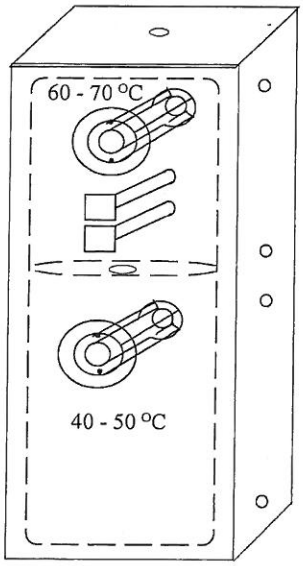
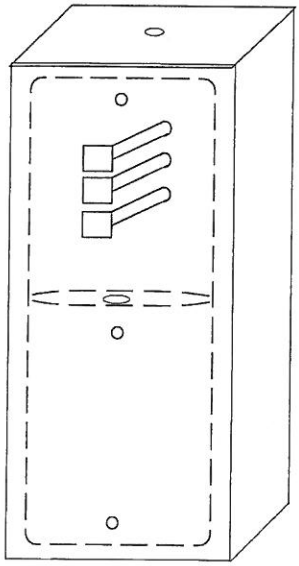
"QVANTUM VISION" concept

Hotwater boilers

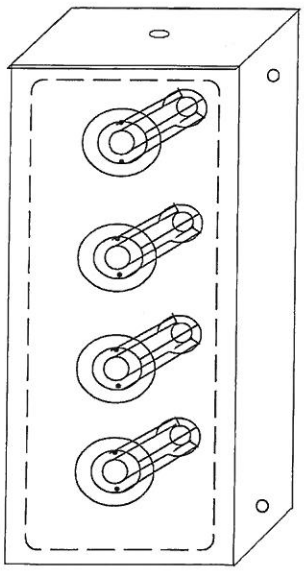
family houses and appartment buildings



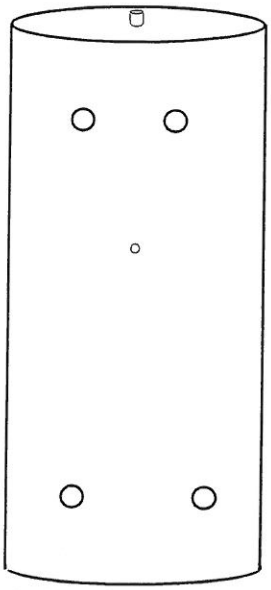
Systemboiler



Qvantum equalizing tank



Accumulator



indirect hotwater boiler

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QVANTUM VISION

Qvantum heatpumps can as an option be supplied with a Qvantum Vision package. This package includes a system for regulating the heatpump and supplement heater according to the outside temperature. The package also includes a function for individual temperature setting for the hot tapwater. The system can supply 100 % of the heat needed for hotwater and heating. The Qvantum-vision system uses the heatpump and supplementary heat with maximum efficiency.

QVANTUM VISION 1A EXKL QVANTUM EQUALIZING TANK (QET)

The system is shown on the drawing (1A) below

RADIATORFLOW

OBS!! The radiator flow must be constant and according to flow given in "tecnical data". If the radiators are equipted with radiatorthermostatic valves there is a risk that theese valves can affect the radiator flow. If the flow over the heatpump (condensor flow) is restricted the system will not function at its best. When the heatpump operates the temperature of the water leaving the condenser will be about 10 degrees higher than when entering. This can result in noice when the tubes leading to the radiators expand. If a Qvantum Equalizing Tank (QET) used this problem is elliminated as well as the constant evaporator flow is secured.

The DIXELL regulator regulates the return flow temperature according to the given parameters.(se separate description) To obtain maximum efficiency the setting should be as low as possible. When adjusting the parameters it is best to have all radiator valves fully open. Only use the radiator valves to eaven out a difference in room temperture. The regulator regulates the return flow , the temperature to the radiators is about 10 degrees higher.

SUPPLEMENT HEAT (not included)

The supplement heat is normally an electrical heater. This should be connected after the heatpump but before the hotwaterheater.

