

709 OSY

## Series 709 Double Check Valve Assemblies

Sizes: 2½" – 10"

### MODELS

Suffix:

- NRS – non-rising stem resilient seated gate valves
- OSY – UL/FM outside stem and yoke resilient seated gate valves
- S-FDA – FDA epoxy coated strainer
- BB – bronze body - 2½" – 3" (64 – 76mm)
- QT – quarter-turn ball valves
- QT-FDA – FDA epoxy coated ball valve shutoffs
- LF – without shutoff valves

### FEATURES

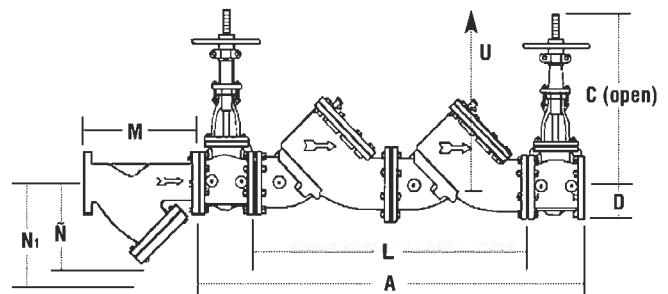
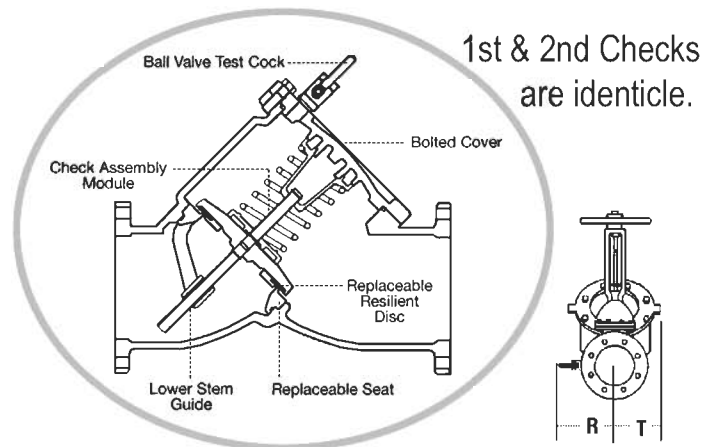
- Replaceable bronze seats
- Maximum flow at low pressure drop
- Design simplicity for easy maintenance
- No special tools required for servicing
- Captured spring assemblies for safety
- Approved for vertical flow up installation

### DESCRIPTION

Series 709 Double Check Valve Assemblies are designed to prevent the reverse flow of polluted water from entering into the potable water system. This series can be applied, where approved by the local authority having jurisdiction, on non-health hazard installations. Series 709 features a modular check design concept to facilitate easy maintenance. Check with local jurisdictional authority as to installation requirements.

### SPECIFICATIONS

A Double Check Valve Assembly shall be installed at referenced cross-connections to prevent the backflow of polluted water into the potable water supply. The cross-connections shall be determined by local inspection authority for use where a high hazard situation does not exist. Valve shall feature modular check assemblies with center stem guiding. Each check module shall have a captured spring and be accessible through a bolted cover plate. Seats shall be replaceable without special tools. It shall be a complete assembly including tight-closing resilient seated shutoff valves, test cocks, and a strainer is recommended. The assembly shall meet the requirements of ASSE No. 1015; AWWA C510-92; CSA B64.5 and UL Classified File No. EX3185. Approved by the Foundation for Cross-Connection Control and Hydraulic Research at the University of Southern California. Assembly shall be a Watts Regulator Company Series 709.



### DIMENSIONS

SIZE (DN)	DIMENSIONS										STRAINER						
	A	C (OSY)	C (NRS)	D	L	U*	M	N	N1†	R	R♣	T	NRS	OSY	QT	Weight	
2½	39⅞	16⅞	9⅞	3½	24⅞	11	10	6½	10	4	16	3	167	170	154	28	
3	40⅞	18⅞	10¼	3¾	24⅞	14	10⅞	7	10	5	16	3	167	170	162	34	
4	52⅞	22¾	12⅜	4½	34⅞	14	12⅞	8¼	12	6	19¾	6	368	383	275	60	
6	62⅞	30⅞	16	5½	41⅞	16	18½	13½	20	11	26	7½	627	707	611	122	
8	75	37¾	19⅝	6½	52	21	21⅞	15½	22¾	11¼	11¼	9	1201	1307	1419	247	
10	90	45¾	23⅝	8	64	25	26	18½	28	12½	12½	10¼	2003	2073	2466	370	

† - Dimension required for screen removal. ♣ Quarter-turn (QT) valve dimensions.  
\* Service clearance for check assembly from center.

