

PRODUCT CATALOGUE



✓ Er P LOT6 - 2016

✓ Er P LOT6 - 2018



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GENERAL DESCRIPTION

The FTA VERTICAL series are designed for floor installation with vertical configuration. They are suitable for civil and industrial uses, heating or cooling, using two or one single coil.

VERSIONS:

- FTA/C1/2R** - Basic unit with 2-Row heating coil
- FTA/C1/4R** - Basic unit with 4-Row cooling coil
- FTA/C1/6R** - Basic unit with 6-Row cooling coil
- FTA/C2/4R-2R** - Basic unit with 4-Row cooling coil and 2-Row heating coil for 4-Pipe system
- FTA/C2/6R-2R** - Basic unit with 6-Row cooling coil and 2-Row heating coil for 4-Pipe system

TECHNICAL FEATURES:

The structure is made of extruded aluminium profiles and nylon angle bars.

The panels are of the sandwich type (25-mm thickness) with galvanized sheet double walls prepainted on the outside and thermal insulation in high density polyurethane foam (40 Kg/m³), fastened on the structure by means of an aluminum SNAP-IN locking system.

The fan section is equipped with forward bladed double intake radial fan, chosen for its low-noise feature.

The fan-motor group is supported by a frame in aluminium beams and insulated from the structure with rubber shock-absorbers and elastic joint on outlet.

The electric motor, fixed on belt-stretcher rails.

Transmission is envisaged by means of trapezoidal belts and taper hub removable pulleys.

The Cu/Al coils are designed for hot and chilled water functioning and drawer removable from casing.

The condensation tray, for the cooling coil version, remains inside the panelling and is made in suitably insulated galvanised metal sheeting.

Filters type:

- plated flat cell filters, G4 efficiency, removable on sliding rails
- plated flat cell filters, G4 efficiency, and rigid bag filters, F7 efficiency, removable on sliding rails (PFT accessory).

The floor-resting base is in press-formed galvanised metal sheet.

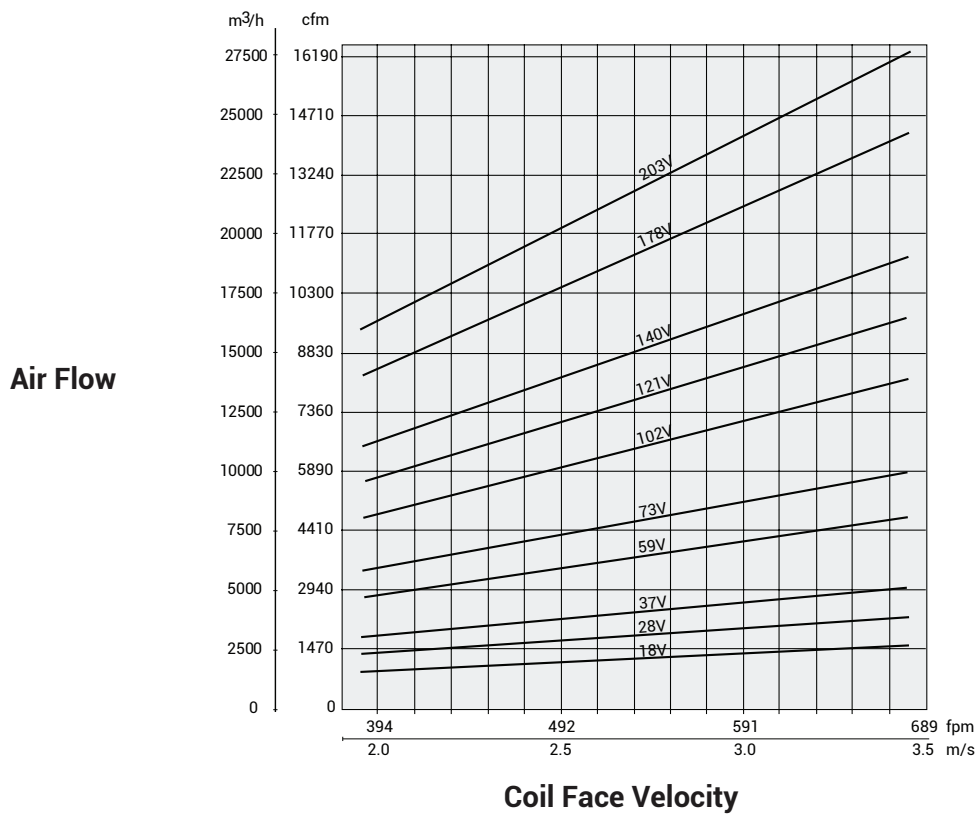
Access to fan section group and filters is via doors fitted with closing clips and micro-switch.

