services
- **Infrastructure Planning and Project Management**



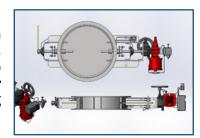
#### CONCEPT

Our policy is to listen to the customer and understand the application of the intended design/product and what is important to the customer. We will offer several levels of Elite's engagement during this process and will accommodate to whatever you are comfortable with. We will be glad to exchange emails, participate in conference calls or meet in person as the projects needs require us to do so.



#### **DESIGN**

Once the concept is finalized we will start creating an initial design using the latest designing standards and technologies available. This will include using top 3D CAD software to help visualize the concept. The design software also drastically reduces the need for a prototype for form, fit, and function verification, thereby reducing our manufacturing costs.



#### **MANUFACTURE**



Once we finalize the design, and conduct thorough design reviews, the product is now ready to be launched into production. With our state of the art advanced manufacturing infrastructure, the manufacturing process is smooth while ensuring the highest level of quality. Our manufacturing process follows the six sigma principles. There are in process inspections throughout the entire product flow. We are here to serve you and will do whatever we can to make it a success. We want to prove to you that you made the right choice by choosing Elite for your manufacturing needs.

## **ROUND BUTTERFLY DAMPERS**



2000 SERIES ANSI CLASS WAFER

The 2000 series butterfly flange less control valve can be used in either throttling or on/off of varies applications. The valve body is constructed of carbon steel, stainless steel, aluminum or special alloy with fabricated brackets and stuffing boxes welded to the body. The valve is constructed to bolt between two adjacent flanges on the duct/pipe. The standard valve design is to bolt between ANSI/ASME B16.1 Class 125 flanges. Sizes 24" and smaller also match ANSI/ASME B16.5 Class 150. The valve's flange faces are flat face, machined or serrated are available as an option.

- Sizes up to 66" (Larger and special sizes consult for quote)
- Design is to bolt between 125/150# flanges.
- Blind end bearing is available as an option.
- Standard shaft is stub type. Through shaft is available as an option.
- Maximum pressure drop rating is at ambient temperature and 0°
- All seat types may not be available for all sizes. Extended face-to-face may be required for some seats.



2100 SERIES DUCTWORK DRILLED -MEDIUM DUTY

The 2100 series is a standard damper furnished in sizes 4" to 48" for all medium duty services.

- Body, Disc & Flange: Standard Carbon Steel, Optional 304
- Drilling: Ductwork
- Shaft: Standard 304 S/S
- Bushings: Carbon/Graphite
- Packing Follower: Standard 304 S/S
- Stuffing Box Housing: Standard Carbon Steel, Optional 304 S/S
- Maximum Operating Temperature: Carbon Steel 750°F, 304 SS 1000°F
- Maximum Static Pressure: 20 PSIG. at ambient
- Maximum Shut-Off Pressure Drop: 1 PSI. Std.



2200 SERIES ANSI FABRICATED WAFER

The 2200 series fabricated wafer damper is constructed to fit between 125/150# ANSI flanges with sizes up to 72". Locating holes are provided to center damper in the pipeline. Flange stiffeners are provided depending on damper size & service conditions. Flange faces are standard mil finish. Machined/ serrated flanges can be provided as an option. Materials of construction are identical to the 2400 series. Damper can be supplied in all weldable materials.

- Sizes up to 72" (Larger and special sizes consult for quote)
- Maximum Operating Temperatures: Up to 2100°F standard, up to 2600°F are optional
- Maximum Static Pressure: 50 PSIG
- Blind end stuffing box and blind end outboard ball bearing available as an option.
- Standard shaft is stub type. Through shaft is available as an option.

## **ROUND BUTTERFLY DAMPERS**



2300 SERIES ANSI DRILLED - HEAVY DUTY

The 2300 series fabricated damper is constructed to bolt up to ANSI drilled flanges up to 144". Each flange is individually bolted to adjacent flange on duct/pipe. Flange stiffeners are provided depending on damper size and service conditions. Flange faces are standard mill finish. Machined/serrated flanges can be provided as an option. Materials of construction are identical to the 2400 series. Damper can be supplied in all weldable materials.

