

NELES

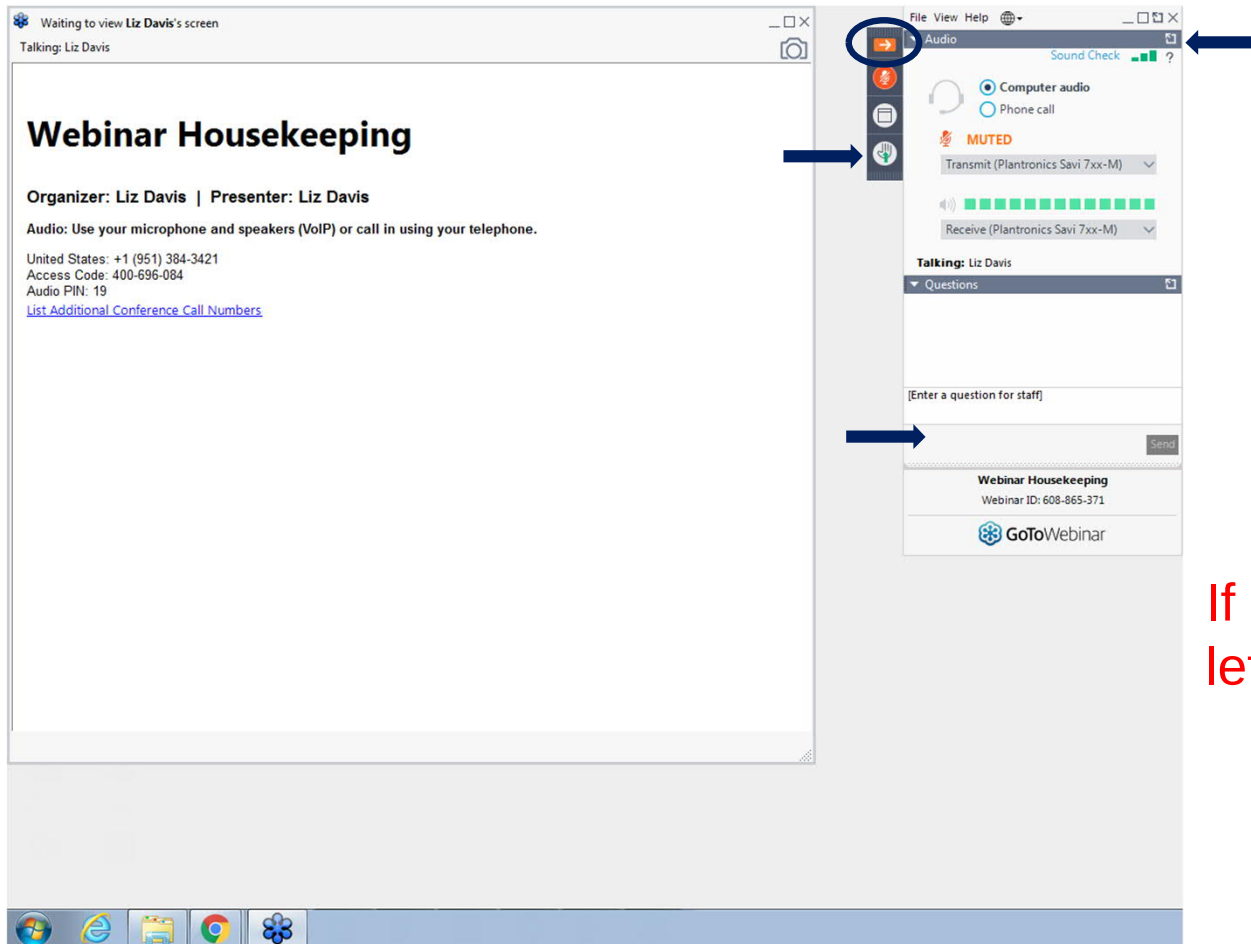
Product school

R-Series Segmented Ball Valve

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In session features

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If experiencing audio issues please let us know in question field.

Introductions

Presenter / Moderator / Panelist / Guest speaker

- Steven Hocurscak
- Control Valve Product Manager
- With the company for 15 years, predominately involved with control valves.



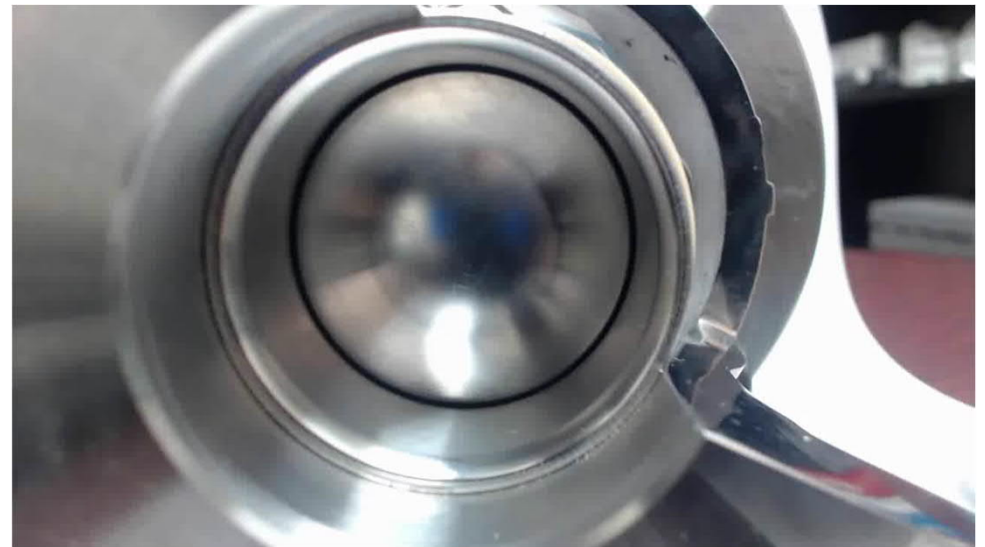
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Segment Valve Basics

R-Series Rotary Control Valves

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Valve Basics



R-Series V-Port Segment Valves

Valve Basics

- General service control valve
 - Moderate dP capability due to shaft and bearing strength
 - Fibrous, viscous
 - Solids / Erosive and low flow applications
- High $C_v \Rightarrow$ smaller valve sizes
 - More capacity compared to eccentric plug or globe style valves
 - Wide control range compared to butterfly or globe style valves
- Low dynamic torque and low friction bearings reduce actuator size



R-Series Rotary Control Valves

Valve Basics

- Typical customer's challenges
 - Control performance
 - Safety / reliability
 - Severe service
 - Cavitation
 - Noise abatement



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Features & Benefits

Designed For Control Performance

V-Shaped Flow Port

- Segment (1) provides inherent equal % characteristic
- Excellent shearing action in fibrous medias
- Excellent rangeability to control a wide range of flow conditions



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Challenge

Control Performance

Solution

V-Shaped Flow Port

Designed For Control Performance

Low C_v Segments

- Only company to offer 5 different 1" C_v options
- Accurately control a wide range of applications

0.5

1.5

5

15

45



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Challenge

Control Performance

Low Flow Controllability

Solution

Low C_v Segments

Designed For Control Performance

Splined Shaft / Segment Connection

- Backlash free connection
- No lost motion
- Minimize dead band
- Minimize hysteresis



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Challenge

Control Performance

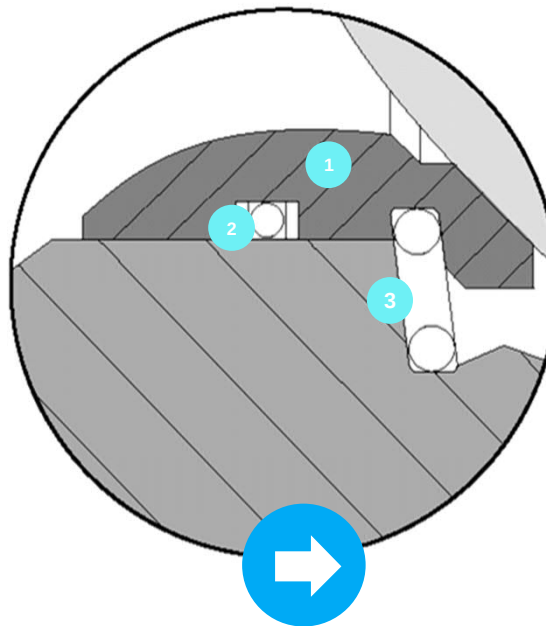
Solution

Splined Shaft / Segment
Connection

Designed For Reliability

Spring Energized Captured Seat

- Spring energized seat for good sealing at low differential pressures (1)
- Simple, robust seat design has only three components
- Seat is supported independent of external pipe loads.



Flow direction

1. Seat ring 2. Seal 3. Wave spring

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Challenge

Shutoff

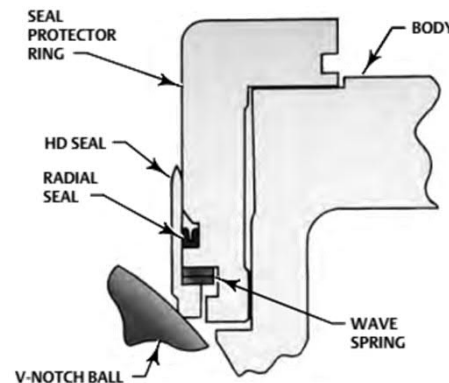
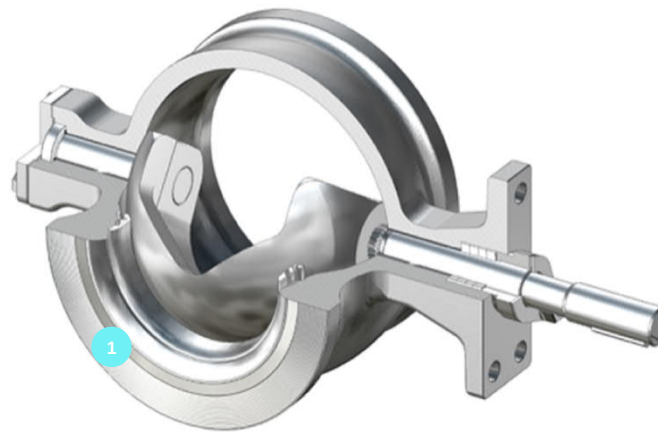
Solution

Spring Energized Captured Seat

Designed For Safety

Single Piece Valve Body

- Retainer free seat design allows for single piece body
- No extra leak path (1) reducing risk of lost media.
- Seat / seal tightness not affected by piping forces



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Challenge

Leak Paths

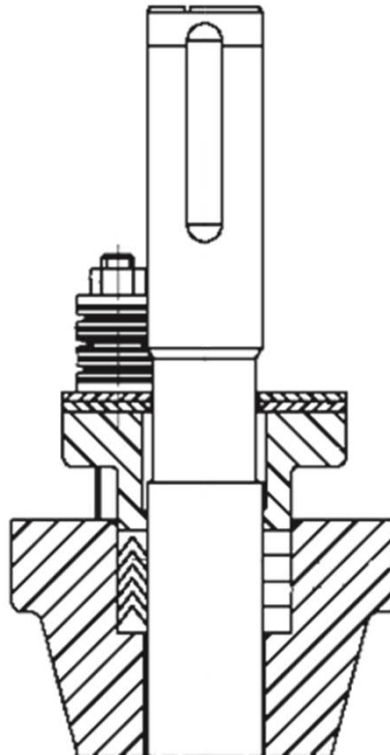
Solution

Single Piece Valve Body

Designed For Safety

Standard Live Loaded Packing

- Long lasting emission performance
- Reduced maintenance required



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Challenge
Emissions Performance

Solution
Standard Live Loaded
Packing

Designed For Safety

Anti-Blowout Shaft

- Blowout prevention for drive shaft ensures shaft can not exit the valve
- Redundant safety to shaft / pin connection at segment



