

CHAPTER 6

WATER RESOURCE CONSERVATION, QUALITY AND EFFICIENCY

SECTION 601 (IgCC 701) GENERAL

601.1 (IgCC 701.1) Scope. The provisions of this chapter shall establish the means of conserving water, protecting water quality and providing for safe water consumption.

601.2 (IgCC 701.2) Water usage metering required. Water consumed from any source associated with the building or building site shall be metered. Each potable and reclaimed source of water, and each onsite nonpotable water source, shall be metered separately. Meters shall be installed in accordance with the requirements of the *International Plumbing Code*. For the purposes of Section 601.2.1 (IgCC 701.2.1), each meter identified in Table 601.2.1 (IgCC Table 701.2.1) shall be capable of communicating water consumption data remotely and at a minimum, be capable of providing daily data with electronic data storage and reporting capability that can produce reports that show daily, monthly, and annual water consumption.

Exception: Fire sprinkler systems installed in accordance with Section (IFC 903.3) shall not be required to be metered.

601.2.1 (IgCC 701.2.1) Individual metering required. All potable and nonpotable water supplied to the applications listed in Table 601.2.1 (IgCC Table 701.2.1) shall be individually metered in accordance with the requirements

indicated in Table 601.2.1 (IgCC Table 701.2.1). Similar appliances and equipment shall be permitted to be grouped and supplied from piping connected to a single meter.

Exception: In Group I-2 occupancies and ambulatory care facilities, water used for patient treatment or to support patient care shall not be required to be individually metered.

SECTION 602 (IgCC 702) FIXTURES, FITTINGS, EQUIPMENT AND APPLIANCES

602.1 (IgCC 702.1) Fitting and fixture consumption. Fixtures shall comply with Table 602.1 (IgCC Table 702.1) and the following:

1. For dwelling unit and guestroom shower compartments with a floor area of not greater than 2600 in² (1.7 m²), the combined flow rate from shower water outlets that are capable of operating simultaneously including rain systems, waterfalls, body sprays and jets shall not exceed 2.0 gallons per minute (gpm) (7.6 L/min). Where the floor area of such shower compartments is greater than 2600 in² (1.7 m²), the combined flow rate from simultaneously operating shower water outlets

**TABLE 601.2.1 (IgCC TABLE 701.2.1)
METERING REQUIREMENTS**

APPLICATION	REQUIREMENTS
Irrigation	Irrigation systems that are automatically controlled shall be metered.
Tenant spaces	Tenant spaces that are estimated to consume over 1000 gallons of water per day shall be metered individually.
Onsite water collection systems	The makeup water lines supplying onsite water collection systems shall be metered.
Ornamental water features	Ornamental water features with a permanently installed water supply shall be required to utilize a meter on makeup water supply lines.
Pools and in-ground spas	Indoor and outdoor pools and in-ground spas shall be required to utilize a meter on makeup water supply lines.
Open and closed circuit cooling towers	Cooling towers with a flow through a tower greater than 500 gallons per minute shall be required to utilize a meter on makeup water and blow-down water supply lines.
Steam boilers	The makeup water supply line to steam boilers anticipated to draw more than 100,000 gallons annually or having a rating of 500,000 Btu/h or greater shall be metered.
Industrial processes	Industrial processes consuming more than 1,000 gallons per day on average shall be metered individually.
Evaporative coolers	Evaporative coolers supplying in excess of 0.6 gallons per minute, on average, makeup water shall be metered.
Fluid coolers and chillers	Water-cooled fluid coolers and chillers that do not utilize closed-loop recirculation shall be metered.
Makeup water for closed loop systems such as chilled water and hydronic systems	Makeup water supplying systems of 50 tons of cooling capacity or 500,000 Btu/h of heating capacity shall be metered.
Roof spray systems	Roof spray systems for irrigating vegetated roofs or thermal conditioning shall be metered.

For SI: 1 gallon = 3.8 L, 1 gallon per minute = 3.8 Lpm, 1 ton = 12,000 Btu, 1 British thermal unit per hour = 0.00029 kWh.

shall not exceed 2.0 gpm (7.6 L/min) for each additional 2600 in² (1.7 m²) of floor area or portion thereof.

