



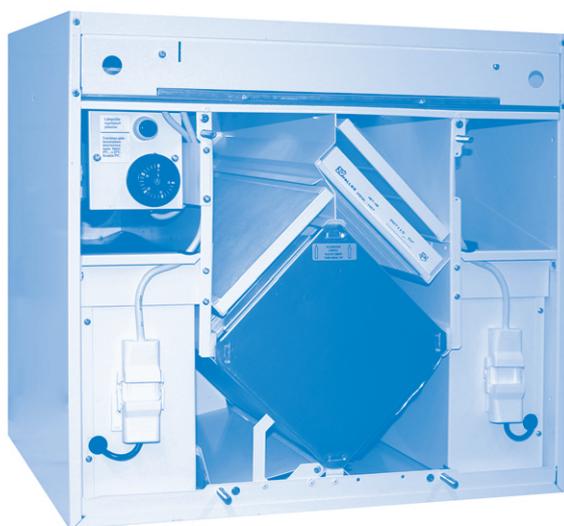
VALLOX 75.95

SILENT

• 1.09.353E
• 30.10.2008
• Model 3510
© VALLOX

Model 3510

The VALLOX SILENT models have been designed especially for ventilation in individual dwellings in blocks of flats and terraced houses.



VALLOX 75 SILENT

for dwellings with an area of 40–80 m²

VALLOX 95 SILENT

for dwellings with an area of 80–120 m²

- Efficient sound insulation in the unit
- Sound silencing fan construction
- Ceiling mounting prevents sound from passing through to the wall structures in the dwelling
- Supply and extract air ventilation with heat recovery
- Good filtering
- In-built heat recovery bypass for summer ventilation
- Versatile control alternatives
- Handy ceiling mounting plate – for simple and quick mounting
- Service switch as standard

All models are available as R and L models

Models:

VALLOX 75 SILENT

VALLOX 95 SILENT

VALLOX 75 SILENT VKL

VALLOX 95 SILENT VKL

Technical specifications

Fans	VALLOX 75 SILENT	Supply air	105 W	65 dm ³ /s	60 Pa
		Extract air	105 W	75 dm ³ /s	75 Pa
Fans	VALLOX 95 SILENT	Supply air	180 W	85 dm ³ /s	50 Pa
		Extract air	180 W	95 dm ³ /s	75 Pa
Heat recovery			Plate heat exchanger, efficiency approx. 60%		
Heat recovery bypass			Summer / winter damper		
Post-heating			Electric 500 W radiator or water radiator (VKL)		
Filters	Supply air		G 3 + F 7		
	Extract air		G 3		
Weight			52 kg		
Service switch			Door switch		
Power adjustment			Cooker hood PTX / PTXP, control centre 1992/1992 EK or remote monitoring control centre 1993 YK		
Input power and data			230 V, IP 34		
	VALLOX 75 SILENT		105 W, 0,9 A + post-heating 2.2 A, 3.1 A in all		
	VALLOX 95 SILENT		180 W, 1,6 A + post-heating 2.2 A, 3.8 A in all		
	VALLOX 75 SILENT VKL		105 W, 0,9 A		
	VALLOX 95 SILENT VKL		180 W, 1,6 A		

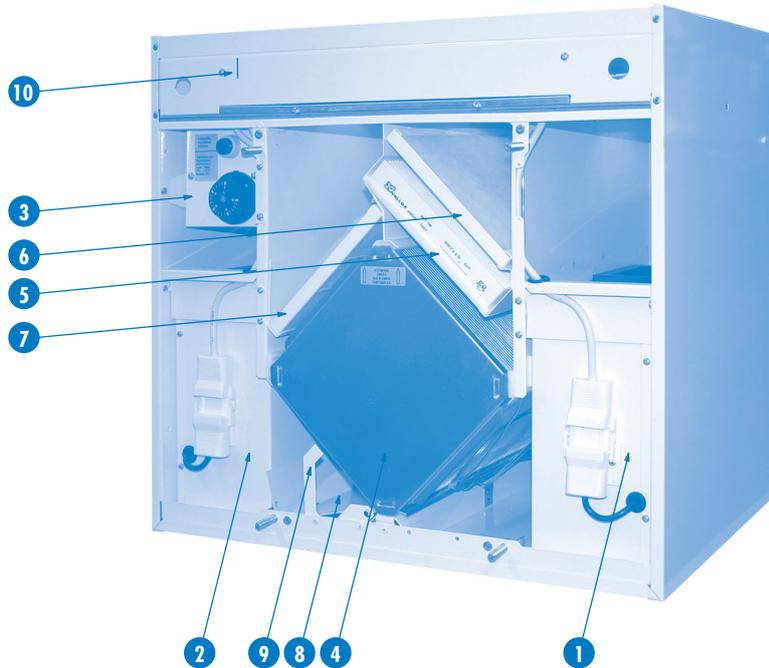
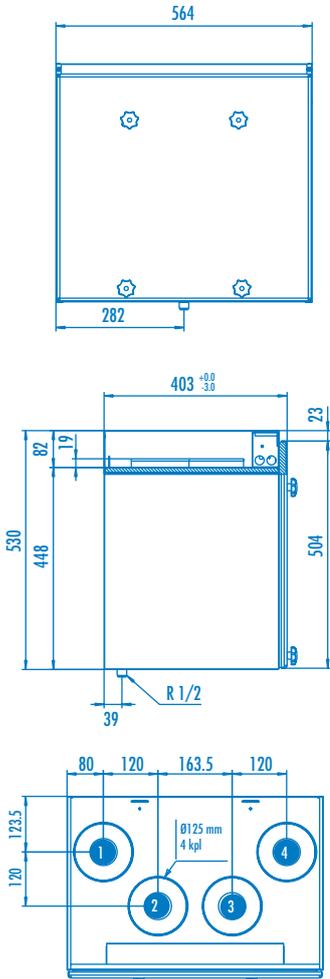
TECHNICAL SPECIFICATION



VALLOX 75/95 SILENT

DIMENSIONS AND MAIN PARTS

Dimensions and duct outlets



Main parts

- | | |
|--|-------------------------------|
| 1 Extract air fan | 6 Outdoor air filter G3 |
| 2 Supply air fan | 7 Extract air filter G3 |
| 3 Postheating radiator (electric or water) | 8 Summer / winter damper |
| 4 Heat recovery cell | 9 Summer / winter damper lock |
| 5 Outdoor air filter F7 | 10 Safety switch |

DUCT OUTLETS

R model

- 1 Supply air to the dwelling
- 2 Extract air from the dwelling
- 3 Outdoor air to the unit
- 4 Exhaust air outside

L model

- 1 Exhaust air outside
- 2 Outdoor air to the unit
- 3 Extract air from the dwelling
- 4 Supply air to the dwelling

