

Zone Sizing Summary for FC-01

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2021
01:47p. m

Air System Information

Air System Name **FC-01**
Equipment Class **TERM**
Air System Type **4P-FC**

Number of zones **1**
Floor Area **24,1** m²
Location **Temuco, Chile**

Sizing Calculation Information

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

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

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5,6 K (L/s)	Time of Peak Coil Load	Zone L/(s·m²)
Zone 1	3,1	3,1	24,3 / 17,9	15,4 / 14,7	0,13	Dec 1700	11,96

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	1,8	16,9 / 22,1	0,04	288	0,000	0,000	60

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (m²)
Zone 1	3,3	Dec 1800	0,5	24,1

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m²)	Space L/(s·m²)
Zone 1							
1P 01 SALA IRA	1	3,3	Dec 1800	288	0,5	24,1	11,96

Ventilation Sizing Summary for FC-01

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2021
01:47p. m

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows

2. Space Ventilation Analysis

2.1 Zone: Zone 1

Zone Name / Space Name	Mult.	Floor Area (m²)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s·m²))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Uncorrected Outdoor Air (L/s)
Zone 1									
1P 01 SALA IRA	1	24,1	2,4	288,2	10,00	1,50	0,0	0,0	60,3
Totals (incl. Space Multipliers)				288,2					60,3

Zone Sizing Summary for FC-02

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:47p. m

Air System Information

Air System Name **FC-02**
Equipment Class **TERM**
Air System Type **4P-FC**

Number of zones **1**
Floor Area **24,6** m²
Location **Temuco, Chile**

Sizing Calculation Information

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

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

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5,6 K (L/s)	Time of Peak Coil Load	Zone L/(s·m²)
Zone 1	3,1	3,1	24,1 / 17,7	15,3 / 14,6	0,13	Dec 1800	11,75

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	1,7	16,9 / 21,8	0,04	289	0,000	0,000	62

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (m²)
Zone 1	3,3	Dec 1800	0,3	24,6

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m²)	Space L/(s·m²)
Zone 1							
1P 02 SALA ERA	1	3,3	Dec 1800	289	0,3	24,6	11,75

Ventilation Sizing Summary for FC-02

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:47p. m

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows

2. Space Ventilation Analysis

2.1 Zone: Zone 1

Zone Name / Space Name	Mult.	Floor Area (m²)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s·m²))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Uncorrected Outdoor Air (L/s)
Zone 1									
1P 02 SALA ERA	1	24,6	2,5	289,1	10,00	1,50	0,0	0,0	61,5
Totals (incl. Space Multipliers)				289,1					61,5

Zone Sizing Summary for FC-03

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:47p. m

Air System Information

Air System Name **FC-03**
Equipment Class **TERM**
Air System Type **4P-FC**

Number of zones **1**
Floor Area **23,8** m²
Location **Temuco, Chile**

Sizing Calculation Information

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

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

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5,6 K (L/s)	Time of Peak Coil Load	Zone L/(s·m²)
Zone 1	3,2	3,1	23,9 / 17,6	15,0 / 14,4	0,14	Dec 1800	12,39

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	2,0	16,1 / 21,9	0,04	295	0,000	0,000	75

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (m²)
Zone 1	3,4	Dec 1800	0,3	23,8

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m²)	Space L/(s·m²)
Zone 1							
1P 03 SALA TOMA DE MUEST	1	3,4	Dec 1800	295	0,3	23,8	12,39

Ventilation Sizing Summary for FC-03

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:47p. m

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows

2. Space Ventilation Analysis

2.1 Zone: Zone 1

Zone Name / Space Name	Mult.	Floor Area (m²)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s·m²))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Uncorrected Outdoor Air (L/s)
Zone 1									
1P 03 SALA TOMA DE MUEST	1	23,8	4,0	295,0	10,00	1,50	0,0	0,0	75,4
Totals (incl. Space Multipliers)				295,0					75,4

Zone Sizing Summary for FC-04

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:47p. m

Air System Information

Air System Name **FC-04**
Equipment Class **TERM**
Air System Type **4P-FC**

Number of zones **1**
Floor Area **12,7** m²
Location **Temuco, Chile**

Sizing Calculation Information

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

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

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5,6 K (L/s)	Time of Peak Coil Load	Zone L/(s·m²)
Zone 1	2,0	1,8	24,2 / 18,0	14,8 / 14,2	0,09	Dec 1800	12,64

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	0,6	19,0 / 22,0	0,01	161	0,000	0,000	18

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (m²)
Zone 1	1,8	Dec 1800	0,1	12,7

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m²)	Space L/(s·m²)
Zone 1							
1P 04 ESTAR SAPU	1	1,8	Dec 1800	161	0,1	12,7	12,64

Ventilation Sizing Summary for FC-04

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:47p. m

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows

2. Space Ventilation Analysis

2.1 Zone: Zone 1

Zone Name / Space Name	Mult.	Floor Area (m²)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s·m²))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Uncorrected Outdoor Air (L/s)
Zone 1									
1P 04 ESTAR SAPU	1	12,7	4,2	160,6	3,00	0,40	0,0	0,0	17,8
Totals (incl. Space Multipliers)				160,6					17,8

Zone Sizing Summary for FC-07

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:47p. m

Air System Information

Air System Name **FC-07**
Equipment Class **TERM**
Air System Type **4P-FC**

Number of zones **1**
Floor Area **9,9** m²
Location **Temuco, Chile**

Sizing Calculation Information

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

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

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5,6 K (L/s)	Time of Peak Coil Load	Zone L/(s·m²)
Zone 1	0,4	0,4	24,3 / 17,7	14,4 / 13,8	0,02	Mar 1500	3,11

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	0,3	16,6 / 24,5	0,01	31	0,000	0,000	7

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (m²)
Zone 1	0,4	Apr 1900	0,1	9,9

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m²)	Space L/(s·m²)
Zone 1							
1P 07 JEFE SOME	1	0,4	Apr 1900	31	0,1	9,9	3,11

Ventilation Sizing Summary for FC-07

Project Name: CESFAM VILLA ALEGRE
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11-13-2020
01:47p. m

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows

2. Space Ventilation Analysis

2.1 Zone: Zone 1

Zone Name / Space Name	Mult.	Floor Area (m²)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s·m²))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Uncorrected Outdoor Air (L/s)
Zone 1									
1P 07 JEFE SOME	1	9,9	1,0	30,8	3,00	0,40	0,0	0,0	6,9
Totals (incl. Space Multipliers)				30,8					6,9

Zone Sizing Summary for FC-08

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:47p. m

Air System Information

Air System Name **FC-08**
Equipment Class **TERM**
Air System Type **4P-FC**

Number of zones **1**
Floor Area **15,0** m²
Location **Temuco, Chile**

Sizing Calculation Information

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

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

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5,6 K (L/s)	Time of Peak Coil Load	Zone L/(s·m²)
Zone 1	0,5	0,5	24,5 / 17,3	14,4 / 13,6	0,02	Jan 1500	2,71

Terminal Unit Sizing Data - Heating, Fan, Ventilation

Zone Name	Heating Coil Load (kW)	Heating Coil Ent/Lvg DB (°C)	Htg Coil Water Flow @11,1 K (L/s)	Fan Design Airflow (L/s)	Fan Motor (BHP)	Fan Motor (kW)	OA Vent Design Airflow (L/s)
Zone 1	0,9	3,2 / 21,1	0,02	41	0,000	0,000	38

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (m²)
Zone 1	0,5	Jan 1900	0,0	15,0

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m²)	Space L/(s·m²)
Zone 1							
1P 08 BOX VACUNATO	1	0,5	Jan 1900	41	0,0	15,0	2,71

Ventilation Sizing Summary for FC-08

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:47p. m

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows

2. Space Ventilation Analysis

2.1 Zone: Zone 1

Zone Name / Space Name	Mult.	Floor Area (m²)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s·m²))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Uncorrected Outdoor Air (L/s)
Zone 1									
1P 08 BOX VACUNATO	1	15,0	1,5	40,6	10,00	1,50	0,0	0,0	37,5
Totals (incl. Space Multipliers)				40,6					37,5

Zone Sizing Summary for FC-09

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:47p. m

Air System Information

Air System Name **FC-09**
Equipment Class **TERM**
Air System Type **4P-FC**

Number of zones **1**
Floor Area **15,6** m²
Location **Temuco, Chile**

Sizing Calculation Information

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

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

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5,6 K (L/s)	Time of Peak Coil Load	Zone L/(s·m²)
Zone 1	0,6	0,5	25,0 / 18,0	14,4 / 13,8	0,03	Jan 1500	2,71

Terminal Unit Sizing Data - Heating, Fan, Ventilation

Zone Name	Heating Coil Load (kW)	Heating Coil Ent/Lvg DB (°C)	Htg Coil Water Flow @11,1 K (L/s)	Fan Design Airflow (L/s)	Fan Motor (BHP)	Fan Motor (kW)	OA Vent Design Airflow (L/s)
Zone 1	0,3	16,1 / 21,1	0,01	42	0,000	0,000	11

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (m²)
Zone 1	0,5	Jan 1900	0,0	15,6

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m²)	Space L/(s·m²)
Zone 1							
1P 09 SOME PROCEDIMIENTO	1	0,5	Jan 1900	42	0,0	15,6	2,71

Ventilation Sizing Summary for FC-09

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:47p. m

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows

2. Space Ventilation Analysis

2.1 Zone: Zone 1

Zone Name / Space Name	Mult.	Floor Area (m²)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s·m²))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Uncorrected Outdoor Air (L/s)
Zone 1									
1P 09 SOME PROCEDIMIENTO	1	15,6	1,6	42,2	3,00	0,40	0,0	0,0	10,9
Totals (incl. Space Multipliers)				42,2					10,9

Zone Sizing Summary for FC-10

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:47p. m

Air System Information

Air System Name **FC-10**
Equipment Class **TERM**
Air System Type **4P-FC**

Number of zones **1**
Floor Area **19,6** m²
Location **Temuco, Chile**

Sizing Calculation Information

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

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

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5,6 K (L/s)	Time of Peak Coil Load	Zone L/(s·m²)
Zone 1	2,2	2,2	22,9 / 17,0	14,4 / 13,9	0,09	Dec 0900	11,01

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	1,4	16,7 / 22,1	0,03	216	0,000	0,000	49

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (m²)
Zone 1	2,5	Dec 0900	0,3	19,6

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m²)	Space L/(s·m²)
Zone 1							
1P 10 BOX ATENCION URGEN	1	2,5	Dec 0900	216	0,3	19,6	11,01

Ventilation Sizing Summary for FC-10

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:47p. m

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows

2. Space Ventilation Analysis

2.1 Zone: Zone 1

Zone Name / Space Name	Mult.	Floor Area (m²)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s·m²))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Uncorrected Outdoor Air (L/s)
Zone 1									
1P 10 BOX ATENCION URGEN	1	19,6	2,0	215,8	10,00	1,50	0,0	0,0	49,0
Totals (incl. Space Multipliers)				215,8					49,0

Zone Sizing Summary for FC-11

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:47p. m

Air System Information

Air System Name **FC-11**
Equipment Class **TERM**
Air System Type **4P-FC**

Number of zones **1**
Floor Area **24,4** m²
Location **Temuco, Chile**

Sizing Calculation Information

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

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

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5,6 K (L/s)	Time of Peak Coil Load	Zone L/(s·m²)
Zone 1	2,5	2,5	24,4 / 17,9	15,9 / 14,9	0,11	Dec 1400	10,04

Terminal Unit Sizing Data - Heating, Fan, Ventilation

Zone Name	Heating Coil Load (kW)	Heating Coil Ent/Lvg DB (°C)	Htg Coil Water Flow @11,1 K (L/s)	Fan Design Airflow (L/s)	Fan Motor (BHP)	Fan Motor (kW)	OA Vent Design Airflow (L/s)
Zone 1	1,9	15,8 / 22,2	0,04	245	0,000	0,000	67