2. In gang shower rooms, the combined flow rate from shower water outlets that are capable of operating simultaneously, including rain systems, waterfalls, body sprays and jets, shall not exceed 2.0 gpm (7.6 L/min) for every 1600 in² (1.01 m²) or portion thereof of room floor area.
3. In shower compartments required to comply with the requirements of Chapter (IBC Chapter 11), the combined flow rate from shower water outlets that are capa-

**TABLE 602.1 (IgCC TABLE 702.1)
MAXIMUM FIXTURE AND FITTING FLOW RATES
FOR REDUCED WATER CONSUMPTION^{f, g}**

FIXTURE OR FIXTURE FITTING TYPE	MAXIMUM FLOW RATE
Showerhead ^a	2.0 gpm at 80 psi and WaterSense labeled
Lavatory faucet and bar sink—private	1.5 gpm at 60 psi
Lavatory faucet—public (metered)	0.25 gpc ^b
Lavatory faucet—public (nonmetered)	0.5 gpm at 60 psi
Kitchen faucet—private	1.8 gpm at 60 psi
Kitchen and bar sink faucets in other than dwelling units and guestrooms	2.2 gpm at 60 psi
Urinal	0.5 gpf and WaterSense labeled or nonwater urinal
Water closet—public and remote ^c	1.6 gpf
Water closet—public and nonremote	1.28 gpf average ^{d, e}
Water closet—tank type, private	1.28 gpf and WaterSense labeled ^d
Water closet—flushometer type, private	1.28 gpf ^e
Prerinse spray valves	1.3 gpm and WaterSense labeled
Drinking fountains (manual)	0.7 gpm
Drinking fountains (metered)	0.25 gpc ^b

For SI: 1 foot = 304.8 mm, 1 gallon per cycle (gpc) = 3.8 Lpc, 1 gallon per flush (gpf) = 3.8 Lpf, 1 gallon per minute (gpm) = 3.8 Lpm, 1 pound per square inch = 6.895 kPa.

- a. Includes hand showers, body sprays, rainfall panels and jets. Showerheads shall be supplied by automatic compensating valves that comply with ASSE 1016/ASME A112.1016/CSA B125.16 and that are specifically designed to function at the flow rate of the showerheads being used.
- b. Gallons per cycle of water volume discharged from each activation of a metered faucet.
- c. A remote water closet is a water closet located not less than 30 feet upstream of other drain line connections or fixtures and is located where less than 1.5 drainage fixture units are upstream of the drain line connection.
- d. The effective flush volume for a dual-flush water closet is defined as the composite, average flush volume of two reduced flushes and one full flush.
- e. In public settings, the maximum water use of a dual flush water closet is based solely on its full flush operation; not an average of full and reduced volume flushes.
- f. Water dispensers associated with drinking fountains shall not have limitations for flow rate.
- g. Where a faucet has a pot filler mode, the flow shall not exceed 22 gpm at 60 psi. Such faucets shall automatically return to the flow rate indicated in the table when the pot filler mode activation mechanism is released or when the faucet flow is turned off.

ble of operating simultaneously, including rain systems, waterfalls, body sprays and jets, shall not exceed 4.0 gpm (15.1 L/min) for every 2600 in² (1.7 m²) or portion thereof of room floor area.

602.2 (IgCC 702.2) Combination tub and shower valves. Tub spout leakage from combination tub and shower valves that occurs when the outlet flow is diverted to the shower shall not exceed 0.1 gpm, measured in accordance with the requirements of ASME A112.18.1/CSA B125.1.

602.3 (IgCC 702.3) Food establishment prerinse spray valves. Food establishment prerinse spray valves shall have a maximum flow rate in accordance with Table 602.1 (IgCC Table 702.1) and shall shut off automatically when released.

602.4 (IgCC 702.4) Drinking fountain controls. Drinking fountains equipped with manually controlled valves shall shut off automatically upon release of the valve. Metered drinking fountains shall comply with the flow volume specified in Table 602.1 (IgCC Table 702.1).

602.5 (IgCC 702.5) Appliances. Sections 602.5.1 (IgCC 702.5.1) through 602.5.4 (IgCC 702.5.4) shall regulate appliances that are not related to space conditioning.

602.5.1 (IgCC 702.5.1) Clothes washers. Clothes washers of the type in the ENERGY STAR program as defined in “ENERGY STAR® Program Requirements, Product Specification for Clothes Washers, Eligibility Criteria,” shall have a water factor (WF) not exceeding 6.0 and a *modified energy factor* (MEF) of not less than 2.0.

