

# Space Input Data

REFORMA E AMPLIAÇÃO - SESC - DOCA

04/09/2019  
03:43

## 1P-APRESENTAÇÃO PESSOAL

### 1. General Details:

Floor Area ..... 69,3 m<sup>2</sup>  
Avg. Ceiling Height ..... 2,7 m  
Building Weight ..... 341,8 kg/m<sup>2</sup>

#### 1.1. OA Ventilation Requirements:

Space Usage ..... User-Defined  
OA Requirement 1 ..... 0,0 L/s  
OA Requirement 2 ..... 0,00 L/(s·m<sup>2</sup>)  
Space Usage Defaults ..... ASHRAE Std 62.1-2007

### 2. Internals:

#### 2.1. Overhead Lighting:

Fixture Type ..... Recessed (Unvented)  
Wattage ..... 16,00 W/m<sup>2</sup>  
Ballast Multiplier ..... 1,00  
Schedule ..... PADRÃO HR COMERCIAL

#### 2.2. Task Lighting:

Wattage ..... 0,00 W/m<sup>2</sup>  
Schedule ..... None

#### 2.3. Electrical Equipment:

Wattage ..... 1400,0 Watts  
Schedule ..... PADRÃO HR COMERCIAL

### 3. Walls, Windows, Doors:

Exp.	Wall Gross Area (m <sup>2</sup> )	Window 1 Qty.	Window 2 Qty.	Door 1 Qty.
NW	47,8	25	0	0

#### 3.1. Construction Types for Exposure NW

Wall Type ..... PAREDE  
1st Window Type ..... VIDRO

### 4. Roofs, Skylights:

(No Roof or Skylight data).

### 5. Infiltration:

Design Cooling ..... 20,00 L/s  
Design Heating ..... 20,00 L/s  
Energy Analysis ..... 0,00 L/s  
Infiltration occurs at all hours.

### 6. Floors:

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

### 7. Partitions:

#### 7.1. 1st Partition Details:

Partition Type ..... Ceiling Partition  
Area ..... 47,8 m<sup>2</sup>  
U-Value ..... 2,480 W/(m<sup>2</sup>·K)  
Uncondit. Space Max Temp ..... 28,0 °C  
Ambient at Space Max Temp ..... 24,0 °C  
Uncondit. Space Min Temp ..... 24,0 °C  
Ambient at Space Min Temp ..... 23,0 °C

#### 7.2. 2nd Partition Details:

(No partition data).

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## 1P-DEPOSITO INFRA

### 1. General Details:

Floor Area ..... 14,4 m<sup>2</sup>  
Avg. Ceiling Height ..... 2,7 m  
Building Weight ..... 341,8 kg/m<sup>2</sup>

#### 1.1. OA Ventilation Requirements:

Space Usage ..... User-Defined  
OA Requirement 1 ..... 0,0 L/s  
OA Requirement 2 ..... 0,00 L/(s·m<sup>2</sup>)  
Space Usage Defaults ..... ASHRAE Std 62.1-2007

### 2. Internals:

#### 2.1. Overhead Lighting:

Fixture Type ..... Recessed (Unvented)  
Wattage ..... 16,00 W/m<sup>2</sup>  
Ballast Multiplier ..... 1,00  
Schedule ..... PADRÃO HR COMERCIAL

#### 2.2. Task Lighting:

Wattage ..... 0,00 W/m<sup>2</sup>  
Schedule ..... None

#### 2.3. Electrical Equipment:

Wattage ..... 200,0 Watts  
Schedule ..... PADRÃO HR COMERCIAL

### 3. Walls, Windows, Doors:

Exp.	Wall Gross Area (m <sup>2</sup> )	Window 1 Qty.	Window 2 Qty.	Door 1 Qty.
NW	9,7	6	0	0

#### 3.1. Construction Types for Exposure NW

Wall Type ..... PAREDE  
1st Window Type ..... VIDRO

### 4. Roofs, Skylights:

(No Roof or Skylight data).

### 5. Infiltration:

Design Cooling ..... 20,00 L/s  
Design Heating ..... 20,00 L/s  
Energy Analysis ..... 0,00 L/s  
Infiltration occurs at all hours.

### 6. Floors:

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

### 7. Partitions:

#### 7.1. 1st Partition Details:

Partition Type ..... Ceiling Partition  
Area ..... 9,7 m<sup>2</sup>  
U-Value ..... 2,480 W/(m<sup>2</sup>·K)  
Uncondit. Space Max Temp ..... 28,0 °C  
Ambient at Space Max Temp ..... 24,0 °C  
Uncondit. Space Min Temp ..... 24,0 °C  
Ambient at Space Min Temp ..... 23,0 °C

#### 2.4. People:

Occupancy ..... 1,0 Person  
Activity Level ..... Office Work  
Sensible ..... 71,8 W/person  
Latent ..... 60,1 W/person  
Schedule ..... PADRÃO HR COMERCIAL

#### 2.5. Miscellaneous Loads:

Sensible ..... 0 W  
Schedule ..... None  
Latent ..... 0 W  
Schedule ..... None

#### 7.2. 2nd Partition Details:

(No partition data).

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## 1P-IDIOMAS 1

### 1. General Details:

Floor Area ..... 27,9 m<sup>2</sup>  
Avg. Ceiling Height ..... 2,7 m  
Building Weight ..... 341,8 kg/m<sup>2</sup>

#### 1.1. OA Ventilation Requirements:

Space Usage ..... User-Defined  
OA Requirement 1 ..... 0,0 L/s  
OA Requirement 2 ..... 0,00 L/(s·m<sup>2</sup>)  
Space Usage Defaults ..... ASHRAE Std 62.1-2007

### 2. Internals:

#### 2.1. Overhead Lighting:

Fixture Type ..... Recessed (Unvented)  
Wattage ..... 16,00 W/m<sup>2</sup>  
Ballast Multiplier ..... 1,00  
Schedule ..... PADRÃO HR COMERCIAL

#### 2.2. Task Lighting:

Wattage ..... 0,00 W/m<sup>2</sup>  
Schedule ..... None

#### 2.3. Electrical Equipment:

Wattage ..... 600,0 Watts  
Schedule ..... PADRÃO HR COMERCIAL

### 3. Walls, Windows, Doors:

Exp.	Wall Gross Area (m <sup>2</sup> )	Window 1 Qty.	Window 2 Qty.	Door 1 Qty.
NE	13,0	5	0	0

#### 3.1. Construction Types for Exposure NE

Wall Type ..... PAREDE  
1st Window Type ..... VIDRO

### 4. Roofs, Skylights:

(No Roof or Skylight data).

### 5. Infiltration:

Design Cooling ..... 123,00 L/s  
Design Heating ..... 123,00 L/s  
Energy Analysis ..... 0,00 L/s  
Infiltration occurs at all hours.

### 6. Floors:

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

### 7. Partitions:

#### 7.1. 1st Partition Details:

Partition Type ..... Ceiling Partition  
Area ..... 13,0 m<sup>2</sup>  
U-Value ..... 2,480 W/(m<sup>2</sup>·K)  
Uncondit. Space Max Temp ..... 28,0 °C  
Ambient at Space Max Temp ..... 24,0 °C  
Uncondit. Space Min Temp ..... 24,0 °C  
Ambient at Space Min Temp ..... 23,0 °C

#### 2.4. People:

Occupancy ..... 25,0 People  
Activity Level ..... Seated at Rest  
Sensible ..... 67,4 W/person  
Latent ..... 35,2 W/person  
Schedule ..... PADRÃO HR COMERCIAL

#### 2.5. Miscellaneous Loads:

Sensible ..... 0 W  
Schedule ..... None  
Latent ..... 0 W  
Schedule ..... None

#### 7.2. 2nd Partition Details:

(No partition data).

## Space Input Data

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### 1P-IDIOMAS 2

#### 1. General Details:

Floor Area ..... 27,9 m<sup>2</sup>  
Avg. Ceiling Height ..... 2,7 m  
Building Weight ..... 341,8 kg/m<sup>2</sup>

#### 1.1. OA Ventilation Requirements:

Space Usage ..... User-Defined  
OA Requirement 1 ..... 0,0 L/s  
OA Requirement 2 ..... 0,00 L/(s·m<sup>2</sup>)  
Space Usage Defaults ..... ASHRAE Std 62.1-2007

#### 2. Internals:

##### 2.1. Overhead Lighting:

Fixture Type ..... Recessed (Unvented)  
Wattage ..... 16,00 W/m<sup>2</sup>  
Ballast Multiplier ..... 1,00  
Schedule ..... PADRÃO HR COMERCIAL

##### 2.2. Task Lighting:

Wattage ..... 0,00 W/m<sup>2</sup>  
Schedule ..... None

##### 2.3. Electrical Equipment:

Wattage ..... 600,0 Watts  
Schedule ..... PADRÃO HR COMERCIAL

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

Exp.	Wall Gross Area (m <sup>2</sup> )	Window 1 Qty.	Window 2 Qty.	Door 1 Qty.
NE	13,0	5	0	0

##### 3.1. Construction Types for Exposure NE

Wall Type ..... PAREDE  
1st Window Type ..... VIDRO

#### 4. Roofs, Skylights:

(No Roof or Skylight data).

#### 5. Infiltration:

Design Cooling ..... 123,00 L/s  
Design Heating ..... 123,00 L/s  
Energy Analysis ..... 0,00 L/s  
Infiltration occurs at all hours.

#### 6. Floors:

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

#### 7. Partitions:

##### 7.1. 1st Partition Details:

Partition Type ..... Ceiling Partition  
Area ..... 13,0 m<sup>2</sup>  
U-Value ..... 2,480 W/(m<sup>2</sup>·K)  
Uncondit. Space Max Temp ..... 28,0 °C  
Ambient at Space Max Temp ..... 24,0 °C  
Uncondit. Space Min Temp ..... 24,0 °C  
Ambient at Space Min Temp ..... 23,0 °C

##### 2.4. People:

Occupancy ..... 25,0 People  
Activity Level ..... Seated at Rest  
Sensible ..... 67,4 W/person  
Latent ..... 35,2 W/person  
Schedule ..... PADRÃO HR COMERCIAL

##### 2.5. Miscellaneous Loads:

Sensible ..... 0 W  
Schedule ..... None  
Latent ..... 0 W  
Schedule ..... None

##### 7.2. 2nd Partition Details:

(No partition data).

## Space Input Data

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### 1P-PDV INFRA

#### 1. General Details:

Floor Area ..... 9,3 m<sup>2</sup>  
Avg. Ceiling Height ..... 2,7 m  
Building Weight ..... 341,8 kg/m<sup>2</sup>

#### 1.1. OA Ventilation Requirements:

Space Usage ..... User-Defined  
OA Requirement 1 ..... 0,0 L/s  
OA Requirement 2 ..... 0,00 L/(s·m<sup>2</sup>)  
Space Usage Defaults ..... ASHRAE Std 62.1-2007

#### 2. Internals:

##### 2.1. Overhead Lighting:

Fixture Type ..... Recessed (Unvented)  
Wattage ..... 16,00 W/m<sup>2</sup>  
Ballast Multiplier ..... 1,00  
Schedule ..... PADRÃO HR COMERCIAL

##### 2.2. Task Lighting:

Wattage ..... 0,00 W/m<sup>2</sup>  
Schedule ..... None

##### 2.3. Electrical Equipment:

Wattage ..... 300,0 Watts  
Schedule ..... PADRÃO HR COMERCIAL

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

Exp.	Wall Gross Area (m <sup>2</sup> )	Window 1 Qty.	Window 2 Qty.	Door 1 Qty.
NW	8,9	5	0	0

##### 3.1. Construction Types for Exposure NW

Wall Type ..... PAREDE  
1st Window Type ..... VIDRO

#### 4. Roofs, Skylights:

(No Roof or Skylight data).

#### 5. Infiltration:

Design Cooling ..... 15,00 L/s  
Design Heating ..... 15,00 L/s  
Energy Analysis ..... 0,00 L/s  
Infiltration occurs at all hours.

#### 6. Floors:

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

#### 7. Partitions:

##### 7.1. 1st Partition Details:

Partition Type ..... Ceiling Partition  
Area ..... 8,9 m<sup>2</sup>  
U-Value ..... 2,480 W/(m<sup>2</sup>·K)  
Uncondit. Space Max Temp ..... 28,0 °C  
Ambient at Space Max Temp ..... 24,0 °C  
Uncondit. Space Min Temp ..... 24,0 °C  
Ambient at Space Min Temp ..... 23,0 °C

##### 2.4. People:

Occupancy ..... 2,0 People  
Activity Level ..... Office Work  
Sensible ..... 71,8 W/person  
Latent ..... 60,1 W/person  
Schedule ..... PADRÃO HR COMERCIAL

##### 2.5. Miscellaneous Loads:

Sensible ..... 0 W  
Schedule ..... None  
Latent ..... 0 W  
Schedule ..... None

##### 7.2. 2nd Partition Details:

(No partition data).

## Space Input Data

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### 1P-SALA 01

#### 1. General Details:

Floor Area ..... 19,1 m<sup>2</sup>  
Avg. Ceiling Height ..... 2,7 m  
Building Weight ..... 341,8 kg/m<sup>2</sup>

#### 1.1. OA Ventilation Requirements:

Space Usage ..... User-Defined  
OA Requirement 1 ..... 0,0 L/s  
OA Requirement 2 ..... 0,00 L/(s·m<sup>2</sup>)  
Space Usage Defaults ..... ASHRAE Std 62.1-2007

#### 2. Internals:

##### 2.1. Overhead Lighting:

Fixture Type ..... Recessed (Unvented)  
Wattage ..... 16,00 W/m<sup>2</sup>  
Ballast Multiplier ..... 1,00  
Schedule ..... PADRÃO HR COMERCIAL

##### 2.2. Task Lighting:

Wattage ..... 0,00 W/m<sup>2</sup>  
Schedule ..... None

##### 2.3. Electrical Equipment:

Wattage ..... 300,0 Watts  
Schedule ..... PADRÃO HR COMERCIAL

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

Exp.	Wall Gross Area (m <sup>2</sup> )	Window 1 Qty.	Window 2 Qty.	Door 1 Qty.
SE	9,1	5	0	0

##### 3.1. Construction Types for Exposure SE

Wall Type ..... PAREDE  
1st Window Type ..... VIDRO

#### 4. Roofs, Skylights:

(No Roof or Skylight data).

#### 5. Infiltration:

Design Cooling ..... 30,00 L/s  
Design Heating ..... 30,00 L/s  
Energy Analysis ..... 0,00 L/s  
Infiltration occurs at all hours.

#### 6. Floors:

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

#### 7. Partitions:

##### 7.1. 1st Partition Details:

Partition Type ..... Ceiling Partition  
Area ..... 9,1 m<sup>2</sup>  
U-Value ..... 2,480 W/(m<sup>2</sup>·K)  
Uncondit. Space Max Temp ..... 28,0 °C  
Ambient at Space Max Temp ..... 24,0 °C  
Uncondit. Space Min Temp ..... 24,0 °C  
Ambient at Space Min Temp ..... 23,0 °C

##### 2.4. People:

Occupancy ..... 4,0 People  
Activity Level ..... Office Work  
Sensible ..... 71,8 W/person  
Latent ..... 60,1 W/person  
Schedule ..... PADRÃO HR COMERCIAL

##### 2.5. Miscellaneous Loads:

Sensible ..... 0 W  
Schedule ..... None  
Latent ..... 0 W  
Schedule ..... None

##### 7.2. 2nd Partition Details:

(No partition data).

# Space Input Data

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## 1P-SALA 02

### 1. General Details:

Floor Area ..... 19,1 m<sup>2</sup>  
Avg. Ceiling Height ..... 2,7 m  
Building Weight ..... 341,8 kg/m<sup>2</sup>

#### 1.1. OA Ventilation Requirements:

Space Usage ..... User-Defined  
OA Requirement 1 ..... 0,0 L/s  
OA Requirement 2 ..... 0,00 L/(s·m<sup>2</sup>)  
Space Usage Defaults ..... ASHRAE Std 62.1-2007

### 2. Internals:

#### 2.1. Overhead Lighting:

Fixture Type ..... Recessed (Unvented)  
Wattage ..... 16,00 W/m<sup>2</sup>  
Ballast Multiplier ..... 1,00  
Schedule ..... PADRÃO HR COMERCIAL

#### 2.2. Task Lighting:

Wattage ..... 0,00 W/m<sup>2</sup>  
Schedule ..... None

#### 2.3. Electrical Equipment:

Wattage ..... 200,0 Watts  
Schedule ..... PADRÃO HR COMERCIAL

### 3. Walls, Windows, Doors:

Exp.	Wall Gross Area (m <sup>2</sup> )	Window 1 Qty.	Window 2 Qty.	Door 1 Qty.
SE	9,1	5	0	0

#### 3.1. Construction Types for Exposure SE

Wall Type ..... PAREDE  
1st Window Type ..... VIDRO

### 4. Roofs, Skylights:

(No Roof or Skylight data).

### 5. Infiltration:

Design Cooling ..... 30,00 L/s  
Design Heating ..... 30,00 L/s  
Energy Analysis ..... 0,00 L/s  
Infiltration occurs at all hours.

### 6. Floors:

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

### 7. Partitions:

#### 7.1. 1st Partition Details:

Partition Type ..... Ceiling Partition  
Area ..... 9,1 m<sup>2</sup>  
U-Value ..... 2,480 W/(m<sup>2</sup>·K)  
Uncondit. Space Max Temp ..... 28,0 °C  
Ambient at Space Max Temp ..... 24,0 °C  
Uncondit. Space Min Temp ..... 24,0 °C  
Ambient at Space Min Temp ..... 23,0 °C

#### 2.4. People:

Occupancy ..... 4,0 People  
Activity Level ..... Office Work  
Sensible ..... 71,8 W/person  
Latent ..... 60,1 W/person  
Schedule ..... PADRÃO HR COMERCIAL

#### 2.5. Miscellaneous Loads:

Sensible ..... 0 W  
Schedule ..... None  
Latent ..... 0 W  
Schedule ..... None

#### 7.2. 2nd Partition Details:

(No partition data).

**1P-SALA CABELELEIRA****1. General Details:**

Floor Area ..... **79,4** m<sup>2</sup>  
 Avg. Ceiling Height ..... **2,7** m  
 Building Weight ..... **341,8** kg/m<sup>2</sup>

**1.1. OA Ventilation Requirements:**

Space Usage ..... **User-Defined**  
 OA Requirement 1 ..... **0,0** L/s  
 OA Requirement 2 ..... **0,00** L/(s·m<sup>2</sup>)  
 Space Usage Defaults ..... **ASHRAE Std 62.1-2007**

**2. Internals:****2.1. Overhead Lighting:**

Fixture Type ..... **Recessed (Unvented)**  
 Wattage ..... **16,00** W/m<sup>2</sup>  
 Ballast Multiplier ..... **1,00**  
 Schedule ..... **PADRÃO HR COMERCIAL**

**2.2. Task Lighting:**

Wattage ..... **0,00** W/m<sup>2</sup>  
 Schedule ..... **None**

**2.3. Electrical Equipment:**

Wattage ..... **400,0** Watts  
 Schedule ..... **PADRÃO HR COMERCIAL**

**3. Walls, Windows, Doors:**

Exp.	Wall Gross Area (m <sup>2</sup> )	Window 1 Qty.	Window 2 Qty.	Door 1 Qty.
SE	38,4	22	0	0

**3.1. Construction Types for Exposure SE**

Wall Type ..... **PAREDE**  
 1st Window Type ..... **VIDRO**

**4. Roofs, Skylights:**

**(No Roof or Skylight data).**

**5. Infiltration:**

Design Cooling ..... **267,00** L/s  
 Design Heating ..... **267,00** L/s  
 Energy Analysis ..... **0,00** L/s  
 Infiltration occurs at all hours.

**6. Floors:**

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

**7. Partitions:****7.1. 1st Partition Details:**

Partition Type ..... **Ceiling Partition**  
 Area ..... **38,4** m<sup>2</sup>  
 U-Value ..... **2,480** W/(m<sup>2</sup>·K)  
 Uncondit. Space Max Temp ..... **28,0** °C  
 Ambient at Space Max Temp ..... **24,0** °C  
 Uncondit. Space Min Temp ..... **24,0** °C  
 Ambient at Space Min Temp ..... **23,0** °C

**2.4. People:**

Occupancy ..... **35,0** People  
 Activity Level ..... **Office Work**  
 Sensible ..... **71,8** W/person  
 Latent ..... **60,1** W/person  
 Schedule ..... **PADRÃO HR COMERCIAL**

**2.5. Miscellaneous Loads:**

Sensible ..... **0** W  
 Schedule ..... **None**  
 Latent ..... **0** W  
 Schedule ..... **None**

**7.2. 2nd Partition Details:**

**(No partition data).**



**1P-SALA DE CORTE E COST.****1. General Details:**

Floor Area ..... 119,1 m<sup>2</sup>  
 Avg. Ceiling Height ..... 2,7 m  
 Building Weight ..... 341,8 kg/m<sup>2</sup>

**1.1. OA Ventilation Requirements:**

Space Usage ..... User-Defined  
 OA Requirement 1 ..... 0,0 L/s  
 OA Requirement 2 ..... 0,00 L/(s·m<sup>2</sup>)  
 Space Usage Defaults ..... ASHRAE Std 62.1-2007

**2. Internals:****2.1. Overhead Lighting:**

Fixture Type ..... Recessed (Unvented)  
 Wattage ..... 16,00 W/m<sup>2</sup>  
 Ballast Multiplier ..... 1,00  
 Schedule ..... PADRÃO HR COMERCIAL

**2.2. Task Lighting:**

Wattage ..... 0,00 W/m<sup>2</sup>  
 Schedule ..... None

**2.3. Electrical Equipment:**

Wattage ..... 3600,0 Watts  
 Schedule ..... PADRÃO HR COMERCIAL

**3. Walls, Windows, Doors:**

Exp.	Wall Gross Area (m <sup>2</sup> )	Window 1 Qty.	Window 2 Qty.	Door 1 Qty.
SE	57,1	33	0	0
SW	15,2	0	0	0

**3.1. Construction Types for Exposure SE**

Wall Type ..... PAREDE  
 1st Window Type ..... VIDRO

**3.2. Construction Types for Exposure SW**

Wall Type ..... PAREDE

**4. Roofs, Skylights:**

(No Roof or Skylight data).

**5. Infiltration:**

Design Cooling ..... 270,00 L/s  
 Design Heating ..... 270,00 L/s  
 Energy Analysis ..... 0,00 L/s

Infiltration occurs at all hours.

**6. Floors:**

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

**7. Partitions:****7.1. 1st Partition Details:**

Partition Type ..... Ceiling Partition  
 Area ..... 57,1 m<sup>2</sup>  
 U-Value ..... 2,480 W/(m<sup>2</sup>·K)  
 Uncondit. Space Max Temp ..... 28,0 °C  
 Ambient at Space Max Temp ..... 24,0 °C  
 Uncondit. Space Min Temp ..... 24,0 °C  
 Ambient at Space Min Temp ..... 23,0 °C

**7.2. 2nd Partition Details:**

(No partition data).

**1P-SALA DE CULINÁRIA****1. General Details:**

Floor Area ..... **75,7** m<sup>2</sup>  
 Avg. Ceiling Height ..... **2,7** m  
 Building Weight ..... **341,8** kg/m<sup>2</sup>

**1.1. OA Ventilation Requirements:**

Space Usage ..... **User-Defined**  
 OA Requirement 1 ..... **0,0** L/s  
 OA Requirement 2 ..... **0,00** L/(s·m<sup>2</sup>)  
 Space Usage Defaults ..... **ASHRAE Std 62.1-2007**

**2. Internals:****2.1. Overhead Lighting:**

Fixture Type ..... **Recessed (Unvented)**  
 Wattage ..... **16,00** W/m<sup>2</sup>  
 Ballast Multiplier ..... **1,00**  
 Schedule ..... **PADRÃO HR COMERCIAL**

**2.2. Task Lighting:**

Wattage ..... **0,00** W/m<sup>2</sup>  
 Schedule ..... **None**

**2.3. Electrical Equipment:**

Wattage ..... **800,0** Watts  
 Schedule ..... **PADRÃO HR COMERCIAL**

**3. Walls, Windows, Doors:**

Exp.	Wall Gross Area (m <sup>2</sup> )	Window 1 Qty.	Window 2 Qty.	Door 1 Qty.
SE	40,8	22	0	0
NE	15,4	5	0	0

**3.1. Construction Types for Exposure SE**

Wall Type ..... **PAREDE**  
 1st Window Type ..... **VIDRO**

**3.2. Construction Types for Exposure NE**

Wall Type ..... **PAREDE**  
 1st Window Type ..... **VIDRO**

**4. Roofs, Skylights:**

**(No Roof or Skylight data).**

**5. Infiltration:**

Design Cooling ..... **75,00** L/s  
 Design Heating ..... **75,00** L/s  
 Energy Analysis ..... **0,00** L/s  
 Infiltration occurs at all hours.

**6. Floors:**

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

**7. Partitions:****7.1. 1st Partition Details:**

Partition Type ..... **Ceiling Partition**  
 Area ..... **22,0** m<sup>2</sup>  
 U-Value ..... **2,480** W/(m<sup>2</sup>·K)  
 Uncondit. Space Max Temp ..... **28,0** °C  
 Ambient at Space Max Temp ..... **24,0** °C  
 Uncondit. Space Min Temp ..... **24,0** °C  
 Ambient at Space Min Temp ..... **23,0** °C

**2.4. People:**

Occupancy ..... **10,0** People  
 Activity Level ..... **Office Work**  
 Sensible ..... **71,8** W/person  
 Latent ..... **60,1** W/person  
 Schedule ..... **PADRÃO HR COMERCIAL**

**2.5. Miscellaneous Loads:**

Sensible ..... **0** W  
 Schedule ..... **None**  
 Latent ..... **0** W  
 Schedule ..... **None**

**7.2. 2nd Partition Details:**

**(No partition data).**

**1P-SALA REUNIÃO****1. General Details:**

Floor Area ..... **28,6** m<sup>2</sup>  
 Avg. Ceiling Height ..... **2,7** m  
 Building Weight ..... **341,8** kg/m<sup>2</sup>

**1.1. OA Ventilation Requirements:**

Space Usage ..... **User-Defined**  
 OA Requirement 1 ..... **0,0** L/s  
 OA Requirement 2 ..... **0,00** L/(s·m<sup>2</sup>)  
 Space Usage Defaults ..... **ASHRAE Std 62.1-2007**

**2. Internals:****2.1. Overhead Lighting:**

Fixture Type ..... **Recessed (Unvented)**  
 Wattage ..... **16,00** W/m<sup>2</sup>  
 Ballast Multiplier ..... **1,00**  
 Schedule ..... **PADRÃO HR COMERCIAL**

**2.2. Task Lighting:**

Wattage ..... **0,00** W/m<sup>2</sup>  
 Schedule ..... **None**

**2.3. Electrical Equipment:**

Wattage ..... **400,0** Watts  
 Schedule ..... **PADRÃO HR COMERCIAL**

**3. Walls, Windows, Doors:**

Exp.	Wall Gross Area (m <sup>2</sup> )	Window 1 Qty.	Window 2 Qty.	Door 1 Qty.
SE	13,3	5	0	0

**3.1. Construction Types for Exposure SE**

Wall Type ..... **PAREDE**  
 1st Window Type ..... **VIDRO**

**4. Roofs, Skylights:**

**(No Roof or Skylight data).**

**5. Infiltration:**

Design Cooling ..... **76,00** L/s  
 Design Heating ..... **76,00** L/s  
 Energy Analysis ..... **0,00** L/s  
 Infiltration occurs at all hours.

**6. Floors:**

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

**7. Partitions:****7.1. 1st Partition Details:**

Partition Type ..... **Ceiling Partition**  
 Area ..... **13,3** m<sup>2</sup>  
 U-Value ..... **2,480** W/(m<sup>2</sup>·K)  
 Uncondit. Space Max Temp ..... **28,0** °C  
 Ambient at Space Max Temp ..... **24,0** °C  
 Uncondit. Space Min Temp ..... **24,0** °C  
 Ambient at Space Min Temp ..... **23,0** °C

**2.4. People:**

Occupancy ..... **16,0** People  
 Activity Level ..... **Office Work**  
 Sensible ..... **71,8** W/person  
 Latent ..... **60,1** W/person  
 Schedule ..... **PADRÃO HR COMERCIAL**

**2.5. Miscellaneous Loads:**

Sensible ..... **0** W  
 Schedule ..... **None**  
 Latent ..... **0** W  
 Schedule ..... **None**

**7.2. 2nd Partition Details:**

**(No partition data).**

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## 1P-SALA TÉCNICOS

### 1. General Details:

Floor Area ..... 28,9 m<sup>2</sup>  
Avg. Ceiling Height ..... 2,7 m  
Building Weight ..... 341,8 kg/m<sup>2</sup>

### 1.1. OA Ventilation Requirements:

Space Usage ..... User-Defined  
OA Requirement 1 ..... 0,0 L/s  
OA Requirement 2 ..... 0,00 L/(s·m<sup>2</sup>)  
Space Usage Defaults ..... ASHRAE Std 62.1-2007

### 2. Internals:

#### 2.1. Overhead Lighting:

Fixture Type ..... Recessed (Unvented)  
Wattage ..... 16,00 W/m<sup>2</sup>  
Ballast Multiplier ..... 1,00  
Schedule ..... PADRÃO HR COMERCIAL

#### 2.2. Task Lighting:

Wattage ..... 0,00 W/m<sup>2</sup>  
Schedule ..... None

#### 2.3. Electrical Equipment:

Wattage ..... 450,0 Watts  
Schedule ..... PADRÃO HR COMERCIAL

### 3. Walls, Windows, Doors:

Exp.	Wall Gross Area (m <sup>2</sup> )	Window 1 Qty.	Window 2 Qty.	Door 1 Qty.
NE	13,4	5	0	0

#### 3.1. Construction Types for Exposure NE

Wall Type ..... PAREDE  
1st Window Type ..... VIDRO

### 4. Roofs, Skylights:

(No Roof or Skylight data).

### 5. Infiltration:

Design Cooling ..... 30,00 L/s  
Design Heating ..... 30,00 L/s  
Energy Analysis ..... 0,00 L/s  
Infiltration occurs at all hours.