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (m²)
Zone 1	2,8	Dec 0900	0,3	24,4

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m²)	Space L/(s·m²)
Zone 1							
1P 11 BOX CURACION Y TRA	1	2,8	Dec 0900	245	0,3	24,4	10,04

Ventilation Sizing Summary for FC-11

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:47p. m

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows

2. Space Ventilation Analysis

2.1 Zone: Zone 1

Zone Name / Space Name	Mult.	Floor Area (m²)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s·m²))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Uncorrected Outdoor Air (L/s)
Zone 1									
1P 11 BOX CURACION Y TRA	1	24,4	3,1	244,9	10,00	1,50	0,0	0,0	67,1
Totals (incl. Space Multipliers)				244,9					67,1

Zone Sizing Summary for FC-12

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:47p. m

Air System Information

Air System Name **FC-12**
Equipment Class **TERM**
Air System Type **4P-FC**

Number of zones **1**
Floor Area **19,6** m²
Location **Temuco, Chile**

Sizing Calculation Information

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

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

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5,6 K (L/s)	Time of Peak Coil Load	Zone L/(s·m²)
Zone 1	2,0	2,0	24,4 / 17,9	15,9 / 14,9	0,09	Dec 1400	10,22

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	1,4	16,4 / 22,2	0,03	200	0,000	0,000	49

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (m²)
Zone 1	2,3	Dec 0900	0,2	19,6

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m²)	Space L/(s·m²)
Zone 1							
1P 12 SALA PROCEDIMIENTO	1	2,3	Dec 0900	200	0,2	19,6	10,22

Ventilation Sizing Summary for FC-12

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:47p. m

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows

2. Space Ventilation Analysis

2.1 Zone: Zone 1

Zone Name / Space Name	Mult.	Floor Area (m²)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s·m²))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Uncorrected Outdoor Air (L/s)
Zone 1									
1P 12 SALA PROCEDIMIENTO	1	19,6	2,0	200,3	10,00	1,50	0,0	0,0	49,0
Totals (incl. Space Multipliers)				200,3					49,0

Zone Sizing Summary for FC-13

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:47p. m

Air System Information

Air System Name **FC-13**
Equipment Class **TERM**
Air System Type **4P-FC**

Number of zones **1**
Floor Area **12,6** m²
Location **Temuco, Chile**

Sizing Calculation Information

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

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

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5,6 K (L/s)	Time of Peak Coil Load	Zone L/(s·m²)
Zone 1	0,5	0,5	24,5 / 17,3	14,4 / 13,6	0,02	Jan 1500	3,01

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	0,9	3,3 / 23,0	0,02	38	0,000	0,000	35

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (m²)
Zone 1	0,4	Dec 1900	0,1	12,6

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m²)	Space L/(s·m²)
Zone 1							
1P 13 SALA DE ACOGIDA	1	0,4	Dec 1900	38	0,1	12,6	3,01

Ventilation Sizing Summary for FC-13

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:47p. m

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows

2. Space Ventilation Analysis

2.1 Zone: Zone 1

Zone Name / Space Name	Mult.	Floor Area (m²)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s·m²))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Uncorrected Outdoor Air (L/s)
Zone 1									
1P 13 SALA DE ACOGIDA	1	12,6	1,6	38,0	10,00	1,50	0,0	0,0	34,7
Totals (incl. Space Multipliers)				38,0					34,7

Zone Sizing Summary for FC-14

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:47p. m

Air System Information

Air System Name **FC-14**
Equipment Class **TERM**
Air System Type **4P-FC**

Number of zones **1**
Floor Area **139,0** m²
Location **Temuco, Chile**

Sizing Calculation Information

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

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

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5,6 K (L/s)	Time of Peak Coil Load	Zone L/(s·m²)
Zone 1	19,8	18,7	24,2 / 17,8	14,8 / 14,2	0,85	Feb 1600	11,91

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	28,5	7,0 / 21,3	0,61	1655	0,000	0,000	1195

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (m²)
Zone 1	18,8	Mar 1700	0,7	139,0

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m²)	Space L/(s·m²)
Zone 1							
1P 14 SALA DE ESPERA	1	18,8	Mar 1700	1655	0,7	139,0	11,91

Ventilation Sizing Summary for FC-14

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:47p. m

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows

2. Space Ventilation Analysis

2.1 Zone: Zone 1

Zone Name / Space Name	Mult.	Floor Area (m²)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s·m²))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Uncorrected Outdoor Air (L/s)
Zone 1									
1P 14 SALA DE ESPERA	1	139,0	173,8	1655,2	6,00	1,10	0,0	0,0	1195,4
Totals (incl. Space Multipliers)				1655,2					1195,4

Zone Sizing Summary for FC-15

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:47p. m

Air System Information

Air System Name **FC-15**
Equipment Class **TERM**
Air System Type **4P-FC**

Number of zones **1**
Floor Area **139,0** m²
Location **Temuco, Chile**

Sizing Calculation Information

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

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

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5,6 K (L/s)	Time of Peak Coil Load	Zone L/(s·m²)
Zone 1	19,8	18,7	24,2 / 17,8	14,8 / 14,2	0,85	Feb 1600	11,91

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	28,5	7,0 / 21,3	0,61	1655	0,000	0,000	1195

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (m²)
Zone 1	18,8	Mar 1700	0,7	139,0

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m²)	Space L/(s·m²)
Zone 1							
1P 14 SALA DE ESPERA	1	18,8	Mar 1700	1655	0,7	139,0	11,91

Ventilation Sizing Summary for FC-15

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:47p. m

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows

2. Space Ventilation Analysis

2.1 Zone: Zone 1

Zone Name / Space Name	Mult.	Floor Area (m²)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s·m²))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Uncorrected Outdoor Air (L/s)
Zone 1									
1P 14 SALA DE ESPERA	1	139,0	173,8	1655,2	6,00	1,10	0,0	0,0	1195,4
Totals (incl. Space Multipliers)				1655,2					1195,4

Zone Sizing Summary for FC-16

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:47p. m

Air System Information

Air System Name **FC-16**
Equipment Class **TERM**
Air System Type **4P-FC**

Number of zones **1**
Floor Area **17,7** m²
Location **Temuco, Chile**

Sizing Calculation Information

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

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

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5,6 K (L/s)	Time of Peak Coil Load	Zone L/(s·m²)
Zone 1	3,9	3,9	24,5 / 17,8	14,9 / 14,3	0,17	Mar 1600	18,87

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	0,5	20,2 / 21,5	0,01	334	0,000	0,000	12

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (m²)
Zone 1	3,8	Mar 1600	0,3	17,7

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m²)	Space L/(s·m²)
Zone 1							
1P 16 DESPACHO FARMACIA	1	3,8	Mar 1600	334	0,3	17,7	18,87

Ventilation Sizing Summary for FC-16

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:47p. m

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows

2. Space Ventilation Analysis

2.1 Zone: Zone 1

Zone Name / Space Name	Mult.	Floor Area (m²)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s·m²))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Uncorrected Outdoor Air (L/s)
Zone 1									
1P 16 DESPACHO FARMACIA	1	17,7	1,8	333,9	3,00	0,40	0,0	0,0	12,4
Totals (incl. Space Multipliers)				333,9					12,4

Zone Sizing Summary for FC-17

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:47p. m

Air System Information

Air System Name **FC-17**
Equipment Class **TERM**
Air System Type **4P-FC**

Number of zones **1**
Floor Area **11,8** m²
Location **Temuco, Chile**

Sizing Calculation Information

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

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

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5,6 K (L/s)	Time of Peak Coil Load	Zone L/(s·m²)
Zone 1	4,7	4,6	24,4 / 17,7	14,9 / 14,3	0,20	Dec 1700	34,11

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	0,7	20,8 / 22,3	0,02	403	0,000	0,000	8

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (m²)
Zone 1	4,6	Dec 1700	0,5	11,8

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m²)	Space L/(s·m²)
Zone 1							
1P 17 DESPACHO PNAC	1	4,6	Dec 1700	403	0,5	11,8	34,11

Ventilation Sizing Summary for FC-17

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:47p. m

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows

2. Space Ventilation Analysis

2.1 Zone: Zone 1

Zone Name / Space Name	Mult.	Floor Area (m²)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s·m²))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Uncorrected Outdoor Air (L/s)
Zone 1									
1P 17 DESPACHO PNAC	1	11,8	1,2	402,6	3,00	0,40	0,0	0,0	8,3
Totals (incl. Space Multipliers)				402,6					8,3

Zone Sizing Summary for FC-18

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:47p. m

Air System Information

Air System Name **FC-18**
Equipment Class **TERM**
Air System Type **4P-FC**

Number of zones **1**
Floor Area **9,0** m²
Location **Temuco, Chile**

Sizing Calculation Information

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

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

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5,6 K (L/s)	Time of Peak Coil Load	Zone L/(s·m²)
Zone 1	1,8	1,8	24,6 / 17,9	15,1 / 14,4	0,08	Mar 1600	17,37

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	0,3	20,5 / 22,1	0,01	156	0,000	0,000	6

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (m²)
Zone 1	1,8	Mar 1600	0,1	9,0

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m²)	Space L/(s·m²)
Zone 1							
1P 18 BOX QUIM FARM	1	1,8	Mar 1600	156	0,1	9,0	17,37

Ventilation Sizing Summary for FC-18

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:47p. m

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows

2. Space Ventilation Analysis

2.1 Zone: Zone 1

Zone Name / Space Name	Mult.	Floor Area (m²)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s·m²))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Uncorrected Outdoor Air (L/s)
Zone 1									
1P 18 BOX QUIM FARM	1	9,0	0,9	156,3	3,00	0,40	0,0	0,0	6,3
Totals (incl. Space Multipliers)				156,3					6,3

Zone Sizing Summary for FC-19

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:47p. m

Air System Information

Air System Name **FC-19**
Equipment Class **TERM**
Air System Type **4P-FC**

Number of zones **1**
Floor Area **33,0** m²
Location **Temuco, Chile**

Sizing Calculation Information

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

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

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5,6 K (L/s)	Time of Peak Coil Load	Zone L/(s·m²)
Zone 1	5,5	5,1	23,6 / 17,9	15,3 / 14,7	0,24	Dec 1700	15,25

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	6,9	10,1 / 21,6	0,15	503	0,000	0,000	284

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (m²)
Zone 1	5,7	Dec 1800	0,3	33,0

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m²)	Space L/(s·m²)
Zone 1							
1P 19 ESPERA PNAC FARMA	1	5,7	Dec 1800	503	0,3	33,0	15,25

Ventilation Sizing Summary for FC-19

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:47p. m.

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows

2. Space Ventilation Analysis

2.1 Zone: Zone 1

Zone Name / Space Name	Mult.	Floor Area (m²)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s·m²))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Uncorrected Outdoor Air (L/s)
Zone 1									
1P 19 ESPERA PNAC FARMA	1	33,0	41,3	503,2	6,00	1,10	0,0	0,0	283,8
Totals (incl. Space Multipliers)				503,2					283,8

Zone Sizing Summary for FC-20

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:47p. m

Air System Information

Air System Name **FC-20**
Equipment Class **TERM**
Air System Type **4P-FC**

Number of zones **1**
Floor Area **40,1** m²
Location **Temuco, Chile**

Sizing Calculation Information

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

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

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5,6 K (L/s)	Time of Peak Coil Load	Zone L/(s·m²)
Zone 1	10,6	9,8	24,4 / 17,9	14,9 / 14,3	0,46	Mar 1500	21,32

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	2,4	19,6 / 21,9	0,05	855	0,000	0,000	64

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (m²)
Zone 1	9,7	Mar 1600	0,9	40,1

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m²)	Space L/(s·m²)
Zone 1							
1P 20 SALA MULTIUSO	1	9,7	Mar 1600	855	0,9	40,1	21,32

Ventilation Sizing Summary for FC-20

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:47p. m.