FACTORY FITTED ACCESSORIES:

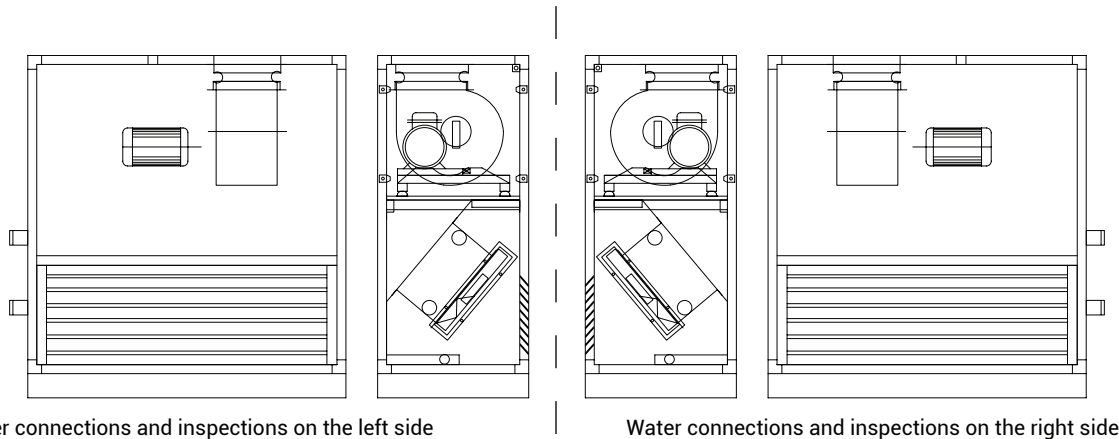
- PLM** - Discharge plenum with double-row nozzle.
- PLR** - Intake plenum.
- PFT** - G4 plate filters + F7 bag filters plenum.
- GR** - Front intake grid with fixed fins.
- SF** - 100% front damper.
- SL** - 100% side damper.
- CMT** - Damper manual control.
- SM** - Damper modulating servo-motor 24V.
- TT** - Galvanized metal sheet roof

QUICK REFERENCE DIAGRAM

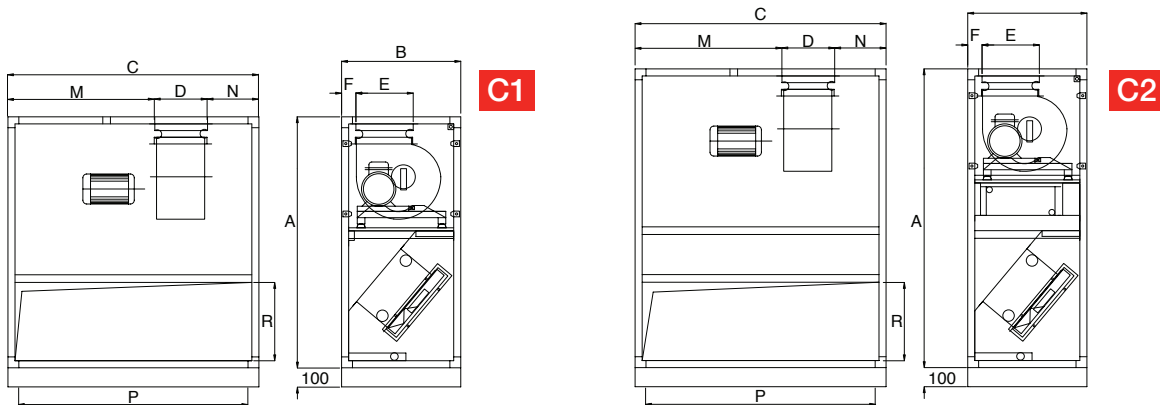
FTA		18V	28V	37V	59V	73V	102V	121V	140V	178V	203V	
Air Flow	Max	m ³ /h	2600	3900	5100	8200	10200	14200	16900	19500	24900	28400
		cfm	1530	2300	3000	4830	6000	8360	9950	11480	14660	16720
	Nominal	m ³ /h	2000	2900	3800	6300	7800	10900	13000	15000	19200	21900
		cfm	1180	1710	2240	3710	4590	6420	7650	8830	11300	12890
	Min	m ³ /h	1500	2200	2900	4700	5800	8100	9700	11200	14200	16200
		cfm	880	1290	1710	2770	3410	4770	5710	6590	8360	9530