- Sizes up to 144" (Larger and special sizes consult for quote)
- Maximum Operating Temperature: Up to 850°F standard, up to 2600°F optional
- Maximum Static Pressure: 50 PSIG
- Flanged design. Rate flanges furnished for any ANSI drilling.
- Sizes 4" to 10" have Sch. 40 wall thickness.
- Blind end bearing standard on size 72" and larger.
- Standard shaft is stub type. Through shaft is available as an option.



2400 SERIES DUCTWORK DRILLED -HEAVY DUTY

The 2400 series consists of a fabricated carbon steel body furnished with flanges drilled for bolting to rolled angle companion flanges or with no drilling for thru bolting between 125/150 ANSI flanges (wafer) design, fabricated carbon steel disc, 304 stainless stub end shafts, graphitar lantern gland, lubricated stuffing boxes with alemite purge fittings, conventional swing thru seat design.

- Sizes to 144" (Larger and special sizes consult for quote)
- Flanges, Body, & Disc: Standard Carbon Steel, Optional Corten, Aluminum, Stainless (All 300 Series), Carpenter 20, Titanium & Tantalum, FRP Ctd. Stl. (All wetted pts.), Refactory lined
- Shaft: Standard 304 SS,
   Optional Stainless (All 300 Series), Aluminum & Aluminum -Br, Carpenter
   20, Titanium & Tantalum, Plastic coated
- Bushings: Standard Carbon (3000°F),
   Optional Gr. -Br., 17-4 Ph, Stellite, TFE glass filled & Rulon
- Bearings (Outboard ball): Standard 72" & above, Optional – Ball & roller (all sizes)
- Packing Follower: Standard 304 SS, Optional Same alloys as body
- Lantern Gland: Standard Carbon, Optional Same alloys as body
- Seat: Standard Swing through, Optional Scissor, Metal & Tadpole
- Maximum Operating Temperature: Standard 750°F, Optional 2300°F
- Maximum Static Pressure: Standard 25 PSIG, Optional 50 PSIG
- Maximum Shut-Off Pressure Drop: Standard 1 PSI, Optional 10 PSI
- Designed for bolting to duct work flanges

## **ROUND BUTTERFLY DAMPERS**

The 2500 body is a durable, solid ring type body that is machined for accurate disc alignment. Standard body wall thicknesses vary according to static pressure and flange rating. The body is designed to with-stand stresses imposed upon it, through pipe flanges. Each disc is fabricated with precision machined and specially finished tolerances preventing shaft distortion and disc misalignment. Ample metal is provided in the hub to maintain rigidity and strength of the disc and its components. The shaft cam be either one piece or stub shafts. Standard bushing materials are carbon/graphite or GR.GRZ. Bolting holes are located in valve body where optimum strength requirements provide maximum support to the total valve assembly. Two or four body holes are dimension according to USAS Code flange standards depending on valve size.



2500 SERIES ANSI CLASS "LUGGED" WAFER

- Sizes up to 72" (Larger and special sizes consult for quote)
- Body & Disc: Standard Carbon, Optional Corten, Aluminum, Stainless (All 300 Series), Carpenter 20, Titanium, Tantalum
- Flange Rating: Standard 125/150,
   Optional 300, 600, 900, 1500 & 2500# ANSI
- Shaft: Standard 304 SS, Optional Aluminum, 17-4 ph., Stainless (All 300 Series), Carpenter 20, Titanium, Tantalum
- Bushings: Standard Carbon/Graphite, GR, BRZ,
  Optional 300 Series SS, Stellite, TFE, Glass filled TFE
- Bearings (Outboard ball): Standard (none), Optional Ball & roller
- Packing Follower: Standard 304 SS, Optional Same alloys as body
- Lantern Gland: Standard Graphitar 304 SS, Optional Same alloys as body
- Maximum Operating Temperature: Standard 750°F, Optional 3000°F
- Maximum Static Pressure: 50 PSIG (depending on size), Optional 2500
- Maximum Shut-Off Pressure Drop: Up to 20 PSI (depending on size), Optional 300 Max.