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows

2. Space Ventilation Analysis

2.1 Zone: Zone 1

Zone Name / Space Name	Mult.	Floor Area (m²)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s·m²))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Uncorrected Outdoor Air (L/s)
Zone 1									
1P 20 SALA MULTIUSO	1	40,1	16,0	855,0	3,00	0,40	0,0	0,0	64,2
Totals (incl. Space Multipliers)				855,0					64,2

Zone Sizing Summary for FC-21

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:47p. m

Air System Information

Air System Name **FC-21**
Equipment Class **TERM**
Air System Type **4P-FC**

Number of zones **1**
Floor Area **9,8** m²
Location **Temuco, Chile**

Sizing Calculation Information

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

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

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5,6 K (L/s)	Time of Peak Coil Load	Zone L/(s·m²)
Zone 1	0,4	0,4	24,3 / 17,7	14,8 / 14,2	0,02	Jan 1400	3,91

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	0,6	8,5 / 21,1	0,01	38	0,000	0,000	25

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (m²)
Zone 1	0,4	Jan 1900	0,0	9,8

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m²)	Space L/(s·m²)
Zone 1							
1P 21 OIRS	1	0,2	Jan 1900	18	0,0	6,7	2,71
1P 22 LACT PUBLICO	1	0,2	Jan 1900	20	0,0	3,1	6,50

Ventilation Sizing Summary for FC-21

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:47p. m

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows

2. Space Ventilation Analysis

2.1 Zone: Zone 1

Zone Name / Space Name	Mult.	Floor Area (m²)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s·m²))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Uncorrected Outdoor Air (L/s)
Zone 1									
1P 21 OIRS	1	6,7	0,7	18,1	3,00	0,40	0,0	0,0	4,7
1P 22 LACT PUBLICO	1	3,1	1,6	20,2	10,00	1,50	0,0	0,0	20,2
Totals (incl. Space Multipliers)				38,3					24,8

Zone Sizing Summary for FC-23

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:47p. m

Air System Information

Air System Name **FC-23**
Equipment Class **TERM**
Air System Type **4P-FC**

Number of zones **1**
Floor Area **15,4** m²
Location **Temuco, Chile**

Sizing Calculation Information

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

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

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5,6 K (L/s)	Time of Peak Coil Load	Zone L/(s·m²)
Zone 1	0,9	0,7	24,7 / 18,4	14,4 / 13,9	0,04	Jan 1500	3,90

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	0,5	14,1 / 21,1	0,01	60	0,000	0,000	22

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (m²)
Zone 1	0,7	Jan 1900	0,0	15,4

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m²)	Space L/(s·m²)
Zone 1							
1P 23 TRABAJO CLIN GRUPA	1	0,7	Jan 1900	60	0,0	15,4	3,90

Ventilation Sizing Summary for FC-23

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:47p. m

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows

2. Space Ventilation Analysis

2.1 Zone: Zone 1

Zone Name / Space Name	Mult.	Floor Area (m²)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s·m²))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Uncorrected Outdoor Air (L/s)
Zone 1									
1P 23 TRABAJO CLIN GRUPA	1	15,4	5,1	60,1	3,00	0,40	0,0	0,0	21,6
Totals (incl. Space Multipliers)				60,1					21,6

Zone Sizing Summary for FC-24

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:47p. m

Air System Information

Air System Name **FC-24**
Equipment Class **TERM**
Air System Type **4P-FC**

Number of zones **1**
Floor Area **96,4** m²
Location **Temuco, Chile**

Sizing Calculation Information

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

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

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5,6 K (L/s)	Time of Peak Coil Load	Zone L/(s·m²)
Zone 1	7,4	7,3	23,8 / 17,3	14,4 / 13,8	0,32	Feb 1200	6,72

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	5,5	14,9 / 22,0	0,12	648	0,000	0,000	209

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (m²)
Zone 1	7,4	Mar 1200	0,5	96,4

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m²)	Space L/(s·m²)
Zone 1							
1P 24 SALA REHABILITACIO	1	7,4	Mar 1200	648	0,5	96,4	6,72

Ventilation Sizing Summary for FC-24

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:47p. m

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows

2. Space Ventilation Analysis

2.1 Zone: Zone 1

Zone Name / Space Name	Mult.	Floor Area (m²)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s·m²))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Uncorrected Outdoor Air (L/s)
Zone 1									
1P 24 SALA REHABILITACIO	1	96,4	6,4	648,2	10,00	1,50	0,0	0,0	208,9
Totals (incl. Space Multipliers)				648,2					208,9

Zone Sizing Summary for FC-26

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

Air System Information

Air System Name **FC-26**
Equipment Class **TERM**
Air System Type **4P-FC**

Number of zones **1**
Floor Area **15,2** m²
Location **Temuco, Chile**

Sizing Calculation Information

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

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

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5,6 K (L/s)	Time of Peak Coil Load	Zone L/(s·m²)
Zone 1	2,2	2,2	23,1 / 17,0	14,4 / 13,9	0,09	Dec 0900	13,52

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	1,1	17,5 / 22,1	0,02	206	0,000	0,000	38

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (m²)
Zone 1	2,3	Dec 0900	0,3	15,2

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m²)	Space L/(s·m²)
Zone 1							
1P 26 PODOLOGIA	1	2,3	Dec 0900	206	0,3	15,2	13,52

Ventilation Sizing Summary for FC-26

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:47p. m.

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows

2. Space Ventilation Analysis

2.1 Zone: Zone 1

Zone Name / Space Name	Mult.	Floor Area (m²)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s·m²))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Uncorrected Outdoor Air (L/s)
Zone 1									
1P 26 PODOLOGIA	1	15,2	1,5	205,5	10,00	1,50	0,0	0,0	38,0
Totals (incl. Space Multipliers)				205,5					38,0

Zone Sizing Summary for FC-27

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

Air System Information

Air System Name **FC-27**
Equipment Class **TERM**
Air System Type **4P-FC**

Number of zones **1**
Floor Area **15,2** m²
Location **Temuco, Chile**

Sizing Calculation Information

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

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

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5,6 K (L/s)	Time of Peak Coil Load	Zone L/(s·m²)
Zone 1	1,8	1,8	22,9 / 17,0	14,4 / 13,9	0,08	Dec 0900	11,49

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	1,1	16,8 / 22,1	0,02	175	0,000	0,000	38

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (m²)
Zone 1	2,0	Dec 0900	0,2	15,2

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m²)	Space L/(s·m²)
Zone 1							
1P 27 ECOGRAFIA	1	2,0	Dec 0900	175	0,2	15,2	11,49

Ventilation Sizing Summary for FC-27

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:47p. m.

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows

2. Space Ventilation Analysis

2.1 Zone: Zone 1

Zone Name / Space Name	Mult.	Floor Area (m²)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s·m²))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Uncorrected Outdoor Air (L/s)
Zone 1									
1P 27 ECOGRAFIA	1	15,2	1,5	174,6	10,00	1,50	0,0	0,0	38,0
Totals (incl. Space Multipliers)				174,6					38,0

Zone Sizing Summary for FC-28

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

Air System Information

Air System Name **FC-28**
Equipment Class **TERM**
Air System Type **4P-FC**

Number of zones **1**
Floor Area **30,1** m²
Location **Temuco, Chile**

Sizing Calculation Information

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

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

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5,6 K (L/s)	Time of Peak Coil Load	Zone L/(s·m²)
Zone 1	6,3	6,1	23,4 / 17,4	14,9 / 14,3	0,27	Dec 1100	19,99

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	3,8	17,4 / 22,6	0,08	602	0,000	0,000	120

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (m²)
Zone 1	6,8	Dec 0900	0,8	30,1

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m²)	Space L/(s·m²)
Zone 1							
1P 28 SALA DE ESTIMULACI	1	6,8	Dec 0900	602	0,8	30,1	19,99

Ventilation Sizing Summary for FC-28

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:47p. m.

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows

2. Space Ventilation Analysis

2.1 Zone: Zone 1

Zone Name / Space Name	Mult.	Floor Area (m²)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s·m²))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Uncorrected Outdoor Air (L/s)
Zone 1									
1P 28 SALA DE ESTIMULACI	1	30,1	7,5	601,6	10,00	1,50	0,0	0,0	120,4
Totals (incl. Space Multipliers)				601,6					120,4

Zone Sizing Summary for FC-31

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:47p. m

Air System Information

Air System Name **FC-31**
Equipment Class **TERM**
Air System Type **4P-FC**

Number of zones **1**
Floor Area **24,2** m²
Location **Temuco, Chile**

Sizing Calculation Information

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

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

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5,6 K (L/s)	Time of Peak Coil Load	Zone L/(s·m²)
Zone 1	7,2	7,0	24,2 / 17,7	15,0 / 14,3	0,31	Jan 1700	26,13

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	3,4	17,4 / 21,9	0,07	632	0,000	0,000	117

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (m²)
Zone 1	7,1	Dec 1700	0,7	24,2

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m²)	Space L/(s·m²)
Zone 1							
2P 31 BOX CLINICO	1	4,8	Jan 1700	418	0,5	12,0	34,82
2P 32 BOX CLINICO	1	2,4	Dec 1800	214	0,2	12,2	17,58

Ventilation Sizing Summary for FC-31

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:47p. m.

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows

2. Space Ventilation Analysis

2.1 Zone: Zone 1

Zone Name / Space Name	Mult.	Floor Area (m²)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s·m²))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Uncorrected Outdoor Air (L/s)
Zone 1									
2P 31 BOX CLINICO	1	12,0	4,0	417,9	10,00	1,50	0,0	0,0	58,0
2P 32 BOX CLINICO	1	12,2	4,1	214,4	10,00	1,50	0,0	0,0	59,0
Totals (incl. Space Multipliers)				632,3					117,0

Zone Sizing Summary for FC-33

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:47p. m

Air System Information

Air System Name **FC-33**
Equipment Class **TERM**
Air System Type **4P-FC**

Number of zones **1**
Floor Area **24,4** m²
Location **Temuco, Chile**

Sizing Calculation Information

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

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

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5,6 K (L/s)	Time of Peak Coil Load	Zone L/(s·m²)
Zone 1	4,8	4,6	23,7 / 17,6	14,8 / 14,2	0,21	Dec 1800	17,58

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	3,1	15,6 / 21,5	0,07	429	0,000	0,000	118

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (m²)
Zone 1	4,9	Dec 1800	0,4	24,4

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m²)	Space L/(s·m²)
Zone 1							
2P 33 BOX CLINICO	1	2,4	Dec 1800	214	0,2	12,2	17,58
2P 34 BOX CLINICO	1	2,4	Dec 1800	214	0,2	12,2	17,58

Ventilation Sizing Summary for FC-33

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:47p. m.

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows

2. Space Ventilation Analysis

2.1 Zone: Zone 1

Zone Name / Space Name	Mult.	Floor Area (m²)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s·m²))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Uncorrected Outdoor Air (L/s)
Zone 1									
2P 33 BOX CLINICO	1	12,2	4,1	214,4	10,00	1,50	0,0	0,0	59,0
2P 34 BOX CLINICO	1	12,2	4,1	214,4	10,00	1,50	0,0	0,0	59,0
Totals (incl. Space Multipliers)				428,9					117,9

Zone Sizing Summary for FC-35

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:47p. m

Air System Information

Air System Name **FC-35**
Equipment Class **TERM**
Air System Type **4P-FC**

Number of zones **1**
Floor Area **24,4** m²
Location **Temuco, Chile**

Sizing Calculation Information

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

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

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5,6 K (L/s)	Time of Peak Coil Load	Zone L/(s·m²)
Zone 1	4,8	4,6	23,7 / 17,6	14,8 / 14,2	0,21	Dec 1800	17,58

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	3,1	15,6 / 21,5	0,07	429	0,000	0,000	118

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (m²)
Zone 1	4,9	Dec 1800	0,4	24,4

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m²)	Space L/(s·m²)
Zone 1							
2P 35 BOX CLINICO	1	2,4	Dec 1800	214	0,2	12,2	17,58
2P 36 BOX CLINICO	1	2,4	Dec 1800	214	0,2	12,2	17,58

Ventilation Sizing Summary for FC-35

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:47p. m.