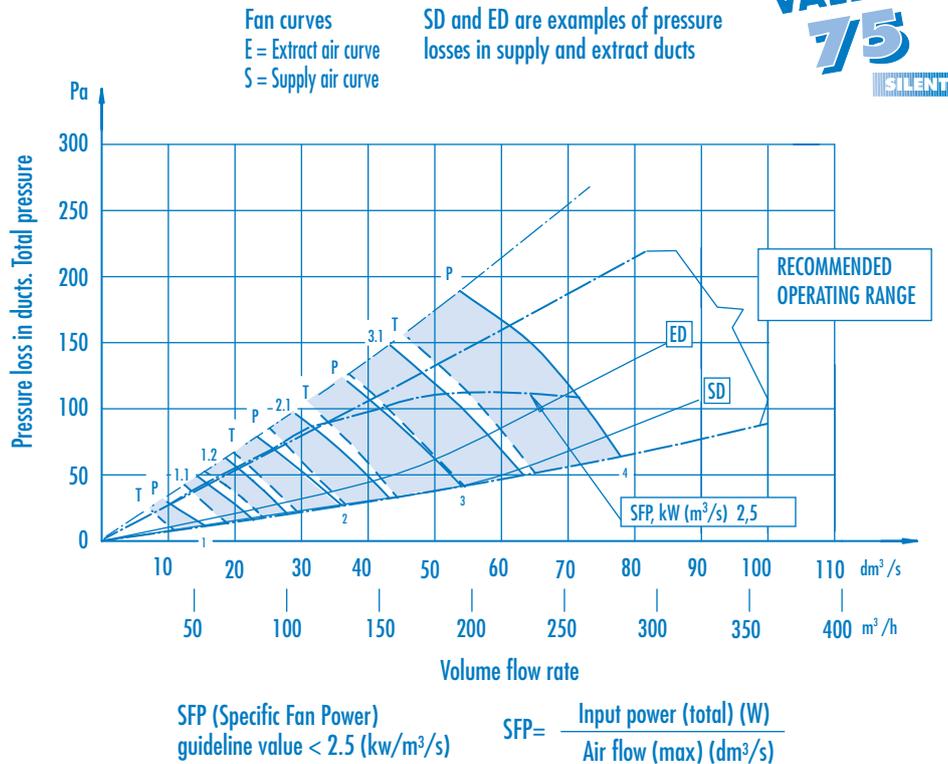
VALLOX 75/95 SILENT



PERFORMANCE

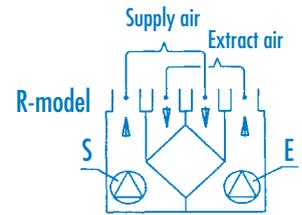
Air volumes and SFP

VALLOX 75 SILENT/fan 105 W

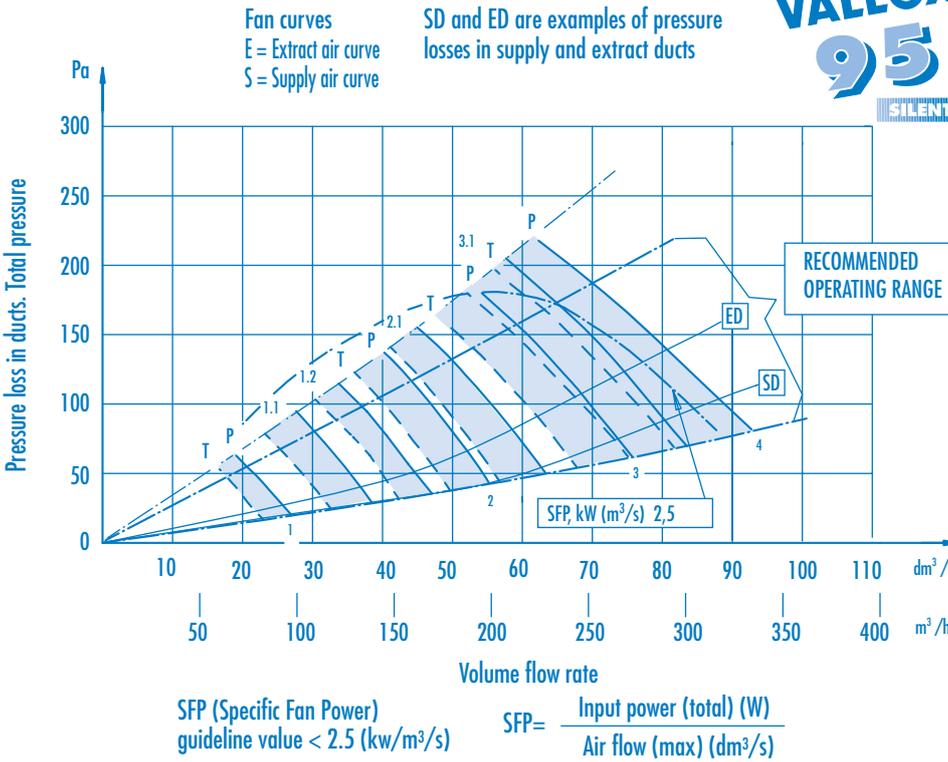


Measuring points VALLOX 75/95 SILENT

Measuring points after the connection outlet.
Fan curves indicate the total pressure available for duct losses.



VALLOX 95 SILENT/fan 180 W





VALLOX 75/95 SILENT

SOUND VALUES AND POWER – 75/95 SILENT

Power



105 W fan

Input power includes a transformer 0.85 A (PTX)

Fan speeds	Input power of fans (2 fans)	Control voltage
*1	25 W	70V
1.1	38 W	90 V
1.2	50 W	110 V
*2	63 W	120 V
2.1	78 W	135 V
*3	104 W	160 V
3.1	128 W	180 V
*4	182 W	230 V

*) Factory preselected control speeds

Power



180 W fan

Input power includes a transformer 0.85 A (PTX)

Fan speeds	Input power of fans (2 fans)	Control voltage
*1	42 W	70V
1.1	65 W	90 V
1.2	80 W	110 V
*2	104 W	120 V
2.1	122 W	135 V
*3	153 W	160 V
3.1	179 W	180 V
*4	221 W	230 V

*) Factory preselected control speeds

Sound values VALLOX 75 SILENT, 105 W fan

	Sound power level from the ventilation unit to supply air ducts by octave band L_w , dB									Sound power level from the ventilation unit to extract air ducts by octave band L_w , dB								
	ADJUSTMENT POSITION / VOLUME FLOW RATE																	
	Hz	1 13	1.1 20	1.2 24	2 31	2.1 36	3 44	3.1 51	4 61	1 18	1.1 26	1.2 28	2 35	2.1 41	3 50	3.1 58	4 69	
Medium frequency of the octave band, Hz	63	62	68	73	75	77	86	81	85	41	56	62	65	65	71	72	76	
	125	47	53	56	59	62	66	71	74	41	48	52	55	57	63	67	69	
	250	36	41	45	48	51	55	58	62	30	34	38	42	45	50	54	58	
	500	28	35	39	41	43	47	49	53	24	28	31	34	36	40	43	46	
	1000	27	35	42	46	50	52	55	58	15	24	30	34	37	40	42	44	
	2000	17	29	35	38	41	46	50	57		17	23	27	30	35	38	43	
	4000		19	28	31	34	40	43	47				17	20	25	29	33	
8000				19	25	33	38	43							17	25		
L_w , dB	62	68	73	75	78	86	82	86	44	56	62	65	66	72	73	77		
L_{wA} , dB(A)	37	43	48	51	54	60	60	64	25	34	41	43	44	50	52	56		
	A-weighted sound pressure level dB (A) coming from the unit through the envelope to the rooms where the unit has been installed (10 m ² sound absorption)																	
	ADJUSTMENT POSITION / VOLUME FLOW RATES (supply / extract)																	
		1 12/15	1.1 18/22	1.2 24/28	2 28/35	2.1 35/40	3 44/50	3.1 50/58	4 60/71									
L_{pAr} , dB(A)	<20	<20	21	23	26	29	32	35										



*) Calculated values

Sound values VALLOX 95 SILENT, 180 W fan

	Sound power level from the ventilation unit to supply air ducts by octave band L_w , dB									Sound power level from the ventilation unit to extract air ducts by octave band L_w , dB								
	ADJUSTMENT POSITION / VOLUME FLOW RATE																	
	Hz	1 24	1.1 34	1.2 40	2 49	2.1 55	3 63	3.1 69	4 74	1 28	1.1 37	1.2 45	2 54	2.1 61	3 70	3.1 76	4 82	
Medium frequency of the octave band, Hz	63	76	78	80	82	84	88	89	89	61	67	71	73	74	79	78	80	
	125	59	66	70	72	74	76	78	79	53	61	64	67	69	72	74	75	
	250	46	53	58	61	64	68	70	71	41	48	53	57	60	63	65	67	
	500	38	44	48	51	54	57	59	61	29	32	35	39	42	44	46	47	
	1000	33	40	45	47	49	52	53	55	22	32	34	36	38	40	42	43	
	2000	28	36	41	44	47	51	53	54	22	26	31	34	36	40	42	44	
	4000	20	30	36	39	42	45	47	49		19	24	27	29	32	34	36	
8000		19	29	33	37	41	43	44					17	22	26	27		
L_w , dB	76	79	80	83	85	89	90	89	62	68	72	74	75	80	80	81		
L_{wA} , dB(A)	50	54	58	60	62	65	67	68	40	47	51	53	56	59	60	62		
	A-weighted sound pressure level dB (A) coming from the unit through the envelope to the rooms where the unit has been installed (10 m ² sound absorption)																	
	ADJUSTMENT POSITION / VOLUME FLOW RATES (supply / extract)																	
		1 23/27	1.1 34/38	1.2 40/45	2 48/54	2.1 56/61	3 64/70	3.1 71/77	4 74/83									
L_{pAr} , dB(A)	21	26	30	33	36	39	41	42										