# MATERIALS

Check Valve Bodies: Epoxy coated cast iron  
 Seats: Bronze

# MODEL 709

## TEMPERATURE - PRESSURE

Temperatures Range: 33°F – 110°F continuous,  
 140°F intermittent  
 Maximum Working Pressure: 175psi

## STANDARDS

ASSE No. 1015, AWWA C510-92  
 CSA B64.5, IAPMO PA 31  
 UL Classified File No. EX3185  
 USC Manual for Cross-Connection Control, 8th Edition

## APPROVALS

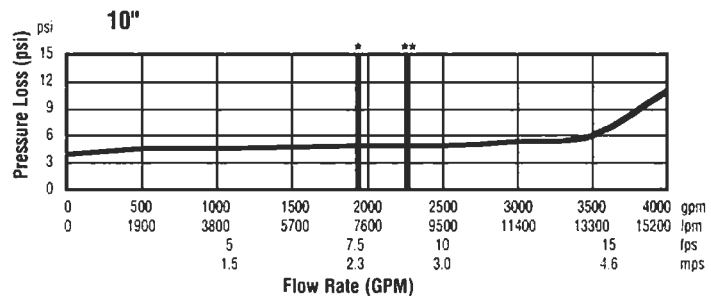
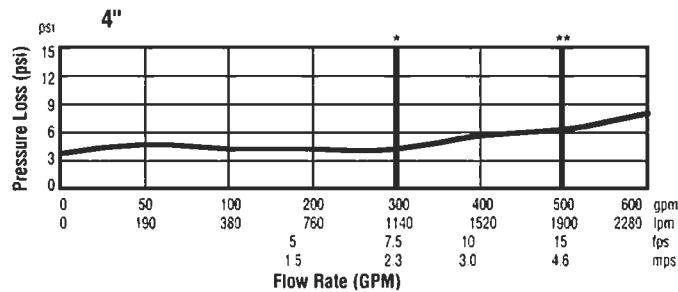
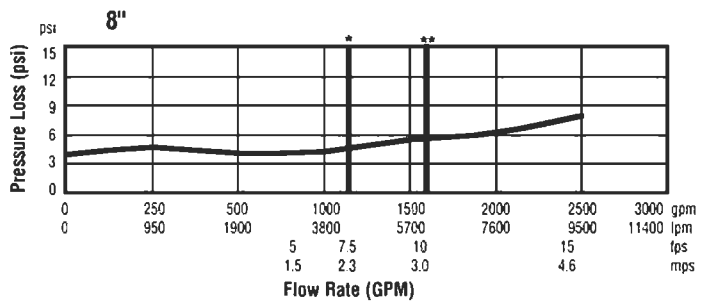
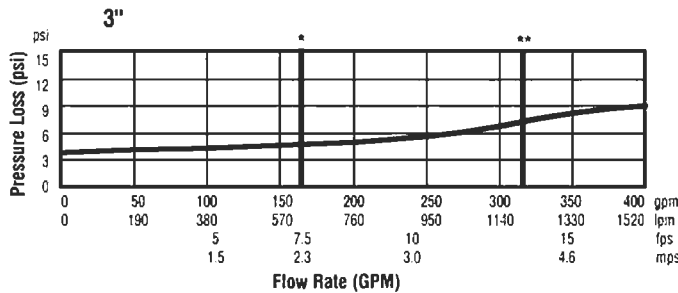
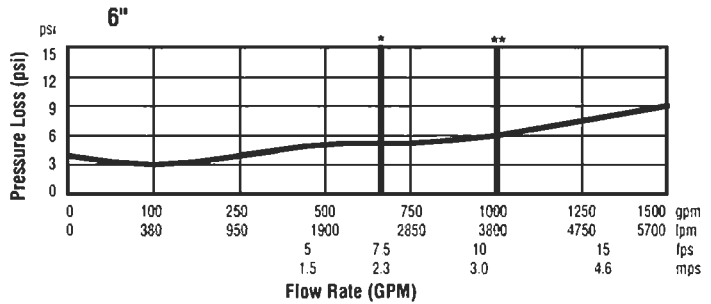
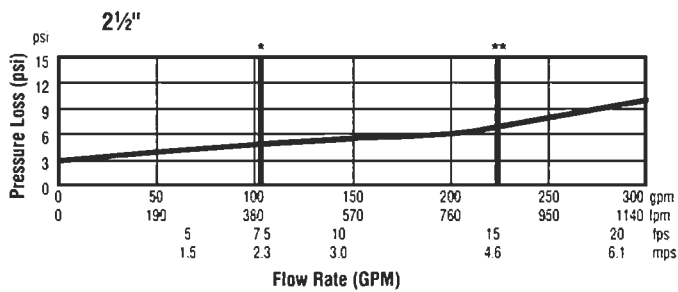
ASSE  
 AWWA  
 UL  


