Swiss air conditioning

The climate of Europe varies greatly from north to south: it ranges from the polar and subpolar tundra in the north to the temperate climate zones in the middle and subtropical climate in the south with Mediterranean influence. The Gulf Stream shapes the climate of Western Europe with oceanic conditions, while the climate in the East becomes more continental. However, Europe is warming at an above-average rate, leading to record heats and increasing weather extremes.

Example Bern in Switzerland

Altitude 540 m above sea level, pressure 0.95 bar
Minimum -18.3°C (Below -11°C only 45 hours per year)
Maximum 35.0°C (Progressively warmer and more humid)
Daily average 11.81°C/70.42%/6.45 g/kg
Night average 9.72°C/82.25%/6.56 g/kg
24 hour average 10.77°C/76.11%/6.51 g/kg
Maximum wet bulb temperature 24.2°C
Maximum enthalpy 76.4 kJ/kg

We distinguish between 3 applications for a supply air volume flow of 10,000 kg/h, which corresponds to an air volume flow of 8,950 m3/h at 20°C/40% (Standard). Unfortunately, air volume flows in m3/h are still tendered out of sheer habit, which leads to large errors without reference.

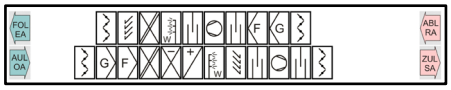
Air conditioning private, 100% recirculating air, 0% fresh air: In this case, the split cooling unit would have to provide the calculated heat load of 43.9 kW. Converted to 1 room of medium size, this amounts to about 10% of the heat load, i.e. 4.4 kW with an air volume flow of 900 m3/h.

Office air conditioning, 0% recirculating air, 100% fresh air: Energy recovery is mandatory, ideally all year round. Circuit composite systems, plate and rotor heat exchangers are used for this purpose. As a result of leaks, plate and rotor heat exchangers are not recommended.

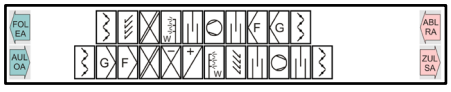
Air conditioning hospital, 0% circulating air, 100% fresh air: Due to the risk of virus and bacteria transmission, recirculating air is prohibited. Energy recovery is only permitted with a circuit composite system, **see subsequent pages**.

