94235E-06
2009-10

FLEXIT L12 X L30 X L18 X L50 X L20 X

E **Operating Instructions**
Air Handling Unit - Cross

As there are various automatic control options, the instructions do not contain a description of the automatic control. See separate automatic control documentation.

Contents

1 Safety

CAUTION

Check that the unit is dead before opening it for service or maintenance

- Only personnel with the relevant technical skills may perform maintenance work
- The switch for all-pole breaking must be off when the inspection doors are opened and all rotating parts must have stopped
- Use the unit's service switch to stop the unit. Units with electric heating batteries must run for 3 minutes before stopping so that the battery is cooled down
- Check that the doors are properly closed after service has been performed
- If open bosses or short duct(s) are used, the fans must be protected with protective grids

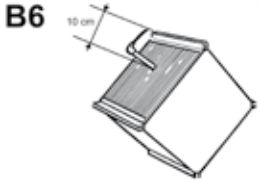
1.1 Symbols Used

This product has a number of symbols that are used to label the product itself and in the installation and user documentation. Here is an explanation of some of the commonest symbols.

SUPPLY AIR

EXTRACT AIR

HEATING THERMOSTAT



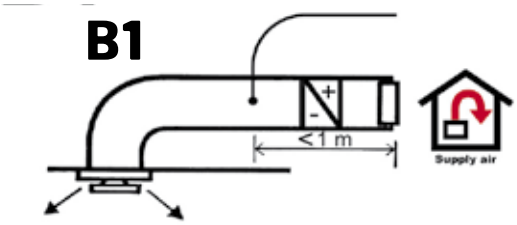
MOISTURE ROD INSTALLATION

DANGER! ELECTRICITY

DANGER! DO NOT TOUCH

EXHAUST AIR

OUTDOOR AIR



SUPPLY AIR SENSOR

DRAINAGE OUTLET

CAUTION: When a text bears this symbol, it means that personal injury or serious damage to the equipment may follow if the instructions are not followed.

NB: When a text bears this symbol, damage to equipment or a poor utilisation ratio may be the consequence of not following the instructions.

2 Transporting the Unit

2.1 Lifting Points

The unit must be lifted using a truck/jack trolley (Fig. 1/2) or lifting straps. Remember to use 2 jack trolleys/trucks, one from each side, to avoid the unit tipping down onto the floor and the base being damaged.,
If you choose to use jack trolleys or trucks to lift the unit in the middle, use equipment that has sufficiently long forks. The forks on the jack trolley/truck should correspond at least to the width of the unit.

Fig. 1

Fig. 2

2.2 Weight

Data	L12	L18	L20	L30	L50
Gross unit weight	165 kg	306 kg	320 kg	360 kg	510 kg
Fans	28 kg (2 fans)	42 kg (2 fans)	56 kg (2 fans)	56 kg (2 fans)	86 kg (2 fans)
Heat recovery system	16 kg	29 kg	29 kg	33 kg	37 kg
Doors	25 kg (2 doors)	91 kg (6 doors)	91 kg (6 doors)	91 kg (6 doors)	42 kg (5 doors)
Net weight for transport inside	97 kg	144 kg	144 kg	180 kg	329 kg

When the exchanger cassette is removed, the moisture rod must be taken out of the cassette and the contact for the bypass motor released.

2.3 Sizes/Physical Dimensions

L12 X

All measures in mm

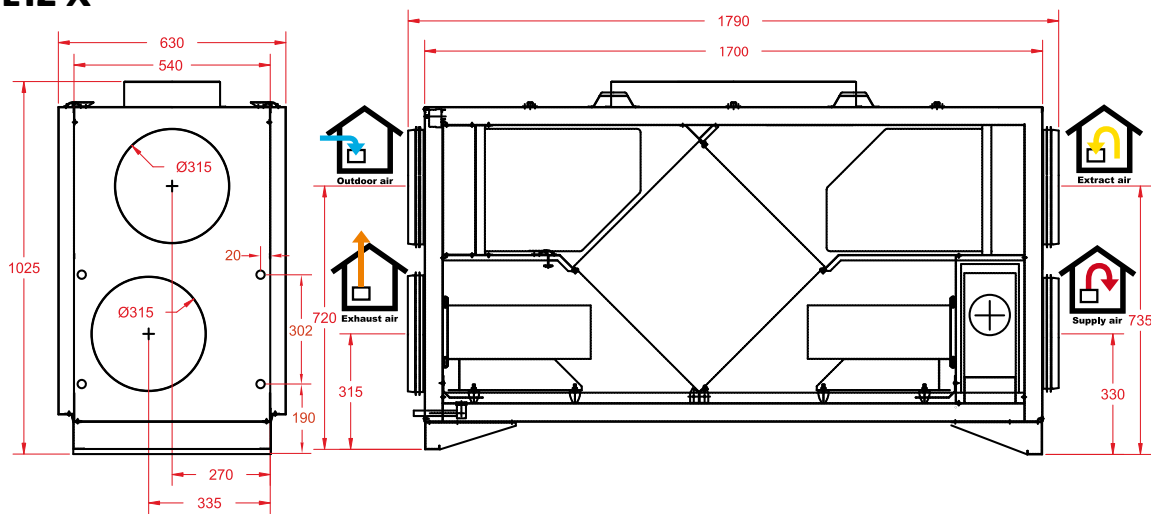


Fig. 3

With a water battery: The pipe connection for the water battery may be on either the right or left side of the supply air duct by reversing the battery. Hole templates on both sides have been prepared in the factory. **It is important for water pipes not to block doors or prevent the removal of the heat recovery system, filters and fans.**
The dimensions are the same on both end sides. The units have 2 doors on each side and can be operated from either side.

L18 X and L20 X

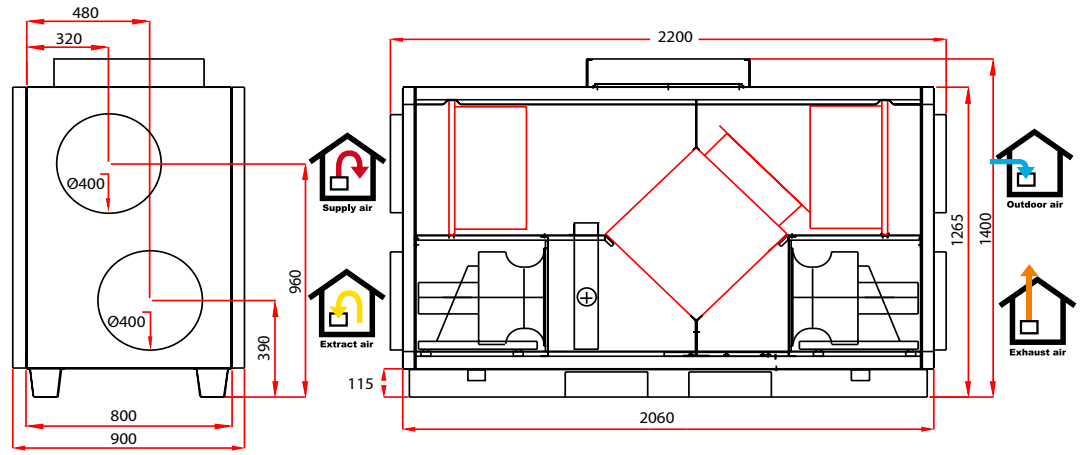


Fig. 4

With a water battery: See the separate drawing on the next page for connection to the water battery (common to L18, L20 and L30). *The dimensions are the same on both end sides. The units have 2 doors on each side and can be operated from either side.*

L30 X

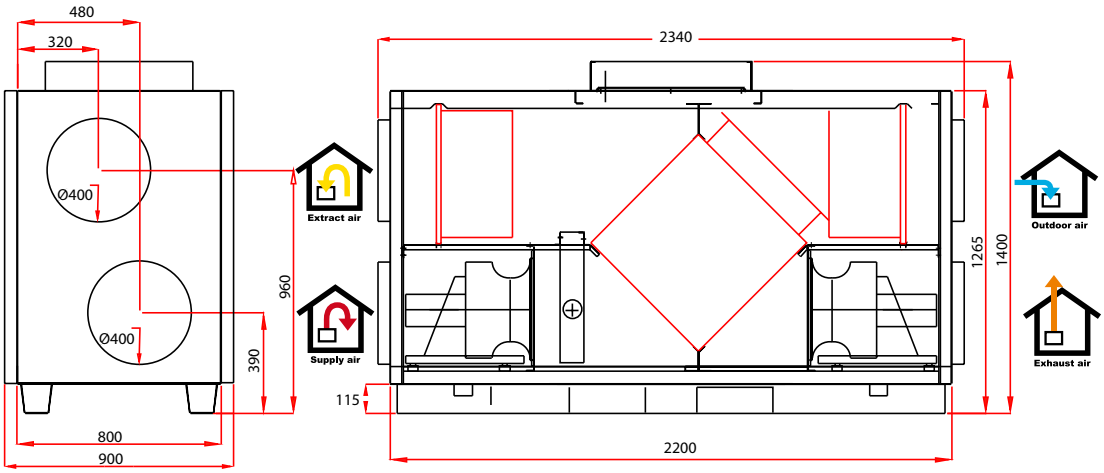


Fig. 5

With a water battery: See the separate drawing on the next page for connection to the water battery (common to L18, L20 and L30). *The dimensions are the same on both end sides. The units have 2 doors on each side and can be operated from either side.*

L18/L20/L30 W

Shows connection of water heating battery.