Approved by the Foundation for Cross-Connection Control and Hydraulic Research at the University of Southern California. Sizes 4" – 10" approved horizontal and vertical "flow up" Size 2½" and 3" approved horizontal only.  
 Factory Mutual approved 4" – 10" vertical "flow up" with OSY gate valves only.

Note: Model "S" not listed

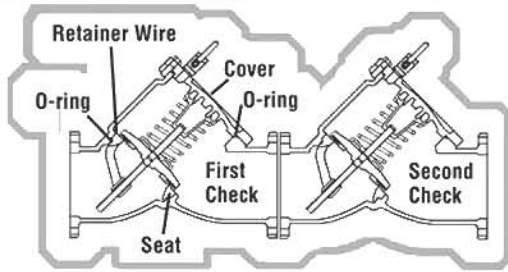
## FLOW CURVES

\*Typical maximum system flow rate  
 \*\*UL rated flow



# American Backflow Specialties

(800) 66-BKFLO (619) 527-2525 Fax: (619) 527-2527  
www.americanbackflow.com



## 709 2½" - 10"

EDP No.	Kit No.	Size
<b>First or Second Check Kits</b>		
0887900	RK 709 CK4	2½" - 3"
0887901	RK 709 CK4	4"
0887902	RK 709 CK4	6"
0887903	RK 709 CK4	8"
0887904	RK 709 CK4	10"

Kit includes: Disc & spring assembly and Cover O-ring.

### Rubber Parts (for one check)

0887905	RK 709 RC4	2½" - 3"
0887906	RK 709 RC4	4"
0887907	RK 709 RC4	6"
0887908	RK 709 RC4	8"
0887909	RK 709 RC4	10"

Kit includes: Disc and Cover O-ring.

### Complete Rubber Parts

0887915	RK 709 RT	2½" - 3"
0887916	RK 709 RT	4"
0887917	RK 709 RT	6"
0887918	RK 709 RT	8"
0887919	RK 709 RT	10"

Kit includes: Two discs and Two Cover O-rings.

### Seat Kits

0887910	RK 709S	2½" - 3"
0887911	RK 709S	4"
0887912	RK 709S	6"
0887913	RK 709S	8"
0887914	RK 709S	10"

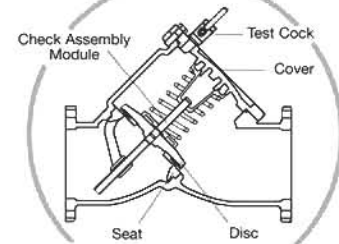
Kit includes: Seat, Seat o-ring, Retainer Wire and Cover O-ring.

### Cover Kits

0887920	RK 709 C	2½" - 3"
0887921	RK 709 C	4"
0887922	RK 709 C	6"
0887923	RK 709 C	8"
0887924	RK 709 C	10"

Kit includes: Cover and Cover O-ring.

