# FlexTRAK<sup>™</sup>-2MB Plasma System

## **Features and Benefits**

- Unique boat bypass feature optimizes productivity
- Multiple inline plasma modules increase throughput
- High uniform plasma treatment
- Production ready dual lane boat handling
- Ideal for pre-Flip-Chip Underfill (FCUF) processes



#### Plasma System for High-Throughput, Inline Boat Processing

The FlexTRAK<sup>TM</sup>-2MB system is designed for high throughput, inline processing of microelectronic devices held in boats, trays or other carriers. The patented plasma module provides exceptional uniformity and runto-run process repeatability. Its advanced three axis symmetrical plasma chamber ensures control over all process parameters and highly repeatable results.

The system seamlessly integrates into a production line, while accommodating a wide range of boat sizes, yielding unmatched production flexibility. Its compact plasma chamber and proprietary process control system minimize cycle time.

The integrated boat handler of the FlexTRAK-2MB system provides rapid material transfer, up to 2 boats per plasma cycle. Combined with the compact design and short plasma cycle, the system maximizes through-put and minimizes cost of ownership.

# Applications

Plasma processes for pre-flip chip underfill, pre-die attach, pre-wire bond and pre-mold steps.

## **Plasma Contamination Removal & Cleaning**

- Fluorine & other halogens
- Metals & metal oxides
- Organic compounds

#### **Plasma Etching**

- Roughen surfaces to improve adhesion and reduced delamination
- Modify surfaces to increase bond strength and surface tension properties

## **Surface Activation**

- Improve flip chip underfill performance by minimizing voids, enhancing adhesion, increasing wicking speed and maximizing filet height uniformity.
- Improve mold material flow to eliminate voids and reduce wire sweep