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Challenge

Safety Risks

Solution

Anti-Blowout Shaft

Designed For Safety

Live Loading and Anti-Blowout Shaft



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Challenge

Emissions Performance

Redundant Anti-Blowout
Shaft Design

Solution

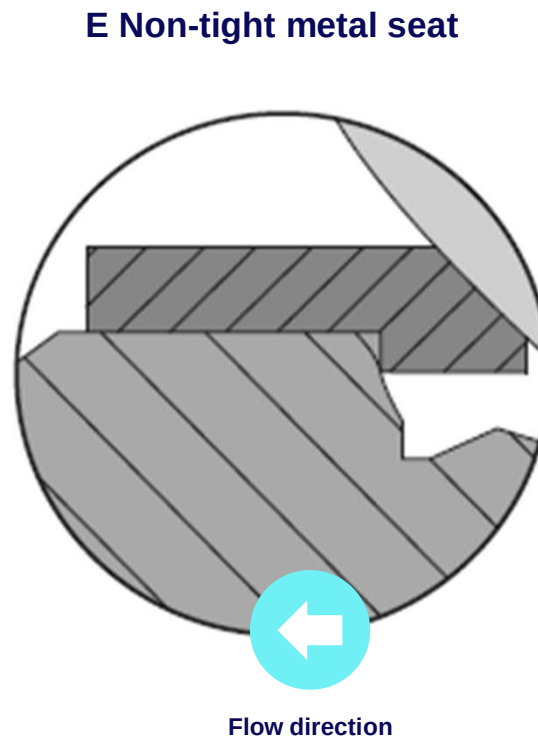
Standard Live Loaded
Packing

Anti-Blowout Shaft

Designed For Erosive Applications

Erosion Construction

- Full cobalt-based alloy seat for extremely erosive control applications
- Reversed flow direction to protect valve body



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Challenge

Erosive Service

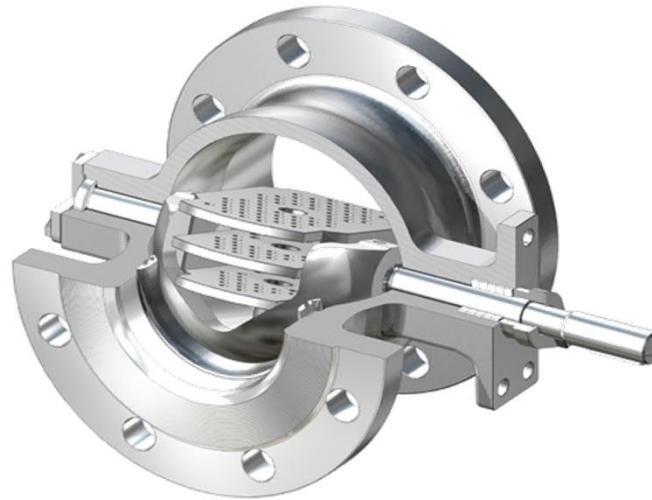
Solution

Optional Erosion Seat

Designed For Cavitation / High Noise

Q-Trim

- Q-Trim attenuator for cavitation and noise reduction
- Variable resistor is most effective at lower opening angles
- Reduces noise
- Reduces vibration
- Self flushing



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Challenge

Cavitation

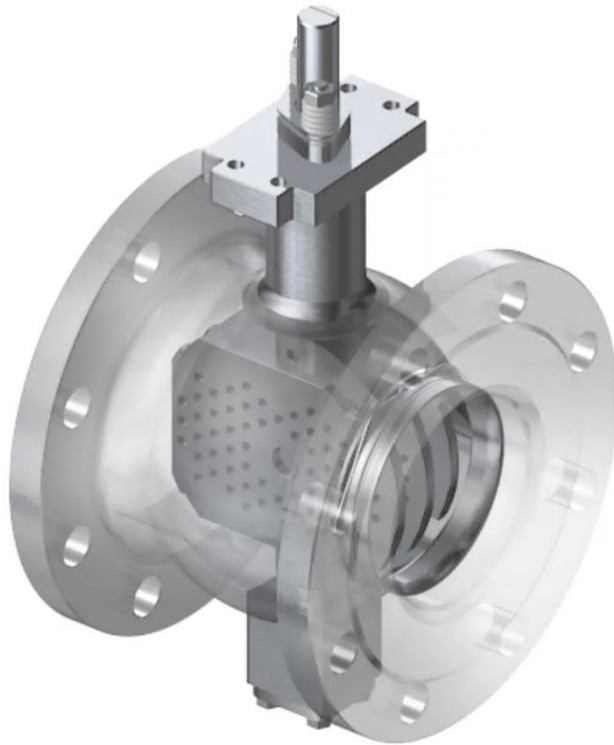
High Noise

Solution

Q-Trim (Anti-Cavitation
Noise Abatement Trim)

Designed For Cavitation / High Noise

Q-Trim



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Challenge

Cavitation

High Noise

Solution

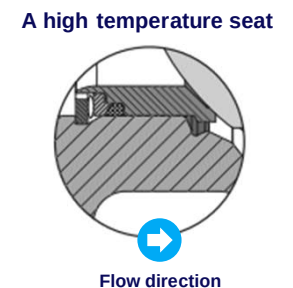
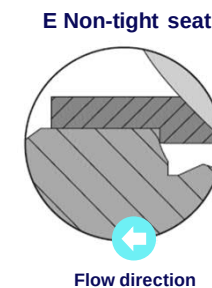
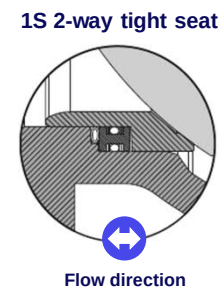
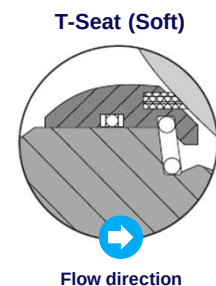
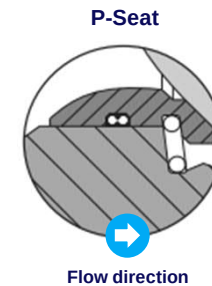
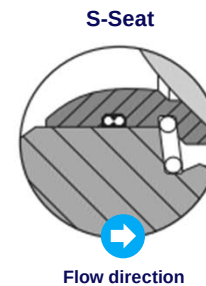
Q-Trim (Anti-Cavitation
Noise Abatement Trim)

Designed For Severe Applications

Application-Based Seat Design Options

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Standard	S-Seat Low friction standard control seat
On-off metal seat	P-Seat On-off seat for low dP isolating service
Soft seat	T-Seat Class VI tight shut-off
2-way seat	1S Seat Bi-Directional Class IV Shutoff
Erosion seat	E-Seat Full cobalt-based alloy seat for extremely erosive control applications
High temperature seat	A-Seat Up to 425°C (800°F) control seat



Application Specific Designs

R2-Series Medium Consistency Pump Valve

- Designed for 8-19% medium consistency
- Flow path of valve continually increasing to eliminate restrictions



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Challenge

Medium Consistency Pump
Application

Process Buildup

Solution

R-Series R2-Series
Medium Consistency Pump
Valve

Application Specific Designs

NelesAce Basis Weight Control Valve

- Assembly includes special R-Series and high resolution step motor
- Valve stem welded to segment
- Seat welded to body & does not come into contact with the segment
 - Reduce hysteresis / torque
 - [Application bulletins](#) specifically for this valve



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Challenge

Basis Weight Control

Process determines the quality and grade of paper

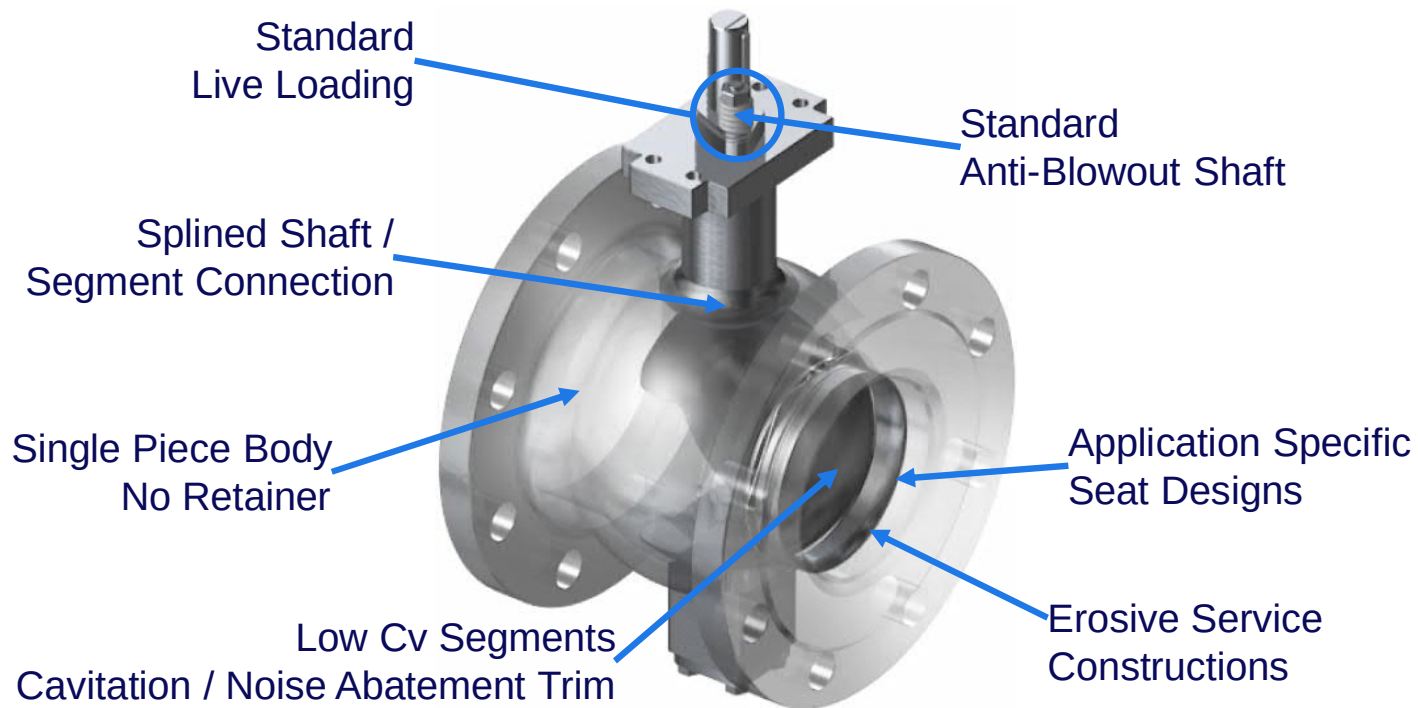
Must compensate for fluctuations in stock flows

Solution

NelesAce Basis Weight Control Valve

Valve Design Features

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R-Series Rotary Control Valves

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Product Scope

Sizes	ASME 1" – 32", EN DN25-DN800 Flanged (RE): 1" – 32" Wafer (RE1): 1" – 8" Flanged(RE13): 1" – 12" (Ball valve face to face)
Temperature	-52...+425°C (-60...+800°F)
Body types	Trunnion mounted V-port segment ball valve. Flanged (RE, RE13) Wafer (RE1, RA)
Ratings	EN PN10-PN40; ASME 150 – 300 (600 in 1")
Face to Face	RE & RE1: ISA 75.08 (control valve face to face) RE13: B16.10 (Ball valve (short pattern) face to face)

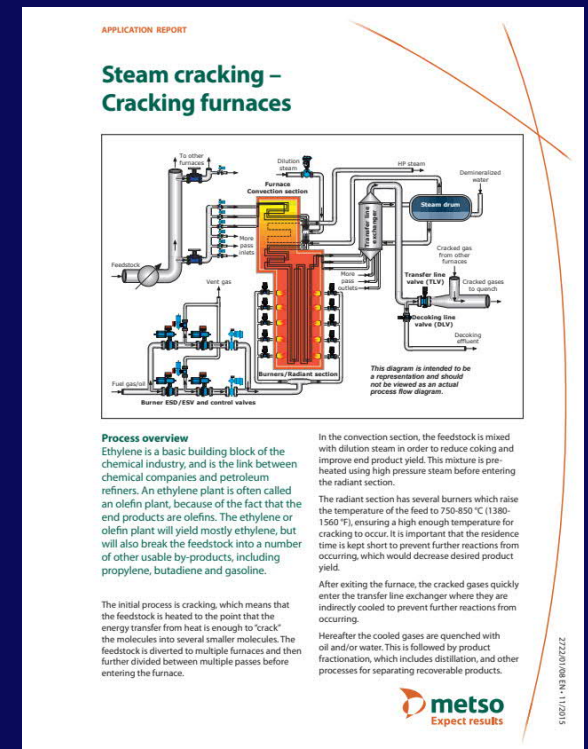


Application Information

Application Information

Chemical / Petrochemical Application Reports

- [Chemical](#)
 - Steam Reforming [2728/03/02](#)
- [Petrochemical](#)
 - Steam Cracking – Cracking Furnace [2722/01/08](#)
 - Steam Cracking – Quench [2722/02/04](#)
 - Polymerization [2722/06/14](#)
 - Aromatics Complex [2722/07/01](#)
 - Styrene-Butadiene Rubber [2722/08/01](#)
 - Propane Dehydrogenation – Fuel Control [2722/45/01](#)
 - Propane Dehydrogenation – Catalyst Regen [2722/45/02](#)
 - Propylene via Metathesis [2722/45/03](#)



- ## APPLICATION REPORT

ANDRITZ Continuous Pulp Cooking System Metering and Steaming of Chips



Process description



metso
Expect results

Application Information

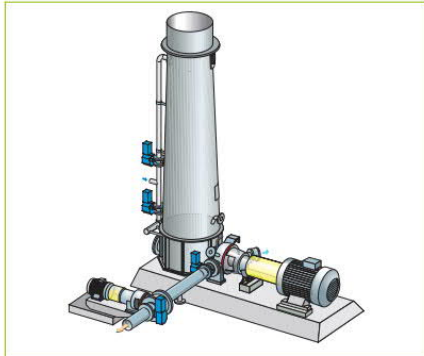
Pulp Application Reports

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- [Bleaching](#)
 - Medium Consistency Flow Control Valves [2611/03/01](#)
 - Acid Hydrolysis [2611/03/04](#)
 - Bleaching Storage [2611/03/05](#)
 - Alkaline Stage E [2611/03/06](#)
 - Hypochlorite Bleaching [2611/03/07](#)
 - Peroxide [2611/03/08](#)
 - Ozone [2611/03/09](#)
 - Oxygen Delignification [2611/03/10](#)

APPLICATION REPORT

MEDIUM CONSISTENCY FLOW CONTROL VALVES



Overview of the process
In many pulp applications, 8-19 % medium consistency is used to achieve cost savings or technical benefits in the process.

