

MILLENNIUM

PRECISION AIR CONDITIONING UNITS
WITH CHILLED WATER COIL



UV 190 U

UV...Series

Cooling capacities from 5 to 105 kW

The precision air conditioning units series UV with chilled water coil have been designed for being used in technology centres, computer processing centres, telecom applications and where special thermo-hygrometric conditions are required.

The units are available in different versions in relation to the air intake and discharge:

- UV...U** frontal air intake, upwards air discharge
- UV...V** down air intake, upwards air discharge
- UV...B** back air intake, upwards air discharge
- UV...D** up air intake, downwards air discharge

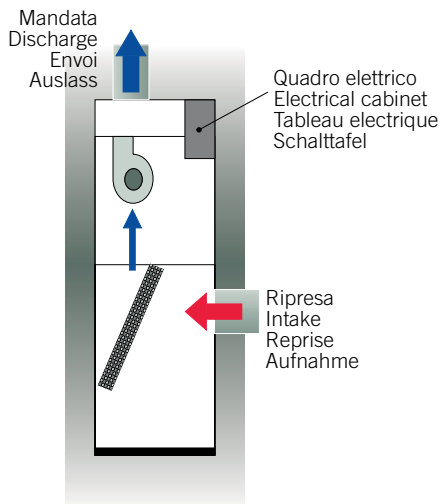
Made up of:

Housing in steel sections and panels, finely painted with epoxy powders.
Sound insulated panels, internally covered by sound-proofing material.
Centrifugal fans with directly coupled motor and low rotation speed.
Chilled water coil with copper pipes and aluminium fins.
Drain pan made up of aluminium.
Regenerable air filters - Efficiency F4.
Electric board in compliance with CE regulations provided with: main switch, automatic switches, remote control switches, motor protection switches, low-tension auxiliary circuits and terminal board.
EMIPRO control microprocessor.
Fans alarm.

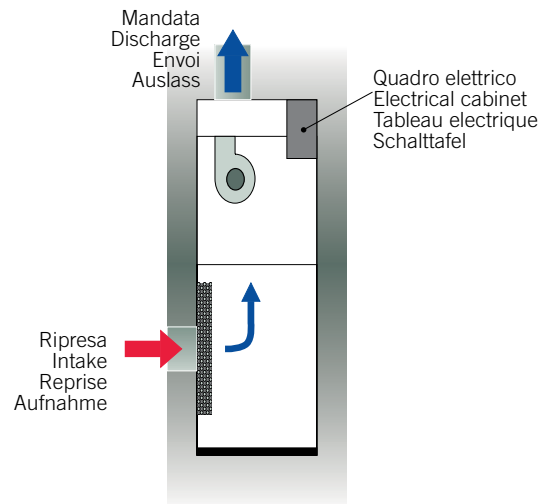
Accessories

AA	Flooding detector
AE	Electric supply different from the standard one
AF	Clogged filters alarm
AL	Smoke alarm
AM	Air outlet soundproof baffles
AR	Air inlet soundproof baffles
B	Adjustable base-frame
BC	Hot water coil with three-way valve and modulating actuator
BN	Base-frame with conveyor
BS	Base-frame with on/off electric damper, for version D
DH	Dehumidification control system without H
F5-F6-F7a	Several degrees of air filtration (thickness 50-100mm)
F7b-F9	Several degrees of air filtration (thickness 300mm) (not available for size L1)
FP	Plenum for filter extraction on version D
H	Humidifier
IE	Wooden cage
IG	Watch card
IH	Interface card RS 485
IM	Sea wood package
IP	Magnothermic switch for auxiliaries
IT	Magnothermic switch for auxiliaries RE, H
KC	Spare filters kit (F4)
MF	Phase monitor
MP	Oversized microprocessor
PB	Condensate pump
PL	Distribution plenum on air discharge provided with adjustable fins grid for versions U,V,B
PQ	Remote microprocessor
PR	Fresh air inlet with filter
RE	Electrical heater with aluminium armoured elements and safety thermostat
RV	Personalized RAL paint
SL	Main switch with padlock
SM	Servomotor for 3 way valve 0-10V
SS	Hand 3 fan speed regulation (not available with version 1M-5M)
ST	Calibration damper
SV	Gravity damper for versions U, V, B
1M/5M	Different higher available pressure on the fan opening

