



**CONSÓRCIO
SAÚDE**

CONCREMAT | MEP

MEMÓRIA DE CÁLCULO SISTEMA DE HVAC CAPS I

FEVEREIRO / 2026

VERSÃO R02

ASSUNTO:	PLANO DE EXECUÇÃO BIM – PEB	
LOCAL:	DIVERSOS (PROJETO PADRÃO)	
CONTRATANTE:	SECRETARIA DA SAÚDE DO ESTADO DA BAHIA (SESAB)	CNPJ: 13.937.131/0001-41
CONTRATADA:	CONSÓRCIO SAÚDE CONCREMAT-MEP	CNPJ: 60.255.454/0001-35

ESTATÍSTICAS:		
PROJETOS PADRÃO	ÁREA ESTIMADA	ÁREA ESTIMADA DO TERRENO
UBSI TIPO I	250,00	1.000,00
UBSI TIPO II	400,00	1.000,00
UBS TIPO II	650,00	2.000,00
UBS TIPO III	750,00	2.500,00
UBS TIPO IV	930,00	3.000,00
CER TIPO II	1.650,00	4.000,00
CER TIPO III	1.910,00	5.000,00
CER TIPO IV	2.100,00	6.000,00
UA	450,00	2.000,00
CAPS I	630,00	2.000,00
CAPS III	820,00	2.500,00
LMRR REGIONAL	670,00	3.000,00
HEMOCENTRO REGIONAL	730,00	3.000,00
TOTAL	11.940,00m ²	37.000,00m ²
CONTRATANTE: SECRETARIA DA SAÚDE DO ESTADO DA BAHIA (SESAB) CNPJ: 13.937.131/0001-41 AUTOR DO MEMORIAL: Manuela Cedraz Carneiro ENGENHEIRA MECÂNICA CREA nº 76698BA ESCALA: INDICADA DATA: FEVEREIRO/2026 TEXTO: CONSÓRCIO SAÚDE CONCREMAT-MEP REVISÃO: R02		

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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 CAPS I – Centro de Atenção Psicossocial I – Infante Juvenil, de forma que os sistemas de climatização dos ambientes atendam o estabelecido na norma NBR-16401:2024.

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 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 16401:2008 – 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:

- 0011-PP-CAPS1-ARQ-PB-001-02-PLN – CAPS I – Infante Juvenil – Arquitetura – Planta Baixa;
- 0011-PP-CAPS1-ARQ-PB-002-02-LAY – CAPS I – Infante Juvenil – Arquitetura – Planta Lay Out;

- 0011-PP-CAPS1-ARQ-PB-003-02-COB – CAPS I – Infante Juvenil – Arquitetura – Cobertura;
- 0011-PP-CAPS1-ARQ-PB-004-02-COR – CAPS I – Infante Juvenil – Arquitetura – Cortes;
- 0011-PP-CAPS1-ARQ-PB-005-02-ELE – CAPS I – Infante Juvenil – Arquitetura – Elevações;
- IFC – Modelagem BIM CAPS 1

4. PREMISSAS PARA CÁLCULO DE CARGA TÉRMICA

Para o cálculo da carga térmica foi empregando o "software" HAP 40, versão 4.70, 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.

4.1 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) |

4.2 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.

4.3 Vazão de ar exterior para renovação e exaustão

- Atendendo a ABNT NBR 16401-3:2008 – Instalações Centrais de Ar Condicionado – Sistemas Centrais e Unitários – Parte 3 – Qualidade do Ar Interior.

4.4 Condições Internas para ambientes climatizados

AMBIENTE	ÁREA (m ²)	OCUPAÇÃO (nº pessoas)	EQUIPAMENTOS (W)	ILUMINAÇÃO (W/m ²)
Sala de Espera de Acolhimento	55,77	10	190	9,6
Recepção	7,35	2	190	9,6
Sala de TI / Servidor	3,64	1	1.000	10,5
Farmácia	13,69	1	405	12,3
Sala de Acolhimento	9,52	3	95	17,9
Sala de Atendimento Individual 01	9,52	3	95	17,9
Sala de Atendimento Individual 02	9,52	3	95	17,9
Sala de Atendimento Individual/Coletivo	27,69	10	95	17,9
Sala de Reunião	31,21	20	95	10,5
Sala de Apoio Administrativo	18,08	4	425	10,5
Sala Administrativa	10,75	3	235	10,5
Sala de Atendimento Coletivo 02	25,16	15	160	17,9
Sala de Atendimento Coletivo 01	25,26	17	160	17,9
Refeitório para Pacientes	54,32	36	200	14,1
Cozinha	27,91	10	840	10,7
Sala de Aplicação de Medicamentos	10,89	3	310	17,9
Posto de Enfermagem	7,80	2	190	10,5
Sala de Convivência	65,87	16	0	10,5
Estar	24,21	5	95	10,5
Quarto de Acolhimento 04	13,58	2	0	9,6

Obs.: Conforme formalizado pela SESAB em 26/01/2026, ficou definido que os pontos de ar-condicionado existentes na área de convivência, sala de estar, corredor e refeitório deverão ser substituídos por ventiladores. O sistema de renovação de ar foi mantido, para manutenção da qualidade do ar interior.

5. CÁLCULO DA VAZÃO DE RENOVAÇÃO - INSUFLAMENTO

RESUMO RENOVAÇÃO DE AR CAPS 1							
Ambiente	N. pessoas	Area	Fa	Fp	Vazão eficaz (l/s)	Vazão eficaz (m3/h)	Vazão Adotada (m3/h)
INSUFLAMENTO							
Sala de Espera de Acolhimento	10,00	55,77	0,50	3,80	65,89	237,19	250,00
Recepção	2,00	7,35	0,50	3,80	11,28	40,59	50,00
Sala de TI / Servidor	1,00	3,64	0,50	3,80	5,62	20,23	50,00
Farmácia	1,00	13,69	0,50	3,80	10,65	38,32	100,00
Sala de Acolhimento	3,00	9,52	0,50	3,80	16,16	58,18	100,00
Sala de Atendimento Individual 01	3,00	9,52	0,50	3,80	16,16	58,18	100,00
Sala de Atendimento Individual 02	3,00	9,52	0,50	3,80	16,16	58,18	100,00
Sala de Atendimento Individual/Coletivo	10,00	27,69	0,50	3,80	51,85	186,64	200,00
Sala de Reunião	20,00	31,21	0,50	3,80	91,61	329,78	350,00
Sala de Apoio Administrativo	4,00	18,08	0,50	3,80	24,24	87,26	100,00
Sala Administrativa	3,00	10,50	0,50	3,80	16,65	59,94	100,00
Sala de Atendimento Coletivo 02	15,00	25,16	0,50	3,80	69,58	250,49	300,00
Sala de Atendimento Coletivo 01	17,00	25,26	0,50	3,80	77,23	278,03	300,00
Refeitório para Pacientes	36,00	54,32	1,40	5,70	281,25	1.012,49	1.100,00
Cozinha	15,00	27,01	1,40	5,70	123,31	443,93	484,00
Sala de Aplicação de Medicamentos	3,00	10,89	0,50	3,80	16,85	60,64	100,00
Posto de Enfermagem	2,00	7,80	0,50	3,80	11,50	41,40	100,00
Sala de Convivência	16,00	65,87	0,50	3,80	93,74	337,45	400,00
Estar	5,00	24,21	0,50	3,80	31,11	111,98	200,00
Quarto de Acolhimento 04	2,00	13,58	0,50	3,80	14,39	51,80	100,00

6. ESPECIFICAÇÃO SISTEMA DE RENOVAÇÃO DE AR - INSUFLAMENTO

AMBIENTE	ÁREA (m²)	CAPACIDADE ADOTADA (m³/h)	EQUIPAMENTO ADOTADO (Referência)	QTDE
Sala de Espera de Acolhimento	55,77	250,0	Gabinete de ventilação SICFLUX, mod. FH 400, vazão 2.100 m³/h, pressão est. 20 mmca, filtro G4+M5, motor elétrico 500 W, monofásico, 220V	01
Recepção	7,35	50,0		
Sala de TI / Servidor	3,64	50,0		
Farmácia	13,69	100,0		
Sala de Acolhimento	9,52	100,0		
Sala de Atendimento Individual 01	9,52	100,0		
Sala de Atendimento Individual 02	9,52	100,0		
Sala de Atendimento Individual/Coletivo	27,69	200,0		
Sala de Reunião	31,21	350,0		
Sala de Apoio Administrativo	18,08	100,0		
Sala Administrativa	10,75	100,0		
Sala de Atendimento Coletivo 02	25,16	300,0		
Sala de Atendimento Coletivo 01	25,26	300,0		

AMBIENTE	ÁREA (m ²)	CAPACIDADE ADOTADA (m ³ /h)	EQUIPAMENTO ADOTADO (Referência)	QTDE
Refeitório para Pacientes	54,32	1.100,00	Gabinete de ventilação SICFLUX, mod. FH 250, vazão 1.100 m ³ /h, pressão est. 15 mmca, filtro G4+M5, motor elétrico 200 W, monofásico, 220V	01
Cozinha	27,91	484,00	Gabinete de ventilação SICFLUX, mod. FH 150, vazão 484 m ³ /h, pressão est. 10 mmca, filtro G4+M5, motor elétrico 100 W, monofásico, 220V	01
Sala de Aplicação de Medicamento s	10,89	100,0	Gabinete de ventilação SICFLUX, mod. FH 250, vazão 900 m ³ /h, pressão est. 25 mmca, filtro G4+M5, motor elétrico 200 W, monofásico, 220V	01
Posto de Enfermagem	7,80	100,0		
Sala de Convivência	65,87	400,0		
Estar	24,21	200,0		
Quarto de Acolhimento 04	13,58	100,0		