Europe

Bern in the year 2050

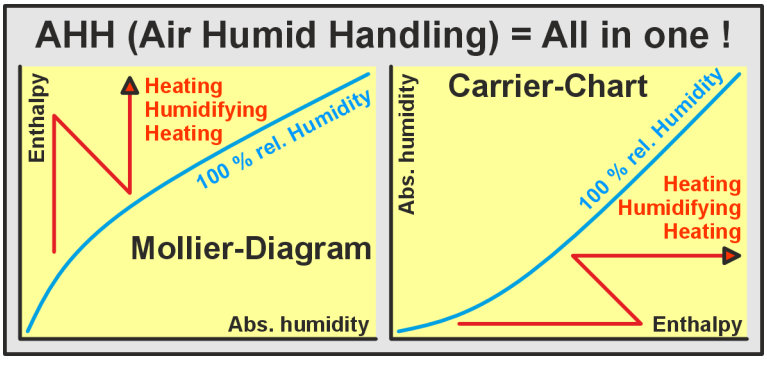


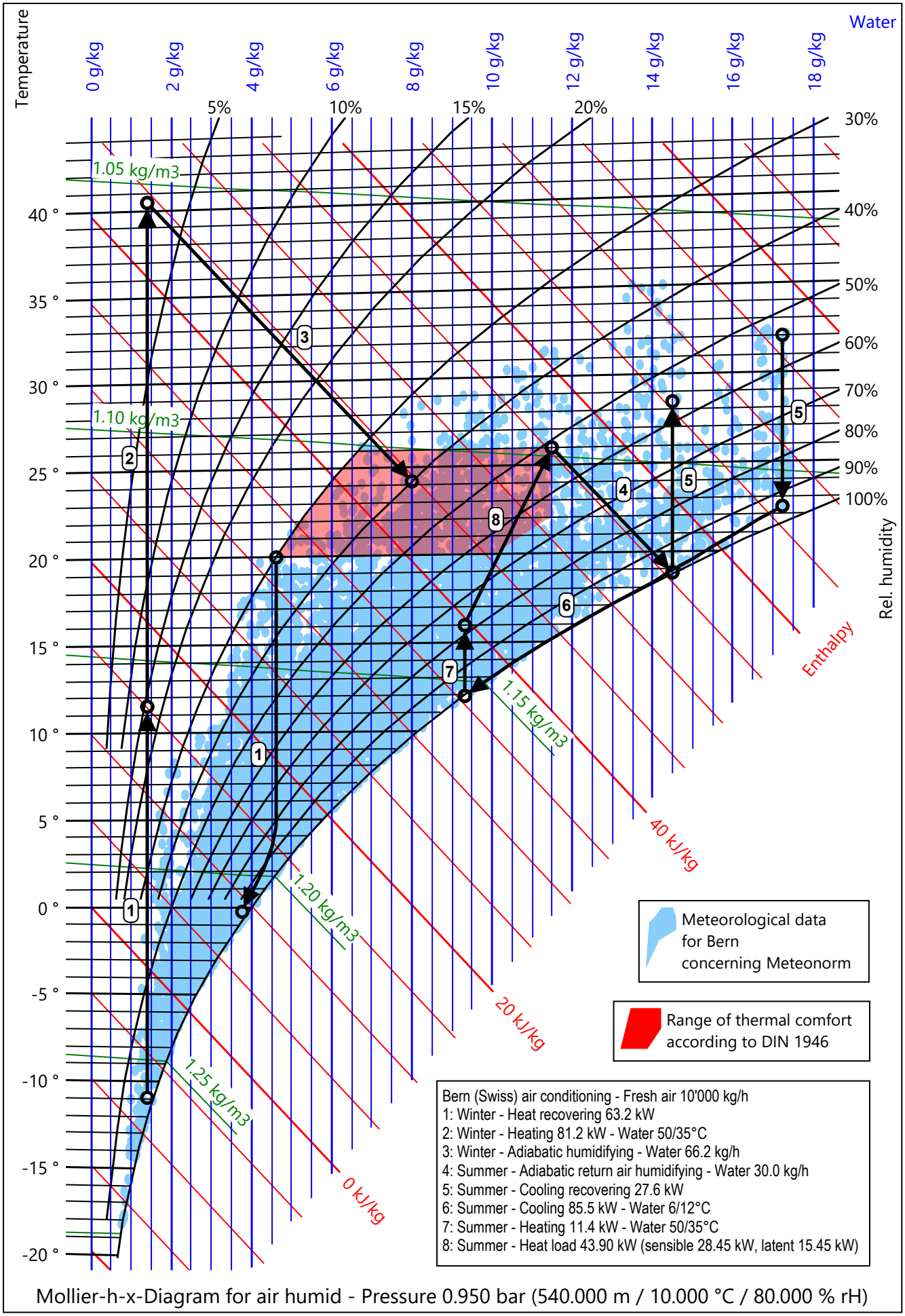
Investment approx. EUR 60,000, incl. hydraulics and controllers.



Investment approx. EUR 60,000, incl. hydraulics and controllers.

What does it take to be able to carry out such calculations?





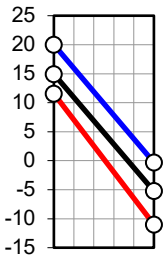
Mollier-h-x-Diagram for air humid - Pressure 0.950 bar (540.000 m / 10.000 °C / 80.000 % rH)

CC-System in winter		SA-He	RA-Co	Definition
Height over sea level	m			540.000
Pressure	hPa			949.653
Efficiency	%	72.750	65.497	
Capacity sensible	kW	63.194	57.162	
Capacity latent	kW	---	5.456	
Capacity frost	kW	---	0.576	
Capacity total	kW	63.194	63.193	
Surface reserve	%	0.311	0.230	
Present surface	m2	383.971	383.971	

SA-He		Inlet	Outlet	Definition
Temp.	°C	-11.000	11.553	20.000
Rel. humidity	%	90.000	15.600	40.000
Abs. humidity	g/kg	1.394	1.394	6.174
Volume flow humid	m3/h	7943.395	8626.731	8950.790
Velocity	m/s	1.618	1.758	1.824
Pressure drop	Pa		82.542	

