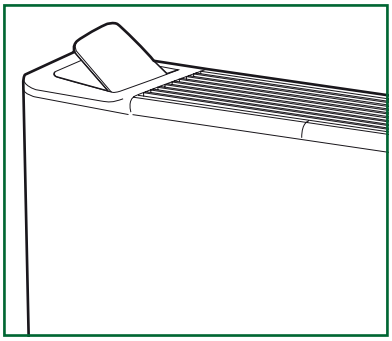
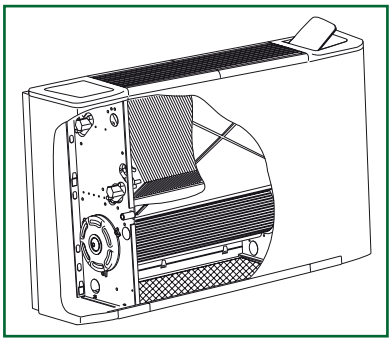
QZT *"Silent"* fan coil with tangential fan





The series QZT is equipped with an exclusive tangential fan assembly that has a 120 mm diameter, the largest one on this kind of unit. Its special spiral shape guarantees a perfect and continuous airflow on the whole coil surface, optimizes thermal exchange and avoids the annoying "pumping" effect of other kinds of tangential fans. The noise level has been remarkably reduced.

Moreover each version has the same internal structure, identical in both horizontal and vertical models, in order to standardize production and guarantee a greater flexibility in distribution and installation.

The fan coils are available with every kind of accessories and controls to meet all electronic and installation needs.

Quick selection

Cooling

Entering air temperature: 27°C dry bulb - 19°C wet bulb
Entering water temperature: 7°C, Δt 5°C

Size	Speed	Air flow, m^3/h	Cooling, kW	Sound pressure, Lp dB (A)
QZT-13	3	300	1.40	39
QZT-14	3	300	1.70	39
QZT-23	3	450	2.40	38
QZT-24	3	450	2.60	39
QZT-33	3	600	3.40	39
QZT-34	3	600	3.70	38
QZT-43	3	750	4.05	43
QZT-44	3	750	4.50	43
QZT-53	3	1000	4.60	46
QZT-54	3	1000	5.30	47

Properties

Fan Coil Unit QZT

5 sizes from 10 to 50 (Q = 190 - 1000m^3/h & P = 1.0 - 5.3 kW).

2-pipe system - 3 or 4 rows (cooling or heating).

4-pipe system - 1 additional row for heating.

4 versions (A, F, M, T) to cover all high comfort needs.

Fan coil and controls with innovative design.

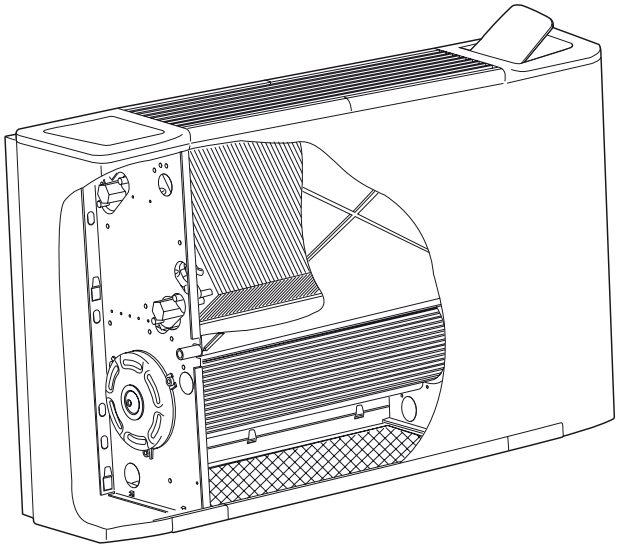
Low noise level.

Easy to assemble, use and maintain.

Product code example

Fan Coil Unit QZT
QZTF-34-1-2-1-03

QZT *"Silent"* fan coil unit – Description



Decorative cabinet

Made of galvanized and prepainted steel casing.
The plastic top grid has fixed louvres and is reversible in order to distribute the air in two different directions.

Standard colours:

- top grid: Pantone 427C (light grey)
- frontal sheet: RAL 9003 (white)
- other colours on request.

Basic unit

Made of galvanized steel with closed cell insulation.

Filter

The filtration medium is a washable polypropylene net and the filter frame is made of galvanized steel.
Special plastic sliding guides allow for easy insertion and removal of the filter.

Fandeck

The tangential fan assembly is composed of two fan shrouds: an external one with an evolving plastic section and an internal one of holed, shaped steel.
The fan has an external diameter of 120 mm and is the lenght of the battery. The fins are concave and are positioned in a spiral shape along the whole lenght of the fan.

Motor

The motor is wired for single-phase with three speeds and thermal protection (klixon).
The motor is secured on antivibration mountings and is fitted on the outside of the inner casing. Protection IP 21, insulation class B.

Heat exchanger

It is manufactured from drawn copper tube and the aluminium fins are mechanically bonded onto the tube by an expansion process.
The coil has two 1/2 inch BSP internal connections and 1/8 inch BSP air vent and drain.
Flow and return pipe connections are situated at the same end on the left or right side looking into the air outlet of the unit.
This must be specified on the order but are also easily reversable on site.

Diptray

Made from plastic with an “L” shape fitted on the inner casing. The outside diameter of the condensate discharge pipe is 15 mm.

Nominal performances – QZT

2-pipe units

Cooling

Entering air temperature: 27°C dry bulb - 19°C wet bulb
Entering water temperature: 7°C, Δt 5°C

Heating

Entering air temperature: 20°C
Entering water temperature: 50°C
Same water flow rate as for the cooling

SIZE	QZT-13			QZT-23			QZT-33			QZT-43			QZT-53		
Speed	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
Air flow m3/h	190	240	300	290	360	450	380	480	600	480	600	750	650	800	1000
Total Cooling kW	1.04	1.20	1.40	1.70	2.08	2.40	2.30	2.80	3.40	2.83	3.34	4.05	3.47	4.02	4.60
Sensible Cooling kW	0.78	0.92	1.17	1.31	1.62	2.02	1.89	2.30	2.87	1.91	2.29	2.99	2.57	3.14	3.88
Heating kW	1.45	1.66	2.08	2.30	2.70	3.10	2.90	3.60	4.30	3.50	4.20	5.02	4.50	5.30	6.30
ΔP Cooling kPa	2.8	3.7	4.6	7.0	9.8	12.0	6.0	10.0	13.2	11.0	14.8	19.7	16.1	21.4	27.4
ΔP Heating kPa	2.1	2.9	3.7	6.2	8.0	9.8	6.2	8.4	11.0	9.2	12.4	16.4	15.6	20.5	26.1
Fan W	27	30	40	37	45	50	42	50	65	50	58	80	57	70	85
Sound power	34	41	48	35	42	47	36	42	48	41	46	52	45	50	55
Sound pressure	25	32	39	26	33	38	27	33	39	32	37	43	36	41	46

