Results for RS160

Inside temperature	21,00	[°C]
Inside relative humidity	40	%
Outside temperature	-15,00	[°C]
Outside relative humidity	70	%
Flow	120,0	[m³/h]
Type	RS160	
Height recuperator	0,15	[m]

effectiveness for RS160	
dry	84,5 %
sensible fresh air	89,9 %
latent fresh air	0,0 %
sensible waste air	68,1 %
latent waste air	61,1 %
enthalpy	66,3 %

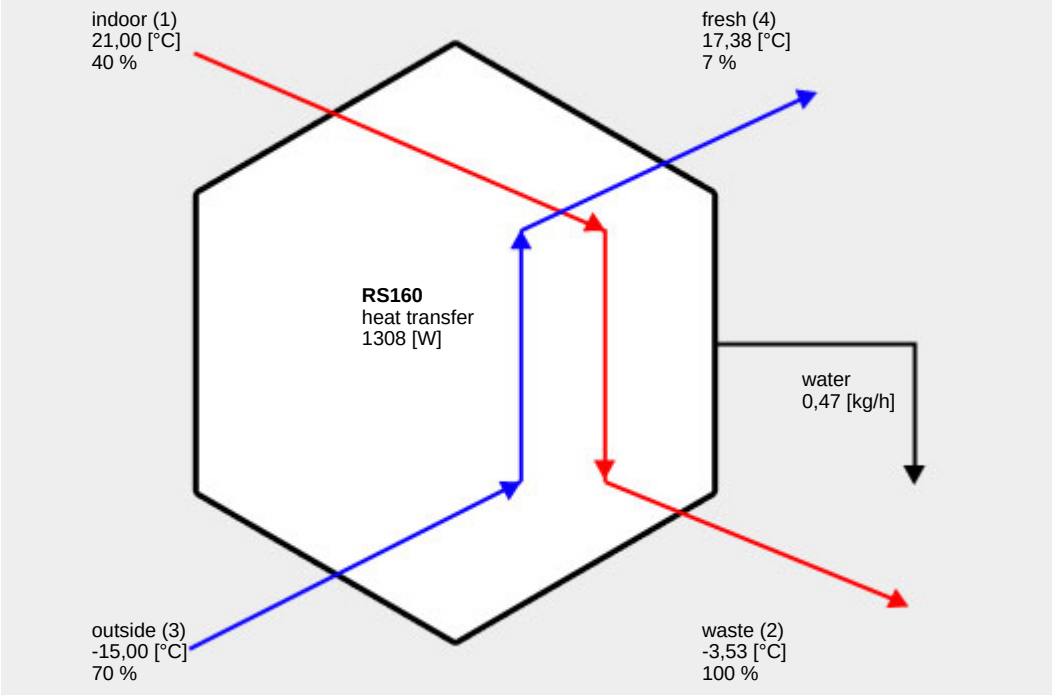
heat transferred for RS160	
heat transferred	1308 [W]
increase sensible heat	1308 [W]
increase latent heat	0 [W]
decrease sensible heat	991 [W]
decrease latent heat	317 [W]
potential heat transfer RS160	
sensible	1454 [W]
latent	519 [W]
total	1973 [W]

condensation/evaporization RS160	
condensation	0,47 [kg/h]
	317 [W]
evaporization	0,00 [kg/h]
	0 [W]
water produced	0,47 [kg/h]
	317 [W]

effectiveness	**pressure drop**	**heat transferred**
89,9 %	85,2 [Pa]	1308 [W]

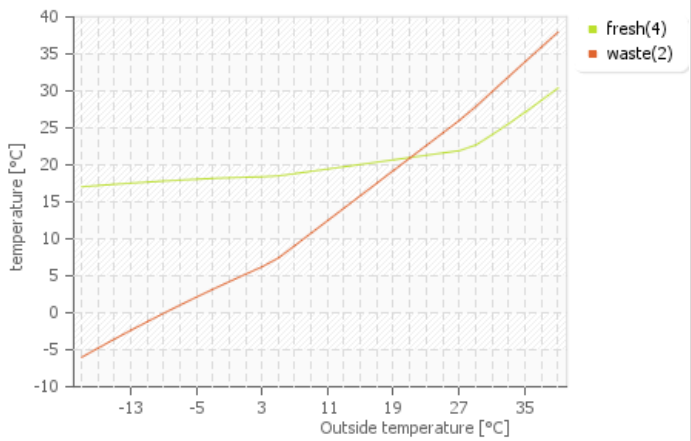
calculations for RS160 overview all positions

		indoor (1)	waste (2)	outside (3)	fresh (4)
temperature	[°C]	21,00	-3,53	-15,00	17,38
relative humidity	[-]	0,400	1,000	0,700	0,067
massflow moisture	[kg/s]	0,000244	0,000115	0,000033	0,000033
	[kg/h]	0,88	0,41	0,12	0,12
	[g/kg]	6,16	2,90	0,82	0,82
mass flow dry air	[kg/s]	0,0397	0,0397	0,0401	0,0401
	[kg/h]	142,86	142,86	144,27	144,27
flow (dry air)	[m3/h]	119,0	109,1	105,4	118,7
flow (wet air)	[m3/h]	120,0	109,6	105,6	118,8
rho (dry air)	[kg/m³]	1,20	1,31	1,37	1,22
enthalpy flow	[W]	1448	140	-525	783
enthalpy	[kJ/kg]	36,26	3,51	-13,03	19,41
start condensation	[°C]	6,90	-3,53	-19,24	-19,24
saturation pressure	[Pa]	2484,3	470,5	190,8	1982,3
partial pressure (H2O)	[Pa]	993,7	470,5	133,6	133,6