RA-Co		Inlet	Outlet	Definition
Temp.	°C	20.000	-0.304	20.000
Rel. humidity	%	30.000	97.863	40.000
Abs. humidity	g/kg	4.619	3.845	6.174
Volume flow humid	m3/h	8928.637	8299.981	8950.790
Velocity	m/s	1.819	1.691	1.824
Pressure drop wet	Pa		91.875	

25 V% Et.glycol			SA-He	RA-Co
Temp.	in	°C	14.940	-5.250
Temp.	out	°C	-5.250	14.940
Volume flow		m3/h	2.927	2.928
Velocity		m/s	1.099	1.099
Reynolds		---	4508.662	4413.943
Pressure drop		kPa	198.236	199.389



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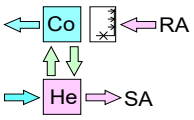
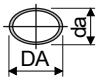
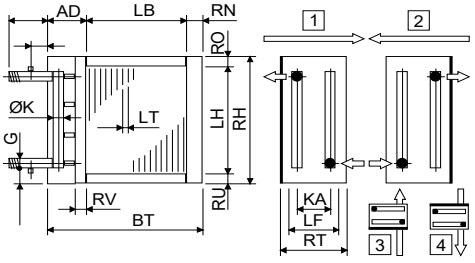


Software by www.zcs.ch

Technical data			SA-He	RA-Co		SA-He	RA-Co
Tubes total		Piece	336	336	Tubes:	Cu	Cu
Tubes blank		Piece	0	0	Tubes:	smooth	smooth
Int. vent./drains		Piece	5	5	Tubes:	staggered	staggered
Tube rows on the depth		Piece	12	12	Tubes:	circular	circular
Tube rows on the height		Piece	28	28	Collectors:	Cu	Cu
Tube coupling in series		Piece	48	48	Collectors:	1.01 m/s	1.01 m/s
Number of circuits (NC)		Piece	7	7	Connections:	Rg7	Rg7
Volume		l	63	63	Connections:	1.01 m/s	1.01 m/s
Weight		kg	216	216	Fins:	Al	Al
Connections	G	---	1 ¼"	1 ¼"	Fins:	Wave structure	Wave structure
Frame height	RH	mm	900	900	Frame:	AISI 304	AISI 304
Frame width	BT	mm	1800	1800	Air flow direction:	horizontal	horizontal
Frame depth	RT	mm	370	370	Protection:	without	without
Finned height	LH	mm	840	840	Protection:	---	---
Finned width	LB	mm	1623	1623			
Finned depth	LF	mm	312	312			
Frame on top	RO	mm	30	30			
Frame on bottom	RU	mm	30	30			
Frame in front	RV	mm	30	30			
Frame on back (~53/53mm)	RN	mm	53	53			
Collector-Diameter	K	mm	35	35			
Collector covering	AD	mm	124	124			
Collector distance	KA	mm	302	302			
Fin spacing	LT	mm	2.500	2.500			
Fin thickness	LD	mm	0.200	0.200			
Tube diameter	DA	mm	12.400	12.400	Delivery:		5-6 weeks
Tube diameter	da	mm	12.400	12.400	Validity:		12 weeks
Tube thickness	S	mm	0.400	0.400	Condit.:		net, prepaid address
Tube interval on the height	S1	mm	30.000	30.000	Payment:		30 days net
Tube interval on the depth	S2	mm	25.981	25.981			





SA-He: 30/26/12-12R-28T-1623A-2.5PA-7C-Cu/Al/AISI 304 — **SA-He: EUR 3926.00**

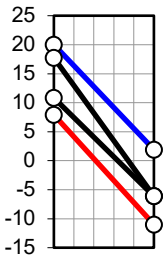
RA-Co: 30/26/12-12R-28T-1623A-2.5PA-7C-Cu/Al/AISI 304 — **RA-Co: EUR 3926.00**

CC-System in winter		SA-He	RA-Co	Definition
Height over sea level	m			540.000
Pressure	hPa			949.653
Efficiency	%	61.000	58.330	
Capacity sensible	kW	52.985	50.954	
Capacity latent	kW	---	2.032	
Capacity frost	kW	---	0.000	
Capacity total	kW	52.985	52.985	
Surface reserve	%	0.008	0.085	
Present surface	m2	383.971	383.971	

