

## Zone Sizing Summary for Ductless Split System 1

Project Name: 7724-3206 GSH-5 River Data Room  
Prepared by: MacDonald-Miller Facility Solutions

02/04/2025  
01:38PM

### Air System Information

Air System Name ..... **Ductless Split System 1**  
Equipment Class ..... **TERM**  
Air System Type ..... **VRF**

Number of zones ..... **1**  
Floor Area ..... **550.0** ft<sup>2</sup>  
Location ..... **Tacoma, Washington**

### Sizing Calculation Information

Calculation Months ..... **Jan to Dec**  
Sizing Data ..... **Calculated**

Zone CFM Sizing ..... **Sum of space airflow rates**  
Space CFM Sizing ..... **Individual peak space loads**

### Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (MBH)	Sens Coil Load (MBH)	Coil Entering DB / WB (°F)	Coil Leaving DB / WB (°F)	Water Flow @ 10.0 °F (gpm)	Time of Peak Coil Load	Zone CFM/ft <sup>2</sup>
Zone 1	22.1	22.1	76.7 / 46.6	59.8 / 38.1	-	Jun 1500	2.23

### Terminal Unit Sizing Data - Heating, Fan, Ventilation

Zone Name	Heating Coil Load (MBH)	Heating Coil Ent/Lvg DB (°F)	Htg Coil Water Flow @20.0 °F (gpm)	Fan Design Airflow (CFM)	Fan Motor (BHP)	Fan Motor (kW)	OA Vent Design Airflow (CFM)
Zone 1	1.8	70.2 / 71.6	-	1225	0.000	0.000	0

### VRF Outdoor Unit Sizing Data

	Cooling [MBH]	Cooling [Tons]	Heating [MBH]
Peak Coincident Indoor Unit Loads	22.1	1.8	1.8
Estimated Piping / Line Losses	0.0	0.0	0.0
<b>Total Required ODU Capacity</b>	<b>22.1</b>	<b>1.8</b>	<b>1.8</b>

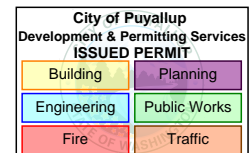
Calculations required to be provided by the Permittee on site for all Inspections

PRMH20250190

*Note: VRF piping / line losses are based on typical loss factors for this class of equipment. Actual line loss varies widely from one product to another. Therefore, when selecting equipment it is critical to consult manufacturer's guidance to utilize actual line loss data.*

### Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (MBH)	Time of Peak Sensible Cooling Load	Zone Heating Load (MBH)	Zone Floor Area (ft <sup>2</sup> )
Zone 1	22.2	Jun 1500	1.8	550.0



### Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (MBH)	Time of Peak Sensible Load	Air Flow (CFM)	Heating Load (MBH)	Floor Area (ft <sup>2</sup> )	Space CFM/ft <sup>2</sup>
<b>Zone 1</b>							
Large Data Room	1	22.2	Jun 1500	1225	1.8	550.0	2.23

## Air System Design Load Summary for Ductless Split System 1

Project Name: 7724-3206 GSH-5 River Data Room  
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	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jun 1500 COOLING OA DB / WB 85.0 °F / 65.0 °F			HEATING DATA AT DES HTG HEATING OA DB / WB 18.0 °F / 14.8 °F		
ZONE LOADS	Details	Sensible (BTU/hr)	Latent (BTU/hr)	Details	Sensible (BTU/hr)	Latent (BTU/hr)
Window & Skylight Solar Loads	0 ft²	0	-	0 ft²	-	-
Wall Transmission	180 ft²	50	-	180 ft²	1022	-
Roof Transmission	550 ft²	797	-	550 ft²	793	-
Window Transmission	0 ft²	0	-	0 ft²	0	-
Skylight Transmission	0 ft²	0	-	0 ft²	0	-
Door Loads	0 ft²	0	-	0 ft²	0	-
Floor Transmission	0 ft²	0	-	0 ft²	0	-
Partitions	0 ft²	0	-	0 ft²	0	-
Ceiling	0 ft²	0	-	0 ft²	0	-
Overhead Lighting	0 W	0	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	2750 W	9383	-	0	0	-
People	0	0	0	0	0	0
Infiltration	-	0	0	-	0	0
Miscellaneous	-	12000	0	-	0	0
Safety Factor	0% / 0%	0	0	0%	0	0
>> Total Zone Loads	-	22230	0	-	1815	0
Zone Conditioning	-	22147	0	-	1815	0
Plenum Wall Load	0%	0	-	0	0	-
Plenum Roof Load	0%	0	-	0	0	-
Plenum Lighting Load	0%	0	-	0	0	-
Exhaust Fan Load	0 CFM	0	-	0 CFM	0	-
Ventilation Load	0 CFM	0	0	0 CFM	0	0
Ventilation Fan Load	0 CFM	0	-	0 CFM	0	-
Space Fan Coil Fans	-	0	-	-	0	-
Duct Heat Gain / Loss	0%	0	-	0%	0	-
>> Total System Loads	-	22147	0	-	1815	0
Terminal Unit Cooling	-	22147	0	-	0	0
Terminal Unit Heating	-	0	-	-	1815	-
>> Total Conditioning	-	22147	0	-	1815	0
Key:	Positive values are clg loads Negative values are htg loads			Positive values are htg loads Negative values are clg loads		

