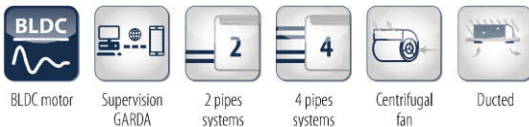


Medium available head duct units with BLDC motor

DUCTIMAX i 2 - 8 kW



Modulation and efficiency in a recess ceiling-mounted unit

The range is completed by DUCTIMAX i, which uses inverter BLDC technology in the electric motors. To the features of DUCTIMAX it adds the benefits of brushless technology, including a reduction in electricity consumption and consequent reduction in CO₂ emissions, increase in operating flexibility thanks to the modulation of air flow and increase in the level of comfort in terms of temperature, humidity and noise levels.

The range is made up of 12 models with air flows from 300 to 1200 m³/h.

Continuous modulation of the air flow and the use of high-efficiency heat exchangers enables operation also with small air-water temperature differences.

The heat exchangers can also be optimized in the circuit for centralized applications such as district cooling.

Operation is controlled from wall-mounted microprocessor control panels with display, such as the MYCOMFORT LARGE and EVO models which also enable DUCTIMAX i to be connected to GARDA.

The action of the G3 or G4 air filter can be combined with an air ionisation system available as an accessory.

PLUS

- » Permanent magnet BLDC motor
- » Low electricity consumption
- » Easy setup of ventilation section
- » Heat exchanger up to 4 rows
- » Compact dimensions
- » Reversible water connections
- » Can be integrated into GARDA
- » Wide range of available accessories
- » Incorporable JONIX sanitizing module



Besides assuring a big advantage in terms of energy efficiency, the inverter-controlled BLDC motor enables flexibility of installation and reduces the time needed to set up the ventilation section, thanks to the continuous modulation of air flow.

AVAILABLE VERSIONS

DMXXDILO...A Units for 2 pipes systems

DMXXDILL...A Unit for 4-pipe systems equipped with an additional 1-row exchanger for the hot water circuit

DMXX - DILM...A - Unit for 4-pipe systems equipped with an additional 2-row exchanger for the hot water circuit (**On request**)

Available on request air decontamination system installed on special plenum

MAIN COMPONENTS

Structure

Built from galvanised steel sheet, heat and sound insulated by means of Class 1 self-extinguishing panels. Reduced height to facilitate installation in a horizontal position in a false ceiling. The structure incorporates a drip tray and condensate drain outlet.

The main condensate drip tray is situated inside the structure of the unit and is at a positive pressure relative to the drain outlet to facilitate condensate drainage.

Fans

Double suction centrifugal fans made with ABS or aluminium, with statically and dynamically balanced forward-curving blades, directly coupled to the electric motor.



BLDC electric motor

Permanent magnet motor. The unit is equipped with an inverter board to control the motor, that makes it possible to precisely set the maximum rotation speed of the motor (control signal 0-10 V).



Heat exchanger

High efficiency 3 and 4 rows heat exchanger made with copper piping and aluminium fins blocked to pipings by mechanical expansion, provided with brass manifolds and air vent valve. The heat exchanger usually comes with water connections mounted on the left, but it can be turned by 180°. High-efficiency heat exchangers optimized for district cooling applications are available on request.

Air filter

Washable air filter, made of acrylic fibre, filtration class G2 or G3, applied on the air intake; may be pulled out from below.

ACCESSORIES

Electronic microprocessor control panels with display

DIST	MY COMFORT controller spacer for wall mounting
E2TK	Touch screen 2.8" user panel for EVO control EVO-2-TOUCH, frame in aluminium color black RAL9005
E2TY	Touch screen 2.8" user panel for EVO control EVO-2-TOUCH, frame in natural brushed aluminium
EVOBOARD	Circuit board for EVO control
EVODISP	User interface with display for EVO controller
EYNAVEL	Device for Wi-Fi or Bluetooth communication between EVOBOARD and smartphone
MCLE	Microprocessor control with display MY COMFORT LARGE
MCSUE	Humidity sensor for MY COMFORT (medium e large), EVO
MCSWE	Water sensor for MYCOMFORT and EVO controllers