SIZE	QZT-14			QZT-24			QZT-34			QZT-44			QZT-54		
Speed	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
Air flow m3/h	190	240	300	290	360	450	380	480	600	480	600	750	650	800	1000
Total Cooling kW	1.20	1.45	1.70	1.90	2.30	2.60	2.50	3.10	3.70	3.15	3.75	4.50	4.00	4.50	5.30
Sensible Cooling kW	0.90	1.15	1.40	1.34	1.66	1.99	1.69	2.08	2.62	2.34	2.77	3.52	3.02	3.61	4.46
Heating kW	1.50	1.90	2.25	2.40	2.80	3.30	3.15	3.90	4.65	3.80	4.60	5.55	4.80	5.80	6.90
ΔP Cooling kPa	4.0	6.0	8.0	5.7	7.3	9.2	5.7	7.7	10.3	19.7	26.7	36.6	11.9	15.6	20.6
ΔP Heating kPa	3.4	4.7	6.3	4.7	6.0	7.6	4.5	6.2	8.7	17.8	24.4	33.4	10.0	13.2	17.4
Fan W	27	30	40	37	45	50	42	50	65	50	58	80	57	70	85
Sound power	34	40	48	36	42	48	36	43	47	41	46	52	47	51	56
Sound pressure	25	31	39	27	33	39	27	34	38	32	37	43	38	42	47

4-pipe units

Cooling

Entering air temperature: 27°C dry bulb - 19°C wet bulb
Entering water temperature: 7°C, Δt 5°C

Heating

Entering air temperature: 20°C
Entering water temperature: 70°C, Δt 10°C

SIZE	QZT-13			QZT-23			QZT-33			QZT-43			QZT-53		
Speed	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
Air flow m3/h	190	240	300	290	360	450	380	480	600	480	600	750	650	800	1000
Total Cooling kW	1.04	1.20	1.40	1.70	2.08	2.40	2.30	2.80	3.40	2.83	3.34	4.05	3.17	3.67	4.20
Sensible Cooling kW	0.78	0.92	1.17	1.10	1.36	1.70	1.70	2.07	2.59	1.91	2.29	2.99	2.28	2.79	3.45
Heating kW	1.05	1.18	1.44	1.95	2.25	2.60	2.45	3.00	3.50	3.00	3.40	3.95	3.28	3.80	4.40
ΔP Cooling kPa	3.4	5.7	5.7	8.5	11.8	14.5	7.7	10.5	13.9	11.0	14.8	19.7	12.4	16.1	20.6
ΔP Heating kPa	1.4	1.8	2.4	5.4	6.9	8.9	2.1	4.5	3.7	2.7	3.5	4.4	3.3	4.3	5.4
Fan W	27	30	40	37	45	50	42	50	65	50	58	80	57	70	85
Sound power	34	41	48	36	42	47	39	43	48	43	48	54	44	48	54
Sound pressure	25	32	39	27	33	38	30	34	39	34	39	45	35	39	45

Sound data are measured in dB(A). Sound pressure levels are valid for a room of 100 m3 and a reverberation time of 0,5 sec.

Above data are based on Eurovent conditions.

Technical data – QZT

Operation limits

Highest water inlet temperature +85°C
Lowest water inlet temperature + 5°C
Highest working pressure 8 bar

Water flow limits for 3 row coil (l/h) 2-pipe units

Size	QZT-13	QZT-23	QZT-33	QZT-43	QZT-53
Lowest	100	150	150	200	250
Highest	500	750	1000	1000	1500

Water flow limits for 4 row coil (l/h) 2-pipe units

Size	QZT-14	QZT-24	QZT-34	QZT-44	QZT-54
Lowest	100	150	200	250	300
Highest	750	1000	1000	1500	2000

Water flow limits for 1 row heating coil (l/h) 4-pipe units

Size	QZT-13/14	QZT-23/24	QZT-33/34	QZT-43/44	QZT-53/54
Lowest	60	80	100	130	160
Highest	250	350	450	500	650

Motor characteristics

Size		QZT-13/14	QZT-23/24	QZT-33/34	QZT-43/44	QZT-53/54
230/1 50Hz	W	38	40	60	70	85
	A	0.15	0.16	0.20	0.27	0.35
	µF	1	1,5	1,25	2	1,5

Capacity (k) and air flow (Q) correction factors at high speed in accordance to the requested available pressure (Δp).

Size		QZT-13/14	QZT-23/24	QZT-33/34	QZT-43/44	QZT-53/54
ΔP 05 Pa	Q=m ^{3}/h	270	410	560	700	950
	(W) · k	0.95	0.94	0.94	0.95	0.96
ΔP 10 Pa	Q=m ^{3}/h	250	370	520	650	900
	(W) · k	0.87	0.85	0.88	0.87	0.87
ΔP 15 Pa	Q=m ^{3}/h	220	340	470	600	800
	(W) · k	0.80	0.83	0.82	0.81	0.83

Cooling selection tables – QZT
Cooling capacity – 3 row coil – 2-pipe units

Entering air temperature: 27°C dry bulb - 19°C wet bulb

Size	Speed	Air flow	EWT 5 - LWT 10°C			EWT 7 - LWT 12°C			EWT 12 - LWT 17°C		
			Water flow	Capacity		Water flow	Capacity		Water flow	Capacity	
		m³/h m³/sec.	l/h	Tot. Watt	Sen. Watt	l/h	Tot. Watt	Sen. Watt	l/h	Tot. Watt	Sen. Watt
QZT-13	High	300 0.08	320	1870	1400	240	1400	1170	130	760	760
	Medium	240 0.07	260	1520	1130	210	1200	920	110	650	650
	Low	190 0.05	230	1320	950	180	1040	780	100	570	570
QZT-23	High	450 0.12	545	3150	2300	415	2400	2020	225	1310	1310
	Medium	360 0.10	455	2630	1930	360	2080	1620	195	1130	1130
	Low	290 0.08	390	2270	1540	295	1700	1310	160	930	930
QZT-33	High	600 0.17	770	4450	3450	590	3400	2870	320	1850	1850
	Medium	480 0.13	610	3540	2620	485	2800	2300	265	1530	1530
	Low	380 0.10	550	3200	2200	400	2300	1890	215	1250	1250
QZT-43	High	750 0.21	915	5300	4080	700	4050	2990	380	2210	2210
	Medium	600 0.17	740	4500	3160	580	3340	2290	315	1820	1820
	Low	480 0.13	650	3800	2600	490	2830	1910	265	1540	1540
QZT-53	High	1000 0.28	1055	6100	4670	795	4600	3880	435	2510	2510
	Medium	800 0.22	880	5090	3820	695	4020	3140	380	2190	2190
	Low	650 0.18	760	4390	3200	600	3470	2570	325	1890	1890

Correction factors for different entering air temperatures

E.A.T. C°	K
28/20	1.14
26/18,5	0.93
25/18	0.84

EAT = Entering air temperature
EWT = Entering water temperature
LWT = Leaving water temperature

Other selections are available from our computer program. Ask your local sales representative.
The cooling selection tables are valid for both systems (2- and 4-pipe)

