

2021 Uniform Plumbing Code Part 4

Wisdom and Associates, Inc.

Chapter 9 - Vents

Size of Vents

- Use Table 703.2
- Minimum 1-1/4"
- Minimum ½ the diameter of the drain pipe served
- Minimum cross sectional area not less than size of building drain (904.1)

Length of Vents

- Maximum 1/3 of vent piping in horizontal position
- No limit to horizontal length is pipe increased one size (904.2)

Vent Pipe Grades and Connections

- No drops or sags
- Graded back to drainage piping (905.1-2)

Vent Pipe Rise

- Must rise 6" above flood rim level before horizontal offset
- If not possible structurally, then drainage fittings must be used (905.3)

Vent Pipe Opening

- Vent pipe opening cannot be below the trap weir (905.5)

Vent Termination

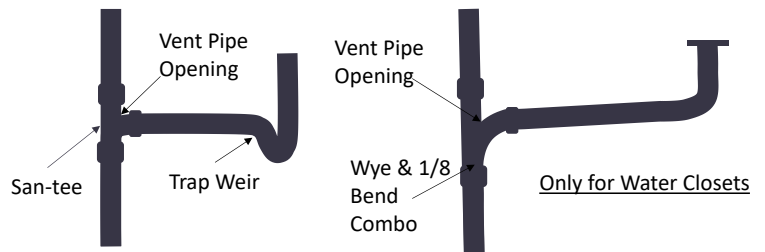
- Vents must terminate 6 inches above roof line
- At least 1 foot from vertical walls
- ABS & PVC protected from sunlight by water based paint (906.1-2)

Frost or Snow Closure

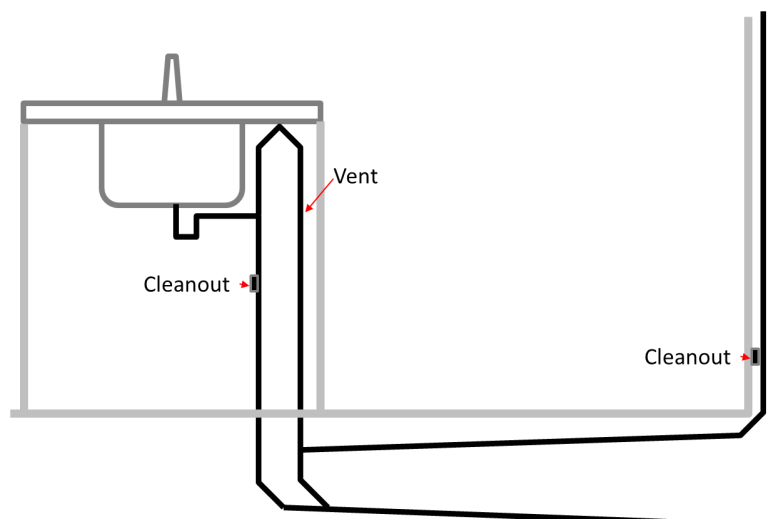
- Design temperature below 0°:
- Minimum 2" diameter
- Minimum 10" above roof (906.7)

Island Venting

- Only for island fixtures
- Vent extends as high as possible
- Foot vent connects to closest vertical vent stack
- Accessible cleanout in vertical portion of foot vent (909.1)



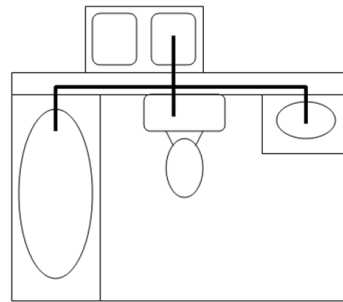
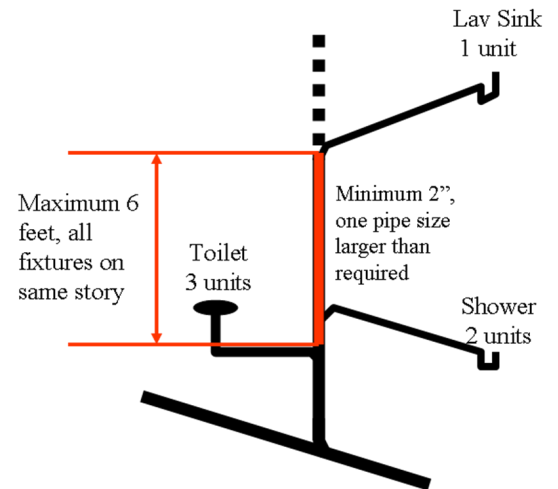
When a vent pipe connects below the trap's weir, there's a risk that the fixture might cause self-siphonage. As a result, there are specific limits on the lengths and slopes of trap arms to ensure the vent pipe does not connect below the trap's weir. For vertical setups, the correct fitting is a sanitary tee. Using a combination wye and one-eighth bend, or a wye is prohibited in this case, as it would position the vent opening below the trap's weir. This rule, however, does not apply to water closets and similar siphon-waste fixtures.



Vertical Wet Venting

- Allowed if:
- Fixtures located on the same story
- Maximum 4 - 1 to 2 unit traps
- Developed length less than 6 feet
- Wet vented waste pipe sections 1 pipe size larger
- Wet vented waste pipe sections minimum 2" (908.1-3)

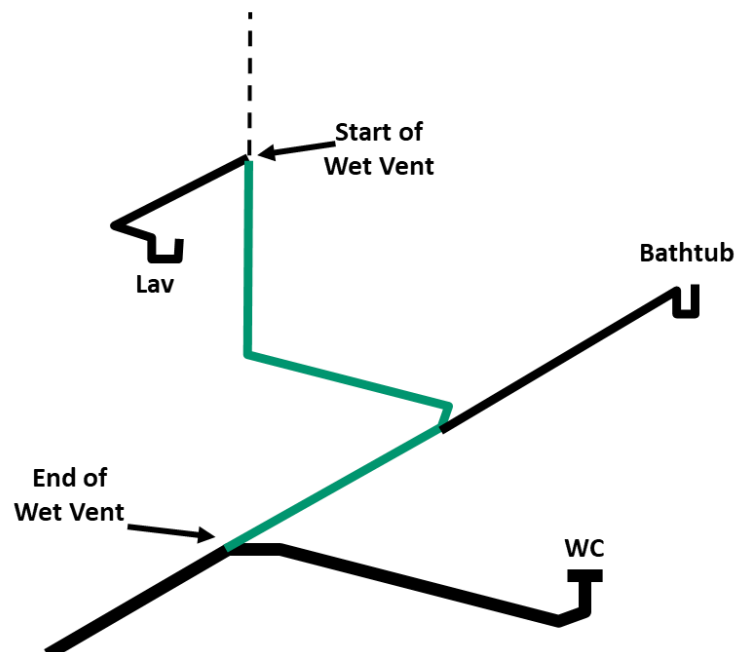
Less than four - one or two unit trap arms discharging into wet vented portion of piping, serving as a vent for a fifth fixture. *Toilet is using wet vent, but is not discharging into wet vent.*