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows

2. Space Ventilation Analysis

2.1 Zone: Zone 1

Zone Name / Space Name	Mult.	Floor Area (m²)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s·m²))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Uncorrected Outdoor Air (L/s)
Zone 1									
2P 35 BOX CLINICO	1	12,2	4,1	214,4	10,00	1,50	0,0	0,0	59,0
2P 36 BOX CLINICO	1	12,2	4,1	214,4	10,00	1,50	0,0	0,0	59,0
Totals (incl. Space Multipliers)				428,9					117,9

Zone Sizing Summary for FC-37

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:47p. m

Air System Information

Air System Name **FC-37**
Equipment Class **TERM**
Air System Type **4P-FC**

Number of zones **1**
Floor Area **29,8** m²
Location **Temuco, Chile**

Sizing Calculation Information

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

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

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5,6 K (L/s)	Time of Peak Coil Load	Zone L/(s·m²)
Zone 1	5,9	5,8	24,1 / 17,6	14,7 / 14,1	0,25	Mar 1600	17,11

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	3,7	15,5 / 21,5	0,08	510	0,000	0,000	144

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (m²)
Zone 1	5,8	Mar 1600	0,4	29,8

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m²)	Space L/(s·m²)
Zone 1							
2P 37 BOX DENTAL	1	2,9	Mar 1600	255	0,2	14,9	17,11
2P 38 BOX DENTAL	1	2,9	Mar 1600	255	0,2	14,9	17,11

Ventilation Sizing Summary for FC-37

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:47p. m.

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows

2. Space Ventilation Analysis

2.1 Zone: Zone 1

Zone Name / Space Name	Mult.	Floor Area (m²)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s·m²))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Uncorrected Outdoor Air (L/s)
Zone 1									
2P 37 BOX DENTAL	1	14,9	5,0	255,0	10,00	1,50	0,0	0,0	72,0
2P 38 BOX DENTAL	1	14,9	5,0	255,0	10,00	1,50	0,0	0,0	72,0
Totals (incl. Space Multipliers)				510,0					144,0

Zone Sizing Summary for FC-39

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:47p. m

Air System Information

Air System Name **FC-39**
Equipment Class **TERM**
Air System Type **4P-FC**

Number of zones **1**
Floor Area **30,8** m²
Location **Temuco, Chile**

Sizing Calculation Information

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

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

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5,6 K (L/s)	Time of Peak Coil Load	Zone L/(s·m²)
Zone 1	1,5	1,3	24,9 / 18,3	14,4 / 13,8	0,07	Jan 1500	3,31

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	0,8	14,9 / 21,1	0,02	102	0,000	0,000	32

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (m²)
Zone 1	1,2	Jan 1900	0,0	30,8

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m²)	Space L/(s·m²)
Zone 1							
2P 39 TRAB CLIN GRUPAL	1	0,7	Jan 1900	60	0,0	15,4	3,90
2P 40 SOME SATELITE	1	0,5	Jan 1900	42	0,0	15,4	2,71

Ventilation Sizing Summary for FC-39

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:47p. m.

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows

2. Space Ventilation Analysis

2.1 Zone: Zone 1

Zone Name / Space Name	Mult.	Floor Area (m²)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s·m²))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Uncorrected Outdoor Air (L/s)
Zone 1									
2P 39 TRAB CLIN GRUPAL	1	15,4	5,1	60,1	3,00	0,40	0,0	0,0	21,6
2P 40 SOME SATELITE	1	15,4	1,5	41,7	3,00	0,40	0,0	0,0	10,8
Totals (incl. Space Multipliers)				101,8					32,3

Zone Sizing Summary for FC-41

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:47p. m

Air System Information

Air System Name **FC-41**
Equipment Class **TERM**
Air System Type **4P-FC**

Number of zones **1**
Floor Area **24,0** m²
Location **Temuco, Chile**

Sizing Calculation Information

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

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

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5,6 K (L/s)	Time of Peak Coil Load	Zone L/(s·m²)
Zone 1	5,5	5,5	24,3 / 18,2	15,9 / 15,3	0,24	Dec 1600	22,32

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	3,4	16,9 / 22,2	0,07	536	0,000	0,000	116

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (m²)
Zone 1	5,6	Dec 1700	0,7	24,0

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m²)	Space L/(s·m²)
Zone 1							
2P 41 BOX CLINICO	1	4,1	Dec 1800	357	0,5	12,0	29,78
2P 42 BOX CLINICO	1	2,0	Dec 0900	178	0,2	12,0	14,86

Ventilation Sizing Summary for FC-41

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:48p. m.

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows

2. Space Ventilation Analysis

2.1 Zone: Zone 1

Zone Name / Space Name	Mult.	Floor Area (m²)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s·m²))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Uncorrected Outdoor Air (L/s)
Zone 1									
2P 41 BOX CLINICO	1	12,0	4,0	357,4	10,00	1,50	0,0	0,0	58,0
2P 42 BOX CLINICO	1	12,0	4,0	178,3	10,00	1,50	0,0	0,0	58,0
Totals (incl. Space Multipliers)				535,7					116,0

Zone Sizing Summary for FC-43

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:48p. m

Air System Information

Air System Name **FC-43**
Equipment Class **TERM**
Air System Type **4P-FC**

Number of zones **1**
Floor Area **12,0** m²
Location **Temuco, Chile**

Sizing Calculation Information

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

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

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5,6 K (L/s)	Time of Peak Coil Load	Zone L/(s·m²)
Zone 1	1,8	1,8	24,2 / 18,1	15,9 / 15,1	0,08	Dec 1400	14,86

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	1,6	14,8 / 22,1	0,03	178	0,000	0,000	58

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (m²)
Zone 1	2,0	Dec 0900	0,2	12,0

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m²)	Space L/(s·m²)
Zone 1							
2P 43 BOX PSICOLOGO	1	2,0	Dec 0900	178	0,2	12,0	14,86

Ventilation Sizing Summary for FC-43

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:48p. m

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows

2. Space Ventilation Analysis

2.1 Zone: Zone 1

Zone Name / Space Name	Mult.	Floor Area (m²)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s·m²))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Uncorrected Outdoor Air (L/s)
Zone 1									
2P 43 BOX PSICOLOGO	1	12,0	4,0	178,3	10,00	1,50	0,0	0,0	58,0
Totals (incl. Space Multipliers)				178,3					58,0

Zone Sizing Summary for FC-44

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:48p. m

Air System Information

Air System Name **FC-44**
Equipment Class **TERM**
Air System Type **4P-FC**

Number of zones **1**
Floor Area **17,8** m²
Location **Temuco, Chile**

Sizing Calculation Information

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

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

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5,6 K (L/s)	Time of Peak Coil Load	Zone L/(s·m²)
Zone 1	3,0	3,0	24,2 / 18,1	16,0 / 15,3	0,13	Dec 1400	17,16

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	2,5	15,8 / 22,5	0,05	305	0,000	0,000	86

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (m²)
Zone 1	3,5	Dec 0900	0,4	17,8

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m²)	Space L/(s·m²)
Zone 1							
2P 44 BOX GINECOLOGICO	1	3,5	Dec 0900	305	0,4	17,8	17,16

Ventilation Sizing Summary for FC-44

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:48p. m

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows

2. Space Ventilation Analysis

2.1 Zone: Zone 1

Zone Name / Space Name	Mult.	Floor Area (m²)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s·m²))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Uncorrected Outdoor Air (L/s)
Zone 1									
2P 44 BOX GINECOLOGICO	1	17,8	5,9	305,5	10,00	1,50	0,0	0,0	86,0
Totals (incl. Space Multipliers)				305,5					86,0

Zone Sizing Summary for FC-45

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

Air System Information

Air System Name **FC-45**
Equipment Class **TERM**
Air System Type **4P-FC**

Number of zones **1**
Floor Area **29,2** m²
Location **Temuco, Chile**

Sizing Calculation Information

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

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

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5,6 K (L/s)	Time of Peak Coil Load	Zone L/(s·m²)
Zone 1	8,7	8,5	24,2 / 17,7	14,9 / 14,3	0,38	Feb 1700	26,17

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	4,0	17,3 / 21,6	0,09	764	0,000	0,000	141

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (m²)
Zone 1	8,4	Feb 1700	0,8	29,2

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m²)	Space L/(s·m²)
Zone 1							
2P 45 BOX DENTAL	1	5,0	Jan 1700	444	0,5	14,5	30,60
2P 46 BOX DENTAL	1	3,6	Mar 1600	321	0,3	14,7	21,81

Ventilation Sizing Summary for FC-45

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:48p. m.

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows

2. Space Ventilation Analysis

2.1 Zone: Zone 1

Zone Name / Space Name	Mult.	Floor Area (m²)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s·m²))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Uncorrected Outdoor Air (L/s)
Zone 1									
2P 45 BOX DENTAL	1	14,5	4,8	443,7	10,00	1,50	0,0	0,0	70,1
2P 46 BOX DENTAL	1	14,7	4,9	320,6	10,00	1,50	0,0	0,0	71,1
Totals (incl. Space Multipliers)				764,3					141,1

Zone Sizing Summary for FC-47

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

Air System Information

Air System Name **FC-47**
Equipment Class **TERM**
Air System Type **4P-FC**

Number of zones **1**
Floor Area **9,3** m²
Location **Temuco, Chile**

Sizing Calculation Information

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

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

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5,6 K (L/s)	Time of Peak Coil Load	Zone L/(s·m²)
Zone 1	2,9	2,9	24,0 / 17,6	14,8 / 14,2	0,13	Dec 1800	27,85

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	1,3	17,5 / 21,7	0,03	259	0,000	0,000	45

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (m²)
Zone 1	2,9	Dec 1800	0,3	9,3

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m²)	Space L/(s·m²)
Zone 1							
2P 47 RX DENTAL	1	1,5	Dec 1800	129	0,1	4,6	28,12
2P 48 SALA COMANDOS	1	1,5	Dec 1800	130	0,1	4,7	27,60

Ventilation Sizing Summary for FC-47

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:48p. m.

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows

2. Space Ventilation Analysis

2.1 Zone: Zone 1

Zone Name / Space Name	Mult.	Floor Area (m²)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s·m²))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Uncorrected Outdoor Air (L/s)
Zone 1									
2P 47 RX DENTAL	1	4,6	1,5	129,3	10,00	1,50	0,0	0,0	22,2
2P 48 SALA COMANDOS	1	4,7	1,6	129,7	10,00	1,50	0,0	0,0	22,7
Totals (incl. Space Multipliers)				259,0					45,0

Zone Sizing Summary for FC-49

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

Air System Information

Air System Name **FC-49**
Equipment Class **TERM**
Air System Type **4P-FC**

Number of zones **1**
Floor Area **24,0** m²
Location **Temuco, Chile**

Sizing Calculation Information

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

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

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5,6 K (L/s)	Time of Peak Coil Load	Zone L/(s·m²)
Zone 1	7,8	7,7	24,2 / 17,6	14,8 / 14,2	0,34	Mar 1600	28,05

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	3,4	17,7 / 21,9	0,07	673	0,000	0,000	116

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (m²)
Zone 1	7,7	Mar 1600	0,7	24,0

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m²)	Space L/(s·m²)
Zone 1							
2P 49 BOX CLINICO	1	3,0	Mar 1600	267	0,2	12,1	22,03
2P 50 BOX CLINICO	1	4,6	Mar 1600	407	0,5	11,9	34,16

Ventilation Sizing Summary for FC-49

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:48p. m.