### 6. Floors:

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

### 7. Partitions:

#### 7.1. 1st Partition Details:

Partition Type ..... Ceiling Partition  
Area ..... 13,4 m<sup>2</sup>  
U-Value ..... 2,480 W/(m<sup>2</sup>·K)  
Uncondit. Space Max Temp ..... 28,0 °C  
Ambient at Space Max Temp ..... 24,0 °C  
Uncondit. Space Min Temp ..... 24,0 °C  
Ambient at Space Min Temp ..... 23,0 °C

#### 2.4. People:

Occupancy ..... 3,0 People  
Activity Level ..... Office Work  
Sensible ..... 71,8 W/person  
Latent ..... 60,1 W/person  
Schedule ..... PADRÃO HR COMERCIAL

#### 2.5. Miscellaneous Loads:

Sensible ..... 0 W  
Schedule ..... None  
Latent ..... 0 W  
Schedule ..... None

#### 7.2. 2nd Partition Details:

(No partition data).

**2P-ASSIST. MÉDICO****1. General Details:**

Floor Area ..... 7,1 m<sup>2</sup>  
 Avg. Ceiling Height ..... 2,7 m  
 Building Weight ..... 341,8 kg/m<sup>2</sup>

**1.1. OA Ventilation Requirements:**

Space Usage ..... User-Defined  
 OA Requirement 1 ..... 0,0 L/s  
 OA Requirement 2 ..... 0,00 L/(s·m<sup>2</sup>)  
 Space Usage Defaults ..... ASHRAE Std 62.1-2007

**2. Internals:****2.1. Overhead Lighting:**

Fixture Type ..... Recessed (Unvented)  
 Wattage ..... 16,00 W/m<sup>2</sup>  
 Ballast Multiplier ..... 1,00  
 Schedule ..... PADRÃO HR COMERCIAL

**2.2. Task Lighting:**

Wattage ..... 0,00 W/m<sup>2</sup>  
 Schedule ..... None

**2.3. Electrical Equipment:**

Wattage ..... 200,0 Watts  
 Schedule ..... PADRÃO HR COMERCIAL

**3. Walls, Windows, Doors:**

(No Wall, Window, Door data).

**4. Roofs, Skylights:**

Exp.	Roof Gross Area (m <sup>2</sup> )	Roof Slope (deg.)	Skylight Qty.
H	7,1	0	0

**4.1. Construction Types for Exposure H**

Roof Type ..... FORRO COM LAJE E TELHADO

**5. Infiltration:**

Design Cooling ..... 15,00 L/s  
 Design Heating ..... 15,00 L/s  
 Energy Analysis ..... 0,00 L/s  
 Infiltration occurs at all hours.

**6. Floors:**

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

**7. Partitions:**

(No partition data).

**2.4. People:**

Occupancy ..... 2,0 People  
 Activity Level ..... Office Work  
 Sensible ..... 71,8 W/person  
 Latent ..... 60,1 W/person  
 Schedule ..... PADRÃO HR COMERCIAL

**2.5. Miscellaneous Loads:**

Sensible ..... 0 W  
 Schedule ..... None  
 Latent ..... 0 W  
 Schedule ..... None

## 2P-AUDITÓRIO

## 1. General Details:

Floor Area ..... 56,6 m<sup>2</sup>  
 Avg. Ceiling Height ..... 2,7 m  
 Building Weight ..... 341,8 kg/m<sup>2</sup>

## 1.1. OA Ventilation Requirements:

Space Usage ..... User-Defined  
 OA Requirement 1 ..... 0,0 L/s  
 OA Requirement 2 ..... 0,00 L/(s·m<sup>2</sup>)  
 Space Usage Defaults ..... ASHRAE Std 62.1-2007

## 2. Internals:

## 2.1. Overhead Lighting:

Fixture Type ..... Recessed (Unvented)  
 Wattage ..... 16,00 W/m<sup>2</sup>  
 Ballast Multiplier ..... 1,00  
 Schedule ..... PADRÃO HR COMERCIAL

## 2.2. Task Lighting:

Wattage ..... 0,00 W/m<sup>2</sup>  
 Schedule ..... None

## 2.3. Electrical Equipment:

Wattage ..... 800,0 Watts  
 Schedule ..... PADRÃO HR COMERCIAL

## 3. Walls, Windows, Doors:

Exp.	Wall Gross Area (m <sup>2</sup> )	Window 1 Qty.	Window 2 Qty.	Door 1 Qty.
NE	26,3	16	0	0

## 3.1. Construction Types for Exposure NE

Wall Type ..... PAREDE  
 1st Window Type ..... VIDRO

## 4. Roofs, Skylights:

Exp.	Roof Gross Area (m <sup>2</sup> )	Roof Slope (deg.)	Skylight Qty.
H	56,6	0	0

## 4.1. Construction Types for Exposure H

Roof Type ..... FORRO COM LAJE E TELHADO

## 5. Infiltration:

Design Cooling ..... 179,00 L/s  
 Design Heating ..... 179,00 L/s  
 Energy Analysis ..... 0,00 L/s  
 Infiltration occurs at all hours.

## 6. Floors:

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

## 7. Partitions:

## 7.1. 1st Partition Details:

Partition Type ..... Ceiling Partition  
 Area ..... 26,3 m<sup>2</sup>  
 U-Value ..... 2,480 W/(m<sup>2</sup>·K)  
 Uncondit. Space Max Temp ..... 28,0 °C  
 Ambient at Space Max Temp ..... 24,0 °C  
 Uncondit. Space Min Temp ..... 24,0 °C  
 Ambient at Space Min Temp ..... 23,0 °C

## 7.2. 2nd Partition Details:

(No partition data).

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### 2P-BIBLIOTECA

#### 1. General Details:

Floor Area ..... 105,6 m<sup>2</sup>  
Avg. Ceiling Height ..... 2,7 m  
Building Weight ..... 341,8 kg/m<sup>2</sup>

#### 1.1. OA Ventilation Requirements:

Space Usage ..... User-Defined  
OA Requirement 1 ..... 0,0 L/s  
OA Requirement 2 ..... 0,00 L/(s·m<sup>2</sup>)  
Space Usage Defaults ..... ASHRAE Std 62.1-2007

#### 2. Internals:

##### 2.1. Overhead Lighting:

Fixture Type ..... Recessed (Unvented)  
Wattage ..... 16,00 W/m<sup>2</sup>  
Ballast Multiplier ..... 1,00  
Schedule ..... PADRÃO HR COMERCIAL

##### 2.2. Task Lighting:

Wattage ..... 0,00 W/m<sup>2</sup>  
Schedule ..... None

##### 2.3. Electrical Equipment:

Wattage ..... 900,0 Watts  
Schedule ..... PADRÃO HR COMERCIAL

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

Exp.	Wall Gross Area (m <sup>2</sup> )	Window 1 Qty.	Window 2 Qty.	Door 1 Qty.
SE	50,3	25	0	0
NE	15,6	9	0	0

#### 3.1. Construction Types for Exposure SE

Wall Type ..... PAREDE  
1st Window Type ..... VIDRO

#### 3.2. Construction Types for Exposure NE

Wall Type ..... PAREDE  
1st Window Type ..... VIDRO

#### 4. Roofs, Skylights:

Exp.	Roof Gross Area (m <sup>2</sup> )	Roof Slope (deg.)	Skylight Qty.
H	105,6	0	0

#### 4.1. Construction Types for Exposure H

Roof Type ..... FORRO COM LAJE E TELHADO

#### 5. Infiltration:

Design Cooling ..... 158,00 L/s  
Design Heating ..... 158,00 L/s  
Energy Analysis ..... 0,00 L/s  
Infiltration occurs at all hours.

#### 6. Floors:

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

#### 7. Partitions:

##### 7.1. 1st Partition Details:

Partition Type ..... Ceiling Partition  
Area ..... 35,0 m<sup>2</sup>  
U-Value ..... 2,480 W/(m<sup>2</sup>·K)  
Uncondit. Space Max Temp ..... 28,0 °C  
Ambient at Space Max Temp ..... 24,0 °C  
Uncondit. Space Min Temp ..... 24,0 °C  
Ambient at Space Min Temp ..... 23,0 °C

##### 2.4. People:

Occupancy ..... 22,0 People  
Activity Level ..... Seated at Rest  
Sensible ..... 67,4 W/person  
Latent ..... 35,2 W/person  
Schedule ..... PADRÃO HR COMERCIAL

##### 2.5. Miscellaneous Loads:

Sensible ..... 0 W  
Schedule ..... None  
Latent ..... 0 W  
Schedule ..... None

##### 7.2. 2nd Partition Details:

(No partition data).

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### 2P-CONSULTORIO 01 A 04

#### 1. General Details:

Floor Area ..... 89,3 m<sup>2</sup>  
Avg. Ceiling Height ..... 2,7 m  
Building Weight ..... 341,8 kg/m<sup>2</sup>

#### 1.1. OA Ventilation Requirements:

Space Usage ..... User-Defined  
OA Requirement 1 ..... 0,0 L/s  
OA Requirement 2 ..... 0,00 L/(s·m<sup>2</sup>)  
Space Usage Defaults ..... ASHRAE Std 62.1-2007

#### 2. Internals:

##### 2.1. Overhead Lighting:

Fixture Type ..... Recessed (Unvented)  
Wattage ..... 16,00 W/m<sup>2</sup>  
Ballast Multiplier ..... 1,00  
Schedule ..... PADRÃO HR COMERCIAL

##### 2.2. Task Lighting:

Wattage ..... 0,00 W/m<sup>2</sup>  
Schedule ..... None

##### 2.3. Electrical Equipment:

Wattage ..... 1200,0 Watts  
Schedule ..... PADRÃO HR COMERCIAL

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

(No Wall, Window, Door data).

#### 4. Roofs, Skylights:

Exp.	Roof Gross Area (m <sup>2</sup> )	Roof Slope (deg.)	Skylight Qty.
H	89,3	0	0

#### 4.1. Construction Types for Exposure H

Roof Type ..... FORRO COM LAJE E TELHADO

#### 5. Infiltration:

Design Cooling ..... 117,00 L/s  
Design Heating ..... 117,00 L/s  
Energy Analysis ..... 0,00 L/s  
Infiltration occurs at all hours.

#### 6. Floors:

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

#### 7. Partitions:

##### 7.1. 1st Partition Details:

Partition Type ..... Ceiling Partition  
Area ..... 85,1 m<sup>2</sup>  
U-Value ..... 2,480 W/(m<sup>2</sup>·K)  
Uncondit. Space Max Temp ..... 28,0 °C  
Ambient at Space Max Temp ..... 24,0 °C  
Uncondit. Space Min Temp ..... 24,0 °C  
Ambient at Space Min Temp ..... 23,0 °C

##### 7.2. 2nd Partition Details:

(No partition data).



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### 2P-COORD. BIBLIOTECA

#### 1. General Details:

Floor Area ..... 19,4 m<sup>2</sup>  
Avg. Ceiling Height ..... 2,7 m  
Building Weight ..... 341,8 kg/m<sup>2</sup>

#### 1.1. OA Ventilation Requirements:

Space Usage ..... User-Defined  
OA Requirement 1 ..... 0,0 L/s  
OA Requirement 2 ..... 0,00 L/(s·m<sup>2</sup>)  
Space Usage Defaults ..... ASHRAE Std 62.1-2007

#### 2. Internals:

##### 2.1. Overhead Lighting:

Fixture Type ..... Recessed (Unvented)  
Wattage ..... 16,00 W/m<sup>2</sup>  
Ballast Multiplier ..... 1,00  
Schedule ..... PADRÃO HR COMERCIAL

##### 2.2. Task Lighting:

Wattage ..... 0,00 W/m<sup>2</sup>  
Schedule ..... None

##### 2.3. Electrical Equipment:

Wattage ..... 600,0 Watts  
Schedule ..... PADRÃO HR COMERCIAL

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

Exp.	Wall Gross Area (m <sup>2</sup> )	Window 1 Qty.	Window 2 Qty.	Door 1 Qty.
SE	9,3	6	0	0

##### 3.1. Construction Types for Exposure SE

Wall Type ..... PAREDE  
1st Window Type ..... VIDRO

#### 4. Roofs, Skylights:

Exp.	Roof Gross Area (m <sup>2</sup> )	Roof Slope (deg.)	Skylight Qty.
H	19,4	0	0

##### 4.1. Construction Types for Exposure H

Roof Type ..... FORRO COM LAJE E TELHADO

#### 5. Infiltration:

Design Cooling ..... 30,00 L/s  
Design Heating ..... 30,00 L/s  
Energy Analysis ..... 0,00 L/s  
Infiltration occurs at all hours.

#### 6. Floors:

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

#### 7. Partitions:

##### 7.1. 1st Partition Details:

Partition Type ..... Ceiling Partition  
Area ..... 24,0 m<sup>2</sup>  
U-Value ..... 2,480 W/(m<sup>2</sup>·K)  
Uncondit. Space Max Temp ..... 28,0 °C  
Ambient at Space Max Temp ..... 24,0 °C  
Uncondit. Space Min Temp ..... 24,0 °C  
Ambient at Space Min Temp ..... 23,0 °C

##### 7.2. 2nd Partition Details:

(No partition data).

**2P-COORDENAÇÃO****1. General Details:**

Floor Area ..... **14,2** m<sup>2</sup>  
 Avg. Ceiling Height ..... **2,7** m  
 Building Weight ..... **341,8** kg/m<sup>2</sup>

**1.1. OA Ventilation Requirements:**

Space Usage ..... **User-Defined**  
 OA Requirement 1 ..... **0,0** L/s  
 OA Requirement 2 ..... **0,00** L/(s·m<sup>2</sup>)  
 Space Usage Defaults ..... **ASHRAE Std 62.1-2007**

**2. Internals:****2.1. Overhead Lighting:**

Fixture Type ..... **Recessed (Unvented)**  
 Wattage ..... **16,00** W/m<sup>2</sup>  
 Ballast Multiplier ..... **1,00**  
 Schedule ..... **PADRÃO HR COMERCIAL**

**2.2. Task Lighting:**

Wattage ..... **0,00** W/m<sup>2</sup>  
 Schedule ..... **None**

**2.3. Electrical Equipment:**

Wattage ..... **300,0** Watts  
 Schedule ..... **PADRÃO HR COMERCIAL**

**3. Walls, Windows, Doors:**

**(No Wall, Window, Door data).**

**4. Roofs, Skylights:**

Exp.	Roof Gross Area (m <sup>2</sup> )	Roof Slope (deg.)	Skylight Qty.
H	14,2	0	0

**4.1. Construction Types for Exposure H**

Roof Type ..... **FORRO COM LAJE E TELHADO**

**5. Infiltration:**

Design Cooling ..... **23,00** L/s  
 Design Heating ..... **23,00** L/s  
 Energy Analysis ..... **0,00** L/s  
 Infiltration occurs at all hours.

**6. Floors:**

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

**7. Partitions:****7.1. 1st Partition Details:**

Partition Type ..... **Ceiling Partition**  
 Area ..... **20,0** m<sup>2</sup>  
 U-Value ..... **2,480** W/(m<sup>2</sup>·K)  
 Uncondit. Space Max Temp ..... **28,0** °C  
 Ambient at Space Max Temp ..... **24,0** °C  
 Uncondit. Space Min Temp ..... **24,0** °C  
 Ambient at Space Min Temp ..... **23,0** °C

**2.4. People:**

Occupancy ..... **3,0** People  
 Activity Level ..... **Office Work**  
 Sensible ..... **71,8** W/person  
 Latent ..... **60,1** W/person  
 Schedule ..... **PADRÃO HR COMERCIAL**

**2.5. Miscellaneous Loads:**

Sensible ..... **0** W  
 Schedule ..... **None**  
 Latent ..... **0** W  
 Schedule ..... **None**

**7.2. 2nd Partition Details:**

**(No partition data).**

**2P-ENDODONTIA 5****1. General Details:**

Floor Area ..... 15,3 m<sup>2</sup>  
 Avg. Ceiling Height ..... 2,7 m  
 Building Weight ..... 341,8 kg/m<sup>2</sup>

**1.1. OA Ventilation Requirements:**

Space Usage ..... User-Defined  
 OA Requirement 1 ..... 0,0 L/s  
 OA Requirement 2 ..... 0,00 L/(s·m<sup>2</sup>)  
 Space Usage Defaults ..... ASHRAE Std 62.1-2007

**2. Internals:****2.1. Overhead Lighting:**

Fixture Type ..... Recessed (Unvented)  
 Wattage ..... 16,00 W/m<sup>2</sup>  
 Ballast Multiplier ..... 1,00  
 Schedule ..... PADRÃO HR COMERCIAL

**2.2. Task Lighting:**

Wattage ..... 0,00 W/m<sup>2</sup>  
 Schedule ..... None

**2.3. Electrical Equipment:**

Wattage ..... 300,0 Watts  
 Schedule ..... PADRÃO HR COMERCIAL

**3. Walls, Windows, Doors:**

Exp.	Wall Gross Area (m <sup>2</sup> )	Window 1 Qty.	Window 2 Qty.	Door 1 Qty.
SW	12,0	0	0	0
SE	9,1	6	0	0

**3.1. Construction Types for Exposure SW**

Wall Type ..... PAREDE

**3.2. Construction Types for Exposure SE**

Wall Type ..... PAREDE  
 1st Window Type ..... VIDRO

**4. Roofs, Skylights:**

Exp.	Roof Gross Area (m <sup>2</sup> )	Roof Slope (deg.)	Skylight Qty.
H	15,3	0	0

**4.1. Construction Types for Exposure H**

Roof Type ..... FORRO COM LAJE E TELHADO

**5. Infiltration:**

Design Cooling ..... 23,00 L/s  
 Design Heating ..... 23,00 L/s  
 Energy Analysis ..... 0,00 L/s  
 Infiltration occurs at all hours.

**6. Floors:**

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

**7. Partitions:**

(No partition data).

**2.4. People:**

Occupancy ..... 2,0 People  
 Activity Level ..... Office Work  
 Sensible ..... 71,8 W/person  
 Latent ..... 60,1 W/person  
 Schedule ..... PADRÃO HR COMERCIAL

**2.5. Miscellaneous Loads:**

Sensible ..... 0 W  
 Schedule ..... None  
 Latent ..... 0 W  
 Schedule ..... None

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## 2P-EST. LIMPO

### 1. General Details:

Floor Area ..... 6,5 m<sup>2</sup>  
Avg. Ceiling Height ..... 2,7 m  
Building Weight ..... 341,8 kg/m<sup>2</sup>

#### 1.1. OA Ventilation Requirements:

Space Usage ..... User-Defined  
OA Requirement 1 ..... 0,0 L/s  
OA Requirement 2 ..... 0,00 L/(s·m<sup>2</sup>)  
Space Usage Defaults ..... ASHRAE Std 62.1-2007

### 2. Internals:

#### 2.1. Overhead Lighting:

Fixture Type ..... Recessed (Unvented)  
Wattage ..... 16,00 W/m<sup>2</sup>  
Ballast Multiplier ..... 1,00  
Schedule ..... PADRÃO HR COMERCIAL

#### 2.2. Task Lighting:

Wattage ..... 0,00 W/m<sup>2</sup>  
Schedule ..... None

#### 2.3. Electrical Equipment:

Wattage ..... 400,0 Watts  
Schedule ..... PADRÃO HR COMERCIAL

### 3. Walls, Windows, Doors:

Exp.	Wall Gross Area (m <sup>2</sup> )	Window 1 Qty.	Window 2 Qty.	Door 1 Qty.
NW	4,5	1	0	0

#### 3.1. Construction Types for Exposure NW

Wall Type ..... PAREDE  
1st Window Type ..... VIDRO

### 4. Roofs, Skylights:

Exp.	Roof Gross Area (m <sup>2</sup> )	Roof Slope (deg.)	Skylight Qty.
H	6,5	0	0

#### 4.1. Construction Types for Exposure H

Roof Type ..... FORRO COM LAJE E TELHADO

### 5. Infiltration:

Design Cooling ..... 0,00 L/s  
Design Heating ..... 0,00 L/s  
Energy Analysis ..... 0,00 L/s  
Infiltration occurs at all hours.

### 6. Floors:

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

### 7. Partitions:

#### 7.1. 1st Partition Details:

Partition Type ..... Ceiling Partition  
Area ..... 21,6 m<sup>2</sup>  
U-Value ..... 2,480 W/(m<sup>2</sup>·K)  
Uncondit. Space Max Temp ..... 28,0 °C  
Ambient at Space Max Temp ..... 24,0 °C  
Uncondit. Space Min Temp ..... 24,0 °C  
Ambient at Space Min Temp ..... 23,0 °C

#### 7.2. 2nd Partition Details:

(No partition data).

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## 2P-EST. SUJO

### 1. General Details:

Floor Area ..... 8,7 m<sup>2</sup>  
Avg. Ceiling Height ..... 2,7 m  
Building Weight ..... 341,8 kg/m<sup>2</sup>

#### 1.1. OA Ventilation Requirements:

Space Usage ..... User-Defined  
OA Requirement 1 ..... 0,0 L/s  
OA Requirement 2 ..... 0,00 L/(s·m<sup>2</sup>)  
Space Usage Defaults ..... ASHRAE Std 62.1-2007

### 2. Internals:

#### 2.1. Overhead Lighting:

Fixture Type ..... Recessed (Unvented)  
Wattage ..... 16,00 W/m<sup>2</sup>  
Ballast Multiplier ..... 1,00  
Schedule ..... PADRÃO HR COMERCIAL

#### 2.2. Task Lighting:

Wattage ..... 0,00 W/m<sup>2</sup>  
Schedule ..... None

#### 2.3. Electrical Equipment:

Wattage ..... 400,0 Watts  
Schedule ..... PADRÃO HR COMERCIAL

### 3. Walls, Windows, Doors:

Exp.	Wall Gross Area (m <sup>2</sup> )	Window 1 Qty.	Window 2 Qty.	Door 1 Qty.
NW	5,9	1	0	0

#### 3.1. Construction Types for Exposure NW

Wall Type ..... PAREDE  
1st Window Type ..... VIDRO

### 4. Roofs, Skylights:

Exp.	Roof Gross Area (m <sup>2</sup> )	Roof Slope (deg.)	Skylight Qty.
H	8,7	0	0

#### 4.1. Construction Types for Exposure H

Roof Type ..... FORRO COM LAJE E TELHADO

### 5. Infiltration:

Design Cooling ..... 0,00 L/s  
Design Heating ..... 0,00 L/s  
Energy Analysis ..... 0,00 L/s  
Infiltration occurs at all hours.

### 6. Floors:

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

### 7. Partitions:

#### 7.1. 1st Partition Details:

Partition Type ..... Ceiling Partition  
Area ..... 21,6 m<sup>2</sup>  
U-Value ..... 2,480 W/(m<sup>2</sup>·K)  
Uncondit. Space Max Temp ..... 28,0 °C  
Ambient at Space Max Temp ..... 24,0 °C  
Uncondit. Space Min Temp ..... 24,0 °C  
Ambient at Space Min Temp ..... 23,0 °C

#### 7.2. 2nd Partition Details:

(No partition data).

**2P-HIGIENE BUCAL****1. General Details:**

Floor Area ..... **36,3** m<sup>2</sup>  
 Avg. Ceiling Height ..... **2,7** m  
 Building Weight ..... **341,8** kg/m<sup>2</sup>

**1.1. OA Ventilation Requirements:**

Space Usage ..... **User-Defined**  
 OA Requirement 1 ..... **0,0** L/s  
 OA Requirement 2 ..... **0,00** L/(s·m<sup>2</sup>)  
 Space Usage Defaults ..... **ASHRAE Std 62.1-2007**

**2. Internals:****2.1. Overhead Lighting:**

Fixture Type ..... **Recessed (Unvented)**  
 Wattage ..... **16,00** W/m<sup>2</sup>  
 Ballast Multiplier ..... **1,00**  
 Schedule ..... **PADRÃO HR COMERCIAL**

**2.2. Task Lighting:**

Wattage ..... **0,00** W/m<sup>2</sup>  
 Schedule ..... **None**

**2.3. Electrical Equipment:**

Wattage ..... **0,0** Watts  
 Schedule ..... **PADRÃO HR COMERCIAL**

**3. Walls, Windows, Doors:**

Exp.	Wall Gross Area (m <sup>2</sup> )	Window 1 Qty.	Window 2 Qty.	Door 1 Qty.
SE	47,6	14	0	0

**3.1. Construction Types for Exposure SE**

Wall Type ..... **PAREDE**  
 1st Window Type ..... **VIDRO**

**4. Roofs, Skylights:**

Exp.	Roof Gross Area (m <sup>2</sup> )	Roof Slope (deg.)	Skylight Qty.
H	36,3	0	0

**4.1. Construction Types for Exposure H**

Roof Type ..... **FORRO COM LAJE E TELHADO**

**5. Infiltration:**

Design Cooling ..... **54,00** L/s  
 Design Heating ..... **54,00** L/s  
 Energy Analysis ..... **0,00** L/s  
 Infiltration occurs at all hours.

**6. Floors:**

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

**7. Partitions:**

(No partition data).

**2.4. People:**

Occupancy ..... **2,0** People  
 Activity Level ..... **Office Work**  
 Sensible ..... **71,8** W/person  
 Latent ..... **60,1** W/person  
 Schedule ..... **PADRÃO HR COMERCIAL**

**2.5. Miscellaneous Loads:**

Sensible ..... **0** W  
 Schedule ..... **None**  
 Latent ..... **0** W  
 Schedule ..... **None**

## Space Input Data

REFORMA E AMPLIAÇÃO - SESC - DOCA

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03:43

### 2P-MASSOTERAPIA

#### 1. General Details:

Floor Area ..... 27,5 m<sup>2</sup>  
Avg. Ceiling Height ..... 2,7 m  
Building Weight ..... 341,8 kg/m<sup>2</sup>

#### 1.1. OA Ventilation Requirements:

Space Usage ..... User-Defined  
OA Requirement 1 ..... 0,0 L/s  
OA Requirement 2 ..... 0,00 L/(s·m<sup>2</sup>)  
Space Usage Defaults ..... ASHRAE Std 62.1-2007

#### 2. Internals:

##### 2.1. Overhead Lighting:

Fixture Type ..... Recessed (Unvented)  
Wattage ..... 16,00 W/m<sup>2</sup>  
Ballast Multiplier ..... 1,00  
Schedule ..... PADRÃO HR COMERCIAL

##### 2.2. Task Lighting:

Wattage ..... 0,00 W/m<sup>2</sup>  
Schedule ..... None

##### 2.3. Electrical Equipment:

Wattage ..... 600,0 Watts  
Schedule ..... PADRÃO HR COMERCIAL

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

Exp.	Wall Gross Area (m <sup>2</sup> )	Window 1 Qty.	Window 2 Qty.	Door 1 Qty.
NW	18,8	12	0	0

##### 3.1. Construction Types for Exposure NW

Wall Type ..... PAREDE  
1st Window Type ..... VIDRO

#### 4. Roofs, Skylights:

Exp.	Roof Gross Area (m <sup>2</sup> )	Roof Slope (deg.)	Skylight Qty.
H	27,5	0	0

##### 4.1. Construction Types for Exposure H

Roof Type ..... FORRO COM LAJE E TELHADO

#### 5. Infiltration:

Design Cooling ..... 47,00 L/s  
Design Heating ..... 47,00 L/s  
Energy Analysis ..... 0,00 L/s  
Infiltration occurs at all hours.

#### 6. Floors:

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

#### 7. Partitions:

##### 7.1. 1st Partition Details:

Partition Type ..... Ceiling Partition  
Area ..... 28,0 m<sup>2</sup>  
U-Value ..... 2,480 W/(m<sup>2</sup>·K)  
Uncondit. Space Max Temp ..... 28,0 °C  
Ambient at Space Max Temp ..... 24,0 °C  
Uncondit. Space Min Temp ..... 24,0 °C  
Ambient at Space Min Temp ..... 23,0 °C

##### 7.2. 2nd Partition Details:

(No partition data).

**2P-MÉDICO DO TRABALHO****1. General Details:**

Floor Area ..... 11,4 m<sup>2</sup>  
 Avg. Ceiling Height ..... 2,7 m  
 Building Weight ..... 341,8 kg/m<sup>2</sup>

**1.1. OA Ventilation Requirements:**

Space Usage ..... User-Defined  
 OA Requirement 1 ..... 0,0 L/s  
 OA Requirement 2 ..... 0,00 L/(s·m<sup>2</sup>)  
 Space Usage Defaults ..... ASHRAE Std 62.1-2007

**2. Internals:****2.1. Overhead Lighting:**

Fixture Type ..... Recessed (Unvented)  
 Wattage ..... 16,00 W/m<sup>2</sup>  
 Ballast Multiplier ..... 1,00  
 Schedule ..... PADRÃO HR COMERCIAL

**2.2. Task Lighting:**

Wattage ..... 0,00 W/m<sup>2</sup>  
 Schedule ..... None

**2.3. Electrical Equipment:**

Wattage ..... 200,0 Watts  
 Schedule ..... PADRÃO HR COMERCIAL

**3. Walls, Windows, Doors:**

Exp.	Wall Gross Area (m <sup>2</sup> )	Window 1 Qty.	Window 2 Qty.	Door 1 Qty.
SE	9,1	6	0	0

**3.1. Construction Types for Exposure SE**

Wall Type ..... PAREDE  
 1st Window Type ..... VIDRO

**4. Roofs, Skylights:**

Exp.	Roof Gross Area (m <sup>2</sup> )	Roof Slope (deg.)	Skylight Qty.
H	11,4	0	0

**4.1. Construction Types for Exposure H**

Roof Type ..... FORRO COM LAJE E TELHADO

**5. Infiltration:**

Design Cooling ..... 17,00 L/s  
 Design Heating ..... 17,00 L/s  
 Energy Analysis ..... 0,00 L/s  
 Infiltration occurs at all hours.

**6. Floors:**

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

**7. Partitions:****7.1. 1st Partition Details:**

Partition Type ..... Ceiling Partition  
 Area ..... 9,1 m<sup>2</sup>  
 U-Value ..... 2,480 W/(m<sup>2</sup>·K)  
 Uncondit. Space Max Temp ..... 28,0 °C  
 Ambient at Space Max Temp ..... 24,0 °C  
 Uncondit. Space Min Temp ..... 24,0 °C  
 Ambient at Space Min Temp ..... 23,0 °C

**7.2. 2nd Partition Details:**

(No partition data).



