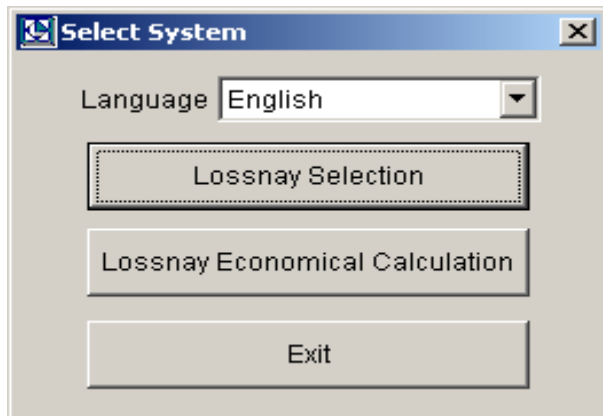


# Lossnay Selection & Lossnay Economical calculation

## **1.What is Lossnay Selection & Lossnay Economical calculation**

This program can be used to select the best model based on the relationship between the heat exchange ratio and static loss characteristics for processed air volume performance of each Lossnay model and calculate the heat recovery effect and economy. Once the program has been started, the menu shown below will appear. Select the program to be started from this menu.



### **Lossnay Selection**

Lossnay selection candidates are displayed based on required air volume and static pressure. The amount of recovered heat and outdoor air load can be calculated based on indoor and outdoor conditions.

### **Lossnay Economical Calculation**

The outdoor air load, amount of heat recovered and savings are calculated. The economical efficiency can also be displayed in graph form.

"When the ""Lossnay selection & Economical calculation"" has been started, use this program for switching the display to the language of your country.

Enter the suitable words or phrases corresponding to those in the original language. (The default is English.) (Use abbreviations if there are many characters in your language. Some of the characters may not be displayed properly when ""Lossnay selection & Economical calculation"" is displayed.)

Click [Convert] and the conversion to your language will be made. The program will then end.

Start the ""Lossnay selection & Economical calculation"" and the next time the program is started, it will be in the converted language."

Language convert

Help

Language name  Font

Original Language	New Language
Lossnay Selection	Lossnay Selection
Lossnay Economical Calculation	Lossnay Economical Calculation
Exit	Exit
Room Conditions	Room Conditions
Indoor Condition	Indoor Condition
Outdoor Condition	Outdoor Condition
Airflow per person	Airflow per person
Number of persons	Number of persons
Total supply air	Total supply air
Supply air (SA)	Supply air (SA)
Lossnay	Lossnay
Sensible heat exchanger	Sensible heat exchanger
Conventional ventilator	Conventional ventilator
Dry bulb temperature	Dry bulb temperature

Enter the words in your lanugage.  
Then click "convert".

Convert Cancel

## 2. Main window

Lossnay selection candidates are displayed based on required air volume and static pressure. The amount of recovered heat and outdoor air load can be calculated based on indoor and outdoor conditions.

**MITSUBISHI ELECTRIC CORPORATION Lossnay Selection**

**Selection**

Power Supply: 220V 50Hz

Inlet Heater: ☐ Necessary ☒ Unnecessary

**A Room Conditions**

☐ Airflow per person: 16 m3/h

☐ Number of persons: 20

☒ Total supply air: 1000 m3/h

**Selected Lossnay model & Fan Speed**

LOH-100RX5-E x 1 unit, "Extra High"

LOH-100RX5-E x 1 unit, "High"

LOH-50RX5-E x 2 unit, "Extra High"

☒ Extra High ☒ High ☒ Low ☒ Extra Low

Heat exchange efficiency (%): 74.6

Enthalpy exchange efficiency (%): 68.6

Sound level (dB): 36

**Outdoor air (OA)**

**B** Dry bulb temperature (°C): 25

Relative humidity (%): 50

**1** Absolute humidity (g/kg): 9.9

Enthalpy (kJ/kg): 50.3

External static pressure (Pa): 100

**C** ☒ Pre heater (W): 0

☐ Dry bulb temperature (°C): 25

Relative humidity (%): 50

Enthalpy (kJ/kg): 50.3

**Room air (RA)**

**D** Dry bulb temperature (°C): 20

Relative humidity (%): 40

**2** Absolute humidity (g/kg): 5.8

Enthalpy (kJ/kg): 34.8

**Supply air (SA)**

	Lossnay	Sensible heat exchanger	Conventional ventilator
Dry bulb temperature (°C)	21.3	21.3	25
Absolute humidity (g/kg)	7.2	9.9	9.9
Relative humidity (%)	46	63	50
Enthalpy (kJ/kg)	39.7	46.6	50.3
	(kcal/kg)	11.1	12
<b>3</b> Total heat recovered (kW)	4	1.4	0
	(kcal/h)	3446.8	1206.8
Outdoor air load (kW)	1.8	4.4	5.8
	(kcal/h)	1577.7	5024.5
Outdoor air load ratio (%)	31	76	100
Real air volume (m3/h)	1133		

Real Air Volume is calculated without taking into consideration Heaters static pressure loss.