5 wet vented units, 3 trap arms. Toilet cannot discharge into a wet vent since it is more than 3 fixture units

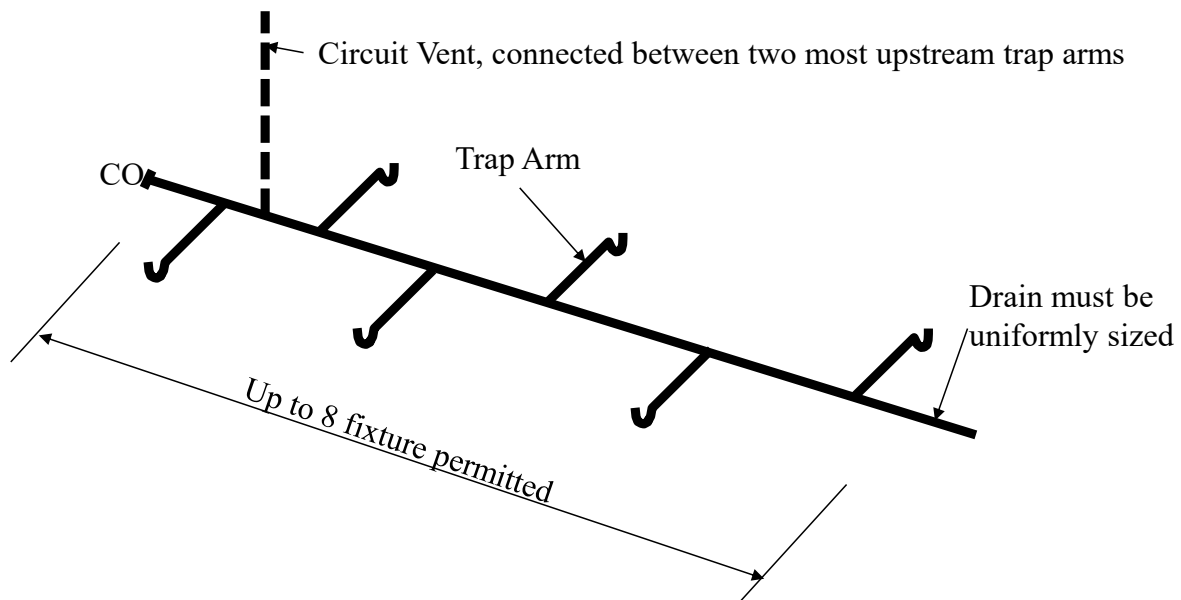
Horizontal Wet Vent

- Allowed for bathroom groups if:
- Water closet trap arm downstream
- Only one wet vent fixture above the dry vent
- Minimum 2" for 4 DFUs, 3" for 5 DFUs or more (909.1)

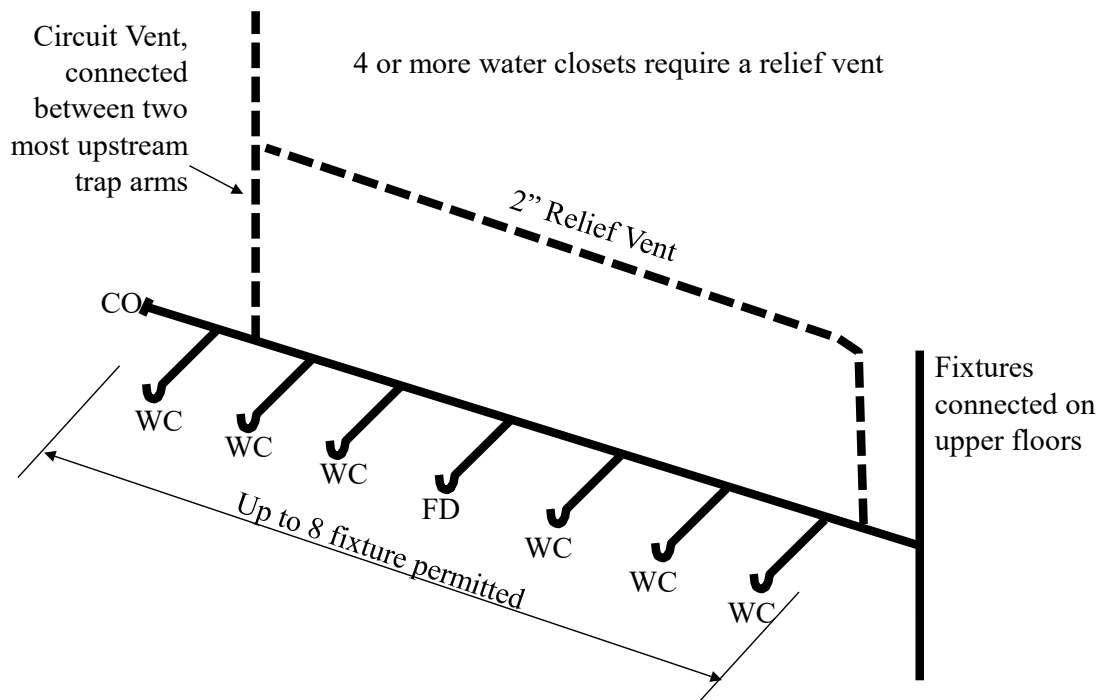


Circuit Venting

- Section re-worked for additional clarity
- Added definitions
- Identifies permitted fixtures
- Now references Table 703.2
- Maximum of eight floor outlet water closets, showers, bathtubs, floor drains connected to a horizontal branch
- [Trap arm length limits apply \(1002.2\)](#)
- [Back outlet and wall hung water closets permitted \(911.1-2\)](#)
- Four or more water closets discharging into a drain that receive waste from above
- Connects between stack and most downstream trap arm (911.3)
- Can serve as a fixture drain up to 4 units
- Uniformly sloped
- Not to exceed 1 inch per foot (911.4)
- Additional fixture permitted, must be individually vented (911.5)



This circuit venting diagram shows the general arrangement of the system. Up to 8 fixtures are permitted to be located on a single horizontal branch, provided the branch is uniformly sized and has no vertical offsets. The circuit vent is located between the two most upstream trap arms, and no waste is permitted to discharge into this vent.



When 4 or more water closets are located on a circuit vent, a relief vent is required. A relief vent is a minimum 2 inch vent pipe that attaches to the horizontal branch drain below the lowest connected trap arm. This requirement applies when the waste stack receives discharge from fixtures connected above. If there is no waste from above, then the relief vent is not required.