## Zone Design Load Summary for Ductless Split System 1

Project Name: 7724-3206 GSH-5 River Data Room  
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Zone 1	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jun 1500			HEATING DATA AT DES HTG		
	COOLING OA DB / WB 85.0 °F / 65.0 °F			HEATING OA DB / WB 18.0 °F / 14.8 °F		
	OCCUPIED T-STAT 75.0 °F			OCCUPIED T-STAT 70.0 °F		
ZONE LOADS	Details	Sensible (BTU/hr)	Latent (BTU/hr)	Details	Sensible (BTU/hr)	Latent (BTU/hr)
Window & Skylight Solar Loads	0 ft²	0	-	0 ft²	-	-
Wall Transmission	180 ft²	50	-	180 ft²	1022	-
Roof Transmission	550 ft²	797	-	550 ft²	793	-
Window Transmission	0 ft²	0	-	0 ft²	0	-
Skylight Transmission	0 ft²	0	-	0 ft²	0	-
Door Loads	0 ft²	0	-	0 ft²	0	-
Floor Transmission	0 ft²	0	-	0 ft²	0	-
Partitions	0 ft²	0	-	0 ft²	0	-
Ceiling	0 ft²	0	-	0 ft²	0	-
Overhead Lighting	0 W	0	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	2750 W	9383	-	0	0	-
People	0	0	0	0	0	0
Infiltration	-	0	0	-	0	0
Miscellaneous	-	12000	0	-	0	0
Safety Factor	0% / 0%	0	0	0%	0	0
>> Total Zone Loads	-	22230	0	-	1815	0

# Space Design Load Summary for Ductless Split System 1

Project Name: 7724-3206 GSH-5 River Data Room  
Prepared by: MacDonald-Miller Facility Solutions

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**TABLE 1.1.A. Component Loads For Space "Large Data Room" In Zone "Zone 1"**

	<b>DESIGN COOLING</b>			<b>DESIGN HEATING</b>		
	<b>COOLING DATA AT Jun 1500</b>			<b>HEATING DATA AT DES HTG</b>		
	<b>COOLING OA DB / WB 85.0 °F / 65.0 °F</b>			<b>HEATING OA DB / WB 18.0 °F / 14.8 °F</b>		
	<b>OCCUPIED T-STAT 75.0 °F</b>			<b>OCCUPIED T-STAT 70.0 °F</b>		
<b>SPACE LOADS</b>	<b>Details</b>	<b>Sensible (BTU/hr)</b>	<b>Latent (BTU/hr)</b>	<b>Details</b>	<b>Sensible (BTU/hr)</b>	<b>Latent (BTU/hr)</b>
Window & Skylight Solar Loads	0 ft²	0	-	0 ft²	-	-
Wall Transmission	180 ft²	50	-	180 ft²	1022	-
Roof Transmission	550 ft²	797	-	550 ft²	793	-
Window Transmission	0 ft²	0	-	0 ft²	0	-
Skylight Transmission	0 ft²	0	-	0 ft²	0	-
Door Loads	0 ft²	0	-	0 ft²	0	-
Floor Transmission	0 ft²	0	-	0 ft²	0	-
Partitions	0 ft²	0	-	0 ft²	0	-
Ceiling	0 ft²	0	-	0 ft²	0	-
Overhead Lighting	0 W	0	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	2750 W	9383	-	0	0	-
People	0	0	0	0	0	0
Infiltration	-	0	0	-	0	0
Miscellaneous	-	12000	0	-	0	0
Safety Factor	0% / 0%	0	0	0%	0	0
<b>&gt;&gt; Total Zone Loads</b>	<b>-</b>	<b>22230</b>	<b>0</b>	<b>-</b>	<b>1815</b>	<b>0</b>