Electronic microprocessor control panels

TED 10	Electronic controller for BLDC fan equipped with inverter and ON/OFF valves 230 V
TED SWA	Water temperature sensor for TED controls

Auxiliary water drip trays, insulating shell, condensate drainage pump

KSC	Condensate drainage pump kit
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Electrical heating elements

RE	Heating element with installation kit, relay box and safety devices
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Air inlet and outlet grilles

GA	Aluminium air intake grille, with frame
GM	Aluminium air outlet grille with 2-row fins and subframe

Valves

V2VDF+STD	2-way valves, ON/OFF or MODULATING actuator, 230 V or 24 V power supply, hydraulic kit, for main and additional heat exchanger
V2VSTD	2-way valve, ON/OFF or MODULATING actuator, 230 V or 24 V power supply, hydraulic kit, for main heat exchanger

V3VDF	3-way valves, ON/OFF or MODULATING actuator, 230 V or 24 V power supply, hydraulic kit, for additional heat exchanger
V3VSTD	2-way valves, ON/OFF or MODULATING actuator, 230 V or 24 V power supply, hydraulic kit, for main heat exchanger
VVIC	2-way valves pressure independent, ON/OFF or MODULATING actuator, 230 V or 24 V power supply, hydraulic kit, for main heat exchanger

Plenum, air intake modules, air inlet and outlet connectors and cabinets

MAFO	Air intake module with G4 air filter
PAF	Intake and delivery plenum, not insulated, with spigot Ø 200 mm
PMA	Intake and delivery plenum, not insulated, with spigot Ø 200 mm
PMAC	Intake and delivery plenum, insulated, with spigot Ø 200 mm
R90	90° uninsulated air inlet/outlet connector
R90C	90° uninsulated air inlet/outlet connector
RD	Straight uninsulated air inlet/outlet connector
RDC	Straight insulated air inlet/outlet connector

Flexible ducts - caps

TFA	Not insulated flexible ducts, Ø 200 mm (6 m length indivisible)
TFM	Insulated flexible ducts, Ø 200 mm (6 m length indivisible)
TP	Plastic cap Ø 200 mm

Air inlet and outlet plenum box

CA	Air Inlet plenum box with double row grille
CAF	Air Inlet plenum box with double row grille 300 x 600 mm and filter G2
CM	Insulated air outlet plenum box with grille

Accessories

VRC	Auxiliary water drip tray
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RATED TECHNICAL DATA 2 PIPES

DUCTIMAX i			13			14			23			24		
Speed			min	med	max	min	med	max	min	med	max	min	med	max
Control voltage	(E)	V	2,90	8,00	9,00	2,90	8,00	9,00	4,30	6,70	8,60	4,30	6,70	8,60
Rated air flow	(E)	m ³ /h	109	246	276	109	246	276	171	275	341	171	275	341
Available static pressure	(E)	Pa	10	50	63	10	50	63	19	50	77	19	50	77
Power input	(E)	W	2	11	15	2	11	15	9	20	35	9	20	35
Total cooling capacity	(1)(E)	kW	0,94	1,77	1,97	0,97	1,96	2,18	1,29	1,95	2,35	1,38	2,16	2,61
Sensible cooling capacity	(1)(E)	kW	0,63	1,26	1,41	0,65	1,35	1,50	0,91	1,39	1,67	0,95	1,49	1,80
FCEER class	(E)		A			A			A			A		
Water flow	(2)	l/h	161	306	340	167	337	375	222	339	408	239	374	453
Water pressure drop	(2)(E)	kPa	2	5	6	2	7	8	3	6	8	4	8	12
Heating capacity	(3)(E)	kW	0,88	1,81	1,99	0,91	1,98	2,21	1,33	1,98	2,35	1,40	2,20	2,68
FCCOP class	(E)		A											
Water flow	(3)	l/h	153	315	346	158	345	384	231	345	408	244	382	466
Water pressure drop	(3)(E)	kPa	1	4	5	2	6	7	2	5	7	3	7	10
Standard coil - number of rows			3			4			3			4		
Total sound power level	(4)	dB(A)	28	49	52	28	49	52	39	48	54	39	48	54
Inlet + radiated sound power level	(4)(E)	dB(A)	26	47	50	26	47	50	37	46	52	37	46	52
Outlet sound power level	(4)(E)	dB(A)	25	46	49	25	46	49	36	45	51	36	45	51

