



MP3nergy BSNV

Counterflow Heat Recovery Units
Air flow from 400 to 4700 m³/h

MP3nergy

Heat recovery units



BSNV heat recovery units

The unit is supplied with special aluminum counterflow heat recovery exchanger and EC direct drive centrifugal fans. The fans are statically and dynamically balanced. Designed for floor installation, all the units are provided with standard compact filter ePM1 55% (F7 EN 779) efficiency for the fresh air flow, ePM10 55% (M5 EN 779) efficiency for the exhaust air flow. ePM1 55% (F7 EN 779) filter available for exhaust air as optional.

Each model is available with two specular air flow configurations. The suction openings can be adjusted in two different positions onsite.

The panels have the thickness of 23mm, the filter media is halogen-free, corrosion free, moisture-resistant, micro biologically inactive, and is suitable for thermal waste treatment.

3 different control configurations are available:

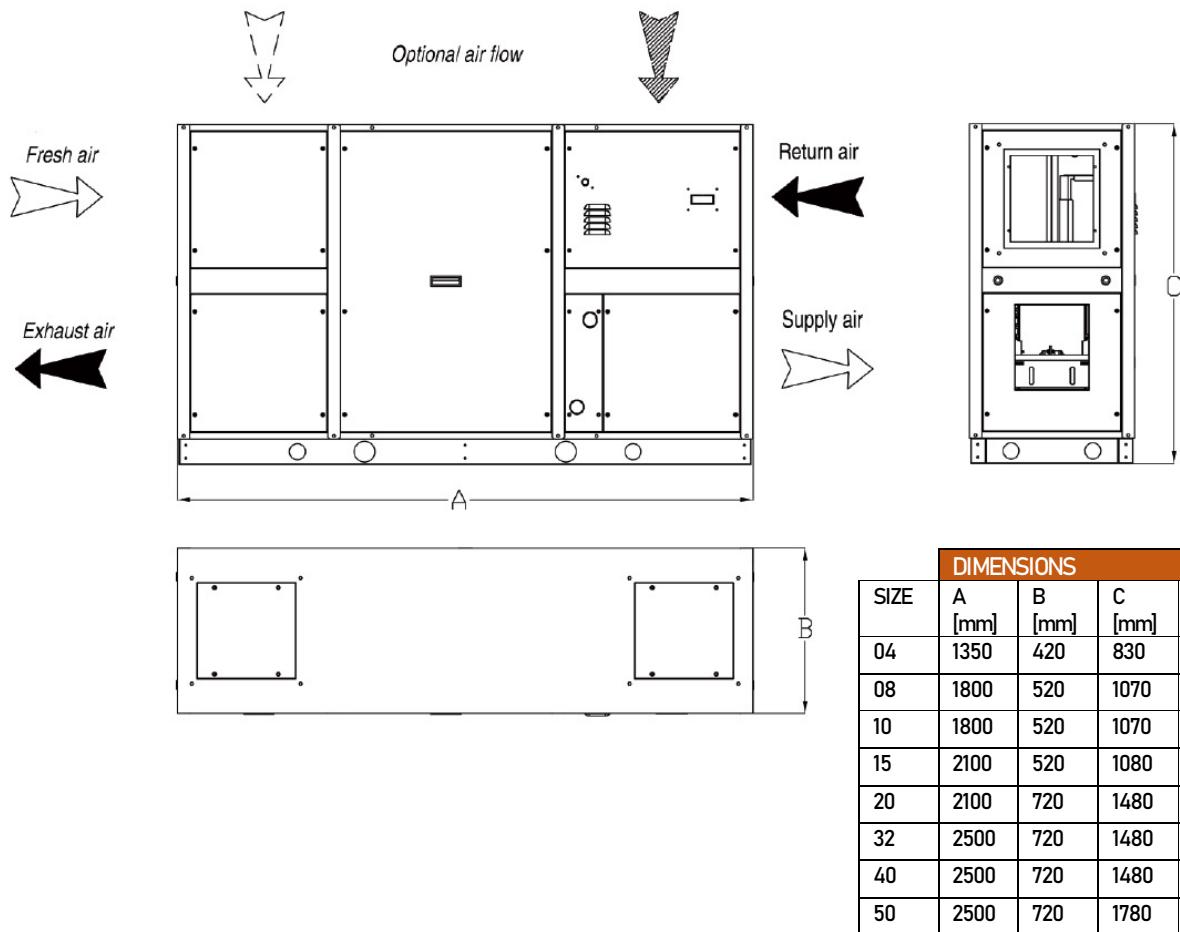
BASIC – unit supplied without control, sensors and bypass motor. The bypass motor and other tools are available as ancillary.