DWV Sizing - Private Use

Table 703.2 Maximum Unit Loading and Maximum Length of Drainage and Vent Piping										
Size of Pipe (inches)	1.25	1.5	2	3	4	5	6	8	10	12
Maximum Units Drainage Piping ¹										
Vertical	1	2 ²	16 ³	48 ⁴	256	600	1380	3600	5600	8400
Horizontal	1	1	8 ³	35 ⁴	216 ⁵	428 ⁵	720 ⁵	2640 ⁵	4680 ⁵	8200 ⁵
Maximum Length Drainage Piping										
Vertical (feet)	45	65	85	212	300	390	510	750	-	-
Horizontal (unlimited)										
Vent Piping Horizontal and Vertical ⁶										
Maximum Units	1	8 ³	24	84	256	600	1380	3600	-	-
Maximum Lengths, (feet)	45	60	120	212	300	390	510	750	-	-

¹ Excluding trap arm.

² Except sinks, urinals, and dishwashers - exceeding 1 fixture unit.

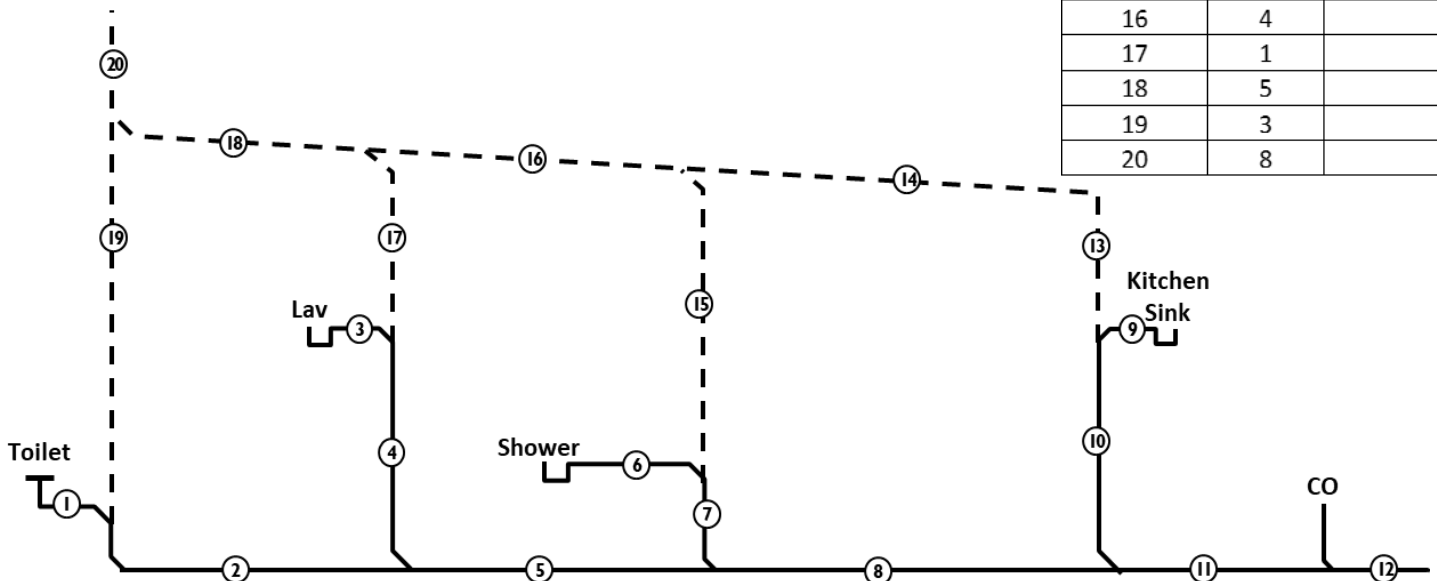
³ Except six-unit traps or water closets.

⁴ Only four water closets or six-unit traps allowed on a certical pipe or stack; and not to exceed three water closets of six-units by a factor of 0.8.

⁵ Based on 1/4 inch per foot slope. For 1/8 inch per foot slpe, multiply horizontal fixture units by a factor of 0.8.

⁶ The diameter of an individual vent shall be not less than 1.25 inches nor less than one-half the diameter of the drain to which it is connected. Fixture unit load values for drainage and vent piping shall be computed from Table 702.1 and Table 702.2(2). Not to xceed one-third of the total permitted length of a vent shall be permitted to be installed in a horizontal position. Where vents are increased one pipe size for their entire length, the maximum length limitations specified in this table do not apply. This table is in accordance with the requirements of Section 901.3.

Pipe/Fixture Section	Fixture Units	Pipe Size
1	3	3"
2	3	
3	1	
4	1	
5	4	
6	2	
7	2	
8	6	
9	2	
10	2	
11	8	
12	8	
13	2	
14	2	
15	2	
16	4	
17	1	
18	5	
19	3	
20	8	



Plumbing Appliances, Appertenances, or Fixtures	Minimum Trap And Trap Arm ⁷ (Inches)	Private	Public	Assembly ⁸
Bathtub or Combination Bath/Shower	1.5	2.0	2.0	-
Bidet	1.25	1.0	-	-
Bidet	1.5	2.0	-	-
Clothes Washer, domestic, standpipe ⁵	2	3.0	3.0	3.0
Dentil Unit, cuspidor	1.25	-	1.0	1.0
Dishwasher, domestic, with independent drain ²	1.5	2.0	2.0	2.0
Drinking Fountain or Water Cooler	1.25	5.0	0.5	1.0
Food Waste Disposer, commercial	2	-	3.0	3.0
Floor Drain, emergency	2	-	0.0	0.0
Floor Drain (for additional sizes see Section 702.0)	2	2.0	2.0	2.0
Shower, single-head trap	2	2.0	2.0	2.0
Multi-head, each additional	2	1.0	1.0	1.0
Lavatory	1.25	1.0	1.0	1.0
Lavatory in sets	1.5	2.0	2.0	2.0
Washfountain	1.5	-	2.0	2.0
Washfountain	2	-	3.0	3.0
Mobile Home, trap	3	12.0	-	-
Receptor, indirect waste ^{1,3}	1.5	See footnote ^{1,3}		
Receptor, indirect waste ^{1,4}	2	See footnote ^{1,4}		
Receptor, indirect waste ¹	3	See footnote ¹		
Sinks	-	-	-	-
Bar	1.5	1.0	-	-
Bar 2	1.5	-	2.0	2.0
Clinical	3	-	6.0	6.0
Commercial with food waste ²	1.5	-	3.0	3.0
Exam Room	1.5	-	1.0	-
Special Purpose ²	1.5	2.0	3.0	3.0
Special Purpose ²	2	3.0	4.0	4.0
Special Purpose	3	-	6.0	6.0
Kitchen, domestic (with or without food waste disposer, dishwasher, or both)	1.5	2.0	2.0	
Laundry ² (with or without discharge from a clothes washer)	1.5	2.0	2.0	2.0
Service or Mop Basin	2	-	3.0	3.0
Service or Mop Basin	3	-	3.0	3.0
Service, flushing rim	3	-	6.0	6.0
Wash, each set of faucets	-	-	2.0	2.0
Urinal, integral trap 1.0 GPF ²	2	2.0	2.0	5.0
Urinal, integral trap greater than 1.0 GPF	2	2.0	2.0	6.0
Urinal, exposed trap	1.5	2.0	2.0	5.0
Water Closet, 1.6 GPF Gravity Tank ⁶	3	3.0	4.0	6.0
Water Closet, 1.6 GPF Flushometer Tank ⁶	3	3.0	4.0	6.0
Water Closet, 1.6 GPF Flushometer Tank ⁶	3	3.0	4.0	6.0
Water Closet, greater than 1.6 GPF Gravity Tank ⁶	3	4.0	6.0	8.0
Water Closet, greater than 1.6 GPF Gravity Tank ⁶	3	4.0	6.0	8.0

