SPECIFICATION SHEET

Series 825YD

Reduced Pressure Zone Assemblies

Size: 2½" - 10" (65mm - 250mm)



825YD

The FEBCO Series 825YD Reduced Pressure Zone Assemblies are used to protect against high hazard (toxic) fluids in water services to industrial plants, hospitals, morgues, mortuaries, and chemical plants. They are also used in irrigation systems, boilerfeed, water lines and other installations requiring maximum protection.

Features

- The DuraCheck features all stainless steel check assemblies for corrosion resistance, reduced fouling and longer valve life.
- DuraCast ductile iron body for superior strength, corrosion resistance and lighter weight.
- Ultimate mechanical protection of potable water against hazards of cross-connection contamination.
- Meets all specifications of AWWA, ASSE, the Foundation for Cross Connection Control and Hydraulic Research at the University of Southern California, and UL classified for fire sprinkler service.
- Documented flow curves established by University of Southern California Foundation for Cross-connection Control and Hydraulic Research.
- All bronze modular relief valve for ease of maintenance.
- End Detail – 2½" - 10" (65 - 250mm) Flanged ANSI B16.1

Specifications

Reduced pressure backflow preventer assemblies shall consist of two independent "Y" configured check valves and one differential relief valve.

By design, the assembly shall automatically reduce the pressure in the zone between the check valves. Should the differential between the zone and upstream pressure drop to 2psi, the differential relief valve will open, maintaining proper zone differential.

Valve bodies and cover shall be manufactured of ductile iron ASTM A536, Grade 65-45 12, Ductile iron bodies shall be flanged, ANSI B16.1, Class 125, epoxy coated.

The assembly shall be constructed so all internal parts, including seat rings, can be serviced from the top or side or removed while assembly is in line. The assembly shall be rated 175psi (12.1 bar) MWWP.

Relief valve assembly shall be of a modular design for ease of maintenance.

The assembly shall meet or exceed requirements of ASSE standard 1013, AWWA standard C511, and the USC Foundation for Cross-Connection Control and Hydraulic Research at the University of Southern California.

Reduced pressure backflow preventer assemblies shall be FEBCO 825YD, or prior approved equal.

Operation

In a flow condition, the check valves are open with the pressure between the checks, called the zone, being maintained at least 5.0psi (34.5 kPa) lower than the inlet pressure and the relief valve is maintained closed.

Should abnormal conditions arise under no flow or reversal of flow, the differential relief valve will open and discharge to maintain the zone at least 2psi lower than the supply. In resumption of normal flow, the zone's differential pressure will resume and the relief valve will close.

Pressure – Temperature

Maximum Working Pressure:	175psi (12.1 bar)
Hydrostatic Test Press:	350psi (24.1 bar)
Temperature Range:	32ºF to 140ºF (0ºC to 60ºC)

Materials

Main Valve Body:	Ductile iron grade 65-45-12 fusion epoxy coated internal and external
Main Valve Trim:	Bronze
Internal Check Assembly:	Stainless Steel
Relief Valve Body and Trim:	Bronze
Elastomers:	Nitrile
Diaphragms:	Nitrile, fabric reinforced
Springs:	Stainless Steel
Internal Check Assembly:	Stainless Steel
Shutoffs:	Non-rising stem, resilient seated gates

Models

- OS&Y Gate Valves
- Left Handed Relief Valve
- NRS Gate Valves
- Less Gates

Job Name _____ Contractor _____

Job Location _____ Approval _____

Engineer _____ Contractor's P.O. No. _____

Approval _____ Representative _____

FEBCO product specifications in U.S. customary units and metric are approximate and are provided for reference only. For precise measurements, please contact FEBCO. FEBCO reserves the right to change or modify product design, construction, specifications, or materials without prior notice and without incurring any obligation to make such changes and modifications on FEBCO products previously or subsequently sold.

Approvals

- Approved by the Foundation for Cross-Connection Control and Hydraulic Research at the University of Southern California.*
- ANSI/AWWA Conformance (C511-89)
- ULC Listed (2½", 3", 6"-10")

1013 B64.4

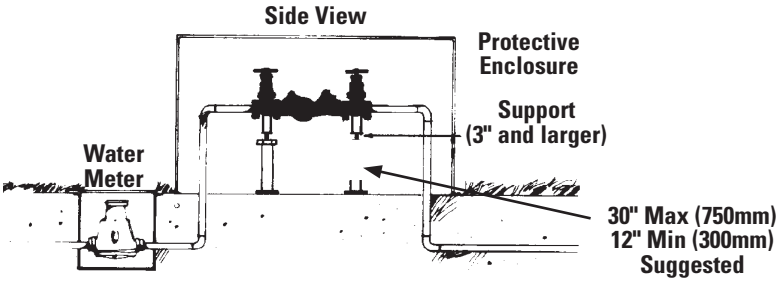
* Valves must be supplied with resilient seated shutoff valves for USC approvals to be in effect. Standard Meter is GPM. UL and FM Listings only applicable with approved OS&Y gates.

