

Outside Diameters, Wall Thickness & Pressure Rating for CPVC 4120
Schedule 40 Piping System As per ASTM F 441

Nominal Size		Outside Diameter (in mm)		I.D.	Wall Thickness (in mm)		Pipe P. R. PSI (kg/cm)	
(in)	(mm)	Average	Tolerance	Average	Minimum	Tolerance	73.4°F	(23°C)
2 1/2	(65)	2 875 (73.0)	+ 0.007 (0.18)	2 444 (62.07)	0.203 (5.16)	+ 0.024 (0.61)	300	(21.10)
3	(80)	3 500 (88.9)	+ 0.008 (0.20)	3 041 (77.26)	0.216 (5.49)	+ 0.026 (0.66)	280	(18.28)
4	(100)	4 500 (114.3)	+ 0.009 (0.23)	3 998 (101.55)	0.237 (6.02)	+ 0.028 (0.71)	220	(15.47)

P.R. = Pressure Rating

Outside Diameters, Wall Thickness & Pressure Rating for CPVC 4120
Schedule 80 Piping system as per ASTM F441

Nominal Size		Outside Diameter (in mm)		I.D.	Wall Thickness (in mm)		Pipe P. R. PSI (kg/cm)	
(in)	(mm)	Average	Tolerance	Average	Minimum	Tolerance	73.4°F	(23°C)
2 1/2	(65)	2 875 (73.0)	+ 0.007 (0.18)	2 288 (58.14)	0.276 (7.01)	+ 0.033 (0.84)	420	(29.53)
3	(80)	3 500 (88.9)	+ 0.008 (0.20)	2 864 (72.75)	0.300 (7.62)	+ 0.036 (0.91)	370	(26.01)
4	(100)	4 500 (114.3)	+ 0.009 (0.23)	3 778 (95.97)	0.337 (8.56)	+ 0.040 (1.02)	320	(22.50)

P.R. = Pressure Rating

Temperature Derating Factors

Working Temperature (°F)	73-80	90	100	120	140	160	180	200
Working Temperature (°C)	23-25	32	38	49	60	71	82	93
Pipe Derating Factor	1.00	0.91	0.82	0.65	0.50	0.40	0.25	0.20
Valve Derating Factor	1.00	0.95	0.90	0.80	0.70	0.61	0.53	0.45

N.B.: For obtaining working pressure in system, multiply the maximum pressure with derating factor at the working temperature of system. Valves, Unions & Speciality Products have different elevated temperature rating than pipe.

Module of Elasticity and Working Stress for CPVC			
Temperature (F) (C)		Modulus, E (psi)	Stress, S (psi)
73	27	423,000	2000
90	32	403,000	1800
110	43	371,000	1500
120	49	355,000	1300
140	60	323,000	1000
160	71	291,000	750
180	82	269,000	500