MARCH

#### Specifications: FlexTRAK<sup>™</sup>-2MB Plasma System

Building     W x D x H - Footprint     Bouw x 1530D x 1590H; 1590H mm with Light Tower (31.5W x 60.2D x 62.8H; 76.8H in. with Light Tower)       Dimensions     Net Weight     590 kg (1300 bs)       Equipment Clearances     Front, Right, Left - 607 mm (24 in.), Back - 254 mm (10 in)       Chamber     Maximum Volume     5.5 lifters (338 in)       Variable Electrode Configurations     Power-Ground, Ground-Power, Power-Power       Variable Electrode Configurations     Power-Ground, Ground-Power, Power-Power       Standard Watage     600 W       Frequency     13.56 MHz       Available Flow Volumes     10, 25, 50, 100, 250 or 500 sccm       Maximum Number of MFCs     4       Control & Interface     Software Control     EPC with PC-Based Touch Screen Interface       Remote Interface     SMEMA, SECS/GEM       Standard Dry Pump     16 cfm       Optional Purged Dry Pump     16 cfm       Optional Purged Dry Pump     16 cfm       Optional Purged Dry Pump     16 cfm       Pocess Gas Fitting Size & Type     6.35 mm (0.25 in.) OD Swagelok Tube       Process Gas Purity     Lab or Electronic Grade       Process Gas Pressure     2 bar (30 psig) min. to 1.30 bar (15 psig) max., regula			
DimensionsNet Weight590 kg (1300 lbs)Equipment ClearancesFront, Right, Left - 607 mm (24 in.), Back - 254 mm (10 in)ChamberMaximum Volume5.5 liters (338 in <sup>3</sup> )ElectrodesVariable Electrode ConfigurationsPower-Ground, Ground-Power; Power-PowerWorking Area305W x 305D mm (12W x 12D in.)Standard Wattage600 WFrequency13.56 MHzAvailable Flow Volumes10, 25, 50, 100, 250 or 500 sccmMaximum Number of MFCs4Control &Software ControlRemote InterfaceSMEMA, SECS/GEMStandard Dy Pump16 cfmOptional Wet Pump19.5 cfmOptional Wet Pump16 cfmN2euum PumpOptional Purged Dry PumpOptional Purged Dry Pump6.35 mm (0.25 in.) OD Swagelok TubeProcess Gas PurityLab or Electronic GradeProcess Gas Pressure0.69 bar (10 psig) min. to 1.03 bar (15 psig) max., regulatedPurge Gas Fitting Size & Type6.35 mm (0.25 in.) OD Swagelok TubePurge Gas Pressure2 bar (30 psig) min. to 6.9 bar (100 psig) max., regulatedPneumatic Gas Pressure2 bar (30 psig) min. to 7.00 smagelok TubePurge Gas PurityLab or Electronic Grade N2/CDAPurge Gas Pressure2 bar (30 psig) min. to 6.9 bar (100 psig) max., regulatedPneumatic Gas Pressure2 bar (30 psig) min. to 6.9 bar (100 psig) max., regulatedPneumatic Gas Pressure2.4 mm (1 in.) OD Pipe FlangeSEMIE10, S2/S8 (EH&S/Ergonomics)InternationalCE MarkedMitrogen<		W x D x H – Footprint	800W x 1530D x 1596H; 1950H mm with Light Tower (31 5W x 60 2D x 62 8H; 76 8H in, with Light Tower)
Equipment Clearances     Front, Right, Leff – 607 mm (24 in.), Back – 254 mm (10 in)       Chamber     Maximum Volume     5.5 liters (338 in <sup>3</sup> )       Electrodes     Working Area     305W x 305D mm (12W x 12D in.)       RF Power     Standard Wattage     600 W       Frequency     13.56 MHz       Available Flow Volumes     10, 25, 50, 100, 250 or 500 sccm       Maximum Number of MFCs     4       Control & Interface     Software Control     EPC with PC-Based Touch Screen Interface       Remote Interface     SMEMA, SECS/GEM       Standard Dry Pump     16 cfm       Qoptional Wet Pump     19.5 cfm       Optional Wet Pump Flow     2 slm       Power Supply     220 VAC, 15A, 50/60 Hz, 1-Phase, 12 AWG, 3-Wire       Process Gas Fitting Size & Type     6.35 mm (0.25 in.) OD Swagelok Tube       Process Gas Purity     Lab or Electronic Grade       Purge Gas Pressure     2 bar (30 psig) min. to 1.03 bar (15 psig) max., regulated       Purge Gas Pressure     2 bar (30 psig) min. to 6.9 bar (100 psig) max., regulated       Process Gas Pressure     2 bar (30 psig) min. to 6.9 bar (100 psig) max., regulated       Pneumatic Gas Purity     Lab or Electronic Grade N2/CDA		Net Weight	
