

VENTUS

made of expectations

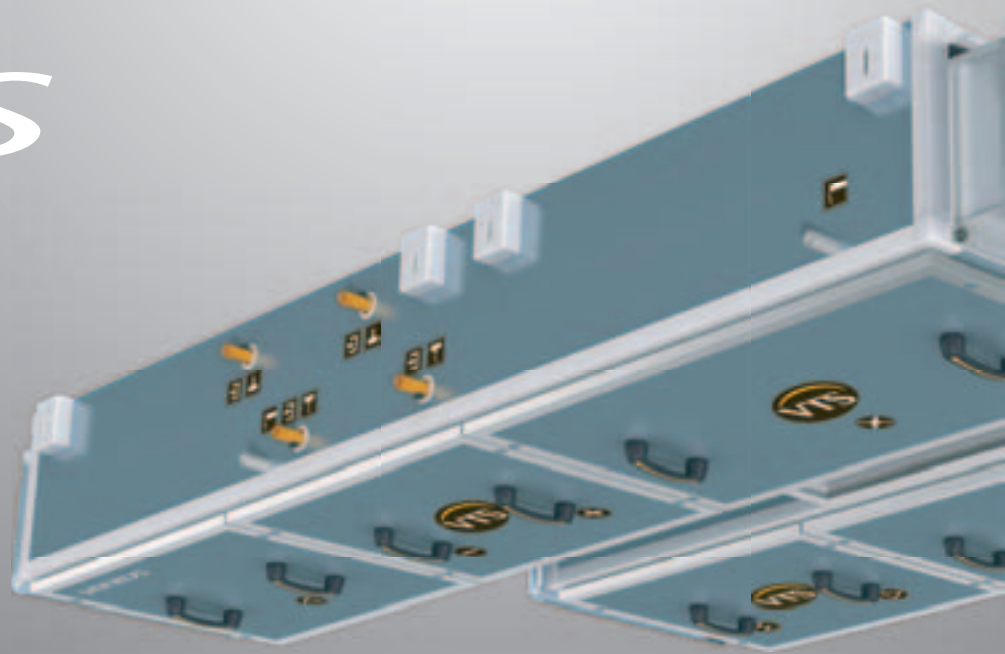


Air Handling Units Catalogue 2006

innovative air handling units



ventus



Air Handling Units



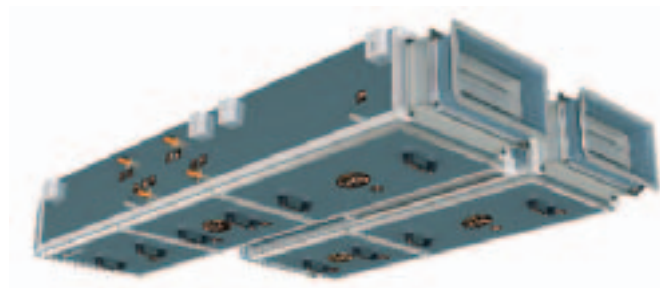
VENTUS - Air Handling Units

General description	12
How to select an AHU?	13
Symbols and labels	14
Base AHUs and optional functions	15
Quick selection	16
Navigation	20
Supply AHUs	
Heating	21
Cooling	22
Heating, Cooling	23
Heating, Cooling, Heating	24
Exhaust AHUs	
Ventilation	25
Filtration, Ventilation	26
Supply-exhaust AHUs: cross-flow exchanger	
Ventilation	27
Heating	29
Cooling	32
Heating, Cooling	35
Heating, Cooling, Heating	38
Supply-exhaust AHUs: rotary exchanger	
Ventilation	41
Heating	42
Cooling	44
Heating, Cooling	46
Heating, Cooling, Heating	48
Supply-exhaust AHUs: glycol system	
Heating	50
Heating, Cooling	51
Optional functions and accessories	53
Components	54
Control elements	72
Control applications	78

