Medium available static pressure ducted hydronic units

DUCTIMAX 2 - 8 kW

NEW PRODUCT JUNE **2015**

ERGO Supervision | 2-pipe system | 4-pipe system | Ducted | Centrifugal fan

Performance and compactness in recessed ceiling installations

The Ductimax ducted unit has been conceived for air conditioning interiors where the installation of high-performance medium-head units with reduced overall dimensions is required. The range features 12 models with air flows of from 300 to 1200 m^3/h. The heat exchanger enables Ductimax to be used under a whole variety of operating conditions. The weight-bearing structure in fact houses a 3- or 4-row exchanger which can be combined with an additional 1- or 2-row exchanger for exceptional performance even with low temperature differentials. The heat exchangers can be optimized for centralized applications such as district cooling. Ductimax is designed for horizontal ceiling installation. 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.
A wide range of wall-mounted controllers is available, including controllers of an electromechanical type and microprocessor controllers with display. The use of MYCOMFORT MEDIUM and LARGE or EVO enables DUCTIMAX to be connected to ERGO.
Heating elements complete with safety devices are available to supplement the hydronic system.
The action of the G3 air filter can be combined with an air ionisation system.

PLUS

- Multi speed motor
- Heat exchanger up to 4 rows
- Reversible water connections
- ABS centrifugal fans
- Can be integrated into the ERGO
- Incorporable ioniser

AVAILABLE VERSIONS

DM xx0 DS Unit for 2-pipe systems

DM xx1 DS Unit for 4-pipe systems equipped with an additional 1-row exchanger for the hot water circuit

DM xx2 DS Unit for 4-pipe systems equipped with an additional 2-row exchanger for the hot water circuit

The structure makes it possible to combine a wide range of accessories on the air intake and outlet sides so as to obtain the optimal configuration of the unit.

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.

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.

Electric motor

Single-phase asynchronous multi-speed electric motor with permanently connected capacitor and thermal protector, mounted on vibration-damping supports.

Fans

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

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

ELECTROMECHANICAL CONTROL PANELS	
CD	Recess wall-mounted speed selector
CDE	Wall-mounted speed selector
TD	Wall-mounted speed selector, thermostat and summer/winter selecting switch
TDC	Wall-mounted speed selector and thermostat
TD4T	Wall-mounted speed selector, thermostat and summer/winter selecting switch for 2 or 4-pipe systems with valves
TC	Thermostat for minimum water temperature in heating mode, mounted on the heat exchanger
TA	Ambient thermostat
TA2	Ambient thermostat with summer/winter selecting switch
KP	Power interface for connecting in parallel up to 4 fan coils to one controller
MICROPROCESSOR ELECTRONIC CONTROL PANELS	
MCBE	MYCOMFORT BASE electronic controller with display
MCME	MYCOMFORT MEDIUM electronic controller with display
MCLE	MYCOMFORT LARGE electronic controller with display
DIST	MYCOMFORT controller spacer for wall mounting
EVODISP	EVO CLOCK Remote display
EVOVOARD	EVO 230V circuit board
LED503	Recess wall-mounted electronic controller with display
CO (B-G-W)	Plate for LED503, white W (RAL 7031), grey G (RAL 9003), black B (RAL 9005)
MCSWE	Water sensor for EVO, MYCOMFORT BASE, MEDIUM, LARGE, AND LED 503 microprocessor controllers
MCSUE	Humidity sensor for EVO, MYCOMFORT MEDIUM AND LARGE microprocessor controller
PLENUM AND AIR INLET AND OUTLET CONNECTORS	
PMA	Uninsulated air outlet/intake plenum with Ø 200 mm collars
PMAC	Insulated air outlet/intake plenum with Ø 200 mm collars
PAF	Uninsulated front air intake plenum with Ø 200 mm collars
RD	Straight uninsulated air inlet/outlet connector
RDC	Straight insulated air inlet/outlet connector
R90	90° uninsulated air inlet/outlet connector
R90C	90° insulated air inlet/outlet connector
MAFO	Air intake module with G4 undulated filter
CONNECTION HOSES AND PLUGS	
TFA	Uninsulated hose Ø 200 mm
TFM	Insulated hose Ø 200 mm
TP	Plastic plug Ø 200 mm
AIR OUTLET AND INTAKE DUCTS	
CA	Air intake duct with honeycomb grille
CAF	Air intake duct with honeycomb grille and G2 filter
CM	Insulated air outlet duct, with 2-way grille
AIR OUTLET AND INTAKE GRILLES	
GM	Aluminium air outlet grille with 2-row fins, with frame
GA	Aluminium air intake grille, with frame
MOTOR DRIVEN ON/OFF AND MODULATING VALVES	
VK	ON-OFF 3-way motor driven valve (230V and 24V actuator), with hydraulic kit for standard and DF heat exchanger
VK	Modulating 3-way motor driven valve (24V actuator), with hydraulic kit for standard and DF heat exchanger
KV	ON-OFF 2-way motor driven valve (230V and 24V actuator), with hydraulic kit for standard and DF heat exchanger
KVM	Modulating 2-way motor driven valve (24V actuator), with hydraulic kit for standard and DF heat exchanger
ACCESSORIES	
VRC	Auxiliary external drip tray.
RE	Additional heating element for installation on board the unit, complete with safety devices
KSC	Condensate drainage pump