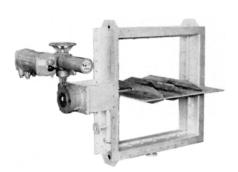


2700 SERIES WELD-IN - HEAVY DUTY

The 2700 series fabricated weld end damper is constructed to be welded in between two duct or pipe sections. Body stiffeners are provided depending on damper size and service conditions. Two types of weld ends are offered. The standard 371/2° bevel and the stub end flange for ease of fit-up. Materials of construction are identical to the 2400 series. Damper can be supplied in all weldable materials.

- Sizes up to 144" (Larger and special sizes consult for quote)
- Maximum Operating Temperature: Standard 850°F, Optional 2600°F
- Maximum Static Pressure: 50 PSIG
- Sizes 4" to 10" have Sch. 40 wall thickness.
- Blind end bearing standard on size 72" and larger.
- Standard shaft is stub type. Through shaft is available as an option.
- Sizes 4" to 10" do not have stiffener rings on weld end (37-1/2 bevel).

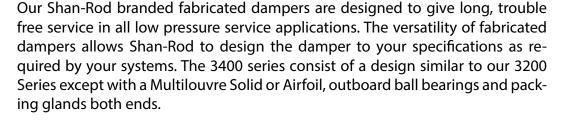
#### **SQUARE & RECTANGULAR BUTTERFLY DAMPERS**

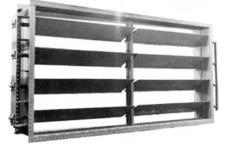


3200 SERIES SINGLE BLADE - HEAVY DUTY

Our Shan-Rod branded fabricated dampers are designed to give long, trouble free service in all low pressure service applications. The versatility of fabricated dampers allows Shan-Rod to design the damper to your specifications as required by your systems. The 3200 series consist of a carbon steel body and flanges, single blade, inboard carbon bushings, stuffing box pwr end only w/Lube-Purge fitting both ends.

- Flanges, Body, Disc & Blades, both Solid & Airfoil: Standard Carbon Steel, Optional – Corten, Aluminum, Aluminum Br, Stainless (All 300 Series) Carpenter 20, Titanium, Tantalum
- Shaft: Standard 304 SS, Optional Aluminum, Aluminum Br, Stainless (All 300 Series), Carpenter 20, Titanium, Tantalum
- Bushings: Standard Carbon, Optional Gr. Br. 17-4 Ph, 300 Series SS, Stellite, Glass TFE filled
- Bearings (Outboard ball): Standard (None), Optional Ball & Roller (all sizes)
- Packing Follower: Standard 304, Optional Same alloys as body
- Lantern Gland: Standard Graphitar, Optional Same alloys as body, 305 SS
- Packing Gland: Standard 304
- Maximum Operating Temperature: Standard 750°F, Optional 3000°F
- Maximum Static Pressure: Standard 5 PSIG, Optional Contact for Options
- Maximum Shut-Off Pressure Drop: Standard 1 PSI,
   Optional Contact for Options





3400 SERIES MULTI-LOUVER - HEAVY DUTY

- Flanges, Body, Disc & Blades, both Solid & Airfoil: Standard Carbon Steel, Optional Corten, Aluminum, Aluminum Br, Stainless (All 300 Series) Carpenter 20, Titanium, Tantalum
- Shaft: Standard Carbon Steel, Optional Aluminum, Aluminum Br, Stainless (All 300 Series), Carpenter 20, Titanium, Tantalum
- Bearings (Outboard ball): Standard Ball & Roller
- Packing Follower: Standard 304, Optional Same alloys as body
- Lantern Gland: Standard Graphitar, Optional Same alloys as body, 305 SS
- Packing Gland: Standard 304
- Maximum Operating Temperature: Standard 750°F, Optional 3000°F
- Maximum Static Pressure: Standard 5 PSIG, Optional Contact for Options
- Maximum Shut-Off Pressure Drop: Standard 1 PSI, Optional – Contact for Options