**G** ☒ After heater (W): 0

☐ Dry bulb temperature (°C): 21.3

Relative humidity (%): 46

Enthalpy (kJ/kg): 39.7

This calculated value is an approximate value, which may vary depending on the environment of actual use of the device.

Psychometric chart Lossnay Economical Calculation Print Specification

### Setting Items

#### Required air volume . . . A

Enter the required air volume. There are two methods for entering the required air volume. One method is to use the option button to enter the required air volume per person times the number of people to calculate the overall required air volume. The other method is to directly enter the required air volume.

#### Outdoor conditions and required static pressure . . . B

Enter the dry bulb temperature and relative humidity for the outdoor conditions.

Enter the required static pressure.

#### Heater capacity . . . C

Enter the heater capacity or required temperature assuming that a pre-heater is used.

Indoor conditions . . .D

Enter the dry bulb temperature and relative humidity for the indoor conditions.

Select model . . .E

The appropriate models, air speed and required number of units are listed in real time according to the required air volume and required static pressure that has been entered.

Select the most appropriate model.

Results display . . . F

The Lossnay, sensible heat exchanger and air supply conditions for a conventional ventilator are displayed in real time according to the conditions entered above.

It is possible to compare the outside air load when various ventilators are used.

Heater capacity . . . G

Enter the heater capacity or required temperature assuming that an after-heater is used.

Air volume Selection . . . H

This panel shows the possible air volume. To build its list of solutions , the Lossnay selection program will only consider the checked air volume. So, if you want to include a speed in the solutions list, just check its mark.

The Lossnay selection program requires at least one marked air volume. So, if there is only one checked speed left, the Lossnay selection program does not allow you to uncheck it.

### 3. Psychrometric chart window

The chart which shows the properties of humid air is called a psychrometric chart.

The psychrometric chart can be used to find the dry bulb temperature ,wet bulb temperature ,absolute humidity ,relative humidity ,dew point and enthalpy (total heat) of a certain air condition.

If two of these value are known beforehand ,the other values can be found with this chart.

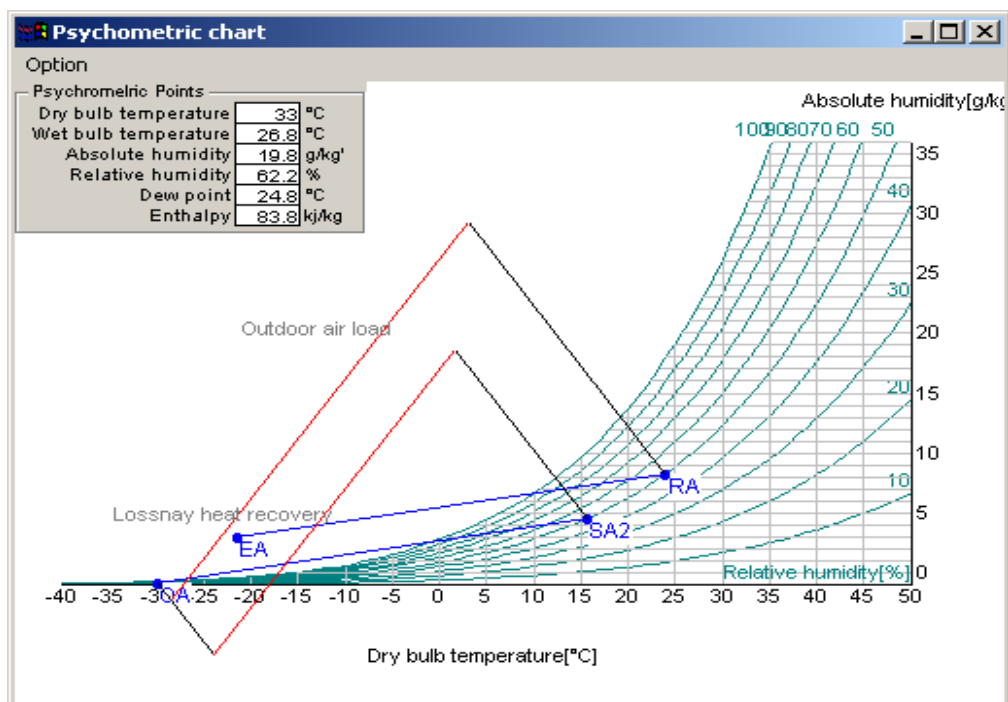
The way that the air will change when it is heated ,cooled ,humidified or dehumidified can also be seen easily on the chart.

The result screen shows the air conditions OA, RA, SA and EA in a psychrometric chart.

Place the pointer on a point on the psychrometric chart and the data for that point will be displayed in the upper left corner of the screen.

The picture below is a copy of the Lossnay selection psychrometric chart window.

To understand what the different settings mean, just click on the part you are interested in.

