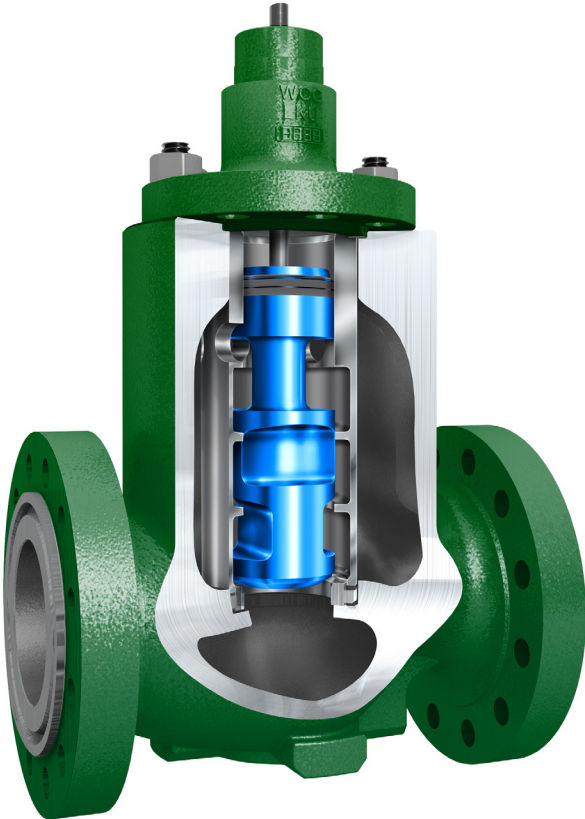


Fisher™ NotchFlo™ DST Control Valves

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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

With an installed base over one thousand units, the Fisher NotchFlo DST control valve has proven to be the valve of choice for critical service applications containing entrained particulate. In many cases the Fisher NotchFlo DST outperforms existing control valves by providing improved control and reliability for critical service valve applications. The purpose of this document is to simplify the transition from existing control valve technologies, which are beyond their service life or no longer provide the control and reliability required, to the proven reliable Fisher NotchFlo DST.

Contained in this document are two sections. First there is a Question and Answer section to help end users complete Management of Change approval documents when upgrading to a Fisher NotchFlo DST control valve. Then there is a side by side comparison of the Fisher NotchFlo DST and the Masoneilan LincolnLog. In this section, in addition to the similarities between these two valves, you will see a number of advantages the NotchFlo DST design has compared to the LincolnLog design. These comparisons demonstrate how the NotchFlo DST can allow users to safely and efficiently replace existing problematic control valves for critical service applications.

Question & Answer Checklist

- 1 Q:** Does the proposed modification cause any changes to the piping and instrumentation diagram (P&ID)?

A: No. There will be no change in the existing P&IDs.
- 2 Q:** Does the proposed modification change process chemistry, technology, or operating and control philosophies?

A: No.
- 3 Q:** Does the proposed modification change how the existing plant is operated?

A: No.

- 4** Q: Does the proposed modification change process flows?
A: No. The modification doesn't change the process flow direction.
- 5** Q: Does the proposed modification change the process description?
A: No.
- 6** Q: Have the codes and standards to which the new equipment was designed changed?
A: No.
- 7** Q: Have the operating and design conditions (flow, temperature, pressure, process fluids) of the proposed modification 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: Not generally, but there are certain isolated cases, where the material form (cast to forged bodies) changes. Be sure to review trim material comparison thoroughly to assure there are no compatibility issues.
- 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 old equipment items.
- 10** Q: Does the proposed modification change existing operator training requirements?
A: Yes. The Emerson network of Local Business Partners offers local training and support to ensure operators; maintenance personnel, and instrument technicians are fully trained on the Fisher NotchFlo DST control valve.
- 11** Q: Does the proposed modification change existing pressure relief cases?
A: No, as long as the replacement selection doesn't exceed the maximum rated C_v of the existing valve.