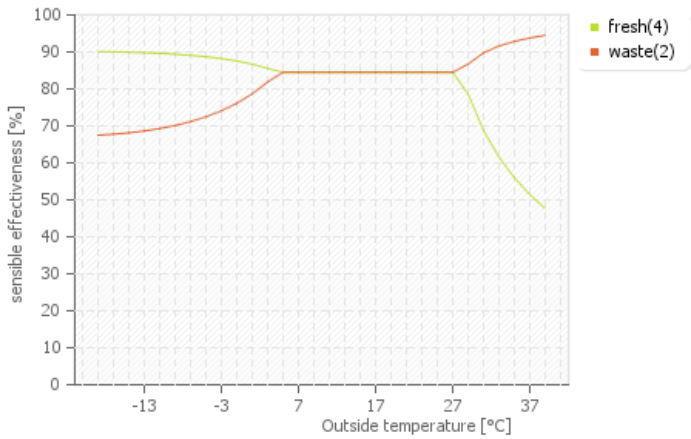


recair

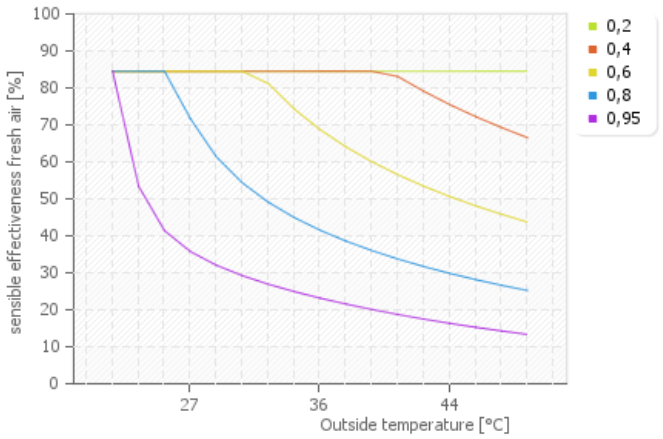
temperature of fresh air (4) and waste air (2) as a function of the outdoor temperature



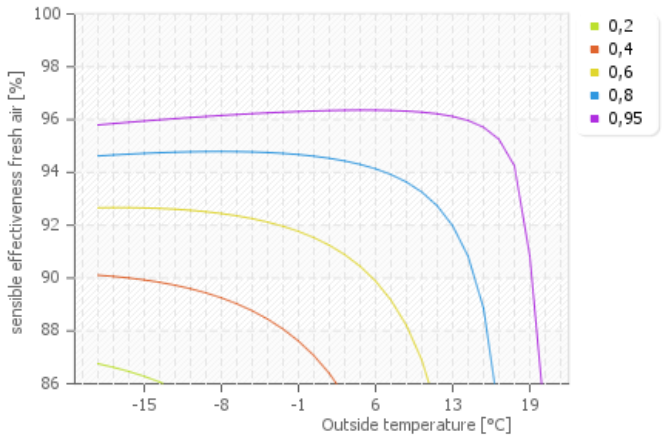
effectiveness as a function of the outdoor temperature for



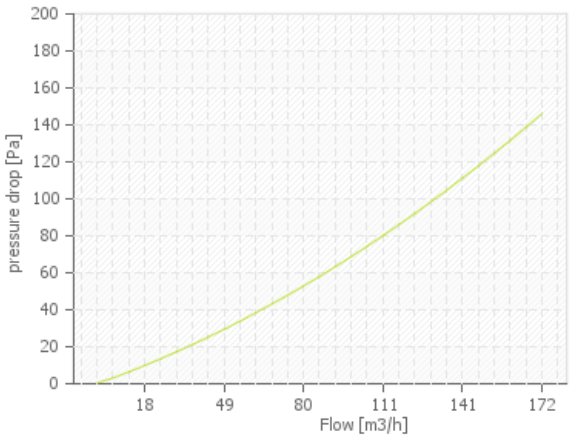
(Tout > Tin), effectiveness as a function of the outdoor temperature and RH



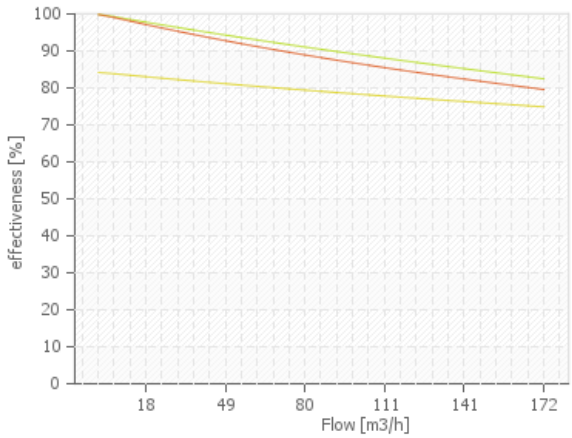
(Tout < Tin), effectiveness as a function of the outdoor temperature and indoor RH



pressure drop as a function of the flow



effectiveness as a function of the flow



effectiveness as ratio of transferred enthalpy to potential sensible heat as function of the outdoor temperature (indoor temperature 20 °C, RH indoor 50%)