



**CONSÓRCIO
SAÚDE**

CONCREMAT | MEP

MEMORIAL DE CÁLCULO PROJETO EXECUTIVO DE HVAC

**PROSUS II
UNIDADE BÁSICA DE SAÚDE
(UBS) ESPECIAL.**

**AGOSTO/2026
VERSÃO R00**

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1. APRESENTAÇÃO

Esta memória de cálculo visa apresentar os cálculos de renovação de ar, exaustão e de carga térmica para a implantação dos sistemas de climatização das Unidades Básicas de Saúde Tipo E.

Conforme NOTIFICAÇÃO Nº 003/2026, Processo nº 019.8781.2026.0044414-60, SEI nº 00135106342 (ANEXO 1), a SESAB deliberou, de forma expressa e fundamentada, pela adoção de solução simplificada de climatização e conforto térmico, que consistente na utilização de sistemas de ar condicionado split do tipo inverter convencionais, associados à renovação de ar adequada aos ambientes, de forma a atender os requisitos técnicos previstos na ABNT NBR 7256 somente quanto ao controle de temperatura. Não foram previstos controle de umidade e filtragem nos ambientes climatizados.

Considerando que as Unidades Básicas de Saúde Tipo II) objeto dos projetos serão implantadas, em sua maioria, em municípios de pequeno porte, frequentemente situados em regiões com limitações de infraestrutura técnica, restrições orçamentárias e reduzida capacidade operacional para manutenção de sistemas prediais de alta complexidade.

Considerando que a adoção integral dos sistemas de tratamento de ar previstos na ABNT NBR 7256 implica implantação, operação e manutenção de equipamentos com elevado grau de complexidade técnica, custos contínuos de manutenção especializada, necessidade de reposição de componentes e exigência de equipe técnica qualificada, fatores que podem comprometer a sustentabilidade operacional das unidades ao longo do tempo.

Considerando, ainda, que tais estabelecimentos destinam-se à prestação de serviços típicos de atenção básica à saúde, cujo perfil assistencial, nível de risco e dinâmica de funcionamento não justificam, sob a ótica da razoabilidade, economicidade e adequação ao interesse público, a adoção de sistemas completos de climatização hospitalar de alta complexidade.

Todos os esclarecimentos técnicos e formais acerca das exigências estabelecidas na ABNT NBR 7256, bem como demais normas correlatas aplicáveis a estabelecimentos assistenciais de saúde, foram passados, bem como quanto às implicações técnicas, sanitárias, operacionais e legais decorrentes da não observância

integral da referida norma, especialmente no que se refere ao controle de infecção, pressurização e renovação de ar, filtragem e classificação de ambientes críticos, segurança de pacientes e equipe assistencial.

2. NORMAS DE REFERÊNCIA

Considera-se como referências técnicas para a elaboração desta memória de cálculo as seguintes normas:

- RESOLUÇÃO ANVISA - RDC Nº 50, DE 21 DE FEVEREIRO DE 2002 - Regulamento Técnico para planejamento, programação, elaboração e avaliação de projetos físicos de estabelecimentos assistenciais de saúde;
- ABNT NBR 7256:2022 – Tratamento de ar em ambientes assistenciais de saúde (EAS) – Requisitos para projeto e execução das instalações;
- ABNT NBR 16401:2024 – Instalações Centrais de Ar Condicionado – Sistemas Centrais e Unitários – Parte 1 – Projetos de Instalações;
- ABNT NBR 16401:2024 – Instalações Centrais de Ar Condicionado – Sistemas Centrais e Unitários – Parte 2 – Parâmetros de Conforto Térmico Conforto;
- ABNT NBR 16401:2024 – Instalações Centrais de Ar Condicionado – Sistemas Centrais e Unitários – Parte 3 – Qualidade do Ar Interior;
- PORTARIA Nº 3.523, DE 28 DE AGOSTO DE 1998, do Ministério da Saúde;
- LEI Nº 13.589, DE 4 DE JANEIRO DE 2018.

3. DOCUMENTOS ESPECÍFICOS DE REFERÊNCIA

Considera-se como referências específicas para a elaboração desta memória de cálculo os seguintes documentos:

- 0058-PP-UBSE-ARQ-PB-DES-002-01-lay – UBSE – Arquitetura – Planta de Layout;
- 0058-PP-UBSE-ARQ-PB-MDB-001-01 – Modelagem BIM UBSE

4. PREMISSAS PARA CÁLCULO DE CARGA TÉRMICA

Para o cálculo da carga térmica foi empregando o "software" HAP 40, versão 5.1, da Carrier. O sistema HAP emprega o método de cálculo "Transfer Function" da ASHRAE e permite além do cálculo de carga térmica, a simulação hora a hora das 8.760 horas/ano.

1. Condições Externas de Ambiente

Consideramos a implantação da unidade em clima tropical, Salvador / Bahia, com frequência anual 0,4%, adotando-se para o ar exterior os parâmetros indicados pela NBR-16.401, parte 1, Anexo A, Tabela A-4, a saber:

- Temperatura bulbo seco (TBS): 32,6 °C (verão)
- Temperatura bulbo úmido (TBU): 26,6 °C (verão)

2. Taxas para Cálculo da Carga Térmica

- Para os itens: ocupação, equipamentos, iluminação e calor dissipado pelas pessoas foram consideradas as recomendações da ABNT NBR-16.401, parte 1, Anexo C.

3. Condições Internas para ambientes climatizados

- Pé Direito (m) = 2,70
- Temperatura de Bulbo Seco = 20 °C a 24 °C
- Umidade Relativa = 60% (máxima)
- Vazão mínima de ar exterior (renovações por hora) = 2,0

5. CÁLCULO DA VAZÃO DE RENOVAÇÃO – INSUFLAMENTO

Para o cálculo da vazão de ar exterior dos ambientes, foi adotada a taxa mínima de 2 (duas) renovações de ar por hora.

Segue conforme tabelas abaixo:

Renovação de ar exterior (NBR 7256)								
Mínima vazão de ar por ambiente								ADOTA DA
Ambientes	Área	Pé	Pressão	Renov ações por hora (T/h)	Vazão	Vazão	Exaustão total	Vazão
		direito			(m³/h)	(L/s)		
SALA DE OBSERVAÇÃO /MEDICAÇÃO	20,36	2,7	Positiva	3	164,91 6	45,81	Não	200
SALA DE CURATIVOS	13,34	2,7	Positiva	6	216,10 8	60,03	Não	220
SALA DE REIDRATAÇÃO/COLETA	16,51	2,7	Positiva	3	133,73 1	37,147 5	Não	150
SALA DE INALAÇÃO/	8,42	2,7	Negativa	10	227,34	63,15	Sim	240
CONSULTÓRIO DIFERENCIADO 01	10,97	2,7	Positiva	2	59,238	16,455	Não	100
CONSULTÓRIO DIFERENCIADO 02	11,02	2,7	Positiva	2	59,508	16,53	Não	100
SANITÁRIO FUNC. PCD	4,46	2,7	Negativa	10	120,42	33,45	Não	150
CONSULTÓRIO INDIFERENCIADO 02	10,33	2,7	Positiva	2	55,782	15,495	Não	100
SALA DE TELECONSULTA	9,15	2,7	Positiva	2	49,41	13,725	Não	100
CONSULTÓRIO MULTIPROFISSIONAL	9,44	2,7	Positiva	2	50,976	14,16	Não	100
SALA DE RECEPÇÃO E LAVAGEM CME	7,57	2,7	Negativa	10	204,39	56,775	Sim	210
SALA DE ESTERILIZAÇÃO E DISTRIBUIÇÃO CME	10,59	2,7	Positiva	6	171,55 8	47,655	Não	180
CONSULTÓRIO INDIFERENCIADO 01	10,64	2,7	Positiva	2	57,456	15,96	Não	100
CONSULTÓRIO ENFERMAGEM	10,58	2,7	Positiva	2	57,132	15,87	Não	100
PRÁTICAS COLETIVAS	20,03	2,7	Positiva	2	108,16 2	30,045	Não	120
FARMÁCIA	18	2,7	Positiva	2	97,2	27	Não	100
SALA AMAMENTAÇÃO/	5,9	2,7	Positiva	2	31,86	8,85	Não	100
RECEPÇÃO	19,36	2,7	Positiva	2	104,54 4	29,04	Não	150
SALA DE ESPERA	74	2,7	Positiva	2	399,6	111	Não	600
DML	2,48	2,7	Negativa	10	66,96	18,6	Sim	100

CONSULTÓRIO ODONTOLÓGICO 01	14,14	2,7	Negativa	10	381,78	106,05	Sim	385
CONSULTÓRIO ODONTOLÓGICO 02	13,87	2,7	Negativa	10	374,49	104,02 ₅	Sim	385
CONSULTÓRIO ODONTOLÓGICO/ RAI-O-X PERIAPICAL	10,32	2,7	Negativa	10	278,64	77,4	Sim	285
IMUNIZAÇÃO	12,79	2,7	Positiva	2	69,066	19,185	Não	100
SALA DE TI (CABEAM. ESTRUTURADO)	6,9	2,7	Positiva	2	37,26	10,35	Não	50
DML	4,23	2,7	Negativa	10	114,21	31,725	Sim	120
ALMOXARIFADO	8,13	2,7	Neutra	2	43,902	12,195	Não	100
SALA DE PARAMENTAÇÃO	2,86	2,7	Positiva	6	46,332	12,87	Não	100
SALA INTEGRAÇÃO DE EQUIPES	9,77	2,7	Positiva	2	52,758	14,655	Não	100
COPA DE FUNC.	9,07	2,7	Neutra	6	146,93 ₄	40,815	Não	150
SALA ADMINISTRATIVA	11,35	2,7	Positiva	2	61,29	17,025	Não	100

5. CÁLCULO DA VAZÃO DE EXAUSTÃO

Exaustão								
Mínima vazão de ar por ambiente								ADOTADA
Ambientes	Área	Pé	Pressão	Renovações por hora (T/h)	Vazão	Vazão	Exaustão total	Vazão
		direito			(m³/h)	(L/s)		
BANHEIRO PCD	5,18	2,7	Negativa	10	139,86	38,85	Sim	150
SALA DE INALAÇÃO/	8,42	2,7	Negativa	10	227,34	63,15	Sim	250
SANITÁRIO PCD	3,32	2,7	Negativa	10	89,64	24,9	Sim	100
SANITÁRIO PCD	3,33	2,7	Negativa	10	89,91	24,975	Sim	100
CONSULTÓRIO ODONTOLÓGICO 01	14,14	2,7	Negativa	10	381,78	106,05	Sim	400
CONSULTÓRIO ODONTOLÓGICO 02	13,87	2,7	Negativa	10	374,49	104,025	Sim	400
CONSULTÓRIO ODONTOLÓGICO/ RAI-O-X PERIAPICAL	10,32	2,7	Negativa	10	278,64	77,4	Sim	300
ESCOVÓDROMO/	7,22	2,7	Negativa	3	58,482	16,245	Sim	100
COPA DE FUNC.	9,07	2,7	Neutra	6	146,934	40,815	Não	150
DML	2,48	2,7	Negativa	10	66,96	18,6	Sim	100
SANIT. PÚB. FEM. PCD/FAMÍLIA	3,4	2,7	Negativa	10	91,8	25,5	Sim	100
SANIT. PUB. MASC.	8,44	2,7	Negativa	10	227,88	63,3	Sim	250
SANIT. PUB. FEM.	10,98	2,7	Negativa	10	296,46	82,35	Sim	300
SANIT. PÚB. MASC. PCD	3,52	2,7	Negativa	10	95,04	26,4	Sim	100

CONSULTÓRIO ENFERMAGEM	10,58	2,7	Positiva	2	57,132	15,87	Não	100
CONSULTÓRIO INDIFERENCIADO 01	10,64	2,7	Positiva	2	57,456	15,96	Não	100
DML	4,23	2,7	Negativa	10	114,21	31,725	Sim	120
BANHEIRO/VEST. FUNC. MASC.	12,9	2,7	Negativa	10	348,3	96,75	Sim	400
BANHEIRO/VEST. FUNC. FEM.	16,31	2,7	Negativa	10	440,37	122,325	Sim	450
ALMOXARIFADO	8,13	2,7	Neutra	2	43,902	12,195	Não	100
SALA DE RECEPÇÃO E LAVAGEM CME	7,57	2,7	Positiva	10	204,39	56,775	Sim	210

6. ESPECIFICAÇÃO EQUIPAMENTOS DE CLIMATIZAÇÃO

RELAÇÃO EQUIPAMENTOS SPLIT INVERTER						
Tipo	Área (m²)	CARGA TÉRMICA (Kw)	CAPACIDADE ADOTADA (kW)	CAPACIDADE ADOTADA (BTU/h)		QTDE
ALMOXARIFADO/	18,7	3,3	5,3	18000	Split tipo Hi-Wall, modelo: 18.000 BTU/h, Potência: 1600W - 220/1F/60Hz, condensadora de descarga vertical.	1
SALA MULTIUSO	27,3	8,8	7	24000	Split tipo Hi-Wall, modelo: 24.000 BTU/h, Potência: 2100W - 220/1F/60Hz, condensadora de descarga vertical.	1

SALA ADM	13,86	2,3	3,5	12000	Split tipo Hi-Wall, modelo: 12.000 BTU/h, Potência: 1100W - 220/1F/60Hz, condensadora de descarga vertical.	1
APOIO ADM	19,63	4,7	5,3	18000	Split tipo Hi-Wall, modelo: 18.000 BTU/h, Potência: 1600W - 220/1F/60Hz, condensadora de descarga vertical.	1
SALA DE COODERNAÇÃO	13,92	3,4	3,5	12000	Split tipo Hi-Wall, modelo: 12.000 BTU/h, Potência: 1100W - 220/1F/60Hz, condensadora de descarga vertical.	1
ÁREA DE ESTAR EQ.	27,86	7,2	7	24000	Split tipo Hi-Wall, modelo: 24.000 BTU/h, Potência: 2100W - 220/1F/60Hz, condensadora de descarga vertical.	1
SALA DE REUNIÃO	36,79	12,6	8,8	18000	Split tipo Hi-Wall, modelo: 18.000 BTU/h, Potência: 1600W - 220/1F/60Hz, condensadora de descarga vertical	2

COPA/ REFEITÓRIO	27,84	9	7	24000	Split tipo Hi-Wall, modelo: 24.000 BTU/h, Potência: 2100W - 220/1F/60Hz, condensadora de descarga vertical.	1
COPA/ REFEITÓRIO	41,18	13,9	5,3	18000	Split tipo Hi-Wall, modelo: 18.000 BTU/h, Potência: 1600W - 220/1F/60Hz, condensadora de descarga vertical.	2
SALA DE TI	5,02	1,9	3,5	12000	Split tipo Hi-Wall, modelo: 12.000 BTU/h, Potência: 1100W - 220/1F/60Hz, condensadora de descarga vertical.	2
ARQUIVO	12,52	3,3	2,6	9000	Split tipo Hi-Wall, modelo: 9.000 BTU/h, Potência: 810W - 220/1F/60Hz, condensadora de descarga vertical.	1
SALA DE AMAMENTAÇÃO	7,33	1,9	2,6	9000	Split tipo Hi-Wall, modelo: 9.000 BTU/h, Potência: 810W - 220/1F/60Hz, condensadora de descarga vertical.	1

SALA DE TI	4,85	2,3	3,5	12000	Split tipo Hi-Wall, modelo: 12.000 BTU/h, Potência: 1100W - 220/1F/60Hz, condensadora de descarga vertical.	2
RECEPÇÃO/ SL ESPERA	77,88	25,7	30,1	72000	Split tipo Piso Teto vias, modelo: 36.000 BTU/h, Potência: 4300W - 220/1F/60Hz, condensadora de descarga vertical	2
CONSULTÓRIO INTERD.	11	3	4	12000	Split tipo Hi-Wall, modelo: 12.000 BTU/h, Potência: 1100W - 220/1F/60Hz, condensadora de descarga vertical.	1
SL. ATEND. INFATIL 01	19,94	5,5	5,7	24000	Split tipo Hi-Wall, modelo: 24.000 BTU/h, Potência: 2100W - 220/1F/60Hz, condensadora de descarga vertical.	1
SL DE ATIVIDADE DE VIDA	24,2	5,5	5,7	24000	Split tipo Hi-Wall, modelo: 24.000 BTU/h, Potência: 2100W - 220/1F/60Hz, condensadora de descarga vertical.	1

SL. ESTIMULAÇÃO PREC. 02	18,83	4	4	24000	Split tipo Hi-Wall, modelo: 24.000 BTU/h, Potência: 2100W - 220/1F/60Hz, condensadora de descarga vertical.	1
SL. DE ATEND. EM GRUPO ADULTO	19,92	4,9	5,7	24000	Split tipo Hi-Wall, modelo: 24.000 BTU/h, Potência: 2100W - 220/1F/60Hz, condensadora de descarga vertical.	1
SL. ESTIMULAÇÃO PREC. 01	18,8	4,1	5,7	24000	Split tipo Hi-Wall, modelo: 24.000 BTU/h, Potência: 2100W - 220/1F/60Hz, condensadora de descarga vertical.	1
GINÁSIO DE GINESIOTERAPIA	108,5	19,8	22,9	108000	Split tipo Piso Teto vias, modelo: 36.000 BTU/h, Potência: 4300W - 220/1F/60Hz, condensadora de descarga vertical	3
SL. DE CINESIOTERAPIA INFANTIL	24,9	5,7	5,7	24000	Split tipo Hi-Wall, modelo: 24.000 BTU/h, Potência: 2100W - 220/1F/60Hz, condensadora de descarga vertical.	1

AMBULATÓRIO ESTOMIA	12	3,4	4	12000	Split tipo Hi-Wall, modelo: 12.000 BTU/h, Potência: 1100W - 220/1F/60Hz, condensadora de descarga vertical.	1
ACOLHIMENTO FAMILIAR	46,23	13,5	15,1	48000	Split tipo Hi-Wall, modelo: 24.000 BTU/h, Potência: 2100W - 220/1F/60Hz, condensadora de descarga vertical.	2
CONSULT. MULTIPROFISSIONAL 01	10,09	2,5	4	12000	Split tipo Hi-Wall, modelo: 12.000 BTU/h, Potência: 1100W - 220/1F/60Hz, condensadora de descarga vertical.	1
CONSULT. MULTIPROFISSIONAL 02	10,09	3,5	4	12000	Split tipo Hi-Wall, modelo: 12.000 BTU/h, Potência: 1100W - 220/1F/60Hz, condensadora de descarga vertical.	1
CONSULT. FISIATRIA/ORTOPEDIA	11,23	3,2	4	12000	Split tipo Hi-Wall, modelo: 12.000 BTU/h, Potência: 1100W - 220/1F/60Hz, condensadora de descarga vertical.	1

SL. INTEGRAÇÃO	29,79	6	7,5	24000	Split tipo Hi-Wall, modelo: 24.000 BTU/h, Potência: 2100W - 220/1F/60Hz, condensadora de descarga vertical.	1
SL. DE ESTIMULAÇÃO	23,51	7,1	7,5	24000	Split tipo Hi-Wall, modelo: 24.000 BTU/h, Potência: 2100W - 220/1F/60Hz, condensadora de descarga vertical.	1
SL DE PROCED. INTERNOS	12,82	3,6	4	12000	Split tipo Hi-Wall, modelo: 12.000 BTU/h, Potência: 1100W - 220/1F/60Hz, condensadora de descarga vertical.	1
CONSULTÓRIO NEUROLOGIA	11,13	2,9	4	12000	Split tipo Hi-Wall, modelo: 12.000 BTU/h, Potência: 1100W - 220/1F/60Hz, condensadora de descarga vertical.	1
CONSULTÓRIO MULTIPROF. 01	11,03	2,7	4	12000	Split tipo Hi-Wall, modelo: 12.000 BTU/h, Potência: 1100W - 220/1F/60Hz, condensadora de descarga vertical.	1

CONSULTÓRIO MULTIPROF. 02	11,09	3,3	4	12000	Split tipo Hi-Wall, modelo: 12.000 BTU/h, Potência: 1100W - 220/1F/60Hz, condensadora de descarga vertical.	1
SL. EXAME PEATE- BERA	8,82	3,5	4	12000	Split tipo Hi-Wall, modelo: 12.000 BTU/h, Potência: 1100W - 220/1F/60Hz, condensadora de descarga vertical.	1
SL OARA SELEÇÃO DE AASI	9,98	3,5	4	12000	Split tipo Hi-Wall, modelo: 12.000 BTU/h, Potência: 1100W - 220/1F/60Hz, condensadora de descarga vertical.	1
AVALIAÇÃO AUDIOLÓGICA	10,79	3,9	5,7	12000	Split tipo Hi-Wall, modelo: 12.000 BTU/h, Potência: 1100W - 220/1F/60Hz, condensadora de descarga vertical.	1
CONSULTÓRIO MULTIPROF. 01	10,06	3,7	4	12000	Split tipo Hi-Wall, modelo: 12.000 BTU/h, Potência: 1100W - 220/1F/60Hz, condensadora de descarga vertical.	1

CONSULTÓRIO MULTIPROF. 02	10,04	3,5	4	12000	Split tipo Hi-Wall, modelo: 12.000 BTU/h, Potência: 1100W - 220/1F/60Hz, condensadora de descarga vertical.	1
CONSULTÓRIO OTORRIN.	10,08	3,5	4		Split tipo Hi-Wall, modelo: 12.000 BTU/h, Potência: 1100W - 220/1F/60Hz, condensadora de descarga vertical.	
ESTERILIZ. E DISTRIB. CME	5,46	6,9	10,55	18000	Split tipo Hi-Wall, modelo: 18.000 BTU/h, Potência: 1600W - 220/1F/60Hz, condensadora de descarga vertical.	1
RECEPÇÃO E LAVAGEM CME	4,8	6,9	4	18000	Split tipo Hi-Wall, modelo: 18.000 BTU/h, Potência: 1600W - 220/1F/60Hz, condensadora de descarga vertical.	1
CONSULTÓRIO DE OFTALMOLOGIA	16,41	2,7	5,3	18000	Split tipo Hi-Wall, modelo: 18.000 BTU/h, Potência: 1600W - 220/1F/60Hz, condensadora de descarga vertical.	1

CONSULTÓRIO MULTIPROFISSIONAL	10,56	3,7	4	12000	Split tipo Hi-Wall, modelo: 12.000 BTU/h, Potência: 1100W - 220/1F/60Hz, condensadora de descarga vertical.	1
SALA DE ORIENTAÇÃO DE BAIXA VISÃO	16,38	3,9	5,3	18000	Split tipo Hi-Wall, modelo: 18.000 BTU/h, Potência: 1600W - 220/1F/60Hz, condensadora de descarga vertical.	1
LABORATÓRIO PROTESE OCULAR	12,16	4,3	4	12000	Split tipo Hi-Wall, modelo: 12.000 BTU/h, Potência: 1100W - 220/1F/60Hz, condensadora de descarga vertical.	1
SALA DE ORIENTAÇÃO DE MOBILIDADE	21,25	5	7,5	24000	Split tipo Hi-Wall, modelo: 24.000 BTU/h, Potência: 2100W - 220/1F/60Hz, condensadora de descarga vertical.	1

7. RELATÓRIO DE CÁLCULO DE CARGA TÉRMICA

Air System Sizing Summary for CONSULTÓRIO - RAIO X

(In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:57

Air System Information

Air System Name CONSULTÓRIO - RAIO X
Equipment Class SPLT AHU
Air System Type SZCAV

Number of zones 1
Floor Area 11.1 sqm
Location Ilheus Ap, 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

Central Cooling Coil Sizing Data

Total coil load 3.0 kW
Sensible coil load 1.9 kW
Coil L/s at peak load 141 L/s
Sum of peak zone L/s 141 L/s
Sensible heat ratio 0.624
L/(s kW) 47.1
sqm/kW 3.7
W/sqm 268.2
Water flow @ 5.6 K rise N/A

Peak coil load occurs at janeiro 17:00
OA DB / WB 30.1 / 25.9 C
Entering DB / WB 24.7 / 19.8 C
Leaving DB / WB 14.0 / 13.9 C
Resulting RH 59 %
Design supply temp. 14.4 C
Zone T-stat Check 1 of 1 OK
Max zone temperature deviation 0.0 K

Central Heating Coil Sizing Data

Max coil load 0.1 kW
Coil L/s at Design Heating 141 L/s
Max coil L/s 141 L/s
Water flow @ 11.1 K drop N/A

Load occurs at Design Heating
W/sqm 7.5
Ent. DB / Lvg DB 20.4 / 20.9 C

Supply Fan Sizing Data

Design L/s 141 L/s
Design L/(s sqm) 12.63 L/(s sqm)

Fan motor BHP 0.16 BHP
Fan motor kW 0.13 kW
Fan total static 497 Pa

Outdoor Ventilation Air Data

Design airflow L/s 34 L/s
L/(s sqm) 3.05 L/(s sqm)

L/s/person 11.31 L/s/person

Zone Sizing Summary for CONSULTÓRIO - RAO X (In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:57

Air System Information

Air System Name CONSULTÓRIO - RAO X
Equipment Class SPLT AHU
Air System Type SZCAV

Number of zones 1
Floor Area 11.1 sqm
Location Ilheus Ap, 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

Zone Terminal Sizing Data

Zone Name	Design Supply Airflow (L/s)	Minimum Supply Airflow (L/s)	Zone L/(s sqm)	Reheat Coil Capacity (kW)	Reheat Coil Water L/s @ 11.1 K	Zone Htg Unit Coil Capacity (kW)	Zone Htg Unit Water L/s @ 11.1 K	Mixing Box Fan Airflow (L/s)
CONSULTÓRIO - RAO X	141	141	12.63	0.0	-	0.0	-	0

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (sqm)
CONSULTÓRIO - RAO X	1.5	janeiro 18:00	0.1	11.1

Space Loads and Airflows

Zone Name / Space Name	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (sqm)	Space L/(s sqm)
CONSULTÓRIO - RAO X						
CONSUTÓRIO ONDOTOLOGICO (RAO X PARAFACIAL)	1.5	janeiro 18:00	141	0.1	11.1	12.63

Ventilation Sizing Summary for CONSULTÓRIO - RAIO X

(In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:57

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows
Design Ventilation Airflow Rate 34 L/s

2. Space Ventilation Analysis

Zone Name / Space Name	Floor Area (sqm)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s sqm))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Required Outdoor Air (ACH)	Uncorrected Outdoor Air (L/s)	Direct Exhaust Air (L/s)
CONSULTÓRIO - RAIO X										
CONSUTÓRIO ONDOTOLOGICO (RAIO X PARAFACIAL)	11.1	3.0	140.5	0.00	0.00	0.0	0.0	3.00	0.0	0.0
Totals			140.5						33.9	

Air System Heat Balance Summary for CONSULTÓRIO - RAIO X

(In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:57

Table 1. System Loads

COMPONENT LOADS	DESIGN COOLING - JANEIRO 17:00			DESIGN HEATING		
	Details	Sensible [W]	Latent [W]	Details	Sensible [W]	Latent [W]
Zone Conditioning	-	1430	175	-	96	0
Plenum Load	-	0	0	-	0	0
Return Fan Load	141 L/s	0	-	141 L/s	0	-
Ventilation Load	34 L/s	287	906	34 L/s	115	0
Supply Fan Load	141 L/s	129	-	141 L/s	-129	-
Zone Fan Coil Fans Load	-	0	-	-	0	-
>> Total System Loads	-	1846	1082	-	82	0
Central Cooling Coil	-	1864	1121	-	0	0
Central Heating Coil	-	0	-	-	84	-
>> Total Conditioning	-	1864	1121	-	84	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

Table 2. Zone Heat Balance Loads

Zone Heat Balance Component	DESIGN COOLING - JANEIRO 17:00			DESIGN HEATING		
	Details	Sensible [W]	Latent [W]	Details	Sensible [W]	Latent [W]
Exterior Wall Convection	0 sqm	0	-	0 sqm	0	-
Roof Convection	11 sqm	325	-	11 sqm	29	-
Window Convection	0 sqm	0	-	0 sqm	0	-
Skylight Convection	0 sqm	0	-	0 sqm	0	-
Door Convection	0 sqm	0	-	0 sqm	0	-
Floor Convection	11 sqm	79	-	11 sqm	5	-
Interior Wall Convection	49 sqm	365	-	49 sqm	40	-
Ceiling Convection	0 sqm	0	-	0 sqm	0	-
Overhead Lighting Convection	134 W	83	-	0 W	0	-
Task Lighting Convection	56 W	24	-	0 W	0	-
Electric Equipment Convection	668 W	501	-	0 W	0	-
People Convection	3	65	180	0	0	0
Infiltration	0 L/s	0	0	0 L/s	0	0
Miscellaneous Equipment	-	0	0	-	0	0
Air Internal Energy Change	-	0	-	-	0	0
Safety Factor	0% / 0%	0	0	0%	0	0
>> Total Zone Loads	-	1443	180	-	74	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

Note 1: Surface convection line items show the combined effects of conductive heat gain to the surface and radiative heat gains absorbed at the surface which are then convected to room air.

Note 2: Lighting, equipment, and people line items include only the direct convective heat gain from the heat source to the room air. The radiative portion of the heat gain is first absorbed by surfaces in the room and then later convected from the surface to the air. Therefore the effect of the radiative portion of the heat gain is found in the surface convection line items.

Note 3: Solar heat gain is absorbed by surfaces in the room, re-radiated to other surfaces, and finally convected from the surfaces to room air. Therefore, the effect of solar heat gain is found in the surface convection line items.

Zone Heat Balance Summary for CONSULTÓRIO - RAIO X

(In Alternative: Default Alternative)

Project: PP070

08/18/2026

Prepared by: Teste 17/03/26

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Table 1. Heat Balance Loads for Zone CONSULTÓRIO - RAIO X

	DESIGN COOLING - JANEIRO 18:00			DESIGN HEATING		
	OA DB / WB 29.5 C / 25.7 C			OA DB / WB 18.3 C / 12.4 C		
	OCCUPIED T-STAT 23.0 C			OCCUPIED T-STAT 21.1 C		
Zone Heat Balance Component	Details	Sensible [W]	Latent [W]	Details	Sensible [W]	Latent [W]
Exterior Wall Convection	0 sqm	0	-	0 sqm	0	-
Roof Convection	11 sqm	330	-	11 sqm	29	-
Window Convection	0 sqm	0	-	0 sqm	0	-
Skylight Convection	0 sqm	0	-	0 sqm	0	-
Door Convection	0 sqm	0	-	0 sqm	0	-
Floor Convection	11 sqm	80	-	11 sqm	5	-
Interior Wall Convection	49 sqm	367	-	49 sqm	40	-
Ceiling Convection	0 sqm	0	-	0 sqm	0	-
Overhead Lighting Convection	134 W	83	-	0 W	0	-
Task Lighting Convection	56 W	24	-	0 W	0	-
Electric Equipment Convection	668 W	501	-	0 W	0	-
People Convection	3	65	180	0	0	0
Infiltration	0 L/s	0	0	0 L/s	0	0
Miscellaneous Equipment	-	0	0	-	0	0
Air Internal Energy Change	-	0	-	-	0	0
Safety Factor	0% / 0%	0	0	0%	0	0
		1450	180	-	74	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

Note 1: Surface convection line items show the combined effects of conductive heat gain to the surface and radiative heat gains absorbed at the surface which are then convected to room air.

Note 2: Lighting, equipment, and people line items include only the direct convective heat gain from the heat source to the room air. The radiative portion of the heat gain is first absorbed by surfaces in the room and then later convected from the surface to the air. Therefore the effect of the radiative portion of the heat gain is found in the surface convection line items.