DUCTIMAX i			33			34			43			44		
Speed			min	med	max	min	med	max	min	med	max	min	med	max
Control voltage	(E)	V	4,50	7,40	8,30	4,50	7,40	8,30	5,40	8,30	9,90	5,40	8,30	9,90
Rated air flow	(E)	m ³ /h	195	360	402	195	360	402	305	532	652	305	532	652
Available static pressure	(E)	Pa	19	50	63	19	50	63	17	50	75	17	50	75
Power input	(E)	W	10	26	35	10	26	35	9	23	34	9	23	34
Total cooling capacity	(1)(E)	kW	1,46	2,33	2,59	1,59	2,74	3,04	1,99	3,29	3,84	2,36	3,90	4,61
Sensible cooling capacity	(1)(E)	kW	1,03	1,74	1,94	1,09	1,91	2,11	1,49	2,51	2,97	1,64	2,73	3,24
FCEER class	(E)		A			A			A			A		
Water flow	(2)	l/h	252	406	449	274	476	527	343	568	664	407	673	798
Water pressure drop	(2)(E)	kPa	2	5	5	3	7	9	3	8	11	6	14	18
Heating capacity	(3)(E)	kW	1,57	2,70	2,96	1,59	2,80	3,10	2,35	3,71	4,31	2,41	3,95	4,68
FCCOP class	(E)		A											
Water flow	(3)	l/h	272	470	515	276	488	538	408	644	749	419	687	814
Water pressure drop	(3)(E)	kPa	2	5	6	2	6	8	4	9	11	5	12	16
Standard coil - number of rows			3			4			3			4		
Total sound power level	(4)	dB(A)	39	50	54	39	50	54	38	52	58	38	52	58
Inlet + radiated sound power level	(4)(E)	dB(A)	37	48	52	37	48	52	36	50	56	36	50	56
Outlet sound power level	(4)(E)	dB(A)	36	47	51	36	47	51	35	49	55	35	49	55

(1) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity) according to EN1397:2015

(2) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity)

(3) Water temperature 45°C / 40°C, air temperature 20°C

(4) Sound power measured according to standards ISO 3741 and ISO 3742

(E) EUROVENT certified data

Power supply 230-1-50 (V-ph-Hz)

NOTE: The dimensional drawings of the DUCTIMAX i inverter units are the same of the DUCTIMAX ON/OFF version. They are reported from page 100

RATED TECHNICAL DATA 2 PIPES

DUCTIMAX i			53			54			63			64		
Speed			min	med	max	min	med	max	min	med	max	min	med	max
Control voltage	(E)	V	3,40	7,60	8,50	3,40	7,60	8,50	6,80	7,50	8,30	6,80	7,50	8,30
Rated air flow	(E)	m ³ /h	333	687	760	333	687	760	1050	1163	1289	1050	1163	1289
Available static pressure	(E)	Pa	12	50	61	12	50	61	40	50	60	40	50	60
Power input	(E)	W	5	24	30	5	24	30	105	128	162	105	128	162
Total cooling capacity	(1)(E)	kW	2,30	4,37	4,79	2,52	4,94	5,39	6,28	6,81	7,38	7,04	7,64	8,28
Sensible cooling capacity	(1)(E)	kW	1,68	3,24	3,55	1,78	3,48	3,80	4,64	5,03	5,46	4,96	5,38	5,84
FCEER class	(E)		A			A			C			B		
Water flow	(2)	l/h	394	753	828	432	850	930	1094	1190	1295	1225	1332	1448
Water pressure drop	(2)(E)	kPa	2	7	8	3	10	12	13	16	18	20	23	26
Heating capacity	(3)(E)	kW	2,54	4,76	5,17	2,63	5,03	5,49	6,68	7,22	7,80	7,18	7,80	8,46
FCCOP class	(E)		A			A			B			B		
Water flow	(3)	l/h	441	827	898	457	875	955	1162	1256	1356	1248	1355	1471
Water pressure drop	(3)(E)	kPa	2	7	8	3	9	11	12	14	16	17	19	22
Standard coil - number of rows			3			4			3			4		
Total sound power level	(4)	dB(A)	38	55	58	38	55	58	61	63	69	61	63	69
Inlet + radiated sound power level	(4)(E)	dB(A)	36	53	56	36	53	56	59	61	67	59	61	67
Outlet sound power level	(4)(E)	dB(A)	35	52	55	35	52	55	58	60	66	58	60	66