The process
The medium consistency pump, designed for handling stocks from 8 % to 19 %, is basically a centrifugal pump with an open impeller. It acts as a turbulence generator fluidizing the pulp at the inlet.

A normal head is up to 150 meters and pulp flow is controlled by means of a valve mounted straight to the pump discharge flange.

There is two basic ways to run the pumps, variable speed pumps and static head pumps. There is clear difference how to use the medium consistency valves with these two pump styles.

In case of variable speed pump it is important to run the pump with fully 90 degree open valve. Thus creating minimum resistance in the valve. Valve will be throttled only when the pressure differential over the valve goes below critical point creating danger of blocking the valve. This can happen only with very low speed of the pump.

metso
Expect results

61.052-4-NB 1.0/03.1/08

Application Information

Paper Application Reports

- [Paper Machine Coating Section](#)
 - Filler Slurry Control [2612/04/01](#)
 - Coating and Surface Sizing [2621/04/02](#)
- [Paper Machine Drying](#)
 - Tissue Paper Machine Steam Systems [2621/03/01](#)
 - Steam and Condensate System [2621/03/02](#)
- [Paper Machine Short Circulation](#)
 - Paper Machine Headbox Loops [2621/02/02](#)
 - nelesACE Basis Weight Valve [2621/02/04](#) [2621/02/05](#)
- [Recycled Pulp, Waste Paper, De-Inking](#)
 - Secondary Fiber Prep – Deinking Line [2621/05/02](#)

APPLICATION REPORT

Q-TRIM™ IN PAPER MACHINE HEADBOX LOOPS

Overview of the process
To meet the current demand for producing greater amounts of quality grade paper in the shortest possible time, modern paper machines run at even higher speeds (1500 m/min, 4900 ft/min) than in the past. Because this requires higher pressures within the headbox, it is important that pulsations or vibration caused by cavitation resulting from high pressure drops across control valves be eliminated.

The process
The part of the process where the stock is blended with white water and pumped through the approach flow piping to the headbox is called short

circulation. White water, which falls through the wire into the wire pit contains fibers and additives. Fast running machines require higher headbox pressure, therefore, cavitation may occur in the recirculation control valve.

Results
Normally some 10 % of the total flow is recirculated through the bypass line after the inlet header. Control of the headbox is critical and seeks to eliminate any pulsations or flow velocity differences across the full width of the wire.

metso
Expect results

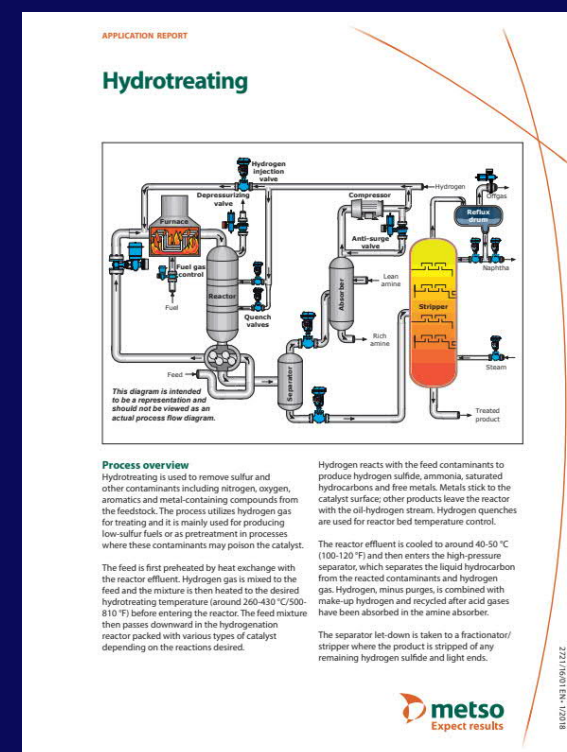
2621/02/02 EN, 9/2019

Application Information

Refining Application Reports

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- Refining
 - Hydrotreating [2721/16/01](#)
 - Crude and Vacuum Distillation [2721/01/01](#)
 - Sulphur Recovery and Tail Gas Treatment [2721/03/01](#)
 - Hydrocracking [2721/14/01](#)
 - Isomerisation [2721/23/01](#)



Competition

Competitor Comparison

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Competitor Offering

	Size	Temp	Body type F=flanged W=wafer	ANSI rating	Face to face
R-Series	1"-32"	-60...+800°F	F: 1"-32" / W: 1"-8"	150#-300#	S75.08 & B16.10
Fisher V-Ball	1"-24"	-325...+800°F	F: 1"-24x20" / W: 1"-10"	150#-600# / 600# 1"-8"	S75.08 & B16.10
DeZURIK VPB	1"-20"	-20...+1,000°F	F: 1"-20" / W: 1"-12"	150# 1"-20" / 300# 1"-12"	S75.08 & B16.10
Valtek ShearStream	1"-16"	-50...+600°F	F: 1"-16" / W: 1"-16"	150#-600#	S75.08
NAF Setball	1" – 20"	-22...+482°F	F: 1"-20" / W: 1"-8"	150#-300#	S75.08
Masoneilan V-Max	1"-12"	-50...+600°F	F: 1"-12"	150#-300#	S75.08
Bray Flow-Tek	1"-12"	-60...+500°F	F: 1"-12" / W 1"-10"	150#-600#	S75.08
Samson Type 3310	1"-12"	-51...+842°F	F: 1"-12"	150#-300#	S75.08
Linuo	1"-16"	-20...+750°F	F: 1"-16" / W: 1"-10"	150#-300#	S75.08
Others: A-T Controls V-Series , J-Flow DM9900 , VSI Series V , Flo-Tite V-Ball , Mascot Vflo , Hiton , Dyna-Flo					

Design Features

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[illegible]

R-Series Control Valves Competition

Capacity Comparison

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Max Metal Seat Cv Values

Size (Inch)	R-series	Fisher Vee-Ball	DeZURIK VPB	NAF Setball	Linuo Segment Ball Valve	Valtek ShearStream	Masoneilan 36005 V-Max	Bray Flow-Tek	Samson Type 3310
1	45	34.6	36	26	27	24	55	33	40
1.5	110	76	120	76	70	50	125	78	120
2	180	123	210	120	110	104	170	133	160
3	420	321	360	287	280	275	440	302	400
4	620	596	600	486	410	445	740	460	700
6	1260	1100	1230	1135	980	844	1250	905	1400
8	2030	1820	2015	1463	1720	1338	1860	1480	2000
10	3210	3000	3000	2902	2900	2710	3020	2430	3100
12	4490	3980	4225	4633	3800	4150	4400	3425	3100
14	6440	5610	5830	6675	7000	N/A	N/A	N/A	N/A
16	8510	8270	7500	9085	9800	7150	N/A	N/A	N/A
20	13020	10300	12000	12110	N/A	N/A	N/A	N/A	N/A
24	19700	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
28	25300	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
32	32000	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Competitors

NELES

R-Series Control Valves Competition
(Emerson) Fisher V-Ball

NELES

	NELES R-Series	Fisher V-Ball
Size	1" - 32"	1" - 24x20"
Temperature	-52...+425°C (-60...+800°F)	-198...+425°C (-325...+800°F)
Body types	Flanged (RE, RE13) Wafer (RE1, RA)	Flanged (V150 / V200 / V300) Wafer (V200)
Rating	150# - 300# (600# in 1")	150# - 300# (V150 - V300) 600# (V200 Flanged 2"-6", Wafer 1"-10")
Face to Face	ISA S75.08 / ASME B16.10 (1"-12")	ISA S75.08 / ASME B16.10 (1"-12")

 Fisher V-Ball
Technical Bulletin

Fisher V-Ball

R-Series Control Valves Competition
DeZURIK V-Port Ball Valve (VPB)

NELES

	NELES R-Series	DeZURIK VPB
Size	1" - 32"	1" - 20"
Temperature	-52...+425°C (-60...+800°F)	-29...+540°C (-20...+1,000°F)
Body types	Flanged (RE, RE13) Wafer (RE1, RA)	Flanged Flangeless 1" - 32" 150# Only
Rating	150# - 300# (600# in 1")	150# (1" - 20") 300# (1" - 1")
Face to Face	ISA S75.08 / ASME B16.10 (1"-12")	ISA S75.08 / ASME B16.10 (1" - 12" 150# Only)

 DeZURIK VPB
Technical Specifications

DeZURIK VPB

R-Series Control Valves Competition
(Flowserve) Valtek ShearStream HP

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	NELES R-Series	Valtek ShearStream
Size	1" - 32"	1" - 12" & 16"
Temperature	-52...+425°C (-60...+800°F)	-46...+316°C (-60...+600°F)
Body types	Flanged (RE, RE13) Wafer (RE1, RA)	Flanged Separate Flanged Flangeless
Rating	150# - 300# (600# in 1")	150# - 600# 600# body / 300# external?
Face to Face	ISA S75.08 / ASME B16.10 (1"-12")	ISA S75.08

 Valtek ShearStream
Technical Specifications

Valtek ShearStream

R-Series Control Valves Competition
(Flowserve) NAF Setball

NELES

	NELES R-Series	NAF Setball
Size	1" - 32"	1" - 20"
Temperature	-52...+425°C (-60...+800°F)	-30...+250°C (-20...+482°F)
Body types	Flanged (RE, RE13) Wafer (RE1, RA)	Flanged (1"-20") Waferless (1"-6")
Rating	150# - 600# (600# in 1" only)	150# F: 1"-20" / W: 1"-6" 300# F: 1"-16" / W: 1"-2"
Face to Face	ISA S75.08 / ASME B16.10 (1"-12")	ISA S75.08

W = Wafer / F = Flanged

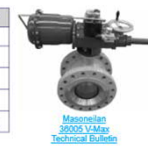
 NAF Setball
Technical Specifications

NAF Setball

R-Series Control Valves Competition
(GE / Baker Hughes) Masonneilan 36005 Series V-Max

NELES

	NELES R-Series	Masonneilan 36005 V-Max
Size	1" - 32"	1" - 12"
Temperature	-52...+425°C (-60...+800°F)	-46...+316°C (-60...+600°F)
Body types	Flanged (RE, RE13) Wafer (RE1, RA)	Flanged Only
Rating	150# - 300# (600# in 1")	150# - 300#
Face to Face	ISA S75.08 / ASME B16.10 (1"-12")	ISA S75.08 / ASME B16.10 (150# Only)

 Masonneilan 36005 V-Max
Technical Bulletin

Masonneilan 36005

R-Series Control Valves Competition
(Bray) Flow-Tek Series 19 Segmented Ball Valve

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	NELES R-Series	(Bray) Flow-Tek Series 19
Size	1" - 32"	1" - 12"
Temperature	-52...+425°C (-60...+800°F)	-40...+260°C (-40...+500°F)
Body types	Flanged (RE, RE13) Wafer (RE1, RA)	Flanged (1"-12") Flangeless (1"-10")
Rating	150# F: 1"-32" / W: 1"-8" 300# F: 1"-32" / W: 1"-8" 600# F: 1"	150# F: 1"-12" / W: 1"-10" 300# F: 1"-12" / W: 1"-8" 600# F: 1"-12"
Face to Face	ISA S75.08 / ASME B16.10 (1"-12")	W: 150-300# Flow-Tek 488 W: 600# & F (42): ISA S75.08

