

Replacement of Fisher™ POSI-SEAL™ A31D Valve with Fisher 8580 & 8532 High-Performance Butterfly Valves

Table of Contents

- Management of Change2
- Background2
- Question & Answer Checklist2
- Comparison of POSI-SEAL A31D to 8580 & 8532 Valve4
 - Scope, Size, and Class 4
 - Capacity 4
 - Actuator Sizing 4
 - Face-to-Face Dimensions 5
 - Actuator Mounting Dimensions 5
 - Shaft Size 7
- Conclusion8



X1429

Fisher 8580 Valve Double Flanged Style

Management of Change

Management of Change (MOC) is a procedure used to proactively manage changes that have the potential to impact safety or the process within a plant. Evaluating new techniques for improving MOC approval procedures can have an impact on plant efficiency. Historically, upgrading obsolete products or replacing existing process control equipment had been delayed or abandoned due to the extensive paperwork involved in completing a complex MOC approval sheet.

Background

The Fisher 8580 and 8532 valves are now available in the double flanged body style. These configurations of 8580 and 8532 valves can fully replace the Fisher POSI-SEAL A31D valve NPS 3 – 24 CL150 and 300. The soft seal option for the A31D will be made obsolete, leaving the NOVEX and Phoenix III seals still available. The 8580 valve covers sizes NPS 3 – 12 and the 8532 valve covers sizes 14 – 24. This is part of a continuing effort to consolidate the Fisher High-Performance Butterfly Valve (HPBV) product offering.

The Fisher 8580 Double Flanged valve is a new product that is an extension of the 8580 valve with all the same features and options. It does not have the same Cv, mounting, spare parts, etc. The Fisher 8532 is identical to the NPS 14 – 24 A31D valve.

Question & Answer Checklist

- 1** **Q:** Does the proposed modification cause any changes to the piping and instrumentation diagram (P&ID)?
A: Maybe. Actuator size & type could change.

- 2** **Q:** Does the proposed modification change process chemistry, technology, or operating and control philosophies?
A: Maybe. Could change the actuator type and/or size.

- 3** **Q:** Does the proposed modification change how the existing plant is operated?
A: Maybe. Actuation changes could affect plant operation.

- 4** **Q:** Does the proposed modification change process flows?
A: Yes. CVs change for 8580. Please see Catalog 12 Section 1.

- 5** Q: Does the proposed modification change existing pressure relief cases?
A: No.
- 6** Q: Does the proposed modification change the process description?
A: No.
- 7** Q: Have the codes and standards to which the new equipment was designed changed?
A: No.
- 8** Q: Does the proposed modification change the materials of construction, such as a change in material form (cast, forged, or alloy)?
A: Yes. Standard materials are different for 8580. See the product bulletin.
- 9** Q: Does the proposed modification introduce new equipment items that require periodic predictive maintenance?
A: No. The new equipment items will require the same periodic maintenance as required by the previous equipment items.
- 10** Q: Does the proposed modification change existing operator training requirements?
A: No.
- 11** Q: Does the proposed modification introduce new equipment items that require spare parts, training manuals, maintenance procedures or training to teach the maintenance department how to maintain them?
A: Yes. 8580 is different than the 8532/A31D. See the instruction manual.
- 12** Q: Does the proposed modification introduce new equipment items that require spares or obsolete spares for existing equipment?
A: Yes. Spare parts will be different for the 8580.
- 13** Q: Does the proposed modification permanently remove the spares for existing pieces of equipment?
A: Yes. Spare parts will be different for the 8580.

14 Q: Does the proposed modification change the inspection scope or inspection interval?

A: No.

15 Q: Does the proposed modification require welding work to be performed?

A: No.

16 Q: Have the materials of construction been reviewed to ensure that the metallurgy is correct?

A: Yes.

POSI-SEAL A31D and 8580 & 8532 Valve Comparison

The following sections are intended to provide a nominal comparison between the Fisher POSI-SEAL A31D valve and the Fisher 8580 & 8532 valves.

Scope, Size, and Class

Sizes NPS 3 – 24 CL150 and 300 of the A31D valve will be made obsolete and replaced with the 8580 and 8532 valves in equivalent size and class. The 8580 valve covers NPS 3 – 12 and the 8532 valve covers NPS 14 – 24.

Capacity (Cv)

The flow capacity of the A31D valve is not equivalent to the 8580 valve. However, the A31D and 8532 have identical flow coefficients. Please see Catalog 12 Section 1.