SA-He		Inlet	Outlet	Definition
Temp.	°C	-11.000	7.910	20.000
Rel. humidity	%	90.000	19.905	40.000
Abs. humidity	g/kg	1.394	1.394	6.174
Volume flow humid	m3/h	7943.395	8516.364	8950.790
Velocity	m/s	1.618	1.735	1.824
Pressure drop	Pa		81.913	

RA-Co		Inlet	Outlet	Definition
Temp.	°C	20.000	1.918	20.000
Rel. humidity	%	30.000	93.385	40.000
Abs. humidity	g/kg	4.619	4.331	6.174
Volume flow humid	m3/h	8928.637	8374.058	8950.790
Velocity	m/s	1.819	1.706	1.824
Pressure drop wet	Pa		89.376	

25 V% Et.glycol			SA-He	RA-Co
Temp.	in	°C	10.832	-6.114
Temp.	out	°C	-6.114	17.742
Volume flow		m3/h	2.927	2.074
Velocity		m/s	1.099	0.779
Reynolds		---	4148.169	3546.721
Pressure drop		kPa	202.391	105.465



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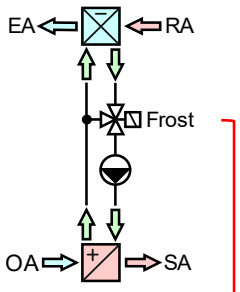
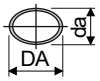
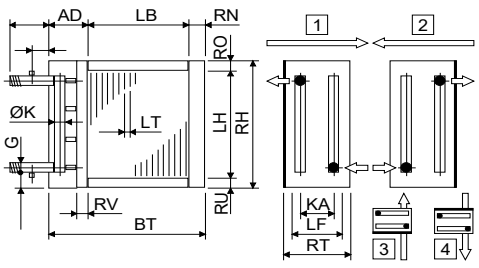


Bypass 0.853 m3/h

Software by www.zcs.ch

Technical data			SA-He	RA-Co		SA-He	RA-Co
Tubes total		Piece	336	336	Tubes:	Cu	Cu
Tubes blank		Piece	0	0	Tubes:	smooth	smooth
Int. vent./drains		Piece	5	5	Tubes:	staggered	staggered
Tube rows on the depth		Piece	12	12	Tubes:	circular	circular
Tube rows on the height		Piece	28	28	Collectors:	Cu	Cu
Tube coupling in series		Piece	48	48	Collectors:	1.01 m/s	0.72 m/s
Number of circuits (NC)		Piece	7	7	Connections:	Rg7	Rg7
Volume		l	63	63	Connections:	1.01 m/s	0.72 m/s
Weight		kg	216	216	Fins:	Al	Al
Connections	G	---	1 ¼"	1 ¼"	Fins:	Wave structure	Wave structure
Frame height	RH	mm	900	900	Frame:	AISI 304	AISI 304
Frame width	BT	mm	1800	1800	Air flow direction:	horizontal	horizontal
Frame depth	RT	mm	370	370	Protection:	without	without
Finned height	LH	mm	840	840	Protection:	---	---
Finned width	LB	mm	1623	1623			
Finned depth	LF	mm	312	312			
Frame on top	RO	mm	30	30			
Frame on bottom	RU	mm	30	30			
Frame in front	RV	mm	30	30			
Frame on back (~53/53mm)	RN	mm	53	53			
Collector-Diameter	K	mm	35	35			
Collector covering	AD	mm	124	124			
Collector distance	KA	mm	302	302			
Fin spacing	LT	mm	2.500	2.500			
Fin thickness	LD	mm	0.200	0.200			
Tube diameter	DA	mm	12.400	12.400	Delivery:		5-6 weeks
Tube diameter	da	mm	12.400	12.400	Validity:		12 weeks
Tube thickness	S	mm	0.400	0.400	Condit.:		net, prepaid address
Tube interval on the height	S1	mm	30.000	30.000	Payment:		30 days net
Tube interval on the depth	S2	mm	25.981	25.981			





SA-He: 30/26/12-12R-28T-1623A-2.5PA-7C-Cu/Al/AISI 304 — **SA-He: EUR 3926.00**

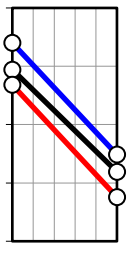
RA-Co: 30/26/12-12R-28T-1623A-2.5PA-7C-Cu/Al/AISI 304 — **RA-Co: EUR 3926.00**