Note 3: Solar heat gain is absorbed by surfaces in the room, re-radiated to other surfaces, and finally convected from the surfaces to room air. Therefore, the effect of solar heat gain is found in the surface convection line items.

Air System Sizing Summary for CONSULTÓRIO DIFERENCIAL

(In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:57

Air System Information

Air System Name **CONSULTÓRIO DIFERENCIAL**
Equipment Class **SPLT AHU**
Air System Type **SZCAV**

Number of zones **1**
Floor Area **12.2** sqm
Location **Ilheus Ap, 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**

Central Cooling Coil Sizing Data

Total coil load **5.5** kW
Sensible coil load **3.2** kW
Coil L/s at peak load **229** L/s
Sum of peak zone L/s **229** L/s
Sensible heat ratio **0.588**
L/(s kW) **41.5**
sqm/kW **2.2**
W/sqm **451.4**
Water flow @ 5.6 K rise **N/A**

Peak coil load occurs at **janeiro 16:00**
OA DB / WB **30.5 / 26.0** C
Entering DB / WB **25.5 / 20.5** C
Leaving DB / WB **14.0 / 13.9** C
Resulting RH **58** %
Design supply temp. **14.4** C
Zone T-stat Check **1 of 1** OK
Max zone temperature deviation **0.0** K

Central Heating Coil Sizing Data

Max coil load **0.3** kW
Coil L/s at Design Heating **229** L/s
Max coil L/s **229** L/s
Water flow @ 11.1 K drop **N/A**

Load occurs at **Design Heating**
W/sqm **26.0**
Ent. DB / Lvg DB **20.2 / 21.3** C

Supply Fan Sizing Data

Design L/s **229** L/s
Design L/(s sqm) **18.74** L/(s sqm)

Fan motor BHP **0.27** BHP
Fan motor kW **0.21** kW
Fan total static **497** Pa

Outdoor Ventilation Air Data

Design airflow L/s **75** L/s
L/(s sqm) **6.10** L/(s sqm)

L/s/person **24.87** L/s/person

Zone Sizing Summary for CONSULTÓRIO DIFERENCIAL

(In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:57

Air System Information

Air System Name **CONSULTÓRIO DIFERENCIAL**
Equipment Class **SPLT AHU**
Air System Type **SZCAV**

Number of zones **1**
Floor Area **12.2** sqm
Location **Ilheus Ap, 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**

Zone Terminal Sizing Data

Zone Name	Design Supply Airflow (L/s)	Minimum Supply Airflow (L/s)	Zone L/s (sqm)	Reheat Coil Capacity (kW)	Reheat Coil Water L/s @ 11.1 K	Zone Htg Unit Coil Capacity (kW)	Zone Htg Unit Water L/s @ 11.1 K	Mixing Box Fan Airflow (L/s)
CONSULTÓRIO DIFERENCIAL	229	229	18.74	0.0	-	0.0	-	0

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (sqm)
CONSULTÓRIO DIFERENCIAL	2.4	janeiro 16:00	0.2	12.2

Space Loads and Airflows

Zone Name / Space Name	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (sqm)	Space L/(s sqm)
CONSULTÓRIO DIFERENCIAL						
CONSUTÓRIO DIFERENCIAL 01 (AC)	2.4	janeiro 16:00	229	0.2	12.2	18.74

Ventilation Sizing Summary for CONSULTÓRIO DIFERENCIAL

(In Alternative: Default Alternative)

Project: PP070

Prepared by: Teste 17/03/26

08/18/2026

09:57

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows

Design Ventilation Airflow Rate 75 L/s

2. Space Ventilation Analysis

Zone Name / Space Name	Floor Area (sqm)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s sqm))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Required Outdoor Air (ACH)	Uncorrected Outdoor Air (L/s)	Direct Exhaust Air (L/s)
CONSULTÓRIO DIFERENCIAL										
CONSUTÓRIO DIFERENCIAL 01 (AC)	12.2	3.0	229.5	0.00	0.00	0.0	0.0	6.00	0.0	0.0
Totals			229.5						74.6	

Air System Heat Balance Summary for CONSULTÓRIO DIFERENCIAL

(In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:57

Table 1. System Loads

COMPONENT LOADS	DESIGN COOLING - JANEIRO 16:00			DESIGN HEATING		
	OA DB / WB 30.5 C / 26.0 C			OA DB / WB 18.3 C / 12.4 C		
	Details	Sensible [W]	Latent [W]	Details	Sensible [W]	Latent [W]
Zone Conditioning	-	2324	172	-	272	0
Plenum Load	-	0	0	-	0	0
Return Fan Load	229 L/s	0	-	229 L/s	0	-
Ventilation Load	75 L/s	674	2031	75 L/s	254	0
Supply Fan Load	229 L/s	211	-	229 L/s	-211	-
Zone Fan Coil Fans Load	-	0	-	-	0	-
>> Total System Loads	-	3209	2203	-	315	0
Central Cooling Coil	-	3249	2277	-	0	0
Central Heating Coil	-	0	-	-	319	-
>> Total Conditioning	-	3249	2277	-	319	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

Table 2. Zone Heat Balance Loads

Zone Heat Balance Component	DESIGN COOLING - JANEIRO 16:00			DESIGN HEATING		
	OA DB / WB 30.5 C / 26.0 C			OA DB / WB 18.3 C / 12.4 C		
	Details	Sensible [W]	Latent [W]	Details	Sensible [W]	Latent [W]
Exterior Wall Convection	16 sqm	322	-	16 sqm	39	-
Roof Convection	12 sqm	437	-	12 sqm	51	-
Window Convection	3 sqm	385	-	3 sqm	22	-
Skylight Convection	0 sqm	0	-	0 sqm	0	-
Door Convection	0 sqm	0	-	0 sqm	0	-
Floor Convection	12 sqm	231	-	12 sqm	30	-
Interior Wall Convection	33 sqm	535	-	33 sqm	52	-
Ceiling Convection	0 sqm	0	-	0 sqm	0	-
Overhead Lighting Convection	147 W	92	-	0 W	0	-
Task Lighting Convection	61 W	27	-	0 W	0	-
Electric Equipment Convection	367 W	275	-	0 W	0	-
People Convection	3	65	180	0	0	0
Infiltration	0 L/s	0	0	0 L/s	0	0
Miscellaneous Equipment	-	0	0	-	0	0
Air Internal Energy Change	-	0	-	-	0	0
Safety Factor	0% / 0%	0	0	0%	0	0
>> Total Zone Loads	-	2369	180	-	193	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

Note 1: Surface convection line items show the combined effects of conductive heat gain to the surface and radiative heat gains absorbed at the surface which are then convected to room air.

Note 2: Lighting, equipment, and people line items include only the direct convective heat gain from the heat source to the room air. The radiative portion of the heat gain is first absorbed by surfaces in the room and then later convected from the surface to the air. Therefore the effect of the radiative portion of the heat gain is found in the surface convection line items.

Note 3: Solar heat gain is absorbed by surfaces in the room, re-radiated to other surfaces, and finally convected from the surfaces to room air. Therefore, the effect of solar heat gain is found in the surface convection line items.

Zone Heat Balance Summary for CONSULTÓRIO DIFERENCIAL

(In Alternative: Default Alternative)

Project: PP070

08/18/2026

Prepared by: Teste 17/03/26

09:57

Table 1. Heat Balance Loads for Zone CONSULTÓRIO DIFERENCIAL

Zone Heat Balance Component	DESIGN COOLING - JANEIRO 16:00			DESIGN HEATING		
	OA DB / WB 30.5 C / 26.0 C			OA DB / WB 18.3 C / 12.4 C		
	OCCUPIED T-STAT 23.0 C			OCCUPIED T-STAT 21.1 C		
	Details	Sensible [W]	Latent [W]	Details	Sensible [W]	Latent [W]
Exterior Wall Convection	16 sqm	322	-	16 sqm	39	-
Roof Convection	12 sqm	437	-	12 sqm	51	-
Window Convection	3 sqm	385	-	3 sqm	22	-
Skylight Convection	0 sqm	0	-	0 sqm	0	-
Door Convection	0 sqm	0	-	0 sqm	0	-
Floor Convection	12 sqm	231	-	12 sqm	30	-
Interior Wall Convection	33 sqm	535	-	33 sqm	52	-
Ceiling Convection	0 sqm	0	-	0 sqm	0	-
Overhead Lighting Convection	147 W	92	-	0 W	0	-
Task Lighting Convection	61 W	27	-	0 W	0	-
Electric Equipment Convection	367 W	275	-	0 W	0	-
People Convection	3	65	180	0	0	0
Infiltration	0 L/s	0	0	0 L/s	0	0
Miscellaneous Equipment	-	0	0	-	0	0
Air Internal Energy Change	-	0	-	-	0	0
Safety Factor	0% / 0%	0	0	0%	0	0
		2369	180	-	193	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

Note 1: Surface convection line items show the combined effects of conductive heat gain to the surface and radiative heat gains absorbed at the surface which are then convected to room air.

Note 2: Lighting, equipment, and people line items include only the direct convective heat gain from the heat source to the room air. The radiative portion of the heat gain is first absorbed by surfaces in the room and then later convected from the surface to the air. Therefore the effect of the radiative portion of the heat gain is found in the surface convection line items.

Note 3: Solar heat gain is absorbed by surfaces in the room, re-radiated to other surfaces, and finally convected from the surfaces to room air. Therefore, the effect of solar heat gain is found in the surface convection line items.

Air System Sizing Summary for CONSULTÓRIO DIFERENCIAL 02

(In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:57

Air System Information

Air System Name . **CONSULTÓRIO DIFERENCIAL 02**
Equipment Class **SPLT AHU**
Air System Type **SZCAV**

Number of zones **1**
Floor Area **12.0** sqm
Location **Ilheus Ap, 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**

Central Cooling Coil Sizing Data

Total coil load **4.3** kW
Sensible coil load **2.1** kW
Coil L/s at peak load **133** L/s
Sum of peak zone L/s **133** L/s
Sensible heat ratio **0.490**
L/(s kW) **30.7**
sqm/kW **2.8**
W/sqm **361.6**
Water flow @ 5.6 K rise **N/A**

Peak coil load occurs at **janeiro 17:00**
OA DB / WB **30.1 / 25.9** C
Entering DB / WB **26.9 / 22.5** C
Leaving DB / WB **14.0 / 13.9** C
Resulting RH **59** %
Design supply temp. **14.4** C
Zone T-stat Check **1 of 1** OK
Max zone temperature deviation **0.0** K

Central Heating Coil Sizing Data

Max coil load **0.3** kW
Coil L/s at Design Heating **133** L/s
Max coil L/s **133** L/s
Water flow @ 11.1 K drop **N/A**

Load occurs at **Design Heating**
W/sqm **22.1**
Ent. DB / Lvg DB **19.5 / 21.2** C

Supply Fan Sizing Data

Design L/s **133** L/s
Design L/(s sqm) **11.10** L/(s sqm)

Fan motor BHP **0.15** BHP
Fan motor kW **0.12** kW
Fan total static **497** Pa

Outdoor Ventilation Air Data

Design airflow L/s **73** L/s
L/(s sqm) **6.10** L/(s sqm)

L/s/person **24.41** L/s/person

Zone Sizing Summary for CONSULTÓRIO DIFERENCIAL 02

(In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:57

Air System Information

Air System Name : **CONSULTÓRIO DIFERENCIAL 02**
Equipment Class : **SPLT AHU**
Air System Type : **SZCAV**

Number of zones : **1**
Floor Area : **12.0** sqm
Location : **Ilheus Ap, 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**

Zone Terminal Sizing Data

Zone Name	Design Supply Airflow (L/s)	Minimum Supply Airflow (L/s)	Zone L/s (sqm)	Reheat Coil Capacity (kW)	Reheat Coil Water L/s @ 11.1 K	Zone Htg Unit Coil Capacity (kW)	Zone Htg Unit Water L/s @ 11.1 K	Mixing Box Fan Airflow (L/s)
CONSULTÓRIO DIFERENCIAL 02	133	133	11.10	0.0	-	0.0	-	0

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (sqm)
CONSULTÓRIO DIFERENCIAL 02	1.4	janeiro 19:00	0.1	12.0

Space Loads and Airflows

Zone Name / Space Name	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (sqm)	Space L/s (sqm)
CONSULTÓRIO DIFERENCIAL 02						
CONSULTÓRIO DIFERENCIADO 02 (AC)	1.4	janeiro 19:00	133	0.1	12.0	11.10

Ventilation Sizing Summary for CONSULTÓRIO DIFERENCIAL 02

(In Alternative: Default Alternative)

Project: PP070

Prepared by: Teste 17/03/26

08/18/2026

09:57

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows

Design Ventilation Airflow Rate 73 L/s

2. Space Ventilation Analysis

Zone Name / Space Name	Floor Area (sqm)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s sqm))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Required Outdoor Air (ACH)	Uncorrected Outdoor Air (L/s)	Direct Exhaust Air (L/s)
CONSULTÓRIO DIFERENCIAL 02										
CONSULTÓRIO DIFERENCIADO 02 (AC)	12.0	3.0	133.3	0.00	0.00	0.0	0.0	6.00	0.0	0.0
Totals			133.3						73.2	

Air System Heat Balance Summary for CONSULTÓRIO DIFERENCIAL 02

(In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:57

Table 1. System Loads

COMPONENT LOADS	DESIGN COOLING - JANEIRO 17:00			DESIGN HEATING		
	OA DB / WB 30.1 C / 25.9 C			OA DB / WB 18.3 C / 12.4 C		
	Details	Sensible [W]	Latent [W]	Details	Sensible [W]	Latent [W]
Zone Conditioning	-	1350	176	-	136	0
Plenum Load	-	0	0	-	0	0
Return Fan Load	133 L/s	0	-	133 L/s	0	-
Ventilation Load	73 L/s	619	1964	73 L/s	249	0
Supply Fan Load	133 L/s	123	-	133 L/s	-123	-
Zone Fan Coil Fans Load	-	0	-	-	0	-
>> Total System Loads	-	2092	2140	-	262	0
Central Cooling Coil	-	2129	2216	-	0	0
Central Heating Coil	-	0	-	-	266	-
>> Total Conditioning	-	2129	2216	-	266	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

Table 2. Zone Heat Balance Loads

Zone Heat Balance Component	DESIGN COOLING - JANEIRO 17:00			DESIGN HEATING		
	OA DB / WB 30.1 C / 25.9 C			OA DB / WB 18.3 C / 12.4 C		
	Details	Sensible [W]	Latent [W]	Details	Sensible [W]	Latent [W]
Exterior Wall Convection	0 sqm	0	-	0 sqm	0	-
Roof Convection	12 sqm	343	-	12 sqm	33	-
Window Convection	0 sqm	0	-	0 sqm	0	-
Skylight Convection	0 sqm	0	-	0 sqm	0	-
Door Convection	0 sqm	0	-	0 sqm	0	-
Floor Convection	12 sqm	82	-	12 sqm	7	-
Interior Wall Convection	51 sqm	485	-	51 sqm	58	-
Ceiling Convection	0 sqm	0	-	0 sqm	0	-
Overhead Lighting Convection	144 W	90	-	0 W	0	-
Task Lighting Convection	60 W	26	-	0 W	0	-
Electric Equipment Convection	360 W	270	-	0 W	0	-
People Convection	3	65	180	0	0	0
Infiltration	0 L/s	0	0	0 L/s	0	0
Miscellaneous Equipment	-	0	0	-	0	0
Air Internal Energy Change	-	0	-	-	0	0
Safety Factor	0% / 0%	0	0	0%	0	0
>> Total Zone Loads	-	1362	180	-	98	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

Note 1: Surface convection line items show the combined effects of conductive heat gain to the surface and radiative heat gains absorbed at the surface which are then convected to room air.

Note 2: Lighting, equipment, and people line items include only the direct convective heat gain from the heat source to the room air. The radiative portion of the heat gain is first absorbed by surfaces in the room and then later convected from the surface to the air. Therefore the effect of the radiative portion of the heat gain is found in the surface convection line items.

Note 3: Solar heat gain is absorbed by surfaces in the room, re-radiated to other surfaces, and finally convected from the surfaces to room air. Therefore, the effect of solar heat gain is found in the surface convection line items.

Zone Heat Balance Summary for CONSULTÓRIO DIFERENCIAL 02

(In Alternative: Default Alternative)

Project: PP070

08/18/2026

Prepared by: Teste 17/03/26

09:57

Table 1. Heat Balance Loads for Zone CONSULTÓRIO DIFERENCIAL 02

Zone Heat Balance Component	DESIGN COOLING - JANEIRO 19:00			DESIGN HEATING		
	OA DB / WB 28.6 C / 25.5 C			OA DB / WB 18.3 C / 12.4 C		
	OCCUPIED T-STAT 23.0 C			OCCUPIED T-STAT 21.1 C		
	Details	Sensible [W]	Latent [W]	Details	Sensible [W]	Latent [W]
Exterior Wall Convection	0 sqm	0	-	0 sqm	0	-
Roof Convection	12 sqm	345	-	12 sqm	33	-
Window Convection	0 sqm	0	-	0 sqm	0	-
Skylight Convection	0 sqm	0	-	0 sqm	0	-
Door Convection	0 sqm	0	-	0 sqm	0	-
Floor Convection	12 sqm	83	-	12 sqm	7	-
Interior Wall Convection	51 sqm	496	-	51 sqm	58	-
Ceiling Convection	0 sqm	0	-	0 sqm	0	-
Overhead Lighting Convection	144 W	90	-	0 W	0	-
Task Lighting Convection	60 W	26	-	0 W	0	-
Electric Equipment Convection	360 W	270	-	0 W	0	-
People Convection	3	65	180	0	0	0
Infiltration	0 L/s	0	0	0 L/s	0	0
Miscellaneous Equipment	-	0	0	-	0	0
Air Internal Energy Change	-	0	-	-	0	0
Safety Factor	0% / 0%	0	0	0%	0	0
		1376	180	-	98	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

Note 1: Surface convection line items show the combined effects of conductive heat gain to the surface and radiative heat gains absorbed at the surface which are then convected to room air.

Note 2: Lighting, equipment, and people line items include only the direct convective heat gain from the heat source to the room air. The radiative portion of the heat gain is first absorbed by surfaces in the room and then later convected from the surface to the air. Therefore the effect of the radiative portion of the heat gain is found in the surface convection line items.

Note 3: Solar heat gain is absorbed by surfaces in the room, re-radiated to other surfaces, and finally convected from the surfaces to room air. Therefore, the effect of solar heat gain is found in the surface convection line items.

Air System Sizing Summary for CONSULTÓRIO ENFERMAGEM

(In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:57

Air System Information

Air System Name **CONSULTÓRIO ENFERMAGEM**
Equipment Class **SPLT AHU**
Air System Type **SZCAV**

Number of zones **1**
Floor Area **11.6** sqm
Location **Ilheus Ap, 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**

Central Cooling Coil Sizing Data

Total coil load **4.6** kW
Sensible coil load **2.3** kW
Coil L/s at peak load **152** L/s
Sum of peak zone L/s **152** L/s
Sensible heat ratio **0.516**
L/(s kW) **33.5**
sqm/kW **2.5**
W/sqm **393.5**
Water flow @ 5.6 K rise **N/A**

Peak coil load occurs at **dezembro 15:00**
OA DB / WB **30.3 / 26.1** C
Entering DB / WB **26.4 / 21.8** C
Leaving DB / WB **14.0 / 13.8** C
Resulting RH **58** %
Design supply temp. **14.4** C
Zone T-stat Check **1 of 1** OK
Max zone temperature deviation **0.0** K

Central Heating Coil Sizing Data

Max coil load **0.3** kW
Coil L/s at Design Heating **152** L/s
Max coil L/s **152** L/s
Water flow @ 11.1 K drop **N/A**

Load occurs at **Design Heating**
W/sqm **26.6**
Ent. DB / Lvg DB **19.8 / 21.4** C

Supply Fan Sizing Data

Design L/s **152** L/s
Design L/(s sqm) **13.16** L/(s sqm)

Fan motor BHP **0.18** BHP
Fan motor kW **0.14** kW
Fan total static **497** Pa

Outdoor Ventilation Air Data

Design airflow L/s **71** L/s
L/(s sqm) **6.10** L/(s sqm)

L/s/person **23.52** L/s/person

Zone Sizing Summary for CONSULTÓRIO ENFERMAGEM (In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:57

Air System Information

Air System Name **CONSULTÓRIO ENFERMAGEM**
Equipment Class **SPLT AHU**
Air System Type **SZCAV**

Number of zones **1**
Floor Area **11.6** sqm
Location **Ilheus Ap, 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**

Zone Terminal Sizing Data

Zone Name	Design Supply Airflow (L/s)	Minimum Supply Airflow (L/s)	Zone L/(s sqm)	Reheat Coil Capacity (kW)	Reheat Coil Water L/s @ 11.1 K	Zone Htg Unit Coil Capacity (kW)	Zone Htg Unit Water L/s @ 11.1 K	Mixing Box Fan Airflow (L/s)
CONSULTÓRIO ENFERMAGEM	152	152	13.16	0.0	-	0.0	-	0

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (sqm)
CONSULTÓRIO ENFERMAGEM	1.6	dezembro 15:00	0.1	11.6

Space Loads and Airflows

Zone Name / Space Name	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (sqm)	Space L/(s sqm)
CONSULTÓRIO ENFERMAGEM						
CONSUTÓRIO ENFERMAGEM (AC)	1.6	dezembro 15:00	152	0.1	11.6	13.16

Ventilation Sizing Summary for CONSULTÓRIO ENFERMAGEM

(In Alternative: Default Alternative)

Project: PP070

Prepared by: Teste 17/03/26

08/18/2026

09:57

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows

Design Ventilation Airflow Rate 71 L/s

2. Space Ventilation Analysis

Zone Name / Space Name	Floor Area (sqm)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/s sqm)	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Required Outdoor Air (ACH)	Uncorrected Outdoor Air (L/s)	Direct Exhaust Air (L/s)
CONSULTÓRIO ENFERMAGEM										
CONSUTÓRIO ENFERMAGEM (AC)	11.6	3.0	152.4	0.00	0.00	0.0	0.0	6.00	0.0	0.0
Totals			152.4						70.6	

Air System Heat Balance Summary for CONSULTÓRIO ENFERMAGEM

(In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:57

Table 1. System Loads

COMPONENT LOADS	DESIGN COOLING - DEZEMBRO 15:00			DESIGN HEATING		
	OA DB / WB 30.3 C / 26.1 C			OA DB / WB 18.3 C / 12.4 C		
	Details	Sensible [W]	Latent [W]	Details	Sensible [W]	Latent [W]
Zone Conditioning	-	1552	175	-	204	0
Plenum Load	-	0	0	-	0	0
Return Fan Load	152 L/s	0	-	152 L/s	0	-
Ventilation Load	71 L/s	619	1954	71 L/s	240	0
Supply Fan Load	152 L/s	140	-	152 L/s	-140	-
Zone Fan Coil Fans Load	-	0	-	-	0	-
>> Total System Loads	-	2312	2129	-	304	0
Central Cooling Coil	-	2349	2205	-	0	0
Central Heating Coil	-	0	-	-	307	-
>> Total Conditioning	-	2349	2205	-	307	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

Table 2. Zone Heat Balance Loads

Zone Heat Balance Component	DESIGN COOLING - DEZEMBRO 15:00			DESIGN HEATING		
	OA DB / WB 30.3 C / 26.1 C			OA DB / WB 18.3 C / 12.4 C		
	Details	Sensible [W]	Latent [W]	Details	Sensible [W]	Latent [W]
Exterior Wall Convection	8 sqm	132	-	8 sqm	19	-
Roof Convection	12 sqm	321	-	12 sqm	34	-
Window Convection	3 sqm	180	-	3 sqm	20	-
Skylight Convection	0 sqm	0	-	0 sqm	0	-
Door Convection	0 sqm	0	-	0 sqm	0	-
Floor Convection	12 sqm	118	-	12 sqm	20	-
Interior Wall Convection	39 sqm	385	-	39 sqm	45	-
Ceiling Convection	0 sqm	0	-	0 sqm	0	-
Overhead Lighting Convection	139 W	87	-	0 W	0	-
Task Lighting Convection	58 W	25	-	0 W	0	-
Electric Equipment Convection	347 W	260	-	0 W	0	-
People Convection	3	65	180	0	0	0
Infiltration	0 L/s	0	0	0 L/s	0	0
Miscellaneous Equipment	-	0	0	-	0	0
Air Internal Energy Change	-	0	-	-	0	0
Safety Factor	0% / 0%	0	0	0%	0	0
>> Total Zone Loads	-	1573	180	-	139	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

Note 1: Surface convection line items show the combined effects of conductive heat gain to the surface and radiative heat gains absorbed at the surface which are then convected to room air.

Note 2: Lighting, equipment, and people line items include only the direct convective heat gain from the heat source to the room air. The radiative portion of the heat gain is first absorbed by surfaces in the room and then later convected from the surface to the air. Therefore the effect of the radiative portion of the heat gain is found in the surface convection line items.

Note 3: Solar heat gain is absorbed by surfaces in the room, re-radiated to other surfaces, and finally convected from the surfaces to room air. Therefore, the effect of solar heat gain is found in the surface convection line items.

Zone Heat Balance Summary for CONSULTÓRIO ENFERMAGEM

(In Alternative: Default Alternative)

Project: PP070

08/18/2026

Prepared by: Teste 17/03/26

09:57

Table 1. Heat Balance Loads for Zone CONSULTÓRIO ENFERMAGEM

Zone Heat Balance Component	DESIGN COOLING - DEZEMBRO 15:00			DESIGN HEATING		
	OA DB / WB 30.3 C / 26.1 C			OA DB / WB 18.3 C / 12.4 C		
	OCCUPIED T-STAT 23.0 C			OCCUPIED T-STAT 21.1 C		
	Details	Sensible [W]	Latent [W]	Details	Sensible [W]	Latent [W]
Exterior Wall Convection	8 sqm	132	-	8 sqm	19	-
Roof Convection	12 sqm	321	-	12 sqm	34	-
Window Convection	3 sqm	180	-	3 sqm	20	-
Skylight Convection	0 sqm	0	-	0 sqm	0	-
Door Convection	0 sqm	0	-	0 sqm	0	-
Floor Convection	12 sqm	118	-	12 sqm	20	-
Interior Wall Convection	39 sqm	385	-	39 sqm	45	-
Ceiling Convection	0 sqm	0	-	0 sqm	0	-
Overhead Lighting Convection	139 W	87	-	0 W	0	-
Task Lighting Convection	58 W	25	-	0 W	0	-
Electric Equipment Convection	347 W	260	-	0 W	0	-
People Convection	3	65	180	0	0	0
Infiltration	0 L/s	0	0	0 L/s	0	0
Miscellaneous Equipment	-	0	0	-	0	0
Air Internal Energy Change	-	0	-	-	0	0
Safety Factor	0% / 0%	0	0	0%	0	0
		1573	180	-	139	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

Note 1: Surface convection line items show the combined effects of conductive heat gain to the surface and radiative heat gains absorbed at the surface which are then convected to room air.

Note 2: Lighting, equipment, and people line items include only the direct convective heat gain from the heat source to the room air. The radiative portion of the heat gain is first absorbed by surfaces in the room and then later convected from the surface to the air. Therefore the effect of the radiative portion of the heat gain is found in the surface convection line items.

Note 3: Solar heat gain is absorbed by surfaces in the room, re-radiated to other surfaces, and finally convected from the surfaces to room air. Therefore, the effect of solar heat gain is found in the surface convection line items.

Air System Sizing Summary for CONSULTÓRIO INDIFERENCIADO 01

(In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:57

Air System Information

Air System Name **CONSULTÓRIO INDIFERENCIADO 01**
Equipment Class **SPLT AHU**
Air System Type **SZCAV**

Number of zones **1**
Floor Area **11.6** sqm
Location **Ilheus Ap, 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**

Central Cooling Coil Sizing Data

Total coil load **4.5** kW
Sensible coil load **2.2** kW
Coil L/s at peak load **142** L/s
Sum of peak zone L/s **142** L/s
Sensible heat ratio **0.504**
L/(s kW) **31.9**
sqm/kW **2.6**
W/sqm **382.8**
Water flow @ 5.6 K rise **N/A**

Peak coil load occurs at **dezembro 14:00**
OA DB / WB **30.3 / 26.1** C
Entering DB / WB **26.7 / 22.1** C
Leaving DB / WB **14.0 / 13.8** C
Resulting RH **58** %
Design supply temp. **14.4** C
Zone T-stat Check **1 of 1** OK
Max zone temperature deviation **0.0** K

Central Heating Coil Sizing Data

Max coil load **0.3** kW
Coil L/s at Design Heating **142** L/s
Max coil L/s **142** L/s
Water flow @ 11.1 K drop **N/A**

Load occurs at **Design Heating**
W/sqm **27.2**
Ent. DB / Lvg DB **19.7 / 21.5** C

Supply Fan Sizing Data

Design L/s **142** L/s
Design L/(s sqm) **12.21** L/(s sqm)

Fan motor BHP **0.16** BHP
Fan motor kW **0.13** kW
Fan total static **497** Pa

Outdoor Ventilation Air Data

Design airflow L/s **71** L/s
L/(s sqm) **6.10** L/(s sqm)

L/s/person **23.63** L/s/person

Zone Sizing Summary for CONSULTÓRIO INDIFERENCIADO 01

(In Alternative: Default Alternative)

Project: PP070

08/18/2026

Prepared by: Teste 17/03/26

09:57

Air System Information

Air System Name **CONSULTÓRIO INDIFERENCIADO 01**
Equipment Class **SPLT AHU**
Air System Type **SZCAV**

Number of zones **1**
Floor Area **11.6** sqm
Location **Ilheus Ap, 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**

Zone Terminal Sizing Data

Zone Name	Design Supply Airflow (L/s)	Minimum Supply Airflow (L/s)	Zone L/(s sqm)	Reheat Coil Capacity (kW)	Reheat Coil Water L/s @ 11.1 K	Zone Htg Unit Coil Capacity (kW)	Zone Htg Unit Water L/s @ 11.1 K	Mixing Box Fan Airflow (L/s)
CONSULTÓRIO INDIFERENCIADO 01	142	142	12.21	0.0	-	0.0	-	0

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (sqm)
CONSULTÓRIO INDIFERENCIADO 01	1.5	dezembro 14:00	0.1	11.6

Space Loads and Airflows

Zone Name / Space Name	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (sqm)	Space L/(s sqm)
CONSULTÓRIO INDIFERENCIADO 01						
CONSUTÓRIO INDIFERENCIADO 01 (AC)	1.5	dezembro 14:00	142	0.1	11.6	12.21

Ventilation Sizing Summary for CONSULTÓRIO INDIFERENCIADO 01

(In Alternative: Default Alternative)

Project: PP070

Prepared by: Teste 17/03/26

08/18/2026

09:57

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows
 Design Ventilation Airflow Rate 71 L/s

2. Space Ventilation Analysis

Zone Name / Space Name	Floor Area (sqm)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/s sqm)	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Required Outdoor Air (ACH)	Uncorrected Outdoor Air (L/s)	Direct Exhaust Air (L/s)
CONSULTÓRIO INDIFERENCIADO 01										
CONSUTÓRIO INDIFERENCIADO 01 (AC)	11.6	3.0	142.0	0.00	0.00	0.0	0.0	6.00	0.0	0.0
Totals			142.0						70.9	

Air System Heat Balance Summary for CONSULTÓRIO INDIFERENCIADO 01

(In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:57

Table 1. System Loads

COMPONENT LOADS	DESIGN COOLING - DEZEMBRO 14:00			DESIGN HEATING		
	OA DB / WB 30.3 C / 26.1 C			OA DB / WB 18.3 C / 12.4 C		
	Details	Sensible [W]	Latent [W]	Details	Sensible [W]	Latent [W]
Zone Conditioning	-	1449	173	-	202	0
Plenum Load	-	0	0	-	0	0
Return Fan Load	142 L/s	0	-	142 L/s	0	-
Ventilation Load	71 L/s	625	1965	71 L/s	241	0
Supply Fan Load	142 L/s	131	-	142 L/s	-131	-
Zone Fan Coil Fans Load	-	0	-	-	0	-
>> Total System Loads	-	2205	2138	-	313	0
Central Cooling Coil	-	2243	2208	-	0	0
Central Heating Coil	-	0	-	-	317	-
>> Total Conditioning	-	2243	2208	-	317	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

Table 2. Zone Heat Balance Loads

Zone Heat Balance Component	DESIGN COOLING - DEZEMBRO 14:00			DESIGN HEATING		
	OA DB / WB 30.3 C / 26.1 C			OA DB / WB 18.3 C / 12.4 C		
	Details	Sensible [W]	Latent [W]	Details	Sensible [W]	Latent [W]
Exterior Wall Convection	8 sqm	129	-	8 sqm	19	-
Roof Convection	12 sqm	288	-	12 sqm	34	-
Window Convection	3 sqm	136	-	3 sqm	20	-
Skylight Convection	0 sqm	0	-	0 sqm	0	-
Door Convection	0 sqm	0	-	0 sqm	0	-
Floor Convection	12 sqm	112	-	12 sqm	20	-
Interior Wall Convection	39 sqm	362	-	39 sqm	45	-
Ceiling Convection	0 sqm	0	-	0 sqm	0	-
Overhead Lighting Convection	140 W	87	-	0 W	0	-
Task Lighting Convection	58 W	26	-	0 W	0	-
Electric Equipment Convection	349 W	262	-	0 W	0	-
People Convection	3	65	180	0	0	0
Infiltration	0 L/s	0	0	0 L/s	0	0
Miscellaneous Equipment	-	0	0	-	0	0
Air Internal Energy Change	-	0	-	-	0	0
Safety Factor	0% / 0%	0	0	0%	0	0
>> Total Zone Loads	-	1466	180	-	139	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

Note 1: Surface convection line items show the combined effects of conductive heat gain to the surface and radiative heat gains absorbed at the surface which are then convected to room air.

