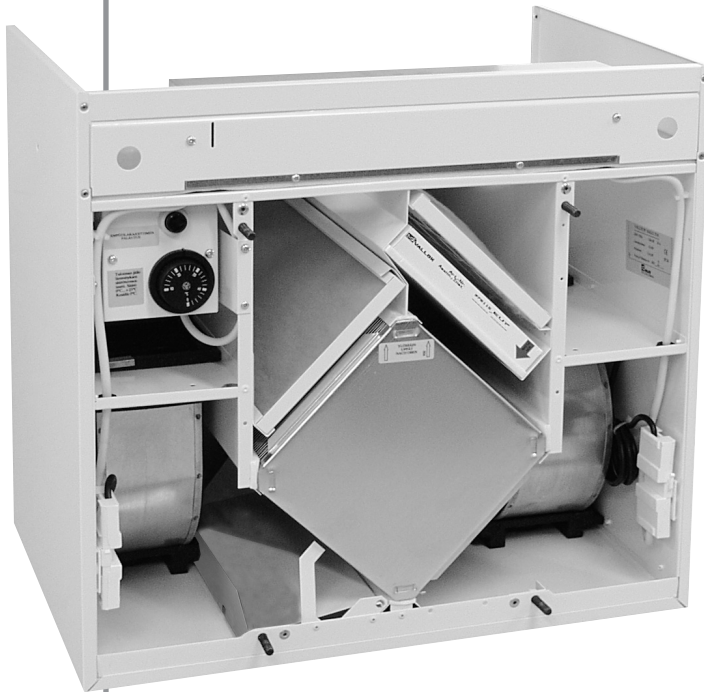




# VALLOX 75.95

• 1.09.259E  
• 22.7.2007  
• CODE 3510  
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CODE 3510



## Models:

**VALLOX 75**

**VALLOX 95**

**VALLOX 75 VKL**

**VALLOX 95 VKL**

- For dwelling-specific ventilation for detached houses, terraced houses and blocks of flats
- Supply and extract air ventilation with heat recovery
- Silent operation
- Good filtering
- In-built heat recovery bypass for summer ventilation
- Versatile control options
- Handy ceiling mounting plate – for simple and quick mounting
- Service switch as standard

All models are available as R and L models

# TECHNICAL SPECIFICATION

## Technical specifications

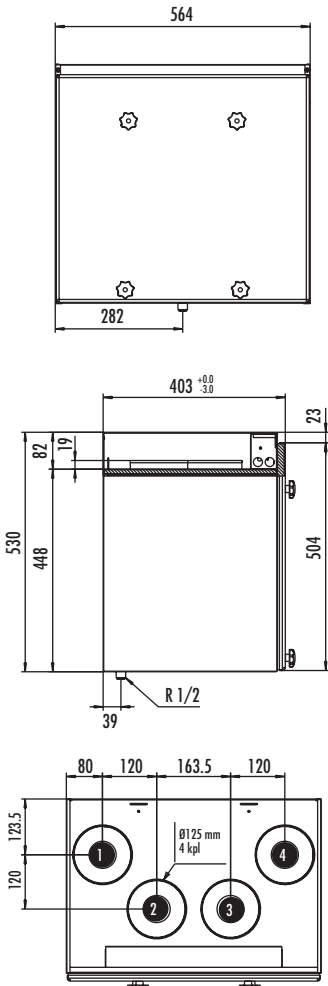
<b>Fans</b>	<b>VALLOX 75</b>	Supply air	105 W	65 dm <sup>3</sup> /s	90 Pa
		Extract air	105 W	75 dm <sup>3</sup> /s	130 Pa
<b>Fans</b>	<b>VALLOX 95</b>	Supply air	180 W	85 dm <sup>3</sup> /s	75 Pa
		Extract air	180 W	95 dm <sup>3</sup> /s	130 Pa
<b>Heat recovery</b>		Plate heat exchanger, efficiency approx. 60%			
<b>Heat recovery bypass</b>		Summer / winter damper			
<b>Post-heating</b>		Electric 500 W radiator or water radiator (VKL)			
<b>Filters</b>		Supply air	G 3 + F 7		
		Extract air	G 3		
<b>Weight</b>		36 kg			
<b>Service switch</b>		Door switch			
<b>Power adjustment</b>		Cooker hood PTX / PTXP, control centre 1992A/1992A EK or remote monitoring control centre 1993A YK			
<b>Input power and data</b>		230 V, IP 34			



# VALLOX 75/95

## DIMENSIONS, PERFORMANCE

### Dimensions and duct outlets



### 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

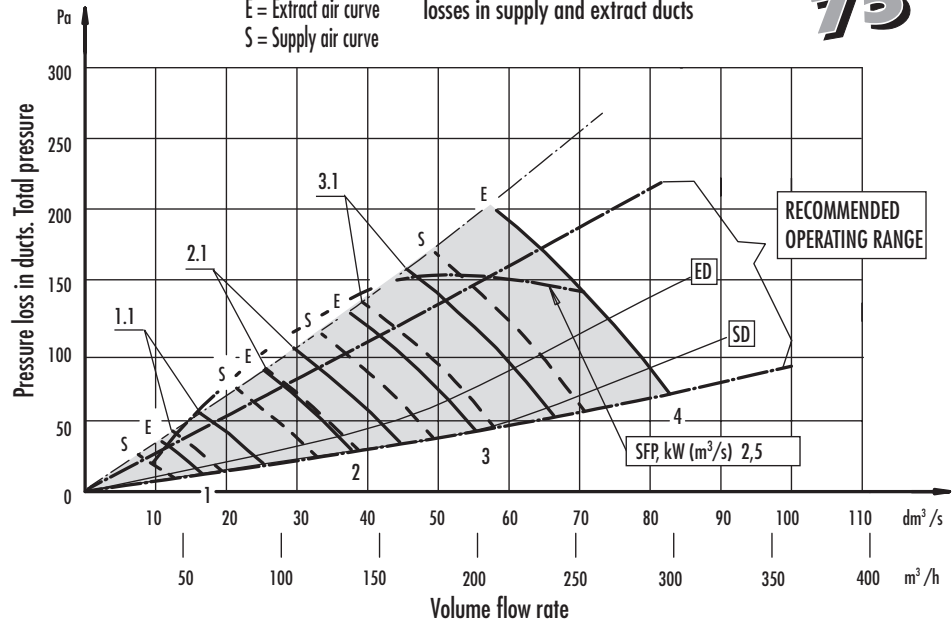
### Air volumes and SFP

#### VALLOX 75/fan 105 W

Fan curves  
E = Extract air curve  
S = Supply air curve

SD and ED are examples of pressure losses in supply and extract ducts

**VALLOX 75**



SFP (Specific Fan Power)  
guideline value < 2.5 (kW/m³/s)