VENTUS



VS 21 ÷ 650



VS 10 ÷ 15

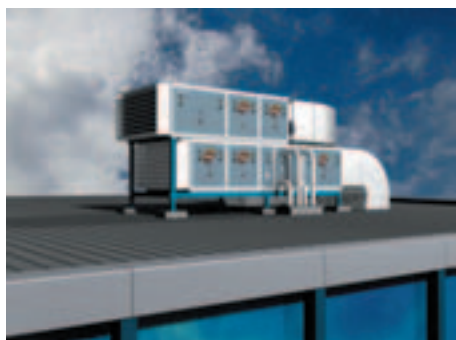
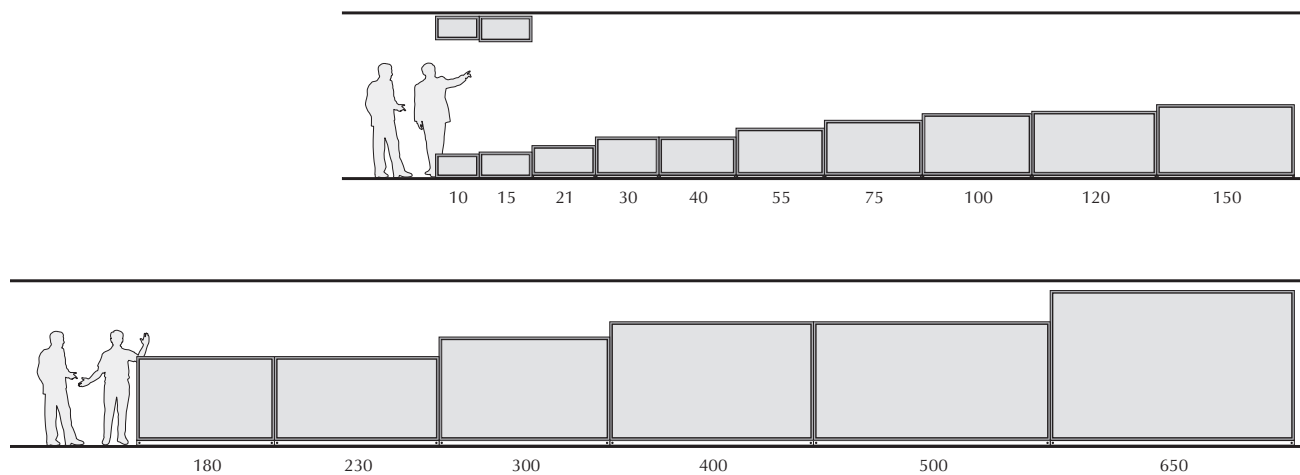
Capacity:

400 ÷ 100 000 [m³/h]

Functions:



Sizes:

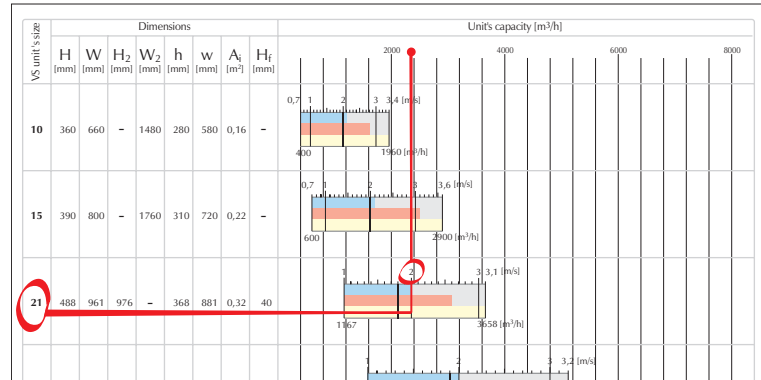


How to select an AHU?

1

Start with the „Quick selection” page (p. 16-19):

- choose a type and a size of an AHU;
- check which AHUs provide a capacity you are interested in;
- choose the optimal one on the basis of air flow speed through the unit’s window, taking the most important function into consideration;
- read the size of the unit , e.g. VS 21.