602.5.2 (IgCC 702.5.2) Ice makers. Ice makers shall not be water cooled. Ice makers producing cubed-type ice shall be ENERGY STAR qualified as commercial ice machines. Ice makers of a type not currently ENERGY STAR qualified, such as flake, nugget or continuous-type ice makers, shall not exceed the total water use of 25 gallons per 100 pounds (94 L per 45 kg) of ice produced.

602.5.3 (IgCC 702.5.3) Steam cookers. Steam cookers shall consume not more than the amounts indicated in Table 503.1 (IgCC Table 609.2.3).

602.5.3 (IgCC 702.5.4) Dishwashers. Dishwashers shall be ENERGY STAR qualified where an ENERGY STAR category exists for the specific dishwasher type. Where an ENERGY STAR category does not exist, the dishwasher shall be in accordance with Table 602.5.4 (IgCC 702.5.4).

**TABLE 602.5.4 (IgCC TABLE 702.5.4)
MAXIMUM WATER CONSUMPTION
FOR COMMERCIAL DISHWASHERS**

DISHWASHER TYPE	MAXIMUM WATER CONSUMPTION
Rackless conveyor	2.2 gallons per minute
Utensil washer	2.2 gallons per rack

For SI: 1 gallon = 3.785 L, 1 gallon per minute = 3.785 Lpm.

602.6 (IgCC 702.6) Municipal reclaimed water. Where required by Table 302.1 (IgCC Table 302.1) and where municipal reclaimed water is accessible and allowed for such use by the laws, rules and ordinances applicable in the jurisdiction, it shall be supplied to water closets, water-supplied urinals, water-supplied trap primers and applicable industrial uses. A municipal reclaimed water supply shall be deemed

accessible where the supply is not greater than 150 percent of the distance that the potable water supply is from the lot boundary or the supply is within 100 feet (30.5 m) of a potable water supply that serves the lot.

602.7 (IgCC 702.7) Hot and tempered water distribution. Water supply piping shall be in accordance with Section 602.7.1 (IgCC 702.7.1) or Section 602.7.2 (IgCC 702.7.2). The flow rate through 1/4-inch (6.4 mm) tubing shall not exceed 0.5 gpm (1.9 Lpm). The flow rate through 5/16-inch (7.9 mm) tubing shall not exceed 1 gpm (3.8 Lpm). The flow rate through 3/8-inch (9.5 mm) tubing shall not exceed 1.5 gpm (5.7 Lpm).

602.7.1 (IgCC 702.7.1) Maximum allowable pipe length method. The maximum allowable pipe length from the source of hot or tempered water to the termination of the fixture supply pipe shall be in accordance with the maximum pipe length columns in Tables 602.7.2(2) [IgCC Table 702.7.2(2)] through 602.7.2(10) [IgCC Table 702.7.2(10)], as appropriate for the type of pipe to be installed. Where the type of pipe to be installed is unknown or the type of pipe is not covered by Tables 602.7.2(2) [IgCC Table 702.7.2(2)] through 602.7.2(10) [IgCC Table 702.7.2(10)], Table 602.7.2(1) [IgCC Table 702.7.2(1)] shall be used for design purposes. Where the length contains more than one size of pipe, the largest size shall be used for determining the maximum allowable length of the pipe in the tables.

602.7.2 (IgCC 702.7.2) Maximum allowable pipe volume method. The water volume in the piping shall be calculated in accordance with Section 602.7.2.1 (IgCC 702.7.2.1). The maximum volume of hot or tempered water in the piping to public lavatory faucets, metering or nonmetering, shall be 2 ounces (0.06 L). For fixtures other than public lavatory faucets, the maximum volume shall be 64 ounces (1.89 L) for hot or tempered water from a water heater or boiler; and 24 ounces (0.7 L) for hot or tempered water from a circulation loop pipe or an electrically heat-traced pipe. The water volume in the piping

shall be calculated in accordance with Section 602.7.2.1 (IgCC 702.7.2.1).