VALLOX 75 / 95 SILENT



CONTROL METHODS

SEPARATE CONTROL CENTRE 1992A 0.85 A

Depth:	90 mm	• 4-step adjustment
Height:	140 mm	• ON/OFF switch
Width:	110 mm	

SEPARATE CONTROL CENTRE 1992A EK 0,85 A

Depth:	90 mm	• Separate 4-step adjustment switch
Height:	140 mm	• ON/OFF switch
Width:	110 mm	

COOKER HOOD PTX/PTXP(A) 500/600 0,85 A

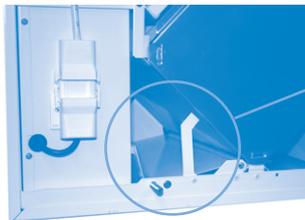
Depth:	500 mm	• Washable grease filter, easy to remove
Height:	140 mm	• Bright, long lasting fluorescent lamp
Width:	498/598 mm	• Outlet collar with rubber ring

REMOTE MONITORING CENTRE VALLOX 1993A

Depth:	100 mm	• ON/OFF switch
Height:	180 mm	• Operating status data to remote monitoring
Width:	255 mm	• Transformer with eight voltage options, of which two + one preselected
		• Can be controlled with a timer or through remote monitoring, for example.



HEAT RECOVERY BYPASS



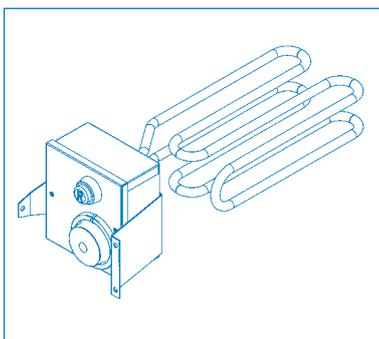
In winter use the heat recovery cell of VALLOX 75 and VALLOX 95 recovers heat from the air leaving the dwelling and uses it to heat the air coming from the outside.



In summer use the heat recovery cell is bypassed in VALLOX 75 and VALLOX 95 with an in-built damper.

In the summer position airflow through the cell is prevented, and heat recovery bypass is activated.

POST-HEATING



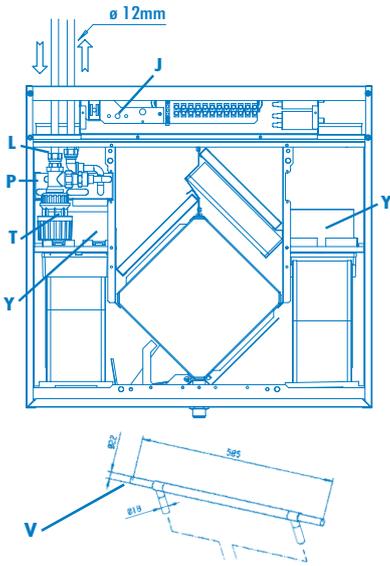
Electric radiator

VALLOX 75 / 95 units feature a 500 W post-heating radiator. The temperature of supply air is adjusted at the thermostat regulator located inside the unit. Adjustments can be made within the range of 0...25°C.



VALLOX 75/95 SILENT

POST-HEATING



Post-heating radiator

Water radiator (VKL model)

VKL models come standard with a water radiator (P). Temperature of air going from the unit is adjusted by a self-actuated thermostat valve (T). Heat pipes coming to the unit are connected within the unit with 12 mm clamps (L) to the radiator.

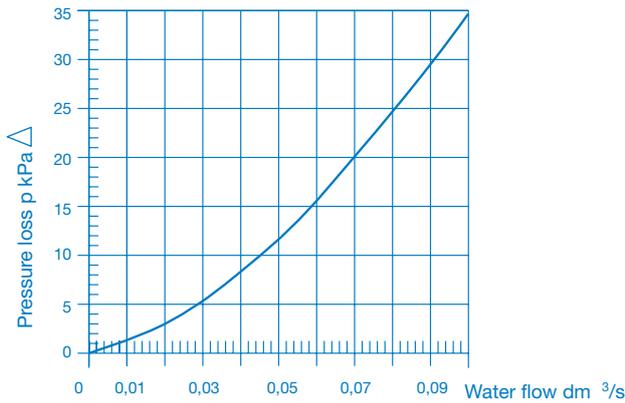
Water radiator defrosting

Defrost thermostat (T) of the post-heating radiator (P) stops the unit when the temperature of the water radiator goes below the setpoint, thereby preventing the freezing risk of the water radiator. This also causes self-actuated one-way dampers (Y) to close, preventing the flow of outdoor air to the unit. The unit starts automatically as soon as the risk of freezing has passed. The threshold temperature of the risk of freezing can be set at the thermostat (J) of the water radiator.

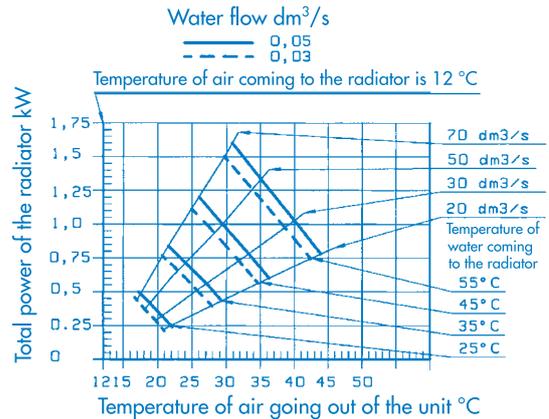
Though VALLOX 75/95 VKL units incorporate efficient freezing protection, at least detached houses should be equipped with a separate heating circuit, with a water-glycol mixture (or other non-freezing solution) as the heat transfer fluid. The system may be equipped with an optional heat exchanger (V). Without non-freezing water-glycol mixture, there is a risk of freezing in the post-heating radiator because it is in direct contact with outdoor air.

VALLOX 75 / 95 VKL radiator performance curves

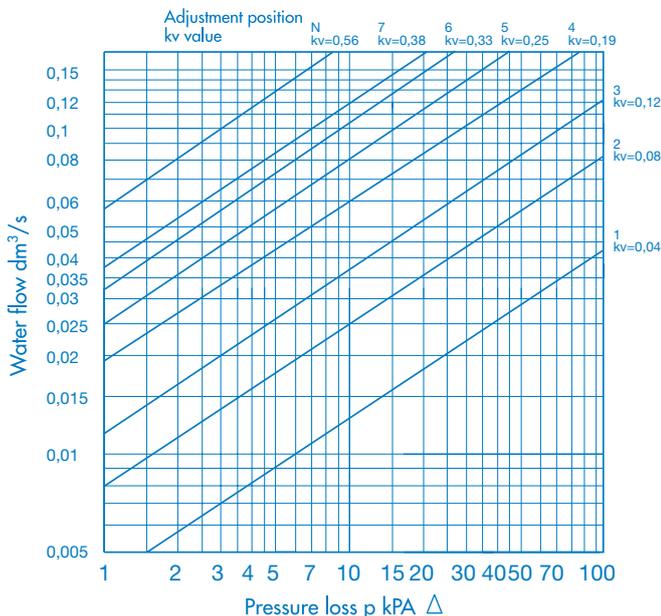
Pressure loss in the VKL water radiator



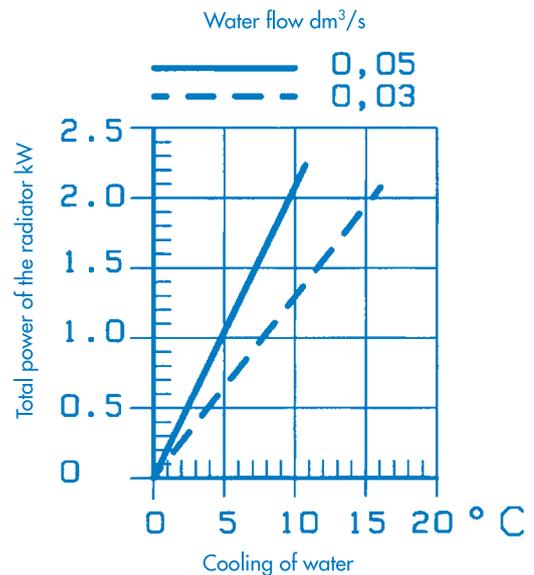
Power of the VKL water radiator



Pressure loss in the valve (valve Danfoss RA-N 10 angle)