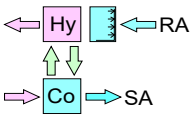
CC-System in summer		RA-Hy	SA-Co	Definition
Height over sea level	m			540.000
Pressure	hPa			949.653
Efficiency	%	72.800	72.434	
Capacity sensible	kW	27.628	27.627	
Capacity latent	kW	0.000	0.000	
Capacity frost	kW	---	0.000	
Capacity total	kW	27.628	27.627	
Surface reserve	%	0.106	0.124	
Present surface	m2	383.971	383.971	

RA-Hy		Inlet	Outlet	Definition
Temp. (26.000)	°C	18.783	28.405	20.000
Rel. humidity (51.435)	%	100.000	56.082	40.000
Abs. humidity (11.500)	g/kg	14.502	14.502	6.174
Volume flow humid	m3/h	9031.801	9329.466	8950.790
Velocity	m/s	1.840	1.901	1.824
Pressure drop	Pa		94.608	

SA-Co		Inlet	Outlet	Definition
Temp.	°C	32.000	22.427	20.000
Rel. humidity	%	54.000	94.534	40.000
Abs. humidity	g/kg	17.224	17.224	6.174
Volume flow humid	m3/h	9481.053	9183.620	8950.790
Velocity	m/s	1.932	1.871	1.824
Pressure drop wet	Pa		96.694	

25 V% Et.glycol			RA-Hy	SA-Co
Temp.	in	°C	29.716	20.955
Temp.	out	°C	20.955	29.716
Volume flow		m3/h	2.927	2.928
Velocity		m/s	1.099	1.099
Reynolds		---	8082.738	8020.962
Pressure drop		kPa	174.323	174.646





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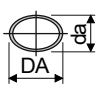
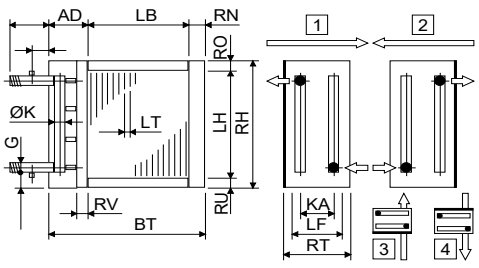
Technical data			RA-Hy	SA-Co		RA-Hy	SA-Co
Tubes total		Piece	336	336	Tubes:	Cu	Cu
Tubes blank		Piece	0	0	Tubes:	smooth	smooth
Int. vent./drains		Piece	5	5	Tubes:	staggered	staggered
Tube rows on the depth		Piece	12	12	Tubes:	circular	circular
Tube rows on the height		Piece	28	28	Collectors:	Cu	Cu
Tube coupling in series		Piece	48	48	Collectors:	1.01 m/s	1.01 m/s
Number of circuits (NC)		Piece	7	7	Connections:	Rg7	Rg7
Volume		l	63	63	Connections:	1.01 m/s	1.01 m/s
Weight		kg	216	216	Fins:	Al	Al
Connections	G	---	1 ¼"	1 ¼"	Fins:	Wave structure	Wave structure
Frame height	RH	mm	900	900	Frame:	AISI 304	AISI 304
Frame width	BT	mm	1800	1800	Air flow direction:	horizontal	horizontal
Frame depth	RT	mm	370	370	Protection:	without	without
Finned height	LH	mm	840	840	Protection:	---	---
Finned width	LB	mm	1623	1623			
Finned depth	LF	mm	312	312			
Frame on top	RO	mm	30	30			
Frame on bottom	RU	mm	30	30			
Frame in front	RV	mm	30	30			
Frame on back (~53/53mm)	RN	mm	53	53			
Collector-Diameter	K	mm	35	35			
Collector covering	AD	mm	124	124			
Collector distance	KA	mm	302	302			
Fin spacing	LT	mm	2.500	2.500			
Fin thickness	LD	mm	0.200	0.200			
Tube diameter	DA	mm	12.400	12.400	Delivery:		5-6 weeks
Tube diameter	da	mm	12.400	12.400	Validity:		12 weeks
Tube thickness	S	mm	0.400	0.400	Condit.:		net, prepaid address
Tube interval on the height	S1	mm	30.000	30.000	Payment:		30 days net
Tube interval on the depth	S2	mm	25.981	25.981			





