

About Watts

Since its founding in 1874, Watts has developed a reputation of "Setting the Standard in Valve Technology." Through a family of companies, Watts Water Technologies, Inc. (collectively "Watts") designs and manufactures innovative products and systems in five application areas: Plumbing & Flow Control, Water Reuse & Drainage, HVAC, Water Quality, and Municipal Waterworks. Watts continues to create integrated solutions for water quality and conservation and to improve comfort, safety, and quality of life for people around the world through expertise in a wide range of water technologies.

For more information about Watts and Watts products, please visit Watts' official website at www.watts.com

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Backflow Preventer

Repair Kits & Service Parts



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Series 007

Double Check Backflow Preventer

Size: DN15-DN50

Repair Kits

Model 007

Size	Type	Ordering Code	Kit No.
DN15	1st or 2nd Check	007-15CK4	0887193
	Complete Rubber Parts	007-15RT	0887194
	Total Repair Kits	007-15-T	0887033
DN20- DN25	1st Check	007-20/25CK1	0887023
	2nd Check	007-20/25CK2	0887024
	Complete Rubber Parts	007-20/25RT	0887040
	Total Repair Kits	007-20/25-T	0887027
DN40- DN50	1st Check	007-40/50CK1	0887025
	2nd Check	007-40/50CK2	0887028
	Complete Rubber Parts	007-40/50RT	0887041
	Total Repair Kits	007-40/50-T	0887034

Model 007M1

Size	Type	Ordering Code	Kit No.
DN20- DN25	1st or 2nd Check	007-20/25M1SCK4	0887026
	Complete Rubber Parts	007-20/25M1RT	0887042
	Retainer	007-20/25M1RE	1047382
DN40- DN50	1st Check	007-40/50M1CK1	0887186
	2nd Check	007-40/50M1CK2	0887187
	Complete Rubber Parts	007-40/50M1RT	0887188
	Retainer	007-40/50M1RE	1047112
	Total Repair Kits	007-40/50M1-T	0887192

Model 007M2

Size	Type	Ordering Code	Kit No.
DN20	1st Check	007-20M2CK1	0887045
	2nd Check	007-20M2CK2	0887046
	Complete Rubber Parts	007-20M2RT	0887043
	Retainer	007-20M2/M3RE	1047394
	Total Repair Kits	007-20M2-T	0887724
DN32- DN40	1st Check	007-32/40M2CK1	0887719
	2nd Check	007-32/40M2CK2	0887720
	Complete Rubber Parts	007-32/40M2RT	0887721
	Retainer	007-32/40M2RE	1047099
	Total Repair Kits	007-32/40M2-T	0887723

Note:

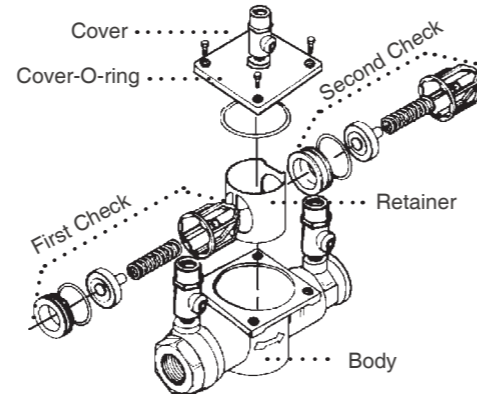
Check Kit consists of: seat; seat O-ring; disc assembly; spring; check cage; cover O-ring

Total Repair Kit consists of: first check repair kit, second check repair kit, retainer (if plastic)

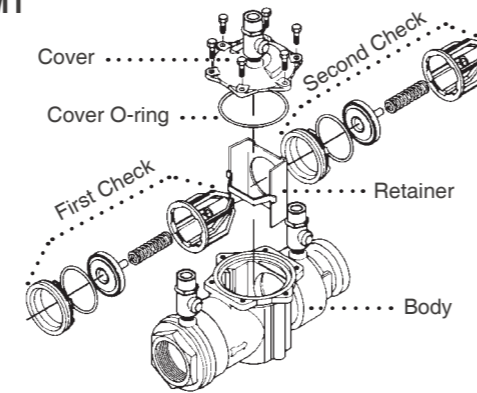
Complete Rubber Parts Kit consists of: cover O-ring; 2 disc assemblies and 2 seat O-rings.

W-007-EN-202110

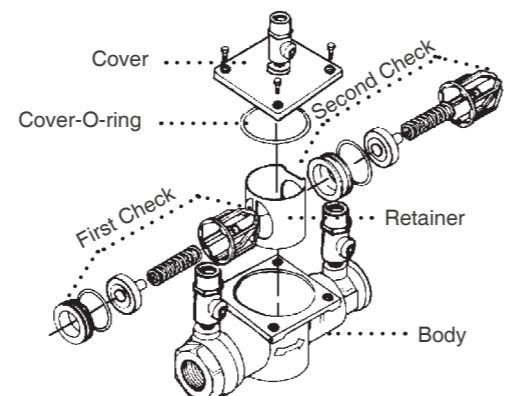
007



007M1



007M2



Model 007M3

Size	Type	Ordering Code	Kit No.
DN20	1st Check	007-20M3CK1	0888550
	2nd Check	007-20M3CK2	0888551
	Complete Rubber Parts	007-20M3RT	0888552
	Retainer	007-20M2/M3RE	1047394
	Total Repair Kits	007-20M3-T	0888554

Note:

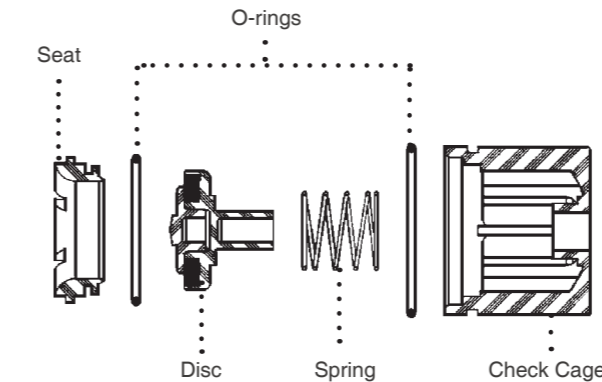
Check Kit consists of: seat; seat O-ring; disc assembly; spring; check cage; cover O-ring

Total Repair Kit consists of: first check repair kit, second check repair kit, retainer (if plastic)

Complete Rubber Parts Kit consists of: cover O-ring; 2 disc assemblies and 2 seat O-rings.