WATER CONNECTIONS AND INSPECTIONS SIDE



CONFIGURATIONS AND DIMENSIONS



FTA	C1	C2	C1 / C2									C1	C2
	A (mm)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	M (mm)	N (mm)	P (mm)	R (mm)	(Kg)	(Kg)
18V	1315	1565	625	815	270	270	75	353	192	740	410	120	130
28V	1315	1565	625	1065	304	270	75	524	237	990	410	144	158
37V	1315	1565	625	1315	276	300	75	770	269	1240	410	175	197
59V	1565	1815	815	1315	404	350	75	674	237	1240	510	227	263
73V	1565	1865	815	1565	380	410	75	848	337	1490	510	296	310
102V	2065	2315	1065	1565	565	485	75	663	337	1490	710	366	378
121V	2065	2315	1065	1815	565	485	75	913	337	1740	710	432	490
140V	2065	2315	1065	2065	565	485	75	1163	337	1990	710	518	549
178V	2315	2565	1315	2065	646	645	75	1032	387	1990	910	557	589
203V	2315	2565	1315	2315	646	645	80	1145	524	2240	910	577	605

Module weight does not include electric motor (see page 13).

All units are single-block built, except sizes 178V and 203V which are supplied in two parts with ventilating section height equal to 1290 mm.

G4 FLAT FILTERS QUANTITY AND DIMENSIONS

FTA	18V	28V	37V	59V	73V	102V	121V	140V	178V	203V
500x400x48 (mm)	-	2	-	-	-	3	1	4	-	-
500x500x48 (mm)	-	-	-	-	-	3	1	4	4	2
625x400x48 (mm)	1	-	2	3	-	-	2	-	-	3
625x500x48 (mm)	-	-	-	-	3	-	2	-	4	4

G4 FLAT FILTERS + F7 BAG FILTERS QUANTITY AND DIMENSIONS

FTA	18V	28V	37V	59V	73V	102V	121V	140V	178V	203V
G4	592x490x48 (mm)	1	1	2	-	-	-	-	-	-
	592x592x48 (mm)	-	-	-	2	2	2	3	6	6
	592x287x48 (mm)	-	-	-	-	1	3	3	-	2
F7	592x490x290 (mm)	1	1	2	-	-	-	-	-	-
	592x592x290 (mm)	-	-	-	2	2	2	3	6	6
	592x287x290 (mm)	-	-	-	-	1	3	3	-	2