## 1st & 2nd checks not interchangeable (on DCDA only).



## 709DCDA 3" - 10"

EDP No.	Kit. No.	Size
<b>First Check Kits</b>		
0887930	RK 709DCDA CK1	3"
0887931	RK 709DCDA CK1	4"
0887932	RK 709DCDA CK1	6"
0887933	RK 709DCDA CK1	8"
0887934	RK 709DCDA CK1	10"

### Second Check Kits

0887935	RK 709DCDA CK2	3"
0887936	RK 709DCDA CK2	4"
0887937	RK 709DCDA CK2	6"
0887938	RK 709DCDA CK2	8"
0887939	RK 709DCDA CK2	10"

Kit includes: Disc assembly, Spring assembly and Cover O-ring.

### Rubber Parts (for one check)

0887940	RK 709DCDA RC4	3"
0887941	RK 709DCDA RC4	4"
0887942	RK 709DCDA RC4	6"
0887943	RK 709DCDA RC4	8"
0887944	RK 709DCDA RC4	10"

Kit includes: Disc and Cover O-ring.

### Seat Kits

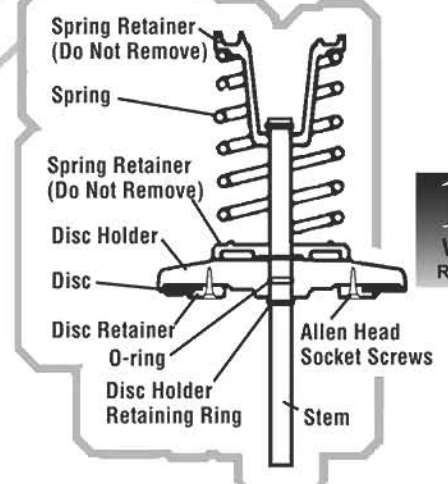
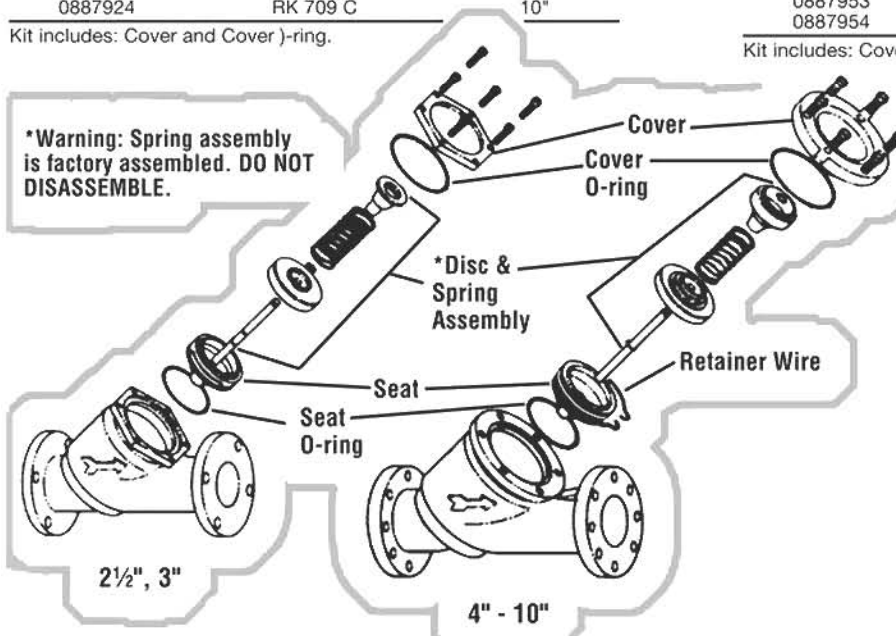
0887945	RK 709DCDA S	3"
0887946	RK 709DCDA S	4"
0887947	RK 709DCDA S	6"
0887948	RK 709DCDA S	8"
0887949	RK 709DCDA S	10"

Kit includes: Seat, Retainer Wire and Cover O-ring.