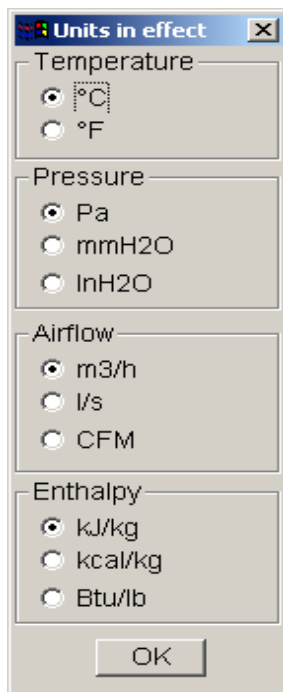


## **4. The units in effect window**

The units in effect window allows you to change the units to use for the numerical results. You can choose between °C or °F, Pa or mmH2O or InH2O ,m3/h or l/s or CFM ,and kJ/kg or kcal/kg or Btu/lb. The picture below shows the units window.

Just click on the unit you want to make the Lossnay selection program & Economical calculation program change it in all its windows.

After you have finished changing the units, click on the Close button to close the window.



## 5. Price window

This window is for the initial price setting of a Lossnay, sensible heat exchanger and conventional ventilator.

Use "Option Price" to make changes to the amount or currency

1. Enter the price of the Lossnay. (There is no price entered as default.)
2. Enter the price of the sensible heat exchanger and conventional ventilator.

To make setting easier, an estimated price can be set provisionally by placing a check in the "Default price (%)" check box and using the "Percentage of Lossnay Price".

If the price of the compatible product is known, this check mark can be removed and the optional price can be entered. (Default setting.)

If the Sensible heat exchanger check box (a) is checked, a economy comparison calculation with the sensible heat exchanger will also be made. (Default is unchecked)

The picture below is a copy of the price window.

\* Prices are just samples

To understand what the different settings mean, just click on the part you are interested in.

Lossnay (a)		Sensible heat exchanger Price	Conventional ventilator Price
Model	Price		
LGH-15RX4-E	20000	10000	2000
LGH-25RX4-E	0	0	0
LGH-35RX4-E	0	0	0
LGH-50RX4-E	0	5000	1000
LGH-65RX4-E	0	0	0
LGH-80RX4-E	0	0	0
LGH-100RX4-E	0	0	0
LGH-150RX4-E	0	0	0
LGH-200RX4-E	0	0	0
LU-500	0	0	0
VL-100U-E	0	0	0

Currency Symbol \$

☒ Default Price(%) Lossnayx 50 ☒ Default Price(%) Lossnayx 10

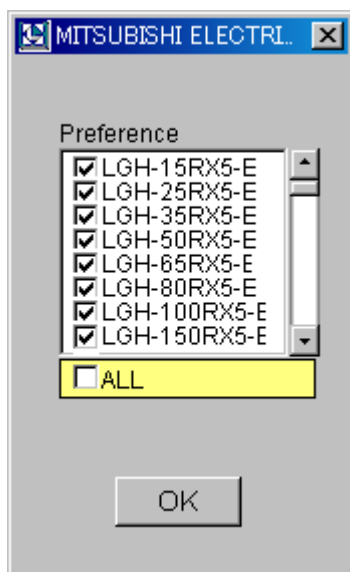
OK CANCEL



## **6. Lossnay Models window**

This panel shows the existing Lossnay models. To build its list of solutions , the Lossnay selection program will only consider the checked Lossnay models. So, if you want to include a Lossnay model in the solutions list, just check its mark.

The Lossnay selection program requires at least one marked Lossnay model. So, if there is only one checked Lossnay model left, the Lossnay selection program does not allow you to uncheck it.



## **7. Menu BAR**

### Files

#### New

Use this command to initialize the settings window with the same default values as the ones used at the moment you start the Lossnay selection program.

#### Open

Use this command to open a file you have saved before. The Lossnay selection program offers a standard MSWindows window to select the file name you want to open. This initializes the settings window with the values of the selection as you have saved it. After having read the file, the Lossnay selection program puts its name in the title bar of the Results window.

#### Save as

The first time you want to save a file, the Lossnay selection program needs to have a file name to save the data in. So, it offers a standard MSWindows window to select the directory and to enter the file name. After having saved the data, the Lossnay selection program puts its name in the title bar of the results window.

#### Save

Once you have saved a file (see the next command), you can save it again, whenever you like, without having to enter its name again. The Lossnay selection program uses the name which appears in the title bar of the results window.

#### Print

Use this command to produce a printed report of the current selection on the printer in effect. This report contains an overview of the settings and the numerical results, together with the technical characteristics about the currently selected Lossnay device and the psychometric chart on which the relevant points have been marked.

#### Exit

Use this command to quit the Lossnay selection program. If you didn't save the selection, you will now get a reminder message to save the data before quitting the program.

option  
units  
price  
models