2-ROW HEATING COIL SELECTION CHART

Mod.	AIR FLOW		WORKING CONDITIONS	HEATING CAPACITY		OUTLET AIR TEMPERATURE	AIR ΔP		WATER FLOW		WATER ΔP		WATER CONNECTIONS
	m ³ /h	cfm		kW	TON		°C	Pa	in WG	l/s	gpm	kPa	
18V	2000	1180	A	13.5	3.8	34.8	28	0.11	0.33	5.2	6	2.0	3/4"
			B	18.1	5.1	21.8	27	0.11	0.44	7.0	8	2.7	3/4"
28V	2900	1710	A	19.9	5.7	35.1	28	0.11	0.48	7.6	10	3.3	1"
			B	26.7	7.6	22.3	27	0.11	0.65	10.3	18	6.0	1"
37V	3800	2240	A	26.7	7.6	35.6	28	0.11	0.65	10.3	21	7.0	1"
			B	35.8	10.2	23.0	27	0.11	0.87	13.8	37	12.3	1"
59V	6300	3710	A	43.9	12.5	35.4	28	0.11	1.07	17.0	14	4.7	1¼"
			B	58.4	16.6	22.5	27	0.11	1.43	22.7	24	8.0	1¼"
73V	7800	4590	A	55.3	15.7	35.8	28	0.11	1.35	21.4	11	3.7	1½"
			B	73.1	20.8	22.8	27	0.11	1.75	27.7	18	6.0	1½"
102V	10900	6420	A	71.6	20.4	34.3	28	0.11	1.75	27.7	5	1.7	1½"
			B	97.1	27.6	21.4	27	0.11	2.37	37.6	7	2.3	1½"
121V	13000	7650	A	91.2	25.9	35.6	28	0.11	2.23	35.4	17	5.7	2"
			B	122	34.8	23.0	27	0.11	2.99	47.4	29	9.7	2"
140V	15000	8830	A	101	28.8	34.8	28	0.11	2.48	39.3	6	2.0	2"
			B	135	38.5	21.8	27	0.11	3.31	52.5	8	2.7	2"
178V	19200	11300	A	130	37.0	34.8	28	0.11	3.18	50.4	5	1.7	2½"
			B	174	49.4	21.9	27	0.11	4.24	67.2	8	2.7	2½"
203V	21900	12890	A	150	42.6	35.1	28	0.11	3.67	58.2	7	2.3	2½"
			B	200	56.8	22.1	27	0.11	4.88	77.4	10	3.3	2½"

REFERENCE CONDITIONS	A	B
INLET WATER TEMPERATURE	80 °C	80 °C
OUTLET WATER TEMPERATURE	70 °C	70 °C
INLET AIR TEMPERATURE	15 °C	-5 °C

CONVERSION FACTORS

AIR TEMPERATURE	WATER TEMPERATURE		
	80/70 °C	70/60 °C	60/50 °C
-5 °C	1.36	1.65	0.97
0 °C	1.26	1.31	0.88
+5 °C	1.17	0.98	0.79
+10 °C	1.8	0.91	0.71
+15 °C	1.00	0.80	0.61
+20 °C	0.90	0.72	0.53

COOLING COILS SELECTION CHART

Mod.	AIR FLOW		RO-WS	TOTAL COOLING CAPACITY		SENSIBLE COOLING CAPACITY		OUTLET AIR TEMPERATURE		AIR ΔP		WATER FLOW		WATER ΔP		WATER CONNECTIONS
	m ³ /h	cfm		n°	kW	TON	kW	TON	°C	RH%	Pa	in WG	l/s	gpm	kPa	
18V	2.000	1.180	4	7.0	2.0	6.3	1.8	17.7	85%	82	0.33	0.33	5.2	11	3.7	3/4"
			6	9.5	2.7	8.0	2.3	15.2	96%	127	0.51	0.45	7.1	28	9.3	3/4"
28V	2.900	1.710	4	9.6	2.7	8.9	2.5	17.9	85%	83	0.33	0.46	7.3	9	3.0	3/4"
			6	13.6	3.9	11.5	3.3	15.3	96%	129	0.52	0.65	10.3	22	7.3	1"
37V	3.800	2.240	4	13.1	3.7	11.9	3.4	17.8	85%	83	0.33	0.62	9.8	19	6.3	3/4"
			6	17.7	5.0	15.1	4.3	15.3	96%	128	0.51	0.85	13.5	22	7.3	1"
59V	6.300	3.710	4	21.7	6.2	19.8	5.6	17.7	86%	82	0.33	1.04	16.5	15	5.0	1 1/2"
			6	29.1	8.3	24.8	7.1	15.3	96%	127	0.51	1.39	22.0	18	6.0	1 1/2"
73V	7.800	4.590	4	26.2	7.5	24.1	6.9	17.9	85%	83	0.33	1.25	19.8	11	3.7	1 1/2"
			6	35.0	10.0	30.5	8.7	15.5	96%	128	0.51	1.67	26.5	10	3.3	1 1/2"
102V	10.900	6.420	4	37.2	10.6	33.8	9.6	17.8	85%	82	0.33	1.77	28.1	16	5.3	1 1/2"
			6	48.9	13.9	42.6	12.1	15.5	96%	128	0.51	2.34	37.1	13	4.3	1 1/2"
121V	13.000	7.650	4	42.6	12.1	39.6	11.3	18.0	85%	82	0.33	2.03	32.2	9	3.0	1 1/2"
			6	60.3	17.2	51.2	14.6	15.3	96%	127	0.51	2.88	45.7	15	5.0	2"
140V	15.000	8.830	4	50.1	14.2	46.6	13.3	17.9	85%	82	0.33	2.39	37.9	12	4.0	1 1/2"
			6	66.3	18.9	58.3	16.6	15.6	96%	128	0.51	3.16	50.1	9	3.0	2"
178V	19.200	11.300	4	64.2	18.3	59.7	17.0	17.9	85%	82	0.33	3.06	48.5	10	3.3	2"
			6	84.9	24.1	74.7	21.2	15.6	96%	127	0.51	4.05	64.2	12	4.0	2"
203V	21.900	12.890	4	74.8	21.3	68.0	19.3	17.8	85%	82	0.33	3.57	56.6	14	4.7	2"
			6	99.0	28.2	85.1	24.2	15.5	96%	96	0.38	4.73	75.0	11	3.7	2 1/2"