Cooling selection tables – QZT
Cooling capacity – 4 row coil – 2-pipe units

Entering air temperature: 27°C dry bulb - 19°C wet bulb

Size	Speed	Air flow m³/h m³/sec.	EWT 5 - LWT 10°C			EWT 7 - LWT 12°C			EWT 12 - LWT 17°C		
			Water flow l/h	Capacity Tot. Watt	Capacity Sen. Watt	Water flow l/h	Capacity Tot. Watt	Capacity Sen. Watt	Water flow l/h	Capacity Tot. Watt	Capacity Sen. Watt
QZT-14	High	300 0.08	375	2180	1660	295	1700	1400	160	940	940
	Medium	240 0.07	315	1830	1340	250	1450	1150	135	790	790
	Low	190 0.05	260	1520	1090	210	1200	900	110	650	650
QZT-24	High	450 0.12	580	3350	2550	450	2600	1990	250	1450	1450
	Medium	360 0.10	500	2910	2150	400	2300	1660	215	1250	1250
	Low	290 0.08	415	2400	1710	330	1900	1340	180	1040	1040
QZT-34	High	600 0.17	815	4720	3520	640	3700	2620	355	2050	2050
	Medium	480 0.13	680	3920	2750	535	3100	2080	290	1690	1690
	Low	380 0,10	545	3160	2160	430	2500	1690	235	1360	1360
QZT-44	High	750 0.21	1000	5790	4450	780	4500	3520	430	2500	2500
	Medium	600 0.17	820	4740	3460	650	3750	2770	350	2040	2040
	Low	480 0.13	690	3980	2840	545	3150	2340	300	1720	1720
QZT-54	High	1000 0.28	1175	6800	5300	915	5300	4460	505	2930	2930
	Medium	800 0.22	985	5690	4250	780	4500	3610	425	2450	2450
	Low	650 0.18	875	5060	3680	690	4000	3020	375	2180	2180

Correction factors for different entering air temperatures

E.A.T. C°	K
28/20	1.14
26/18,5	0.93
25/18	0.84

EAT = Entering air temperature
EWT = Entering water temperature
LWT = Leaving water temperature

Other selections are available from our computer program. Ask your local sales representative.
The cooling selection tables are valid for both systems (2- and 4-pipe)

Heating selection tables – QZT
Heating capacity – 2-pipe units

Entering air temperature: 20°C

Size	Speed	Air flow m³/h m³/sec.	x = 3 row coil						x = 4 row coil					
			EWT 50 - LWT 40 °C		EWT 70 - LWT 60 °C		EWT 85 - LWT 75 °C		EWT 50 - LWT 40 °C		EWT 70 - LWT 60 °C		EWT 85 - LWT 75 °C	
			Water flow l/h	Capacity Watt	Water flow l/h	Capacity Watt	Water flow l/h	Capacity Watt	Water flow l/h	Capacity Watt	Water flow l/h	Capacity Watt	Water flow l/h	Capacity Watt
1x	High	300 0.08	155	1770	295	3400	385	4470	170	1980	330	3800	435	5050
	Medium	240 0.07	120	1400	245	2850	320	3700	145	1700	280	3250	365	4200
	Low	190 0.05	110	1250	210	2400	270	3100	115	1350	230	2650	295	3400
2x	High	450 0.12	250	2880	475	5500	625	7250	260	3000	500	5800	660	7650
	Medium	360 0.10	200	2300	390	4500	500	5800	225	2600	435	5050	570	6600
	Low	290 0.08	175	2000	330	3800	430	4950	190	2200	365	4200	465	5400
3x	High	600 0.17	335	3880	640	7400	845	9750	360	4130	690	8000	935	10800
	Medium	480 0.13	270	3150	535	6200	700	8100	295	3400	575	6650	780	9000
	Low	380 0.10	225	2600	435	5050	565	6550	240	2750	460	5300	605	7000
4x	High	750 0.21	395	4550	745	8650	985	11400	430	5000	830	9600	1090	12600
	Medium	600 0.17	320	3700	625	7200	810	9400	355	4100	690	8000	910	10500
	Low	480 0.13	270	3150	525	6100	680	7900	295	3400	575	6650	780	9000
5x	High	1000 0.28	495	5750	950	11000	1255	14500	550	6400	1060	12250	1425	16500
	Medium	800 0.22	410	4750	785	9100	1030	11900	460	5300	895	10350	1210	14000
	Low	650 0.18	345	4000	675	7800	880	10200	385	4450	745	8650	995	11500

x = 3 or 4 row coil

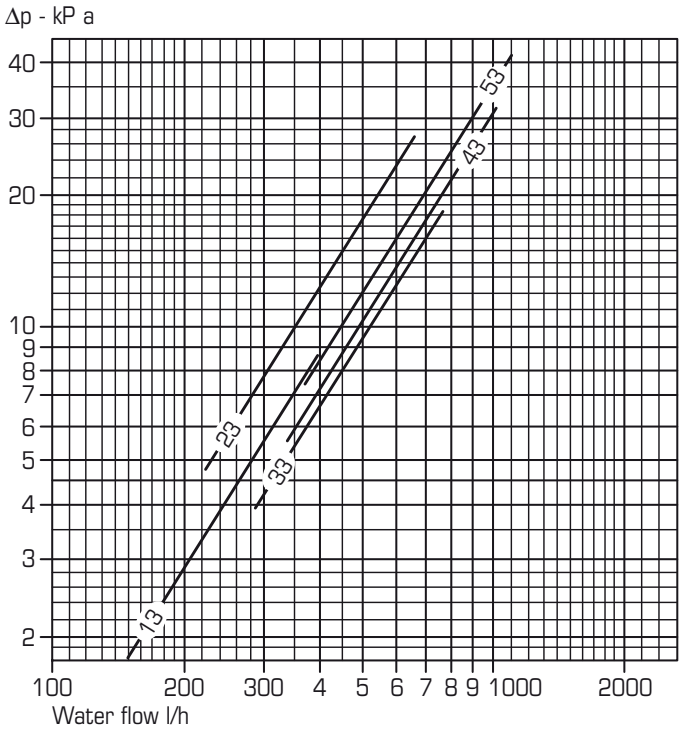
Correction factors for different entering air temperatures

W.T. C°	E.A.T. °C			
	22	18	16	14
50/40	0.91	1.09	1.15	1.23
70/60	0.95	1.05	1.09	1.13
85/75	0.96	1.04	1.07	1.11

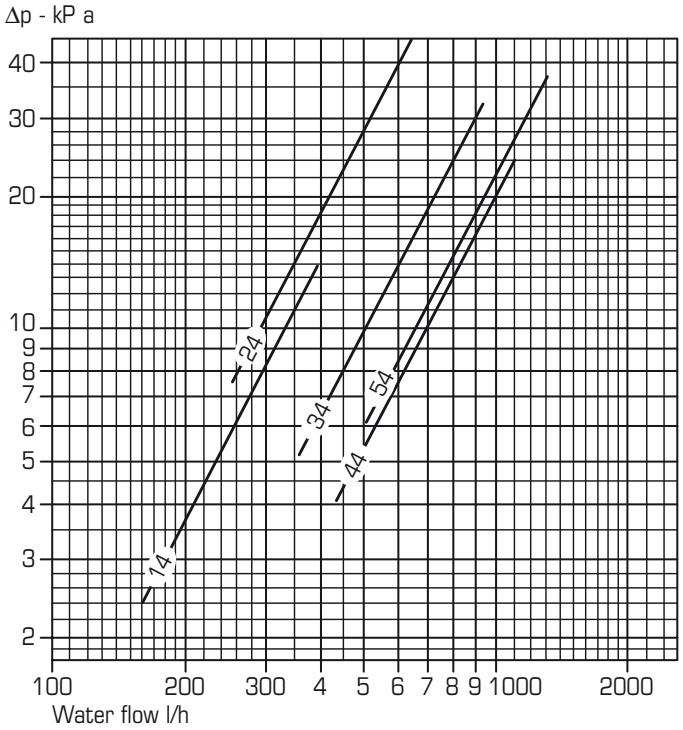
Other selections are available from our computer program. Ask your local sales representative.
EWT = Entering water temperature, LWT = Leaving water temperature, WT = Water temperature, EAT = Entering air temperature.