Note 2: Lighting, equipment, and people line items include only the direct convective heat gain from the heat source to the room air. The radiative portion of the heat gain is first absorbed by surfaces in the room and then later convected from the surface to the air. Therefore the effect of the radiative portion of the heat gain is found in the surface convection line items.

Note 3: Solar heat gain is absorbed by surfaces in the room, re-radiated to other surfaces, and finally convected from the surfaces to room air. Therefore, the effect of solar heat gain is found in the surface convection line items.

Zone Heat Balance Summary for CONSULTÓRIO INDIFERENCIADO 01

(In Alternative: Default Alternative)

Project: PP070

08/18/2026

Prepared by: Teste 17/03/26

09:57

Table 1. Heat Balance Loads for Zone CONSULTÓRIO INDIFERENCIADO 01

Zone Heat Balance Component	DESIGN COOLING - DEZEMBRO 14:00			DESIGN HEATING		
	OA DB / WB 30.3 C / 26.1 C			OA DB / WB 18.3 C / 12.4 C		
	OCCUPIED T-STAT 23.0 C			OCCUPIED T-STAT 21.1 C		
	Details	Sensible [W]	Latent [W]	Details	Sensible [W]	Latent [W]
Exterior Wall Convection	8 sqm	129	-	8 sqm	19	-
Roof Convection	12 sqm	288	-	12 sqm	34	-
Window Convection	3 sqm	136	-	3 sqm	20	-
Skylight Convection	0 sqm	0	-	0 sqm	0	-
Door Convection	0 sqm	0	-	0 sqm	0	-
Floor Convection	12 sqm	112	-	12 sqm	20	-
Interior Wall Convection	39 sqm	362	-	39 sqm	45	-
Ceiling Convection	0 sqm	0	-	0 sqm	0	-
Overhead Lighting Convection	140 W	87	-	0 W	0	-
Task Lighting Convection	58 W	26	-	0 W	0	-
Electric Equipment Convection	349 W	262	-	0 W	0	-
People Convection	3	65	180	0	0	0
Infiltration	0 L/s	0	0	0 L/s	0	0
Miscellaneous Equipment	-	0	0	-	0	0
Air Internal Energy Change	-	0	-	-	0	0
Safety Factor	0% / 0%	0	0	0%	0	0
		1466	180	-	139	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

Note 1: Surface convection line items show the combined effects of conductive heat gain to the surface and radiative heat gains absorbed at the surface which are then convected to room air.

Note 2: Lighting, equipment, and people line items include only the direct convective heat gain from the heat source to the room air. The radiative portion of the heat gain is first absorbed by surfaces in the room and then later convected from the surface to the air. Therefore the effect of the radiative portion of the heat gain is found in the surface convection line items.

Note 3: Solar heat gain is absorbed by surfaces in the room, re-radiated to other surfaces, and finally convected from the surfaces to room air. Therefore, the effect of solar heat gain is found in the surface convection line items.

Air System Sizing Summary for CONSULTÓRIO INDIFERENCIADO 02

(In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:57

Air System Information

Air System Name **CONSULTÓRIO INDIFERENCIADO 02**
Equipment Class **SPLT AHU**
Air System Type **SZCAV**

Number of zones **1**
Floor Area **11.3** sqm
Location **Ilheus Ap, 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**

Central Cooling Coil Sizing Data

Total coil load **4.5** kW
Sensible coil load **2.4** kW
Coil L/s at peak load **156** L/s
Sum of peak zone L/s **156** L/s
Sensible heat ratio **0.531**
L/(s kW) **34.8**
sqm/kW **2.5**
W/sqm **397.8**
Water flow @ 5.6 K rise **N/A**

Peak coil load occurs at **fevereiro 16:00**
OA DB / WB **30.5 / 26.0** C
Entering DB / WB **26.3 / 21.6** C
Leaving DB / WB **14.0 / 13.9** C
Resulting RH **58** %
Design supply temp. **14.4** C
Zone T-stat Check **1 of 1** OK
Max zone temperature deviation **0.0** K

Central Heating Coil Sizing Data

Max coil load **0.3** kW
Coil L/s at Design Heating **156** L/s
Max coil L/s **156** L/s
Water flow @ 11.1 K drop **N/A**

Load occurs at **Design Heating**
W/sqm **27.6**
Ent. DB / Lvg DB **19.9 / 21.5** C

Supply Fan Sizing Data

Design L/s **156** L/s
Design L/(s sqm) **13.82** L/(s sqm)

Fan motor BHP **0.18** BHP
Fan motor kW **0.14** kW
Fan total static **497** Pa

Outdoor Ventilation Air Data

Design airflow L/s **69** L/s
L/(s sqm) **6.10** L/(s sqm)

L/s/person **22.99** L/s/person

Zone Sizing Summary for CONSULTÓRIO INDIFERENCIADO 02

(In Alternative: Default Alternative)

Project: PP070

08/18/2026

Prepared by: Teste 17/03/26

09:57

Air System Information

Air System Name **CONSULTÓRIO INDIFERENCIADO 02**
Equipment Class **SPLT AHU**
Air System Type **SZCAV**

Number of zones **1**
Floor Area **11.3** sqm
Location **Ilheus Ap, 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**

Zone Terminal Sizing Data

Zone Name	Design Supply Airflow (L/s)	Minimum Supply Airflow (L/s)	Zone L/(s sqm)	Reheat Coil Capacity (kW)	Reheat Coil Water L/s @ 11.1 K	Zone Htg Unit Coil Capacity (kW)	Zone Htg Unit Water L/s @ 11.1 K	Mixing Box Fan Airflow (L/s)
CONSULTÓRIO INDIFERENCIADO 02	156	156	13.82	0.0	-	0.0	-	0

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (sqm)
CONSULTÓRIO INDIFERENCIADO 02	1.6	fevereiro 17:00	0.2	11.3

Space Loads and Airflows

Zone Name / Space Name	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (sqm)	Space L/(s sqm)
CONSULTÓRIO INDIFERENCIADO 02						
CONSULTÓRIO INDIFERENCIADO 02 (AC)	1.6	fevereiro 17:00	156	0.2	11.3	13.82

Ventilation Sizing Summary for CONSULTÓRIO INDIFERENCIADO 02

(In Alternative: Default Alternative)

Project: PP070

Prepared by: Teste 17/03/26

08/18/2026

09:57

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows

Design Ventilation Airflow Rate 69 L/s

2. Space Ventilation Analysis

Zone Name / Space Name	Floor Area (sqm)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s sqm))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Required Outdoor Air (ACH)	Uncorrected Outdoor Air (L/s)	Direct Exhaust Air (L/s)
CONSULTÓRIO INDIFERENCIADO 02										
CONSULTÓRIO INDIFERENCIADO 02 (AC)	11.3	3.0	156.4	0.00	0.00	0.0	0.0	6.00	0.0	0.0
Totals			156.4						69.0	

Air System Heat Balance Summary for CONSULTÓRIO INDIFERENCIADO 02

(In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:57

Table 1. System Loads

COMPONENT LOADS	DESIGN COOLING - FEVEREIRO 16:00			DESIGN HEATING		
	OA DB / WB 30.5 C / 26.0 C			OA DB / WB 18.3 C / 12.4 C		
	Details	Sensible [W]	Latent [W]	Details	Sensible [W]	Latent [W]
Zone Conditioning	-	1588	176	-	218	0
Plenum Load	-	0	0	-	0	0
Return Fan Load	156 L/s	0	-	156 L/s	0	-
Ventilation Load	69 L/s	623	1859	69 L/s	235	0
Supply Fan Load	156 L/s	144	-	156 L/s	-144	-
Zone Fan Coil Fans Load	-	0	-	-	0	-
>> Total System Loads	-	2356	2035	-	309	0
Central Cooling Coil	-	2392	2109	-	0	0
Central Heating Coil	-	0	-	-	313	-
>> Total Conditioning	-	2392	2109	-	313	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

Table 2. Zone Heat Balance Loads

Zone Heat Balance Component	DESIGN COOLING - FEVEREIRO 16:00			DESIGN HEATING		
	OA DB / WB 30.5 C / 26.0 C			OA DB / WB 18.3 C / 12.4 C		
	Details	Sensible [W]	Latent [W]	Details	Sensible [W]	Latent [W]
Exterior Wall Convection	2 sqm	33	-	2 sqm	6	-
Roof Convection	11 sqm	329	-	11 sqm	44	-
Window Convection	1 sqm	43	-	1 sqm	7	-
Skylight Convection	0 sqm	0	-	0 sqm	0	-
Door Convection	0 sqm	0	-	0 sqm	0	-
Floor Convection	11 sqm	95	-	11 sqm	17	-
Interior Wall Convection	46 sqm	679	-	46 sqm	86	-
Ceiling Convection	0 sqm	0	-	0 sqm	0	-
Overhead Lighting Convection	136 W	85	-	0 W	0	-
Task Lighting Convection	57 W	25	-	0 W	0	-
Electric Equipment Convection	339 W	255	-	0 W	0	-
People Convection	3	65	180	0	0	0
Infiltration	0 L/s	0	0	0 L/s	0	0
Miscellaneous Equipment	-	0	0	-	0	0
Air Internal Energy Change	-	0	-	-	0	0
Safety Factor	0% / 0%	0	0	0%	0	0
>> Total Zone Loads	-	1608	180	-	161	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

Note 1: Surface convection line items show the combined effects of conductive heat gain to the surface and radiative heat gains absorbed at the surface which are then convected to room air.

Note 2: Lighting, equipment, and people line items include only the direct convective heat gain from the heat source to the room air. The radiative portion of the heat gain is first absorbed by surfaces in the room and then later convected from the surface to the air. Therefore the effect of the radiative portion of the heat gain is found in the surface convection line items.

Note 3: Solar heat gain is absorbed by surfaces in the room, re-radiated to other surfaces, and finally convected from the surfaces to room air. Therefore, the effect of solar heat gain is found in the surface convection line items.

Zone Heat Balance Summary for CONSULTÓRIO INDIFERENCIADO 02

(In Alternative: Default Alternative)

Project: PP070

08/18/2026

Prepared by: Teste 17/03/26

09:57

Table 1. Heat Balance Loads for Zone CONSULTÓRIO INDIFERENCIADO 02

Zone Heat Balance Component	DESIGN COOLING - FEVEREIRO 17:00			DESIGN HEATING		
	OA DB / WB 30.1 C / 25.9 C			OA DB / WB 18.3 C / 12.4 C		
	OCCUPIED T-STAT 23.0 C			OCCUPIED T-STAT 21.1 C		
	Details	Sensible [W]	Latent [W]	Details	Sensible [W]	Latent [W]
Exterior Wall Convection	2 sqm	34	-	2 sqm	6	-
Roof Convection	11 sqm	342	-	11 sqm	44	-
Window Convection	1 sqm	36	-	1 sqm	7	-
Skylight Convection	0 sqm	0	-	0 sqm	0	-
Door Convection	0 sqm	0	-	0 sqm	0	-
Floor Convection	11 sqm	95	-	11 sqm	17	-
Interior Wall Convection	46 sqm	678	-	46 sqm	86	-
Ceiling Convection	0 sqm	0	-	0 sqm	0	-
Overhead Lighting Convection	136 W	85	-	0 W	0	-
Task Lighting Convection	57 W	25	-	0 W	0	-
Electric Equipment Convection	339 W	255	-	0 W	0	-
People Convection	3	65	180	0	0	0
Infiltration	0 L/s	0	0	0 L/s	0	0
Miscellaneous Equipment	-	0	0	-	0	0
Air Internal Energy Change	-	0	-	-	0	0
Safety Factor	0% / 0%	0	0	0%	0	0
		1615	180	-	161	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

Note 1: Surface convection line items show the combined effects of conductive heat gain to the surface and radiative heat gains absorbed at the surface which are then convected to room air.

Note 2: Lighting, equipment, and people line items include only the direct convective heat gain from the heat source to the room air. The radiative portion of the heat gain is first absorbed by surfaces in the room and then later convected from the surface to the air. Therefore the effect of the radiative portion of the heat gain is found in the surface convection line items.

Note 3: Solar heat gain is absorbed by surfaces in the room, re-radiated to other surfaces, and finally convected from the surfaces to room air. Therefore, the effect of solar heat gain is found in the surface convection line items.

Air System Sizing Summary for CONSULTÓRIO MULTIPROFISSIONAL

(In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:57

Air System Information

Air System Name **CONSULTÓRIO MULTIPROFISSIONAL**
Equipment Class **SPLT AHU**
Air System Type **SZCAV**

Number of zones **1**
Floor Area **10.3** sqm
Location **Ilheus Ap, 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**

Central Cooling Coil Sizing Data

Total coil load **3.7** kW
Sensible coil load **1.8** kW
Coil L/s at peak load **110** L/s
Sum of peak zone L/s **110** L/s
Sensible heat ratio **0.486**
L/(s kW) **29.7**
sqm/kW **2.8**
W/sqm **358.2**
Water flow @ 5.6 K rise **N/A**

Peak coil load occurs at **janeiro 16:00**
OA DB / WB **30.5 / 26.0** C
Entering DB / WB **27.3 / 22.8** C
Leaving DB / WB **14.2 / 14.0** C
Resulting RH **60** %
Design supply temp. **14.4** C
Zone T-stat Check **1 of 1** OK
Max zone temperature deviation **0.0** K

Central Heating Coil Sizing Data

Max coil load **0.2** kW
Coil L/s at Design Heating **110** L/s
Max coil L/s **110** L/s
Water flow @ 11.1 K drop **N/A**

Load occurs at **Design Heating**
W/sqm **21.1**
Ent. DB / Lvg DB **19.5 / 21.1** C

Supply Fan Sizing Data

Design L/s **110** L/s
Design L/(s sqm) **10.64** L/(s sqm)

Fan motor BHP **0.13** BHP
Fan motor kW **0.10** kW
Fan total static **497** Pa

Outdoor Ventilation Air Data

Design airflow L/s **63** L/s
L/(s sqm) **6.10** L/(s sqm)

L/s/person **20.91** L/s/person

Zone Sizing Summary for CONSULTÓRIO MULTIPROFISSIONAL

(In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:57

Air System Information

Air System Name **CONSULTÓRIO MULTIPROFISSIONAL**
Equipment Class **SPLT AHU**
Air System Type **SZCAV**

Number of zones **1**
Floor Area **10.3** sqm
Location **Ilheus Ap, 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**

Zone Terminal Sizing Data

Zone Name	Design Supply Airflow (L/s)	Minimum Supply Airflow (L/s)	Zone L/(s sqm)	Reheat Coil Capacity (kW)	Reheat Coil Water L/s @ 11.1 K	Zone Htg Unit Coil Capacity (kW)	Zone Htg Unit Water L/s @ 11.1 K	Mixing Box Fan Airflow (L/s)
CONSULTÓRIO MULTIPROFISSIONAL	110	110	10.64	0.0	-	0.0	-	0

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (sqm)
CONSULTÓRIO MULTIPROFISSIONAL	1.1	janeiro 18:00	0.1	10.3

Space Loads and Airflows

Zone Name / Space Name	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (sqm)	Space L/(s sqm)
CONSULTÓRIO MULTIPROFISSIONAL						
CONSULTÓRIO MULTIPROFISSIONAL (AC)	1.1	janeiro 18:00	110	0.1	10.3	10.64

Ventilation Sizing Summary for CONSULTÓRIO MULTIPROFISSIONAL

(In Alternative: Default Alternative)

Project: PP070

08/18/2026

Prepared by: Teste 17/03/26

09:57

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows

Design Ventilation Airflow Rate 63 L/s

2. Space Ventilation Analysis

Zone Name / Space Name	Floor Area (sqm)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/s sqm)	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Required Outdoor Air (ACH)	Uncorrected Outdoor Air (L/s)	Direct Exhaust Air (L/s)
CONSULTÓRIO MULTIPROFISSIONAL										
CONSULTÓRIO MULTIPROFISSIONAL (AC)	10.3	3.0	109.5	0.00	0.00	0.0	0.0	6.00	0.0	0.0
Totals			109.5						62.7	

Air System Heat Balance Summary for CONSULTÓRIO MULTIPROFISSIONAL

(In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:57

Table 1. System Loads

COMPONENT LOADS	DESIGN COOLING - JANEIRO 16:00			DESIGN HEATING		
	OA DB / WB 30.5 C / 26.0 C			OA DB / WB 18.3 C / 12.4 C		
	Details	Sensible [W]	Latent [W]	Details	Sensible [W]	Latent [W]
Zone Conditioning	-	1093	177	-	101	0
Plenum Load	-	0	0	-	0	0
Return Fan Load	110 L/s	0	-	110 L/s	0	-
Ventilation Load	63 L/s	567	1649	63 L/s	214	0
Supply Fan Load	110 L/s	101	-	110 L/s	-101	-
Zone Fan Coil Fans Load	-	0	-	-	0	-
>> Total System Loads	-	1760	1826	-	214	0
Central Cooling Coil	-	1793	1893	-	0	0
Central Heating Coil	-	0	-	-	217	-
>> Total Conditioning	-	1793	1893	-	217	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

Table 2. Zone Heat Balance Loads

Zone Heat Balance Component	DESIGN COOLING - JANEIRO 16:00			DESIGN HEATING		
	OA DB / WB 30.5 C / 26.0 C			OA DB / WB 18.3 C / 12.4 C		
	Details	Sensible [W]	Latent [W]	Details	Sensible [W]	Latent [W]
Exterior Wall Convection	0 sqm	0	-	0 sqm	0	-
Roof Convection	10 sqm	275	-	10 sqm	27	-
Window Convection	0 sqm	0	-	0 sqm	0	-
Skylight Convection	0 sqm	0	-	0 sqm	0	-
Door Convection	0 sqm	0	-	0 sqm	0	-
Floor Convection	10 sqm	66	-	10 sqm	5	-
Interior Wall Convection	48 sqm	364	-	48 sqm	45	-
Ceiling Convection	0 sqm	0	-	0 sqm	0	-
Overhead Lighting Convection	123 W	77	-	0 W	0	-
Task Lighting Convection	51 W	23	-	0 W	0	-
Electric Equipment Convection	309 W	232	-	0 W	0	-
People Convection	3	65	180	0	0	0
Infiltration	0 L/s	0	0	0 L/s	0	0
Miscellaneous Equipment	-	0	0	-	0	0
Air Internal Energy Change	-	0	-	-	0	0
Safety Factor	0% / 0%	0	0	0%	0	0
>> Total Zone Loads	-	1101	180	-	77	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

Note 1: Surface convection line items show the combined effects of conductive heat gain to the surface and radiative heat gains absorbed at the surface which are then convected to room air.

Note 2: Lighting, equipment, and people line items include only the direct convective heat gain from the heat source to the room air. The radiative portion of the heat gain is first absorbed by surfaces in the room and then later convected from the surface to the air. Therefore the effect of the radiative portion of the heat gain is found in the surface convection line items.

Note 3: Solar heat gain is absorbed by surfaces in the room, re-radiated to other surfaces, and finally convected from the surfaces to room air. Therefore, the effect of solar heat gain is found in the surface convection line items.

Zone Heat Balance Summary for CONSULTÓRIO MULTIPROFISSIONAL

(In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:57

Table 1. Heat Balance Loads for Zone CONSULTÓRIO MULTIPROFISSIONAL

	DESIGN COOLING - JANEIRO 18:00			DESIGN HEATING		
	OA DB / WB 29.5 C / 25.7 C			OA DB / WB 18.3 C / 12.4 C		
	OCCUPIED T-STAT 23.0 C			OCCUPIED T-STAT 21.1 C		
Zone Heat Balance Component	Details	Sensible [W]	Latent [W]	Details	Sensible [W]	Latent [W]
Exterior Wall Convection	0 sqm	0	-	0 sqm	0	-
Roof Convection	10 sqm	294	-	10 sqm	27	-
Window Convection	0 sqm	0	-	0 sqm	0	-
Skylight Convection	0 sqm	0	-	0 sqm	0	-
Door Convection	0 sqm	0	-	0 sqm	0	-
Floor Convection	10 sqm	66	-	10 sqm	5	-
Interior Wall Convection	48 sqm	374	-	48 sqm	45	-
Ceiling Convection	0 sqm	0	-	0 sqm	0	-
Overhead Lighting Convection	123 W	77	-	0 W	0	-
Task Lighting Convection	51 W	23	-	0 W	0	-
Electric Equipment Convection	309 W	232	-	0 W	0	-
People Convection	3	65	180	0	0	0
Infiltration	0 L/s	0	0	0 L/s	0	0
Miscellaneous Equipment	-	0	0	-	0	0
Air Internal Energy Change	-	0	-	-	0	0
Safety Factor	0% / 0%	0	0	0%	0	0
		1130	180	-	77	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

- Note 1:** Surface convection line items show the combined effects of conductive heat gain to the surface and radiative heat gains absorbed at the surface which are then convected to room air.
- Note 2:** Lighting, equipment, and people line items include only the direct convective heat gain from the heat source to the room air. The radiative portion of the heat gain is first absorbed by surfaces in the room and then later convected from the surface to the air. Therefore the effect of the radiative portion of the heat gain is found in the surface convection line items.
- Note 3:** Solar heat gain is absorbed by surfaces in the room, re-radiated to other surfaces, and finally convected from the surfaces to room air. Therefore, the effect of solar heat gain is found in the surface convection line items.

Air System Sizing Summary for CONSULTÓRIO ODONTOLÓGICO

(In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:57

Air System Information

Air System Name **CONSULTÓRIO ODONTOLÓGICO**
Equipment Class **SPLT AHU**
Air System Type **SZCAV**

Number of zones **1**
Floor Area **14.9** sqm
Location **Ilheus Ap, 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**

Central Cooling Coil Sizing Data

Total coil load **3.9** kW
Sensible coil load **2.4** kW
Coil L/s at peak load **182** L/s
Sum of peak zone L/s **182** L/s
Sensible heat ratio **0.625**
L/(s kW) **46.8**
sqm/kW **3.8**
W/sqm **260.7**
Water flow @ 5.6 K rise **N/A**

Peak coil load occurs at **fevereiro 17:00**
OA DB / WB **30.1 / 25.9** C
Entering DB / WB **24.8 / 19.9** C
Leaving DB / WB **14.0 / 13.9** C
Resulting RH **58** %
Design supply temp. **14.4** C
Zone T-stat Check **1 of 1** OK
Max zone temperature deviation **0.0** K

Central Heating Coil Sizing Data

Max coil load **0.2** kW
Coil L/s at Design Heating **182** L/s
Max coil L/s **182** L/s
Water flow @ 11.1 K drop **N/A**

Load occurs at **Design Heating**
W/sqm **14.6**
Ent. DB / Lvg DB **20.4 / 21.4** C

Supply Fan Sizing Data

Design L/s **182** L/s
Design L/(s sqm) **12.21** L/(s sqm)

Fan motor BHP **0.21** BHP
Fan motor kW **0.17** kW
Fan total static **497** Pa

Outdoor Ventilation Air Data

Design airflow L/s **45** L/s
L/(s sqm) **3.05** L/(s sqm)

L/s/person **15.12** L/s/person

Zone Sizing Summary for CONSULTÓRIO ODONTOLÓGICO

(In Alternative: Default Alternative)

Project: PP070

08/18/2026

Prepared by: Teste 17/03/26

09:57

Air System Information

Air System Name **CONSULTÓRIO ODONTOLÓGICO**
Equipment Class **SPLT AHU**
Air System Type **SZCAV**

Number of zones **1**
Floor Area **14.9** sqm
Location **Ilheus Ap, 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**

Zone Terminal Sizing Data

Zone Name	Design Supply Airflow (L/s)	Minimum Supply Airflow (L/s)	Zone L/(s sqm)	Reheat Coil Capacity (kW)	Reheat Coil Water L/s @ 11.1 K	Zone Htg Unit Coil Capacity (kW)	Zone Htg Unit Water L/s @ 11.1 K	Mixing Box Fan Airflow (L/s)
CONSULTÓRIO ONDOTOLOGICO	182	182	12.21	0.0	-	0.0	-	0

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (sqm)
CONSULTÓRIO ONDOTOLOGICO	1.9	fevereiro 18:00	0.2	14.9

Space Loads and Airflows

Zone Name / Space Name	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (sqm)	Space L/(s sqm)
CONSULTÓRIO ONDOTOLOGICO						
CONSUTÓRIO ONDONTÓLOGICO 02	1.9	fevereiro 18:00	182	0.2	14.9	12.21

Ventilation Sizing Summary for CONSULTÓRIO ODONTOLÓGICO

(In Alternative: Default Alternative)

Project: PP070

08/18/2026

Prepared by: Teste 17/03/26

09:57

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows

Design Ventilation Airflow Rate 45 L/s

2. Space Ventilation Analysis

Zone Name / Space Name	Floor Area (sqm)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s sqm))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Required Outdoor Air (ACH)	Uncorrected Outdoor Air (L/s)	Direct Exhaust Air (L/s)
CONSULTÓRIO ONDOTOLOGICO										
CONSUTÓRIO ONDONTÓLOGICO 02	14.9	3.0	181.8	0.00	0.00	0.0	0.0	3.00	0.0	0.0
Totals			181.8						45.4	

Air System Heat Balance Summary for CONSULTÓRIO ODONTOLÓGICO

(In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:57

Table 1. System Loads

COMPONENT LOADS	DESIGN COOLING - FEVEREIRO 17:00			DESIGN HEATING		
	OA DB / WB 30.1 C / 25.9 C			OA DB / WB 18.3 C / 12.4 C		
	Details	Sensible [W]	Latent [W]	Details	Sensible [W]	Latent [W]
Zone Conditioning	-	1853	176	-	227	0
Plenum Load	-	0	0	-	0	0
Return Fan Load	182 L/s	0	-	182 L/s	0	-
Ventilation Load	45 L/s	384	1226	45 L/s	154	0
Supply Fan Load	182 L/s	167	-	182 L/s	-167	-
Zone Fan Coil Fans Load	-	0	-	-	0	-
>> Total System Loads	-	2404	1402	-	214	0
Central Cooling Coil	-	2427	1454	-	0	0
Central Heating Coil	-	0	-	-	217	-
>> Total Conditioning	-	2427	1454	-	217	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

Table 2. Zone Heat Balance Loads

Zone Heat Balance Component	DESIGN COOLING - FEVEREIRO 17:00			DESIGN HEATING		
	OA DB / WB 30.1 C / 25.9 C			OA DB / WB 18.3 C / 12.4 C		
	Details	Sensible [W]	Latent [W]	Details	Sensible [W]	Latent [W]
Exterior Wall Convection	2 sqm	33	-	2 sqm	4	-
Roof Convection	15 sqm	439	-	15 sqm	49	-
Window Convection	0 sqm	0	-	0 sqm	0	-
Skylight Convection	0 sqm	0	-	0 sqm	0	-
Door Convection	0 sqm	0	-	0 sqm	0	-
Floor Convection	15 sqm	116	-	15 sqm	16	-
Interior Wall Convection	55 sqm	736	-	55 sqm	90	-
Ceiling Convection	0 sqm	0	-	0 sqm	0	-
Overhead Lighting Convection	179 W	112	-	0 W	0	-
Task Lighting Convection	74 W	33	-	0 W	0	-
Electric Equipment Convection	447 W	335	-	0 W	0	-
People Convection	3	65	180	0	0	0
Infiltration	0 L/s	0	0	0 L/s	0	0
Miscellaneous Equipment	-	0	0	-	0	0
Air Internal Energy Change	-	0	-	-	0	0
Safety Factor	0% / 0%	0	0	0%	0	0
>> Total Zone Loads	-	1868	180	-	160	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

Note 1: Surface convection line items show the combined effects of conductive heat gain to the surface and radiative heat gains absorbed at the surface which are then convected to room air.

Note 2: Lighting, equipment, and people line items include only the direct convective heat gain from the heat source to the room air. The radiative portion of the heat gain is first absorbed by surfaces in the room and then later convected from the surface to the air. Therefore the effect of the radiative portion of the heat gain is found in the surface convection line items.

Note 3: Solar heat gain is absorbed by surfaces in the room, re-radiated to other surfaces, and finally convected from the surfaces to room air. Therefore, the effect of solar heat gain is found in the surface convection line items.

Zone Heat Balance Summary for CONSULTÓRIO ODONTOLOGICO

(In Alternative: Default Alternative)

Project: PP070

08/18/2026

Prepared by: Teste 17/03/26

09:57

Table 1. Heat Balance Loads for Zone CONSULTÓRIO ONDOTOLOGICO

Zone Heat Balance Component	DESIGN COOLING - FEVEREIRO 18:00			DESIGN HEATING		
	OA DB / WB 29.5 C / 25.7 C			OA DB / WB 18.3 C / 12.4 C		
	OCCUPIED T-STAT 23.0 C			OCCUPIED T-STAT 21.1 C		
	Details	Sensible [W]	Latent [W]	Details	Sensible [W]	Latent [W]
Exterior Wall Convection	2 sqm	32	-	2 sqm	4	-
Roof Convection	15 sqm	446	-	15 sqm	49	-
Window Convection	0 sqm	0	-	0 sqm	0	-
Skylight Convection	0 sqm	0	-	0 sqm	0	-
Door Convection	0 sqm	0	-	0 sqm	0	-
Floor Convection	15 sqm	117	-	15 sqm	16	-
Interior Wall Convection	55 sqm	738	-	55 sqm	90	-
Ceiling Convection	0 sqm	0	-	0 sqm	0	-
Overhead Lighting Convection	179 W	112	-	0 W	0	-
Task Lighting Convection	74 W	33	-	0 W	0	-
Electric Equipment Convection	447 W	335	-	0 W	0	-
People Convection	3	65	180	0	0	0
Infiltration	0 L/s	0	0	0 L/s	0	0
Miscellaneous Equipment	-	0	0	-	0	0
Air Internal Energy Change	-	0	-	-	0	0
Safety Factor	0% / 0%	0	0	0%	0	0
		1877	180	-	160	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

Note 1: Surface convection line items show the combined effects of conductive heat gain to the surface and radiative heat gains absorbed at the surface which are then convected to room air.