REFERENCE CONDITIONS

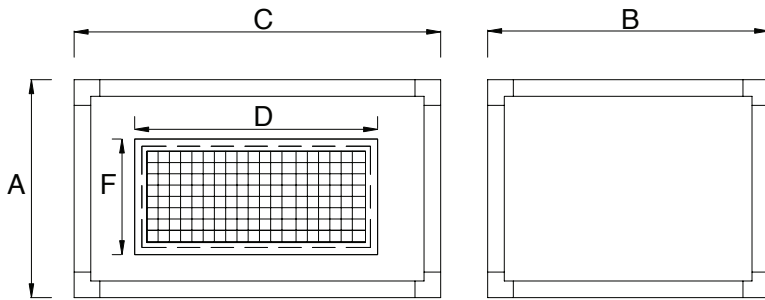
INLET WATER TEMPERATURE	7 °C
OUTLET WATER TEMPERATURE	12 °C
INLET AIR TEMPERATURE	27 °C - 50% RH

CONVERSION FACTORS

AIR TEMPERATURE		WATER TEMPERATURE		
		6/11 °C	7/12 °C	8/13 °C
32 °C	60% RH	1.85	1.76	1.70
27 °C	50% RH	1.08	1.00	0.91
25 °C	50% RH	0.86	0.77	0.68

LOOSE ACCESSORIES

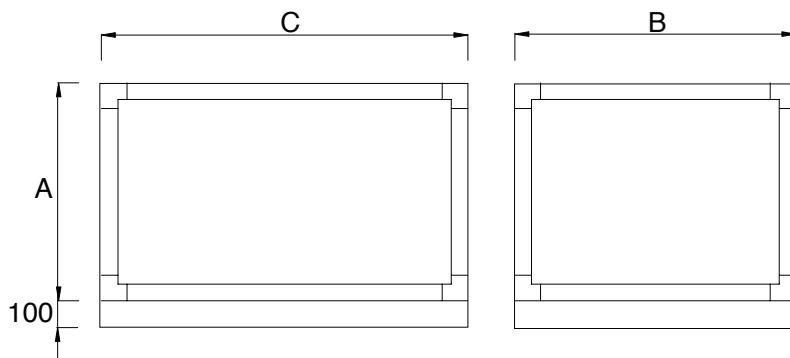
PLM Discharge plenum with double-row nozzle



FTA	A (mm)	B (mm)	C (mm)	D X F (mm)
18V	485	625	815	600 x 300
28V	485	625	1065	900 x 300
37V	485	625	1315	1.000 x 300
59V	585	815	1315	1.100 x 400
73V	585	815	1565	(600 x 400) x 2
102V	785	1065	1565	(700 x 600) x 2
121V	785	1065	1815	(800 x 600) x 2
140V	785	1065	2065	(900 x 600) x 2
178V	985	1315	2065	(900 x 800) x 2
203V	985	1315	2315	(1000 x 800) x 2