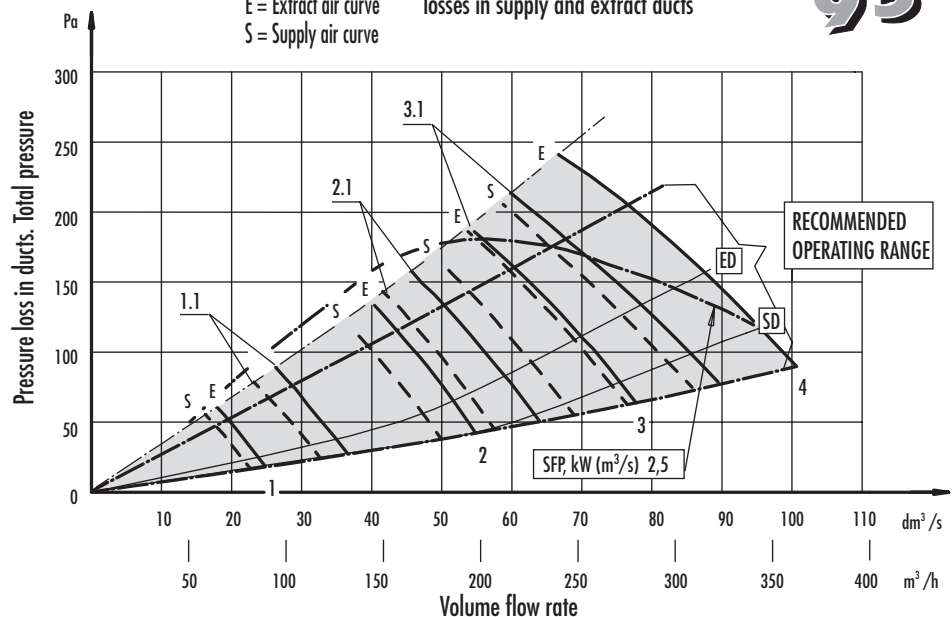
$$SFP = \frac{\text{Input power (total) (W)}}{\text{Air flow (max) (dm}^3\text{/s)}}$$

#### VALLOX 95/Fan 180 W

Fan curves  
E = Extract air curve  
S = Supply air curve

SD and ED are examples of pressure losses in supply and extract ducts

**VALLOX 95**



SFP (Specific Fan Power)  
guideline value < 2.5 (kW/m³/s)


$$SFP = \frac{\text{Input power (total) (W)}}{\text{Air flow (max) (dm}^3\text{/s)}}$$

# VALLOX 75/95




## SOUND VALUES AND POWER – 75/95

### Sound values VALLOX 75, 105 W fan

Hz	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							ADJUSTMENT POSITION / VOLUME FLOW RATE							
	1 13	1.1 20	2 31	2.1 36	3 44	3.1 51	4 61	1 18	1.1 26	2 35	2.1 41	3 50	3.1 58	4 69	
Medium frequency of the octave band, Hz	63	62	68	75	77	86	81	85	41	56	65	65	71	72	76
	125	47	53	59	62	66	71	74	41	48	55	57	63	67	69
	250	36	41	48	51	55	58	62	30	34	42	45	50	54	58
	500	28	35	41	43	47	49	53	24	28	34	36	40	43	46
	1000	27	35	46	50	52	55	58	15	24	34	37	40	42	44
	2000	17	29	38	41	46	50	57		17	27	30	35	38	43
	4000		19	31	34	40	43	47			17	20	25	29	33
	8000			19	25	33	38	43						17	25
$L_w$ dB		62	68	75	78	86	82	86	44	56	65	66	72	73	77
$L_{WA}$ dB(A)		37	43	51	54	60	60	64	25	34	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 <sup>2</sup> sound absorption)							 <b>VALLOX 75 / 105 W</b>						
		ADJUSTMENT POSITION / VOLUME FLOW RATES (supply / extract)													
		1 14/18	2 21/25	3 31/36	4 36/42	5 44/52	6 52/60	7 61/71							
$L_{pA}$ dB(A)		20	24	29	31	34	37	40							

### Sound values VALLOX 95, 180 W fan

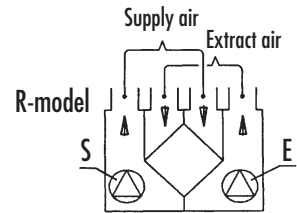
Hz	Sound power level from the ventilation unit to supply air ducts by octave band $L_w$ , dB							Sound power level from the ventilation unit to extract air ducts by octave band $L_w$ , dB							
	ADJUSTMENT POSITION / VOLUME FLOW RATE							ADJUSTMENT POSITION / VOLUME FLOW RATE							
	1 24	1.1 34	2 49	2.1 56	3 65	3.1 72	4 78	1 26	1.1 37	2 53	2.1 60	3 71	3.1 79	4 87	
Medium frequency of the octave band, Hz	63	69	75	79	83	84	85	86	57	63	69	68	73	77	75
	125	55	61	68	72	74	76	77	54	62	68	71	73	75	77
	250	44	49	56	58	62	64	66	39	46	54	57	61	63	65
	500	41	45	50	53	56	58	60	38	43	48	50	52	54	56
	1000	41	50	56	59	61	62	63	31	40	44	46	48	50	51
	2000	37	43	51	55	60	63	64	25	32	40	42	46	49	50
	4000	28	36	45	48	51	53	55	14	23	31	34	37	39	41
	8000		28	39	42	46	48	50			18	23	27	29	31
$L_w$ dB		70	75	79	83	85	86	87	59	66	72	73	76	79	79
$L_{WA}$ dB(A)		47	53	60	63	66	68	69	40	47	53	56	58	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 <sup>2</sup> sound absorption)							 <b>VALLOX 95 / 180 W</b>						
		ADJUSTMENT POSITION / VOLUME FLOW RATES (supply / extract)													
		1 23/26	2 33/37	3 48/53	4 56/62	5 65/72	6 71/80	7 78/87							
$L_{pA}$ dB(A)		28	34	39	41	44	46	47							

### Measuring points

#### VALLOX 75/ VALLOX 95

Measuring points after the connection outlet.

Fan curves indicate the total pressure available for duct losses.