**2P-PRÓTESE****1. General Details:**

Floor Area ..... 7,5 m<sup>2</sup>  
 Avg. Ceiling Height ..... 2,7 m  
 Building Weight ..... 341,8 kg/m<sup>2</sup>

**1.1. OA Ventilation Requirements:**

Space Usage ..... User-Defined  
 OA Requirement 1 ..... 0,0 L/s  
 OA Requirement 2 ..... 0,00 L/(s·m<sup>2</sup>)  
 Space Usage Defaults ..... ASHRAE Std 62.1-2007

**2. Internals:****2.1. Overhead Lighting:**

Fixture Type ..... Recessed (Unvented)  
 Wattage ..... 16,00 W/m<sup>2</sup>  
 Ballast Multiplier ..... 1,00  
 Schedule ..... PADRÃO HR COMERCIAL

**2.2. Task Lighting:**

Wattage ..... 0,00 W/m<sup>2</sup>  
 Schedule ..... None

**2.3. Electrical Equipment:**

Wattage ..... 200,0 Watts  
 Schedule ..... PADRÃO HR COMERCIAL

**3. Walls, Windows, Doors:**

Exp.	Wall Gross Area (m <sup>2</sup> )	Window 1 Qty.	Window 2 Qty.	Door 1 Qty.
NW	9,2	1	0	0

**3.1. Construction Types for Exposure NW**

Wall Type ..... PAREDE  
 1st Window Type ..... VIDRO

**4. Roofs, Skylights:**

Exp.	Roof Gross Area (m <sup>2</sup> )	Roof Slope (deg.)	Skylight Qty.
H	7,5	0	0

**4.1. Construction Types for Exposure H**

Roof Type ..... FORRO COM LAJE E TELHADO

**5. Infiltration:**

Design Cooling ..... 15,00 L/s  
 Design Heating ..... 15,00 L/s  
 Energy Analysis ..... 0,00 L/s  
 Infiltration occurs at all hours.

**6. Floors:**

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

**7. Partitions:****7.1. 1st Partition Details:**

Partition Type ..... Ceiling Partition  
 Area ..... 9,0 m<sup>2</sup>  
 U-Value ..... 2,480 W/(m<sup>2</sup>·K)  
 Uncondit. Space Max Temp ..... 28,0 °C  
 Ambient at Space Max Temp ..... 24,0 °C  
 Uncondit. Space Min Temp ..... 24,0 °C  
 Ambient at Space Min Temp ..... 23,0 °C

**7.2. 2nd Partition Details:**

(No partition data).

## 2P-RAIO X

## 1. General Details:

Floor Area ..... 7,2 m<sup>2</sup>  
 Avg. Ceiling Height ..... 2,7 m  
 Building Weight ..... 341,8 kg/m<sup>2</sup>

## 1.1. OA Ventilation Requirements:

Space Usage ..... User-Defined  
 OA Requirement 1 ..... 0,0 L/s  
 OA Requirement 2 ..... 0,00 L/(s·m<sup>2</sup>)  
 Space Usage Defaults ..... ASHRAE Std 62.1-2007

## 2. Internals:

## 2.1. Overhead Lighting:

Fixture Type ..... Recessed (Unvented)  
 Wattage ..... 16,00 W/m<sup>2</sup>  
 Ballast Multiplier ..... 1,00  
 Schedule ..... PADRÃO HR COMERCIAL

## 2.2. Task Lighting:

Wattage ..... 0,00 W/m<sup>2</sup>  
 Schedule ..... None

## 2.3. Electrical Equipment:

Wattage ..... 200,0 Watts  
 Schedule ..... PADRÃO HR COMERCIAL

## 3. Walls, Windows, Doors:

Exp.	Wall Gross Area (m <sup>2</sup> )	Window 1 Qty.	Window 2 Qty.	Door 1 Qty.
NW	9,2	1	0	0

## 3.1. Construction Types for Exposure NW

Wall Type ..... PAREDE  
 1st Window Type ..... VIDRO

## 4. Roofs, Skylights:

Exp.	Roof Gross Area (m <sup>2</sup> )	Roof Slope (deg.)	Skylight Qty.
H	7,2	0	0

## 4.1. Construction Types for Exposure H

Roof Type ..... FORRO COM LAJE E TELHADO

## 5. Infiltration:

Design Cooling ..... 15,00 L/s  
 Design Heating ..... 15,00 L/s  
 Energy Analysis ..... 0,00 L/s  
 Infiltration occurs at all hours.

## 6. Floors:

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

## 7. Partitions:

## 7.1. 1st Partition Details:

Partition Type ..... Ceiling Partition  
 Area ..... 9,0 m<sup>2</sup>  
 U-Value ..... 2,480 W/(m<sup>2</sup>·K)  
 Uncondit. Space Max Temp ..... 28,0 °C  
 Ambient at Space Max Temp ..... 24,0 °C  
 Uncondit. Space Min Temp ..... 24,0 °C  
 Ambient at Space Min Temp ..... 23,0 °C

## 7.2. 2nd Partition Details:

(No partition data).

## Space Input Data

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### 2P-SALA ESPERA

#### 1. General Details:

Floor Area ..... 59,2 m<sup>2</sup>  
Avg. Ceiling Height ..... 2,7 m  
Building Weight ..... 341,8 kg/m<sup>2</sup>

#### 1.1. OA Ventilation Requirements:

Space Usage ..... User-Defined  
OA Requirement 1 ..... 0,0 L/s  
OA Requirement 2 ..... 0,00 L/(s·m<sup>2</sup>)  
Space Usage Defaults ..... ASHRAE Std 62.1-2007

#### 2. Internals:

##### 2.1. Overhead Lighting:

Fixture Type ..... Recessed (Unvented)  
Wattage ..... 16,00 W/m<sup>2</sup>  
Ballast Multiplier ..... 1,00  
Schedule ..... PADRÃO HR COMERCIAL

##### 2.2. Task Lighting:

Wattage ..... 0,00 W/m<sup>2</sup>  
Schedule ..... None

##### 2.3. Electrical Equipment:

Wattage ..... 300,0 Watts  
Schedule ..... PADRÃO HR COMERCIAL

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

Exp.	Wall Gross Area (m <sup>2</sup> )	Window 1 Qty.	Window 2 Qty.	Door 1 Qty.
NW	18,8	12	0	0
SE	9,0	6	0	0

##### 3.1. Construction Types for Exposure NW

Wall Type ..... PAREDE  
1st Window Type ..... VIDRO

##### 3.2. Construction Types for Exposure SE

Wall Type ..... PAREDE  
1st Window Type ..... VIDRO

#### 4. Roofs, Skylights:

Exp.	Roof Gross Area (m <sup>2</sup> )	Roof Slope (deg.)	Skylight Qty.
H	59,2	0	0

##### 4.1. Construction Types for Exposure H

Roof Type ..... FORRO COM LAJE E TELHADO

#### 5. Infiltration:

Design Cooling ..... 89,00 L/s  
Design Heating ..... 89,00 L/s  
Energy Analysis ..... 0,00 L/s  
Infiltration occurs at all hours.

#### 6. Floors:

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

#### 7. Partitions:

##### 7.1. 1st Partition Details:

Partition Type ..... Ceiling Partition  
Area ..... 20,0 m<sup>2</sup>  
U-Value ..... 2,480 W/(m<sup>2</sup>·K)  
Uncondit. Space Max Temp ..... 28,0 °C  
Ambient at Space Max Temp ..... 24,0 °C  
Uncondit. Space Min Temp ..... 24,0 °C  
Ambient at Space Min Temp ..... 23,0 °C

##### 2.4. People:

Occupancy ..... 10,0 People  
Activity Level ..... Office Work  
Sensible ..... 71,8 W/person  
Latent ..... 60,1 W/person  
Schedule ..... PADRÃO HR COMERCIAL

##### 2.5. Miscellaneous Loads:

Sensible ..... 0 W  
Schedule ..... None  
Latent ..... 0 W  
Schedule ..... None

##### 7.2. 2nd Partition Details:

(No partition data).

## Space Input Data

REFORMA E AMPLIAÇÃO - SESC - DOCA

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### 2P-SALA LIVRE

#### 1. General Details:

Floor Area ..... 28,9 m<sup>2</sup>  
Avg. Ceiling Height ..... 2,7 m  
Building Weight ..... 341,8 kg/m<sup>2</sup>

#### 1.1. OA Ventilation Requirements:

Space Usage ..... User-Defined  
OA Requirement 1 ..... 0,0 L/s  
OA Requirement 2 ..... 0,00 L/(s·m<sup>2</sup>)  
Space Usage Defaults ..... ASHRAE Std 62.1-2007

#### 2. Internals:

##### 2.1. Overhead Lighting:

Fixture Type ..... Recessed (Unvented)  
Wattage ..... 16,00 W/m<sup>2</sup>  
Ballast Multiplier ..... 1,00  
Schedule ..... PADRÃO HR COMERCIAL

##### 2.2. Task Lighting:

Wattage ..... 0,00 W/m<sup>2</sup>  
Schedule ..... None

##### 2.3. Electrical Equipment:

Wattage ..... 600,0 Watts  
Schedule ..... PADRÃO HR COMERCIAL

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

Exp.	Wall Gross Area (m <sup>2</sup> )	Window 1 Qty.	Window 2 Qty.	Door 1 Qty.
NE	13,0	8	0	0

##### 3.1. Construction Types for Exposure NE

Wall Type ..... PAREDE  
1st Window Type ..... VIDRO

#### 4. Roofs, Skylights:

Exp.	Roof Gross Area (m <sup>2</sup> )	Roof Slope (deg.)	Skylight Qty.
H	28,9	0	0

##### 4.1. Construction Types for Exposure H

Roof Type ..... FORRO COM LAJE E TELHADO

#### 5. Infiltration:

Design Cooling ..... 42,00 L/s  
Design Heating ..... 42,00 L/s  
Energy Analysis ..... 0,00 L/s  
Infiltration occurs at all hours.

#### 6. Floors:

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

#### 7. Partitions:

##### 7.1. 1st Partition Details:

Partition Type ..... Ceiling Partition  
Area ..... 13,0 m<sup>2</sup>  
U-Value ..... 2,480 W/(m<sup>2</sup>·K)  
Uncondit. Space Max Temp ..... 28,0 °C  
Ambient at Space Max Temp ..... 24,0 °C  
Uncondit. Space Min Temp ..... 24,0 °C  
Ambient at Space Min Temp ..... 23,0 °C

##### 7.2. 2nd Partition Details:

(No partition data).

## Space Input Data

REFORMA E AMPLIAÇÃO - SESC - DOCA

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03:43

### 2P-TÉCNICOS DE PROM. E S

#### 1. General Details:

Floor Area ..... 28,3 m<sup>2</sup>  
Avg. Ceiling Height ..... 2,7 m  
Building Weight ..... 341,8 kg/m<sup>2</sup>

#### 1.1. OA Ventilation Requirements:

Space Usage ..... User-Defined  
OA Requirement 1 ..... 0,0 L/s  
OA Requirement 2 ..... 0,00 L/(s·m<sup>2</sup>)  
Space Usage Defaults ..... ASHRAE Std 62.1-2007

#### 2. Internals:

##### 2.1. Overhead Lighting:

Fixture Type ..... Recessed (Unvented)  
Wattage ..... 16,00 W/m<sup>2</sup>  
Ballast Multiplier ..... 1,00  
Schedule ..... PADRÃO HR COMERCIAL

##### 2.4. People:

Occupancy ..... 4,0 People  
Activity Level ..... Office Work  
Sensible ..... 71,8 W/person  
Latent ..... 60,1 W/person  
Schedule ..... PADRÃO HR COMERCIAL

##### 2.2. Task Lighting:

Wattage ..... 0,00 W/m<sup>2</sup>  
Schedule ..... None

##### 2.5. Miscellaneous Loads:

Sensible ..... 0 W  
Schedule ..... None  
Latent ..... 0 W  
Schedule ..... None

##### 2.3. Electrical Equipment:

Wattage ..... 600,0 Watts  
Schedule ..... PADRÃO HR COMERCIAL

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

Exp.	Wall Gross Area (m <sup>2</sup> )	Window 1 Qty.	Window 2 Qty.	Door 1 Qty.
NE	13,0	8	0	0

##### 3.1. Construction Types for Exposure NE

Wall Type ..... PAREDE  
1st Window Type ..... VIDRO

#### 4. Roofs, Skylights:

Exp.	Roof Gross Area (m <sup>2</sup> )	Roof Slope (deg.)	Skylight Qty.
H	28,3	0	0

##### 4.1. Construction Types for Exposure H

Roof Type ..... FORRO COM LAJE E TELHADO

#### 5. Infiltration:

Design Cooling ..... 42,00 L/s  
Design Heating ..... 42,00 L/s  
Energy Analysis ..... 0,00 L/s  
Infiltration occurs at all hours.

#### 6. Floors:

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

#### 7. Partitions:

##### 7.1. 1st Partition Details:

Partition Type ..... Ceiling Partition  
Area ..... 13,0 m<sup>2</sup>  
U-Value ..... 2,480 W/(m<sup>2</sup>·K)  
Uncondit. Space Max Temp ..... 28,0 °C  
Ambient at Space Max Temp ..... 24,0 °C  
Uncondit. Space Min Temp ..... 24,0 °C  
Ambient at Space Min Temp ..... 23,0 °C

##### 7.2. 2nd Partition Details:

(No partition data).

**3P-ÁREA COBERTA****1. General Details:**

Floor Area ..... **39,4** m<sup>2</sup>  
 Avg. Ceiling Height ..... **2,7** m  
 Building Weight ..... **341,8** kg/m<sup>2</sup>

**1.1. OA Ventilation Requirements:**

Space Usage ..... **User-Defined**  
 OA Requirement 1 ..... **0,0** L/s  
 OA Requirement 2 ..... **0,00** L/(s·m<sup>2</sup>)  
 Space Usage Defaults ..... **ASHRAE Std 62.1-2007**

**2. Internals:****2.1. Overhead Lighting:**

Fixture Type ..... **Recessed (Unvented)**  
 Wattage ..... **16,00** W/m<sup>2</sup>  
 Ballast Multiplier ..... **1,00**  
 Schedule ..... **PADRÃO HR COMERCIAL**

**2.2. Task Lighting:**

Wattage ..... **0,00** W/m<sup>2</sup>  
 Schedule ..... **None**

**2.3. Electrical Equipment:**

Wattage ..... **300,0** Watts  
 Schedule ..... **PADRÃO HR COMERCIAL**

**3. Walls, Windows, Doors:**

Exp.	Wall Gross Area (m <sup>2</sup> )	Window 1 Qty.	Window 2 Qty.	Door 1 Qty.
NE	13,5	5	0	0
SW	13,5	5	0	0
SE	20,8	15	0	0

**3.1. Construction Types for Exposure NE**

Wall Type ..... **PAREDE**  
 1st Window Type ..... **VIDRO**

**3.2. Construction Types for Exposure SW**

Wall Type ..... **PAREDE**  
 1st Window Type ..... **VIDRO**

**3.3. Construction Types for Exposure SE**

Wall Type ..... **PAREDE**  
 1st Window Type ..... **VIDRO**

**4. Roofs, Skylights:**

Exp.	Roof Gross Area (m <sup>2</sup> )	Roof Slope (deg.)	Skylight Qty.
H	39,4	0	0

**4.1. Construction Types for Exposure H**

Roof Type ..... **FORRO COM LAJE E TELHADO**

**5. Infiltration:**

Design Cooling ..... **0,00** L/s  
 Design Heating ..... **0,00** L/s  
 Energy Analysis ..... **0,00** L/s  
 Infiltration occurs at all hours.

**6. Floors:**

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

**7. Partitions:**

(No partition data).

**2.4. People:**

Occupancy ..... **20,0** People  
 Activity Level ..... **Office Work**  
 Sensible ..... **71,8** W/person  
 Latent ..... **60,1** W/person  
 Schedule ..... **PADRÃO HR COMERCIAL**

**2.5. Miscellaneous Loads:**

Sensible ..... **0** W  
 Schedule ..... **None**  
 Latent ..... **0** W  
 Schedule ..... **None**

## Space Input Data

REFORMA E AMPLIAÇÃO - SESC - DOCA

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03:43

### TE-BRINQUEDOTECA

#### 1. General Details:

Floor Area ..... 104,0 m<sup>2</sup>  
Avg. Ceiling Height ..... 2,6 m  
Building Weight ..... 341,8 kg/m<sup>2</sup>

#### 1.1. OA Ventilation Requirements:

Space Usage ..... User-Defined  
OA Requirement 1 ..... 0,0 L/s  
OA Requirement 2 ..... 0,00 L/(s·m<sup>2</sup>)  
Space Usage Defaults ..... ASHRAE Std 62.1-2007

#### 2. Internals:

##### 2.1. Overhead Lighting:

Fixture Type ..... Recessed (Unvented)  
Wattage ..... 16,00 W/m<sup>2</sup>  
Ballast Multiplier ..... 1,00  
Schedule ..... PADRÃO HR COMERCIAL

##### 2.2. Task Lighting:

Wattage ..... 0,00 W/m<sup>2</sup>  
Schedule ..... None

##### 2.3. Electrical Equipment:

Wattage ..... 600,0 Watts  
Schedule ..... PADRÃO HR COMERCIAL

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

Exp.	Wall Gross Area (m <sup>2</sup> )	Window 1 Qty.	Window 2 Qty.	Door 1 Qty.
SE	42,7	20	0	0
NE	21,9	10	0	0

##### 3.1. Construction Types for Exposure SE

Wall Type ..... PAREDE  
1st Window Type ..... VIDRO

##### 3.2. Construction Types for Exposure NE

Wall Type ..... PAREDE  
1st Window Type ..... VIDRO

#### 4. Roofs, Skylights:

Exp.	Roof Gross Area (m <sup>2</sup> )	Roof Slope (deg.)	Skylight Qty.
H	104,0	0	0

##### 4.1. Construction Types for Exposure H

Roof Type ..... FORRO COM LAJE E TELHADO

#### 5. Infiltration:

Design Cooling ..... 146,00 L/s  
Design Heating ..... 146,00 L/s  
Energy Analysis ..... 0,00 L/s  
Infiltration occurs at all hours.

#### 6. Floors:

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

#### 7. Partitions:

##### 7.1. 1st Partition Details:

Partition Type ..... Ceiling Partition  
Area ..... 21,9 m<sup>2</sup>  
U-Value ..... 2,480 W/(m<sup>2</sup>·K)  
Uncondit. Space Max Temp ..... 28,0 °C  
Ambient at Space Max Temp ..... 24,0 °C  
Uncondit. Space Min Temp ..... 24,0 °C  
Ambient at Space Min Temp ..... 23,0 °C

##### 2.4. People:

Occupancy ..... 20,0 People  
Activity Level ..... Office Work  
Sensible ..... 71,8 W/person  
Latent ..... 60,1 W/person  
Schedule ..... PADRÃO HR COMERCIAL

##### 2.5. Miscellaneous Loads:

Sensible ..... 0 W  
Schedule ..... None  
Latent ..... 0 W  
Schedule ..... None

##### 7.2. 2nd Partition Details:

(No partition data).

## TE-CAIXA

## 1. General Details:

Floor Area ..... 11,0 m<sup>2</sup>  
 Avg. Ceiling Height ..... 3,0 m  
 Building Weight ..... 341,8 kg/m<sup>2</sup>

## 1.1. OA Ventilation Requirements:

Space Usage ..... User-Defined  
 OA Requirement 1 ..... 0,0 L/s  
 OA Requirement 2 ..... 0,00 L/(s·m<sup>2</sup>)  
 Space Usage Defaults ..... ASHRAE Std 62.1-2007

## 2. Internals:

## 2.1. Overhead Lighting:

Fixture Type ..... Recessed (Unvented)  
 Wattage ..... 16,00 W/m<sup>2</sup>  
 Ballast Multiplier ..... 1,00  
 Schedule ..... PADRÃO HR COMERCIAL

## 2.2. Task Lighting:

Wattage ..... 0,00 W/m<sup>2</sup>  
 Schedule ..... None

## 2.3. Electrical Equipment:

Wattage ..... 600,0 Watts  
 Schedule ..... PADRÃO HR COMERCIAL

## 3. Walls, Windows, Doors:

Exp.	Wall Gross Area (m <sup>2</sup> )	Window 1 Qty.	Window 2 Qty.	Door 1 Qty.
NW	10,4	3	0	0

## 3.1. Construction Types for Exposure NW

Wall Type ..... PAREDE  
 1st Window Type ..... VIDRO

## 4. Roofs, Skylights:

(No Roof or Skylight data).

## 5. Infiltration:

Design Cooling ..... 22,00 L/s  
 Design Heating ..... 22,00 L/s  
 Energy Analysis ..... 0,00 L/s  
 Infiltration occurs at all hours.

## 6. Floors:

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

## 7. Partitions:

## 7.1. 1st Partition Details:

Partition Type ..... Ceiling Partition  
 Area ..... 9,5 m<sup>2</sup>  
 U-Value ..... 2,480 W/(m<sup>2</sup>·K)  
 Uncondit. Space Max Temp ..... 28,0 °C  
 Ambient at Space Max Temp ..... 24,0 °C  
 Uncondit. Space Min Temp ..... 24,0 °C  
 Ambient at Space Min Temp ..... 23,0 °C

## 2.4. People:

Occupancy ..... 3,0 People  
 Activity Level ..... Office Work  
 Sensible ..... 71,8 W/person  
 Latent ..... 60,1 W/person  
 Schedule ..... PADRÃO HR COMERCIAL

## 2.5. Miscellaneous Loads:

Sensible ..... 0 W  
 Schedule ..... None  
 Latent ..... 0 W  
 Schedule ..... None

## 7.2. 2nd Partition Details:

(No partition data).



## Space Input Data

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04/09/2019  
03:43

### TE-CENTRAL DE ATEND.

#### 1. General Details:

Floor Area ..... 69,9 m<sup>2</sup>  
Avg. Ceiling Height ..... 3,0 m  
Building Weight ..... 341,8 kg/m<sup>2</sup>

#### 1.1. OA Ventilation Requirements:

Space Usage ..... User-Defined  
OA Requirement 1 ..... 0,0 L/s  
OA Requirement 2 ..... 0,00 L/(s·m<sup>2</sup>)  
Space Usage Defaults ..... ASHRAE Std 62.1-2007

#### 2. Internals:

##### 2.1. Overhead Lighting:

Fixture Type ..... Recessed (Unvented)  
Wattage ..... 16,00 W/m<sup>2</sup>  
Ballast Multiplier ..... 1,00  
Schedule ..... PADRÃO HR COMERCIAL

##### 2.2. Task Lighting:

Wattage ..... 0,00 W/m<sup>2</sup>  
Schedule ..... None

##### 2.3. Electrical Equipment:

Wattage ..... 1050,0 Watts  
Schedule ..... PADRÃO HR COMERCIAL

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

Exp.	Wall Gross Area (m <sup>2</sup> )	Window 1 Qty.	Window 2 Qty.	Door 1 Qty.
SE	37,8	27	0	0

#### 3.1. Construction Types for Exposure SE

Wall Type ..... PAREDE  
1st Window Type ..... VIDRO

#### 4. Roofs, Skylights:

(No Roof or Skylight data).

#### 5. Infiltration:

Design Cooling ..... 175,00 L/s  
Design Heating ..... 175,00 L/s  
Energy Analysis ..... 0,00 L/s  
Infiltration occurs at all hours.

#### 6. Floors:

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

#### 7. Partitions:

##### 7.1. 1st Partition Details:

Partition Type ..... Ceiling Partition  
Area ..... 20,0 m<sup>2</sup>  
U-Value ..... 2,480 W/(m<sup>2</sup>·K)  
Uncondit. Space Max Temp ..... 28,0 °C  
Ambient at Space Max Temp ..... 24,0 °C  
Uncondit. Space Min Temp ..... 24,0 °C  
Ambient at Space Min Temp ..... 23,0 °C

##### 2.4. People:

Occupancy ..... 37,0 People  
Activity Level ..... Office Work  
Sensible ..... 71,8 W/person  
Latent ..... 60,1 W/person  
Schedule ..... PADRÃO HR COMERCIAL

##### 2.5. Miscellaneous Loads:

Sensible ..... 0 W  
Schedule ..... None  
Latent ..... 0 W  
Schedule ..... None

##### 7.2. 2nd Partition Details:

(No partition data).

## TE-ESPAÇO IDOSO

## 1. General Details:

Floor Area ..... 105,7 m<sup>2</sup>  
 Avg. Ceiling Height ..... 3,0 m  
 Building Weight ..... 341,8 kg/m<sup>2</sup>

## 1.1. OA Ventilation Requirements:

Space Usage ..... User-Defined  
 OA Requirement 1 ..... 0,0 L/s  
 OA Requirement 2 ..... 0,00 L/(s·m<sup>2</sup>)  
 Space Usage Defaults ..... ASHRAE Std 62.1-2007

## 2. Internals:

## 2.1. Overhead Lighting:

Fixture Type ..... Recessed (Unvented)  
 Wattage ..... 16,00 W/m<sup>2</sup>  
 Ballast Multiplier ..... 1,00  
 Schedule ..... PADRÃO HR COMERCIAL

## 2.2. Task Lighting:

Wattage ..... 0,00 W/m<sup>2</sup>  
 Schedule ..... None

## 2.3. Electrical Equipment:

Wattage ..... 20,00 W/m<sup>2</sup>  
 Schedule ..... PADRÃO HR COMERCIAL

## 3. Walls, Windows, Doors:

Exp.	Wall Gross Area (m <sup>2</sup> )	Window 1 Qty.	Window 2 Qty.	Door 1 Qty.
SW	44,7	24	0	0
NE	44,7	15	0	0

## 3.1. Construction Types for Exposure SW

Wall Type ..... PAREDE  
 1st Window Type ..... VIDRO

## 3.2. Construction Types for Exposure NE

Wall Type ..... PAREDE  
 1st Window Type ..... VIDRO

## 4. Roofs, Skylights:

(No Roof or Skylight data).

## 5. Infiltration:

Design Cooling ..... 178,00 L/s  
 Design Heating ..... 178,00 L/s  
 Energy Analysis ..... 0,00 L/s  
 Infiltration occurs at all hours.

## 6. Floors:

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

## 7. Partitions:

(No partition data).

## 2.4. People:

Occupancy ..... 20,0 People  
 Activity Level ..... Dancing  
 Sensible ..... 89,4 W/person  
 Latent ..... 159,7 W/person  
 Schedule ..... PADRÃO HR COMERCIAL

## 2.5. Miscellaneous Loads:

Sensible ..... 0 W  
 Schedule ..... None  
 Latent ..... 0 W  
 Schedule ..... None

# Space Input Data

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04/09/2019  
03:43

## TE-ESPAÇO SAUDE

### 1. General Details:

Floor Area ..... 19,2 m<sup>2</sup>  
Avg. Ceiling Height ..... 2,6 m  
Building Weight ..... 341,8 kg/m<sup>2</sup>

### 1.1. OA Ventilation Requirements:

Space Usage ..... User-Defined  
OA Requirement 1 ..... 0,0 L/s  
OA Requirement 2 ..... 0,00 L/(s·m<sup>2</sup>)  
Space Usage Defaults ..... ASHRAE Std 62.1-2007

### 2. Internals:

#### 2.1. Overhead Lighting:

Fixture Type ..... Recessed (Unvented)  
Wattage ..... 16,00 W/m<sup>2</sup>  
Ballast Multiplier ..... 1,00  
Schedule ..... PADRÃO HR COMERCIAL

#### 2.2. Task Lighting:

Wattage ..... 0,00 W/m<sup>2</sup>  
Schedule ..... None

#### 2.3. Electrical Equipment:

Wattage ..... 200,0 Watts  
Schedule ..... PADRÃO HR COMERCIAL

### 3. Walls, Windows, Doors:

Exp.	Wall Gross Area (m <sup>2</sup> )	Window 1 Qty.	Window 2 Qty.	Door 1 Qty.
SW	18,4	9	0	0
SE	9,4	4	0	0

#### 3.1. Construction Types for Exposure SW

Wall Type ..... PAREDE  
1st Window Type ..... VIDRO

#### 3.2. Construction Types for Exposure SE

Wall Type ..... PAREDE  
1st Window Type ..... VIDRO

### 4. Roofs, Skylights:

Exp.	Roof Gross Area (m <sup>2</sup> )	Roof Slope (deg.)	Skylight Qty.
H	19,2	0	0

#### 4.1. Construction Types for Exposure H

Roof Type ..... FORRO COM LAJE E TELHADO

### 5. Infiltration:

Design Cooling ..... 30,00 L/s  
Design Heating ..... 30,00 L/s  
Energy Analysis ..... 0,00 L/s  
Infiltration occurs at all hours.

### 6. Floors:

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

### 7. Partitions:

#### 7.1. 1st Partition Details:

Partition Type ..... Ceiling Partition  
Area ..... 9,5 m<sup>2</sup>  
U-Value ..... 2,480 W/(m<sup>2</sup>·K)  
Uncondit. Space Max Temp ..... 28,0 °C  
Ambient at Space Max Temp ..... 24,0 °C  
Uncondit. Space Min Temp ..... 24,0 °C  
Ambient at Space Min Temp ..... 23,0 °C

#### 7.2. 2nd Partition Details:

(No partition data).

**TE-RESTAURANTE****1. General Details:**

Floor Area ..... **246,5** m<sup>2</sup>  
 Avg. Ceiling Height ..... **3,0** m  
 Building Weight ..... **341,8** kg/m<sup>2</sup>

**1.1. OA Ventilation Requirements:**

Space Usage ..... **User-Defined**  
 OA Requirement 1 ..... **0,0** L/s  
 OA Requirement 2 ..... **0,00** L/(s·m<sup>2</sup>)  
 Space Usage Defaults ..... **ASHRAE Std 62.1-2007**

**2. Internals:****2.1. Overhead Lighting:**

Fixture Type ..... **Recessed (Unvented)**  
 Wattage ..... **16,00** W/m<sup>2</sup>  
 Ballast Multiplier ..... **1,00**  
 Schedule ..... **PADRÃO HR COMERCIAL**

**2.2. Task Lighting:**

Wattage ..... **0,00** W/m<sup>2</sup>  
 Schedule ..... **None**

**2.3. Electrical Equipment:**

Wattage ..... **4000,0** Watts  
 Schedule ..... **PADRÃO HR COMERCIAL**

**3. Walls, Windows, Doors:**

Exp.	Wall Gross Area (m <sup>2</sup> )	Window 1 Qty.	Window 2 Qty.	Door 1 Qty.
SE	85,0	72	0	0
NW	64,0	54	0	0

**3.1. Construction Types for Exposure SE**

Wall Type ..... **PAREDE**  
 1st Window Type ..... **VIDRO**

**3.2. Construction Types for Exposure NW**

Wall Type ..... **PAREDE**  
 1st Window Type ..... **VIDRO**

**4. Roofs, Skylights:**

**(No Roof or Skylight data).**

**5. Infiltration:**

Design Cooling ..... **792,00** L/s  
 Design Heating ..... **792,00** L/s  
 Energy Analysis ..... **0,00** L/s  
 Infiltration occurs at all hours.