All measures in mm

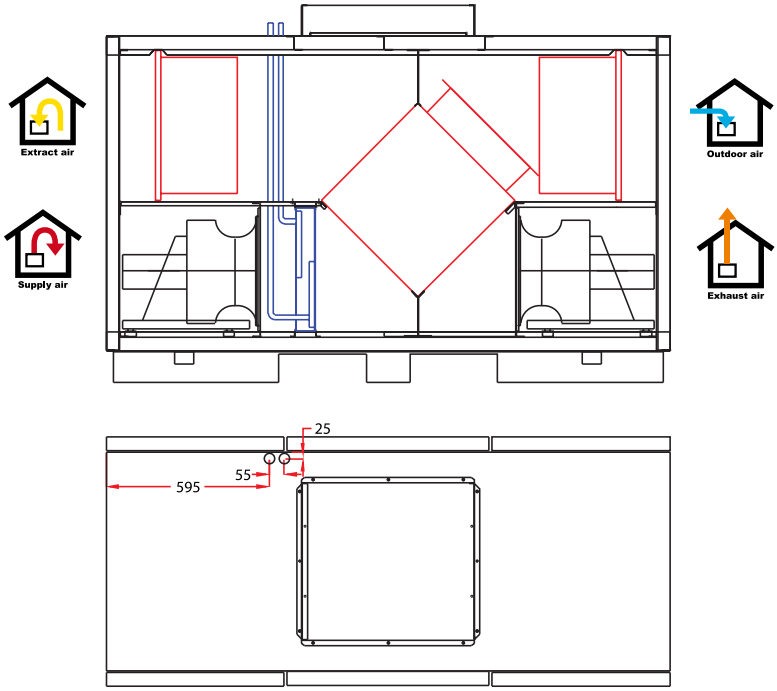


Fig. 6

L50 X

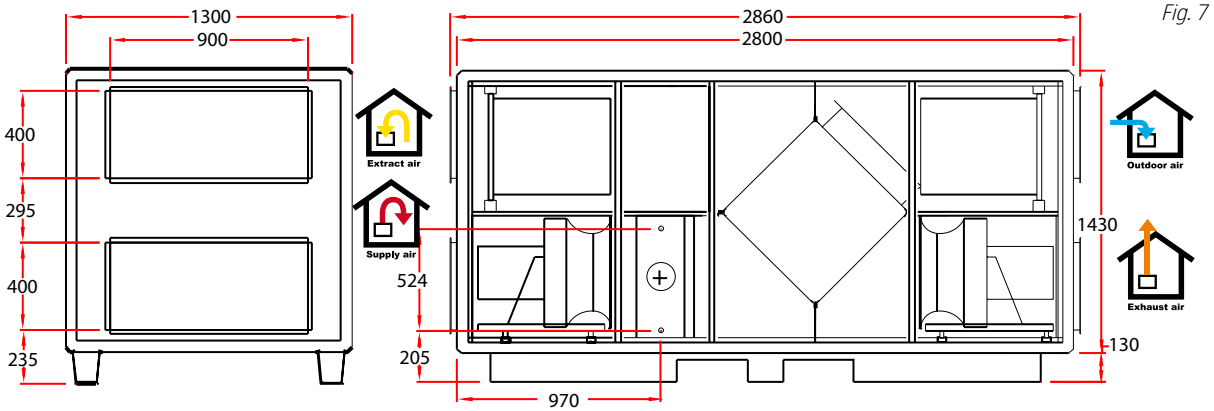


Fig. 7

With a water battery: The pipe connection for the water battery may be either on the front or the rear of the unit by reversing the ends of the battery. Hole templates on both sides have been prepared in the factory. **It is important for water pipes not to block doors or prevent the removal of the heat recovery system, filters and fans.**

The dimensions are the same on both end sides. The L50 has 5 doors in front. Shown here as a right model (XR). Also available as a left model (XL).

3 Installation

The unit is designed for indoor installation.

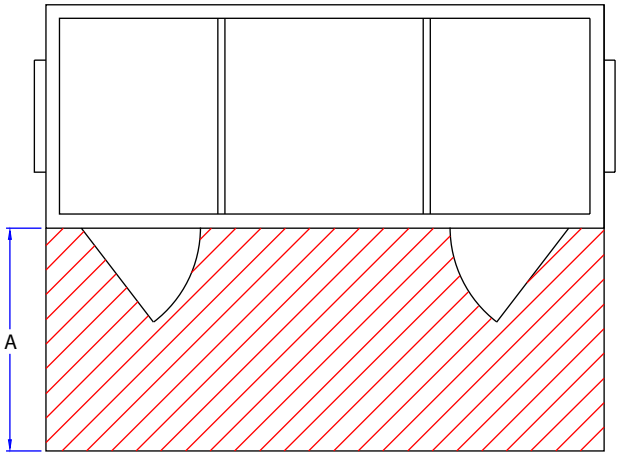
3.1 Inspection/Maintenance

The unit must be installed with space for service and maintenance such as filter replacement and cleaning the fans and exchanger. It is also important for the unit to be located so that the electrical cabinet is easily accessible for electrical connection, troubleshooting and future component replacement.

3.2 Space Required

Type	A	B
L12	550 mm	400 mm
L18	1000 mm	500 mm
L20	1000 mm	500 mm
L30	1000 mm	500 mm
L50	1400 mm	100 mm

See the separate dimensioned drawing for connection of the water battery (pipe location), Chap. 2.3.
These are minimum requirements that only take service needs into account. If other statutory requirements require a greater distance, they must be complied with, for example for electrical safety.



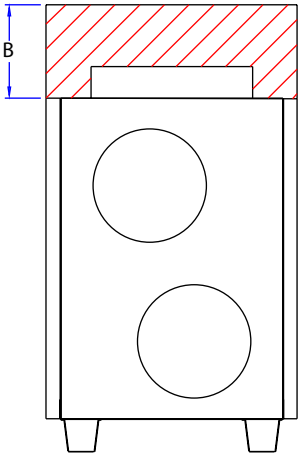


Fig. 8

3.3 Technical Room Requirements

The unit must be placed in a separate technical room with a gully. Ceiling/floor/walls/doors must be in the necessary fire class.

3.4 Recommended Sound Absorption and Sound Transfer

The main silencers must be placed near the unit, preferably in the technical room.
The unit should be placed by a wall that has no room on the other side that is sensitive to noise. The unit should not be less than 400 mm from the wall. If the unit is placed against a wall, low-frequency sound may create vibrations in the wall.
Sound may also be transferred through the floor if the mass and rigidity of the floor are not sufficient.
Technical rooms should be fitted with floating concrete floors to prevent sound transfer on account of vibration.
When installing the unit, fabric bosses must be fitted between the unit and the duct system. It is also important for the unit not to bear the weight of the ducts.
Busbars or water pipes must not prevent the unit from moving freely on the vibration dampers.

3.5 Air Intake/Exhaust

The distance between the air intake and air exhaust must be so great that air circulation is prevented.
The fresh air intake must be placed away from traffic/smoke/dust/walls exposed to the sun. The air intake should be placed min. 1 m above ground level to reduce the risk of clogging with snow and leaves. When designing the intake/exhaust chambers, it is necessary to take drainage into account.
Follow the suppliers' recommendations for max./min. air flow rates through the intake/exhaust gratings/roof hats.

3.6 Stop Damper in Air Intake/Exhaust (Accessory)

Used to prevent self-ventilation when the unit is stopped.
Must always be used in systems with water batteries as protection against frost.