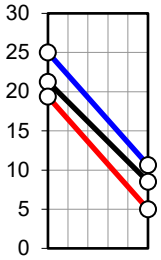
RA-Hy: 30/26/12-12R-28T-1623A-2.5PA-7C-Cu/Al/AISI 304	**RA-Hy:**	**EUR**	**3926.00**
SA-Co: 30/26/12-12R-28T-1623A-2.5PA-7C-Cu/Al/AISI 304	**SA-Co:**	**EUR**	**3926.00**

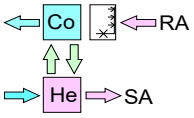
CC-System (DIN EN 308)		SA-He	RA-Co	Definition
Height over sea level	m			540.000
Pressure	hPa			949.653
Efficiency	%	71.820	71.806	
Capacity sensible	kW	40.159	40.159	
Capacity latent	kW	---	---	
Capacity frost	kW	---	---	
Capacity total	kW	40.159	40.159	
Surface reserve	%	0.123	0.123	
Present surface	m2	383.971	383.971	

SA-He		Inlet	Outlet	Definition
Temp.	°C	5.000	19.364	20.000
Rel. humidity	%	0.000	0.000	40.000
Abs. humidity	g/kg	0.000	0.000	6.174
Volume flow humid	m3/h	8409.352	8843.605	8950.790
Velocity	m/s	1.713	1.802	1.824
Pressure drop	Pa		87.057	

RA-Co		Inlet	Outlet	Definition
Temp.	°C	25.000	10.639	20.000
Rel. humidity	%	0.000	0.000	40.000
Abs. humidity	g/kg	0.000	0.000	6.174
Volume flow humid	m3/h	9013.993	8579.822	8950.790
Velocity	m/s	1.837	1.748	1.824
Pressure drop	Pa		89.337	

25 V% Et.glycol			SA-He	RA-Co
Temp.	in	°C	21.269	8.528
Temp.	out	°C	8.528	21.269
Volume flow		m3/h	2.936	2.937
Velocity		m/s	1.103	1.103
Reynolds		---	6169.424	6067.141
Pressure drop		kPa	185.980	186.740





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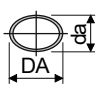
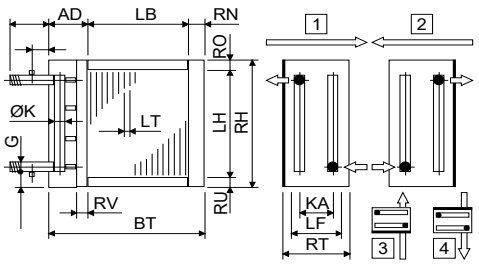
Technical data			SA-He	RA-Co		SA-He	RA-Co
Tubes total		Piece	336	336	Tubes:	Cu	Cu
Tubes blank		Piece	0	0	Tubes:	smooth	smooth
Int. vent./drains		Piece	5	5	Tubes:	staggered	staggered
Tube rows on the depth		Piece	12	12	Tubes:	circular	circular
Tube rows on the height		Piece	28	28	Collectors:	Cu	Cu
Tube coupling in series		Piece	48	48	Collectors:	1.01 m/s	1.01 m/s
Number of circuits (NC)		Piece	7	7	Connections:	Rg7	Rg7
Volume		l	63	63	Connections:	1.01 m/s	1.01 m/s
Weight		kg	216	216	Fins:	Al	Al
Connections	G	---	1 ¼"	1 ¼"	Fins:	Wave structure	Wave structure
Frame height	RH	mm	900	900	Frame:	AISI 304	AISI 304
Frame width	BT	mm	1800	1800	Air flow direction:	horizontal	horizontal
Frame depth	RT	mm	370	370	Protection:	without	without
Finned height	LH	mm	840	840	Protection:	---	---
Finned width	LB	mm	1623	1623			
Finned depth	LF	mm	312	312			
Frame on top	RO	mm	30	30			
Frame on bottom	RU	mm	30	30			
Frame in front	RV	mm	30	30			
Frame on back (~53/53mm)	RN	mm	53	53			
Collector-Diameter	K	mm	35	35			
Collector covering	AD	mm	124	124			
Collector distance	KA	mm	302	302			
Fin spacing	LT	mm	2.500	2.500			
Fin thickness	LD	mm	0.200	0.200			
Tube diameter	DA	mm	12.400	12.400	Delivery:		5-6 weeks
Tube diameter	da	mm	12.400	12.400	Validity:		12 weeks
Tube thickness	S	mm	0.400	0.400	Condit.:		net, prepaid address
Tube interval on the height	S1	mm	30.000	30.000	Payment:		30 days net
Tube interval on the depth	S2	mm	25.981	25.981			