Note 2: Lighting, equipment, and people line items include only the direct convective heat gain from the heat source to the room air. The radiative portion of the heat gain is first absorbed by surfaces in the room and then later convected from the surface to the air. Therefore the effect of the radiative portion of the heat gain is found in the surface convection line items.

Note 3: Solar heat gain is absorbed by surfaces in the room, re-radiated to other surfaces, and finally convected from the surfaces to room air. Therefore, the effect of solar heat gain is found in the surface convection line items.

Air System Sizing Summary for CONSULTÓRIO ODONTOLÓGICO 01

(In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:57

Air System Information

Air System Name **CONSULTÓRIO ODONTOLÓGICO 01**
Equipment Class **SPLT AHU**
Air System Type **SZCAV**

Number of zones **1**
Floor Area **15.5** sqm
Location **Ilheus Ap, 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**

Central Cooling Coil Sizing Data

Total coil load **5.5** kW
Sensible coil load **2.7** kW
Coil L/s at peak load **164** L/s
Sum of peak zone L/s **164** L/s
Sensible heat ratio **0.485**
L/(s kW) **29.9**
sqm/kW **2.8**
W/sqm **354.7**
Water flow @ 5.6 K rise **N/A**

Peak coil load occurs at **janeiro 17:00**
OA DB / WB **30.1 / 25.9** C
Entering DB / WB **27.0 / 22.6** C
Leaving DB / WB **14.0 / 13.9** C
Resulting RH **58** %
Design supply temp. **14.4** C
Zone T-stat Check **1 of 1** OK
Max zone temperature deviation **0.0** K

Central Heating Coil Sizing Data

Max coil load **0.3** kW
Coil L/s at Design Heating **164** L/s
Max coil L/s **164** L/s
Water flow @ 11.1 K drop **N/A**

Load occurs at **Design Heating**
W/sqm **22.4**
Ent. DB / Lvg DB **19.5 / 21.2** C

Supply Fan Sizing Data

Design L/s **164** L/s
Design L/(s sqm) **10.62** L/(s sqm)

Fan motor BHP **0.19** BHP
Fan motor kW **0.15** kW
Fan total static **497** Pa

Outdoor Ventilation Air Data

Design airflow L/s **94** L/s
L/(s sqm) **6.10** L/(s sqm)

L/s/person **31.40** L/s/person

Zone Sizing Summary for CONSULTÓRIO ODONTOLÓGICO 01 (In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:57

Air System Information

Air System Name **CONSULTÓRIO ODONTOLÓGICO 01**
Equipment Class **SPLT AHU**
Air System Type **SZCAV**

Number of zones **1**
Floor Area **15.5** sqm
Location **Ilheus Ap, 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**

Zone Terminal Sizing Data

Zone Name	Design Supply Airflow (L/s)	Minimum Supply Airflow (L/s)	Zone L/s (sqm)	Reheat Coil Capacity (kW)	Reheat Coil Water L/s @ 11.1 K	Zone Htg Unit Coil Capacity (kW)	Zone Htg Unit Water L/s @ 11.1 K	Mixing Box Fan Airflow (L/s)
CONSULTÓRIO ONDOTOLOGICO 01	164	164	10.62	0.0	-	0.0	-	0

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (sqm)
CONSULTÓRIO ONDOTOLOGICO 01	1.7	janeiro 18:00	0.1	15.5

Space Loads and Airflows

Zone Name / Space Name	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (sqm)	Space L/(s sqm)
CONSULTÓRIO ONDOTOLOGICO 01						
CONSULTÓRIO ONDOTOLÓGICO 01 (AC)	1.7	janeiro 18:00	164	0.1	15.5	10.62

Ventilation Sizing Summary for CONSULTÓRIO ODONTOLÓGICO 01

(In Alternative: Default Alternative)

Project: PP070

Prepared by: Teste 17/03/26

08/18/2026

09:57

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows

Design Ventilation Airflow Rate 94 L/s

2. Space Ventilation Analysis

Zone Name / Space Name	Floor Area (sqm)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s sqm))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Required Outdoor Air (ACH)	Uncorrected Outdoor Air (L/s)	Direct Exhaust Air (L/s)
CONSULTÓRIO ONDOTOLOGICO 01										
CONSULTÓRIO ONDOTOLÓGICO 01 (AC)	15.5	3.0	164.1	0.00	0.00	0.0	0.0	6.00	0.0	0.0
Totals			164.1						94.2	

Air System Heat Balance Summary for CONSULTÓRIO ODONTOLOGICO 01

(In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:57

Table 1. System Loads

COMPONENT LOADS	DESIGN COOLING - JANEIRO 17:00			DESIGN HEATING		
	OA DB / WB 30.1 C / 25.9 C			OA DB / WB 18.3 C / 12.4 C		
	Details	Sensible [W]	Latent [W]	Details	Sensible [W]	Latent [W]
Zone Conditioning	-	1662	177	-	172	0
Plenum Load	-	0	0	-	0	0
Return Fan Load	164 L/s	0	-	164 L/s	0	-
Ventilation Load	94 L/s	796	2550	94 L/s	321	0
Supply Fan Load	164 L/s	151	-	164 L/s	-151	-
Zone Fan Coil Fans Load	-	0	-	-	0	-
>> Total System Loads	-	2609	2728	-	342	0
Central Cooling Coil	-	2657	2824	-	0	0
Central Heating Coil	-	0	-	-	347	-
>> Total Conditioning	-	2657	2824	-	347	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

Table 2. Zone Heat Balance Loads

Zone Heat Balance Component	DESIGN COOLING - JANEIRO 17:00			DESIGN HEATING		
	OA DB / WB 30.1 C / 25.9 C			OA DB / WB 18.3 C / 12.4 C		
	Details	Sensible [W]	Latent [W]	Details	Sensible [W]	Latent [W]
Exterior Wall Convection	0 sqm	0	-	0 sqm	0	-
Roof Convection	15 sqm	440	-	15 sqm	43	-
Window Convection	0 sqm	0	-	0 sqm	0	-
Skylight Convection	0 sqm	0	-	0 sqm	0	-
Door Convection	0 sqm	0	-	0 sqm	0	-
Floor Convection	15 sqm	106	-	15 sqm	10	-
Interior Wall Convection	58 sqm	569	-	58 sqm	69	-
Ceiling Convection	0 sqm	0	-	0 sqm	0	-
Overhead Lighting Convection	185 W	116	-	0 W	0	-
Task Lighting Convection	77 W	34	-	0 W	0	-
Electric Equipment Convection	464 W	348	-	0 W	0	-
People Convection	3	65	180	0	0	0
Infiltration	0 L/s	0	0	0 L/s	0	0
Miscellaneous Equipment	-	0	0	-	0	0
Air Internal Energy Change	-	0	-	-	0	0
Safety Factor	0% / 0%	0	0	0%	0	0
>> Total Zone Loads	-	1677	180	-	122	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

Note 1: Surface convection line items show the combined effects of conductive heat gain to the surface and radiative heat gains absorbed at the surface which are then convected to room air.

Note 2: Lighting, equipment, and people line items include only the direct convective heat gain from the heat source to the room air. The radiative portion of the heat gain is first absorbed by surfaces in the room and then later convected from the surface to the air. Therefore the effect of the radiative portion of the heat gain is found in the surface convection line items.

Note 3: Solar heat gain is absorbed by surfaces in the room, re-radiated to other surfaces, and finally convected from the surfaces to room air. Therefore, the effect of solar heat gain is found in the surface convection line items.

Zone Heat Balance Summary for CONSULTÓRIO ODONTOLOGICO 01

(In Alternative: Default Alternative)

Project: PP070

08/18/2026

Prepared by: Teste 17/03/26

09:57

Table 1. Heat Balance Loads for Zone CONSULTÓRIO ONDOTOLOGICO 01

Zone Heat Balance Component	DESIGN COOLING - JANEIRO 18:00			DESIGN HEATING		
	OA DB / WB 29.5 C / 25.7 C			OA DB / WB 18.3 C / 12.4 C		
	OCCUPIED T-STAT 23.0 C			OCCUPIED T-STAT 21.1 C		
	Details	Sensible [W]	Latent [W]	Details	Sensible [W]	Latent [W]
Exterior Wall Convection	0 sqm	0	-	0 sqm	0	-
Roof Convection	15 sqm	448	-	15 sqm	43	-
Window Convection	0 sqm	0	-	0 sqm	0	-
Skylight Convection	0 sqm	0	-	0 sqm	0	-
Door Convection	0 sqm	0	-	0 sqm	0	-
Floor Convection	15 sqm	107	-	15 sqm	10	-
Interior Wall Convection	58 sqm	577	-	58 sqm	69	-
Ceiling Convection	0 sqm	0	-	0 sqm	0	-
Overhead Lighting Convection	185 W	116	-	0 W	0	-
Task Lighting Convection	77 W	34	-	0 W	0	-
Electric Equipment Convection	464 W	348	-	0 W	0	-
People Convection	3	65	180	0	0	0
Infiltration	0 L/s	0	0	0 L/s	0	0
Miscellaneous Equipment	-	0	0	-	0	0
Air Internal Energy Change	-	0	-	-	0	0
Safety Factor	0% / 0%	0	0	0%	0	0
		1694	180	-	122	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

Note 1: Surface convection line items show the combined effects of conductive heat gain to the surface and radiative heat gains absorbed at the surface which are then convected to room air.

Note 2: Lighting, equipment, and people line items include only the direct convective heat gain from the heat source to the room air. The radiative portion of the heat gain is first absorbed by surfaces in the room and then later convected from the surface to the air. Therefore the effect of the radiative portion of the heat gain is found in the surface convection line items.

Note 3: Solar heat gain is absorbed by surfaces in the room, re-radiated to other surfaces, and finally convected from the surfaces to room air. Therefore, the effect of solar heat gain is found in the surface convection line items.

Air System Sizing Summary for FARMACIA

(In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:57

Air System Information

Air System Name **FARMACIA**
Equipment Class **SPLT AHU**
Air System Type **SZCAV**

Number of zones **1**
Floor Area **19.6** sqm
Location **Ilheus Ap, 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**

Central Cooling Coil Sizing Data

Total coil load **5.6** kW
Sensible coil load **3.1** kW
Coil L/s at peak load **217** L/s
Sum of peak zone L/s **217** L/s
Sensible heat ratio **0.563**
L/(s kW) **39.1**
sqm/kW **3.5**
W/sqm **284.3**
Water flow @ 5.6 K rise **N/A**

Peak coil load occurs at **janeiro 17:00**
OA DB / WB **30.1 / 25.9** C
Entering DB / WB **25.6 / 20.8** C
Leaving DB / WB **14.0 / 13.9** C
Resulting RH **58** %
Design supply temp. **14.4** C
Zone T-stat Check **1 of 1** OK
Max zone temperature deviation **0.0** K

Central Heating Coil Sizing Data

Max coil load **0.2** kW
Coil L/s at Design Heating **217** L/s
Max coil L/s **217** L/s
Water flow @ 11.1 K drop **N/A**

Load occurs at **Design Heating**
W/sqm **12.5**
Ent. DB / Lvg DB **20.1 / 21.0** C

Supply Fan Sizing Data

Design L/s **217** L/s
Design L/(s sqm) **11.11** L/(s sqm)

Fan motor BHP **0.25** BHP
Fan motor kW **0.20** kW
Fan total static **497** Pa

Outdoor Ventilation Air Data

Design airflow L/s **79** L/s
L/(s sqm) **4.06** L/(s sqm)

L/s/person **26.49** L/s/person

Zone Sizing Summary for FARMACIA (In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:57

Air System Information

Air System Name **FARMACIA**
Equipment Class **SPLT AHU**
Air System Type **SZCAV**

Number of zones **1**
Floor Area **19.6** sqm
Location **Ilheus Ap, 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**

Zone Terminal Sizing Data

Zone Name	Design Supply Airflow (L/s)	Minimum Supply Airflow (L/s)	Zone L/(s sqm)	Reheat Coil Capacity (kW)	Reheat Coil Water L/s @ 11.1 K	Zone Htg Unit Coil Capacity (kW)	Zone Htg Unit Water L/s @ 11.1 K	Mixing Box Fan Airflow (L/s)
FARMÁCIA	217	217	11.11	0.0	-	0.0	-	0

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (sqm)
FARMÁCIA	2.2	janeiro 18:00	0.1	19.6

Space Loads and Airflows

Zone Name / Space Name	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (sqm)	Space L/(s sqm)
FARMÁCIA						
FARMÁCIA (AC)	2.2	janeiro 18:00	217	0.1	19.6	11.11

Ventilation Sizing Summary for FARMACIA

(In Alternative: Default Alternative)

Project: PP070

Prepared by: Teste 17/03/26

08/18/2026

09:57

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows

Design Ventilation Airflow Rate 79 L/s

2. Space Ventilation Analysis

Zone Name / Space Name	Floor Area (sqm)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/s sqm)	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Required Outdoor Air (ACH)	Uncorrected Outdoor Air (L/s)	Direct Exhaust Air (L/s)
FARMÁCIA										
FARMÁCIA (AC)	19.6	3.0	217.3	0.00	0.00	0.0	0.0	4.00	0.0	0.0
Totals			217.3						79.5	

Air System Heat Balance Summary for FARMACIA (In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:57

Table 1. System Loads

COMPONENT LOADS	DESIGN COOLING - JANEIRO 17:00			DESIGN HEATING		
	OA DB / WB 30.1 C / 25.9 C			OA DB / WB 18.3 C / 12.4 C		
	Details	Sensible [W]	Latent [W]	Details	Sensible [W]	Latent [W]
Zone Conditioning	-	2218	177	-	171	0
Plenum Load	-	0	0	-	0	0
Return Fan Load	217 L/s	0	-	217 L/s	0	-
Ventilation Load	79 L/s	672	2170	79 L/s	271	0
Supply Fan Load	217 L/s	200	-	217 L/s	-200	-
Zone Fan Coil Fans Load	-	0	-	-	0	-
>> Total System Loads	-	3089	2347	-	241	0
Central Cooling Coil	-	3130	2430	-	0	0
Central Heating Coil	-	0	-	-	245	-
>> Total Conditioning	-	3130	2430	-	245	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

Table 2. Zone Heat Balance Loads

Zone Heat Balance Component	DESIGN COOLING - JANEIRO 17:00			DESIGN HEATING		
	OA DB / WB 30.1 C / 25.9 C			OA DB / WB 18.3 C / 12.4 C		
	Details	Sensible [W]	Latent [W]	Details	Sensible [W]	Latent [W]
Exterior Wall Convection	0 sqm	0	-	0 sqm	0	-
Roof Convection	20 sqm	558	-	20 sqm	52	-
Window Convection	0 sqm	0	-	0 sqm	0	-
Skylight Convection	0 sqm	0	-	0 sqm	0	-
Door Convection	0 sqm	0	-	0 sqm	0	-
Floor Convection	20 sqm	132	-	20 sqm	10	-
Interior Wall Convection	71 sqm	554	-	71 sqm	66	-
Ceiling Convection	0 sqm	0	-	0 sqm	0	-
Overhead Lighting Convection	235 W	147	-	0 W	0	-
Task Lighting Convection	98 W	43	-	0 W	0	-
Electric Equipment Convection	978 W	733	-	0 W	0	-
People Convection	3	65	180	0	0	0
Infiltration	0 L/s	0	0	0 L/s	0	0
Miscellaneous Equipment	-	0	0	-	0	0
Air Internal Energy Change	-	0	-	-	0	0
Safety Factor	0% / 0%	0	0	0%	0	0
>> Total Zone Loads	-	2231	180	-	128	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

Note 1: Surface convection line items show the combined effects of conductive heat gain to the surface and radiative heat gains absorbed at the surface which are then convected to room air.

Note 2: Lighting, equipment, and people line items include only the direct convective heat gain from the heat source to the room air. The radiative portion of the heat gain is first absorbed by surfaces in the room and then later convected from the surface to the air. Therefore the effect of the radiative portion of the heat gain is found in the surface convection line items.

Note 3: Solar heat gain is absorbed by surfaces in the room, re-radiated to other surfaces, and finally convected from the surfaces to room air. Therefore, the effect of solar heat gain is found in the surface convection line items.

Zone Heat Balance Summary for FARMACIA

(In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:57

Table 1. Heat Balance Loads for Zone FARMÁCIA

Zone Heat Balance Component	DESIGN COOLING - JANEIRO 18:00			DESIGN HEATING		
	OA DB / WB 29.5 C / 25.7 C			OA DB / WB 18.3 C / 12.4 C		
	OCCUPIED T-STAT 23.0 C			OCCUPIED T-STAT 21.1 C		
	Details	Sensible [W]	Latent [W]	Details	Sensible [W]	Latent [W]
Exterior Wall Convection	0 sqm	0	-	0 sqm	0	-
Roof Convection	20 sqm	567	-	20 sqm	52	-
Window Convection	0 sqm	0	-	0 sqm	0	-
Skylight Convection	0 sqm	0	-	0 sqm	0	-
Door Convection	0 sqm	0	-	0 sqm	0	-
Floor Convection	20 sqm	132	-	20 sqm	10	-
Interior Wall Convection	71 sqm	556	-	71 sqm	66	-
Ceiling Convection	0 sqm	0	-	0 sqm	0	-
Overhead Lighting Convection	235 W	147	-	0 W	0	-
Task Lighting Convection	98 W	43	-	0 W	0	-
Electric Equipment Convection	978 W	733	-	0 W	0	-
People Convection	3	65	180	0	0	0
Infiltration	0 L/s	0	0	0 L/s	0	0
Miscellaneous Equipment	-	0	0	-	0	0
Air Internal Energy Change	-	0	-	-	0	0
Safety Factor	0% / 0%	0	0	0%	0	0
		2243	180	-	128	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

- Note 1:** Surface convection line items show the combined effects of conductive heat gain to the surface and radiative heat gains absorbed at the surface which are then convected to room air.
- Note 2:** Lighting, equipment, and people line items include only the direct convective heat gain from the heat source to the room air. The radiative portion of the heat gain is first absorbed by surfaces in the room and then later convected from the surface to the air. Therefore the effect of the radiative portion of the heat gain is found in the surface convection line items.
- Note 3:** Solar heat gain is absorbed by surfaces in the room, re-radiated to other surfaces, and finally convected from the surfaces to room air. Therefore, the effect of solar heat gain is found in the surface convection line items.

Air System Sizing Summary for IMUNIZAÇÃO

(In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:57

Air System Information

Air System Name **IMUNIZAÇÃO**
Equipment Class **SPLT AHU**
Air System Type **SZCAV**

Number of zones **1**
Floor Area **13.9** sqm
Location **Ilheus Ap, 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**

Central Cooling Coil Sizing Data

Total coil load **5.0** kW
Sensible coil load **2.5** kW
Coil L/s at peak load **153** L/s
Sum of peak zone L/s **153** L/s
Sensible heat ratio **0.494**
L/(s kW) **30.5**
sqm/kW **2.8**
W/sqm **360.4**
Water flow @ 5.6 K rise **N/A**

Peak coil load occurs at **janeiro 16:00**
OA DB / WB **30.5 / 26.0** C
Entering DB / WB **27.2 / 22.6** C
Leaving DB / WB **14.1 / 14.0** C
Resulting RH **59** %
Design supply temp. **14.4** C
Zone T-stat Check **1 of 1** OK
Max zone temperature deviation **0.0** K

Central Heating Coil Sizing Data

Max coil load **0.3** kW
Coil L/s at Design Heating **153** L/s
Max coil L/s **153** L/s
Water flow @ 11.1 K drop **N/A**

Load occurs at **Design Heating**
W/sqm **20.7**
Ent. DB / Lvg DB **19.5 / 21.1** C

Supply Fan Sizing Data

Design L/s **153** L/s
Design L/(s sqm) **10.99** L/(s sqm)

Fan motor BHP **0.18** BHP
Fan motor kW **0.14** kW
Fan total static **497** Pa

Outdoor Ventilation Air Data

Design airflow L/s **85** L/s
L/(s sqm) **6.10** L/(s sqm)

L/s/person **28.27** L/s/person

Zone Sizing Summary for IMUNIZAÇÃO

(In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:57

Air System Information

Air System Name **IMUNIZAÇÃO**
Equipment Class **SPLT AHU**
Air System Type **SZCAV**

Number of zones **1**
Floor Area **13.9** sqm
Location **Ilheus Ap, 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**

Zone Terminal Sizing Data

Zone Name	Design Supply Airflow (L/s)	Minimum Supply Airflow (L/s)	Zone L/s (sqm)	Reheat Coil Capacity (kW)	Reheat Coil Water L/s @ 11.1 K	Zone Htg Unit Coil Capacity (kW)	Zone Htg Unit Water L/s @ 11.1 K	Mixing Box Fan Airflow (L/s)
IMUNIZAÇÃO	153	153	10.99	0.0	-	0.0	-	0

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (sqm)
IMUNIZAÇÃO	1.6	janeiro 18:00	0.1	13.9

Space Loads and Airflows

Zone Name / Space Name	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (sqm)	Space L/(s sqm)
IMUNIZAÇÃO						
IMUNIZAÇÃO (AC)	1.6	janeiro 18:00	153	0.1	13.9	10.99

Ventilation Sizing Summary for IMUNIZAÇÃO

(In Alternative: Default Alternative)

Project: PP070

Prepared by: Teste 17/03/26

08/18/2026

09:57

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows

Design Ventilation Airflow Rate 85 L/s

2. Space Ventilation Analysis

Zone Name / Space Name	Floor Area (sqm)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s sqm))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Required Outdoor Air (ACH)	Uncorrected Outdoor Air (L/s)	Direct Exhaust Air (L/s)
IMUNIZAÇÃO										
IMUNIZAÇÃO (AC)	13.9	3.0	152.9	0.00	0.00	0.0	0.0	6.00	0.0	0.0
Totals			152.9						84.8	

Air System Heat Balance Summary for IMUNIZAÇÃO

(In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:57

Table 1. System Loads

COMPONENT LOADS	DESIGN COOLING - JANEIRO 16:00			DESIGN HEATING		
	OA DB / WB 30.5 C / 26.0 C			OA DB / WB 18.3 C / 12.4 C		
	Details	Sensible [W]	Latent [W]	Details	Sensible [W]	Latent [W]
Zone Conditioning	-	1527	178	-	135	0
Plenum Load	-	0	0	-	0	0
Return Fan Load	153 L/s	0	-	153 L/s	0	-
Ventilation Load	85 L/s	766	2269	85 L/s	289	0
Supply Fan Load	153 L/s	141	-	153 L/s	-141	-
Zone Fan Coil Fans Load	-	0	-	-	0	-
>> Total System Loads	-	2434	2447	-	283	0
Central Cooling Coil	-	2479	2536	-	0	0
Central Heating Coil	-	0	-	-	288	-
>> Total Conditioning	-	2479	2536	-	288	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

Table 2. Zone Heat Balance Loads

Zone Heat Balance Component	DESIGN COOLING - JANEIRO 16:00			DESIGN HEATING		
	OA DB / WB 30.5 C / 26.0 C			OA DB / WB 18.3 C / 12.4 C		
	Details	Sensible [W]	Latent [W]	Details	Sensible [W]	Latent [W]
Exterior Wall Convection	0 sqm	0	-	0 sqm	0	-
Roof Convection	14 sqm	377	-	14 sqm	37	-
Window Convection	0 sqm	0	-	0 sqm	0	-
Skylight Convection	0 sqm	0	-	0 sqm	0	-
Door Convection	0 sqm	0	-	0 sqm	0	-
Floor Convection	14 sqm	94	-	14 sqm	8	-
Interior Wall Convection	55 sqm	450	-	55 sqm	54	-
Ceiling Convection	0 sqm	0	-	0 sqm	0	-
Overhead Lighting Convection	167 W	104	-	0 W	0	-
Task Lighting Convection	70 W	31	-	0 W	0	-
Electric Equipment Convection	557 W	417	-	0 W	0	-
People Convection	3	65	180	0	0	0
Infiltration	0 L/s	0	0	0 L/s	0	0
Miscellaneous Equipment	-	0	0	-	0	0
Air Internal Energy Change	-	0	-	-	0	0
Safety Factor	0% / 0%	0	0	0%	0	0
>> Total Zone Loads	-	1538	180	-	99	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

Note 1: Surface convection line items show the combined effects of conductive heat gain to the surface and radiative heat gains absorbed at the surface which are then convected to room air.

Note 2: Lighting, equipment, and people line items include only the direct convective heat gain from the heat source to the room air. The radiative portion of the heat gain is first absorbed by surfaces in the room and then later convected from the surface to the air. Therefore the effect of the radiative portion of the heat gain is found in the surface convection line items.

Note 3: Solar heat gain is absorbed by surfaces in the room, re-radiated to other surfaces, and finally convected from the surfaces to room air. Therefore, the effect of solar heat gain is found in the surface convection line items.

Zone Heat Balance Summary for IMUNIZAÇÃO

(In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:57

Table 1. Heat Balance Loads for Zone IMUNIZAÇÃO

Zone Heat Balance Component	DESIGN COOLING - JANEIRO 18:00			DESIGN HEATING		
	OA DB / WB 29.5 C / 25.7 C			OA DB / WB 18.3 C / 12.4 C		
	OCCUPIED T-STAT 23.0 C			OCCUPIED T-STAT 21.1 C		
	Details	Sensible [W]	Latent [W]	Details	Sensible [W]	Latent [W]
Exterior Wall Convection	0 sqm	0	-	0 sqm	0	-
Roof Convection	14 sqm	403	-	14 sqm	37	-
Window Convection	0 sqm	0	-	0 sqm	0	-
Skylight Convection	0 sqm	0	-	0 sqm	0	-
Door Convection	0 sqm	0	-	0 sqm	0	-
Floor Convection	14 sqm	95	-	14 sqm	8	-
Interior Wall Convection	55 sqm	463	-	55 sqm	54	-
Ceiling Convection	0 sqm	0	-	0 sqm	0	-
Overhead Lighting Convection	167 W	104	-	0 W	0	-
Task Lighting Convection	70 W	31	-	0 W	0	-
Electric Equipment Convection	557 W	417	-	0 W	0	-
People Convection	3	65	180	0	0	0
Infiltration	0 L/s	0	0	0 L/s	0	0
Miscellaneous Equipment	-	0	0	-	0	0
Air Internal Energy Change	-	0	-	-	0	0
Safety Factor	0% / 0%	0	0	0%	0	0
		1578	180	-	99	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

- Note 1:** Surface convection line items show the combined effects of conductive heat gain to the surface and radiative heat gains absorbed at the surface which are then convected to room air.
- Note 2:** Lighting, equipment, and people line items include only the direct convective heat gain from the heat source to the room air. The radiative portion of the heat gain is first absorbed by surfaces in the room and then later convected from the surface to the air. Therefore the effect of the radiative portion of the heat gain is found in the surface convection line items.
- Note 3:** Solar heat gain is absorbed by surfaces in the room, re-radiated to other surfaces, and finally convected from the surfaces to room air. Therefore, the effect of solar heat gain is found in the surface convection line items.

Air System Sizing Summary for PRÁTICAS COLETIVAS

(In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:57

Air System Information

Air System Name PRÁTICAS COLETIVAS
Equipment Class SPLT AHU
Air System Type SZCAV

Number of zones 1
Floor Area 21.8 sqm
Location Ilheus Ap, 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

Central Cooling Coil Sizing Data

Total coil load 9.5 kW
Sensible coil load 5.2 kW
Coil L/s at peak load 349 L/s
Sum of peak zone L/s 349 L/s
Sensible heat ratio 0.545
L/(s kW) 36.9
sqm/kW 2.3
W/sqm 434.3
Water flow @ 5.6 K rise N/A

Peak coil load occurs at janeiro 16:00
OA DB / WB 30.5 / 26.0 C
Entering DB / WB 25.9 / 21.2 C
Leaving DB / WB 14.0 / 13.9 C
Resulting RH 60 %
Design supply temp. 14.4 C
Zone T-stat Check 1 of 1 OK
Max zone temperature deviation 0.0 K

Central Heating Coil Sizing Data

Max coil load 0.5 kW
Coil L/s at Design Heating 349 L/s
Max coil L/s 349 L/s
Water flow @ 11.1 K drop N/A

Load occurs at Design Heating
W/sqm 21.4
Ent. DB / Lvg DB 20.0 / 21.1 C

Supply Fan Sizing Data

Design L/s 349 L/s
Design L/(s sqm) 16.05 L/(s sqm)

Fan motor BHP 0.41 BHP
Fan motor kW 0.32 kW
Fan total static 497 Pa

Outdoor Ventilation Air Data

Design airflow L/s 133 L/s
L/(s sqm) 6.10 L/(s sqm)

L/s/person 11.06 L/s/person

Zone Sizing Summary for PRÁTICAS COLETIVAS

(In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:57

Air System Information

Air System Name PRÁTICAS COLETIVAS
Equipment Class SPLT AHU
Air System Type SZCAV

Number of zones 1
Floor Area 21.8 sqm
Location Ilheus Ap, 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

Zone Terminal Sizing Data

Zone Name	Design Supply Airflow (L/s)	Minimum Supply Airflow (L/s)	Zone L/(s sqm)	Reheat Coil Capacity (kW)	Reheat Coil Water L/s @ 11.1 K	Zone Htg Unit Coil Capacity (kW)	Zone Htg Unit Water L/s @ 11.1 K	Mixing Box Fan Airflow (L/s)
PRÁTICAS COLETIVAS	349	349	16.05	0.0	-	0.0	-	0

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (sqm)
PRÁTICAS COLETIVAS	3.6	janeiro 16:00	0.2	21.8

Space Loads and Airflows

Zone Name / Space Name	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (sqm)	Space L/(s sqm)
PRÁTICAS COLETIVAS						
PRÁTICAS COLETIVAS (AC)	3.6	janeiro 16:00	349	0.2	21.8	16.05

Ventilation Sizing Summary for PRÁTICAS COLETIVAS

(In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:57

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows
Design Ventilation Airflow Rate 133 L/s

2. Space Ventilation Analysis

Zone Name / Space Name	Floor Area (sqm)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s sqm))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Required Outdoor Air (ACH)	Uncorrected Outdoor Air (L/s)	Direct Exhaust Air (L/s)
PRÁTICAS COLETIVAS										
PRÁTICAS COLETIVAS (AC)	21.8	12.0	349.4	0.00	0.00	0.0	0.0	6.00	0.0	0.0
Totals			349.4						132.7	

Air System Heat Balance Summary for PRÁTICAS COLETIVAS

(In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:57

Table 1. System Loads

COMPONENT LOADS	DESIGN COOLING - JANEIRO 16:00			DESIGN HEATING		
	OA DB / WB 30.5 C / 26.0 C			OA DB / WB 18.3 C / 12.4 C		
	Details	Sensible [W]	Latent [W]	Details	Sensible [W]	Latent [W]
Zone Conditioning	-	3564	693	-	328	0
Plenum Load	-	0	0	-	0	0
Return Fan Load	349 L/s	0	-	349 L/s	0	-
Ventilation Load	133 L/s	1199	3472	133 L/s	452	0
Supply Fan Load	349 L/s	322	-	349 L/s	-322	-
Zone Fan Coil Fans Load	-	0	-	-	0	-
>> Total System Loads	-	5085	4165	-	459	0
Central Cooling Coil	-	5155	4302	-	0	0
Central Heating Coil	-	0	-	-	465	-
>> Total Conditioning	-	5155	4302	-	465	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

Table 2. Zone Heat Balance Loads

Zone Heat Balance Component	DESIGN COOLING - JANEIRO 16:00			DESIGN HEATING		
	OA DB / WB 30.5 C / 26.0 C			OA DB / WB 18.3 C / 12.4 C		
	Details	Sensible [W]	Latent [W]	Details	Sensible [W]	Latent [W]
Exterior Wall Convection	18 sqm	403	-	18 sqm	45	-
Roof Convection	22 sqm	782	-	22 sqm	72	-
Window Convection	3 sqm	359	-	3 sqm	19	-
Skylight Convection	0 sqm	0	-	0 sqm	0	-
Door Convection	0 sqm	0	-	0 sqm	0	-
Floor Convection	22 sqm	369	-	22 sqm	39	-
Interior Wall Convection	49 sqm	618	-	49 sqm	55	-
Ceiling Convection	0 sqm	0	-	0 sqm	0	-
Overhead Lighting Convection	261 W	163	-	0 W	0	-
Task Lighting Convection	0 W	0	-	0 W	0	-
Electric Equipment Convection	871 W	653	-	0 W	0	-
People Convection	12	258	721	0	0	0
Infiltration	0 L/s	0	0	0 L/s	0	0
Miscellaneous Equipment	-	0	0	-	0	0
Air Internal Energy Change	-	0	-	-	0	0
Safety Factor	0% / 0%	0	0	0%	0	0
>> Total Zone Loads	-	3607	721	-	230	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

Note 1: Surface convection line items show the combined effects of conductive heat gain to the surface and radiative heat gains absorbed at the surface which are then convected to room air.