4 Electrical Works

All electrical works must be performed by an authorised electrician.

- **See the separate instructions for the automatic control and its installation.**
- **See the separate wiring diagram in the unit for external connections.**
- **See also Chapter 9 Technical Data for more information on electrical wiring.**
- **A service switch must be installed for all-pole breaking of the supply voltage to the unit. This is not included in the supply from FLEXIT.**
- **The electrical components must not be exposed to temperatures lower than -23°C or higher than +55°C.**

4.1 Main Supply (Mains Cable)

For the L50, 3 supply cables are required, 1 for the automatic control and 2 for the electric battery (there are 2 electrical groups). Only 1 supply cable is required for the other units.

See the separate table in Chapter 9 Technical Data for the exact dimensions of each unit.

4.2 Connection of External Components

See the separate wiring diagram enclosed with each unit. All electrical connections must be installed by qualified electricians.

4.3 Earth-leakage Circuit-breaker

The frequency converter must be earthed to comply with the regulations concerning high leakage currents (over 3.5 mA). If a line-side earth-leakage circuit-breaker is used as protection in accordance with the installation regulations, an earth-leakage circuit-breaker type B must be installed, which functions even if there are DC components. See the symbol in Fig. 9.

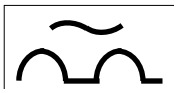


Fig. 9 Earth-leakage symbol

Tighten all terminal blocks before finishing the work to avoid heat generation in the contacts, which may result in fire in the worst case scenario.

5 Plumbing Works

All plumbing work must be performed by an authorised plumber.

5.1 Technical Data for Water Batteries

Unit	Water battery-connection	Pipe connection
L30	R 1/2"	cu Ø12
L40	R 1/2"	cu Ø12

For further information, please refer to the special estimation program for calculation of technical data for the water battery (www.flexit.com).

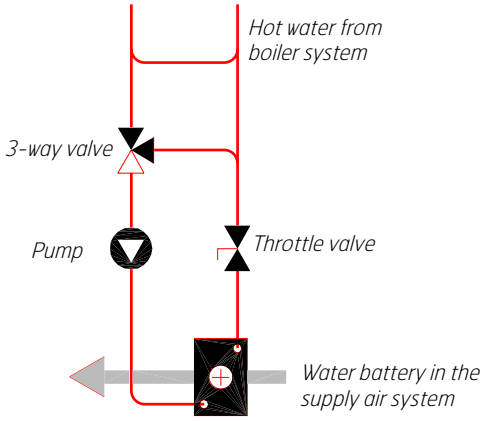


Fig. 10 Recommended connection

5.2 Possible Valve Types

3-way valve, type Honeywell, for capacity:
1.6 kvs art. no. 56232
2.5 kvs art. no. 57228
4.0 kvs art. no. 56283

2-way valve, type Honeywell, for capacity:
1.6 kvs art. no. 56432
2.5 kvs art. no. 56433
4.0 kvs art. no. 56434

5.3 Possible Valve Motor

It is necessary to use a valve motor that is controlled by 0-10 V, where 10 V=100 % open.
Valve motor article number: 56234.

5.4 Connections

Before connecting the water battery, it is necessary to check that the inspection doors are accessible and there is space enough to change the water battery.

Use the recommended connection (see Fig. 10) unless specified otherwise. The water supply must be at the bottom of the water battery - the return must be on the top.
Place the adjustment valve as close to the unit as possible. (Please note that many valve motors can go in both directions and this can be set on the motor. Set it so that the valve opens on an increasing 0-10 V signal.)

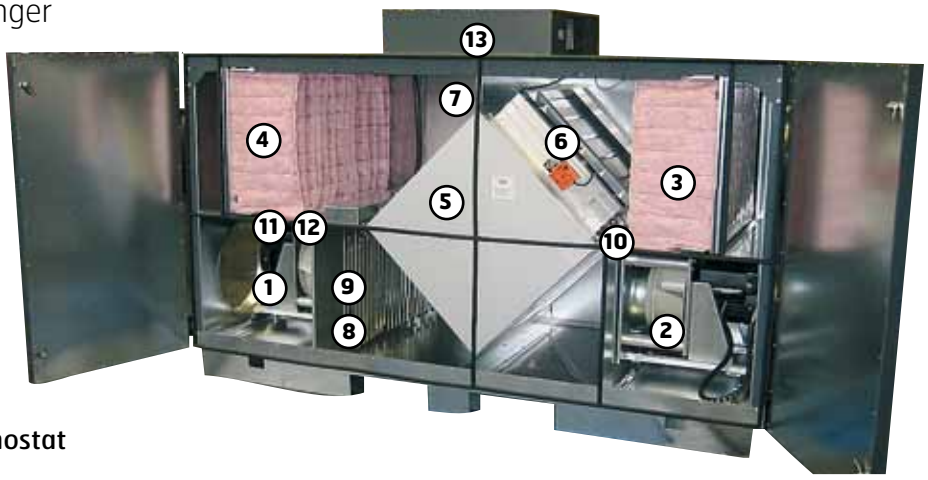
If you use a water battery that has not had glycol (or another antifreeze) added, the unit should be in a heated room on account of the risk of frost in the battery. Install air dampers with spring-loaded return for outdoor air. Place the unit close to a gully to avoid damage caused by any water leaks.
Install pipe routes to the water battery so that there is free access to the motor and recovery system. Remember vibration damping for water pipes.

You can see the location of pipes out of the unit in the dimensioned drawings in Chap. 2.3.

Install the water battery so that there is free access to the motor and exchanger cassette.
Pipe routes for water pipes:
Remember vibration damping for water pipes.

6 General Drawings and System Drawings

General Figure - Cross Heat Exchanger



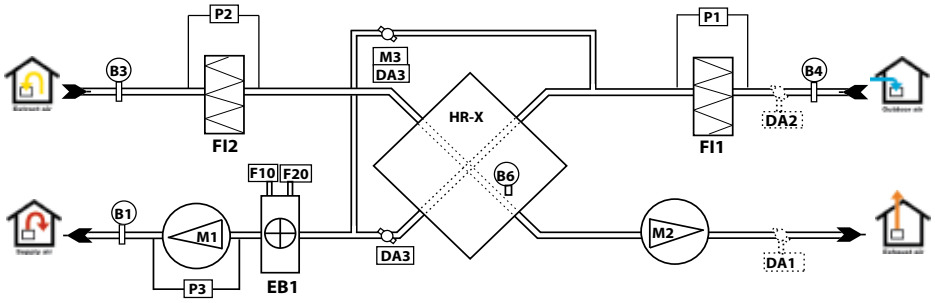
** L50 has integrated automatics (not on top as shown)*

1 (M1) Supply air fan
2 (M2) Extract air fan
3 (FI1) Supply air filter
4 (FI2) Extract air filter
5 (HR-X) Heat exchanger
6 (M3) Bypass motor
7 (B6) Thermoguard
8 (EB1/WB1) Heating battery (electricity or water)
9 (F10-19) Reset overheating thermostat
10 (P1) Supply air filter relay
11 (P2/P3) Extract air filter relay
12 (P3) Fan relay
13 Connection box with automatic control

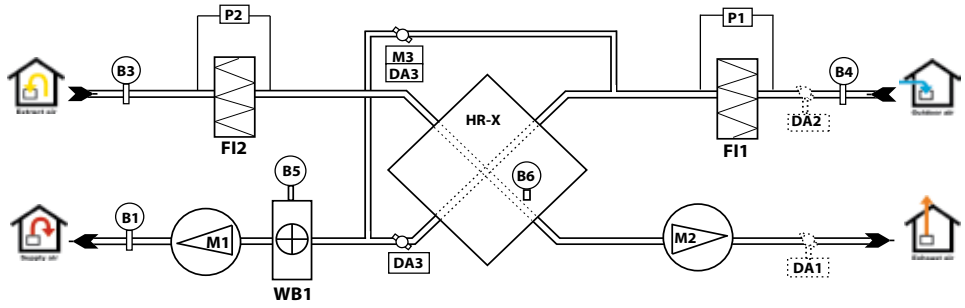
System Drawing - Cross Heat Exchanger/Electric and Water Batteries

M1 Supply air fan
M2 Extract air fan
M3 Bypass motor
FI1 Supply air filter
FI2 Extract air filter
HR-X Cross heat exchanger
P1 Supply air filter relay
P2 Extract air filter relay
P3 Supply air fan flow detector
B1 Supply air temperature sensor
B3 Extract air temperature sensor (not standard)
B4 Outdoor air temperature sensor
B5 Water battery temperature sensor (frost relay)
B6 Thermoguard temperature sensor
F10 Overheating thermostat, manual reset*
F20 Overheating thermostat*
DA1 Air damper, exhaust air (not standard)
DA2 Air damper, outdoor air (not standard)
DA3 Air damper, heat exchanger
WB1 Heating battery, water
EB1 Heating battery, electric

** Only with an electric battery*



Unit with electric heating battery



Unit with water-based heating battery

7 Adjustment, Capacity and Sound Data

The units have separate pressure measurement outlets. They are labelled on the unit. The L20 and L30 have outlets on the top of the unit, the L50 on the end.