2

On the „Navigation” page (p. 20):

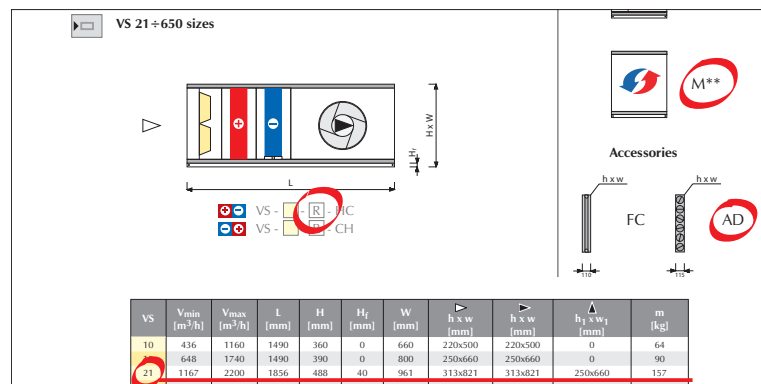
- find a base unit which is equipped with functions you are interested in and the corresponding automatics;
- move to an appropriate page.

AHU TYPE	FUNCTION						PAGE NUMBER				
	▶	◀	+	-	⊗	⊙	AHUs		AUTOMATICS		
							VS 10+15	VS 21+650	VS 10+15	VS 21+650	
SUPPLY AHUs											
Heating	●	●	●	●	●	●	21	21	78		
Cooling	●	●	●	●	●	●	22	22	79		
Heating, Cooling	●	●	●	●	●	●	23	23	80		
Heating, Cooling, Heating	●	●	●	●	●	●	24	24			
EXHAUST AHUs											
Ventilation	●	●	●	●	●	●	25	25	81		
	●	●	●	●	●	●	26	26	81		
SUPPLY – EXHAUST AHUs											
	●	●	●	●	●	●	27, 28	27, 28	82	84	

3

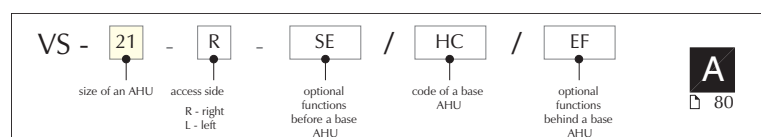
On the page with a description of an AHU:

- choose the access side;
- choose optional functions and accessories;
- read the parameters for the chosen size of a base AHU as well as optional functions (tables for optional functions are presented on page 53 and on the bookmark).




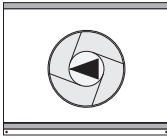

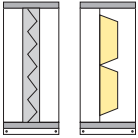


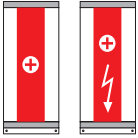


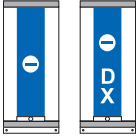

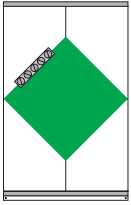

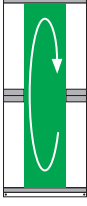

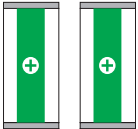
4

Write down the code of an AHU down and check the information concerning a recommended control application.






- ! Detailed technical specification is available in ClimaCAD On-Line application at www.vtsclima.com. If you want to order a selected unit, get in touch with our Sales and technical adviser.


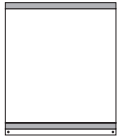



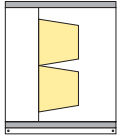


Basic functions of a base AHU

	V - Ventilator	
	F - pre-Filter	
 	H - Heater: water, electric	
 	C - Cooler: water, with direct expansion	
	P - Plate cross-flow recuperator	
	R - Rotary regenerator	
	G - Glycol system	





View of an AHU

-  from a side: VS 10÷650
-  from the top: VS 10÷15
-  from a side: VS 21÷650
(a dominating function in a lower module)

