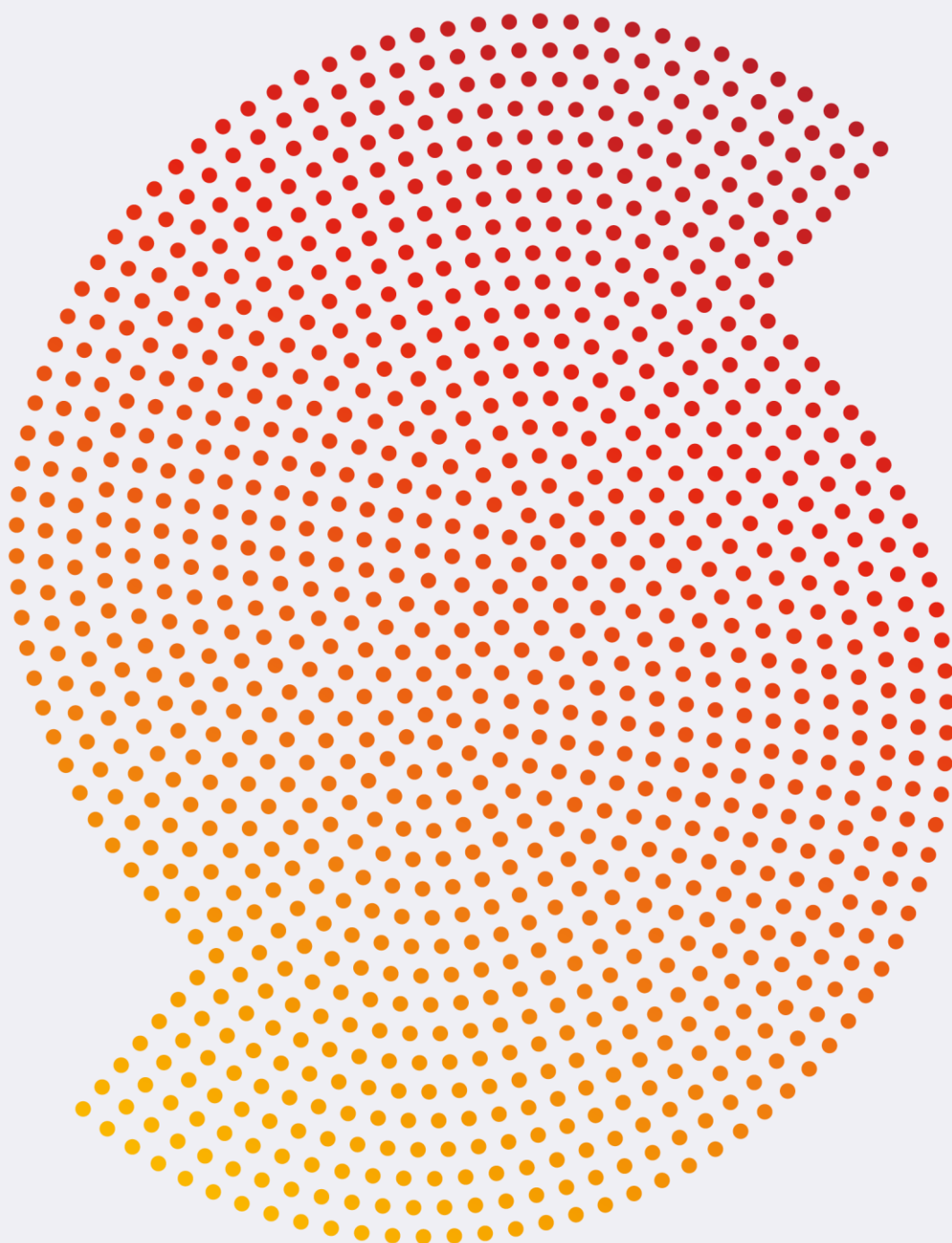


DEAP 4.2.1
Guidance

Showersave[®]



Waste water heat recovery in DEAP 4.2.1

The following information has been extracted from DEAP manual (23/09/19) and acts as guidance for industry professionals seeking to include Showersave WWHR in modelling calculations.

