Connections to a discharge stack at the same floor



René Offringa Technical Advisor Wavin Netherlands





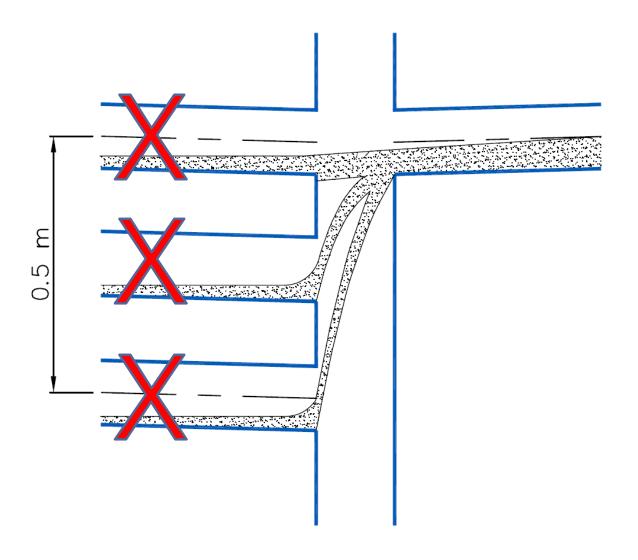
Content



- 1. Introduction: difficult building situations
- 2. Test set-up
- 3. Test results
- 4. Conclusions
- 5. Proposal for standards

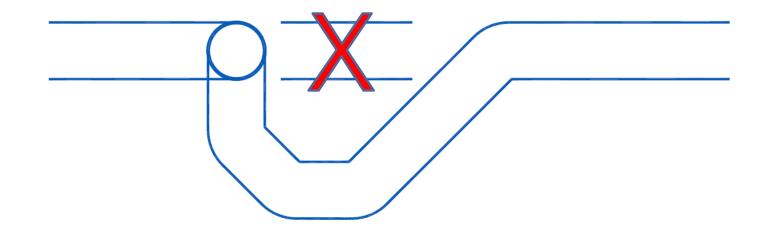
Back flow from stack into branch





Avoiding back flow





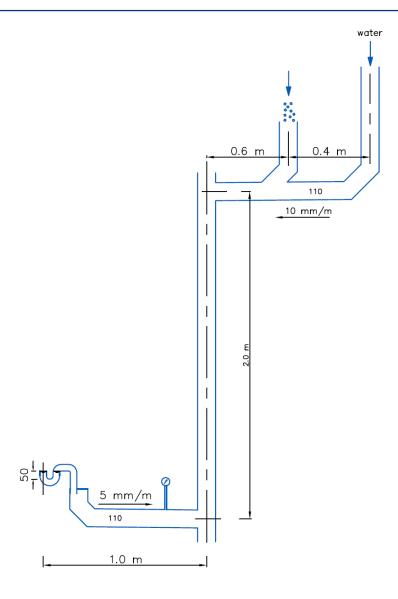
Possible effects of back flow



- Contamination of the branch with possible clogging
- Pressure fluctuations which results in water losses at water traps
- Slow discharge at small devices flushing at the same time
- Contamination of water traps