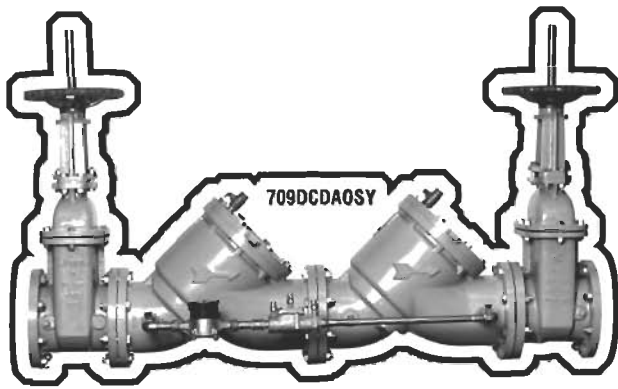
### Cover Kits

0887950	RK 709DCDA C	3"
0887951	RK 709DCDA C	4"
0887952	RK 709DCDA C	6"
0887953	RK 709DCDA C	8"
0887954	RK 709DCDA C	10"

Kit includes: Cover and Cover O-ring.



**14**  
Watts  
Rainbird



# Series 709DCDA Double Check Detector Assemblies

Sizes: 3" – 10"

## FEATURES

- Body construction fused epoxy coated cast iron
- Replaceable bronze seats
- Maximum flow at low pressure drop
- Compact for economy combined with performance
- Design simplicity for easy maintenance
- Furnished with 3/8" x 3/4" bronze meter
- No special tools required for servicing

## DESCRIPTION

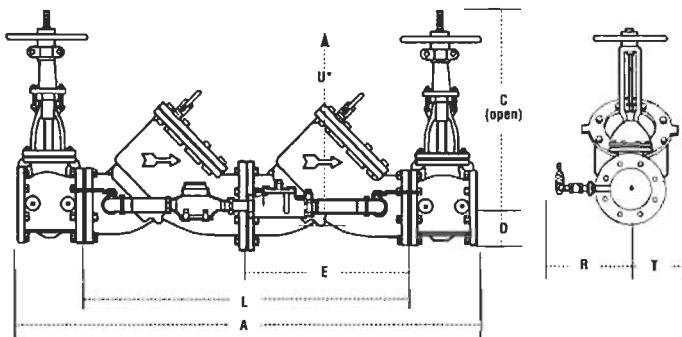
Series 709DCDA Double Check Detector Assemblies are designed exclusively for use in accordance with water authority containment requirements. It is mandatory to prevent the reverse flow of fire protection system substances, i.e. glycerin wetting agents, stagnant water and water of non-potable quality from being pumped or siphoned into the potable water line.

**Benefits:** Detects leaks . . . with emphasis on the cost of unaccountable water; incorporates a meter which allows the water utility to:

- detect leaks underground that historically create great annual cost due to waste.
- provide a detection point for unauthorized use. It can help locate illegal taps.

Modular check design concept facilitates maintenance and assembly access. All sizes are standardly equipped with resilient seated OSY shutoff valves, 3/8" x 3/4" meter and ball type test cocks.

## DIMENSIONS & WEIGHTS



SIZE	DIMENSIONS								WEIGHT
	A	C	D	E	L	R	T	U*	
3	40	18 3/8	3 1/2	12	24	14	3	14	190
4	52	22 3/4	3 3/4	17	34	15	6	14	403
6	62 1/2	30 1/8	4 1/2	21	41 1/2	16	7 1/2	16	727
8	75	37 3/4	5 1/2	26	52	17	9	21	1327
10	90	45 3/4	6 1/2	32	64	18	10 1/4	25	2093

\* Service clearance for check assembly from center.  
† UL/FM approved backflow preventers must include UL/FM approved OSY.

## REPAIR KITS & DIAGRAMS ON PREVIOUS PAGE

## MODELS

- OSY - UL/FM outside stem and yoke resilient seated gate valves
- CFM - cubic feet per minute meter
- GPM - gallons per minute meter
- LF - 4" – 10" (100 – 250mm) without shutoff valves

## PRESSURE - TEMPERATURE

Temperature Range: 33°F – 110°F continuous,  
140°F intermittent  
Minimum Working Pressure: 175psi

## APPROVALS

AWWA, CSA, UL Classified, FM approved  
USC FCCC & HR Sizes 4" – 10"  
Size 3" approved for horizontal only.  
FM approved 4" – 10" vertical "flow up".

## MATERIALS

Body: Epoxy coated cast iron  
Seat: Bronze  
Disc Holder: Bronze  
Trim: Stainless steel  
Check Valve Discs: Rubber  
Test Cocks: Bronze

## FLOW CURVES

\*Typical max flow  
\*\*UL rated flow

