

# Nitrogen

N<sub>2</sub>

| Grade           | Semicon 5N | ULSI 6N   |
|-----------------|------------|-----------|
| Purity, %       | 99.999     | 99.9999   |
| Oxygen          | ≤3.0 ppmv  | ≤200 ppbv |
| Carbon Dioxide  | ≤1.0 ppmv  | ≤100 ppbv |
| Carbon Monoxide | ≤1.0 ppmv  | ≤200 ppbv |
| Methane         | ≤1.0 ppmv  | ≤100 ppbv |
| Water           | ≤3.0 ppmv  | ≤500 ppbv |

- A lot analysis is provided for each order. – Individual analysis is also available upon request.
- Pneumatic valves and JIS connections are available upon request.

| CYLINDER           | Internal Volume                | Liters          | 49.0      | 43.8            | 2.3          |
|--------------------|--------------------------------|-----------------|-----------|-----------------|--------------|
|                    | <b>Cylinder Sizes &gt;&gt;</b> |                 | <b>QK</b> | <b>QF/QA/QB</b> | <b>JF/JB</b> |
|                    | Content                        | Liters          | 8,500     | 7,220           | 310          |
|                    |                                | ft <sup>3</sup> | 300       | 255             | 11           |
| Cylinder Pressure* | psig                           | 2,640           | 2,490     | 2,000           |              |
|                    | atm                            | 186.6           | 176.1     | 141.6           |              |

\* @ NTP

| SHIP | DOT Shipping Name  | Nitrogen Compressed     | UN Number | UN 1066 | Shipped as     |
|------|--------------------|-------------------------|-----------|---------|----------------|
|      | DOT Classification | 2.2 (Non-Flammable Gas) | ECCN #    | EAR99   | Compressed Gas |
|      | DOT Label          | NON-FLAMMABLE GAS       |           |         |                |

| TECHNICAL DATA | Specific Volume  | 0.86 m <sup>3</sup> /kg  |
|----------------|------------------|--------------------------|
|                | @NTP             | 13.8 ft <sup>3</sup> /lb |
|                | CAS No           | 7727-37-9                |
|                | CGA/DISS/JIS     | 580/718/W22-14R          |
|                | Molecular Weight | 28.01 g/mol              |

|                      |          |            |
|----------------------|----------|------------|
| Critical Temperature | -122.4°C | -188.4°F   |
| Critical Pressure    | 50 atm   | 711.5 psia |

NTP = 21°C or 70°F and 101.3 kPa or 1 atm

| Cylinder | Treatment      | Nominal Diameter (OD)xHeight* |                 | Material of Construction |       |
|----------|----------------|-------------------------------|-----------------|--------------------------|-------|
|          |                | cm                            | Inches          | Cylinder                 | Valve |
| QK       | ULTRA-LINE®    | 23.5x140/144/153              | 9.25x55/56.5/60 | CS                       | SS    |
| QF       | ULTRA-LINE®    | 23x130/134/143                | 9x51/52.5/56    | CS                       | SS    |
| QA       | ULTRA-LINE II® | 23x130/134/143                | 9x51/52.5/56    | CS                       | Brass |
| QB       | ULTRA-LINE II® | 23x130/134/143                | 9x51/52.5/56    | CS                       | SS    |
| JF       | ULTRA-LINE®    | 10x33/37/46                   | 4x13/14.5/18    | CS                       | SS    |
| JB       | ULTRA-LINE II® | 10x33/37/46                   | 4x13/14.5/18    | CS                       | SS    |

\*Height is reported as the distance from the bottom of the cylinder to the cylinder neck/ center of the valve outlet/ top of the handwheel  
CS: Carbon Steel SS: Stainless Steel

⚠ WARNING: This product can expose you to chemicals including Carbon Monoxide, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