7. CÁLCULO DA VAZÃO DE EXAUSTÃO

EXAUSTÃO							
Ambiente	Area (m2)	Volume (m3)	Bacias	Fa	Vazão eficaz (l/s)	Vazão eficaz (m3/h)	Vazão Adotada (m3/h)
Sanitário Público Feminino	7,82	21,11	2,00	35,00	70,00	252,00	300,00
Sanitário Público Masculino	5,20	14,04	2,00	35,00	70,00	252,00	300,00
Sanitário Público PCD Masculino	3,70	9,99	1,00	35,00	35,00	126,00	150,00
Sanitário Público PCD Feminino/Família	3,70	9,99	1,00	35,00	35,00	126,00	150,00
DML	6,01	16,23	-	-	-	162,27	200,00
Sanitário Funcionários	3,25	8,78	1,00	35,00	35,00	126,00	150,00
Banheiro/Vestiário Funcionários Feminino	16,33	44,09	2,00	2,50	110,23	396,82	400,00
Banheiro Funcionários PCD	4,84	13,07	1,00	35,00	35,00	126,00	150,00
Banheiro para o Usuário	6,05	16,34	1,00	35,00	35,00	126,00	150,00
Banheiro PCD para o Usuário	6,10	16,47	1,00	35,00	35,00	126,00	150,00
Banheiro PCD	5,25	14,18	1,00	35,00	35,00	126,00	150,00
Lavanderia para o Usuário	7,91	21,36	-	-	-	213,57	250,00
Banheiro/Vestiário Funcionários Masculino	11,73	31,67	2,00	2,50	79,18	285,04	300,00
Cozinha	27,01	72,93		3,50	94,54	340,33	400,00

8. ESPECIFICAÇÃO SISTEMAS DE EXAUSTÃO

AMBIENTE	ÁREA (m²)	CAPACIDADE ADOTADA (m³/h)	EQUIPAMENTO ADOTADO (Referência)	QTDE
Sanitário Público Feminino	7,82	300,00	Gabinete de exaustão SICFLUX, mod. FH 250, vazão 1.100 m³/h, pressão est. 20 mmca, motor elétrico 200 W, monofásico, 220V	01
Sanitário Público Masculino	5,20	300,00		
Sanitário Público PCD Masculino	3,70	150,00		
Sanitário Público PCD Feminino/Família	3,70	150,00		
DML	6,01	200,00		
Sanitário Funcionários	3,25	150,00	Gabinete de exaustão SICFLUX, mod. FH 100, vazão 150 m³/h, pressão est. 20 mmca, motor elétrico 100 W, monofásico, 220V	01
Banheiro/Vestiário Funcionários Feminino	16,33	400,00	Gabinete de exaustão SICFLUX, mod. FH 315, vazão 1.550 m³/h, pressão est. 23 mmca, motor elétrico 350 W, monofásico, 220V	01
Banheiro Funcionários PCD	4,84	150,00		
Banheiro para o Usuário	6,05	150,00		
Banheiro PCD para o Usuário	6,10	150,00		
Banheiro PCD	5,25	150,00		
Lavanderia para o Usuário	7,91	250,00		
Banheiro/Vestiário Funcionários Masculino	11,73	300,00	Gabinete de exaustão SICFLUX, mod. FH 150, vazão 400 m³/h, pressão est. 25 mmca, motor elétrico 100 W, monofásico, 220V	01
Cozinha	27,01	400,0		

9. RELATÓRIO DE CÁLCULO DE CARGA TÉRMICA

Zone Sizing Summary for Sala Espera Acolhimento		
Project Name: CAPS1 SESAB dezembro 2025		12/03/2025
Prepared by: Promec Eng Rep e Serviços de Projetos e Inst Ltda		03:52

Air System Information

Air System Name Sala Espera Acolhimento
 Equipment Class TERM
 Air System Type SPLT-FC

Number of zones 1
 Floor Area 55.8 m²
 Location Salvador, Brazil

Sizing Calculation Information

Zone and Space Sizing Method:

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

Calculation Months Jan to Dec
 Sizing Data Calculated

Zone Sizing Data

Zone Name	Maximum Cooling Sensible (kW)	Design Air Flow (L/s)	Minimum Air Flow (L/s)	Time of Peak Load	Maximum Heating Load (kW)	Zone Floor Area (m²)	Zone L/(s-m²)
Zone 1	8.0	776	776	Jan 1700	0.2	55.8	13.91

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5.6 °K (L/s)	Time of Peak Load
Zone 1	9.8	7.6	23.8 / 18.9	15.7 / 15.3	-	Jan 1700

Terminal Unit Sizing Data - Heating, Fan, Ventilation

Zone Name	Heating Coil Load (kW)	Heating Coil Ent/Lvg DB (°C)	Htg Coil Water Flow @11.1 °K (L/s)	Fan Design AirFlow (L/s)	Fan Motor (BHP)	Fan Motor (kW)	OA Vent Design AirFlow (L/s)
Zone 1	0.0	-18.3 / -18.3	0.00	776	0.000	0.000	0

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m²)	Space L/(s-m²)
Zone 1							
Sala Espera Acolhimento	1	8.0	Jan 1700	776	0.2	55.8	13.91

Air System Design Load Summary for Sala Espera Acolhimento

Project Name: CAPS1 SESAB dezembro 2025
Prepared by: Promec Eng Rep e Serviços de Projetos e Inst Ltda

12/03/2025
03:52

	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jan 1700			HEATING DATA AT DES HTG		
	COOLING OA DB / WB 32.0 °C / 26.5 °C			HEATING OA DB / WB 20.0 °C / 13.8 °C		
ZONE LOADS	Details	Sensible (W)	Latent (W)	Details	Sensible (W)	Latent (W)
Window & Skylight Solar Loads	0 m²	0	-	0 m²	-	-
Wall Transmission	0 m²	0	-	0 m²	0	-
Roof Transmission	56 m²	3448	-	56 m²	217	-
Window Transmission	0 m²	0	-	0 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	97 m²	1886	-	97 m²	0	-
Ceiling	0 m²	0	-	0 m²	0	-
Overhead Lighting	536 W	461	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	190 W	178	-	0	0	-
People	10	556	352	0	0	0
Infiltration	-	755	1637	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	10% / 10%	728	199	0%	0	0
>> Total Zone Loads	-	8012	2188	-	217	0
Zone Conditioning	-	7589	2188	-	0	0
Plenum Wall Load	0%	0	-	0	0	-
Plenum Roof Load	0%	0	-	0	0	-
Plenum Lighting Load	0%	0	-	0	0	-
Exhaust Fan Load	0 L/s	0	-	0 L/s	0	-
Ventilation Load	0 L/s	0	0	0 L/s	0	0
Ventilation Fan Load	0 L/s	0	-	0 L/s	0	-
Space Fan Coil Fans	-	0	-	-	0	-
Duct Heat Gain / Loss	0%	0	-	0%	0	-
>> Total System Loads	-	7589	2188	-	0	0
Terminal Unit Cooling	-	7589	2193	-	0	0
Terminal Unit Heating	-	0	-	-	0	-
>> Total Conditioning	-	7589	2193	-	0	0
Key:	Positive values are clg loads Negative values are htg loads			Positive values are htg loads Negative values are clg loads		

Zone Sizing Summary for Recepção

Project Name: CAPS1 SESAB dezembro 2025
Prepared by: Promec Eng Rep e Serviços de Projetos e Inst Ltda

12/04/2025
05:45

Air System Information

Air System Name Recepção
Equipment Class TERM
Air System Type SPLT-FC

Number of zones 1
Floor Area 7.4 m²
Location Salvador, Brazil

Sizing Calculation Information

Zone and Space Sizing Method:

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

Calculation Months Jan to Dec
Sizing Data Calculated

Zone Sizing Data

Zone Name	Maximum Cooling Sensible (kW)	Design Air Flow (L/s)	Minimum Air Flow (L/s)	Time of Peak Load	Maximum Heating Load (kW)	Zone Floor Area (m²)	Zone L/(s-m²)
Zone 1	1.7	165	165	Jan 1700	0.0	7.4	22.30

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5.6 °K (L/s)	Time of Peak Load
Zone 1	2.1	1.6	23.7 / 18.8	15.6 / 15.1	-	Jan 1700

Terminal Unit Sizing Data - Heating, Fan, Ventilation

Zone Name	Heating Coil Load (kW)	Heating Coil Ent/Lvg DB (°C)	Htg Coil Water Flow @11.1 °K (L/s)	Fan Design AirFlow (L/s)	Fan Motor (BHP)	Fan Motor (kW)	OA Vent Design AirFlow (L/s)
Zone 1	0.0	-18.3 / -18.3	0.00	165	0.000	0.000	0

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m²)	Space L/(s-m²)
Zone 1							
Recepção	1	1.7	Jan 1700	165	0.0	7.4	22.30

Air System Design Load Summary for Recepção

Project Name: CAPS1 SESAB dezembro 2025
Prepared by: Promec Eng Rep e Serviços de Projetos e Inst Ltda

12/04/2025
05:45

	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jan 1700			HEATING DATA AT DES HTG		
	COOLING OA DB / WB 32.0 °C / 26.5 °C			HEATING OA DB / WB 20.0 °C / 13.8 °C		
ZONE LOADS	Details	Sensible (W)	Latent (W)	Details	Sensible (W)	Latent (W)
Window & Skylight Solar Loads	0 m²	0	-	0 m²	-	-
Wall Transmission	0 m²	0	-	0 m²	0	-
Roof Transmission	8 m²	463	-	8 m²	29	-
Window Transmission	0 m²	0	-	0 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	30 m²	576	-	30 m²	0	-
Ceiling	0 m²	0	-	0 m²	0	-
Overhead Lighting	71 W	61	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	190 W	178	-	0	0	-
People	2	119	120	0	0	0
Infiltration	-	151	329	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	10% / 10%	155	45	0%	0	0
>> Total Zone Loads	-	1703	494	-	29	0
Zone Conditioning	-	1621	494	-	0	0
Plenum Wall Load	0%	0	-	0	0	-
Plenum Roof Load	0%	0	-	0	0	-
Plenum Lighting Load	0%	0	-	0	0	-
Exhaust Fan Load	0 L/s	0	-	0 L/s	0	-
Ventilation Load	0 L/s	0	0	0 L/s	0	0
Ventilation Fan Load	0 L/s	0	-	0 L/s	0	-
Space Fan Coil Fans	-	0	-	-	0	-
Duct Heat Gain / Loss	0%	0	-	0%	0	-
>> Total System Loads	-	1621	494	-	0	0
Terminal Unit Cooling	-	1621	495	-	0	0
Terminal Unit Heating	-	0	-	-	0	-
>> Total Conditioning	-	1621	495	-	0	0
Key:	Positive values are clg loads Negative values are htg loads			Positive values are htg loads Negative values are clg loads		

