

Section 1

Introduction and Specifications

1.1 Introduction

The Solitec Wafer Processing Inc. Bell Jar Quartz Cleaning (BJ) Systems, clean Bell Jar quartzware using a process sequence of spraying dilute acid and DI water. The system reclaims and filters the sprayed liquids, has operator safety interlocks and full automatic or manual operation for the ultimate in process flexibility.

Table 1-1

BJ Specifications

- **Bell Jar Overall Dimensions:**
See Fig.'s 3-1 & 3-2
Listed as Height x Depth x Width
90" High x 48" Deep x 78" Wide
 - BJ-60 is 90" x 48" x 78"
 - BJ-100 is 79.5" x 48" x 94.5"
 - BJ-120 is 98" x 48" x 94.5"
- **Weight Uncrated:**
 - BJ-60 1600 lbs.
 - BJ-100 2000 lbs.
 - BJ-120 2400 lbs.
- **Electrical Spec's:** 110/220 VAC, Single Phase, 2.2 KVA, 20 Amp, 60 Hz. Standard, (30 Amps Optional)
- **Exhaust Requirements:** (Fig. 3-1)
No. of Ducts: 2 -
4" Duct 150-250 CFM
Static Pressure: 0.5"-1" H₂O
- **Clean Dry Air (CDA) Requirements for Pump Operation:** (See Fig. 3-1)
CFM - 12.0
Pressure - 60 -100 PSI (min-max)
Fitting Type and Size - ¼" flexible tube connector
- **DI Water Requirements:** (Fig. 3-1)
Manifold Material - PVDF
Inlet and Outlet Pipe Diameter - 1"
FPT Pressure - 30-40 PSI (min-max.)
Flow Required - 5 gpm (min.)
- **Nitrogen Requirements for Solenoid Operation:** (See Fig. 3-1)
CFM - 2.0
Pressure - 60-100 PSI (min.-max.)
Fitting Type and Size - 1/4" flexible tube connector
- **Nitrogen for Hot N₂ Drying (Optional):** (See Fig. 3-1)
CFM - 20.0 min.
Pressure - 80 -100 PSI (min- max.)
Fitting Type and Size - 1/4" flexible tube connector
- **Drains:** (See Fig. 3-1)
Material - PVDF
1 - Acid drain (15 gpm), for concentrated acids
1 - Waste drain (15 gpm), for diluted acids and DI water
Fitting Size - 2" MPT