Water pressure drop – QZT

QZT - 3 row coil



QZT - 4 row coil



The water pressure drop figures refer to a mean water temperature of 10°C, for different temperature, multiply the pressure drop figures by the correction factors K.

°C	K
20	0.94
30	0.90
40	0.86
50	0.82
60	0.78
70	0.74
80	0.70

Heating selection tables – QZT
Heating capacity – 1 row heating coil – 4-pipe units

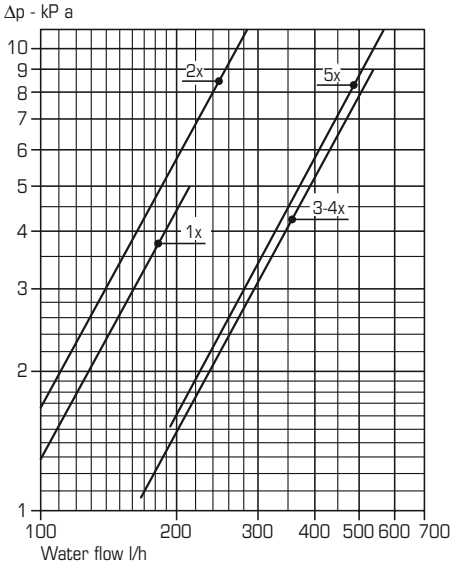
Entering air temperature: 20°C

Size	Speed	Air flow m³/h m³/sec.	EWT 50 - LWT 40°C Water flow l/h	EWT 50 - LWT 40°C Capacity Watt	EWT 70 - LWT 60°C Water flow l/h	EWT 70 - LWT 60°C Capacity Watt	EWT 85 - LWT 75°C Water flow l/h	EWT 85 - LWT 75°C Capacity Watt
1x	High	300 0.08	75	860	145	1440	190	2200
	Medium	240 0.07	60	680	120	1180	150	1750
	Low	190 0.05	55	630	105	1050	135	1550
2x	High	450 0.12	120	1360	225	2600	300	3450
	Medium	360 0.10	100	1160	195	2250	260	2970
	Low	290 0.08	90	1020	170	1950	225	2580
3x	High	600 0.17	155	1820	300	3500	400	4650
	Medium	480 0.13	135	1550	260	3000	340	3900
	Low	380 0.10	120	1360	210	2450	290	3360
4x	High	750 0.21	180	2060	340	3950	455	5250
	Medium	600 0.17	150	1750	295	3400	390	4500
	Low	480 0.13	135	1550	260	3000	340	3940
5x	High	1000 0.28	230	2570	380	4400	585	6750
	Medium	800 0.22	200	2280	330	3800	490	5700
	Low	650 0.18	170	1940	280	3280	425	4900

Correction factors for different entering air temperatures

W.T.° C	E.A.T, °C 22	18	16	14
50/40	0.91	1.09	1.15	1.23
70/60	0.95	1.05	1.09	1.13
85/75	0.96	1.04	1.07	1.11

Water pressure drop - 1 row heating coil



x = 3 or 4 row coil

QZT

The water pressure drop figures refer to a mean water temperature of 65°C; for different temperatures, multiply the pressure drop figures by the correction factors K.

tm °C	K
40	1.14
50	1.08
60	1.02
70	0.96
80	0.90

Other selections are available from our computer program. Ask your local sales representative.
EWT = Entering water temperature, LWT = Leaving water temperature, WT = Water temperature, EAT = Entering air temperature.

Acoustic data

Often sound levels are the key influencing factor in the selection of equipment.
The notion sound power is often confused with the notion sound pressure.
The two notions can be defined as follows :

Sound power (Lw)

Sound power is the output required producing sound pressure waves. It is not, as such, directly measurable.
Sound power is established by measuring the sound pressure on the inner surface of a sphere placed around the source. It is measured and stated in Watts.
Sound power is therefore a measurement, which is not dependent on area or distance, and it is used as a basis for all acoustic data.

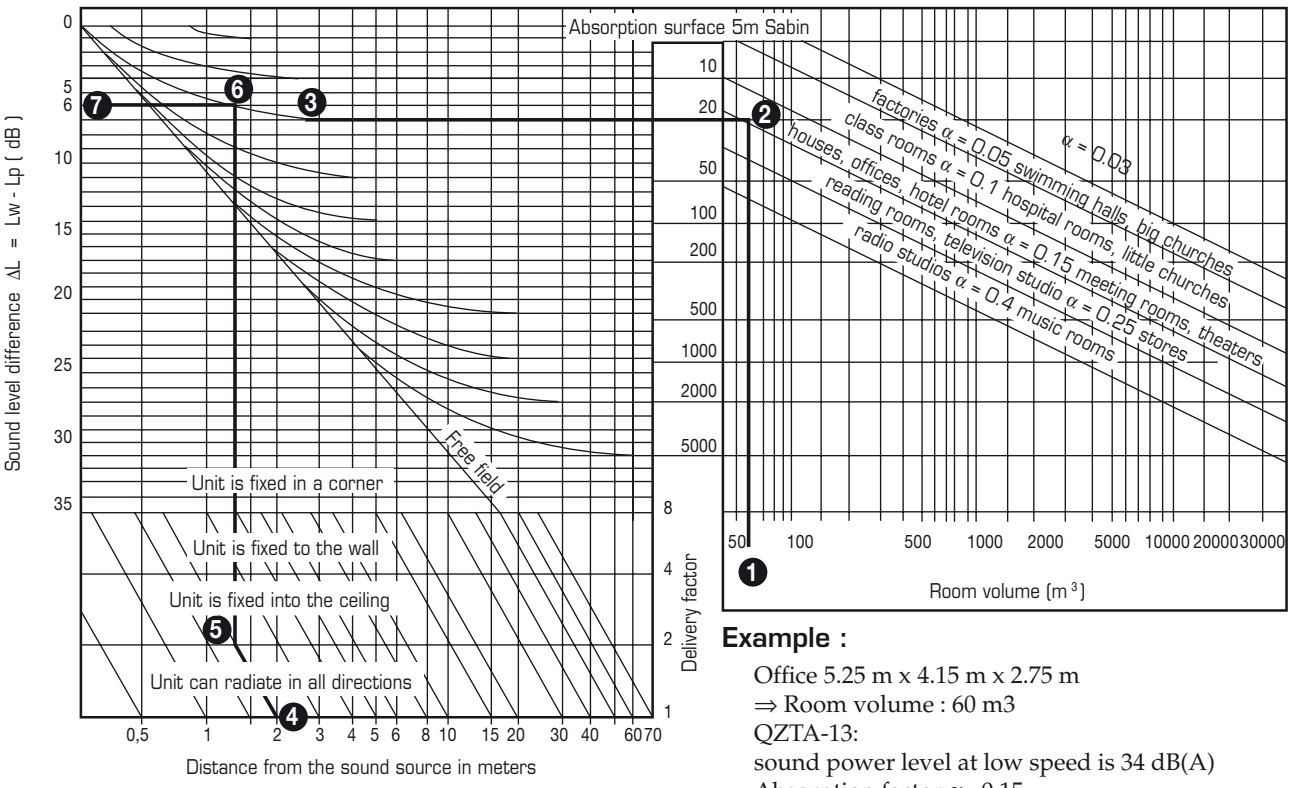
Sound pressure (Lp)

