



January 6, 2020

Required Air Gap Size on RP Type Backflow

Code: 2018 Plumbing Code

Section(s): P202, P608.14.2.1, 802.1.5, 802.2, 802.2.1

Question:

I have a question pertaining to an air gap on a pair of 8" Watts 909 RPDA with by-pass we are installing. What are the Durham requirements for sizing the air gap? Do we pipe out the air gap twice the size of the backflow making it 16-inch pipe for two backflows, or do we use the approved series air gap devices provided by the manufacture? Trying to figure out what we need to do because 16" pipe for an air gap seems excessive.

Answer:

No. The air gap is not required to be two times the diameter of the backflow(s) that it is serving. The air gap is required to be two times the diameter of the outlet of the waste pipe, which in this case is the relief valve on the RPDA. If you connect the two RPDA waste pipes, then the pipe size shall double in size where the two pipes connect and remain the same size the rest of the length of the drain line. The drain line shall not be reduced in size.

P202 Air Gap (Drainage System) The unobstructed vertical distance through the free atmosphere between the outlet of the waste pipe and the *flood level rim* of the receptacle into which the waste pipe is discharged.

P608.14.2.1 Relief port piping. The termination of the piping from a relief port or *air gap* fitting of a backflow preventer shall discharge to an *approved* indirect waste receptor or to the outdoors where it will not cause damage or create a nuisance.

P802.2 Installation. Indirect waste piping shall discharge through an air gap or an air break into a waste receptor. Waste receptors shall be trapped and vented and shall connect to the building drainage system. Indirect waste piping that exceeds 30 inches in developed length measured horizontally, or 54 inches in total developed length, shall be trapped.

Exception: Where a waste receptor receives only clear water waste and does not directly connect to a sanitary drainage system, the receptor shall not require a trap.

P802.2.1 Air Gap. The air gap between the indirect waste pipe and the flood level rim of the waste receptor shall be not less than twice the effective opening of the indirect waste pipe.

Keywords: Outlet of waste pipe, indirect waste, Air gap