#### **BUBBLE TIGHT/ZERO LEAKAGE BUTTERFLY VALVES**

Our 4100 series features a double disc for redundant bubble tight (optional) shutoff in the event of a seal being damaged, airfoil reinforced disc (optional), an easy replacement of seal on sizes 48" and larger without removing the valve from the line and a positive system isolation in positive or negative pressure systems. Various actuation are available including pneumatic, electric, hydraulic and manual. The 4100 series can be used with nuclear safety and non-safety related applications for bubble tight shut-off.

- Flanges, Body, Disc: Standard Carbon Steel, Optional Corten, Aluminum, Aluminum Br., Stainless (All 300 Series), Carpenter 20, Titanium, Tantalum, and any weldable alloy.
- Shaft: Standard 304 SS, Optional Aluminum, Aluminum Br., Stainless (All 300 Series), Carpenter 20, Titanium, Tantalum

Bushings: Standard – Graphite, Bronze, Graphitar, Optional – 17-4 Ph, 300 Se-

- ries SS, Stellite, Glass TFE filled

  Bearings (Outboard ball): Standard Standard Power End,
- Optional Ball & roller all sizes
- Packing Follower: Standard 304, Optional Same alloys as body
- Lantern Gland: Standard Carbon, Optional Same alloys as body
- O-Ring: Standard E.P.D.M, Optional Neoprene, Teflon, Silicone, Viton, Buna 'N'
- Maximum Operating Temperature: Standard 300°F, Optional 500°F
- Maximum Static Pressure: Standard 50 PSIG, Optional 600 PSIG
- Maximum Shut-Off Pressure Drop: Standard 25 PSI, Optional 50 PSI
- Class V leakage

Our 4300 series features a bubble tight shut-off with combined scissors/inflatable seat, double disc for redundant bubble tight shut-off in the event of seal damage, airfoil reinforced disc (optional), an easy replacement of seal on sizes 36" and larger without removing valve from the line, positive seal inflation when disc in closed position, and deflation before disc opening and bubble T.S.O. service. Various actuation are available including pneumatic, electric, hydraulic and manual. Lower actuator torque due to zero interference on opening and closing. The 4300 series can be used with nuclear safety and non-safety related applications for bubble tight shut-off.

- Flanges, Body, Disc: Standard Carbon Steel, Optional Corten, Aluminum, Aluminum Br., Stainless (All 300 Series), Carpenter 20, Titanium, Tantalum, and any weldable alloy.
- Shaft: Standard 304 SS, Optional Aluminum, Aluminum Br., Stainless (All 300 Series), Carpenter 20, Titanium, Tantalum
- Bushings: Standard Carbon, Optional Gr. Br., 17-4 Ph, 300 Series SS, Stellite, Glass TFE filled
- Bearings (Outboard ball): Standard Power End, Optional Ball & roller all sizes
- Packing Follower: Standard 304, Optional Same alloys as body
- Lantern Gland: Standard Carbon, Optional Same alloys as body
- Seat: Standard E.P.D.M & Neoprene, Optional Viton
- Maximum Operating Temperature: Standard 300°F, Optional 400°F
- Maximum Static Pressure: Standard 25 PSIG, Optional 300 PSIG
- Maximum Shut-Off Pressure Drop: Standard 1 PSI, Optional 50 PSI
- No-wear seat design
- No seating torque required



4100 SERIES EV-O-SEAL



4300 SERIES FLATE-O-SEAL

## **DIVERTERS**

Our Var-E-Tee<sup>™</sup> dampers are designed to give long, trouble free service in all low pressure service applications. The versatility of the fabricated Tee and Damper allows to design to your specifications as required by your systems.