The following formula is used:

$Q = k \cdot \sqrt{\Delta P}$

Q = Air flow rate (m^3/h)
k = Factor
ΔP = Pressure read off (Pa)

K-factor:

L50	153
L30	97
L20	85

* *The L12 and L18 have different fans, so the calculation method is not the same.*

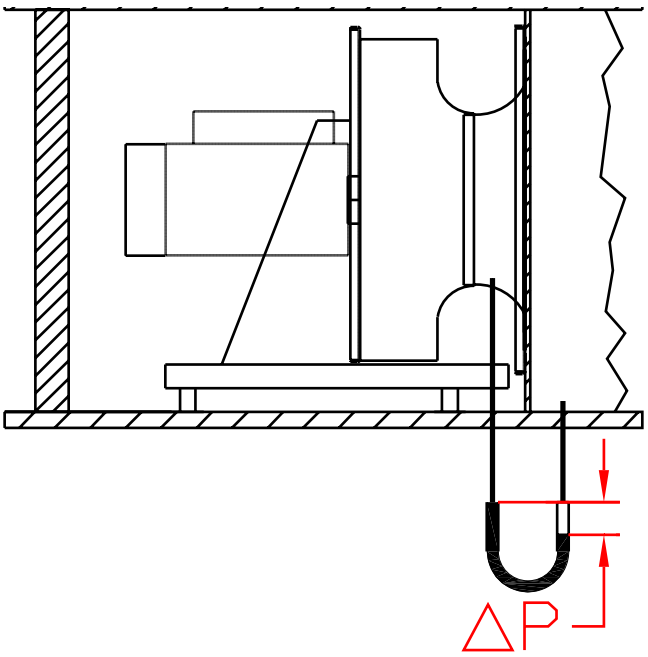


Fig. 11 Schematic diagram

Example:

Unit L30
Required: 2500 m^3/h
L30 has k-factor=97
Use formula: $Q = k \cdot \sqrt{P\Delta}$
$2500 = 97 \sqrt{\Delta P}$

$$\frac{2500}{97} = \frac{97 \cdot \sqrt{\Delta P}}{97}$$

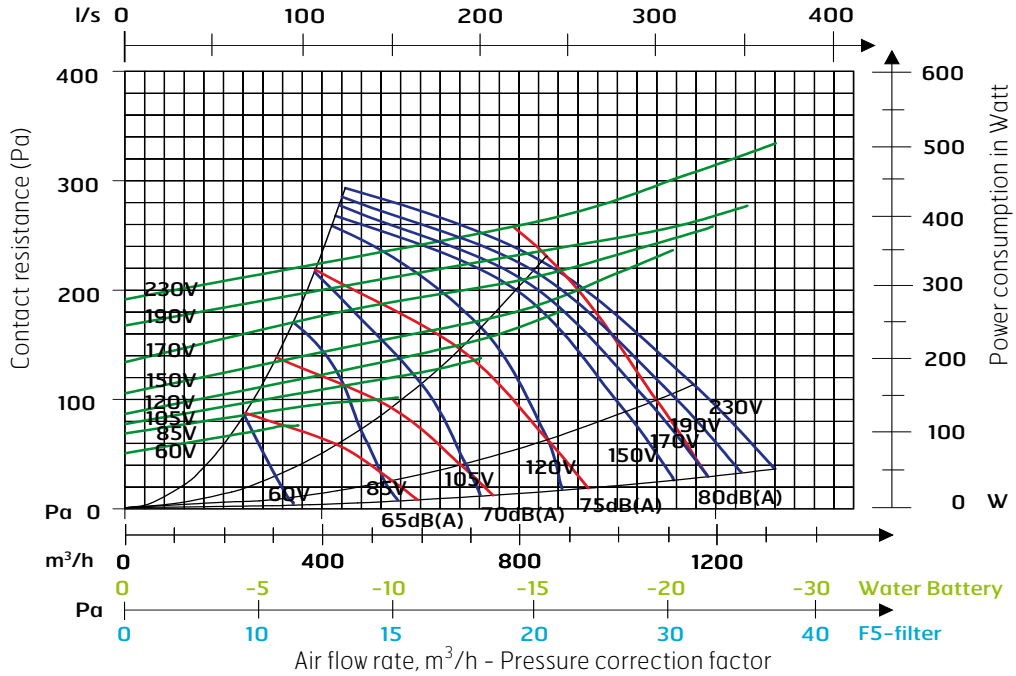
$25.8 = \sqrt{\Delta P}$
$(25.8)^2 = \Delta P$
$\Delta P = 664$

- Connect the pressure meter
- Adjust the fan until 664 Pa is displayed on the instrument

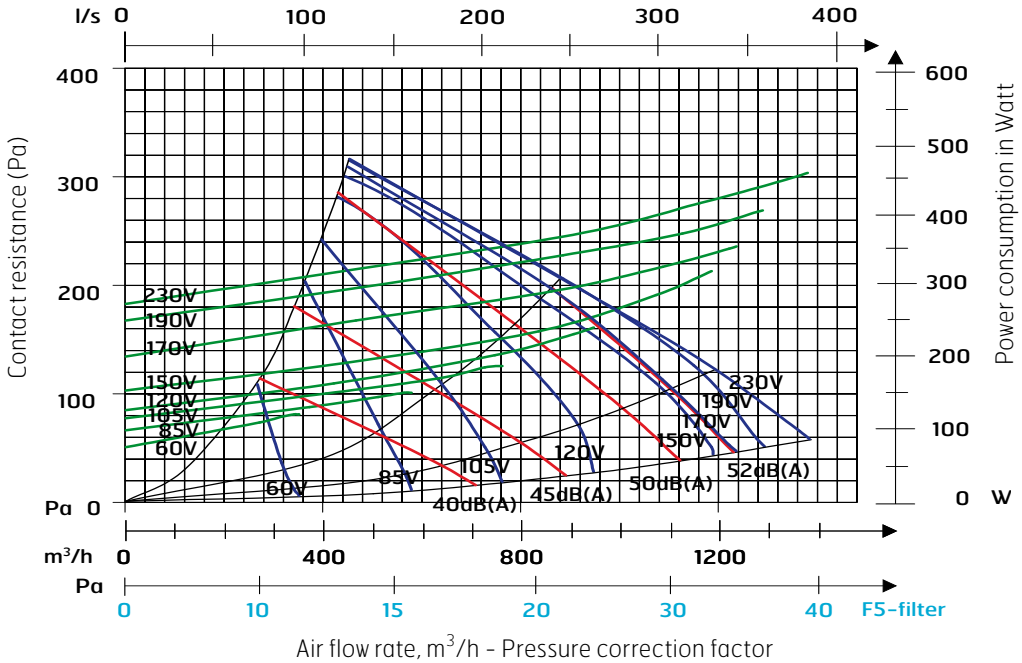
You have now adjusted the L30 unit to a capacity of 2500 m^3/h.

7.1 Capacity Diagram, Sound Data, Specifications – Flexit L12 X W/E

Supply air side (with F7 filter)



Extract air side (with F7 filter)



Sound data is given at sound power level LwA in the capacity diagrams and is corrected with the table below for the various octave bands. Radiated noise produces Lw in the various octave bands and total LwA. This is read directly from the supply air table.