### Power

#### VALLOX 75

#### 105 W fan

Input power includes a transformer 0.85 A (PTX)

Fan speeds	Input power of fans (2 fans)	Control voltage
*1	24 W	70V
1.1	37 W	90 V
*2	62 W	120 V
2.1	77 W	135 V
*3	102 W	160 V
3.1	129 W	180 V
*4	176 W	230 V

\*) Factory preselected control speeds

#### VALLOX 95

#### 180 W fan

Input power includes a transformer 0.85 A (PTX)

Fan speeds	Input power of fans (2 fans)	Control voltage
*1	41 W	70V
1.1	63 W	90 V
*2	102 W	120 V
2.1	122 W	135 V
*3	153 W	160 V
3.1	183 W	180 V
*4	228 W	230 V

\*) Factory preselected control speeds



# VALLOX 75/95

## CONTROL METHODS

### SEPARATE CONTROL CENTRE 1992A 0.85 A

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



### SEPARATE CONTROL CENTRE 1992A EK 0,85 A

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



### COOKER HOOD X-LINE PTX/PTXP(A) 500/600 0,85 A

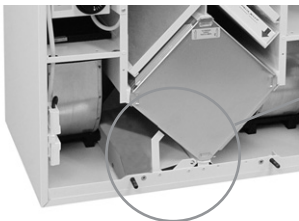
- Depth: 500 mm
- Height: 140 mm
- Width: 498/598 mm
- Washable grease filter, easy to remove
- Bright, long lasting fluorescent lamp
- Outlet collar with rubber ring



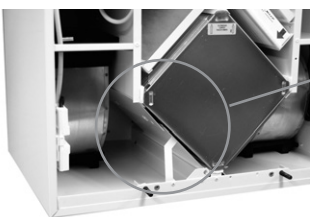
### REMOTE MONITORING CENTRE VALLOX 1993 A

- Depth: 100 mm
- Height: 180 mm
- Width: 255 mm
- ON/OFF switch
- Operating status data to remote monitoring
- 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



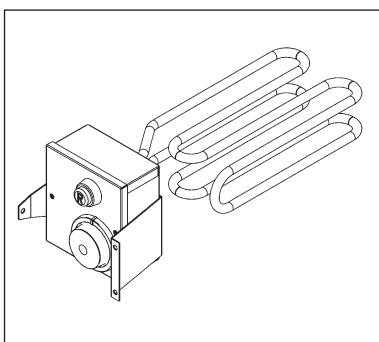
**In winter use** the heat recovery cell of VALLOX 75 and VALLOX 95 recovers heat from the air leaving the dwelling and uses it to heat the air coming from the outside.



**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.



### Post-heating radiator

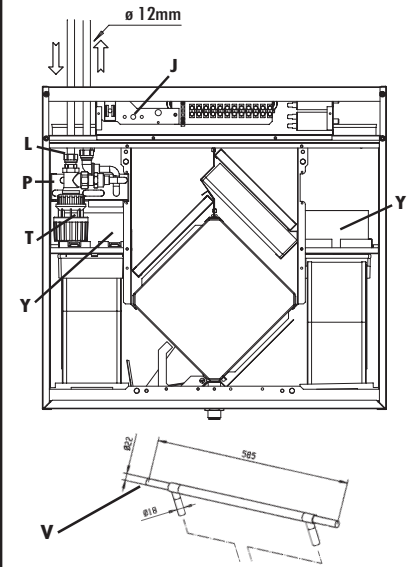
#### Water radiator (VKL model)

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

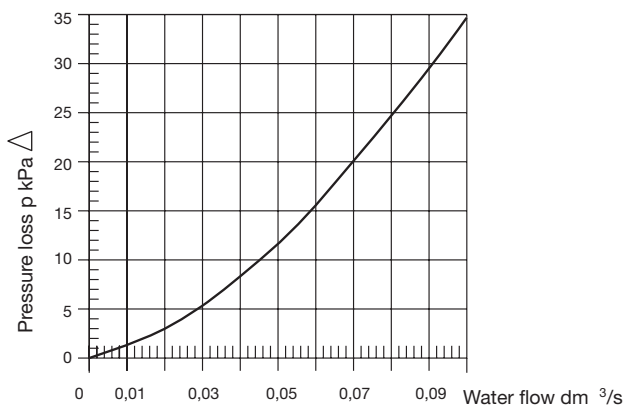
Defrost thermostat (T) of the post-heating radiator (P) stops the unit when the temperature of the water radiator goes below the setpoint, thereby preventing the freezing risk of the water radiator. This also causes self-actuated one-way dampers (Y) to close, preventing the flow of outdoor air to the 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.

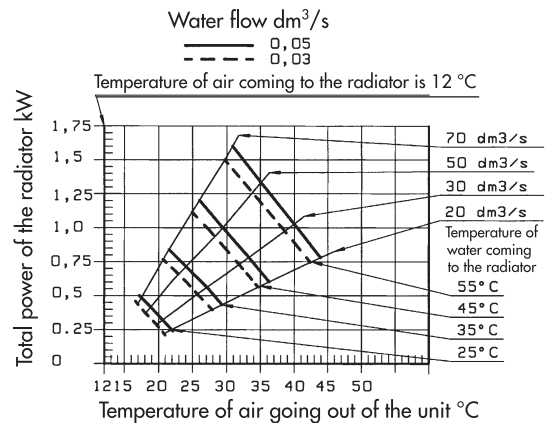


### VALLOX 75 / 95 VKL radiator performance curves

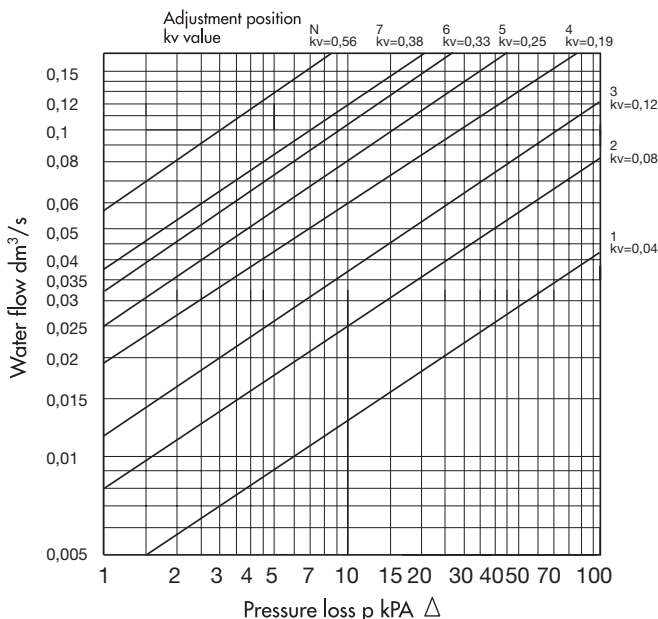
#### Pressure loss in the VKL water radiator



