Air Receiver Capacities

If your tank is not listed in the table to the right, use the following formula to calculate the tank size (gallons) and then estimate the cubic feet tank capacity at a given pressure from the table above.

$$\text{Tank Gallons} = \frac{\text{Tank Height} \times (\text{Tank Radius})^2}{73.53}$$

Height and Radius are in inches

Tank Size (inches)	Tank Size (gallons)	Gauge Pressure on Tank (PSI)			
		0	100	150	200
		Cubic Feet Tank Capacity			
12 x 24	10	1.3	11	15	19
14 x 36	20	2.7	21	30	39
16 x 36	30	4.0	31	45	59
20 x 48	60	8.0	62	90	117
20 x 63	80	10.7	83	120	156
24 x 68	120	16.0	125	180	234
30 x 84	240	32.0	250	360	467

Air Hose Friction

Hose Size (inches)	CFM thru 50' Hose	Gauge Pressure - Pounds/sq inch			
		50	70	90	110
		PSI Loss Over 50' Hose Length			
½"	20	1.8	1.0	.8	.6
	30	5.0	3.4	2.4	2.0
	40	10.1	7.0	5.4	4.3
	50	18.1	12.4	9.5	7.6
	60	+	20.0	14.8	12.0
	70	+	28.4	22.0	17.6
	80	+	+	30.5	24.6
	90	+	+	41.0	33.3
	10	+	+	+	44.5
	110	+	+	+	+
¾"	20	04	.2	.2	.1
	30	.08	.5	.4	.3
	40	1.5	.9	.7	.5
	50	2.4	1.5	1.1	.9
	60	3.5	2.3	1.6	1.3
	70	4.4	3.2	2.3	1.8
	80	6.5	4.2	3.1	2.4
	90	8.5	5.5	4.0	3.1
	100	11.4	7.0	5.0	3.9
	110	14.2	8.8	6.2	4.9
	120	+	11.0	7.5	5.9
	130	+	+	9.0	7.1
1"	20	.1	0	0	0
	30	.2	.1	.1	.1
	40	.3	.2	.2	.2
	50	.5	.4	.3	.2
	60	.8	.5	.4	.3
	70	1.1	.7	.6	.4
	80	1.5	1.0	.7	.6
	90	2.0	1.3	.9	.7
	100	2.6	1.6	1.2	.9
	110	3.5	2.0	1.4	1.1
	120	4.8	2.5	1.7	1.3
	130	7.0	3.1	2.0	1.5

PSI = pressure in pounds/square inch
CFM = air flow in cubic feet/minute

+ pressure loss is too great and therefore the combination of Hose Size, CFM, and Gauge Pressure is not recommended.
Gauge Pressures the indicated air pressure in pounds/square inch, at the source (ie the air compressor receiver tank)