Note 2: Lighting, equipment, and people line items include only the direct convective heat gain from the heat source to the room air. The radiative portion of the heat gain is first absorbed by surfaces in the room and then later convected from the surface to the air. Therefore the effect of the radiative portion of the heat gain is found in the surface convection line items.

Note 3: Solar heat gain is absorbed by surfaces in the room, re-radiated to other surfaces, and finally convected from the surfaces to room air. Therefore, the effect of solar heat gain is found in the surface convection line items.

Zone Heat Balance Summary for PRÁTICAS COLETIVAS

(In Alternative: Default Alternative)

Project: PP070

08/18/2026

Prepared by: Teste 17/03/26

09:57

Table 1. Heat Balance Loads for Zone PRÁTICAS COLETIVAS

Zone Heat Balance Component	DESIGN COOLING - JANEIRO 16:00			DESIGN HEATING		
	OA DB / WB 30.5 C / 26.0 C			OA DB / WB 18.3 C / 12.4 C		
	OCCUPIED T-STAT 23.0 C			OCCUPIED T-STAT 21.1 C		
	Details	Sensible [W]	Latent [W]	Details	Sensible [W]	Latent [W]
Exterior Wall Convection	18 sqm	403	-	18 sqm	45	-
Roof Convection	22 sqm	782	-	22 sqm	72	-
Window Convection	3 sqm	359	-	3 sqm	19	-
Skylight Convection	0 sqm	0	-	0 sqm	0	-
Door Convection	0 sqm	0	-	0 sqm	0	-
Floor Convection	22 sqm	369	-	22 sqm	39	-
Interior Wall Convection	49 sqm	618	-	49 sqm	55	-
Ceiling Convection	0 sqm	0	-	0 sqm	0	-
Overhead Lighting Convection	261 W	163	-	0 W	0	-
Task Lighting Convection	0 W	0	-	0 W	0	-
Electric Equipment Convection	871 W	653	-	0 W	0	-
People Convection	12	258	721	0	0	0
Infiltration	0 L/s	0	0	0 L/s	0	0
Miscellaneous Equipment	-	0	0	-	0	0
Air Internal Energy Change	-	0	-	-	0	0
Safety Factor	0% / 0%	0	0	0%	0	0
		3607	721	-	230	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

Note 1: Surface convection line items show the combined effects of conductive heat gain to the surface and radiative heat gains absorbed at the surface which are then convected to room air.

Note 2: Lighting, equipment, and people line items include only the direct convective heat gain from the heat source to the room air. The radiative portion of the heat gain is first absorbed by surfaces in the room and then later convected from the surface to the air. Therefore the effect of the radiative portion of the heat gain is found in the surface convection line items.

Note 3: Solar heat gain is absorbed by surfaces in the room, re-radiated to other surfaces, and finally convected from the surfaces to room air. Therefore, the effect of solar heat gain is found in the surface convection line items.

Air System Sizing Summary for RECEPÇÃO

(In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:57

Air System Information

Air System Name RECEPÇÃO
Equipment Class SPLT AHU
Air System Type SZCAV

Number of zones 1
Floor Area 15.5 sqm
Location Ilheus Ap, 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

Central Cooling Coil Sizing Data

Total coil load 7.8 kW
Sensible coil load 3.3 kW
Coil L/s at peak load 189 L/s
Sum of peak zone L/s 189 L/s
Sensible heat ratio 0.423
L/(s kW) 24.4
sqm/kW 2.0
W/sqm 498.9
Water flow @ 5.6 K rise N/A

Peak coil load occurs at janeiro 16:00
OA DB / WB 30.5 / 26.0 C
Entering DB / WB 30.5 / 26.0 C
Leaving DB / WB 16.7 / 16.5 C
Resulting RH 69 %
Design supply temp. 14.4 C
Zone T-stat Check 1 of 1 OK
Max zone temperature deviation 0.0 K

Central Heating Coil Sizing Data

Max coil load 0.6 kW
Coil L/s at Design Heating 189 L/s
Max coil L/s 189 L/s
Water flow @ 11.1 K drop N/A

Load occurs at Design Heating
W/sqm 39.2
Ent. DB / Lvg DB 18.3 / 20.9 C

Supply Fan Sizing Data

Design L/s 189 L/s
Design L/(s sqm) 12.19 L/(s sqm)

Fan motor BHP 0.22 BHP
Fan motor kW 0.17 kW
Fan total static 497 Pa

Outdoor Ventilation Air Data

Design airflow L/s 189 L/s
L/(s sqm) 12.19 L/(s sqm)

L/s/person 47.35 L/s/person

Zone Sizing Summary for RECEPÇÃO

(In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:57

Air System Information

Air System Name RECEPÇÃO
Equipment Class SPLT AHU
Air System Type SZCAV

Number of zones 1
Floor Area 15.5 sqm
Location Ilheus Ap, 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

Zone Terminal Sizing Data

Zone Name	Design Supply Airflow (L/s)	Minimum Supply Airflow (L/s)	Zone L/(s sqm)	Reheat Coil Capacity (kW)	Reheat Coil Water L/s @ 11.1 K	Zone Htg Unit Coil Capacity (kW)	Zone Htg Unit Water L/s @ 11.1 K	Mixing Box Fan Airflow (L/s)
RECEPÇÃO	189	189	12.19	0.0	-	0.0	-	0

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (sqm)
RECEPÇÃO	1.3	janeiro 18:00	0.1	15.5

Space Loads and Airflows

Zone Name / Space Name	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (sqm)	Space L/(s sqm)
RECEPÇÃO						
RECEPÇÃO (AC)	1.3	janeiro 18:00	189	0.1	15.5	12.19

Ventilation Sizing Summary for RECEPÇÃO

(In Alternative: Default Alternative)

Project: PP070

Prepared by: Teste 17/03/26

08/18/2026

09:57

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows

Design Ventilation Airflow Rate 189 L/s

2. Space Ventilation Analysis

Zone Name / Space Name	Floor Area (sqm)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/s sqm)	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Required Outdoor Air (ACH)	Uncorrected Outdoor Air (L/s)	Direct Exhaust Air (L/s)
RECEPÇÃO										
RECEPÇÃO (AC)	15.5	4.0	189.4	0.00	0.00	0.0	0.0	12.00	0.0	0.0
Totals			189.4						189.4	

Air System Heat Balance Summary for RECEPÇÃO

(In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:57

Table 1. System Loads

COMPONENT LOADS	DESIGN COOLING - JANEIRO 16:00			DESIGN HEATING		
	OA DB / WB 30.5 C / 26.0 C			OA DB / WB 18.3 C / 12.4 C		
	Details	Sensible [W]	Latent [W]	Details	Sensible [W]	Latent [W]
Zone Conditioning	-	1305	236	-	129	0
Plenum Load	-	0	0	-	0	0
Return Fan Load	189 L/s	0	-	189 L/s	0	-
Ventilation Load	189 L/s	1711	4081	189 L/s	645	0
Supply Fan Load	189 L/s	174	-	189 L/s	-174	-
Zone Fan Coil Fans Load	-	0	-	-	0	-
>> Total System Loads	-	3190	4317	-	600	0
Central Cooling Coil	-	3275	4476	-	0	0
Central Heating Coil	-	0	-	-	609	-
>> Total Conditioning	-	3275	4476	-	609	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

Table 2. Zone Heat Balance Loads

Zone Heat Balance Component	DESIGN COOLING - JANEIRO 16:00			DESIGN HEATING		
	OA DB / WB 30.5 C / 26.0 C			OA DB / WB 18.3 C / 12.4 C		
	Details	Sensible [W]	Latent [W]	Details	Sensible [W]	Latent [W]
Exterior Wall Convection	0 sqm	0	-	0 sqm	0	-
Roof Convection	16 sqm	392	-	16 sqm	41	-
Window Convection	0 sqm	0	-	0 sqm	0	-
Skylight Convection	0 sqm	0	-	0 sqm	0	-
Door Convection	0 sqm	0	-	0 sqm	0	-
Floor Convection	16 sqm	86	-	16 sqm	8	-
Interior Wall Convection	60 sqm	363	-	60 sqm	52	-
Ceiling Convection	0 sqm	0	-	0 sqm	0	-
Overhead Lighting Convection	186 W	116	-	0 W	0	-
Task Lighting Convection	0 W	0	-	0 W	0	-
Electric Equipment Convection	311 W	233	-	0 W	0	-
People Convection	4	86	240	0	0	0
Infiltration	0 L/s	0	0	0 L/s	0	0
Miscellaneous Equipment	-	0	0	-	0	0
Air Internal Energy Change	-	0	-	-	0	0
Safety Factor	0% / 0%	0	0	0%	0	0
>> Total Zone Loads	-	1277	240	-	100	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

Note 1: Surface convection line items show the combined effects of conductive heat gain to the surface and radiative heat gains absorbed at the surface which are then convected to room air.

Note 2: Lighting, equipment, and people line items include only the direct convective heat gain from the heat source to the room air. The radiative portion of the heat gain is first absorbed by surfaces in the room and then later convected from the surface to the air. Therefore the effect of the radiative portion of the heat gain is found in the surface convection line items.

Note 3: Solar heat gain is absorbed by surfaces in the room, re-radiated to other surfaces, and finally convected from the surfaces to room air. Therefore, the effect of solar heat gain is found in the surface convection line items.

Zone Heat Balance Summary for RECEPÇÃO

(In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:57

Table 1. Heat Balance Loads for Zone RECEPÇÃO

Zone Heat Balance Component	DESIGN COOLING - JANEIRO 18:00			DESIGN HEATING		
	OA DB / WB 29.5 C / 25.7 C			OA DB / WB 18.3 C / 12.4 C		
	OCCUPIED T-STAT 23.0 C			OCCUPIED T-STAT 21.1 C		
	Details	Sensible [W]	Latent [W]	Details	Sensible [W]	Latent [W]
Exterior Wall Convection	0 sqm	0	-	0 sqm	0	-
Roof Convection	16 sqm	420	-	16 sqm	41	-
Window Convection	0 sqm	0	-	0 sqm	0	-
Skylight Convection	0 sqm	0	-	0 sqm	0	-
Door Convection	0 sqm	0	-	0 sqm	0	-
Floor Convection	16 sqm	87	-	16 sqm	8	-
Interior Wall Convection	60 sqm	367	-	60 sqm	52	-
Ceiling Convection	0 sqm	0	-	0 sqm	0	-
Overhead Lighting Convection	186 W	116	-	0 W	0	-
Task Lighting Convection	0 W	0	-	0 W	0	-
Electric Equipment Convection	311 W	233	-	0 W	0	-
People Convection	4	86	240	0	0	0
Infiltration	0 L/s	0	0	0 L/s	0	0
Miscellaneous Equipment	-	0	0	-	0	0
Air Internal Energy Change	-	0	-	-	0	0
Safety Factor	0% / 0%	0	0	0%	0	0
		1310	240	-	100	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

- Note 1:** Surface convection line items show the combined effects of conductive heat gain to the surface and radiative heat gains absorbed at the surface which are then convected to room air.
- Note 2:** Lighting, equipment, and people line items include only the direct convective heat gain from the heat source to the room air. The radiative portion of the heat gain is first absorbed by surfaces in the room and then later convected from the surface to the air. Therefore the effect of the radiative portion of the heat gain is found in the surface convection line items.
- Note 3:** Solar heat gain is absorbed by surfaces in the room, re-radiated to other surfaces, and finally convected from the surfaces to room air. Therefore, the effect of solar heat gain is found in the surface convection line items.

Air System Sizing Summary for SALA ADMINISTRATIVA

(In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:57

Air System Information

Air System Name **SALA ADMINISTRATIVA**
Equipment Class **SPLT AHU**
Air System Type **SZCAV**

Number of zones **1**
Floor Area **12.5** sqm
Location **Ilheus Ap, 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**

Central Cooling Coil Sizing Data

Total coil load **5.0** kW
Sensible coil load **2.8** kW
Coil L/s at peak load **203** L/s
Sum of peak zone L/s **203** L/s
Sensible heat ratio **0.562**
L/(s kW) **40.8**
sqm/kW **2.5**
W/sqm **398.5**
Water flow @ 5.6 K rise **N/A**

Peak coil load occurs at **abril 14:00**
OA DB / WB **28.7 / 24.9** C
Entering DB / WB **25.1 / 20.6** C
Leaving DB / WB **14.0 / 13.9** C
Resulting RH **59** %
Design supply temp. **14.4** C
Zone T-stat Check **1 of 1** OK
Max zone temperature deviation **0.0** K

Central Heating Coil Sizing Data

Max coil load **0.4** kW
Coil L/s at Design Heating **203** L/s
Max coil L/s **203** L/s
Water flow @ 11.1 K drop **N/A**

Load occurs at **Design Heating**
W/sqm **30.7**
Ent. DB / Lvg DB **20.0 / 21.6** C

Supply Fan Sizing Data

Design L/s **203** L/s
Design L/(s sqm) **16.26** L/(s sqm)

Fan motor BHP **0.24** BHP
Fan motor kW **0.19** kW
Fan total static **497** Pa

Outdoor Ventilation Air Data

Design airflow L/s **76** L/s
L/(s sqm) **6.10** L/(s sqm)

L/s/person **15.22** L/s/person

Zone Sizing Summary for SALA ADMINISTRATIVA (In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:57

Air System Information

Air System Name **SALA ADMINISTRATIVA**
Equipment Class **SPLT AHU**
Air System Type **SZCAV**

Number of zones **1**
Floor Area **12.5** sqm
Location **Ilheus Ap, 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**

Zone Terminal Sizing Data

Zone Name	Design Supply Airflow (L/s)	Minimum Supply Airflow (L/s)	Zone L/(s sqm)	Reheat Coil Capacity (kW)	Reheat Coil Water L/s @ 11.1 K	Zone Htg Unit Coil Capacity (kW)	Zone Htg Unit Water L/s @ 11.1 K	Mixing Box Fan Airflow (L/s)
SALA DE ADMINISTRAÇÃO	203	203	16.26	0.0	-	0.0	-	0

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (sqm)
SALA DE ADMINISTRAÇÃO	2.1	maio 14:00	0.2	12.5

Space Loads and Airflows

Zone Name / Space Name	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (sqm)	Space L/(s sqm)
SALA DE ADMINISTRAÇÃO						
SALA ADMINISTRATIVA (AC)	2.1	maio 14:00	203	0.2	12.5	16.26

Ventilation Sizing Summary for SALA ADMINISTRATIVA

(In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:57

1. Summary

Ventilation Sizing Method **Sum of Space OA Airflows**
Design Ventilation Airflow Rate **76** L/s

2. Space Ventilation Analysis

Zone Name / Space Name	Floor Area (sqm)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s sqm))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Required Outdoor Air (ACH)	Uncorrected Outdoor Air (L/s)	Direct Exhaust Air (L/s)
SALA DE ADMINISTRAÇÃO										
SALA ADMINISTRATIVA (AC)	12.5	5.0	203.0	0.00	0.00	0.0	0.0	6.00	0.0	0.0
Totals			203.0						76.1	

Air System Heat Balance Summary for SALA ADMINISTRATIVA (In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:57

Table 1. System Loads

COMPONENT LOADS	DESIGN COOLING - ABRIL 14:00			DESIGN HEATING		
	OA DB / WB 28.7 C / 24.9 C			OA DB / WB 18.3 C / 12.4 C		
	Details	Sensible [W]	Latent [W]	Details	Sensible [W]	Latent [W]
Zone Conditioning	-	2060	290	-	308	0
Plenum Load	-	0	0	-	0	0
Return Fan Load	203 L/s	0	-	203 L/s	0	-
Ventilation Load	76 L/s	518	1814	76 L/s	259	0
Supply Fan Load	203 L/s	187	-	203 L/s	-187	-
Zone Fan Coil Fans Load	-	0	-	-	0	-
>> Total System Loads	-	2765	2105	-	380	0
Central Cooling Coil	-	2796	2177	-	0	0
Central Heating Coil	-	0	-	-	384	-
>> Total Conditioning	-	2796	2177	-	384	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

Table 2. Zone Heat Balance Loads

Zone Heat Balance Component	DESIGN COOLING - ABRIL 14:00			DESIGN HEATING		
	OA DB / WB 28.7 C / 24.9 C			OA DB / WB 18.3 C / 12.4 C		
	Details	Sensible [W]	Latent [W]	Details	Sensible [W]	Latent [W]
Exterior Wall Convection	9 sqm	176	-	9 sqm	25	-
Roof Convection	12 sqm	301	-	12 sqm	58	-
Window Convection	3 sqm	230	-	3 sqm	22	-
Skylight Convection	0 sqm	0	-	0 sqm	0	-
Door Convection	0 sqm	0	-	0 sqm	0	-
Floor Convection	12 sqm	208	-	12 sqm	30	-
Interior Wall Convection	40 sqm	757	-	40 sqm	90	-
Ceiling Convection	0 sqm	0	-	0 sqm	0	-
Overhead Lighting Convection	150 W	94	-	0 W	0	-
Task Lighting Convection	62 W	27	-	0 W	0	-
Electric Equipment Convection	250 W	187	-	0 W	0	-
People Convection	5	108	300	0	0	0
Infiltration	0 L/s	0	0	0 L/s	0	0
Miscellaneous Equipment	-	0	0	-	0	0
Air Internal Energy Change	-	0	-	-	0	0
Safety Factor	0% / 0%	0	0	0%	0	0
>> Total Zone Loads	-	2087	300	-	224	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

Note 1: Surface convection line items show the combined effects of conductive heat gain to the surface and radiative heat gains absorbed at the surface which are then convected to room air.

Note 2: Lighting, equipment, and people line items include only the direct convective heat gain from the heat source to the room air. The radiative portion of the heat gain is first absorbed by surfaces in the room and then later convected from the surface to the air. Therefore the effect of the radiative portion of the heat gain is found in the surface convection line items.

Note 3: Solar heat gain is absorbed by surfaces in the room, re-radiated to other surfaces, and finally convected from the surfaces to room air. Therefore, the effect of solar heat gain is found in the surface convection line items.

Zone Heat Balance Summary for SALA ADMINISTRATIVA (In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:57

Table 1. Heat Balance Loads for Zone SALA DE ADMINISTRAÇÃO

	DESIGN COOLING - MAIO 14:00			DESIGN HEATING		
	OA DB / WB 27.0 C / 24.4 C			OA DB / WB 18.3 C / 12.4 C		
	OCCUPIED T-STAT 23.0 C			OCCUPIED T-STAT 21.1 C		
Zone Heat Balance Component	Details	Sensible [W]	Latent [W]	Details	Sensible [W]	Latent [W]
Exterior Wall Convection	9 sqm	174	-	9 sqm	25	-
Roof Convection	12 sqm	261	-	12 sqm	58	-
Window Convection	3 sqm	251	-	3 sqm	22	-
Skylight Convection	0 sqm	0	-	0 sqm	0	-
Door Convection	0 sqm	0	-	0 sqm	0	-
Floor Convection	12 sqm	234	-	12 sqm	30	-
Interior Wall Convection	40 sqm	759	-	40 sqm	90	-
Ceiling Convection	0 sqm	0	-	0 sqm	0	-
Overhead Lighting Convection	150 W	94	-	0 W	0	-
Task Lighting Convection	62 W	27	-	0 W	0	-
Electric Equipment Convection	250 W	187	-	0 W	0	-
People Convection	5	108	300	0	0	0
Infiltration	0 L/s	0	0	0 L/s	0	0
Miscellaneous Equipment	-	0	0	-	0	0
Air Internal Energy Change	-	0	-	-	0	0
Safety Factor	0% / 0%	0	0	0%	0	0
		2095	300	-	224	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

- Note 1:** Surface convection line items show the combined effects of conductive heat gain to the surface and radiative heat gains absorbed at the surface which are then convected to room air.
- Note 2:** Lighting, equipment, and people line items include only the direct convective heat gain from the heat source to the room air. The radiative portion of the heat gain is first absorbed by surfaces in the room and then later convected from the surface to the air. Therefore the effect of the radiative portion of the heat gain is found in the surface convection line items.
- Note 3:** Solar heat gain is absorbed by surfaces in the room, re-radiated to other surfaces, and finally convected from the surfaces to room air. Therefore, the effect of solar heat gain is found in the surface convection line items.

Air System Sizing Summary for SALA DE AMAMENTAÇÃO

(In Alternative: Default Alternative)

Project: PP070

Prepared by: Teste 17/03/26

08/18/2026

09:57

Air System Information

Air System Name **SALA DE AMAMENTAÇÃO**
Equipment Class **SPLT AHU**
Air System Type **SZCAV**

Number of zones **1**
Floor Area **6.8** sqm
Location **Ilheus Ap, 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**

Central Cooling Coil Sizing Data

Total coil load **2.8** kW
Sensible coil load **1.5** kW
Coil L/s at peak load **99** L/s
Sum of peak zone L/s **99** L/s
Sensible heat ratio **0.536**
L/(s kW) **35.6**
sqm/kW **2.4**
W/sqm **411.2**
Water flow @ 5.6 K rise **N/A**

Peak coil load occurs at **fevereiro 15:00**
OA DB / WB **30.9 / 26.1** C
Entering DB / WB **26.3 / 21.6** C
Leaving DB / WB **14.2 / 14.0** C
Resulting RH **60** %
Design supply temp. **14.4** C
Zone T-stat Check **1 of 1** OK
Max zone temperature deviation **0.0** K

Central Heating Coil Sizing Data

Max coil load **0.2** kW
Coil L/s at Design Heating **99** L/s
Max coil L/s **99** L/s
Water flow @ 11.1 K drop **N/A**

Load occurs at **Design Heating**
W/sqm **32.7**
Ent. DB / Lvg DB **19.9 / 21.7** C

Supply Fan Sizing Data

Design L/s **99** L/s
Design L/(s sqm) **14.65** L/(s sqm)

Fan motor BHP **0.12** BHP
Fan motor kW **0.09** kW
Fan total static **497** Pa

Outdoor Ventilation Air Data

Design airflow L/s **41** L/s
L/(s sqm) **6.10** L/(s sqm)

L/s/person **13.77** L/s/person

Zone Sizing Summary for SALA DE AMAMENTAÇÃO

(In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:57

Air System Information

Air System Name SALA DE AMAMENTAÇÃO
Equipment Class SPLT AHU
Air System Type SZCAV

Number of zones 1
Floor Area 6.8 sqm
Location Ilheus Ap, 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

Zone Terminal Sizing Data

Zone Name	Design Supply Airflow (L/s)	Minimum Supply Airflow (L/s)	Zone L/(s sqm)	Reheat Coil Capacity (kW)	Reheat Coil Water L/s @ 11.1 K	Zone Htg Unit Coil Capacity (kW)	Zone Htg Unit Water L/s @ 11.1 K	Mixing Box Fan Airflow (L/s)
SALA DE AMAMENTAÇÃO	99	99	14.65	0.0	-	0.0	-	0

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (sqm)
SALA DE AMAMENTAÇÃO	1.0	fevereiro 9:00	0.1	6.8

Space Loads and Airflows

Zone Name / Space Name	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (sqm)	Space L/(s sqm)
SALA DE AMAMENTAÇÃO						
SALA AMAMENTAÇÃO	1.0	fevereiro 9:00	99	0.1	6.8	14.65

Ventilation Sizing Summary for SALA DE AMAMENTAÇÃO

(In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:57

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows
Design Ventilation Airflow Rate 41 L/s

2. Space Ventilation Analysis

Zone Name / Space Name	Floor Area (sqm)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/s sqm)	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Required Outdoor Air (ACH)	Uncorrected Outdoor Air (L/s)	Direct Exhaust Air (L/s)
SALA DE AMAMENTAÇÃO										
SALA AMAMENTAÇÃO	6.8	3.0	99.3	0.00	0.00	0.0	0.0	6.00	0.0	0.0
Totals			99.3						41.3	

Air System Heat Balance Summary for SALA DE AMAMENTAÇÃO

(In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:57

Table 1. System Loads

COMPONENT LOADS	DESIGN COOLING - FEVEREIRO 15:00			DESIGN HEATING		
	OA DB / WB 30.9 C / 26.1 C			OA DB / WB 18.3 C / 12.4 C		
	Details	Sensible [W]	Latent [W]	Details	Sensible [W]	Latent [W]
Zone Conditioning	-	990	174	-	170	0
Plenum Load	-	0	0	-	0	0
Return Fan Load	99 L/s	0	-	99 L/s	0	-
Ventilation Load	41 L/s	390	1076	41 L/s	141	0
Supply Fan Load	99 L/s	91	-	99 L/s	-91	-
Zone Fan Coil Fans Load	-	0	-	-	0	-
>> Total System Loads	-	1472	1250	-	219	0
Central Cooling Coil	-	1494	1292	-	0	0
Central Heating Coil	-	0	-	-	221	-
>> Total Conditioning	-	1494	1292	-	221	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

Table 2. Zone Heat Balance Loads

Zone Heat Balance Component	DESIGN COOLING - FEVEREIRO 15:00			DESIGN HEATING		
	OA DB / WB 30.9 C / 26.1 C			OA DB / WB 18.3 C / 12.4 C		
	Details	Sensible [W]	Latent [W]	Details	Sensible [W]	Latent [W]
Exterior Wall Convection	14 sqm	217	-	14 sqm	32	-
Roof Convection	7 sqm	184	-	7 sqm	21	-
Window Convection	1 sqm	57	-	1 sqm	11	-
Skylight Convection	0 sqm	0	-	0 sqm	0	-
Door Convection	0 sqm	0	-	0 sqm	0	-
Floor Convection	7 sqm	74	-	7 sqm	16	-
Interior Wall Convection	25 sqm	249	-	25 sqm	32	-
Ceiling Convection	0 sqm	0	-	0 sqm	0	-
Overhead Lighting Convection	81 W	51	-	0 W	0	-
Task Lighting Convection	0 W	0	-	0 W	0	-
Electric Equipment Convection	136 W	102	-	0 W	0	-
People Convection	3	65	180	0	0	0
Infiltration	0 L/s	0	0	0 L/s	0	0
Miscellaneous Equipment	-	0	0	-	0	0
Air Internal Energy Change	-	0	-	-	0	0
Safety Factor	0% / 0%	0	0	0%	0	0
>> Total Zone Loads	-	999	180	-	112	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

Note 1: Surface convection line items show the combined effects of conductive heat gain to the surface and radiative heat gains absorbed at the surface which are then convected to room air.

Note 2: Lighting, equipment, and people line items include only the direct convective heat gain from the heat source to the room air. The radiative portion of the heat gain is first absorbed by surfaces in the room and then later convected from the surface to the air. Therefore the effect of the radiative portion of the heat gain is found in the surface convection line items.

Note 3: Solar heat gain is absorbed by surfaces in the room, re-radiated to other surfaces, and finally convected from the surfaces to room air. Therefore, the effect of solar heat gain is found in the surface convection line items.

Zone Heat Balance Summary for SALA DE AMAMENTAÇÃO

(In Alternative: Default Alternative)

Project: PP070

08/18/2026

Prepared by: Teste 17/03/26

09:57

Table 1. Heat Balance Loads for Zone SALA DE AMAMENTAÇÃO

Zone Heat Balance Component	DESIGN COOLING - FEVEREIRO 9:00			DESIGN HEATING		
	OA DB / WB 27.7 C / 25.3 C			OA DB / WB 18.3 C / 12.4 C		
	OCCUPIED T-STAT 23.0 C			OCCUPIED T-STAT 21.1 C		
	Details	Sensible [W]	Latent [W]	Details	Sensible [W]	Latent [W]
Exterior Wall Convection	14 sqm	153	-	14 sqm	32	-
Roof Convection	7 sqm	113	-	7 sqm	21	-
Window Convection	1 sqm	147	-	1 sqm	11	-
Skylight Convection	0 sqm	0	-	0 sqm	0	-
Door Convection	0 sqm	0	-	0 sqm	0	-
Floor Convection	7 sqm	102	-	7 sqm	16	-
Interior Wall Convection	25 sqm	293	-	25 sqm	32	-
Ceiling Convection	0 sqm	0	-	0 sqm	0	-
Overhead Lighting Convection	81 W	51	-	0 W	0	-
Task Lighting Convection	0 W	0	-	0 W	0	-
Electric Equipment Convection	136 W	102	-	0 W	0	-
People Convection	3	65	180	0	0	0
Infiltration	0 L/s	0	0	0 L/s	0	0
Miscellaneous Equipment	-	0	0	-	0	0
Air Internal Energy Change	-	0	-	-	0	0
Safety Factor	0% / 0%	0	0	0%	0	0
		1025	180	-	112	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

Note 1: Surface convection line items show the combined effects of conductive heat gain to the surface and radiative heat gains absorbed at the surface which are then convected to room air.

Note 2: Lighting, equipment, and people line items include only the direct convective heat gain from the heat source to the room air. The radiative portion of the heat gain is first absorbed by surfaces in the room and then later convected from the surface to the air. Therefore the effect of the radiative portion of the heat gain is found in the surface convection line items.

Note 3: Solar heat gain is absorbed by surfaces in the room, re-radiated to other surfaces, and finally convected from the surfaces to room air. Therefore, the effect of solar heat gain is found in the surface convection line items.

