



# A.Y. McDonald Mfg. Co.

## Angle Dual Check Backflow Preventers/Device

Meets requirements of ASSE 1024 and CSA B64.6

### 111 & 112 Series

#### Model Number Explanation

##### SPACE 1,2 & 3

Basic dual check valve model number:

111 = Inline valve  
112 = Angle valve

##### SPACE 4

(-) Standard

R = Reverse direction of flow

W = Pentagon test plug in cap

##### SPACE 5

Dual check valve size:

3 = 3/4" 4 = 1"

##### SPACE 6

Inlet connection type:

A = Male meter thread integral

B = Male meter thread union

C = CTS (22) Mac-Pak compression union

E = Female iron pipe integral

F = Female iron pipe union

G = CTS T-Series compression union

H = Meter swivel integral with saddle

J = Meter swivel integral

K = K-Style male thread integral

L = K-Style female thread union

M = Male iron pipe union

N = Meter female thread union

P = Male iron pipe thread integral

Q = K-Style male thread union

S = Male meter thread with o-ring seal integral

T = CTS T-Series compression integral

W = Yokebox Cradle

Y = Yoke style thread male integral

2 = CTS (22) Mac-Pak compression integral

##### SPACE 7

Outlet connection type:

A = Male meter thread integral

B = Male meter thread union

C = CTS (22) Mac-Pak compression union

G = CTS T-Series compression union

E = Female iron pipe integral

F = Female iron pipe union

H = Meter swivel integral with saddle

K = K-Style male thread integral

L = K-Style female thread union

M = Male iron pipe union

N = Meter female thread union

P = Male iron pipe thread integral

Q = CTS Q-Series compression integral

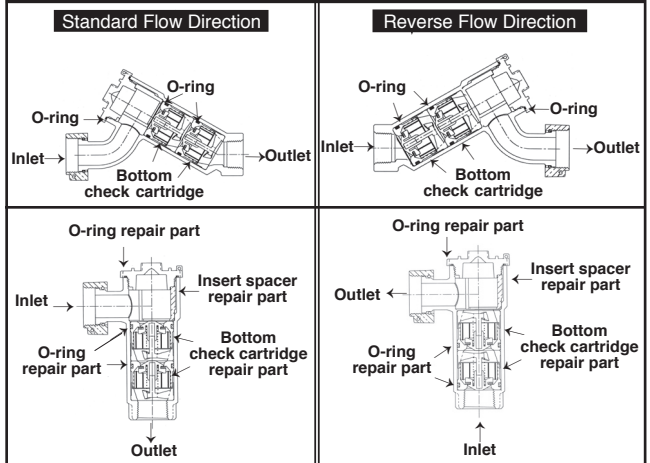
R = Copper flare integral

T = CTS T-Series compression integral

V = CTS Q-Series compression integral

2 = CTS (22) Mac-Pak compression integral

#### Components / Repair Parts



##### SPACE 8 & 9

Sizes for inlet (8) and outlet (9) connections:

1 = 1/2" 3 = 3/4" 5 = 1 1/4"

2 = 5/8" 4 = 1" 6 = 1 1/2"

Thread size of meter swivel nut:

METER SIZE	THREAD SIZE	METER DESIGNATION
5/8	3/4"	3
5/8x3/4	1"	4
3/4	1"	4
1	1 1/4"	5

For Iron Yokes use the following designation:

METER SIZE	THREAD SIZE	METER DESIGNATION
5/8	-	2
5/8x3/4	-	3
3/4	-	3
1	-	4

#### HOW TO ORDER

UNIT REQUIRED (Example):

- Angle style valve
- No test valve
- Valve size 3/4"
- Outlet - FIP integral 3/4"
- Inlet - Meter swivel integral with saddle (5/8 x 3/4 meter)

Not all sizes or combinations are available - contact factory.