- Sizes up to 96" (Larger and special sizes consult for quote)
- Flanges, Body & Disc: Standard Carbon Steel, Optional Corten, Akuminum, Stainless (All 300 Series), Carpenter 20, Titanium, Tantalum, Refractory Lined Body
- Shaft: Standard 304 SS, Optional Aluminum, Aluminum -Br, Stainless (All 300 Series), Carpenter 20, Titanium, Tantalum
- Bushings: Standard Carbon (3000°F), Optional Gr. Br. Stainless (All 300 Series), Stellite, TFE, Glass Filled TFE
- Bearings (Outboard ball): Standard 72" & above (Std. w/ seat), Optional Ball & roller (all sizes)
- Packing Follower: Standard 304, Optional Same alloys as body
- Lantern Gland: Standard Carbon, Optional Same alloys as body
- Seat: Standard Swing-through, Optional Scissor, Metal & Tadpole
- Maximum Operating Temperature: Standard 750°F, Optional 2100°F
- Maximum Static Pressure: Standard 5 PSIG, Optional 150 PSIG
- Maximum Shut-Off Pressure Drop: Standard 1 PSI, Optional 50 PSI
- ANSI drilled flanges with various thicknesses available.
- Outboard bearing on blind end available.
- Flange thickness based on size and service.
- Rolled angle flanges available on medium duty low temperature, low pressure applications.
- Flanged or weld ends.



2600 SERIES

**DIVERTERS** 

# **GATE VALVES**



5000 SERIES BONNETED & BONNETLESS GATE VALVE



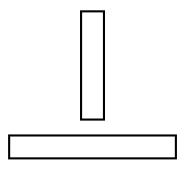
5100 SERIES BONNETED & BONNETLESS GATE VALVE

Slide Gate dampers include the 5000 Series (Bonnet) and the 5100 Series (Bonnetless). We offer our products in various shapes which include square, rectangular and round. Slide Gates are designed mainly for on/off services and are mostly used for shut-off. Refractory Lined Gate valves are available for high temperature applications. Gates can be supplied with or without actuation. Configurations include Pneumatic, Electric, Hydraulic and Electro-Hydraulic. The customer has an option of supplying their own actuation and we can manufacture shaft adapter and a mounting plate. If requested, we can mount and test per customer needs. Fail safe systems are optional on some applications.

- Sizes range from 6-72" (Larger and special sizes consult for quote)
- Constructed Metal: Standard Carbon Steel, Optional Corten, Aluminum, Aluminum Br, Stainless (All 300 Series) Carpenter 20, Titanium, Tantalum

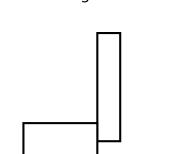
## **VALVE SEAT OPTIONS**

\*Leakage based on damper capacity



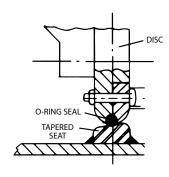
**CONVENTIONAL SEAT** 

Swing-thru design, \*4-5% leakage



**METAL SEAT** 

Materials same as body - approx. \*1% leakage

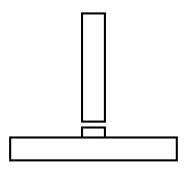


**EV-O-SEAL** 

Various gasket options including:

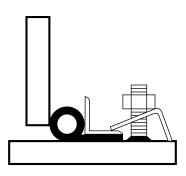
- Buna-N (200°F)
- EPDM (325°F)
- Viton (400°F)
- Teflon (450°F)

Maximum Shut-Off Pressure Drop: 65 PSI



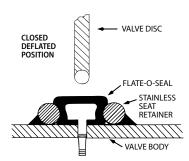
SCISSOR SEAT

Swing-thru design, approx. \*1-2% leakage



**TADPOLE SEAT** 

Material furnished varies with service. Temp. to 1800°F, approx. \*1/4 of 1% leakage



FLATE-O-SEAL SEAT

Various gasket options including:

- Neoprene (200°F)
- EPDM (325°F)
- Viton (400°F)

Maximum Shut-Off Pressure Drop: 65 PSI