**PIPING CALCULATIONS**

**Computing for L/s (Cleanup Room)**

**L/s=**

Where cooling capacity= 3.5167 kW

[V@ 11.4](mailto:V@11.4) °C = 0.001002915 m3/kg

CpWater= 4.187 kJ/kg

Tl= 25.05 °C

Te= 11.4 °C

L/s=

**L/s = 0.082649003 L/s**

**Table 47.0** Summary of L/s from Chiller

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| --- | --- | --- | --- |
| **Space** | **TOR** | **KW** | **L/s** |
| 5-Bed Ward 1 | 3 | 10.5501 | 0.2141 |
| Isolation Room 1 | 1 | 3.5167 | 0.0714 |
| Private Room 1 | 1.5 | 5.27505 | 0.107 |
| Private Room 2 | 1.5 | 5.27505 | 0.107 |
| Private Room 5 | 1.5 | 5.27505 | 0.107 |
| Private Room 9 | 1.5 | 5.27505 | 0.107 |
| Private Room 6 | 1.5 | 5.27505 | 0.107 |
| Private Room 10 | 1.5 | 5.27505 | 0.107 |
| 5-Bed Ward 2 | 3 | 10.5501 | 0.2141 |
| 5-Bed Ward 3 | 3 | 10.5501 | 0.2141 |
| 5-Bed Ward 4 | 3 | 10.5501 | 0.2141 |
| Private Room 4 | 1.5 | 5.27505 | 0.107 |
| Private Room 3 | 1.5 | 5.27505 | 0.107 |
| Isolation Room 2 | 1 | 3.5167 | 0.0714 |
| Private Room 7 | 1.5 | 5.27505 | 0.107 |
| Private Room 8 | 1.5 | 5.27505 | 0.107 |
| Private Room 11 | 1.5 | 5.27505 | 0.107 |
| Private Room 12 | 1.5 | 5.27505 | 0.107 |
| **TOTAL A** | | | **2.2832** |

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| **Space** | **TOR** | **KW** | **L/s** |
| Chief Nurse | 3 | 10.5501 | 0.2141 |
| 3-Bed Ward 1 | 2.5 | 8.79175 | 0.1784 |
| Treatment Room | 2 | 7.0334 | 0.1427 |
| 3-Bed Ward 2 | 2.5 | 8.79175 | 0.1784 |
| **TOTAL B** | | | **0.7136** |

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| **Space** | **TOR** | **KW** | **L/s** |
| Private Room 16 | 1 | 3.5167 | 0.0714 |
| Private Room 15 | 1 | 3.5167 | 0.0714 |
| **TOTAL C** | | | **0.1428** |

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| --- | --- | --- | --- |
| **Space** | **TOR** | **KW** | **L/s** |
| Private Room 13 | 1 | 3.5167 | 0.0714 |
| Private Room 14 | 1 | 3.5167 | 0.0714 |
| **TOTAL D** | | | **0.1428** |

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| --- | --- | --- | --- |
| **Space** | **TOR** | **KW** | **L/s** |
| Admitting | 1 | 3.5167 | 0.0714 |
| Billing | 1 | 3.5167 | 0.0714 |
| Cashier | 1 | 3.5167 | 0.0714 |
| Personel's dining | 14 | 49.2338 | 0.8968 |
| **TOTAL E** | | | **1.111** |

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| --- | --- | --- | --- |
| **Space** | **TOR** | **KW** | **L/s** |
| 5 Bed Ward 1 | 2.5 | 8.79175 | 0.434 |
| Isolation Room 1 | 1 | 3.5167 | 0.1736 |
| Private Room 1 | 1 | 3.5167 | 0.1736 |
| Private Room 2 | 1 | 3.5167 | 0.1736 |
| 5-Bed Ward 2 | 2.5 | 8.79175 | 0.434 |
| Chief Nurse | 2.5 | 8.79175 | 0.434 |
| 5-Bed Ward 3 | 2.5 | 8.79175 | 0.434 |
| 5-Bed Ward 4 | 2.5 | 8.79175 | 0.434 |
| Private Room 3 | 1 | 3.5167 | 0.1736 |
| Private Room 4 | 1 | 3.5167 | 0.1736 |
| Private Room 5 | 1 | 3.5167 | 0.1736 |
| Private Room 6 | 1 | 3.5167 | 0.1736 |
| Private Room 7 | 1 | 3.5167 | 0.1736 |
| Private Room 8 | 1 | 3.5167 | 0.1736 |
| **TOTAL F** | | | **3.7324** |

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| --- | --- | --- | --- |
| **Space** | **TOR** | **KW** | **L/s** |
| Reception | 1 | 3.5167 | 0.1736 |
| Chief of Hospital | 1.5 | 5.27505 | 0.2604 |
| Conference Room | 3 | 10.5501 | 0.5208 |
| 3-Bed Ward 1 | 2 | 7.0334 | 0.3472 |
| 3-Bed Ward 2 | 2 | 7.0334 | 0.3472 |
| Chief of Clinics | 2 | 7.0334 | 0.3472 |
| **TOTAL G** | | | **1.9964** |