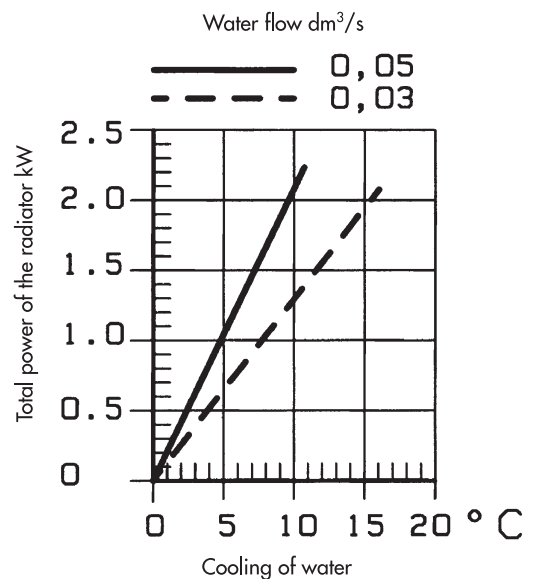
#### Power of the VKL water radiator



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

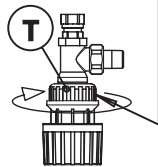
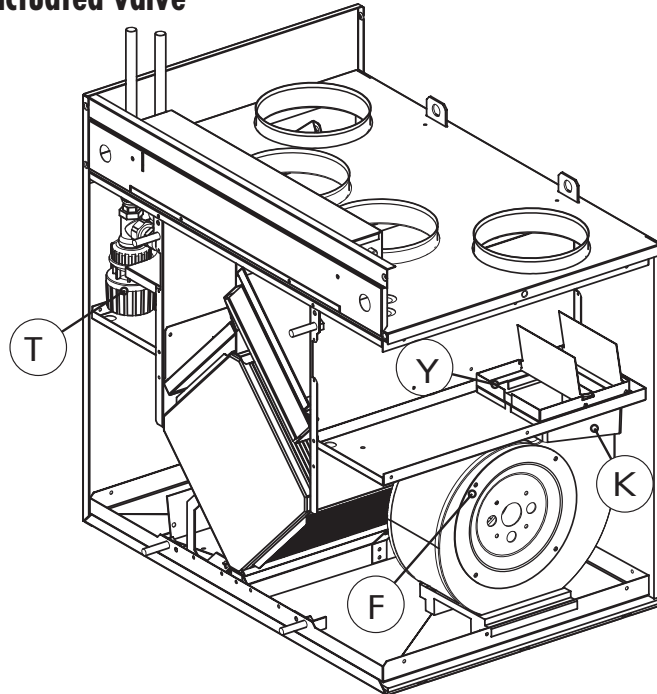


#### Cooling of water in the radiator





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

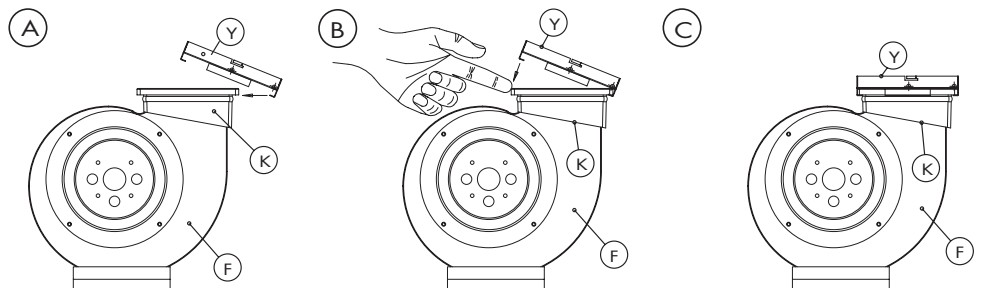


Thermostat sensor is not locked. The sensor is detached by turning the sleeve to the direction shown by the arrow.

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.

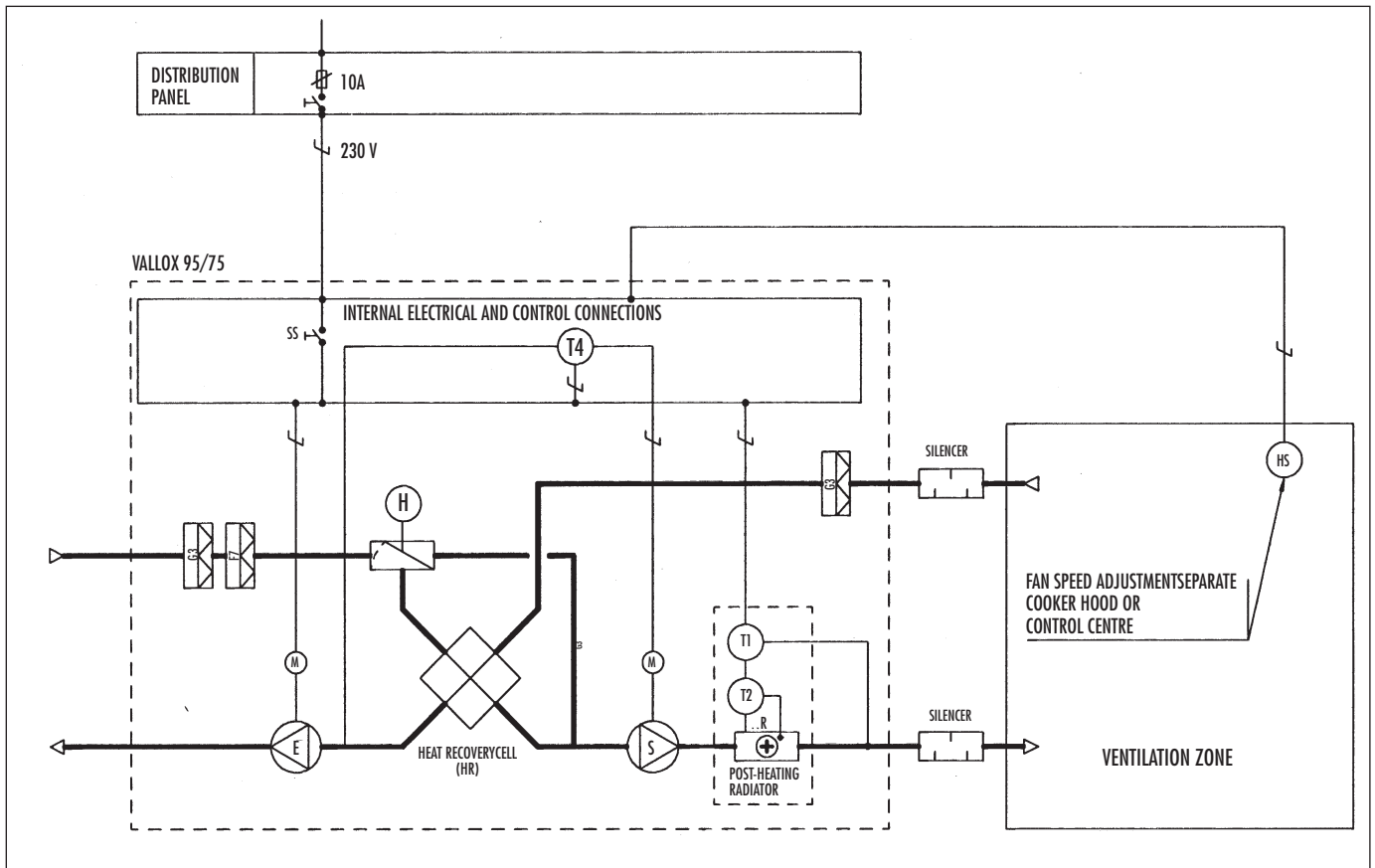
### Detaching and attaching of self-actuated one-way damper (vacuum damper)

- 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.