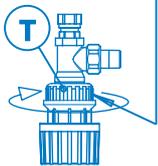
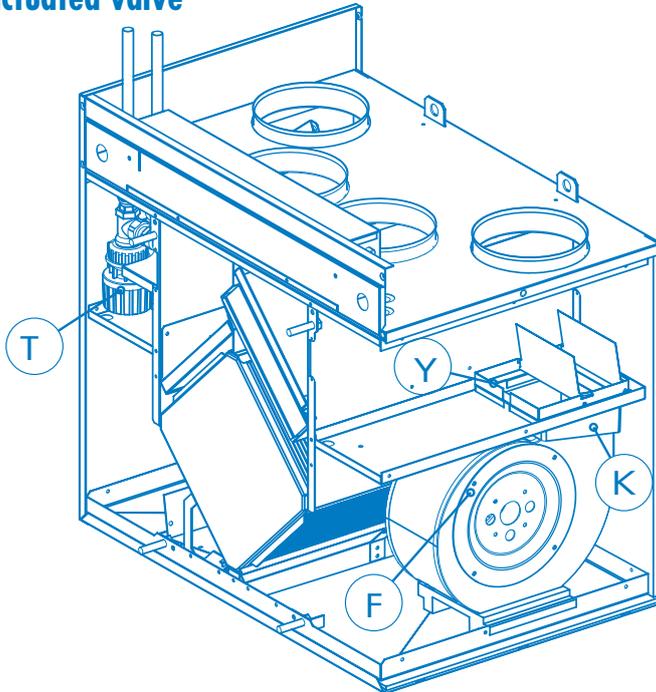


Cooling of water in the radiator





Detaching of thermostat sensor from and attaching it to self-actuated valve

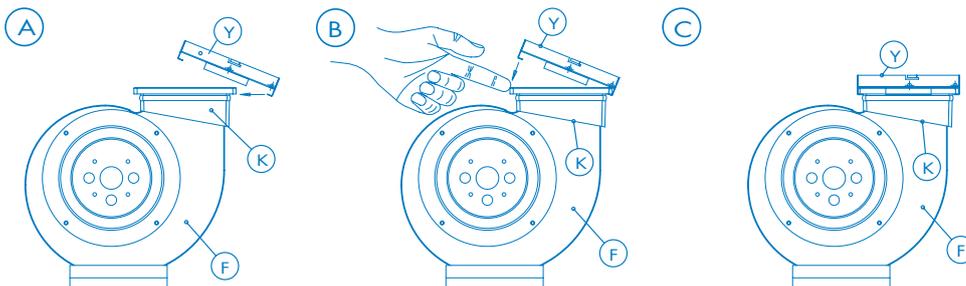


Thermostat sensor is not locked. The sensor is detached by turning the sleeve to the direction shown by the arrow.

When reattaching the sensor, turn the sleeve to the direction shown by the arrow to make the claws lock in the open position, check that the green indicator dot is visible, and push the thermostat sensor to the body of the valve.

Detaching and attaching of self-actuated one-way damper (vacuum damper)

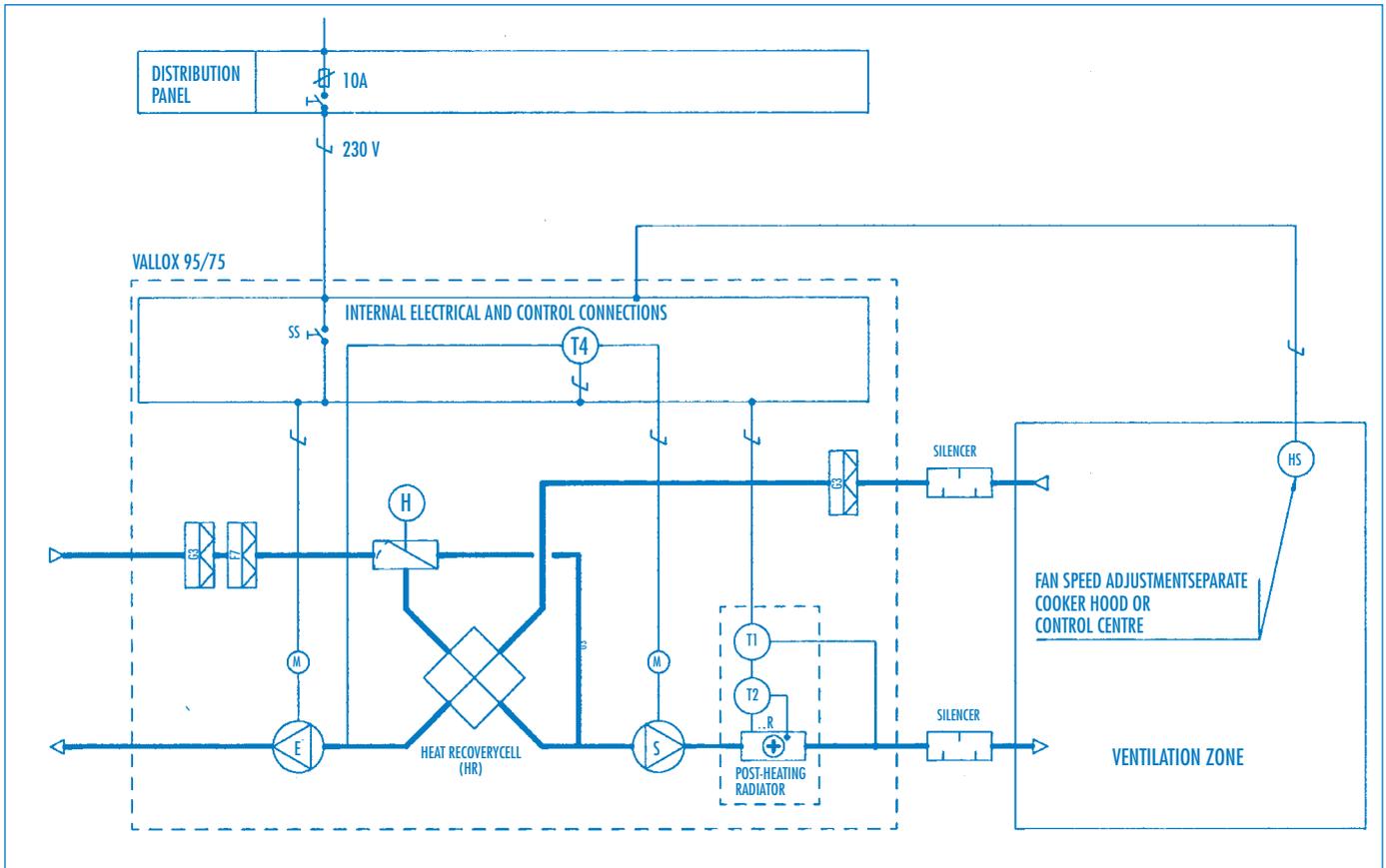
- A** Put the hook of the damper (Y) rim under the back edge of the fastening collar (K) of the fan (F). Then push the damper downwards until the steering edges of the valve go inside the rubber collar.
- B** Push the front edge of the collar with your finger.
- C** Put the hook of the front edge of the damper below the front edge of the collar. When detaching the damper, take the same steps in the opposite order. Self-actuated one-way dampers are only used in VKL model units.





VALLOX 75/95 SILENT

CONTROL DIAGRAM AND DESCRIPTION OF OPERATION FOR VALLOX 75/95 , ELECTRIC RADIATOR



Description of operation for VALLOX 75 / 95

Control of operation

Power supply to the unit is controlled with the 0/1 switch in the distribution panel. There is also a service switch **SS** inside the unit.

Fan speed adjustment

The **S** and **E** fans of the unit are controlled depending on operating conditions with a separate 4-step (1, 2, 3 and 4) control centre **HS** located in the ventilation zone, or with a cooker hood.

Supply air temperature

Regulating thermostat **T1** controls the operation of the electric radiator **R**, keeping the supply air going out from the unit at the setpoint.

Heat recovery bypass

Summer-time bypass of the heat recovery cell **HR** is done manually by turning the **HR** damper **H** in the bypass position for the summer.