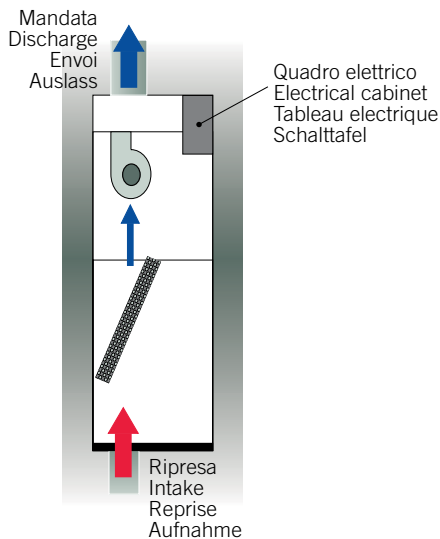
- U** ripresa dal fronte e mandata verso l'alto
- U** frontal air intake, upwards air discharge
- U** reprise frontale et envoi en haut
- U** vorne Luftaufnahme, Luftsauslass nach oben



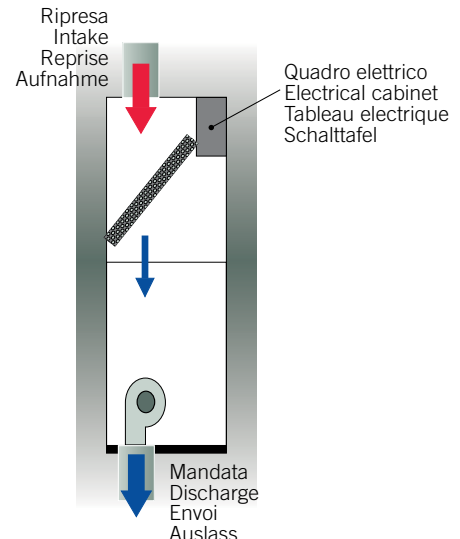
- B** ripresa da dietro e mandata verso l'alto
- B** back air intake, upwards air discharge
- B** reprise de derrière et envoi en haut
- B** Luftaufnahme von hinten, Luftsauslass nach oben



- V** ripresa dal basso e mandata verso l'alto
- V** down air intake, upwards air discharge
- V** reprise du bas et envoi en haut
- V** Luftaufnahme von unten, Luftsauslass nach oben



- D** ripresa dall'alto e mandata verso il basso
- D** up air intake, downwards air discharge
- D** reprise du haut et envoi en bas
- D** Luftaufnahme von oben, Luftsauslass nach unten



