

HEAT RECOVERY UNIT ILOX 89

TECHNICAL CATALOGUE



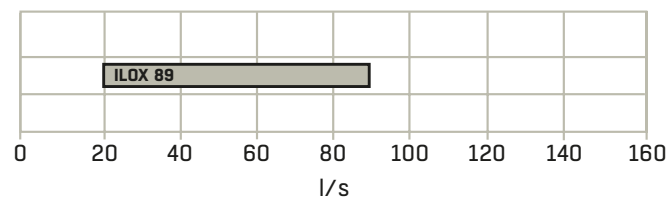
HEAT RECOVERY UNIT ILOX 89

The ILOX 89 heat recovery unit recovers energy from extract air via an efficient counterflow heat exchanger. The unit is equipped with the FläktGroup ISYteq Mini control system with a ISYteq Touch 3.5 control panel. The ILOX 89 is primarily intended for homes and small non-residential premises, for installation in heated spaces. All of its connections are upwards and it is intended for mounting on a wall or stable shelf. It is supplied with a 2 metre connection cable for the control panel. The unit is available with a 5th connection for the connection of a cooker hood.

ENERGY SAVINGS

The ILOX 89 is an energy efficient heat recovery unit with low energy consumption. The energy savings are achieved by using an efficient counterflow heat exchanger provided with a demand-driven defrost function. High-efficiency EC motors are used. These have an energy consumption, according to measurements, 50–60% that of the equivalent AC motors. This also contributes to energy savings.

OVERVIEW AIR FLOW DIAGRAM



PRODUCT DATA

- Recommended for residential floor spaces up to 200 m² (75 l/s)
- Annual efficiency up to 70%
- Counterflow heat exchanger
- Thermo Ice, demand-driven defrosting
- High-efficiency EC motors
- Individually adjustable fans
- Filter, class ISO ePM1 55% (F7) / ISO Coarse (G3)
- Modbus RS485
- ISYteq Touch 3.5 graphic control panel

VVS AMA CODE

QAB

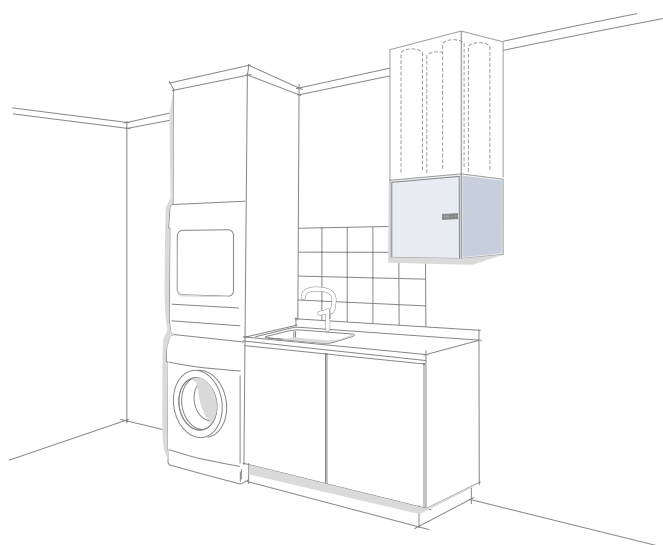
PRODUCT CODE EXAMPLE:

ILOX-089-14-1-1-2

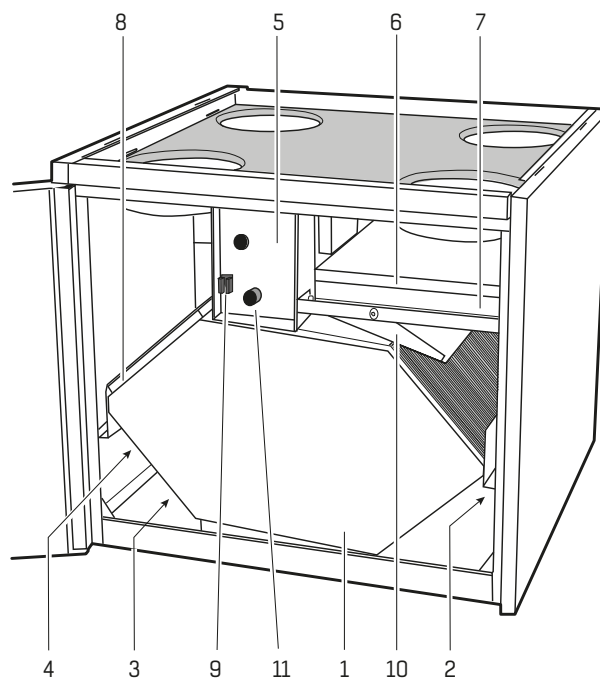
ENERGY CLASS

B

Compliant with energy class A+ in cold climate conditions (Scandinavia).