602.7.2.1 (IgCC 702.7.2.1) Water volume determination. The volume shall be the sum of the internal volumes of pipe, fittings, valves, meters and manifolds between the source of hot water and the termination of the fixture supply pipe. The volume shall be determined from the liquid ounces per foot column of Tables 602.7.2(2) [IgCC Table 702.7.2(2)] through 602.7.2(10) [IgCC Table 702.7.2(10)] as appropriate for the type of pipe. Where the type of pipe is unknown or the type of pipe is not covered by Tables 602.7.2(2) [IgCC Table 702.7.2(2)] through 602.7.2(10) [IgCC Table 702.7.2(10)], Table 602.7.2(1) [IgCC Table 702.7.2(1)] shall be used to determine the volume. The volume contained within fixture shutoff valves, flexible water supply connectors to a fixture fitting, or within a fixture fitting shall not be included in the water volume determination. Where hot or tempered water is supplied by a circulation loop pipe or an electrically heat-traced pipe, the volume shall include the portion of the fitting on the source pipe that supplies water to the fixture.

602.8 (IgCC 702.8) Trap priming water. Potable water shall not be used for trap priming purposes where an alternate nonpotable onsite water distribution system, a reclaimed water distribution system or a gray water distribution system is available.

602.8.1 (IgCC 702.8.1) Continuous operation prohibited. Trap primers that allow continuous water flow shall be prohibited.

602.8.2 (IgCC 702.8.2) Volume limitation. Trap primers shall be of the type that use not more than 30 gallons (114 L) per year per trap.

602.8.3 (IgCC 702.8.3) Water criteria. Where nonpotable water is available and is already being used to supply plumbing fixtures, such water shall be used to supply trap primers.

**TABLE 602.7.2(1) [IgCC TABLE 702.7.2(1)]
VOLUME AND MAXIMUM LENGTH OF PIPE OR TUBE OF A TYPE UNKNOWN OR NOT COVERED^b**

NOMINAL PIPE OR TUBE SIZE (inch)	LIQUID OUNCES PER FOOT OF LENGTH	MAXIMUM PIPE OR TUBE LENGTH		
		System without a circulation loop or heat-traced line (feet)	System with a circulation loop or heat-traced line (feet)	Lavatory faucets – public (metering and nonmetering) (feet)
1/4 ^a	0.33	50	16	6
5/16 ^a	0.5	50	16	4
3/8 ^a	0.75	50	16	3
1/2	1.5	43	16	2
3/8	2	32	12	1
3/4	3	21	8	0.5
7/8	4	16	6	0.5
1	5	13	5	0.5
1 1/4	8	8	3	0.5
1 1/2	11	6	2	0.5
2 or larger	18	4	1	0.5

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 gallon per minute = 3.785 L/m, 1 ounce = 29.6 ml.

a. The flow rate for 1/4-inch size pipe or tube is limited to 0.5 gallons per minute; for 3/16-inch size, it is limited to 1 gpm; for 3/8-inch size, it is limited to 1.5 gpm.
b. Not covered means pipe or tube types not covered by Tables 602.7.2(2) [IgCC Table 702.7.2(2)] through 602.7.2(10) [IgCC Table 702.7.2(10)].

**TABLE 602.7.2(2) [IgCC TABLE 702.7.2(2)]
VOLUME AND MAXIMUM LENGTH OF TYPE K COPPER TUBING**

NOMINAL PIPE OR TUBE SIZE (inch)	LIQUID OUNCES PER FOOT OF LENGTH	MAXIMUM TUBE LENGTH		
		System without a circulation loop or heat-traced line (feet)	System with a heat-traced line (feet)	Lavatory faucets – public (metering and nonmetering) (feet)
$\frac{3}{8}$ ^a	0.84	44.6	14.3	2.7
$\frac{1}{2}$	1.45	44.5	16.6	2.1
$\frac{3}{4}$	2.90	21.7	8.3	0.5
1	5.17	12.6	4.8	0.5
$1\frac{1}{4}$	8.09	7.9	3.0	0.5
$1\frac{1}{2}$	11.45	5.8	1.9	0.5
2 or larger	20.04	3.6	0.9	0.4

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 gallon per minute = 3.785 L/m, 1 ounce = 29.6 ml.

a. The flow rate for $\frac{3}{8}$ -inch size is limited to 1.5 gallons per minute.