Rated technical data

DM DS		130			140			230			240		
Fan speed		min	med	max	min	med	max	min	med	max	min	med	max
		1	4	6	1	4	6	1	5	7	1	5	7
Air flow E	m^3/h	138	246	276	138	246	276	171	275	341	171	275	341
Available static pressure	Pa	15	50	63	15	50	63	19	50	77	19	50	77
Power supply	V-ph-Hz	230-1-50											
Power input (E)	W	24	57	82	24	57	82	34	45	106	34	45	106
Total cooling capacity (1)	kW	1,12	1,78	1,98	1,18	1,97	2,18	1,30	1,97	2,38	1,39	2,18	2,64
Sensible cooling capacity (1)	kW	0,77	1,28	1,41	0,80	1,36	1,51	0,92	1,41	1,70	0,96	1,51	1,84
Water flow	l/h	191	306	338	202	338	374	223	338	410	238	374	454
Water pressure drop (1)	kPa	2	5	6	3	7	8	3	6	8	4	8	12
Heating capacity (2)	kW	1,32	2,18	2,39	1,37	2,38	2,64	1,60	2,38	2,83	1,69	2,64	3,2
Water flow	l/h	194	324	353	202	349	389	238	353	418	248	389	472
Water pressure drop (2)	kPa	2	4	5	2	6	7	2	5	6	3	7	10
1 row DF heating capacity (3)	kW	1,56	2,24	2,38	1,56	2,24	2,38	1,79	2,39	2,69	1,79	2,39	2,69
1 row DF Water flow	l/h	137	198	209	137	198	209	158	209	238	158	209	238
1 row DF Water pressure drop (3)	kPa	2	3	3	2	3	3	2	3	4	2	3	4
2 row DF heating capacity (3)	kW	2,16	3,50	3,78	2,16	3,50	3,78	2,6	3,8	4,5	2,6	3,8	4,5
2 row DF Water flow	l/h	191	306	331	191	306	331	227	335	392	227	335	392
2 DF row DF Water pressure drop (3)	kPa	3	7	8	3	7	8	4	8	11	4	8	11
Standard coil - number of rows	n°		3			4			3			4	
Total sound power level	dB(A)	26	48	52	26	48	52	36	50	58	36	50	58
Inlet + radiated sound power level	dB(A)	24	46	50	24	46	50	34	48	56	34	48	56
Outlet sound power level	dB(A)	22	45	49	22	45	49	32	47	55	32	47	55

DM DS		330			340			430			440		
Fan speed		min	med	max	min	med	max	min	med	max	min	med	max
		1	6	7	1	6	7	1	4	7	1	4	7
Air flow E	m^3/h	194	360	403	194	360	403	305	532	652	305	532	652
Available static pressure	Pa	14	50	63	14	50	63	17	50	76	17	50	76
Power supply	V-ph-Hz	230-1-50											
Power input (E)	W	34	47	106	34	47	106	76	143	192	76	143	192
Total cooling capacity (1)	kW	1,47	2,36	2,62	1,60	2,77	3,07	2,00	3,31	3,87	2,37	3,92	4,64
Sensible cooling capacity (1)	kW	1,05	1,77	1,97	1,10	1,93	2,14	1,50	2,53	3,00	1,65	2,75	3,27
Water flow	l/h	252	407	450	274	475	526	342	569	662	407	673	796
Water pressure drop (1)	kPa	2	5	5	3	7	9	3	8	11	6	14	18
Heating capacity (2)	kW	1,88	2,59	3,52	1,92	2,69	3,72	2,78	4,40	5,11	2,82	4,47	5,2
Water flow	l/h	281	479	526	281	497	547	342	569	662	407	673	796
Water pressure drop (2)	kPa	2	5	6	2	6	7	3	7	9	4	9	12
1 row DF heating capacity (3)	kW	2,38	3,52	3,75	2,38	3,52	3,75	3,18	4,36	4,82	3,18	4,36	4,82
1 row DF Water flow	l/h	209	310	328	209	310	328	281	382	421	281	382	421
1 row DF Water pressure drop (3)	kPa	2	4	4	2	4	4	3	6	7	3	6	7
2 row DF heating capacity (3)	kW	3,10	5,23	5,70	3,10	5,23	5,70	4,6	7,0	8,0	4,6	7,0	8,0
2 row DF Water flow	l/h	274	457	500	274	457	500	400	616	706	400	616	706
2 DF row DF Water pressure drop (3)	kPa	2	6	7	2	6	7	5	10	12	5	10	12
Standard coil - number of rows	n°		3			4			3			4	
Total sound power level	dB(A)	36	52	58	36	52	58	39	52	60	39	52	60
Inlet + radiated sound power level	dB(A)	34	50	56	34	50	56	37	50	58	37	50	58
Outlet sound power level	dB(A)	32	49	55	32	49	55	35	47	56	35	47	56