**TABLE 1.1.B. Envelope Loads For Space "Large Data Room" In Zone "Zone 1"**

	<b>Area</b>	<b>U-Value</b>	<b>Shade</b>	<b>COOLING</b>	<b>COOLING</b>	<b>HEATING</b>
	<b>(ft²)</b>	<b>(BTU/(hr-ft²-°F))</b>	<b>Coeff.</b>	<b>TRANS</b>	<b>SOLAR</b>	<b>TRANS</b>
				<b>(BTU/hr)</b>	<b>(BTU/hr)</b>	<b>(BTU/hr)</b>
<b>N EXPOSURE</b>						
WALL	180	0.109	-	50	-	1022
<b>H EXPOSURE</b>						
ROOF	550	0.028	-	797	-	793

## Zone Sizing Summary for Ductless Split System 2

Project Name: 7724-3206 GSH-5 River Data Room  
Prepared by: MacDonald-Miller Facility Solutions

02/04/2025  
01:46PM

### Air System Information

Air System Name ..... **Ductless Split System 2**  
Equipment Class ..... **TERM**  
Air System Type ..... **VRF**

Number of zones ..... **1**  
Floor Area ..... **250.0** ft<sup>2</sup>  
Location ..... **Tacoma, Washington**

### Sizing Calculation Information

Calculation Months ..... **Jan to Dec**  
Sizing Data ..... **Calculated**

Zone CFM Sizing ..... **Sum of space airflow rates**  
Space CFM Sizing ..... **Individual peak space loads**

### Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (MBH)	Sens Coil Load (MBH)	Coil Entering DB / WB (°F)	Coil Leaving DB / WB (°F)	Water Flow @ 10.0 °F (gpm)	Time of Peak Coil Load	Zone CFM/ft <sup>2</sup>
Zone 1	13.3	13.1	75.9 / 63.8	58.7 / 57.6	-	Jun 1400	2.86

### Terminal Unit Sizing Data - Heating, Fan, Ventilation

Zone Name	Heating Coil Load (MBH)	Heating Coil Ent/Lvg DB (°F)	Htg Coil Water Flow @20.0 °F (gpm)	Fan Design Airflow (CFM)	Fan Motor (BHP)	Fan Motor (kW)	OA Vent Design Airflow (CFM)
Zone 1	1.5	69.9 / 71.8	-	716	0.000	0.000	0

### VRF Outdoor Unit Sizing Data

	Cooling [MBH]	Cooling [Tons]	Heating [MBH]
Peak Coincident Indoor Unit Loads	13.3	1.1	1.5
Estimated Piping / Line Losses	0.0	0.0	0.0
<b>Total Required ODU Capacity</b>	<b>13.3</b>	<b>1.1</b>	<b>1.5</b>

*Note: VRF piping / line losses are based on typical loss factors for this class of equipment. Actual line loss varies widely from one product to another. Therefore, when selecting equipment it is critical to consult manufacturer's guidance to utilize actual line loss data.*

### Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (MBH)	Time of Peak Sensible Cooling Load	Zone Heating Load (MBH)	Zone Floor Area (ft <sup>2</sup> )
Zone 1	13.0	Jun 1500	1.4	250.0

### Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (MBH)	Time of Peak Sensible Load	Air Flow (CFM)	Heating Load (MBH)	Floor Area (ft <sup>2</sup> )	Space CFM/ft <sup>2</sup>
<b>Zone 1</b>							
Small Data Room	1	13.0	Jun 1500	716	1.4	250.0	2.86

## Air System Design Load Summary for Ductless Split System 2

Project Name: 7724-3206 GSH-5 River Data Room  
Prepared by: MacDonald-Miller Facility Solutions