THE UNIT'S MAIN COMPONENTS



The figure above shows a unit bb = 14 = outdoor air right and supply air left.

1. Counterflow heat exchanger
2. Extract air fan (behind the heat exchanger)
3. Supply air fan (behind the heat exchanger)
4. Heater (behind the supply air fan)
5. Control box
6. Supply prefilter ISO Coarse (G3)
7. Supply filter ISO ePM1 55% (F7)
8. Extract air filter ISO Coarse (G3)
9. Door switch
10. Bypass damper
11. Reset button, thermal overload protection

DESCRIPTION, ELECTRICAL DATA, CONTROL EQUIPMENT

CASING

The casing is made of white enamelled sheet metal with an intermediate layer of 15 mm insulation. The doors on the unit are provided with quick-release fasteners.

FANS

The fans are powered by energy-efficient EC motors. Fan speed is continuously variable, and independent of the other fan.

HEAT EXCHANGER

The unit has an efficient aluminium counterflow heat exchanger with an annual efficiency of up to 70%. The ILOX 89 comes with a demand-driven defrost function, Termo Ice, as standard.

The heat exchanger can be removed for cleaning.

HEATER

A heater (electric or water coil) is supplied as standard.

FILTER

The unit is fitted with a class F7 filter with a G3 prefilter for the supply air and a G3 filter for the extract air.

DELIVERY

The unit is delivered in a cardboard box on a pallet. Suspension bracket for wall mounting are supplied. Operation, maintenance and assembly instructions are included.

ELECTRICAL DATA

Voltage: 230 V, single phase, 50 Hz

Code	Fan motors Rated output, W	Electric heater, W	Rated output, W	Rated current, A
ILOX 89	2 x 119	1200	1460	6.4

CONTROL EQUIPMENT

The unit is equipped with an electronic ISYteq Mini control unit. The control unit is integrated into the unit and controls the operation of the fans, the bypass damper and the heater. Modbus RS485 is supplied as standard.

FAN CONTROL

Three operating modes can be selected via the ISYteq Touch 3.5 control panel:

- "AWAY" (low speed) is only used when the premises are left empty for an extended period (during a holiday for example)
- "HOME" (normal speed) is used for normal ventilation flow
- "FORCED" (high speed) is used when there is a greater need for ventilation (reverts to normal automatically after 120 minutes)

The speed of the fans can be adjusted independently of each other.

TEMPERATURE CONTROL

The control unit governs the heater to maintain the set temperature.

DEFROSTING, TERMO ICE

During cold periods when frost forms in the heat exchanger, the Termo Ice function defrosts the unit and the supply air fan is stopped. Defrosting does not start until it is really needed. In other words when much of the heat exchanger has been covered in frost. This is to allow the highest degree of heat recovery possible. The Termo Ice system can detect the difference between frost and condensate.

ETHERNET CONNECTION (ACCESSORY)

This function can be used to connect the unit to an existing network. The unit has an integrated web server, which makes it possible to read and change certain parameters via a web browser.

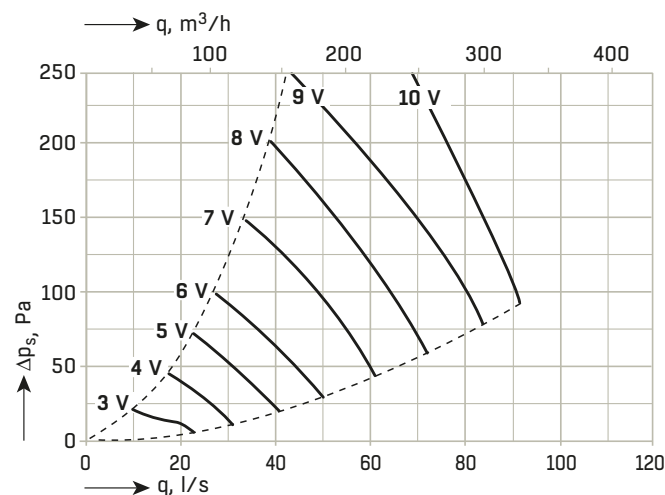
The connection can also be used for connection to a superior system via Modbus TCP/IP.