Heat recovery antifreezing

The antifreezing thermostat **T4** of the **HR** cell keeps stopping the supply air fan **S**, thereby preventing the risk of the freezing of the **HR** cell. The fan starts automatically as soon as the risk of freezing has passed. The threshold temperature of the risk of freezing can be set at the thermostat **T4**.

Overheat protector of the electric radiator

The overheat protector **T2** of the radiator **R** is triggered and power supply to the heating unit is stopped, if the temperature of the thermostat exceeds +80°C.

The overheat protector is reset manually.

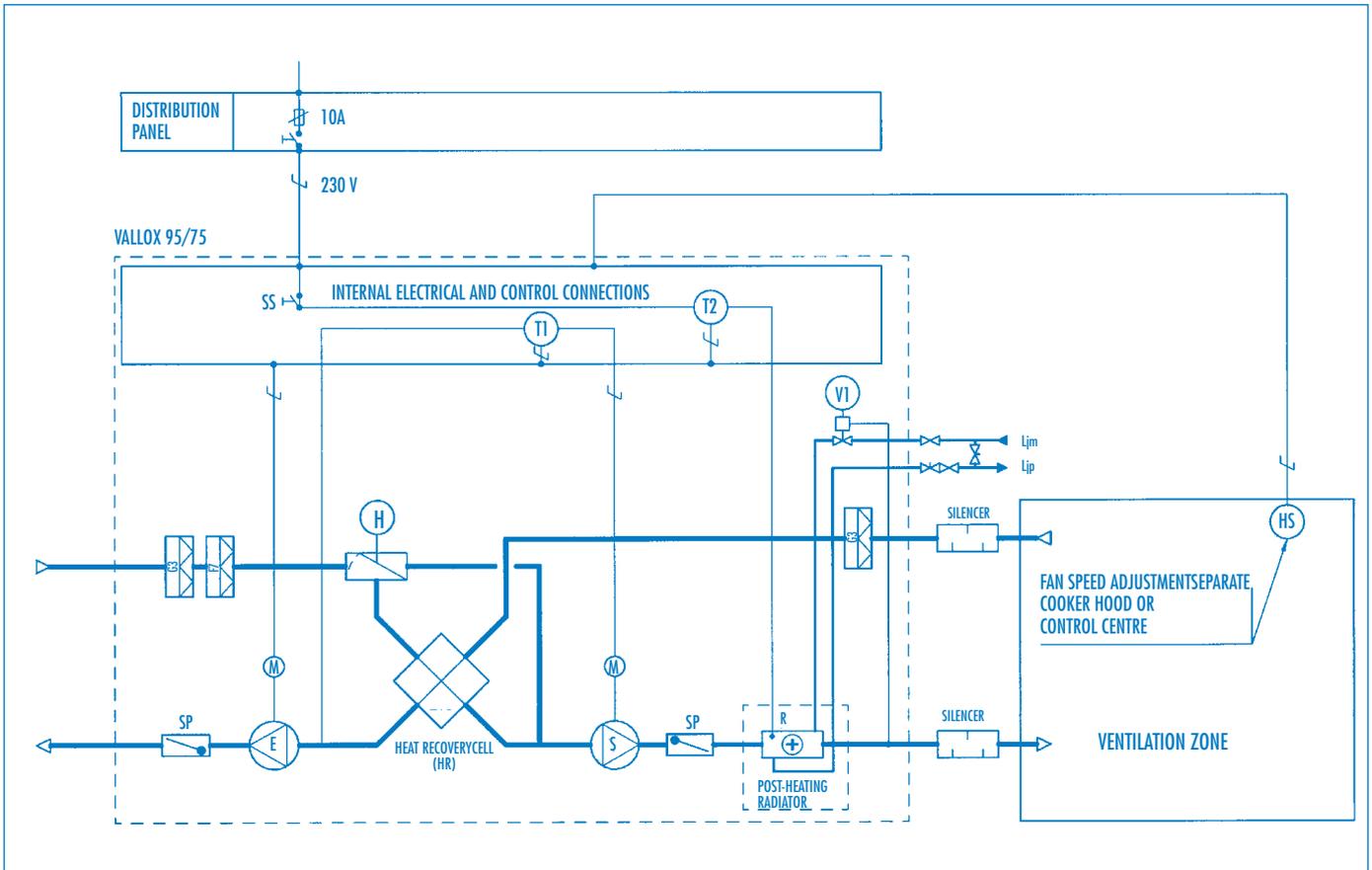
Parts list VALLOX 75 / 95

Code	Name	Technical details	Standard / option
G3	Filter, extract air and supply air	G3	Standard
F7	Fine filter, supply air at least F7	F7	Standard
H	HR bypass damper	Manual	Standard
HS	Speed adjustment	Separate control centre or cooker hood	Option
R	Post-heating radiator	Electric radiator 0.5 kW	Standard
HR	Heat recovery cell	Efficiency approx. 60%	Standard
S	Supply air fan / VALLOX 75	105 W, 65 l/s (50 Pa)	Standard
	Supply air fan / VALLOX 95	180 W, 80 l/s (75 Pa)	Standard
SS	Service switch	Door switch	Standard
T1	Regulating thermostat	0...40 °C	Standard
T2	Overheating protector (2)	80 °C, manually reset	Standard
T4	HR antifreezing thermostat	Factory setting +4 °C	Standard
E	Extract air fan / VALLOX 75	105 W, 75 l/s (80 Pa)	Standard
	Extract air fan / VALLOX 95	180 W, 95 l/s (100 Pa)	Standard

VALLOX 75/95 SILENT



CONTROL DIAGRAM AND DESCRIPTION OF OPERATION FOR VALLOX 75/95 VKL WATER RADIATOR



Description of operation for VALLOX 75/95VKL

Control of operation

Power supply to the unit is controlled with the 0/1 switch in the distribution panel. There is also a maintenance / safety switch **SS** inside the unit. It stops power supply when the door of the unit is opened.

Fan speed adjustment

The operation of the fans **S** and **E** of the unit is controlled with a separate control centre **HS**, located in the ventilation zone, or with a cooker hood.

Supply air temperature

Self-actuated control valve **V1** controls the operation of the postheating radiator **R**, maintaining the temperature of supply air going out from the unit at the setpoint value.

Heat recovery bypass

Summer-time bypass of the heat recovery cell **HR** is done manually by turning the **HR** damper **H** in the bypass position for the summer.

Heat recovery defrosting

The defrost thermostat **T1** of the **HR** cell keeps stopping the supply air fan **S**, thereby preventing the risk of the freezing in the **HR** cell. The fan starts automatically as soon as the risk of freezing has passed. The threshold temperature of the risk of freezing can be set at the thermostat **T1**.

Water radiator defrosting

The defrost thermostat **T2** of the post-heating radiator **R** stops the unit when the temperature of water radiator goes below the threshold value, preventing the risk of freezing in the water radiator. This also causes self-actuated one-way dampers **SP** to close, preventing the flow of outdoor air to the unit. The unit starts automatically as soon as the risk of freezing has passed. The threshold temperature of freezing risk can be set at thermostat **T2**.

Parts list VALLOX 75 VKL / VALLOX 95 VKL

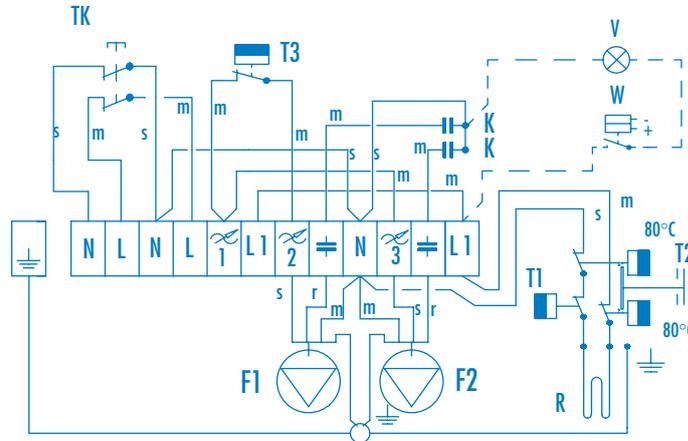
Code	Name	Technical details	Standard / option
G3	Filter, extract air and supply air	G3	Standard
F7	Fine filter, supply air at least F7	F7	Standard
H	HR bypass damper	Manual	Standard
HS	Speed adjustment	Separate control centre or cooker hood	Option
R	Post-heating radiator	Water radiator 0.5 kW	Standard
HR	Heat recovery cell	Efficiency approx. 60%	Standard
S	Supply air fan / VALLOX 75	105 W, 65 l/s (50 Pa)	Standard
	Supply air fan / VALLOX 95	180 W, 80 l/s (75 Pa)	Standard
SS	Service switch	Door switch	Standard
T1	Regulating thermostat	0...40 °C	Standard
E	Extract air fan / VALLOX 75	105 W, 75 l/s (80 Pa)	Standard
	Extract air fan / VALLOX 95	180 W, 95 l/s (100 Pa)	Standard
V1	Control valve	Self-actuated + 5...21 °C	Standard
T2	Water radiator defrost thermostat	Factory setting +5 °C	Standard
SP	One-way damper, 2 pcs	Air flow operated	Standard