EVOLUTION – motorized bypass section with internal temperature sensors, automatic free cooling, management of 0-10V actuator for water heaters and coolers, management of electric heaters. Pressure sensors for filter monitoring. Modbus communication included.

TOP – motorized bypass section with internal temperature sensors, automatic free cooling, automatic defrost of the heat recovery exchanger, automatic variable airflow, management of on/off and 0-10V actuator for water heaters and coolers and electric heaters, remote on/off, service relays, week clock program, status alarms, pressure sensors for filter monitoring . Modbus communication included. Panel and cabinet onboard.

Units standard is a highly efficient aluminium counterflow heat exchanger. Optional: enhanced aluminium counterflow heat exchanger with efficiency up to 90% is available.

	BSNV-	a-	b-	c-	d
a	Size				
04	400 m³/h				
08	750 m³/h				
10	1000 m³/h				
15	1500 m³/h				
20	2000 m³/h				
32	3200 m³/h				
40	3800 m³/h				
50	4700 m³/h				
b	Control				
B	Basic				
E	Evolution				
T	Top				
c	Flow configuration				
1	Configuration 1				
2	Configuration 2				
d	Heat recovery efficiency				
8	high efficiency heat recovery				
9	90% efficiency heat recovery				



Air Flow Range – optimal airflow range to meet Ecodesign parameters

SIZE	Min. Airflow [m ³ /h]	Max. Airflow [m ³ /h]
04	80	400
08	340	750
10	640	1000
15	950	1500
20	1350	2050
32	1950	3200
40	2880	3800
50	3610	4700

TABLE OF PERFORMANCES – HIGH EFFICIENCY RECOVERY

		SIZE							
		04	08	10	15	20	32	40	50
Nominal Airflow	m ³ /h	400	750	1000	1500	2050	3200	3800	4700
Nominal external static pressure	Pa	160	120	180	160	120	180	200	200
Maximum external static pressure	Pa	340	210	520	500	540	375	330	200
Electrical power supply	V/ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50
Full load current	A	2,4	2,4	9	9	9	10	8,8	8,8
FANS									
Fan type		EC							
Fan control		1-10V							
SFP int	W/(m ³ /s)	705	742	1059	1048	898	1040	949	935
Total power	kW	0,16	0,3	0,57	0,76	0,84	1,77	1,78	2,19
Irradiated sound pressure @1m	dB (A)	49	52	51	53	51	56	58	60
HEAT RECOVERY EXCHANGER									
Winter recovery efficiency	%	83,6%	82,9%	81,6%	83,3%	83,7%	86,8%	84,1%	84,2%
Summer recovery efficiency	%	75,5%	75,9%	74,5%	75,1%	75,6%	78%	75%	75,1%
Dry recovery efficiency EN308	%	75,9%	76,4%	75%	75,6%	76%	76,3%	75,5%	75,6%

TABLE OF PERFORMANCES – 90% EFFICIENCY RECOVERY

		SIZE							
		04	08	10	15	20	32	40	50
Nominal Airflow	m ³ /h	320	600	800	1200	1600	2500	3500	4300
Nominal external static pressure	Pa	165	150	160	160	150	250	200	200
Maximum external static pressure	Pa	380	300	600	450	600	440	350	220
Electrical power supply	V/ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50
Full load current	A	2,4	2,4	9	9	9	10	8,8	8,8
FANS									
Fan type		EC							
Fan control		1-10V							
SFP int	W/(m ³ /s)	830	608	722	866	722	816	1157	1129
Total power	kW	0,16	0,24	0,32	0,53	0,61	1,32	1,87	2,27
Irradiated sound pressure @1m	dB (A)	48	49	52	52	52	58	60	59
HEAT RECOVERY EXCHANGER									
Winter recovery efficiency	%	90,2%	91,1%	90,0%	90,0%	90,4%	91,5%	90,1%	90,2%
Summer recovery efficiency	%	79,6%	80,1%	78,7%	79,2%	79,8%	80,0%	78,4%	78,5%
Dry recovery efficiency EN308	%	83,1%	83,7%	82,2%	82,7%	83,3%	83,5%	81,8%	81,9%