007M3

Check Assembly



Universal Rubber Repair Kit

Size	Type	Ordering Code	Kit No.
DN20	Universal Rubber Repair Kit	007-20UNIRT	0887800
DN25		007-25UNIRT	0887801
DN40		007-40UNIRT	0887802
DN50		007-50UNIRT	0887803

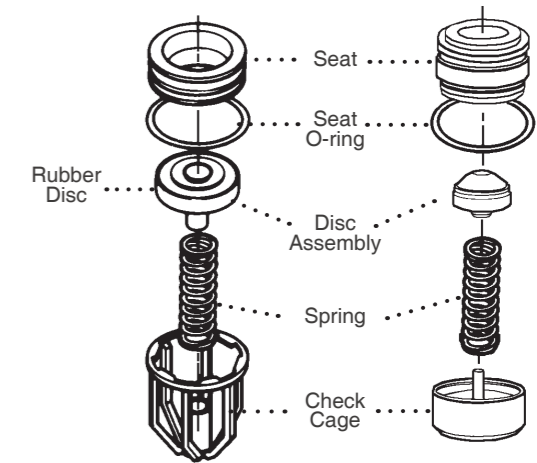
Note:

Universal Rubber Repair Kit consists of: 007-RT, 007-M1RT, 007-M2RT, 007-M3RT

Test Cock

Size	Type	Kit No.
DN15-DN25	TC-1/8	61995015
DN32-DN50	TC-1/4	61995016

W-007M3-EN-202110



Series 709

Double Check Backflow Preventer

Size: DN65-DN250

Repair Kits

Size	Type	Ordering Code	Kit No.
DN65- DN80	1st or 2nd Check	709-65/80CK4	0794014
	Complete Rubber Parts	709-65/80RT	0887915
	Seat Kits	709-65/80S	0794019
DN100	1st or 2nd Check	709-100CK4	0794015
	Complete Rubber Parts	709-100RT	0887916
	Seat Kits	709-100S	0794020
DN150	1st or 2nd Check	709-150CK4	0794016
	Complete Rubber Parts	709-150RT	0887917
	Seat Kits	709-150S	0794021
DN200	1st or 2nd Check	709-200CK4	0794017
	Complete Rubber Parts	709-200RT	0887918
	Seat Kits	709-200S	0794019
DN250	1st or 2nd Check	709-250CK4	0794018
	Complete Rubber Parts	709-250RT	0887919
	Seat Kits	709-250S	0794019

Note:

First or Second Check Kit consists of: disc & spring assembly and cover O-ring.

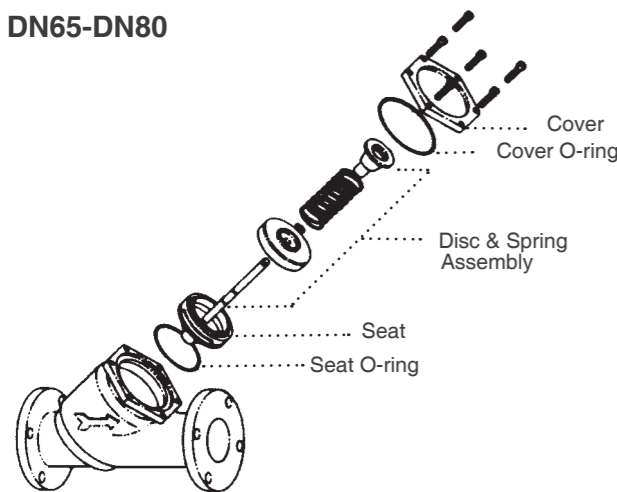
Complete Rubber Part consists of: 2 discs and 2 cover O-rings.

Seat Kit consists of: seat; seat O-ring; cover O-ring and retainer wire.

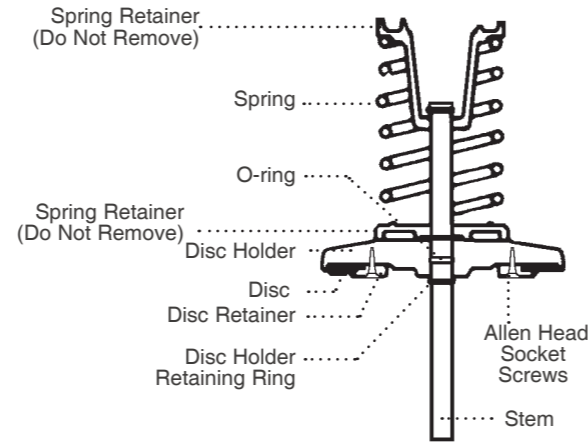
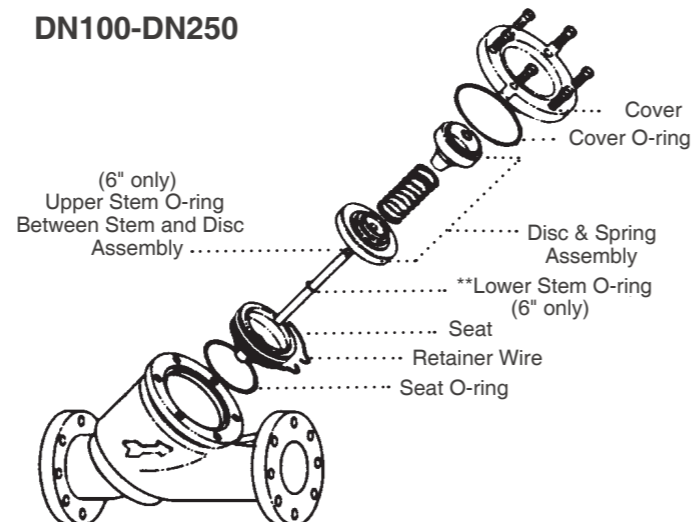
Test Cocks

Size	Type	Kit No.
DN65-DN100	TC-1/2	0792524
DN150-DN250	TC-3/4	0792525

DN65-DN80



DN100-DN250



WARNING

Spring assembly is factory assembled. DO NOT DISASSEMBLE.

Series 757,757DCDA

Double Check Valve Assemblies Double Check Detector Assemblies

Size: DN65-DN250

Repair Kits

Size	Type	Ordering Code	Kit No.
DN65- DN100	First Check Kits	757DCDA-65/100CK1	7018128
	Second Check Kits	757DCDA-65/100CK2	7018130

Size	Type	Ordering Code	Kit No.
DN150	First Check Kits	757DCDA-150CK1	7018131
	Second Check Kits	757DCDA-150CK2	7018133

Size	Type	Ordering Code	Kit No.
DN200	First Check Kits	757DCDA-200CK1	7018134
	Second Check Kits	757DCDA-200CK2	0899206

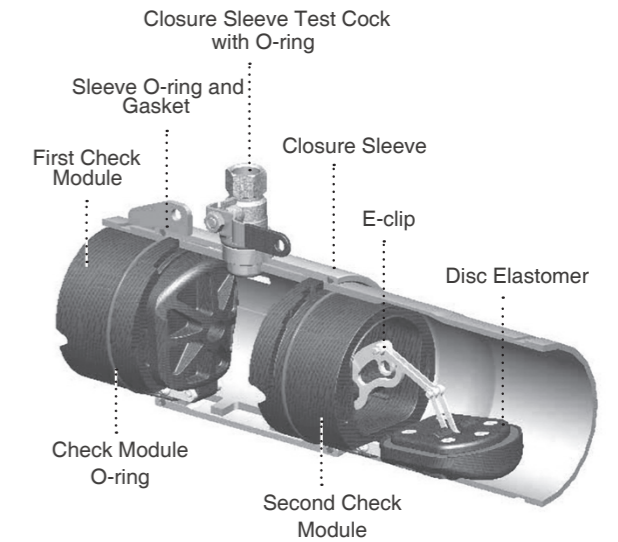
Size	Type	Ordering Code	Kit No.
DN250	First Check Kits	757DCDA-250CK1	0899200
	Second Check Kits	757DCDA-250CK2	0899201

Note:

First or Second Check Kit consists of: check module, check module O-ring and disc elastomer.