VALLOX 75/95 SILENT

ELECTRICAL CONNECTIONS / ELECTRIC RADIATOR

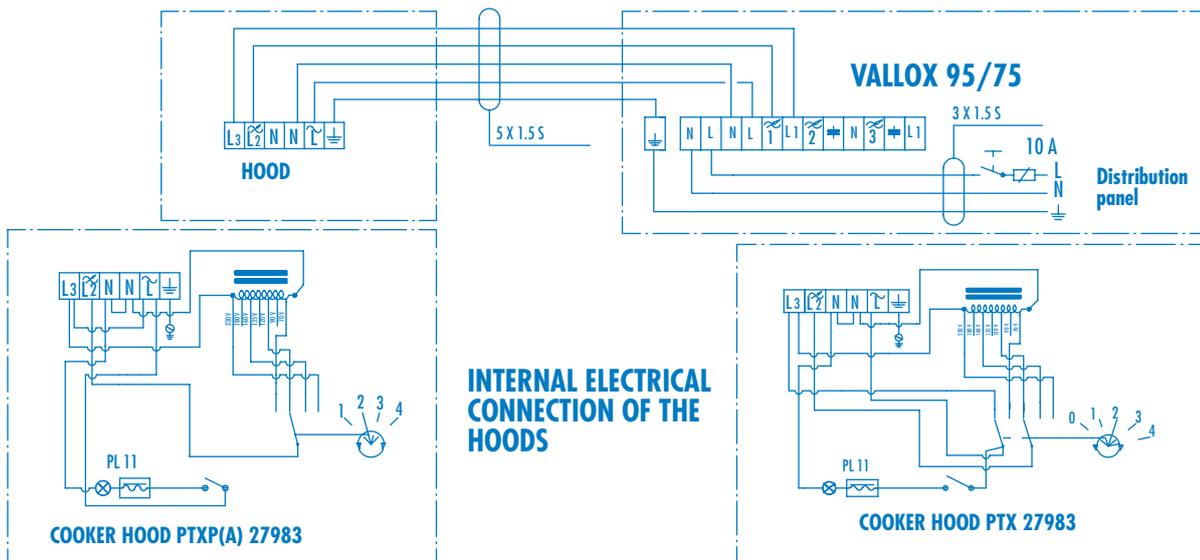
VALLOX 75/95, model 3510, internal electrical connection



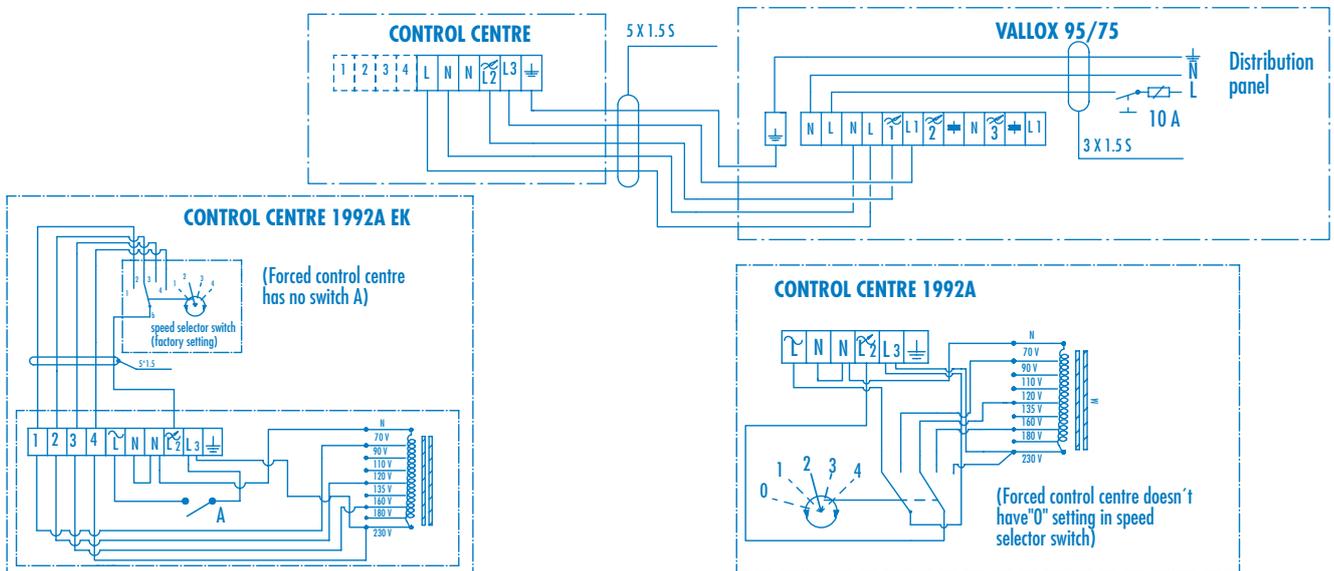
- F1 Supply air fan
- F2 Extract air fan
- T1 Post-heating radiator regulating thermostat 0...+25°C (Limitation)
- T2 Overheat protector +80°C
- T3 Antifreezing thermostat +4°C
- R Post-heating radiator
- K Capacitor
- SS Safety switch

Wire colours:
 m = black
 r = brown
 s = blue

VALLOX 75/95, 3510, external electrical connection with cooker hood PTX 27982 or PTXP(A) 27982



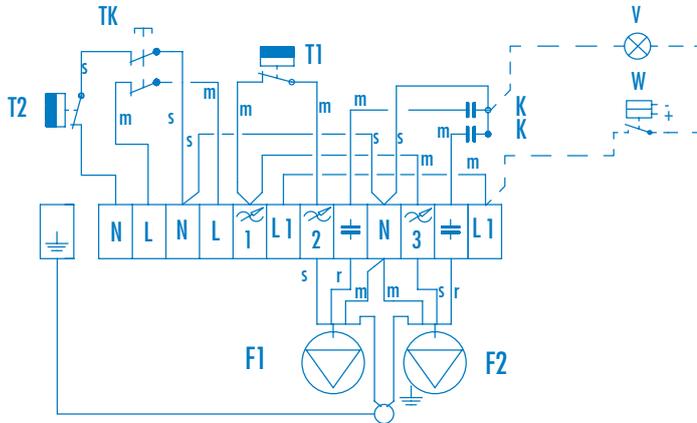
VALLOX 75/95, model 3510, external electrical connection with control centre



VALLOX 75/95 SILENT

ELECTRICAL CONNECTIONS / WATER RADIATOR (VKL)