**TABLE 602.7.2(3) [IgCC TABLE 702.7.2(3)]
VOLUME AND MAXIMUM LENGTH OF TYPE L COPPER TUBING**

NOMINAL PIPE OR TUBE SIZE (inch)	LIQUID OUNCES PER FOOT OF LENGTH	MAXIMUM TUBE LENGTH		
		System without a circulation loop or heat-traced line (feet)	System with a circulation loop or heat-traced line (feet)	Lavatory faucets – public (metering and nonmetering) (feet)
$\frac{3}{8}$ ^a	0.97	38.7	12.4	2.3
$\frac{1}{2}$	1.55	41.6	15.5	1.9
$\frac{3}{4}$	3.22	19.6	7.5	0.5
1	5.49	11.8	4.6	0.5
$1\frac{1}{4}$	8.38	7.6	2.9	0.5
$1\frac{1}{2}$	11.83	5.6	1.9	0.5
2 or larger	20.58	3.5	0.9	0.4

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 gallon per minute = 3.785 L/m, 1 ounce = 29.6 ml.

a. The flow rate for $\frac{3}{8}$ -inch size is limited to 1.5 gpm.

**TABLE 602.7.2(4) [IgCC TABLE 702.7.2(4)]
VOLUME AND MAXIMUM LENGTH OF TYPE M COPPER TUBING**

NOMINAL PIPE OR TUBE SIZE (inch)	LIQUID OUNCES PER FOOT OF LENGTH	MAXIMUM TUBE LENGTH		
		System without a circulation loop or heat-traced line (feet)	System with a circulation loop or heat-traced line (feet)	Lavatory faucets – public (metering and nonmetering) (feet)
$\frac{3}{8}$ ^a	1.06	35.4	11.3	2.1
$\frac{1}{2}$	1.69	38.2	14.2	1.8
$\frac{3}{4}$	3.43	18.4	7.0	0.4
1	5.81	11.2	4.3	0.4
$1\frac{1}{4}$	8.70	7.4	2.8	0.5
$1\frac{1}{2}$	12.18	5.4	1.8	0.5
2 or larger	21.08	3.4	0.9	0.4

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 gallon per minute = 3.785 L/m, 1 ounce = 29.6 ml.

a. The flow rate for $\frac{3}{8}$ -inch size is limited to 1.5 gpm.

**TABLE 602.7.2(5) [IgCC TABLE 702.7.2(5)]
VOLUME AND MAXIMUM LENGTH OF CPVC TUBING, CTS^a**

NOMINAL PIPE OR TUBE SIZE (inch)	LIQUID OUNCES PER FOOT OF LENGTH	MAXIMUM TUBE LENGTH		
		System without a circulation loop or heat-traced line (feet)	System with a circulation loop or heat-traced line (feet)	Lavatory faucets – public (metering and nonmetering) (feet)
1/2	1.25	51.6	19.2	2.4
3/4	2.67	23.6	9.0	0.6
1	4.43	14.7	5.6	0.6
1 1/4	6.61	9.7	3.6	0.6
1 1/2	9.22	7.2	2.4	0.6
2 or larger	15.79	4.6	1.1	0.6

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 gallon per minute = 3.785 L/m, 1 ounce = 29.6 ml.

a. Copper tube size outside diameter dimension and SDR 11.

**TABLE 602.7.2(6) [IgCC TABLE 702.7.2(6)]
VOLUME AND MAXIMUM LENGTH OF CPVC PIPE, SCHEDULE 40**

NOMINAL PIPE OR TUBE SIZE (inch)	LIQUID OUNCES PER FOOT OF LENGTH	MAXIMUM TUBE LENGTH		
		System without a circulation loop or heat-traced line (feet)	System with a circulation loop or heat-traced line (feet)	Lavatory faucets – public (metering and nonmetering) (feet)
3/8 ^a	1.17	32.1	10.3	1.9
1/2	1.89	34.1	12.7	1.6
3/4	3.58	17.6	6.7	0.4
1	5.53	11.8	4.5	0.5
1 1/4	9.66	6.6	2.5	0.4
1 1/2	13.20	5.0	1.7	0.4
2 or larger	21.88	3.3	0.8	0.4

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 gallon per minute = 3.785 L/m, 1 ounce = 29.6 ml.

a. The flow rate for 3/8-inch size is limited to 1.5 gpm.