Test Cocks

Size	Type	Kit No.
DN65-DN100	TC-1/2	0792520
DN150-DN250	TC-3/4	0792521



Series 2000SS

Double Check Backflow Preventer

Size: DN65-DN300

Repair Kits

Size	Type	Ordering Code	Kit No.
DN65- DN100	First Check Kits	2000SS-65/100CK1	7010097
	Second Check Kits	2000SS-65/100CK2	7010100
DN150	First Check Kits	2000SS-150CK1	7010098
	Second Check Kits	2000SS-150CK2	7010101
DN200- DN300	First Check Kits	2000SS-200/300CK1	7010099
	Second Check Kits	2000SS-200/300CK2	7010102

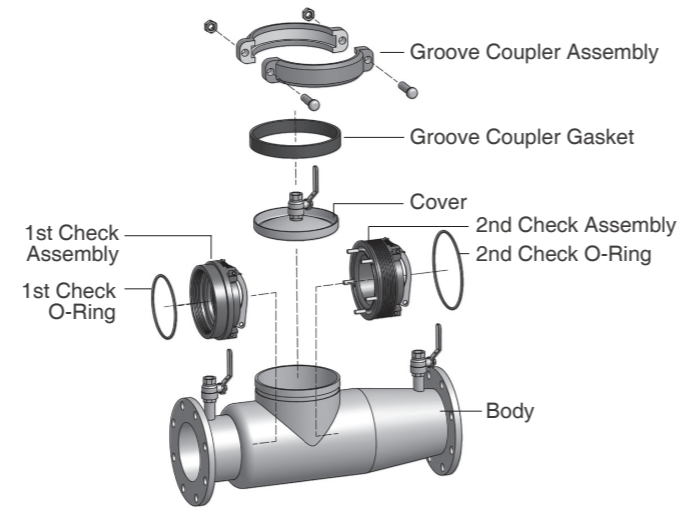
Note:

First or Second Check Kit consists of: Check Assembly, Check O-Ring and Lube.

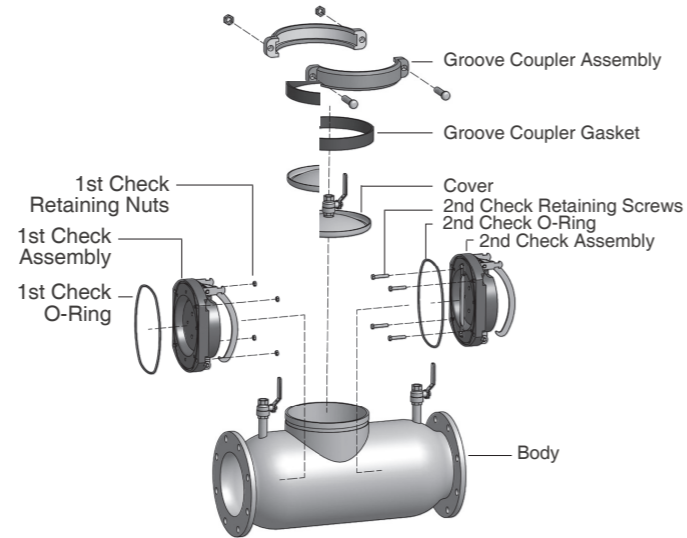
Test Cocks

Size	Type	Kit No.
DN65-DN100	TC-2/3/4000SS-1/2 (1 pcs)	2065572
	TC-2/3/4000SS-1/2 (2 pcs)	2065895
DN150-DN250	TC-2/3/4000SS-3/4 (1 pcs)	2065573
	TC-2/3/4000SS-3/4 (2 pcs)	2065896

DN65-DN150



DN200-DN300



Series 3000SS

Double Check Detector Assembly

Size: DN65-DN250

Repair Kits

Size	Type	Ordering Code	Kit No.
DN65- DN100	First Check Kits	3000SS-65/100CK1	7010107
	Second Check Kits	3000SS-65/100CK2	7010100
DN150	First Check Kits	3000SS-150CK1	7010108
	Second Check Kits	3000SS-150CK2	7010101
DN200- DN300	First Check Kits	3000SS-200/250CK1	1010109
	Second Check Kits	3000SS-200/250CK2	7010102

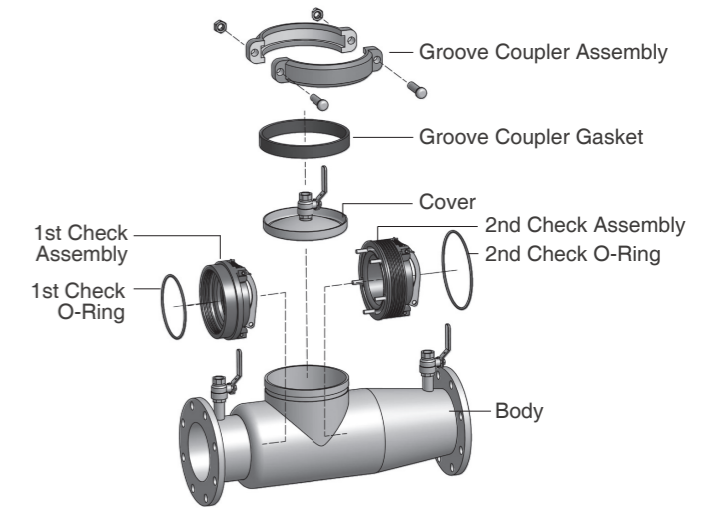
Note:

First or Second Check Kit consists of: Check Assembly, Check O-Ring and Lube.