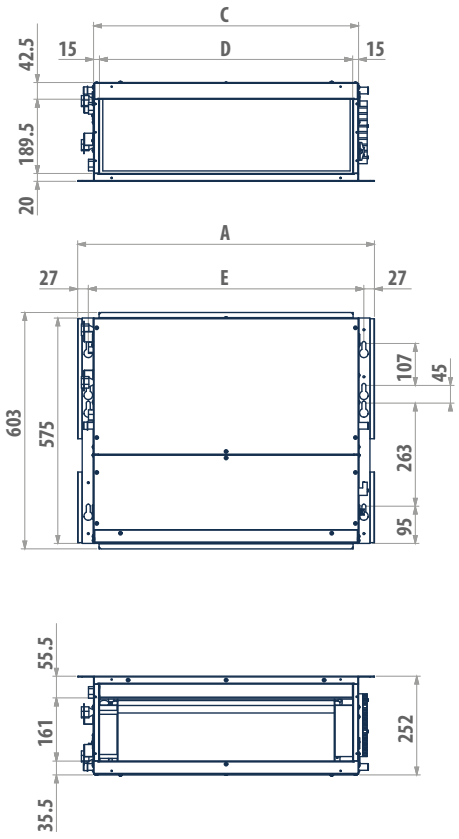
Rated technical data

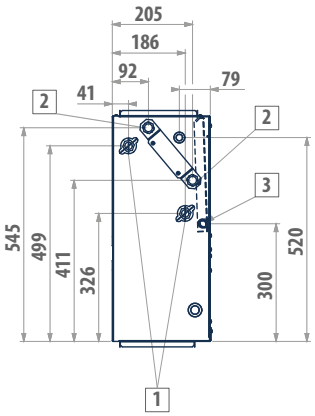
DM DS		530			540			630			640		
Fan speed		min	med	max	min	med	max	min	med	max	min	med	max
		1	6	7	1	6	7	1	2	3	1	2	3
Air flow E	m^3/h	337	687	760	337	687	760	1124	1170	1283	1047	1170	1283
Available static pressure	Pa	12	50	61	12	50	61	40	50	60	40	50	60
Power supply	V-ph-Hz	230-1-50											
Power input (E)	W	76	167	192	76	167	192	235	280	332	235	280	332
Total cooling capacity (1)	kW	2,31	4,39	4,82	2,54	4,95	5,42	6,36	6,97	7,52	7,11	7,80	8,42
Sensible cooling capacity (1)	kW	1,70	3,26	3,58	1,79	3,50	3,83	4,72	5,19	5,61	5,04	5,54	5,99
Water flow	l/h	396	752	828	436	850	929	1091	1197	1291	1221	1340	1445
Water pressure drop (1)	kPa	2	7	8	3	10	12	13	16	18	20	23	26
Heating capacity (2)	kW	3,05	5,66	6,16	3,18	6,04	6,59	7,94	8,65	9,28	8,59	9,40	10,1
Water flow	l/h	396	752	828	436	850	929	1091	1197	1291	1221	1340	1445
Water pressure drop (2)	kPa	2	6	7	3	8	10	11	13	15	16	19	21
1 row DF heating capacity (3)	kW	3,86	5,86	6,18	3,86	5,86	6,18	7,25	7,64	7,96	7,25	7,64	7,96
1 row DF Water flow	l/h	338	515	544	338	515	544	636	670	699	636	670	699
1 row DF Water pressure drop (3)	kPa	8	16	18	8	16	18	23	25	27	23	25	27
2 row DF heating capacity (3)	kW	5,05	8,68	9,25	5,05	8,68	9,25	11,4	12,0	12,5	11,4	12,0	12,5
2 row DF Water flow	l/h	443	760	814	443	760	814	999	1056	1098	999	1056	1098
2 DF row DF Water pressure drop (3)	kPa	6	16	18	6	16	18	26	28	30	26	28	30
Standard coil - number of rows	n°		3			4			3			4	
Total sound power level	dB(A)	39	55	60	39	55	60	59	62	69	59	62	69
Inlet + radiated sound power level	dB(A)	37	53	58	37	53	58	57	60	67	57	60	67
Outlet sound power level	dB(A)	35	51	56	35	51	56	55	58	65	55	58	65