MILLENNIUM

PRECISION AIR CONDITIONING UNITS

WITH CHILLED WATER COIL

UV... Technical data

MODEL	UV..D		60	80	120	170	190	240	280	320	380	470	550	640	740	800	870	1000	
(Size)			L 1	L 1	L 2	L 3	M 1	M 1	M 1	M 2	M 2	M 3	M 4	M 5	M 5	M 6	M 6	M 6	
Cooling capacity 1)																			
Total	27°C-50%	kW	7,8	10,9	15,3	23,3	25,7	32,0	37,6	40,9	49,5	62,6	73,1	85,6	99,2	107	118	140	
Sensible	27°C-50%	kW	5,1	7,0	9,8	14,9	17,1	21,0	24,3	26,8	32,1	40,8	47,2	56,5	64,7	70,7	78,2	92	
Water flow rate	27°C-50%	l/s	0,36	0,53	0,72	1,11	1,22	1,53	1,78	1,94	2,36	2,97	3,47	4,08	4,72	5,08	5,58	6,69	
Water flow rate	27°C-50%	m³/h	1,3	1,9	2,6	4,0	4,4	5,5	6,4	7,0	8,5	10,7	12,5	14,7	17,0	18,3	20,1	24,1	
Total	24°C-50%	kW	5,8	8,1	11,4	17,4	18,3	23,8	27,9	30,5	36,8	46,4	54,5	63,7	73,6	79,1	87,3	104,0	
Sensible	24°C-50%	kW	4,5	6,1	8,5	12,8	14,5	18,3	21,0	23,4	27,7	35,2	40,7	49,5	55,9	61,8	68,6	79,9	
Water flow rate	24°C-50%	l/s	0,28	0,39	0,56	0,83	0,86	1,14	1,33	1,44	1,75	2,19	2,58	3,03	3,50	3,78	4,17	4,94	
Water flow rate	24°C-50%	m³/h	1,0	1,4	2,0	3,0	3,1	4,1	4,8	5,2	6,3	7,9	9,3	10,9	12,6	13,6	15,0	17,8	
Total	22°C-50%	kW	4,6	6,4	9,0	13,8	14,3	18,8	22,0	24,2	29,0	36,5	43,1	50,5	58,0	62,5	69,1	81,9	
Sensible	22°C-50%	kW	4,0	5,4	7,5	11,4	12,8	16,3	18,5	20,9	24,6	31,2	36,2	44,1	49,6	55,1	61,3	70,9	
Water flow rate	22°C-50%	l/s	0,22	0,31	0,42	0,67	0,67	0,89	1,06	1,14	1,39	1,75	2,06	2,39	2,75	2,97	3,28	3,89	
Water flow rate	22°C-50%	m³/h	0,8	1,1	1,5	2,4	2,4	3,2	3,8	4,1	5,0	6,3	7,4	8,6	9,9	10,7	11,8	14,0	
Water pressure drop (coil + valve)	24°C 50%	kPa	23	35	37	34	36	40	32	41	33	29	43	41	30	32	38	31	
Water volume		l																	
Cooling capacity 2)																			
Total	27°C-50%	kW	5,9	8,3	11,7	17,9	18,8	24,5	28,7	31,2	37,8	46,6	55,9	65,1	75,5	80,8	89,1	107	
Sensible	27°C-50%	kW	4,4	6,1	8,4	12,7	14,5	18,1	20,9	23,3	27,6	35,1	40,6	49,2	55,7	61,6	68,4	79,7	
Water flow rate	27°C-50%	l/s	0,28	0,39	0,56	0,86	0,89	1,17	1,36	1,50	1,81	2,28	2,67	3,11	3,61	3,86	4,25	5,08	
Water flow rate	27°C-50%	m³/h	1,0	1,4	2,0	3,1	3,2	4,2	4,9	5,4	6,5	8,2	9,6	11,2	13,0	13,9	15,3	18,3	
Total	24°C-50%	kW	4,0	5,7	8,0	12,2	12,1	16,7	19,5	21,5	25,7	32,4	38,3	44,9	51,4	55,6	61,5	72,7	
Sensible	24°C-50%	kW	3,7	5,0	7,0	10,6	11,5	15,3	17,4	19,6	23,0	29,3	33,9	41,5	46,5	51,8	57,5	66,5	
Water flow rate	24°C-50%	l/s	0,19	0,28	0,39	0,58	0,58	0,81	0,92	1,03	1,22	1,56	1,83	2,14	2,44	2,64	2,94	3,47	
Water flow rate	24°C-50%	m³/h	0,7	1,0	1,4	2,1	2,1	2,9	3,3	3,7	4,4	5,6	6,6	7,7	8,8	9,5	10,6	12,5	
Total	22°C-50%	kW	3,1	4,2	6,0	9,1	9,4	12,8	14,6	16,4	19,4	24,4	28,7	34,5	38,9	42,8	47,6	55,3	
Sensible	22°C-50%	kW	3,1	4,2	6,0	9,1	9,4	12,8	14,6	16,4	19,4	24,4	28,7	34,5	38,9	42,8	47,6	55,3	