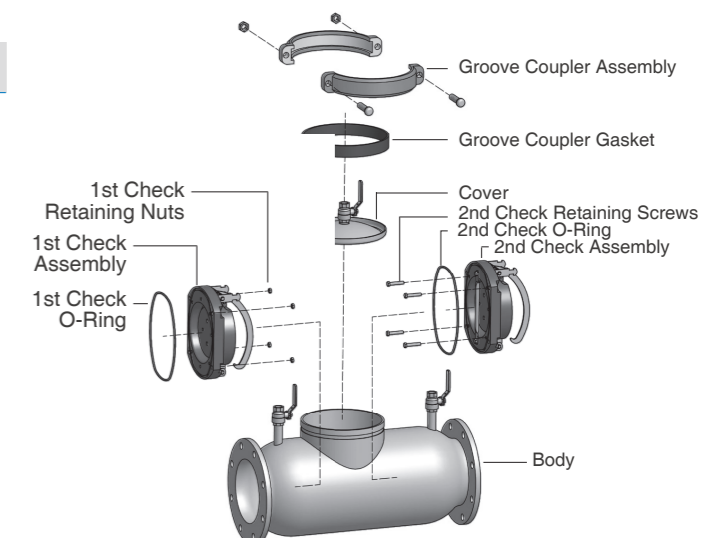
Test Cocks

Size	Type	Kit No.
DN65-DN100	TC-2/3/4000SS-1/2 (1 pcs)	2065572
	TC-2/3/4000SS-1/2 (2 pcs)	2065895
DN150-DN250	TC-2/3/4000SS-3/4 (1 pcs)	2065573
	TC-2/3/4000SS-3/4 (2 pcs)	2065896

DN65-DN150



DN200-DN300



Troubleshooting Guide

Double Check Valve Assemblies, Double Check Detector Assemblies

Problem	CAUSE	Should valve be replaced?	Solution
A. Double check valve fails to hold 1.0 PSID minimum.			
	A-1 Debris on check disc sealing surface	No	Check valve must be disassembled and cleaned
	A-2 Leaking gate valve	No	Gate valve must be disassembled and cleaned
	A-3 Damaged seat disc or seat O-ring	No	Disassemble damage check and replace
	A-4 Damaged guide holding check open	No	Disassemble and clean or replace if necessary
	A-5 Weak or broken spring	No	Check valve must be disassembled and spring replaced
B Chatter during flow conditions			
	B-1 Worn, damaged or defective guide	No	Disassemble and repair or replace guide
C. Low flows passing through mainline valve (DCDA only)			
	C-1 Check(s) on mainline are fouled	No	Mainline check(s) must be disassembled and cleaned
	C-2 Meter strainer on bypass line is plugged	No	Strainer must be disassembled and cleaned
	C-3 Mainline seat disc or seat is damage	No	Disassemble damage seat disc or seat and replace
	C-4 Broken mainline spring	No	Mainline check must be disassembled and spring replaced

Series 009

Reduced Pressure Zone Device

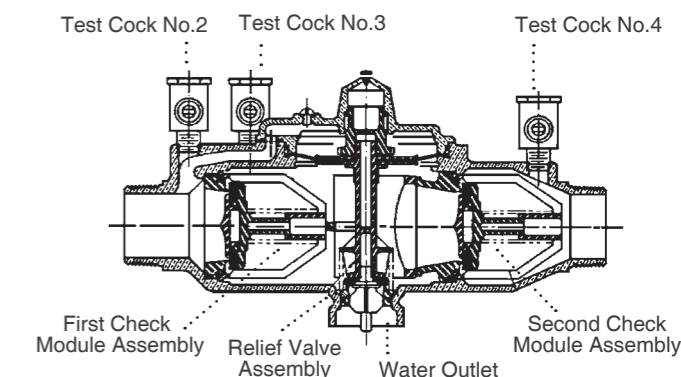
Size: DN15-DN50

Total Repair Kits

Size	Ordering Code	Kit No.
DN15	009-015-T	0887298
	009-20/25-T	0887283
	009-25M2-T	0887302
DN20- DN25	009-25M2-T	0887793
	009-20M3-T	0888527
DN32- DN50	009-32/50-T	0887284
	009-32/50M1-T	0887269
	009-32/40M2-T	0887794
	009-50M2-T	0887795

Note:

Total Repair Kit consists of: seat, seat O-ring, stem & diaphragm assembly, stem O-ring, cover O-ring and RV spring.



Relief Valve Kits

Model 009

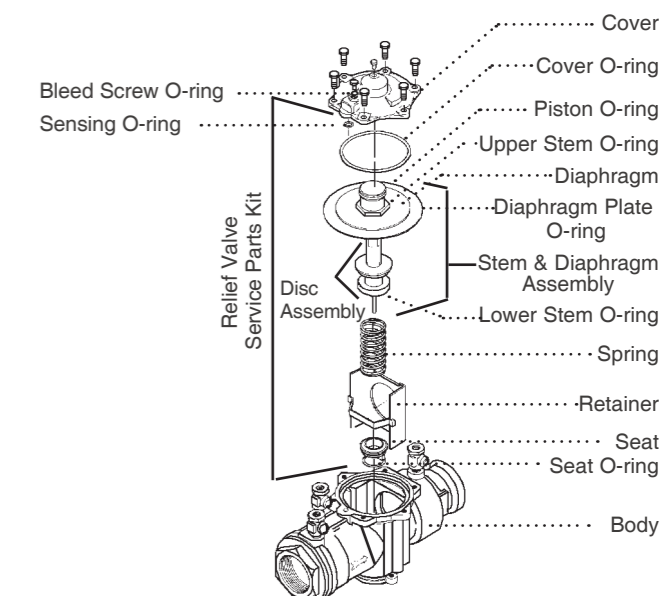
Size	Type	Ordering Code	Kit No.
DN15	Total Relief Valve Kits	009-015VT	0887294
	Relief Valve Rubber Parts Kits	009-015RV	0887295
	Total Rubber Parts Kits	009-015RT	0887297
	Retainer	009-015RE	1047053
DN20- DN25	Total Relief Valve Kits	009-20/25VT	0887015
	Relief Valve Rubber Parts Kits	009-20/25RV	0887181
	Total Rubber Parts Kits	009-20/25RT	0887182
	Retainer	009-20/25RE	1047114
DN32- DN50	Total Relief Valve Kits	009-32/50VT	0887016
	Relief Valve Rubber Parts Kits	009-32/50RV	0887184
	Total Rubber Parts Kits	009-32/50RT	0887185
	Retainer	009-32/50RE	1047001

Note:

Total Relief Valve Kit consists of: seat, seat O-ring, stem & diaphragm assembly, stem O-ring, cover O-ring and RV spring.

Relief Valve Rubber Parts Kits consists of: diaphragm, disc assembly, stem O-rings, seat O-ring and cover O-ring.

Total Rubber Parts Kits consists of: diaphragm, two disc assemblies, stem O-rings, cover O-ring, two seat O-rings and RV seat O-ring.