¹ Indirect waste receptors shall be sized based on the total drainage capacity of the fixtures that drain therein to, in accordance with Table 702.2(2)

² Provide a 2 inch minimum drain

³ For refrigerators, coffee urns, water stations, and similar low demand loads

⁴ For commercial sinks, dishwashers, and similar moderate or heavy loads

⁵ Buildings having a clothes-washing area with clothes washers in a battery of three or more clothes washers shall be rated at 6 fixture units each for purposes of sizing common horizontal and vertical drainage piping

⁶ Water closets shall be computed as 6 fixture units where determining septic tank sizes based on Appendix H of this code

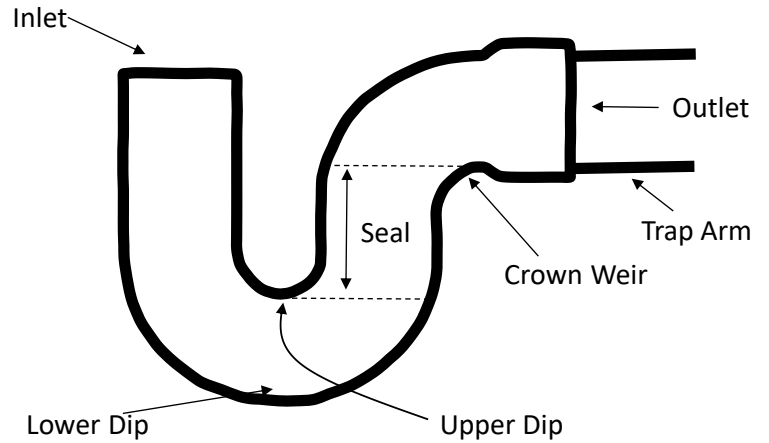
⁷ Trap sizes shall not be increased to the point where the fixture discharge is capable of being inadequate to maintain their self-scouring properties

⁸ Assembly (Public Use [see table 422.1])

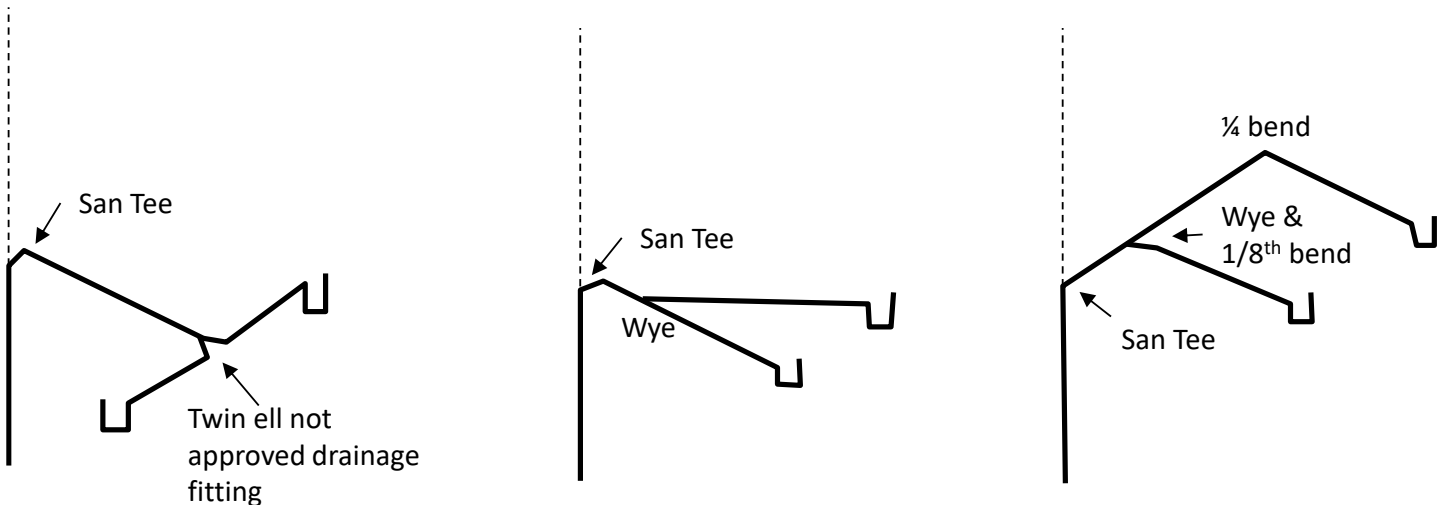
Chapter 10 - Traps and Interceptors

Traps Where Required

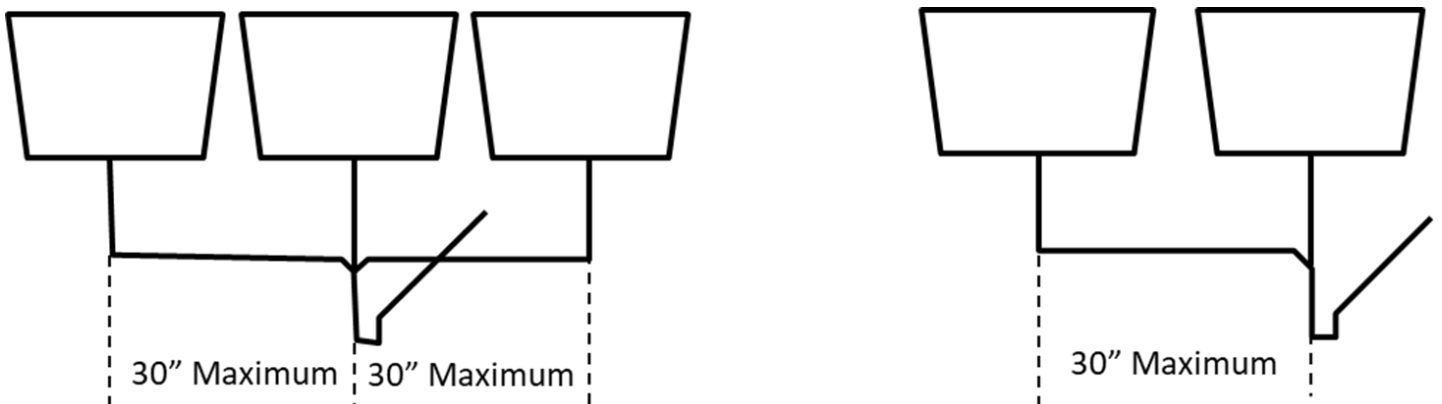
- Each fixture separately trapped, except:
- Clothes washer to laundry tub
- Up to 3 single sinks, outlets less than 30" apart
- 24" max tailpiece length (1001.2)