The supplement heater is engaged when needed. The supplement heat is controlled by closing contact in the regulator (only control cirquite) When heating hotwater the supplementary heater is normally disconnected . The supplementary heater is only used for hot water heating if the outside temperature is so low that the heatpump is disconnected.

HOTWATER BOILER (not included)

The hotwater temperature is controlled by a separate temperature controller that is placed inside the heatpump. When there is need for hotwaterheating this termostat taked over the control of the heatpump and also changes the 3 -way valve. During the hotwater heating the DIXELL controller shows (about) 0 degrees in the display.
When selecting a hotwaterbolier it is very important that the boiler can recieve and heatexchange the power of the heatpump. An insufficiant boiler will result in to many stop/ start of the heatpump and also an insufficiant hotwater temperature. A boiler with to low heattransfer capability also can result in a very rapid temperature rise. If this rapid temperature increase is fast it can make the high pressostat tripp. In the boiler there must be room for a temperaturesensor . Qvantum has a program of indirect hot water boiler that is well suited

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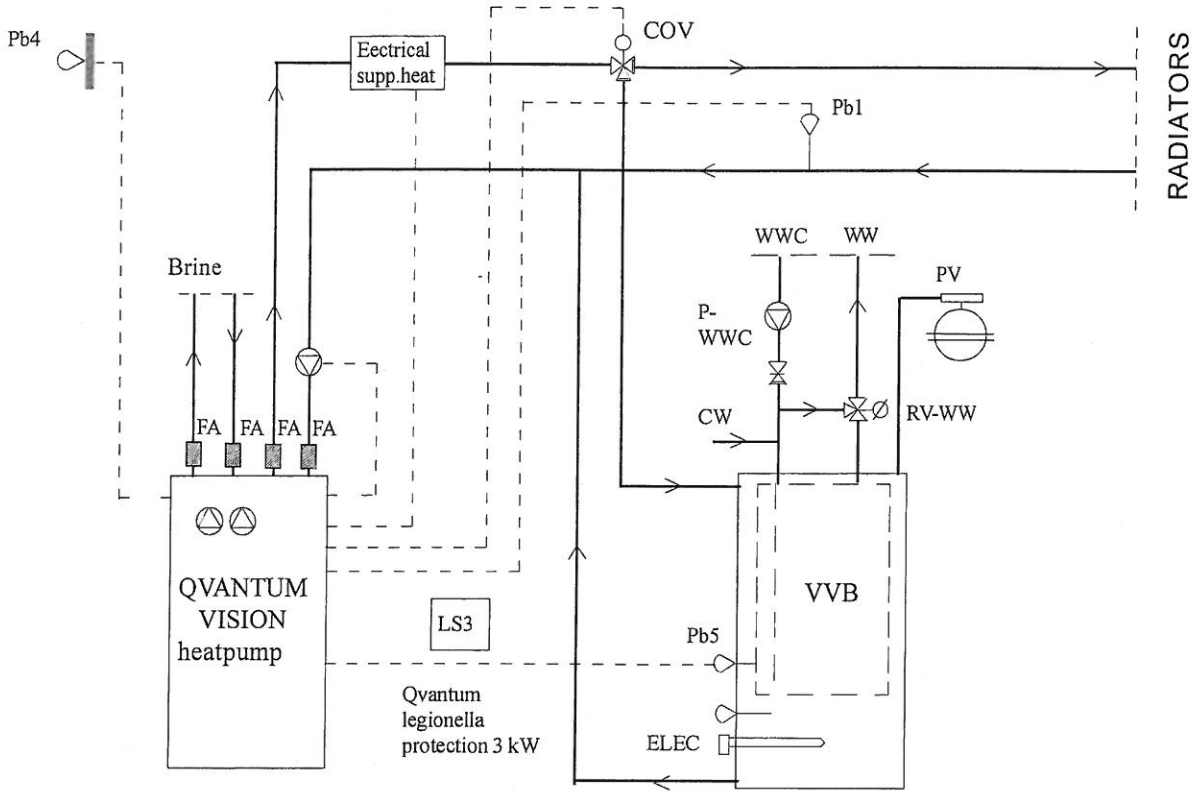
QVANTUM VISION 1A EXKL QVANTUM EQUALIZINGTANK (QET)