Model 009M1

Size	Type	Ordering Code	Kit No.
DN32- DN50	Total Relief Valve Kits	009-32/50M1VT	0887277
	Relief Valve Rubber Parts Kits	009-32/50M1RV	0887276
	Total Rubber Parts Kits	009-32/50M1RT	0887280
	Retainer	009-32/50M3RE	1047001

Model 009M2

Size	Type	Ordering Code	Kit No.
DN20	Total Relief Valve Kits	009-20M2VT	0887002
	Relief Valve Rubber Parts Kits	009-20M2RV	0886998
	Total Rubber Parts Kits	009-20M2RT	0886999
	Retainer	009-20M2M3RE	1047394

DN25	Total Relief Valve Kits	009-25M2VT	0887785
	Relief Valve Rubber Parts Kits	009-25M2RV	0887786
	Total Rubber Parts Kits	009-25M2RT	0887787
	Retainer	009-25M2RE	1047114

DN32- DN40	Total Relief Valve Kits	009-32/40M2VT	0887307
	Relief Valve Rubber Parts Kits	009-32/40M2RV	0887306
	Total Rubber Parts Kits	009-32/40M2RT	0887309
	Retainer	009-32/40M2RE	1047401

DN50	Total Relief Valve Kits	009-50M2VT	0887545
	Relief Valve Rubber Parts Kits	009-50M2RV	0887544
	Total Rubber Parts Kits	009-50M2RT	0887547
	Retainer	009-50M2RE	1047001

Model 009M3

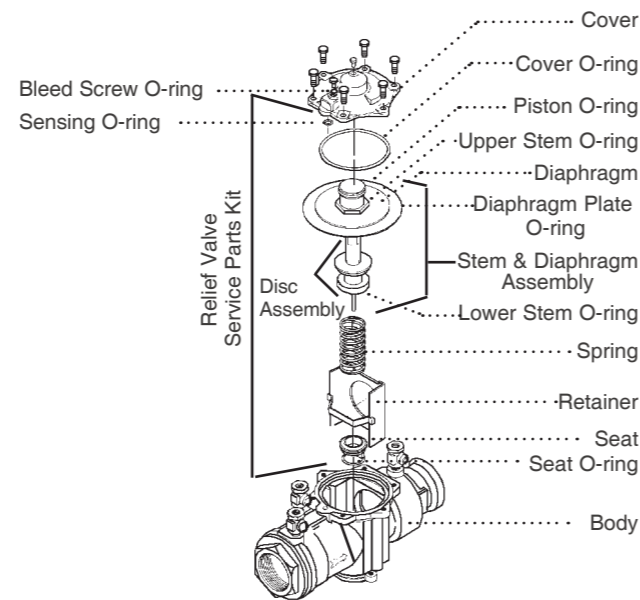
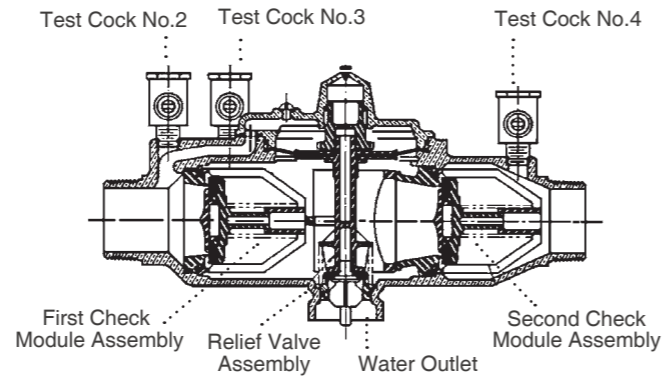
Size	Type	Ordering Code	Kit No.
DN20	Total Relief Valve Kits	009-20M3VT	0888524
	Relief Valve Rubber Parts Kits	009-20M3RV	0888523
	Total Rubber Parts Kits	009-20M3RT	0888526
	Retainer	009-20M2M3RE	1047394

Note:

Total Relief Valve Kit consists of: seat, seat O-ring, stem & diaphragm assembly, stem O-ring, cover O-ring and RV spring.

Relief Valve Rubber Parts Kits consists of: diaphragm, disc assembly, stem O-rings, seat O-ring and cover O-ring.

Total Rubber Parts Kits consists of: diaphragm, two disc assemblies, stem O-rings, cover O-ring, two seat O-rings and RV seat O-ring.



Check Valve Kits

Model 009

Size	Type	Ordering Code	Kit No.
DN15	First Check Kits	009-015CK1	0887291
	Second Check Kits	009-015CK2	0887292

DN20- DN25	First Check Kits	009-20/25CK1	0887005
	Second Check Kits	009-20/25CK2	0887007

DN32- DN50	First Check Kits	009-32/50CK1	0887006
	Second Check Kits	009-32/50CK2	0887008

Model 009M1

Size	Type	Ordering Code	Kit No.
DN32- DN50	First Check Kits	009-32/50M1CK1	0887270
	Second Check Kits	009-32/50M1CK2	0887271

Model 009M2

Size	Type	Ordering Code	Kit No.
DN20	First Check Kits	009-20M2CK1	0887000
	Second Check Kits	009-20M2CK2	0887001

DN25	First Check Kits	009-25M2CK1	0887789
	Second Check Kits	009-25M2CK2	0887790

DN32- DN40	First Check Kits	009-32/40M2CK1	0887300
	Second Check Kits	009-32/40M2CK2	0887301

DN50	First Check Kits	009-50M2CK1	0887540
	Second Check Kits	009-50M2CK2	0887541

Model 009M3

Size	Type	Ordering Code	Kit No.
DN20	First Check Kits	009-20M3CK1	0888520
	Second Check Kits	009-20M3CK2	0888521

Note:

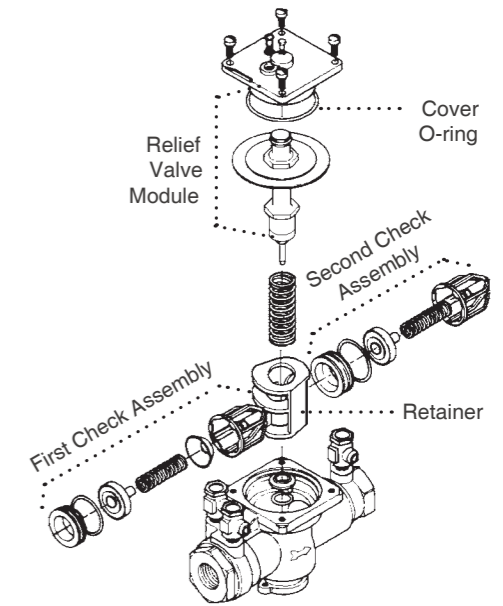
Check Valve Kit consists of: check assembly and cover O-ring.