Air System Sizing Summary for SALA DE CURATIVOS

(In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:57

Air System Information

Air System Name **SALA DE CURATIVOS**
Equipment Class **SPLT AHU**
Air System Type **SZCAV**

Number of zones **1**
Floor Area **14.5** sqm
Location **Ilheus Ap, 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**

Central Cooling Coil Sizing Data

Total coil load **4.9** kW
Sensible coil load **2.8** kW
Coil L/s at peak load **215** L/s
Sum of peak zone L/s **215** L/s
Sensible heat ratio **0.573**
L/(s kW) **44.1**
sqm/kW **3.0**
W/sqm **335.9**
Water flow @ 5.6 K rise **N/A**

Peak coil load occurs at **fevereiro 15:00**
OA DB / WB **30.9 / 26.1** C
Entering DB / WB **25.2 / 20.8** C
Leaving DB / WB **14.7 / 14.6** C
Resulting RH **64** %
Design supply temp. **14.4** C
Zone T-stat Check **1 of 1** OK
Max zone temperature deviation **0.0** K

Central Heating Coil Sizing Data

Max coil load **0.3** kW
Coil L/s at Design Heating **215** L/s
Max coil L/s **215** L/s
Water flow @ 11.1 K drop **N/A**

Load occurs at **Design Heating**
W/sqm **22.8**
Ent. DB / Lvg DB **20.3 / 21.6** C

Supply Fan Sizing Data

Design L/s **215** L/s
Design L/(s sqm) **14.82** L/(s sqm)

Fan motor BHP **0.25** BHP
Fan motor kW **0.20** kW
Fan total static **497** Pa

Outdoor Ventilation Air Data

Design airflow L/s **60** L/s
L/(s sqm) **4.13** L/(s sqm)

L/s/person **6.00** L/s/person

Zone Sizing Summary for SALA DE CURATIVOS

(In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:57

Air System Information

Air System Name SALA DE CURATIVOS
Equipment Class SPLT AHU
Air System Type SZCAV

Number of zones 1
Floor Area 14.5 sqm
Location Ilheus Ap, 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

Zone Terminal Sizing Data

Zone Name	Design Supply Airflow (L/s)	Minimum Supply Airflow (L/s)	Zone L/s (sqm)	Reheat Coil Capacity (kW)	Reheat Coil Water L/s @ 11.1 K	Zone Htg Unit Coil Capacity (kW)	Zone Htg Unit Water L/s @ 11.1 K	Mixing Box Fan Airflow (L/s)
SALA DE CURATIVOS	215	215	14.82	0.0	-	0.0	-	0

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (sqm)
SALA DE CURATIVOS	2.2	abril 14:00	0.2	14.5

Space Loads and Airflows

Zone Name / Space Name	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (sqm)	Space L/(s sqm)
SALA DE CURATIVOS						
SALA DE CURATIVOS (AC/EXA)	2.2	abril 14:00	215	0.2	14.5	14.82

Ventilation Sizing Summary for SALA DE CURATIVOS

(In Alternative: Default Alternative)

Project: PP070

08/18/2026

Prepared by: Teste 17/03/26

09:57

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows

Design Ventilation Airflow Rate 60 L/s

2. Space Ventilation Analysis

Zone Name / Space Name	Floor Area (sqm)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s sqm))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Required Outdoor Air (ACH)	Uncorrected Outdoor Air (L/s)	Direct Exhaust Air (L/s)
SALA DE CURATIVOS										
SALA DE CURATIVOS (AC/EXA)	14.5	10.0	215.3	6.00	0.00	0.0	0.0	0.00	60.0	0.0
Totals			215.3						60.0	

Air System Heat Balance Summary for SALA DE CURATIVOS (In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:57

Table 1. System Loads

COMPONENT LOADS	DESIGN COOLING - FEVEREIRO 15:00			DESIGN HEATING		
	OA DB / WB 30.9 C / 26.1 C			OA DB / WB 18.3 C / 12.4 C		
	Details	Sensible [W]	Latent [W]	Details	Sensible [W]	Latent [W]
Zone Conditioning	-	1998	581	-	322	0
Plenum Load	-	0	0	-	0	0
Return Fan Load	215 L/s	0	-	215 L/s	0	-
Ventilation Load	60 L/s	567	1430	60 L/s	204	0
Supply Fan Load	215 L/s	198	-	215 L/s	-198	-
Zone Fan Coil Fans Load	-	0	-	-	0	-
>> Total System Loads	-	2763	2011	-	328	0
Central Cooling Coil	-	2794	2085	-	0	0
Central Heating Coil	-	0	-	-	331	-
>> Total Conditioning	-	2794	2085	-	331	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

Table 2. Zone Heat Balance Loads

Zone Heat Balance Component	DESIGN COOLING - FEVEREIRO 15:00			DESIGN HEATING		
	OA DB / WB 30.9 C / 26.1 C			OA DB / WB 18.3 C / 12.4 C		
	Details	Sensible [W]	Latent [W]	Details	Sensible [W]	Latent [W]
Exterior Wall Convection	25 sqm	461	-	25 sqm	65	-
Roof Convection	15 sqm	444	-	15 sqm	62	-
Window Convection	3 sqm	115	-	3 sqm	24	-
Skylight Convection	0 sqm	0	-	0 sqm	0	-
Door Convection	0 sqm	0	-	0 sqm	0	-
Floor Convection	15 sqm	170	-	15 sqm	39	-
Interior Wall Convection	28 sqm	352	-	28 sqm	44	-
Ceiling Convection	0 sqm	0	-	0 sqm	0	-
Overhead Lighting Convection	174 W	109	-	0 W	0	-
Task Lighting Convection	73 W	32	-	0 W	0	-
Electric Equipment Convection	145 W	109	-	0 W	0	-
People Convection	10	215	601	0	0	0
Infiltration	0 L/s	0	0	0 L/s	0	0
Miscellaneous Equipment	-	0	0	-	0	0
Air Internal Energy Change	-	0	-	-	0	0
Safety Factor	0% / 0%	0	0	0%	0	0
>> Total Zone Loads	-	2007	601	-	234	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

Note 1: Surface convection line items show the combined effects of conductive heat gain to the surface and radiative heat gains absorbed at the surface which are then convected to room air.

Note 2: Lighting, equipment, and people line items include only the direct convective heat gain from the heat source to the room air. The radiative portion of the heat gain is first absorbed by surfaces in the room and then later convected from the surface to the air. Therefore the effect of the radiative portion of the heat gain is found in the surface convection line items.

Note 3: Solar heat gain is absorbed by surfaces in the room, re-radiated to other surfaces, and finally convected from the surfaces to room air. Therefore, the effect of solar heat gain is found in the surface convection line items.

Zone Heat Balance Summary for SALA DE CURATIVOS

(In Alternative: Default Alternative)

Project: PP070

08/18/2026

Prepared by: Teste 17/03/26

09:57

Table 1. Heat Balance Loads for Zone SALA DE CURATIVOS

	DESIGN COOLING - ABRIL 14:00			DESIGN HEATING		
	OA DB / WB 28.7 C / 24.9 C			OA DB / WB 18.3 C / 12.4 C		
	OCCUPIED T-STAT 23.0 C			OCCUPIED T-STAT 21.1 C		
Zone Heat Balance Component	Details	Sensible [W]	Latent [W]	Details	Sensible [W]	Latent [W]
Exterior Wall Convection	25 sqm	513	-	25 sqm	65	-
Roof Convection	15 sqm	368	-	15 sqm	62	-
Window Convection	3 sqm	226	-	3 sqm	24	-
Skylight Convection	0 sqm	0	-	0 sqm	0	-
Door Convection	0 sqm	0	-	0 sqm	0	-
Floor Convection	15 sqm	252	-	15 sqm	39	-
Interior Wall Convection	28 sqm	397	-	28 sqm	44	-
Ceiling Convection	0 sqm	0	-	0 sqm	0	-
Overhead Lighting Convection	174 W	109	-	0 W	0	-
Task Lighting Convection	73 W	32	-	0 W	0	-
Electric Equipment Convection	145 W	109	-	0 W	0	-
People Convection	10	215	601	0	0	0
Infiltration	0 L/s	0	0	0 L/s	0	0
Miscellaneous Equipment	-	0	0	-	0	0
Air Internal Energy Change	-	0	-	-	0	0
Safety Factor	0% / 0%	0	0	0%	0	0
		2222	601	-	234	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

Note 1: Surface convection line items show the combined effects of conductive heat gain to the surface and radiative heat gains absorbed at the surface which are then convected to room air.

Note 2: Lighting, equipment, and people line items include only the direct convective heat gain from the heat source to the room air. The radiative portion of the heat gain is first absorbed by surfaces in the room and then later convected from the surface to the air. Therefore the effect of the radiative portion of the heat gain is found in the surface convection line items.

Note 3: Solar heat gain is absorbed by surfaces in the room, re-radiated to other surfaces, and finally convected from the surfaces to room air. Therefore, the effect of solar heat gain is found in the surface convection line items.

Air System Sizing Summary for SALA DE ESPERA (In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:57

Air System Information

Air System Name **SALA DE ESPERA**
Equipment Class **SPLT AHU**
Air System Type **SZCAV**

Number of zones **1**
Floor Area **103.9** sqm
Location **Ilheus Ap, 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**

Central Cooling Coil Sizing Data

Total coil load **35.4** kW
Sensible coil load **15.7** kW
Coil L/s at peak load **906** L/s
Sum of peak zone L/s **906** L/s
Sensible heat ratio **0.442**
L/(s kW) **25.6**
sqm/kW **2.9**
W/sqm **341.0**
Water flow @ 5.6 K rise **N/A**

Peak coil load occurs at **dezembro 16:00**
OA DB / WB **30.0 / 26.0** C
Entering DB / WB **27.9 / 23.8** C
Leaving DB / WB **14.0 / 13.8** C
Resulting RH **61** %
Design supply temp. **14.4** C
Zone T-stat Check **1 of 1** OK
Max zone temperature deviation **0.0** K

Central Heating Coil Sizing Data

Max coil load **2.5** kW
Coil L/s at Design Heating **906** L/s
Max coil L/s **906** L/s
Water flow @ 11.1 K drop **N/A**

Load occurs at **Design Heating**
W/sqm **24.5**
Ent. DB / Lvg DB **19.1 / 21.4** C

Supply Fan Sizing Data

Design L/s **906** L/s
Design L/(s sqm) **8.72** L/(s sqm)

Fan motor BHP **1.05** BHP
Fan motor kW **0.83** kW
Fan total static **497** Pa

Outdoor Ventilation Air Data

Design airflow L/s **633** L/s
L/(s sqm) **6.10** L/(s sqm)

L/s/person **15.83** L/s/person

Zone Sizing Summary for SALA DE ESPERA (In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:57

Air System Information

Air System Name **SALA DE ESPERA**
Equipment Class **SPLT AHU**
Air System Type **SZCAV**

Number of zones **1**
Floor Area **103.9** sqm
Location **Ilheus Ap, 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**

Zone Terminal Sizing Data

Zone Name	Design Supply Airflow (L/s)	Minimum Supply Airflow (L/s)	Zone L/(s sqm)	Reheat Coil Capacity (kW)	Reheat Coil Water L/s @ 11.1 K	Zone Htg Unit Coil Capacity (kW)	Zone Htg Unit Water L/s @ 11.1 K	Mixing Box Fan Airflow (L/s)
SALA DE ESPERA	906	906	8.72	0.0	-	0.0	-	0

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (sqm)
SALA DE ESPERA	9.3	janeiro 17:00	0.8	103.9

Space Loads and Airflows

Zone Name / Space Name	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (sqm)	Space L/(s sqm)
SALA DE ESPERA						
SALA DE ESPERA (AC)	9.3	janeiro 17:00	906	0.8	103.9	8.72

Ventilation Sizing Summary for SALA DE ESPERA

(In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:57

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows
Design Ventilation Airflow Rate 633 L/s

2. Space Ventilation Analysis

Zone Name / Space Name	Floor Area (sqm)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s sqm))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Required Outdoor Air (ACH)	Uncorrected Outdoor Air (L/s)	Direct Exhaust Air (L/s)
SALA DE ESPERA										
SALA DE ESPERA (AC)	103.9	40.0	905.6	0.00	0.00	0.0	0.0	6.00	0.0	0.0
Totals			905.6						633.2	

Air System Heat Balance Summary for SALA DE ESPERA

(In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:57

Table 1. System Loads

COMPONENT LOADS	DESIGN COOLING - DEZEMBRO 16:00			DESIGN HEATING		
	OA DB / WB 30.0 C / 26.0 C			OA DB / WB 18.3 C / 12.4 C		
	Details	Sensible [W]	Latent [W]	Details	Sensible [W]	Latent [W]
Zone Conditioning	-	9216	2334	-	1195	0
Plenum Load	-	0	0	-	0	0
Return Fan Load	906 L/s	0	-	906 L/s	0	-
Ventilation Load	633 L/s	5297	16763	633 L/s	2156	0
Supply Fan Load	906 L/s	833	-	906 L/s	-833	-
Zone Fan Coil Fans Load	-	0	-	-	0	-
>> Total System Loads	-	15346	19097	-	2517	0
Central Cooling Coil	-	15667	19753	-	0	0
Central Heating Coil	-	0	-	-	2548	-
>> Total Conditioning	-	15667	19753	-	2548	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

Table 2. Zone Heat Balance Loads

Zone Heat Balance Component	DESIGN COOLING - DEZEMBRO 16:00			DESIGN HEATING		
	OA DB / WB 30.0 C / 26.0 C			OA DB / WB 18.3 C / 12.4 C		
	Details	Sensible [W]	Latent [W]	Details	Sensible [W]	Latent [W]
Exterior Wall Convection	25 sqm	455	-	25 sqm	64	-
Roof Convection	104 sqm	3078	-	104 sqm	313	-
Window Convection	5 sqm	306	-	5 sqm	46	-
Skylight Convection	0 sqm	0	-	0 sqm	0	-
Door Convection	4 sqm	98	-	4 sqm	11	-
Floor Convection	104 sqm	1115	-	104 sqm	136	-
Interior Wall Convection	159 sqm	1841	-	159 sqm	231	-
Ceiling Convection	0 sqm	0	-	0 sqm	0	-
Overhead Lighting Convection	1246 W	779	-	0 W	0	-
Task Lighting Convection	0 W	0	-	0 W	0	-
Electric Equipment Convection	1039 W	779	-	0 W	0	-
People Convection	40	862	2403	0	0	0
Infiltration	0 L/s	0	0	0 L/s	0	0
Miscellaneous Equipment	-	0	0	-	0	0
Air Internal Energy Change	-	0	-	-	0	0
Safety Factor	0% / 0%	0	0	0%	0	0
>> Total Zone Loads	-	9312	2403	-	801	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

Note 1: Surface convection line items show the combined effects of conductive heat gain to the surface and radiative heat gains absorbed at the surface which are then convected to room air.

Note 2: Lighting, equipment, and people line items include only the direct convective heat gain from the heat source to the room air. The radiative portion of the heat gain is first absorbed by surfaces in the room and then later convected from the surface to the air. Therefore the effect of the radiative portion of the heat gain is found in the surface convection line items.

Note 3: Solar heat gain is absorbed by surfaces in the room, re-radiated to other surfaces, and finally convected from the surfaces to room air. Therefore, the effect of solar heat gain is found in the surface convection line items.

Zone Heat Balance Summary for SALA DE ESPERA

(In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:57

Table 1. Heat Balance Loads for Zone SALA DE ESPERA

Zone Heat Balance Component	DESIGN COOLING - JANEIRO 17:00			DESIGN HEATING		
	OA DB / WB 30.1 C / 25.9 C			OA DB / WB 18.3 C / 12.4 C		
	OCCUPIED T-STAT 23.0 C			OCCUPIED T-STAT 21.1 C		
	Details	Sensible [W]	Latent [W]	Details	Sensible [W]	Latent [W]
Exterior Wall Convection	25 sqm	443	-	25 sqm	64	-
Roof Convection	104 sqm	3255	-	104 sqm	313	-
Window Convection	5 sqm	225	-	5 sqm	46	-
Skylight Convection	0 sqm	0	-	0 sqm	0	-
Door Convection	4 sqm	80	-	4 sqm	11	-
Floor Convection	104 sqm	1091	-	104 sqm	136	-
Interior Wall Convection	159 sqm	1836	-	159 sqm	231	-
Ceiling Convection	0 sqm	0	-	0 sqm	0	-
Overhead Lighting Convection	1246 W	779	-	0 W	0	-
Task Lighting Convection	0 W	0	-	0 W	0	-
Electric Equipment Convection	1039 W	779	-	0 W	0	-
People Convection	40	862	2403	0	0	0
Infiltration	0 L/s	0	0	0 L/s	0	0
Miscellaneous Equipment	-	0	0	-	0	0
Air Internal Energy Change	-	0	-	-	0	0
Safety Factor	0% / 0%	0	0	0%	0	0
		9348	2403	-	801	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

- Note 1:** Surface convection line items show the combined effects of conductive heat gain to the surface and radiative heat gains absorbed at the surface which are then convected to room air.
- Note 2:** Lighting, equipment, and people line items include only the direct convective heat gain from the heat source to the room air. The radiative portion of the heat gain is first absorbed by surfaces in the room and then later convected from the surface to the air. Therefore the effect of the radiative portion of the heat gain is found in the surface convection line items.
- Note 3:** Solar heat gain is absorbed by surfaces in the room, re-radiated to other surfaces, and finally convected from the surfaces to room air. Therefore, the effect of solar heat gain is found in the surface convection line items.

Air System Sizing Summary for SALA DE ESTERILIZAÇÃO

(In Alternative: Default Alternative)

Project: PP070

Prepared by: Teste 17/03/26

08/18/2026

09:57

Air System Information

Air System Name **SALA DE ESTERILIZAÇÃO**
Equipment Class **SPLT AHU**
Air System Type **SZCAV**

Number of zones **1**
Floor Area **11.7** sqm
Location **Ilheus Ap, 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**

Central Cooling Coil Sizing Data

Total coil load **3.5** kW
Sensible coil load **2.6** kW
Coil L/s at peak load **225** L/s
Sum of peak zone L/s **225** L/s
Sensible heat ratio **0.753**
L/(s kW) **63.8**
sqm/kW **3.3**
W/sqm **299.7**
Water flow @ 5.6 K rise **N/A**

Peak coil load occurs at **janeiro 15:00**
OA DB / WB **30.9 / 26.1** C
Entering DB / WB **23.8 / 18.3** C
Leaving DB / WB **14.3 / 13.8** C
Resulting RH **57** %
Design supply temp. **14.4** C
Zone T-stat Check **1 of 1** OK
Max zone temperature deviation **0.0** K

Central Heating Coil Sizing Data

Max coil load **0.1** kW
Coil L/s at Design Heating **225** L/s
Max coil L/s **225** L/s
Water flow @ 11.1 K drop **N/A**

Load occurs at **Design Heating**
W/sqm **10.9**
Ent. DB / Lvg DB **20.8 / 21.3** C

Supply Fan Sizing Data

Design L/s **225** L/s
Design L/(s sqm) **19.12** L/(s sqm)

Fan motor BHP **0.26** BHP
Fan motor kW **0.21** kW
Fan total static **497** Pa

Outdoor Ventilation Air Data

Design airflow L/s **24** L/s
L/(s sqm) **2.03** L/(s sqm)

L/s/person **7.95** L/s/person

Zone Sizing Summary for SALA DE ESTERILIZAÇÃO

(In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:57

Air System Information

Air System Name SALA DE ESTERILIZAÇÃO
Equipment Class SPLT AHU
Air System Type SZCAV

Number of zones 1
Floor Area 11.7 sqm
Location Ilheus Ap, 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

Zone Terminal Sizing Data

Zone Name	Design Supply Airflow (L/s)	Minimum Supply Airflow (L/s)	Zone L/s (sqm)	Reheat Coil Capacity (kW)	Reheat Coil Water L/s @ 11.1 K	Zone Htg Unit Coil Capacity (kW)	Zone Htg Unit Water L/s @ 11.1 K	Mixing Box Fan Airflow (L/s)
SALA DE ESTERILIZAÇÃO	225	225	19.12	0.0	-	0.0	-	0

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (sqm)
SALA DE ESTERILIZAÇÃO	2.3	janeiro 8:00	0.2	11.7

Space Loads and Airflows

Zone Name / Space Name	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (sqm)	Space L/s (sqm)
SALA DE ESTERILIZAÇÃO						
SALA DE ESTERILIZAÇÃO E DISTRIBUIÇÃO CME (AC)	2.3	janeiro 8:00	225	0.2	11.7	19.12

Ventilation Sizing Summary for SALA DE ESTERILIZAÇÃO

(In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:57

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows
Design Ventilation Airflow Rate 24 L/s

2. Space Ventilation Analysis

Zone Name / Space Name	Floor Area (sqm)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/s sqm)	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Required Outdoor Air (ACH)	Uncorrected Outdoor Air (L/s)	Direct Exhaust Air (L/s)
SALA DE ESTERILIZAÇÃO										
SALA DE ESTERILIZAÇÃO E DISTRIBUIÇÃO CME (AC)	11.7	3.0	224.5	0.00	0.00	0.0	0.0	2.00	0.0	0.0
Totals			224.5						23.9	

Air System Heat Balance Summary for SALA DE ESTERILIZAÇÃO

(In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:57

Table 1. System Loads

COMPONENT LOADS	DESIGN COOLING - JANEIRO 15:00			DESIGN HEATING		
	OA DB / WB 30.9 C / 26.1 C			OA DB / WB 18.3 C / 12.4 C		
	Details	Sensible [W]	Latent [W]	Details	Sensible [W]	Latent [W]
Zone Conditioning	-	2205	174	-	252	0
Plenum Load	-	0	0	-	0	0
Return Fan Load	225 L/s	0	-	225 L/s	0	-
Ventilation Load	24 L/s	225	666	24 L/s	81	0
Supply Fan Load	225 L/s	207	-	225 L/s	-207	-
Zone Fan Coil Fans Load	-	0	-	-	0	-
>> Total System Loads	-	2637	840	-	127	0
Central Cooling Coil	-	2650	870	-	0	0
Central Heating Coil	-	0	-	-	128	-
>> Total Conditioning	-	2650	870	-	128	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

Table 2. Zone Heat Balance Loads

Zone Heat Balance Component	DESIGN COOLING - JANEIRO 15:00			DESIGN HEATING		
	OA DB / WB 30.9 C / 26.1 C			OA DB / WB 18.3 C / 12.4 C		
	Details	Sensible [W]	Latent [W]	Details	Sensible [W]	Latent [W]
Exterior Wall Convection	18 sqm	351	-	18 sqm	46	-
Roof Convection	12 sqm	357	-	12 sqm	48	-
Window Convection	3 sqm	126	-	3 sqm	20	-
Skylight Convection	0 sqm	0	-	0 sqm	0	-
Door Convection	0 sqm	0	-	0 sqm	0	-
Floor Convection	12 sqm	163	-	12 sqm	29	-
Interior Wall Convection	30 sqm	325	-	30 sqm	40	-
Ceiling Convection	0 sqm	0	-	0 sqm	0	-
Overhead Lighting Convection	141 W	88	-	0 W	0	-
Task Lighting Convection	59 W	26	-	0 W	0	-
Electric Equipment Convection	939 W	705	-	0 W	0	-
People Convection	3	65	180	0	0	0
Infiltration	0 L/s	0	0	0 L/s	0	0
Miscellaneous Equipment	-	0	0	-	0	0
Air Internal Energy Change	-	0	-	-	0	0
Safety Factor	0% / 0%	0	0	0%	0	0
>> Total Zone Loads	-	2205	180	-	183	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

Note 1: Surface convection line items show the combined effects of conductive heat gain to the surface and radiative heat gains absorbed at the surface which are then convected to room air.

Note 2: Lighting, equipment, and people line items include only the direct convective heat gain from the heat source to the room air. The radiative portion of the heat gain is first absorbed by surfaces in the room and then later convected from the surface to the air. Therefore the effect of the radiative portion of the heat gain is found in the surface convection line items.

Note 3: Solar heat gain is absorbed by surfaces in the room, re-radiated to other surfaces, and finally convected from the surfaces to room air. Therefore, the effect of solar heat gain is found in the surface convection line items.

Zone Heat Balance Summary for SALA DE ESTERILIZAÇÃO

(In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:57

Table 1. Heat Balance Loads for Zone SALA DE ESTERILIZAÇÃO

Zone Heat Balance Component	DESIGN COOLING - JANEIRO 8:00			DESIGN HEATING		
	OA DB / WB 26.5 C / 25.0 C			OA DB / WB 18.3 C / 12.4 C		
	OCCUPIED T-STAT 23.0 C			OCCUPIED T-STAT 21.1 C		
	Details	Sensible [W]	Latent [W]	Details	Sensible [W]	Latent [W]
Exterior Wall Convection	18 sqm	237	-	18 sqm	46	-
Roof Convection	12 sqm	240	-	12 sqm	48	-
Window Convection	3 sqm	354	-	3 sqm	20	-
Skylight Convection	0 sqm	0	-	0 sqm	0	-
Door Convection	0 sqm	0	-	0 sqm	0	-
Floor Convection	12 sqm	215	-	12 sqm	29	-
Interior Wall Convection	30 sqm	389	-	30 sqm	40	-
Ceiling Convection	0 sqm	0	-	0 sqm	0	-
Overhead Lighting Convection	141 W	88	-	0 W	0	-
Task Lighting Convection	59 W	26	-	0 W	0	-
Electric Equipment Convection	939 W	705	-	0 W	0	-
People Convection	3	65	180	0	0	0
Infiltration	0 L/s	0	0	0 L/s	0	0
Miscellaneous Equipment	-	0	0	-	0	0
Air Internal Energy Change	-	0	-	-	0	0
Safety Factor	0% / 0%	0	0	0%	0	0
		2318	180	-	183	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

- Note 1:** Surface convection line items show the combined effects of conductive heat gain to the surface and radiative heat gains absorbed at the surface which are then convected to room air.
- Note 2:** Lighting, equipment, and people line items include only the direct convective heat gain from the heat source to the room air. The radiative portion of the heat gain is first absorbed by surfaces in the room and then later convected from the surface to the air. Therefore the effect of the radiative portion of the heat gain is found in the surface convection line items.
- Note 3:** Solar heat gain is absorbed by surfaces in the room, re-radiated to other surfaces, and finally convected from the surfaces to room air. Therefore, the effect of solar heat gain is found in the surface convection line items.

Air System Sizing Summary for SALA DE INALAÇÃO

(In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:57

Air System Information

Air System Name SALA DE INALAÇÃO
Equipment Class SPLT AHU
Air System Type SZCAV

Number of zones 1
Floor Area 9.4 sqm
Location Ilheus Ap, 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

Central Cooling Coil Sizing Data

Total coil load 4.0 kW
Sensible coil load 2.3 kW
Coil L/s at peak load 156 L/s
Sum of peak zone L/s 156 L/s
Sensible heat ratio 0.560
L/(s kW) 38.6
sqm/kW 2.3
W/sqm 427.5
Water flow @ 5.6 K rise N/A

Peak coil load occurs at janeiro 16:00
OA DB / WB 30.5 / 26.0 C
Entering DB / WB 25.8 / 21.0 C
Leaving DB / WB 14.1 / 14.0 C
Resulting RH 59 %
Design supply temp. 14.4 C
Zone T-stat Check 1 of 1 OK
Max zone temperature deviation 0.0 K

Central Heating Coil Sizing Data

Max coil load 0.2 kW
Coil L/s at Design Heating 156 L/s
Max coil L/s 156 L/s
Water flow @ 11.1 K drop N/A

Load occurs at Design Heating
W/sqm 18.6
Ent. DB / Lvg DB 20.1 / 21.0 C

Supply Fan Sizing Data

Design L/s 156 L/s
Design L/(s sqm) 16.50 L/(s sqm)

Fan motor BHP 0.18 BHP
Fan motor kW 0.14 kW
Fan total static 497 Pa

Outdoor Ventilation Air Data

Design airflow L/s 57 L/s
L/(s sqm) 6.10 L/(s sqm)

L/s/person 19.16 L/s/person

Zone Sizing Summary for SALA DE INALAÇÃO

(In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:57

Air System Information

Air System Name **SALA DE INALAÇÃO**
Equipment Class **SPLT AHU**
Air System Type **SZCAV**

Number of zones **1**
Floor Area **9.4** sqm
Location **Ilheus Ap, 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**

Zone Terminal Sizing Data

Zone Name	Design Supply Airflow (L/s)	Minimum Supply Airflow (L/s)	Zone L/(s sqm)	Reheat Coil Capacity (kW)	Reheat Coil Water L/s @ 11.1 K	Zone Htg Unit Coil Capacity (kW)	Zone Htg Unit Water L/s @ 11.1 K	Mixing Box Fan Airflow (L/s)
SALA DE INALAÇÃO	156	156	16.50	0.0	-	0.0	-	0

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (sqm)
SALA DE INALAÇÃO	1.6	janeiro 18:00	0.1	9.4

Space Loads and Airflows

Zone Name / Space Name	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (sqm)	Space L/(s sqm)
SALA DE INALAÇÃO						
SALA DE INALAÇÃO (AC)	1.6	janeiro 18:00	156	0.1	9.4	16.50

Ventilation Sizing Summary for SALA DE INALAÇÃO

(In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:57

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows
Design Ventilation Airflow Rate 57 L/s

2. Space Ventilation Analysis

Zone Name / Space Name	Floor Area (sqm)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s sqm))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Required Outdoor Air (ACH)	Uncorrected Outdoor Air (L/s)	Direct Exhaust Air (L/s)
SALA DE INALAÇÃO										
SALA DE INALAÇÃO (AC)	9.4	3.0	155.6	0.00	0.00	0.0	0.0	6.00	0.0	0.0
Totals			155.6						57.5	

Air System Heat Balance Summary for SALA DE INALAÇÃO

(In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:57

Table 1. System Loads

COMPONENT LOADS	DESIGN COOLING - JANEIRO 16:00			DESIGN HEATING		
	OA DB / WB 30.5 C / 26.0 C			OA DB / WB 18.3 C / 12.4 C		
	Details	Sensible [W]	Latent [W]	Details	Sensible [W]	Latent [W]
Zone Conditioning	-	1563	176	-	120	0
Plenum Load	-	0	0	-	0	0
Return Fan Load	156 L/s	0	-	156 L/s	0	-
Ventilation Load	57 L/s	519	1536	57 L/s	196	0
Supply Fan Load	156 L/s	143	-	156 L/s	-143	-
Zone Fan Coil Fans Load	-	0	-	-	0	-
>> Total System Loads	-	2226	1712	-	172	0
Central Cooling Coil	-	2256	1775	-	0	0
Central Heating Coil	-	0	-	-	175	-
>> Total Conditioning	-	2256	1775	-	175	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

Table 2. Zone Heat Balance Loads

Zone Heat Balance Component	DESIGN COOLING - JANEIRO 16:00			DESIGN HEATING		
	OA DB / WB 30.5 C / 26.0 C			OA DB / WB 18.3 C / 12.4 C		
	Details	Sensible [W]	Latent [W]	Details	Sensible [W]	Latent [W]
Exterior Wall Convection	0 sqm	0	-	0 sqm	0	-
Roof Convection	9 sqm	279	-	9 sqm	26	-
Window Convection	0 sqm	0	-	0 sqm	0	-
Skylight Convection	0 sqm	0	-	0 sqm	0	-
Door Convection	0 sqm	0	-	0 sqm	0	-
Floor Convection	9 sqm	78	-	9 sqm	6	-
Interior Wall Convection	46 sqm	516	-	46 sqm	53	-
Ceiling Convection	0 sqm	0	-	0 sqm	0	-
Overhead Lighting Convection	113 W	71	-	0 W	0	-
Task Lighting Convection	0 W	0	-	0 W	0	-
Electric Equipment Convection	754 W	566	-	0 W	0	-
People Convection	3	65	180	0	0	0
Infiltration	0 L/s	0	0	0 L/s	0	0
Miscellaneous Equipment	-	0	0	-	0	0
Air Internal Energy Change	-	0	-	-	0	0
Safety Factor	0% / 0%	0	0	0%	0	0
>> Total Zone Loads	-	1574	180	-	85	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

Note 1: Surface convection line items show the combined effects of conductive heat gain to the surface and radiative heat gains absorbed at the surface which are then convected to room air.

Note 2: Lighting, equipment, and people line items include only the direct convective heat gain from the heat source to the room air. The radiative portion of the heat gain is first absorbed by surfaces in the room and then later convected from the surface to the air. Therefore the effect of the radiative portion of the heat gain is found in the surface convection line items.