SOUND POWER LEVELS Lw(A) AT NOMINAL AIRFLOW**SIZE 04**

	Potenza sonora Lw per frequenza di centro banda Sound power levels Lw at center band frequencies									Lw globale Total Lw
	Hz	63	125	250	500	1000	2000	4000	8000	
Canale di mandata / Supply duct	dB(A)	47.7	56.9	63.7	66.6	64.8	60.2	58.0	53.9	70.9
Canale di espulsione / Exhaust duct	dB(A)	48.0	57.1	63.8	67.0	65.1	60.4	58.4	54.9	71.2
Esterno involucro / Outside the casing	dB(A)	42.9	45.7	52.0	52.5	50.4	45.5	26.9	17.6	57.3

SIZE 08

	Potenza sonora Lw per frequenza di centro banda Sound power levels Lw at center band frequencies									Lw globale Total Lw
	Hz	63	125	250	500	1000	2000	4000	8000	
Canale di mandata / Supply duct	dB(A)	50.2	59.4	66.2	69.1	67.3	62.7	60.5	56.4	73.4
Canale di espulsione / Exhaust duct	dB(A)	50.5	59.6	66.3	69.5	67.6	62.9	60.9	57.4	73.7
Esterno involucro / Outside the casing	dB(A)	45.4	48.2	54.5	55.0	52.9	48.0	29.4	20.1	59.8

SIZE 10

	Potenza sonora Lw per frequenza di centro banda Sound power levels Lw at center band frequencies									Lw globale Total Lw
	Hz	63	125	250	500	1000	2000	4000	8000	
Canale di mandata / Supply duct	dB(A)	41.8	57.9	67.4	64.8	67.0	65.2	60.0	50.9	72.7
Canale di espulsione / Exhaust duct	dB(A)	41.8	57.9	67.4	64.8	67.0	65.2	60.0	50.9	72.7
Esterno involucro / Outside the casing	dB(A)	36.8	46.6	55.6	50.5	52.4	50.4	28.7	14.1	59.1

SIZE 15

	Potenza sonora Lw per frequenza di centro banda Sound power levels Lw at center band frequencies									Lw globale Total Lw
	Hz	63	125	250	500	1000	2000	4000	8000	
Canale di mandata / Supply duct	dB(A)	33.8	59.9	68.4	65.8	69.0	67.2	62.0	53.9	74.3
Canale di espulsione / Exhaust duct	dB(A)	33.8	59.9	68.4	65.8	69.0	67.2	62.0	53.9	74.3
Esterno involucro / Outside the casing	dB(A)	28.8	48.6	56.6	51.5	54.4	52.4	30.7	17.1	60.5

SIZE 20

	Potenza sonora Lw per frequenza di centro banda Sound power levels Lw at center band frequencies									Lw globale Total Lw
	Hz	63	125	250	500	1000	2000	4000	8000	
Canale di mandata / Supply duct	dB(A)	35.8	58.9	67.4	62.8	66.0	67.2	59.0	49.9	72.6
Canale di espulsione / Exhaust duct	dB(A)	36.0	60.7	67.4	63.1	66.1	67.1	60.0	50.9	72.8
Esterno involucro / Outside the casing	dB(A)	30.9	48.6	55.6	48.7	51.5	52.4	28.2	13.6	59.2