Correction factor for LwA

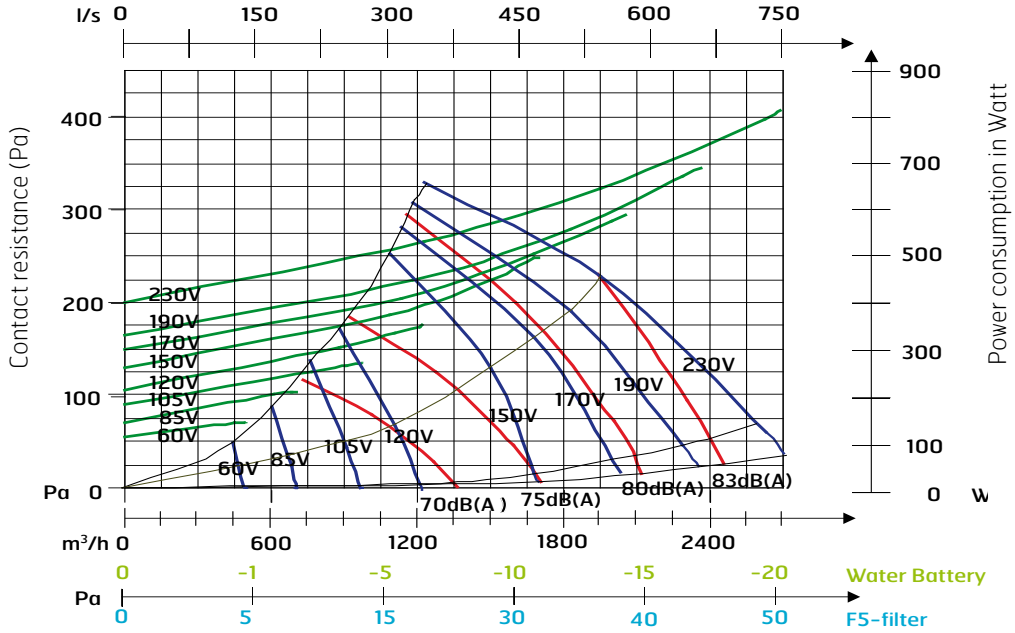
Hz	*63*	*125*	*250*	*500*	*1000*	*2000*	*4000*	*8000*	*LwA*
Supply air	*7*	*-1*	*0*	*-3*	*-3*	*-13*	*-17*	*-28*	
Extract air	*23*	*10*	*0*	*-9*	*-16*	*-27*	*-32*	*-38*	
Radiated	*-30*	*-24*	*-23*	*-25*	*-26*	*-30*	*-32*	*-40*	*-21,6*

Data for supply air is measured in accordance with ISO 5136, the "In duct method".
Radiated noise is measured in accordance with ISO 9614-2.
Bruel ξ Kjær measuring equipment, type 2260.

Blue curves: *Air capacity at various capacity settings in Volt.*
Green curves: *Supply air fan power consumption at various capacity settings.*
Red curves: *Sound power level LwA, cf. correction table.*
Light blue correction axis: *Pressure increase using an EU-5 filter.*
Light green correction axis: *Pressure reduction using a water battery.*

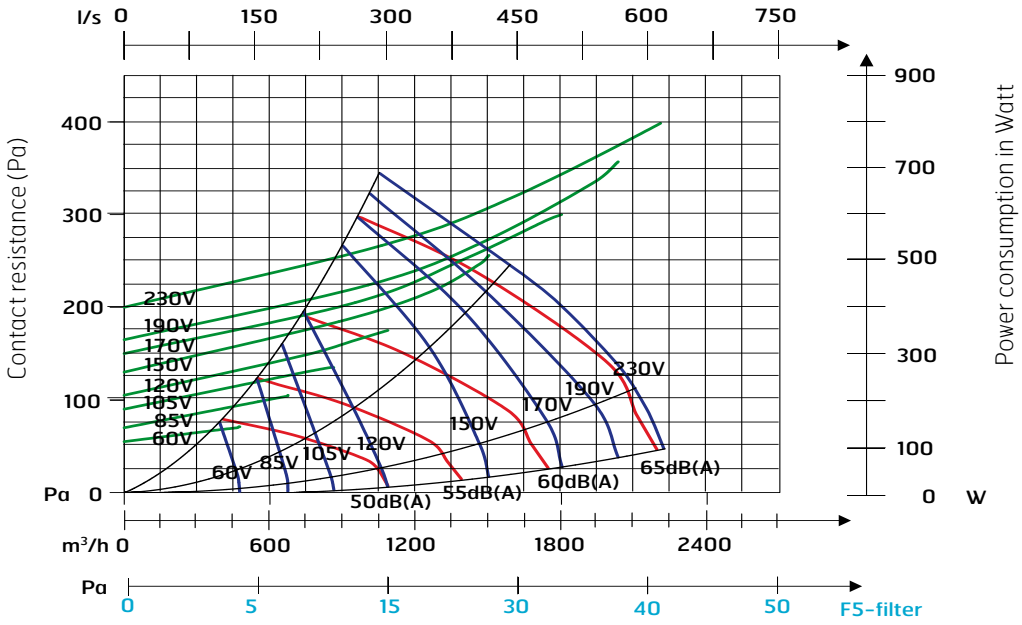
7.2 Capacity Diagram, Sound Data, Specifications – Flexit L18 X W/E

Supply air side (with F7 filter)



Air flow rate, m^3/h - Pressure correction factor

Extract air side (with F7 filter)



Air flow rate, m^3/h - Pressure correction factor

Sound data is given at sound power level LwA in the capacity diagrams and is corrected with the table below for the various octave bands. Radiated noise produces Lw in the various octave bands and total LwA. This is read directly from the supply air table.

Correction factor for LwA

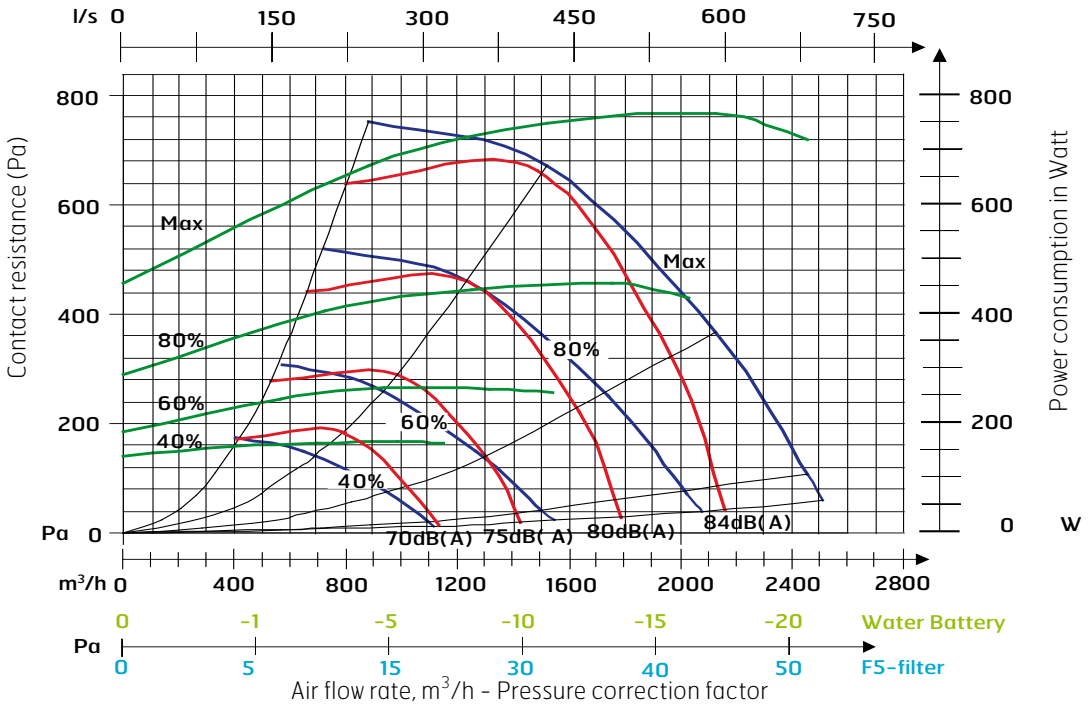
Hz	*63*	*125*	*250*	*500*	*1000*	*2000*	*4000*	*8000*	***LwA***
Supply air	*6*	*0*	*-3*	*-2*	*-4*	*-11*	*-16*	*-24*	
Extract air	*15*	*2*	*-5*	*-2*	*-4*	*-21*	*-51*	*-55*	
Radiated	*-40*	*-40*	*-33*	*-31*	*-28*	*-29*	*-33*	*-44*	*-23,7*

Data for supply air is measured in accordance with ISO 5136, the "In duct method".
Radiated noise is measured in accordance with ISO 9614-2. Bruel ₹ Kjœr measuring equipment, type 2260.