Optional functions







	E - Empty section	
	S - Silencer	
	F - Secondary Filter	
	M - Mixing box	

Accessories

	FC - Flexible Connection	
	AD - Air Damper	

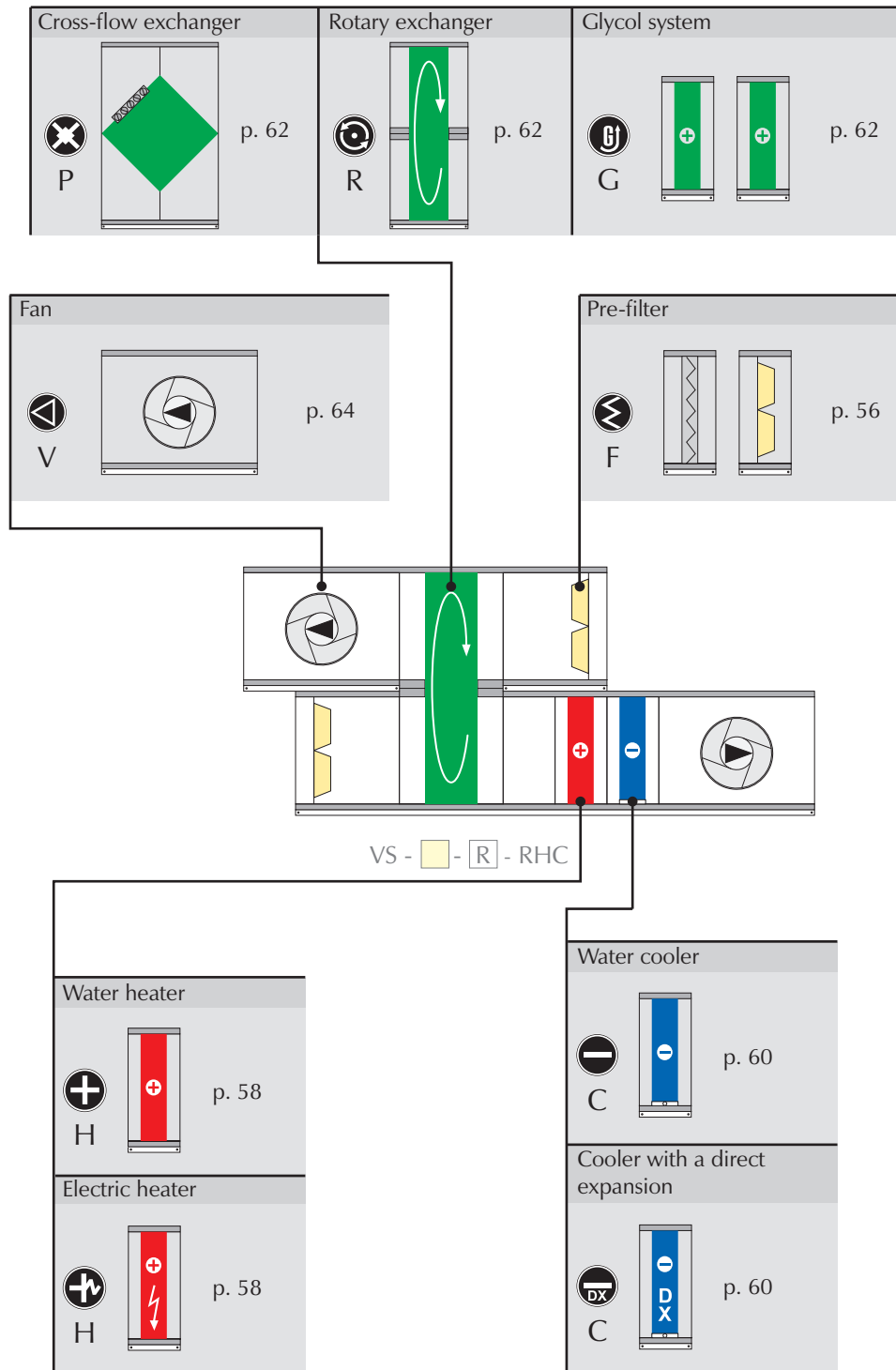
Miscellaneous

CCOL - ClimaCAD On-Line

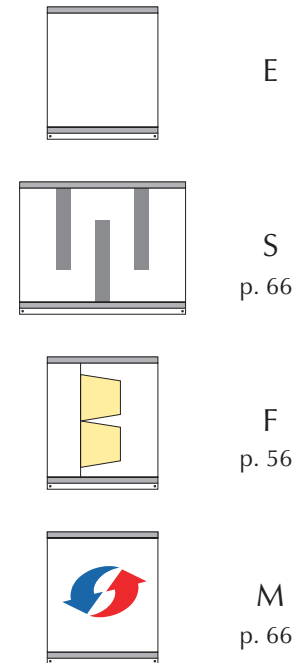
-  Automatics
-  order of exchangers in a unit
(heater, cooler)
-  order of exchangers in a unit
(cooler, heater)
-  80 page symbol
-  unit's inlet
-  unit's outlet

Base AHUs and optional functions

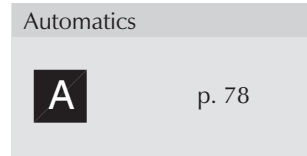
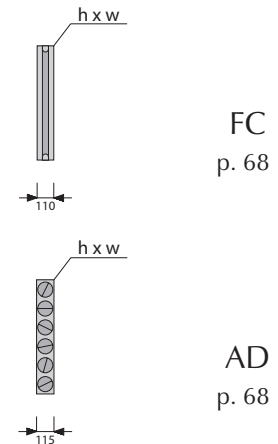
Base AHU