Chamber     Maximum Volume     5.5 litters (338 in³)       Electrodes     Wariable Electrode Configurations     Power-Ground, Ground-Power; Power-Power       RF Power     Standard Wattage     600 W       Gas Control     Available Flow Volumes     10, 25, 50, 100, 250 or 500 sccm       Maximum Number of MFCs     4       Control & Interface     Software Control     EPC with PC-Based Touch Screen Interface       Vacuum Pump     Optional Wet Pump     19, 5 cfm       Optional Wet Pump     19, 5 cfm       Optional Purged Dry Pump     16 cfm       N2 Purged Pump Flow     2 slm       Power Supply     220 VAC, 15A, 50/60 Hz, 1-Phase, 12 AWG, 3-Wire       Process Gas Fitting Size & Type     6.35 mm (0.25 in.) OD Swagelok Tube       Process Gas Pressure     C 8.35 mm (0.25 in.) OD Swagelok Tube       Purge Gas Pressure     2 bar (30 psig) min. to 1.03 bar (15 psig) max., regulated       Purge Gas Pressure     2 bar (30 psig) min. to 6.9 bar (100 psig) max., regulated       Purge Gas Pressure     2 bar (30 psig) min. to 6.9 bar (100 psig) max., regulated       Purge Gas Pressure     2 bar (30 psig) min. to 6.9 bar (100 psig) max., regulated       Pneumatic Gas Pressure     2 bar (30 psig) min.		-	
Electrodes     Variable Electrode Configurations Working Area     Power-Ground, Ground-Power; Power-Power       RF Power     Standard Wattage     600 W       Frequency     13.56 MHz       Gas Control     Available Flow Volumes     10, 25, 50, 100, 250 or 500 sccm       Maximum Number of MFCs     4       Control & Interface     Software Control     EPC with PC-Based Touch Screen Interface       Standard Dry Pump     16 cfm     0ptional Wet Pump       Vacuum Pump     19.5 cfm     0ptional Wet Pump       Optional Wet Pump     19.5 cfm     0ptional Purged Dry Pump       Power Supply     220 VAC, 15A, 50/60 Hz, 1-Phase, 12 AWG, 3-Wire       Process Gas Fitting Size & Type     6.35 mm (0.25 in.) OD Swagelok Tube       Process Gas Pressure     0.69 bar (10 psig) min. to 1.03 bar (15 psig) max., regulated       Purge Gas Pressure     2 bar (30 psig) min. to 6.9 bar (100 psig) max., regulated       Purge Gas Pressure     2 bar (30 psig) min. to 6.9 bar (100 psig) max., regulated       Purge Gas Pressure     2 bar (30 psig) min. to 6.89 bar (100 psig) max., regulated       Purge Gas Pressure     2 bar (50 psig) min. to 6.89 bar (100 psig) max., regulated       Pneumatic Gas Purity     CDA, Oil Free, Dewpoint ≤7°C (45°F),	Chambor	•••	
Electrodes   Working Area   305W x 305D mm (12W x 12D in.)     Standard Wattage   600 W     Frequency   13.56 MHz     Gas Control   Available Flow Volumes   10, 25, 50, 100, 250 or 500 sccm     Maximum Number of MFCs   4     Control & Interface   Software Control   EPC with PC-Based Touch Screen Interface     Standard Dry Pump   16 cfm     Optional Wet Pump   19.5 cfm     Optional Wet Pump   16 cfm     N2 Purged Dry Pump   16 cfm     N2 Purged Pump Flow   2 slm     Power Supply   220 VAC, 15A, 50/60 Hz, 1-Phase, 12 AWG, 3-Wire     Process Gas Fitting Size & Type   6.35 mm (0.25 in.) OD Swagelok Tube     Process Gas Purity   Lab or Electronic Grade     Purge Gas Fitting Size & Type   6.35 mm (0.25 in.) OD Swagelok Tube     Purge Gas Pressure   2 bar (30 psig) min. to 1.03 bar (15 psig) max., regulated     Purge Gas Pressure   2 bar (30 psig) min. to 6.9 bar (100 psig) max., regulated     Purge Gas Pressure   2 bar (30 psig) min. to 6.89 bar (100 psig) max., regulated     Purge Gas Pressure   2 bar (50 psig) min. to 6.89 bar (100 psig) max., regulated     Pneumatic Gas Pressure   3.45 bar (50 psig) min. to 6.89 bar (100 psig) max.	Champer		· · · · · ·