#### Order Model 112-3HE43

Space 1-3	Space 4	Space 5	Space 6	Space 7	Space 8	Space 9
112	-	3	H	E	4	3

(Installation and test procedures on opposite side)



## INSTALLATION INSTRUCTIONS

1. Use only for residential and mobile home supply service or individual outlets.
2. The device can be installed in any position.
3. The device shall be installed in an accessible location to facilitate the removal for servicing and testing.
4. Service lines should be thoroughly flushed before installing the device. Excessive pipe sealant or Teflon tape may foul checks. A suitable strainer should be installed upstream of the device.
5. DO NOT use Vaseline ®, plumber's grease, or any other petroleum based product on seals or o-rings.
6. Insure that device is installed in proper flow direction. Refer to flow direction arrow on body.
7. Do not over-tighten O-ring cap seal or across body cylinder to avoid distortion.
8. Any sweat fittings must be completed before installing device.
9. A pressure relief valve or expansion tank is recommended downstream of device if thermal expansion conditions are possible.
10. Use only on cold water services. Protect from freezing.
11. Refer to pressure and temperature ratings on device tag.

## FIELD INSPECTION AND TEST PROCEDURE

### A. DIS-ASSEMBLY

1. Remove the device cap.
2. Remove the two check assemblies using care not to damage device components.
3. Visually inspect seals, sealing surfaces, etc. for debris or damage.

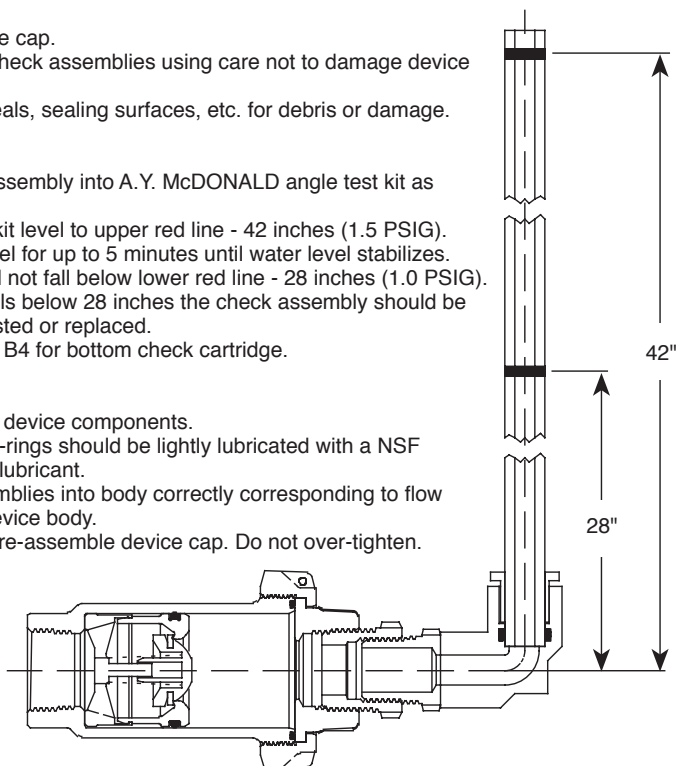
### B. TESTING

1. Insert top check assembly into A.Y. McDONALD angle test kit as shown in drawing.
2. Add water to test kit level to upper red line - 42 inches (1.5 PSIG).
3. Observe water level for up to 5 minutes until water level stabilizes. Water level should not fall below lower red line - 28 inches (1.0 PSIG).
4. If water column falls below 28 inches the check assembly should be cleaned and re-tested or replaced.
5. Repeat steps B1 - B4 for bottom check cartridge.

### C. RE-ASSEMBLY

1. Clean and inspect device components.
2. Check cartridge O-rings should be lightly lubricated with a NSF approved silicone lubricant.
3. Insert check assemblies into body correctly corresponding to flow direction on the device body.
4. Insert spacer and re-assemble device cap. Do not over-tighten.

Contact factory for  
test kit.



**WARNING:** Beginning January 1, 2010, it is unlawful in CALIFORNIA and VERMONT to use any product in the installation or repair of any public water system or any plumbing in a facility or system that provides water for human consumption if the wetted surface area of the product has a weighted average lead content greater than 0.25%. This prohibition does not extend to service saddles used in the state of CALIFORNIA.