Note 3: Solar heat gain is absorbed by surfaces in the room, re-radiated to other surfaces, and finally convected from the surfaces to room air. Therefore, the effect of solar heat gain is found in the surface convection line items.

Zone Heat Balance Summary for SALA DE INALAÇÃO

(In Alternative: Default Alternative)

Project: PP070

08/18/2026

Prepared by: Teste 17/03/26

09:58

Table 1. Heat Balance Loads for Zone SALA DE INALAÇÃO

Zone Heat Balance Component	DESIGN COOLING - JANEIRO 18:00			DESIGN HEATING		
	OA DB / WB 29.5 C / 25.7 C			OA DB / WB 18.3 C / 12.4 C		
	OCCUPIED T-STAT 23.0 C			OCCUPIED T-STAT 21.1 C		
	Details	Sensible [W]	Latent [W]	Details	Sensible [W]	Latent [W]
Exterior Wall Convection	0 sqm	0	-	0 sqm	0	-
Roof Convection	9 sqm	297	-	9 sqm	26	-
Window Convection	0 sqm	0	-	0 sqm	0	-
Skylight Convection	0 sqm	0	-	0 sqm	0	-
Door Convection	0 sqm	0	-	0 sqm	0	-
Floor Convection	9 sqm	79	-	9 sqm	6	-
Interior Wall Convection	46 sqm	530	-	46 sqm	53	-
Ceiling Convection	0 sqm	0	-	0 sqm	0	-
Overhead Lighting Convection	113 W	71	-	0 W	0	-
Task Lighting Convection	0 W	0	-	0 W	0	-
Electric Equipment Convection	754 W	566	-	0 W	0	-
People Convection	3	65	180	0	0	0
Infiltration	0 L/s	0	0	0 L/s	0	0
Miscellaneous Equipment	-	0	0	-	0	0
Air Internal Energy Change	-	0	-	-	0	0
Safety Factor	0% / 0%	0	0	0%	0	0
		1606	180	-	85	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

Note 1: Surface convection line items show the combined effects of conductive heat gain to the surface and radiative heat gains absorbed at the surface which are then convected to room air.

Note 2: Lighting, equipment, and people line items include only the direct convective heat gain from the heat source to the room air. The radiative portion of the heat gain is first absorbed by surfaces in the room and then later convected from the surface to the air. Therefore the effect of the radiative portion of the heat gain is found in the surface convection line items.

Note 3: Solar heat gain is absorbed by surfaces in the room, re-radiated to other surfaces, and finally convected from the surfaces to room air. Therefore, the effect of solar heat gain is found in the surface convection line items.

Air System Sizing Summary for SALA DE INTEGRAÇÃO DE EQUIPES

(In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:58

Air System Information

Air System Name **SALA DE INTEGRAÇÃO DE EQUIPES**
Equipment Class **SPLT AHU**
Air System Type **SZCAV**

Number of zones **1**
Floor Area **11.1** sqm
Location **Ilheus Ap, 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**

Central Cooling Coil Sizing Data

Total coil load **2.6** kW
Sensible coil load **2.2** kW
Coil L/s at peak load **199** L/s
Sum of peak zone L/s **199** L/s
Sensible heat ratio **0.857**
L/(s kW) **77.3**
sqm/kW **4.3**
W/sqm **232.4**
Water flow @ 5.6 K rise **N/A**

Peak coil load occurs at **maio 14:00**
OA DB / WB **27.0 / 24.4** C
Entering DB / WB **23.0 / 17.1** C
Leaving DB / WB **14.0 / 13.2** C
Resulting RH **56** %
Design supply temp. **14.4** C
Zone T-stat Check **1 of 1** OK
Max zone temperature deviation **0.0** K

Central Heating Coil Sizing Data

Max coil load **0.1** kW
Coil L/s at Design Heating **199** L/s
Max coil L/s **199** L/s
Water flow @ 11.1 K drop **N/A**

Load occurs at **Design Heating**
W/sqm **13.3**
Ent. DB / Lvg DB **21.1 / 21.7** C

Supply Fan Sizing Data

Design L/s **199** L/s
Design L/(s sqm) **17.97** L/(s sqm)

Fan motor BHP **0.23** BHP
Fan motor kW **0.18** kW
Fan total static **497** Pa

Outdoor Ventilation Air Data

Design airflow L/s **0** L/s
L/(s sqm) **0.00** L/(s sqm)

L/s/person **0.00** L/s/person

Zone Sizing Summary for SALA DE INTEGRAÇÃO DE EQUIPES

(In Alternative: Default Alternative)

Project: PP070

08/18/2026

Prepared by: Teste 17/03/26

09:58

Air System Information

Air System Name **SALA DE INTEGRAÇÃO DE EQUIPES**
 Equipment Class **SPLT AHU**
 Air System Type **SZCAV**

Number of zones **1**
 Floor Area **11.1** sqm
 Location **Ilheus Ap, 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**

Zone Terminal Sizing Data

Zone Name	Design Supply Airflow (L/s)	Minimum Supply Airflow (L/s)	Zone L/(s sqm)	Reheat Coil Capacity (kW)	Reheat Coil Water L/s @ 11.1 K	Zone Htg Unit Coil Capacity (kW)	Zone Htg Unit Water L/s @ 11.1 K	Mixing Box Fan Airflow (L/s)
SALA DE INTEGRAÇÃO DE EQUIPES	199	199	17.97	0.0	-	0.0	-	0

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (sqm)
SALA DE INTEGRAÇÃO DE EQUIPES	2.0	maio 14:00	0.2	11.1

Space Loads and Airflows

Zone Name / Space Name	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (sqm)	Space L/(s sqm)
SALA DE INTEGRAÇÃO DE EQUIPES						
SALA INTEGRAÇÃO DE EQUIPES (AC)	2.0	maio 14:00	199	0.2	11.1	17.97

Ventilation Sizing Summary for SALA DE INTEGRAÇÃO DE EQUIPES

(In Alternative: Default Alternative)

Project: PP070

Prepared by: Teste 17/03/26

08/18/2026

09:58

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows

Design Ventilation Airflow Rate 0 L/s

2. Space Ventilation Analysis

Zone Name / Space Name	Floor Area (sqm)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s sqm))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Required Outdoor Air (ACH)	Uncorrected Outdoor Air (L/s)	Direct Exhaust Air (L/s)
SALA DE INTEGRAÇÃO DE EQUIPES										
SALA INTEGRAÇÃO DE EQUIPES (AC)	11.1	6.0	198.6	0.00	0.00	0.0	0.0	0.00	0.0	0.0
Totals			198.6						0.0	

Air System Heat Balance Summary for SALA DE INTEGRAÇÃO DE EQUIPES

(In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:58

Table 1. System Loads

COMPONENT LOADS	DESIGN COOLING - MAIO 14:00			DESIGN HEATING		
	OA DB / WB 27.0 C / 24.4 C			OA DB / WB 18.3 C / 12.4 C		
	Details	Sensible [W]	Latent [W]	Details	Sensible [W]	Latent [W]
Zone Conditioning	-	2019	349	-	330	0
Plenum Load	-	0	0	-	0	0
Return Fan Load	199 L/s	0	-	199 L/s	0	-
Ventilation Load	0 L/s	0	0	0 L/s	0	0
Supply Fan Load	199 L/s	183	-	199 L/s	-183	-
Zone Fan Coil Fans Load	-	0	-	-	0	-
>> Total System Loads	-	2202	349	-	147	0
Central Cooling Coil	-	2202	367	-	0	0
Central Heating Coil	-	0	-	-	147	-
>> Total Conditioning	-	2202	367	-	147	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

Table 2. Zone Heat Balance Loads

Zone Heat Balance Component	DESIGN COOLING - MAIO 14:00			DESIGN HEATING		
	OA DB / WB 27.0 C / 24.4 C			OA DB / WB 18.3 C / 12.4 C		
	Details	Sensible [W]	Latent [W]	Details	Sensible [W]	Latent [W]
Exterior Wall Convection	22 sqm	357	-	22 sqm	65	-
Roof Convection	11 sqm	244	-	11 sqm	57	-
Window Convection	3 sqm	261	-	3 sqm	24	-
Skylight Convection	0 sqm	0	-	0 sqm	0	-
Door Convection	0 sqm	0	-	0 sqm	0	-
Floor Convection	11 sqm	236	-	11 sqm	36	-
Interior Wall Convection	25 sqm	508	-	25 sqm	61	-
Ceiling Convection	0 sqm	0	-	0 sqm	0	-
Overhead Lighting Convection	133 W	83	-	0 W	0	-
Task Lighting Convection	55 W	24	-	0 W	0	-
Electric Equipment Convection	276 W	207	-	0 W	0	-
People Convection	6	129	360	0	0	0
Infiltration	0 L/s	0	0	0 L/s	0	0
Miscellaneous Equipment	-	0	0	-	0	0
Air Internal Energy Change	-	0	-	-	0	0
Safety Factor	0% / 0%	0	0	0%	0	0
>> Total Zone Loads	-	2050	360	-	243	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

Note 1: Surface convection line items show the combined effects of conductive heat gain to the surface and radiative heat gains absorbed at the surface which are then convected to room air.

Note 2: Lighting, equipment, and people line items include only the direct convective heat gain from the heat source to the room air. The radiative portion of the heat gain is first absorbed by surfaces in the room and then later convected from the surface to the air. Therefore the effect of the radiative portion of the heat gain is found in the surface convection line items.

Note 3: Solar heat gain is absorbed by surfaces in the room, re-radiated to other surfaces, and finally convected from the surfaces to room air. Therefore, the effect of solar heat gain is found in the surface convection line items.

Zone Heat Balance Summary for SALA DE INTEGRAÇÃO DE EQUIPES

(In Alternative: Default Alternative)

Project: PP070

08/18/2026

Prepared by: Teste 17/03/26

09:58

Table 1. Heat Balance Loads for Zone SALA DE INTEGRAÇÃO DE EQUIPES

	DESIGN COOLING - MAIO 14:00			DESIGN HEATING		
	OA DB / WB 27.0 C / 24.4 C			OA DB / WB 18.3 C / 12.4 C		
	OCCUPIED T-STAT 23.0 C			OCCUPIED T-STAT 21.1 C		
Zone Heat Balance Component	Details	Sensible [W]	Latent [W]	Details	Sensible [W]	Latent [W]
Exterior Wall Convection	22 sqm	357	-	22 sqm	65	-
Roof Convection	11 sqm	244	-	11 sqm	57	-
Window Convection	3 sqm	261	-	3 sqm	24	-
Skylight Convection	0 sqm	0	-	0 sqm	0	-
Door Convection	0 sqm	0	-	0 sqm	0	-
Floor Convection	11 sqm	236	-	11 sqm	36	-
Interior Wall Convection	25 sqm	508	-	25 sqm	61	-
Ceiling Convection	0 sqm	0	-	0 sqm	0	-
Overhead Lighting Convection	133 W	83	-	0 W	0	-
Task Lighting Convection	55 W	24	-	0 W	0	-
Electric Equipment Convection	276 W	207	-	0 W	0	-
People Convection	6	129	360	0	0	0
Infiltration	0 L/s	0	0	0 L/s	0	0
Miscellaneous Equipment	-	0	0	-	0	0
Air Internal Energy Change	-	0	-	-	0	0
Safety Factor	0% / 0%	0	0	0%	0	0
		2050	360	-	243	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

Note 1: Surface convection line items show the combined effects of conductive heat gain to the surface and radiative heat gains absorbed at the surface which are then convected to room air.

Note 2: Lighting, equipment, and people line items include only the direct convective heat gain from the heat source to the room air. The radiative portion of the heat gain is first absorbed by surfaces in the room and then later convected from the surface to the air. Therefore the effect of the radiative portion of the heat gain is found in the surface convection line items.

Note 3: Solar heat gain is absorbed by surfaces in the room, re-radiated to other surfaces, and finally convected from the surfaces to room air. Therefore, the effect of solar heat gain is found in the surface convection line items.

Air System Sizing Summary for SALA DE OBSERVAÇÃO

(In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:58

Air System Information

Air System Name **SALA DE OBSERVAÇÃO**
Equipment Class **SPLT AHU**
Air System Type **SZCAV**

Number of zones **1**
Floor Area **22.3** sqm
Location **Ilheus Ap, 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**

Central Cooling Coil Sizing Data

Total coil load **8.6** kW
Sensible coil load **4.9** kW
Coil L/s at peak load **360** L/s
Sum of peak zone L/s **360** L/s
Sensible heat ratio **0.575**
L/(s kW) **42.0**
sqm/kW **2.6**
W/sqm **384.4**
Water flow @ 5.6 K rise **N/A**

Peak coil load occurs at **abril 14:00**
OA DB / WB **28.7 / 24.9** C
Entering DB / WB **25.1 / 20.5** C
Leaving DB / WB **14.1 / 14.0** C
Resulting RH **58** %
Design supply temp. **14.4** C
Zone T-stat Check **1 of 1** OK
Max zone temperature deviation **0.0** K

Central Heating Coil Sizing Data

Max coil load **0.6** kW
Coil L/s at Design Heating **360** L/s
Max coil L/s **360** L/s
Water flow @ 11.1 K drop **N/A**

Load occurs at **Design Heating**
W/sqm **27.3**
Ent. DB / Lvg DB **20.0 / 21.4** C

Supply Fan Sizing Data

Design L/s **360** L/s
Design L/(s sqm) **16.16** L/(s sqm)

Fan motor BHP **0.42** BHP
Fan motor kW **0.33** kW
Fan total static **497** Pa

Outdoor Ventilation Air Data

Design airflow L/s **136** L/s
L/(s sqm) **6.10** L/(s sqm)

L/s/person **45.24** L/s/person

Zone Sizing Summary for SALA DE OBSERVAÇÃO

(In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

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09:58

Air System Information

Air System Name SALA DE OBSERVAÇÃO
Equipment Class SPLT AHU
Air System Type SZCAV

Number of zones 1
Floor Area 22.3 sqm
Location Ilheus Ap, 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

Zone Terminal Sizing Data

Zone Name	Design Supply Airflow (L/s)	Minimum Supply Airflow (L/s)	Zone L/s (sqm)	Reheat Coil Capacity (kW)	Reheat Coil Water L/s @ 11.1 K	Zone Htg Unit Coil Capacity (kW)	Zone Htg Unit Water L/s @ 11.1 K	Mixing Box Fan Airflow (L/s)
SALA DE OBSERVAÇÃO	360	360	16.16	0.0	-	0.0	-	0

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (sqm)
SALA DE OBSERVAÇÃO	3.7	maio 14:00	0.3	22.3

Space Loads and Airflows

Zone Name / Space Name	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (sqm)	Space L/s (sqm)
SALA DE OBSERVAÇÃO						
SALA DE OBSERVAÇÃO/MEDIÇÃO (AC)	3.7	maio 14:00	360	0.3	22.3	16.16

Ventilation Sizing Summary for SALA DE OBSERVAÇÃO

(In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:58

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows
Design Ventilation Airflow Rate 136 L/s

2. Space Ventilation Analysis

Zone Name / Space Name	Floor Area (sqm)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s sqm))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Required Outdoor Air (ACH)	Uncorrected Outdoor Air (L/s)	Direct Exhaust Air (L/s)
SALA DE OBSERVAÇÃO										
SALA DE OBSERVAÇÃO/MEDIÇÃO (AC)	22.3	3.0	359.8	0.00	0.00	0.0	0.0	6.00	0.0	0.0
Totals			359.8						135.7	

Air System Heat Balance Summary for SALA DE OBSERVAÇÃO

(In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:58

Table 1. System Loads

COMPONENT LOADS	DESIGN COOLING - ABRIL 14:00			DESIGN HEATING		
	OA DB / WB 28.7 C / 24.9 C			OA DB / WB 18.3 C / 12.4 C		
	Details	Sensible [W]	Latent [W]	Details	Sensible [W]	Latent [W]
Zone Conditioning	-	3612	173	-	469	0
Plenum Load	-	0	0	-	0	0
Return Fan Load	360 L/s	0	-	360 L/s	0	-
Ventilation Load	136 L/s	924	3346	136 L/s	462	0
Supply Fan Load	360 L/s	331	-	360 L/s	-331	-
Zone Fan Coil Fans Load	-	0	-	-	0	-
>> Total System Loads	-	4867	3519	-	600	0
Central Cooling Coil	-	4924	3635	-	0	0
Central Heating Coil	-	0	-	-	607	-
>> Total Conditioning	-	4924	3635	-	607	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

Table 2. Zone Heat Balance Loads

Zone Heat Balance Component	DESIGN COOLING - ABRIL 14:00			DESIGN HEATING		
	OA DB / WB 28.7 C / 24.9 C			OA DB / WB 18.3 C / 12.4 C		
	Details	Sensible [W]	Latent [W]	Details	Sensible [W]	Latent [W]
Exterior Wall Convection	18 sqm	339	-	18 sqm	47	-
Roof Convection	22 sqm	539	-	22 sqm	93	-
Window Convection	5 sqm	457	-	5 sqm	47	-
Skylight Convection	0 sqm	0	-	0 sqm	0	-
Door Convection	0 sqm	0	-	0 sqm	0	-
Floor Convection	22 sqm	384	-	22 sqm	51	-
Interior Wall Convection	49 sqm	687	-	49 sqm	87	-
Ceiling Convection	0 sqm	0	-	0 sqm	0	-
Overhead Lighting Convection	267 W	167	-	0 W	0	-
Task Lighting Convection	0 W	0	-	0 W	0	-
Electric Equipment Convection	1336 W	1002	-	0 W	0	-
People Convection	3	65	180	0	0	0
Infiltration	0 L/s	0	0	0 L/s	0	0
Miscellaneous Equipment	-	0	0	-	0	0
Air Internal Energy Change	-	0	-	-	0	0
Safety Factor	0% / 0%	0	0	0%	0	0
>> Total Zone Loads	-	3640	180	-	325	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

Note 1: Surface convection line items show the combined effects of conductive heat gain to the surface and radiative heat gains absorbed at the surface which are then convected to room air.

Note 2: Lighting, equipment, and people line items include only the direct convective heat gain from the heat source to the room air. The radiative portion of the heat gain is first absorbed by surfaces in the room and then later convected from the surface to the air. Therefore the effect of the radiative portion of the heat gain is found in the surface convection line items.

Note 3: Solar heat gain is absorbed by surfaces in the room, re-radiated to other surfaces, and finally convected from the surfaces to room air. Therefore, the effect of solar heat gain is found in the surface convection line items.

Zone Heat Balance Summary for SALA DE OBSERVAÇÃO (In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:58

Table 1. Heat Balance Loads for Zone SALA DE OBSERVAÇÃO

	DESIGN COOLING - MAIO 14:00			DESIGN HEATING		
	OA DB / WB 27.0 C / 24.4 C			OA DB / WB 18.3 C / 12.4 C		
	OCCUPIED T-STAT 23.0 C			OCCUPIED T-STAT 21.1 C		
Zone Heat Balance Component	Details	Sensible [W]	Latent [W]	Details	Sensible [W]	Latent [W]
Exterior Wall Convection	18 sqm	356	-	18 sqm	47	-
Roof Convection	22 sqm	477	-	22 sqm	93	-
Window Convection	5 sqm	501	-	5 sqm	47	-
Skylight Convection	0 sqm	0	-	0 sqm	0	-
Door Convection	0 sqm	0	-	0 sqm	0	-
Floor Convection	22 sqm	452	-	22 sqm	51	-
Interior Wall Convection	49 sqm	694	-	49 sqm	87	-
Ceiling Convection	0 sqm	0	-	0 sqm	0	-
Overhead Lighting Convection	267 W	167	-	0 W	0	-
Task Lighting Convection	0 W	0	-	0 W	0	-
Electric Equipment Convection	1336 W	1002	-	0 W	0	-
People Convection	3	65	180	0	0	0
Infiltration	0 L/s	0	0	0 L/s	0	0
Miscellaneous Equipment	-	0	0	-	0	0
Air Internal Energy Change	-	0	-	-	0	0
Safety Factor	0% / 0%	0	0	0%	0	0
		3714	180	-	325	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

- Note 1:** Surface convection line items show the combined effects of conductive heat gain to the surface and radiative heat gains absorbed at the surface which are then convected to room air.
- Note 2:** Lighting, equipment, and people line items include only the direct convective heat gain from the heat source to the room air. The radiative portion of the heat gain is first absorbed by surfaces in the room and then later convected from the surface to the air. Therefore the effect of the radiative portion of the heat gain is found in the surface convection line items.
- Note 3:** Solar heat gain is absorbed by surfaces in the room, re-radiated to other surfaces, and finally convected from the surfaces to room air. Therefore, the effect of solar heat gain is found in the surface convection line items.

Air System Sizing Summary for SALA DE PARAMETRIZAÇÃO

(In Alternative: Default Alternative)

Project: PP070

Prepared by: Teste 17/03/26

08/18/2026

09:58

Air System Information

Air System Name **SALA DE PARAMETRIZAÇÃO**
Equipment Class **SPLT AHU**
Air System Type **SZCAV**

Number of zones **1**
Floor Area **3.5** sqm
Location **Ilheus Ap, 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**

Central Cooling Coil Sizing Data

Total coil load **2.2** kW
Sensible coil load **1.4** kW
Coil L/s at peak load **108** L/s
Sum of peak zone L/s **108** L/s
Sensible heat ratio **0.644**
L/(s kW) **49.7**
sqm/kW **1.6**
W/sqm **627.9**
Water flow @ 5.6 K rise **N/A**

Peak coil load occurs at **dezembro 15:00**
OA DB / WB **30.3 / 26.1** C
Entering DB / WB **24.4 / 19.6** C
Leaving DB / WB **14.0 / 13.9** C
Resulting RH **59** %
Design supply temp. **14.4** C
Zone T-stat Check **1 of 1** OK
Max zone temperature deviation **0.0** K

Central Heating Coil Sizing Data

Max coil load **0.1** kW
Coil L/s at Design Heating **108** L/s
Max coil L/s **108** L/s
Water flow @ 11.1 K drop **N/A**

Load occurs at **Design Heating**
W/sqm **34.1**
Ent. DB / Lvg DB **20.5 / 21.4** C

Supply Fan Sizing Data

Design L/s **108** L/s
Design L/(s sqm) **31.23** L/(s sqm)

Fan motor BHP **0.13** BHP
Fan motor kW **0.10** kW
Fan total static **497** Pa

Outdoor Ventilation Air Data

Design airflow L/s **21** L/s
L/(s sqm) **6.10** L/(s sqm)

L/s/person **7.02** L/s/person

Zone Sizing Summary for SALA DE PARAMETRIZAÇÃO

(In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:58

Air System Information

Air System Name **SALA DE PARAMETRIZAÇÃO**
Equipment Class **SPLT AHU**
Air System Type **SZCAV**

Number of zones **1**
Floor Area **3.5** sqm
Location **Ilheus Ap, 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**

Zone Terminal Sizing Data

Zone Name	Design Supply Airflow (L/s)	Minimum Supply Airflow (L/s)	Zone L/(s sqm)	Reheat Coil Capacity (kW)	Reheat Coil Water L/s @ 11.1 K	Zone Htg Unit Coil Capacity (kW)	Zone Htg Unit Water L/s @ 11.1 K	Mixing Box Fan Airflow (L/s)
SALA DE PARAMETRIZAÇÃO	108	108	31.23	0.0	-	0.0	-	0

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (sqm)
SALA DE PARAMETRIZAÇÃO	1.1	dezembro 16:00	0.1	3.5

Space Loads and Airflows

Zone Name / Space Name	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (sqm)	Space L/(s sqm)
SALA DE PARAMETRIZAÇÃO						
SALA DE PARAMETRIZAÇÃO (ÁREA LIMPA CME)	1.1	dezembro 16:00	108	0.1	3.5	31.23

Ventilation Sizing Summary for SALA DE PARAMETRIZAÇÃO

(In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:58

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows
Design Ventilation Airflow Rate 21 L/s

2. Space Ventilation Analysis

Zone Name / Space Name	Floor Area (sqm)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s sqm))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Required Outdoor Air (ACH)	Uncorrected Outdoor Air (L/s)	Direct Exhaust Air (L/s)
SALA DE PARAMETRIZAÇÃO										
SALA DE PARAMETRIZAÇÃO (ÁREA LIMPA CME)	3.5	3.0	107.9	0.00	0.00	0.0	0.0	6.00	0.0	0.0
Totals			107.9						21.1	

Air System Heat Balance Summary for SALA DE PARAMETRIZAÇÃO

(In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:58

Table 1. System Loads

COMPONENT LOADS	DESIGN COOLING - DEZEMBRO 15:00			DESIGN HEATING		
	OA DB / WB 30.3 C / 26.1 C			OA DB / WB 18.3 C / 12.4 C		
	Details	Sensible [W]	Latent [W]	Details	Sensible [W]	Latent [W]
Zone Conditioning	-	1101	174	-	144	0
Plenum Load	-	0	0	-	0	0
Return Fan Load	108 L/s	0	-	108 L/s	0	-
Ventilation Load	21 L/s	185	569	21 L/s	72	0
Supply Fan Load	108 L/s	99	-	108 L/s	-99	-
Zone Fan Coil Fans Load	-	0	-	-	0	-
>> Total System Loads	-	1386	744	-	117	0
Central Cooling Coil	-	1397	774	-	0	0
Central Heating Coil	-	0	-	-	118	-
>> Total Conditioning	-	1397	774	-	118	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

Table 2. Zone Heat Balance Loads

Zone Heat Balance Component	DESIGN COOLING - DEZEMBRO 15:00			DESIGN HEATING		
	OA DB / WB 30.3 C / 26.1 C			OA DB / WB 18.3 C / 12.4 C		
	Details	Sensible [W]	Latent [W]	Details	Sensible [W]	Latent [W]
Exterior Wall Convection	4 sqm	92	-	4 sqm	11	-
Roof Convection	3 sqm	113	-	3 sqm	11	-
Window Convection	1 sqm	127	-	1 sqm	12	-
Skylight Convection	0 sqm	0	-	0 sqm	0	-
Door Convection	0 sqm	0	-	0 sqm	0	-
Floor Convection	3 sqm	58	-	3 sqm	8	-
Interior Wall Convection	23 sqm	469	-	23 sqm	45	-
Ceiling Convection	0 sqm	0	-	0 sqm	0	-
Overhead Lighting Convection	41 W	26	-	0 W	0	-
Task Lighting Convection	17 W	8	-	0 W	0	-
Electric Equipment Convection	207 W	156	-	0 W	0	-
People Convection	3	65	180	0	0	0
Infiltration	0 L/s	0	0	0 L/s	0	0
Miscellaneous Equipment	-	0	0	-	0	0
Air Internal Energy Change	-	0	-	-	0	0
Safety Factor	0% / 0%	0	0	0%	0	0
>> Total Zone Loads	-	1113	180	-	86	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

Note 1: Surface convection line items show the combined effects of conductive heat gain to the surface and radiative heat gains absorbed at the surface which are then convected to room air.

Note 2: Lighting, equipment, and people line items include only the direct convective heat gain from the heat source to the room air. The radiative portion of the heat gain is first absorbed by surfaces in the room and then later convected from the surface to the air. Therefore the effect of the radiative portion of the heat gain is found in the surface convection line items.

Note 3: Solar heat gain is absorbed by surfaces in the room, re-radiated to other surfaces, and finally convected from the surfaces to room air. Therefore, the effect of solar heat gain is found in the surface convection line items.

Zone Heat Balance Summary for SALA DE PARAMETRIZAÇÃO

(In Alternative: Default Alternative)

Project: PP070

08/18/2026

Prepared by: Teste 17/03/26

09:58

Table 1. Heat Balance Loads for Zone SALA DE PARAMETRIZAÇÃO

	DESIGN COOLING - DEZEMBRO 16:00			DESIGN HEATING		
	OA DB / WB 30.0 C / 26.0 C			OA DB / WB 18.3 C / 12.4 C		
	OCCUPIED T-STAT 23.0 C			OCCUPIED T-STAT 21.1 C		
Zone Heat Balance Component	Details	Sensible [W]	Latent [W]	Details	Sensible [W]	Latent [W]
Exterior Wall Convection	4 sqm	96	-	4 sqm	11	-
Roof Convection	3 sqm	119	-	3 sqm	11	-
Window Convection	1 sqm	117	-	1 sqm	12	-
Skylight Convection	0 sqm	0	-	0 sqm	0	-
Door Convection	0 sqm	0	-	0 sqm	0	-
Floor Convection	3 sqm	59	-	3 sqm	8	-
Interior Wall Convection	23 sqm	469	-	23 sqm	45	-
Ceiling Convection	0 sqm	0	-	0 sqm	0	-
Overhead Lighting Convection	41 W	26	-	0 W	0	-
Task Lighting Convection	17 W	8	-	0 W	0	-
Electric Equipment Convection	207 W	156	-	0 W	0	-
People Convection	3	65	180	0	0	0
Infiltration	0 L/s	0	0	0 L/s	0	0
Miscellaneous Equipment	-	0	0	-	0	0
Air Internal Energy Change	-	0	-	-	0	0
Safety Factor	0% / 0%	0	0	0%	0	0
		1114	180	-	86	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

Note 1: Surface convection line items show the combined effects of conductive heat gain to the surface and radiative heat gains absorbed at the surface which are then convected to room air.

Note 2: Lighting, equipment, and people line items include only the direct convective heat gain from the heat source to the room air. The radiative portion of the heat gain is first absorbed by surfaces in the room and then later convected from the surface to the air. Therefore the effect of the radiative portion of the heat gain is found in the surface convection line items.

Note 3: Solar heat gain is absorbed by surfaces in the room, re-radiated to other surfaces, and finally convected from the surfaces to room air. Therefore, the effect of solar heat gain is found in the surface convection line items.