The plenum is supplied in the single-block version for sizes up to 73V. Other units are supplied with separate plenum

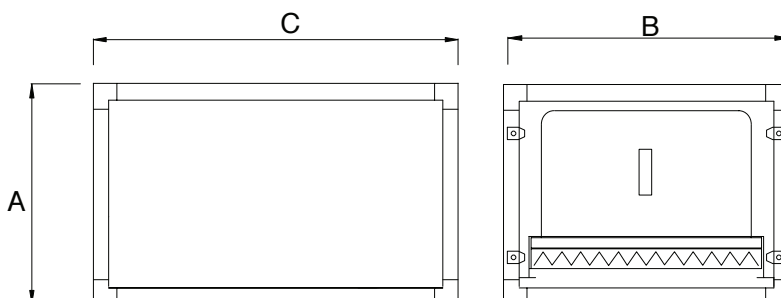
PLR INTAKE PLENUM



FTA	A (mm)	B (mm)	C (mm)
18V	485	625	815
28V	485	625	1065
37V	485	625	1315
59V	585	815	1315
73V	585	815	1565
102V	785	1065	1565
121V	785	1065	1815
140V	785	1065	2065
178V	985	1315	2065
203V	985	1315	2315

To be always matched with bag filters and/or SL accessory

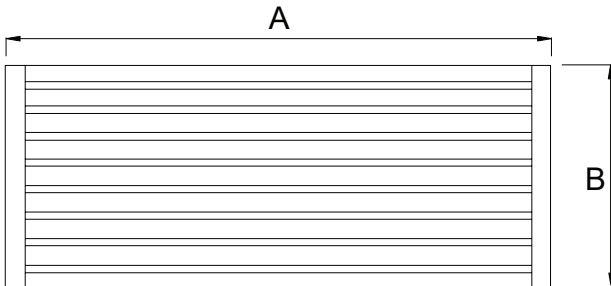
PFT G4 FLAT FILTERS + F7 BAG FILTERS PLENUM



FTA	A (mm)	B (mm)	C (mm)	Δp (Pa)	Δp (in WG)
18V	485	625	815	230	0.91
28V	485	625	1065	230	0.91
37V	485	625	1315	230	0.91
59V	585	815	1315	230	0.91
73V	585	815	1565	230	0.91
102V	785	1065	1565	230	0.91
121V	785	1065	1815	230	0.91
140V	785	1065	2065	230	0.91
178V	985	1315	2065	230	0.91
203V	985	1315	2315	230	0.91

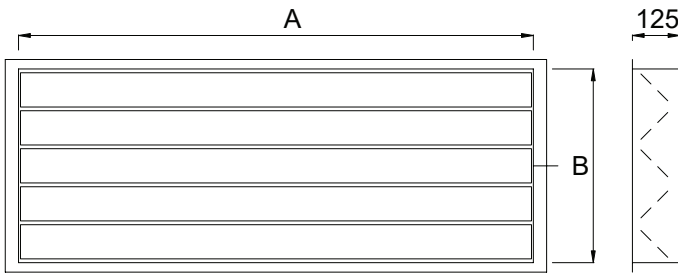
LOOSE ACCESSORIES

GR FRONT INTAKE GRID WITH FIXED FINS



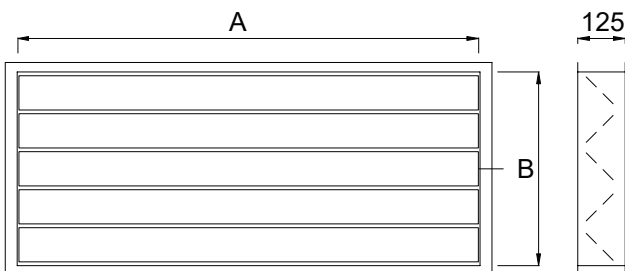
FTA	A (mm)	B (mm)
18V	740	410
28V	990	410
37V	1240	410
59V	1240	510
73V	1490	510
102V	1490	710
121V	1740	710
140V	1990	710
178V	1990	910
203V	2240	910