RF Power     Standard Wattage     600 W       Gas Control     Available Flow Volumes     10, 25, 50, 100, 250 or 500 sccm       Maximum Number of MFCs     4       Control & Interface     Software Control     EPC with PC-Based Touch Screen Interface       Remote Interface     SMEMA, SECS/GEM       Vacuum Pump     16 cfm       Optional Wet Pump     19.5 cfm       Optional Wet Pump     16 cfm       N2 Purged Pump Flow     2 slm       Power Supply     220 VAC, 15A, 50/60 Hz, 1-Phase, 12 AWG, 3-Wire       Process Gas Fitting Size & Type     6.35 mm (0.25 in.) OD Swagelok Tube       Process Gas Pressure     0.69 bar (10 psig) min. to 1.03 bar (15 psig) max., regulated       Purge Gas Pressure     2 bar (30 psig) min. to 1.03 bar (15 psig) max., regulated       Purge Gas Pressure     2 bar (30 psig) min. to 6.9 bar (100 psig) max., regulated       Pneumatic Gas Purity     Lab or Electronic Grade N2/CDA       Purge Gas Purity     Lab or Electronic Srade N2/CDA       Purge Gas Pressure     2 bar (30 psig) min. to 6.9 bar (100 psig) max., regulated       Pneumatic Gas Purity     CDA, Oil Free, Dewpoint ≤7°C (45°F), Particulate Size <5 µm       Pneumatic Gas Pressure     2.4 s mm (1 in.)	Electrodes		
RF Power   Frequency   13.56 MHz     Gas Control   Available Flow Volumes   10, 25, 50, 100, 250 or 500 sccm     Maximum Number of MFCs   4     Control &   Software Control   EPC with PC-Based Touch Screen Interface     Remote Interface   SMEMA, SECS/GEM     Vacuum Pump   16 cfm     Optional Wet Pump   19.5 cfm     Optional Wet Pump   16 cfm     N2 Purged Pump Flow   2 slm     Power Supply   220 VAC, 15A, 50/60 Hz, 1-Phase, 12 AWG, 3-Wire     Process Gas Fitting Size & Type   6.35 mm (0.25 in.) OD Swagelok Tube     Process Gas Pressure   0.69 bar (10 psig) min. to 1.03 bar (15 psig) max., regulated     Purge Gas Pressure   2 bar (30 psig) min. to 6.9 bar (100 psig) max., regulated     Preumatic Valves Fitting Size & Type   6.35 mm (0.25 in.) OD Swagelok Tube     Purge Gas Pressure   2 bar (30 psig) min. to 6.9 bar (100 psig) max., regulated     Pneumatic Gas Purity   Lab or Electronic Grade N2/CDA     Purge Gas Pressure   2 bar (30 psig) min. to 6.9 bar (100 psig) max., regulated     Pneumatic Gas Purity   CDA, Oil Free, Dewpoint ≤7°C (45°F), Particulate Size <5 µm     Pneumatic Gas Pressure   3.45 bar (50 psig) min. to 6.89 bar (100 psig) max., regulated <th></th> <th></th> <th></th>			
Gas Control     Available Flow Volumes     10, 25, 50, 100, 250 or 500 sccm       Maximum Number of MFCs     4       Control & Interface     Software Control     EPC with PC-Based Touch Screen Interface       Remote Interface     SMEMA, SECS/GEM       Standard Dry Pump     16 cfm       Optional Wet Pump     19.5 cfm       Optional Purged Dry Pump     16 cfm       N2 Purged Pump Flow     2 slm       Power Supply     220 VAC, 15A, 50/60 Hz, 1-Phase, 12 AWG, 3-Wire       Process Gas Fitting Size & Type     6.35 mm (0.25 in.) OD Swagelok Tube       Process Gas Pressure     0.69 bar (10 psig) min. to 1.03 bar (15 psig) max., regulated       Purge Gas Pressure     0.69 bar (10 psig) min. to 1.00 psig) max., regulated       Purge Gas Pressure     2 bar (30 psig) min. to 6.9 bar (100 psig) max., regulated       Purge Gas Pressure     2 bar (30 psig) min. to 6.9 bar (100 psig) max., regulated       Pneumatic Gas Purity     Lab or Electronic ≤7°C (45°F), Particulate Size <5 µm       Pneumatic Gas Pressure     3.45 bar (50 psig) min. to 6.89 bar (100 psig) max., regulated       Exhaust     25.4 mm (1 in.) OD Pipe Flange       SEMI     E10, S2/S8 (EH&S/Ergonomics)       International     CE Marked	RF Power		
Gas Control   Maximum Number of MFCs   4     Control &   Software Control   EPC with PC-Based Touch Screen Interface     Interface   Remote Interface   SMEMA, SECS/GEM     Standard Dry Pump   16 cfm     Optional Wet Pump   19.5 cfm     Optional Purged Dry Pump   16 cfm     N2 Purged Pump Flow   2 slm     Power Supply   220 VAC, 15A, 50/60 Hz, 1-Phase, 12 AWG, 3-Wire     Process Gas Fitting Size & Type   6.35 mm (0.25 in.) OD Swagelok Tube     Process Gas Pressure   0.69 bar (10 psig) min. to 1.03 bar (15 psig) max., regulated     Purge Gas Fitting Size & Type   6.35 mm (0.25 in.) OD Swagelok Tube     Purge Gas Pressure   2 bar (30 psig) min. to 1.03 bar (15 psig) max., regulated     Purge Gas Pressure   2 bar (30 psig) min. to 6.9 bar (100 psig) max., regulated     Pneumatic Valves Fitting Size & Type   6.35 mm (0.25 in.) OD Swagelok Tube     Purge Gas Pressure   2 bar (30 psig) min. to 6.9 bar (100 psig) max., regulated     Pneumatic Gas Purity   Lab or Electronic Grade N2/CDA     Purge Gas Pressure   2 bar (30 psig) min. to 6.9 bar (100 psig) max., regulated     Pheumatic Gas Purity   CDA, Oil Free, Dewpoint ≤7°C (45°F), Particulate Size <5 µm     Preumatic Gas Pressure			
