

the Repair GUYS



BACKFLOW PREVENTION

Model 825 Seat Removal Tool



In our line of work, we field questions from contractors and technicians concerning repairs, installations, and general backflow prevention practices. We'd like to share some questions we receive and our answers. Everyone has different opinions on these subjects and we would like to hear yours. Contact us with your questions and ideas via email at: imark@backflowparts.com or mail us at American Backflow Products Co., Post Office Box 37025, Tallahassee, FL 32315.

- Mark Inman and Jason Gregg

QUESTION —

I have a badly damaged check valve seat in a 6-inch Febco reduced pressure principle assembly that needs to be replaced. I know the assembly is fairly old. I am not certain, but I think that it may be a Model 825. Are there any special tools required to replace the seats on this model?

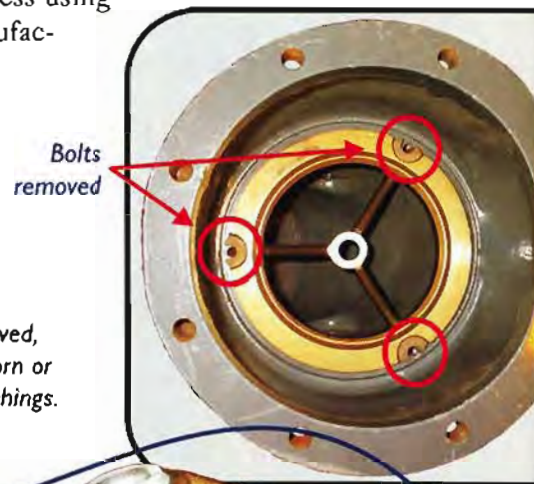
Mark -

Well, first we need to make sure of the correct model number to verify the type of seat and if a special tool is required for removal. Febco has three different models of the 825 series. They are the models 825, 825D, and the 825YD. The two main differences between these models are in the seats and relief valves. The model number will help indicate if the seat is threaded or bolted into the check valve body. Lets take a minute to look at the major differences concerning the assemblies and the check valve seats.

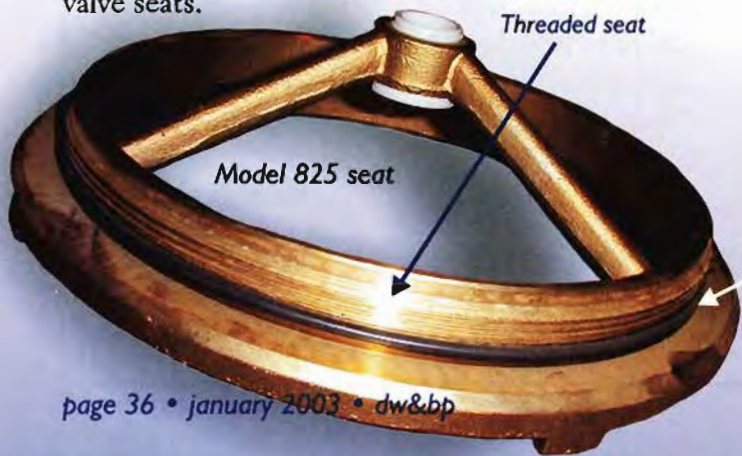
- Jason

The model 825 began production in 1975 and was discontinued in 1988. Prior to that, Bailey valves had check valve bodies constructed of cast iron with an epoxy coating to help inhibit rusting. The check valve seats are replaceable on this model, but you'll need a seat removal tool, because they are threaded into the assembly body. The check valve seats thread into the body clockwise and are sealed by an O-ring.

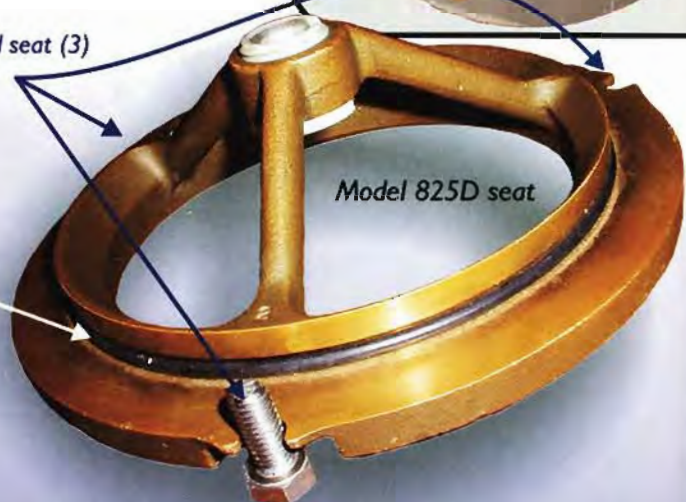
Febco does not offer a seat removal tool but gives specifications on how to build one. Some of the seat tools can be easily made from schedule 80 PVC pipe. Depending on the condition of the body, size, and age of the assembly, the seat may be a little harder to remove. You will probably have better success using steel pipe to manufacture a tool. We have included the tool specifications for building the seat removal tool on the next page.