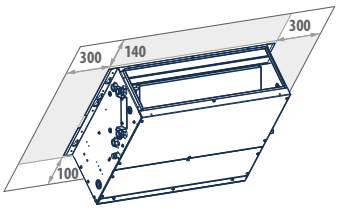
(1) Water temperature 7-12°C, air temperature D.B. 27°C, W.B. 19°C (47% relative humidity)
(2) Inlet water temperature 50°C, water flow rate same as in cooling mode, air temperature 20°C
(3) Water temperature 70 / 60°C, air temperature 20°C
(4) Sound power measured according to standards ISO 3741 and ISO 3742
(E) EUROVENT certified data

Dimensional drawings

DUCTIMAX 1 - 4





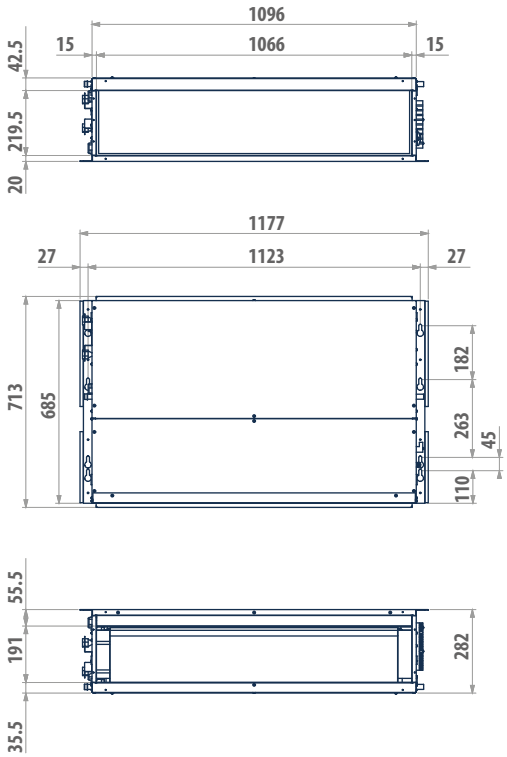


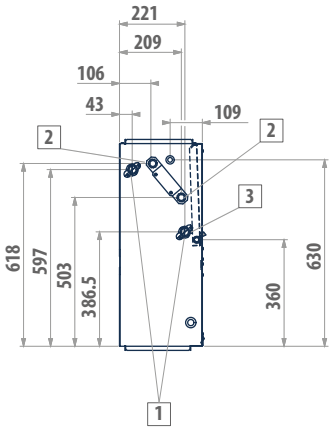
DUCTIMAX	130 - 140	230 - 240	330 - 340	430 - 440
A	757	757	967	967
C	677	677	887	887
D	648	648	858	858
E	703	703	913	913
1	1/2"	1/2"	1/2"	1/2"
2	1/2"	1/2"	1/2"	1/2"
3	Ø 17	Ø 17	Ø 17	Ø 17

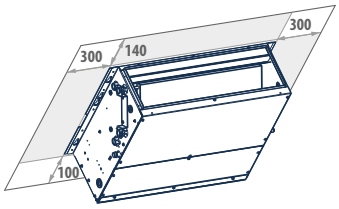
LEGEND	
1	Standard heat exchanger water connections
2	Additional heat exchanger water connections
3	Condensate drainage

Dimensional drawings

DUCTIMAX 5 - 6







DUCTIMAX	530 - 540	630 - 640
1	3/4"	3/4"
2	3/4"	3/4"
3	Ø 17	Ø 17

LEGEND	
1	Standard heat exchanger water connections
2	Additional heat exchanger water connections
3	Condensate drainage