SIZE 32

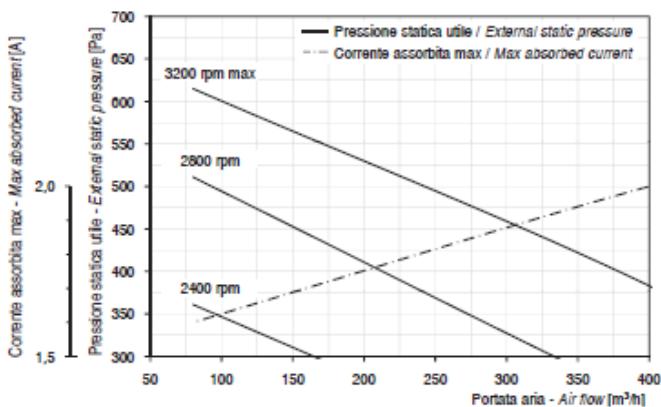
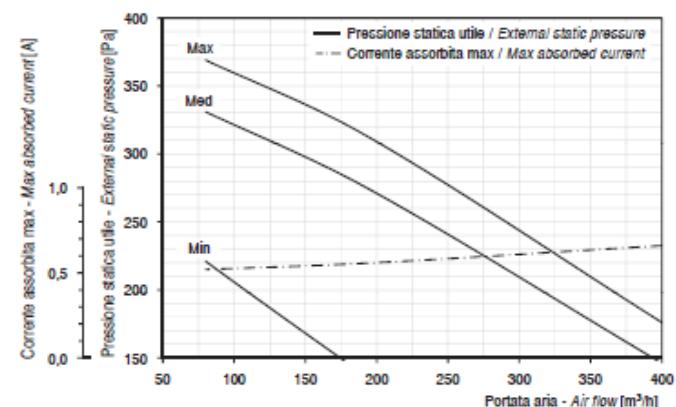
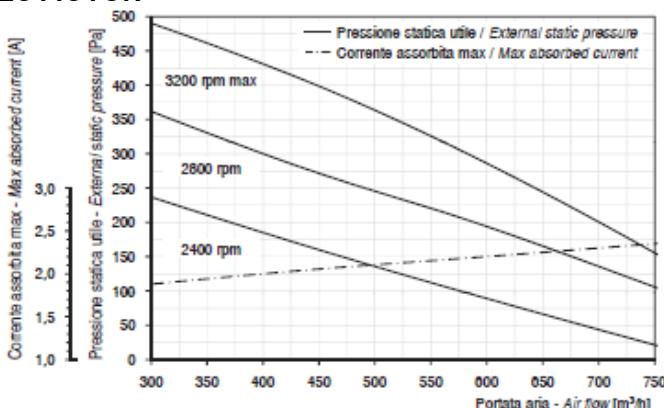
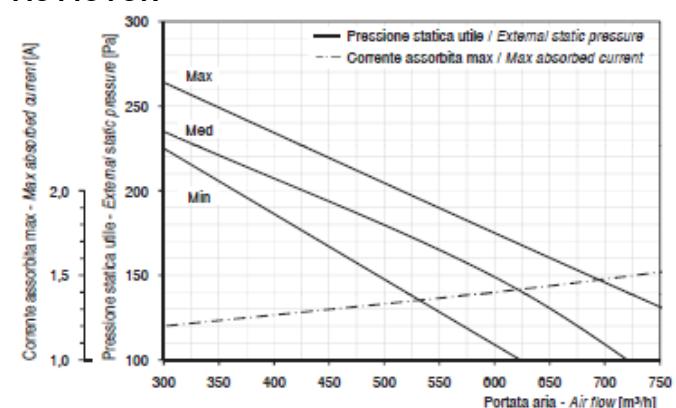
	Potenza sonora Lw per frequenza di centro banda Sound power levels Lw at center band frequencies									Lw globale Total Lw
	Hz	63	125	250	500	1000	2000	4000	8000	
Canale di mandata / Supply duct	dB(A)	36.8	62.9	74.4	65.8	68.0	68.2	63.0	54.9	76.9
Canale di espulsione / Exhaust duct	dB(A)	37.3	63.4	74.7	66.2	68.4	68.4	63.6	55.7	77.2
Esterno involucro / Outside the casing	dB(A)	32.1	51.9	62.8	51.7	53.6	53.5	32.0	18.5	64.2