## 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.

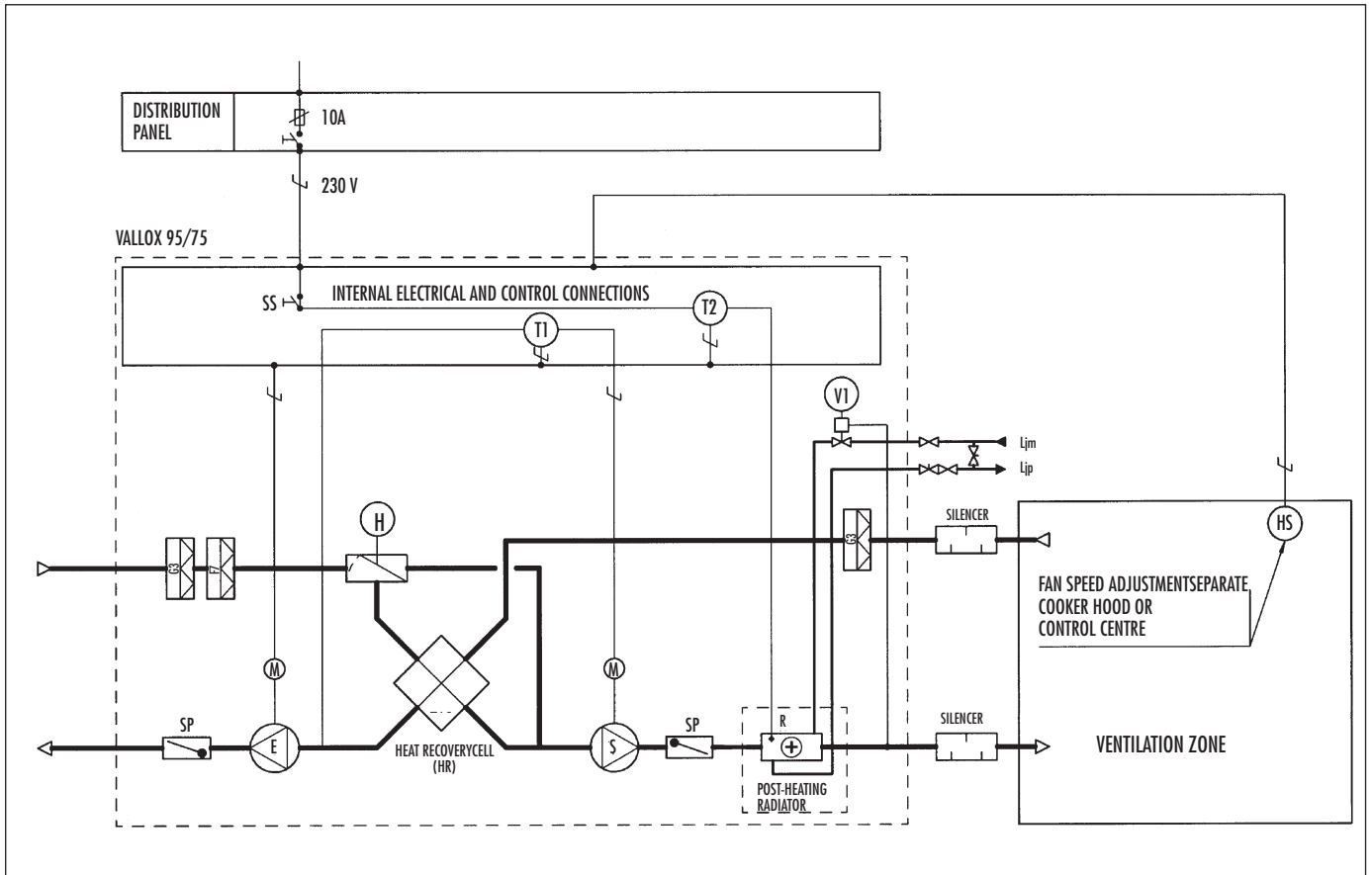
### Parts list VALLOX 75 / 95

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

## 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**.

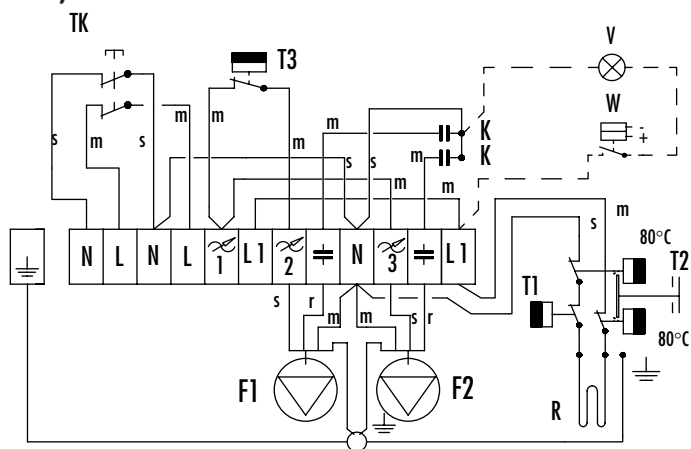
### Parts list VALLOX 75 VKL / VALLOX 95 VKL