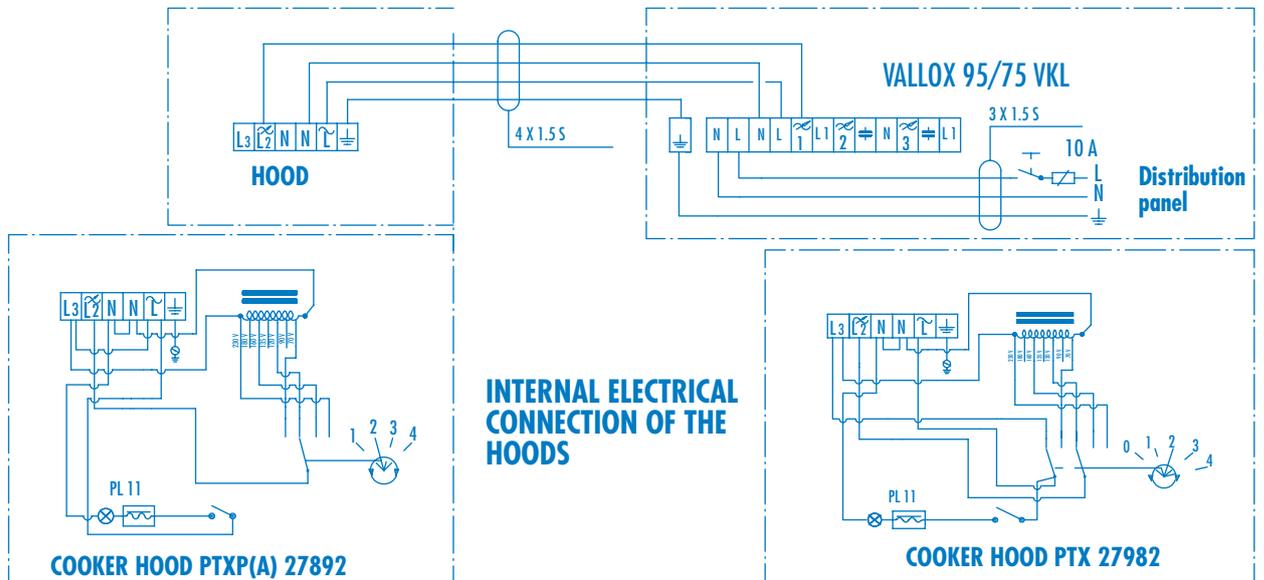
VALLOX 75 / 95 VKL, model 3510, internal electrical connection



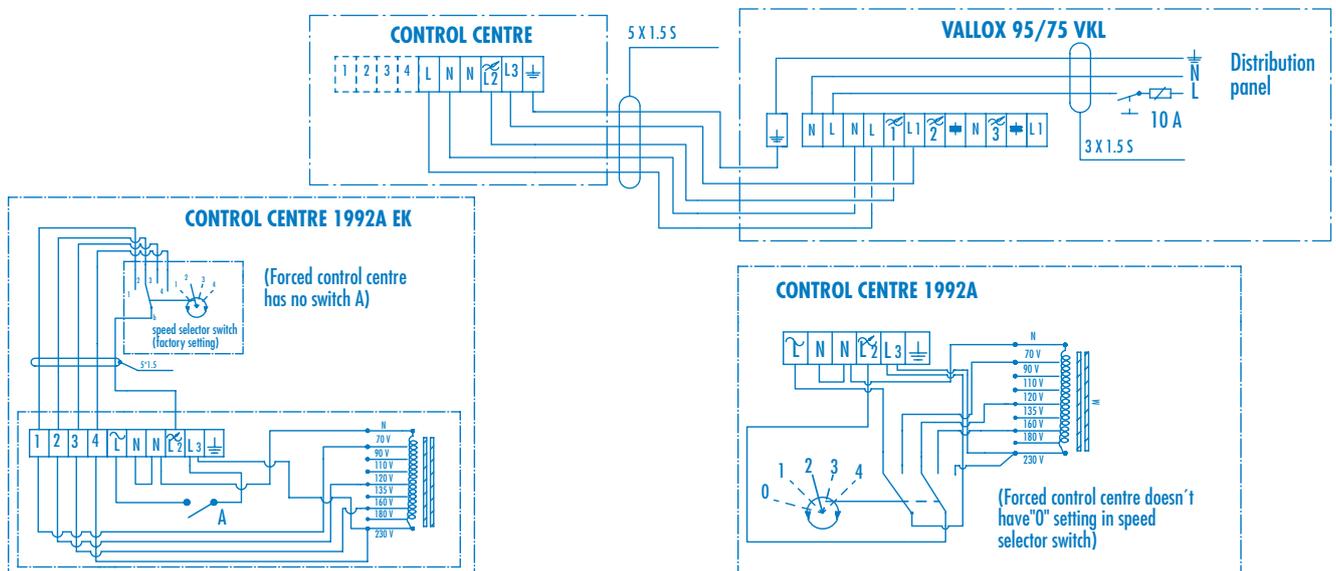
- F1 Supply air fan
- F2 Extract air fan
- T1 Post-heating radiator regulating thermostat 0...+25 °C (Limitation)
- T2 Defrost thermostat +5 °C
- K Capacitor
- SS Safety switch

Wire colours:
 m = black
 r = brown
 s = blue

VALLOX 75/95 VKL, 3510, external electrical connection with cooker hood PTX 27982 or PTP(A) 27982



VALLOX 75 / 95 VKL, model 3510, external electrical connection with control centre

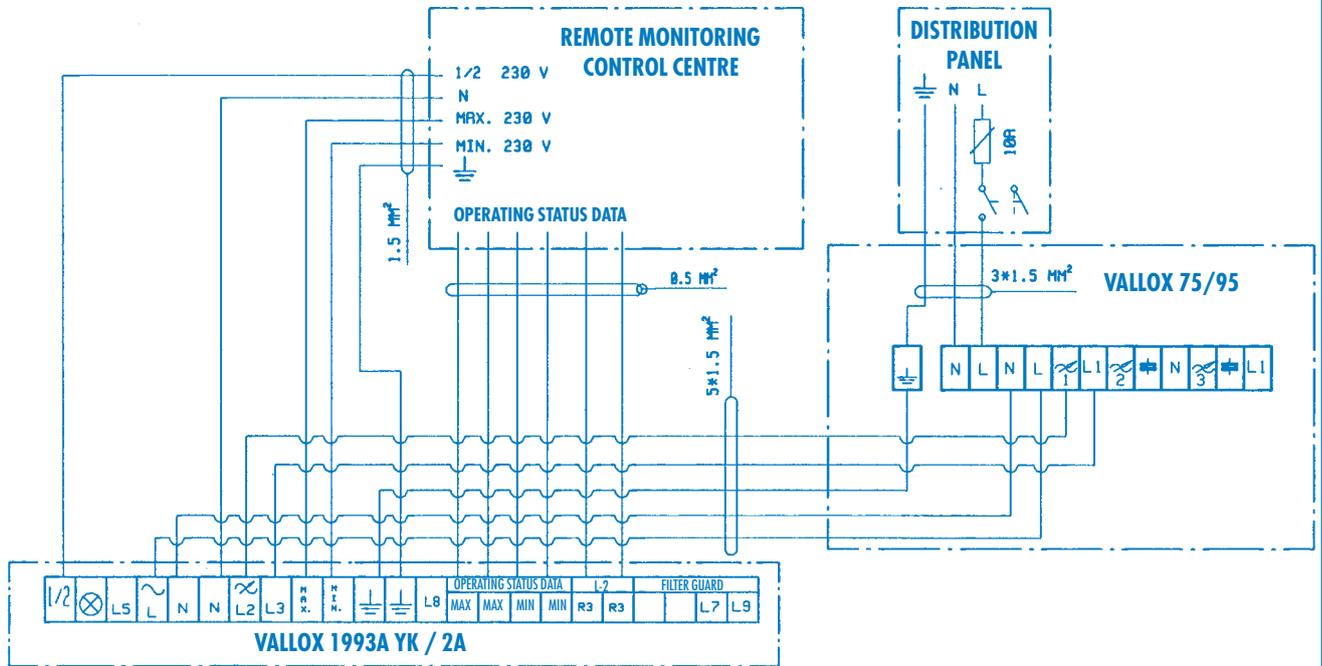




VALLOX 75/95 SILENT

ELECTRICAL CONNECTIONS / REMOTE MONITORING

VALLOX 75/95, control through remote monitoring with control centre 1993 YK/2A





VALLOX 75/95 location

VALLOX 75 / 95 SILENT is mounted in a place where temperature is more than +10 °C. The unit must be located in a place where the acoustic disturbance for residents is minimal. If residents can boost ventilation so that it exceeds the ratings for the time of operation, the sound level rating may be exceeded by +10 dB. If needed, the unit shall be encased.