Air System Sizing Summary for SALA DE RECEPÇÃO E LAVAGEM

(In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:58

Air System Information

Air System Name **SALA DE RECEPÇÃO E LAVAGEM**
Equipment Class **SPLT AHU**
Air System Type **SZCAV**

Number of zones **1**
Floor Area **8.5** sqm
Location **Ilheus Ap, 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**

Central Cooling Coil Sizing Data

Total coil load **5.8** kW
Sensible coil load **2.6** kW
Coil L/s at peak load **146** L/s
Sum of peak zone L/s **146** L/s
Sensible heat ratio **0.449**
L/(s kW) **25.2**
sqm/kW **1.5**
W/sqm **684.3**
Water flow @ 5.6 K rise **N/A**

Peak coil load occurs at **janeiro 16:00**
OA DB / WB **30.5 / 26.0** C
Entering DB / WB **28.3 / 23.9** C
Leaving DB / WB **14.1 / 13.8** C
Resulting RH **63** %
Design supply temp. **14.4** C
Zone T-stat Check **1 of 1** OK
Max zone temperature deviation **0.0** K

Central Heating Coil Sizing Data

Max coil load **0.3** kW
Coil L/s at Design Heating **146** L/s
Max coil L/s **146** L/s
Water flow @ 11.1 K drop **N/A**

Load occurs at **Design Heating**
W/sqm **40.6**
Ent. DB / Lvg DB **19.1 / 21.0** C

Supply Fan Sizing Data

Design L/s **146** L/s
Design L/(s sqm) **17.26** L/(s sqm)

Fan motor BHP **0.17** BHP
Fan motor kW **0.13** kW
Fan total static **497** Pa

Outdoor Ventilation Air Data

Design airflow L/s **103** L/s
L/(s sqm) **12.19** L/(s sqm)

L/s/person **10.32** L/s/person

Zone Sizing Summary for SALA DE RECEPÇÃO E LAVAGEM (In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:58

Air System Information

Air System Name **SALA DE RECEPÇÃO E LAVAGEM**
Equipment Class **SPLT AHU**
Air System Type **SZCAV**

Number of zones **1**
Floor Area **8.5** sqm
Location **Ilheus Ap, 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**

Zone Terminal Sizing Data

Zone Name	Design Supply Airflow (L/s)	Minimum Supply Airflow (L/s)	Zone L/(s sqm)	Reheat Coil Capacity (kW)	Reheat Coil Water L/s @ 11.1 K	Zone Htg Unit Coil Capacity (kW)	Zone Htg Unit Water L/s @ 11.1 K	Mixing Box Fan Airflow (L/s)
SALA DE RECEPÇÃO E LAVAGEM CME	146	146	17.26	0.0	-	0.0	-	0

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (sqm)
SALA DE RECEPÇÃO E LAVAGEM CME	1.5	janeiro 18:00	0.1	8.5

Space Loads and Airflows

Zone Name / Space Name	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (sqm)	Space L/(s sqm)
SALA DE RECEPÇÃO E LAVAGEM CME						
SALA DE RECEPÇÃO E LAVAGEM CME (AC/EXA)	1.5	janeiro 18:00	146	0.1	8.5	17.26

Ventilation Sizing Summary for SALA DE RECEPÇÃO E LAVAGEM

(In Alternative: Default Alternative)

Project: PP070

08/18/2026

Prepared by: Teste 17/03/26

09:58

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows
Design Ventilation Airflow Rate 103 L/s

2. Space Ventilation Analysis

Zone Name / Space Name	Floor Area (sqm)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s sqm))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Required Outdoor Air (ACH)	Uncorrected Outdoor Air (L/s)	Direct Exhaust Air (L/s)
SALA DE RECEPÇÃO E LAVAGEM CME										
SALA DE RECEPÇÃO E LAVAGEM CME (AC/EXA)	8.5	10.0	146.1	0.00	0.00	0.0	0.0	12.00	0.0	0.0
Totals			146.1						103.2	

Air System Heat Balance Summary for SALA DE RECEPÇÃO E LAVAGEM

(In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:58

Table 1. System Loads

COMPONENT LOADS	DESIGN COOLING - JANEIRO 16:00			DESIGN HEATING		
	Details	Sensible [W]	Latent [W]	Details	Sensible [W]	Latent [W]
Zone Conditioning	-	1477	580	-	122	0
Plenum Load	-	0	0	-	0	0
Return Fan Load	146 L/s	0	-	146 L/s	0	-
Ventilation Load	103 L/s	933	2508	103 L/s	351	0
Supply Fan Load	146 L/s	134	-	146 L/s	-134	-
Zone Fan Coil Fans Load	-	0	-	-	0	-
>> Total System Loads	-	2544	3088	-	339	0
Central Cooling Coil	-	2598	3194	-	0	0
Central Heating Coil	-	0	-	-	344	-
>> Total Conditioning	-	2598	3194	-	344	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

Table 2. Zone Heat Balance Loads

Zone Heat Balance Component	DESIGN COOLING - JANEIRO 16:00			DESIGN HEATING		
	Details	Sensible [W]	Latent [W]	Details	Sensible [W]	Latent [W]
Exterior Wall Convection	0 sqm	0	-	0 sqm	0	-
Roof Convection	8 sqm	290	-	8 sqm	24	-
Window Convection	0 sqm	0	-	0 sqm	0	-
Skylight Convection	0 sqm	0	-	0 sqm	0	-
Door Convection	0 sqm	0	-	0 sqm	0	-
Floor Convection	8 sqm	110	-	8 sqm	6	-
Interior Wall Convection	43 sqm	676	-	43 sqm	56	-
Ceiling Convection	0 sqm	0	-	0 sqm	0	-
Overhead Lighting Convection	102 W	63	-	0 W	0	-
Task Lighting Convection	42 W	19	-	0 W	0	-
Electric Equipment Convection	152 W	114	-	0 W	0	-
People Convection	10	215	601	0	0	0
Infiltration	0 L/s	0	0	0 L/s	0	0
Miscellaneous Equipment	-	0	0	-	0	0
Air Internal Energy Change	-	0	-	-	0	0
Safety Factor	0% / 0%	0	0	0%	0	0
>> Total Zone Loads	-	1488	601	-	86	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

Note 1: Surface convection line items show the combined effects of conductive heat gain to the surface and radiative heat gains absorbed at the surface which are then convected to room air.

Note 2: Lighting, equipment, and people line items include only the direct convective heat gain from the heat source to the room air. The radiative portion of the heat gain is first absorbed by surfaces in the room and then later convected from the surface to the air. Therefore the effect of the radiative portion of the heat gain is found in the surface convection line items.

Note 3: Solar heat gain is absorbed by surfaces in the room, re-radiated to other surfaces, and finally convected from the surfaces to room air. Therefore, the effect of solar heat gain is found in the surface convection line items.

Zone Heat Balance Summary for SALA DE RECEPÇÃO E LAVAGEM (In Alternative: Default Alternative)

Project: PP070

08/18/2026

Prepared by: Teste 17/03/26

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Table 1. Heat Balance Loads for Zone SALA DE RECEPÇÃO E LAVAGEM CME

Zone Heat Balance Component	DESIGN COOLING - JANEIRO 18:00			DESIGN HEATING		
	OA DB / WB 29.5 C / 25.7 C			OA DB / WB 18.3 C / 12.4 C		
	OCCUPIED T-STAT 23.0 C			OCCUPIED T-STAT 21.1 C		
	Details	Sensible [W]	Latent [W]	Details	Sensible [W]	Latent [W]
Exterior Wall Convection	0 sqm	0	-	0 sqm	0	-
Roof Convection	8 sqm	305	-	8 sqm	24	-
Window Convection	0 sqm	0	-	0 sqm	0	-
Skylight Convection	0 sqm	0	-	0 sqm	0	-
Door Convection	0 sqm	0	-	0 sqm	0	-
Floor Convection	8 sqm	111	-	8 sqm	6	-
Interior Wall Convection	43 sqm	681	-	43 sqm	56	-
Ceiling Convection	0 sqm	0	-	0 sqm	0	-
Overhead Lighting Convection	102 W	63	-	0 W	0	-
Task Lighting Convection	42 W	19	-	0 W	0	-
Electric Equipment Convection	152 W	114	-	0 W	0	-
People Convection	10	215	601	0	0	0
Infiltration	0 L/s	0	0	0 L/s	0	0
Miscellaneous Equipment	-	0	0	-	0	0
Air Internal Energy Change	-	0	-	-	0	0
Safety Factor	0% / 0%	0	0	0%	0	0
		1508	601	-	86	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

Note 1: Surface convection line items show the combined effects of conductive heat gain to the surface and radiative heat gains absorbed at the surface which are then convected to room air.

Note 2: Lighting, equipment, and people line items include only the direct convective heat gain from the heat source to the room air. The radiative portion of the heat gain is first absorbed by surfaces in the room and then later convected from the surface to the air. Therefore the effect of the radiative portion of the heat gain is found in the surface convection line items.

Note 3: Solar heat gain is absorbed by surfaces in the room, re-radiated to other surfaces, and finally convected from the surfaces to room air. Therefore, the effect of solar heat gain is found in the surface convection line items.

Air System Sizing Summary for SALA DE REIDRATAÇÃO

(In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:58

Air System Information

Air System Name **SALA DE REIDRATAÇÃO**
Equipment Class **SPLT AHU**
Air System Type **SZCAV**

Number of zones **1**
Floor Area **17.8** sqm
Location **Ilheus Ap, 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**

Central Cooling Coil Sizing Data

Total coil load **9.0** kW
Sensible coil load **5.6** kW
Coil L/s at peak load **411** L/s
Sum of peak zone L/s **411** L/s
Sensible heat ratio **0.623**
L/(s kW) **45.8**
sqm/kW **2.0**
W/sqm **504.6**
Water flow @ 5.6 K rise **N/A**

Peak coil load occurs at **fevereiro 16:00**
OA DB / WB **30.5 / 26.0** C
Entering DB / WB **25.0 / 20.0** C
Leaving DB / WB **14.0 / 13.9** C
Resulting RH **58** %
Design supply temp. **14.4** C
Zone T-stat Check **1 of 1** OK
Max zone temperature deviation **0.0** K

Central Heating Coil Sizing Data

Max coil load **0.4** kW
Coil L/s at Design Heating **411** L/s
Max coil L/s **411** L/s
Water flow @ 11.1 K drop **N/A**

Load occurs at **Design Heating**
W/sqm **23.4**
Ent. DB / Lvg DB **20.4 / 21.2** C

Supply Fan Sizing Data

Design L/s **411** L/s
Design L/(s sqm) **23.11** L/(s sqm)

Fan motor BHP **0.48** BHP
Fan motor kW **0.38** kW
Fan total static **497** Pa

Outdoor Ventilation Air Data

Design airflow L/s **108** L/s
L/(s sqm) **6.10** L/(s sqm)

L/s/person **18.05** L/s/person

Zone Sizing Summary for SALA DE REIDRATAÇÃO

(In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:58

Air System Information

Air System Name SALA DE REIDRATAÇÃO
Equipment Class SPLT AHU
Air System Type SZCAV

Number of zones 1
Floor Area 17.8 sqm
Location Ilheus Ap, 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

Zone Terminal Sizing Data

Zone Name	Design Supply Airflow (L/s)	Minimum Supply Airflow (L/s)	Zone L/(s sqm)	Reheat Coil Capacity (kW)	Reheat Coil Water L/s @ 11.1 K	Zone Htg Unit Coil Capacity (kW)	Zone Htg Unit Water L/s @ 11.1 K	Mixing Box Fan Airflow (L/s)
SALA DE REIDRATAÇÃO	411	411	23.11	0.0	-	0.0	-	0

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (sqm)
SALA DE REIDRATAÇÃO	4.2	fevereiro 16:00	0.3	17.8

Space Loads and Airflows

Zone Name / Space Name	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (sqm)	Space L/(s sqm)
SALA DE REIDRATAÇÃO						
SALA DE REIDRATAÇÃO/COLETA (AC)	4.2	fevereiro 16:00	411	0.3	17.8	23.11

Ventilation Sizing Summary for SALA DE REIDRATAÇÃO

(In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:58

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows
Design Ventilation Airflow Rate 108 L/s

2. Space Ventilation Analysis

Zone Name / Space Name	Floor Area (sqm)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s sqm))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Required Outdoor Air (ACH)	Uncorrected Outdoor Air (L/s)	Direct Exhaust Air (L/s)
SALA DE REIDRATAÇÃO										
SALA DE REIDRATAÇÃO/COLETA (AC)	17.8	6.0	410.6	0.00	0.00	0.0	0.0	6.00	0.0	0.0
Totals			410.6						108.3	

Air System Heat Balance Summary for SALA DE REIDRATAÇÃO

(In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:58

Table 1. System Loads

COMPONENT LOADS	DESIGN COOLING - FEVEREIRO 16:00			DESIGN HEATING		
	OA DB / WB 30.5 C / 26.0 C			OA DB / WB 18.3 C / 12.4 C		
	Details	Sensible [W]	Latent [W]	Details	Sensible [W]	Latent [W]
Zone Conditioning	-	4171	341	-	419	0
Plenum Load	-	0	0	-	0	0
Return Fan Load	411 L/s	0	-	411 L/s	0	-
Ventilation Load	108 L/s	978	2944	108 L/s	369	0
Supply Fan Load	411 L/s	378	-	411 L/s	-378	-
Zone Fan Coil Fans Load	-	0	-	-	0	-
>> Total System Loads	-	5527	3286	-	410	0
Central Cooling Coil	-	5585	3378	-	0	0
Central Heating Coil	-	0	-	-	416	-
>> Total Conditioning	-	5585	3378	-	416	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

Table 2. Zone Heat Balance Loads

Zone Heat Balance Component	DESIGN COOLING - FEVEREIRO 16:00			DESIGN HEATING		
	OA DB / WB 30.5 C / 26.0 C			OA DB / WB 18.3 C / 12.4 C		
	Details	Sensible [W]	Latent [W]	Details	Sensible [W]	Latent [W]
Exterior Wall Convection	18 sqm	422	-	18 sqm	46	-
Roof Convection	18 sqm	734	-	18 sqm	76	-
Window Convection	5 sqm	853	-	5 sqm	46	-
Skylight Convection	0 sqm	0	-	0 sqm	0	-
Door Convection	0 sqm	0	-	0 sqm	0	-
Floor Convection	18 sqm	484	-	18 sqm	44	-
Interior Wall Convection	39 sqm	778	-	39 sqm	67	-
Ceiling Convection	0 sqm	0	-	0 sqm	0	-
Overhead Lighting Convection	213 W	133	-	0 W	0	-
Task Lighting Convection	89 W	39	-	0 W	0	-
Electric Equipment Convection	888 W	666	-	0 W	0	-
People Convection	6	129	360	0	0	0
Infiltration	0 L/s	0	0	0 L/s	0	0
Miscellaneous Equipment	-	0	0	-	0	0
Air Internal Energy Change	-	0	-	-	0	0
Safety Factor	0% / 0%	0	0	0%	0	0
>> Total Zone Loads	-	4238	360	-	279	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

Note 1: Surface convection line items show the combined effects of conductive heat gain to the surface and radiative heat gains absorbed at the surface which are then convected to room air.

Note 2: Lighting, equipment, and people line items include only the direct convective heat gain from the heat source to the room air. The radiative portion of the heat gain is first absorbed by surfaces in the room and then later convected from the surface to the air. Therefore the effect of the radiative portion of the heat gain is found in the surface convection line items.

Note 3: Solar heat gain is absorbed by surfaces in the room, re-radiated to other surfaces, and finally convected from the surfaces to room air. Therefore, the effect of solar heat gain is found in the surface convection line items.

Zone Heat Balance Summary for SALA DE REIDRATAÇÃO

(In Alternative: Default Alternative)

Project: PP070

08/18/2026

Prepared by: Teste 17/03/26

09:58

Table 1. Heat Balance Loads for Zone SALA DE REIDRATAÇÃO

Zone Heat Balance Component	DESIGN COOLING - FEVEREIRO 16:00			DESIGN HEATING		
	OA DB / WB 30.5 C / 26.0 C			OA DB / WB 18.3 C / 12.4 C		
	OCCUPIED T-STAT 23.0 C			OCCUPIED T-STAT 21.1 C		
	Details	Sensible [W]	Latent [W]	Details	Sensible [W]	Latent [W]
Exterior Wall Convection	18 sqm	422	-	18 sqm	46	-
Roof Convection	18 sqm	734	-	18 sqm	76	-
Window Convection	5 sqm	853	-	5 sqm	46	-
Skylight Convection	0 sqm	0	-	0 sqm	0	-
Door Convection	0 sqm	0	-	0 sqm	0	-
Floor Convection	18 sqm	484	-	18 sqm	44	-
Interior Wall Convection	39 sqm	778	-	39 sqm	67	-
Ceiling Convection	0 sqm	0	-	0 sqm	0	-
Overhead Lighting Convection	213 W	133	-	0 W	0	-
Task Lighting Convection	89 W	39	-	0 W	0	-
Electric Equipment Convection	888 W	666	-	0 W	0	-
People Convection	6	129	360	0	0	0
Infiltration	0 L/s	0	0	0 L/s	0	0
Miscellaneous Equipment	-	0	0	-	0	0
Air Internal Energy Change	-	0	-	-	0	0
Safety Factor	0% / 0%	0	0	0%	0	0
		4238	360	-	279	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

Note 1: Surface convection line items show the combined effects of conductive heat gain to the surface and radiative heat gains absorbed at the surface which are then convected to room air.

Note 2: Lighting, equipment, and people line items include only the direct convective heat gain from the heat source to the room air. The radiative portion of the heat gain is first absorbed by surfaces in the room and then later convected from the surface to the air. Therefore the effect of the radiative portion of the heat gain is found in the surface convection line items.

Note 3: Solar heat gain is absorbed by surfaces in the room, re-radiated to other surfaces, and finally convected from the surfaces to room air. Therefore, the effect of solar heat gain is found in the surface convection line items.

Air System Sizing Summary for SALA DE TELECONSULTA

(In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:58

Air System Information

Air System Name **SALA DE TELECONSULTA**
Equipment Class **SPLT AHU**
Air System Type **SZCAV**

Number of zones **1**
Floor Area **10.1** sqm
Location **Ilheus Ap, 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**

Central Cooling Coil Sizing Data

Total coil load **3.4** kW
Sensible coil load **1.6** kW
Coil L/s at peak load **94** L/s
Sum of peak zone L/s **94** L/s
Sensible heat ratio **0.460**
L/(s kW) **27.3**
sqm/kW **2.9**
W/sqm **340.4**
Water flow @ 5.6 K rise **N/A**

Peak coil load occurs at **janeiro 17:00**
OA DB / WB **30.1 / 25.9** C
Entering DB / WB **27.6 / 23.3** C
Leaving DB / WB **14.1 / 13.9** C
Resulting RH **60** %
Design supply temp. **14.4** C
Zone T-stat Check **1 of 1** OK
Max zone temperature deviation **0.0** K

Central Heating Coil Sizing Data

Max coil load **0.2** kW
Coil L/s at Design Heating **94** L/s
Max coil L/s **94** L/s
Water flow @ 11.1 K drop **N/A**

Load occurs at **Design Heating**
W/sqm **24.2**
Ent. DB / Lvg DB **19.2 / 21.4** C

Supply Fan Sizing Data

Design L/s **94** L/s
Design L/(s sqm) **9.29** L/(s sqm)

Fan motor BHP **0.11** BHP
Fan motor kW **0.09** kW
Fan total static **497** Pa

Outdoor Ventilation Air Data

Design airflow L/s **62** L/s
L/(s sqm) **6.10** L/(s sqm)

L/s/person **20.58** L/s/person

Zone Sizing Summary for SALA DE TELECONSULTA

(In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:58

Air System Information

Air System Name **SALA DE TELECONSULTA**
Equipment Class **SPLT AHU**
Air System Type **SZCAV**

Number of zones **1**
Floor Area **10.1** sqm
Location **Ilheus Ap, 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**

Zone Terminal Sizing Data

Zone Name	Design Supply Airflow (L/s)	Minimum Supply Airflow (L/s)	Zone L/s (sqm)	Reheat Coil Capacity (kW)	Reheat Coil Water L/s @ 11.1 K	Zone Htg Unit Coil Capacity (kW)	Zone Htg Unit Water L/s @ 11.1 K	Mixing Box Fan Airflow (L/s)
SALA DE TELECONSULTA	94	94	9.29	0.0	-	0.0	-	0

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (sqm)
SALA DE TELECONSULTA	1.0	janeiro 19:00	0.1	10.1

Space Loads and Airflows

Zone Name / Space Name	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (sqm)	Space L/(s sqm)
SALA DE TELECONSULTA						
SALA DE TELECONSULTA (AC)	1.0	janeiro 19:00	94	0.1	10.1	9.29

Ventilation Sizing Summary for SALA DE TELECONSULTA

(In Alternative: Default Alternative)

Project: PP070

Prepared by: Teste 17/03/26

08/18/2026

09:58

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows

Design Ventilation Airflow Rate 62 L/s

2. Space Ventilation Analysis

Zone Name / Space Name	Floor Area (sqm)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/s sqm)	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Required Outdoor Air (ACH)	Uncorrected Outdoor Air (L/s)	Direct Exhaust Air (L/s)
SALA DE TELECONSULTA										
SALA DE TELECONSULTA (AC)	10.1	3.0	94.1	0.00	0.00	0.0	0.0	6.00	0.0	0.0
Totals			94.1						61.7	

Air System Heat Balance Summary for SALA DE TELECONSULTA

(In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:58

Table 1. System Loads

COMPONENT LOADS	DESIGN COOLING - JANEIRO 17:00			DESIGN HEATING		
	Details	Sensible [W]	Latent [W]	Details	Sensible [W]	Latent [W]
Zone Conditioning	-	948	177	-	119	0
Plenum Load	-	0	0	-	0	0
Return Fan Load	94 L/s	0	-	94 L/s	0	-
Ventilation Load	62 L/s	522	1621	62 L/s	210	0
Supply Fan Load	94 L/s	87	-	94 L/s	-87	-
Zone Fan Coil Fans Load	-	0	-	-	0	-
>> Total System Loads	-	1557	1797	-	242	0
Central Cooling Coil	-	1588	1860	-	0	0
Central Heating Coil	-	0	-	-	245	-
>> Total Conditioning	-	1588	1860	-	245	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

Table 2. Zone Heat Balance Loads

Zone Heat Balance Component	DESIGN COOLING - JANEIRO 17:00			DESIGN HEATING		
	Details	Sensible [W]	Latent [W]	Details	Sensible [W]	Latent [W]
Exterior Wall Convection	0 sqm	0	-	0 sqm	0	-
Roof Convection	10 sqm	276	-	10 sqm	28	-
Window Convection	0 sqm	0	-	0 sqm	0	-
Skylight Convection	0 sqm	0	-	0 sqm	0	-
Door Convection	0 sqm	0	-	0 sqm	0	-
Floor Convection	10 sqm	60	-	10 sqm	6	-
Interior Wall Convection	47 sqm	408	-	47 sqm	54	-
Ceiling Convection	0 sqm	0	-	0 sqm	0	-
Overhead Lighting Convection	122 W	76	-	0 W	0	-
Task Lighting Convection	0 W	0	-	0 W	0	-
Electric Equipment Convection	101 W	76	-	0 W	0	-
People Convection	3	65	180	0	0	0
Infiltration	0 L/s	0	0	0 L/s	0	0
Miscellaneous Equipment	-	0	0	-	0	0
Air Internal Energy Change	-	0	-	-	0	0
Safety Factor	0% / 0%	0	0	0%	0	0
>> Total Zone Loads	-	960	180	-	87	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

Note 1: Surface convection line items show the combined effects of conductive heat gain to the surface and radiative heat gains absorbed at the surface which are then convected to room air.

Note 2: Lighting, equipment, and people line items include only the direct convective heat gain from the heat source to the room air. The radiative portion of the heat gain is first absorbed by surfaces in the room and then later convected from the surface to the air. Therefore the effect of the radiative portion of the heat gain is found in the surface convection line items.

Note 3: Solar heat gain is absorbed by surfaces in the room, re-radiated to other surfaces, and finally convected from the surfaces to room air. Therefore, the effect of solar heat gain is found in the surface convection line items.

Zone Heat Balance Summary for SALA DE TELECONSULTA

(In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

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Table 1. Heat Balance Loads for Zone SALA DE TELECONSULTA

Zone Heat Balance Component	DESIGN COOLING - JANEIRO 19:00			DESIGN HEATING		
	OA DB / WB 28.6 C / 25.5 C			OA DB / WB 18.3 C / 12.4 C		
	OCCUPIED T-STAT 23.0 C			OCCUPIED T-STAT 21.1 C		
	Details	Sensible [W]	Latent [W]	Details	Sensible [W]	Latent [W]
Exterior Wall Convection	0 sqm	0	-	0 sqm	0	-
Roof Convection	10 sqm	277	-	10 sqm	28	-
Window Convection	0 sqm	0	-	0 sqm	0	-
Skylight Convection	0 sqm	0	-	0 sqm	0	-
Door Convection	0 sqm	0	-	0 sqm	0	-
Floor Convection	10 sqm	60	-	10 sqm	6	-
Interior Wall Convection	47 sqm	417	-	47 sqm	54	-
Ceiling Convection	0 sqm	0	-	0 sqm	0	-
Overhead Lighting Convection	122 W	76	-	0 W	0	-
Task Lighting Convection	0 W	0	-	0 W	0	-
Electric Equipment Convection	101 W	76	-	0 W	0	-
People Convection	3	65	180	0	0	0
Infiltration	0 L/s	0	0	0 L/s	0	0
Miscellaneous Equipment	-	0	0	-	0	0
Air Internal Energy Change	-	0	-	-	0	0
Safety Factor	0% / 0%	0	0	0%	0	0
		971	180	-	87	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

- Note 1:** Surface convection line items show the combined effects of conductive heat gain to the surface and radiative heat gains absorbed at the surface which are then convected to room air.
- Note 2:** Lighting, equipment, and people line items include only the direct convective heat gain from the heat source to the room air. The radiative portion of the heat gain is first absorbed by surfaces in the room and then later convected from the surface to the air. Therefore the effect of the radiative portion of the heat gain is found in the surface convection line items.
- Note 3:** Solar heat gain is absorbed by surfaces in the room, re-radiated to other surfaces, and finally convected from the surfaces to room air. Therefore, the effect of solar heat gain is found in the surface convection line items.

Air System Sizing Summary for SALA DE TI

(In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
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Air System Information

Air System Name **SALA DE TI**
Equipment Class **SPLT AHU**
Air System Type **SZCAV**

Number of zones **1**
Floor Area **7.8** sqm
Location **Ilheus Ap, 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**

Central Cooling Coil Sizing Data

Total coil load **1.6** kW
Sensible coil load **1.5** kW
Coil L/s at peak load **135** L/s
Sum of peak zone L/s **135** L/s
Sensible heat ratio **0.926**
L/(s kW) **82.8**
sqm/kW **4.8**
W/sqm **209.9**
Water flow @ 5.6 K rise **N/A**

Peak coil load occurs at **fevereiro 17:00**
OA DB / WB **30.1 / 25.9** C
Entering DB / WB **23.0 / 16.7** C
Leaving DB / WB **13.9 / 13.0** C
Resulting RH **53** %
Design supply temp. **14.4** C
Zone T-stat Check **1 of 1** OK
Max zone temperature deviation **0.0** K

Central Heating Coil Sizing Data

Max coil load **0.0** kW
Coil L/s at Design Heating **135** L/s
Max coil L/s **135** L/s
Water flow @ 11.1 K drop **N/A**

Load occurs at **Design Heating**
W/sqm **2.3**
Ent. DB / Lvg DB **21.1 / 21.2** C

Supply Fan Sizing Data

Design L/s **135** L/s
Design L/(s sqm) **17.38** L/(s sqm)

Fan motor BHP **0.16** BHP
Fan motor kW **0.12** kW
Fan total static **497** Pa

Outdoor Ventilation Air Data

Design airflow L/s **0** L/s
L/(s sqm) **0.00** L/(s sqm)

L/s/person **0.00** L/s/person

Zone Sizing Summary for SALA DE TI (In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:58

Air System Information

Air System Name **SALA DE TI**
Equipment Class **SPLT AHU**
Air System Type **SZCAV**

Number of zones **1**
Floor Area **7.8** sqm
Location **Ilheus Ap, 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**

Zone Terminal Sizing Data

Zone Name	Design Supply Airflow (L/s)	Minimum Supply Airflow (L/s)	Zone L/(s sqm)	Reheat Coil Capacity (kW)	Reheat Coil Water L/s @ 11.1 K	Zone Htg Unit Coil Capacity (kW)	Zone Htg Unit Water L/s @ 11.1 K	Mixing Box Fan Airflow (L/s)
SALA DE TI	135	135	17.38	0.0	-	0.0	-	0

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (sqm)
SALA DE TI	1.4	fevereiro 17:00	0.1	7.8

Space Loads and Airflows

Zone Name / Space Name	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (sqm)	Space L/(s sqm)
SALA DE TI						
SALA DE TI.	1.4	fevereiro 17:00	135	0.1	7.8	17.38

Ventilation Sizing Summary for SALA DE TI
(In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:58

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows
Design Ventilation Airflow Rate 0 L/s

2. Space Ventilation Analysis

Zone Name / Space Name	Floor Area (sqm)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s sqm))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Required Outdoor Air (ACH)	Uncorrected Outdoor Air (L/s)	Direct Exhaust Air (L/s)
SALA DE TI										
SALA DE TI.	7.8	2.0	135.2	0.00	0.00	0.0	0.0	0.00	0.0	0.0
Totals			135.2						0.0	

Air System Heat Balance Summary for SALA DE TI (In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

08/18/2026
09:58

Table 1. System Loads

COMPONENT LOADS	DESIGN COOLING - FEVEREIRO 17:00			DESIGN HEATING		
	OA DB / WB 30.1 C / 25.9 C			OA DB / WB 18.3 C / 12.4 C		
	Details	Sensible [W]	Latent [W]	Details	Sensible [W]	Latent [W]
Zone Conditioning	-	1387	116	-	143	0
Plenum Load	-	0	0	-	0	0
Return Fan Load	135 L/s	0	-	135 L/s	0	-
Ventilation Load	0 L/s	0	0	0 L/s	0	0
Supply Fan Load	135 L/s	124	-	135 L/s	-124	-
Zone Fan Coil Fans Load	-	0	-	-	0	-
>> Total System Loads	-	1512	116	-	18	0
Central Cooling Coil	-	1512	122	-	0	0
Central Heating Coil	-	0	-	-	18	-
>> Total Conditioning	-	1512	122	-	18	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

Table 2. Zone Heat Balance Loads

Zone Heat Balance Component	DESIGN COOLING - FEVEREIRO 17:00			DESIGN HEATING		
	OA DB / WB 30.1 C / 25.9 C			OA DB / WB 18.3 C / 12.4 C		
	Details	Sensible [W]	Latent [W]	Details	Sensible [W]	Latent [W]
Exterior Wall Convection	15 sqm	259	-	15 sqm	32	-
Roof Convection	8 sqm	237	-	8 sqm	22	-
Window Convection	0 sqm	0	-	0 sqm	0	-
Skylight Convection	0 sqm	0	-	0 sqm	0	-
Door Convection	0 sqm	0	-	0 sqm	0	-
Floor Convection	8 sqm	61	-	8 sqm	17	-
Interior Wall Convection	26 sqm	212	-	26 sqm	26	-
Ceiling Convection	0 sqm	0	-	0 sqm	0	-
Overhead Lighting Convection	93 W	58	-	0 W	0	-
Task Lighting Convection	0 W	0	-	0 W	0	-
Electric Equipment Convection	700 W	525	-	0 W	0	-
People Convection	2	43	120	0	0	0
Infiltration	0 L/s	0	0	0 L/s	0	0
Miscellaneous Equipment	-	0	0	-	0	0
Air Internal Energy Change	-	0	-	-	0	0
Safety Factor	0% / 0%	0	0	0%	0	0
>> Total Zone Loads	-	1396	120	-	97	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

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Zone Heat Balance Summary for SALA DE TI

(In Alternative: Default Alternative)

Project: PP070
Prepared by: Teste 17/03/26

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Zone Heat Balance Component	DESIGN COOLING - FEVEREIRO 17:00			DESIGN HEATING		
	OA DB / WB 30.1 C / 25.9 C			OA DB / WB 18.3 C / 12.4 C		
	OCCUPIED T-STAT 23.0 C			OCCUPIED T-STAT 21.1 C		
	Details	Sensible [W]	Latent [W]	Details	Sensible [W]	Latent [W]
Exterior Wall Convection	15 sqm	259	-	15 sqm	32	-
Roof Convection	8 sqm	237	-	8 sqm	22	-
Window Convection	0 sqm	0	-	0 sqm	0	-
Skylight Convection	0 sqm	0	-	0 sqm	0	-
Door Convection	0 sqm	0	-	0 sqm	0	-
Floor Convection	8 sqm	61	-	8 sqm	17	-
Interior Wall Convection	26 sqm	212	-	26 sqm	26	-
Ceiling Convection	0 sqm	0	-	0 sqm	0	-
Overhead Lighting Convection	93 W	58	-	0 W	0	-
Task Lighting Convection	0 W	0	-	0 W	0	-
Electric Equipment Convection	700 W	525	-	0 W	0	-
People Convection	2	43	120	0	0	0
Infiltration	0 L/s	0	0	0 L/s	0	0
Miscellaneous Equipment	-	0	0	-	0	0
Air Internal Energy Change	-	0	-	-	0	0
Safety Factor	0% / 0%	0	0	0%	0	0
		1396	120	-	97	0
Key:	Positive values are cooling loads Negative values are heating loads			Positive values are heating loads Negative values are cooling loads		

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