

mean water temp= (flow temp + return temp)/2																
flow temp (input Values)	45	45	45	45	45	45	40	40	40	40	40	40	35	35	35	29
return temp (input Values)	34	35	35	35	35	35	29	30	30	30	30	30	25	28	30	25
MWT	39.5	40	40	40	40	40	34.5	35	35	35	35	35	30	31.5	32.5	27
<b>Delta T = MWT - Room Temp</b>																
MWT	39.50	40.00	40.00	40.00	40.00	40.00	34.50	35.00	35.00	35.00	35.00	35.00	30.00	31.50	32.50	27.00
<b>(av over whole house temp)</b>																
room temp (input values)	5.00	6.00	7.00	8.00	9.00	10.00	5.00	6.00	7.00	8.00	9.00	10.00	12.00	12.00	12.00	21.00
delta T ( for Rads)	34.50	34.00	33.00	32.00	31.00	30.00	29.50	29.00	28.00	27.00	26.00	25.00	18.00	19.50	20.50	6.00
Heat output potential Kw	15.59	15.59	15.01	14.42	13.83	13.25	12.69	12.69	12.13	11.57	11.00	10.44	6.84	7.33	7.82	1.66
<b>Flow Rate L/m (input Value)</b>																
	kgs/sec	kgs/sec	kgs/sec	kgs/sec	kgs/sec	kgs/sec	kgs/sec	kgs/sec	kgs/sec	kgs/sec	kgs/sec	kgs/sec	kgs/sec	kgs/sec	kgs/sec	kgs/sec
	10.1	11	10	9	8	7	7	7	7	7	7	7	7	7	7	7
m = flow rate in kgs/sec	0.1683	0.1833	0.1667	0.1500	0.1333	0.1167	0.1167	0.1167	0.1167	0.1167	0.1167	0.1167	0.1167	0.1167	0.1167	0.1167
Cp= specific heat capacity of water = 4.186 kj	4.186	4.186	4.186	4.186	4.186	4.186	4.186	4.186	4.186	4.186	4.186	4.186	4.186	4.186	4.186	4.186
Delta T = temp diff between supply and return water	11	10	10	10	10	10	11	10	10	10	10	10	10	7	5	4
ASHP Heat Output KW	7.75	7.67	6.98	6.28	5.58	4.88	5.37	4.88	4.88	4.88	4.88	4.88	4.88	3.42	2.44	1.95
Heat needed	7.32	7.32	7.32	7.32	7.32	7.32	7.32	7.32	7.32	7.32	7.32	7.32	7.32	7.32	7.32	2.86
outside temp (input values)	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	-2	12
inside temp Desired (input value)	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21

Remember the Heat Pump is producing X KW of heat. But this won't all make it to the radiators, there will be some loss in the pipes to the start of the heating system and in the pipes of the heating system ( ie between all the rads, the circuit). So Maybe 10% loss

If the HP is producing more heat than the radiators can handle, I assume this will mean the return flow temp is higher and the Delta T will drop, thus bringing output closer to radiator capacity

Heat pump priorities assumed when in LWT

Priority 1: Get LWT to target

Priority 2: Get Delta T to target

Priority 3: Get Flow rate to Target

at no time is house temp a target, because the weather comp curve should be set to deliver, which it should unless undersized

I don't know what impact the system constraints have ie max power max output