

Air handling units

Performance characteristics	DIN EN 13053 02/2012		
Heat recovery	KVS		
Air volume supply air	25000 m ³ /h		
Air volume exhaust air	25000 m ³ /h		
Unit type	Supply and exhaust air		
Casing design	50 mm		
Baseframe	Baseframe 200 mm loose in single pieces on palett , Sound insulation on job site		
Air velocity	Supply air:2,5 m/s Class: V5	Unit size supply air	KG Top 320
Air velocity	Exhaust air:2,5 m/s Class: V5	Unit size exhaust air	KG Top 320

Supply air:

(1) Return air section

Damper class 1 in accordance to DIN EN 1751,S external,1019 x 1832 / 10 Nm troque / Damper shaft for actuator 15 x 15 mm	Damper class 1 in accordance to DIN EN 1751,Return air damper,409 x 1527 / 8 Nm troque / Damper shaft for actuator 15 x 15 mm
Flexible connection,S	
Potential settlement mounted	

(2) Bag filter G4

Initial resistance	55 Pa	Final pressure difference	150 Pa
Selection resistance	102 Pa	Filter surface	15,78 m ²
Bag filter G4		Access door	
Bag filter frame,Bag filters removeable			

(3) KVS - heating coil section long

Heat exchanger type	III Cu/Al KT	Medium flow rate	12,90 m ³ /h
Connection (inlet/outlet)	2 0/0 Inch	Antifreeze percentile	23 %
Air-on temperature	-12,0 °C	Air pressure drop	152 Pa
Air-off temperature	0,4 °C	Pressure drop medium	35,6 kPa
Capacity (total)	115,4 kW	Heat recovery figure	37 %
Medium on temp.	9,0 °C	Air velocity	2,8 m/s
Medium off temp.	0,5 °C	Watercontent	70,9 l
Drain and vent valve,T-piece2 "		Slide out rail for heating coil	
Flange/counterflange			

(4) Cooling section

Heat exchanger type	7 Cu/Al LT	Pressure drop(drop elim.)	31 Pa
Connection(inlet/outlet)	3 0/0 Inch - 3 0/0 Inch	Air pressure drop (dry)	79 Pa
Air-on temperature	29,5 °C	Medium on temp.	7,0 °C
Relative humidity	40,0 %	Medium off temp.	12,0 °C
Air-off temperature	19,0 °C	Medium flow rate	18,03 m ³ /h
Relative humidity	67,5 %	Antifreeze percentile	0 %
Capacity (latent)	20,7 kW	Pressure drop medium	13,4 kPa
Capacity (sensitive)	84,4 kW	Air velocity	2,9 m/s
Capacity (total)	105,1 kW	Watercontent	58,7 l

In duty as a heater in change-over operation

Air-on temperature	0,0 °C	Medium flow rate	10,62 m ³ /h
Air-off temperature	27,0 °C	Antifreeze percentile	0 %
Capacity (total)	240,6 kW	Pressure drop medium	3,8 kPa
Medium on temp.	90,0 °C	Air velocity	2,9 m/s
Medium off temp.	70,0 °C		
Slide in rails		Drain pan 1906 KGT	
Drop eliminator,Plastic-drop eliminator (PP),T 400		Drain plug: 1 1/4 Inch	
Slide in rails			

(5) Empty section 407

(11) Fan, Impeller with EC Motor

Air volume	25000 m ³ /h	Max. Motor-current	17,8 A
External pressure	350 Pa	Max. Motor-capacity	11,6 kW
Pressure drop fan unit	49 Pa	Motor - voltage	3*400 V
Internal pressure	364 Pa	Control voltage	8,84 V
Dynamic pressure	115 Pa	K-value	695
Total pressure	878 Pa	absorbed el. effective power PM	8,85 KW
Fan type	VM800-11,6/400EC-1 370-M	effective input power at SFPv conditions	8,46 KW
Fan - speed	1261 1/min	SFP (Specific fan power)	1,22 kW/(m ³ /s)
max. fan speed	1370 1/min		0,339 W/(m ³ /h)
Total efficiency	68,8 %	SFP class (EN 13779)	SFP3
Motor-current consumption	13,71 A	P-class (EN 13053)	P3

Octave band middle frequency(Hz)	63	125	250	500	1000	2000	4000	8000	Sum
Lw(A) suction side	49	68	72	78	83	88	77	73	90
Lw(A) pressure side	50	69	78	87	87	91	79	76	94

Isolator mounted and wired,AR 6/18,5

Access door ,Access door pressure side

Flexible connection,Q

Potential settlement mounted

Exhaust air:

(8) Fan, Impeller with EC Motor

Air volume	25000 m ³ /h	Max. Motor-current	17,8 A
External pressure	350 Pa	Max. Motor-capacity	11,6 kW
Pressure drop fan unit	49 Pa	Motor - voltage	3*400 V
Internal pressure	166 Pa	Control voltage	8,38 V
Dynamic pressure	115 Pa	K-value	695
Total pressure	680 Pa	absorbed el. effective power PM	7,23 KW
Fan type	VM800-11,6/400EC-1 370-M	SFP (Specific fan power)	1,04 kW/(m ³ /s)
Fan - speed	1193 1/min		0,289 W/(m ³ /h)
max. fan speed	1370 1/min	SFP class (EN 13779)	SFP3
Total efficiency	65,3 %	P-class (EN 13053)	P4
Motor-current consumption	11,32 A		