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



## ELECTRICAL CONNECTIONS / ELECTRIC RADIATOR

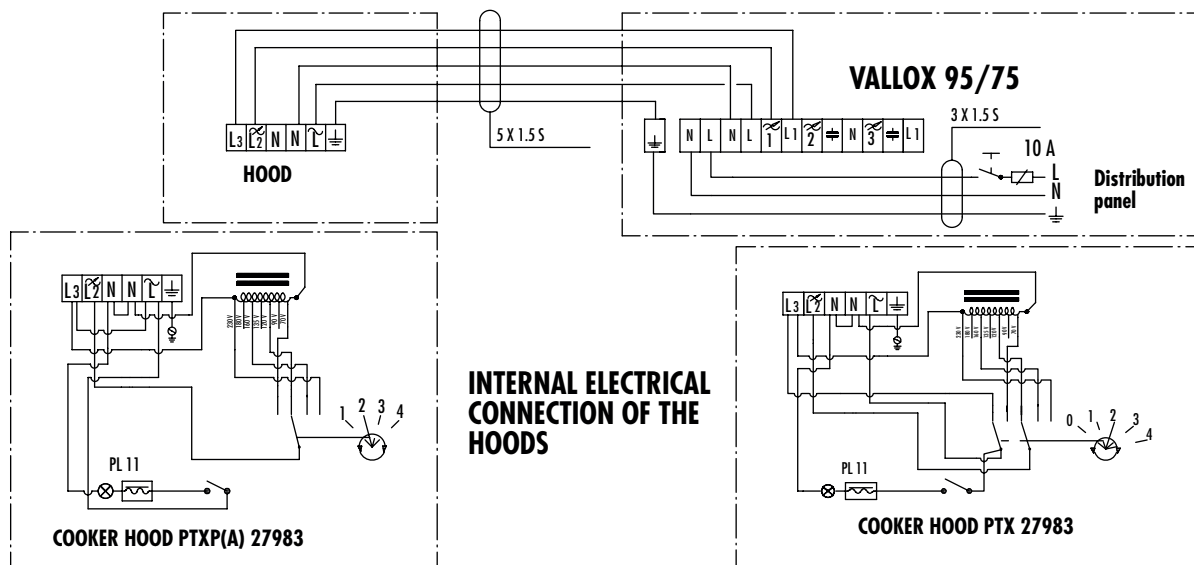
### VALLOX 75 / 95, model 3510, internal electrical connection



- 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

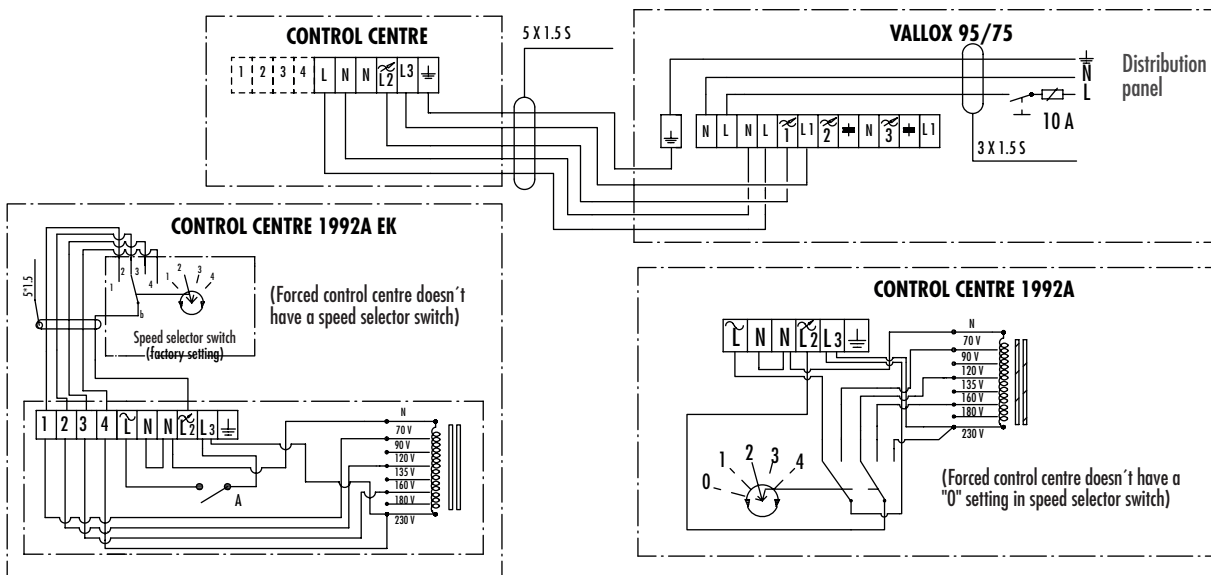
Wire colours:  
 m = black  
 r = brown  
 s = blue

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



**INTERNAL ELECTRICAL CONNECTION OF THE HOODS**

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

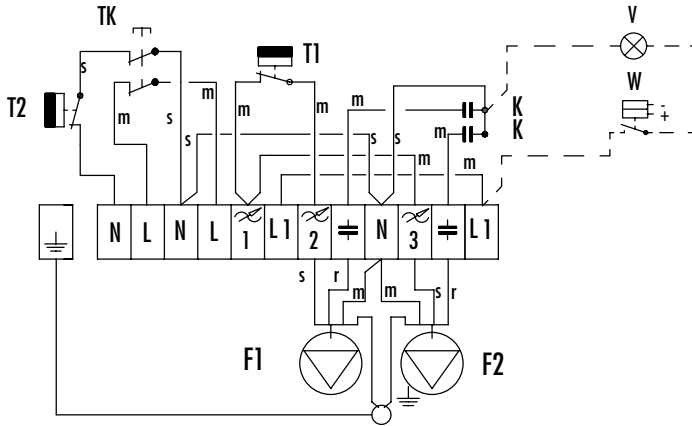




# VALLOX 75/95

## ELECTRICAL CONNECTIONS/WATER RADIATOR (VKL)

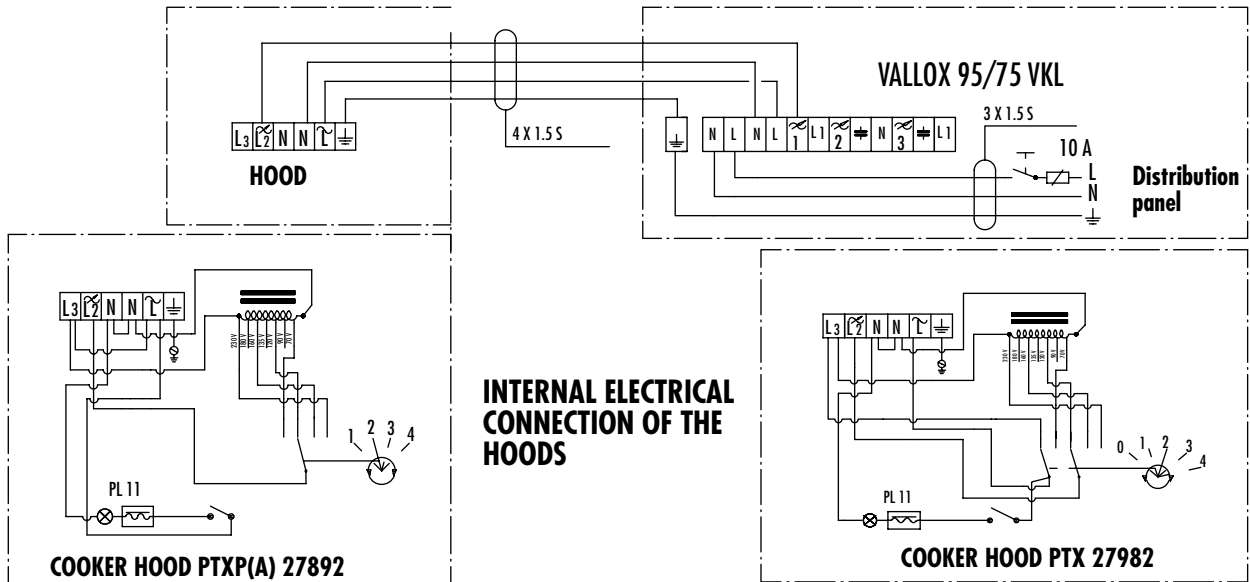
### VALLOX 75 / 95 VKL, model 3510, internal electrical connection