This is the alternating pressure produced by waves from a sound source. It is a measure of the noise level or noise intensity.
Sound pressure is dependent on the average absorption factor of the room, distance from the sound source, the position of the unit in the room, the occupation and is therefore not suitable for calculations of sound propagation or spread.

An explanatory example :

The sound power level can be compared with the heating capacity of a boiler. This capacity will remain the same regardless of the thermal characteristics of the installation.
The sound pressure level can be compared with the temperature obtained in a room supplied from the boiler. Obviously, the temperature will vary depending upon the room characteristics and so it is with sound pressure.
Therefore, accurate comparisons between competing equipment should always be made, in the case of the boiler, by comparing boiler capacity and in case of fan coil units by comparing the sound power levels.

Conversion : Sound power level dB(A) ⇒ Sound pressure level dB(A)

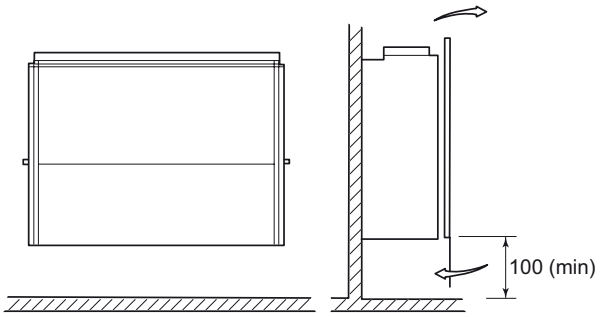


Example :

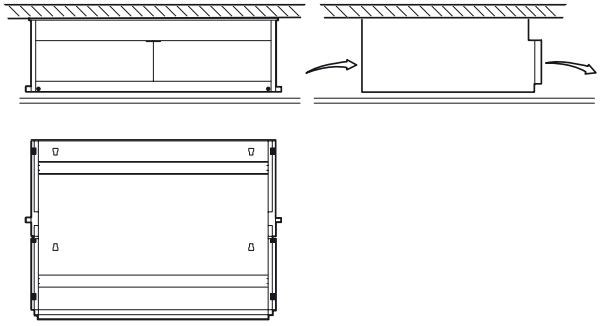
Office 5.25 m x 4.15 m x 2.75 m
⇒ Room volume : 60 m3
QZTA-13:
sound power level at low speed is 34 dB(A)
Absorption factor α : 0.15
Distance from the source : 2 m
Direction factor : 2
ΔL : 6 dB
Sound pressure level : Lp = Lw(A) - ΔL
Lp = 34 - 6 = **28 dB(A)**

Models of the *"Silent"* fan coil unit

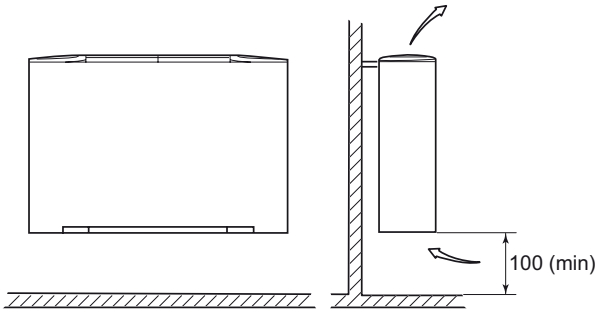
Version QZTA
concealed model in a vertical application



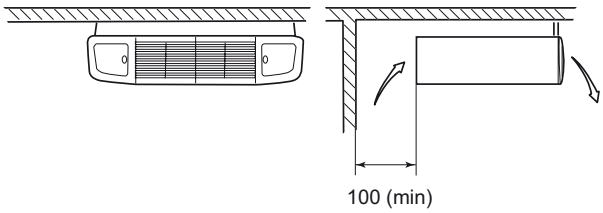
Version QZTA
concealed model in a horizontal application



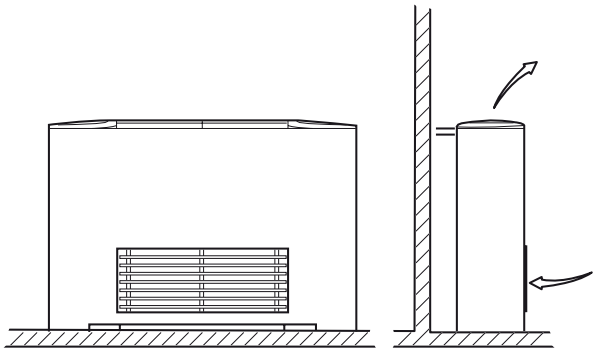
Version QZTF
exposed model in a vertical application



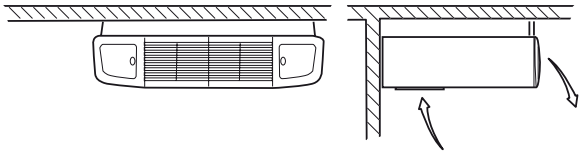
Version QZTF
exposed model in a horizontal application