Zone Sizing Summary for Sala TI Servidor

Project Name: CAPS1 SESAB dezembro 2025
Prepared by: Promec Eng Rep e Serviços de Projetos e Inst Ltda

12/04/2025
05:48

Air System Information

Air System Name Sala TI Servidor
Equipment Class TERM
Air System Type SPLT-FC

Number of zones 1
Floor Area 3.7 m²
Location Salvador, Brazil

Sizing Calculation Information

Zone and Space Sizing Method:

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

Calculation Months Jan to Dec
Sizing Data Calculated

Zone Sizing Data

Zone Name	Maximum Cooling Sensible (kW)	Design Air Flow (L/s)	Minimum Air Flow (L/s)	Time of Peak Load	Maximum Heating Load (kW)	Zone Floor Area (m²)	Zone L/(s-m²)
Zone 1	2.0	197	197	Jan 1700	0.0	3.7	53.37

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5.6 °K (L/s)	Time of Peak Load
Zone 1	2.5	2.0	23.8 / 18.7	15.6 / 15.1	-	Feb 1600

Terminal Unit Sizing Data - Heating, Fan, Ventilation

Zone Name	Heating Coil Load (kW)	Heating Coil Ent/Lvg DB (°C)	Htg Coil Water Flow @11.1 °K (L/s)	Fan Design AirFlow (L/s)	Fan Motor (BHP)	Fan Motor (kW)	OA Vent Design AirFlow (L/s)
Zone 1	0.0	-18.3 / -18.3	0.00	197	0.000	0.000	0

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m²)	Space L/(s-m²)
Zone 1							
Sala TI Servidor	1	2.0	Jan 1700	197	0.0	3.7	53.37

Air System Design Load Summary for Sala TI Servidor

Project Name: CAPS1 SESAB dezembro 2025
Prepared by: Promec Eng Rep e Serviços de Projetos e Inst Ltda

12/04/2025
05:48

ZONE LOADS	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Feb 1600			HEATING DATA AT DES HTG		
	Details	Sensible (W)	Latent (W)	Details	Sensible (W)	Latent (W)
Window & Skylight Solar Loads	0 m²	0	-	0 m²	-	-
Wall Transmission	0 m²	0	-	0 m²	0	-
Roof Transmission	4 m²	217	-	4 m²	14	-
Window Transmission	0 m²	0	-	0 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	22 m²	428	-	22 m²	0	-
Ceiling	0 m²	0	-	0 m²	0	-
Overhead Lighting	39 W	33	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	1000 W	933	-	0	0	-
People	1	70	133	0	0	0
Infiltration	-	158	335	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	10% / 10%	184	47	0%	0	0
>> Total Zone Loads	-	2024	516	-	14	0
Zone Conditioning	-	1958	516	-	0	0
Plenum Wall Load	0%	0	-	0	0	-
Plenum Roof Load	0%	0	-	0	0	-
Plenum Lighting Load	0%	0	-	0	0	-
Exhaust Fan Load	0 L/s	0	-	0 L/s	0	-
Ventilation Load	0 L/s	0	0	0 L/s	0	0
Ventilation Fan Load	0 L/s	0	-	0 L/s	0	-
Space Fan Coil Fans	-	0	-	-	0	-
Duct Heat Gain / Loss	0%	0	-	0%	0	-
>> Total System Loads	-	1958	516	-	0	0
Terminal Unit Cooling	-	1958	517	-	0	0
Terminal Unit Heating	-	0	-	-	0	-
>> Total Conditioning	-	1958	517	-	0	0
Key:	Positive values are clg loads Negative values are htg loads			Positive values are htg loads Negative values are clg loads		

Zone Sizing Summary for Farmácia

Project Name: CAPS1 SESAB dezembro 2025
Prepared by: Promec Eng Rep e Serviços de Projetos e Inst Ltda

12/04/2025
05:52

Air System Information

Air System Name Farmácia
Equipment Class TERM
Air System Type SPLT-FC

Number of zones 1
Floor Area 13.7 m²
Location Salvador, Brazil

Sizing Calculation Information

Zone and Space Sizing Method:

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

Calculation Months Jan to Dec
Sizing Data Calculated

Zone Sizing Data

Zone Name	Maximum Cooling Sensible (kW)	Design Air Flow (L/s)	Minimum Air Flow (L/s)	Time of Peak Load	Maximum Heating Load (kW)	Zone Floor Area (m²)	Zone L/(s·m²)
Zone 1	2.8	272	272	Jan 1700	0.1	13.7	19.82

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5.6 °K (L/s)	Time of Peak Load
Zone 1	3.5	2.7	23.8 / 18.9	15.7 / 15.2	-	Jan 1700

Terminal Unit Sizing Data - Heating, Fan, Ventilation

Zone Name	Heating Coil Load (kW)	Heating Coil Ent/Lvg DB (°C)	Htg Coil Water Flow @ 11.1 °K (L/s)	Fan Design AirFlow (L/s)	Fan Motor (BHP)	Fan Motor (kW)	OA Vent Design AirFlow (L/s)
Zone 1	0.0	-18.3 / -18.3	0.00	272	0.000	0.000	0

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m²)	Space L/(s·m²)
Zone 1							
Farmácia	1	2.8	Jan 1700	272	0.1	13.7	19.82

Air System Design Load Summary for Farmácia

Project Name: CAPS1 SESAB dezembro 2025
Prepared by: Promec Eng Rep e Serviços de Projetos e Inst Ltda

12/04/2025
05:52

	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jan 1700			HEATING DATA AT DES HTG		
	COOLING OA DB / WB 32.0 °C / 26.5 °C			HEATING OA DB / WB 20.0 °C / 13.8 °C		
ZONE LOADS	Details	Sensible (W)	Latent (W)	Details	Sensible (W)	Latent (W)
Window & Skylight Solar Loads	0 m²	0	-	0 m²	-	-
Wall Transmission	0 m²	0	-	0 m²	0	-
Roof Transmission	14 m²	846	-	14 m²	53	-
Window Transmission	0 m²	0	-	0 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	42 m²	807	-	42 m²	0	-
Ceiling	0 m²	0	-	0 m²	0	-
Overhead Lighting	169 W	145	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	405 W	380	-	0	0	-
People	1	68	79	0	0	0
Infiltration	-	302	654	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	10% / 10%	255	73	0%	0	0
>> Total Zone Loads	-	2803	806	-	53	0
Zone Conditioning	-	2663	806	-	0	0
Plenum Wall Load	0%	0	-	0	0	-
Plenum Roof Load	0%	0	-	0	0	-
Plenum Lighting Load	0%	0	-	0	0	-
Exhaust Fan Load	0 L/s	0	-	0 L/s	0	-
Ventilation Load	0 L/s	0	0	0 L/s	0	0
Ventilation Fan Load	0 L/s	0	-	0 L/s	0	-
Space Fan Coil Fans	-	0	-	-	0	-
Duct Heat Gain / Loss	0%	0	-	0%	0	-
>> Total System Loads	-	2663	806	-	0	0
Terminal Unit Cooling	-	2663	811	-	0	0
Terminal Unit Heating	-	0	-	-	0	-
>> Total Conditioning	-	2663	811	-	0	0
Key:	Positive values are clg loads Negative values are htg loads			Positive values are htg loads Negative values are clg loads		

Zone Sizing Summary for Sala Acolhimento

Project Name: CAPS1 SESAB dezembro 2025
Prepared by: Promec Eng Rep e Serviços de Projetos e Inst Ltda
12/04/2025
05:58

Air System Information

Air System Name Sala Acolhimento
Equipment Class TERM
Air System Type SPLT-FC

Number of zones 1
Floor Area 9.5 m²
Location Salvador, Brazil

Sizing Calculation Information

Zone and Space Sizing Method:
Zone L/s Sum of space airflow rates
Space L/s Individual peak space loads

Calculation Months Jan to Dec
Sizing Data Calculated

Zone Sizing Data

Zone Name	Maximum Cooling Sensible (kW)	Design Air Flow (L/s)	Minimum Air Flow (L/s)	Time of Peak Load	Maximum Heating Load (kW)	Zone Floor Area (m²)	Zone L/(s-m²)
Zone 1	2.5	243	243	Jan 1600	0.1	9.5	25.54

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5.6 °K (L/s)	Time of Peak Load
Zone 1	3.3	2.4	23.7 / 18.9	15.5 / 15.0	-	Feb 1600

Terminal Unit Sizing Data - Heating, Fan, Ventilation

Zone Name	Heating Coil Load (kW)	Heating Coil Ent/Lvg DB (°C)	Htg Coil Water Flow @11.1 °K (L/s)	Fan Design AirFlow (L/s)	Fan Motor (BHP)	Fan Motor (kW)	OA Vent Design AirFlow (L/s)
Zone 1	0.0	-18.3 / -18.3	0.00	243	0.000	0.000	0

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m²)	Space L/(s-m²)
Zone 1							
Sala Acolhimento	1	2.5	Jan 1600	243	0.1	9.5	25.54

Air System Design Load Summary for Sala Acolhimento

Project Name: CAPS1 SESAB dezembro 2025
Prepared by: Promec Eng Rep e Serviços de Projetos e Inst Ltda