Water flow rate	22°C-50%	l/s	0,14	0,19	0,28	0,44	0,44	0,61	0,69	0,78	0,92	1,17	1,36	1,64	1,86	2,06	2,28	2,64	
Water flow rate	22°C-50%	m³/h	0,5	0,7	1,0	1,6	1,6	2,2	2,5	2,8	3,3	4,2	4,9	5,9	6,7	7,4	8,2	9,5	
Water pressure drop (coil + valve)	24°C 50%	kPa	12	18	19	18	16	21	16	21	17	15	23	21	16	17	20	16	
Centrifugal fans																			
Quantity		n	1	1	1	1	2	2	2	2	2	2	2	3	3	4	4	4	
Standard motor power		W	446	446	446	908	1518	1518	1518	2277	2277	2178	2244	6664	6664	8885	10662	10662	
Standard air flow		l/s	388	445	625	890	1700	1556	1500	2083	2083	2772	3000	4583	4375	5970	6950	6670	
Standard nominal absorbed current		A	2,7	2,7	2,7	5,5	9,2	9,2	9,2	13,8	13,8	13,2	13,6	13,5	13,5	18	21,6	21,6	
Standard available external pressure 3)		Pa	50	45	45	70	80	115	120	75	60	60	30	45	50	40	55	75	
1M Higher available pressure		Pa	90	105	70	125	135	155	165	95	80	130	90	70	110	195	205	220	
2M Higher available pressure		Pa	140	220	175	155	270	280	280	135	120	235	220	170	190	245	280	290	
3M Higher available pressure		Pa	200	230	250	205	335	335	330	260	245	285	290	245	260	365	-	-	
4M Higher available pressure		Pa	270	245	260	335	-	-	-	-	-	335	450	395	400	395	-	-	
5M Higher available pressure		Pa	570	295	330	425	-	-	-	-	-	445	-	-	-	-	-	-	
Reduction of available pressure																			
With F5 (50) air filter		Pa	106	140	140	145	-	-	-	-	-	-	-	-	-	-	-	-	
With F5 (100) air filter		Pa	-	-	-	-	260	220	200	330	330	125	115	185	175	200	250	270	
With F6 (50) air filter		Pa	200	250	255	235	-	-	-	-	-	-	-	-	-	-	-	-	
With F6 (100) air filter		Pa	-	-	-	-	360	330	310	500	500	220	195	295	285	280	335	355	
With F7a (50) air filter		Pa	340	330	330	300	-	-	-	-	-	-	-	-	-	-	-	-	
With F7a (100) air filter		Pa	-	-	-	-	560	525	510	650	650	400	350	510	480	510	560	600	
With F7b air filter		Pa	-	-	155	194	185	156	150	255	255	105	95	150	125	155	187	195	
With F9 air filter		Pa	-	-	200	240	230	200	195	305	305	140	130	190	178	198	235	240	
With soundproofing baffles on discharge		Pa	28	35	30	24	45	38	35	40	40	49	26	37	35	42	51	56	
With soundproofing baffles on suction		Pa	13	17	18	15	73	61	56	105	105	36	30	33	52	58	75	80	
Humidifier																			
Steam production		kg/h	3	3	3	3	8	8	8	8	8	8	8	8	8	8	8	8	
Maximum absorbed power		kW	2,25	2,25	2,25	2,25	6	6	6	6	6	6	6	6	6	6	6	6	
Maximum absorbed current		A	9,8	9,8	9,8	9,8	8,7	8,7	8,7	8,7	8,7	8,7	8,7	8,7	8,7	8,7	8,7	8,7	
Electrical heaters																			
Power		kW	3	3	3	6	9	9	9	9	9	13,5	13,5	18	18	18	18	18	
Steps		n	1	1	1	2	3	3	3	3	3	3	3	3	3	3	3	3	
Absorbed current		A	3,75	3,75	3,75	11,25	15	15	15	15	15	22,5	22,5	30	30	30	30	30	