SA-He: 30/26/12-12R-28T-1623A-2.5PA-7C-Cu/Al/AISI 304	**SA-He:**	**EUR**	**3926.00**
RA-Co: 30/26/12-12R-28T-1623A-2.5PA-7C-Cu/Al/AISI 304	**RA-Co:**	**EUR**	**3926.00**

Energy recovery / Year (Service at 100% Air flow = 5667 Hours

No	Outside air		CCSB		Return air		Exhaust air		Efficiency	Capacity	Energy
	°C	%	°C	%	°C	%	°C	%	%	kW	MWh
1	-8.7	84.0	13.2	16.1	21.1	34.5	2.5	93.5	73.62	61.41	8.70
2	-3.3	78.4	14.4	22.1	21.2	35.0	5.2	88.4	72.38	49.79	7.05
3	-1.4	79.2	14.9	25.3	21.3	35.4	6.2	86.8	72.03	46.00	6.52
4	-0.2	78.5	15.3	27.1	21.4	35.9	6.9	85.7	71.86	43.69	6.19
5	0.8	76.3	15.7	27.9	21.5	36.3	7.5	84.7	71.71	41.72	5.91
6	1.6	79.2	15.9	30.2	21.6	36.7	8.1	84.1	71.60	40.24	5.70
7	2.4	77.1	16.2	30.5	21.7	37.2	8.5	83.6	71.53	38.90	5.51
8	3.0	77.3	16.5	31.5	21.8	37.6	9.0	83.1	71.47	37.83	5.36
9	3.6	76.2	16.7	31.8	21.9	38.1	9.4	82.8	71.42	36.83	5.22
10	4.2	75.3	16.9	32.2	22.0	38.5	9.7	82.5	71.38	35.93	5.09
11	4.7	75.9	17.2	33.3	22.2	39.0	10.1	82.2	71.33	35.03	4.96
12	5.3	73.8	17.4	33.1	22.3	39.4	10.5	81.9	71.30	34.12	4.83
13	5.9	75.2	17.6	34.7	22.4	39.9	10.9	81.5	71.23	33.08	4.69
14	6.5	72.4	17.9	34.4	22.5	40.3	11.3	80.9	71.19	32.00	4.53
15	7.1	73.7	18.1	35.8	22.6	40.7	11.7	80.4	71.15	31.07	4.40
16	7.7	72.1	18.3	35.9	22.7	41.2	12.1	79.9	71.12	30.14	4.27
17	8.3	73.0	18.6	37.4	22.8	41.6	12.6	79.0	71.08	29.03	4.11
18	9.0	73.9	18.9	39.0	22.9	42.1	13.1	78.1	71.06	27.93	3.96
19	9.6	73.3	19.1	39.7	23.0	42.5	13.5	76.9	71.06	26.83	3.80
20	10.3	71.7	19.4	39.9	23.1	43.0	14.0	75.9	71.07	25.83	3.66
21	10.9	72.5	19.6	41.3	23.2	43.4	14.5	74.8	71.06	24.79	3.51
22	11.5	68.9	19.6	40.3	23.3	43.9	15.0	73.7	71.08	22.70	3.22
23	12.3	68.7	19.4	41.5	23.4	44.3	15.5	72.3	71.07	20.21	2.86
24	13.1	69.7	19.3	43.5	23.5	44.7	16.1	70.9	71.06	17.64	2.50
25	13.7	67.7	19.1	43.3	23.6	45.2	16.6	69.8	71.06	15.38	2.18
26	14.3	69.5	19.0	45.6	23.8	45.6	17.0	69.0	71.05	13.35	1.89
27	14.9	71.2	18.9	47.9	23.9	46.1	17.5	68.0	71.02	11.14	1.58
28	15.5	71.6	18.7	49.2	24.0	46.5	18.0	67.2	71.01	9.09	1.29
29	16.1	71.0	18.6	49.9	24.1	47.0	18.4	66.3	71.01	6.96	0.99
30	16.7	67.3	18.4	48.5	24.2	47.4	18.9	65.4	71.03	4.79	0.68
31	17.4	64.6	18.3	47.7	24.3	47.9	19.4	64.5	71.05	2.61	0.37
32	18.0	64.9	18.1	49.0	24.4	48.3	19.9	63.7	71.04	0.42	0.06
33	18.6	63.9	17.5	68.4	17.1	100.0	18.2	93.4	71.15	3.13	0.44
34	19.3	64.2	17.9	70.4	17.3	100.0	18.7	91.3	71.14	4.16	0.59
35	20.1	64.5	18.2	72.7	17.4	100.0	19.3	88.7	71.11	5.48	0.78
36	21.0	60.2	18.6	70.0	17.6	100.0	20.0	85.9	71.14	6.98	0.99
37	22.0	62.1	19.0	74.9	17.7	100.0	20.8	82.9	71.09	8.66	1.23
38	23.2	60.1	19.4	75.7	17.9	100.0	21.7	79.3	71.08	10.77	1.53
39	24.8	56.4	20.0	75.4	18.1	100.0	22.8	74.6	71.07	13.65	1.93
40	28.3	50.1	21.2	76.7	18.2	100.0	25.4	64.7	71.03	20.52	2.91