12/04/2025
05:58

ZONE LOADS	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Feb 1600			HEATING DATA AT DES HTG		
	COOLING OA DB / WB	32.4 °C / 26.6 °C		HEATING OA DB / WB	20.0 °C / 13.8 °C	
	Details	Sensible (W)	Latent (W)	Details	Sensible (W)	Latent (W)
Window & Skylight Solar Loads	1 m²	298	-	1 m²	-	-
Wall Transmission	6 m²	146	-	6 m²	21	-
Roof Transmission	10 m²	557	-	10 m²	37	-
Window Transmission	1 m²	34	-	1 m²	8	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	26 m²	500	-	26 m²	0	-
Ceiling	0 m²	0	-	0 m²	0	-
Overhead Lighting	170 W	145	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	95 W	89	-	0	0	-
People	3	175	180	0	0	0
Infiltration	-	316	642	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	10% / 10%	226	82	0%	0	0
>> Total Zone Loads	-	2485	905	-	66	0
Zone Conditioning	-	2400	905	-	0	0
Plenum Wall Load	0%	0	-	0	0	-
Plenum Roof Load	0%	0	-	0	0	-
Plenum Lighting Load	0%	0	-	0	0	-
Exhaust Fan Load	0 L/s	0	-	0 L/s	0	-
Ventilation Load	0 L/s	0	0	0 L/s	0	0
Ventilation Fan Load	0 L/s	0	-	0 L/s	0	-
Space Fan Coil Fans	-	0	-	-	0	-
Duct Heat Gain / Loss	0%	0	-	0%	0	-
>> Total System Loads	-	2400	905	-	0	0
Terminal Unit Cooling	-	2400	907	-	0	0
Terminal Unit Heating	-	0	-	-	0	-
>> Total Conditioning	-	2400	907	-	0	0
Key:	Positive values are clg loads Negative values are htg loads			Positive values are htg loads Negative values are clg loads		

Zone Sizing Summary for Sala Atend Individual 1

Project Name: CAPS1 SESAB dezembro 2025
Prepared by: Promec Eng Rep e Serviços de Projetos e Inst Ltda

12/04/2025
06:02

Air System Information

Air System Name Sala Atend Individual 1
Equipment Class TERM
Air System Type SPLT-FC

Number of zones 1
Floor Area 9.5 m²
Location Salvador, Brazil

Sizing Calculation Information

Zone and Space Sizing Method:

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

Calculation Months Jan to Dec
Sizing Data Calculated

Zone Sizing Data

Zone Name	Maximum Cooling Sensible (kW)	Design Air Flow (L/s)	Minimum Air Flow (L/s)	Time of Peak Load	Maximum Heating Load (kW)	Zone Floor Area (m²)	Zone L/(s-m²)
Zone 1	2.4	234	234	Jan 1600	0.1	9.5	24.68

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5.6 °K (L/s)	Time of Peak Load
Zone 1	3.2	2.3	23.7 / 19.0	15.5 / 15.1	-	Jan 1700

Terminal Unit Sizing Data - Heating, Fan, Ventilation

Zone Name	Heating Coil Load (kW)	Heating Coil Ent/Lvg DB (°C)	Htg Coil Water Flow @11.1 °K (L/s)	Fan Design AirFlow (L/s)	Fan Motor (BHP)	Fan Motor (kW)	OA Vent Design AirFlow (L/s)
Zone 1	0.0	-18.3 / -18.3	0.00	234	0.000	0.000	0

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m²)	Space L/(s-m²)
Zone 1							
Sala Atend Individual 1	1	2.4	Jan 1600	234	0.1	9.5	24.68

Air System Design Load Summary for Sala Atend Individual 1

Project Name: CAPS1 SESAB dezembro 2025
Prepared by: Promec Eng Rep e Serviços de Projetos e Inst Ltda

12/04/2025
06:02

	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jan 1700			HEATING DATA AT DES HTG		
	COOLING OA DB / WB 32.0 °C / 26.5 °C			HEATING OA DB / WB 20.0 °C / 13.8 °C		
ZONE LOADS	Details	Sensible (W)	Latent (W)	Details	Sensible (W)	Latent (W)
Window & Skylight Solar Loads	1 m²	180	-	1 m²	-	-
Wall Transmission	7 m²	181	-	7 m²	22	-
Roof Transmission	10 m²	587	-	10 m²	37	-
Window Transmission	1 m²	25	-	1 m²	6	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	26 m²	503	-	26 m²	0	-
Ceiling	0 m²	0	-	0 m²	0	-
Overhead Lighting	170 W	146	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	95 W	89	-	0	0	-
People	3	178	180	0	0	0
Infiltration	-	302	637	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	10% / 10%	219	82	0%	0	0
>> Total Zone Loads	-	2409	899	-	65	0
Zone Conditioning	-	2314	899	-	0	0
Plenum Wall Load	0%	0	-	0	0	-
Plenum Roof Load	0%	0	-	0	0	-
Plenum Lighting Load	0%	0	-	0	0	-
Exhaust Fan Load	0 L/s	0	-	0 L/s	0	-
Ventilation Load	0 L/s	0	0	0 L/s	0	0
Ventilation Fan Load	0 L/s	0	-	0 L/s	0	-
Space Fan Coil Fans	-	0	-	-	0	-
Duct Heat Gain / Loss	0%	0	-	0%	0	-
>> Total System Loads	-	2314	899	-	0	0
Terminal Unit Cooling	-	2314	905	-	0	0
Terminal Unit Heating	-	0	-	-	0	-
>> Total Conditioning	-	2314	905	-	0	0
Key:	Positive values are clg loads Negative values are htg loads			Positive values are htg loads Negative values are clg loads		

Zone Sizing Summary for Sala Atend Individual 2

Project Name: CAPS1 SESAB dezembro 2025
Prepared by: Promec Eng Rep e Serviços de Projetos e Inst Ltda

12/04/2025
06:04

Air System Information

Air System Name Sala Atend Individual 2
Equipment Class TERM
Air System Type SPLT-FC

Number of zones 1
Floor Area 9.5 m²
Location Salvador, Brazil

Sizing Calculation Information

Zone and Space Sizing Method:

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

Calculation Months Jan to Dec
Sizing Data Calculated

Zone Sizing Data

Zone Name	Maximum Cooling Sensible (kW)	Design Air Flow (L/s)	Minimum Air Flow (L/s)	Time of Peak Load	Maximum Heating Load (kW)	Zone Floor Area (m²)	Zone L/(s·m²)
Zone 1	2.5	243	243	Jan 1600	0.1	9.5	25.54

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5.6 °K (L/s)	Time of Peak Load
Zone 1	3.3	2.4	23.7 / 18.9	15.5 / 15.0	-	Feb 1600

Terminal Unit Sizing Data - Heating, Fan, Ventilation

Zone Name	Heating Coil Load (kW)	Heating Coil Ent/Lvg DB (°C)	Htg Coil Water Flow @ 11.1 °K (L/s)	Fan Design AirFlow (L/s)	Fan Motor (BHP)	Fan Motor (kW)	OA Vent Design AirFlow (L/s)
Zone 1	0.0	-18.3 / -18.3	0.00	243	0.000	0.000	0

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m²)	Space L/(s·m²)
Zone 1							
Sala Atend Individual 2	1	2.5	Jan 1600	243	0.1	9.5	25.54

Air System Design Load Summary for Sala Atend Individual 2

Project Name: CAPS1 SESAB dezembro 2025
Prepared by: Promec Eng Rep e Serviços de Projetos e Inst Ltda

12/04/2025
06:04

	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Feb 1600			HEATING DATA AT DES HTG		
	COOLING OA DB / WB 32.4 °C / 26.6 °C			HEATING OA DB / WB 20.0 °C / 13.8 °C		
ZONE LOADS	Details	Sensible (W)	Latent (W)	Details	Sensible (W)	Latent (W)
Window & Skylight Solar Loads	1 m²	298	-	1 m²	-	-
Wall Transmission	6 m²	146	-	6 m²	21	-
Roof Transmission	10 m²	557	-	10 m²	37	-
Window Transmission	1 m²	34	-	1 m²	8	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	26 m²	500	-	26 m²	0	-
Ceiling	0 m²	0	-	0 m²	0	-
Overhead Lighting	170 W	145	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	95 W	89	-	0	0	-
People	3	175	180	0	0	0
Infiltration	-	316	642	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	10% / 10%	226	82	0%	0	0
>> Total Zone Loads	-	2485	905	-	66	0
Zone Conditioning	-	2400	905	-	0	0
Plenum Wall Load	0%	0	-	0	0	-
Plenum Roof Load	0%	0	-	0	0	-
Plenum Lighting Load	0%	0	-	0	0	-
Exhaust Fan Load	0 L/s	0	-	0 L/s	0	-
Ventilation Load	0 L/s	0	0	0 L/s	0	0
Ventilation Fan Load	0 L/s	0	-	0 L/s	0	-
Space Fan Coil Fans	-	0	-	-	0	-
Duct Heat Gain / Loss	0%	0	-	0%	0	-
>> Total System Loads	-	2400	905	-	0	0
Terminal Unit Cooling	-	2400	907	-	0	0
Terminal Unit Heating	-	0	-	-	0	-
>> Total Conditioning	-	2400	907	-	0	0
Key:	Positive values are clg loads Negative values are htg loads			Positive values are htg loads Negative values are clg loads		

Zone Sizing Summary for Sala Atend Ind Coletivo

Project Name: CAPS1 SESAB dezembro 2025
Prepared by: Promec Eng Rep e Serviços de Projetos e Inst Ltda

12/04/2025
06:08

Air System Information

Air System Name Sala Atend Ind Coletivo
Equipment Class TERM
Air System Type SPLT-FC

Number of zones 1
Floor Area 27.7 m²
Location Salvador, Brazil

Sizing Calculation Information

Zone and Space Sizing Method:

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

Calculation Months Jan to Dec
Sizing Data Calculated

Zone Sizing Data

Zone Name	Maximum Cooling Sensible (kW)	Design Air Flow (L/s)	Minimum Air Flow (L/s)	Time of Peak Load	Maximum Heating Load (kW)	Zone Floor Area (m²)	Zone L/(s-m²)
Zone 1	5.7	550	550	Jan 1600	0.2	27.7	19.87

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5.6 °K (L/s)	Time of Peak Load
Zone 1	7.5	5.5	23.7 / 19.0	15.5 / 15.1	-	Jan 1600

Terminal Unit Sizing Data - Heating, Fan, Ventilation

Zone Name	Heating Coil Load (kW)	Heating Coil Ent/Lvg DB (°C)	Htg Coil Water Flow @11.1 °K (L/s)	Fan Design AirFlow (L/s)	Fan Motor (BHP)	Fan Motor (kW)	OA Vent Design AirFlow (L/s)
Zone 1	0.0	-18.3 / -18.3	0.00	550	0.000	0.000	0

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m²)	Space L/(s-m²)
Zone 1							
Sala Atend Ind Coletivo	1	5.7	Jan 1600	550	0.2	27.7	19.87

Air System Design Load Summary for Sala Atend Ind Coletivo

Project Name: CAPS1 SESAB dezembro 2025
Prepared by: Promec Eng Rep e Serviços de Projetos e Inst Ltda

12/04/2025
06:08

	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jan 1600			HEATING DATA AT DES HTG		
	COOLING OA DB / WB 32.4 °C / 26.6 °C			HEATING OA DB / WB 20.0 °C / 13.8 °C		
ZONE LOADS	Details	Sensible (W)	Latent (W)	Details	Sensible (W)	Latent (W)
Window & Skylight Solar Loads	4 m²	552	-	4 m²	-	-
Wall Transmission	27 m²	527	-	27 m²	89	-
Roof Transmission	28 m²	1665	-	28 m²	108	-
Window Transmission	4 m²	102	-	4 m²	24	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	31 m²	591	-	31 m²	0	-
Ceiling	0 m²	0	-	0 m²	0	-
Overhead Lighting	496 W	422	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	95 W	89	-	0	0	-
People	10	584	601	0	0	0
Infiltration	-	632	1280	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	10% / 10%	516	188	0%	0	0
>> Total Zone Loads	-	5679	2069	-	221	0
Zone Conditioning	-	5461	2069	-	0	0
Plenum Wall Load	0%	0	-	0	0	-
Plenum Roof Load	0%	0	-	0	0	-
Plenum Lighting Load	0%	0	-	0	0	-
Exhaust Fan Load	0 L/s	0	-	0 L/s	0	-
Ventilation Load	0 L/s	0	0	0 L/s	0	0
Ventilation Fan Load	0 L/s	0	-	0 L/s	0	-
Space Fan Coil Fans	-	0	-	-	0	-
Duct Heat Gain / Loss	0%	0	-	0%	0	-
>> Total System Loads	-	5461	2069	-	0	0
Terminal Unit Cooling	-	5461	2071	-	0	0
Terminal Unit Heating	-	0	-	-	0	-
>> Total Conditioning	-	5461	2071	-	0	0
Key:	Positive values are clg loads Negative values are htg loads			Positive values are htg loads Negative values are clg loads		

Zone Sizing Summary for Sala de Reunião

Project Name: CAPS1 SESAB dezembro 2025
Prepared by: Promec Eng Rep e Serviços de Projetos e Inst Ltda

12/04/2025
06:12

Air System Information

Air System Name Sala de Reunião
Equipment Class TERM
Air System Type SPLT-FC

Number of zones 1
Floor Area 31.2 m²
Location Salvador, Brazil

Sizing Calculation Information

Zone and Space Sizing Method:

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

Calculation Months Jan to Dec
Sizing Data Calculated

Zone Sizing Data

Zone Name	Maximum Cooling Sensible (kW)	Design Air Flow (L/s)	Minimum Air Flow (L/s)	Time of Peak Load	Maximum Heating Load (kW)	Zone Floor Area (m²)	Zone L/(s·m²)
Zone 1	6.4	619	619	Jan 1700	0.1	31.2	19.83

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5.6 °K (L/s)	Time of Peak Load
Zone 1	9.7	6.1	23.7 / 19.6	15.5 / 15.2	-	Jan 1700

Terminal Unit Sizing Data - Heating, Fan, Ventilation

Zone Name	Heating Coil Load (kW)	Heating Coil Ent/Lvg DB (°C)	Htg Coil Water Flow @11.1 °K (L/s)	Fan Design AirFlow (L/s)	Fan Motor (BHP)	Fan Motor (kW)	OA Vent Design AirFlow (L/s)
Zone 1	0.0	-18.3 / -18.3	0.00	619	0.000	0.000	0

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m²)	Space L/(s·m²)
Zone 1							
Sala de Reunião	1	6.4	Jan 1700	619	0.1	31.2	19.83

Air System Design Load Summary for Sala de Reunião

Project Name: CAPS1 SESAB dezembro 2025

12/04/2025

Prepared by: Promec Eng Rep e Serviços de Projetos e Inst Ltda

06:12

	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jan 1700			HEATING DATA AT DES HTG		
	COOLING OA DB / WB 32.0 °C / 26.5 °C			HEATING OA DB / WB 20.0 °C / 13.8 °C		
ZONE LOADS	Details	Sensible (W)	Latent (W)	Details	Sensible (W)	Latent (W)
Window & Skylight Solar Loads	0 m²	0	-	0 m²	-	-
Wall Transmission	0 m²	0	-	0 m²	0	-
Roof Transmission	31 m²	1928	-	31 m²	122	-
Window Transmission	0 m²	0	-	0 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	65 m²	1265	-	65 m²	0	-
Ceiling	0 m²	0	-	0 m²	0	-
Overhead Lighting	328 W	282	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	95 W	89	-	0	0	-
People	20	1185	1202	0	0	0
Infiltration	-	1055	2014	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	10% / 10%	580	322	0%	0	0
>> Total Zone Loads	-	6385	3538	-	122	0
Zone Conditioning	-	6115	3538	-	0	0
Plenum Wall Load	0%	0	-	0	0	-
Plenum Roof Load	0%	0	-	0	0	-
Plenum Lighting Load	0%	0	-	0	0	-
Exhaust Fan Load	0 L/s	0	-	0 L/s	0	-
Ventilation Load	0 L/s	0	0	0 L/s	0	0
Ventilation Fan Load	0 L/s	0	-	0 L/s	0	-
Space Fan Coil Fans	-	0	-	-	0	-
Duct Heat Gain / Loss	0%	0	-	0%	0	-
>> Total System Loads	-	6115	3538	-	0	0
Terminal Unit Cooling	-	6115	3541	-	0	0
Terminal Unit Heating	-	0	-	-	0	-
>> Total Conditioning	-	6115	3541	-	0	0
Key:	Positive values are clg loads Negative values are htg loads			Positive values are htg loads Negative values are clg loads		

Zone Sizing Summary for Sala Apoio Administrativo

Project Name: CAPS1 SESAB dezembro 2025
Prepared by: Promec Eng Rep e Serviços de Projetos e Inst Ltda

12/04/2025
06:17

Air System Information

Air System Name Sala Apoio Administrativo
Equipment Class TERM
Air System Type SPLT-FC

Number of zones 1
Floor Area 18.1 m²
Location Salvador, Brazil

Sizing Calculation Information

Zone and Space Sizing Method:

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

Calculation Months Jan to Dec
Sizing Data Calculated

Zone Sizing Data

Zone Name	Maximum Cooling Sensible (kW)	Design Air Flow (L/s)	Minimum Air Flow (L/s)	Time of Peak Load	Maximum Heating Load (kW)	Zone Floor Area (m²)	Zone L/(s-m²)
Zone 1	3.8	368	368	Jan 1600	0.1	18.1	20.33

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5.6 °K (L/s)	Time of Peak Load
Zone 1	4.6	3.6	23.8 / 18.8	15.7 / 15.2	-	Feb 1700

Terminal Unit Sizing Data - Heating, Fan, Ventilation

Zone Name	Heating Coil Load (kW)	Heating Coil Ent/Lvg DB (°C)	Htg Coil Water Flow @11.1 °K (L/s)	Fan Design AirFlow (L/s)	Fan Motor (BHP)	Fan Motor (kW)	OA Vent Design AirFlow (L/s)
Zone 1	0.0	-18.3 / -18.3	0.00	368	0.000	0.000	0

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m²)	Space L/(s-m²)
Zone 1							
Sala Apoio Administrativ	1	3.8	Jan 1600	368	0.1	18.1	20.33

Air System Design Load Summary for Sala Apoio Administrativo

Project Name: CAPS1 SESAB dezembro 2025
Prepared by: Promec Eng Rep e Serviços de Projetos e Inst Ltda

12/04/2025
06:17

	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Feb 1700			HEATING DATA AT DES HTG		
	COOLING OA DB / WB 32.0 °C / 26.5 °C			HEATING OA DB / WB 20.0 °C / 13.8 °C		
ZONE LOADS	Details	Sensible (W)	Latent (W)	Details	Sensible (W)	Latent (W)
Window & Skylight Solar Loads	1 m²	229	-	1 m²	-	-
Wall Transmission	7 m²	196	-	7 m²	24	-
Roof Transmission	18 m²	1091	-	18 m²	71	-
Window Transmission	1 m²	33	-	1 m²	8	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	39 m²	759	-	39 m²	0	-
Ceiling	0 m²	0	-	0 m²	0	-
Overhead Lighting	190 W	163	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	425 W	398	-	0	0	-
People	4	237	240	0	0	0
Infiltration	-	302	662	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	10% / 10%	341	90	0%	0	0
>> Total Zone Loads	-	3750	993	-	103	0
Zone Conditioning	-	3599	993	-	0	0
Plenum Wall Load	0%	0	-	0	0	-
Plenum Roof Load	0%	0	-	0	0	-
Plenum Lighting Load	0%	0	-	0	0	-
Exhaust Fan Load	0 L/s	0	-	0 L/s	0	-
Ventilation Load	0 L/s	0	0	0 L/s	0	0
Ventilation Fan Load	0 L/s	0	-	0 L/s	0	-
Space Fan Coil Fans	-	0	-	-	0	-
Duct Heat Gain / Loss	0%	0	-	0%	0	-
>> Total System Loads	-	3599	993	-	0	0
Terminal Unit Cooling	-	3599	994	-	0	0
Terminal Unit Heating	-	0	-	-	0	-
>> Total Conditioning	-	3599	994	-	0	0
Key:	Positive values are clg loads Negative values are htg loads			Positive values are htg loads Negative values are clg loads		