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MODEL	UV..D		60	80	120	170	190	240	280	320	380	470	550	640	740	800	870	1000	
Hot water coil 4)																			
Power		kW	5,1	5,8	9,3	16,4	20,0	20,9	21,1	26,8	27,6	34,8	41,2	53,8	53,3	68,3	73,7	74,2	
Water flow rate		l/s	0,08	0,08	0,14	0,28	0,33	0,33	0,33	0,44	0,44	0,56	0,67	0,89	0,86	1,11	1,19	1,22	
Water flow rate		m ³ /h	0,3	0,3	0,5	1,0	1,20	1,20	1,20	1,60	1,60	2,00	2,40	3,20	3,10	4,00	4,30	4,40	
Water pressure drop (coil + valve)		kPa	26	33	18	24	30	32	33	28	30	37	55	30	29	25	29	29	
Air pressure drop		Pa	12	13	10	9	14	13	13	11	11	22	17	20	19	20	23	22	
Water volume		l																	
Sound pressure level 5)																			
D Version		dB(A)	45	45	46	48	56	54	53	58	58	57	58	58	58	59	63	62	
Dimensions																			
Length		mm	490	490	640	940	1230	1230	1230	1530	1530	1730	1990	2390	2390	2950	2950	2950	
Width		mm	524	524	524	524	665	665	665	665	665	815	815	815	815	815	815	815	
Height		mm	1800	1800	1800	1800	1975	1975	1975	1975	1975	1995	1995	1995	1995	1995	1995	1995	
Weight		kg	155	160	190	198	221	230	241	267	274	290	310	325	332	346	370	384	
Power supply		400V / 50 Hz / 3Ph + N + T																	