**6. Floors:**

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

**7. Partitions:****7.1. 1st Partition Details:**

Partition Type ..... **Ceiling Partition**  
 Area ..... **76,0** m<sup>2</sup>  
 U-Value ..... **2,480** W/(m<sup>2</sup>·K)  
 Uncondit. Space Max Temp ..... **28,0** °C  
 Ambient at Space Max Temp ..... **24,0** °C  
 Uncondit. Space Min Temp ..... **24,0** °C  
 Ambient at Space Min Temp ..... **23,0** °C

**2.4. People:**

Occupancy ..... **150,0** People  
 Activity Level ..... **Seated at Rest**  
 Sensible ..... **67,4** W/person  
 Latent ..... **35,2** W/person  
 Schedule ..... **PADRÃO HR COMERCIAL**

**2.5. Miscellaneous Loads:**

Sensible ..... **0** W  
 Schedule ..... **None**  
 Latent ..... **0** W  
 Schedule ..... **None**

**7.2. 2nd Partition Details:**

**(No partition data).**

## TE-SALÃO DE JOGOS

## 1. General Details:

Floor Area ..... 67,3 m<sup>2</sup>  
 Avg. Ceiling Height ..... 2,6 m  
 Building Weight ..... 341,8 kg/m<sup>2</sup>

## 1.1. OA Ventilation Requirements:

Space Usage ..... User-Defined  
 OA Requirement 1 ..... 0,0 L/s  
 OA Requirement 2 ..... 0,00 L/(s·m<sup>2</sup>)  
 Space Usage Defaults ..... ASHRAE Std 62.1-2007

## 2. Internals:

## 2.1. Overhead Lighting:

Fixture Type ..... Recessed (Unvented)  
 Wattage ..... 16,00 W/m<sup>2</sup>  
 Ballast Multiplier ..... 1,00  
 Schedule ..... PADRÃO HR COMERCIAL

## 2.2. Task Lighting:

Wattage ..... 0,00 W/m<sup>2</sup>  
 Schedule ..... None

## 2.3. Electrical Equipment:

Wattage ..... 600,0 Watts  
 Schedule ..... PADRÃO HR COMERCIAL

## 3. Walls, Windows, Doors:

Exp.	Wall Gross Area (m <sup>2</sup> )	Window 1 Qty.	Window 2 Qty.	Door 1 Qty.
SE	32,9	16	0	0

## 3.1. Construction Types for Exposure SE

Wall Type ..... PAREDE  
 1st Window Type ..... VIDRO

## 4. Roofs, Skylights:

Exp.	Roof Gross Area (m <sup>2</sup> )	Roof Slope (deg.)	Skylight Qty.
H	67,3	0	0

## 4.1. Construction Types for Exposure H

Roof Type ..... FORRO COM LAJE E TELHADO

## 5. Infiltration:

Design Cooling ..... 116,00 L/s  
 Design Heating ..... 116,00 L/s  
 Energy Analysis ..... 0,00 L/s  
 Infiltration occurs at all hours.

## 6. Floors:

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

## 7. Partitions:

## 7.1. 1st Partition Details:

Partition Type ..... Ceiling Partition  
 Area ..... 32,9 m<sup>2</sup>  
 U-Value ..... 2,480 W/(m<sup>2</sup>·K)  
 Uncondit. Space Max Temp ..... 28,0 °C  
 Ambient at Space Max Temp ..... 24,0 °C  
 Uncondit. Space Min Temp ..... 24,0 °C  
 Ambient at Space Min Temp ..... 23,0 °C

## 7.2. 2nd Partition Details:

(No partition data).

## TE-TSI

## 1. General Details:

Floor Area ..... 31,0 m<sup>2</sup>  
 Avg. Ceiling Height ..... 3,0 m  
 Building Weight ..... 341,8 kg/m<sup>2</sup>

## 1.1. OA Ventilation Requirements:

Space Usage ..... User-Defined  
 OA Requirement 1 ..... 0,0 L/s  
 OA Requirement 2 ..... 0,00 L/(s·m<sup>2</sup>)  
 Space Usage Defaults ..... ASHRAE Std 62.1-2007

## 2. Internals:

## 2.1. Overhead Lighting:

Fixture Type ..... Recessed (Unvented)  
 Wattage ..... 16,00 W/m<sup>2</sup>  
 Ballast Multiplier ..... 1,00  
 Schedule ..... PADRÃO HR COMERCIAL

## 2.2. Task Lighting:

Wattage ..... 0,00 W/m<sup>2</sup>  
 Schedule ..... None

## 2.3. Electrical Equipment:

Wattage ..... 750,0 Watts  
 Schedule ..... PADRÃO HR COMERCIAL

## 3. Walls, Windows, Doors:

Exp.	Wall Gross Area (m <sup>2</sup> )	Window 1 Qty.	Window 2 Qty.	Door 1 Qty.
NE	14,8	13	0	0

## 3.1. Construction Types for Exposure NE

Wall Type ..... PAREDE  
 1st Window Type ..... VIDRO

## 4. Roofs, Skylights:

(No Roof or Skylight data).

## 5. Infiltration:

Design Cooling ..... 47,00 L/s  
 Design Heating ..... 47,00 L/s  
 Energy Analysis ..... 0,00 L/s  
 Infiltration occurs at all hours.

## 6. Floors:

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

## 7. Partitions:

(No partition data).

## 2.4. People:

Occupancy ..... 5,0 People  
 Activity Level ..... Office Work  
 Sensible ..... 71,8 W/person  
 Latent ..... 60,1 W/person  
 Schedule ..... PADRÃO HR COMERCIAL

## 2.5. Miscellaneous Loads:

Sensible ..... 0 W  
 Schedule ..... None  
 Latent ..... 0 W  
 Schedule ..... None

## TE-TURISMO SOCIAL

## 1. General Details:

Floor Area ..... 54,7 m<sup>2</sup>  
 Avg. Ceiling Height ..... 3,0 m  
 Building Weight ..... 341,8 kg/m<sup>2</sup>

## 1.1. OA Ventilation Requirements:

Space Usage ..... User-Defined  
 OA Requirement 1 ..... 0,0 L/s  
 OA Requirement 2 ..... 0,00 L/(s·m<sup>2</sup>)  
 Space Usage Defaults ..... ASHRAE Std 62.1-2007

## 2. Internals:

## 2.1. Overhead Lighting:

Fixture Type ..... Recessed (Unvented)  
 Wattage ..... 16,00 W/m<sup>2</sup>  
 Ballast Multiplier ..... 1,00  
 Schedule ..... PADRÃO HR COMERCIAL

## 2.2. Task Lighting:

Wattage ..... 0,00 W/m<sup>2</sup>  
 Schedule ..... None

## 2.3. Electrical Equipment:

Wattage ..... 600,0 Watts  
 Schedule ..... PADRÃO HR COMERCIAL

## 3. Walls, Windows, Doors:

Exp.	Wall Gross Area (m <sup>2</sup> )	Window 1 Qty.	Window 2 Qty.	Door 1 Qty.
SE	22,9	21	0	0
NE	14,6	13	0	0

## 3.1. Construction Types for Exposure SE

Wall Type ..... PAREDE  
 1st Window Type ..... VIDRO

## 3.2. Construction Types for Exposure NE

Wall Type ..... PAREDE  
 1st Window Type ..... VIDRO

## 4. Roofs, Skylights:

(No Roof or Skylight data).

## 5. Infiltration:

Design Cooling ..... 80,00 L/s  
 Design Heating ..... 80,00 L/s  
 Energy Analysis ..... 0,00 L/s  
 Infiltration occurs at all hours.

## 6. Floors:

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

## 7. Partitions:

(No partition data).

## 2.4. People:

Occupancy ..... 17,0 People  
 Activity Level ..... Seated at Rest  
 Sensible ..... 67,4 W/person  
 Latent ..... 35,2 W/person  
 Schedule ..... PADRÃO HR COMERCIAL

## 2.5. Miscellaneous Loads:

Sensible ..... 0 W  
 Schedule ..... None  
 Latent ..... 0 W  
 Schedule ..... None

## Zone Sizing Summary for SPLIT COBERTURA

Project Name: REFORMA E AMPLIAÇÃO - SESC - DOCA  
Prepared by:

04/09/2019  
03:40

### Air System Information

Air System Name ..... **SPLIT COBERTURA**  
Equipment Class ..... **TERM**  
Air System Type ..... **SPLT-FC**

Number of zones ..... **1**  
Floor Area ..... **39,4** m<sup>2</sup>  
Location ..... **Belem, Brazil**

### Sizing Calculation Information

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

Zone L/s Sizing ..... **Sum of space airflow rates**  
Space L/s Sizing ..... **Individual peak space loads**

### Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5,6 K (L/s)	Time of Peak Coil Load	Zone L/(s·m²)
COBERTURA	9,6	8,3	24,6 / 17,2	12,8 / 12,1	-	Jan 1600	14,82

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

Zone Name	Heating Coil Load (kW)	Heating Coil Ent/Lvg DB (°C)	Htg Coil Water Flow @11,1 K (L/s)	Fan Design Airflow (L/s)	Fan Motor (BHP)	Fan Motor (kW)	OA Vent Design Airflow (L/s)
COBERTURA	0,0	-18,3 / -18,3	0,00	584	0,000	0,000	0

### Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (m²)
COBERTURA	8,4	Jan 1600	0,0	39,4

### Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m²)	Space L/(s·m²)
<b>COBERTURA</b>							
3P-ÁREA COBERTA	1	8,4	Jan 1600	584	0,0	39,4	14,82



## Air System Design Load Summary for SPLIT COBERTURA

Project Name: REFORMA E AMPLIAÇÃO - SESC - DOCA  
Prepared by:

04/09/2019  
03:40

	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500			HEATING DATA AT DES HTG		
	COOLING OA DB / WB 27,8 °C / 22,2 °C			HEATING OA DB / WB 22,2 °C / 15,6 °C		
ZONE LOADS	Details	Sensible (W)	Latent (W)	Details	Sensible (W)	Latent (W)
Window & Skylight Solar Loads	25 m²	1799	-	25 m²	-	-
Wall Transmission	23 m²	352	-	23 m²	0	-
Roof Transmission	39 m²	171	-	39 m²	0	-
Window Transmission	25 m²	277	-	25 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	0 m²	0	-	0 m²	0	-
Ceiling	0 m²	0	-	0 m²	0	-
Overhead Lighting	630 W	523	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	300 W	277	-	0	0	-
People	20	1129	1202	0	0	0
Infiltration	-	0	0	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	226	60	0%	0	0
>> Total Zone Loads	-	4754	1262	-	0	0
Zone Conditioning	-	4513	1262	-	0	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 L/s	0	-	0 L/s	0	-
Ventilation Load	0 L/s	0	0	0 L/s	0	0
Ventilation Fan Load	0 L/s	0	-	0 L/s	0	-
Space Fan Coil Fans	-	0	-	-	0	-
Duct Heat Gain / Loss	0%	0	-	0%	0	-
>> Total System Loads	-	4513	1262	-	0	0
Terminal Unit Cooling	-	4513	1246	-	0	0
Terminal Unit Heating	-	0	-	-	0	-
>> Total Conditioning	-	4513	1246	-	0	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 SPLIT COBERTURA

Project Name: REFORMA E AMPLIAÇÃO - SESC - DOCA  
Prepared by:

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COBERTURA	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500			HEATING DATA AT DES HTG		
	COOLING OA DB / WB 27,8 °C / 22,2 °C			HEATING OA DB / WB 22,2 °C / 15,6 °C		
	OCCUPIED T-STAT 24,0 °C			OCCUPIED T-STAT 21,1 °C		
ZONE LOADS	Details	Sensible (W)	Latent (W)	Details	Sensible (W)	Latent (W)
Window & Skylight Solar Loads	25 m²	1799	-	25 m²	-	-
Wall Transmission	23 m²	352	-	23 m²	0	-
Roof Transmission	39 m²	171	-	39 m²	0	-
Window Transmission	25 m²	277	-	25 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	0 m²	0	-	0 m²	0	-
Ceiling	0 m²	0	-	0 m²	0	-
Overhead Lighting	630 W	523	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	300 W	277	-	0	0	-
People	20	1129	1202	0	0	0
Infiltration	-	0	0	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	226	60	0%	0	0
>> Total Zone Loads	-	4754	1262	-	0	0

## Space Design Load Summary for SPLIT COBERTURA

Project Name: REFORMA E AMPLIAÇÃO - SESC - DOCA  
Prepared by:

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TABLE 1.1.A. Component Loads For Space "3P-ÁREA COBERTA" In Zone "COBERTURA"						
	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500 COOLING OA DB / WB 27,8 °C / 22,2 °C OCCUPIED T-STAT 24,0 °C			HEATING DATA AT DES HTG HEATING OA DB / WB 22,2 °C / 15,6 °C OCCUPIED T-STAT 21,1 °C		
		Sensible	Latent		Sensible	Latent
SPACE LOADS	Details	(W)	(W)	Details	(W)	(W)
Window & Skylight Solar Loads	25 m²	1799	-	25 m²	-	-
Wall Transmission	23 m²	352	-	23 m²	0	-
Roof Transmission	39 m²	171	-	39 m²	0	-
Window Transmission	25 m²	277	-	25 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	0 m²	0	-	0 m²	0	-
Ceiling	0 m²	0	-	0 m²	0	-
Overhead Lighting	630 W	523	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	300 W	277	-	0	0	-
People	20	1129	1202	0	0	0
Infiltration	-	0	0	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	226	60	0%	0	0
>> Total Zone Loads	-	4754	1262	-	0	0

TABLE 1.1.B. Envelope Loads For Space "3P-ÁREA COBERTA" In Zone "COBERTURA"						
	Area	U-Value	Shade	COOLING	COOLING	HEATING
	(m²)	(W/(m².K))	Coeff.	TRANS	SOLAR	TRANS
				(W)	(W)	(W)
<b>NE EXPOSURE</b>						
WALL	9	2,494	-	242	-	0
WINDOW 1	5	4,800	0,800	55	674	0
<b>SW EXPOSURE</b>						
WALL	9	2,494	-	55	-	0
WINDOW 1	5	4,800	0,800	55	322	0
<b>SE EXPOSURE</b>						
WALL	6	2,494	-	55	-	0
WINDOW 1	15	4,800	0,800	166	803	0
<b>H EXPOSURE</b>						
ROOF	39	0,842	-	171	-	0

## Zone Sizing Summary for VRF-1PAV

Project Name: REFORMA E AMPLIAÇÃO - SESC - DOCA  
Prepared by:

04/09/2019  
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### Air System Information

Air System Name ..... VRF-1PAV  
Equipment Class ..... TERM  
Air System Type ..... VRF

Number of zones ..... 12  
Floor Area ..... 518,7 m<sup>2</sup>  
Location ..... Belem, Brazil

### Sizing Calculation Information

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

Zone L/s Sizing ..... Sum of space airflow rates  
Space L/s Sizing ..... Individual peak space loads

### Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5,6 K (L/s)	Time of Peak Coil Load	Zone L/(s·m²)
1P-APRESENTAÇÃO PESS	15,9	11,7	24,8 / 18,1	12,4 / 11,8	-	Apr 1600	11,30
1P-DEPOSITO INFRA	3,3	2,4	24,8 / 18,1	12,5 / 11,9	-	Apr 1600	11,36
1P-IDIOMAS 1	6,9	5,1	24,6 / 17,9	12,2 / 11,6	-	Feb 1600	12,14
1P-IDIOMAS 2	6,9	5,1	24,6 / 17,9	12,2 / 11,6	-	Feb 1600	12,14
1P-PDV INFRA	2,8	2,2	24,8 / 17,7	12,6 / 12,0	-	Apr 1600	16,05
1P-SALA 01	4,0	2,7	25,2 / 18,5	12,0 / 11,4	-	Dec 1100	9,01
1P-SALA 02	3,9	2,6	25,2 / 18,6	12,0 / 11,5	-	Dec 1100	8,67
1P-SALA CABELELEIRA	18,2	13,0	24,9 / 18,3	12,3 / 11,8	-	Dec 1200	10,81
1P-SALA DE CORTE E COSTU	29,1	21,1	24,9 / 18,1	12,0 / 11,4	-	Dec 1100	11,34
1P-SALA DE CULINÁRIA	16,1	11,2	25,4 / 18,5	12,0 / 11,4	-	Dec 1100	9,21
1P-SALA REUNIÃO	6,3	4,5	24,8 / 18,2	12,0 / 11,4	-	Jan 1400	10,13
1P-SALA TÉCNICOS	4,3	2,7	24,8 / 19,1	12,0 / 11,6	-	Feb 1300	6,04

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

Zone Name	Heating Coil Load (kW)	Heating Coil Ent/Lvg DB (°C)	Htg Coil Water Flow @11,1 K (L/s)	Fan Design Airflow (L/s)	Fan Motor (BHP)	Fan Motor (kW)	OA Vent Design Airflow (L/s)
1P-APRESENTAÇÃO PESS	0,0	-17,8 / -17,8	0,00	783	0,000	0,000	0
1P-DEPOSITO INFRA	0,0	-17,8 / -17,8	0,00	164	0,000	0,000	0
1P-IDIOMAS 1	0,0	-17,8 / -17,8	0,00	339	0,000	0,000	0
1P-IDIOMAS 2	0,0	-17,8 / -17,8	0,00	339	0,000	0,000	0
1P-PDV INFRA	0,0	-17,8 / -17,8	0,00	149	0,000	0,000	0
1P-SALA 01	0,0	-17,8 / -17,8	0,00	172	0,000	0,000	0
1P-SALA 02	0,0	-17,8 / -17,8	0,00	166	0,000	0,000	0
1P-SALA CABELELEIRA	0,0	-17,8 / -17,8	0,00	859	0,000	0,000	0
1P-SALA DE CORTE E COSTU	0,0	-17,8 / -17,8	0,00	1351	0,000	0,000	0
1P-SALA DE CULINÁRIA	0,0	-17,8 / -17,8	0,00	697	0,000	0,000	0
1P-SALA REUNIÃO	0,0	-17,8 / -17,8	0,00	290	0,000	0,000	0
1P-SALA TÉCNICOS	0,0	-17,8 / -17,8	0,00	175	0,000	0,000	0

### VRF Outdoor Unit Sizing Data

	Cooling [kW]	Heating [kW]
Peak Coincident Indoor Unit Loads	110,4	0,0
Estimated Piping / Line Losses	0,0	0,0
<b>Total Required ODU Capacity</b>	<b>110,4</b>	<b>0,0</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 Cooling Sensible	Time of Peak Sensible	Zone Heating Load	Zone Floor Area
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## Zone Sizing Summary for VRF-1PAV

Project Name: REFORMA E AMPLIAÇÃO - SESC - DOCA  
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Zone Name	(kW)	Cooling Load	(kW)	(m²)
1P-APRESENTAÇÃO PESS	11,3	May 1600	0,0	69,3
1P-DEPOSITO INFRA	2,4	May 1600	0,0	14,4
1P-IDIOMAS 1	4,9	Feb 1500	0,0	27,9
1P-IDIOMAS 2	4,9	Feb 1500	0,0	27,9
1P-PDV INFRA	2,2	May 1600	0,0	9,3
1P-SALA 01	2,5	Dec 1200	0,0	19,1
1P-SALA 02	2,4	Dec 1100	0,0	19,1
1P-SALA CABELELEIRA	12,4	Jan 1400	0,0	79,4
1P-SALA DE CORTE E COSTU	19,5	Jan 1500	0,0	119,1
1P-SALA DE CULINÁRIA	10,1	Dec 1100	0,0	75,7
1P-SALA REUNIÃO	4,2	Jan 1500	0,0	28,6
1P-SALA TÉCNICOS	2,5	Apr 1400	0,0	28,9

### Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m²)	Space L/(s·m²)
<b>1P-APRESENTAÇÃO PESS</b>							
1P-APRESENTAÇÃO PESSOAL	1	11,3	May 1600	783	0,0	69,3	11,30
<b>1P-DEPOSITO INFRA</b>							
1P-DEPOSITO INFRA	1	2,4	May 1600	164	0,0	14,4	11,36
<b>1P-IDIOMAS 1</b>							
1P-IDIOMAS 1	1	4,9	Feb 1500	339	0,0	27,9	12,14
<b>1P-IDIOMAS 2</b>							
1P-IDIOMAS 2	1	4,9	Feb 1500	339	0,0	27,9	12,14
<b>1P-PDV INFRA</b>							
1P-PDV INFRA	1	2,2	May 1600	149	0,0	9,3	16,05
<b>1P-SALA 01</b>							
1P-SALA 01	1	2,5	Dec 1200	172	0,0	19,1	9,01
<b>1P-SALA 02</b>							
1P-SALA 02	1	2,4	Dec 1100	166	0,0	19,1	8,67
<b>1P-SALA CABELELEIRA</b>							
1P-SALA CABELELEIRA	1	12,4	Jan 1400	859	0,0	79,4	10,81
<b>1P-SALA DE CORTE E COSTU</b>							
1P-SALA DE CORTE E COST.	1	19,5	Jan 1500	1351	0,0	119,1	11,34
<b>1P-SALA DE CULINÁRIA</b>							
1P-SALA DE CULINÁRIA	1	10,1	Dec 1100	697	0,0	75,7	9,21
<b>1P-SALA REUNIÃO</b>							
1P-SALA REUNIÃO	1	4,2	Jan 1500	290	0,0	28,6	10,13
<b>1P-SALA TÉCNICOS</b>							
1P-SALA TÉCNICOS	1	2,5	Apr 1400	175	0,0	28,9	6,04

## Air System Design Load Summary for VRF-1PAV

Project Name: REFORMA E AMPLIAÇÃO - SESC - DOCA  
Prepared by:

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	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500			HEATING DATA AT DES HTG		
	COOLING OA DB / WB 27,8 °C / 22,2 °C			HEATING OA DB / WB 22,2 °C / 15,6 °C		
ZONE LOADS	Details	Sensible (W)	Latent (W)	Details	Sensible (W)	Latent (W)
Window & Skylight Solar Loads	148 m²	15052	-	148 m²	-	-
Wall Transmission	156 m²	2441	-	156 m²	0	-
Roof Transmission	0 m²	0	-	0 m²	0	-
Window Transmission	148 m²	1637	-	148 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	0 m²	0	-	0 m²	0	-
Ceiling	255 m²	2066	-	255 m²	0	-
Overhead Lighting	8299 W	6880	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	9250 W	8544	-	0	0	-
People	181	9977	9135	0	0	0
Infiltration	-	4912	6929	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	2575	803	0%	0	0
>> Total Zone Loads	-	54084	16867	-	0	0
Zone Conditioning	-	54397	16867	-	0	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 L/s	0	-	0 L/s	0	-
Ventilation Load	0 L/s	0	0	0 L/s	0	0
Ventilation Fan Load	0 L/s	0	-	0 L/s	0	-
Space Fan Coil Fans	-	0	-	-	0	-
Duct Heat Gain / Loss	0%	0	-	0%	0	-
>> Total System Loads	-	54397	16867	-	0	0
Terminal Unit Cooling	-	54397	17319	-	0	0
Terminal Unit Heating	-	0	-	-	0	-
>> Total Conditioning	-	54397	17319	-	0	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 VRF-1PAV

Project Name: REFORMA E AMPLIAÇÃO - SESC - DOCA  
Prepared by:

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1P-APRESENTAÇÃO PESS	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500			HEATING DATA AT DES HTG		
	COOLING OA DB / WB 27,8 °C / 22,2 °C			HEATING OA DB / WB 22,2 °C / 15,6 °C		
	OCCUPIED T-STAT 24,0 °C			OCCUPIED T-STAT 21,1 °C		
ZONE LOADS	Details	Sensible (W)	Latent (W)	Details	Sensible (W)	Latent (W)
Window & Skylight Solar Loads	25 m²	5161	-	25 m²	-	-
Wall Transmission	23 m²	474	-	23 m²	0	-
Roof Transmission	0 m²	0	-	0 m²	0	-
Window Transmission	25 m²	277	-	25 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	0 m²	0	-	0 m²	0	-
Ceiling	48 m²	388	-	48 m²	0	-
Overhead Lighting	1109 W	919	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	1400 W	1293	-	0	0	-
People	20	1060	704	0	0	0
Infiltration	-	91	247	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	483	48	0%	0	0
>> Total Zone Loads	-	10146	998	-	0	0

1P-DEPOSITO INFRA	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500			HEATING DATA AT DES HTG		
	COOLING OA DB / WB 27,8 °C / 22,2 °C			HEATING OA DB / WB 22,2 °C / 15,6 °C		
	OCCUPIED T-STAT 24,0 °C			OCCUPIED T-STAT 21,1 °C		
ZONE LOADS	Details	Sensible (W)	Latent (W)	Details	Sensible (W)	Latent (W)
Window & Skylight Solar Loads	6 m²	1239	-	6 m²	-	-
Wall Transmission	4 m²	77	-	4 m²	0	-
Roof Transmission	0 m²	0	-	0 m²	0	-
Window Transmission	6 m²	66	-	6 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	0 m²	0	-	0 m²	0	-
Ceiling	10 m²	79	-	10 m²	0	-
Overhead Lighting	230 W	191	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	200 W	185	-	0	0	-
People	1	56	60	0	0	0
Infiltration	-	91	228	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	99	14	0%	0	0
>> Total Zone Loads	-	2083	302	-	0	0

## Zone Design Load Summary for VRF-1PAV

Project Name: REFORMA E AMPLIAÇÃO - SESC - DOCA  
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1P-IDIOMAS 1	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500			HEATING DATA AT DES HTG		
	COOLING OA DB / WB 27,8 °C / 22,2 °C			HEATING OA DB / WB 22,2 °C / 15,6 °C		
	OCCUPIED T-STAT 24,0 °C			OCCUPIED T-STAT 21,1 °C		
ZONE LOADS	Details	Sensible (W)	Latent (W)	Details	Sensible (W)	Latent (W)
Window & Skylight Solar Loads	5 m²	674	-	5 m²	-	-
Wall Transmission	8 m²	228	-	8 m²	0	-
Roof Transmission	0 m²	0	-	0 m²	0	-
Window Transmission	5 m²	55	-	5 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	0 m²	0	-	0 m²	0	-
Ceiling	13 m²	105	-	13 m²	0	-
Overhead Lighting	446 W	370	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	600 W	554	-	0	0	-
People	25	1325	880	0	0	0
Infiltration	-	560	1292	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	194	109	0%	0	0
>> Total Zone Loads	-	4065	2281	-	0	0

1P-IDIOMAS 2	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500			HEATING DATA AT DES HTG		
	COOLING OA DB / WB 27,8 °C / 22,2 °C			HEATING OA DB / WB 22,2 °C / 15,6 °C		
	OCCUPIED T-STAT 24,0 °C			OCCUPIED T-STAT 21,1 °C		
ZONE LOADS	Details	Sensible (W)	Latent (W)	Details	Sensible (W)	Latent (W)
Window & Skylight Solar Loads	5 m²	674	-	5 m²	-	-
Wall Transmission	8 m²	228	-	8 m²	0	-
Roof Transmission	0 m²	0	-	0 m²	0	-
Window Transmission	5 m²	55	-	5 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	0 m²	0	-	0 m²	0	-
Ceiling	13 m²	105	-	13 m²	0	-
Overhead Lighting	446 W	370	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	600 W	554	-	0	0	-
People	25	1325	880	0	0	0
Infiltration	-	560	1292	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	194	109	0%	0	0
>> Total Zone Loads	-	4065	2281	-	0	0



## Zone Design Load Summary for VRF-1PAV

Project Name: REFORMA E AMPLIAÇÃO - SESC - DOCA  
Prepared by:

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1P-PDV INFRA	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500			HEATING DATA AT DES HTG		
	COOLING OA DB / WB 27,8 °C / 22,2 °C			HEATING OA DB / WB 22,2 °C / 15,6 °C		
	OCCUPIED T-STAT 24,0 °C			OCCUPIED T-STAT 21,1 °C		
ZONE LOADS	Details	Sensible (W)	Latent (W)	Details	Sensible (W)	Latent (W)
Window & Skylight Solar Loads	5 m²	1032	-	5 m²	-	-
Wall Transmission	4 m²	81	-	4 m²	0	-
Roof Transmission	0 m²	0	-	0 m²	0	-
Window Transmission	5 m²	55	-	5 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	0 m²	0	-	0 m²	0	-
Ceiling	9 m²	72	-	9 m²	0	-
Overhead Lighting	149 W	123	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	300 W	277	-	0	0	-
People	2	113	120	0	0	0
Infiltration	-	68	203	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	91	16	0%	0	0
>> Total Zone Loads	-	1914	340	-	0	0

1P-SALA 01	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500			HEATING DATA AT DES HTG		
	COOLING OA DB / WB 27,8 °C / 22,2 °C			HEATING OA DB / WB 22,2 °C / 15,6 °C		
	OCCUPIED T-STAT 24,0 °C			OCCUPIED T-STAT 21,1 °C		
ZONE LOADS	Details	Sensible (W)	Latent (W)	Details	Sensible (W)	Latent (W)
Window & Skylight Solar Loads	5 m²	268	-	5 m²	-	-
Wall Transmission	4 m²	39	-	4 m²	0	-
Roof Transmission	0 m²	0	-	0 m²	0	-
Window Transmission	5 m²	55	-	5 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	0 m²	0	-	0 m²	0	-
Ceiling	9 m²	74	-	9 m²	0	-
Overhead Lighting	306 W	253	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	300 W	277	-	0	0	-
People	4	226	240	0	0	0
Infiltration	-	137	126	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	66	18	0%	0	0
>> Total Zone Loads	-	1395	385	-	0	0

## Zone Design Load Summary for VRF-1PAV

Project Name: REFORMA E AMPLIAÇÃO - SESC - DOCA  
Prepared by:

04/09/2019  
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1P-SALA 02	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500			HEATING DATA AT DES HTG		
	COOLING OA DB / WB 27,8 °C / 22,2 °C			HEATING OA DB / WB 22,2 °C / 15,6 °C		
	OCCUPIED T-STAT 24,0 °C			OCCUPIED T-STAT 21,1 °C		
ZONE LOADS	Details	Sensible (W)	Latent (W)	Details	Sensible (W)	Latent (W)
Window & Skylight Solar Loads	5 m²	268	-	5 m²	-	-
Wall Transmission	4 m²	39	-	4 m²	0	-
Roof Transmission	0 m²	0	-	0 m²	0	-
Window Transmission	5 m²	55	-	5 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	0 m²	0	-	0 m²	0	-
Ceiling	9 m²	74	-	9 m²	0	-
Overhead Lighting	306 W	253	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	200 W	185	-	0	0	-
People	4	226	240	0	0	0
Infiltration	-	137	109	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	62	17	0%	0	0
>> Total Zone Loads	-	1298	367	-	0	0