Version QZTM
Vertical exposed model
with front air intake



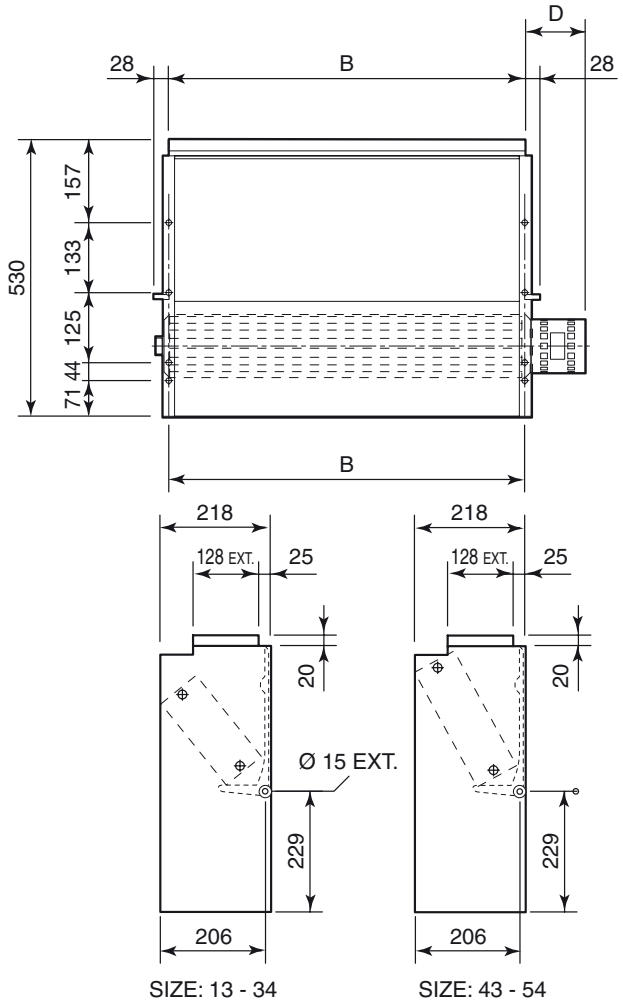
Version QZTT
Horizontal exposed model
with underside air intake



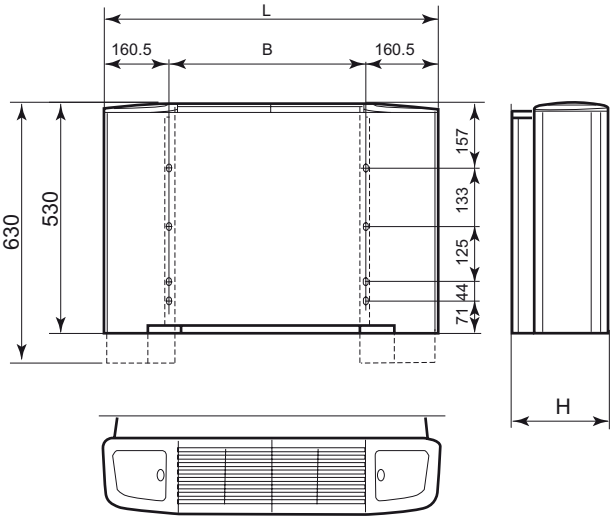
Note:
To connect vertical exposed model units to wall remote controls, use the terminal board adaptor kit QZMZ-01-02.

Dimensions of the *"Silent"* fan coil unit

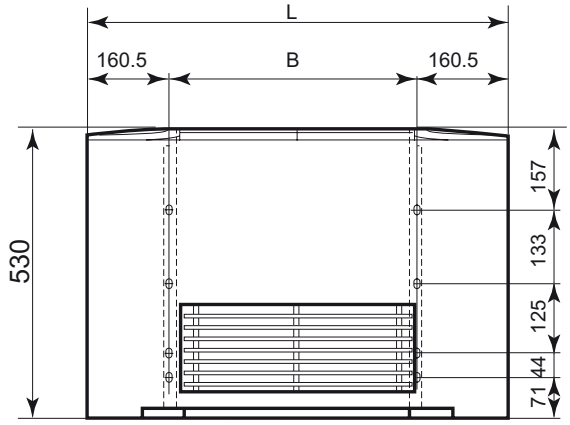
Version QZTA - vertical application



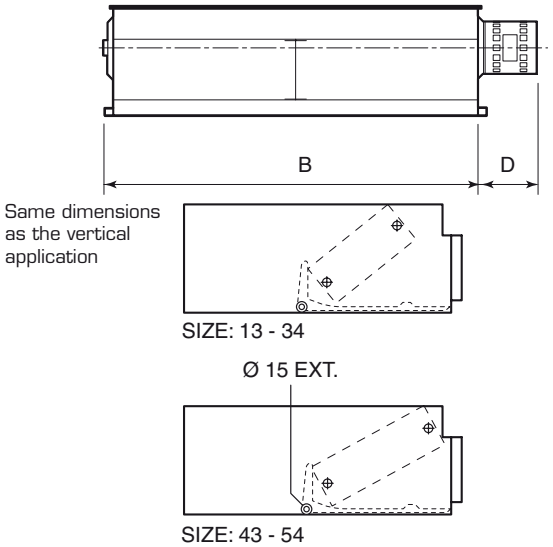
Version QZTF - vertical/horizontal application

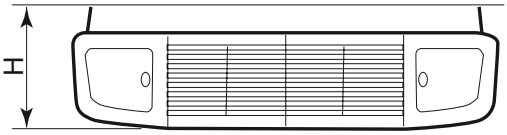


Version QZTM - vertical application
Version QZTT - horizontal application



Version QZTA - horizontal application





Dimensions and weights

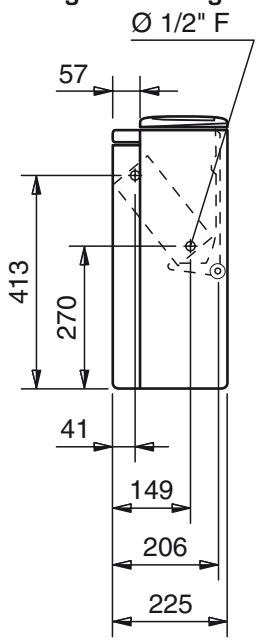
Size	B	L	D	H	V, l [1)]	W, kg
13	454	775	85	225	0.6	15
14	454	775	85	225	0.8	17
23	669	990	85	225	0.9	20
24	669	990	85	225	1.3	23
33	884	1205	95	225	1.3	23
34	884	1205	95	225	1.7	26
43	884	1205	95	225	1.6	24
44	884	1205	95	225	2.2	27
53	1099	1420	95	225	1.7	29
54	1099	1420	95	225	2.4	33

[1)] Coil water contents (Litres)