02/04/2025  
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	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jun 1400 COOLING OA DB / WB 84.3 °F / 64.8 °F			HEATING DATA AT DES HTG HEATING OA DB / WB 18.0 °F / 14.8 °F		
ZONE LOADS	Details	Sensible (BTU/hr)	Latent (BTU/hr)	Details	Sensible (BTU/hr)	Latent (BTU/hr)
Window & Skylight Solar Loads	0 ft²	0	-	0 ft²	-	-
Wall Transmission	180 ft²	360	-	180 ft²	1022	-
Roof Transmission	250 ft²	363	-	250 ft²	360	-
Window Transmission	0 ft²	0	-	0 ft²	0	-
Skylight Transmission	0 ft²	0	-	0 ft²	0	-
Door Loads	0 ft²	0	-	0 ft²	0	-
Floor Transmission	0 ft²	0	-	0 ft²	0	-
Partitions	0 ft²	0	-	0 ft²	0	-
Ceiling	0 ft²	0	-	0 ft²	0	-
Overhead Lighting	0 W	0	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	1250 W	4265	-	0	0	-
People	1	245	205	0	0	0
Infiltration	-	0	0	-	0	0
Miscellaneous	-	7740	0	-	0	0
Safety Factor	0% / 0%	0	0	0%	0	0
>> Total Zone Loads	-	12973	205	-	1383	0
Zone Conditioning	-	13112	205	-	1455	0
Plenum Wall Load	0%	0	-	0	0	-
Plenum Roof Load	0%	0	-	0	0	-
Plenum Lighting Load	0%	0	-	0	0	-
Exhaust Fan Load	0 CFM	0	-	0 CFM	0	-
Ventilation Load	0 CFM	0	0	0 CFM	0	0
Ventilation Fan Load	0 CFM	0	-	0 CFM	0	-
Space Fan Coil Fans	-	0	-	-	0	-
Duct Heat Gain / Loss	0%	0	-	0%	0	-
>> Total System Loads	-	13112	205	-	1455	0
Terminal Unit Cooling	-	13112	214	-	0	0
Terminal Unit Heating	-	0	-	-	1455	-
>> Total Conditioning	-	13112	214	-	1455	0
Key:	Positive values are clg loads Negative values are htg loads			Positive values are htg loads Negative values are clg loads		

## Zone Design Load Summary for Ductless Split System 2

Project Name: 7724-3206 GSH-5 River Data Room  
Prepared by: MacDonald-Miller Facility Solutions

02/04/2025  
01:46PM

Zone 1	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jun 1500			HEATING DATA AT DES HTG		
	COOLING OA DB / WB 85.0 °F / 65.0 °F			HEATING OA DB / WB 18.0 °F / 14.8 °F		
	OCCUPIED T-STAT 75.0 °F			OCCUPIED T-STAT 70.0 °F		
ZONE LOADS	Details	Sensible (BTU/hr)	Latent (BTU/hr)	Details	Sensible (BTU/hr)	Latent (BTU/hr)
Window & Skylight Solar Loads	0 ft²	0	-	0 ft²	-	-
Wall Transmission	180 ft²	376	-	180 ft²	1022	-
Roof Transmission	250 ft²	362	-	250 ft²	360	-
Window Transmission	0 ft²	0	-	0 ft²	0	-
Skylight Transmission	0 ft²	0	-	0 ft²	0	-
Door Loads	0 ft²	0	-	0 ft²	0	-
Floor Transmission	0 ft²	0	-	0 ft²	0	-
Partitions	0 ft²	0	-	0 ft²	0	-
Ceiling	0 ft²	0	-	0 ft²	0	-
Overhead Lighting	0 W	0	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	1250 W	4265	-	0	0	-
People	1	245	205	0	0	0
Infiltration	-	0	0	-	0	0
Miscellaneous	-	7740	0	-	0	0
Safety Factor	0% / 0%	0	0	0%	0	0
>> Total Zone Loads	-	12989	205	-	1383	0

## Space Design Load Summary for Ductless Split System 2

Project Name: 7724-3206 GSH-5 River Data Room  
Prepared by: MacDonald-Miller Facility Solutions