ALARMS

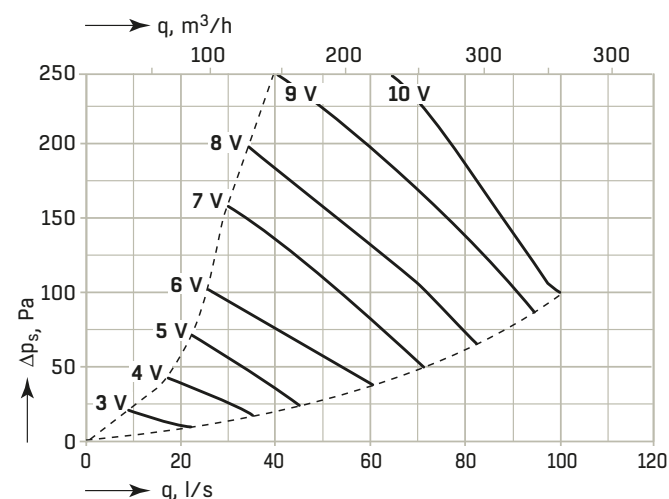
The system generates alarms for filter replacement, incorrect temperatures and sensor malfunctions. Alarms can be easily acknowledged and read off in plain text from the ISYteq Touch 3.5 control panel.

CAPACITY, OUTPUT AND NOISE DATA

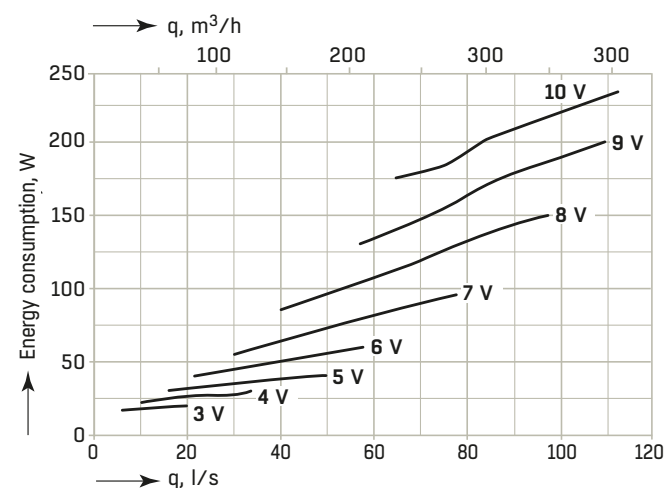
SUPPLY AIR FAN



EXTRACT AIR FAN



FAN POWER CONSUMPTION



NOISE DATA

SOUND POWER VALUES L_W IN OCTAVE BANDS TO THE SUPPLY AIR DUCT

U, V	q, l/s	L_{WA} , dB(A)	Octave band, mid-frequency Hz							
			63	125	250	500	1000	2000	4000	8000
3	22	44	59	52	47	41	36	24	1)	1)
4	34	51	66	60	53	48	45	35	25	1)
5	41	56	69	65	58	53	50	42	34	21
6	55	60	74	69	63	57	54	48	41	33
7	63	64	78	74	66	62	57	52	45	39
8	79	68	80	79	70	65	59	56	50	45
9	84	70	84	82	73	68	62	58	53	48
10	97	71	85	82	74	69	62	59	54	49

1) Noise generation is lower than the background noise

U = Control voltage setting, V (see diagram)

q = Air flow, l/s

L_{WA} = Sound power level in the duct, dB(A)

SOUND POWER VALUES L_W IN OCTAVE BANDS TO THE EXTRACT AIR DUCT

U, V	q, l/s	L_{WA} , dB(A)	Octave band, mid-frequency Hz							
			63	125	250	500	1000	2000	4000	8000
3	32	36	53	48	37	33	23	13	1)	1)
4	50	43	57	55	43	40	31	21	1)	1)
5	4	47	58	59	48	43	34	26	16	1)
6	66	52	64	64	52	48	37	31	22	1)
7	71	53	65	64	55	52	41	35	27	1)
8	71	57	70	68	59	54	43	37	31	1)
10	88	61	74	73	62	59	46	41	35	21
10	97	71	85	82	74	69	62	59	54	49

1) Noise generation is lower than the background noise

U = Control voltage setting, V (see diagram)

q = Air flow, l/s

L_{WA} = Sound power level in the duct, dB(A)

SOUND PRESSURE LEVEL L_{p10A} THROUGH THE CASING TO A ROOM WITH A 10 m² SOUND ABSORPTION AREA

U, V	3	4	5	6	7	8	9	10
$q_{\text{supply air}}$, l/s	22	34	46	58	71	84	95	99
$q_{\text{extract air}}$, l/s	27	39	48	58	69	80	89	94
L_{p10A} , dB(A)	24	28	32	36	40	44	46	47

U = Control voltage setting, V (see diagram)