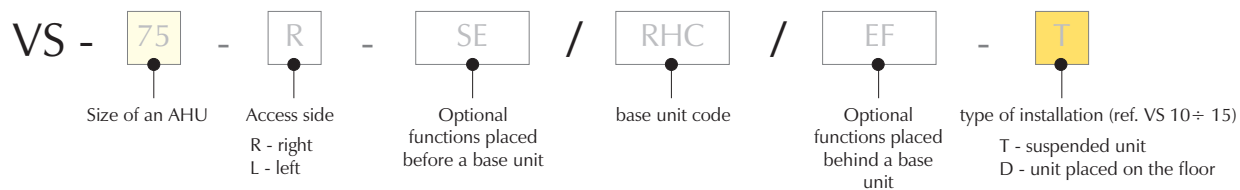
Optional functions



Accessories



Coding system



Quick selection

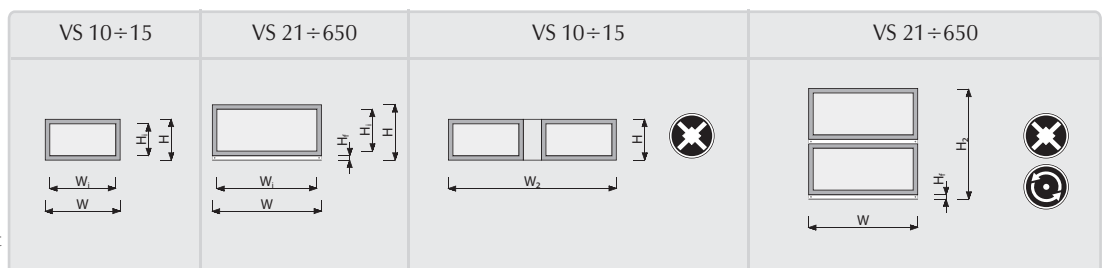
VENTUS

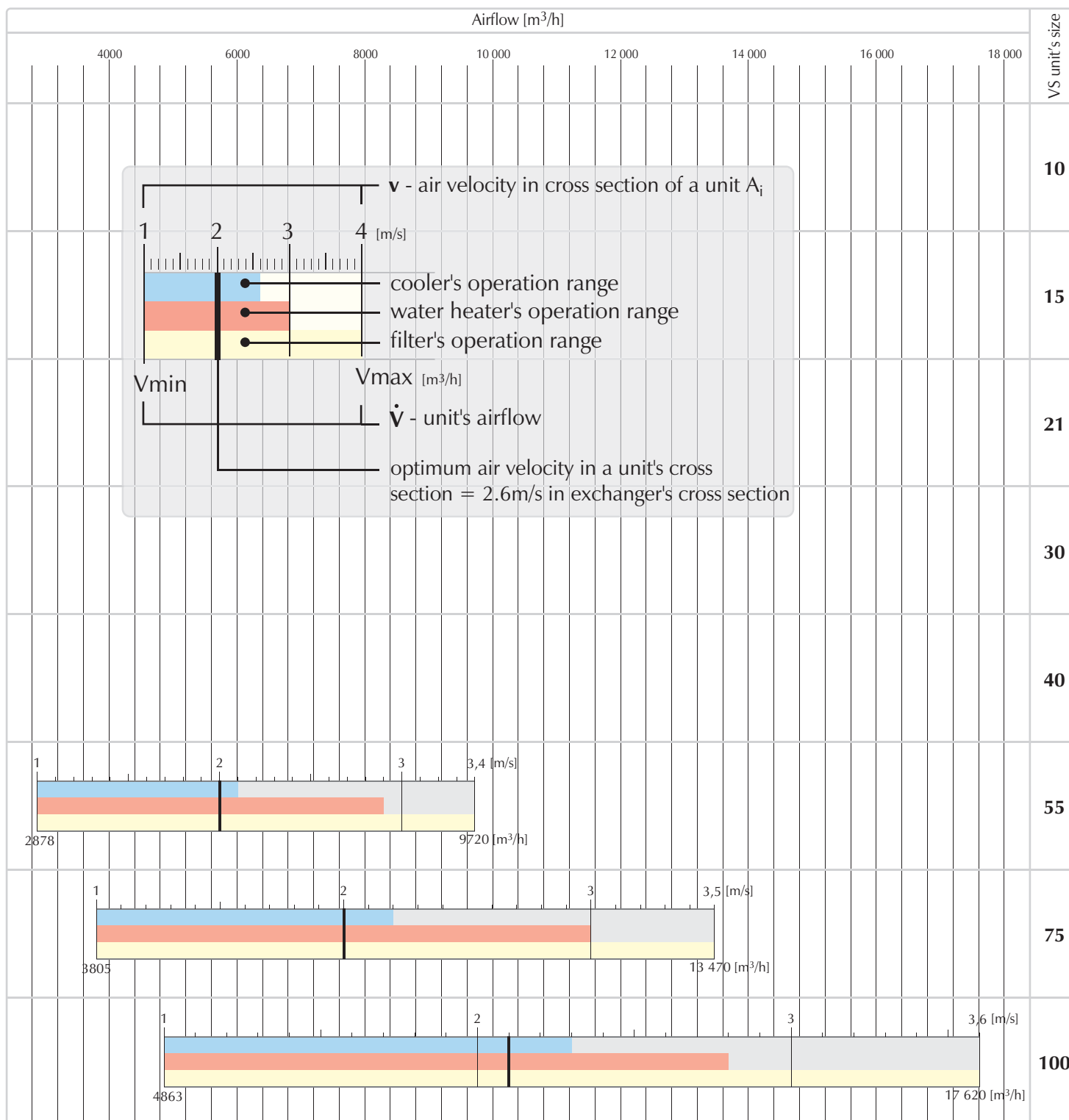
VS unit's size	Dimensions								Airflow [m ³ /h]				
	H [mm]	W [mm]	H ₂ [mm]	W ₂ [mm]	H _i [mm]	W _i [mm]	A _i [m ²]	H _f [mm]	2000	4000	6000	8000	
10	360	660	-	1480	280	580	0,16	-					
15	390	800	-	1760	310	720	0,22	-					
21	488	961	976	-	368	881	0,32	40					
30	620	961	1240	-	500	881	0,44	40					
40	620	1168	1240	-	500	1088	0,54	40					
55	755	1339	1510	-	635	1259	0,80	40					
75	875	1480	1750	-	755	1400	1,06	40					
100	975	1660	1950	-	855	1580	1,35	40					

Construction of a unit

Legend:

- H - height of a unit'
- W - width of a unit
- H₂ - height of an integrated unit
- W₂ - width of an integrated unit
- H_i - height of a unit's cross section
- W_i - width of a unit's cross section
- A_i - cross section of the window inside a unit
- H_f - height of a unit's frame