- 12 Q:** Does the proposed modification introduce new equipment items that require spare parts, training manuals, maintenance procedures or training to maintenance department?
- A:** Yes. The new equipment items require spare parts, training manuals, maintenance procedures, and training to maintenance department that are specific to the new Fisher equipment items.
- 13 Q:** Does the proposed modification permanently remove the spares for existing pieces of equipment?
- A:** Yes. The spare parts of the existing equipment items have to be removed from the plant.
- 14 Q:** Does the proposed modification require welding work to be performed?
- A:** No, unless the existing and new valve have welded end connections.
- 15 Q:** Does the proposed modification change the inspection scope or inspection interval?
- A:** No.

Fisher NotchFlo DST and Masoneilan LincolnLog Valve Comparison

Even though NotchFlo DST and LincolnLog look physically similar, there are certain key differences and advantages in the design of the NotchFlo DST valve. This section provides insight on the differences between the two valves.

Face-to-Face Dimensions

The globe NotchFlo DST valve has same face-to-face dimensions as that of LincolnLog. The table below is an example of few sizes of the NotchFlo and LincolnLog.

Valve Size	Face-to-Face Dimensions (inches)	
	NotchFlo	LincolnLog
2	14.75	14.75
3	18.12	18.12
4	20.88	20.88

Table 1. Face to Face Dimension (in inches) of CL1500 NotchFlo DST and LincolnLog

The angle NotchFlo DST valve is more compact when compared to LincolnLog. However, in case of MRO replacements, if customer could not change their piping, or accept spool pieces, forged NotchFlo DST valve with special face to face dimensions can be offered to meet the customer piping requirements.

Allowable Particle Size

The main issue that needs to be addressed in the dirty service is clogging due to the particles present in the service. For a given valve size, the Fisher NotchFlo DST can pass larger debris when compared with Masoneilan LincolnLog. The table below shows the particle size as claimed by the manufacturer that NotchFlo DST and LincolnLog can pass.

Valve Type	Valve Size (NPS)					
	1	2	3	4	5	6
Fisher NotchFlo DST	0.12	0.24	0.33	0.43	0.46	0.92
Masoneilan LincolnLog	0.1	0.2	0.3	0.4	0.45	0.8

Table 2. Maximum particle size (in inches) that NotchFlo DST and LincolnLog could pass

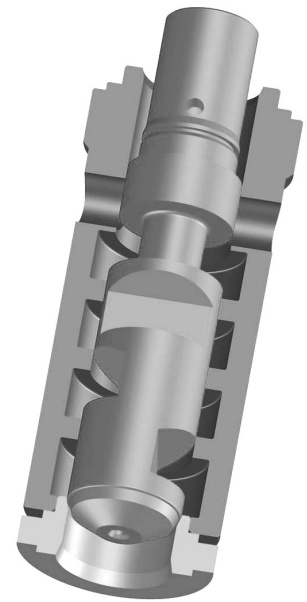


Figure 1. NotchFlo Plug

Weight

On average, a NotchFlo DST valve is 25% lighter than a LincolnLog valve.

Valve Performance with Positioner

The Fisher NotchFlo DST valve with the FIELDVUE™ digital valve controller offers superior performance when compared to the Masoneilan LincolnLog valve with SVI® II AP positioner. With over one million FIELDVUE digital valve controllers sold, its state-of-the-art technology combined with the NotchFlo DST valve provides complete control over the process.