SF 100% FRONT DAMPER



FTA	A (mm)	B (mm)
18V	740	410
28V	990	410
37V	1240	410
59V	1240	510
73V	1490	510
102V	1490	710
121V	1740	710
140V	1990	710
178V	1990	910
203V	2240	910

SL 100% SIDE DAMPER



FTA	A (mm)	B (mm)
18V	550	410
28V	550	410
37V	550	410
59V	740	510
73V	740	510
102V	990	710
121V	990	710
140V	990	710
178V	1240	910
203V	1240	910

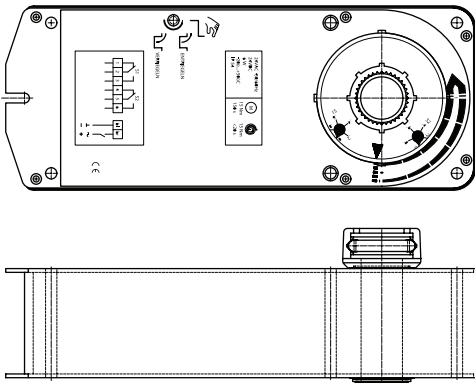
LOOSE ACCESSORIES

CMT DAMPER MANUAL CONTROL



Manual calibration control equipped with graduated scale showing the damper opening percentage.

SM DAMPER MODULATING SERVO-MOTOR 24V



On/Off control with spring back-setting. The auxiliary motor opens the damper by loading the spring: in case of power failure, the damper is brought back to the safety position by the spring.

TT GALVANIZED METAL SHEET ROOF

All units that must be positioned outside or generally speaking are exposed to the weather may be equipped with a hot-galvanized metal sheet roof as accessory element. The roof overhang with regard to the unit outer dimensions is of about 100 mm. All roof corners are equipped with accident-prevention protections.

ACCESSORIES WEIGHT (KG)

FTA	18V	28V	37V	59V	73V	102V	121V	140V	178V	203V
PLM	15	19	23	28	35	45	53	65	78	78
PLR	12	14	16	17	19	20	22	24	26	26
PFT	30	45	55	60	65	65	75	95	100	115
GR	4	5.5	7	7	10	12	17	20	22	22
SF	4.5	6	7	7	10	11	15	17	19	19
SL	3	3	45	4	5	6	7.5	8.5	9.5	9.5

FTA		18V	28V	37V	59V	73V	102V	121V	140V	178V	203V
Power supply	V/Ph/Hz	←----- 400/3/50 ----->									
Max absorbed power	kW	0.32	0.41	0.68	1.1	1.4	1.7	2.3	3.1	3.8	5.0
Max absorbed current	A	0.6	0.8	1.4	2.3	2.9	3.5	4.7	6.4	7.8	10

Data referring to FTA/C1/2R version and available static pressure of 200 Pa (0.8 in WG).
Different power supply, voltage and frequency (50/60 Hz) are also available.

ELECTRIC MOTORS WEIGHT

Motor size	kW	0.55	0.75	1.1	1.5	2.2	3.0	4.0	5.5	7.5	11
Weight	Kg	17	19	23	25	31	35	41	52	62	70

FTA	18V	28V	37V	59V	73V	102V	121V	140V	178V	203V
dB(A)	67	67	70	70	71	71	72	73	73	73

Sound pressure level measured at 1 m from the unit with reverberation time 0.5s.

PRESSURE DROPS CALCULATION

In order to match the appropriate motor dimension to the required performances it is necessary to calculate the total static pressure resulting from load losses stated in the selection specifications of all components.

FTA 59V SELECTION (EXAMPLE):

Pressure drop inside the unit:				
Heating coil 2-Row (pag.8):	28	Pa	0.11	in WG
Cooling coil 4-Row (pag. 9):	82	Pa	0.41	in WG
G4 plate filters + F7 bag filters (pag. 10):	230	Pa	0.92	in WG
Available static pressure required:	250	Pa	1.00	in WG
TOTAL STATIC PRESSURE:	590	Pa	2.36	in WG

According to the chart here below (power motor calculation to install), a 2.2 kW motor is required (up to 600 Pa - 2.41 in WG).