W = Wafer / F = Flanged

 Flow-Tek Series 19
Technical Specifications

Flow-Tek Series 19

R-Series Control Valves Competition
Samson 3310 Segmented Ball Valve

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	NELES R-Series	Samson 3310
Size	1" - 32"	1" - 12"
Temperature	-52...+425°C (-60...+800°F)	-46...+450°C (-61...+842°F)
Body types	Flanged (RE, RE13) Wafer (RE1, RA)	Flanged Only
Rating	150# - 300# (600# in 1")	150# - 300#
Face to Face	ISA S75.08 / ASME B16.10 (1"-12")	ISA S75.08 / ASME B16.10 (150# Only)

 Samson 3310
Technical Bulletin

Samson 3310

R-Series Control Valves Competition
Linuo V-Series Segment Ball Valve

NELES

	NELES R-Series	Linuo V-Series
Size	1" - 32"	1" - 16"
Temperature	-52...+425°C (-60...+800°F)	-20...+399°C (-20...+750°F)
Body types	Flanged (RE, RE13) Wafer (RE1, RA)	Flanged Wafer (1"-10")
Rating	150# - 300# (600# in 1")	150#-300#
Face to Face	ISA S75.08 / ASME B16.10 (1"-12")	ISA S75.08

 Linuo V-Series
Technical Bulletin

Linuo V-Series

Other Competitors

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Other Competitors

R-Series Rotary Control Valves
R-Series V-Port Segment Valves

NELES

Features That Address Customer's Challenges

- Heavy duty single piece seat
 - Not affected by piping forces
- Single piece body w/ captured seat
- Standard live loading & anti-blowout shaft
- Application specific seat designs
- Q-Trim noise abatement trim
- Accurate low flow control with (5) 1" trim options



R-Series Summary

R-Series Control Valves Competition

(Emerson) Fisher V-Ball

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	Neles R-Series	Fisher V-Ball
Sizes	1" – 32"	1" – 24(x20)"
Temperature	-52...+425°C (-60...+800°F)	-198...+425°C (-325...+800°F)
Body types	Flanged (RE, RE13) Wafer (RE1, RA)	Flanged (V150 / V200 / V300) Wafer (V200)
Ratings	150# – 300# (600# in 1")	150# - 300# (V150 - V300) 600# (V200 Flanged 2"-8", Wafer 1"-10")
Face to face	ISA S75.08 / ASME B16.10 (1"–12")	ISA S75.08 / ASME B16.10 (1"–12")



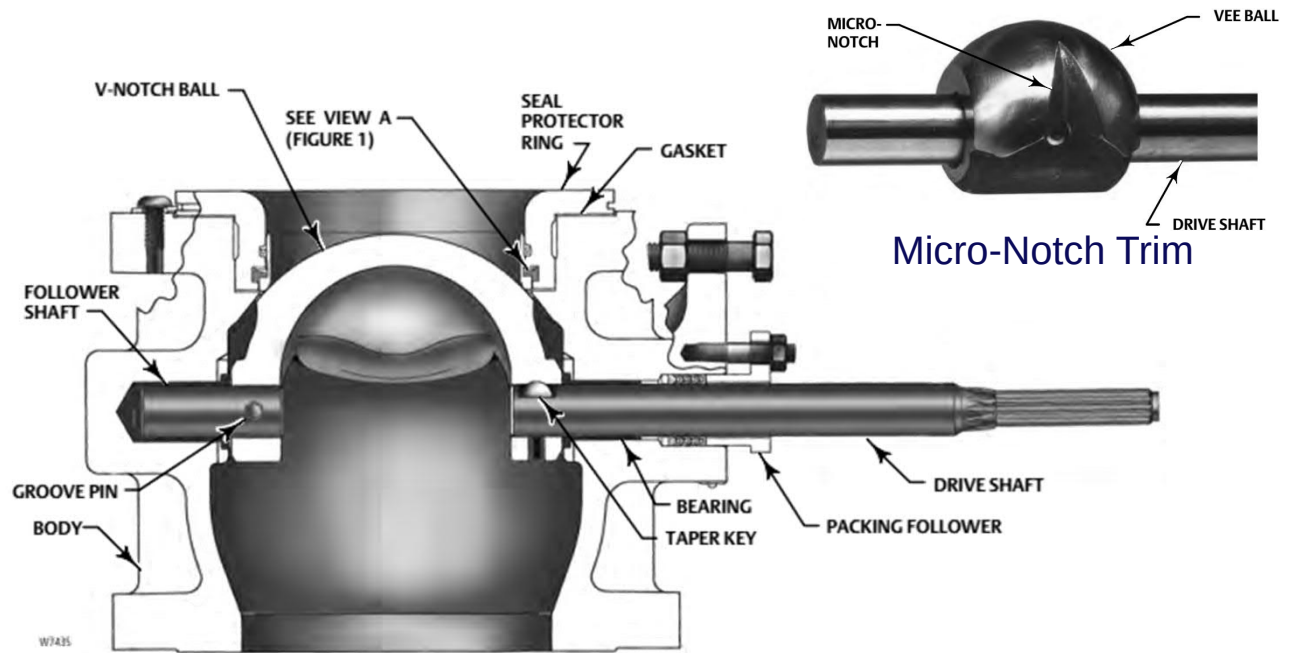
[Fisher
V-Ball
Technical Bulletin](#)

R-Series Control Valves Competition

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(Emerson) Fisher V-Ball

- 2 piece body
- Pinned segment / shaft connection to 12", Splined 14" and greater
- No Anti-blowout shaft
- Live Loading (Enviro-Seal) is optional
- Two 1" low Cv options:
Micro-Notch (Cv 5.2)
Macro-Notch (Cv 9.5)



Vee-Ball Construction

R-Series Control Valves Competition

(Emerson) Fisher V-Ball

NELES

HD Seat

- Class IV Shut-Off
- -46...+288°C (-50...+550°F)

High Temp HD Seat

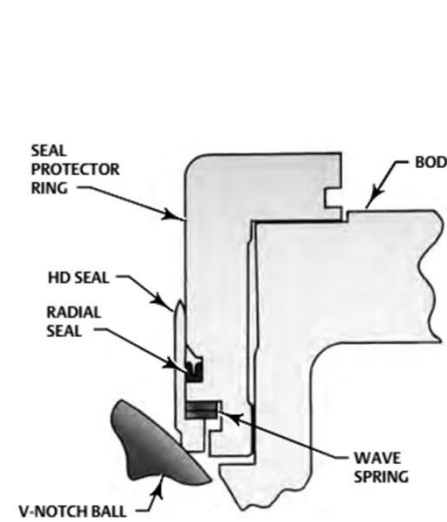
- Class III Shut-Off
- +288...+427°C (+550...+800°F)

Flat Metal Seat

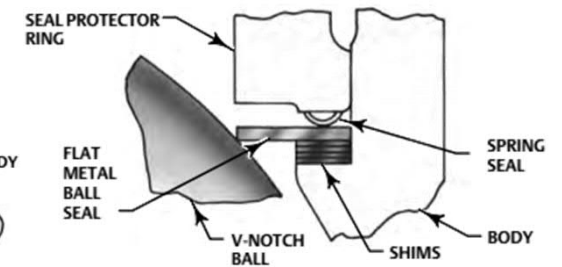
- 3" – 12" Only
- Class IV Shut-Off
- -198...+425°C (-325...+800°F)

Soft Seat

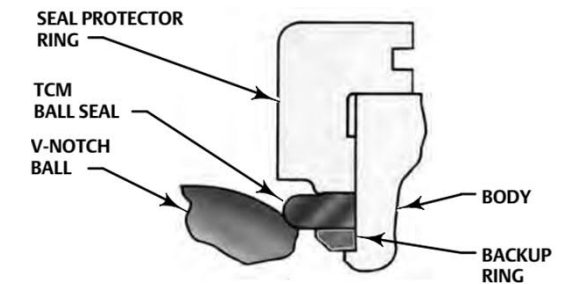
- Class VI Shut-Off
- -46...+232°C (-50...+450°F) TCM
- -46...+260°C (-50...+500°F) TCM Ultra



HD Seat



Flat Metal Seat



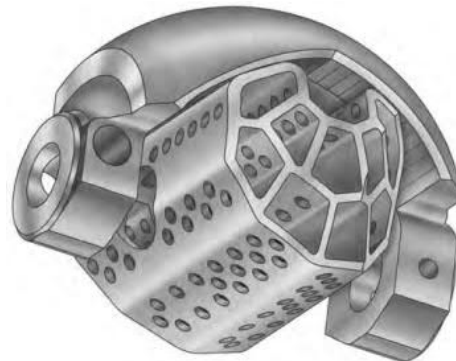
Soft Seat

R-Series Control Valves Competition

NELES

(Emerson) Fisher V-Ball

- V-Ball Attenuator
 - 4" – 20"
 - ASME 150# - 600#
- Hex Anti-Cavitation Trim
 - 4" – 12"
 - 150# - 600#
 - Fisher claims performance is similar to globe valve trim.
 - Not self flushing
 - Adds ½" to face to face



V-Ball Attenuator



Cavitrol Hex Anti-Cavitation Trim

R-Series Control Valves Competition

NELES

(Emerson) Fisher V-Ball – Cavitrol Hex Anti-Cavitation Trim

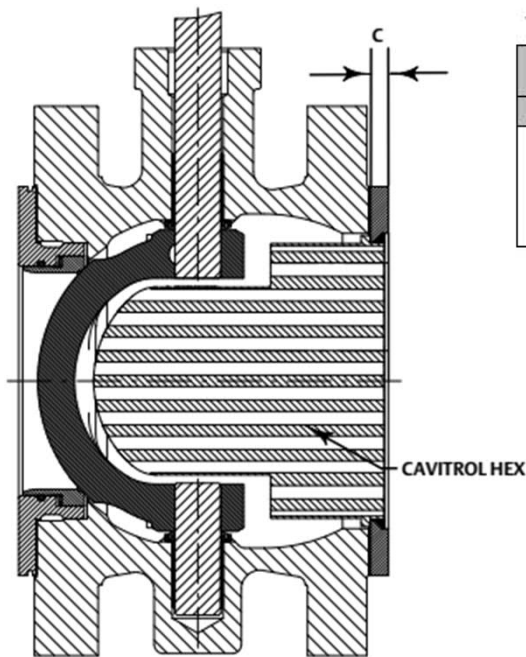


Table 4. Fisher Cavitrol Hex Dimensions and Weight

VALVE SIZE	FLANGE THICKNESS C (ADD TO OVERALL FACE-TO-FACE DIMENSION)		WEIGHT	
NPS	mm	Inch	kg	lbs
4	12.7	0.5	3.3	7.3
6	12.7	0.5	7.8	17.3
8	12.7	0.5	12.8	28.3
10	12.7	0.5	24.0	53.1
12	12.7	0.5	35.7	78.8



R-Series Control Valves Competition

NELES

(Emerson) Fisher V-Ball - Links

- Brochures
 - [Catalog of Fisher Control Valves](#)
 - [Fisher Vee-Ball Rotary Control Valves](#)
 - [Noise-Attenuation Technologies](#)
- Product Bulletin
 - [Fisher Vee-Ball V150, V200, V300](#)
 - [Vee-Ball Noise Attenuator](#)
 - [Fisher Rotary Valve Selection Guide](#)
- Instruction Manual
 - [Vee-Ball 1"-12"](#)
 - [Vee-Ball 14"-24x20"](#)



R-Series Control Valves Competition

DeZURIK V-Port Ball Valve (VPB)

NELES

	Neles R-Series	DeZURIK VPB
Sizes	1" – 32"	1" – 20"
Temperature	-52...+425°C (-60...+800°F)	-29...+540°C (-20...+1,000°F)
Body types	Flanged (RE, RE13) Wafer (RE1, RA)	Flanged Flangeless 1" – 12" 150# Only
Ratings	150# – 300# (600# in 1")	150# (1" – 20") 300# (1" – 12")
Face to Face	ISA S75.08 / ASME B16.10 (1"–12")	ISA S75.08 / ASME B16.10 (1" – 12" 150# Only)