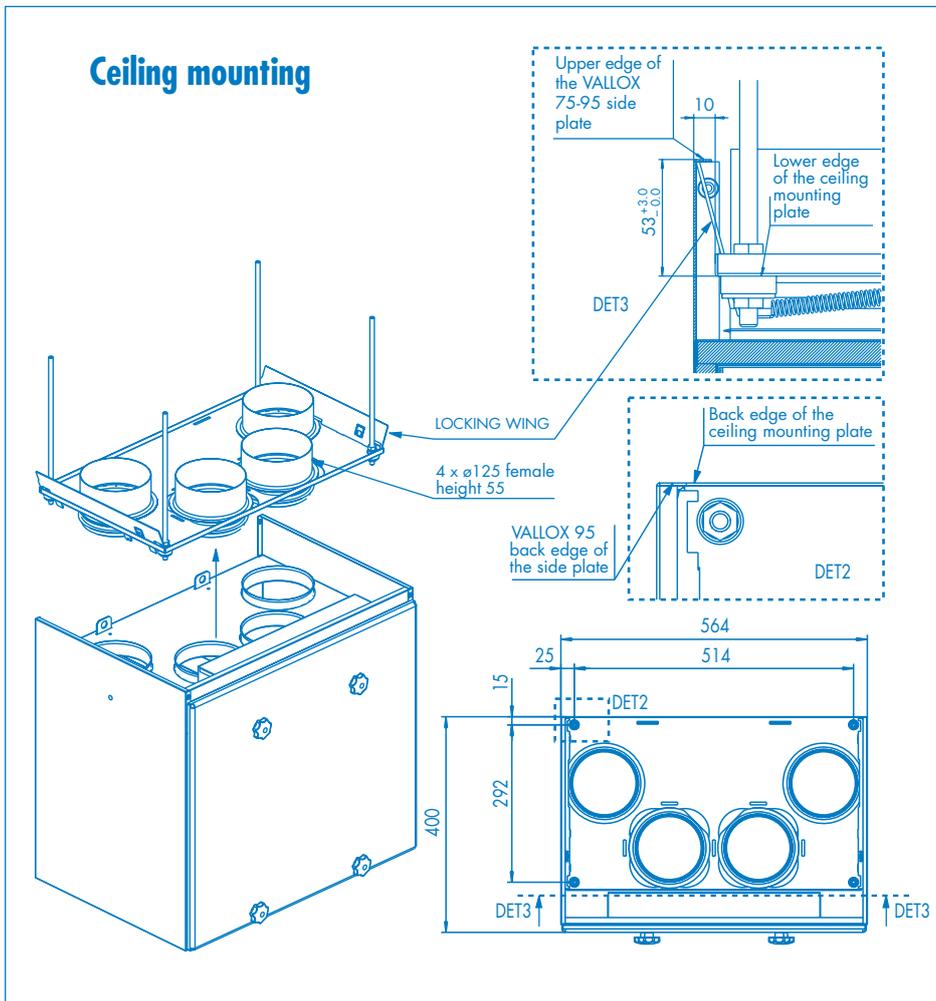
Ceiling mounting

VALLOX 75 / 95 Silent is mounted in place with an easy-to-use ceiling mounting plate (patent pending). This prevents sounds of operation from passing through to the wall structures. The ceiling mounting plate is fixed to the ceiling with M8 thread bars. Fix the bars so that they stand the weight of the unit, i.e. approximately 52 kg. **The ceiling mounting plate has to be fixed horizontally in order to ensure that the unit will be straight.**

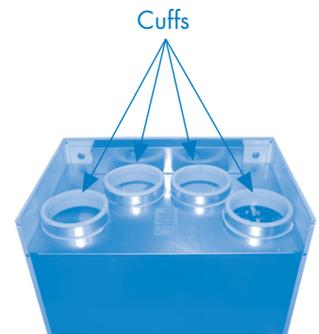
The outdoor air duct must be insulated against condensation, also between the unit and the ceiling mounting plate. Special "cuffs" (4 pcs) are delivered with the unit for this purpose.

Installation

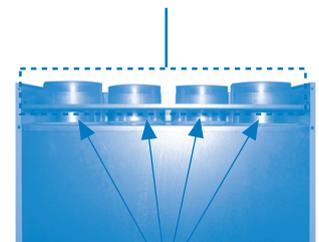
Lift the unit straight upwards till the locking wings on the sides of the mounting plate lock into the side plates of the unit. You can detach the unit from the mounting plate by releasing the locking wings from the side plates. To facilitate mounting, you may use a lubricant, such as O-ring grease, in the collar seals. Mounting accessories comprised in the delivery include rubber silencers, base plates and nuts as well as insulated cuffs to be located between the unit and the ceiling mounting plate. Thread bars are not included in the delivery.



Ceiling mounting plate



Ceiling mounting plate



Cuffs



VALLOX 75/95 SILENT

INSTALLATION

The condensing water pipe must have a downward slope.

The condensing water pipe must never be connected directly to the sewer.

It is not recommended to connect a condensing water pipe to a water seal or a floor drain where hot wash or shower water goes.

(If hot wash water goes to the floor drain and condensing water seal gets dry during the summer, steaming air is released from the drain to the unit's negatively pressured outlet side, which causes water to condense from the air in the pipe. A condensed water drop may generate an audible sound from the floor drain. The sound may be generated in winter as well if the water seal of the condensing water pipe is not filled and does not prevent air from flowing. Air flow and the formation of water drops in the condensing water pipe should be prevented.)

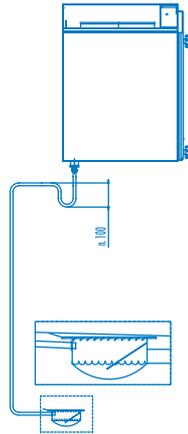
The delivery does not include a water seal nor the pipe and its components.

Examples of condensing water connections

Normally to the floor drain

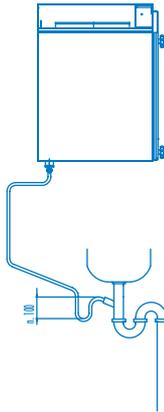
May generate sound when the water seal gets dry.

When there is no condensing water, the water seal may get dry in 1 to 4 weeks.



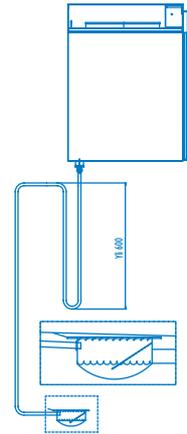
To the water seal in the wash basin

May generate sound when the water seal gets dry.



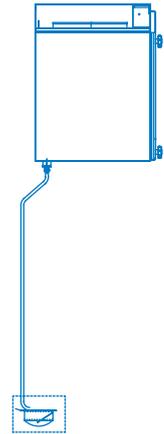
Normally to the floor drain with a long water seal

A long water seal ensures soundlessness for a long time.



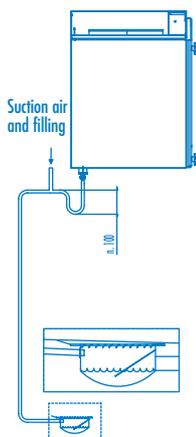
Straight to the floor drain without a water seal

The downward slope of the pipe is so steep that a water drop generating sound cannot remain in the pipe.



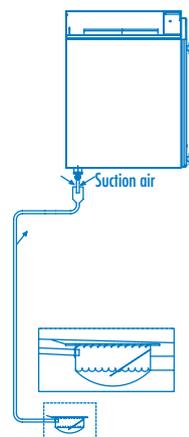
Normally to the floor drain

The pipe has a fork which decreases suction from the floor drain. No sound. Water seal not necessary. The fork can also be used to fill the water seal if such a seal is used.



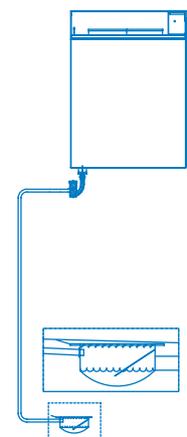
Normally to the floor drain through a funnel

No water seal. No sound because there is no suction in the pipe. The unit sucks replacement air from the funnel.



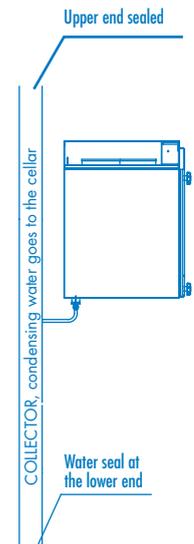
Normally to the floor drain through a non-return valve

The valve prevents air flow in the pipe but lets condensing water flow into the floor drain. No sound.



To the collector

No sound. (Blocks of flats)



VALLOX

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