Octave band middle frequency(Hz)	63	125	250	500	1000	2000	4000	8000	Sum
Lw(A) suction side	50	66	71	77	81	88	75	71	90
Lw(A) pressure side	50	68	77	86	86	91	78	74	93

Isolator mounted and wired,AR 6/18,5

Access door ,Access door pressure side

Flexible connection,Q

Potential settlement mounted

(9) KVS - cooling coil section

Heat exchanger type	III Cu/Al KT	Medium on temp.	0,5 °C
Connection(inlet/outlet)	2 0/0 Inch	Medium off temp.	9,0 °C
Air-on temperature	21,0 °C	Medium flow rate	12,90 m ³ /h
Relative humidity	35,0 %	Antifreeze percentile	23 %
Air-off temperature	7,0 °C	Pressure drop medium	35,6 kPa
Relative humidity	86,8 %	Heat recovery figure	37 %
Capacity (total)	-115,4 kW	Air velocity	2,8 m/s
Pressure drop(drop elim.)	31 Pa	Watercontent	70,9 l
Air pressure drop	135 Pa		
Drain and vent valve,T-piece2 "		Drop eliminator,Plastic-drop eliminator (PP),T 400	
Flange/counterflange		Slide in rails	
Pump not wired ,Flange set for coil connection DN50		Drain pan 1906 KGT	
Piping accessory KVS loose ,Expansion vessel 8L		Drain plug: 1 1/4 Inch	

,Safety valve 3,0 bar w. manometer ,spheric valve
 DN 15 ,Vent valve 1/2" ,2 x Gate valve 2" for
 runaround coil system DIN 3352 ,Valve cap for
 expansion vessel
 Slide in rails

(10) Return air section

Damper class 1 in accordance to DIN EN
 1751,Return air damper,409 x 1527 / 8 Nm troque /
 Damper shaft for actuator 15 x 15 mm

Data sheet for sound level

Supply air										
Casing	50 mm	Fan type					EC fan			
Fan - speed		1261 1/min					VM800-11,6/400EC-1370-M rs61,2 xc1584			
Total pressure										878 Pa
sound level in the unit										
Frequency (Hz)	63	125	250	500	1000	2000	4000	8000	Total	
Sections on the suction side										
Emitted sound power from the fan	48,8	68,3	71,9	78,2	82,6	88,1	76,6	72,9	89,9 dB(A)	
Heat recovery-heater coil section III Cu/Al, Cooling section 7 Cu/Al, Bag filter G4										
Sound power, taking into account the a.m. built-in parts	40,8	59,3	66,9	69,2	69,6	74,1	60,6	51,9	77,0 dB(A)	
Sections on the pressure side										
Emitted sound power from the fan	49,7	69,1	78,0	86,8	86,8	91,3	79,2	75,5	94,0 dB(A)	
Sound power, taking into account the a.m. built-in parts	49,7	69,1	78,0	86,8	86,8	91,3	79,2	75,5	94,0 dB(A)	
Sound level beside the unit										
Radiated from the casing										
Sound power level										69,2 dB(A)
Sound pressure level in 1 m Distance										54,2 dB(A)
Exhaust air										
Casing	50 mm	Fan type					EC fan			
Fan - speed		1193 1/min					VM800-11,6/400EC-1370-M rs60,5 xc1519			
Total pressure										680 Pa
sound level in the unit										
Frequency (Hz)	63	125	250	500	1000	2000	4000	8000	Total	
Sections on the suction side										
Emitted sound power from the fan	49,7	65,7	70,9	77,0	81,4	88,1	75,0	71,0	89,5 dB(A)	
Sound power, taking into account the a.m. built-in parts	49,7	65,7	70,9	77,0	81,4	88,1	75,0	71,0	89,5 dB(A)	
Sections on the pressure side										
Emitted sound power from the fan	50,1	68,2	77,4	86,2	85,5	90,9	77,6	73,7	93,3 dB(A)	
Heat recovery-cooler coil section III Cu/Al										
Sound power, taking into account the a.m. built-in parts	46,1	64,2	75,4	82,2	80,5	84,9	71,6	66,7	88,1 dB(A)	
Sound level beside the unit										
Radiated from the casing										
Sound power level										68,3 dB(A)
Sound pressure level in 1 m Distance										53,5 dB(A)
Unit dimensions										
Width	3764 mm	No.							/02	
Width	1932 mm	Total weight							2505 kg	
Height Incl. baseframe	3454 mm									
Baseframe 200 mm loose										

Summary of accessory

- 1 x Expansion vessel 8L
 - 1 x Flange set for coil connection DN50
 - 2 x Gate valve 2" for runaround coil system DIN 3352
 - 3 x Potential settlement mounted
 - 1 x Safety valve 3,0 bar w. manometer
 - 1 x spheric valve DN 15
 - 1 x Valve cap for expansion vessel
 - 1 x Vent valve 1/2"
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