- = not available

1) Nominal condition referred to: water 7/12 °C - 0% Glycol

2) Nominal condition referred to: water 10/15 °C - 0% Glycol

3) Values for F4 air filters

4) Air 20 °C - Water 80/65 °C

5) Measured at 2 m in open field (ISO 3746) with air suction and air discharge in ducts

TECHNICAL DATA FOR FANS FOR UV... MODELS D VERSION

MODEL		60	80	120	170	190	240	280	320	380	470	550	640	740	800	870	1000
Quantity	n	1	1	1	1	2	2	2	2	2	2	2	3	3	4	4	4
Standard available pressure 1)		50	45	45	70	80	115	120	75	60	60	30	45	50	40	55	75
Power supply	V	230V 1Ph	230V 1Ph	230V 1Ph	230V 1Ph	230V 1Ph	230V 1Ph	230V 1Ph	230V 1Ph	230V 1Ph	230V 1Ph	230V 1Ph	400V 3Ph	400V 3Ph	400V 3Ph	400V 3Ph	400V 3Ph
Name-plate input power for each motor	W	245	245	280	500	550	550	550	550	550	736	736	1100	1100	1100	1500	1500
Max total absorbed current	A	2,7	2,7	2,7	5,5	9,2	9,2	9,2	13,8	13,8	13,2	13,6	13,5	13,5	18,0	22,0	22,0
Max total absorbed power	W	446	446	446	908	1518	1518	1518	2277	2277	2178	2244	6664	6664	8885	10662	10662
1M Higher available pressure 1)		90	105	70	125	135	155	165	95	80	130	90	70	110	195	205	220
Power supply	V	230V 1Ph	230V 1Ph	230V 1Ph	230V 1Ph	230V 1Ph	230V 1Ph	230V 1Ph	400V 3Ph	400V 3Ph	400V 3Ph	400V 3Ph	400V 3Ph	400V 3Ph	400V 3Ph	400V 3Ph	400V 3Ph
Name-plate input power for each motor	W	300	350	350	550	550	550	550	550	550	1100	1100	1500	1500	1500	1500	1500
Max total absorbed current	A	2,3	3,1	3,8	6,8	13,6	13,6	13,6	5,0	5,0	8,6	9,0	14,1	14,1	15,0	20,0	20,0
Max total absorbed power	W	380	512	627	1122	2244	2244	2244	2468	2468	4245	4443	6960	6960	7404	9872	9872
Increase of dB(A) 2)	dB(A)	5	2	2	0	0	0	0	0	0	1	1	11	11	5	5	4
2M Higher available pressure 1)		140	220	175	155	270	280	280	135	120	235	220	170	190	245	280	290
Power supply	V	230V 1Ph	230V 1Ph	230V 1Ph	230V 1Ph	230V 1Ph	230V 1Ph	230V 1Ph	230V 1Ph	230V 1Ph	400V 3Ph	400V 3Ph	400V 3Ph	400V 3Ph	400V 3Ph	400V 3Ph	400V 3Ph
Name-plate input power for each motor	W	350	300	550	550	550	550	550	550	550	1500	1500	1500	1500	1500	1500	1500
Max total absorbed current	A	3,1	2,6	4,6	6,8	13,0	13,0	13,0	13,0	13,0	9,4	11,2	16,8	16,8	21,6	21,6	21,6
Max total absorbed power	W	512	429	759	1122	2145	2145	2145	2145	2145	4640	5529	8293	8293	10662	10662	10662
Increase of dB(A) 2)	dB(A)	7	3	6	0	0	2	2	0	0	7	7	5	5	3	2	2
3M Higher available pressure 1)		200	230	250	205	335	335	330	260	245	285	290	245	260	365	-	-
Power supply	V	230V 1Ph	230V 1Ph	230V 1Ph	230V 1Ph	400V 3Ph	400V 3Ph	400V 3Ph	400V 3Ph	400V 3Ph	400V 3Ph	400V 3Ph	400V 3Ph	400V 3Ph	400V 3Ph	-	-
Name-plate input power for each motor	W	350	350	550	550	1500	1500	1500	1500	1500	1500	1500	1500	1500	1500	-	-
Max total absorbed current	A	3,1	3,1	6,8	5,9	11,2	11,2	11,2	11,2	11,2	11,2	10,8	16,2	16,2	20,0	-	-
Max total absorbed power	W	512	512	1122	974	5529	5529	5529	5529	5529	5529	5331	7997	7997	9872	-	-
Increase of dB(A) 2)	dB(A)	7	4	8	0	4	6	6	1	1	4	4	2	2	6	-	-
4M Higher available pressure 1)		270	245	260	335	-	-	-	-	-	335	450	395	400	395	-	-
Power supply	V	230V 1Ph	230V 1Ph	230V 1Ph	230V 1Ph	-	-	-	-	-	400V 3Ph	400V 3Ph	400V 3Ph	400V 3Ph	400V 3Ph	-	-
Name-plate input power for each motor	W	550	420	550	550	-	-	-	-	-	1500	1500	1500	1500	1500	-	-
Max total absorbed current	A	5,5	3,6	5,9	6,9	-	-	-	-	-	10,0	10,8	16,2	16,2	21,6	-	-
Max total absorbed power	W	908	594	974	1139	-	-	-	-	-	4936	5331	7997	7997	10662	-	-
Increase of dB(A) 2)	dB(A)	8	5	8	1	-	-	-	-	-	3	5	4	3	4	-	-
5M Higher available pressure 1)		570	295	330	425	-	-	-	-	-	445	-	-	-	-	-	-
Power supply	V	230V 1Ph	230V 1Ph	230V 1Ph	400V 3Ph	-	-	-	-	-	400V 3Ph	-	-	-	-	-	-
Name-plate input power for each motor	W	550	373	550	1500	-	-	-	-	-	1500	-	-	-	-	-	-
Max total absorbed current	A	5,5	4,1	6,5	5,6	-	-	-	-	-	10,0	-	-	-	-	-	-
Max total absorbed power	W	907,5	676,5	1072,5	2764	-	-	-	-	-	4936	-	-	-	-	-	-
Increase of dB(A) 2)	dB(A)	16	12	8	1	-	-	-	-	-	5	-	-	-	-	-	-

- = not available
1) Values for F4 air filters
2) Respect the standard value declared for the unit