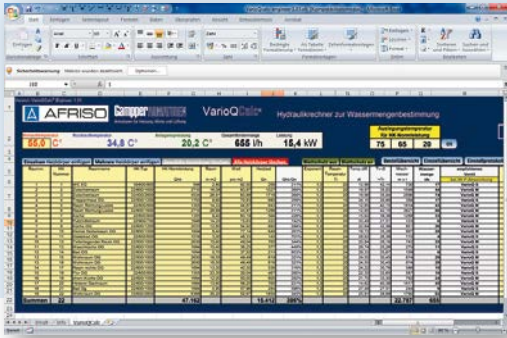


Calculation software

VarioQCalc

Campper ARMATUREN
a brand of the AFRISO group



- Calculation software for hydraulic balancing
- Fast, easy calculation without knowledge of the pipe system
- Valve selection with ordering and adjustment list
- Easy operation, MS Excel as software basis
- Direct data transmission to handheld measuring instrument HMG 10

Application Calculation software for hydraulic balancing. Determination of the required optimum water volume, system spread and selection of the VarioQ valves needed for all individual radiators for optimisation of the flow temperature and the pump capacity in heating systems. Implementing the optimisation calculated with VarioQCalc results in a continuous, permanent condensing effect.

Description VarioQCalc is based on MS Excel so that it is very easy to use without requiring any special knowledge. Only the flow temperature of the system, the radiator capacity and the heat requirements of the rooms to be heated are needed as a basis for the calculation. Ideally, the heating load is re-calculated or determined via the room sizes using reference values. Considering incorrectly rated radiators (too small or large), it precisely determines the required water volume per radiator, selects the suitable VarioQ valves, generates adjustment recommendations and creates an order list for purchasing from your wholesaler.

The calculated individual spread of the radiator as well as the spread of all radiators together (system spread) allows the heating system professional to determine the extent to which the potential of the boiler is used. The system can be optimised in addition to hydraulic balancing by means of changing the flow temperature: The effects on total spread, spread of the individual spread of the radiators and total volume flow become immediately visible.

The calculated water volume and adjustment recommendation per radiator can be directly transmitted to the handheld measuring instrument HMG 10 (USB) for adjustment of the valves. Measured values can be returned for documentation and certification purposes.

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Software information

Calculation results

- Radiator/total water volume
- Radiator/system spread
- Valve recommendation
- Adjustment recommendation
- Order list
- Documentation

Optimisation potential

- Flow temperature
- Radiator capacity
- Condensing effect

System requirements

- PC
- WINDOWS operating system
- MS Excel 2007, 2010, 2013



Free download of
VarioQCalc at
www.afriso.com/varioqcalc

Calculation software VarioQCalc

Room No.	Radiator No.	Room name	Radiator type	Standard radiator capacity	Room size m ²	Heat loss/m ²	Heat loss	Radiator sizing	Energy Requirement	Room temperature	Differential temperature	T-v-dt	Return temperature	mixing water	water flow rate	Valve recommendation	Valve style	Valve size	Installed valve	Adjuster
1	1	Storage	22/500/1400	OK	12.00	70	840	OK/ON	8.9 kW	20	10.58	64.41	4393	88	VarioQ M	Angle	1/2			
2	1	Bathroom	22/500/1400	OK	11.00	70	770	OK/ON	8.9 kW	20	10.58	64.41	4393	73	VarioQ M	Angle	1/2			
3	1	Room	11/600/1000	OK	9.43	70	666	OK/ON	8.9 kW	20	10.58	64.41	4393	68	VarioQ S	Stright	1/2			
4	1	Living Room 1	22/500/1800	OK	19.84	70	1394	OK/ON	8.9 kW	20	10.58	64.41	4393	10	VarioQ S	Stright	1/2			
5	1	Room	11/600/1000	OK	9.43	70	666	OK/ON	8.9 kW	20	10.58	64.41	4393	10	VarioQ S	Stright	1/2			
6	1	Kitchen	11/600/1600	OK	9.00	70	630	OK/ON	8.9 kW	20	10.58	64.41	4393	13	VarioQ S	Stright	1/2			
7	1	Room	22/500/1800	OK	19.84	70	1394	OK/ON	8.9 kW	20	10.58	64.41	4393	16	VarioQ S	Stright	1/2			
8	1	Bedroom 1	11/600/1600	OK	11.00	70	770	OK/ON	8.9 kW	20	10.58	64.41	4393	16	VarioQ S	Stright	1/2			
9	1	Bedroom 2	22/500/1800	OK	19.84	70	1394	OK/ON	8.9 kW	20	10.58	64.41	4393	25	VarioQ M	Lockshid Stright	1/2			
10	2	Living Room 2	22/500/1400	OK	23/22	70	1190	OK/ON	8.9 kW	20	10.58	64.41	4393	25	VarioQ M	Lockshid Stright	1/2			
Total:							16.142		8.890					14.216	291					

- Flow temperature**
Flow temperature at which the system is operated/to be operated.
- Return temperature, system spread, total supply volume, capacity** are calculated by the program
- Design temperature for radiator's standard capacity**
System temperature from radiator table at which the standard capacity is specified. Click "OK" after entering the temperatures.
- Insert single radiator**
Inserts a new row with all required formulas. If you have not yet entered radiator information, the system displays ### or #Value!
- Insert multiple radiators**
Prompts for the number of radiators to be inserted. Inserts the corresponding new rows with all required formulas. If you have not yet entered radiator information, the system displays ### or #Value!
- Delete selected radiators**
The selected radiators are deleted.*
- Delete all radiators**
Project is reset. CAUTION! All radiators are deleted.
- Worksheet protection off**
Enables entries in all cells.
- Worksheet protection on (default)**
Locks all cells required for calculation so they cannot be deleted/overwritten.
- Order overview**
Creates a list of the valves recommended for the order. Contains quantities and part numbers.
- Adjustment overview**
Generates an overview of the base settings of the valves during mounting for printing.
- Adjustment report for KFW**
Generates a report after adjustment for application for KFW funds (Germany).
- Room no., radiator no., radiator type**
Cells to be used for describing the radiator.
- Standard capacity**
Enter the standard capacity of the radiator according to the design temperature (see above). The standard capacities of the most typical radiators are stored (75/65/20).
- Room in m², Watt per m², heating load method 1 (VarioQCalc standard)**
Measuring the room, calculating the area, determining the heat requirement per m², VarioQCalc calculates the heating load.
Method 2 (recommended)
Calculate the heating load by means of appropriate software, enter the values in the Heating Load column (in this case, it is not necessary to enter the values for room in m² and Watt per m²).
- Room temperature**
Required room temperature.
- Valve design**
Enter one of the following designs: angled, DG, Kombi angled, Kombi DG, RLV angled, RLV DG.
- Valve dimensions**
Enter one of the following dimensions: 3/8 – 1/2 – 3/4.

* Use only this function to delete radiators since formulas in adjacent cells may be affected if you use the MS Excel standard functions for inserting or deleting cells.

Free download of VarioQCalc at www.afriso.com/varioqcalc