Prohibited Trap Arrangements



Acceptable Trap Arrangements



Change of Direction

- Trap arms may turn up to 90° without a cleanout
- Traps over 3 inches up to 135°
- Offset trap arms not prohibited (commentary) (1002.3)

Vent Pipe Opening

- Vent pipe openings must be above trap weir (1002.4)

Trap Size

- Up to 1 size larger than Table 702.1 allowed
- Trap size same as trap arm (1003.3)

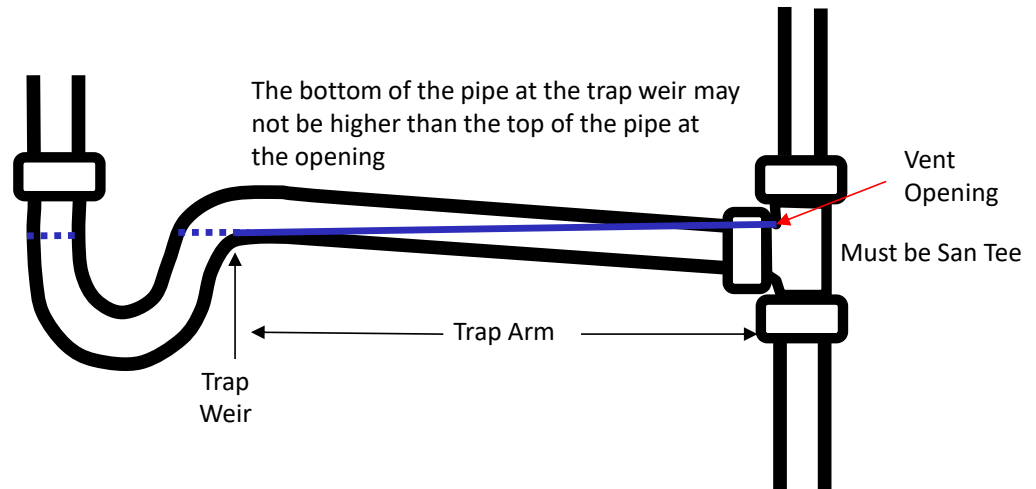


Table 702.1
Drainage Fixture Unit Values (DFU)

Plumbing Appliances, Appertenances, or Fixtures	Minimum Trap And Trap Arm ⁷ (Inches)	Private	Public	Assembly ⁸
Bathtub or Combination Bath/Shower	1.5	2.0	2.0	-
Bidet	1.25	1.0	-	-
Bidet	1.5	2.0	-	-
Clothes Washer, domestic, standpipe ⁵	2	3.0	3.0	3.0
Dentil Unit, cuspidor	1.25	-	1.0	1.0
Dishwasher, domestic, with independent drain ²	1.5	2.0	2.0	2.0
Drinking Fountain or Water Cooler	1.25	5.0	0.5	1.0
Food Waste Disposer, commercial	2	-	3.0	3.0
Floor Drain, emergency	2	-	0.0	0.0

Table 1002.2
Horizontal Lengths of Trap Arms
Except For Water Closets and Similar Fixtures ^{1,2}

Trap Arm Pipe Diameter (inches)	Distance Trap To Vent Minimum (inches)	Length Maximum (inches)
1.25	2.5	30
1.5	3	42
2	4	60
3	6	72
4	8	120
Exceeding 4	2X diameter	120

¹ Maintain 1/4 inch per foot slope

² The developed length between the trap of a water closet or similar fixture (measured from the top of the closet flange to the inner edge of the vent) and its vent shall not exceed 6 feet

Trap Size

- Up to 1 size larger than Table 702.1 allowed
- Trap size same as trap arm (1003.3)
-

Traps Prohibited

- No movable parts
- No "S", bell, or crown vented traps
- No double traps (1004.1)

Trap Seal

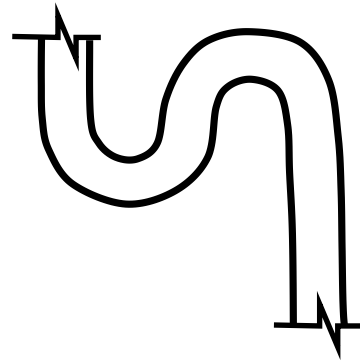
- 2-4" water depth
- Trap must be level (1005.1)

Trap Seal Protection

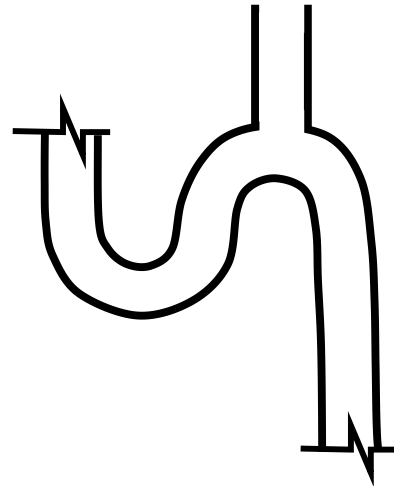
- Trap primer for infrequently used floor drains (1007.1)

Building Traps

- Must be approved by building official
- Combined sewer/storm drainage systems (1008.1)



The plumbing S traps is not a permissible trap shape due to the fact that the S trap's design creates a natural siphon effect. When water flows down the drain, it can create a vacuum that pulls the water out of the trap. This siphon action can completely drain the trap of its water seal, which is the barrier preventing sewer gases from entering the building.



A venting technique known as "crown vent" was once utilized for traps, but it proved prone to blockages. When the fixture is used, the discharge creates a vertical flow upwards on the outlet side of the trap. If the vent is positioned at the trap's crown, this flow can enter the vent, leading to eventual fouling and clogging. Additionally, when the vent is located at or near the crown of the trap, it becomes submerged by the initial surge of water into the trap arm, rendering it ineffective in preventing siphonage. As a result, there is a stipulation for a minimum length of the trap arm.