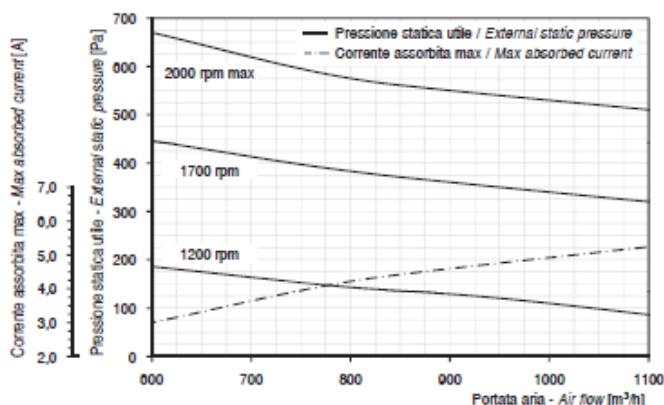
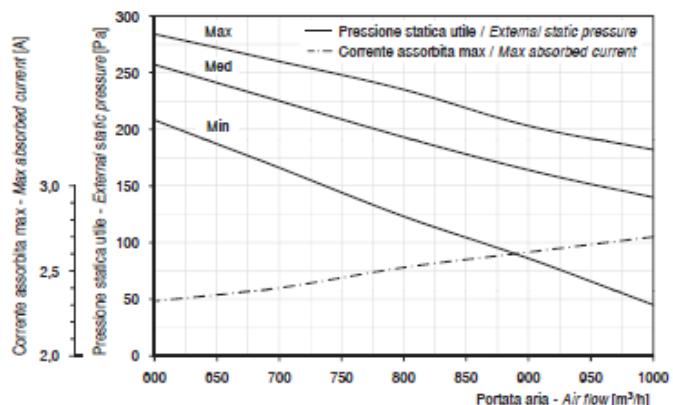
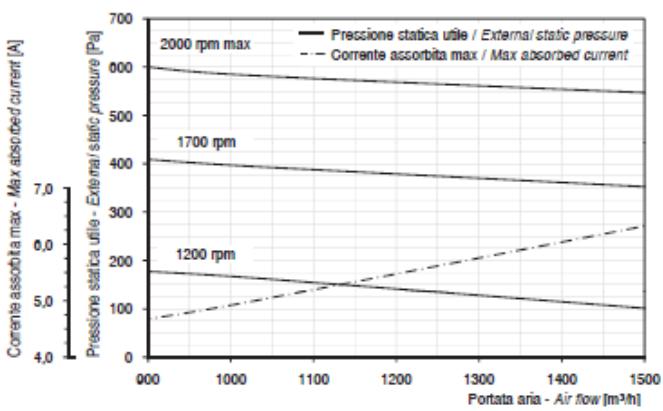
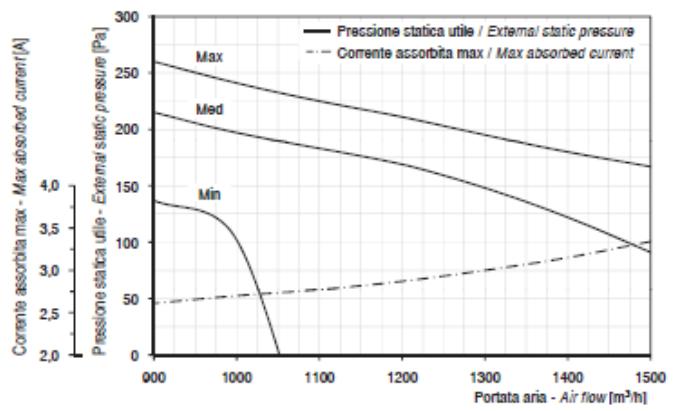
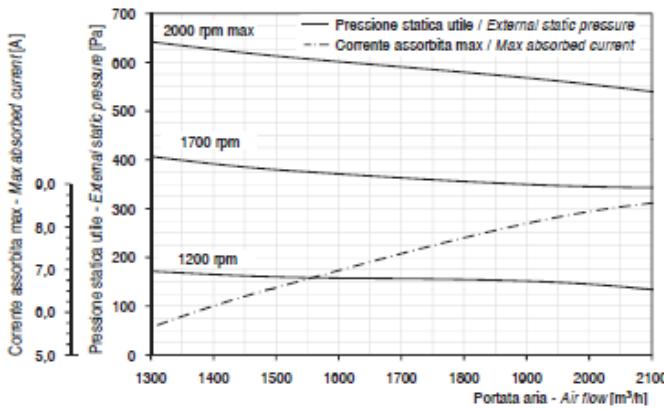
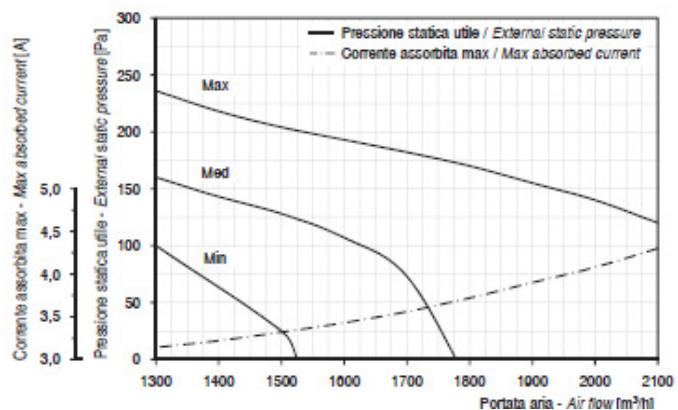
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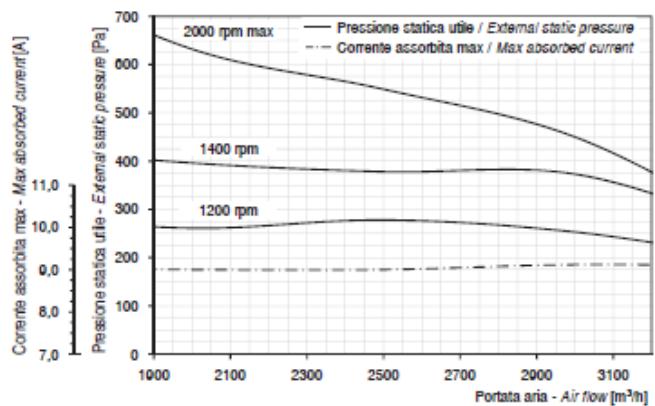
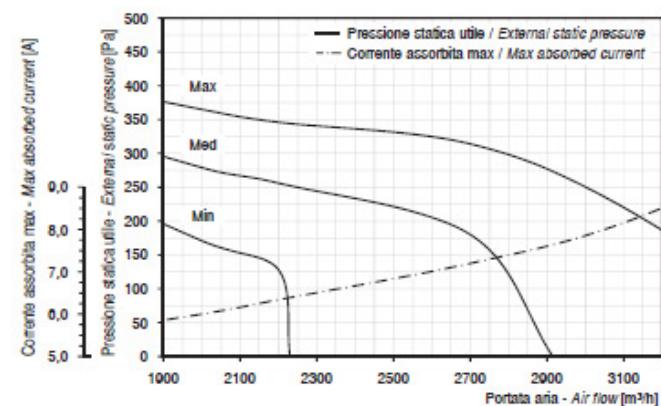
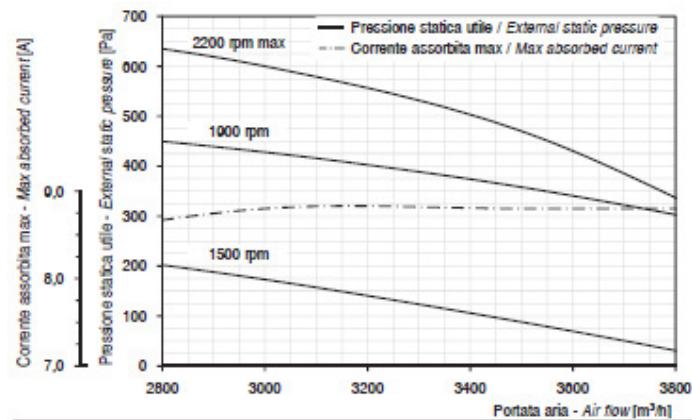
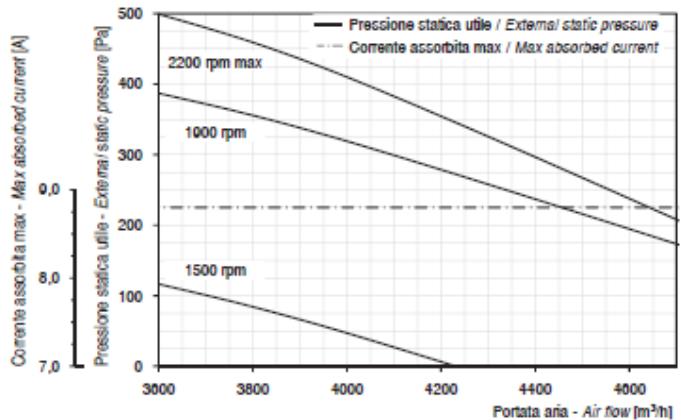
	Potenza sonora Lw per frequenza di centro banda Sound power levels Lw at center band frequencies									Lw globale Total Lw
	Hz	63	125	250	500	1000	2000	4000	8000	
Canale di mandata / Supply duct	dB(A)	40.8	66.4	73.4	69.8	72.0	72.2	69.0	60.9	78.9
Canale di espulsione / Exhaust duct	dB(A)	40.8	67.0	74.4	70.3	72.6	72.5	69.0	59.9	79.5
Esterno involucro / Outside the casing	dB(A)	35.8	55.4	62.1	55.8	57.7	57.6	37.7	23.6	65.5