Domestic hot water ['Water Heating' tab] The demand for domestic hot water (DHW) is based on the SAP methodology (SAP 10). It is derived from the dwelling floor area and calculated taking account of heating, storage and distribution losses as well as several other parameters such as:

- Number of electric showers (this uses electricity directly rather than from the water heating system)
- Mixer showers, fed from the water heating system
 - presence of flow restrictors on the mixer shower. Flow restrictors must be permanently fitted (i.e. cannot be removed without the use of tools).
 - Is the mixer shower unvented?
 - Is the mixer shower vented (and does it have a pump?)
 - Is the flow rate (L/min) known for the mixer shower?
- Is there an instantaneous waste water heat recovery unit (WWHR) listed on the SAP PCDB fitted to the mixer shower? The WWHR utilisation factor and efficiency are entered based on PCDB 2012 figures.
 - Instantaneous WWHR systems use a heat exchanger to recover heat from waste warm water as it flows through the waste plumbing system to pre-heat the cold water feed of a shower and a combi boiler or mains pressure hot



water system (thermal store or unvented cylinder). **The calculation in DEAP deals with instantaneous WWHRs linked to thermostatic mixer showers** (where the shower water is a mixture of cold feed and that from the combi boiler or mains pressure hot water system). It is assumed that the WWHRs is located inside the heated envelope. A WWHRs linked to an instantaneous electric shower (IES) is not covered by this procedure.

- Presence of a bath/baths. A shower fitted to bath taps is entered as a bath and not as a shower in DEAP.
- Water usage (hot and cold) per person, per day. The methodology to determine the water usage in the dwelling is detailed in Appendix I Water Efficiency Calculation Methodology of the DEAP manual.



Including Showersave in DEAP 4.2.1 calculations

The screenshot below shows the information required when inputting Showersave systems into calculations using DEAP 4.2.1.

- [Waste water heat recovery efficiency and utilisation factor can be found in the PCDB](#)

Edit Shower [X]

Product Details

Shower Type: Mixer
Mixer System: Vented hot water system

[VIEW DETAILS IN LIBRARY](#)

Survey Details

Number of items *

Room: **None** [v]

Description:

Flow Restrictor

Flow Rate [l/min] *

Waste Water Heat Recovery Efficiency:

Waste Water Heat Recovery Utilisation Factor:

CANCEL **SAVE**

Product efficiencies

(KIWA certificates available on request)

QB1-21



Flow (l/min)	Efficiency (%)	Utilisation factor	Flow resistance (ΔP) (bar)
9.2	64.6	0.973	0.30
12.5	61.4	0.973	0.52
* SAP PCDB	62.7	0.973	0.51

QB1-21C



Flow (l/min)	Efficiency (%)	Utilisation factor	Flow resistance (ΔP) (bar)
9.2	65.6	0.973	0.30
12.5	62.1	0.973	0.52
* SAP PCDB	63.5	0.973	0.51

QB1-21D



Flow (l/min)	Efficiency (%)	Utilisation factor	Flow resistance (ΔP) (bar)
9.2	70.4	0.961	0.13
12.5	69.3	0.961	0.20
* SAP PCDB	69.7	0.961	not tested

Linear drain 3P-630



Flow (l/min)	Efficiency (%)	Utilisation factor	Flow resistance (ΔP) (bar)
5.8	30.8	0.984	0.12
9.2	26.9	0.984	0.25
12.5	23.4	0.984	0.42
* SAP PCDB	24.7	0.984	not tested

Linear drain 5P-630



Flow (l/min)	Efficiency (%)	Utilisation factor	Flow resistance (ΔP) (bar)
5.8	41.0	0.984	0.16
9.2	38.2	0.984	0.35
12.5	34.3	0.984	0.61
* SAP PCDB	35.8	0.984	not tested

*SAP PCDB efficiency = System A @ flow rate 11 l/min


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