Test Cocks

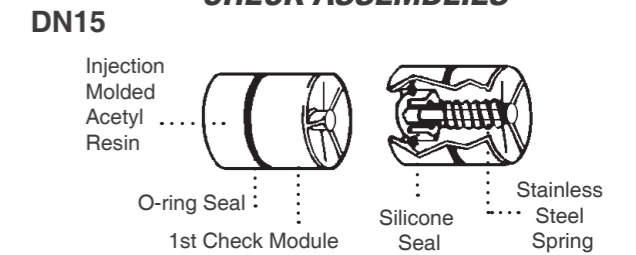
Size	Type	Kit No.
DN15-DN25	TC-1/8	61995015
DN32-DN50	TC-1/4	61995016

Air Gaps

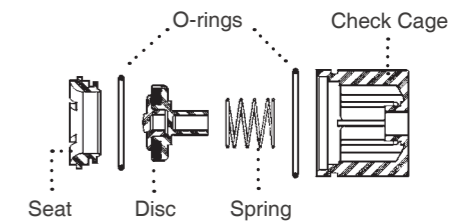
Size	Type	Ordering Code	Kit No.
DN15	009	AG-009-15	0881399
DN20-DN25	009	AG-009-20/25	0881376
DN32-DN50	009	AG-009-32/50	0881378
DN32-DN50	009M1	AG-009M1-32/50	0881378
DN20	009M2	AG-009M2-20	0881399
DN32-DN40	009M2	AG-009M2-32/40	0881376
DN50	009M2	AG-009M2-50	0881378
DN20	009M3	AG-009M3-20	0881399



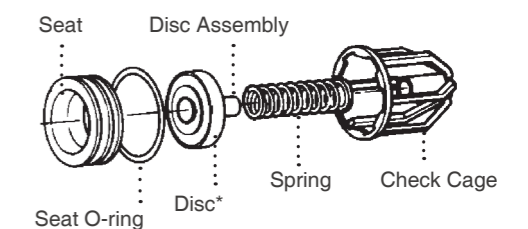
CHECK ASSEMBLIES



DN20M3



DN20-DN50



Series 909

Reduced Pressure Zone Device

Size: DN65-DN250

Relief Valve Kits

Size	Type	Ordering Code	Kit No.
DN65-DN80	Total Relief Valve Kits	909-65/80VT	0794085
	Relief Valve Rubber Parts Kits	909-65/80RV	0794081
	Total Rubber Parts Kits	909-65/80RT	0794089
DN100-DN150	Total Relief Valve Kits	909-100/150VT	0794151
	Relief Valve Rubber Parts Kits	909-100/150RV	0794150
	Total Rubber Parts Kits	909-100RT	0794090
DN200-DN250	Total Relief Valve Kits	909-200/250VT	0887237
	Relief Valve Rubber Parts Kits	909-200/250RV	0794083
	Total Rubber Parts Kits	909-200/250M1RT	0794150
DN200-DN250	Total Relief Valve Kits	909-200/250M1VT	0794151
	Relief Valve Rubber Parts Kits	909-200/250M1RV	0794083
	Total Rubber Parts Kits	909-200M1RT	0794092
DN200-DN250	Total Rubber Parts Kits	909-200M1RT	0794093
		909-250RT	0794094
		909-250M1RT	0794095

Note:

Total Relief Valve Kit consists of: diaphragm, disc & piston assembly, seat, seat O-ring, adapter O-ring and lubricant. (Sizes DN100–DN250M1 includes bottom plug & spring assembly).

Relief Valve Rubber Parts Kit consists of: sleeve O-ring, piston O-ring, stem O-ring, RV disc assembly, diaphragm, piston seal, bottom plug O-ring, adapter O-ring and lubricant.

Total Rubber Parts Kit consists of: upper and lower check stem O-ring (DN150 only), check disc, cover O-ring, sleeve O-ring, piston O-ring, RV disc assembly, diaphragm, piston seal and lubricant.

Test Cocks

Size	Ordering Code	Kit No.
DN65-DN100	TC-1/2	0792524
DN150-DN250	TC-3/4	0792525

Hose Assembly Kit (sensing line)

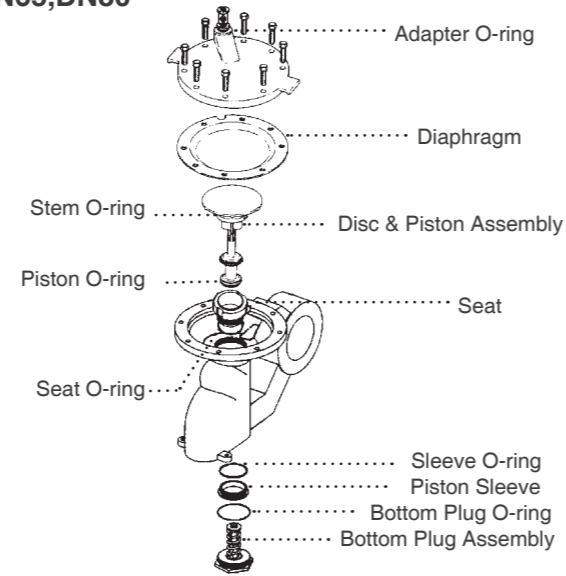
Size	Ordering Code	Kit No.
DN65-DN100	909-65/100HA	0881486
DN150-DN200	909-150/200HA	0881487
DN250	909-150/250HA	0881488

Air Gaps

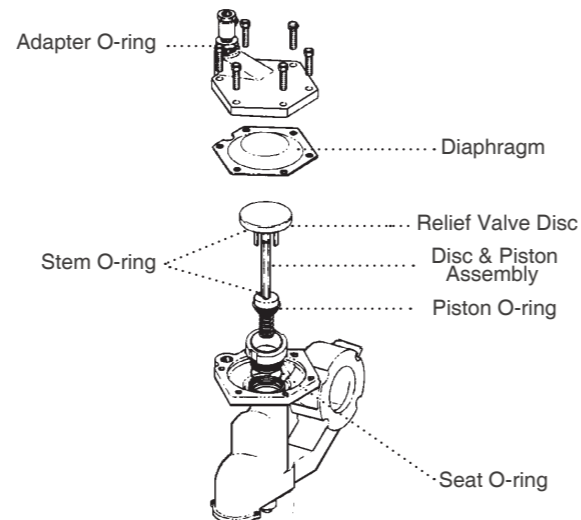
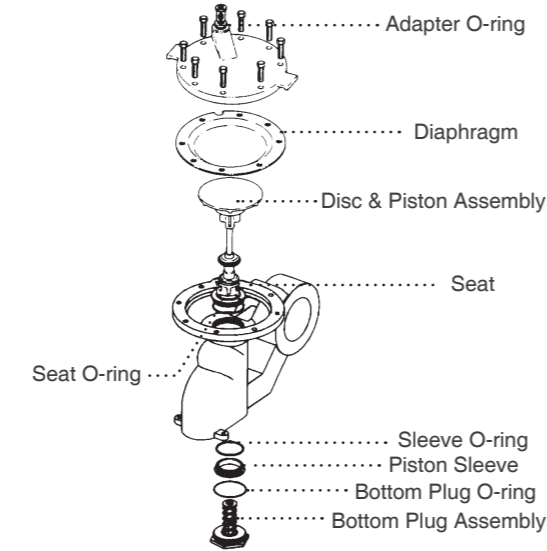
Size	Ordering Code	Kit No.
DN65-DN80	AG-909-65/80	0881378
DN100-DN150	AG-909-100/150	0881385
DN200-DN250	AG-909-200/250A	0881488