SIZE 50

	Potenza sonora Lw per frequenza di centro banda Sound power levels Lw at center band frequencies									Lw globale Total Lw
	Hz	63	125	250	500	1000	2000	4000	8000	
Canale di mandata / Supply duct	dB(A)	44.6	70.7	75.6	71.8	74.5	76.1	73.0	64.9	81.9
Canale di espulsione / Exhaust duct	dB(A)	44.8	71.5	76.4	71.8	75.0	76.2	73.2	65.0	82.3
Esterno involucro / Outside the casing	dB(A)	39.7	59.8	64.2	57.5	60.2	61.4	41.8	28.2	68.2

FAN CURVES**SIZE 04****EC MOTOR****AC MOTOR****SIZE 08****EC MOTOR****AC MOTOR**

SIZE 10**EC MOTOR****AC MOTOR****SIZE 15****EC MOTOR****AC MOTOR****SIZE 20****EC MOTOR****AC MOTOR**

SIZE 32**EC MOTOR****AC MOTOR****SIZE 40****EC MOTOR****AC MOTOR not available****SIZE 50****EC MOTOR****AC MOTOR not available**

ANCILLARIES		
	Code	Size
By pass KIT for automatic free cooling	BZKBo450	size from 04 to 50
	BZERo404	size 04
	BZER0810	size from 08 to 10
Electric post-heating	BZER1520	size from 15 to 20
	BZER3240	size from 32 to 40
	BZER5050	size 50
	BZWH0404	size 04
	BZWH0810	size from 08 to 10
	BZWH1515	size 15
Post-heating water coil	BZWH2020	size 20
	BZWH3232	size 32
	BZWH4040	size 40
	BZWH5050	size 50
Kit 2-Way valve with ON/OFF actuator	BVOHo440	size from 04 to 40
	BVOH5050	size 50
Kit 3-Way valve with modulating actuator	BVMH0440	size from 04 to 40
	BVMH5050	size 50
	BSWV0404	size 04
	BSWV0810	size from 08 to 10
	BSWV1515	size 15
Water coil section	BSWV2020	size 20
	BSWV3232	size 32
	BSWV4040	size 40
	BSWV5050	size 50
Kit 2-Way valve with ON/OFF actuator	BVOW0420	size from 04 to 20
	BVOW3240	size from 32 to 40
	BVOW5050	size 50
Kit 3-Way valve with modulating actuator	BVMW0420	size from 04 to 20
	BVMW3240	size from 32 to 40
	BVMW5050	size 50
	BF7C0404	size 04
	BF7C0810	size from 08 to 10
Filter F7	BF7C1515	size 15
	BF7C2020	size 20
	BF7C3240	size from 32 to 40
	BF7C5050	size 50
Filter Pressure switch	BKPF0450	size from 04 to 50

