

UPONOR PEX PIPE & FITTINGS (ASTM F1960)

AQUAPEX PIPE



Pipe

	1/2"	3/4"	1"
20'	\$ 15.98	27.39	49.37
100'	79.95	137.00	246.75
300'	239.65	410.80	740.40



Coupling



Male / Female Adapter

FITTINGS Plastic / Brass

1/2" 3/4" 1"



Plug

Coupling (P x P)	2.00 / 7.20	2.50 / 11.00	3.90 / 20.10
Tee (P x P x P)	2.45 / 12.15	3.90 / 19.80	7.10 / 36.55
90° Elbow (P x P)	2.45 / -----	3.05 / 14.10	6.30 / 22.70
Propex Rings	.32	.66	1.41
Plugs (P)	1.55	2.40	3.20
Male Adapter (P x Mip)	6.30	11.50	23.70
Female Adapter (P x Fip)	12.65	14.20	30.85
Copper Adapter (P x Cop)	4.95	10.10	16.85
Drop-Ear 90° Elbow (P x Fip)	16.95	37.20	56.00
Ball Valve (P x P)	23.40	28.25	54.10
Ball Valve (P x Cop)	19.00	33.70	



Valve P X P



Angle Stop



Drop-ear 90°



Stub Out



Copper adapter



Rings

1/2" Ball Valve (P x Mip)	30.95	10.55	1/2" DE Bend Support
Plastic Bend Support (1/2" // 3/4")	2.05 // 4.75	14.05	1/2" Straight Support
Metal Bend Support (1/2" // 3/4")	5.05 // 7.55	12.00	Stub out (4" x 8")
Angle Stop (1/2P x 3/8")	9.05	14.75	90° Elbow (P x Mip)



Tees

Tee (1/2P x 1/2P x 3/4P)	9.40 / -----	6.50 / 36.55	(1P x 1P x 1/2P) Tee
Tee (3/4P x 3/4P x 1/2P)	3.20 / 19.80	7.20 / 36.55	(1P x 1P x 3/4P) Tee
Tee (3/4P x 1/2P x 1/2P)	3.75 / -----	6.25 / 36.55	(1P x 3/4P x 3/4P) Tee
Tee (3/4P x 3/4P x 1P)	14.05 / 31.95	7.50 / 36.55	(1P x 3/4P x 1P) Tee
Washing Machine Box	88.10	9.50	(3/4P-thru x 2-1/2"P-out) Tee
Ice Maker Box	52.55	12.90 / 11.05	(3/4P-thru /end x 3-1/2"P-out) Tee
		16.50 / 16.50	(3/4P-thru / end x 4-1/2"P-out) Tee



Multi-Port Tee



Elbows



Drop-ear & Straight Supports

Heat needed to heat area = Sq ft of heat area * ceiling height(cu ft of air to be heated)

A 1,000 sq/ft house with 8' ceilings (in Eureka, CA) with standard insulation needs about 5BTU/hr per cu/ft of air to be heated.

1,000 sq/ft x 8'(ceilings) = 40,000 BTU's of heat (@ 5 BTU/hr per cu/ft).

A well insulated house(in Eureka, CA) needs 2-3 BTU/hr per cu/ft of air to be heated.

1,000 sq/ft x 8'(ceilings) = 20,000 BTU/hr of heat (@ 2.5 BTU/hr per cu/ft).

GPM(circulator) = .002*(BUT's needed to heat area)

@Assuming a 20°F temperature drop / pex loop.

1 GPM = 10,000BUT/hr.

Assume the kitchen living room area is on a 4 loop pex manifold and is 500 sq/ft in a standard insulated house then:

20,000 BTU/hr / (10,000BUT/hr. / 1 GPM) = 2 GPM of 85°F water going through each loop.

2 GPM / 4(loops) = .5gpm through each loop.

.5gpm = about .01' head/ft (see chart)

A 300' loop the has about 3.0 ft of head.

Since all 4 loops are in parallel, then the circulating pump must have 3gpm @.3' head.

Pressure Loss Per 100 Feet

½" Wirsbo hePEX and Uponor AquaPEX (100% Water)

Head (Feet of Water) Per 100 Feet of Tubing									
gpm	Velocity (ft/s)	40°F 4°C	60°F 16°C	80°F 27°C	100°F 38°C	120°F 49°C	140°F 60°C	160°F 71°C	180°F 82°C
0.1	0.18	0.06	0.05	0.05	0.05	0.05	0.05	0.04	0.04
0.2	0.36	0.21	0.19	0.18	0.18	0.17	0.16	0.16	0.16
0.3	0.54	0.44	0.41	0.39	0.37	0.36	0.35	0.34	0.33
0.4	0.72	0.75	0.70	0.66	0.64	0.61	0.59	0.58	0.57
0.5	0.91	1.14	1.05	1.00	0.96	0.92	0.89	0.88	0.86
0.6	1.09	1.59	1.47	1.40	1.35	1.29	1.25	1.23	1.20
0.7	1.27	2.12	1.96	1.86	1.79	1.71	1.66	1.63	1.60
0.8	1.45	2.72	2.51	2.38	2.30	2.19	2.13	2.09	2.05
0.9	1.63	3.38	3.12	2.96	2.86	2.73	2.65	2.60	2.55
1.0	1.81	4.10	3.79	3.60	3.47	3.31	3.22	3.16	3.09
1.1	1.99	4.89	4.52	4.29	4.14	3.95	3.84	3.77	3.69
1.2	2.17	5.75	5.31	5.04	4.86	4.64	4.51	4.42	4.33
1.3	2.35	6.67	6.15	5.85	5.64	5.38	5.23	5.13	5.03
1.4	2.53	7.65	7.06	6.71	6.47	6.18	6.00	5.88	5.76
1.5	2.72	8.69	8.02	7.62	7.35	7.02	6.82	6.68	6.55