W-909-EN-202110

DN65, DN80



DN100-DN250



Check Valve Kits

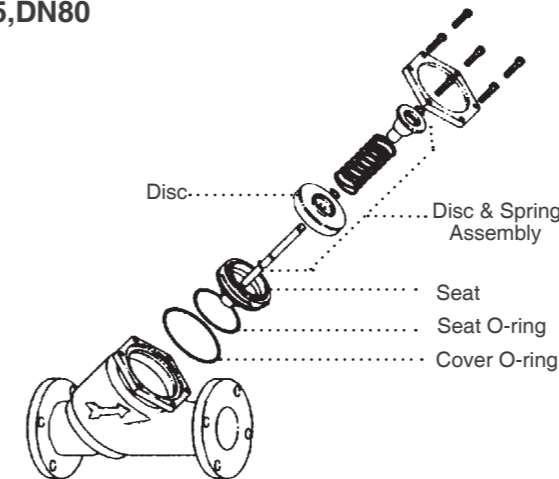
Size	Type	Ordering Code	Kit No.
DN65-DN80	First Check Kits	909-65/80CK1	0794096
	Second Check Kits	909-65/80CK2	0794101
	Seat Kits	909-65/80S	0794106
DN100	First Check Kits	909-100CK1	0794097
	Second Check Kits	909-100CK2	0794102
	Seat Kits	909-100S	0794107
DN150	First Check Kits	909-150CK1	0794098
	Second Check Kits	909-150CK2	0794103
	Seat Kits	909-150S	0794108
DN200	First Check Kits	909-200CK1	0794099
	Second Check Kits	909-200CK2	0794104
	Seat Kits	909-200S	0794109
DN250	First Check Kits	909-250CK1	0794100
	Second Check Kits	909-250CK2	0794105
	Seat Kits	909-250S	0794110

Note:

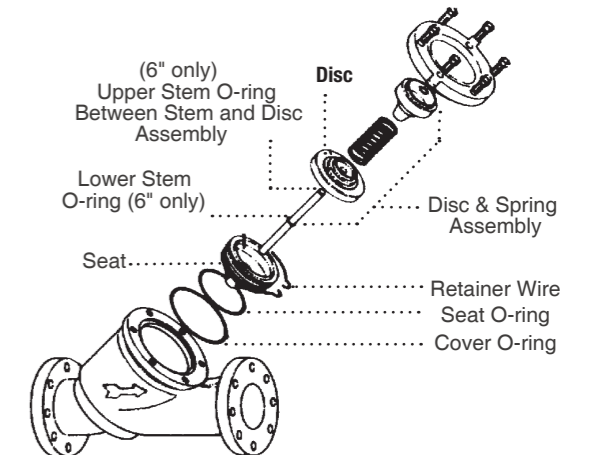
First & Second Check Kits consist of: disc & spring assembly, cover O-ring and lubricant.

Seat Kit consists of: seat, seat O-ring, cover O-ring, retainer wires and lubricant.

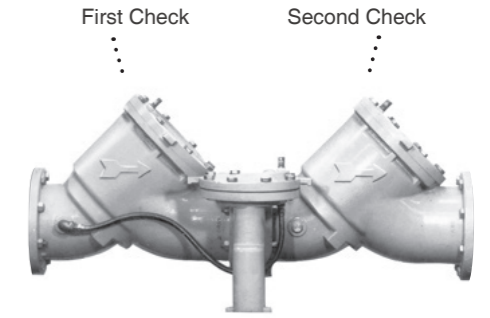
DN65, DN80



DN100-DN250



W-909-EN-202110



First and second checks are not interchangeable.

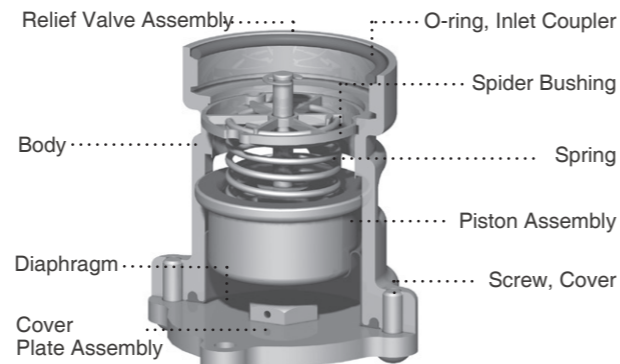
Series 957

Reduced Pressure Zone Device

Size: DN65-DN250

Repair Kits

Size	Type	Ordering Code	Kit No.
DN65- DN250	Relief Valve Total Kits	957-65/250VT	0899232
	Relief Valve Rubber Parts Kits	957-65/250RV	0899236
DN65- DN100	First Check Kits	957-65/100CK1	0889370
	Second Check Kits	957-65/100CK2	0889371
DN150	First Check Kits	957-150CK1	0889374
	Second Check Kits	957-150CK2	0889375
DN200	First Check Kits	957-200CK1	7018135
	Second Check Kits	957-200CK2	0899218
DN250	First Check Kits	957-250CK1	0899215
	Second Check Kits	957-250CK2	0899219



Note:

Relief Valve Total Kit consists of: complete relief valve assembly.

Relief Valve Rubber Parts Kit consists of: diaphragm, inlet coupler O-ring and piston assembly.

First or Second Check Kit consists of: check module, check module O-ring and disc elastomer.

Test Cocks

Size	Ordering Code	Kit No.
DN65-DN100	TC-1/2	0792520
DN150-DN250	TC-3/4	0792521

Hose Assembly Kit (sensing line)

Size	Ordering Code	Kit No.
DN65-DN100	957-65/100VH	0298406
DN150	957-150VH	0298407
DN200	957-200VH	0298122

Air Gaps

Size	Type	Ordering Code	Kit No.
DN65-DN250	Air Gaps	AG-957-65/250	0111764
DN100-DN250	Splash Guard Only	AG-957-100/250	0111815

Series 4000SS

Reduced Pressure Zone Device

Size: DN65-DN250

Repair Kits

Size	Type	Ordering Code	Kit No.
DN65- DN100	First Check Kits	4000SS-65/100CK1	7010107
	Second Check Kits	4000SS-65/100CK2	7010110
DN150	First Check Kits	4000SS-150CK1	7010108
	Second Check Kits	4000SS-150CK2	7010111
DN200- DN250	First Check Kits	4000SS-200/250CK1	1010109
	Second Check Kits	4000SS-200/250CK2	7010112
DN65- DN250	Relief Valve Kit	4000SS-65/250VT	7010114
	Relief Valve Rubber Parts Kit	4000SS-65/250RV	7010113

Note:

Relief Valve Total Kit consists of: Check Assembly, Check O-Ring and Lube.

Relief Valve Kit consists of: Complete RV, RV O-Ring and Lube.

Relief Valve Rubber Parts Kit consists of: RV Diaphragm, Piston, RV Disc, RV Disc O-Ring and Lube.