- (1) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity) according to EN1397:2015
 (2) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity)
 (3) Water temperature 45°C / 40°C, air temperature 20°C
 (4) Sound power measured according to standards ISO 3741 and ISO 3742
 (E) EUROVENT certified data
 Power supply 230-1-50 (V-ph-Hz)

NOTE: The dimensional drawings of the DUCTIMAX i inverter units are the same of the DUCTIMAX ON/OFF version. They are reported from page 100

RATED TECHNICAL DATA 4 PIPES

DUCTIMAX i			13			14			23			24		
Speed			min	med	max	min	med	max	min	med	max	min	med	max
Control voltage	(E)	V	2,90	7,90	8,90	2,90	7,90	8,90	4,50	6,60	9,10	4,50	6,60	9,10
Rated air flow	(E)	m ³ /h	109	243	270	109	243	270	170	272	336	170	272	336
Available static pressure	(E)	Pa	10	50	63	10	50	63	19	50	77	19	50	77
Power input	(E)	W	2	11	14	2	11	14	9	19	34	9	19	34
Total cooling capacity	(1)(E)	kW	0,94	1,75	1,93	0,97	1,93	2,13	1,28	1,93	2,32	1,37	2,14	2,57
Sensible cooling capacity	(1)(E)	kW	0,63	1,25	1,38	0,65	1,33	1,47	0,90	1,38	1,65	0,94	1,47	1,78
FCEER class	(E)		A			A			A			A		
Water flow	(2)	l/h	161	302	333	167	334	368	221	335	404	238	370	447
Water pressure drop	(2)(E)	kPa	2	5	6	2	7	8	3	6	8	4	8	12
Heating capacity	(3)(E)	kW	1,14	1,93	2,06	1,14	1,93	2,06	1,55	2,07	2,32	1,55	2,07	2,32
FCCOP class	(E)		A			A			A			A		
Water flow	(3)	l/h	100	169	180	100	169	180	136	181	204	136	181	204
Water pressure drop	(3)(E)	kPa	1	2	3	1	2	3	2	3	3	2	3	3
Additional coil DF - number of rows			3+1			4+1			3+1			4+1		
Total sound power level	(4)	dB(A)	28	49	52	28	49	52	39	48	54	39	48	54
Inlet + radiated sound power level	(4)(E)	dB(A)	26	47	50	26	47	50	37	46	52	37	46	52
Outlet sound power level	(4)(E)	dB(A)	25	46	49	25	46	49	36	45	51	36	45	51