Flowchart Qvantum vision heatpump ,heating and hotwater

ACCESORIES FOR QVANTUM INDIRECT HOT WATER BOILERS

LEGIONELLA PROTECTION (not included)

To avoid the risk of legionella Qvantum has a system, LS, that prevents legionella growth. The temperature in the hotwater boiler is raised periodically to a high temperature level. The high temperture kills/elliminates the legionella bacteria. The LS system is available in three versions, 3,0 kW , 4,5 kW and 6,0 kW for Qvantum indirect hot water boilers

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QVANTUM VISION 1B INKL QVANTUM EQUALIZINGTANK (QET)

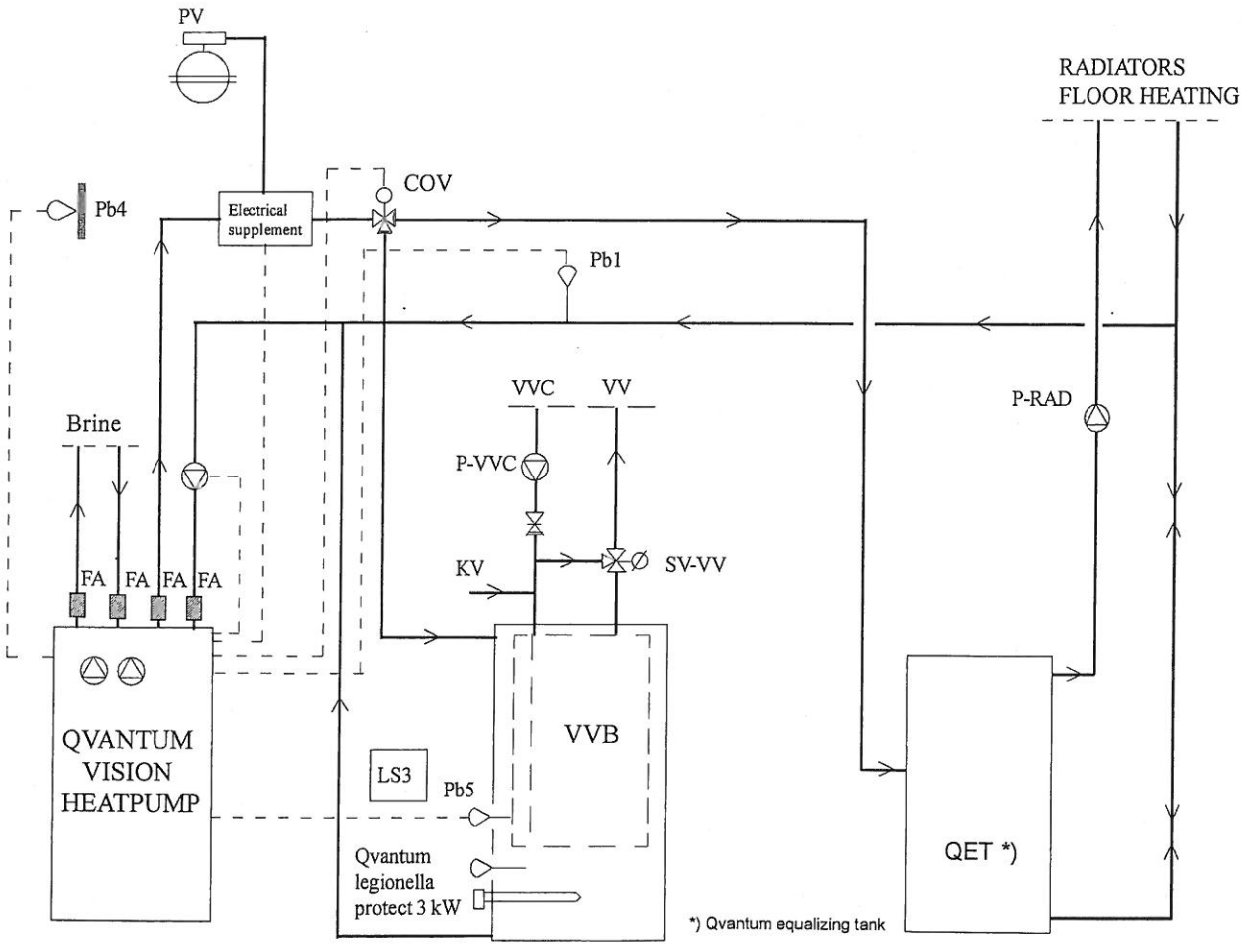
The Qvantum Vision system combined with an indirect hot water boiler and a Qvantum equalizing tank (QET) can supply the whole need for heating and hot water ina house or a building.