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows

2. Space Ventilation Analysis

2.1 Zone: Zone 1

Zone Name / Space Name	Mult.	Floor Area (m²)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s·m²))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Uncorrected Outdoor Air (L/s)
Zone 1									
2P 49 BOX CLINICO	1	12,1	4,0	266,6	10,00	1,50	0,0	0,0	58,5
2P 50 BOX CLINICO	1	11,9	4,0	406,5	10,00	1,50	0,0	0,0	57,5
Totals (incl. Space Multipliers)				673,1					116,0

Zone Sizing Summary for FC-51

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

Air System Information

Air System Name **FC-51**
Equipment Class **TERM**
Air System Type **4P-FC**

Number of zones **1**
Floor Area **119,0** m²
Location **Temuco, Chile**

Sizing Calculation Information

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

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

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5,6 K (L/s)	Time of Peak Coil Load	Zone L/(s·m²)
Zone 1	18,7	18,0	24,3 / 18,1	15,4 / 14,8	0,80	Feb 1600	13,97

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	25,1	9,2 / 21,7	0,54	1663	0,000	0,000	1023

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (m²)
Zone 1	18,9	Mar 1700	0,9	119,0

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m²)	Space L/(s·m²)
Zone 1							
2P 51 SALA DE ESPERA	1	18,9	Mar 1700	1663	0,9	119,0	13,97

Ventilation Sizing Summary for FC-51

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:48p. m.

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows

2. Space Ventilation Analysis

2.1 Zone: Zone 1

Zone Name / Space Name	Mult.	Floor Area (m²)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s·m²))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Uncorrected Outdoor Air (L/s)
Zone 1									
2P 51 SALA DE ESPERA	1	119,0	148,8	1663,0	6,00	1,10	0,0	0,0	1023,4
Totals (incl. Space Multipliers)				1663,0					1023,4

Zone Sizing Summary for FC-52

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:48p. m

Air System Information

Air System Name **FC-52**
Equipment Class **TERM**
Air System Type **4P-FC**

Number of zones **1**
Floor Area **119,0** m²
Location **Temuco, Chile**

Sizing Calculation Information

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

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

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5,6 K (L/s)	Time of Peak Coil Load	Zone L/(s·m²)
Zone 1	18,7	18,0	24,3 / 18,1	15,4 / 14,8	0,80	Feb 1600	13,97

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	25,1	9,2 / 21,7	0,54	1663	0,000	0,000	1023

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (m²)
Zone 1	18,9	Mar 1700	0,9	119,0

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m²)	Space L/(s·m²)
Zone 1							
2P 51 SALA DE ESPERA	1	18,9	Mar 1700	1663	0,9	119,0	13,97

Ventilation Sizing Summary for FC-52

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:48p. m.

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows

2. Space Ventilation Analysis

2.1 Zone: Zone 1

Zone Name / Space Name	Mult.	Floor Area (m²)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s·m²))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Uncorrected Outdoor Air (L/s)
Zone 1									
2P 51 SALA DE ESPERA	1	119,0	148,8	1663,0	6,00	1,10	0,0	0,0	1023,4
Totals (incl. Space Multipliers)				1663,0					1023,4

Zone Sizing Summary for FC-53

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:48p. m

Air System Information

Air System Name **FC-53**
Equipment Class **TERM**
Air System Type **4P-FC**

Number of zones **1**
Floor Area **31,4** m²
Location **Temuco, Chile**

Sizing Calculation Information

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

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

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5,6 K (L/s)	Time of Peak Coil Load	Zone L/(s·m²)
Zone 1	1,6	1,3	24,9 / 18,3	14,4 / 13,8	0,07	Jan 1500	3,32

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	0,8	14,9 / 21,1	0,02	104	0,000	0,000	33

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (m²)
Zone 1	1,2	Jan 1900	0,0	31,4

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m²)	Space L/(s·m²)
Zone 1							
2P 52 SOME SATELITAL	1	0,5	Jan 1900	42	0,0	15,4	2,71
2P 53 TRAB CLIN GRUPAL	1	0,7	Jan 1900	62	0,0	16,0	3,90

Ventilation Sizing Summary for FC-53

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:48p. m.

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows

2. Space Ventilation Analysis

2.1 Zone: Zone 1

Zone Name / Space Name	Mult.	Floor Area (m²)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s·m²))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Uncorrected Outdoor Air (L/s)
Zone 1									
2P 52 SOME SATELITAL	1	15,4	1,5	41,7	3,00	0,40	0,0	0,0	10,8
2P 53 TRAB CLIN GRUPAL	1	16,0	5,3	62,5	3,00	0,40	0,0	0,0	22,4
Totals (incl. Space Multipliers)				104,2					33,2

Zone Sizing Summary for FC-54

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:48p. m

Air System Information

Air System Name **FC-54**
Equipment Class **TERM**
Air System Type **4P-FC**

Number of zones **1**
Floor Area **20,0** m²
Location **Temuco, Chile**

Sizing Calculation Information

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

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

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5,6 K (L/s)	Time of Peak Coil Load	Zone L/(s·m²)
Zone 1	1,6	1,6	24,5 / 17,7	15,7 / 14,5	0,07	Feb 1500	7,54

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	2,4	8,7 / 21,8	0,05	151	0,000	0,000	97

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (m²)
Zone 1	1,7	Mar 1200	0,1	20,0

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m²)	Space L/(s·m²)
Zone 1							
2P 54 BOX GINECOLOGICO	1	1,7	Mar 1200	151	0,1	20,0	7,54

Ventilation Sizing Summary for FC-54

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:48p. m.

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows

2. Space Ventilation Analysis

2.1 Zone: Zone 1

Zone Name / Space Name	Mult.	Floor Area (m²)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s·m²))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Uncorrected Outdoor Air (L/s)
Zone 1									
2P 54 BOX GINECOLOGICO	1	20,0	6,7	150,8	10,00	1,50	0,0	0,0	96,7
Totals (incl. Space Multipliers)				150,8					96,7

Zone Sizing Summary for FC-55

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:48p. m

Air System Information

Air System Name **FC-55**
Equipment Class **TERM**
Air System Type **4P-FC**

Number of zones **1**
Floor Area **13,6** m²
Location **Temuco, Chile**

Sizing Calculation Information

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

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

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5,6 K (L/s)	Time of Peak Coil Load	Zone L/(s·m²)
Zone 1	3,3	3,3	23,9 / 17,6	15,0 / 14,4	0,14	Mar 1200	22,84

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	1,9	17,1 / 22,2	0,04	311	0,000	0,000	66

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (m²)
Zone 1	3,5	Mar 1100	0,3	13,6

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m²)	Space L/(s·m²)
Zone 1							
2P 55 BOX CLINICO	1	3,5	Mar 1100	311	0,3	13,6	22,84

Ventilation Sizing Summary for FC-55

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:48p. m

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows

2. Space Ventilation Analysis

2.1 Zone: Zone 1

Zone Name / Space Name	Mult.	Floor Area (m²)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s·m²))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Uncorrected Outdoor Air (L/s)
Zone 1									
2P 55 BOX CLINICO	1	13,6	4,5	310,6	10,00	1,50	0,0	0,0	65,7
Totals (incl. Space Multipliers)				310,6					65,7

Zone Sizing Summary for FC-56

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:48p. m

Air System Information

Air System Name **FC-56**
Equipment Class **TERM**
Air System Type **4P-FC**

Number of zones **1**
Floor Area **36,3** m²
Location **Temuco, Chile**

Sizing Calculation Information

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

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

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5,6 K (L/s)	Time of Peak Coil Load	Zone L/(s·m²)
Zone 1	6,5	6,4	23,9 / 17,7	15,1 / 14,6	0,28	Feb 1200	16,86

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	4,7	15,6 / 22,1	0,10	612	0,000	0,000	175

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (m²)
Zone 1	7,0	Mar 1100	0,6	36,3

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m²)	Space L/(s·m²)
Zone 1							
2P 56 BOX CLINICO	2	2,3	Mar 1100	204	0,2	12,1	16,86
2P 57 BOX CLINICO	1	2,3	Mar 1100	204	0,2	12,1	16,86

Ventilation Sizing Summary for FC-56

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:48p. m

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows

2. Space Ventilation Analysis

2.1 Zone: Zone 1

Zone Name / Space Name	Mult.	Floor Area (m²)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s·m²))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Uncorrected Outdoor Air (L/s)
Zone 1									
2P 56 BOX CLINICO	2	12,1	4,0	203,9	10,00	1,50	0,0	0,0	58,5
2P 57 BOX CLINICO	1	12,1	4,0	203,9	10,00	1,50	0,0	0,0	58,5
Totals (incl. Space Multipliers)				611,8					175,5

Zone Sizing Summary for FC-58

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:48p. m

Air System Information

Air System Name **FC-58**
Equipment Class **TERM**
Air System Type **4P-FC**

Number of zones **1**
Floor Area **12,1** m²
Location **Temuco, Chile**

Sizing Calculation Information

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

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

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5,6 K (L/s)	Time of Peak Coil Load	Zone L/(s·m²)
Zone 1	2,1	2,1	23,8 / 17,6	15,1 / 14,5	0,09	Mar 1300	16,86

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	1,6	15,7 / 22,1	0,03	204	0,000	0,000	58

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (m²)
Zone 1	2,3	Mar 1100	0,2	12,1

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m²)	Space L/(s·m²)
Zone 1							
2P 58 BOX CLINICO	1	2,3	Mar 1100	204	0,2	12,1	16,86

Ventilation Sizing Summary for FC-58

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:48p. m

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows

2. Space Ventilation Analysis

2.1 Zone: Zone 1

Zone Name / Space Name	Mult.	Floor Area (m²)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s·m²))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Uncorrected Outdoor Air (L/s)
Zone 1									
2P 58 BOX CLINICO	1	12,1	4,0	203,9	10,00	1,50	0,0	0,0	58,5
Totals (incl. Space Multipliers)				203,9					58,5

Zone Sizing Summary for FC-59

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:48p. m

Air System Information

Air System Name **FC-59**
Equipment Class **TERM**
Air System Type **4P-FC**

Number of zones **1**
Floor Area **28,8** m²
Location **Temuco, Chile**

Sizing Calculation Information

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

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

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5,6 K (L/s)	Time of Peak Coil Load	Zone L/(s·m²)
Zone 1	5,0	4,8	24,3 / 17,5	14,4 / 13,8	0,21	Dec 0900	14,14

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	1,0	20,2 / 22,2	0,02	407	0,000	0,000	20

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (m²)
Zone 1	4,6	Dec 0900	0,5	28,8

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m²)	Space L/(s·m²)
Zone 1							
2P 59 ESTERILIZACION	1	4,6	Dec 0900	407	0,5	28,8	14,14

Ventilation Sizing Summary for FC-59

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:48p. m.

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows

2. Space Ventilation Analysis

2.1 Zone: Zone 1

Zone Name / Space Name	Mult.	Floor Area (m²)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s·m²))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Uncorrected Outdoor Air (L/s)
Zone 1									
2P 59 ESTERILIZACION	1	28,8	2,9	407,4	3,00	0,40	0,0	0,0	20,2
Totals (incl. Space Multipliers)				407,4					20,2

Zone Sizing Summary for FC-60

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

Air System Information

Air System Name **FC-60**
Equipment Class **TERM**
Air System Type **4P-FC**

Number of zones **1**
Floor Area **12,0** m²
Location **Temuco, Chile**

Sizing Calculation Information

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

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

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5,6 K (L/s)	Time of Peak Coil Load	Zone L/(s·m ²)
Zone 1	1,8	1,8	24,2 / 18,1	15,9 / 15,1	0,08	Dec 1400	14,86

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	1,6	14,8 / 22,1	0,03	178	0,000	0,000	58

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (m ²)
Zone 1	2,0	Dec 0900	0,2	12,0

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m ²)	Space L/(s·m ²)
Zone 1							
2P 60 BOX PSICOLOGO	1	2,0	Dec 0900	178	0,2	12,0	14,86

Ventilation Sizing Summary for FC-60

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:48p. m.