Chapter 11 - Storm Drainage

Where Required

- Roofs, paved areas, courts, courtyards vent shafts, light wells
- Separate or combined storm water system
- One and two family dwellings: flows away from building and adjoining property, not a nuisance (1101.2)

Drainage to Sanitary Sewer

- Storm water not drained into sanitary sewer (1101.3)

Subsoil Drains

- PE, PVS, or Vitrified Clay
- Open joints, perforated, or both
- Provided around buildings with basement, cellars, crawlspaces, floors below grade (conflicts with building code)
- 3 inch perf pipe laid in gravel or equivalent
- Filter media for exterior piping (1101.6)

Discharge

- Piped to storm drain, street curb, gutter alley (1101.6.1)

Discharge

- Sump required where gravity drainage not possible
- Minimum 15 gpm pump
- Minimum 1.5" discharge (1101.6.2)

Window Areaway Drains

- Minimum 2" drain size (1101.9)

Primary Roof Drains

- Roofs drained by roof drains or gutters (1101.12.1)

Testing

- 5 psi air for 15 minutes
- 10 feet of water head for 15 minutes (1107.2)



The uniform plumbing code requires subsoil drains in all cases where part of the building is below grade. This conflicts with the building code which only requires a subsoil drain in other than Group 1 (free draining) soils.

Maximum Rainfall Rates - Alaska (Appendix D)

	Inches Per Hour	GPM per Square Foot
Aleutian Islands	1.0	0.010
Anchorage	0.6	0.006
Bethel	0.8	0.008
Fairbanks	1.0	0.010
Juneau	0.6	0.006

Sizing Roof Drains For ≤ 1 " Rainfall (Table 1103.1)

Size of Pipe, Inches	GPM	Square Feet
2	30	2880
3	92	8800
4	192	18,400
5	360	34,600
6	563	54,000
8	1208	116,000

Chapter 12 - Fuel Gas

Meter Location

- Ventilated space
- Readily accessible
- Not subject to damage
- 3' from ignition source
- Not subject to extreme temperature change (1208.6.1)

Meter Support

- Supported to not place strain on meter
- Mobile home - meter supported by post and bracket with footing (1208.6.2)

Drip Legs

- Required where gas is "wet"
- Collects condensate (1210.7)

Sediment Traps

- Captures Particles
- Installed at appliance (1210.7.2)

Gas Outlets

- Secured in place
- Not located behind doors
- Accessible to wrenches without straining pipe
- Minimum 1" unthreaded pipe through ceilings or walls
- Minimum 2" unthreaded pipe through floors or slabs (1210.9)

Electrical Bonding

- Each section of above ground piping bonded
- Attached to appliance grounding conductor (1211.1)

CSST Bonding

- Each section of CSST bonded
- Gas piping bonded when connected to
 - Electrical service equipment enclosure
 - Grounded conductor
 - Grounding electrode (12511.2)

Approximate Gas Input NFPA Table 5.4.2.1

Appliance	Input (BTU/h)
Space Heating Units	
Warm Air Furnace	
Single Family	100,000
Multi-Family, Per Unit	60,000
Hydronic Boiler	
Single Family	100,000
Multi-Family, Per Unit	60,000
Space and Water Heating Units	
Hydronic Boiler	
Single Family	120,000
Multi-Family, Per Unit	75,000
Water Heating Appliances	
Water Heater, 30-40 Gallon tank	35,000
Water Heater, 50 Gallon Tank	50,000
Water Heater, Instantaneous	
2 GPM	142,800
4 GPM	285,000
6 GPM	428,400
Water heater, domestic, sidearm	35,000
Cooking Appliances	
Range, freestanding, domestic	65,000
Built in oven or broiler unit, domestic	25,000
Built in top unit, domestic	40,000
Other Appliances	
Refrigerator	3000
Clothes dryer, Type I (domestic)	35,000
Gas fireplace direct vent	40,000
Gas log	80,000
Barbeque	40,000
Gaslight	2500

Testing

- Minimum 15 minutes
- Minimum 10 psi (1213.3)

Gas Pipe Sizing

- Based on section 1216
- Gas at a specific gravity of 0.60
- Contact gas supplies for specific gravity information
- Table 1208.4.1 used to estimate demand
- Minimum ½" outlet in all cases
- Based on piping type, gas or propane, and inlet and pressure drop
- No changes to tables since 2012

Gas BTU Capacity

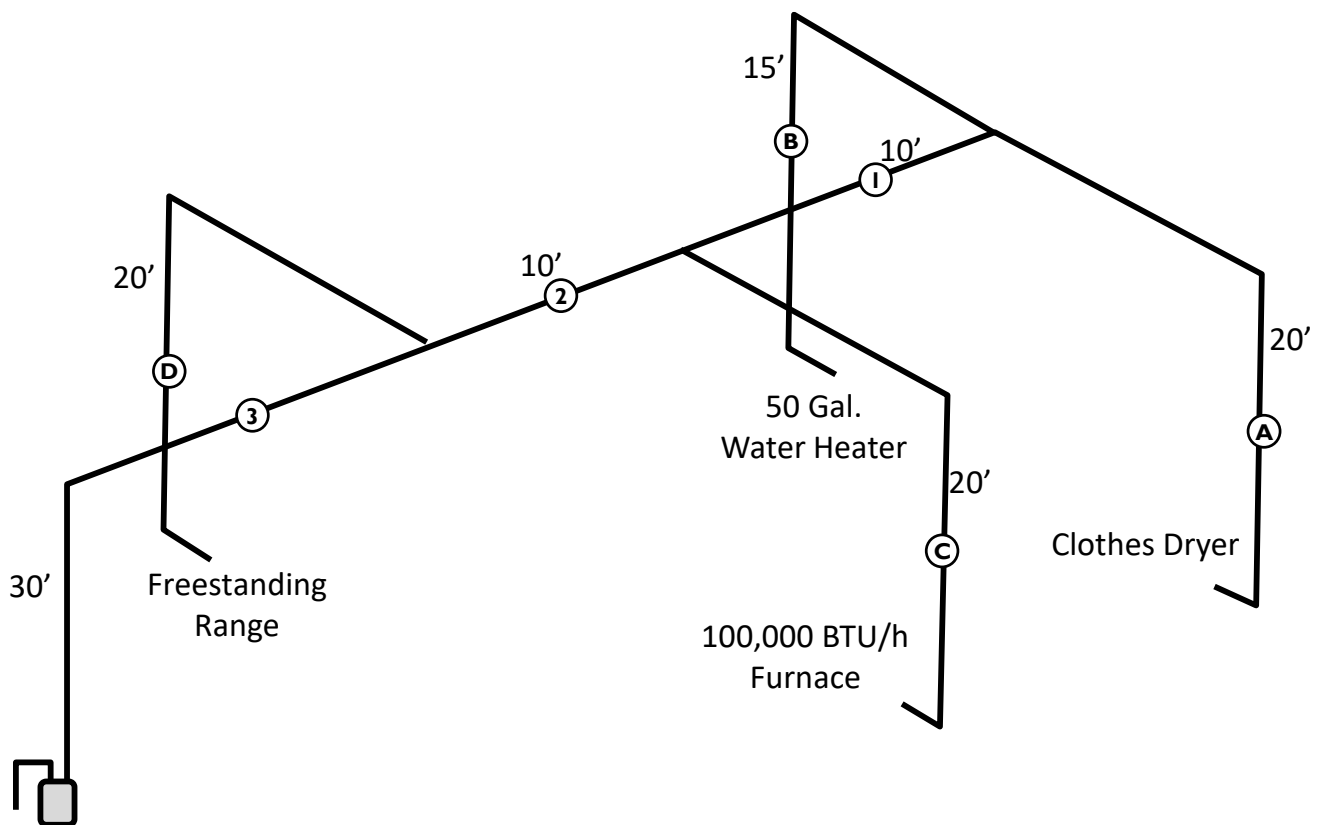
- Gas measured in cubic feet per hour
- BTU content may vary, check with gas supplier
- 1028 BTU per cubic foot typical for Enstar
- If more or less than 1000, divide gas demand by actual BTU per cubic foot