	Code	Size
Circular connection kit	BCCK0404	size 04
	BCCK0810	size from 08 to 10
	BCCK1515	size 15
	BCCK2020	size 20
	BCCK3232	size 32
	BCCK4050	size from 40 to 50
Regulation damper	BRDP0404	size 04
	BRDP0810	size from 08 to 10
	BRDP1515	size 15
	BRDP2020	size 20
	BRDP3232	size 32
Damper actuator	BRDP4050	size from 40 to 50
	BMRD0450	size from 04 to 50
Damper actuator spring return	BMRDS0450	size from 04 to 50
3 dampers section	B3DS0404	size 04
	B3DS0810	size from 08 to 10
	B3DS1515	size 15
	B3DS2020	size 20
	B3DS3232	size 32
	B3DS4040	size 40
Damper actuator	B3DS5050	size 50
	BM3D4050	size from 40 to 50
Damper actuator spring return	BM3DS4050	size from 40 to 50
Signal lamps kit	BKSL4050	size from 40 to 50
Anti-freeze thermostat	BAFT4050	size from 40 to 50
Kit for outdoor installation	BEXV0404	size 04
	BEXV0810	size from 08 to 10
	BEXV1515	size 15
	BEXV2020	size 20
	BEXV3240	size from 32 to 40
	BEXV5050	size 50
Fresh and exhaust air stream rain hood kit	BCXT0404	size 04
	BCXT0810	size from 08 to 10
	BCXT1515	size 15
	BCXT2020	size 20
	BCXT3232	size 32
	BCXT4050	size from 40 to 50

	Code	Size
Duct sound attenuator	BDSA0404	size 04
	BDSA0810	size from 08 to 10
	BDSA1515	size 15
	BDSA2020	size 20
	BDSA3232	size 32
	BDSA4050	size from 40 to 50
Sanitization system MP3 oXy	BOXG0404	size 04
	BOXG0810	size from 08 to 10
	BOXG1515	size 15
	BOXG2020	size 20
	BOXG3232	size 32
	BOXG4050	size from 40 to 50
Section with filter F7	BSF7V0404	size 04
	BSF7V0810	size from 08 to 10
	BSF7V1515	size 15
	BSF7V2020	size 20
	BSF7V3232	size 32
	BSF7V4040	size 40
	BSF7V5050	size 50
Section with filter F9	BSF9V0404	size 04
	BSF9V0810	size from 08 to 10
	BSF9V1515	size 15
	BSF9V2020	size 20
	BSF9V3232	size 32
	BSF9V4040	size 40
	BSF9V5050	size 50
Constant airflow fans	BCAV1032	size from 10 to 32
	BCAV4050	size from 40 to 50
Unit control panel	BPCE0450	size from 04 to 50
Unit control panel with modbus	BPCM0450	size from 04 to 50
Unit control panel with 0-10 V exit MCUE	BMCE0450	size from 04 to 50
Unit control panel with 0-10V and modbus	BMCM0450	size from 04 to 50
Duct mount CO2 sensor	BECDO450	size from 04 to 50
Wall mount CO2 sensor	BECWO450	size from 04 to 50
Wall mount EVO management system	BCTQ0408	size from 04 to 08
	BCTQ1015	size from 10 to 15
	BCTQ2032	size from 20 to 32
	BCTQ4040	size 40
	BCTQ5050	size 50

	Code	Size
Built in EVO management system	BCTBV0408	size from 04 to 08
	BCTBV1015	size from 10 to 15
	BCTBV2032	size from 20 to 32
	BCTBV4040	size 40
	BCTBV5050	size 50
Wall mount remote control panel	BWCP0450	size from 04 to 50
Modbus serial card	BMDB0450	size from 04 to 50
Duct mount CO2 sensor	BTCD0450	size from 04 to 50
Wall mount CO2 sensor	BTCW0450	size from 04 to 50
Duct mount humidity sensor	BHUD0450	size from 04 to 50
Wall mount humidity sensor	BHUW0450	size from 04 to 50
Speed controller for AC motors	BC3V0432	size from 04 to 32
Unit control panel AC motors	BPCU0432	size from 04 to 32