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows

2. Space Ventilation Analysis

2.1 Zone: Zone 1

Zone Name / Space Name	Mult.	Floor Area (m²)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s·m²))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Uncorrected Outdoor Air (L/s)
Zone 1									
2P 60 BOX PSICOLOGO	1	12,0	4,0	178,3	10,00	1,50	0,0	0,0	58,0
Totals (incl. Space Multipliers)				178,3					58,0

Zone Sizing Summary for FC-61

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

Air System Information

Air System Name **FC-61**
Equipment Class **TERM**
Air System Type **4P-FC**

Number of zones **1**
Floor Area **24,0** m²
Location **Temuco, Chile**

Sizing Calculation Information

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

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

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5,6 K (L/s)	Time of Peak Coil Load	Zone L/(s·m²)
Zone 1	5,5	5,3	23,1 / 17,4	14,9 / 14,3	0,24	Jan 1000	22,35

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	3,4	16,9 / 22,2	0,07	536	0,000	0,000	116

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (m²)
Zone 1	6,0	Dec 0900	0,7	24,0

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m²)	Space L/(s·m²)
Zone 1							
2P 61 BOX CLINICO	1	2,0	Dec 0900	178	0,2	12,0	14,86
2P 62 BOX CLINICO	1	4,1	Jan 1000	358	0,5	12,0	29,84

Ventilation Sizing Summary for FC-61

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:48p. m.

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows

2. Space Ventilation Analysis

2.1 Zone: Zone 1

Zone Name / Space Name	Mult.	Floor Area (m²)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s·m²))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Uncorrected Outdoor Air (L/s)
Zone 1									
2P 61 BOX CLINICO	1	12,0	4,0	178,3	10,00	1,50	0,0	0,0	58,0
2P 62 BOX CLINICO	1	12,0	4,0	358,1	10,00	1,50	0,0	0,0	58,0
Totals (incl. Space Multipliers)				536,4					116,0

Zone Sizing Summary for FC-63

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:48p. m

Air System Information

Air System Name **FC-63**
Equipment Class **TERM**
Air System Type **4P-FC**

Number of zones **1**
Floor Area **24,2** m²
Location **Temuco, Chile**

Sizing Calculation Information

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

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

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5,6 K (L/s)	Time of Peak Coil Load	Zone L/(s·m²)
Zone 1	7,4	7,2	24,2 / 17,8	15,0 / 14,4	0,32	Dec 1700	26,67

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	3,6	17,6 / 22,2	0,08	645	0,000	0,000	117

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (m²)
Zone 1	7,2	Dec 1700	0,8	24,2

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m²)	Space L/(s·m²)
Zone 1							
3P 63 BOX CLINICO	1	4,8	Jan 1700	425	0,5	12,0	35,38
3P 64 BOX CLINICO	1	2,5	Dec 1800	221	0,3	12,2	18,10

Ventilation Sizing Summary for FC-63

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:48p. m.

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows

2. Space Ventilation Analysis

2.1 Zone: Zone 1

Zone Name / Space Name	Mult.	Floor Area (m²)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s·m²))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Uncorrected Outdoor Air (L/s)
Zone 1									
3P 63 BOX CLINICO	1	12,0	4,0	424,6	10,00	1,50	0,0	0,0	58,0
3P 64 BOX CLINICO	1	12,2	4,1	220,8	10,00	1,50	0,0	0,0	59,0
Totals (incl. Space Multipliers)				645,3					117,0

Zone Sizing Summary for FC-65

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:48p. m

Air System Information

Air System Name **FC-65**
Equipment Class **TERM**
Air System Type **4P-FC**

Number of zones **1**
Floor Area **24,4** m²
Location **Temuco, Chile**

Sizing Calculation Information

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

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

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5,6 K (L/s)	Time of Peak Coil Load	Zone L/(s·m²)
Zone 1	4,8	4,7	23,8 / 17,7	15,0 / 14,4	0,21	Dec 1800	18,10

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	3,3	16,0 / 22,2	0,07	442	0,000	0,000	118

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (m²)
Zone 1	5,0	Dec 1800	0,5	24,4

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m²)	Space L/(s·m²)
Zone 1							
3P 65 BOX CLINICO	1	2,5	Dec 1800	221	0,3	12,2	18,10
3P 66 BOX CLINICO	1	2,5	Dec 1800	221	0,3	12,2	18,10

Ventilation Sizing Summary for FC-65

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:48p. m.

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows

2. Space Ventilation Analysis

2.1 Zone: Zone 1

Zone Name / Space Name	Mult.	Floor Area (m²)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s·m²))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Uncorrected Outdoor Air (L/s)
Zone 1									
3P 65 BOX CLINICO	1	12,2	4,1	220,8	10,00	1,50	0,0	0,0	59,0
3P 66 BOX CLINICO	1	12,2	4,1	220,8	10,00	1,50	0,0	0,0	59,0
Totals (incl. Space Multipliers)				441,5					117,9

Zone Sizing Summary for FC-67

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:48p. m

Air System Information

Air System Name **FC-67**
Equipment Class **TERM**
Air System Type **4P-FC**

Number of zones **1**
Floor Area **24,2** m²
Location **Temuco, Chile**

Sizing Calculation Information

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

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

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5,6 K (L/s)	Time of Peak Coil Load	Zone L/(s·m²)
Zone 1	5,0	4,8	24,0 / 17,7	14,9 / 14,3	0,22	Dec 1700	18,21

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	3,3	16,0 / 22,2	0,07	441	0,000	0,000	117

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (m²)
Zone 1	5,0	Dec 1800	0,5	24,2

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m²)	Space L/(s·m²)
Zone 1							
3P 67 BOX CLINICO	1	2,5	Dec 1800	220	0,3	12,0	18,32
3P 68 BOX CLINICO	1	2,5	Dec 1800	221	0,3	12,2	18,10

Ventilation Sizing Summary for FC-67

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:48p. m.

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows

2. Space Ventilation Analysis

2.1 Zone: Zone 1

Zone Name / Space Name	Mult.	Floor Area (m²)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s·m²))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Uncorrected Outdoor Air (L/s)
Zone 1									
3P 67 BOX CLINICO	1	12,0	4,0	219,9	10,00	1,50	0,0	0,0	58,0
3P 68 BOX CLINICO	1	12,2	4,1	220,8	10,00	1,50	0,0	0,0	59,0
Totals (incl. Space Multipliers)				440,7					117,0

Zone Sizing Summary for FC-69

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:48p. m

Air System Information

Air System Name **FC-69**
Equipment Class **TERM**
Air System Type **4P-FC**

Number of zones **1**
Floor Area **29,8** m²
Location **Temuco, Chile**

Sizing Calculation Information

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

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

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5,6 K (L/s)	Time of Peak Coil Load	Zone L/(s·m²)
Zone 1	8,5	8,3	24,4 / 17,8	15,0 / 14,4	0,36	Feb 1600	24,55

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	4,3	17,3 / 22,3	0,09	732	0,000	0,000	144

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (m²)
Zone 1	8,3	Mar 1600	0,9	29,8

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m²)	Space L/(s·m²)
Zone 1							
3P 69 BOX DENTAL	1	3,0	Mar 1600	260	0,3	14,9	17,48
3P 70 BOX DENTAL	1	5,4	Mar 1600	471	0,6	14,9	31,63

Ventilation Sizing Summary for FC-69

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:48p. m.

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows

2. Space Ventilation Analysis

2.1 Zone: Zone 1

Zone Name / Space Name	Mult.	Floor Area (m²)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s·m²))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Uncorrected Outdoor Air (L/s)
Zone 1									
3P 69 BOX DENTAL	1	14,9	5,0	260,4	10,00	1,50	0,0	0,0	72,0
3P 70 BOX DENTAL	1	14,9	5,0	471,3	10,00	1,50	0,0	0,0	72,0
Totals (incl. Space Multipliers)				731,7					144,0

Zone Sizing Summary for FC-71

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:48p. m

Air System Information

Air System Name **FC-71**
Equipment Class **TERM**
Air System Type **4P-FC**

Number of zones **1**
Floor Area **30,8** m²
Location **Temuco, Chile**

Sizing Calculation Information

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

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

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5,6 K (L/s)	Time of Peak Coil Load	Zone L/(s·m²)
Zone 1	1,7	1,4	24,7 / 18,2	14,4 / 13,8	0,07	Dec 1500	3,79

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	0,9	15,6 / 21,7	0,02	117	0,000	0,000	32

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (m²)
Zone 1	1,3	Dec 1700	0,1	30,8

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m²)	Space L/(s·m²)
Zone 1							
3P 71 TRABAJ CLINIC GRUP	1	0,8	Dec 1800	67	0,1	15,4	4,38
3P 72 SOME SATELITE	1	0,6	Dec 1700	49	0,1	15,4	3,21

Ventilation Sizing Summary for FC-71

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:48p. m.

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows

2. Space Ventilation Analysis

2.1 Zone: Zone 1

Zone Name / Space Name	Mult.	Floor Area (m²)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s·m²))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Uncorrected Outdoor Air (L/s)
Zone 1									
3P 71 TRABAJ CLINIC GRUP	1	15,4	5,1	67,4	3,00	0,40	0,0	0,0	21,6
3P 72 SOME SATELITE	1	15,4	1,5	49,4	3,00	0,40	0,0	0,0	10,8
Totals (incl. Space Multipliers)				116,8					32,3

Zone Sizing Summary for FC-72

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:48p. m

Air System Information

Air System Name **FC-72**
Equipment Class **TERM**
Air System Type **4P-FC**

Number of zones **1**
Floor Area **100,0** m²
Location **Temuco, Chile**

Sizing Calculation Information

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

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

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5,6 K (L/s)	Time of Peak Coil Load	Zone L/(s·m²)
Zone 1	19,7	17,6	23,8 / 17,8	14,7 / 14,1	0,85	Feb 1700	15,99

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	21,7	10,6 / 21,9	0,47	1599	0,000	0,000	860

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (m²)
Zone 1	18,2	Mar 1600	1,6	100,0

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m²)	Space L/(s·m²)
Zone 1							
3P 73 SALA DE ESPERA	1	18,2	Mar 1600	1599	1,6	100,0	15,99

Ventilation Sizing Summary for FC-72

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:48p. m.

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows

2. Space Ventilation Analysis

2.1 Zone: Zone 1

Zone Name / Space Name	Mult.	Floor Area (m²)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s·m²))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Uncorrected Outdoor Air (L/s)
Zone 1									
3P 73 SALA DE ESPERA	1	100,0	125,0	1599,0	6,00	1,10	0,0	0,0	860,0
Totals (incl. Space Multipliers)				1599,0					860,0

Zone Sizing Summary for FC-73

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:48p. m

Air System Information

Air System Name **FC-73**
Equipment Class **TERM**
Air System Type **4P-FC**

Number of zones **1**
Floor Area **100,0** m²
Location **Temuco, Chile**

Sizing Calculation Information

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

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

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5,6 K (L/s)	Time of Peak Coil Load	Zone L/(s·m²)
Zone 1	19,7	17,6	23,8 / 17,8	14,7 / 14,1	0,85	Feb 1700	15,99

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	21,7	10,6 / 21,9	0,47	1599	0,000	0,000	860

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (m²)
Zone 1	18,2	Mar 1600	1,6	100,0

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m²)	Space L/(s·m²)
Zone 1							
3P 73 SALA DE ESPERA	1	18,2	Mar 1600	1599	1,6	100,0	15,99

Ventilation Sizing Summary for FC-73

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:48p. m

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows

2. Space Ventilation Analysis

2.1 Zone: Zone 1

Zone Name / Space Name	Mult.	Floor Area (m²)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s·m²))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Uncorrected Outdoor Air (L/s)
Zone 1									
3P 73 SALA DE ESPERA	1	100,0	125,0	1599,0	6,00	1,10	0,0	0,0	860,0
Totals (incl. Space Multipliers)				1599,0					860,0