Control & Interface     Software Control     EPC with PC-Based Touch Screen Interface       Remote Interface     SMEMA, SECS/GEM       Standard Dry Pump     16 cfm       Optional Wet Pump     19.5 cfm       Optional Purged Dry Pump     16 cfm       N2 Purged Pump Flow     2 slm       Power Supply     220 VAC, 15A, 50/60 Hz, 1-Phase, 12 AWG, 3-Wire       Process Gas Fitting Size & Type     6.35 mm (0.25 in.) OD Swagelok Tube       Process Gas Pressure     0.69 bar (10 psig) min. to 1.03 bar (15 psig) max., regulated       Purge Gas Fitting Size & Type     6.35 mm (0.25 in.) OD Swagelok Tube       Purge Gas Pressure     2 bar (30 psig) min. to 6.9 bar (100 psig) max., regulated       Purge Gas Pressure     2 bar (30 psig) min. to 6.9 bar (100 psig) max., regulated       Pneumatic Gas Purity     Lab or Electronic Grade N2/CDA       Purge Gas Pressure     2 bar (30 psig) min. to 6.9 bar (100 psig) max., regulated       Pneumatic Gas Purity     CDA, Oil Free, Dewpoint ≤7°C (45°F), Particulate Size <5 µm       Pneumatic Gas Pressure     25.4 mm (1 in.) OD Pipe Flange       SEMI     E10, S2/S8 (EH&S/Ergonomics)       International     CE Marked       Nitrogen, Hydrogen     Nitrogen, Nidrogen			
Interface     Remote Interface     SMEMA, SECS/GEM       Vacuum Pump     Standard Dry Pump     16 cfm       Optional Wet Pump     19.5 cfm       Optional Purged Dry Pump     16 cfm       N2 Purged Pump Flow     2 slm       Power Supply     220 VAC, 15A, 50/60 Hz, 1-Phase, 12 AWG, 3-Wire       Process Gas Fitting Size & Type     6.35 mm (0.25 in.) OD Swagelok Tube       Process Gas Purity     Lab or Electronic Grade       Process Gas Pressure     0.69 bar (10 psig) min. to 1.03 bar (15 psig) max., regulated       Purge Gas Fitting Size & Type     6.35 mm (0.25 in.) OD Swagelok Tube       Purge Gas Purity     Lab or Electronic Grade N2/CDA       Purge Gas Pressure     2 bar (30 psig) min. to 6.9 bar (100 psig) max., regulated       Pneumatic Valves Fitting Size & Type     6.35 mm (0.25 in.) OD Swagelok Tube       Purge Gas Pressure     2 bar (30 psig) min. to 6.9 bar (100 psig) max., regulated       Pneumatic Gas Purity     CDA, Oil Free, Dewpoint ≤7°C (45°F), Particulate Size <5 µm       Pneumatic Gas Pressure     24.5 bar (50 psig) min. to 6.89 bar (100 psig) max., regulated       Exhaust     25.4 mm (1 in.) OD Pipe Flange       SEMI     E10, S2/S8 (EH&S/Ergonomics)       International     C			-
Vacuum Pump     Standard Dry Pump     I 6 cfm       Optional Wet Pump     19.5 cfm       Optional Purged Dry Pump     16 cfm       N2 Purged Pump Flow     2 slm       Power Supply     220 VAC, 15A, 50/60 Hz, 1-Phase, 12 AWG, 3-Wire       Process Gas Fitting Size & Type     6.35 mm (0.25 in.) OD Swagelok Tube       Process Gas Pressure     0.69 bar (10 psig) min. to 1.03 bar (15 psig) max., regulated       Purge Gas Fitting Size & Type     6.35 mm (0.25 in.) OD Swagelok Tube       Purge Gas Pressure     2 bar (30 psig) min. to 1.03 bar (15 psig) max., regulated       Purge Gas Pressure     2 bar (30 psig) min. to 6.9 bar (100 psig) max., regulated       Pneumatic Valves Fitting Size & Type     6.35 mm (0.25 in.) OD Swagelok Tube       Purge Gas Pressure     2 bar (30 psig) min. to 6.9 bar (100 psig) max., regulated       Pneumatic Valves Fitting Size & Type     6.35 mm (0.25 in.) OD Swagelok Tube       Purge Gas Pressure     2 bar (30 psig) min. to 6.9 bar (100 psig) max., regulated       Pheumatic Gas Purity     CDA, Oil Free, Dewpoint ≤7°C (45°F), Particulate Size <5 µm       Pneumatic Gas Pressure     3.45 bar (50 psig) min. to 6.89 bar (100 psig) max., regulated       Exhaust     25.4 mm (1 in.) OD Pipe Flange       SEMI     E10, S2/S8 (EH&S/E			