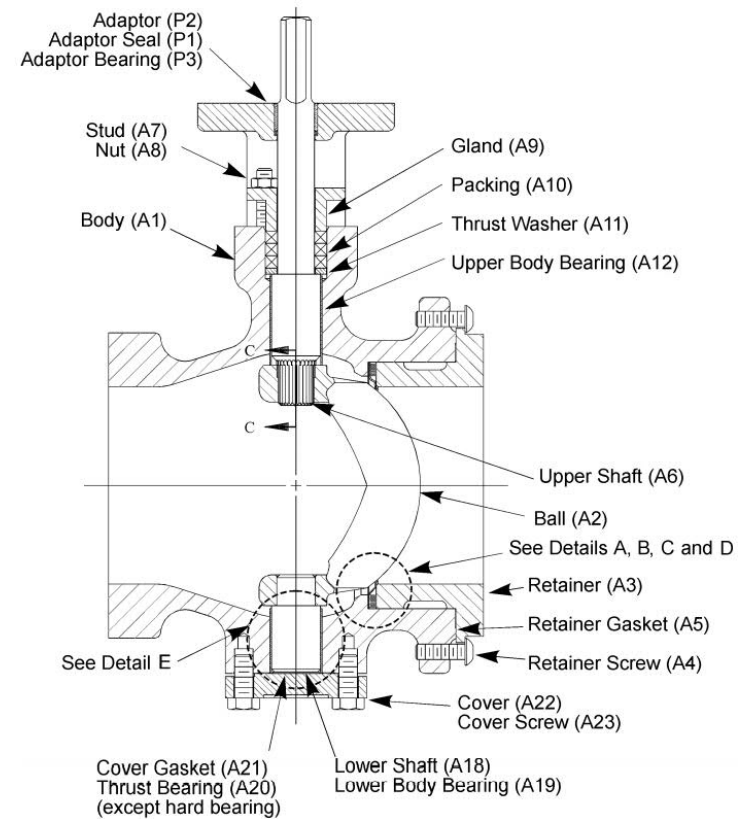
[DeZURIK
VPB
Technical Specifications](#)

R-Series Control Valves Competition

NELES

DeZURIK V-Port Ball Valve (VPB)

- 2 piece body
- Splined segment / shaft connection
- Anti-blowout shaft std
- No Live Loading
- No Low Cv Options
- No Variable Attenuation



DeZURIK VPB Construction

R-Series Control Valves Competition

DeZURIK V-Port Ball Valve (VPB)

NELES

Flexible Metal Seat

- Class IV Shut-Off
- -29...+370°C (-20...+700°F)

Clearance Seat

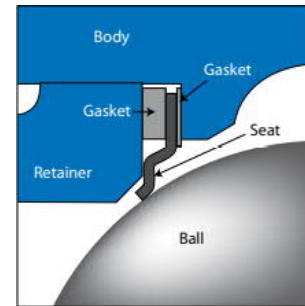
- Non-Tight Shut-Off
- -29...+540°C (-20...+1,000°F)

Soft Seat

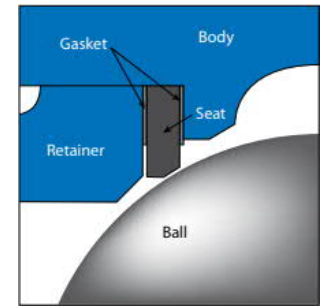
- Class VI Shut-Off
- -29...+260°C (-20...+500°F)

Rigid Seat

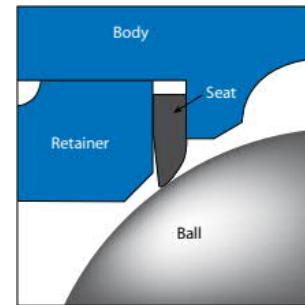
- Class IV Shut-Off
- -29...+230°C (-20...+450°F)



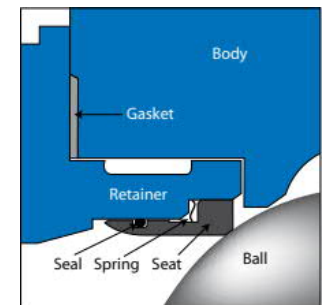
Flexible Metal Seat



Clearance Seat



Soft Seat



Rigid Seat

R-Series Control Valves Competition

DeZURIK V-Port Ball Valve (VPB) - Links

- Brochures
 - [VPB Sales Bulletin](#)
- Product Bulletin
 - [VPB Technical Specifications](#)
- Instruction Manual
 - [VPB Instruction Manual](#)



R-Series Control Valves Competition

(Flowserve) Valtek ShearStream HP

NELES

	Neles R-Series	Valtek ShearStream
Sizes	1" – 32"	1" – 12" & 16"
Temperature	-52...+425°C (-60...+800°F)	-46...+316°C (-50...+600°F)
Body types	Flanged (RE, RE13) Wafer (RE1, RA)	Flanged Separable Flanged Flangeless
Ratings	150# – 300# (600# in 1")	150# - 600# 600# body / 300# internals?
Face to Face	ISA S75.08 / ASME B16.10 (1"–12")	ISA S75.08



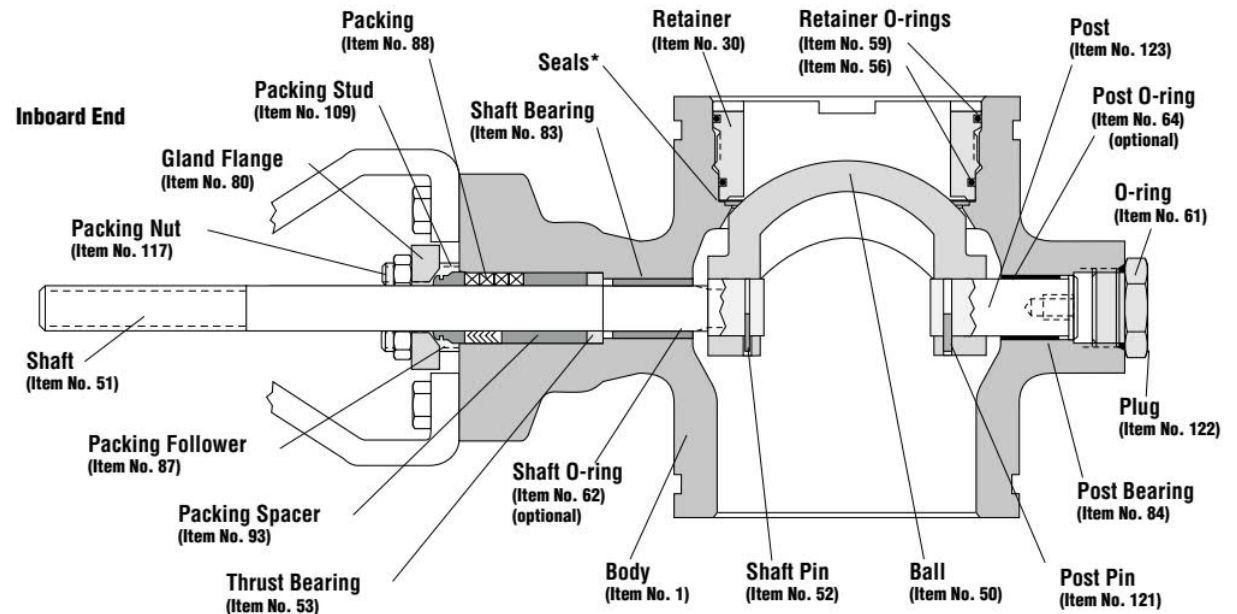
[Valtek
ShearStream
Technical Specifications](#)

R-Series Control Valves Competition

(Flowserve) Valtek ShearStream HP

NELES

- 1 piece body w/ Retainer
- Splined segment / shaft connection
- No Anti-blowout shaft
- Optional Live Loading
- No Low Cv Options
- No Variable Attenuation



Valtek ShearStream

R-Series Control Valves Competition

(Flowserve) Valtek ShearStream HP

NELES

Metal Seat

- Class IV Shut-Off

Heavy Duty Metal Seat

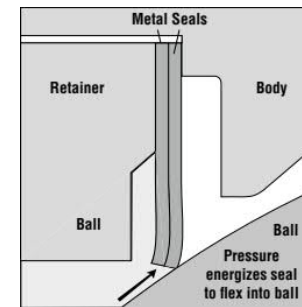
- Class IV Shut-Off

Soft Seat

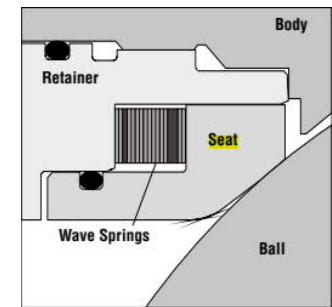
- Class VI Shut-Off

Flow Ring

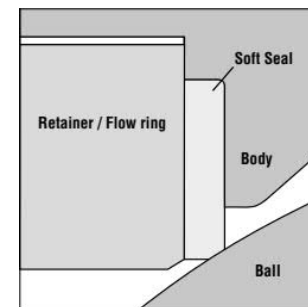
- Class II Shut-Off



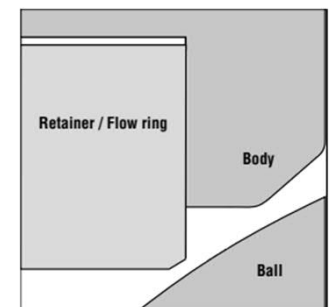
Metal Seat



HD Metal Seat



Soft Seat



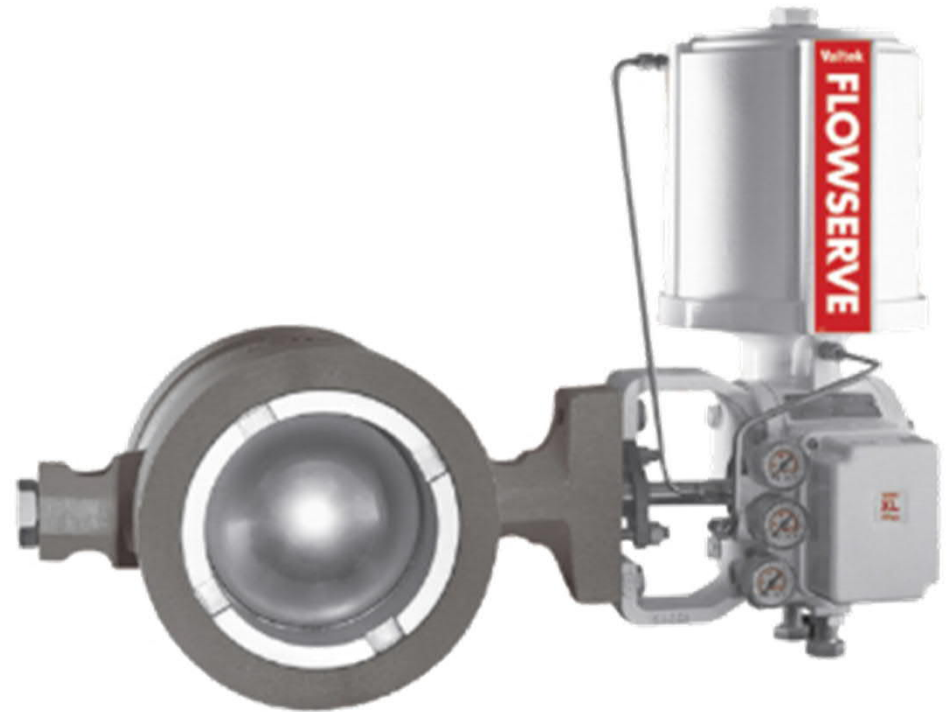
Flow Ring

R-Series Control Valves Competition

(Flowserve) Valtek ShearStream HP - Links

NELES

- Brochures
 - [Flowserve Control Valve Product Guide](#)
 - [Valtek ShearStream](#)
- Product Bulletin
 - [Technical Bulletin](#)
- Instruction Manual
 - [Installation Operation Maintenance](#)



R-Series Control Valves Competition

(Flowserve) NAF Setball

NELES

	Neles R-Series	NAF Setball
Sizes	1" – 32"	1" – 20"
Temperature	-52...+425°C (-60...+800°F)	-30...+250°C (-22...+482°F)
Body types	Flanged (RE, RE13) Wafer (RE1, RA)	Flanged (1"-20") Flangeless (1"-8")
Ratings	150# – 600# (600# in 1" only)	150# F: 1"-20" / W: 1"-8" 300# F: 1"-16" / W: 1"-2"
Face to Face	ISA S75.08 / ASME B16.10 (1"-12")	ISA S75.08

W = Wafer / F = Flanged

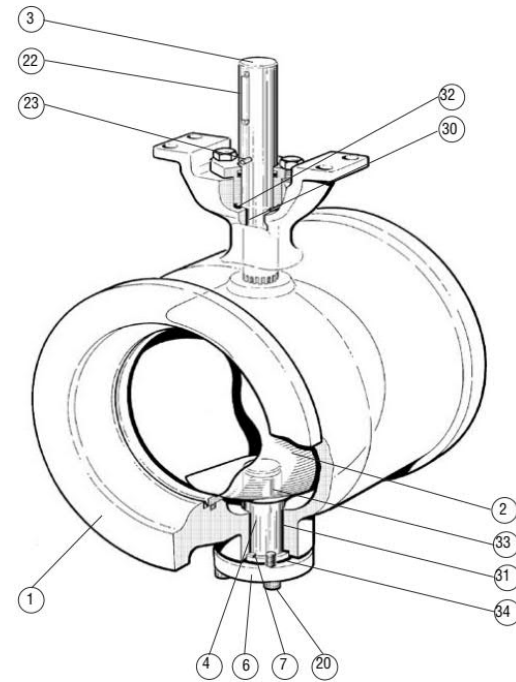


[NAF
Setball
Technical Specifications](#)