Maximum air velocity v_{max} [m/s]

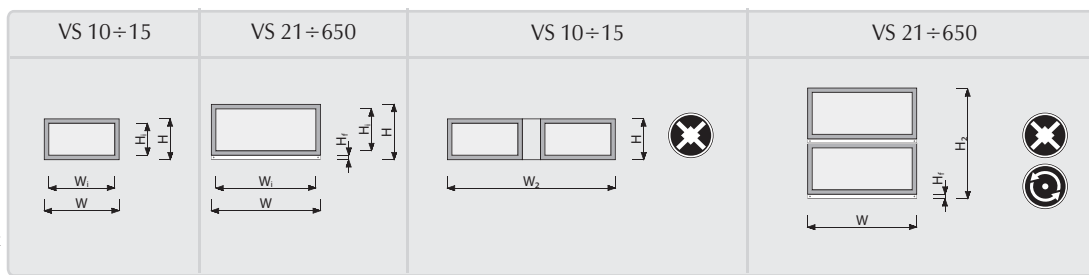
functions								
velocity in a units cross section	3,6	3,0	3,0	3,6	2,3	2,3	3,6	3,6
velocity in a component's cross section	4,3	3,5	3,8	4,5	2,8	2,8	4,5	5,2

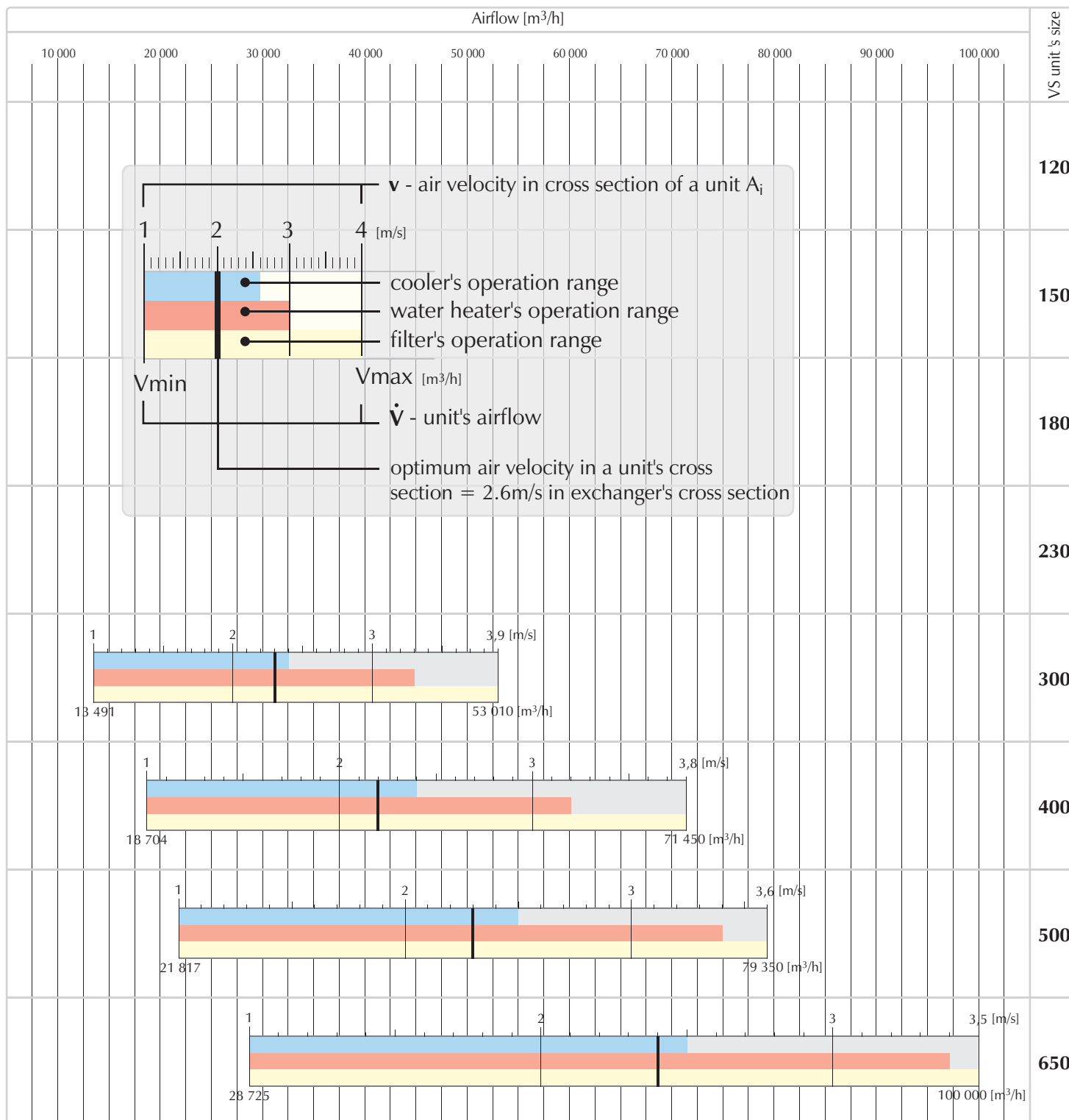
VS unit's size	Dimensions								Airflow [m ³ /h]										
	H [mm]	W [mm]	H ₂ [mm]	W ₂ [mm]	H _i [mm]	W _i [mm]	A _i [m ²]	H _f [mm]	5000	10 000	15 000	20 000	25 000	30 000	35 000	40 000	45 000	50 000	
120	1012	1891	2024	-	892	1811	1,62	40											
150	1113	2085	2226	-	993	2005	1,99	40											
180	1357	2085	2714	-	1197	2005	2,40	80											
230	1357	2493	2714	-	1197	2413	2,89	80											
300	1656	2585	3312	-	1496	2505	3,75	80											
400	1889	3085	3778	-	1729	3005	5,20	80											
500	1889	3585	3778	-	1729	3505	6,06	80											
650	2366	3697	4732	-	2206	3617	7,98	80											