1P-SALA CABELELEIRA	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500			HEATING DATA AT DES HTG		
	COOLING OA DB / WB 27,8 °C / 22,2 °C			HEATING OA DB / WB 22,2 °C / 15,6 °C		
	OCCUPIED T-STAT 24,0 °C			OCCUPIED T-STAT 21,1 °C		
ZONE LOADS	Details	Sensible (W)	Latent (W)	Details	Sensible (W)	Latent (W)
Window & Skylight Solar Loads	22 m²	1178	-	22 m²	-	-
Wall Transmission	16 m²	156	-	16 m²	0	-
Roof Transmission	0 m²	0	-	0 m²	0	-
Window Transmission	22 m²	243	-	22 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	0 m²	0	-	0 m²	0	-
Ceiling	38 m²	311	-	38 m²	0	-
Overhead Lighting	1270 W	1053	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	400 W	369	-	0	0	-
People	35	1976	2104	0	0	0
Infiltration	-	1215	952	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	325	153	0%	0	0
>> Total Zone Loads	-	6828	3209	-	0	0

## Zone Design Load Summary for VRF-1PAV

Project Name: REFORMA E AMPLIAÇÃO - SESC - DOCA  
Prepared by:

04/09/2019  
03:40

1P-SALA DE CORTE E COSTU	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500			HEATING DATA AT DES HTG		
	COOLING OA DB / WB 27,8 °C / 22,2 °C			HEATING OA DB / WB 22,2 °C / 15,6 °C		
	OCCUPIED T-STAT 24,0 °C			OCCUPIED T-STAT 21,1 °C		
ZONE LOADS	Details	Sensible (W)	Latent (W)	Details	Sensible (W)	Latent (W)
Window & Skylight Solar Loads	33 m²	1767	-	33 m²	-	-
Wall Transmission	39 m²	328	-	39 m²	0	-
Roof Transmission	0 m²	0	-	0 m²	0	-
Window Transmission	33 m²	365	-	33 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	0 m²	0	-	0 m²	0	-
Ceiling	57 m²	463	-	57 m²	0	-
Overhead Lighting	1906 W	1580	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	3600 W	3325	-	0	0	-
People	36	2033	2164	0	0	0
Infiltration	-	1229	1509	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	554	184	0%	0	0
>> Total Zone Loads	-	11643	3856	-	0	0

1P-SALA DE CULINÁRIA	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500			HEATING DATA AT DES HTG		
	COOLING OA DB / WB 27,8 °C / 22,2 °C			HEATING OA DB / WB 22,2 °C / 15,6 °C		
	OCCUPIED T-STAT 24,0 °C			OCCUPIED T-STAT 21,1 °C		
ZONE LOADS	Details	Sensible (W)	Latent (W)	Details	Sensible (W)	Latent (W)
Window & Skylight Solar Loads	27 m²	1851	-	27 m²	-	-
Wall Transmission	29 m²	475	-	29 m²	0	-
Roof Transmission	0 m²	0	-	0 m²	0	-
Window Transmission	27 m²	299	-	27 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	0 m²	0	-	0 m²	0	-
Ceiling	22 m²	178	-	22 m²	0	-
Overhead Lighting	1211 W	1004	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	800 W	739	-	0	0	-
People	10	565	601	0	0	0
Infiltration	-	341	303	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	273	45	0%	0	0
>> Total Zone Loads	-	5725	949	-	0	0

## Zone Design Load Summary for VRF-1PAV

Project Name: REFORMA E AMPLIAÇÃO - SESC - DOCA  
Prepared by:

04/09/2019  
03:40

1P-SALA REUNIÃO	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500			HEATING DATA AT DES HTG		
	COOLING OA DB / WB 27,8 °C / 22,2 °C			HEATING OA DB / WB 22,2 °C / 15,6 °C		
	OCCUPIED T-STAT 24,0 °C			OCCUPIED T-STAT 21,1 °C		
ZONE LOADS	Details	Sensible (W)	Latent (W)	Details	Sensible (W)	Latent (W)
Window & Skylight Solar Loads	5 m²	268	-	5 m²	-	-
Wall Transmission	8 m²	79	-	8 m²	0	-
Roof Transmission	0 m²	0	-	0 m²	0	-
Window Transmission	5 m²	55	-	5 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	0 m²	0	-	0 m²	0	-
Ceiling	13 m²	108	-	13 m²	0	-
Overhead Lighting	458 W	379	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	400 W	369	-	0	0	-
People	16	903	962	0	0	0
Infiltration	-	346	390	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	125	68	0%	0	0
>> Total Zone Loads	-	2633	1419	-	0	0

1P-SALA TÉCNICOS	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500			HEATING DATA AT DES HTG		
	COOLING OA DB / WB 27,8 °C / 22,2 °C			HEATING OA DB / WB 22,2 °C / 15,6 °C		
	OCCUPIED T-STAT 24,0 °C			OCCUPIED T-STAT 21,1 °C		
ZONE LOADS	Details	Sensible (W)	Latent (W)	Details	Sensible (W)	Latent (W)
Window & Skylight Solar Loads	5 m²	674	-	5 m²	-	-
Wall Transmission	8 m²	239	-	8 m²	0	-
Roof Transmission	0 m²	0	-	0 m²	0	-
Window Transmission	5 m²	55	-	5 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	0 m²	0	-	0 m²	0	-
Ceiling	13 m²	109	-	13 m²	0	-
Overhead Lighting	462 W	383	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	450 W	416	-	0	0	-
People	3	169	180	0	0	0
Infiltration	-	137	277	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	109	23	0%	0	0
>> Total Zone Loads	-	2291	481	-	0	0

## Space Design Load Summary for VRF-1PAV

Project Name: REFORMA E AMPLIAÇÃO - SESC - DOCA  
Prepared by:

04/09/2019  
03:40

TABLE 1.1.A. Component Loads For Space "1P-APRESENTAÇÃO PESSOAL" In Zone "1P-APRESENTAÇÃO PESS"						
	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500 COOLING OA DB / WB 27,8 °C / 22,2 °C OCCUPIED T-STAT 24,0 °C			HEATING DATA AT DES HTG HEATING OA DB / WB 22,2 °C / 15,6 °C OCCUPIED T-STAT 21,1 °C		
		Sensible	Latent		Sensible	Latent
SPACE LOADS	Details	(W)	(W)	Details	(W)	(W)
Window & Skylight Solar Loads	25 m²	5161	-	25 m²	-	-
Wall Transmission	23 m²	474	-	23 m²	0	-
Roof Transmission	0 m²	0	-	0 m²	0	-
Window Transmission	25 m²	277	-	25 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	0 m²	0	-	0 m²	0	-
Ceiling	48 m²	388	-	48 m²	0	-
Overhead Lighting	1109 W	919	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	1400 W	1293	-	0	0	-
People	20	1060	704	0	0	0
Infiltration	-	91	247	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	483	48	0%	0	0
>> Total Zone Loads	-	10146	998	-	0	0

TABLE 1.1.B. Envelope Loads For Space "1P-APRESENTAÇÃO PESSOAL" In Zone "1P-APRESENTAÇÃO PESS"						
	Area	U-Value	Shade	COOLING	COOLING	HEATING
	(m²)	(W/(m²·K))	Coeff.	TRANS	SOLAR	TRANS
				(W)	(W)	(W)
NW EXPOSURE						
WALL	23	2,494	-	474	-	0
WINDOW 1	25	4,800	0,800	277	5161	0

## Space Design Load Summary for VRF-1PAV

Project Name: REFORMA E AMPLIAÇÃO - SESC - DOCA  
Prepared by:

04/09/2019  
03:40

TABLE 2.1.A. Component Loads For Space "1P-DEPOSITO INFRA" In Zone "1P-DEPOSITO INFRA"						
	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500 COOLING OA DB / WB 27,8 °C / 22,2 °C OCCUPIED T-STAT 24,0 °C			HEATING DATA AT DES HTG HEATING OA DB / WB 22,2 °C / 15,6 °C OCCUPIED T-STAT 21,1 °C		
		Sensible	Latent		Sensible	Latent
SPACE LOADS	Details	(W)	(W)	Details	(W)	(W)
Window & Skylight Solar Loads	6 m²	1239	-	6 m²	-	-
Wall Transmission	4 m²	77	-	4 m²	0	-
Roof Transmission	0 m²	0	-	0 m²	0	-
Window Transmission	6 m²	66	-	6 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	0 m²	0	-	0 m²	0	-
Ceiling	10 m²	79	-	10 m²	0	-
Overhead Lighting	230 W	191	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	200 W	185	-	0	0	-
People	1	56	60	0	0	0
Infiltration	-	91	228	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	99	14	0%	0	0
>> Total Zone Loads	-	2083	302	-	0	0

TABLE 2.1.B. Envelope Loads For Space "1P-DEPOSITO INFRA" In Zone "1P-DEPOSITO INFRA"						
	Area	U-Value	Shade	COOLING	COOLING	HEATING
	(m²)	(W/(m²·K))	Coeff.	TRANS	SOLAR	TRANS
				(W)	(W)	(W)
NW EXPOSURE						
WALL	4	2,494	-	77	-	0
WINDOW 1	6	4,800	0,800	66	1239	0

## Space Design Load Summary for VRF-1PAV

Project Name: REFORMA E AMPLIAÇÃO - SESC - DOCA  
Prepared by:

04/09/2019  
03:40

TABLE 3.1.A. Component Loads For Space "1P-IDIOMAS 1" In Zone "1P-IDIOMAS 1"						
	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500 COOLING OA DB / WB 27,8 °C / 22,2 °C OCCUPIED T-STAT 24,0 °C			HEATING DATA AT DES HTG HEATING OA DB / WB 22,2 °C / 15,6 °C OCCUPIED T-STAT 21,1 °C		
		Sensible	Latent		Sensible	Latent
SPACE LOADS	Details	(W)	(W)	Details	(W)	(W)
Window & Skylight Solar Loads	5 m²	674	-	5 m²	-	-
Wall Transmission	8 m²	228	-	8 m²	0	-
Roof Transmission	0 m²	0	-	0 m²	0	-
Window Transmission	5 m²	55	-	5 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	0 m²	0	-	0 m²	0	-
Ceiling	13 m²	105	-	13 m²	0	-
Overhead Lighting	446 W	370	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	600 W	554	-	0	0	-
People	25	1325	880	0	0	0
Infiltration	-	560	1292	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	194	109	0%	0	0
>> Total Zone Loads	-	4065	2281	-	0	0

TABLE 3.1.B. Envelope Loads For Space "1P-IDIOMAS 1" In Zone "1P-IDIOMAS 1"						
	Area	U-Value	Shade	COOLING	COOLING	HEATING
	(m²)	(W/(m²·K))	Coeff.	TRANS	SOLAR	TRANS
NE EXPOSURE				(W)	(W)	(W)
WALL	8	2,494	-	228	-	0
WINDOW 1	5	4,800	0,800	55	674	0

## Space Design Load Summary for VRF-1PAV

Project Name: REFORMA E AMPLIAÇÃO - SESC - DOCA  
Prepared by:

04/09/2019  
03:40

TABLE 4.1.A. Component Loads For Space "1P-IDIOMAS 2" In Zone "1P-IDIOMAS 2"						
	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500 COOLING OA DB / WB 27,8 °C / 22,2 °C OCCUPIED T-STAT 24,0 °C			HEATING DATA AT DES HTG HEATING OA DB / WB 22,2 °C / 15,6 °C OCCUPIED T-STAT 21,1 °C		
		Sensible	Latent		Sensible	Latent
SPACE LOADS	Details	(W)	(W)	Details	(W)	(W)
Window & Skylight Solar Loads	5 m²	674	-	5 m²	-	-
Wall Transmission	8 m²	228	-	8 m²	0	-
Roof Transmission	0 m²	0	-	0 m²	0	-
Window Transmission	5 m²	55	-	5 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	0 m²	0	-	0 m²	0	-
Ceiling	13 m²	105	-	13 m²	0	-
Overhead Lighting	446 W	370	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	600 W	554	-	0	0	-
People	25	1325	880	0	0	0
Infiltration	-	560	1292	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	194	109	0%	0	0
>> Total Zone Loads	-	4065	2281	-	0	0

TABLE 4.1.B. Envelope Loads For Space "1P-IDIOMAS 2" In Zone "1P-IDIOMAS 2"						
	Area	U-Value	Shade	COOLING	COOLING	HEATING
	(m²)	(W/(m²·K))	Coeff.	TRANS	SOLAR	TRANS
NE EXPOSURE				(W)	(W)	(W)
WALL	8	2,494	-	228	-	0
WINDOW 1	5	4,800	0,800	55	674	0



## Space Design Load Summary for VRF-1PAV

Project Name: REFORMA E AMPLIAÇÃO - SESC - DOCA  
Prepared by:

04/09/2019  
03:40

TABLE 5.1.A. Component Loads For Space "1P-PDV INFRA" In Zone "1P-PDV INFRA"						
	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500 COOLING OA DB / WB 27,8 °C / 22,2 °C OCCUPIED T-STAT 24,0 °C			HEATING DATA AT DES HTG HEATING OA DB / WB 22,2 °C / 15,6 °C OCCUPIED T-STAT 21,1 °C		
		Sensible	Latent		Sensible	Latent
SPACE LOADS	Details	(W)	(W)	Details	(W)	(W)
Window & Skylight Solar Loads	5 m²	1032	-	5 m²	-	-
Wall Transmission	4 m²	81	-	4 m²	0	-
Roof Transmission	0 m²	0	-	0 m²	0	-
Window Transmission	5 m²	55	-	5 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	0 m²	0	-	0 m²	0	-
Ceiling	9 m²	72	-	9 m²	0	-
Overhead Lighting	149 W	123	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	300 W	277	-	0	0	-
People	2	113	120	0	0	0
Infiltration	-	68	203	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	91	16	0%	0	0
>> Total Zone Loads	-	1914	340	-	0	0

TABLE 5.1.B. Envelope Loads For Space "1P-PDV INFRA" In Zone "1P-PDV INFRA"						
	Area	U-Value	Shade	COOLING	COOLING	HEATING
	(m²)	(W/(m²·K))	Coeff.	TRANS	SOLAR	TRANS
				(W)	(W)	(W)
NW EXPOSURE						
WALL	4	2,494	-	81	-	0
WINDOW 1	5	4,800	0,800	55	1032	0

## Space Design Load Summary for VRF-1PAV

Project Name: REFORMA E AMPLIAÇÃO - SESC - DOCA  
Prepared by:

04/09/2019  
03:40

TABLE 6.1.A. Component Loads For Space "1P-SALA 01" In Zone "1P-SALA 01"						
	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500 COOLING OA DB / WB 27,8 °C / 22,2 °C OCCUPIED T-STAT 24,0 °C			HEATING DATA AT DES HTG HEATING OA DB / WB 22,2 °C / 15,6 °C OCCUPIED T-STAT 21,1 °C		
		Sensible	Latent		Sensible	Latent
SPACE LOADS	Details	(W)	(W)	Details	(W)	(W)
Window & Skylight Solar Loads	5 m²	268	-	5 m²	-	-
Wall Transmission	4 m²	39	-	4 m²	0	-
Roof Transmission	0 m²	0	-	0 m²	0	-
Window Transmission	5 m²	55	-	5 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	0 m²	0	-	0 m²	0	-
Ceiling	9 m²	74	-	9 m²	0	-
Overhead Lighting	306 W	253	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	300 W	277	-	0	0	-
People	4	226	240	0	0	0
Infiltration	-	137	126	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	66	18	0%	0	0
>> Total Zone Loads	-	1395	385	-	0	0

TABLE 6.1.B. Envelope Loads For Space "1P-SALA 01" In Zone "1P-SALA 01"						
	Area	U-Value	Shade	COOLING	COOLING	HEATING
	(m²)	(W/(m²·K))	Coeff.	TRANS	SOLAR	TRANS
				(W)	(W)	(W)
SE EXPOSURE						
WALL	4	2,494	-	39	-	0
WINDOW 1	5	4,800	0,800	55	268	0

## Space Design Load Summary for VRF-1PAV

Project Name: REFORMA E AMPLIAÇÃO - SESC - DOCA  
Prepared by:

04/09/2019  
03:40

TABLE 7.1.A. Component Loads For Space "1P-SALA 02" In Zone "1P-SALA 02"						
	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500 COOLING OA DB / WB 27,8 °C / 22,2 °C OCCUPIED T-STAT 24,0 °C			HEATING DATA AT DES HTG HEATING OA DB / WB 22,2 °C / 15,6 °C OCCUPIED T-STAT 21,1 °C		
		Sensible	Latent		Sensible	Latent
SPACE LOADS	Details	(W)	(W)	Details	(W)	(W)
Window & Skylight Solar Loads	5 m²	268	-	5 m²	-	-
Wall Transmission	4 m²	39	-	4 m²	0	-
Roof Transmission	0 m²	0	-	0 m²	0	-
Window Transmission	5 m²	55	-	5 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	0 m²	0	-	0 m²	0	-
Ceiling	9 m²	74	-	9 m²	0	-
Overhead Lighting	306 W	253	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	200 W	185	-	0	0	-
People	4	226	240	0	0	0
Infiltration	-	137	109	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	62	17	0%	0	0
>> Total Zone Loads	-	1298	367	-	0	0

TABLE 7.1.B. Envelope Loads For Space "1P-SALA 02" In Zone "1P-SALA 02"						
	Area	U-Value	Shade	COOLING	COOLING	HEATING
	(m²)	(W/(m²·K))	Coeff.	TRANS	SOLAR	TRANS
				(W)	(W)	(W)
SE EXPOSURE						
WALL	4	2,494	-	39	-	0
WINDOW 1	5	4,800	0,800	55	268	0

## Space Design Load Summary for VRF-1PAV

Project Name: REFORMA E AMPLIAÇÃO - SESC - DOCA  
Prepared by:

04/09/2019  
03:40

TABLE 8.1.A. Component Loads For Space "1P-SALA CABELELEIRA" In Zone "1P-SALA CABELELEIRA"						
	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500 COOLING OA DB / WB 27,8 °C / 22,2 °C OCCUPIED T-STAT 24,0 °C			HEATING DATA AT DES HTG HEATING OA DB / WB 22,2 °C / 15,6 °C OCCUPIED T-STAT 21,1 °C		
		Sensible	Latent		Sensible	Latent
SPACE LOADS	Details	(W)	(W)	Details	(W)	(W)
Window & Skylight Solar Loads	22 m²	1178	-	22 m²	-	-
Wall Transmission	16 m²	156	-	16 m²	0	-
Roof Transmission	0 m²	0	-	0 m²	0	-
Window Transmission	22 m²	243	-	22 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	0 m²	0	-	0 m²	0	-
Ceiling	38 m²	311	-	38 m²	0	-
Overhead Lighting	1270 W	1053	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	400 W	369	-	0	0	-
People	35	1976	2104	0	0	0
Infiltration	-	1215	952	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	325	153	0%	0	0
>> Total Zone Loads	-	6828	3209	-	0	0

TABLE 8.1.B. Envelope Loads For Space "1P-SALA CABELELEIRA" In Zone "1P-SALA CABELELEIRA"						
	Area	U-Value	Shade	COOLING	COOLING	HEATING
	(m²)	(W/(m²·K))	Coeff.	TRANS	SOLAR	TRANS
				(W)	(W)	(W)
SE EXPOSURE						
WALL	16	2,494	-	156	-	0
WINDOW 1	22	4,800	0,800	243	1178	0

## Space Design Load Summary for VRF-1PAV

Project Name: REFORMA E AMPLIAÇÃO - SESC - DOCA  
Prepared by:

04/09/2019  
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TABLE 9.1.A. Component Loads For Space "1P-SALA DE CORTE E COST." In Zone "1P-SALA DE CORTE E COSTU"						
	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500 COOLING OA DB / WB 27,8 °C / 22,2 °C OCCUPIED T-STAT 24,0 °C			HEATING DATA AT DES HTG HEATING OA DB / WB 22,2 °C / 15,6 °C OCCUPIED T-STAT 21,1 °C		
		Sensible	Latent		Sensible	Latent
SPACE LOADS	Details	(W)	(W)	Details	(W)	(W)
Window & Skylight Solar Loads	33 m²	1767	-	33 m²	-	-
Wall Transmission	39 m²	328	-	39 m²	0	-
Roof Transmission	0 m²	0	-	0 m²	0	-
Window Transmission	33 m²	365	-	33 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	0 m²	0	-	0 m²	0	-
Ceiling	57 m²	463	-	57 m²	0	-
Overhead Lighting	1906 W	1580	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	3600 W	3325	-	0	0	-
People	36	2033	2164	0	0	0
Infiltration	-	1229	1509	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	554	184	0%	0	0
>> Total Zone Loads	-	11643	3856	-	0	0

TABLE 9.1.B. Envelope Loads For Space "1P-SALA DE CORTE E COST." In Zone "1P-SALA DE CORTE E COSTU"						
	Area	U-Value	Shade	COOLING	COOLING	HEATING
	(m²)	(W/(m²·K))	Coeff.	TRANS	SOLAR	TRANS
				(W)	(W)	(W)
SE EXPOSURE						
WALL	24	2,494	-	229	-	0
WINDOW 1	33	4,800	0,800	365	1767	0
SW EXPOSURE						
WALL	15	2,494	-	98	-	0

## Space Design Load Summary for VRF-1PAV

Project Name: REFORMA E AMPLIAÇÃO - SESC - DOCA  
Prepared by:

04/09/2019  
03:40

TABLE 10.1.A. Component Loads For Space "1P-SALA DE CULINÁRIA" In Zone "1P-SALA DE CULINÁRIA"						
	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500 COOLING OA DB / WB 27,8 °C / 22,2 °C OCCUPIED T-STAT 24,0 °C			HEATING DATA AT DES HTG HEATING OA DB / WB 22,2 °C / 15,6 °C OCCUPIED T-STAT 21,1 °C		
		Sensible	Latent		Sensible	Latent
SPACE LOADS	Details	(W)	(W)	Details	(W)	(W)
Window & Skylight Solar Loads	27 m²	1851	-	27 m²	-	-
Wall Transmission	29 m²	475	-	29 m²	0	-
Roof Transmission	0 m²	0	-	0 m²	0	-
Window Transmission	27 m²	299	-	27 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	0 m²	0	-	0 m²	0	-
Ceiling	22 m²	178	-	22 m²	0	-
Overhead Lighting	1211 W	1004	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	800 W	739	-	0	0	-
People	10	565	601	0	0	0
Infiltration	-	341	303	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	273	45	0%	0	0
>> Total Zone Loads	-	5725	949	-	0	0

TABLE 10.1.B. Envelope Loads For Space "1P-SALA DE CULINÁRIA" In Zone "1P-SALA DE CULINÁRIA"						
	Area	U-Value	Shade	COOLING	COOLING	HEATING
	(m²)	(W/(m²·K))	Coeff.	TRANS	SOLAR	TRANS
				(W)	(W)	(W)
SE EXPOSURE						
WALL	19	2,494	-	179	-	0
WINDOW 1	22	4,800	0,800	243	1178	0
NE EXPOSURE						
WALL	10	2,494	-	296	-	0
WINDOW 1	5	4,800	0,800	55	674	0

## Space Design Load Summary for VRF-1PAV

Project Name: REFORMA E AMPLIAÇÃO - SESC - DOCA  
Prepared by:

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TABLE 11.1.A. Component Loads For Space "1P-SALA REUNIÃO" In Zone "1P-SALA REUNIÃO"						
	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500 COOLING OA DB / WB 27,8 °C / 22,2 °C OCCUPIED T-STAT 24,0 °C			HEATING DATA AT DES HTG HEATING OA DB / WB 22,2 °C / 15,6 °C OCCUPIED T-STAT 21,1 °C		
		Sensible	Latent		Sensible	Latent
SPACE LOADS	Details	(W)	(W)	Details	(W)	(W)
Window & Skylight Solar Loads	5 m²	268	-	5 m²	-	-
Wall Transmission	8 m²	79	-	8 m²	0	-
Roof Transmission	0 m²	0	-	0 m²	0	-
Window Transmission	5 m²	55	-	5 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	0 m²	0	-	0 m²	0	-
Ceiling	13 m²	108	-	13 m²	0	-
Overhead Lighting	458 W	379	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	400 W	369	-	0	0	-
People	16	903	962	0	0	0
Infiltration	-	346	390	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	125	68	0%	0	0
>> Total Zone Loads	-	2633	1419	-	0	0

TABLE 11.1.B. Envelope Loads For Space "1P-SALA REUNIÃO" In Zone "1P-SALA REUNIÃO"						
	Area	U-Value	Shade	COOLING	COOLING	HEATING
	(m²)	(W/(m²·K))	Coeff.	TRANS	SOLAR	TRANS
SE EXPOSURE				(W)	(W)	(W)
WALL	8	2,494	-	79	-	0
WINDOW 1	5	4,800	0,800	55	268	0

## Space Design Load Summary for VRF-1PAV

Project Name: REFORMA E AMPLIAÇÃO - SESC - DOCA  
Prepared by:

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TABLE 12.1.A. Component Loads For Space "1P-SALA TÉCNICOS" In Zone "1P-SALA TÉCNICOS"						
	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500 COOLING OA DB / WB 27,8 °C / 22,2 °C OCCUPIED T-STAT 24,0 °C			HEATING DATA AT DES HTG HEATING OA DB / WB 22,2 °C / 15,6 °C OCCUPIED T-STAT 21,1 °C		
		Sensible	Latent		Sensible	Latent
SPACE LOADS	Details	(W)	(W)	Details	(W)	(W)
Window & Skylight Solar Loads	5 m²	674	-	5 m²	-	-
Wall Transmission	8 m²	239	-	8 m²	0	-
Roof Transmission	0 m²	0	-	0 m²	0	-
Window Transmission	5 m²	55	-	5 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	0 m²	0	-	0 m²	0	-
Ceiling	13 m²	109	-	13 m²	0	-
Overhead Lighting	462 W	383	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	450 W	416	-	0	0	-
People	3	169	180	0	0	0
Infiltration	-	137	277	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	109	23	0%	0	0
>> Total Zone Loads	-	2291	481	-	0	0

TABLE 12.1.B. Envelope Loads For Space "1P-SALA TÉCNICOS" In Zone "1P-SALA TÉCNICOS"						
	Area	U-Value	Shade	COOLING	COOLING	HEATING
	(m²)	(W/(m²·K))	Coeff.	TRANS	SOLAR	TRANS
				(W)	(W)	(W)
NE EXPOSURE						
WALL	8	2,494	-	239	-	0
WINDOW 1	5	4,800	0,800	55	674	0



## Zone Sizing Summary for VRF-2PAV

Project Name: REFORMA E AMPLIAÇÃO - SESC - DOCA  
Prepared by:

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### Air System Information

Air System Name ..... VRF-2PAV  
Equipment Class ..... TERM  
Air System Type ..... VRF

Number of zones ..... 17  
Floor Area ..... 529,0 m<sup>2</sup>  
Location ..... Belem, Brazil

### Sizing Calculation Information

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

Zone L/s Sizing ..... Sum of space airflow rates  
Space L/s Sizing ..... Individual peak space loads

### Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5,6 K (L/s)	Time of Peak Coil Load	Zone L/(s.m²)
2P-ASSIST. MÉDICO	1,0	0,7	24,9 / 18,5	12,3 / 11,7	-	Feb 1500	6,61
2P-AUDITÓRIO	12,4	9,6	24,8 / 17,7	12,3 / 11,7	-	Feb 1600	11,28
2P-BIBLIOTECA	21,2	16,0	25,2 / 17,9	12,0 / 11,4	-	Jan 1100	9,53
2P-CONSULTÓRIO 01 A 04	10,6	6,8	24,9 / 18,9	12,0 / 11,5	-	Feb 0700	4,88
2P-COORD. BIBLIOTECA	4,7	3,7	25,1 / 17,7	12,0 / 11,3	-	Dec 1000	11,97
2P-COORDENAÇÃO	2,0	1,4	24,7 / 18,4	12,2 / 11,7	-	Feb 1600	6,48
2P-ENDODONTIA 5	4,0	3,2	24,9 / 17,5	12,0 / 11,3	-	Dec 1000	13,36
2P-HIGIENE BUCAL	8,8	6,9	25,3 / 17,7	12,0 / 11,3	-	Dec 1100	11,87
2P-MASSOTERAPIA	7,0	5,8	25,0 / 17,7	12,9 / 12,2	-	Apr 1600	14,37
2P-MÉDICO DO TRABALHO	3,2	2,6	25,2 / 17,5	12,0 / 11,3	-	Dec 1000	14,53
2P-PRÓTESE	1,6	1,3	24,9 / 18,0	13,0 / 12,4	-	Feb 1700	11,87
2P-RAIO X	1,6	1,3	24,8 / 17,9	12,9 / 12,3	-	Feb 1700	12,29
2P-SALA ESPERA	10,5	7,7	24,9 / 18,1	12,3 / 11,7	-	Feb 1600	8,52
2P-SALA LIVRE	5,1	3,7	24,8 / 18,0	12,0 / 11,4	-	Feb 1500	8,24
2P-TÉNICOS DE PROM	5,0	3,7	24,8 / 18,0	12,0 / 11,4	-	Feb 1500	8,38
2P-EST. LIMPO	1,5	1,2	24,9 / 17,8	12,9 / 12,3	-	Mar 1700	12,79
2P-EST. SUJO	1,8	1,4	24,6 / 17,7	12,2 / 11,6	-	Mar 1700	10,46

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

Zone Name	Heating Coil Load (kW)	Heating Coil Ent/Lvg DB (°C)	Htg Coil Water Flow @11,1 K (L/s)	Fan Design Airflow (L/s)	Fan Motor (BHP)	Fan Motor (kW)	OA Vent Design Airflow (L/s)
2P-ASSIST. MÉDICO	0,0	-17,8 / -17,8	0,00	47	0,000	0,000	0
2P-AUDITÓRIO	0,0	-17,8 / -17,8	0,00	639	0,000	0,000	0
2P-BIBLIOTECA	0,0	-17,8 / -17,8	0,00	1006	0,000	0,000	0
2P-CONSULTÓRIO 01 A 04	0,0	-17,8 / -17,8	0,00	436	0,000	0,000	0
2P-COORD. BIBLIOTECA	0,0	-17,8 / -17,8	0,00	232	0,000	0,000	0
2P-COORDENAÇÃO	0,0	-17,8 / -17,8	0,00	92	0,000	0,000	0
2P-ENDODONTIA 5	0,0	-17,8 / -17,8	0,00	204	0,000	0,000	0
2P-HIGIENE BUCAL	0,0	-17,8 / -17,8	0,00	431	0,000	0,000	0
2P-MASSOTERAPIA	0,0	-17,8 / -17,8	0,00	395	0,000	0,000	0
2P-MÉDICO DO TRABALHO	0,0	-17,8 / -17,8	0,00	166	0,000	0,000	0
2P-PRÓTESE	0,0	-17,8 / -17,8	0,00	89	0,000	0,000	0
2P-RAIO X	0,0	-17,8 / -17,8	0,00	88	0,000	0,000	0
2P-SALA ESPERA	0,0	-17,8 / -17,8	0,00	504	0,000	0,000	0
2P-SALA LIVRE	0,0	-17,8 / -17,8	0,00	238	0,000	0,000	0
2P-TÉNICOS DE PROM	0,0	-17,8 / -17,8	0,00	237	0,000	0,000	0
2P-EST. LIMPO	0,0	-17,8 / -17,8	0,00	83	0,000	0,000	0
2P-EST. SUJO	0,0	-17,8 / -17,8	0,00	91	0,000	0,000	0

