

Manifold Sizing

Medical Air Manifold:

$$\text{Cylinders per Bank} = \frac{400 \text{ ft}^3}{\text{[Cubic ft of gas used per month per bed]}} \times \text{No. of beds} \times \frac{12}{\text{[Months per year]}} \div \frac{52}{\text{[# of weeks per year]}} \div \frac{234}{\text{[Cubic ft per cylinder]}} \div \frac{2}{\text{[Cylinders per bank]}}$$

Surgery Center Oxygen Cylinder Manifold:

Where usage is not known

$$\text{Cylinders per Bank} = \frac{400 \text{ ft}^3}{\text{[Cubic ft of gas used per month per bed]}} \times \text{No. of Beds} \times \frac{12}{\text{[Months per year]}} \div \frac{52}{\text{[# of weeks per year]}} \div \frac{244}{\text{[Cubic ft per cylinder]}} \div \frac{2}{\text{[Cylinders per bank]}}$$

Hospital Oxygen Cylinder Manifold:

Where usage is not known

$$\text{Cylinders per Bank} = \frac{700 \text{ ft}^3}{\text{[Cubic ft of gas used per month per bed]}} \times \text{No. of Beds} \times \frac{12}{\text{[Months per year]}} \div \frac{52}{\text{[# of weeks per year]}} \div \frac{244}{\text{[Cubic ft per cylinder]}} \div \frac{2}{\text{[Cylinders per bank]}}$$

*With a monthly demand of 30,000 ft, bulk O2 should be used.

Where usage is known:

Usage, Ft3 per Month	Duplex Manifold Size Divide by 2 for each Bank
5850	6
9750	10
13650	14
17600	18
21500	22
25350	26
29250	30

N2O Cylinder Manifold:

Divide total by 2 for each Bank

No. of Operating Rooms	Total No. of Cylinders
1 to 4	4
5 to 8	8
9 to 12	12
13 to 16	16
17 to 20	20

N2 Cylinder Manifold:

Divide total by 2 for each bank

No. of Operating Rooms	Total No. of Cylinders
1 to 2	4
3 to 4	8
5 to 6	12
7 to 8	16
9 to 10	20
11 to 12	24
13 to 14	28

CO2 Cylinder Manifold:

Divide total by 2 for each bank

No. of Operating Rooms	Total No. of Cylinders
1 to 8	4
9 to 16	8
17 to 32	12