Zone Sizing Summary for FC-74

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:48p. m

Air System Information

Air System Name **FC-74**
Equipment Class **TERM**
Air System Type **4P-FC**

Number of zones **1**
Floor Area **24,0** m²
Location **Temuco, Chile**

Sizing Calculation Information

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

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

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5,6 K (L/s)	Time of Peak Coil Load	Zone L/(s·m²)
Zone 1	5,9	5,8	24,1 / 17,9	15,2 / 14,6	0,26	Dec 1700	22,57

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	3,5	17,0 / 22,3	0,08	542	0,000	0,000	116

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (m²)
Zone 1	5,8	Dec 1700	0,8	24,0

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m²)	Space L/(s·m²)
Zone 1							
3P 74 BOX CLINICO	1	4,1	Dec 1800	364	0,5	12,0	30,30
3P 75 BOX CLINICO	1	2,0	Dec 0900	178	0,3	12,0	14,84

Ventilation Sizing Summary for FC-74

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:48p. m

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows

2. Space Ventilation Analysis

2.1 Zone: Zone 1

Zone Name / Space Name	Mult.	Floor Area (m²)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s·m²))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Uncorrected Outdoor Air (L/s)
Zone 1									
3P 74 BOX CLINICO	1	12,0	4,0	363,6	10,00	1,50	0,0	0,0	58,0
3P 75 BOX CLINICO	1	12,0	4,0	178,1	10,00	1,50	0,0	0,0	58,0
Totals (incl. Space Multipliers)				541,7					116,0

Zone Sizing Summary for FC-76

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:48p. m

Air System Information

Air System Name **FC-76**
Equipment Class **TERM**
Air System Type **4P-FC**

Number of zones **1**
Floor Area **12,0** m²
Location **Temuco, Chile**

Sizing Calculation Information

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

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

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5,6 K (L/s)	Time of Peak Coil Load	Zone L/(s·m²)
Zone 1	1,8	1,8	24,4 / 18,1	15,9 / 15,2	0,08	Dec 1500	14,84

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	1,6	14,9 / 22,4	0,03	178	0,000	0,000	58

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (m²)
Zone 1	2,0	Dec 0900	0,3	12,0

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m²)	Space L/(s·m²)
Zone 1							
3P 76 BOX PSICOLOGO	1	2,0	Dec 0900	178	0,3	12,0	14,84

Ventilation Sizing Summary for FC-76

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:48p. m.

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows

2. Space Ventilation Analysis

2.1 Zone: Zone 1

Zone Name / Space Name	Mult.	Floor Area (m²)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s·m²))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Uncorrected Outdoor Air (L/s)
Zone 1									
3P 76 BOX PSICOLOGO	1	12,0	4,0	178,1	10,00	1,50	0,0	0,0	58,0
Totals (incl. Space Multipliers)				178,1					58,0

Zone Sizing Summary for FC-77

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

Air System Information

Air System Name **FC-77**
Equipment Class **TERM**
Air System Type **4P-FC**

Number of zones **1**
Floor Area **17,8** m²
Location **Temuco, Chile**

Sizing Calculation Information

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

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

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5,6 K (L/s)	Time of Peak Coil Load	Zone L/(s·m ²)
Zone 1	3,1	3,1	24,3 / 18,1	15,9 / 15,2	0,13	Dec 1400	17,15

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	2,4	15,5 / 22,1	0,05	305	0,000	0,000	86

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (m ²)
Zone 1	3,5	Dec 0900	0,4	17,8

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m ²)	Space L/(s·m ²)
Zone 1							
3P 77 BOX GINECOLOGICO	1	3,5	Dec 0900	305	0,4	17,8	17,15

Ventilation Sizing Summary for FC-77

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:48p. m.

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows

2. Space Ventilation Analysis

2.1 Zone: Zone 1

Zone Name / Space Name	Mult.	Floor Area (m²)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s·m²))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Uncorrected Outdoor Air (L/s)
Zone 1									
3P 77 BOX GINECOLOGICO	1	17,8	5,9	305,2	10,00	1,50	0,0	0,0	86,0
Totals (incl. Space Multipliers)				305,2					86,0

Zone Sizing Summary for FC-78

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

Air System Information

Air System Name **FC-78**
Equipment Class **TERM**
Air System Type **4P-FC**

Number of zones **1**
Floor Area **50,0** m²
Location **Temuco, Chile**

Sizing Calculation Information

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

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

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5,6 K (L/s)	Time of Peak Coil Load	Zone L/(s·m ²)
Zone 1	13,9	12,2	24,4 / 18,2	15,0 / 14,4	0,60	Feb 1600	21,62

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	5,9	17,4 / 21,8	0,13	1081	0,000	0,000	203

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (m ²)
Zone 1	12,3	Mar 1600	1,2	50,0

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m ²)	Space L/(s·m ²)
Zone 1							
3P 78 CAFETERIA	1	12,3	Mar 1600	1081	1,2	50,0	21,62

Ventilation Sizing Summary for FC-78

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:48p. m.

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows

2. Space Ventilation Analysis

2.1 Zone: Zone 1

Zone Name / Space Name	Mult.	Floor Area (m²)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s·m²))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Uncorrected Outdoor Air (L/s)
Zone 1									
3P 78 CAFETERIA	1	50,0	41,7	1081,2	3,80	0,90	0,0	0,0	203,3
Totals (incl. Space Multipliers)				1081,2					203,3

Zone Sizing Summary for FC-79

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:48p. m

Air System Information

Air System Name **FC-79**
Equipment Class **TERM**
Air System Type **4P-FC**

Number of zones **1**
Floor Area **8,1** m²
Location **Temuco, Chile**

Sizing Calculation Information

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

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

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5,6 K (L/s)	Time of Peak Coil Load	Zone L/(s·m²)
Zone 1	1,4	1,3	24,5 / 17,7	14,8 / 14,1	0,06	Mar 1100	13,94

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	0,3	20,2 / 22,3	0,01	113	0,000	0,000	6

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (m²)
Zone 1	1,3	Mar 1200	0,1	8,1

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m²)	Space L/(s·m²)
Zone 1							
3P 79 SALA LAC FUNC	1	1,3	Mar 1200	113	0,1	8,1	13,94

Ventilation Sizing Summary for FC-79

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:48p. m.

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows

2. Space Ventilation Analysis

2.1 Zone: Zone 1

Zone Name / Space Name	Mult.	Floor Area (m²)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s·m²))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Uncorrected Outdoor Air (L/s)
Zone 1									
3P 79 SALA LAC FUNC	1	8,1	0,8	112,9	3,00	0,40	0,0	0,0	5,7
Totals (incl. Space Multipliers)				112,9					5,7

Zone Sizing Summary for FC-80

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:48p. m

Air System Information

Air System Name **FC-80**
Equipment Class **TERM**
Air System Type **4P-FC**

Number of zones **1**
Floor Area **19,8** m²
Location **Temuco, Chile**

Sizing Calculation Information

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

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

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5,6 K (L/s)	Time of Peak Coil Load	Zone L/(s·m²)
Zone 1	2,8	2,7	24,3 / 17,6	14,5 / 13,9	0,12	Feb 1200	11,75

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	0,6	19,9 / 22,1	0,01	233	0,000	0,000	14

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (m²)
Zone 1	2,6	Mar 1200	0,3	19,8

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m²)	Space L/(s·m²)
Zone 1							
3P 80 OFICINA TEC SIGGES	1	2,6	Mar 1200	233	0,3	19,8	11,75

Ventilation Sizing Summary for FC-80

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:48p. m.

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows

2. Space Ventilation Analysis

2.1 Zone: Zone 1

Zone Name / Space Name	Mult.	Floor Area (m²)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s·m²))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Uncorrected Outdoor Air (L/s)
Zone 1									
3P 80 OFICINA TEC SIGGES	1	19,8	2,0	232,7	3,00	0,40	0,0	0,0	13,9
Totals (incl. Space Multipliers)				232,7					13,9

Zone Sizing Summary for FC-81

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:48p. m

Air System Information

Air System Name **FC-81**
Equipment Class **TERM**
Air System Type **4P-FC**

Number of zones **1**
Floor Area **23,0** m²
Location **Temuco, Chile**

Sizing Calculation Information

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

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

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5,6 K (L/s)	Time of Peak Coil Load	Zone L/(s·m²)
Zone 1	3,4	3,3	24,3 / 17,6	14,6 / 14,0	0,15	Feb 1200	12,23

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	0,7	20,0 / 22,1	0,02	281	0,000	0,000	16

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (m²)
Zone 1	3,2	Mar 1200	0,3	23,0

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m²)	Space L/(s·m²)
Zone 1							
3P 81 SALA INFORMES PRO	1	3,2	Mar 1200	281	0,3	23,0	12,23

Ventilation Sizing Summary for FC-81

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:48p. m.

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows

2. Space Ventilation Analysis

2.1 Zone: Zone 1

Zone Name / Space Name	Mult.	Floor Area (m²)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s·m²))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Uncorrected Outdoor Air (L/s)
Zone 1									
3P 81 SALA INFORMES PRO	1	23,0	2,3	281,3	3,00	0,40	0,0	0,0	16,1
Totals (incl. Space Multipliers)				281,3					16,1

Zone Sizing Summary for FC-83

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:48p. m

Air System Information

Air System Name **FC-83**
Equipment Class **TERM**
Air System Type **4P-FC**

Number of zones **1**
Floor Area **6,6** m²
Location **Temuco, Chile**

Sizing Calculation Information

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

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

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5,6 K (L/s)	Time of Peak Coil Load	Zone L/(s·m²)
Zone 1	2,6	2,5	24,4 / 17,6	14,8 / 14,1	0,11	Mar 1100	33,21

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	0,4	20,4 / 21,7	0,01	219	0,000	0,000	5

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (m²)
Zone 1	2,5	Mar 1100	0,3	6,6

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m²)	Space L/(s·m²)
Zone 1							
3P 83 SALA TIC	1	2,5	Mar 1100	219	0,3	6,6	33,21

Ventilation Sizing Summary for FC-83

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:48p. m

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows

2. Space Ventilation Analysis

2.1 Zone: Zone 1

Zone Name / Space Name	Mult.	Floor Area (m²)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s·m²))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Uncorrected Outdoor Air (L/s)
Zone 1									
3P 83 SALA TIC	1	6,6	0,7	219,2	3,00	0,40	0,0	0,0	4,6
Totals (incl. Space Multipliers)				219,2					4,6

Zone Sizing Summary for FC-84

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:48p. m

Air System Information

Air System Name **FC-84**
Equipment Class **TERM**
Air System Type **4P-FC**

Number of zones **1**
Floor Area **11,7** m²
Location **Temuco, Chile**

Sizing Calculation Information

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

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

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5,6 K (L/s)	Time of Peak Coil Load	Zone L/(s·m²)
Zone 1	2,0	2,0	24,3 / 17,5	14,4 / 13,8	0,09	Dec 0900	14,21

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	0,4	19,9 / 22,0	0,01	166	0,000	0,000	8

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (m²)
Zone 1	1,9	Dec 0900	0,3	11,7

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m²)	Space L/(s·m²)
Zone 1							
3P 84 OF LINEA 800	1	1,9	Dec 0900	166	0,3	11,7	14,21

Ventilation Sizing Summary for FC-84

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:48p. m

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows

2. Space Ventilation Analysis

2.1 Zone: Zone 1

Zone Name / Space Name	Mult.	Floor Area (m²)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s·m²))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Uncorrected Outdoor Air (L/s)
Zone 1									
3P 84 OF LINEA 800	1	11,7	1,2	166,3	3,00	0,40	0,0	0,0	8,2
Totals (incl. Space Multipliers)				166,3					8,2

Zone Sizing Summary for FC-85

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:48p. m

Air System Information

Air System Name **FC-85**
Equipment Class **TERM**
Air System Type **4P-FC**

Number of zones **1**
Floor Area **9,8** m²
Location **Temuco, Chile**

Sizing Calculation Information

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

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

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5,6 K (L/s)	Time of Peak Coil Load	Zone L/(s·m²)
Zone 1	2,1	2,1	24,5 / 17,7	14,8 / 14,2	0,09	Dec 0900	18,10

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	0,5	20,5 / 22,6	0,01	177	0,000	0,000	7

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (m²)
Zone 1	2,0	Dec 0900	0,3	9,8

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m²)	Space L/(s·m²)
Zone 1							
3P 85 SECRETARIA	1	2,0	Dec 0900	177	0,3	9,8	18,10

Ventilation Sizing Summary for FC-85

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:48p. m

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows

2. Space Ventilation Analysis

2.1 Zone: Zone 1

Zone Name / Space Name	Mult.	Floor Area (m²)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s·m²))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Uncorrected Outdoor Air (L/s)
Zone 1									
3P 85 SECRETARIA	1	9,8	1,0	177,4	3,00	0,40	0,0	0,0	6,9
Totals (incl. Space Multipliers)				177,4					6,9

Zone Sizing Summary for FC-86

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:48p. m

Air System Information

Air System Name **FC-86**
Equipment Class **TERM**
Air System Type **4P-FC**

Number of zones **1**
Floor Area **11,9** m²
Location **Temuco, Chile**

Sizing Calculation Information

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

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

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5,6 K (L/s)	Time of Peak Coil Load	Zone L/(s·m²)
Zone 1	2,5	2,5	24,5 / 17,7	14,8 / 14,1	0,11	Dec 0900	17,91

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	0,5	20,0 / 21,8	0,01	213	0,000	0,000	8

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (m²)
Zone 1	2,4	Dec 0900	0,3	11,9

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m²)	Space L/(s·m²)
Zone 1							
3P 86 SUBDIRECTOR ADM	1	2,4	Dec 0900	213	0,3	11,9	17,91

Ventilation Sizing Summary for FC-86

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:48p. m.