R-Series Control Valves Competition

(Flowserve) NAF Setball

- 1 piece body
- Splined segment / shaft connection
- No Anti-blowout shaft
- Optional Live Loading (Safeguard)
- No Low Cv Options
- Z-Trim Variable Attenuation



NAF Setball

R-Series Control Valves Competition

(Flowserve) NAF Setball

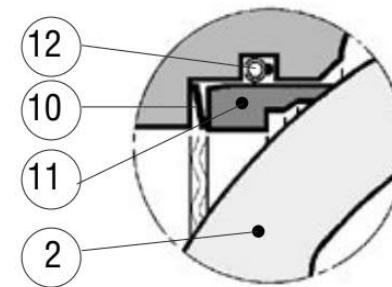
NELES

Metal Seat

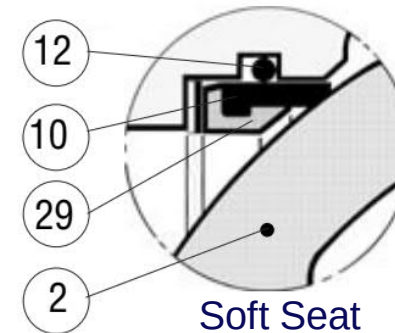
- Class IV Shut-Off
- -30...+250°C (-22...+482°F)

Soft Seat

- EN 12266-1 Rate A
- -30...+225°C (-20...+437°F)



Metal Seat



Soft Seat

R-Series Control Valves Competition

(Flowserve) NAF Setball - Links

NELES

- Brochures
 - [Flowserve Control Valve Product Guide](#)
 - [NAF Product Overview](#)
- Product Bulletin
 - [Technical Bulletin](#)
- Instruction Manual
 - [Installation Operation Maintenance](#)



R-Series Control Valves Competition

(GE / Baker Hughes) Masoneilan 36005 Series V-Max

NELES

	Neles R-Series	Masoneilan 36005 V-Max
Sizes	1" – 32"	1" – 12"
Temperature	-52...+425°C (-60...+800°F)	-46...+316°C (-50...+600°F)
Body types	Flanged (RE, RE13) Wafer (RE1, RA)	Flanged Only
Ratings	150# – 300# (600# in 1")	150# - 300#
Face to Face	ISA S75.08 / ASME B16.10 (1"–12")	ISA S75.08 / ASME B16.10 (150# Only)



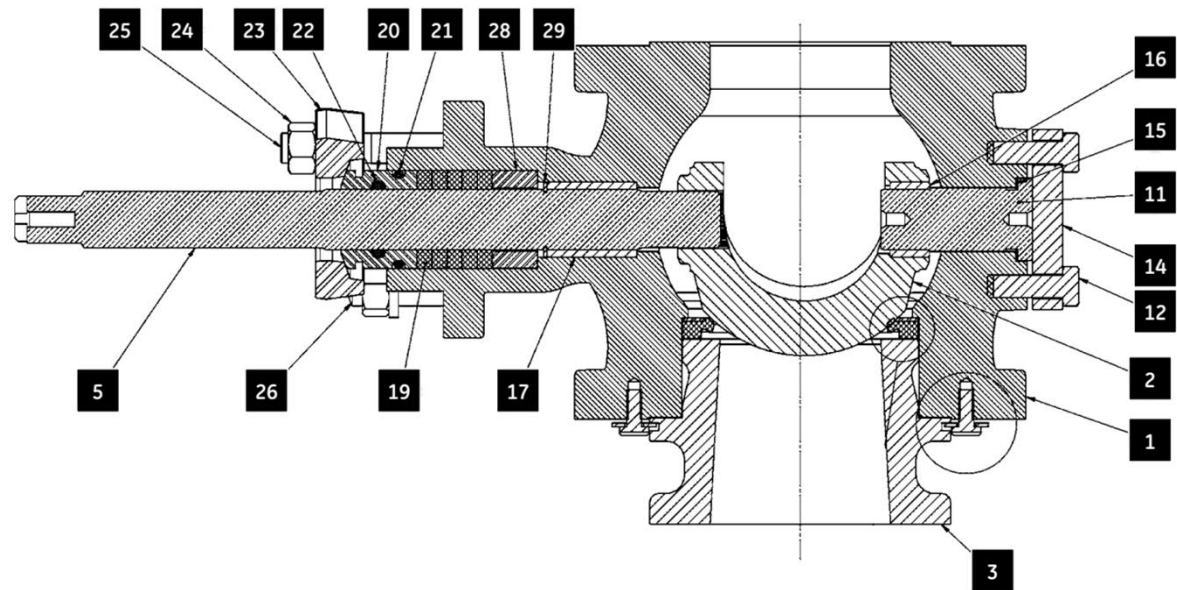
[Masoneilan
36005 V-Max
Technical Bulletin](#)

R-Series Control Valves Competition

NELES

(GE / Baker Hughes) Masoneilan 36005 Series V-Max

- 2 piece body
- Splined segment / shaft connection
- No Anti-blowout shaft
- EF Seal (Emission Free) standard (items 21-22)
 - No Live Loading
- No Low Cv Options
- No Variable Attenuation



36005 V-Max Construction

R-Series Control Valves Competition

(GE / Baker Hughes) Masoneilan 36005 Series V-Max

NELES

Heavy Duty HD Seat

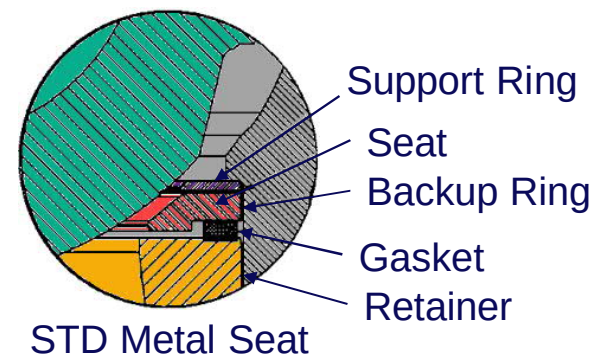
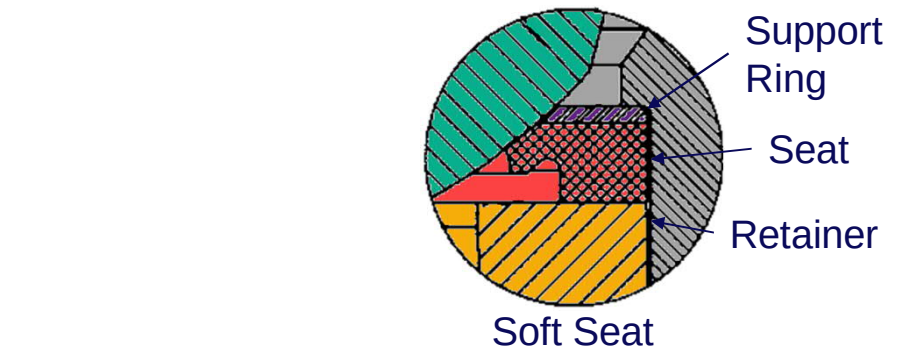
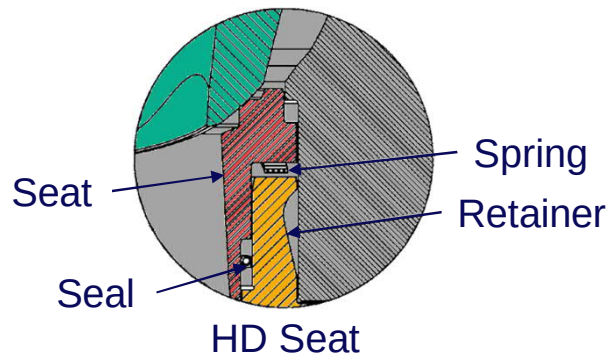
- 1" – 6" Only
- Class IV Shut-Off
- -46...+260°C (-50...+500°F)

Standard Metal Seat

- Class IV Shut-Off
- -46...+218°C (-50...+425°F) Std
- -46...+316°C (-50...+600°F) HT

Soft Seat

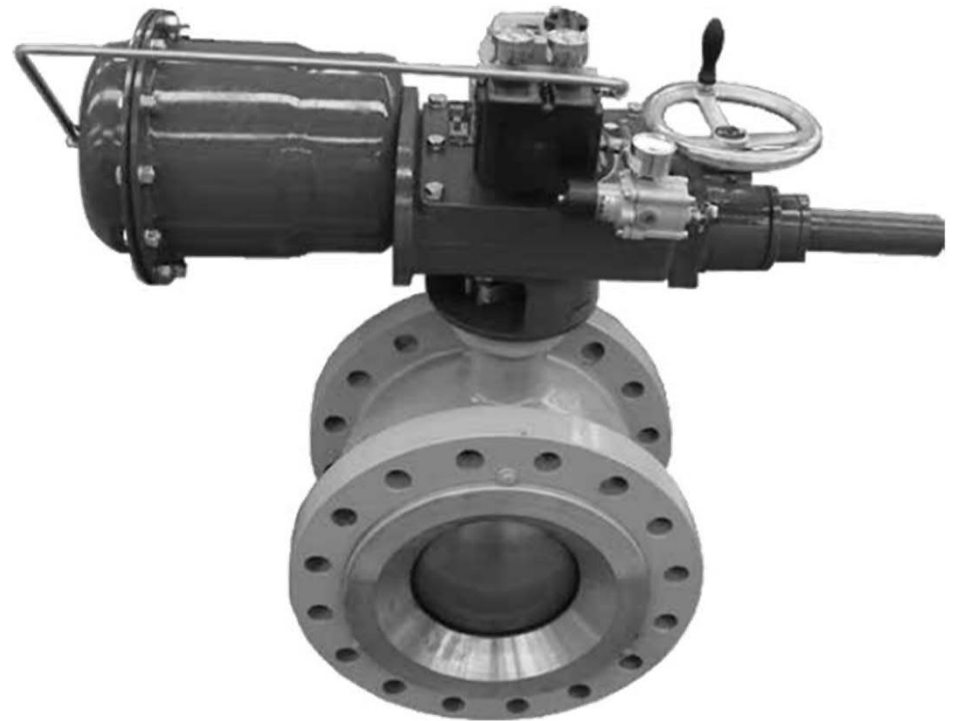
- Class VI Shut-Off
- -46...+232°C (-50...+450°F)



R-Series Control Valves Competition

(GE / Baker Hughes) Masoneilan 36005 Series V-Max - Links

- Brochures
 - [V-Max Fact Sheet](#)
- Product Bulletin
 - [V-Max Technical Specification](#)
- Instruction Manual
 - [V-Max Instruction Manual](#)



R-Series Control Valves Competition

(Bray) Flow-Tek Series 19 Segmented Ball Valve

NELES

	Neles R-Series	(Bray) Flow-Tek Series 19
Sizes	1" – 32"	1" – 12"
Temperature	-52...+425°C (-60...+800°F)	-40...+260°C (-40...+500°F)
Body types	Flanged (RE, RE13) Wafer (RE1, RA)	Flanged (1"-12" Flangeless (1"-10")
Ratings	150# F: 1"-32" / W: 1"-8" 300# F: 1"-32" / W: 1"-8" 600# F: 1"	150# F: 1"-12" / W: 1"-10" 300# F: 1"-12" / W: 1"-8" 600# F: 1"-12"
Face to Face	ISA S75.08 / ASME B16.10 (1"-12")	W: 150-300# Flow-Tek std W: 600# & F (All): ISA S75.08