QVANTUM VISION 1B

A flowchart of the system 1B is displayed below.

Radiatorcirquit

The heatpump evaporator cirquit and the radiator cirquit is seoarate cirquits with separate circulation pumps. This means that any disturbance or restriction in the radiator cirquit will not effekt the flow in the evaporator cirquit. The equalizing tank also evans out the variation in temperture in the temperature to the radiators depending on weather the heatpump is operating or not.



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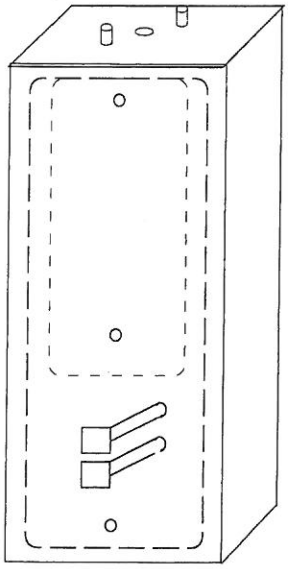
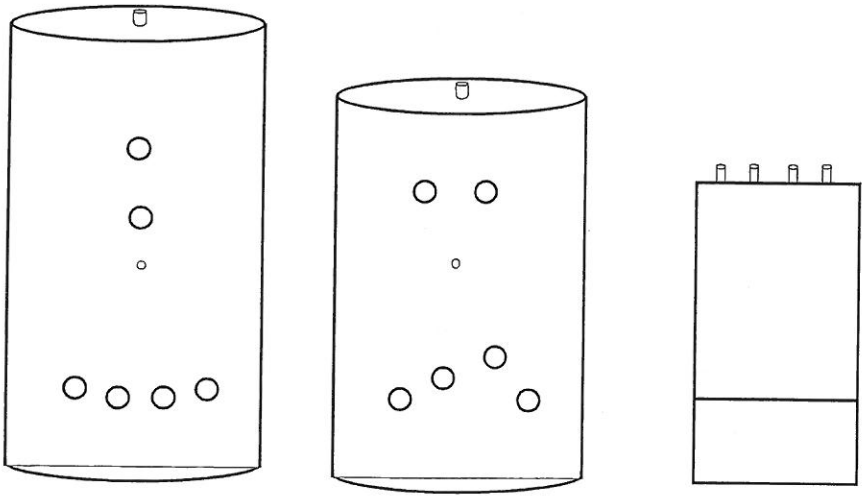
QVANTUM INDIRECT HOTWATER BOILER DVVB

Qvantum DVVB	500-160	500-200	500-300
Total volume liter	500	500	500
Volume hot w.w.	160	200	300
Volym ambient w	340	300	200
Connect.hot ww	22	22	28
Dim (h x w x d) mm	1850 x740 x 740		
Workpress ambient	3,0 bar		
Num of 2" conn pcs	2		
Max electrical pwr	15 kW		
Color	galv(std) eller vit		



INDIRECT HOT WATER BOILERS VPA/VPAS



Hotwater boiler	VPA200/70	VPA300/200	VPA450/300	VPAS300/450
Total volume liter	271	490	735	750
Volume hotwater l	205	300	450	300
Weight net	150 kg	208 kg	285 kg	315 kg
Dim (h x w x d) mm	1520x600x610	h=1700 ø=750	h=2000 ø= 850	h=2000 ø= 850
Num 2" connect pcs	1	2	2	2
Max power exhanged *)	8,2kW	10,0	14,5	10,0
Color	white	white	white	white
Coil sun	no	no	no	yes

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