Air (%)	Service (h/a)
100.00	4000
66.67	2000
33.33	1000
▼	▼
100.00	5667

LOGO

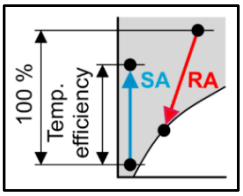
Company
Branch
Street
Country / ZIP / City

Phone: xxxxxxxxxx
Fax: xxxxxxxxxx
E-Mail
Homepage

City, 6.10.2025
With the compliments of

Representative
Direct dialing
xxxxxxxxxx

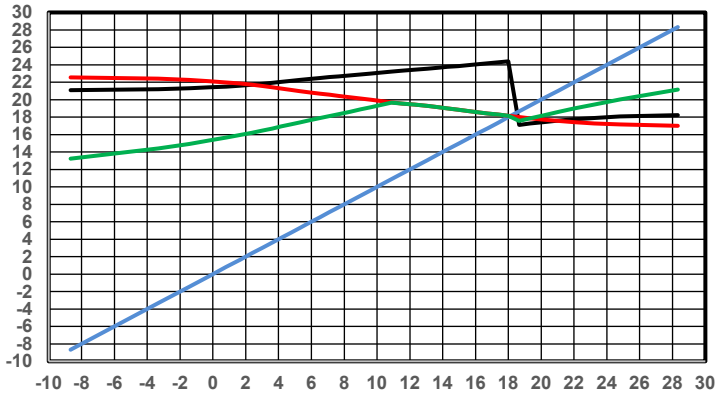
Plant
Object
Position



Software by www.zcs.ch

EU: Energy recovery: Heat energy	MWh	125.59	EUR	7535.00	(60.00 EUR/MWh)
EU: Energy recovery: Cold energy	MWh	10.39	EUR	831.00	(80.00 EUR/MWh)
EU: 2 Fan + Glycol pump	MWh	-6.95	EUR	-695.00	(100.00 EUR/MWh)
EU: Energy recovery: Net useful ratio / Year	MWh	129.03	EUR	7671.00	(59.45 EUR/MWh)
EU: Need of energy total / Year	MWh	220.63	EUR	15369.47	(69.66 EUR/MWh)
EU: Net useful ratio / Year	%	58.48	%	49.91	TWG = 72.75%
CH: Guidelines from associations such as SIA and SWKI: TWG>70.00% & JNG>75.00% & ETV>15.00					JNG = 74.26%
					ETV = 22.58

Outside air (°C) Return air (°C) Supply air (°C)
Energy recovery (°C)



Station		Bern (CH)
Height over sea level	m	540.00
Pressure	hPa	949.65
Outside air	m3/h	8950.79
Return air	m3/h	8950.79
Adiabatic return air cooling	h/a	1133.33
Service at 100% Air flow	h/a	5666.65
Capital interest	%	1.00
Energy increase	%	1.00
Inflation	%	1.00
Support costs	%	5.00
Costs without CC-System	EUR	37000.00
Costs with CC-System	EUR	62000.00
Additional costs	EUR	25000.00
BEP (Break even point) after	Years	3.92