Test Cocks

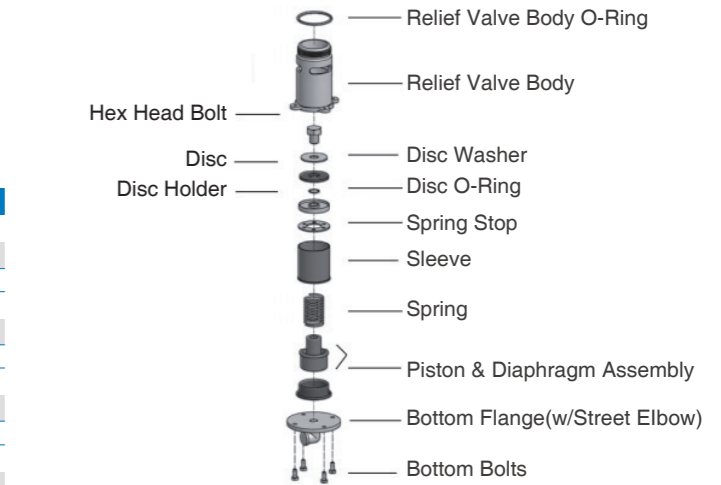
Size	Type	Kit No.
DN65-DN100	TC-2/3/4000SS-1/2 (1 pcs)	2065572
	TC-2/3/4000SS-1/2 (2 pcs)	2065895
DN150-DN250	TC-2/3/4000SS-3/4 (1 pcs)	2065573
	TC-2/3/4000SS-3/4 (2 pcs)	2065896

Hose Assembly Kit (sensing line)

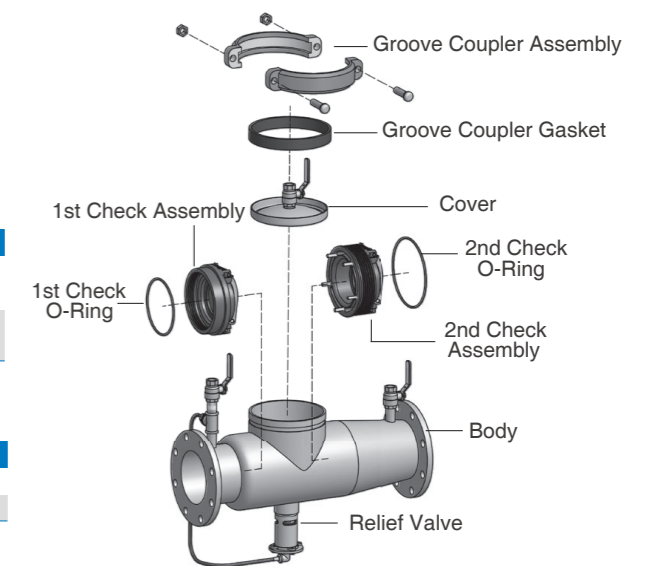
Size	Ordering Code	Kit No.
DN65-DN150	4000SS-65/150VH	7013343
DN200-DN250	4000SS-200/250VH	7013522

Air Gaps

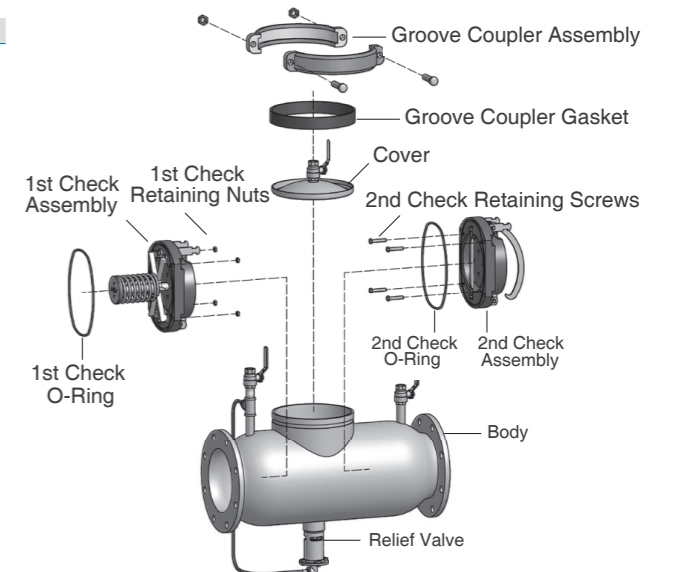
Size	Type	Ordering Code	Kit No.
DN65-DN150	Vertical	AG-4000SS-65/150	0690511
DN65-DN250	Plastic	AG-4000SS-65/250	0691842



DN65-DN150



DN200-DN250



Troubleshooting Guide

Reduced Pressure Zone Assemblies, Reduced Pressure Detector Assemblies

PROBLEM CAUSE	Should valve be replaced?	SOLUTION
A. Valve spits periodically from the vent.		
A.1 Fluctuating supply pressure.	No	A.1 Install a spring-loaded, soft seated check valve immediately upstream of the device.
A.2 Fluctuating downstream pressure.	No	A.2 Install a spring-loaded, soft seated check valve downstream of the device as close as possible to the shutoff valve.
B. Valve drips continually from the vent.		
B.1 Fouled first check.	No	B.1 Flush valve. If flushing does not resolve problem, disassemble valve and clean or replace the first check.
B.2 Damaged or fouled relief valve seat.	No	B.2 Clean or replace the relief valve seat.
B.3 Relief valve piston O-ring not free to move due to pipe scale, dirt or build-up of mineral deposits.	No	B.3 Clean, grease or replace the piston O-ring.
B.4 Excessive backpressure, freezing, or water hammer	No	B.4 Eliminate source of excessive backpressure or hammer has distorted the second check water hammer in the system downstream of the device. Use Watts Series LF601/601 to dampen out backpressure and Series LF15/15 to eliminate water hammer. Replace defective second check assembly. In case of freezing; thaw, disassemble, and inspect internal components. Replace as necessary.
B.5 Electrolysis of relief valve seat or first .	No	B.5 Replace relief valve seat or inlet cover. Install check seats dielectric unions (Watts Series LF3001/3001 through LF3006/3006). Electrically ground the piping system and/or electrically isolate the device with plastic pipe immediately upstream and downstream of the device.
B.6 Valve improperly reassembled.	No	B.6 If valve is disassembled during installation, caution must be exercised to install check springs in their proper location.
C. Valve exhibits high pressure drop.		
C.1 Fouled strainer.	No	C.1 Clean strainer element or replace.
C.2 Valve too small for flows encountered.	Yes	C.2 Install proper sized device based upon flow requirements.
D. No water flows downstream of valve.		
D. Valve installed backwards.	No	D. Install valve in accordance with flow direction arrow.
E. Valve does not test properly.		
E.1 Follow manufacturer's test procedure.	No	E.1, E.2 Clean or replace gate valve with full port ball valves or resilient wedge shutoff valves.
E.2 Leaky downstream gate valve.	No	
F. Valve quickly and repeatedly fouls following servicing.		
F. Debris in pipe line is too fine to be trapped by strainer.	No	F. Install finer mesh strainer element in the strainer.
G. Winterization of backflow preventers.		
		G. Prevent freeze damage by enclosing in a WATTSBOX heated enclosure. For additional information, send for literature ES-WB.