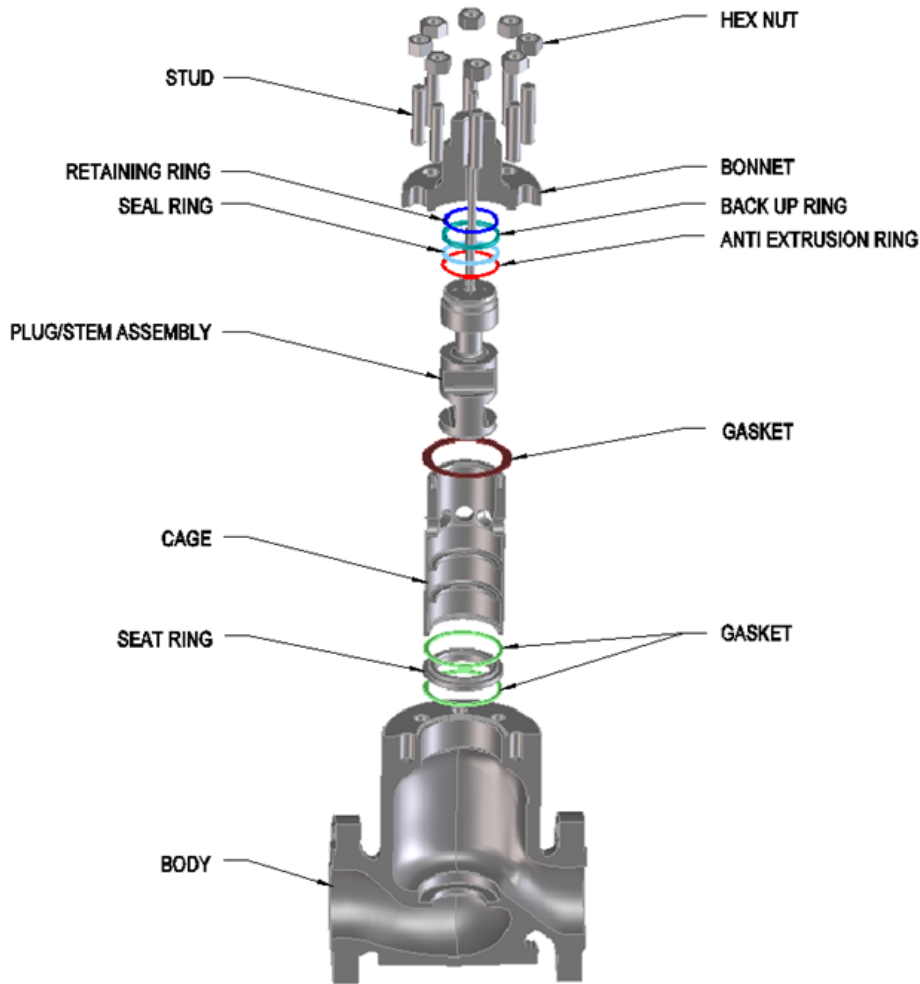


Figure 2. Exploded View of NotchFlo Valve

Trim Materials

The Fisher NotchFlo DST valve has several trim options as shown in table 3. It can be offered with trim materials matching existing Masoneilan LincolnLog installations. The Fisher NotchFlo DST valve can also be offered with trim materials that are superior to Masoneilan LincolnLog trim materials. The table below shows the trim materials that are offered in standard and NACE services.

Trim	Standard Construction		NACE Construction	
	NotchFlo	LincolnLog	NotchFlo	LincolnLog
Cage	17-4 PH H1075	17-4 PH H900	Nitronic 50	Nitronic 50
Plug	S44004 (440C)	410 SST	17-4 PH DBL H1150	17-4 PH H1150M
Seat Ring	S44004 (440C)	316 Hardfaced	316 Hardfaced	316 Hardfaced
Stem	S20910 (Nit 50)	17-4 PH H1075	S20910 (Nit 50)	S20910 (Nit 50)

Table 3. Trim Materials of NotchFlo DST and LincolnLog

Conclusion

Reliable Fisher control valves have been used in the process control industry for more than 130 years. With a superior design, the Fisher NotchFlo DST control valve offers multiple advantages that allow the user to transition from existing problematic control, avoiding lengthy MOC approval documents.

Additional Resources

[Product Bulletin: NotchFlo DST Valve](#)

[Instruction Manual: NotchFlo DST Valve](#)

[Webpage: NotchFlo DST Valve](#)

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

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

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

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

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