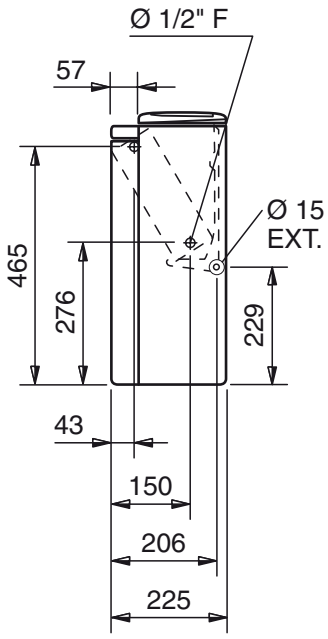
Water connections

2-pipe units

3 or 4 row coil for cooling or heating



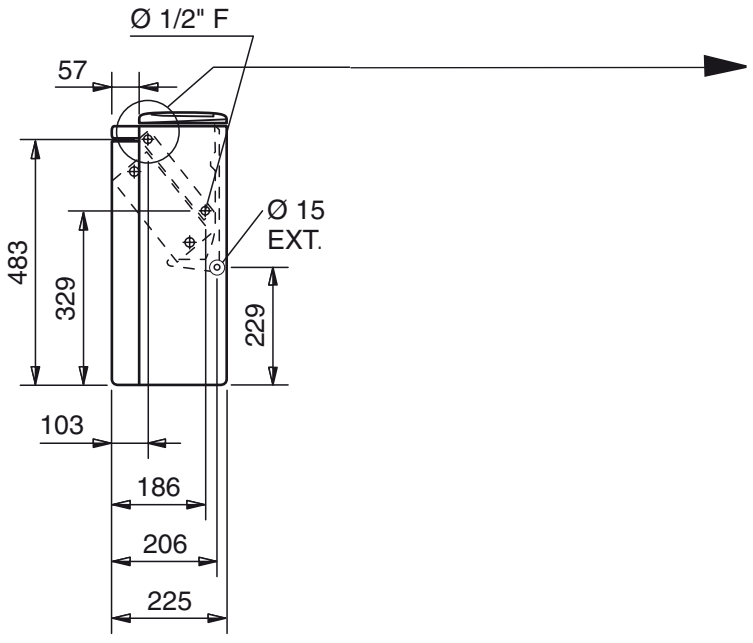
SIZE: 13 - 34



SIZE: 43 - 54

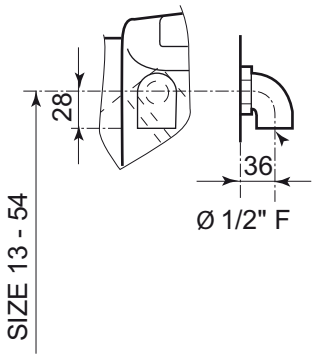
4-pipe units

1 row supplementary heating coil



SIZE 13 - 54

1 row heating coil connection



Practical guidelines

Precautions to be taken before and during installation

- Units are carefully inspected and tested prior to delivery.
- The water system must be carefully designed and balanced if the fan coil system is to perform correctly.
- The units should be installed in such a way to allow easy access for maintenance and adjustments.
- It is important that the unit is placed level or slopes slightly towards the condensate drain side.
- Sufficient slope of the drain system shall be assured for a quick condensate removal = 2 % (min. 2 cm/m).
- The inlet water connections for cooling and heating are always the lower of the coil connection.
- Although units equipped with water control valves have been carefully checked at the factory, it is advisable to check the tightness of all pipe connections on site using a spanner.
- Make sure that the condensate will drain off freely.
- Do not connect the drain system directly to the drainpipe of the main driptray but use the drainpipe of the auxiliary driptray for the evacuation of the condensate.
- It is recommended to seal the joint between the unit and the auxiliary driptray with a sealer.
- The distance between the air intake side and the floor or wall should be minimum 100 mm.
- Make sure that no shelving or furniture obstructs free air circulation.
- Dispose of packaging material in accordance with local requirements.

Electrical connections

- All motors are tested prior to delivery.
- The voltage of the motor is stated on the identification label of each unit.
- The electrical wiring of the units should be done by an authorised electrician in accordance with the local regulations.
- The electrical heating elements must only be factory installed.
- The electrical installation should be of permanent type and the unit protected by means of fuses in the power supply from the mains.
- Incorrect field wiring will cause motor damage.
- Always use the same power supply circuit for the fan coil system (fan coil units, thermostats, etc. ..)
- Do not connect more than one fan coil unit to one common speed selector switch.
- In master/slave applications, check carefully the equipotentiality of the electrical connections.

Control system

- When the fans are not running, it is strongly advisable to ensure that the chilled water supply to the coils is automatically shut off, to prevent condensation in and on the unit.
- Units equipped with electrical heating elements must be connected to a regulation with permanent ventilation.

Starting-up

- Check that the coils have been cleaned after the installation work.
- Check the water system and open the valves for the water supply.
- Check that the water connections do not leak.
- Open the venting screws and check that there is no air in the coils.
- Equalisation of the pressure drop across the whole water system is recommended.
- Check that the fan impeller rotates freely and in the correct direction.
- Run the fan at high, medium and low speed and check that no mechanical noise can be heard.
- Check that the unit is well secured and does not vibrate.
- Check the performance of the supervisory system.

Maintenance

! Before performing any service or maintenance operations, turn OFF the main power supply.
- Inspect the unit at regular intervals.
- The frequency of cleaning the coil and the driptray depend on local conditions.
- The coil should be cleaned on both sides. Use a vacuum cleaner with a rubber nozzle.
- Work carefully to avoid damaging the coil surfaces.
- Check that the drainpipe is clean and not clogged.
- The motor bearings are permanently lubricated and do not require lubrication.
- The standard filters are of the washable type and should be cleaned when clogged.
- Check min. once a month the filter – final pressure drop is recommended up to 25 Pa.
- The frequency of filter cleaning or replacement is dependent on the dust content in the return air. (our recommendation : Max. 1 month after starting-up period and further min. every 3 months)

WARNING !!

! The cooling and heating output of the unit will be reduced if the unit is running with clogged filters.
! Unit mounted electrical heating elements can influence the sound level of the units.
! Dirty/clogged filters will increase the sound level and are harmful to the operation and working-expenses of the units.
! Prolonged operation with a dirty / clogged filter may lead to deterioration of the motor.
! To avoid breaks caused by ice, please empty the water-circuit when the roomtemperature goes down to 0 °C.

Accessories for QZT

Electrostatic filter, for hygienic application

With this filter the various stages of air treatment are combined in one appliance.
Thanks to this new patented filter, air pollutants such as cigarette smoke, dust, pollen and most biological organisms are eliminated.
In addition, as fresh air is not being introduced to obtain the best climatic conditions, there are consequential energy savings.

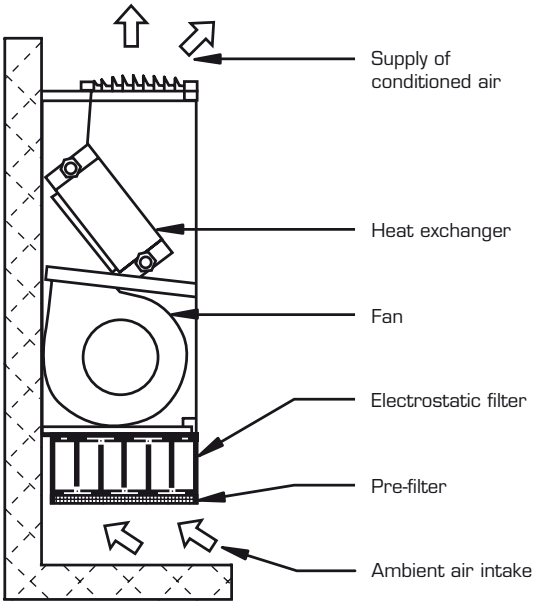
The electronic filtering system consists of two parts: the first is a plate type electronic active filter and is fitted in the inlet section of the fan coil, while the second is an electronic control and regulation board. All electrical connections are made during production.