Pipe Sizing Methods

- Longest Length Method – uses the longest length from point of delivery to most remote outlet and load to size entire system
- Branch Length Method – uses the longest length from point of delivery to most remote outlet, then repeats for each for each un-sized branch (1216.1)
- Both methods are acceptable
- Longest length method may oversize shorter branches
- Branch length method selects the smallest possible pipe size acceptable, which may save money in materials
- Class exercises are based on branch length method

Gas Pipe Sizing

- Use Table 1216.2(1), assume 1,000 BTU per CF
1. Determine length of most remote outlet
 2. Choose length from left hand column equal or greater than most remote outlet
 3. Determine gas demand at most remote outlet, find a gas demand equal to or greater in the row selected
 4. Correct pipe size is located at the top of the column
 5. Size each section of pipe serving this outlet based on demand and length. Stay in the original row for each pipe section serving the most remote outlet
 6. Size each remaining branch using the same method, using the length from the meter to most remote outlet on the branch



Pipe Section/Outlet	Appliance	BTU/h	CF Demand	Table Length	Pipe Size
A	Clothes Dryer	35,000	35	70	1/2
B	50 Gal. Water Heater	50,000	50		
C	100 MBTU/h Furnace	100,000	100		
D	Freestanding Range	65,000	65		
1	A & B	85,000	85		
2	A, B, & C	185,000	185		
3	A, B, C, & D	250,000	250		

Schedule 40 Metallic Pipe								Gas:		Natural	
								Inlet Pressure:		Less than 2 PSI	
								Pressure Drop:		0.5 in w.c.	
								Specific Gravity:		0.60	
	Pipe Size (in.)										
Nominal:	½	¾	1	1-1/4	1-1/2	2	2-1/2	3	4	5	6
Actual ID:	0.622	0.824	10.49	1.380	1.610	2.067	2.469	3.068	4.026	4.047	6.065
Length (ft)	Capacity in Cubic Feet of Gas per Hour										
10	172	360	678	1390	2090	4020	6400	11300	23100	41800	67600
20	118	247	466	957	1430	2760	4400	7780	15900	28700	46500
30	95	199	374	768	1150	2220	3530	6250	12700	23000	37300
40	81	170	320	657	958	1900	3020	5350	10900	19700	31900
50	72	151	284	583	873	1680	2680	4740	9660	17500	28300
60	65	137	257	528	791	1520	2430	4290	8760	15800	25600
70	60	126	237	486	728	1400	2230	3950	8050	14600	23600

Corrugated Stainless Steel Tubing

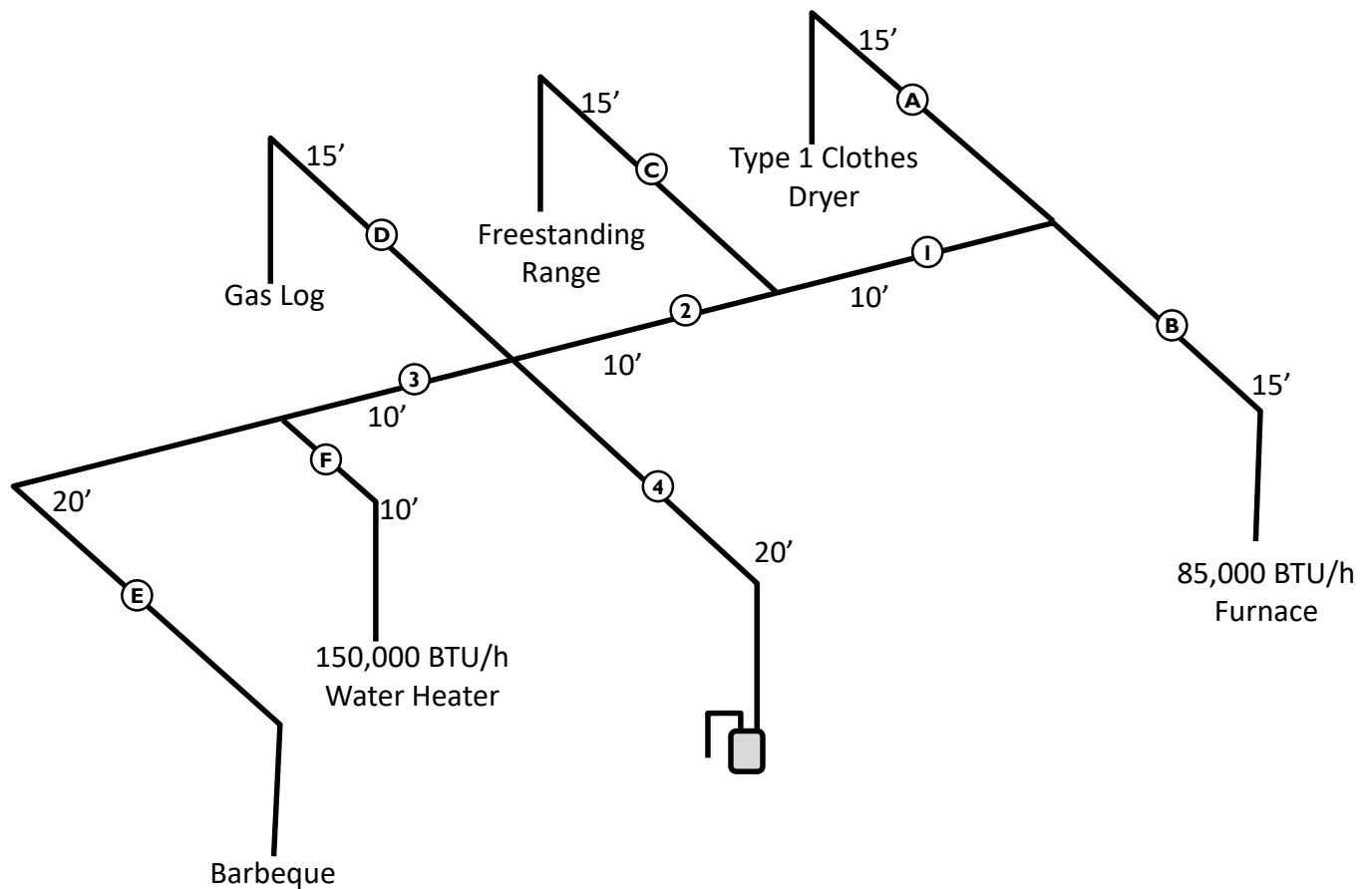
- Sized by EHD (Equivalent Hydraulic Diameter)
- EHD may vary between manufacturers
- Less capacity per diameter than black pipe