Vacuum Pump     Optional Wet Pump     19.5 cfm       Optional Purged Dry Pump     16 cfm       N2 Purged Pump Flow     2 slm       Power Supply     220 VAC, 15A, 50/60 Hz, 1-Phase, 12 AWG, 3-Wire       Process Gas Fitting Size & Type     6.35 mm (0.25 in.) OD Swagelok Tube       Process Gas Pressure     0.69 bar (10 psig) min. to 1.03 bar (15 psig) max., regulated       Purge Gas Fitting Size & Type     6.35 mm (0.25 in.) OD Swagelok Tube       Purge Gas Pressure     0.69 bar (10 psig) min. to 1.03 bar (15 psig) max., regulated       Purge Gas Pressure     2 bar (30 psig) min. to 6.9 bar (100 psig) max., regulated       Pneumatic Valves Fitting Size & Type     6.35 mm (0.25 in.) OD Swagelok Tube       Purge Gas Pressure     2 bar (30 psig) min. to 6.9 bar (100 psig) max., regulated       Pneumatic Gas Purity     Lab or Electronic Grade N2/CDA       Purge Gas Pressure     2 bar (30 psig) min. to 6.9 bar (100 psig) max., regulated       Pneumatic Gas Purity     CDA, Oil Free, Dewpoint ≤7°C (45°F), Particulate Size <5 µm       Pneumatic Gas Pressure     3.45 bar (50 psig) min. to 6.89 bar (100 psig) max., regulated       Exhaust     25.4 mm (1 in.) OD Pipe Flange       SEMI     E10, S2/S8 (EH&S/Ergonomics)       International     CE Marked	Interface		-
Vacuum Pump     Optional Purged Dry Pump     16 cfm       N2 Purged Pump Flow     2 slm       Power Supply     220 VAC, 15A, 50/60 Hz, 1-Phase, 12 AWG, 3-Wire       Process Gas Fitting Size & Type     6.35 mm (0.25 in.) OD Swagelok Tube       Process Gas Purity     Lab or Electronic Grade       Process Gas Pressure     0.69 bar (10 psig) min. to 1.03 bar (15 psig) max., regulated       Purge Gas Fitting Size & Type     6.35 mm (0.25 in.) OD Swagelok Tube       Purge Gas Purity     Lab or Electronic Grade N2/CDA       Purge Gas Pressure     2 bar (30 psig) min. to 6.9 bar (100 psig) max., regulated       Pneumatic Valves Fitting Size & Type     6.35 mm (0.25 in.) OD Swagelok Tube       Purge Gas Pressure     2 bar (30 psig) min. to 6.9 bar (100 psig) max., regulated       Pneumatic Cas Purity     CDA, Oil Free, Dewpoint ≤7°C (45°F), Particulate Size <5 µm       Pneumatic Gas Pressure     3.45 bar (50 psig) min. to 6.89 bar (100 psig) max., regulated       Exhaust     25.4 mm (1 in.) OD Pipe Flange       SEMI     E10, S2/S8 (EH&S/Ergonomics)       International     CE Marked       Macillary     Gas Generators	Vacuum Pump	<i>i</i> .	
Facilities   Optional Purged Dry Pump   16 ctm     N2 Purged Pump Flow   2 slm     Power Supply   220 VAC, 15A, 50/60 Hz, 1-Phase, 12 AWG, 3-Wire     Process Gas Fitting Size & Type   6.35 mm (0.25 in.) OD Swagelok Tube     Process Gas Purity   Lab or Electronic Grade     Process Gas Pressure   0.69 bar (10 psig) min. to 1.03 bar (15 psig) max., regulated     Purge Gas Fitting Size & Type   6.35 mm (0.25 in.) OD Swagelok Tube     Purge Gas Pressure   2 bar (30 psig) min. to 1.03 bar (15 psig) max., regulated     Purge Gas Pressure   2 bar (30 psig) min. to 6.9 bar (100 psig) max., regulated     Pneumatic Valves Fitting Size & Type   6.35 mm (0.25 in.) OD Swagelok Tube     Purge Gas Pressure   2 bar (30 psig) min. to 6.9 bar (100 psig) max., regulated     Pneumatic Gas Purity   CDA, Oil Free, Dewpoint <7°C (45°F), Particulate Size <5 µm     Pneumatic Gas Pressure   3.45 bar (50 psig) min. to 6.89 bar (100 psig) max., regulated     Exhaust   25.4 mm (1 in.) OD Pipe Flange     SEMI   E10, S2/S8 (EH&S/Ergonomics)     International   CE Marked     Mitrogen, Hydrogen   Nitrogen, Hydrogen     (Requires Additional Non-Optional Hardware)   Nitrogen		• •	