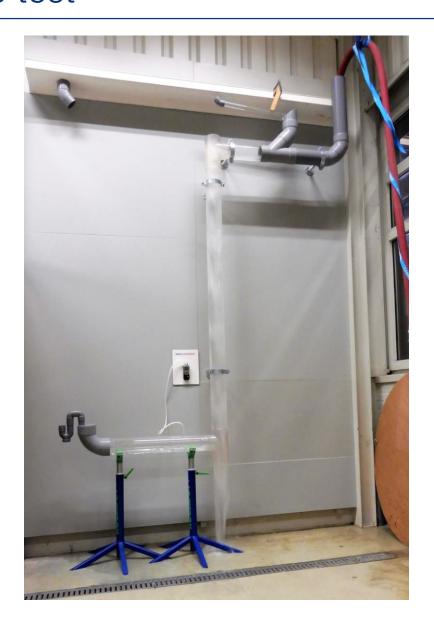
Test set up reference test





Picture of the reference test





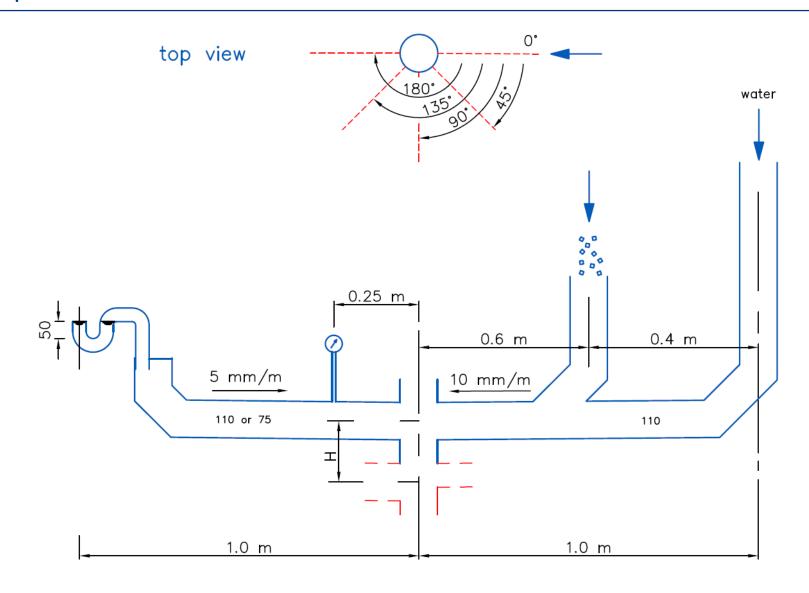
Test 1, reference test





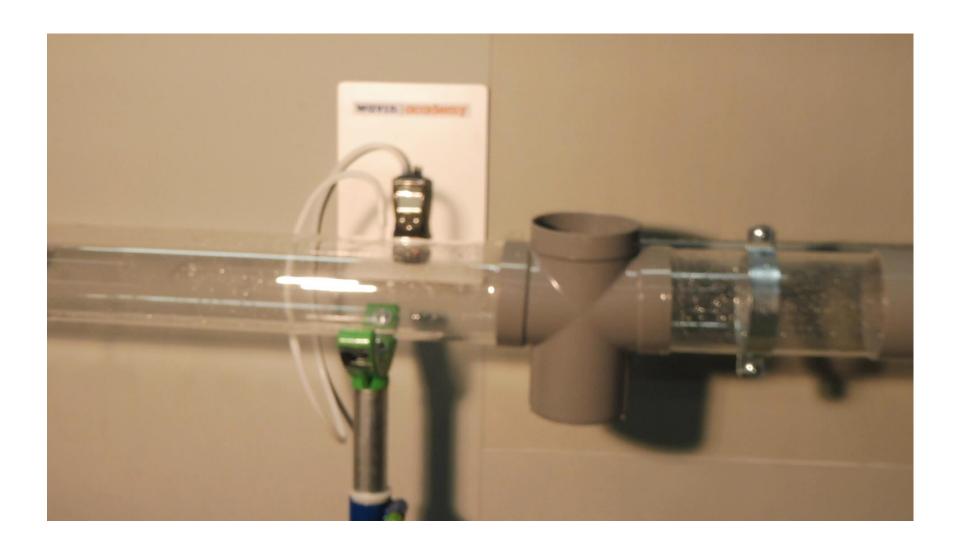
Test set up back flow





Test 2, double T 180°, H=0, 2 l/s





Test 3, ball T 180°, H=0, 2 l/s





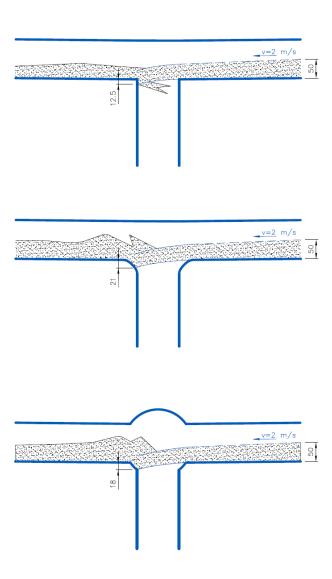
Test 4, double swept T 180°, H=0, 2 l/s





Flushing situation at different fittings





Test 8, double T 90°, H=0, 2 l/s





Test 16, 180°, H=150, 2 l/s





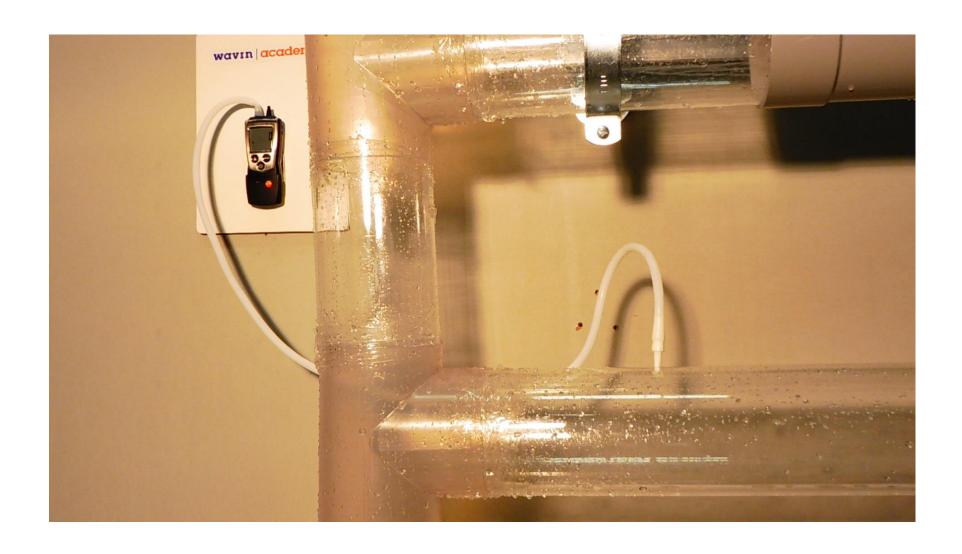
Test 17, 180°, H=150, 0.3 l/s





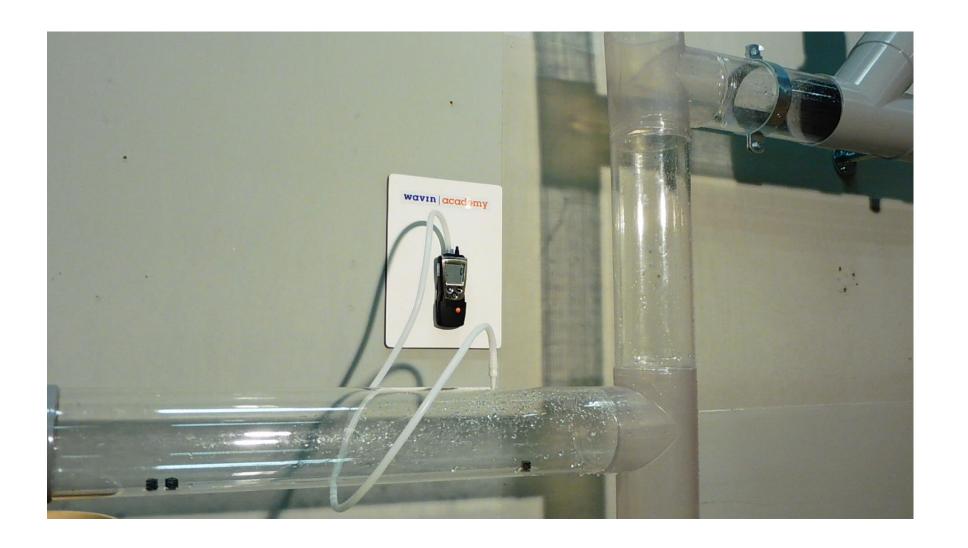
Test 34, 0°, H=300, 2 l/s