### VRF Outdoor Unit Sizing Data

	Cooling [kW]	Heating [kW]
Peak Coincident Indoor Unit Loads	97,5	0,0
Estimated Piping / Line Losses	0,0	0,0

## Zone Sizing Summary for VRF-2PAV

Project Name: REFORMA E AMPLIAÇÃO - SESC - DOCA  
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<b>Total Required ODU Capacity</b>	97,5	0,0
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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 (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (m²)
2P-ASSIST. MÉDICO	0,7	Feb 1700	0,0	7,1
2P-AUDITÓRIO	9,2	Feb 1500	0,0	56,6
2P-BIBLIOTECA	14,5	Jan 1500	0,0	105,6
2P-CONSULTÓRIO 01 A 04	6,3	Feb 1700	0,0	89,3
2P-COORD. BIBLIOTECA	3,4	Dec 1100	0,0	19,4
2P-COORDENAÇÃO	1,3	Feb 1700	0,0	14,2
2P-ENDODONTIA 5	3,0	Jan 1700	0,0	15,3
2P-HIGIENE BUCAL	6,2	Dec 1200	0,0	36,3
2P-MASSOTERAPIA	5,7	Apr 1600	0,0	27,5
2P-MÉDICO DO TRABALHO	2,4	Dec 1100	0,0	11,4
2P-PRÓTESE	1,3	Mar 1700	0,0	7,5
2P-RAIO X	1,3	Mar 1700	0,0	7,2
2P-SALA ESPERA	7,3	Feb 1600	0,0	59,2
2P-SALA LIVRE	3,4	Mar 1500	0,0	28,9
2P-TÉNICOS DE PROM	3,4	Mar 1500	0,0	28,3
2P-EST. LIMPO	1,2	Apr 1700	0,0	6,5
2P-EST. SUJO	1,3	Apr 1700	0,0	8,7

### Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m²)	Space L/(s·m²)
<b>2P-ASSIST. MÉDICO</b>							
2P-ASSIST. MÉDICO	1	0,7	Feb 1700	47	0,0	7,1	6,61
<b>2P-AUDITÓRIO</b>							
2P-AUDITÓRIO	1	9,2	Feb 1500	639	0,0	56,6	11,28
<b>2P-BIBLIOTECA</b>							
2P-BIBLIOTECA	1	14,5	Jan 1500	1006	0,0	105,6	9,53
<b>2P-CONSULTÓRIO 01 A 04</b>							
2P-CONSULTORIO 01 A 04	1	6,3	Feb 1700	436	0,0	89,3	4,88
<b>2P-COORD. BIBLIOTECA</b>							
2P-COORD. BIBLIOTECA	1	3,4	Dec 1100	232	0,0	19,4	11,97
<b>2P-COORDENAÇÃO</b>							
2P-COORDENAÇÃO	1	1,3	Feb 1700	92	0,0	14,2	6,48
<b>2P-ENDODONTIA 5</b>							
2P-ENDODONTIA 5	1	3,0	Jan 1700	204	0,0	15,3	13,36
<b>2P-HIGIENE BUCAL</b>							
2P-HIGIENE BUCAL	1	6,2	Dec 1200	431	0,0	36,3	11,87
<b>2P-MASSOTERAPIA</b>							
2P-MASSOTERAPIA	1	5,7	Apr 1600	395	0,0	27,5	14,37
<b>2P-MÉDICO DO TRABALHO</b>							
2P-MÉDICO DO TRABALHO	1	2,4	Dec 1100	166	0,0	11,4	14,53
<b>2P-PRÓTESE</b>							
2P-PRÓTESE	1	1,3	Mar 1700	89	0,0	7,5	11,87
<b>2P-RAIO X</b>							
2P-RAIO X	1	1,3	Mar 1700	88	0,0	7,2	12,29
<b>2P-SALA ESPERA</b>							
2P-SALA ESPERA	1	7,3	Feb 1600	504	0,0	59,2	8,52
<b>2P-SALA LIVRE</b>							
2P-SALA LIVRE	1	3,4	Mar 1500	238	0,0	28,9	8,24
<b>2P-TÉNICOS DE PROM</b>							

## Zone Sizing Summary for VRF-2PAV

Project Name: REFORMA E AMPLIAÇÃO - SESC - DOCA  
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Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m²)	Space L/(s·m²)
2P-TÉCNICOS DE PROM. E S	1	3,4	Mar 1500	237	0,0	28,3	8,38
<b>2P-EST. LIMPO</b>							
2P-EST. LIMPO	1	1,2	Apr 1700	83	0,0	6,5	12,79
<b>2P-EST. SUJO</b>							
2P-EST. SUJO	1	1,3	Apr 1700	91	0,0	8,7	10,46

## Air System Design Load Summary for VRF-2PAV

Project Name: REFORMA E AMPLIAÇÃO - SESC - DOCA  
Prepared by:

04/09/2019  
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	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500			HEATING DATA AT DES HTG		
	COOLING OA DB / WB 27,8 °C / 22,2 °C			HEATING OA DB / WB 22,2 °C / 15,6 °C		
ZONE LOADS	Details	Sensible (W)	Latent (W)	Details	Sensible (W)	Latent (W)
Window & Skylight Solar Loads	132 m²	14677	-	132 m²	-	-
Wall Transmission	149 m²	2320	-	149 m²	0	-
Roof Transmission	529 m²	2297	-	529 m²	0	-
Window Transmission	132 m²	1460	-	132 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	0 m²	0	-	0 m²	0	-
Ceiling	335 m²	2714	-	335 m²	0	-
Overhead Lighting	8464 W	7016	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	7800 W	7205	-	0	0	-
People	118	6420	5349	0	0	0
Infiltration	-	3942	7217	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	2403	628	0%	0	0
>> Total Zone Loads	-	50453	13194	-	0	0
Zone Conditioning	-	50628	13194	-	0	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 L/s	0	-	0 L/s	0	-
Ventilation Load	0 L/s	0	0	0 L/s	0	0
Ventilation Fan Load	0 L/s	0	-	0 L/s	0	-
Space Fan Coil Fans	-	0	-	-	0	-
Duct Heat Gain / Loss	0%	0	-	0%	0	-
>> Total System Loads	-	50628	13194	-	0	0
Terminal Unit Cooling	-	50628	12833	-	0	0
Terminal Unit Heating	-	0	-	-	0	-
>> Total Conditioning	-	50628	12833	-	0	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 VRF-2PAV

Project Name: REFORMA E AMPLIAÇÃO - SESC - DOCA  
Prepared by:

04/09/2019  
03:41

2P-ASSIST. MÉDICO	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500			HEATING DATA AT DES HTG		
	COOLING OA DB / WB 27,8 °C / 22,2 °C			HEATING OA DB / WB 22,2 °C / 15,6 °C		
	OCCUPIED T-STAT 24,0 °C			OCCUPIED T-STAT 21,1 °C		
ZONE LOADS	Details	Sensible (W)	Latent (W)	Details	Sensible (W)	Latent (W)
Window & Skylight Solar Loads	0 m²	0	-	0 m²	-	-
Wall Transmission	0 m²	0	-	0 m²	0	-
Roof Transmission	7 m²	31	-	7 m²	0	-
Window Transmission	0 m²	0	-	0 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	0 m²	0	-	0 m²	0	-
Ceiling	0 m²	0	-	0 m²	0	-
Overhead Lighting	114 W	94	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	200 W	185	-	0	0	-
People	2	113	120	0	0	0
Infiltration	-	68	132	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	25	13	0%	0	0
>> Total Zone Loads	-	515	265	-	0	0

2P-AUDITÓRIO	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500			HEATING DATA AT DES HTG		
	COOLING OA DB / WB 27,8 °C / 22,2 °C			HEATING OA DB / WB 22,2 °C / 15,6 °C		
	OCCUPIED T-STAT 24,0 °C			OCCUPIED T-STAT 21,1 °C		
ZONE LOADS	Details	Sensible (W)	Latent (W)	Details	Sensible (W)	Latent (W)
Window & Skylight Solar Loads	16 m²	2155	-	16 m²	-	-
Wall Transmission	10 m²	293	-	10 m²	0	-
Roof Transmission	57 m²	246	-	57 m²	0	-
Window Transmission	16 m²	177	-	16 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	0 m²	0	-	0 m²	0	-
Ceiling	26 m²	213	-	26 m²	0	-
Overhead Lighting	906 W	751	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	800 W	739	-	0	0	-
People	38	2014	1338	0	0	0
Infiltration	-	815	2113	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	370	173	0%	0	0
>> Total Zone Loads	-	7773	3623	-	0	0

## Zone Design Load Summary for VRF-2PAV

Project Name: REFORMA E AMPLIAÇÃO - SESC - DOCA  
Prepared by:

04/09/2019  
03:41

2P-BIBLIOTECA	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500			HEATING DATA AT DES HTG		
	COOLING OA DB / WB 27,8 °C / 22,2 °C			HEATING OA DB / WB 22,2 °C / 15,6 °C		
	OCCUPIED T-STAT 24,0 °C			OCCUPIED T-STAT 21,1 °C		
ZONE LOADS	Details	Sensible (W)	Latent (W)	Details	Sensible (W)	Latent (W)
Window & Skylight Solar Loads	34 m²	2551	-	34 m²	-	-
Wall Transmission	32 m²	428	-	32 m²	0	-
Roof Transmission	106 m²	459	-	106 m²	0	-
Window Transmission	34 m²	376	-	34 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	0 m²	0	-	0 m²	0	-
Ceiling	35 m²	284	-	35 m²	0	-
Overhead Lighting	1690 W	1401	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	900 W	831	-	0	0	-
People	22	1166	774	0	0	0
Infiltration	-	719	883	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	411	83	0%	0	0
>> Total Zone Loads	-	8625	1740	-	0	0

2P-CONSULTÓRIO 01 A 04	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500			HEATING DATA AT DES HTG		
	COOLING OA DB / WB 27,8 °C / 22,2 °C			HEATING OA DB / WB 22,2 °C / 15,6 °C		
	OCCUPIED T-STAT 24,0 °C			OCCUPIED T-STAT 21,1 °C		
ZONE LOADS	Details	Sensible (W)	Latent (W)	Details	Sensible (W)	Latent (W)
Window & Skylight Solar Loads	0 m²	0	-	0 m²	-	-
Wall Transmission	0 m²	0	-	0 m²	0	-
Roof Transmission	89 m²	388	-	89 m²	0	-
Window Transmission	0 m²	0	-	0 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	0 m²	0	-	0 m²	0	-
Ceiling	85 m²	690	-	85 m²	0	-
Overhead Lighting	1429 W	1184	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	1200 W	1108	-	0	0	-
People	8	452	481	0	0	0
Infiltration	-	533	702	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	218	59	0%	0	0
>> Total Zone Loads	-	4573	1242	-	0	0

## Zone Design Load Summary for VRF-2PAV

Project Name: REFORMA E AMPLIAÇÃO - SESC - DOCA  
Prepared by:

04/09/2019  
03:41

2P-COORD. BIBLIOTECA	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500			HEATING DATA AT DES HTG		
	COOLING OA DB / WB 27,8 °C / 22,2 °C			HEATING OA DB / WB 22,2 °C / 15,6 °C		
	OCCUPIED T-STAT 24,0 °C			OCCUPIED T-STAT 21,1 °C		
ZONE LOADS	Details	Sensible (W)	Latent (W)	Details	Sensible (W)	Latent (W)
Window & Skylight Solar Loads	6 m²	321	-	6 m²	-	-
Wall Transmission	3 m²	31	-	3 m²	0	-
Roof Transmission	19 m²	84	-	19 m²	0	-
Window Transmission	6 m²	66	-	6 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	0 m²	0	-	0 m²	0	-
Ceiling	24 m²	195	-	24 m²	0	-
Overhead Lighting	310 W	257	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	600 W	554	-	0	0	-
People	5	282	301	0	0	0
Infiltration	-	137	161	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	96	23	0%	0	0
>> Total Zone Loads	-	2025	484	-	0	0

2P-COORDENAÇÃO	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500			HEATING DATA AT DES HTG		
	COOLING OA DB / WB 27,8 °C / 22,2 °C			HEATING OA DB / WB 22,2 °C / 15,6 °C		
	OCCUPIED T-STAT 24,0 °C			OCCUPIED T-STAT 21,1 °C		
ZONE LOADS	Details	Sensible (W)	Latent (W)	Details	Sensible (W)	Latent (W)
Window & Skylight Solar Loads	0 m²	0	-	0 m²	-	-
Wall Transmission	0 m²	0	-	0 m²	0	-
Roof Transmission	14 m²	62	-	14 m²	0	-
Window Transmission	0 m²	0	-	0 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	0 m²	0	-	0 m²	0	-
Ceiling	20 m²	162	-	20 m²	0	-
Overhead Lighting	227 W	188	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	300 W	277	-	0	0	-
People	3	169	180	0	0	0
Infiltration	-	105	175	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	48	18	0%	0	0
>> Total Zone Loads	-	1012	373	-	0	0

## Zone Design Load Summary for VRF-2PAV

Project Name: REFORMA E AMPLIAÇÃO - SESC - DOCA  
Prepared by:

04/09/2019  
03:41

2P-ENDODONTIA 5	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500			HEATING DATA AT DES HTG		
	COOLING OA DB / WB 27,8 °C / 22,2 °C			HEATING OA DB / WB 22,2 °C / 15,6 °C		
	OCCUPIED T-STAT 24,0 °C			OCCUPIED T-STAT 21,1 °C		
ZONE LOADS	Details	Sensible (W)	Latent (W)	Details	Sensible (W)	Latent (W)
Window & Skylight Solar Loads	6 m²	321	-	6 m²	-	-
Wall Transmission	15 m²	107	-	15 m²	0	-
Roof Transmission	15 m²	66	-	15 m²	0	-
Window Transmission	6 m²	66	-	6 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	0 m²	0	-	0 m²	0	-
Ceiling	0 m²	0	-	0 m²	0	-
Overhead Lighting	245 W	203	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	300 W	277	-	0	0	-
People	2	113	120	0	0	0
Infiltration	-	105	58	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	63	9	0%	0	0
>> Total Zone Loads	-	1322	187	-	0	0

2P-HIGIENE BUCAL	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500			HEATING DATA AT DES HTG		
	COOLING OA DB / WB 27,8 °C / 22,2 °C			HEATING OA DB / WB 22,2 °C / 15,6 °C		
	OCCUPIED T-STAT 24,0 °C			OCCUPIED T-STAT 21,1 °C		
ZONE LOADS	Details	Sensible (W)	Latent (W)	Details	Sensible (W)	Latent (W)
Window & Skylight Solar Loads	14 m²	749	-	14 m²	-	-
Wall Transmission	34 m²	319	-	34 m²	0	-
Roof Transmission	36 m²	158	-	36 m²	0	-
Window Transmission	14 m²	155	-	14 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	0 m²	0	-	0 m²	0	-
Ceiling	0 m²	0	-	0 m²	0	-
Overhead Lighting	581 W	481	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	0 W	0	-	0	0	-
People	2	113	120	0	0	0
Infiltration	-	246	39	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	111	8	0%	0	0
>> Total Zone Loads	-	2333	167	-	0	0



## Zone Design Load Summary for VRF-2PAV

Project Name: REFORMA E AMPLIAÇÃO - SESC - DOCA  
Prepared by:

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2P-MASSOTERAPIA	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500			HEATING DATA AT DES HTG		
	COOLING OA DB / WB 27,8 °C / 22,2 °C			HEATING OA DB / WB 22,2 °C / 15,6 °C		
	OCCUPIED T-STAT 24,0 °C			OCCUPIED T-STAT 21,1 °C		
ZONE LOADS	Details	Sensible (W)	Latent (W)	Details	Sensible (W)	Latent (W)
Window & Skylight Solar Loads	12 m²	2478	-	12 m²	-	-
Wall Transmission	7 m²	141	-	7 m²	0	-
Roof Transmission	28 m²	119	-	28 m²	0	-
Window Transmission	12 m²	133	-	12 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	0 m²	0	-	0 m²	0	-
Ceiling	28 m²	227	-	28 m²	0	-
Overhead Lighting	440 W	365	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	600 W	554	-	0	0	-
People	10	530	352	0	0	0
Infiltration	-	214	629	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	238	49	0%	0	0
>> Total Zone Loads	-	4999	1030	-	0	0

2P-MÉDICO DO TRABALHO	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500			HEATING DATA AT DES HTG		
	COOLING OA DB / WB 27,8 °C / 22,2 °C			HEATING OA DB / WB 22,2 °C / 15,6 °C		
	OCCUPIED T-STAT 24,0 °C			OCCUPIED T-STAT 21,1 °C		
ZONE LOADS	Details	Sensible (W)	Latent (W)	Details	Sensible (W)	Latent (W)
Window & Skylight Solar Loads	6 m²	321	-	6 m²	-	-
Wall Transmission	3 m²	29	-	3 m²	0	-
Roof Transmission	11 m²	50	-	11 m²	0	-
Window Transmission	6 m²	66	-	6 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	0 m²	0	-	0 m²	0	-
Ceiling	9 m²	74	-	9 m²	0	-
Overhead Lighting	182 W	151	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	200 W	185	-	0	0	-
People	2	113	120	0	0	0
Infiltration	-	77	63	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	53	9	0%	0	0
>> Total Zone Loads	-	1120	192	-	0	0

## Zone Design Load Summary for VRF-2PAV

Project Name: REFORMA E AMPLIAÇÃO - SESC - DOCA  
Prepared by:

04/09/2019  
03:41

2P-PRÓTESE	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500			HEATING DATA AT DES HTG		
	COOLING OA DB / WB 27,8 °C / 22,2 °C			HEATING OA DB / WB 22,2 °C / 15,6 °C		
	OCCUPIED T-STAT 24,0 °C			OCCUPIED T-STAT 21,1 °C		
ZONE LOADS	Details	Sensible (W)	Latent (W)	Details	Sensible (W)	Latent (W)
Window & Skylight Solar Loads	1 m²	206	-	1 m²	-	-
Wall Transmission	8 m²	170	-	8 m²	0	-
Roof Transmission	8 m²	33	-	8 m²	0	-
Window Transmission	1 m²	11	-	1 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	0 m²	0	-	0 m²	0	-
Ceiling	9 m²	73	-	9 m²	0	-
Overhead Lighting	120 W	99	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	200 W	185	-	0	0	-
People	2	113	120	0	0	0
Infiltration	-	68	153	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	48	14	0%	0	0
>> Total Zone Loads	-	1007	287	-	0	0

2P-RAIO X	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500			HEATING DATA AT DES HTG		
	COOLING OA DB / WB 27,8 °C / 22,2 °C			HEATING OA DB / WB 22,2 °C / 15,6 °C		
	OCCUPIED T-STAT 24,0 °C			OCCUPIED T-STAT 21,1 °C		
ZONE LOADS	Details	Sensible (W)	Latent (W)	Details	Sensible (W)	Latent (W)
Window & Skylight Solar Loads	1 m²	206	-	1 m²	-	-
Wall Transmission	8 m²	170	-	8 m²	0	-
Roof Transmission	7 m²	31	-	7 m²	0	-
Window Transmission	1 m²	11	-	1 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	0 m²	0	-	0 m²	0	-
Ceiling	9 m²	73	-	9 m²	0	-
Overhead Lighting	115 W	95	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	200 W	185	-	0	0	-
People	2	113	120	0	0	0
Infiltration	-	68	148	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	48	13	0%	0	0
>> Total Zone Loads	-	1001	282	-	0	0

## Zone Design Load Summary for VRF-2PAV

Project Name: REFORMA E AMPLIAÇÃO - SESC - DOCA  
Prepared by:

04/09/2019  
03:41

2P-SALA ESPERA	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500			HEATING DATA AT DES HTG		
	COOLING OA DB / WB 27,8 °C / 22,2 °C			HEATING OA DB / WB 22,2 °C / 15,6 °C		
	OCCUPIED T-STAT 24,0 °C			OCCUPIED T-STAT 21,1 °C		
ZONE LOADS	Details	Sensible (W)	Latent (W)	Details	Sensible (W)	Latent (W)
Window & Skylight Solar Loads	18 m²	2799	-	18 m²	-	-
Wall Transmission	10 m²	170	-	10 m²	0	-
Roof Transmission	59 m²	257	-	59 m²	0	-
Window Transmission	18 m²	199	-	18 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	0 m²	0	-	0 m²	0	-
Ceiling	20 m²	162	-	20 m²	0	-
Overhead Lighting	947 W	785	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	300 W	277	-	0	0	-
People	10	565	601	0	0	0
Infiltration	-	405	982	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	281	79	0%	0	0
>> Total Zone Loads	-	5900	1662	-	0	0

2P-SALA LIVRE	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500			HEATING DATA AT DES HTG		
	COOLING OA DB / WB 27,8 °C / 22,2 °C			HEATING OA DB / WB 22,2 °C / 15,6 °C		
	OCCUPIED T-STAT 24,0 °C			OCCUPIED T-STAT 21,1 °C		
ZONE LOADS	Details	Sensible (W)	Latent (W)	Details	Sensible (W)	Latent (W)
Window & Skylight Solar Loads	8 m²	1078	-	8 m²	-	-
Wall Transmission	5 m²	142	-	5 m²	0	-
Roof Transmission	29 m²	125	-	29 m²	0	-
Window Transmission	8 m²	89	-	8 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	0 m²	0	-	0 m²	0	-
Ceiling	13 m²	105	-	13 m²	0	-
Overhead Lighting	462 W	383	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	600 W	554	-	0	0	-
People	4	226	240	0	0	0
Infiltration	-	191	488	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	145	36	0%	0	0
>> Total Zone Loads	-	3039	764	-	0	0

## Zone Design Load Summary for VRF-2PAV

Project Name: REFORMA E AMPLIAÇÃO - SESC - DOCA  
Prepared by:

04/09/2019  
03:41

2P-TÉNICOS DE PROM	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500			HEATING DATA AT DES HTG		
	COOLING OA DB / WB 27,8 °C / 22,2 °C			HEATING OA DB / WB 22,2 °C / 15,6 °C		
	OCCUPIED T-STAT 24,0 °C			OCCUPIED T-STAT 21,1 °C		
ZONE LOADS	Details	Sensible (W)	Latent (W)	Details	Sensible (W)	Latent (W)
Window & Skylight Solar Loads	8 m²	1078	-	8 m²	-	-
Wall Transmission	5 m²	142	-	5 m²	0	-
Roof Transmission	28 m²	123	-	28 m²	0	-
Window Transmission	8 m²	89	-	8 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	0 m²	0	-	0 m²	0	-
Ceiling	13 m²	105	-	13 m²	0	-
Overhead Lighting	453 W	375	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	600 W	554	-	0	0	-
People	4	226	240	0	0	0
Infiltration	-	191	491	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	144	37	0%	0	0
>> Total Zone Loads	-	3028	768	-	0	0

2P-EST. LIMPO	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500			HEATING DATA AT DES HTG		
	COOLING OA DB / WB 27,8 °C / 22,2 °C			HEATING OA DB / WB 22,2 °C / 15,6 °C		
	OCCUPIED T-STAT 24,0 °C			OCCUPIED T-STAT 21,1 °C		
ZONE LOADS	Details	Sensible (W)	Latent (W)	Details	Sensible (W)	Latent (W)
Window & Skylight Solar Loads	1 m²	206	-	1 m²	-	-
Wall Transmission	4 m²	73	-	4 m²	0	-
Roof Transmission	7 m²	28	-	7 m²	0	-
Window Transmission	1 m²	11	-	1 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	0 m²	0	-	0 m²	0	-
Ceiling	22 m²	175	-	22 m²	0	-
Overhead Lighting	104 W	86	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	400 W	369	-	0	0	-
People	1	56	60	0	0	0
Infiltration	-	0	0	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	50	3	0%	0	0
>> Total Zone Loads	-	1056	63	-	0	0

## Zone Design Load Summary for VRF-2PAV

Project Name: REFORMA E AMPLIAÇÃO - SESC - DOCA  
Prepared by:

04/09/2019  
03:41

2P-EST. SUJO	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500			HEATING DATA AT DES HTG		
	COOLING OA DB / WB 27,8 °C / 22,2 °C			HEATING OA DB / WB 22,2 °C / 15,6 °C		
	OCCUPIED T-STAT 24,0 °C			OCCUPIED T-STAT 21,1 °C		
ZONE LOADS	Details	Sensible (W)	Latent (W)	Details	Sensible (W)	Latent (W)
Window & Skylight Solar Loads	1 m²	206	-	1 m²	-	-
Wall Transmission	5 m²	102	-	5 m²	0	-
Roof Transmission	9 m²	38	-	9 m²	0	-
Window Transmission	1 m²	11	-	1 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	0 m²	0	-	0 m²	0	-
Ceiling	22 m²	175	-	22 m²	0	-
Overhead Lighting	139 W	115	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	400 W	369	-	0	0	-
People	1	56	60	0	0	0
Infiltration	-	0	0	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	54	3	0%	0	0
>> Total Zone Loads	-	1127	63	-	0	0

## Space Design Load Summary for VRF-2PAV

Project Name: REFORMA E AMPLIAÇÃO - SESC - DOCA  
Prepared by:

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03:41

TABLE 1.1.A. Component Loads For Space "2P-ASSIST. MÉDICO" In Zone "2P-ASSIST. MÉDICO"						
	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500 COOLING OA DB / WB 27,8 °C / 22,2 °C OCCUPIED T-STAT 24,0 °C			HEATING DATA AT DES HTG HEATING OA DB / WB 22,2 °C / 15,6 °C OCCUPIED T-STAT 21,1 °C		
		Sensible	Latent		Sensible	Latent
SPACE LOADS	Details	(W)	(W)	Details	(W)	(W)
Window & Skylight Solar Loads	0 m²	0	-	0 m²	-	-
Wall Transmission	0 m²	0	-	0 m²	0	-
Roof Transmission	7 m²	31	-	7 m²	0	-
Window Transmission	0 m²	0	-	0 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	0 m²	0	-	0 m²	0	-
Ceiling	0 m²	0	-	0 m²	0	-
Overhead Lighting	114 W	94	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	200 W	185	-	0	0	-
People	2	113	120	0	0	0
Infiltration	-	68	132	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	25	13	0%	0	0
>> Total Zone Loads	-	515	265	-	0	0

TABLE 1.1.B. Envelope Loads For Space "2P-ASSIST. MÉDICO" In Zone "2P-ASSIST. MÉDICO"						
	Area	U-Value	Shade	COOLING	COOLING	HEATING
	(m²)	(W/(m².K))	Coeff.	TRANS	SOLAR	TRANS
H EXPOSURE				(W)	(W)	(W)
ROOF	7	0,842	-	31	-	0

## Space Design Load Summary for VRF-2PAV

Project Name: REFORMA E AMPLIAÇÃO - SESC - DOCA  
Prepared by:

04/09/2019  
03:41

TABLE 2.1.A. Component Loads For Space "2P-AUDITÓRIO" In Zone "2P-AUDITÓRIO"						
	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500 COOLING OA DB / WB 27,8 °C / 22,2 °C OCCUPIED T-STAT 24,0 °C			HEATING DATA AT DES HTG HEATING OA DB / WB 22,2 °C / 15,6 °C OCCUPIED T-STAT 21,1 °C		
		Sensible	Latent		Sensible	Latent
SPACE LOADS	Details	(W)	(W)	Details	(W)	(W)
Window & Skylight Solar Loads	16 m²	2155	-	16 m²	-	-
Wall Transmission	10 m²	293	-	10 m²	0	-
Roof Transmission	57 m²	246	-	57 m²	0	-
Window Transmission	16 m²	177	-	16 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	0 m²	0	-	0 m²	0	-
Ceiling	26 m²	213	-	26 m²	0	-
Overhead Lighting	906 W	751	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	800 W	739	-	0	0	-
People	38	2014	1338	0	0	0
Infiltration	-	815	2113	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	370	173	0%	0	0
>> Total Zone Loads	-	7773	3623	-	0	0

TABLE 2.1.B. Envelope Loads For Space "2P-AUDITÓRIO" In Zone "2P-AUDITÓRIO"						
	Area	U-Value	Shade	COOLING	COOLING	HEATING
	(m²)	(W/(m²·K))	Coeff.	TRANS	SOLAR	TRANS
				(W)	(W)	(W)
NE EXPOSURE						
WALL	10	2,494	-	293	-	0
WINDOW 1	16	4,800	0,800	177	2155	0
H EXPOSURE						
ROOF	57	0,842	-	246	-	0

## Space Design Load Summary for VRF-2PAV

Project Name: REFORMA E AMPLIAÇÃO - SESC - DOCA  
Prepared by:

04/09/2019  
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TABLE 3.1.A. Component Loads For Space "2P-BIBLIOTECA" In Zone "2P-BIBLIOTECA"						
	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500 COOLING OA DB / WB 27,8 °C / 22,2 °C OCCUPIED T-STAT 24,0 °C			HEATING DATA AT DES HTG HEATING OA DB / WB 22,2 °C / 15,6 °C OCCUPIED T-STAT 21,1 °C		
		Sensible	Latent		Sensible	Latent
SPACE LOADS	Details	(W)	(W)	Details	(W)	(W)
Window & Skylight Solar Loads	34 m²	2551	-	34 m²	-	-
Wall Transmission	32 m²	428	-	32 m²	0	-
Roof Transmission	106 m²	459	-	106 m²	0	-
Window Transmission	34 m²	376	-	34 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	0 m²	0	-	0 m²	0	-
Ceiling	35 m²	284	-	35 m²	0	-
Overhead Lighting	1690 W	1401	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	900 W	831	-	0	0	-
People	22	1166	774	0	0	0
Infiltration	-	719	883	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	411	83	0%	0	0
>> Total Zone Loads	-	8625	1740	-	0	0