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows

2. Space Ventilation Analysis

2.1 Zone: Zone 1

Zone Name / Space Name	Mult.	Floor Area (m²)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s·m²))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Uncorrected Outdoor Air (L/s)
Zone 1									
3P 86 SUBDIRECTOR ADM	1	11,9	1,2	213,1	3,00	0,40	0,0	0,0	8,3
Totals (incl. Space Multipliers)				213,1					8,3

Zone Sizing Summary for FC-87

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

Air System Information

Air System Name **FC-87**
Equipment Class **TERM**
Air System Type **4P-FC**

Number of zones **1**
Floor Area **14,4** m²
Location **Temuco, Chile**

Sizing Calculation Information

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

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

Terminal Unit Sizing Data - Cooling

Zone Name	Total Coil Load (kW)	Sens Coil Load (kW)	Coil Entering DB / WB (°C)	Coil Leaving DB / WB (°C)	Water Flow @ 5,6 K (L/s)	Time of Peak Coil Load	Zone L/(s·m ²)
Zone 1	4,5	4,4	24,4 / 17,6	14,8 / 14,1	0,19	Jan 1000	26,48

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	0,8	20,5 / 22,3	0,02	381	0,000	0,000	10

Zone Peak Sensible Loads

Zone Name	Zone Cooling Sensible (kW)	Time of Peak Sensible Cooling Load	Zone Heating Load (kW)	Zone Floor Area (m ²)
Zone 1	4,3	Dec 1000	0,6	14,4

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m ²)	Space L/(s·m ²)
Zone 1							
3P 87 OF DIRECTOR	1	4,3	Dec 1000	381	0,6	14,4	26,48

Ventilation Sizing Summary for FC-87

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:48p. m.

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows

2. Space Ventilation Analysis

2.1 Zone: Zone 1

Zone Name / Space Name	Mult.	Floor Area (m²)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s·m²))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Uncorrected Outdoor Air (L/s)
Zone 1									
3P 87 OF DIRECTOR	1	14,4	1,4	381,4	3,00	0,40	0,0	0,0	10,1
Totals (incl. Space Multipliers)				381,4					10,1

Zone Sizing Summary for UI-05

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

Air System Information

Air System Name UI-05
Equipment Class SPLT AHU
Air System Type SZCAV

Number of zones 1
Floor Area 11,2 m²
Location Temuco, Chile

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·m ²)	Reheat Coil Load (kW)	Reheat Coil Water L/s @ 11,1 K	Zone Htg Unit Coil Load (kW)	Zone Htg Unit Water L/s @ 11,1 K	Mixing Box Fan Airflow (L/s)
Zone 1	211	211	18,81	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 (m ²)
Zone 1	2,4	Dec 1800	0,2	11,2

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m ²)	Space L/(s·m ²)
Zone 1							
1P 05 SALA GUARDIAS Y CH	1	2,4	Dec 1800	211	0,2	11,2	18,81

Ventilation Sizing Summary for UI-05

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:48p. m.

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows
Design Ventilation Airflow Rate 16 L/s

2. Space Ventilation Analysis

Zone Name / Space Name	Mult.	Floor Area (m²)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s·m²))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Uncorrected Outdoor Air (L/s)
Zone 1									
1P 05 SALA GUARDIAS Y CH	1	11,2	3,7	210,6	3,00	0,40	0,0	0,0	15,7
Totals (incl. Space Multipliers)				210,6					15,7

Zone Sizing Summary for UI-06.

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:48p. m

Air System Information

Air System Name UI-06.
Equipment Class SPLT AHU
Air System Type SZCAV

Number of zones 1
Floor Area 7,8 m²
Location Temuco, Chile

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·m ²)	Reheat Coil Load (kW)	Reheat Coil Water L/s @ 11,1 K	Zone Htg Unit Coil Load (kW)	Zone Htg Unit Water L/s @ 11,1 K	Mixing Box Fan Airflow (L/s)
Zone 1	17	17	2,19	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 (m ²)
Zone 1	0,2	Jan 1900	0,0	7,8

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m ²)	Space L/(s·m ²)
Zone 1							
1P 06 BODEGA FARMACOS SA	1	0,2	Jan 1900	17	0,0	7,8	2,19

Ventilation Sizing Summary for UI-06.

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:48p. m.

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows
Design Ventilation Airflow Rate 12 L/s

2. Space Ventilation Analysis

Zone Name / Space Name	Mult.	Floor Area (m²)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s·m²))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Uncorrected Outdoor Air (L/s)
Zone 1									
1P 06 BODEGA FARMACOS SA	1	7,8	0,0	17,1	0,00	1,50	0,0	0,0	11,7
Totals (incl. Space Multipliers)				17,1					11,7

Zone Sizing Summary for UI-25

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:48p. m

Air System Information

Air System Name UI-25
Equipment Class SPLT AHU
Air System Type SZCAV

Number of zones 1
Floor Area 19,8 m²
Location Temuco, Chile

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·m ²)	Reheat Coil Load (kW)	Reheat Coil Water L/s @ 11,1 K	Zone Htg Unit Coil Load (kW)	Zone Htg Unit Water L/s @ 11,1 K	Mixing Box Fan Airflow (L/s)
Zone 1	251	251	12,68	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 (m ²)
Zone 1	2,9	Mar 1200	0,2	19,8

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m ²)	Space L/(s·m ²)
Zone 1							
1P 25 ACT VIDA DIARIA	1	2,9	Mar 1200	251	0,2	19,8	12,68

Ventilation Sizing Summary for UI-25

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
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1. Summary

Ventilation Sizing Method Sum of Space OA Airflows
Design Ventilation Airflow Rate 50 L/s

2. Space Ventilation Analysis

Zone Name / Space Name	Mult.	Floor Area (m²)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s·m²))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Uncorrected Outdoor Air (L/s)
Zone 1									
1P 25 ACT VIDA DIARIA	1	19,8	6,6	251,0	3,00	1,50	0,0	0,0	49,5
Totals (incl. Space Multipliers)				251,0					49,5

Zone Sizing Summary for UI-29

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

Air System Information

Air System Name UI-29
Equipment Class SPLT AHU
Air System Type SZCAV

Number of zones 1
Floor Area 30,1 m²
Location Temuco, Chile

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·m ²)	Reheat Coil Load (kW)	Reheat Coil Water L/s @ 11,1 K	Zone Htg Unit Coil Load (kW)	Zone Htg Unit Water L/s @ 11,1 K	Mixing Box Fan Airflow (L/s)
Zone 1	67	67	2,24	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 (m ²)
Zone 1	0,8	Dec 1900	0,2	30,1

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m ²)	Space L/(s·m ²)
Zone 1							
1P 29 BODEGA PNAC	1	0,8	Dec 1900	67	0,2	30,1	2,24

Ventilation Sizing Summary for UI-29

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
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1. Summary

Ventilation Sizing Method Sum of Space OA Airflows
Design Ventilation Airflow Rate 35 L/s

2. Space Ventilation Analysis

Zone Name / Space Name	Mult.	Floor Area (m²)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s·m²))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Uncorrected Outdoor Air (L/s)
Zone 1									
1P 29 BODEGA PNAC	1	30,1	0,0	67,5	0,00	0,00	35,0	0,0	35,0
Totals (incl. Space Multipliers)				67,5					35,0

Zone Sizing Summary for UI-30

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:48p. m

Air System Information

Air System Name UI-30
Equipment Class SPLT AHU
Air System Type SZCAV

Number of zones 1
Floor Area 55,7 m²
Location Temuco, Chile

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·m ²)	Reheat Coil Load (kW)	Reheat Coil Water L/s @ 11,1 K	Zone Htg Unit Coil Load (kW)	Zone Htg Unit Water L/s @ 11,1 K	Mixing Box Fan Airflow (L/s)
Zone 1	125	125	2,24	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 (m ²)
Zone 1	1,4	Dec 1900	0,3	55,7

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m ²)	Space L/(s·m ²)
Zone 1							
1P 30 BODEGA FARMACIA	1	1,4	Dec 1900	125	0,3	55,7	2,24

Ventilation Sizing Summary for UI-30

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:48p. m.

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows
Design Ventilation Airflow Rate 35 L/s

2. Space Ventilation Analysis

Zone Name / Space Name	Mult.	Floor Area (m²)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s·m²))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Uncorrected Outdoor Air (L/s)
Zone 1									
1P 30 BODEGA FARMACIA	1	55,7	0,0	124,9	0,00	0,00	35,0	0,0	35,0
Totals (incl. Space Multipliers)				124,9					35,0

Zone Sizing Summary for UI-82

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:48p. m

Air System Information

Air System Name UI-82
Equipment Class SPLT AHU
Air System Type SZCAV

Number of zones 1
Floor Area 4,2 m²
Location Temuco, Chile

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·m ²)	Reheat Coil Load (kW)	Reheat Coil Water L/s @ 11,1 K	Zone Htg Unit Coil Load (kW)	Zone Htg Unit Water L/s @ 11,1 K	Mixing Box Fan Airflow (L/s)
Zone 1	13	13	3,21	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 (m ²)
Zone 1	0,2	Dec 1700	0,0	4,2

Space Loads and Airflows

Zone Name / Space Name	Mult.	Cooling Sensible (kW)	Time of Peak Sensible Load	Air Flow (L/s)	Heating Load (kW)	Floor Area (m ²)	Space L/(s·m ²)
Zone 1							
3P 82 SALA TIC	1	0,2	Dec 1700	13	0,0	4,2	3,21

Ventilation Sizing Summary for UI-82

Project Name: CESFAM VILLA ALEGRE
Prepared by: LBN CONSULTING

11-13-2020
01:48p. m

1. Summary

Ventilation Sizing Method Sum of Space OA Airflows
Design Ventilation Airflow Rate 3 L/s

2. Space Ventilation Analysis

Zone Name / Space Name	Mult.	Floor Area (m²)	Maximum Occupants	Maximum Supply Air (L/s)	Required Outdoor Air (L/s/person)	Required Outdoor Air (L/(s·m²))	Required Outdoor Air (L/s)	Required Outdoor Air (% of supply)	Uncorrected Outdoor Air (L/s)
Zone 1									
3P 82 SALA TIC	1	4,2	0,4	13,5	3,00	0,40	0,0	0,0	2,9
Totals (incl. Space Multipliers)				13,5					2,9