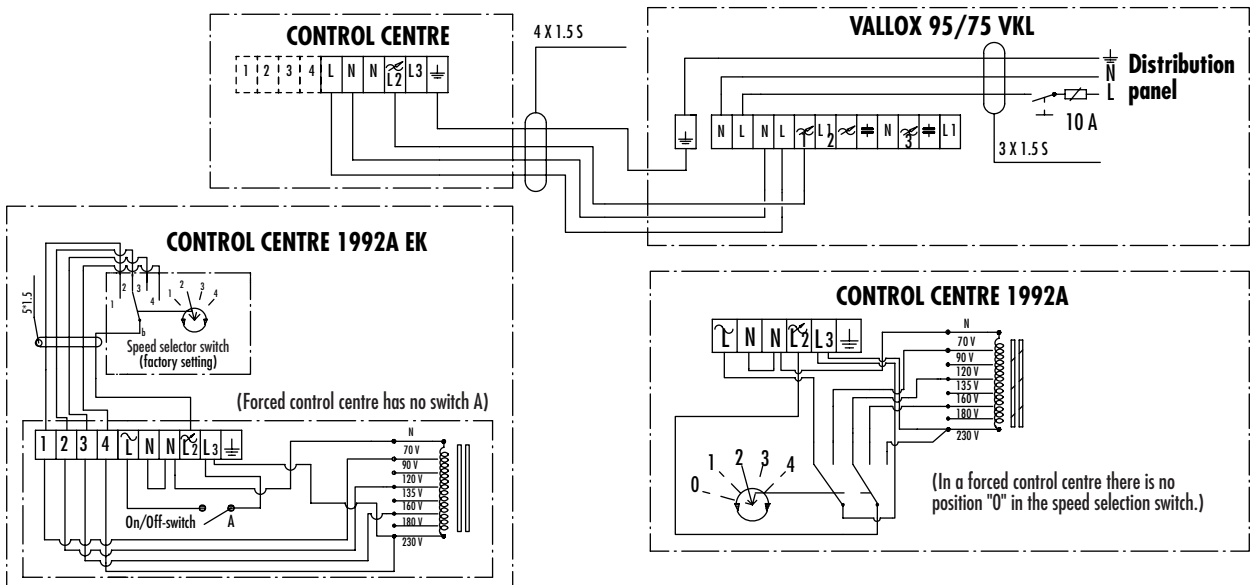
- F1 Supply air fan
- F2 Extract air fan
- T1 Post-heating radiator regulating thermostat 0...+25 °C (Limitation)
- T2 Defrost thermostat +5 °C
- K Capacitor
- SS Safety switch

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



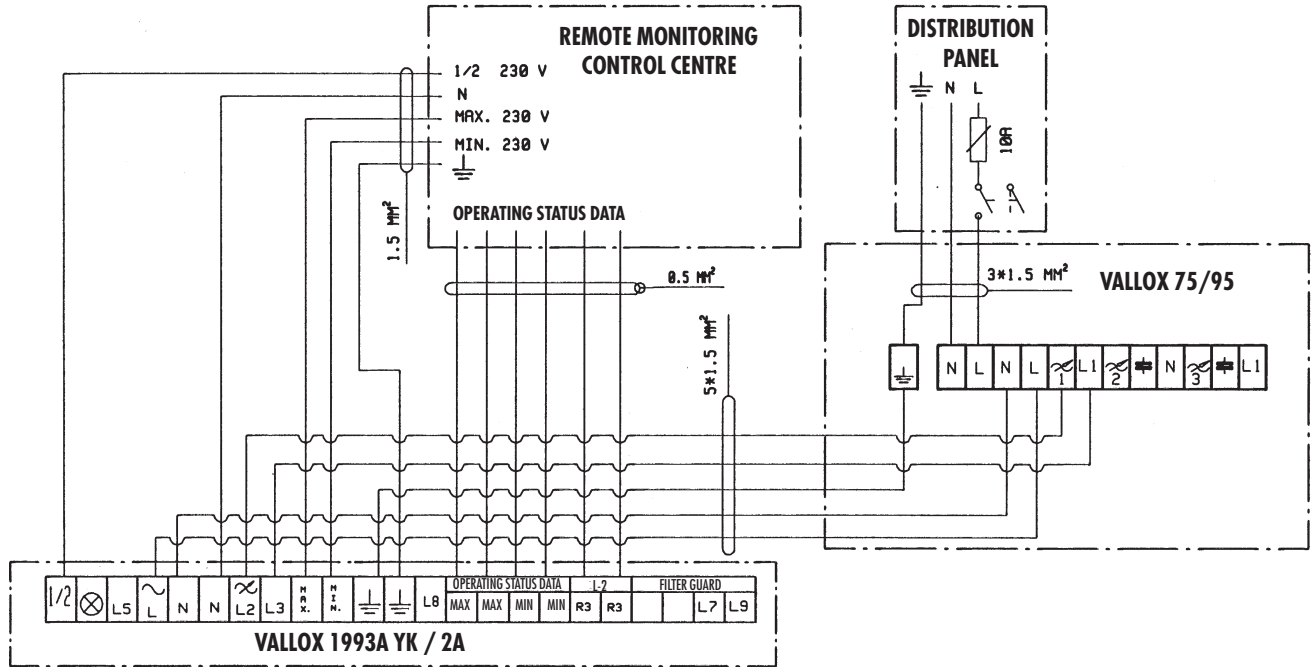
### VALLOX 75 / 95 VKL, model 3510, external electrical connection with control centre



# VALLOX 75/95

## ELECTRICAL CONNECTIONS / REMOTE MONITORING

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



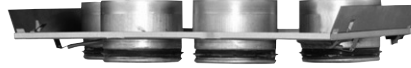


# VALLOX 75/95

## INSTALLATION

### VALLOX 75/95 location

VALLOX 75 / 95 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 can be equipped with an optional easy-to-use ceiling mounting plate (patent pending). 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 40 kg.