Zone Sizing Summary for Sala Administrativa

Project Name: CAPS1 SESAB dezembro 2025
Prepared by: Promec Eng Rep e Serviços de Projetos e Inst Ltda

12/04/2025
06:20

Air System Information

Air System Name Sala Administrativa
Equipment Class TERM
Air System Type SPLT-FC

Number of zones 1
Floor Area 10.8 m²
Location Salvador, Brazil

Sizing Calculation Information

Zone and Space Sizing Method:

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

Calculation Months Jan to Dec
Sizing Data Calculated

Zone Sizing Data

Zone Name	Maximum Cooling Sensible (kW)	Design Air Flow (L/s)	Minimum Air Flow (L/s)	Time of Peak Load	Maximum Heating Load (kW)	Zone Floor Area (m ²)	Zone L/(s-m ²)
Zone 1	2.7	266	266	Jan 1600	0.1	10.8	24.65

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5.6 °K (L/s)	Time of Peak Load
Zone 1	3.5	2.6	23.6 / 18.9	15.5 / 15.1	-	Dec 1600

Terminal Unit Sizing Data - Heating, Fan, Ventilation

Zone Name	Heating Coil Load (kW)	Heating Coil Ent/Lvg DB (°C)	Htg Coil Water Flow @11.1 °K (L/s)	Fan Design AirFlow (L/s)	Fan Motor (BHP)	Fan Motor (kW)	OA Vent Design AirFlow (L/s)
Zone 1	0.0	-18.3 / -18.3	0.00	266	0.000	0.000	0

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m ²)	Space L/(s-m ²)
Zone 1							
Sala Administrativa	1	2.7	Jan 1600	266	0.1	10.8	24.65

Air System Design Load Summary for Sala Administrativa

Project Name: CAPS1 SESAB dezembro 2025
Prepared by: Promec Eng Rep e Serviços de Projetos e Inst Ltda

12/04/2025
06:20

	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Dec 1600			HEATING DATA AT DES HTG		
	COOLING OA DB / WB 31.9 °C / 26.6 °C			HEATING OA DB / WB 20.0 °C / 13.8 °C		
ZONE LOADS	Details	Sensible (W)	Latent (W)	Details	Sensible (W)	Latent (W)
Window & Skylight Solar Loads	1 m²	292	-	1 m²	-	-
Wall Transmission	6 m²	127	-	6 m²	18	-
Roof Transmission	11 m²	640	-	11 m²	42	-
Window Transmission	1 m²	32	-	1 m²	8	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	30 m²	565	-	30 m²	0	-
Ceiling	0 m²	0	-	0 m²	0	-
Overhead Lighting	113 W	96	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	235 W	219	-	0	0	-
People	3	175	180	0	0	0
Infiltration	-	297	664	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	10% / 10%	244	84	0%	0	0
>> Total Zone Loads	-	2688	929	-	69	0
Zone Conditioning	-	2600	929	-	0	0
Plenum Wall Load	0%	0	-	0	0	-
Plenum Roof Load	0%	0	-	0	0	-
Plenum Lighting Load	0%	0	-	0	0	-
Exhaust Fan Load	0 L/s	0	-	0 L/s	0	-
Ventilation Load	0 L/s	0	0	0 L/s	0	0
Ventilation Fan Load	0 L/s	0	-	0 L/s	0	-
Space Fan Coil Fans	-	0	-	-	0	-
Duct Heat Gain / Loss	0%	0	-	0%	0	-
>> Total System Loads	-	2600	929	-	0	0
Terminal Unit Cooling	-	2600	931	-	0	0
Terminal Unit Heating	-	0	-	-	0	-
>> Total Conditioning	-	2600	931	-	0	0
Key:	Positive values are clg loads Negative values are htg loads			Positive values are htg loads Negative values are clg loads		

Zone Sizing Summary for Sala Atend Coletivo 2

Project Name: CAPS1 SESAB dezembro 2025
Prepared by: Promec Eng Rep e Serviços de Projetos e Inst Ltda

12/04/2025
06:23

Air System Information

Air System Name Sala Atend Coletivo 2
Equipment Class TERM
Air System Type SPLT-FC

Number of zones 1
Floor Area 25.2 m²
Location Salvador, Brazil

Sizing Calculation Information

Zone and Space Sizing Method:

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

Calculation Months Jan to Dec
Sizing Data Calculated

Zone Sizing Data

Zone Name	Maximum Cooling Sensible (kW)	Design Air Flow (L/s)	Minimum Air Flow (L/s)	Time of Peak Load	Maximum Heating Load (kW)	Zone Floor Area (m ²)	Zone L/(s-m ²)
Zone 1	5.3	517	517	Jan 1700	0.1	25.2	20.51

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5.6 °K (L/s)	Time of Peak Load
Zone 1	7.7	5.1	23.7 / 19.3	15.4 / 15.0	-	Jan 1600

Terminal Unit Sizing Data - Heating, Fan, Ventilation

Zone Name	Heating Coil Load (kW)	Heating Coil Ent/Lvg DB (°C)	Htg Coil Water Flow @11.1 °K (L/s)	Fan Design AirFlow (L/s)	Fan Motor (BHP)	Fan Motor (kW)	OA Vent Design AirFlow (L/s)
Zone 1	0.0	-18.3 / -18.3	0.00	517	0.000	0.000	0

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m ²)	Space L/(s-m ²)
Zone 1							
Sala Atend Coletivo 2	1	5.3	Jan 1700	517	0.1	25.2	20.51

Air System Design Load Summary for Sala Atend Coletivo 2

Project Name: CAPS1 SESAB dezembro 2025
Prepared by: Promec Eng Rep e Serviços de Projetos e Inst Ltda

12/04/2025
06:23

	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jan 1600			HEATING DATA AT DES HTG		
	COOLING OA DB / WB 32.4 °C / 26.6 °C			HEATING OA DB / WB 20.0 °C / 13.8 °C		
ZONE LOADS	Details	Sensible (W)	Latent (W)	Details	Sensible (W)	Latent (W)
Window & Skylight Solar Loads	0 m²	0	-	0 m²	-	-
Wall Transmission	0 m²	0	-	0 m²	0	-
Roof Transmission	25 m²	1515	-	25 m²	98	-
Window Transmission	0 m²	0	-	0 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	52 m²	1011	-	52 m²	0	-
Ceiling	0 m²	0	-	0 m²	0	-
Overhead Lighting	451 W	384	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	160 W	149	-	0	0	-
People	15	822	528	0	0	0
Infiltration	-	947	1813	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	10% / 10%	483	234	0%	0	0
>> Total Zone Loads	-	5310	2576	-	98	0
Zone Conditioning	-	5132	2576	-	0	0
Plenum Wall Load	0%	0	-	0	0	-
Plenum Roof Load	0%	0	-	0	0	-
Plenum Lighting Load	0%	0	-	0	0	-
Exhaust Fan Load	0 L/s	0	-	0 L/s	0	-
Ventilation Load	0 L/s	0	0	0 L/s	0	0
Ventilation Fan Load	0 L/s	0	-	0 L/s	0	-
Space Fan Coil Fans	-	0	-	-	0	-
Duct Heat Gain / Loss	0%	0	-	0%	0	-
>> Total System Loads	-	5132	2576	-	0	0
Terminal Unit Cooling	-	5132	2581	-	0	0
Terminal Unit Heating	-	0	-	-	0	-
>> Total Conditioning	-	5132	2581	-	0	0
Key:	Positive values are clg loads Negative values are htg loads			Positive values are htg loads Negative values are clg loads		

Zone Sizing Summary for Sala Atend Coletivo 1

Project Name: CAPS1 SESAB dezembro 2025
Prepared by: Promec Eng Rep e Serviços de Projetos e Inst Ltda
12/04/2025
06:27

Air System Information

Air System Name Sala Atend Coletivo 1
Equipment Class TERM
Air System Type SPLT-FC
Number of zones 1
Floor Area 25.3 m²
Location Salvador, Brazil

Sizing Calculation Information

Zone and Space Sizing Method:
Zone L/s Sum of space airflow rates
Space L/s Individual peak space loads
Calculation Months Jan to Dec
Sizing Data Calculated

Zone Sizing Data

Zone Name	Maximum Cooling Sensible (kW)	Design Air Flow (L/s)	Minimum Air Flow (L/s)	Time of Peak Load	Maximum Heating Load (kW)	Zone Floor Area (m²)	Zone L/(s-m²)
Zone 1	6.0	586	586	Jan 1600	0.2	25.3	23.15

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5.6 °K (L/s)	Time of Peak Load
Zone 1	8.4	5.8	23.7 / 19.2	15.6 / 15.2	-	Jan 1700

Terminal Unit Sizing Data - Heating, Fan, Ventilation

Zone Name	Heating Coil Load (kW)	Heating Coil Ent/Lvg DB (°C)	Htg Coil Water Flow @ 11.1 °K (L/s)	Fan Design AirFlow (L/s)	Fan Motor (BHP)	Fan Motor (kW)	OA Vent Design AirFlow (L/s)
Zone 1	0.0	-18.3 / -18.3	0.00	586	0.000	0.000	0

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m²)	Space L/(s-m²)
Zone 1							
Sala Atend Coletivo 1	1	6.0	Jan 1600	586	0.2	25.3	23.15