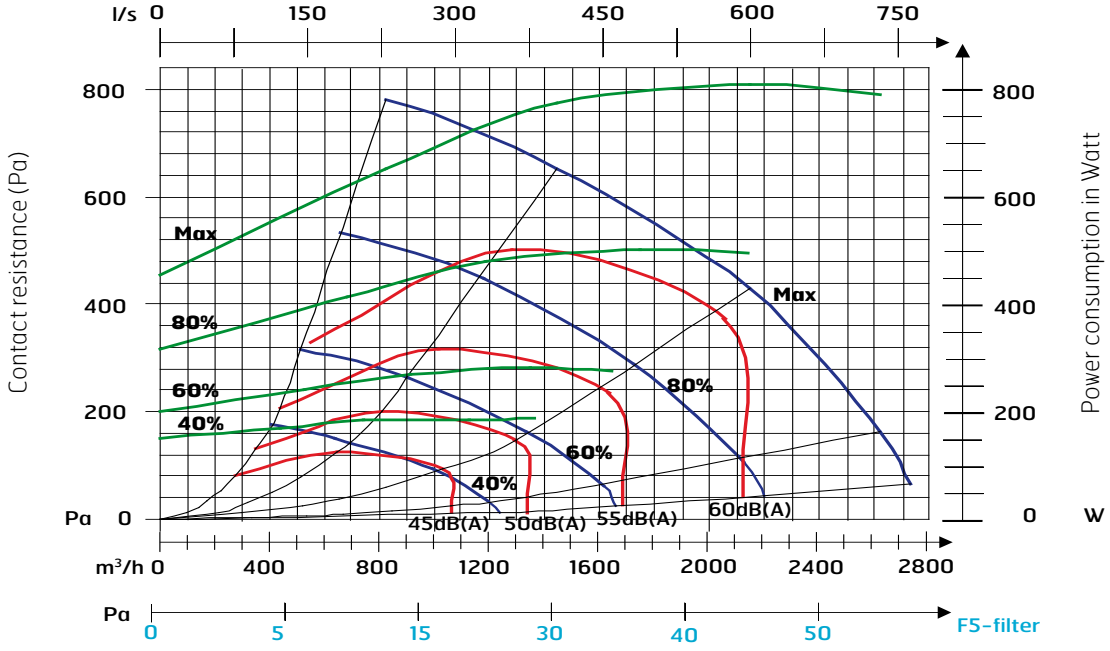
Blue curves: *Air capacity at various capacity settings in Volt.*
Green curves: *Supply air fan power consumption at various capacity settings.*
Red curves: *Sound power level Lw_A, cf. correction table.*
Light blue correction axis: *Pressure increase using an EU-5 filter.*
Light green correction axis: *Pressure reduction using a water battery.*

7.3 Capacity Diagram, Sound Data, Specifications – Flexit L20 X W/E

Supply air side (with F7 filter)



Extract air side (with F7 filter)



Sound data is given at sound power level LwA in the capacity diagrams and is corrected with the table below for the various octave bands. Radiated noise produces Lw in the various octave bands and total LwA. This is read directly from the supply air table.

Correction factor for LwA

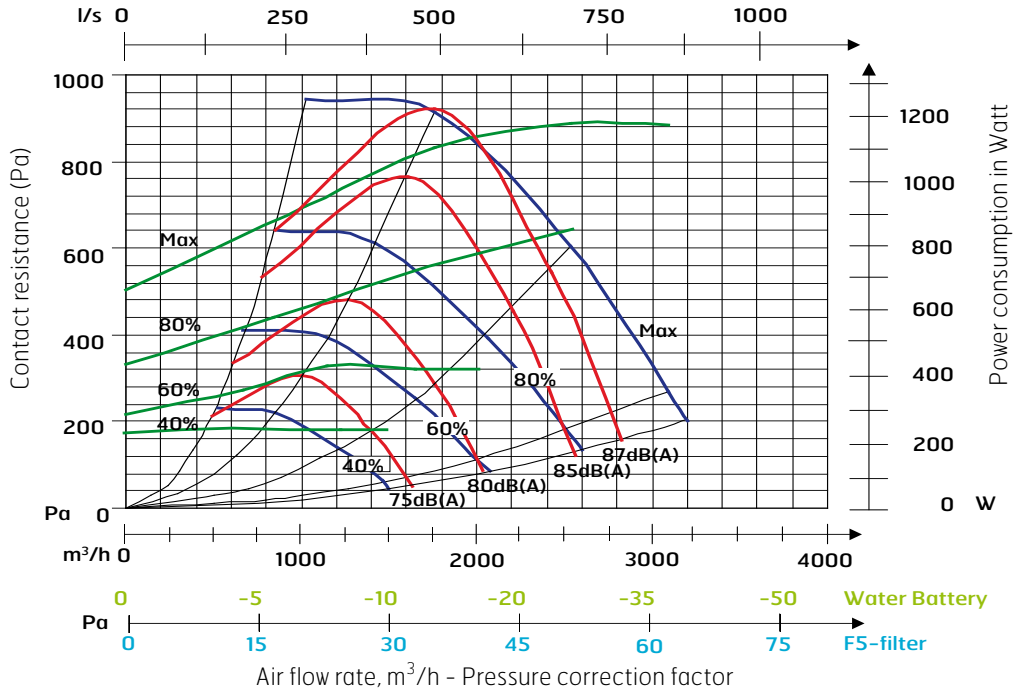
Hz	*63*	*125*	*250*	*500*	*1000*	*2000*	*4000*	*8000*	*LwA*
Supply air	*2*	*-9*	*-1*	*-3*	*-4*	*-9*	*-17*	*-28*	
Extract air	*20*	*6*	*-7*	*-1*	*-17*	*-24*	*-34*	*-43*	
Radiated	*-40*	*-40*	*-33*	*-31*	*-28*	*-29*	*-33*	*-49*	*-23,6*

Data for supply air is measured in accordance with ISO 5136, the "In duct method".
Radiated noise is measured in accordance with ISO 9614-2.
Bruel ξ Kjær measuring equipment, type 2260.

Blue curves: *Air capacity at various capacity settings in Volt.*
Green curves: *Supply air fan power consumption at various capacity settings.*
Red curves: *Sound power level LwA, cf. correction table.*
Light blue correction axis: *Pressure increase using an EU-5 filter.*
Light green correction axis: *Pressure reduction using a water battery.*

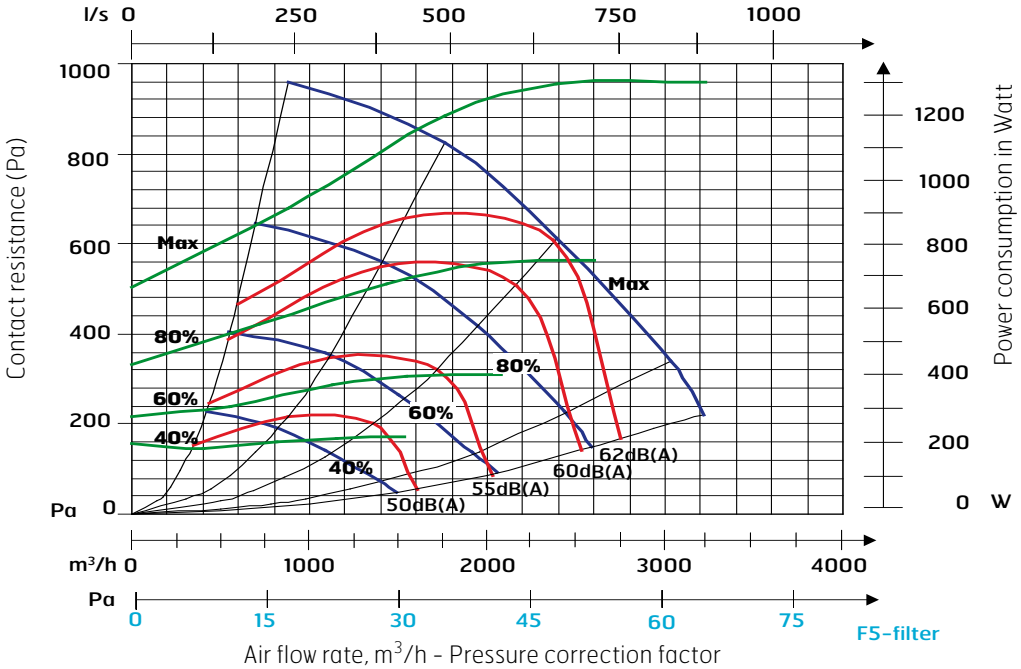
7.4 Capacity Diagram, Sound Data, Specifications – Flexit L30 X W/E

Supply air side (with F7 filter)



Air flow rate, m^3/h - Pressure correction factor

Extract air side (with F7 filter)



Air flow rate, m^3/h - Pressure correction factor

Sound data is given at sound power level LwA in the capacity diagrams and is corrected with the table below for the various octave bands. Radiated noise produces Lw in the various octave bands and total LwA. This is read directly from the supply air table.