**TABLE 602.7.2(7) [IgCC TABLE 702.7.2(7)]
VOLUME AND MAXIMUM LENGTH OF CPVC PIPE, SCHEDULE 80**

NOMINAL PIPE OR TUBE SIZE (inch)	LIQUID OUNCES PER FOOT OF LENGTH	MAXIMUM TUBE LENGTH		
		System without a circulation loop or heat-traced line (feet)	System with a circulation loop or heat-traced line (feet)	Lavatory faucets – public (metering and nonmetering) (feet)
3/8 ^a	0.86	43.6	14.0	2.6
1/2	1.46	44.2	16.4	2.1
3/4	2.74	23.0	8.8	0.5
1	4.56	14.3	5.5	0.5
1 1/4	8.24	7.8	2.9	0.5
1 1/2	11.38	5.8	1.9	0.5
2 or larger	19.11	3.8	0.9	0.5

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 gallon per minute = 3.785 L/m, 1 ounce = 29.6 ml.

a. The flow rate for 3/8-inch size is limited to 1.5 gpm.

**TABLE 602.7.2(8) [IgCC TABLE 702.7.2(8)]
VOLUME AND MAXIMUM LENGTH OF PE-AL-PE TUBING**

NOMINAL PIPE OR TUBE SIZE (inch)	LIQUID OUNCES PER FOOT OF LENGTH	MAXIMUM TUBE LENGTH		
		System without a circulation loop or heat-traced line (feet)	System with a circulation loop or heat-traced line (feet)	Lavatory faucets – public (metering and nonmetering) (feet)
$\frac{3}{8}$ ^a	0.63	59.5	19.0	3.6
$\frac{1}{2}$	1.31	49.2	18.3	2.3
$\frac{3}{4}$	3.39	18.6	7.1	0.4
1	5.56	11.7	4.5	0.4
$1\frac{1}{4}$	8.49	7.5	2.8	0.5
$1\frac{1}{2}$	13.88	4.8	1.6	0.4
2 or larger	21.48	3.4	0.8	0.4

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 gallon per minute = 3.785 L/m, 1 ounce = 29.6 ml.

a. The flow rate for $\frac{3}{8}$ -inch size is limited to 1.5 gpm.

**TABLE 602.7.2(9) [IgCC TABLE 702.7.2(9)]
VOLUME AND MAXIMUM LENGTH OF PEX AND PE-RT TUBING, CTS^b**

NOMINAL PIPE OR TUBE SIZE (inch)	LIQUID OUNCES PER FOOT OF LENGTH	MAXIMUM TUBE LENGTH		
		System without a circulation loop or heat-traced line (feet)	System with a circulation loop or heat-traced line (feet)	Lavatory faucets – public (metering and nonmetering) (feet)
$\frac{3}{8}$ ^a	0.6	58.6	18.8	3.5
$\frac{1}{2}$	1.18	54.7	20.3	2.5
$\frac{3}{4}$	2.35	26.8	10.2	0.6
1	3.91	16.6	6.4	0.6
$1\frac{1}{4}$	5.81	11.0	4.1	0.7
$1\frac{1}{2}$	8.09	8.2	2.7	0.7
2 or larger	13.86	5.2	1.3	0.6

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 gallon per minute = 3.785 L/m, 1 ounce = 29.6 ml.

a. The flow rate for $\frac{3}{8}$ -inch size is limited to 1.5 gpm.

b. Copper tube size outside diameter dimension and SDR 9, for both PEX and PE-RT types of tubing.

**TABLE 602.7.2(10) [IgCC TABLE 702.7.2(10)]
VOLUME AND MAXIMUM LENGTH OF PEX-AL-PEX TUBING**

NOMINAL PIPE OR TUBE SIZE (inch)	LIQUID OUNCES PER FOOT OF LENGTH	MAXIMUM TUBE LENGTH		
		System without a circulation loop or heat-traced line (feet)	System with a circulation loop or heat-traced line (feet)	Lavatory faucets – public (metering and nonmetering) (feet)
$\frac{3}{8}$ ^a	0.63	59.5	19.0	3.6
$\frac{1}{2}$	1.31	49.2	18.3	2.3
$\frac{3}{4}$	3.39	18.6	7.1	0.4
1	5.56	11.7	4.5	0.4
$1\frac{1}{4}$	8.49	7.5	2.8	0.5
$1\frac{1}{2}$	13.88	4.8	1.6	0.4
2 or larger	21.48	3.4	0.8	0.4

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 gallon per minute = 3.785 L/m, 1 ounce = 29.6 ml.

a. The flow rate for $\frac{3}{8}$ -inch size is limited to 1.5 gpm.