W = Wafer / F = Flanged



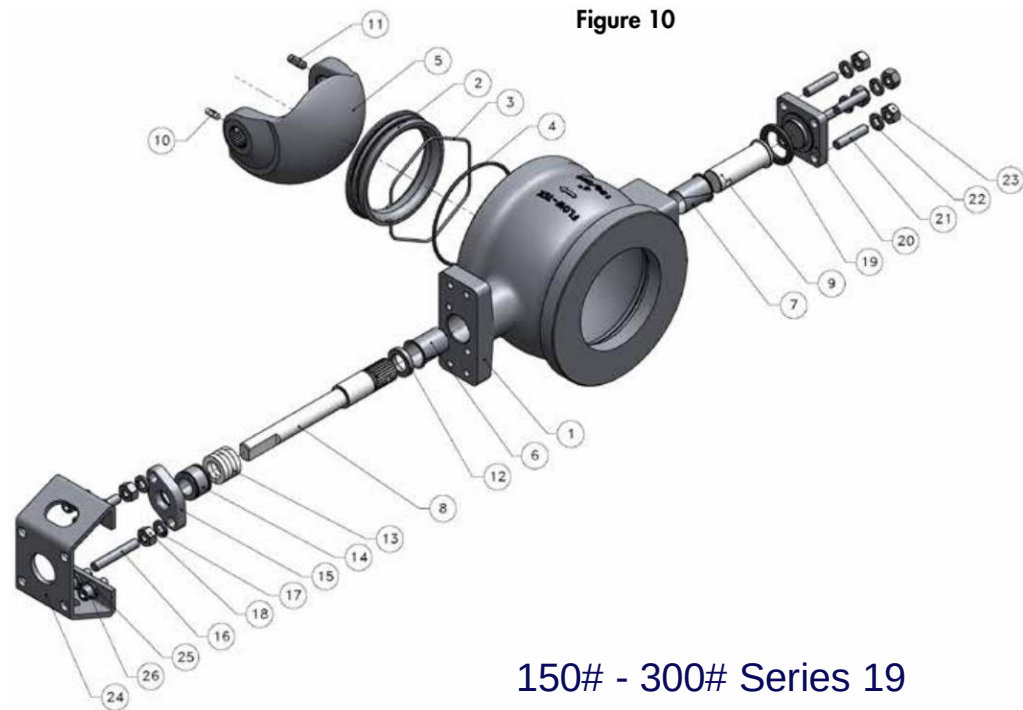
[Flow-Tek
Series 19
Technical Specifications](#)

R-Series Control Valves Competition

NELES

(Bray) Flow-Tek Series 19 Segmented Ball Valve

- Single Piece Body
- Splined Segment / Shaft Connection
- Anti-Blowout Shaft
- No Live Loading
- No Low Cv Options
- No Variable Attenuation



R-Series Control Valves Competition

NELES

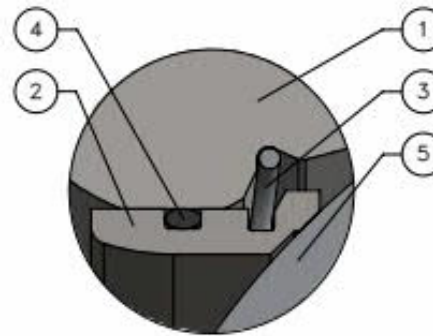
(Bray) Flow-Tek Series 19 Segmented Ball Valve

Metal Seat

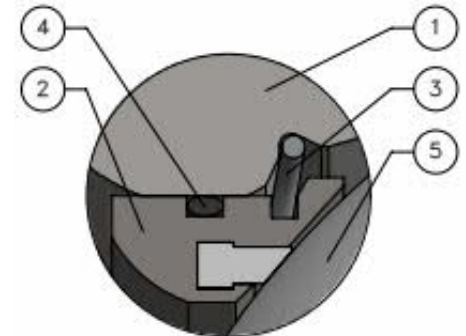
- Class IV Shut-Off
- -40...+260°C (-40...+500°F)

Soft Seat

- Class VI Shut-Off
- -40...+260°C (-40...+500°F)



Metal Seat



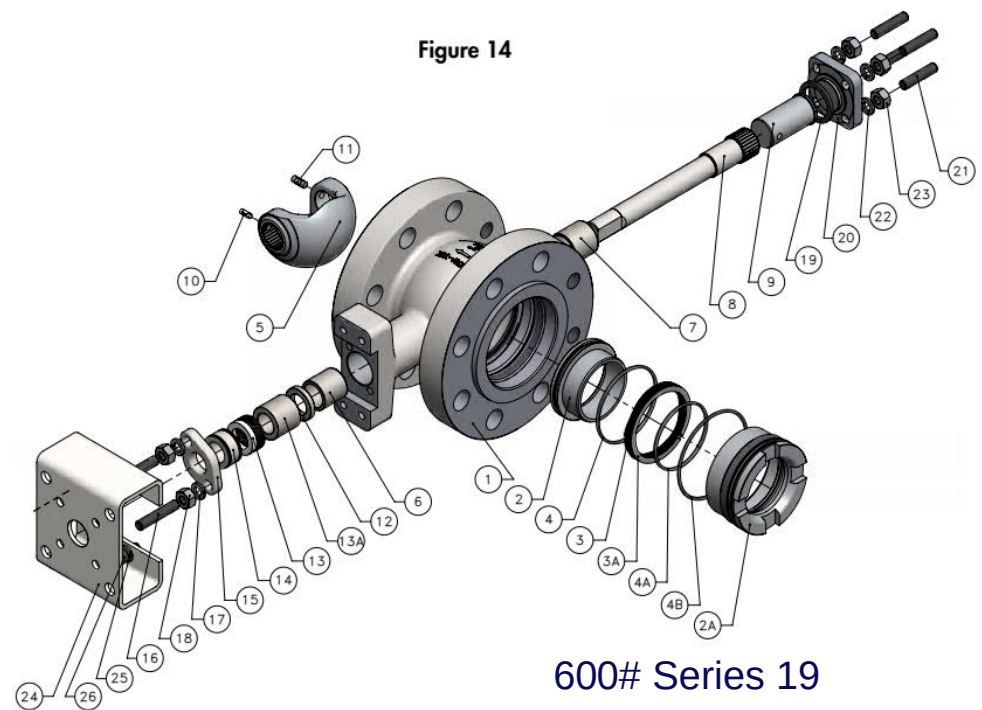
Soft Seat

R-Series Control Valves Competition

NELES

(Bray) Flow-Tek Series 19 Segmented Ball Valve

- Single Piece Body
- Splined Segment / Shaft Connection
- Anti-Blowout Shaft
- No Live Loading
- No Low Cv Options
- No Variable Attenuation



R-Series Control Valves Competition

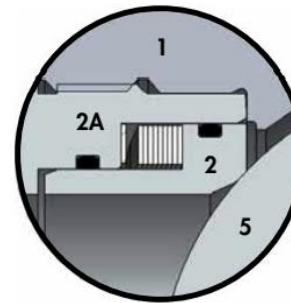
(Bray) Flow-Tek Series 19 Segmented Ball Valve

Metal Seat

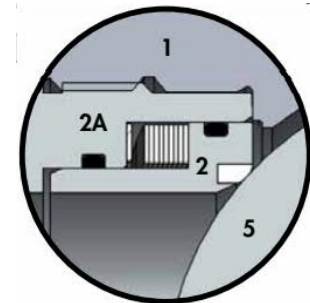
- Class IV Shut-Off
- -40...+260°C (-40...+500°F)

Soft Seat

- Class VI Shut-Off
- -40...+260°C (-40...+500°F)



Metal Seat



Soft Seat

R-Series Control Valves Competition

(Bray) Flow-Tek Series 19 Segmented Ball Valve - Links

- Brochures
 - [Sales Brochure](#)
- Product Bulletin
 - [Technical Bulletin](#)
 - [Model Number Selection Guide](#)
- Instruction Manual
 - [Maintenance Manual](#)

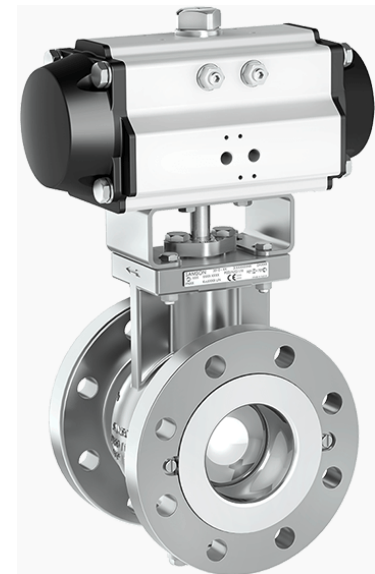


R-Series Control Valves Competition

NELES

Samson 3310 Segmented Ball Valve

	Neles R-Series	Samson 3310
Sizes	1" – 32"	1" – 12"
Temperature	-52...+425°C (-60...+800°F)	-46...+450°C (-51...+842°F)
Body types	Flanged (RE, RE13) Wafer (RE1, RA)	Flanged Only
Ratings	150# – 300# (600# in 1")	150# - 300#
Face to Face	ISA S75.08 / ASME B16.10 (1"–12")	ISA S75.08 / ASME B16.10 (150# Only)



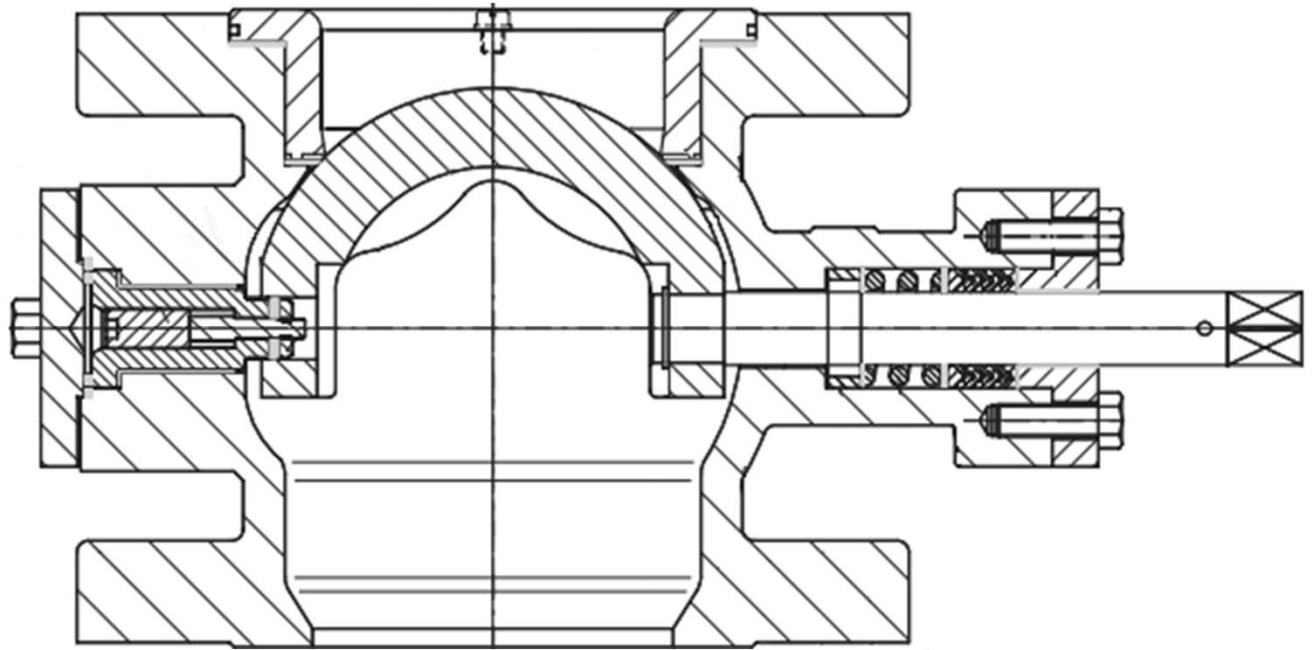
[Samson](#)
[3310](#)
[Technical Bulletin](#)

R-Series Control Valves Competition

NELES

Samson 3310 Segmented Ball Valve

- 2 piece body
- Snap Ring Segment / Shaft Connection
- No Anti-blowout shaft
- Live Loading Internally in Shaft Bore
- No Low Cv Options
- No Variable Attenuation



Samson 3310 Segmented Ball Valve

R-Series Control Valves Competition

NELES

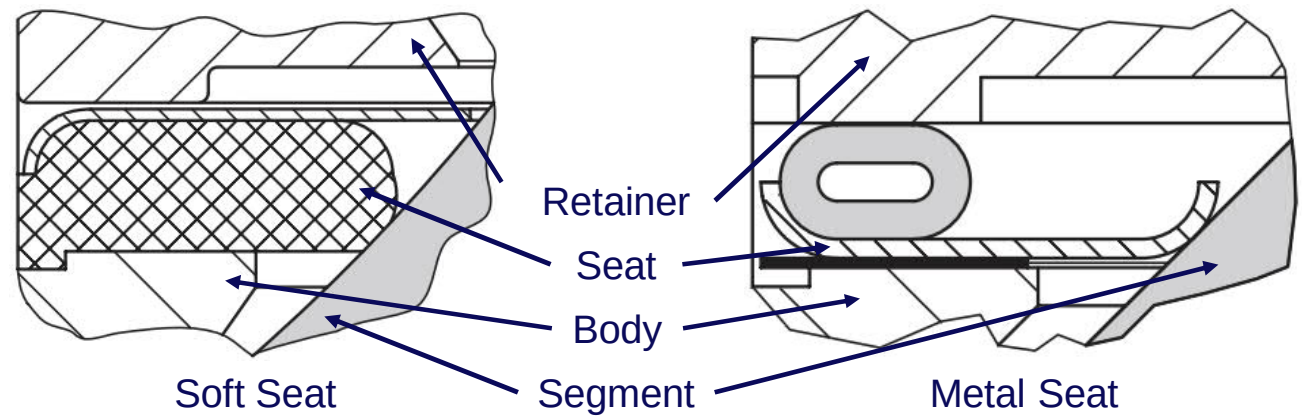
Samson 3310 Segmented Ball Valve

Metal Seat

- Class IV Shut-Off
- -10...+220°C (-14...+430°F)
- -46...+450°C (-51...+842°F) HT Ext.