Correction factor for LwA

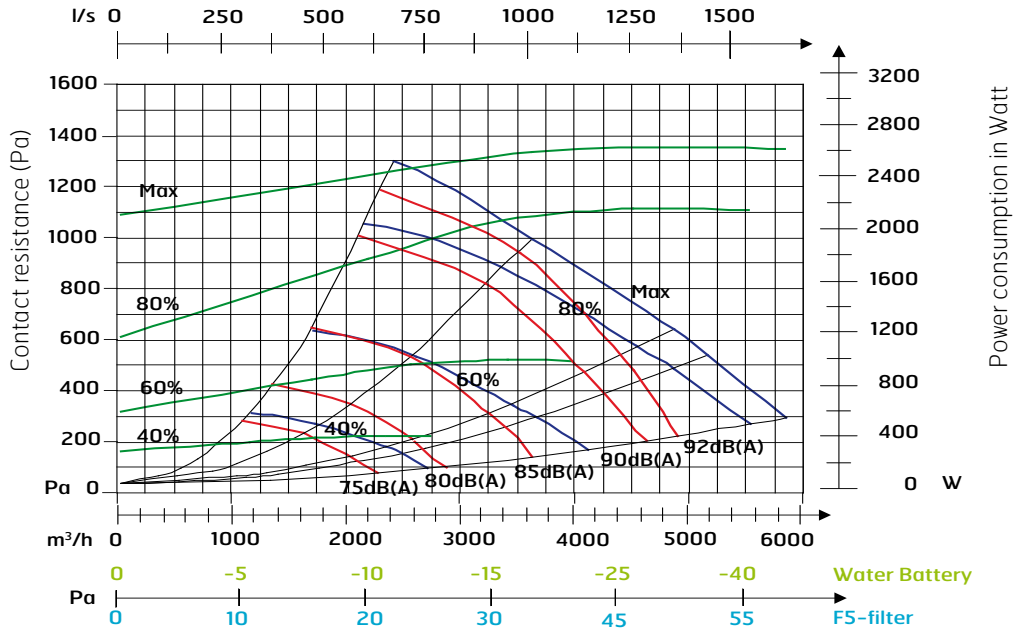
Hz	*63*	*125*	*250*	*500*	*1000*	*2000*	*4000*	*8000*	*LwA*
Supply air	*1*	*-7*	*0*	*-3*	*-4*	*-11*	*-19*	*-30*	
Extract air	*16*	*6*	*-4*	*1*	*-14*	*-22*	*-33*	*-42*	
Radiated	*-28*	*-34*	*-30*	*-26*	*-26*	*-28*	*-34*	*-47*	*-21,7*

Data for supply air is measured in accordance with ISO 5136, the "In duct method".
Radiated noise is measured in accordance with ISO 9614-2.
Bruel & Kjær measuring equipment, type 2260.

Blue curves: *Air capacity at various capacity settings in Volt.*
Green curves: *Supply air fan power consumption at various capacity settings.*
Red curves: *Sound power level LwA, cf. correction table.*
Light blue correction axis: *Pressure increase using an EU-5 filter.*
Light green correction axis: *Pressure reduction using a water battery.*

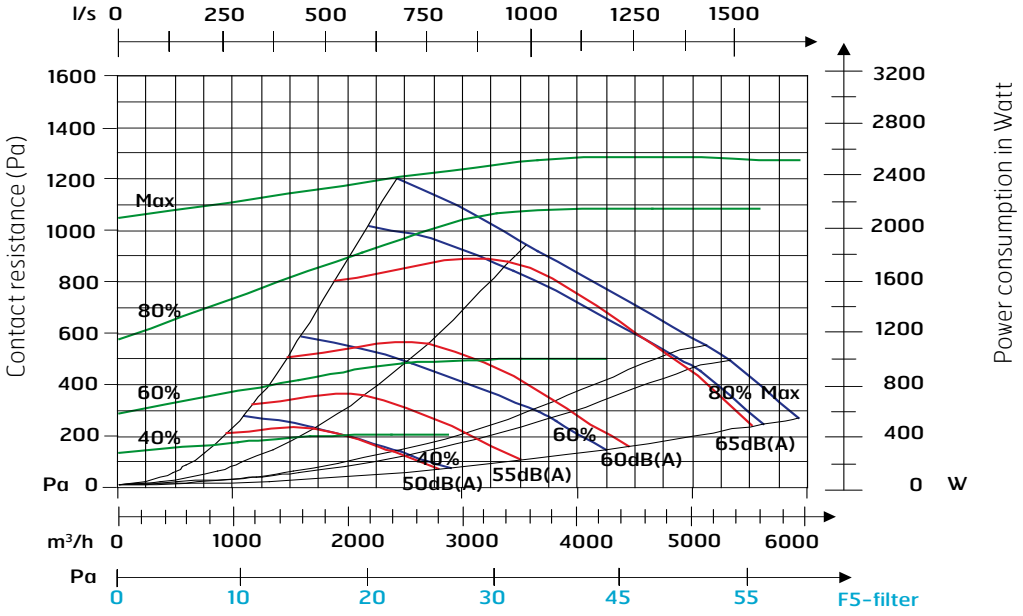
7.5 Capacity Diagram, Sound Data, Specifications – Flexit L50 X W/E

Supply air side (with F7 filter)



Air flow rate, m^3/h - Pressure correction factor

Extract air side (with F7 filter)



Air flow rate, m^3/h - Pressure correction factor

Sound data is given at sound power level LwA in the capacity diagrams and is corrected with the table below for the various octave bands. Radiated noise produces Lw in the various octave bands and total LwA. This is read directly from the supply air table.

Correction factor for LwA

Hz	*63*	*125*	*250*	*500*	*1000*	*2000*	*4000*	*8000*	***LwA***
Supply air	*-5*	*-12*	*-2*	*-2*	*-3*	*-11*	*-21*	*-32*	
Extract air	*17*	*8*	*0*	*-3*	*-12*	*-19*	*-30*	*-42*	
Radiated	*-36*	*-28*	*-25*	*-25*	*-25*	*-27*	*-31*	*-41*	*-20,3*

Data for supply air is measured in accordance with ISO 5136, the "In duct method".
Radiated noise is measured in accordance with ISO 9614-2.
Bruel ξ Kjœr measuring equipment, type 2260.

Blue curves: *Air capacity at various capacity settings in Volt.*
Green curves: *Supply air fan power consumption at various capacity settings.*
Red curves: *Sound power level LwA, cf. correction table.*
Light blue correction axis: *Pressure increase using an EU-5 filter.*
Light green correction axis: *Pressure reduction using a water battery.*

8 Maintenance

You should inspect the system regularly. This must be performed by qualified operating personnel. The inspection should be performed twice a year, preferably in the spring and autumn. If the unit has a cross heat exchanger, you should check for leaks in the drain or water on the floor. If a water battery is used to heat the air, check also for water leaks. Listen for strange sounds and check for abnormal vibrations. Check at regular intervals that the air intake is free of snow and leaves. The inspection and maintenance of fans, exchanger cassettes, air dampers, filters and heating batteries are essential to achieve optimal performance.

Exchanger cassette: As the system has filters installed with a high densityF class, it is not normally necessary to clean the exchanger cassette. If, for various reasons, it should still be necessary, dust can be removed with a soft brush. Further cleaning is possible if you remove the exchanger cassette, spray it with fat-soluble detergent and then blow it clean from the opposite side. Distance approximately 60 mm and max. pressure 80 bar.
NB ! Do not use detergent that is harmful to aluminium.

Air dampers: The air damper plates are suspended in plastic bearings and do not need lubrication. The individual air damper plates are connected via an arm system that does not need lubrication. Check every year that the air damper is tight. If the air damper is not properly tight, it can be corrected by adjusting the air damper motor or possibly adjusting the arm tension.