Power Supply220 VAC, 15A, 50/60 Hz, 1-Phase, 12 AWG, 3-WireProcess Gas Fitting Size & Type6.35 mm (0.25 in.) OD Swagelok TubeProcess Gas PurityLab or Electronic GradeProcess Gas Pressure0.69 bar (10 psig) min. to 1.03 bar (15 psig) max., regulatedPurge Gas Fitting Size & Type6.35 mm (0.25 in.) OD Swagelok TubePurge Gas Pressure0.69 bar (10 psig) min. to 1.03 bar (15 psig) max., regulatedPurge Gas Pressure2 bar (30 psig) min. to 6.9 bar (100 psig) max., regulatedPneumatic Valves Fitting Size & Type6.35 mm (0.25 in.) OD Swagelok TubePneumatic Gas Pressure2 bar (30 psig) min. to 6.9 bar (100 psig) max., regulatedPneumatic Gas PurityCDA, Oil Free, Dewpoint ≤7°C (45°F), Particulate Size <5 µmPneumatic Gas Pressure3.45 bar (50 psig) min. to 6.89 bar (100 psig) max., regulatedExhaust25.4 mm (1 in.) OD Pipe FlangeSEMIE10, S2/S8 (EH&S/Ergonomics)InternationalCE MarkedAncillaryGas GeneratorsMarcellaryNitrogen, Hydrogen (Requires Additional Non-Optional Hardware)			16 cfm
Process Gas Fitting Size & Type6.35 mm (0.25 in.) OD Swagelok TubeProcess Gas PurityLab or Electronic GradeProcess Gas Pressure0.69 bar (10 psig) min. to 1.03 bar (15 psig) max., regulatedPurge Gas Fitting Size & Type6.35 mm (0.25 in.) OD Swagelok TubePurge Gas PurityLab or Electronic Grade N2/CDAPurge Gas Pressure2 bar (30 psig) min. to 6.9 bar (100 psig) max., regulatedPneumatic Valves Fitting Size & Type6.35 mm (0.25 in.) OD Swagelok TubePneumatic Gas Pressure2 bar (30 psig) min. to 6.9 bar (100 psig) max., regulatedPneumatic Gas PurityCDA, Oil Free, Dewpoint <7°C (45°F), Particulate Size <5 µmPneumatic Gas Pressure3.45 bar (50 psig) min. to 6.89 bar (100 psig) max., regulatedExhaust25.4 mm (1 in.) OD Pipe FlangeSEMIE10, S2/S8 (EH&S/Ergonomics)InternationalCE MarkedAncillaryGas GeneratorsMitrogen, Hydrogen (Requires Additional Non-Optional Hardware)		N2 Purged Pump Flow	2 slm
Process Gas PurityLab or Electronic GradeProcess Gas Pressure0.69 bar (10 psig) min. to 1.03 bar (15 psig) max., regulatedPurge Gas Fitting Size & Type6.35 mm (0.25 in.) OD Swagelok TubePurge Gas PurityLab or Electronic Grade N2/CDAPurge Gas Pressure2 bar (30 psig) min. to 6.9 bar (100 psig) max., regulatedPneumatic Valves Fitting Size & Type6.35 mm (0.25 in.) OD Swagelok TubePurge Gas Pressure2 bar (30 psig) min. to 6.9 bar (100 psig) max., regulatedPneumatic Valves Fitting Size & Type6.35 mm (0.25 in.) OD Swagelok TubePneumatic Gas PurityCDA, Oil Free, Dewpoint <7°C (45°F), Particulate Size <5 µmPneumatic Gas Pressure3.45 bar (50 psig) min. to 6.89 bar (100 psig) max., regulatedExhaust25.4 mm (1 in.) OD Pipe FlangeSEMI InternationalE10, S2/S8 (EH&S/Ergonomics)InternationalCE MarkedAncillary EquipmentGas GeneratorsNitrogen, Hydrogen (Requires Additional Non-Optional Hardware)	Facilities	•••	220 VAC, 15A, 50/60 Hz, 1-Phase, 12 AWG, 3-Wire
FacilitiesProcess Gas Pressure0.69 bar (10 psig) min. to 1.03 bar (15 psig) max., regulatedFacilitiesPurge Gas Fitting Size & Type6.35 mm (0.25 in.) OD Swagelok TubePurge Gas PurityLab or Electronic Grade N2/CDAPurge Gas Pressure2 bar (30 psig) min. to 6.9 bar (100 psig) max., regulatedPneumatic Valves Fitting Size & Type6.35 mm (0.25 in.) OD Swagelok TubePneumatic Gas PurityCDA, Oil Free, Dewpoint <7°C (45°F), Particulate Size <5 µmPneumatic Gas Pressure3.45 bar (50 psig) min. to 6.89 bar (100 psig) max., regulatedExhaust25.4 mm (1 in.) OD Pipe FlangeSEMIE10, S2/S8 (EH&S/Ergonomics)InternationalCE MarkedAncillary EquipmentGas GeneratorsNitrogen, Hydrogen (Requires Additional Non-Optional Hardware)		Process Gas Fitting Size & Type	6.35 mm (0.25 in.) OD Swagelok Tube
Facilities   Purge Gas Fitting Size & Type   6.35 mm (0.25 in.) OD Swagelok Tube     Purge Gas Purity   Lab or Electronic Grade N2/CDA     Purge Gas Pressure   2 bar (30 psig) min. to 6.9 bar (100 psig) max., regulated     Pneumatic Valves Fitting Size & Type   6.35 mm (0.25 in.) OD Swagelok Tube     Pneumatic Gas Pressure   2 bar (30 psig) min. to 6.9 bar (100 psig) max., regulated     Pneumatic Gas Purity   CDA, Oil Free, Dewpoint ≤7°C (45°F), Particulate Size <5 µm     Pneumatic Gas Pressure   3.45 bar (50 psig) min. to 6.89 bar (100 psig) max., regulated     Exhaust   25.4 mm (1 in.) OD Pipe Flange     SEMI   E10, S2/S8 (EH&S/Ergonomics)     International   CE Marked     Ancillary   Gas Generators     Requires Additional Non-Optional Hardware)		Process Gas Purity	Lab or Electronic Grade
