SECTION 1 SITE REQUIREMENTS

1.1 LOCATION

The Mastering Area should be located at ground level away from sources of vibration. The floor should be of concrete with a minimum thickness of 150 mm. Good access from the point of arrival (loading dock) to the Mastering Area is essential, with adequate clearance for all equipment.

1.2 LAYOUT AND CONSTRUCTION

The layout of equipment within the Mastering Area should be designed for good work flow, and to allow easy access to all equipment for routine maintenance tasks. ODC Nimbus will work with customers (and their contractors) to design a suitable area.

The Mastering Area should be constructed using good quality materials and workmanship. Although a clean room is not a specific requirement, it is highly recommended. If a clean room is not built, all materials must be easily cleaned (i.e. hard smooth surfaces, minimal horizontal ledges, sealed edges). This includes ceilings that must be sealed to withstand a room pressure of 55 Pascals.

1.3 SPACE REQUIREMENTS

The space required depends on the current and future equipment to be installed in the Mastering Area. It is recommended that the total volume of the room be kept to a minimum practical size, as this will positively affect the air cleanliness, and will reduce energy costs. For the same reason, standard 2.4m ceilings are recommended. The following table shows typical minimum room dimensions:

Equipment	Approximate Area Required
M8100 + Laserprep + Metallizer	50 square meters
Additional Laserwave LBR	6 square meters
Additional M8100 LBR	12 square meters
Additional Metallizer	6 square meters

Please note this document is intended as a reference for the M8100. For more detailed information on supporting equipment, refer to the ODC Facility Preparation Guide, Laserprep Version 12671-003.

1.4 EQUIPMENT DIMENSIONS AND WEIGHTS

Equipment dimensions (mm) and weights (kg):

Equipment	Width	Depth	Height	Weight
M8100 LBR Unit (including frame)	1200	1900	1700	650
M8100 LBR Unit less frame (see 1.6)	1000	1700	n/a	550
M8100 Control Rack	610	780	2050	450
M8100 Complete System Crated	1700	2900	2300	1340

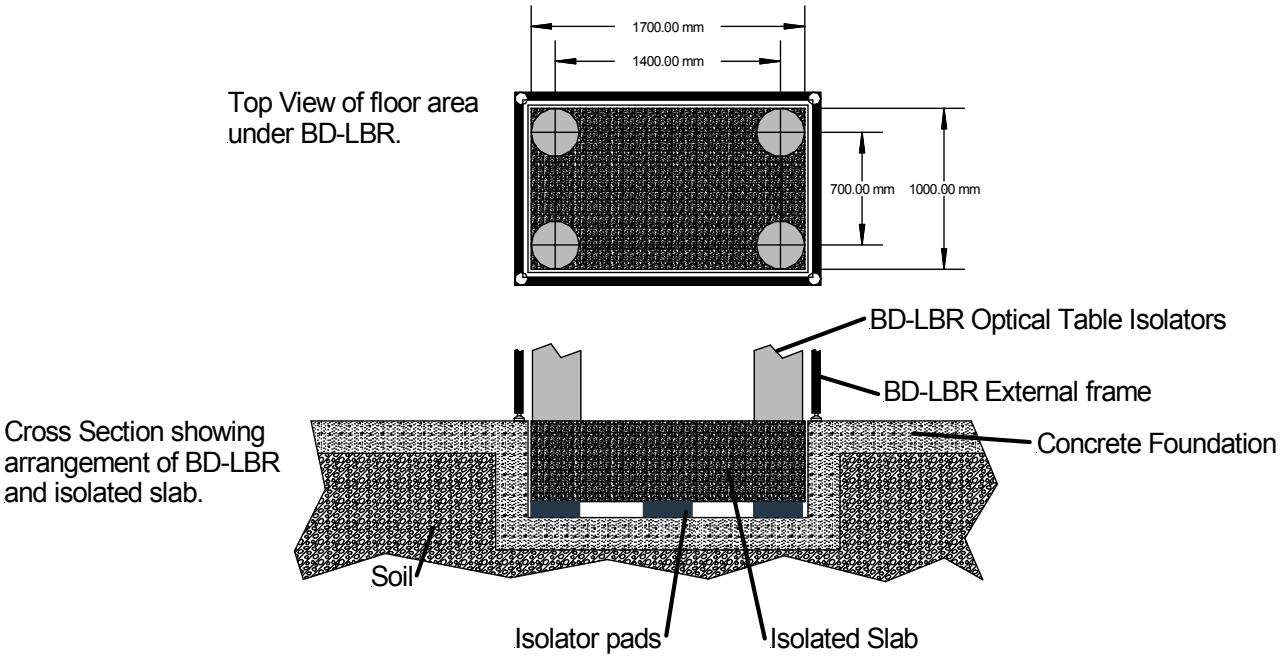
1.5 AIR-CONDITIONING / CLEAN AIR

The Mastering Area should be air-conditioned, and all air supplied to the room should be HEPA filtered. Supply and Return air must be balanced to provide positive pressure (above ambient) within the room. The room must comply with the following:

Requirement	
Particles, Maximum per Cubic Foot (equivalent to Class 10,000)	10,000 smaller than 0.5 micometers 2,000 smaller than 1.0 micometers 60 smaller than 5.0 micometers
Temperature	Between 19˚C and 23˚C
Humidity	50% to 60% RH
Room Pressure	55 Pascals above ambient
Heat Load M8100	Approximately 2kW

1.6 VIBRATION

The movement of the floor in the Mastering Area, measured as RMS acceleration in two horizontal planes and in the vertical plane (at mutual right angles) must not exceed 10 mm/sec² between 1 Hz and 1 kHz. If necessary, an isolated concrete slab independent of the floor slab should be provided to achieve this specification. A typical isolation slab is shown here:



Typical method of creating an isolated slab to minimize vibration from external sources being transmitted into the BD-LBR Optical Table. Note that the BD-LBR external frame does not contact the isolated internal Optical Table, and therefore does not sit on the slab. This diagram is for illustration only, and the final isolation design should be referred to a company specializing in vibration isolation.

SECTION 2 SERVICE CONNECTION REQUIREMENTS

2.1 ELECTRICAL SUPPLY

The M8100 BD Mastering System requires one single-phase electrical connection. Power requirement is:

208 +/- 10% VAC, 50 or 60 Hz, 15A protected (max requirement approximately 1kW).

A noise free, stable supply of electricity is essential. In areas prone to electrical noise or brown-outs the use of a UPS and / or power conditioner is recommended.

2.2 COMPRESSED AIR

Clean, dry, compressed air is required for the M8100 as follows:

Pressure	5.4 – 6.8 bar (80 – 100 psi)
Capacity	0.42 m^3/min @5.4 bar (12scfm@80psi)

The use of an oil-free air compressor is highly recommended.