Once removed, check for worn or damaged bushings.



Bolted seat (3)



Avoid damaging the seat by making sure the tool's 3 notches are fully engaged before applying any torque to turn.

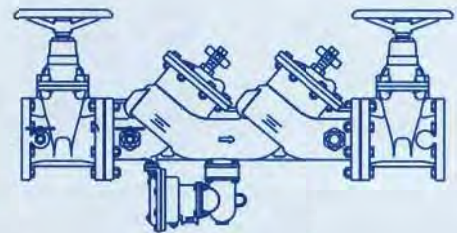
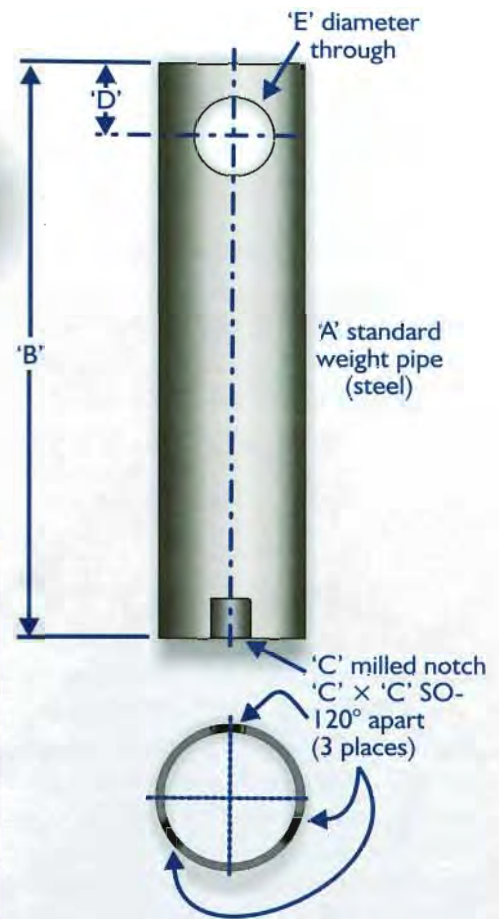


The hole allows the user to pass through a piece of rod stock to use as a handle.



Seat Ring Tool
Dimensions (inches)

VALVE SIZE	A	B	C	D	E
1½	1½	6	3/8	3/4	3/4
2	1½	6	3/8	3/4	3/4
2½	2½	8	1/2	1	1
3	3	8	1/2	1	1
4	4	9	1/2	1	1
6	6	10	5/8	1	1
8	8	12	5/8	1	1
10	8	12	5/8	1	1



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Mark -


The Model 825D was produced between 1988 and 1989, following the Model 825. The 6-inch size of the 825 and the 825D share all of the same rubber parts except for the cover O-rings because of a change in the construction of the device body. The Model 825D had a body made of ductile iron which allowed a change in the seat design. The check valve seats in the 825D are bolted into the body as opposed to threaded into the body. The check seats are sealed with an o-ring and held into place by three 5/16-inch stainless bolts and flat washers. No special tools are required to remove the check valve seats on the 825D. Simply remove the bolts and pull the seat straight out of the body.

- Jason

The next in this series to be produced was the 825YD. The difference between the 825D and the 825YD would be a change in the relief valve design. The 825YD device body was also constructed of ductile iron, allowing the seats to be bolted into the body. The check seats are sealed with an o-ring and held into place by three - 5/16-inch stainless bolts and flat washers. No

special tools are required to remove the check valve seats on the model 825YD. Simply remove the bolts and pull the seat straight out of the body. Always remember to apply some food grade lubricant to the o-ring to help the O-ring slide into place and not get pinched while you are installing the new seat.



Thanks to The Dillon Company, Denver, CO for assistance with this article. 

Fact 3:

Backflow Software that lets you name the fields.

You, the user, can easily change the data screen field names - customize your software /creatively track non-backflow* information.

- * Water Meter Testing
- * Grease Trap Inspection
- * Hydrant Flow
- * Industrial Pre-treatment
- * Fire Line Inspection
- * Private Hydrant Tracking
- * All modules are included in the Navigator.

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