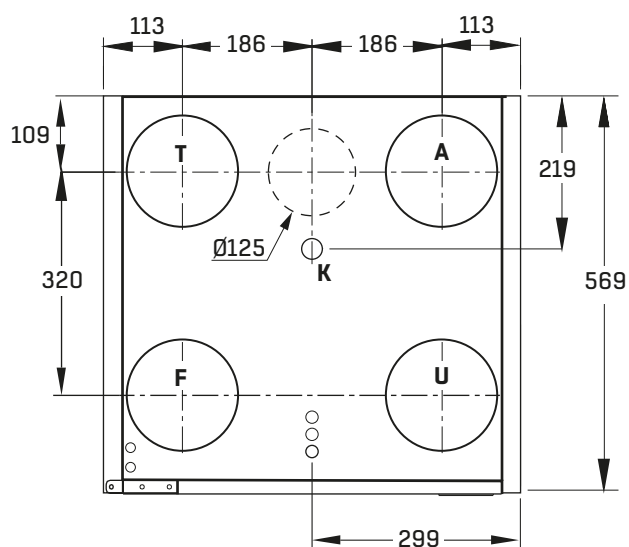
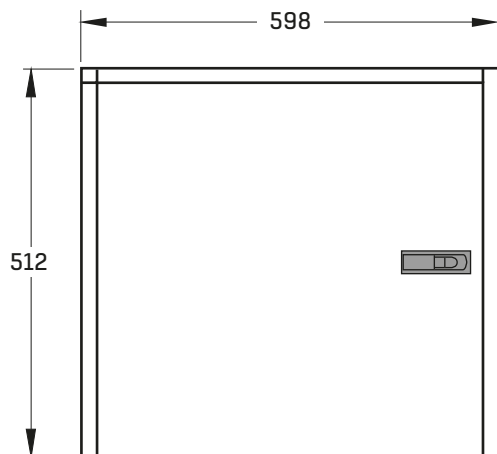
$q_{\text{supply air}}$ = Supply air flow, l/s

$q_{\text{extract air}}$ = Extract air flow, l/s

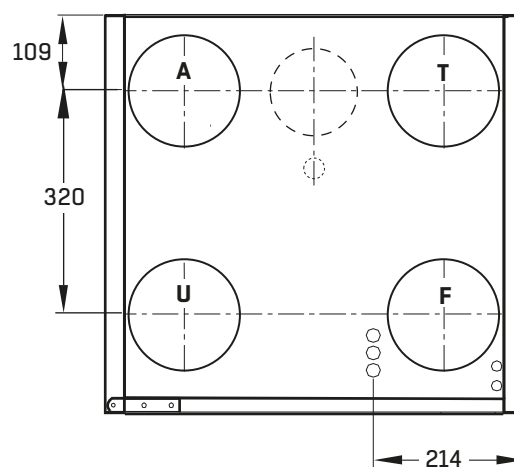
L_{p10A} = Sound level for a room with a 10 m² sound absorption area, dB(A)

DIMENSIONS AND CONNECTIONS

DIMENSIONS, WEIGHT AND CONNECTIONS



bb = 14 = Outdoor air right, supply air left



bb = 24 = Outdoor air left, supply air right

Weight: 50 kg

Connection	T	F	U	A
Diameter	160	160	160	160
Connection	Supply air	Extract air	Outdoor air	Exhaust air

K = condensation drain ½ inch internal thread on the underside.

The door is always hung on the left.



ORDERING CODES

Heat recovery unit

RDXA-089-bb-cc-ddd

Connection (bb) _____

01 = Outdoor air right, supply air left

02 = Outdoor air left, supply air right

03 = Outdoor air right, 5th connection for a cooker hood

04 = Outdoor air left, 5th connection for a cooker hood

Filter (cc) _____

1 = ISO Coarse (G3) + ISO ePM1 55% (F7)/ISO Coarse (G3)

Heater (cc) _____

1 = Electric heater

2 = Water heater

3 = Electric heater, low power

Language (ddd) _____

1 = Swedish

3 = English

Air quality control (ddd) _____

0 = None

1 = CO₂

Communication (ddd) _____

0 = Modbus RS485

1 = Modbus TCP/IP, Web server

ACCESSORIES

Filter set 2 x ISO Coarse (G3) + 1 x ISO ePM1 55% (F7) **ILOZ-11-1**

Mounting frame 4 connections **ILOZ-52-4**

Mounting frame 5 connections **ILOZ-52-5**

Ethernet card **RDKZ-53-5**

EXCELLENCE IN SOLUTIONS

FläktGroup is the European market leader for smart and energy efficient Indoor Air and Critical Air solutions to support every application area. We offer our customers innovative technologies, high quality and outstanding performance supported by more than a century of accumulated industry experience. The widest product range in the market, and strong market presence in 65 countries worldwide, guarantee that we are always by your side, ready to deliver Excellence in Solutions.

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