






ESBE GUIDE DIMENSIONING

The ESBE thermostatic mixing valves are available with Kvs-values from 1,2 up to 4,8 and is to be dimensioned as below.

DIMENSIONING OF DOMESTIC WATER APPLICATIONS

The thermostatic mixing valves for domestic hot water applications can be dimensioned according to the number of households in the house or the number of showers in, for example sports centers.

RECOMMENDED KVS-VALUES

Kvs	Typical households ¹⁾  Quantity*	Showers ²⁾  Quantity*	Shower heads ³⁾  Quantity*	Under floor heating ⁴⁾  m ²	Radiator heating ⁵⁾  kW
1,2 - 1,3	1	2	2	< 80	< 12
1,5 - 1,6	≤ 3	3	2	40 - 105	6 - 16
2,2 - 2,5	≤ 6	5	3	60 - 165	10 - 26
3,0 - 3,2	≤ 15	6	4	75 - 210	12 - 33
3,4 - 3,6	≤ 20	7	5	85 - 230	13 - 36
4,5 - 4,8 ⁶⁾	—	—	—	110 - 315	18 - 49

* Number of households in the house or the number of showers in, for example sports centers.

1) A typical household consist of bath, shower, kitchen sink and washbasin with a design flow evaluated from probability curve in reference with EN 806-3:2006, and with a supply pressure >300kPa (3 bar). ESBE recommends max. allowed pressure drop (instant use) over valve <200 kPa (2 bar)

2) Showers in for example sport centers (simultaneous usage) meaning supply of scald safe hot water to shower mixer with supply pressure >300kPa (3 bar)

3) Showers in for example sport centers (simultaneous usage) meaning supply of scald safe mixed water to shower head with supply pressure >300kPa (3 bar)

4) Under floor heating calculated for: $q = 55W/m^2$, $\Delta t = 7K$ and $\Delta p = 3-20kPa$

5) Power calculated for: $\Delta t = 20K$ and $\Delta p = 3-20kPa$

6) Kvs-values available only for heating valves