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| --- | --- | --- | --- |
| **Space** | **TOR** | **KW** | **L/s** |
| 3-Bed Ward 3 | 2 | 7.0334 | 0.3472 |
| 3-Bed Ward 4 | 2 | 7.0334 | 0.3472 |
| Autoclave area | 1.5 | 5.27505 | 0.2604 |
| Sterile supply room | 2.5 | 8.79175 | 0.1392 |
| **TOTAL H** | | | **1.094** |

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| --- | --- | --- | --- |
| **Space** | **TOR** | **KW** | **L/s** |
| Recovery Room | 4 | 14.0668 | 0.6944 |
| Pre-operation area | 2.5 | 8.79175 | 0.1066 |
| Breastfeeding room | 1 | 3.5167 | 0.1736 |
| Work area (Inside) | 2 | 7.0334 | 0.3472 |
| Labor Room | 2 | 7.0334 | 0.3472 |
| Delivery Room | 5 | 17.5835 | 0.2132 |
| Major Operating Room | 5 | 17.5835 | 0.2132 |
| **TOTAL I** | | | **2.0954** |

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| --- | --- | --- | --- |
| **Space** | **TOR** | **KW** | **L/s** |
| Clean up room | 1 | 3.5167 | 0.0557 |
| Pathologic Nursery | 1.5 | 5.27505 | 0.2604 |
| Pre-mature nursery | 1.5 | 5.27505 | 0.2604 |
| Lounge Area | 3 | 10.5501 | 0.5208 |
| Treatment Room | 1.5 | 5.27505 | 0.2604 |
| Isolation Room 2 | 1 | 3.5167 | 0.1736 |
| Anesthesia Office & Storage | 2 | 7.0334 | 0.1113 |
| **TOTAL J** | | | **1.6426** |

GROUND FLOOR

|  |  |  |  |
| --- | --- | --- | --- |
| **Space** | **TOR** | **KW** | **L/s** |
| Cadaver Holding Room | 1.5 | 5.27505 | 0.0926 |
| Examination / treatment area | 6 | 21.1002 | 0.4246 |
| Minor Operating Room | 2.5 | 8.79175 | 0.1107 |
| Work Area (laboratory) | 3 | 10.5501 | 0.1328 |
| Maintenance Office | 1 | 3.5167 | 0.0708 |
| **TOTAL K** | | | **0.8315** |

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| **Space** | **TOR** | **KW** | **L/s** |
| Pharmacy | 1 | 3.5167 | 0.0708 |
| Medical Records Office | 1 | 3.5167 | 0.0708 |
| PHILHEALTH | 1 | 3.5167 | 0.0708 |
| Doctor's Duty | 1 | 3.5167 | 0.0708 |
| **TOTAL L** | | | **0.2832** |

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| **Space** | **TOR** | **KW** | **L/s** |
| Supply Room | 1.5 | 5.27505 | 0.1061 |
| OPD clinic dental 1 | 1 | 3.5167 | 0.0708 |
| OPD clinic dental 2 | 1 | 3.5167 | 0.0708 |
| OPD Clinic Pedia 1 | 1 | 3.5167 | 0.0708 |
| OPD Clinic Pedia 2 | 1 | 3.5167 | 0.0708 |
| Dark Room | 1 | 3.5167 | 0.0708 |
| Radiologist Office | 1 | 3.5167 | 0.0708 |
| Control Booth | 1 | 3.5167 | 0.0708 |
| Linen storage | 1 | 3.5167 | 0.0617 |
| **TOTAL M** | | | **0.6634** |

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| --- | --- | --- | --- |
| **Space** | **TOR** | **KW** | **L/s** |
| Cooking Area | 2.5 | 8.79175 | 0.1543 |
| Dietician's Office | 1 | 3.5167 | 0.0708 |
| Admin Office | 1 | 3.5167 | 0.0708 |
| Administrative office | 1.5 | 5.27505 | 0.1061 |
| Social Welfare | 1 | 3.5167 | 0.0708 |
| Dietary | 1.5 | 5.27505 | 0.1061 |
| Staff Dining | 2 | 7.0334 | 0.1415 |
| Canteen | 12 | 42.2004 | 0.7405 |
| **TOTAL N** | | | **1.4609** |

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| --- | --- | --- | --- |
| **Space** | **TOR** | **KW** | **L/s** |
| OPD info. And admitting | 1 | 3.5167 | 0.0708 |
| OPD records | 1 | 3.5167 | 0.0708 |
| Ultrasound | 1 | 3.5167 | 0.0708 |
| OPD clinic Ob-gyne | 1.5 | 5.27505 | 0.1061 |
| **TOTAL O** | | | **0.3185** |

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| --- | --- | --- | --- |
| **Space** | **TOR** | **KW** | **L/s** |
| Cashier | 1 | 3.5167 | 0.0708 |
| Billing | 1 | 3.5167 | 0.0708 |
| Admitting | 1 | 3.5167 | 0.0708 |
| OPD Clinic Medical 1 | 1 | 3.5167 | 0.0708 |
| OPD Clinic Medical 2 | 1 | 3.5167 | 0.0708 |
| OPD clinic surgery 1 | 1 | 3.5167 | 0.0708 |
| OPD clinic surgery 2 | 1 | 3.5167 | 0.0708 |
| OPD Info. And admitting | 1 | 3.5167 | 0.0708 |
| OPD records | 1 | 3.5167 | 0.0708 |
| **TOTAL P** | | | **0.6372** |