Soft Seat

- Class VI Shut-Off
- -10...+220°C (-14...+430°F) Std



R-Series Control Valves Competition

Samson 3310 Segmented Ball Valve - Links

NELES

- Brochures
 - [Spare Parts](#)
- Product Bulletin
 - [Data Sheet T 8222 EN](#)
- Instruction Manual
 - [Mounting and Operating Instructions EB 8222 EN](#)



R-Series Control Valves Competition

Linuo V-Series Segment Ball Valve

NELES

	Neles R-Series	Linuo V-Series
Sizes	1" – 32"	1" – 16"
Temperature	-52...+425°C (-60...+800°F)	-29...+399°C (-20...+750°F)
Body types	Flanged (RE, RE13) Wafer (RE1, RA)	Flanged Wafer (1"-10")
Ratings	150# – 300# (600# in 1")	150#-300#
Face to Face	ISA S75.08 / ASME B16.10 (1"–12")	ISA S75.08



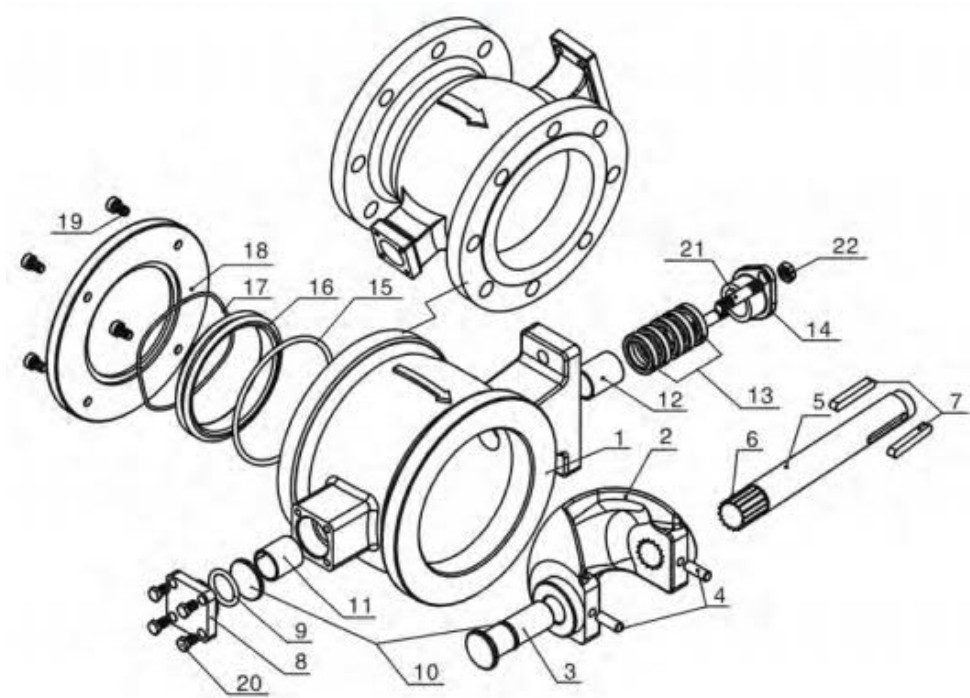
[Linuo
V-Series
Technical Bulletin](#)

R-Series Control Valves Competition

NELES

Linuo V-Series Segment Ball Valve

- Single Piece Body w/ Retainer
- Splined Segment to Shaft Connection
- No Anti-blowout shaft
- No Live Loading
- No Low Cv Options
- No Variable Attenuation



R-Series Control Valves Competition

NELES

Linuo V-Series Segment Ball Valve

Metal Seat

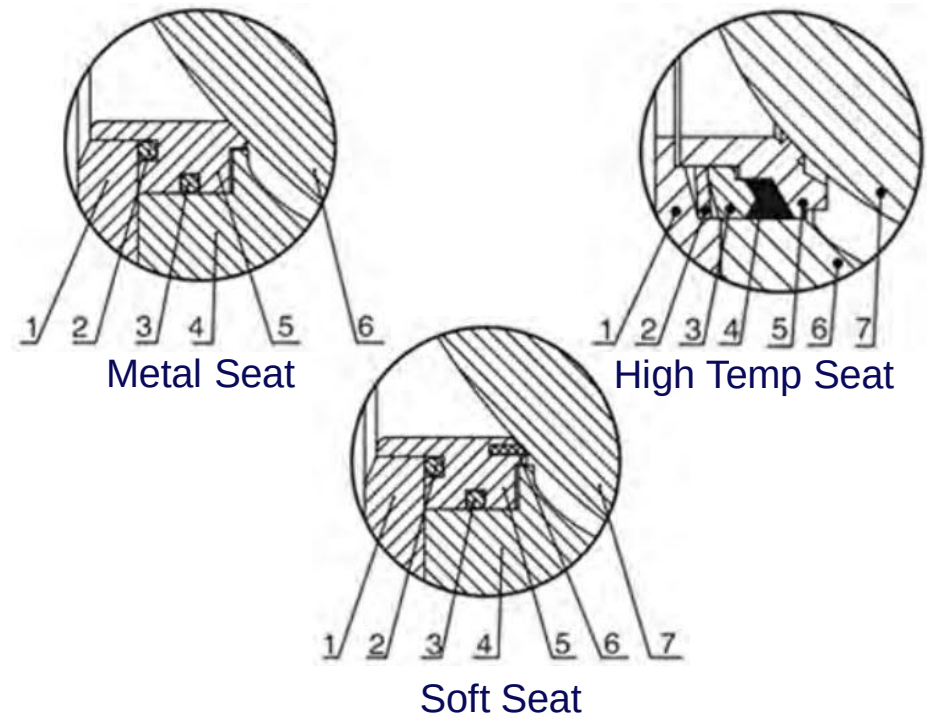
- Class IV Shut-Off
- -29...+205°C (-20...+400°F)

High Temp Seat

- Class IV Shut-Off
- -29...+399°C (-20...+750°F)

Soft Seat

- Class VI Shut-Off
- -29...+160°C (-20...+320°F)



R-Series Control Valves Competition

Linuo V-Series Segment Ball Valve

NELES

- Brochures
 - None Found
- Product Bulletin
 - [Segment Ball Valve](#)
- Instruction Manual
 - None Found
- Video
 - [Linuo USA Segment Control Valve](#)



Other Competitors

R-Series Control Valves Competition

A-T Controls V-Series V-Port Segment Control Valve - Links

A-T Controls

V-Series

- Product Bulletin
 - [Product Bulletin](#)
- Instruction Manual
 - [V-Segment Series](#)



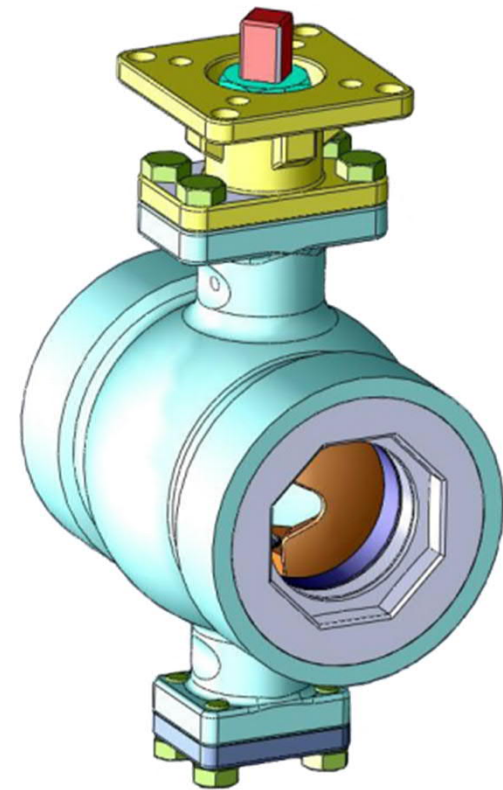
R-Series Control Valves Competition

J-Flow DM9900 Segmented Ball Valve - Links

J-Flow

DM-9900-Series

- Product Bulletin
 - [Flanged DM9900 Series](#)
 - [Wafer DM9900 Series](#)
 - [Flanged DM9900 Series with J-Trim](#)
 - [Wafer DM9900 Series with J-Trim](#)



R-Series Control Valves Competition

NELES

Valve Solutions Inc (VSI) Series V Segmented Ball Valve - Links

VSI Series V

- Product Bulletin
 - [Series V Segmented Ball Valve](#)



R-Series Control Valves Competition

Flo-Tite V-Ball Control Valve Series TB - Links

Flo-Tite V-Ball Control Valve

- Brochures
 - [Ball Valve Selection Guide](#)
- Product Bulletin
 - [Product Bulletin](#)
- Video
 - [Segmented Ball Valve Video](#)



R-Series Control Valves Competition

NELES

Mascot VFlo V-Notch Ball Valve - Links

Mascot
VFlo

- Product Bulletin
 - [Product Bulletin](#)



R-Series Control Valves Competition

Hiton VQF Series V-Port Segment Ball Valve - Links

NELES

[Hiton](#)
[VQF](#)

- Product Bulletin
 - [Product Bulletin](#)
- Product Video
 - [VQF Video](#)



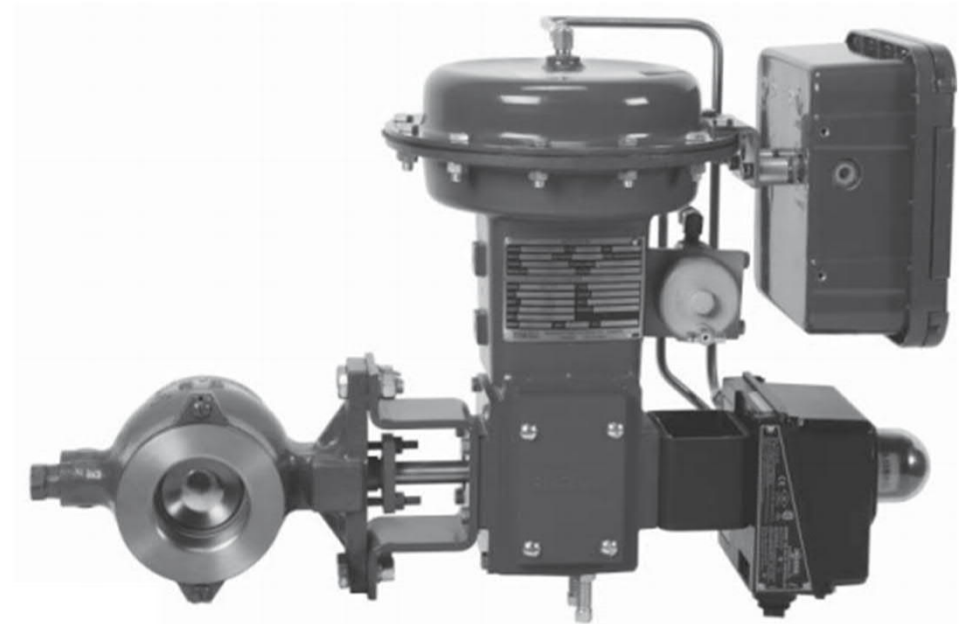
R-Series Control Valves Competition

NELES

Dyna-Flo Series 570, 571, 573 Segmented Ball Valve - Links

[Dyna-FLo](#) [Series 570](#)

- Product Bulletin
 - [Product Bulletin](#)
- Instruction Manual
 - [Instruction Manual](#)



R-Series Rotary Control Valves

R-Series V-Port Segment Valves

NELES

Features That Address Customer's Challenges

- Heavy duty single piece seat
 - Not affected by piping forces
- Single piece body w/ captured seat
- Standard live loading & anti-blowout shaft
- Application specific seat designs
- Q-Trim noise abatement trim
- Accurate low flow control with (5) 1" trim options



Contact us

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 - Steven.Hocurscak@neles.com
- Applications Engineering
 - apps.engineering@neles.com
- Area Sales Managers map
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