TABLE 3.1.B. Envelope Loads For Space "2P-BIBLIOTECA" In Zone "2P-BIBLIOTECA"						
	Area	U-Value	Shade	COOLING	COOLING	HEATING
	(m²)	(W/(m²·K))	Coeff.	TRANS	SOLAR	TRANS
				(W)	(W)	(W)
SE EXPOSURE						
WALL	25	2,494	-	241	-	0
WINDOW 1	25	4,800	0,800	277	1338	0
NE EXPOSURE						
WALL	7	2,494	-	188	-	0
WINDOW 1	9	4,800	0,800	100	1212	0
H EXPOSURE						
ROOF	106	0,842	-	459	-	0



## Space Design Load Summary for VRF-2PAV

Project Name: REFORMA E AMPLIAÇÃO - SESC - DOCA  
Prepared by:

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03:41

TABLE 4.1.A. Component Loads For Space "2P-CONSULTORIO 01 A 04" In Zone "2P-CONSULTÓRIO 01 A 04"						
	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500 COOLING OA DB / WB 27,8 °C / 22,2 °C OCCUPIED T-STAT 24,0 °C			HEATING DATA AT DES HTG HEATING OA DB / WB 22,2 °C / 15,6 °C OCCUPIED T-STAT 21,1 °C		
		Sensible	Latent		Sensible	Latent
SPACE LOADS	Details	(W)	(W)	Details	(W)	(W)
Window & Skylight Solar Loads	0 m²	0	-	0 m²	-	-
Wall Transmission	0 m²	0	-	0 m²	0	-
Roof Transmission	89 m²	388	-	89 m²	0	-
Window Transmission	0 m²	0	-	0 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	0 m²	0	-	0 m²	0	-
Ceiling	85 m²	690	-	85 m²	0	-
Overhead Lighting	1429 W	1184	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	1200 W	1108	-	0	0	-
People	8	452	481	0	0	0
Infiltration	-	533	702	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	218	59	0%	0	0
>> Total Zone Loads	-	4573	1242	-	0	0

TABLE 4.1.B. Envelope Loads For Space "2P-CONSULTORIO 01 A 04" In Zone "2P-CONSULTÓRIO 01 A 04"						
	Area	U-Value	Shade	COOLING	COOLING	HEATING
	(m²)	(W/(m².K))	Coeff.	TRANS	SOLAR	TRANS
H EXPOSURE				(W)	(W)	(W)
ROOF	89	0,842	-	388	-	0

## Space Design Load Summary for VRF-2PAV

Project Name: REFORMA E AMPLIAÇÃO - SESC - DOCA  
Prepared by:

04/09/2019  
03:41

TABLE 5.1.A. Component Loads For Space "2P-COORD. BIBLIOTECA" In Zone "2P-COORD. BIBLIOTECA"						
	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500 COOLING OA DB / WB 27,8 °C / 22,2 °C OCCUPIED T-STAT 24,0 °C			HEATING DATA AT DES HTG HEATING OA DB / WB 22,2 °C / 15,6 °C OCCUPIED T-STAT 21,1 °C		
		Sensible	Latent		Sensible	Latent
SPACE LOADS	Details	(W)	(W)	Details	(W)	(W)
Window & Skylight Solar Loads	6 m²	321	-	6 m²	-	-
Wall Transmission	3 m²	31	-	3 m²	0	-
Roof Transmission	19 m²	84	-	19 m²	0	-
Window Transmission	6 m²	66	-	6 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	0 m²	0	-	0 m²	0	-
Ceiling	24 m²	195	-	24 m²	0	-
Overhead Lighting	310 W	257	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	600 W	554	-	0	0	-
People	5	282	301	0	0	0
Infiltration	-	137	161	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	96	23	0%	0	0
>> Total Zone Loads	-	2025	484	-	0	0

TABLE 5.1.B. Envelope Loads For Space "2P-COORD. BIBLIOTECA" In Zone "2P-COORD. BIBLIOTECA"						
	Area	U-Value	Shade	COOLING	COOLING	HEATING
	(m²)	(W/(m²·K))	Coeff.	TRANS	SOLAR	TRANS
				(W)	(W)	(W)
SE EXPOSURE						
WALL	3	2,494	-	31	-	0
WINDOW 1	6	4,800	0,800	66	321	0
H EXPOSURE						
ROOF	19	0,842	-	84	-	0

## Space Design Load Summary for VRF-2PAV

Project Name: REFORMA E AMPLIAÇÃO - SESC - DOCA  
Prepared by:

04/09/2019  
03:41

TABLE 6.1.A. Component Loads For Space "2P-COORDENAÇÃO" In Zone "2P-COORDENAÇÃO"						
	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500 COOLING OA DB / WB 27,8 °C / 22,2 °C OCCUPIED T-STAT 24,0 °C			HEATING DATA AT DES HTG HEATING OA DB / WB 22,2 °C / 15,6 °C OCCUPIED T-STAT 21,1 °C		
		Sensible	Latent		Sensible	Latent
SPACE LOADS	Details	(W)	(W)	Details	(W)	(W)
Window & Skylight Solar Loads	0 m²	0	-	0 m²	-	-
Wall Transmission	0 m²	0	-	0 m²	0	-
Roof Transmission	14 m²	62	-	14 m²	0	-
Window Transmission	0 m²	0	-	0 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	0 m²	0	-	0 m²	0	-
Ceiling	20 m²	162	-	20 m²	0	-
Overhead Lighting	227 W	188	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	300 W	277	-	0	0	-
People	3	169	180	0	0	0
Infiltration	-	105	175	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	48	18	0%	0	0
>> Total Zone Loads	-	1012	373	-	0	0

TABLE 6.1.B. Envelope Loads For Space "2P-COORDENAÇÃO" In Zone "2P-COORDENAÇÃO"						
	Area	U-Value	Shade	COOLING	COOLING	HEATING
	(m²)	(W/(m².K))	Coeff.	TRANS	SOLAR	TRANS
H EXPOSURE				(W)	(W)	(W)
ROOF	14	0,842	-	62	-	0

## Space Design Load Summary for VRF-2PAV

Project Name: REFORMA E AMPLIAÇÃO - SESC - DOCA  
Prepared by:

04/09/2019  
03:41

TABLE 7.1.A. Component Loads For Space "2P-ENDODONTIA 5" In Zone "2P-ENDODONTIA 5"						
	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500 COOLING OA DB / WB 27,8 °C / 22,2 °C OCCUPIED T-STAT 24,0 °C			HEATING DATA AT DES HTG HEATING OA DB / WB 22,2 °C / 15,6 °C OCCUPIED T-STAT 21,1 °C		
		Sensible	Latent		Sensible	Latent
SPACE LOADS	Details	(W)	(W)	Details	(W)	(W)
Window & Skylight Solar Loads	6 m²	321	-	6 m²	-	-
Wall Transmission	15 m²	107	-	15 m²	0	-
Roof Transmission	15 m²	66	-	15 m²	0	-
Window Transmission	6 m²	66	-	6 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	0 m²	0	-	0 m²	0	-
Ceiling	0 m²	0	-	0 m²	0	-
Overhead Lighting	245 W	203	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	300 W	277	-	0	0	-
People	2	113	120	0	0	0
Infiltration	-	105	58	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	63	9	0%	0	0
>> Total Zone Loads	-	1322	187	-	0	0

TABLE 7.1.B. Envelope Loads For Space "2P-ENDODONTIA 5" In Zone "2P-ENDODONTIA 5"						
	Area	U-Value	Shade	COOLING	COOLING	HEATING
	(m²)	(W/(m².K))	Coeff.	TRANS	SOLAR	TRANS
				(W)	(W)	(W)
SW EXPOSURE						
WALL	12	2,494	-	78	-	0
SE EXPOSURE						
WALL	3	2,494	-	29	-	0
WINDOW 1	6	4,800	0,800	66	321	0
H EXPOSURE						
ROOF	15	0,842	-	66	-	0

## Space Design Load Summary for VRF-2PAV

Project Name: REFORMA E AMPLIAÇÃO - SESC - DOCA  
Prepared by:

04/09/2019  
03:41

TABLE 8.1.A. Component Loads For Space "2P-HIGIENE BUCAL" In Zone "2P-HIGIENE BUCAL"						
	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500 COOLING OA DB / WB 27,8 °C / 22,2 °C OCCUPIED T-STAT 24,0 °C			HEATING DATA AT DES HTG HEATING OA DB / WB 22,2 °C / 15,6 °C OCCUPIED T-STAT 21,1 °C		
		Sensible	Latent		Sensible	Latent
SPACE LOADS	Details	(W)	(W)	Details	(W)	(W)
Window & Skylight Solar Loads	14 m²	749	-	14 m²	-	-
Wall Transmission	34 m²	319	-	34 m²	0	-
Roof Transmission	36 m²	158	-	36 m²	0	-
Window Transmission	14 m²	155	-	14 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	0 m²	0	-	0 m²	0	-
Ceiling	0 m²	0	-	0 m²	0	-
Overhead Lighting	581 W	481	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	0 W	0	-	0	0	-
People	2	113	120	0	0	0
Infiltration	-	246	39	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	111	8	0%	0	0
>> Total Zone Loads	-	2333	167	-	0	0

TABLE 8.1.B. Envelope Loads For Space "2P-HIGIENE BUCAL" In Zone "2P-HIGIENE BUCAL"						
	Area	U-Value	Shade	COOLING	COOLING	HEATING
	(m²)	(W/(m²·K))	Coeff.	TRANS	SOLAR	TRANS
				(W)	(W)	(W)
SE EXPOSURE						
WALL	34	2,494	-	319	-	0
WINDOW 1	14	4,800	0,800	155	749	0
H EXPOSURE						
ROOF	36	0,842	-	158	-	0

## Space Design Load Summary for VRF-2PAV

Project Name: REFORMA E AMPLIAÇÃO - SESC - DOCA  
Prepared by:

04/09/2019  
03:41

TABLE 9.1.A. Component Loads For Space "2P-MASSOTERAPIA" In Zone "2P-MASSOTERAPIA"						
	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500 COOLING OA DB / WB 27,8 °C / 22,2 °C OCCUPIED T-STAT 24,0 °C			HEATING DATA AT DES HTG HEATING OA DB / WB 22,2 °C / 15,6 °C OCCUPIED T-STAT 21,1 °C		
		Sensible	Latent		Sensible	Latent
SPACE LOADS	Details	(W)	(W)	Details	(W)	(W)
Window & Skylight Solar Loads	12 m²	2478	-	12 m²	-	-
Wall Transmission	7 m²	141	-	7 m²	0	-
Roof Transmission	28 m²	119	-	28 m²	0	-
Window Transmission	12 m²	133	-	12 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	0 m²	0	-	0 m²	0	-
Ceiling	28 m²	227	-	28 m²	0	-
Overhead Lighting	440 W	365	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	600 W	554	-	0	0	-
People	10	530	352	0	0	0
Infiltration	-	214	629	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	238	49	0%	0	0
>> Total Zone Loads	-	4999	1030	-	0	0

TABLE 9.1.B. Envelope Loads For Space "2P-MASSOTERAPIA" In Zone "2P-MASSOTERAPIA"						
	Area	U-Value	Shade	COOLING	COOLING	HEATING
	(m²)	(W/(m²·K))	Coeff.	TRANS	SOLAR	TRANS
				(W)	(W)	(W)
NW EXPOSURE						
WALL	7	2,494	-	141	-	0
WINDOW 1	12	4,800	0,800	133	2478	0
H EXPOSURE						
ROOF	28	0,842	-	119	-	0

## Space Design Load Summary for VRF-2PAV

Project Name: REFORMA E AMPLIAÇÃO - SESC - DOCA  
Prepared by:

04/09/2019  
03:41

TABLE 10.1.A. Component Loads For Space "2P-MÉDICO DO TRABALHO" In Zone "2P-MÉDICO DO TRABALHO"						
	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500 COOLING OA DB / WB 27,8 °C / 22,2 °C OCCUPIED T-STAT 24,0 °C			HEATING DATA AT DES HTG HEATING OA DB / WB 22,2 °C / 15,6 °C OCCUPIED T-STAT 21,1 °C		
		Sensible	Latent		Sensible	Latent
SPACE LOADS	Details	(W)	(W)	Details	(W)	(W)
Window & Skylight Solar Loads	6 m²	321	-	6 m²	-	-
Wall Transmission	3 m²	29	-	3 m²	0	-
Roof Transmission	11 m²	50	-	11 m²	0	-
Window Transmission	6 m²	66	-	6 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	0 m²	0	-	0 m²	0	-
Ceiling	9 m²	74	-	9 m²	0	-
Overhead Lighting	182 W	151	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	200 W	185	-	0	0	-
People	2	113	120	0	0	0
Infiltration	-	77	63	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	53	9	0%	0	0
>> Total Zone Loads	-	1120	192	-	0	0

TABLE 10.1.B. Envelope Loads For Space "2P-MÉDICO DO TRABALHO" In Zone "2P-MÉDICO DO TRABALHO"						
	Area	U-Value	Shade	COOLING	COOLING	HEATING
	(m²)	(W/(m²·K))	Coeff.	TRANS	SOLAR	TRANS
				(W)	(W)	(W)
SE EXPOSURE						
WALL	3	2,494	-	29	-	0
WINDOW 1	6	4,800	0,800	66	321	0
H EXPOSURE						
ROOF	11	0,842	-	50	-	0

## Space Design Load Summary for VRF-2PAV

Project Name: REFORMA E AMPLIAÇÃO - SESC - DOCA  
Prepared by:

04/09/2019  
03:41

TABLE 11.1.A. Component Loads For Space "2P-PRÓTESE" In Zone "2P-PRÓTESE"						
	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500 COOLING OA DB / WB 27,8 °C / 22,2 °C OCCUPIED T-STAT 24,0 °C			HEATING DATA AT DES HTG HEATING OA DB / WB 22,2 °C / 15,6 °C OCCUPIED T-STAT 21,1 °C		
		Sensible	Latent		Sensible	Latent
SPACE LOADS	Details	(W)	(W)	Details	(W)	(W)
Window & Skylight Solar Loads	1 m²	206	-	1 m²	-	-
Wall Transmission	8 m²	170	-	8 m²	0	-
Roof Transmission	8 m²	33	-	8 m²	0	-
Window Transmission	1 m²	11	-	1 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	0 m²	0	-	0 m²	0	-
Ceiling	9 m²	73	-	9 m²	0	-
Overhead Lighting	120 W	99	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	200 W	185	-	0	0	-
People	2	113	120	0	0	0
Infiltration	-	68	153	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	48	14	0%	0	0
>> Total Zone Loads	-	1007	287	-	0	0

TABLE 11.1.B. Envelope Loads For Space "2P-PRÓTESE" In Zone "2P-PRÓTESE"						
	Area	U-Value	Shade	COOLING	COOLING	HEATING
	(m²)	(W/(m²·K))	Coeff.	TRANS	SOLAR	TRANS
				(W)	(W)	(W)
NW EXPOSURE						
WALL	8	2,494	-	170	-	0
WINDOW 1	1	4,800	0,800	11	206	0
H EXPOSURE						
ROOF	8	0,842	-	33	-	0



## Space Design Load Summary for VRF-2PAV

Project Name: REFORMA E AMPLIAÇÃO - SESC - DOCA  
Prepared by:

04/09/2019  
03:41

TABLE 12.1.A. Component Loads For Space "2P-RAIO X" In Zone "2P-RAIO X"						
	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500 COOLING OA DB / WB 27,8 °C / 22,2 °C OCCUPIED T-STAT 24,0 °C			HEATING DATA AT DES HTG HEATING OA DB / WB 22,2 °C / 15,6 °C OCCUPIED T-STAT 21,1 °C		
		Sensible	Latent		Sensible	Latent
SPACE LOADS	Details	(W)	(W)	Details	(W)	(W)
Window & Skylight Solar Loads	1 m²	206	-	1 m²	-	-
Wall Transmission	8 m²	170	-	8 m²	0	-
Roof Transmission	7 m²	31	-	7 m²	0	-
Window Transmission	1 m²	11	-	1 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	0 m²	0	-	0 m²	0	-
Ceiling	9 m²	73	-	9 m²	0	-
Overhead Lighting	115 W	95	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	200 W	185	-	0	0	-
People	2	113	120	0	0	0
Infiltration	-	68	148	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	48	13	0%	0	0
>> Total Zone Loads	-	1001	282	-	0	0

TABLE 12.1.B. Envelope Loads For Space "2P-RAIO X" In Zone "2P-RAIO X"						
	Area	U-Value	Shade	COOLING	COOLING	HEATING
	(m²)	(W/(m²·K))	Coeff.	TRANS	SOLAR	TRANS
				(W)	(W)	(W)
NW EXPOSURE						
WALL	8	2,494	-	170	-	0
WINDOW 1	1	4,800	0,800	11	206	0
H EXPOSURE						
ROOF	7	0,842	-	31	-	0

## Space Design Load Summary for VRF-2PAV

Project Name: REFORMA E AMPLIAÇÃO - SESC - DOCA  
Prepared by:

04/09/2019  
03:41

TABLE 13.1.A. Component Loads For Space "2P-SALA ESPERA" In Zone "2P-SALA ESPERA"						
	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500 COOLING OA DB / WB 27,8 °C / 22,2 °C OCCUPIED T-STAT 24,0 °C			HEATING DATA AT DES HTG HEATING OA DB / WB 22,2 °C / 15,6 °C OCCUPIED T-STAT 21,1 °C		
		Sensible	Latent		Sensible	Latent
SPACE LOADS	Details	(W)	(W)	Details	(W)	(W)
Window & Skylight Solar Loads	18 m²	2799	-	18 m²	-	-
Wall Transmission	10 m²	170	-	10 m²	0	-
Roof Transmission	59 m²	257	-	59 m²	0	-
Window Transmission	18 m²	199	-	18 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	0 m²	0	-	0 m²	0	-
Ceiling	20 m²	162	-	20 m²	0	-
Overhead Lighting	947 W	785	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	300 W	277	-	0	0	-
People	10	565	601	0	0	0
Infiltration	-	405	982	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	281	79	0%	0	0
>> Total Zone Loads	-	5900	1662	-	0	0

TABLE 13.1.B. Envelope Loads For Space "2P-SALA ESPERA" In Zone "2P-SALA ESPERA"						
	Area	U-Value	Shade	COOLING	COOLING	HEATING
	(m²)	(W/(m²·K))	Coeff.	TRANS	SOLAR	TRANS
				(W)	(W)	(W)
NW EXPOSURE						
WALL	7	2,494	-	141	-	0
WINDOW 1	12	4,800	0,800	133	2478	0
SE EXPOSURE						
WALL	3	2,494	-	29	-	0
WINDOW 1	6	4,800	0,800	66	321	0
H EXPOSURE						
ROOF	59	0,842	-	257	-	0

## Space Design Load Summary for VRF-2PAV

Project Name: REFORMA E AMPLIAÇÃO - SESC - DOCA  
Prepared by:

04/09/2019  
03:41

TABLE 14.1.A. Component Loads For Space "2P-SALA LIVRE" In Zone "2P-SALA LIVRE"						
	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500 COOLING OA DB / WB 27,8 °C / 22,2 °C OCCUPIED T-STAT 24,0 °C			HEATING DATA AT DES HTG HEATING OA DB / WB 22,2 °C / 15,6 °C OCCUPIED T-STAT 21,1 °C		
		Sensible	Latent		Sensible	Latent
SPACE LOADS	Details	(W)	(W)	Details	(W)	(W)
Window & Skylight Solar Loads	8 m²	1078	-	8 m²	-	-
Wall Transmission	5 m²	142	-	5 m²	0	-
Roof Transmission	29 m²	125	-	29 m²	0	-
Window Transmission	8 m²	89	-	8 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	0 m²	0	-	0 m²	0	-
Ceiling	13 m²	105	-	13 m²	0	-
Overhead Lighting	462 W	383	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	600 W	554	-	0	0	-
People	4	226	240	0	0	0
Infiltration	-	191	488	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	145	36	0%	0	0
>> Total Zone Loads	-	3039	764	-	0	0

TABLE 14.1.B. Envelope Loads For Space "2P-SALA LIVRE" In Zone "2P-SALA LIVRE"						
	Area	U-Value	Shade	COOLING	COOLING	HEATING
	(m²)	(W/(m²·K))	Coeff.	TRANS	SOLAR	TRANS
				(W)	(W)	(W)
NE EXPOSURE						
WALL	5	2,494	-	142	-	0
WINDOW 1	8	4,800	0,800	89	1078	0
H EXPOSURE						
ROOF	29	0,842	-	125	-	0

## Space Design Load Summary for VRF-2PAV

Project Name: REFORMA E AMPLIAÇÃO - SESC - DOCA  
Prepared by:

04/09/2019  
03:41

TABLE 15.1.A. Component Loads For Space "2P-TÉCNICOS DE PROM. E S" In Zone "2P-TÉCNICOS DE PROM"						
	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500 COOLING OA DB / WB 27,8 °C / 22,2 °C OCCUPIED T-STAT 24,0 °C			HEATING DATA AT DES HTG HEATING OA DB / WB 22,2 °C / 15,6 °C OCCUPIED T-STAT 21,1 °C		
		Sensible	Latent		Sensible	Latent
SPACE LOADS	Details	(W)	(W)	Details	(W)	(W)
Window & Skylight Solar Loads	8 m²	1078	-	8 m²	-	-
Wall Transmission	5 m²	142	-	5 m²	0	-
Roof Transmission	28 m²	123	-	28 m²	0	-
Window Transmission	8 m²	89	-	8 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	0 m²	0	-	0 m²	0	-
Ceiling	13 m²	105	-	13 m²	0	-
Overhead Lighting	453 W	375	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	600 W	554	-	0	0	-
People	4	226	240	0	0	0
Infiltration	-	191	491	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	144	37	0%	0	0
>> Total Zone Loads	-	3028	768	-	0	0

TABLE 15.1.B. Envelope Loads For Space "2P-TÉCNICOS DE PROM. E S" In Zone "2P-TÉCNICOS DE PROM"						
	Area	U-Value	Shade	COOLING	COOLING	HEATING
	(m²)	(W/(m²·K))	Coeff.	TRANS	SOLAR	TRANS
				(W)	(W)	(W)
NE EXPOSURE						
WALL	5	2,494	-	142	-	0
WINDOW 1	8	4,800	0,800	89	1078	0
H EXPOSURE						
ROOF	28	0,842	-	123	-	0

## Space Design Load Summary for VRF-2PAV

Project Name: REFORMA E AMPLIAÇÃO - SESC - DOCA  
Prepared by:

04/09/2019  
03:41

TABLE 16.1.A. Component Loads For Space "2P-EST. LIMPO" In Zone "2P-EST. LIMPO"						
	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500 COOLING OA DB / WB 27,8 °C / 22,2 °C OCCUPIED T-STAT 24,0 °C			HEATING DATA AT DES HTG HEATING OA DB / WB 22,2 °C / 15,6 °C OCCUPIED T-STAT 21,1 °C		
		Sensible	Latent		Sensible	Latent
SPACE LOADS	Details	(W)	(W)	Details	(W)	(W)
Window & Skylight Solar Loads	1 m <sup>2</sup>	206	-	1 m <sup>2</sup>	-	-
Wall Transmission	4 m <sup>2</sup>	73	-	4 m <sup>2</sup>	0	-
Roof Transmission	7 m <sup>2</sup>	28	-	7 m <sup>2</sup>	0	-
Window Transmission	1 m <sup>2</sup>	11	-	1 m <sup>2</sup>	0	-
Skylight Transmission	0 m <sup>2</sup>	0	-	0 m <sup>2</sup>	0	-
Door Loads	0 m <sup>2</sup>	0	-	0 m <sup>2</sup>	0	-
Floor Transmission	0 m <sup>2</sup>	0	-	0 m <sup>2</sup>	0	-
Partitions	0 m <sup>2</sup>	0	-	0 m <sup>2</sup>	0	-
Ceiling	22 m <sup>2</sup>	175	-	22 m <sup>2</sup>	0	-
Overhead Lighting	104 W	86	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	400 W	369	-	0	0	-
People	1	56	60	0	0	0
Infiltration	-	0	0	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	50	3	0%	0	0
>> Total Zone Loads	-	1056	63	-	0	0

TABLE 16.1.B. Envelope Loads For Space "2P-EST. LIMPO" In Zone "2P-EST. LIMPO"						
	Area	U-Value	Shade	COOLING	COOLING	HEATING
	(m <sup>2</sup> )	(W/(m <sup>2</sup> ·K))	Coeff.	TRANS	SOLAR	TRANS
				(W)	(W)	(W)
NW EXPOSURE						
WALL	4	2,494	-	73	-	0
WINDOW 1	1	4,800	0,800	11	206	0
H EXPOSURE						
ROOF	7	0,842	-	28	-	0

## Space Design Load Summary for VRF-2PAV

Project Name: REFORMA E AMPLIAÇÃO - SESC - DOCA  
Prepared by:

04/09/2019  
03:41

TABLE 17.1.A. Component Loads For Space "2P-EST. SUJO" In Zone "2P-EST. SUJO"						
	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500 COOLING OA DB / WB 27,8 °C / 22,2 °C OCCUPIED T-STAT 24,0 °C			HEATING DATA AT DES HTG HEATING OA DB / WB 22,2 °C / 15,6 °C OCCUPIED T-STAT 21,1 °C		
		Sensible	Latent		Sensible	Latent
SPACE LOADS	Details	(W)	(W)	Details	(W)	(W)
Window & Skylight Solar Loads	1 m <sup>2</sup>	206	-	1 m <sup>2</sup>	-	-
Wall Transmission	5 m <sup>2</sup>	102	-	5 m <sup>2</sup>	0	-
Roof Transmission	9 m <sup>2</sup>	38	-	9 m <sup>2</sup>	0	-
Window Transmission	1 m <sup>2</sup>	11	-	1 m <sup>2</sup>	0	-
Skylight Transmission	0 m <sup>2</sup>	0	-	0 m <sup>2</sup>	0	-
Door Loads	0 m <sup>2</sup>	0	-	0 m <sup>2</sup>	0	-
Floor Transmission	0 m <sup>2</sup>	0	-	0 m <sup>2</sup>	0	-
Partitions	0 m <sup>2</sup>	0	-	0 m <sup>2</sup>	0	-
Ceiling	22 m <sup>2</sup>	175	-	22 m <sup>2</sup>	0	-
Overhead Lighting	139 W	115	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	400 W	369	-	0	0	-
People	1	56	60	0	0	0
Infiltration	-	0	0	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	54	3	0%	0	0
>> Total Zone Loads	-	1127	63	-	0	0

TABLE 17.1.B. Envelope Loads For Space "2P-EST. SUJO" In Zone "2P-EST. SUJO"						
	Area	U-Value	Shade	COOLING	COOLING	HEATING
	(m <sup>2</sup> )	(W/(m <sup>2</sup> ·K))	Coeff.	TRANS	SOLAR	TRANS
				(W)	(W)	(W)
NW EXPOSURE						
WALL	5	2,494	-	102	-	0
WINDOW 1	1	4,800	0,800	11	206	0
H EXPOSURE						
ROOF	9	0,842	-	38	-	0

## Zone Sizing Summary for VRF-TÉRREO

Project Name: REFORMA E AMPLIAÇÃO - SESC - DOCA  
Prepared by:

04/09/2019  
03:41

### Air System Information

Air System Name ..... VRF-TÉRREO  
Equipment Class ..... TERM  
Air System Type ..... VRF

Number of zones ..... 9  
Floor Area ..... 709,3 m<sup>2</sup>  
Location ..... Belem, Brazil

### Sizing Calculation Information

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

Zone L/s Sizing ..... Sum of space airflow rates  
Space L/s Sizing ..... Individual peak space loads

### Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5,6 K (L/s)	Time of Peak Coil Load	Zone L/(s.m <sup>2</sup> )
TE-BRINQUEDOTECA	21,2	14,2	25,0 / 18,7	12,0 / 11,5	-	Dec 1100	8,67
TE-CAIXA	3,0	2,3	24,8 / 18,0	12,5 / 11,9	-	Apr 1600	13,93
TE-CENTRAL DE ATEND.	18,9	13,8	25,2 / 18,1	12,0 / 11,4	-	Dec 1100	12,48
TE-ESPAÇO SAUDE	7,3	5,8	24,8 / 17,6	12,3 / 11,7	-	Dec 1600	20,22
TE-RESTAURANTE	69,1	51,3	24,7 / 17,9	12,1 / 11,5	-	Jan 1500	13,76
TE-SALÃO DE JOGOS	14,0	9,4	25,1 / 18,7	12,0 / 11,5	-	Dec 1100	8,87
TE-TSI	6,6	4,7	25,2 / 18,4	12,0 / 11,4	-	Apr 1000	9,47
TE-TURISMO SOCIAL	14,5	10,6	25,4 / 18,2	12,0 / 11,4	-	Jan 1000	11,94
TE-ESPAÇO IDOSO	26,5	18,9	24,7 / 18,1	12,0 / 11,4	-	Dec 1600	11,71

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

Zone Name	Heating Coil Load (kW)	Heating Coil Ent/Lvg DB (°C)	Htg Coil Water Flow @11,1 K (L/s)	Fan Design Airflow (L/s)	Fan Motor (BHP)	Fan Motor (kW)	OA Vent Design Airflow (L/s)
TE-BRINQUEDOTECA	0,0	-17,8 / -17,8	0,00	901	0,000	0,000	0
TE-CAIXA	0,0	-17,8 / -17,8	0,00	153	0,000	0,000	0
TE-CENTRAL DE ATEND.	0,0	-17,8 / -17,8	0,00	873	0,000	0,000	0
TE-ESPAÇO SAUDE	0,0	-17,8 / -17,8	0,00	388	0,000	0,000	0
TE-RESTAURANTE	0,0	-17,8 / -17,8	0,00	3391	0,000	0,000	0
TE-SALÃO DE JOGOS	0,0	-17,8 / -17,8	0,00	597	0,000	0,000	0
TE-TSI	0,0	-17,8 / -17,8	0,00	294	0,000	0,000	0
TE-TURISMO SOCIAL	0,0	-17,8 / -17,8	0,00	653	0,000	0,000	0
TE-ESPAÇO IDOSO	0,0	-17,8 / -17,8	0,00	1238	0,000	0,000	0

### VRF Outdoor Unit Sizing Data

	Cooling [kW]	Heating [kW]
Peak Coincident Indoor Unit Loads	177,1	0,0
Estimated Piping / Line Losses	0,0	0,0
<b>Total Required ODU Capacity</b>	177,1	0,0