Actuator Sizing (Torque)

The actuator sizing for the A31D valve and 8532 valve is the same. The sizing coefficients, breakout torque, and dynamic torque are also the same.

The actuator sizing for the A31D and 8580 are different. Please see Catalog 14 Sections C & D.

Face-to-Face Dimensions

The 8580 & 8532 valves have the same face-face as the A31D valve.

Actuator Mounting Dimensions

The NPS 3 - 12 A31D has slightly different mounting dimensions than the 8580

The NPS 14 - 24 A31D has the same mounting dimensions as the 8532.

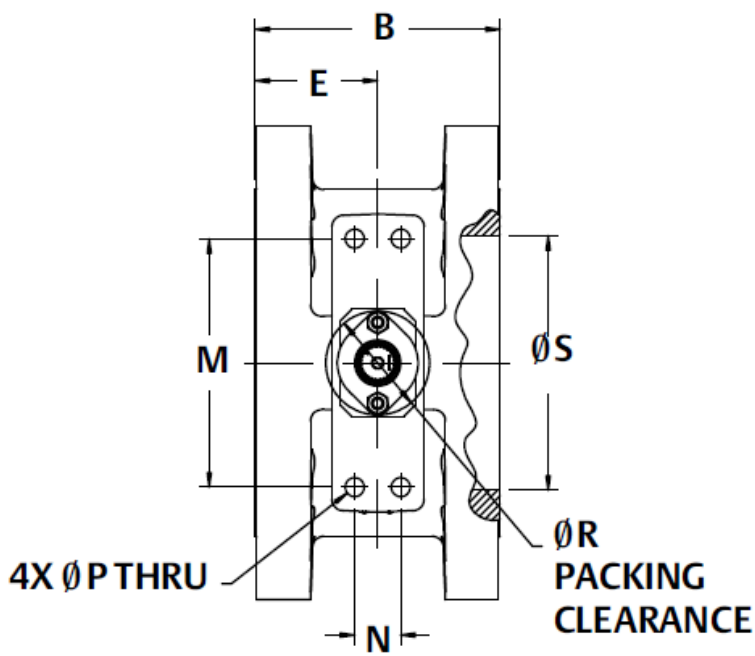


Figure 1. Fisher POSI-SEAL A31D

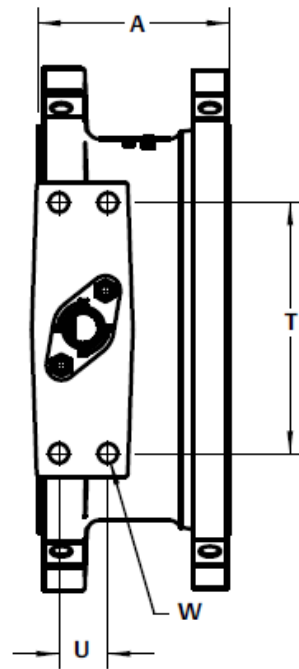


Figure 2. Fisher 8580 Double Flanged Style

CL150, Double-Flanged							
Valve Size		M	T	N	U	P	W
		A31D	8580	A31D	8580	A31D	8580
NPS 3	mm	117	117	-	-	14.2	14
	inch	4.62	4.62	-	-	0.56	0.55
NPS 4	mm	117	152	-	32	14.2	14
	inch	4.62	6	-	1.25	0.56	0.55
NPS 6	mm	152	152	31.8	32	14.2	14
	inch	6.00	6	1.25	1.25	0.56	0.55
NPS 8	mm	152	235	31.8	46	14.2	18
	inch	6.00	9.25	1.25	1.81	0.56	0.71
NPS 10	mm	235	235	46.0	46	17.5	18
	inch	9.25	9.25	1.81	1.81	1.81	0.71
NPS 12	mm	235	235	46.0	46	17.5	18
	inch	9.25	9.25	1.81	1.81	1.81	0.71

CL300, Double-Flanged							
Valve Size		M	T	N	U	P	W
		A31D	8580	A31D	8580	A31D	8580
NPS 3	mm	117	117	-	-	14.2	14
	inch	4.62	4.62	-	-	0.56	0.55
NPS 4	mm	117	152	-	32	14.2	14
	inch	4.62	6	-	1.25	0.56	0.55
NPS 6	mm	152	152	31.8	32	14.2	14
	inch	6.00	6	1.25	1.25	0.56	0.55
NPS 8	mm	235	235	46.0	46	17.5	18
	inch	9.25	9.25	1.81	1.81	0.69	0.71
NPS 10	mm	235	235	46.0	46	17.5	18
	inch	9.25	9.25	1.81	1.81	0.69	0.71
NPS 12	mm	273	235	50.8	46	20.6	18
	inch	10.75	9.25	2.00	1.81	0.81	0.71