02/04/2025  
01:46PM

**TABLE 1.1.A. Component Loads For Space "Small Data Room" In Zone "Zone 1"**

	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jun 1500			HEATING DATA AT DES HTG		
	COOLING OA DB / WB 85.0 °F / 65.0 °F			HEATING OA DB / WB 18.0 °F / 14.8 °F		
	OCCUPIED T-STAT 75.0 °F			OCCUPIED T-STAT 70.0 °F		
SPACE LOADS	Details	Sensible (BTU/hr)	Latent (BTU/hr)	Details	Sensible (BTU/hr)	Latent (BTU/hr)
Window & Skylight Solar Loads	0 ft²	0	-	0 ft²	-	-
Wall Transmission	180 ft²	376	-	180 ft²	1022	-
Roof Transmission	250 ft²	362	-	250 ft²	360	-
Window Transmission	0 ft²	0	-	0 ft²	0	-
Skylight Transmission	0 ft²	0	-	0 ft²	0	-
Door Loads	0 ft²	0	-	0 ft²	0	-
Floor Transmission	0 ft²	0	-	0 ft²	0	-
Partitions	0 ft²	0	-	0 ft²	0	-
Ceiling	0 ft²	0	-	0 ft²	0	-
Overhead Lighting	0 W	0	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	1250 W	4265	-	0	0	-
People	1	245	205	0	0	0
Infiltration	-	0	0	-	0	0
Miscellaneous	-	7740	0	-	0	0
Safety Factor	0% / 0%	0	0	0%	0	0
>> Total Zone Loads	-	12989	205	-	1383	0

**TABLE 1.1.B. Envelope Loads For Space "Small Data Room" In Zone "Zone 1"**

	Area (ft²)	U-Value (BTU/(hr·ft²·°F))	Shade Coeff.	COOLING	COOLING	HEATING
				TRANS	SOLAR	TRANS
				(BTU/hr)	(BTU/hr)	(BTU/hr)
<b>E EXPOSURE</b>						
WALL	180	0.109	-	376	-	1022
<b>H EXPOSURE</b>						
ROOF	250	0.028	-	362	-	360



# Ductless Split System 1 Input Data

Project Name: 7724-3206 GSH-5 River Data Room  
Prepared by: MacDonald-Miller Facility Solutions

02/04/2025  
01:42PM

## 1. General Details:

Air System Name ..... Ductless Split System 1  
Equipment Type ..... Terminal Units  
Air System Type ..... Variable Refrigerant Flow (VRF)  
Number of zones ..... 1  
Ventilation ..... Direct Ventilation

## 2. Dedicated Outdoor Air System Components:

(Dedicated Outdoor Air System not used: no inputs)

## 3. Zone Components:

### Space Assignments:

Zone 1: Zone 1	
Large Data Room	x1

### Thermostats and Zone Data:

Zone	Cooling T-Stat Occ. (°F)	Cooling T-Stat Unocc. (°F)	Heating T-Stat Occ. (°F)	Heating T-Stat Unocc. (°F)	T-Stat Throttling Range (°F)
1	75.0	80.0	70.0	65.0	1.50

Thermostat Schedule ..... Fan/Thermostat Schedule  
Unoccupied Cooling is ..... Available

### Common Terminal Unit Data:

#### Cooling Coil:

Design Supply Temp. .... 58.0 °F  
Coil Bypass Factor ..... 0.100  
Cooling Source ..... Air-Cooled DX  
Schedule ..... JFMAMJJASOND

#### Heating Coil:

Design Supply Temp. .... 85.0 °F  
Heating Source ..... Air Source Heat Pump  
Schedule ..... JFMAMJJASOND

Fan Control ..... Fan On  
Ventilation Sizing Method ..... Sum of Space OA Airflows

### Terminal Units Data:

Zone	Terminal Type	Air Distribution	Air Distribution Effectiveness Specification	Air Distribution Effectiveness	Minimum Airflow	Fan Performance	Fan Efficiency	Design Supply Temp.
1	Fan coil	Ceiling supply / ceiling return	Not Used	-	0.00 CFM/person	0.00 in wg	50 %	-

## 4. Sizing Data (Computer-Generated):

### System Sizing Data:

#### Sizing Data:

Cooling Supply Temperature ..... 58.0 °F  
Heating Supply Temperature ..... 85.0 °F

#### Hydronic Sizing Specifications:

Chilled Water Delta-T ..... 10.0 °F  
Hot Water Delta-T ..... 20.0 °F

#### Safety Factors:

Cooling Sensible ..... 0 %  
Cooling Latent ..... 0 %  
Heating ..... 0 %

### Zone Sizing Data:

Zone Airflow Sizing Method ..... Sum of space airflow rates

## Ductless Split System 1 Input Data

Project Name: 7724-3206 GSH-5 River Data Room  
Prepared by: MacDonald-Miller Facility Solutions