Filters: How frequently filters need replacing depends on the dust concentration in the air that passes through the filters. It is very important to replace filters to ensure that the system works properly. Filters must be replaced when the filter replacement lamp on the control panel lights up. They must be replaced at least once a year.

Heating battery: The heating battery, electric or water-based, will be exposed to dirt very rarely, as the system has filters fitted with a high density class. If cleaning should still be necessary, you can use compressed air, which is blown in the opposite direction to the air flow, or a vacuum cleaner with a soft nozzle. Cleaning must be done carefully to ensure that the battery's fins are not damaged. Inspect the cables to the electric battery at least twice a year. Check for damaged cables and components. Tighten all terminal blocks for power supply to the electric battery (elements, contactors, SSR) and other terminal blocks.

Corrosion damage: If there is corrosion damage to fins or pipes, this may indicate moisture or corrosive air. The cause must be found and remedied.

8.1 Troubleshooting

Fault	***Remedial action***	***Component***
The unit does not start	*1. Check the fuses and that there is power to the unit* *2. Check the control panels in case the unit has stopped on account of an alarm or the service switch is off* *3. Check that the unit is not in STOP mode*	*Fuses, overheating protection, motor protection or frost sensor*
The heating does not come on	*1. Check that the pressure relay is OK (only with an electric battery)* *2. Check that the valve has control current (over 2 V) and supply voltage* *3. Check the temperature sensors*	*Pressure relay* *Sensors* *Valve*
The fans do not start	*1. Check the operating setting* *2. Check that the fans have operating voltage and control current (over 2 V)* *3. Check that the motor protection is not active*	*Motor protection*

9 Technical Specifications

9.1 Technical Specifications, L12 X

Heating type:	**L12 XW**	**L12 XE**
Rated voltage	**230 V**	**400 V**
Fuse	1x10 A	3x16 A
Rated current, total	7 A	15 A
Rated power, total	1080 W	7080 W
Rated power, electric battery		6000 W
Rated power, fans	2x560 W	2x560 W
Rated preheating power		
Fan type	F-wheel	F-wheel
Fan motor control	Transformer	Transformer
Max. fan speed	1400 rpm	1400 rpm
Filter type (SUP/EXTR)	F 7	F7
Filter dimensions (W x H x D)	540x354x428 mm	540x354x428 mm
Number of bags	8	8
Weight	165 kg	165 kg
Duct connection	Dia. 315 mm	Dia. 315 mm
Height	1025 mm	1025 mm
Width	1700 mm	1700 mm
Depth	630 mm	630 mm

9.2 Technical Specifications, L18 X

Heating type:	**L18 XW**	**L18 XE**
Rated voltage	**230 V**	**400 V**
Fuse, operation	1x10 A	3x20 A
Rated current, operation	8 A	19 A
Rated power, total	1800 W	12300 W
Rated power, electric battery		10000 W
Rated power, fans	2x550 W	2x550 W
Rated preheating power		
Fan type	F-wheel	F-wheel
Fan motor control	Transformer	Transformer
Max. fan speed	1220 rpm	1220 rpm
Filter type (SUP/EXTR)	F 7	F 7
Filter dimensions (WxHxD, mm)	813x548x300	813x548x300
Number of bags	14	14
Weight	320 kg	320 kg
Duct connection	Dia. 400 mm	Dia. 400 mm
Height	1400 mm	1400 mm
Width	2060 mm	2060 mm
Depth	900 mm	900 mm

9.3 Technical Specifications, L20 X/L30 X

	L20 X		L30 X	
	L20 XW	**L20 XE**	**L30 XW**	**L30 XE**
Rated voltage	**230 V**	**400 V**	**230 V**	**400 V**
Fuse	1x16 A	3x32 A	1x16 A	3x40 A
Rated current, total	7.5 A	26 A	12 A	37 A
Rated power, total	1400 W	16400 W	2500 W	23500 W
Rated power, electric battery		15000 W		20000 W
Rated power, fans	2x750 W	2x750 W	2x1100 W	2x1100 W
Rated preheating power				
Fan type	B-wheel	B-wheel	B-wheel	B-wheel
Fan motor control	Frequency converter	Frequency converter	EC control	EC control
Max. fan speed	3000 RPM	3000 RPM	3000 RPM	3000 RPM
Filter type (SUP/EXTR)	F7	F7	F7	F7
Filter dimensions (WxHxD, mm)	813x548x300	813x548x300	813x548x300	813x548x300
Number of bags	14	14	14	14
Weight	320 kg	320 kg	360 kg	360 kg
Duct connection	Dia. 400 mm	Dia. 400 mm	Dia. 400 mm	Dia. 400 mm
Height	1400 mm	1400 mm	1400 mm	1400 mm
Width	2060 mm	2060 mm	2200 mm	2200 mm
Depth	900 mm	900 mm	900 mm	900 mm

9.4 Technical Specifications, L50 X

Heating type:	**L50 XW**	**L50 XE**
Rated voltage	**400 V**	**400 V**
Fuse, operation	3x20 A	3x20 A
Fuse, electrical group 1		3x32 A
Fuse, electrical group 2		3x32 A
Rated current, operation	16 A	16 A
Rated current, electrical group 1		25 A
Rated current, electrical group 2		25 A
Rated power, total	6200 W	40200 W
Rated power, electric battery		34000 W
Rated power, fans	2x2200 W	2x2200 W
Rated preheating power		
Fan type	B-wheel	B-wheel
Fan motor control	Frequency converter	Frequency converter
Max. fan speed	3000 RPM	3000 RPM
Filter type (SUP/EXTR)	F 7	F 7
Filter dimensions (WxHxD, mm)	592x490x550 x2	592x490x550 x2
Number of bags	8	8
Weight	510 kg	510 kg
Duct connection	400x900 mm	400x900 mm
Height	1435 mm	1435 mm
Width	2800 mm	2800 mm
Depth	1300 mm	1300 mm

10 Commissioning

The unit must not be started until all documentation has been studied and all electrical and plumbing work has been performed.

1 Familiarise yourself well with the documentation for the automatic control system

2 Programme the various operating times and speeds (possibly including stop)

3 Check that the correct temperature regulation and temperature settings have been selected. Are the sensors located correctly?

4 Check that the fans rotate freely

5 Check that all air dampers work. The unit must not be operated with closed air dampers.

6 Check that all doors are properly closed

7 Start the unit as described in the documentation for the automatic control

8 Check that air dampers open (and close when the unit stops)

9 Check that the heat recovery system works correctly

10 Check that the heat control works correctly

11 If the unit has a water battery, you must test the frost function. Cool the frost sensor to below 5 °C. The unit should stop and the air dampers close.

12 Tighten all terminal blocks after commissioning

11 EU Declaration of Conformity

This declaration confirms that the products meet the requirements of the following Council Directives:
89/336/EEC Electromagnetic Compatibility
73/23/EEC Low Voltage Directive
98/37/EEC Machinery Directive

Manufacturer: FLEXIT AS, Televeien 15, N-1870 Ørje
Tel.: +47 69 81 00 00 Fax +47 69 81 00 80

Type of equipment: 86 42 000
Ventilation equipment for mounting in ducts

Model:

VG 1200 (el)	**Flexit L18 - E**	**Flexit L20 - Cross E**	**Flexit L30 - Cross E**	**Flexit L50 - Cross EL**
VG 1200 (water)	Flexit **L30 - W**	**Flexit L20 - Cross W**	**Flexit L30 - Cross W**	**Flexit L50 - Cross W**

Serial no.: **.....**

The following harmonized European standards or technical specifications have been applied:
EN 50081-1:92 EMC - Emission
EN 50082-1:97 EMC - Immunity
EN 60335-1:1994 Safety
A11:95, A1:96, A12:96
EN292, EN563, EN294

FLEXIT AS Ørje, 15/04/2005

Pål J. Martinsen
General Manager

*The right to give notice of lack of conformity applies to this product in accordance with the existing terms of sale, **provided that the product is used correctly and maintained**. Filters are consumables.*

The symbol on the product or on its packaging indicates that this product may not be treated as household waste. Instead it shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment.
By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human healthe, which could otherwisw be caused by inappropriate waste handeling of this product. For more detailed information, please contact your local city office, your household waste disposal service or the shop where you purchased the product.

Notice of lack of conformity as a result of incorrect or defective installation must be submitted to the installation company responsible. The right to give notice of lack of conformity may lapse if the system is used incorrectly or maintenance is grossly neglected.

Flexit AS, Televeien 15, N-1870 Ørje **www.flexit.com**