Shaft Size

The NPS 14 – 24 A31D has the same shaft size dimensions as the 8532. The 8580 valve uses the Fisher style F mounting pattern and a spline shaft, as standard, which will mount easily to Fisher actuators. Square is a shaft option that is available for mounting ISO 5211 actuators. The 8580 valve does not have a keyed shaft option as the A31D did.

CL150, Double-Flanged												
Valve Size	Spline Diameter				Square Size				Keyed Diameter			
	A31D		8580		A31D		8580		A31D		8580	
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
NPS 3	14.3	0.56	15.9	0.63	-	-	11	0.43	14.3	0.56	-	-
NPS 4	15.9	0.63	19.1	0.75	-	-	14	0.55	17.5	0.69	-	-
NPS 6	22.2	0.88	25.4	1.00	-	-	19	0.75	23.8	0.94	-	-
NPS 8	22.2	0.88	31.8	1.25	-	-	22	0.87	23.8	0.94	-	-
NPS 10	28.4	1.13	31.8	1.25	-	-	22	0.87	28.6	1.13	-	-
NPS 12	31.8	1.25	38.1	1.50	-	-	27	1.06	31.8	1.25	-	-

CL300, Double-Flanged												
Valve Size	Spline Diameter				Square Size				Keyed Diameter			
	A31D		8580		A31D		8580		A31D		8580	
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
NPS 3	14.3	0.56	15.9	0.63	-	-	11	0.43	14.3	0.56	-	-
NPS 4	15.9	0.63	19.1	0.75	-	-	14	0.55	17.5	0.69	-	-
NPS 6	22.2	0.88	25.4	1.00	-	-	19	0.75	23.8	0.94	-	-
NPS 8	31.8	1.25	31.8	1.25	-	-	22	0.87	31.8	1.25	-	-
NPS 10	38.1	1.50	31.8	1.25	-	-	22	0.87	41.3	1.63	-	-
NPS 12	44.5	1.75	38.1	1.50	-	-	27	1.06	47.6	1.88	-	-

Table 3. Shaft Size

Spare Parts

The A31D valve and 8532 valve use all the same trim parts, including seals, gaskets, and bearings. The 8532 valve is available with both standard and ENVIRO-SEAL packing.

The packing parts of the 8580 and A31D valves are not interchangeable. They do not share the same spare parts.

Conclusion

Emerson now offers the Fisher 8580 and 8532 valves with the Double Flanged body style option as a replacement for the obsolete Fisher POSI-SEAL A31D valve. With this change, Emerson offers a simplified line of Fisher butterfly valves, while maintaining full application coverage.

Please contact your local Emerson business partner or sales office for additional details or questions regarding the Fisher 8580 and 8532 valves.



Visit [Fisher.com](http://www.Fisher.com) to find an Emerson sales contact in your area.



<http://www.Facebook.com/FisherValves>



<http://www.YouTube.com/user/FisherControlValve>



<http://www.Twitter.com/FisherValves>



<http://www.Linkedin.com/groups/Fisher-3941826>

© 2018 Fisher Controls International LLC. All rights reserved.

Fisher and FIELDVUE are marks owned by one of the companies in the Emerson Automation Solutions business unit of Emerson Electric Co. Emerson and the Emerson logo are trademarks and service marks of Emerson Electric Co. All other marks are the property of their respective owners.

The contents of this publication are presented for informational purposes only, and while every effort has been made to ensure their accuracy, nothing herein is to be construed as a warranty or guarantee, express or implied, regarding the products or services described herein or their use, performance, merchantability or fitness for a particular purpose. Individual results may vary. All sales are governed by our terms and conditions, which are available upon request. We reserve the right to modify or improve the designs or specifications of our products at any time without notice. Responsibility for proper selection, use and maintenance of any product or service remains solely with the purchaser and end user.

Emerson Automation Solutions

Marshalltown, Iowa 50158 USA
Sorocaba, 18087 Brazil
Cernay, 68700 France
Dubai, United Arab Emirates
Singapore 128461 Singapore