CSST Sizing

- Length of piping adjusted for bends and fittings
- Bend = any 90° turn in piping
- Fittings = any end fitting, wyes, tees, etc.
- Sizing charts assume 4 - 90° bends and 2 fittings
- Add 1.3 feet for each additional fitting or bend
- Same steps as gas pipe sizing in previous exercises

CSST Sizing Exercise

- Use Table 1216.2(14) - assume 1028 BTU per cf



Corrugated Stainless Steel Tubing (CSST)											Gas	Natural
											Inlet Pressure	Less than 2 psi
											Pressure Drop	0.5 in. w.c.
											Specific Gravity	0.60
	Tube Size (EHD)											
Flow Designation	13	15	18	19	23	25	30	31	37	46	48	60
5	46	63	115	134	225	270	471	546	895	1037	1790	2070
10	32	44	82	95	161	192	330	383	639	746	1260	1470
15	25	35	66	77	132	157	267	310	524	615	1030	1200
20	22	31	58	67	116	137	231	269	456	536	888	1050
25	19	27	52	60	104	122	206	240	409	482	793	936
30	18	25	47	55	96	112	188	218	374	442	723	856
40	15	21	41	47	83	97	162	188	325	386	625	742
50	13	19	37	42	75	87	144	168	292	347	559	665
60	12	17	34	38	68	80	131	153	267	318	509	608
70	11	16	31	36	63	74	121	141	248	295	471	563

Pipe Section/Outlet	Appliance	BTU/h	CF Demand	Table Length	Tube Size EHD
A	Type 1 Clothes Dryer	35,000	34	60	18
B	85 MBTU/h Furnace	85,000			
C	Freestanding Range	65,000			
D	Gas Log	80,000			
E	Barbeque	40,000			
F	150 MBTU/h Water Heater	150,000			
1	Serves A & B	120,000			
2	Serves A, B, & C	185,000			
3	Serves E & F	190,000			
4	Serves A through F	455,000			

Chapter 13 - Health Care Facilities & Medical gas & Medical Vacuum Systems

Applicability

- Special fixtures and systems for health care facilities
- Central supply system to the outlets or inlets (1301.1)

Where Not Applicable

- Does not apply to:
- Cylinder/container management
- Bulk supply systems
- Electrical connections and requirements
- Motor requirements and controls
- Systems having nonstandard operating pressure
- Waste anesthetic gas disposal systems
- Surface mounted medical gas rail systems
- Breathing air replenishment systems
- Medical gas support systems
- Gas powered device supply systems
- Scavenging systems (1301.2)

Conflict of Requirements

- Refer to NFPA 99 for portions of medical gas and vacuum systems not addressed in this chapter (1301.3)

Terms

- Medical gas or medical support gas refers to oxygen, nitrous oxide, medical air, carbon dioxide, helium, nitrogen, instrument air (1301.4)

Qualification of Installers

- Qualified competent technicians
- Experienced in performing such installation
- Includes all personnel actually installing the piping system (1306.1)

Chapter 14 - Firestop Protection

Applicability

- Penetrations of fire rated assemblies conform with the building code and this chapter (1401.1)

Fire Resistance Rating

- Penetrations of fire rated assemblies must meet the original fire rating (1404.2)

Sleeves

- Sleeves must be securely fastened
- Annular spaces must be fire stopped (1404.6)

Field Installations

- Inspector to check required ratings and installation



(1406.4)

Chapter 15 - Alternate Water Sources & Nonpotable Water

Allowable Uses of Alternate Water

- Reclaimed, recycled, gray, or on site treated water:
- Reclaimed - nonpotable water provided by wastewater utility
- Recycled - Not defined in the code, grouped with reclaimed systems
- Gray - untreated wastewater that has not come in contact with toilet, kitchen sink, dishwasher or similar. Includes bath, shower, lav, clothes washer, laundry tub
- On site treated nonpotable water - nonpotable water, including gray water, that has been collected, treated, and intended to be used on site. (1501.2)

System Design

- System designed by a registered design professional
- Exceptions:
- Gray water systems less than 250 gallons per day, single and multi family
- On site treated nonpotable water systems less than 250 gallons per day, single family (1501.2)

Maintenance and Inspection

- Maintenance log required of the property owner
- Inspect, clean and/or replace filters/screens every 3 months
- Verify water quality per manufacturer instructions
- Inspect all system parts every 12 months (1501.5)

Gray Water Requirements

- Permitted to not drain into sewer
- May discharge into mulch basin for single family and multi family dwellings (1503.2)

Reclaimed (Recycled) Water Systems

- Permitted for water closets, urinals, trap primers for floor drains, irrigation, cooling or air conditioning (1505.1)

Reclaimed (Recycled) Water Systems

- Permitted for water closets, urinals, trap primers for floor drains, irrigation, cooling or air conditioning (1506.1)

Chapter 16 - Nonpotable Rainwater Catchment Systems System Design

- Designed by a registered or licensed professional
- Exception: System storage less than 360 gallons
- Exception: Single family dwelling where system components, outlets, piping are exterior of the building (1601.2)

Maintenance and Inspection

- Inspect, clean and/or replace filters/screens every 3 months
- Verify water quality per manufacturer instructions
- Clean roof, gutters every 6 months
- Inspect all system parts every 12 months (1601.5.1)

Maintenance Log

- Maintenance log required of the property owner (1601.5.2)

Rainwater Catchment System Surfaces

- Roof surface or other manmade, above ground collection surfaces (1602.9.3)

Other Surfaces

- Surface water runoff or other at or below grade sources can only be used for on site treated nonpotable water systems (water closets, urinals, trap primers for floor drains, irrigation) (1602.9.4)

Chapter 17 - Referenced Standards

- Designed by All referenced standards in Table 1701.1 are referenced in the code and considered to be part of the code (1701.1)
- All referenced standards in Table 1701.2 are not referenced in the code, but are permitted as Alternate Materials and Methods of Construction Equivalency (301.1)