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 (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (m <sup>2</sup> )
TE-BRINQUEDOTECA	13,0	Jan 1500	0,0	104,0
TE-CAIXA	2,2	Apr 1600	0,0	11,0
TE-CENTRAL DE ATEND.	12,6	Dec 1100	0,0	69,9
TE-ESPAÇO SAUDE	5,6	Dec 1600	0,0	19,2
TE-RESTAURANTE	49,0	Feb 1600	0,0	246,5

## Zone Sizing Summary for VRF-TÉRREO

Project Name: REFORMA E AMPLIAÇÃO - SESC - DOCA  
Prepared by:

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Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (m²)
TE-SALÃO DE JOGOS	8,6	Jan 1500	0,0	67,3
TE-TSI	4,2	May 1100	0,0	31,0
TE-TURISMO SOCIAL	9,4	Jan 1100	0,0	54,7
TE-ESPAÇO IDOSO	17,9	Jan 1600	0,0	105,7

### Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m²)	Space L/(s·m²)
<b>TE-BRINQUEDOTECA</b>							
TE-BRINQUEDOTECA	1	13,0	Jan 1500	901	0,0	104,0	8,67
<b>TE-CAIXA</b>							
TE-CAIXA	1	2,2	Apr 1600	153	0,0	11,0	13,93
<b>TE-CENTRAL DE ATEND.</b>							
TE-CENTRAL DE ATEND.	1	12,6	Dec 1100	873	0,0	69,9	12,48
<b>TE-ESPAÇO SAUDE</b>							
TE-ESPAÇO SAUDE	1	5,6	Dec 1600	388	0,0	19,2	20,22
<b>TE-RESTAURANTE</b>							
TE-RESTAURANTE	1	49,0	Feb 1600	3391	0,0	246,5	13,76
<b>TE-SALÃO DE JOGOS</b>							
TE-SALÃO DE JOGOS	1	8,6	Jan 1500	597	0,0	67,3	8,87
<b>TE-TSI</b>							
TE-TSI	1	4,2	May 1100	294	0,0	31,0	9,47
<b>TE-TURISMO SOCIAL</b>							
TE-TURISMO SOCIAL	1	9,4	Jan 1100	653	0,0	54,7	11,94
<b>TE-ESPAÇO IDOSO</b>							
TE-ESPAÇO IDOSO	1	17,9	Jan 1600	1238	0,0	105,7	11,71



## Air System Design Load Summary for VRF-TÉRREO

Project Name: REFORMA E AMPLIAÇÃO - SESC - DOCA  
Prepared by:

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03:41

	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500			HEATING DATA AT DES HTG		
	COOLING OA DB / WB 27,8 °C / 22,2 °C			HEATING OA DB / WB 22,2 °C / 15,6 °C		
ZONE LOADS	Details	Sensible (W)	Latent (W)	Details	Sensible (W)	Latent (W)
Window & Skylight Solar Loads	301 m²	29329	-	301 m²	-	-
Wall Transmission	163 m²	2509	-	163 m²	0	-
Roof Transmission	191 m²	827	-	191 m²	0	-
Window Transmission	301 m²	3330	-	301 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	0 m²	0	-	0 m²	0	-
Ceiling	170 m²	1377	-	170 m²	0	-
Overhead Lighting	11349 W	9407	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	10514 W	9711	-	0	0	-
People	266	14718	13820	0	0	0
Infiltration	-	7219	12063	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	3921	1294	0%	0	0
>> Total Zone Loads	-	82350	27177	-	0	0
Zone Conditioning	-	83767	27177	-	0	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 L/s	0	-	0 L/s	0	-
Ventilation Load	0 L/s	0	0	0 L/s	0	0
Ventilation Fan Load	0 L/s	0	-	0 L/s	0	-
Space Fan Coil Fans	-	0	-	-	0	-
Duct Heat Gain / Loss	0%	0	-	0%	0	-
>> Total System Loads	-	83767	27177	-	0	0
Terminal Unit Cooling	-	83767	26233	-	0	0
Terminal Unit Heating	-	0	-	-	0	-
>> Total Conditioning	-	83767	26233	-	0	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 VRF-TÉRREO

Project Name: REFORMA E AMPLIAÇÃO - SESC - DOCA  
Prepared by:

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TE-BRINQUEDOTECA	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500			HEATING DATA AT DES HTG		
	COOLING OA DB / WB 27,8 °C / 22,2 °C			HEATING OA DB / WB 22,2 °C / 15,6 °C		
	OCCUPIED T-STAT 24,0 °C			OCCUPIED T-STAT 21,1 °C		
ZONE LOADS	Details	Sensible (W)	Latent (W)	Details	Sensible (W)	Latent (W)
Window & Skylight Solar Loads	30 m²	2418	-	30 m²	-	-
Wall Transmission	35 m²	555	-	35 m²	0	-
Roof Transmission	104 m²	452	-	104 m²	0	-
Window Transmission	30 m²	332	-	30 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	0 m²	0	-	0 m²	0	-
Ceiling	22 m²	178	-	22 m²	0	-
Overhead Lighting	1664 W	1379	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	600 W	554	-	0	0	-
People	20	1129	1202	0	0	0
Infiltration	-	665	846	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	383	102	0%	0	0
>> Total Zone Loads	-	8044	2150	-	0	0

TE-CAIXA	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500			HEATING DATA AT DES HTG		
	COOLING OA DB / WB 27,8 °C / 22,2 °C			HEATING OA DB / WB 22,2 °C / 15,6 °C		
	OCCUPIED T-STAT 24,0 °C			OCCUPIED T-STAT 21,1 °C		
ZONE LOADS	Details	Sensible (W)	Latent (W)	Details	Sensible (W)	Latent (W)
Window & Skylight Solar Loads	3 m²	619	-	3 m²	-	-
Wall Transmission	7 m²	154	-	7 m²	0	-
Roof Transmission	0 m²	0	-	0 m²	0	-
Window Transmission	3 m²	33	-	3 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	0 m²	0	-	0 m²	0	-
Ceiling	10 m²	77	-	10 m²	0	-
Overhead Lighting	176 W	146	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	600 W	554	-	0	0	-
People	3	169	180	0	0	0
Infiltration	-	100	268	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	93	22	0%	0	0
>> Total Zone Loads	-	1946	470	-	0	0

## Zone Design Load Summary for VRF-TÉRREO

Project Name: REFORMA E AMPLIAÇÃO - SESC - DOCA  
Prepared by:

04/09/2019  
03:41

TE-CENTRAL DE ATEND.	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500			HEATING DATA AT DES HTG		
	COOLING OA DB / WB 27,8 °C / 22,2 °C			HEATING OA DB / WB 22,2 °C / 15,6 °C		
	OCCUPIED T-STAT 24,0 °C			OCCUPIED T-STAT 21,1 °C		
ZONE LOADS	Details	Sensible (W)	Latent (W)	Details	Sensible (W)	Latent (W)
Window & Skylight Solar Loads	27 m²	1445	-	27 m²	-	-
Wall Transmission	11 m²	103	-	11 m²	0	-
Roof Transmission	0 m²	0	-	0 m²	0	-
Window Transmission	27 m²	299	-	27 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	0 m²	0	-	0 m²	0	-
Ceiling	20 m²	162	-	20 m²	0	-
Overhead Lighting	1118 W	927	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	1050 W	970	-	0	0	-
People	37	2089	2224	0	0	0
Infiltration	-	797	769	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	340	150	0%	0	0
>> Total Zone Loads	-	7131	3142	-	0	0

TE-ESPAÇO SAUDE	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500			HEATING DATA AT DES HTG		
	COOLING OA DB / WB 27,8 °C / 22,2 °C			HEATING OA DB / WB 22,2 °C / 15,6 °C		
	OCCUPIED T-STAT 24,0 °C			OCCUPIED T-STAT 21,1 °C		
ZONE LOADS	Details	Sensible (W)	Latent (W)	Details	Sensible (W)	Latent (W)
Window & Skylight Solar Loads	13 m²	794	-	13 m²	-	-
Wall Transmission	15 m²	112	-	15 m²	0	-
Roof Transmission	19 m²	83	-	19 m²	0	-
Window Transmission	13 m²	144	-	13 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	0 m²	0	-	0 m²	0	-
Ceiling	10 m²	77	-	10 m²	0	-
Overhead Lighting	307 W	255	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	200 W	185	-	0	0	-
People	4	226	240	0	0	0
Infiltration	-	137	34	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	101	14	0%	0	0
>> Total Zone Loads	-	2113	288	-	0	0

## Zone Design Load Summary for VRF-TÉRREO

Project Name: REFORMA E AMPLIAÇÃO - SESC - DOCA  
Prepared by:

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03:41

TE-RESTAURANTE	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500			HEATING DATA AT DES HTG		
	COOLING OA DB / WB 27,8 °C / 22,2 °C			HEATING OA DB / WB 22,2 °C / 15,6 °C		
	OCCUPIED T-STAT 24,0 °C			OCCUPIED T-STAT 21,1 °C		
ZONE LOADS	Details	Sensible (W)	Latent (W)	Details	Sensible (W)	Latent (W)
Window & Skylight Solar Loads	126 m²	15003	-	126 m²	-	-
Wall Transmission	23 m²	331	-	23 m²	0	-
Roof Transmission	0 m²	0	-	0 m²	0	-
Window Transmission	126 m²	1394	-	126 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	0 m²	0	-	0 m²	0	-
Ceiling	76 m²	616	-	76 m²	0	-
Overhead Lighting	3944 W	3269	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	4000 W	3695	-	0	0	-
People	150	7950	5280	0	0	0
Infiltration	-	3605	7716	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	1793	650	0%	0	0
>> Total Zone Loads	-	37657	13645	-	0	0

TE-SALÃO DE JOGOS	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500			HEATING DATA AT DES HTG		
	COOLING OA DB / WB 27,8 °C / 22,2 °C			HEATING OA DB / WB 22,2 °C / 15,6 °C		
	OCCUPIED T-STAT 24,0 °C			OCCUPIED T-STAT 21,1 °C		
ZONE LOADS	Details	Sensible (W)	Latent (W)	Details	Sensible (W)	Latent (W)
Window & Skylight Solar Loads	16 m²	857	-	16 m²	-	-
Wall Transmission	17 m²	161	-	17 m²	0	-
Roof Transmission	67 m²	292	-	67 m²	0	-
Window Transmission	16 m²	177	-	16 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	0 m²	0	-	0 m²	0	-
Ceiling	33 m²	267	-	33 m²	0	-
Overhead Lighting	1077 W	893	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	600 W	554	-	0	0	-
People	10	565	601	0	0	0
Infiltration	-	528	283	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	215	44	0%	0	0
>> Total Zone Loads	-	4507	928	-	0	0

## Zone Design Load Summary for VRF-TÉRREO

Project Name: REFORMA E AMPLIAÇÃO - SESC - DOCA  
Prepared by:

04/09/2019  
03:41

TE-TSI	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500			HEATING DATA AT DES HTG		
	COOLING OA DB / WB 27,8 °C / 22,2 °C			HEATING OA DB / WB 22,2 °C / 15,6 °C		
	OCCUPIED T-STAT 24,0 °C			OCCUPIED T-STAT 21,1 °C		
ZONE LOADS	Details	Sensible (W)	Latent (W)	Details	Sensible (W)	Latent (W)
Window & Skylight Solar Loads	13 m²	1751	-	13 m²	-	-
Wall Transmission	2 m²	51	-	2 m²	0	-
Roof Transmission	0 m²	0	-	0 m²	0	-
Window Transmission	13 m²	144	-	13 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	0 m²	0	-	0 m²	0	-
Ceiling	0 m²	0	-	0 m²	0	-
Overhead Lighting	496 W	411	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	750 W	693	-	0	0	-
People	5	282	301	0	0	0
Infiltration	-	214	507	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	177	40	0%	0	0
>> Total Zone Loads	-	3724	848	-	0	0

TE-TURISMO SOCIAL	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500			HEATING DATA AT DES HTG		
	COOLING OA DB / WB 27,8 °C / 22,2 °C			HEATING OA DB / WB 22,2 °C / 15,6 °C		
	OCCUPIED T-STAT 24,0 °C			OCCUPIED T-STAT 21,1 °C		
ZONE LOADS	Details	Sensible (W)	Latent (W)	Details	Sensible (W)	Latent (W)
Window & Skylight Solar Loads	34 m²	2875	-	34 m²	-	-
Wall Transmission	3 m²	64	-	3 m²	0	-
Roof Transmission	0 m²	0	-	0 m²	0	-
Window Transmission	34 m²	376	-	34 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	0 m²	0	-	0 m²	0	-
Ceiling	0 m²	0	-	0 m²	0	-
Overhead Lighting	875 W	725	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	600 W	554	-	0	0	-
People	17	901	598	0	0	0
Infiltration	-	364	488	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	293	54	0%	0	0
>> Total Zone Loads	-	6153	1141	-	0	0

## Zone Design Load Summary for VRF-TÉRREO

Project Name: REFORMA E AMPLIAÇÃO - SESC - DOCA  
Prepared by:

04/09/2019  
03:41

TE-ESPAÇO IDOSO	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500			HEATING DATA AT DES HTG		
	COOLING OA DB / WB 27,8 °C / 22,2 °C			HEATING OA DB / WB 22,2 °C / 15,6 °C		
	OCCUPIED T-STAT 24,0 °C			OCCUPIED T-STAT 21,1 °C		
ZONE LOADS	Details	Sensible (W)	Latent (W)	Details	Sensible (W)	Latent (W)
Window & Skylight Solar Loads	39 m²	3566	-	39 m²	-	-
Wall Transmission	50 m²	979	-	50 m²	0	-
Roof Transmission	0 m²	0	-	0 m²	0	-
Window Transmission	39 m²	431	-	39 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	0 m²	0	-	0 m²	0	-
Ceiling	0 m²	0	-	0 m²	0	-
Overhead Lighting	1691 W	1402	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	2114 W	1953	-	0	0	-
People	20	1406	3194	0	0	0
Infiltration	-	810	1152	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	527	217	0%	0	0
>> Total Zone Loads	-	11075	4564	-	0	0

## Space Design Load Summary for VRF-TÉRREO

Project Name: REFORMA E AMPLIAÇÃO - SESC - DOCA  
Prepared by:

04/09/2019  
03:42

TABLE 1.1.A. Component Loads For Space "TE-BRINQUEDOTECA" In Zone "TE-BRINQUEDOTECA"						
	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500 COOLING OA DB / WB 27,8 °C / 22,2 °C OCCUPIED T-STAT 24,0 °C			HEATING DATA AT DES HTG HEATING OA DB / WB 22,2 °C / 15,6 °C OCCUPIED T-STAT 21,1 °C		
		Sensible	Latent		Sensible	Latent
SPACE LOADS	Details	(W)	(W)	Details	(W)	(W)
Window & Skylight Solar Loads	30 m²	2418	-	30 m²	-	-
Wall Transmission	35 m²	555	-	35 m²	0	-
Roof Transmission	104 m²	452	-	104 m²	0	-
Window Transmission	30 m²	332	-	30 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	0 m²	0	-	0 m²	0	-
Ceiling	22 m²	178	-	22 m²	0	-
Overhead Lighting	1664 W	1379	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	600 W	554	-	0	0	-
People	20	1129	1202	0	0	0
Infiltration	-	665	846	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	383	102	0%	0	0
>> Total Zone Loads	-	8044	2150	-	0	0

TABLE 1.1.B. Envelope Loads For Space "TE-BRINQUEDOTECA" In Zone "TE-BRINQUEDOTECA"						
	Area	U-Value	Shade	COOLING	COOLING	HEATING
	(m²)	(W/(m²·K))	Coeff.	TRANS	SOLAR	TRANS
				(W)	(W)	(W)
SE EXPOSURE						
WALL	23	2,494	-	216	-	0
WINDOW 1	20	4,800	0,800	221	1071	0
NE EXPOSURE						
WALL	12	2,494	-	339	-	0
WINDOW 1	10	4,800	0,800	111	1347	0
H EXPOSURE						
ROOF	104	0,842	-	452	-	0

## Space Design Load Summary for VRF-TÉRREO

Project Name: REFORMA E AMPLIAÇÃO - SESC - DOCA  
Prepared by:

04/09/2019  
03:42

TABLE 2.1.A. Component Loads For Space "TE-CAIXA" In Zone "TE-CAIXA"						
	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500 COOLING OA DB / WB 27,8 °C / 22,2 °C OCCUPIED T-STAT 24,0 °C			HEATING DATA AT DES HTG HEATING OA DB / WB 22,2 °C / 15,6 °C OCCUPIED T-STAT 21,1 °C		
		Sensible	Latent		Sensible	Latent
SPACE LOADS	Details	(W)	(W)	Details	(W)	(W)
Window & Skylight Solar Loads	3 m²	619	-	3 m²	-	-
Wall Transmission	7 m²	154	-	7 m²	0	-
Roof Transmission	0 m²	0	-	0 m²	0	-
Window Transmission	3 m²	33	-	3 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	0 m²	0	-	0 m²	0	-
Ceiling	10 m²	77	-	10 m²	0	-
Overhead Lighting	176 W	146	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	600 W	554	-	0	0	-
People	3	169	180	0	0	0
Infiltration	-	100	268	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	93	22	0%	0	0
>> Total Zone Loads	-	1946	470	-	0	0

TABLE 2.1.B. Envelope Loads For Space "TE-CAIXA" In Zone "TE-CAIXA"						
	Area	U-Value	Shade	COOLING	COOLING	HEATING
	(m²)	(W/(m²·K))	Coeff.	TRANS	SOLAR	TRANS
				(W)	(W)	(W)
NW EXPOSURE						
WALL	7	2,494	-	154	-	0
WINDOW 1	3	4,800	0,800	33	619	0



## Space Design Load Summary for VRF-TÉRREO

Project Name: REFORMA E AMPLIAÇÃO - SESC - DOCA  
Prepared by:

04/09/2019  
03:42

TABLE 3.1.A. Component Loads For Space "TE-CENTRAL DE ATEND." In Zone "TE-CENTRAL DE ATEND."						
	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500 COOLING OA DB / WB 27,8 °C / 22,2 °C OCCUPIED T-STAT 24,0 °C			HEATING DATA AT DES HTG HEATING OA DB / WB 22,2 °C / 15,6 °C OCCUPIED T-STAT 21,1 °C		
		Sensible	Latent		Sensible	Latent
SPACE LOADS	Details	(W)	(W)	Details	(W)	(W)
Window & Skylight Solar Loads	27 m²	1445	-	27 m²	-	-
Wall Transmission	11 m²	103	-	11 m²	0	-
Roof Transmission	0 m²	0	-	0 m²	0	-
Window Transmission	27 m²	299	-	27 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	0 m²	0	-	0 m²	0	-
Ceiling	20 m²	162	-	20 m²	0	-
Overhead Lighting	1118 W	927	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	1050 W	970	-	0	0	-
People	37	2089	2224	0	0	0
Infiltration	-	797	769	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	340	150	0%	0	0
>> Total Zone Loads	-	7131	3142	-	0	0

TABLE 3.1.B. Envelope Loads For Space "TE-CENTRAL DE ATEND." In Zone "TE-CENTRAL DE ATEND."						
	Area	U-Value	Shade	COOLING	COOLING	HEATING
	(m²)	(W/(m²·K))	Coeff.	TRANS	SOLAR	TRANS
SE EXPOSURE				(W)	(W)	(W)
WALL	11	2,494	-	103	-	0
WINDOW 1	27	4,800	0,800	299	1445	0

## Space Design Load Summary for VRF-TÉRREO

Project Name: REFORMA E AMPLIAÇÃO - SESC - DOCA  
Prepared by:

04/09/2019  
03:42

TABLE 4.1.A. Component Loads For Space "TE-ESPAÇO SAUDE" In Zone "TE-ESPAÇO SAUDE"						
	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500 COOLING OA DB / WB 27,8 °C / 22,2 °C OCCUPIED T-STAT 24,0 °C			HEATING DATA AT DES HTG HEATING OA DB / WB 22,2 °C / 15,6 °C OCCUPIED T-STAT 21,1 °C		
		Sensible	Latent		Sensible	Latent
SPACE LOADS	Details	(W)	(W)	Details	(W)	(W)
Window & Skylight Solar Loads	13 m²	794	-	13 m²	-	-
Wall Transmission	15 m²	112	-	15 m²	0	-
Roof Transmission	19 m²	83	-	19 m²	0	-
Window Transmission	13 m²	144	-	13 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	0 m²	0	-	0 m²	0	-
Ceiling	10 m²	77	-	10 m²	0	-
Overhead Lighting	307 W	255	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	200 W	185	-	0	0	-
People	4	226	240	0	0	0
Infiltration	-	137	34	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	101	14	0%	0	0
>> Total Zone Loads	-	2113	288	-	0	0

TABLE 4.1.B. Envelope Loads For Space "TE-ESPAÇO SAUDE" In Zone "TE-ESPAÇO SAUDE"						
	Area	U-Value	Shade	COOLING	COOLING	HEATING
	(m²)	(W/(m²·K))	Coeff.	TRANS	SOLAR	TRANS
				(W)	(W)	(W)
SW EXPOSURE						
WALL	9	2,494	-	61	-	0
WINDOW 1	9	4,800	0,800	100	580	0
SE EXPOSURE						
WALL	5	2,494	-	51	-	0
WINDOW 1	4	4,800	0,800	44	214	0
H EXPOSURE						
ROOF	19	0,842	-	83	-	0

## Space Design Load Summary for VRF-TÉRREO

Project Name: REFORMA E AMPLIAÇÃO - SESC - DOCA  
Prepared by:

04/09/2019  
03:42

TABLE 5.1.A. Component Loads For Space "TE-RESTAURANTE" In Zone "TE-RESTAURANTE"						
	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500 COOLING OA DB / WB 27,8 °C / 22,2 °C OCCUPIED T-STAT 24,0 °C			HEATING DATA AT DES HTG HEATING OA DB / WB 22,2 °C / 15,6 °C OCCUPIED T-STAT 21,1 °C		
		Sensible	Latent		Sensible	Latent
SPACE LOADS	Details	(W)	(W)	Details	(W)	(W)
Window & Skylight Solar Loads	126 m²	15003	-	126 m²	-	-
Wall Transmission	23 m²	331	-	23 m²	0	-
Roof Transmission	0 m²	0	-	0 m²	0	-
Window Transmission	126 m²	1394	-	126 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	0 m²	0	-	0 m²	0	-
Ceiling	76 m²	616	-	76 m²	0	-
Overhead Lighting	3944 W	3269	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	4000 W	3695	-	0	0	-
People	150	7950	5280	0	0	0
Infiltration	-	3605	7716	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	1793	650	0%	0	0
>> Total Zone Loads	-	37657	13645	-	0	0

TABLE 5.1.B. Envelope Loads For Space "TE-RESTAURANTE" In Zone "TE-RESTAURANTE"						
	Area	U-Value	Shade	COOLING	COOLING	HEATING
	(m²)	(W/(m²·K))	Coeff.	TRANS	SOLAR	TRANS
				(W)	(W)	(W)
SE EXPOSURE						
WALL	13	2,494	-	124	-	0
WINDOW 1	72	4,800	0,800	797	3854	0
NW EXPOSURE						
WALL	10	2,494	-	208	-	0
WINDOW 1	54	4,800	0,800	597	11149	0

## Space Design Load Summary for VRF-TÉRREO

Project Name: REFORMA E AMPLIAÇÃO - SESC - DOCA  
Prepared by:

04/09/2019  
03:42

TABLE 6.1.A. Component Loads For Space "TE-SALÃO DE JOGOS" In Zone "TE-SALÃO DE JOGOS"						
	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500 COOLING OA DB / WB 27,8 °C / 22,2 °C OCCUPIED T-STAT 24,0 °C			HEATING DATA AT DES HTG HEATING OA DB / WB 22,2 °C / 15,6 °C OCCUPIED T-STAT 21,1 °C		
		Sensible	Latent		Sensible	Latent
SPACE LOADS	Details	(W)	(W)	Details	(W)	(W)
Window & Skylight Solar Loads	16 m²	857	-	16 m²	-	-
Wall Transmission	17 m²	161	-	17 m²	0	-
Roof Transmission	67 m²	292	-	67 m²	0	-
Window Transmission	16 m²	177	-	16 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	0 m²	0	-	0 m²	0	-
Ceiling	33 m²	267	-	33 m²	0	-
Overhead Lighting	1077 W	893	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	600 W	554	-	0	0	-
People	10	565	601	0	0	0
Infiltration	-	528	283	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	215	44	0%	0	0
>> Total Zone Loads	-	4507	928	-	0	0

TABLE 6.1.B. Envelope Loads For Space "TE-SALÃO DE JOGOS" In Zone "TE-SALÃO DE JOGOS"						
	Area	U-Value	Shade	COOLING	COOLING	HEATING
	(m²)	(W/(m²·K))	Coeff.	TRANS	SOLAR	TRANS
				(W)	(W)	(W)
SE EXPOSURE						
WALL	17	2,494	-	161	-	0
WINDOW 1	16	4,800	0,800	177	857	0
H EXPOSURE						
ROOF	67	0,842	-	292	-	0

## Space Design Load Summary for VRF-TÉRREO

Project Name: REFORMA E AMPLIAÇÃO - SESC - DOCA  
Prepared by:

04/09/2019  
03:42

TABLE 7.1.A. Component Loads For Space "TE-TSI" In Zone "TE-TSI"						
	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500 COOLING OA DB / WB 27,8 °C / 22,2 °C OCCUPIED T-STAT 24,0 °C			HEATING DATA AT DES HTG HEATING OA DB / WB 22,2 °C / 15,6 °C OCCUPIED T-STAT 21,1 °C		
		Sensible	Latent		Sensible	Latent
SPACE LOADS	Details	(W)	(W)	Details	(W)	(W)
Window & Skylight Solar Loads	13 m²	1751	-	13 m²	-	-
Wall Transmission	2 m²	51	-	2 m²	0	-
Roof Transmission	0 m²	0	-	0 m²	0	-
Window Transmission	13 m²	144	-	13 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	0 m²	0	-	0 m²	0	-
Ceiling	0 m²	0	-	0 m²	0	-
Overhead Lighting	496 W	411	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	750 W	693	-	0	0	-
People	5	282	301	0	0	0
Infiltration	-	214	507	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	177	40	0%	0	0
>> Total Zone Loads	-	3724	848	-	0	0

TABLE 7.1.B. Envelope Loads For Space "TE-TSI" In Zone "TE-TSI"						
	Area	U-Value	Shade	COOLING	COOLING	HEATING
	(m²)	(W/(m²·K))	Coeff.	TRANS	SOLAR	TRANS
				(W)	(W)	(W)
NE EXPOSURE						
WALL	2	2,494	-	51	-	0
WINDOW 1	13	4,800	0,800	144	1751	0

## Space Design Load Summary for VRF-TÉRREO

Project Name: REFORMA E AMPLIAÇÃO - SESC - DOCA  
Prepared by:

04/09/2019  
03:42

TABLE 8.1.A. Component Loads For Space "TE-TURISMO SOCIAL" In Zone "TE-TURISMO SOCIAL"						
	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500 COOLING OA DB / WB 27,8 °C / 22,2 °C OCCUPIED T-STAT 24,0 °C			HEATING DATA AT DES HTG HEATING OA DB / WB 22,2 °C / 15,6 °C OCCUPIED T-STAT 21,1 °C		
		Sensible	Latent		Sensible	Latent
SPACE LOADS	Details	(W)	(W)	Details	(W)	(W)
Window & Skylight Solar Loads	34 m²	2875	-	34 m²	-	-
Wall Transmission	3 m²	64	-	3 m²	0	-
Roof Transmission	0 m²	0	-	0 m²	0	-
Window Transmission	34 m²	376	-	34 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	0 m²	0	-	0 m²	0	-
Ceiling	0 m²	0	-	0 m²	0	-
Overhead Lighting	875 W	725	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	600 W	554	-	0	0	-
People	17	901	598	0	0	0
Infiltration	-	364	488	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	293	54	0%	0	0
>> Total Zone Loads	-	6153	1141	-	0	0

TABLE 8.1.B. Envelope Loads For Space "TE-TURISMO SOCIAL" In Zone "TE-TURISMO SOCIAL"						
	Area	U-Value	Shade	COOLING	COOLING	HEATING
	(m²)	(W/(m²·K))	Coeff.	TRANS	SOLAR	TRANS
				(W)	(W)	(W)
SE EXPOSURE						
WALL	2	2,494	-	18	-	0
WINDOW 1	21	4,800	0,800	232	1124	0
NE EXPOSURE						
WALL	2	2,494	-	46	-	0
WINDOW 1	13	4,800	0,800	144	1751	0

## Space Design Load Summary for VRF-TÉRREO

Project Name: REFORMA E AMPLIAÇÃO - SESC - DOCA  
Prepared by:

04/09/2019  
03:42

TABLE 9.1.A. Component Loads For Space "TE-ESPAÇO IDOSO" In Zone "TE-ESPAÇO IDOSO"						
	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jul 1500 COOLING OA DB / WB 27,8 °C / 22,2 °C OCCUPIED T-STAT 24,0 °C			HEATING DATA AT DES HTG HEATING OA DB / WB 22,2 °C / 15,6 °C OCCUPIED T-STAT 21,1 °C		
		Sensible	Latent		Sensible	Latent
SPACE LOADS	Details	(W)	(W)	Details	(W)	(W)
Window & Skylight Solar Loads	39 m²	3566	-	39 m²	-	-
Wall Transmission	50 m²	979	-	50 m²	0	-
Roof Transmission	0 m²	0	-	0 m²	0	-
Window Transmission	39 m²	431	-	39 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	0 m²	0	-	0 m²	0	-
Ceiling	0 m²	0	-	0 m²	0	-
Overhead Lighting	1691 W	1402	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	2114 W	1953	-	0	0	-
People	20	1406	3194	0	0	0
Infiltration	-	810	1152	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	5% / 5%	527	217	0%	0	0
>> Total Zone Loads	-	11075	4564	-	0	0

TABLE 9.1.B. Envelope Loads For Space "TE-ESPAÇO IDOSO" In Zone "TE-ESPAÇO IDOSO"						
	Area	U-Value	Shade	COOLING	COOLING	HEATING
	(m²)	(W/(m²·K))	Coeff.	TRANS	SOLAR	TRANS
				(W)	(W)	(W)
SW EXPOSURE						
WALL	21	2,494	-	134	-	0
WINDOW 1	24	4,800	0,800	266	1545	0
NE EXPOSURE						
WALL	30	2,494	-	845	-	0
WINDOW 1	15	4,800	0,800	166	2021	0