Construction of a unit

Legend:

- H - height of a unit'
- W - width of a unit
- H₂ - height of an integrated unit
- W₂ - width of an integrated unit
- H_i - height of a unit's cross section
- W_i - width of a unit's cross section
- A_i - cross section of the window inside a unit
- H_f - height of a unit's frame





Maximum air velocity v_{max} [m/s]

functions								
velocity in a units cross section	3,6	3,0	3,0	3,6	2,3	2,3	3,6	3,6
velocity in a component's cross section	4,3	3,5	3,8	4,5	2,8	2,8	4,5	5,2

AHU TYPE	FUNCTION							PAGE NUMBER			
								AHUs		AUTOMATICS	
								VS 10 ÷ 15	VS 21 ÷ 650	VS 10 ÷ 15	VS 21 ÷ 650
SUPPLY AHUs											
Heating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	21	21	78	
Cooling	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	22	22	79	
Heating, Cooling	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	23	23	80	
Heating, Cooling, Heating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	24	24		
EXHAUST AHUs											
Ventilation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	25	25	81	
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	26	26	81	
SUPPLY – EXHAUST AHUs											
Ventilation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	27, 28	27, 28	82	84
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		41	86	
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		52		
Heating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	29, 31	29, 30, 31	82	84
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		42, 43	86	
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		50		
Cooling	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	32, 34	32, 33, 34	83	85
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		44, 45	87	
Heating, Cooling	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	35, 37	35, 36, 37	83	85
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		46, 47	87	
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		51		
Heating, Cooling, Heating	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	38, 40	38, 39, 40		
	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>		48, 49		

OPTIONAL FUNCTIONS:

* VS 10-15 AHUs are available as indoor units only.

** Optional functions are available for VS 21-650 AHUs only.

Inlet/Outlet configurations of E empty section are presented on page 53 and on the bookmark.

Inlet/Outlet configurations of M mixing box are presented on page 53 and on the bookmark.

Dimensions of optional functions are presented on page 53 and on the bookmark.