Typical Installation

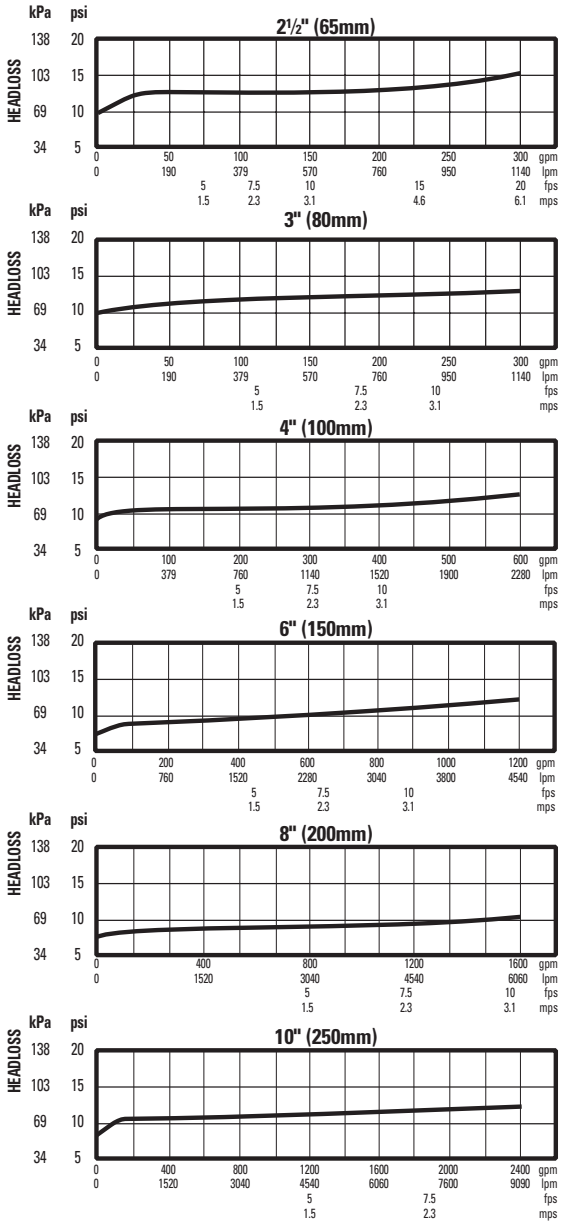
Reduced Pressure Backflow Preventers should be installed with a suggested minimum clearance of 12" (300mm) between port and floor or grade. They must be installed where any discharge will not be objectionable and can be positively drained away. They should be installed where easily accessible for testing and maintenance and must be protected from freezing. Larger sizes should have support blocks to prevent flange damage. Thermal water expansion and/or water hammer down stream of the Backflow Preventer can cause excessive pressure. Excessive pressure situations should be eliminated to avoid possible damage to the system and assembly.

NOTICE

The gap drain is not designed to catch the maximum discharge possible from the relief valve. The installation of FEBCO air gap with the drain line terminating above a floor drain will handle any normal discharge or nuisance spitting through the relief valve. However, floor drain size may need to be designed to prevent water damage caused by a catastrophic failure condition. Do not reduce the size of the drain line from the air gap fitting.



Capacity

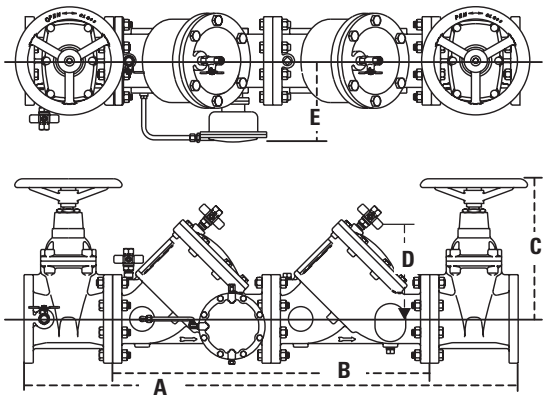


Dimensions – Weights

Size: 2½" - 10" (65 - 250mm)

SIZE (DN)		DIMENSIONS										WEIGHT	
		A		B		C*		D		E			
in.	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*in.*	*mm*	*lbs.*	*kgs.*
2½	65	37 3/16	945	22 1/16	560	12 5/8	321	7½	191	11	279	178	80.7
3	80	41 11/16	1059	25 9/16	649	12 7/8	327	8 1/16	205	12	305	213	96.6
4	100	50 7/16	1281	32 5/16	821	14 3/8	365	11	279	13	330	360	163.3
6	150	59 11/16	1516	38 9/16	980	18 7/8	479	14	356	15	381	601	272.6
8	200	69 3/16	1757	46 1/16	1170	23½	597	18	457	16	406	892	404.6
10	250	84 3/16	2138	58 1/16	1475	27½	699	22	559	17	432	1593	722.6

* Applies to NRS gated units only.
Dimensions shown are nominal, allowance must be made for normal manufacturing tolerances.



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