



**SPECIFICATIONS**

**SHIELDING REQUIREMENTS:**

- ENTRY PANEL 3/4" THK LEAD
- EXIT PANEL 1" THK LEAD (TOTAL BACK WALL= 2" THK LEAD)
- SIDE WALLS 3/4" THK LEAD
- ROOF 1/2" THK LEAD

**CONSTRUCTION: MODULAR**

**STRUCTURE: SELF-SUPPORTED**

- COMMERCIAL RATED: 40 LBS LIVE WEIGHT/SQ FT
- 100 LBS DEAD WEIGHT/SQ FT

**OVERALL DIMS:**

- 4.8M Avg WIDTH X 9.8M LONG X 3.3M HIGH [15.8'X 32' X 11']
- CLEAR HEIGHT INSIDE: 3.0M [10']
- DOOR OPENING: 2.4M HIGH X 1.0M WIDE [8'X 3.3']

**SLIDING DOORS:**

- ONE MANUAL, FIXED BY LATCH
- ONE PNEUMATIC WITH MANUAL OVERRIDE

**STANDARD SIDE PANEL: 1.0M WIDE X 3.3M HIGH [3.3'X11']**

**SANDWICH CONSTRUCTION:**

- STEEL 3mm [1/8" (11Ga)] - LEAD 19mm [3/4"] - STEEL 6mm [1/4"]
- STRUCTURE: 3 1/2" X 3 1/2" X 1/4" STEEL ANGLE, ALL AROUND
- WEIGHT: 2290LB

**STANDARD BACK PANEL: 1.0M WIDE X 3.3M HIGH [3.3'X11']**

**SANDWICH CONSTRUCTION:**

- STEEL 3mm [1/8" (11Ga)] - LEAD 25mm [1"] - STEEL 6mm [1/4"]
- STRUCTURE: 3 1/2" X 3 1/2" X 1/4" STEEL ANGLE, ALL AROUND
- WEIGHT: 2823LB

**STANDARD ROOF PANEL: 1.0M WIDE X 1.75M LONG [3.3'X5.8']**

**SANDWICH CONSTRUCTION:**

- STEEL 3mm [1/8" (11Ga)] - LEAD 12mm [1/2"] - STEEL 6mm [1/4"]
- STRUCTURE: MC 6 X 16.3 STEEL CHANNEL, ALL AROUND
- WEIGHT: 1150LB

**STANDARD DOOR PANEL: 1.0M WIDE X 2.5M HIGH [3.3'X8']**

**SANDWICH CONSTRUCTION:**

- STEEL 3mm [1/8" (11Ga)] - LEAD 19mm [3/4"] - STEEL 6mm [1/4"]
- WEIGHT: 1470LB

**LABYRINTH PANELS: UTILITIES, CABLES, VENTILATION, OZONE**

**UTILITIES: CHILLED WATER 5°-0.8°C [41°-1.5°F]**

- DI WATER
- COMPRESSED AIR 90psi
- ELECTRICAL POWER 30kVA 120/208V

**WORK STATION CRANE WITH MANUAL HOIST:**

- SPAN 1.5M [5'] WIDE X RUNWAY LENGTH 10.2M [33.5'] X CLEAR HEIGHT 3.0M [10']
- CAPACITY: 1000Kg [1 TON]

**ILLUMINATION: FLUORESCENT- OFFICE RATED: 100 FOOT CANDLE.**

**NOTES:**

1- THE HUTCH MANUFACTURER SHALL BE RESPONSIBLE FOR THE STRUCTURAL INTEGRITY OF THE HUTCH, AND SHALL CERTIFY THAT THE STRUCTURE WAS REVIEWED BY A LICENSED STRUCTURAL ENGINEER.

STRUCTURES AND THEIR ELEMENTS SHALL BE BUILT FOLLOWING DOE 6430 AS REFERRED TO IN TECHNICAL SPECS. DESIGN LOADS SHALL INCLUDE LOADS THAT CAN OCCUR DURING CONSTRUCTION. DEAD LOADS SHALL INCLUDE THE USE OF THE INTERIOR UNISTRUT FOR SHELVES ONE FOOT WIDE SUPPORTING LOADS OF 200 LBS.

2- LEAD THICKNESS IS SPECIFIED BY ARGONNE. THE MANUFACTURER SHALL BE RESPONSIBLE FOR PROVIDING A RADIATION LEAK PROOF HUTCH.

LEAD LINED PANELS SHALL BE CONSTRUCTED FROM SINGLE UNPIERCED SHEET, FREE OF OXIDE INCLUSIONS, FISSURES, VOIDS AND ALL OTHER DETRIMENTAL DEFECTS. MATERIAL SHALL BE LEAD GRADE 'C' TO COMPLY WITH FEDERAL SPECIFICATION QQ-L-201. HUTCH SHALL MEET ALL APPLICABLE RADIATION GUIDE LINES REFERRED TO IN TECHNICAL SPECS.

**LEGEND:**



| REV  | DESCRIPTION | DATE | BY | CHKD | APP'D | MATERIAL / SPEC | QTY             |
|--|-------------|------|----|------|-------|-----------------|-----------------|
| <b>PARTS LIST</b>  |             |      |    |      |       |                 |                 |
| <b>ARGONNE NATIONAL LABORATORY</b>                                       |             |      |    |      |       |                 |                 |
| <b>ADVANCED PHOTON SOURCE</b>  |             |      |    |      |       |                 |                 |
| HK COMCAT WBES 32-ID-B<br>WHITE BEAM<br>EXPERIMENTAL STATION<br>ASSEMBLY |             |      |    |      |       |                 |                 |
| (DRAWING TREE)   |             |      |    |      |       |                 |                 |
|  |             |      |    |      |       | SCALE: 1:20     |                 |
|  |             |      |    |      |       | SHEET: 2/4      |                 |
|  |             |      |    |      |       | D               | HK-320000-00-02 |

| NO. | DESCRIPTION | BY | DATE |
|-----|-------------|----|------|
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|     |             |    |      |