DUCTIMAX i			33			34			43			44		
Speed			min	med	max	min	med	max	min	med	max	min	med	max
Control voltage	(E)	V	4,50	7,40	8,30	4,50	7,40	8,30	5,40	8,30	9,90	5,40	8,30	9,90
Rated air flow	(E)	m ³ /h	195	357	398	195	357	398	302	524	642	302	524	642
Available static pressure	(E)	Pa	19	50	63	19	50	63	17	50	75	17	50	75
Power input	(E)	W	10	26	35	10	26	35	9	22	33	9	22	33
Total cooling capacity	(1)(E)	kW	1,46	2,31	2,56	1,59	2,72	3,01	1,96	3,25	3,80	2,34	3,85	4,56
Sensible cooling capacity	(1)(E)	kW	1,03	1,73	1,92	1,09	1,89	2,09	1,48	2,47	2,94	1,63	2,69	3,20
FCEER class	(E)		A			A			A			A		
Water flow	(2)	l/h	252	402	445	274	473	522	339	562	656	403	664	788
Water pressure drop	(2)(E)	kPa	2	5	5	3	7	9	3	8	11	6	13	18
Heating capacity	(3)(E)	kW	2,09	3,09	3,29	2,09	3,09	3,29	2,80	3,82	4,24	2,80	3,82	4,24
FCCOP class	(E)		A											
Water flow	(3)	l/h	183	271	288	183	271	288	245	334	371	245	334	371
Water pressure drop	(3)(E)	kPa	2	3	4	2	3	4	3	5	6	3	5	6
Additional coil DF - number of rows			3+1			4+1			3+1			4+1		
Total sound power level	(4)	dB(A)	39	50	54	39	50	54	38	52	58	38	52	58
Inlet + radiated sound power level	(4)(E)	dB(A)	37	48	52	37	48	52	36	50	56	36	50	56
Outlet sound power level	(4)(E)	dB(A)	36	47	51	36	47	51	35	49	55	35	49	55

(1) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity) according to EN1397:2015

(2) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity)

(3) Water temperature 65°C / 55°C, air temperature 20°C

(4) Sound power measured according to standards ISO 3741 and ISO 3742

(E) EUROVENT certified data

Power supply 230-1-50 (V-ph-Hz)

NOTE: The dimensional drawings of the DUCTIMAX i inverter units are the same of the DUCTIMAX ON/OFF version. They are reported from page 100

RATED TECHNICAL DATA 4 PIPES

DUCTIMAX i			53			54			63			64		
Speed			min	med	max	min	med	max	min	med	max	min	med	max
Control voltage	(E)	V	3,40	7,60	8,50	3,40	7,60	8,50	6,80	7,50	8,30	6,80	7,50	8,30
Rated air flow	(E)	m ³ /h	333	683	755	333	683	755	1050	1163	1289	1050	1163	1289
Available static pressure	(E)	Pa	12	50	61	12	50	61	40	50	60	40	50	60
Power input	(E)	W	5	24	30	5	24	30	105	128	162	105	128	162
Total cooling capacity	(1)(E)	kW	2,30	4,35	4,76	2,52	4,91	5,36	6,28	6,81	7,38	7,04	7,64	8,28
Sensible cooling capacity	(1)(E)	kW	1,68	3,22	3,52	1,78	3,46	3,78	4,64	5,03	5,46	4,96	5,38	5,84
FCEER class	(E)		A			A			C			B		
Water flow	(2)	l/h	394	749	822	432	846	925	1094	1190	1295	1225	1332	1448
Water pressure drop	(2)(E)	kPa	2	7	8	3	10	12	13	16	18	20	23	26
Heating capacity	(3)(E)	kW	3,40	5,17	5,45	3,40	5,17	5,45	6,42	6,73	7,06	6,42	6,73	7,06
FCCOP class	(E)		A			A			C			C		
Water flow	(3)	l/h	297	452	477	297	452	477	562	589	618	562	589	618
Water pressure drop	(3)(E)	kPa	6	13	14	6	13	14	19	21	22	19	21	22
Additional coil DF - number of rows			3+1			4+1			3+1			4+1		
Total sound power level	(4)	dB(A)	38	55	58	38	55	58	61	63	69	61	63	69
Inlet + radiated sound power level	(4)(E)	dB(A)	36	53	56	36	53	56	59	61	67	59	61	67
Outlet sound power level	(4)(E)	dB(A)	35	52	55	35	52	55	58	60	66	58	60	66

- (1) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity) according to EN1397:2015
(2) Water temperature 7°C / 12°C, air temperature dry bulb 27°C, wet bulb 19°C (47% relative humidity)
(3) Water temperature 65°C / 55°C, air temperature 20°C
(4) Sound power measured according to standards ISO 3741 and ISO 3742
(E) EUROVENT certified data
Power supply 230-1-50 (V-ph-Hz)

NOTE: The dimensional drawings of the DUCTIMAX i inverter units are the same of the DUCTIMAX ON/OFF version. They are reported from page 100