

**BUILDING SERVICES PIPING TESTING REQUIREMENTS** (Nov 2017)

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TYPE OF PIPING SYSTEM	TEST or PROCEDURE REQUIRED	TEST PRESSURE or METHOD	TEST DURATION	LEAKAGE PERMITTED or RESULT	CODE SECTION REFERENCE
Drainage and vent rough-in	Water test	10-foot head of water	15 minutes	None	OPC 312.2.1
	or Air test (only if allowed by manufacturer)	5 psi or sufficient to balance a 10-inch column of mercury Must use 2 pressure relief valves (each rated at 7.5 psig)	15 minutes	None	OPC 312.2.2
	or Alternative test (only if allowed by manufacturer)	As prescribed by manufacturer	As prescribed by manufacturer	As prescribed by manufacturer	OPC 312.2.3
Drainage and vent final  (after fixtures are connected)	Visual/operational test	N/A	N/A	None	OPC 312.4.1
	or Final test	1 inch water column (manometer or water can)	15 minutes	None	OPC 312.4.2
	or Alternative test (only if allowed by manufacturer)	1 inch water column	As prescribed by manufacturer	None	OPC 312.4.3
	Shower Liner	Plug shower drain. Fill floor/receptor to 2 inch depth	15 minutes	None	OPC 312.9
Plumbing fixture water supply	Working pressure test	Working pressure	15 minutes	None	OPC 312.5.1
	or Air test (only if allowed by manufacturer)	50 psi	15 minutes	None	OPC 312.5.2
	Disinfection	Flush with potable water until clear, fill with water/chlorine solution, stand for designated time, flush with potable water	Standing time is 3 hours or 24 hours (depending upon water/chlorine solution concentration)	N/A	OPC 610.1
Storm drainage	Water test	10-foot head of water	15 minutes	None	OPC 312.8 & 312.2.1
	or Air test (only if allowed by manufacturer)	5 psi or sufficient to balance a 10-inch column of mercury Must use 2 pressure relief valves (each rated at 7.5 psig)	15 minutes	None	OPC 312.8 & 312.2.2
	or Alternative test (only if allowed by manufacturer)	As prescribed by manufacturer	As prescribed by manufacturer	As prescribed by manufacturer	OPC 312.8 & 312.2.3
Fire protection water supply (underground)	Water flow tests	Record static pressure on hydrant A, then open hydrant B and use pitot tube to measure flow pressure from hydrant B, measure residual pressure at hydrant A while flowing hydrant B	Until pressure stabilizes	Record residual pressure	OBC 901.5, 2016 NFPA 13: A.24.2.2
	Flushing	Flow need to achieve 10 ft/sec	Until clear	N/A	OBC 901.5, 2016 NFPA 13: 10.10.2.1
	Hydrostatic test (water)	200 psi or 50 psi above working pressure (whichever is larger)	2 hours (+ or - 5 psi)	See 2016 NFPA 13: Table 10.10.2.2.6	OBC 901.5, 2016 NFPA 13: 10.10.2.2.1 & 10.10.2.2.6

Fire protection water supply (aboveground)	Hydrostatic test (water)	200 psi or 50 psi above working pressure in excess of 150 psi (whichever is larger)	2 hours	None	OBC 901.5, 2016 NFPA 13: 25.2.1
	Wet pipe system operating test	Open inspector's test connection	5 minutes	Alarm received	OBC 901.5, 2016 NFPA 13: 25.2.3.1
	Main drain test	Record static pressure, then open main drain valve	Until pressure stabilizes	Record residual pressures	OBC 901.5, 2016 NFPA 13: 25.2.3.4.1
	Dry pipe system pneumatic (air) test	40 psi	24 hours	1.5 psi	OBC 901.5, 2016 NFPA 13: 25.2.2.1
	Dry pipe system operating test	Open inspector's test connection	TBD	Record elapsed time & pressure for the valve to trip and time for water to reach test outlet; ensure alarm received	OBC 901.5, 2016 NFPA 13: 25.2.3.2.2 & 7.2.3.6
Refrigerant piping (field constructed)	Field test of high-pressure and low-pressure sides using an inert test gas such as nitrogen or carbon dioxide (air is permitted only for R-717 ammonia ...never use oxygen)	Not less than the lower of the design pressures on the compressor/ condensing unit or the setting of the relief device(s)	N/A	None	OMC 1108.1 & 1108.2
Hydronic piping (hot water heating, chilled water cooling, dual temperature water, condenser and cooling tower water, steam and steam condensate, and solar heating)	Hydrostatic test (water)	1.5 times the maximum system design pressure but not less than 100 psi	15 minutes	None	OMC 1208.1
Ground source heat pump loops	Hydrostatic test (water)	100 psi	15 minutes	None	OMC 1210.10
Fuel oil	Air or inert gas	5-10 psi	10 minutes	None	OMC 1309, 2016 NFPA 31: 8.11.3
	or Vacuum test for supply lines	20 inches of mercury	30 minutes	None	OMC 1309, 2016 NFPA 31: 8.11.4
Fuel gas	Pressure test using air, nitrogen, carbon dioxide or an inert test gas ...never oxygen	1.5 times the maximum working pressure but not less than 3 psig. (Where the test pressure >125 psig, the test pressure shall not exceed a value that produces a hoop stress in the piping >50% of the min. yield strength of the pipe)	30 minutes for each 500 cubic feet of pipe or fraction thereof, but not more than 24 hours.  If system has a volume <10 cubic feet or a single family dwelling, 10 minutes.	None	OMC 301.6, 2015 IFGC 406.2 & 406.4
	or Leakage test with fuel gas in piping	Design pressure	N/A	None	OMC 301.6, 2015 IFGC 406.6

List of abbreviations used in this table:

IFGC-International Fuel Gas Code  
NFPA-National Fire Protection Association

OBC- Ohio Building Code  
OMC-Ohio Mechanical Code  
OPC-Ohio Plumbing Code