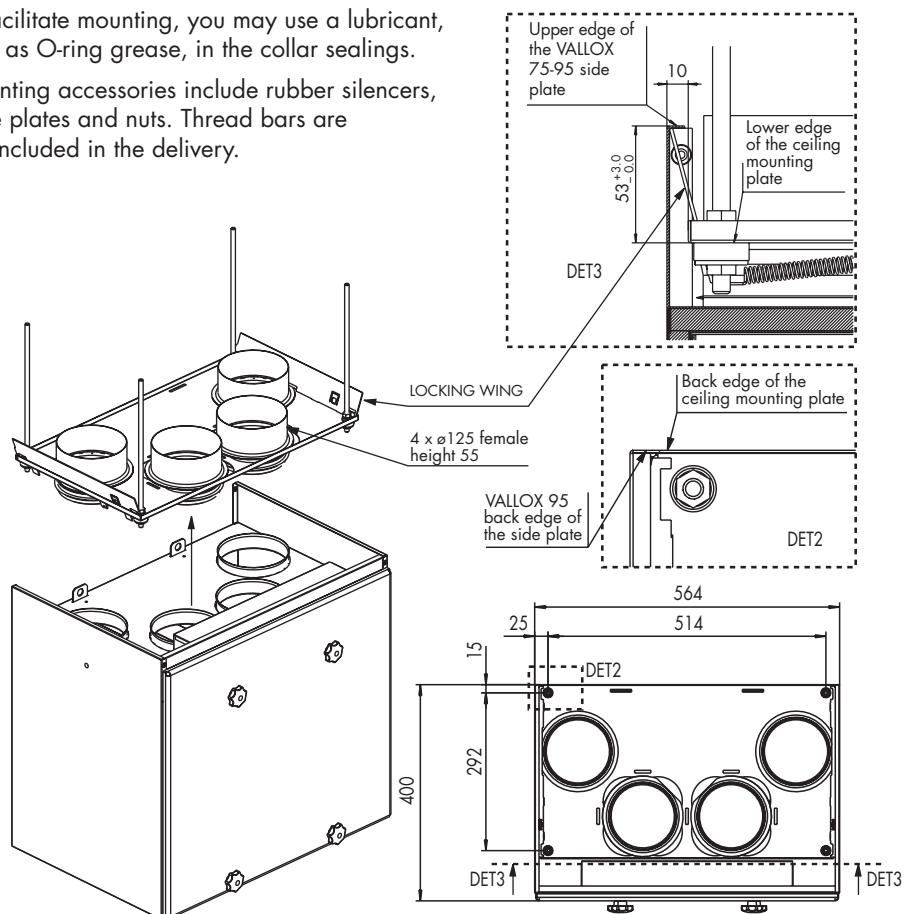
**The ceiling mounting plate has to be fixed horizontally in order to ensure that the unit will be straight.**

### 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 sealings.

Mounting accessories include rubber silencers, base plates and nuts. Thread bars are not included in the delivery.





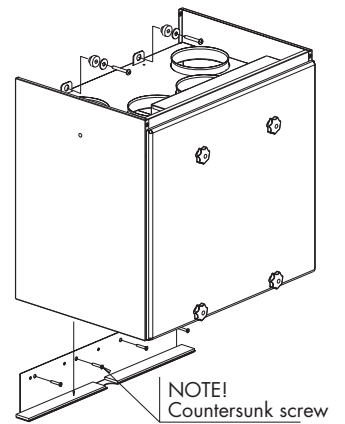
## INSTALLATION

### Wall mounting

The delivery of VALLOX 75/95 includes wall mounting accessories with the exception of screws. The unit has to be mounted horizontally and vertically straight.

### Wall construction

Pay attention to the wall construction when mounting the unit. Avoid mounting the unit on a hollow, echoing dividing wall and on a bedroom wall because of air conduction, or prevent air conduction.



Wall mounting of VALLOX 75 / 95



# VALLOX 75/95

## 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.

### Vallox water seal "SILENT"



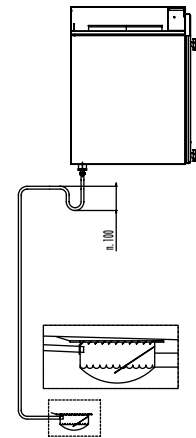
VALLOX SILENT non-return valve ensures a condensing water connection that will not gurgle.

### Examples of condensing water connections

#### Normally to the floor drain

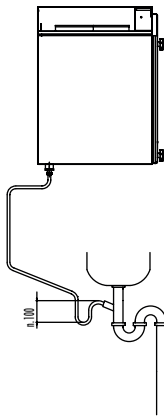
May generate sound when the water seal gets dry.

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



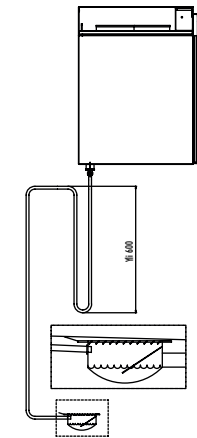
#### To the water seal in the wash basin

May generate sound when the water seal gets dry.



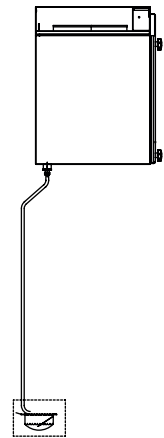
#### Normally to the floor drain with a long water seal

A long water seal ensures soundlessness for a long time.



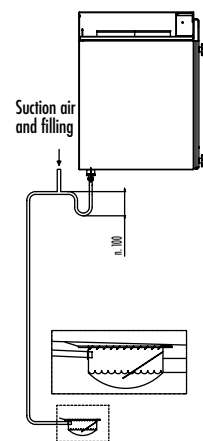
#### Straight to the floor drain without a water seal

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



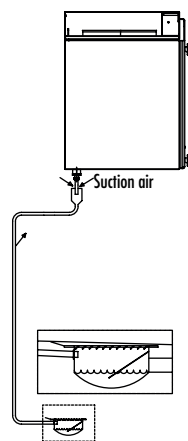
#### Normally to the floor drain

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.



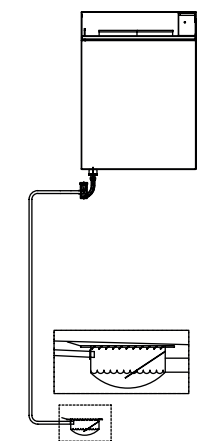
#### Normally to the floor drain through a funnel

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



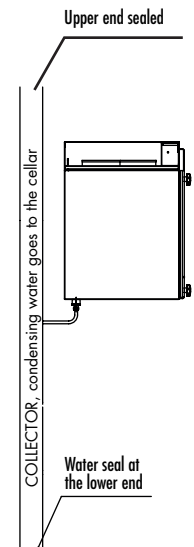
#### Normally to the floor drain through a non-return valve

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)



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