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Space Airflow Sizing Method ..... Individual peak space loads

Zone	Supply Airflow (CFM)	Zone Htg Unit (MBH)	Reheat Coil (MBH)	Ventilation (CFM)
1	1225.0	-	-	0.0

## Ductless Split System 2 Input Data

Project Name: 7724-3206 GSH-5 River Data Room  
Prepared by: MacDonald-Miller Facility Solutions

02/04/2025  
01:43PM

### 1. General Details:

Air System Name ..... Ductless Split System 2  
Equipment Type ..... Terminal Units  
Air System Type ..... Variable Refrigerant Flow (VRF)  
Number of zones ..... 1  
Ventilation ..... Direct Ventilation

### 2. Dedicated Outdoor Air System Components:

(Dedicated Outdoor Air System not used: no inputs)

### 3. Zone Components:

#### Space Assignments:

Zone 1: Zone 1	
Small Data Room	x1

#### Thermostats and Zone Data:

Zone	Cooling T-Stat Occ. (°F)	Cooling T-Stat Unocc. (°F)	Heating T-Stat Occ. (°F)	Heating T-Stat Unocc. (°F)	T-Stat Throttling Range (°F)
1	75.0	80.0	70.0	65.0	1.50

Thermostat Schedule ..... Fan/Thermostat Schedule  
Unoccupied Cooling is ..... Available

#### Common Terminal Unit Data:

##### Cooling Coil:

Design Supply Temp. .... 58.0 °F  
Coil Bypass Factor ..... 0.100  
Cooling Source ..... Air-Cooled DX  
Schedule ..... JFMAMJJASOND

##### Heating Coil:

Design Supply Temp. .... 85.0 °F  
Heating Source ..... Air Source Heat Pump  
Schedule ..... JFMAMJJASOND

Fan Control ..... Fan On  
Ventilation Sizing Method ..... Sum of Space OA Airflows

#### Terminal Units Data:

Zone	Terminal Type	Air Distribution	Air Distribution Effectiveness Specification	Air Distribution Effectiveness	Minimum Airflow	Fan Performance	Fan Efficiency	Design Supply Temp.
1	Fan coil	Ceiling supply / ceiling return	Not Used	-	0.00 CFM/person	0.00 in wg	50 %	-

### 4. Sizing Data (Computer-Generated):

#### System Sizing Data:

##### Sizing Data:

Cooling Supply Temperature ..... 58.0 °F  
Heating Supply Temperature ..... 85.0 °F

##### Hydronic Sizing Specifications:

Chilled Water Delta-T ..... 10.0 °F  
Hot Water Delta-T ..... 20.0 °F

##### Safety Factors:

Cooling Sensible ..... 0 %  
Cooling Latent ..... 0 %  
Heating ..... 0 %

#### Zone Sizing Data:

Zone Airflow Sizing Method ..... Sum of space airflow rates

## Ductless Split System 2 Input Data

Project Name: 7724-3206 GSH-5 River Data Room  
Prepared by: MacDonald-Miller Facility Solutions

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01:43PM

Space Airflow Sizing Method ..... Individual peak space loads

Zone	Supply Airflow (CFM)	Zone Htg Unit (MBH)	Reheat Coil (MBH)	Ventilation (CFM)
1	715.7	-	-	0.0

## Space Input Data

7724-3206 GSH-5 River Data Room  
MacDonald-Miller Facility Solutions

02/04/2025  
01:45PM

### Large Data Room

#### 1. General Details:

Floor Area ..... **550.0** ft<sup>2</sup>  
Avg. Ceiling Height ..... **9.0** ft  
Building Weight ..... **70.0** lb/ft<sup>2</sup>

#### 1.1. OA Ventilation Requirements:

Space Usage ..... **User-Defined**  
OA Requirement 1 ..... **0.0** CFM/person  
OA Requirement 2 ..... **0.00** CFM/ft<sup>2</sup>  
Space Usage Defaults ..... **ASHRAE Std 62.1-2013**

#### 2. Internals:

##### 2.1. Overhead Lighting:

Fixture Type ..... **Recessed (Unvented)**  
Wattage ..... **0.00** W/ft<sup>2</sup>  
Ballast Multiplier ..... **1.00**  
Schedule ..... **24/7**