Facilities   Purge Gas Purity   Lab or Electronic Grade N2/CDA     Purge Gas Pressure   2 bar (30 psig) min. to 6.9 bar (100 psig) max., regulated     Pneumatic Valves Fitting Size & Type   6.35 mm (0.25 in.) OD Swagelok Tube     Pneumatic Gas Purity   CDA, Oil Free, Dewpoint ≤7°C (45°F), Particulate Size <5 µm     Pneumatic Gas Pressure   3.45 bar (50 psig) min. to 6.89 bar (100 psig) max., regulated     Exhaust   25.4 mm (1 in.) OD Pipe Flange     SEMI   E10, S2/S8 (EH&S/Ergonomics)     International   CE Marked     Ancillary   Gas Generators     Requires Additional Non-Optional Hardware)		Process Gas Pressure	
FacilitiesPurge Gas Pressure2 bar (30 psig) min. to 6.9 bar (100 psig) max., regulatedPneumatic Valves Fitting Size & Type6.35 mm (0.25 in.) OD Swagelok TubePneumatic Gas PurityCDA, Oil Free, Dewpoint ≤7°C (45°F), Particulate Size <5 µmPneumatic Gas Pressure3.45 bar (50 psig) min. to 6.89 bar (100 psig) max., regulatedExhaust25.4 mm (1 in.) OD Pipe FlangeSEMIE10, S2/S8 (EH&S/Ergonomics)InternationalCE MarkedAncillary EquipmentGas GeneratorsNitrogen, Hydrogen (Requires Additional Non-Optional Hardware)		Purge Gas Fitting Size & Type	6.35 mm (0.25 in.) OD Swagelok Tube
Pneumatic Valves Fitting Size & Type 2 bar (30 psig) fillit. to 0.9 bar (100 psig) filax., regulated   Pneumatic Valves Fitting Size & Type 6.35 mm (0.25 in.) OD Swagelok Tube   Pneumatic Gas Purity CDA, Oil Free, Dewpoint ≤7°C (45°F), Particulate Size <5 µm   Pneumatic Gas Pressure 3.45 bar (50 psig) min. to 6.89 bar (100 psig) max., regulated   Exhaust 25.4 mm (1 in.) OD Pipe Flange   SEMI International CE Marked   Ancillary Equipment Gas Generators		Purge Gas Purity	Lab or Electronic Grade N2/CDA
Type6.35 mm (0.25 in.) OD Swagelok TubePneumatic Gas PurityCDA, Oil Free, Dewpoint ≤7°C (45°F), Particulate Size <5 µmPneumatic Gas Pressure3.45 bar (50 psig) min. to 6.89 bar (100 psig) max., regulatedExhaust25.4 mm (1 in.) OD Pipe FlangeSEMIE10, S2/S8 (EH&S/Ergonomics)InternationalCE MarkedAncillary EquipmentGas GeneratorsNitrogen, Hydrogen (Requires Additional Non-Optional Hardware)		Purge Gas Pressure	2 bar (30 psig) min. to 6.9 bar (100 psig) max., regulated
Pneumatic Gas Purity   Particulate Size <5 µm		, and the second s	6.35 mm (0.25 in.) OD Swagelok Tube
Pneumatic Gas Pressure regulated   regulated regulated   Exhaust 25.4 mm (1 in.) OD Pipe Flange   SEMI E10, S2/S8 (EH&S/Ergonomics)   International CE Marked   Ancillary Gas Generators   Requires Additional Non-Optional Hardware)		Pneumatic Gas Purity	
SEMI     E10, S2/S8 (EH&S/Ergonomics)       International     CE Marked       Ancillary     Gas Generators     Nitrogen, Hydrogen (Requires Additional Non-Optional Hardware)		Pneumatic Gas Pressure	
Compliance     International     CE Marked       Ancillary     Gas Generators     Nitrogen, Hydrogen (Requires Additional Non-Optional Hardware)		Exhaust	25.4 mm (1 in.) OD Pipe Flange
Ancillary     Gas Generators     Nitrogen, Hydrogen (Requires Additional Non-Optional Hardware)	Compliance	SEMI	E10, S2/S8 (EH&S/Ergonomics)
Ancillary Gas Generators (Requires Additional Non-Optional Hardware)		International	CE Marked
(Requires Additional Non-Optional Hardware)	Ancillony		Nitrogen, Hydrogen
Facilities Chiller, Scrubber			· · · ·
	Lyaphone	Facilities	Chiller, Scrubber

#### For more information, speak with your local representative or contact your regional office.

**North America** China Headquarters Concord, CA +1.925.827.1240

Shanghai +86.21.3866.9166

**EMEA** Maastricht, Netherlands +31.65.155.4996

S.E. Asia Singapore +65.6796.9500

Korea Seoul +82.31.739.6374

info@nordsonmarch.com

Accelonix BV Luchthavenweg 18b • NL-5657 EB •

Eindhoven • The Netherlands • T: +31 40 750 1650 • E: info@accelonix.nl

Taiwan New Taipei City +886.2.2902.1860

India Chennai +91.44.4353.9024



Published 2017-04-06

www.nordsonmarch.com