Test 38, 180°, H=450, 2 l/s

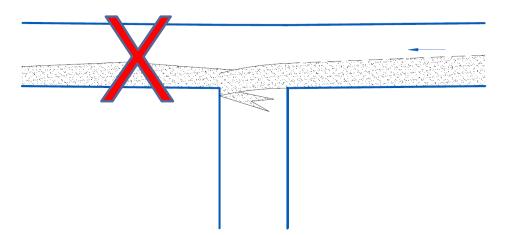




Proposal for standards (1)



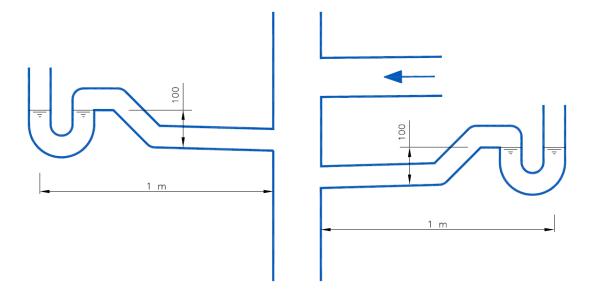
 Any branch opposite another branch on which a toilet or other device with a lot of contamination is connected, should be avoided, meaning all connections 180° at the same level, straight T, swept T or ball T.



Proposal for standards (2)



 All other branch connections at the same floor are harmless provided that the length of the branch is at least 1 m and there is a regularly discharge and/or the water traps are situated min. 100 mm above the branch to flush away possible contamination.





Thanks for your attention