##### 2.4. People:

Occupancy ..... **0.0** Person  
Activity Level ..... **Office Work**  
Sensible ..... **245.0** BTU/hr/person  
Latent ..... **205.0** BTU/hr/person  
Schedule ..... **None**

##### 2.2. Task Lighting:

Wattage ..... **0.00** W/ft<sup>2</sup>  
Schedule ..... **None**

##### 2.5. Miscellaneous Loads:

Sensible ..... **12000** BTU/hr  
Schedule ..... **24/7**  
Latent ..... **0** BTU/hr  
Schedule ..... **None**

#### 2.3. Electrical Equipment:

Wattage ..... **2750.0** Watts  
Schedule ..... **24/7**

#### 3. Walls, Windows, Doors:

Exp.	Wall Gross Area (ft <sup>2</sup> )	Window 1 Qty.	Window 2 Qty.	Door 1 Qty.
N	180.0	0	0	0

#### 3.1. Construction Types for Exposure N

Wall Type ..... **Default Wall Assembly**

#### 4. Roofs, Skylights:

Exp.	Roof Gross Area (ft <sup>2</sup> )	Roof Slope (deg.)	Skylight Qty.
H	550.0	0	0

#### 4.1. Construction Types for Exposure H

Roof Type ..... **Default Roof Assembly**

#### 5. Infiltration:

Design Cooling ..... **0.00** CFM  
Design Heating ..... **0.00** CFM  
Energy Analysis ..... **0.00** CFM

Infiltration occurs only when the fan is off.

#### 6. Floors:

Type ..... **Floor Above Conditioned Space**  
**(No additional input required for this floor type).**

#### 7. Partitions:

**(No partition data).**

# Space Input Data

7724-3206 GSH-5 River Data Room  
MacDonald-Miller Facility Solutions

02/04/2025  
01:45PM

## Small Data Room

### 1. General Details:

Floor Area ..... **250.0** ft<sup>2</sup>  
Avg. Ceiling Height ..... **9.0** ft  
Building Weight ..... **70.0** lb/ft<sup>2</sup>

### 1.1. OA Ventilation Requirements:

Space Usage ..... **User-Defined**  
OA Requirement 1 ..... **0.0** CFM/person  
OA Requirement 2 ..... **0.00** CFM/ft<sup>2</sup>  
Space Usage Defaults ..... **ASHRAE Std 62.1-2013**

### 2. Internals:

#### 2.1. Overhead Lighting:

Fixture Type ..... **Recessed (Unvented)**  
Wattage ..... **0.00** W/ft<sup>2</sup>  
Ballast Multiplier ..... **1.00**  
Schedule ..... **24/7**

#### 2.4. People:

Occupancy ..... **1.0** Person  
Activity Level ..... **Office Work**  
Sensible ..... **245.0** BTU/hr/person  
Latent ..... **205.0** BTU/hr/person  
Schedule ..... **24/7**

#### 2.2. Task Lighting:

Wattage ..... **0.00** W/ft<sup>2</sup>  
Schedule ..... **None**

#### 2.5. Miscellaneous Loads:

Sensible ..... **7740** BTU/hr  
Schedule ..... **24/7**  
Latent ..... **0** BTU/hr  
Schedule ..... **None**

### 2.3. Electrical Equipment:

Wattage ..... **1250.0** Watts  
Schedule ..... **24/7**

### 3. Walls, Windows, Doors:

Exp.	Wall Gross Area (ft <sup>2</sup> )	Window 1 Qty.	Window 2 Qty.	Door 1 Qty.
E	180.0	0	0	0

### 3.1. Construction Types for Exposure E

Wall Type ..... **Default Wall Assembly**

### 4. Roofs, Skylights:

Exp.	Roof Gross Area (ft <sup>2</sup> )	Roof Slope (deg.)	Skylight Qty.
H	250.0	0	0

### 4.1. Construction Types for Exposure H

Roof Type ..... **Default Roof Assembly**

### 5. Infiltration:

Design Cooling ..... **0.00** CFM  
Design Heating ..... **0.00** CFM  
Energy Analysis ..... **0.00** CFM  
*Infiltration occurs only when the fan is off.*

### 6. Floors:

Type ..... **Floor Above Conditioned Space**  
**(No additional input required for this floor type).**

### 7. Partitions:

**(No partition data).**