Air System Design Load Summary for Sala Atend Coletivo 1

Project Name: CAPS1 SESAB dezembro 2025
Prepared by: Promec Eng Rep e Serviços de Projetos e Inst Ltda

12/04/2025
06:27

	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jan 1700			HEATING DATA AT DES HTG		
	COOLING OA DB / WB 32.0 °C / 26.5 °C			HEATING OA DB / WB 20.0 °C / 13.8 °C		
ZONE LOADS	Details	Sensible (W)	Latent (W)	Details	Sensible (W)	Latent (W)
Window & Skylight Solar Loads	2 m²	480	-	2 m²	-	-
Wall Transmission	11 m²	292	-	11 m²	36	-
Roof Transmission	25 m²	1563	-	25 m²	99	-
Window Transmission	2 m²	66	-	2 m²	16	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	39 m²	761	-	39 m²	0	-
Ceiling	0 m²	0	-	0 m²	0	-
Overhead Lighting	453 W	390	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	160 W	150	-	0	0	-
People	15	834	528	0	0	0
Infiltration	-	904	1839	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	10% / 10%	544	237	0%	0	0
>> Total Zone Loads	-	5984	2604	-	150	0
Zone Conditioning	-	5775	2604	-	0	0
Plenum Wall Load	0%	0	-	0	0	-
Plenum Roof Load	0%	0	-	0	0	-
Plenum Lighting Load	0%	0	-	0	0	-
Exhaust Fan Load	0 L/s	0	-	0 L/s	0	-
Ventilation Load	0 L/s	0	0	0 L/s	0	0
Ventilation Fan Load	0 L/s	0	-	0 L/s	0	-
Space Fan Coil Fans	-	0	-	-	0	-
Duct Heat Gain / Loss	0%	0	-	0%	0	-
>> Total System Loads	-	5775	2604	-	0	0
Terminal Unit Cooling	-	5775	2623	-	0	0
Terminal Unit Heating	-	0	-	-	0	-
>> Total Conditioning	-	5775	2623	-	0	0
Key:	Positive values are clg loads Negative values are htg loads			Positive values are htg loads Negative values are clg loads		

Zone Sizing Summary for Cozinha

Project Name: CAPS1 SESAB dezembro 2025

12/04/2025

Prepared by: Promec Eng Rep e Serviços de Projetos e Inst Ltda

06:39

Air System Information

Air System Name Cozinha
Equipment Class TERM
Air System Type SPLT-FC

Number of zones 1
Floor Area 27.9 m²
Location Salvador, Brazil

Sizing Calculation Information

Zone and Space Sizing Method:

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

Calculation Months Jan to Dec
Sizing Data Calculated

Zone Sizing Data

Zone Name	Maximum Cooling Sensible (kW)	Design Air Flow (L/s)	Minimum Air Flow (L/s)	Time of Peak Load	Maximum Heating Load (kW)	Zone Floor Area (m²)	Zone L/(s-m²)
Zone 1	7.2	698	698	Jan 1600	0.2	27.9	25.03

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5.6 °K (L/s)	Time of Peak Load
Zone 1	10.8	6.8	23.7 / 19.6	15.6 / 15.3	-	Feb 1700

Terminal Unit Sizing Data - Heating, Fan, Ventilation

Zone Name	Heating Coil Load (kW)	Heating Coil Ent/Lvg DB (°C)	Htg Coil Water Flow @11.1 °K (L/s)	Fan Design AirFlow (L/s)	Fan Motor (BHP)	Fan Motor (kW)	OA Vent Design AirFlow (L/s)
Zone 1	0.0	-18.3 / -18.3	0.00	698	0.000	0.000	0

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m²)	Space L/(s-m²)
Zone 1							
Cozinha	1	7.2	Jan 1600	698	0.2	27.9	25.03

Air System Design Load Summary for Cozinha

Project Name: CAPS1 SESAB dezembro 2025

12/04/2025

Prepared by: Promec Eng Rep e Serviços de Projetos e Inst Ltda

06:39

	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Feb 1700			HEATING DATA AT DES HTG		
	COOLING OA DB / WB 32.0 °C / 26.5 °C			HEATING OA DB / WB 20.0 °C / 13.8 °C		
ZONE LOADS	Details	Sensible (W)	Latent (W)	Details	Sensible (W)	Latent (W)
Window & Skylight Solar Loads	2 m²	343	-	2 m²	-	-
Wall Transmission	11 m²	290	-	11 m²	36	-
Roof Transmission	28 m²	1682	-	28 m²	109	-
Window Transmission	2 m²	50	-	2 m²	12	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	46 m²	898	-	46 m²	0	-
Ceiling	0 m²	0	-	0 m²	0	-
Overhead Lighting	299 W	257	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	840 W	788	-	0	0	-
People	10	678	791	0	0	0
Infiltration	-	1459	2775	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	10% / 10%	644	357	0%	0	0
>> Total Zone Loads	-	7089	3923	-	156	0
Zone Conditioning	-	6827	3923	-	0	0
Plenum Wall Load	0%	0	-	0	0	-
Plenum Roof Load	0%	0	-	0	0	-
Plenum Lighting Load	0%	0	-	0	0	-
Exhaust Fan Load	0 L/s	0	-	0 L/s	0	-
Ventilation Load	0 L/s	0	0	0 L/s	0	0
Ventilation Fan Load	0 L/s	0	-	0 L/s	0	-
Space Fan Coil Fans	-	0	-	-	0	-
Duct Heat Gain / Loss	0%	0	-	0%	0	-
>> Total System Loads	-	6827	3923	-	0	0
Terminal Unit Cooling	-	6827	3947	-	0	0
Terminal Unit Heating	-	0	-	-	0	-
>> Total Conditioning	-	6827	3947	-	0	0
Key:	Positive values are clg loads Negative values are htg loads			Positive values are htg loads Negative values are clg loads		

Zone Sizing Summary for Sala Aplic Medicamentos

Project Name: CAPS1 SESAB dezembro 2025

12/04/2025

Prepared by: Promec Eng Rep e Serviços de Projetos e Inst Ltda

06:42

Air System Information

Air System Name Sala Aplic Medicamentos

Number of zones 1

Equipment Class TERM

Floor Area 10.9 m²

Air System Type SPLT-FC

Location Salvador, Brazil

Sizing Calculation Information

Zone and Space Sizing Method:

Zone L/s Sum of space airflow rates

Calculation Months Jan to Dec

Space L/s Individual peak space loads

Sizing Data Calculated

Zone Sizing Data

Zone Name	Maximum Cooling Sensible (kW)	Design Air Flow (L/s)	Minimum Air Flow (L/s)	Time of Peak Load	Maximum Heating Load (kW)	Zone Floor Area (m ²)	Zone L/(s-m ²)
Zone 1	2.6	250	250	Jan 1700	0.0	10.9	22.92

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5.6 °K (L/s)	Time of Peak Load
Zone 1	3.3	2.4	23.7 / 18.9	15.6 / 15.2	-	Feb 1700

Terminal Unit Sizing Data - Heating, Fan, Ventilation

Zone Name	Heating Coil Load (kW)	Heating Coil Ent/Lvg DB (°C)	Htg Coil Water Flow @ 11.1 °K (L/s)	Fan Design AirFlow (L/s)	Fan Motor (BHP)	Fan Motor (kW)	OA Vent Design AirFlow (L/s)
Zone 1	0.0	-18.3 / -18.3	0.00	250	0.000	0.000	0

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m ²)	Space L/(s-m ²)
Zone 1							
Sala Aplic Medicamentos	1	2.6	Jan 1700	250	0.0	10.9	22.92

Air System Design Load Summary for Sala Aplic Medicamentos

Project Name: CAPS1 SESAB dezembro 2025

12/04/2025

Prepared by: Promec Eng Rep e Serviços de Projetos e Inst Ltda

06.42

	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Feb 1700			HEATING DATA AT DES HTG		
	COOLING OA DB / WB 32.0 °C / 26.5 °C			HEATING OA DB / WB 20.0 °C / 13.8 °C		
ZONE LOADS	Details	Sensible (W)	Latent (W)	Details	Sensible (W)	Latent (W)
Window & Skylight Solar Loads	0 m²	0	-	0 m²	-	-
Wall Transmission	0 m²	0	-	0 m²	0	-
Roof Transmission	11 m²	657	-	11 m²	42	-
Window Transmission	0 m²	0	-	0 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	38 m²	743	-	38 m²	0	-
Ceiling	0 m²	0	-	0 m²	0	-
Overhead Lighting	195 W	168	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	310 W	291	-	0	0	-
People	3	167	106	0	0	0
Infiltration	-	302	646	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	10% / 10%	233	75	0%	0	0
>> Total Zone Loads	-	2560	827	-	42	0
Zone Conditioning	-	2449	827	-	0	0
Plenum Wall Load	0%	0	-	0	0	-
Plenum Roof Load	0%	0	-	0	0	-
Plenum Lighting Load	0%	0	-	0	0	-
Exhaust Fan Load	0 L/s	0	-	0 L/s	0	-
Ventilation Load	0 L/s	0	0	0 L/s	0	0
Ventilation Fan Load	0 L/s	0	-	0 L/s	0	-
Space Fan Coil Fans	-	0	-	-	0	-
Duct Heat Gain / Loss	0%	0	-	0%	0	-
>> Total System Loads	-	2449	827	-	0	0
Terminal Unit Cooling	-	2449	828	-	0	0
Terminal Unit Heating	-	0	-	-	0	-
>> Total Conditioning	-	2449	828	-	0	0
Key:	Positive values are clg loads Negative values are htg loads			Positive values are htg loads Negative values are clg loads		

Zone Sizing Summary for Posto Enfermagem

Project Name: CAPS1 SESAB dezembro 2025

12/04/2025

Prepared by: Promec Eng Rep e Serviços de Projetos e Inst Ltda

06:46

Air System Information

Air System Name Posto Enfermagem

Number of zones 1

Equipment Class TERM

Floor Area 7.8 m²

Air System Type SPLT-FC

Location Salvador, Brazil

Sizing Calculation Information

Zone and Space Sizing Method:

Zone L/s Sum of space airflow rates

Calculation Months Jan to Dec

Space L/s Individual peak space loads

Sizing Data Calculated

Zone Sizing Data

Zone Name	Maximum Cooling Sensible (kW)	Design Air Flow (L/s)	Minimum Air Flow (L/s)	Time of Peak Load	Maximum Heating Load (kW)	Zone Floor Area (m²)	Zone L/(s-m²)
Zone 1	1.9	187	187	Jan 1700	0.0	7.8	23.92

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5.6 °K (L/s)	Time of Peak Load
Zone 1	2.7	1.8	23.6 / 19.1	15.4 / 15.0	-	Jan 1700

Terminal Unit Sizing Data - Heating, Fan, Ventilation

Zone Name	Heating Coil Load (kW)	Heating Coil Ent/Lvg DB (°C)	Htg Coil Water Flow @11.1 °K (L/s)	Fan Design AirFlow (L/s)	Fan Motor (BHP)	Fan Motor (kW)	OA Vent Design AirFlow (L/s)
Zone 1	0.0	-18.3 / -18.3	0.00	187	0.000	0.000	0

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m²)	Space L/(s-m²)
Zone 1							
Posto Enfermagem	1	1.9	Jan 1700	187	0.0	7.8	23.92

Air System Design Load Summary for Posto Enfermagem

Project Name: CAPS1 SESAB dezembro 2025

12/04/2025

Prepared by: Promec Eng Rep e Serviços de Projetos e Inst Ltda

06:46

	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jan 1700			HEATING DATA AT DES HTG		
	COOLING OA DB / WB 32.0 °C / 26.5 °C			HEATING OA DB / WB 20.0 °C / 13.8 °C		
ZONE LOADS	Details	Sensible (W)	Latent (W)	Details	Sensible (W)	Latent (W)
Window & Skylight Solar Loads	0 m²	0	-	0 m²	-	-
Wall Transmission	0 m²	0	-	0 m²	0	-
Roof Transmission	8 m²	482	-	8 m²	30	-
Window Transmission	0 m²	0	-	0 m²	0	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	31 m²	600	-	31 m²	0	-
Ceiling	0 m²	0	-	0 m²	0	-
Overhead Lighting	82 W	70	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	190 W	178	-	0	0	-
People	2	119	120	0	0	0
Infiltration	-	302	623	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	10% / 10%	175	74	0%	0	0
>> Total Zone Loads	-	1925	818	-	30	0
Zone Conditioning	-	1847	818	-	0	0
Plenum Wall Load	0%	0	-	0	0	-
Plenum Roof Load	0%	0	-	0	0	-
Plenum Lighting Load	0%	0	-	0	0	-
Exhaust Fan Load	0 L/s	0	-	0 L/s	0	-
Ventilation Load	0 L/s	0	0	0 L/s	0	0
Ventilation Fan Load	0 L/s	0	-	0 L/s	0	-
Space Fan Coil Fans	-	0	-	-	0	-
Duct Heat Gain / Loss	0%	0	-	0%	0	-
>> Total System Loads	-	1847	818	-	0	0
Terminal Unit Cooling	-	1847	820	-	0	0
Terminal Unit Heating	-	0	-	-	0	-
>> Total Conditioning	-	1847	820	-	0	0
Key:	Positive values are clg loads Negative values are htg loads			Positive values are htg loads Negative values are clg loads		

Zone Sizing Summary for Quarto acolhimento 4

Project Name: CAPS1 SESAB dezembro 2025 12/04/2025
Prepared by: Promec Eng Rep e Serviços de Projetos e Inst Ltda 06:59

Air System Information

Air System Name Quarto acolhimento 4
Equipment Class TERM
Air System Type SPLT-FC

Number of zones 1
Floor Area 13.6 m²
Location Salvador, Brazil

Sizing Calculation Information

Zone and Space Sizing Method:

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

Calculation Months Jan to Dec
Sizing Data Calculated

Zone Sizing Data

Zone Name	Maximum Cooling Sensible (kW)	Design Air Flow (L/s)	Minimum Air Flow (L/s)	Time of Peak Load	Maximum Heating Load (kW)	Zone Floor Area (m²)	Zone L/(s-m²)
Zone 1	2.2	211	211	Jan 1600	0.1	13.6	15.50

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5.6 °K (L/s)	Time of Peak Load
Zone 1	2.8	2.1	23.9 / 19.1	15.8 / 15.3	-	Jan 1700

Terminal Unit Sizing Data - Heating, Fan, Ventilation

Zone Name	Heating Coil Load (kW)	Heating Coil Ent/Lvg DB (°C)	Htg Coil Water Flow @11.1 °K (L/s)	Fan Design AirFlow (L/s)	Fan Motor (BHP)	Fan Motor (kW)	OA Vent Design AirFlow (L/s)
Zone 1	0.0	-18.3 / -18.3	0.00	211	0.000	0.000	0

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m²)	Space L/(s-m²)
Zone 1							
Quarto acolhimento 4	1	2.2	Jan 1600	211	0.1	13.6	15.50

Air System Design Load Summary for Quarto acolhimento 4

Project Name: CAPS1 SESAB dezembro 2025

12/04/2025

Prepared by: Promec Eng Rep e Serviços de Projetos e Inst Ltda

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ZONE LOADS	DESIGN COOLING			DESIGN HEATING		
	COOLING DATA AT Jan 1700			HEATING DATA AT DES HTG		
	COOLING OA DB / WB 32.0 °C / 26.5 °C			HEATING OA DB / WB 20.0 °C / 13.8 °C		
	Details	Sensible (W)	Latent (W)	Details	Sensible (W)	Latent (W)
Window & Skylight Solar Loads	1 m²	240	-	1 m²	-	-
Wall Transmission	10 m²	281	-	10 m²	34	-
Roof Transmission	14 m²	840	-	14 m²	53	-
Window Transmission	1 m²	33	-	1 m²	8	-
Skylight Transmission	0 m²	0	-	0 m²	0	-
Door Loads	0 m²	0	-	0 m²	0	-
Floor Transmission	0 m²	0	-	0 m²	0	-
Partitions	3 m²	50	-	3 m²	0	-
Ceiling	0 m²	0	-	0 m²	0	-
Overhead Lighting	131 W	112	-	0	0	-
Task Lighting	0 W	0	-	0	0	-
Electric Equipment	0 W	0	-	0	0	-
People	2	111	70	0	0	0
Infiltration	-	302	627	-	0	0
Miscellaneous	-	0	0	-	0	0
Safety Factor	10% / 10%	197	70	0%	0	0
>> Total Zone Loads	-	2167	767	-	95	0
Zone Conditioning	-	2061	767	-	0	0
Plenum Wall Load	0%	0	-	0	0	-
Plenum Roof Load	0%	0	-	0	0	-
Plenum Lighting Load	0%	0	-	0	0	-
Exhaust Fan Load	0 L/s	0	-	0 L/s	0	-
Ventilation Load	0 L/s	0	0	0 L/s	0	0
Ventilation Fan Load	0 L/s	0	-	0 L/s	0	-
Space Fan Coil Fans	-	0	-	-	0	-
Duct Heat Gain / Loss	0%	0	-	0%	0	-
>> Total System Loads	-	2061	767	-	0	0
Terminal Unit Cooling	-	2061	773	-	0	0
Terminal Unit Heating	-	0	-	-	0	-
>> Total Conditioning	-	2061	773	-	0	0
Key:	Positive values are clg loads Negative values are htg loads			Positive values are htg loads Negative values are clg loads		

10.ESPECIFICAÇÃO EQUIPAMENTOS DE CLIMATIZAÇÃO

AMBIENTE	ÁREA (m²)	CARGA TÉRMICA (kW)	CARGA TÉRMICA (BTU/h)	CAPACIDADE ADOTADA (BTU/h)	EQUIPAMENTO SPLIT REFERÊNCIA	QTDE.	CAPACIDADE INDIVIDUAL (BTU/h)
Sala de Espera de Acolhimento	55,77	9,8	33.439	36.000	PISO TETO	01	36.000
Recepção	7,35	2,1	7.166	9.000	HI WALL	01	9.000
Sala de TI / Servidor	3,64	2,5	8.531	9.000	HI WALL	01	9.000
Farmácia	13,69	3,5	11.943	12.000	HI WALL	01	12.000
Sala de Acolhimento	9,52	3,3	11.260	12.000	HI WALL	01	12.000
Sala de Atendimento Individual 01	9,52	3,2	10.919	12.000	HI WALL	01	12.000
Sala de Atendimento Individual 02	9,52	3,3	11.260	12.000	HI WALL	01	12.000
Sala de Atendimento Individual/Coletiv o	27,69	7,5	25.591	30.000	HI WALL	01	30.000
Sala de Reunião	31,21	9,7	33.098	36.000	PISO TETO	01	36.000
Sala de Apoio Administrativo	18,08	4,6	15.696	18.000	HI WALL	01	18.000
Sala Administrativa	10,75	3,5	11.943	12.000	HI WALL	01	12.000
Sala de Atendimento Coletivo 02	25,16	7,7	26.274	30.000	HI WALL	01	30.000
Sala de Atendimento Coletivo 01	25,26	8,4	28.662	30.000	HI WALL	01	30.000
Refeitório para Pacientes	54,32	Sem climatização					
Cozinha	27,91	10,8	36.851	36.000	PISO TETO	01	36.000
Sala de Aplicação de Medicamentos	10,89	3,3	11.260	12.000	HI WALL	01	12.000
Posto de Enfermagem	7,80	2,7	9.213	9.000	HI WALL	01	9.000
Sala de Convivência	65,87	Sem climatização					

Estar	24,21	Sem climatização					
Quarto de Acolhimento 04	13,58	2,8	9.554	9.000	HI WALL	01	9.000