This patented filter works on the electrostatic principle that electric charges of opposite polarity attract each other. When crossing the first filter section the particles in the air pass through an electric field which gives them a positive charge. In the second filter section the particles are attracted and adhere to the filter plates which have a negative electrostatic charge. In this way while passing through the filter the air is cleaned and any impurity is removed. Then the smallest particles (50 ÷ 0.01 µm) are exposed to an intensive ionic field and are polarized. **(Phase 2)**

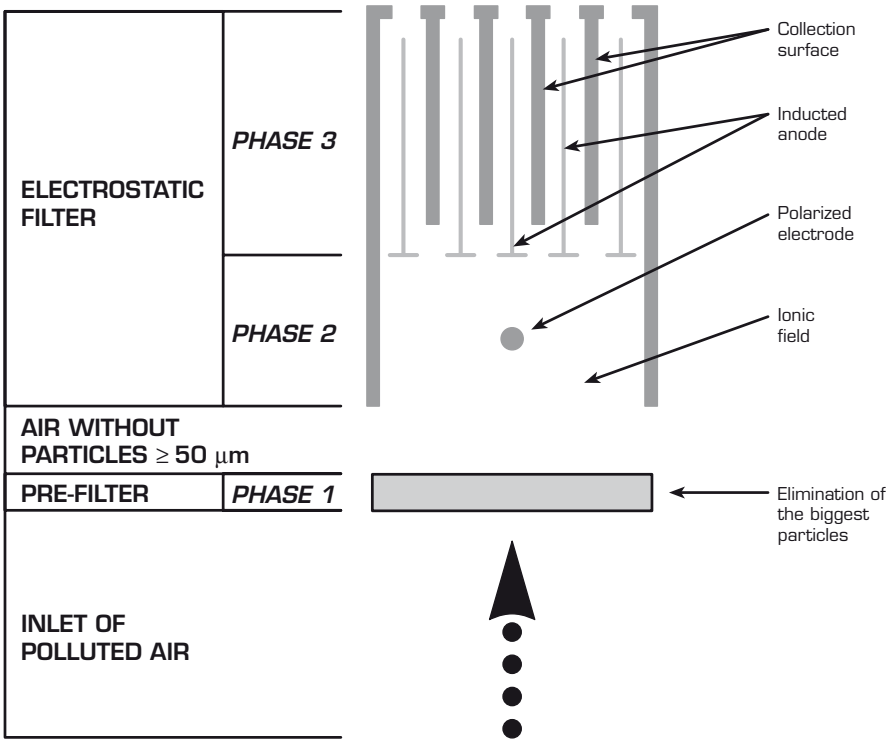
The charged particles passing through the second filter section, are pushed back by the anode and attracted to the collection surfaces by a strong, induced magnetic field. **(Phase 3)**

The air which leaves the unit is free from polluting particles.

Note! Accessories are not mounted/installed when delivered.



Size	Product code
13-14	QZMZ-09-11
23-24	QZMZ-09-21
33-34	QZMZ-09-31
53-54	QZMZ-09-51

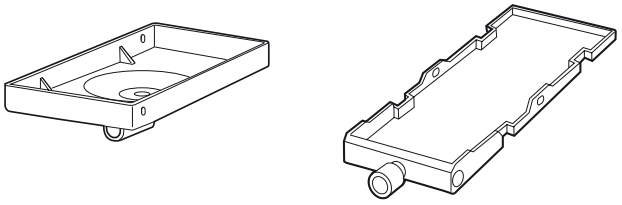


Accessories for QZT

Note! Accessories are not installed/mounted when delivered[1)]

Auxiliary driptray (for coil)

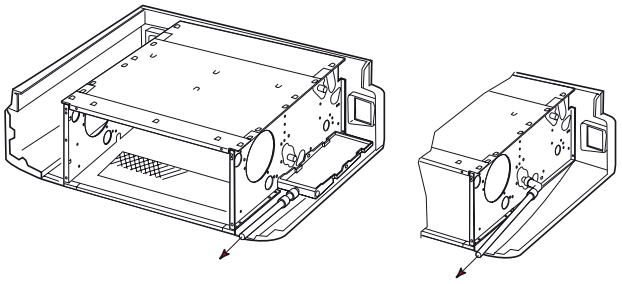
Intended for QZT	All Sizes	Product code
Vertical units	–	QZMZ-02-01
Horizontal units	Left hand unit	QZMZ-02-02
	Right hand unit	QZMZ-02-03



Supplementary plastic condensate drain pipe (with quick-connection) (for valve)

Allows correct condensate drain

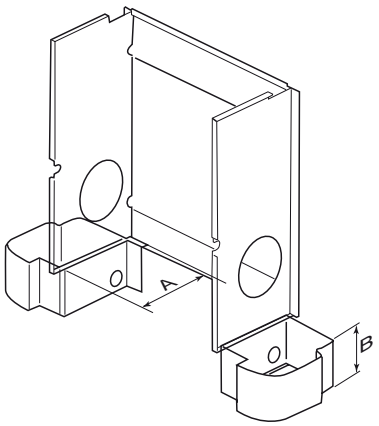
Intended for QZT	All Sizes	Product code
Vertical units	–	QZMZ-02-05
Horizontal units	–	QZMZ-02-05



Feet

(for vertical unit with and without decorative cabinet)

Sizes	Product code	A	B
13-54	QZMZ-03-10-0	185	100



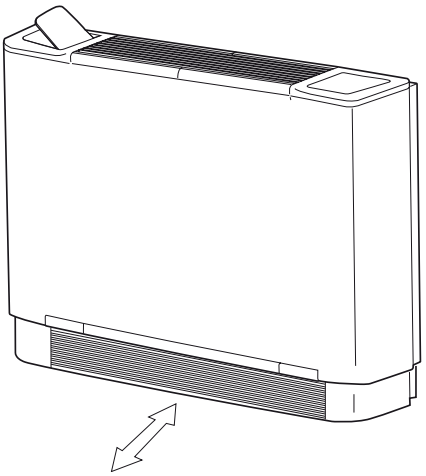
Feet for unit equipped with electrostatic filter

Size	Product code
Size 13-54	QZMZ-03-10-1

Aluminium air inlet grill

(to be mounted between the feet)
To be ordered in additional the corresponding feet

Sizes	Product code
13-14	QZMZ-06-31
23-24	QZMZ-06-32
33-44	QZMZ-06-33
53-54	QZMZ-06-35

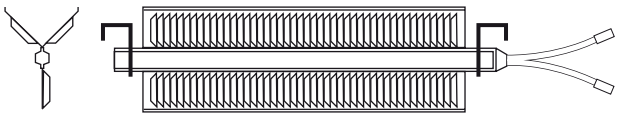


Electrical heating element

(230V - 1F+N)
With security thermostat and relais control (230V - 1F+N)

Base

Sizes	Product code	Capacity (W)
13-14	QZMZ-16-10	1000
23-24	QZMZ-16-15	1500
33-44	QZMZ-16-20	2000
53-54	QZMZ-16-25	2500



Alternative 1

Size	Product code	Capacity (w)
13-14	QZMZ-16-09	600
23-24	QZMZ-16-14	900
33-44	QZMZ-16-19	1250
53-54	QZMZ-16-24	1500

Alternative 2

Size	Product code	Capacity (w)
13-14	QZMZ-16-08	400
23-24	QZMZ-16-13	600
33-44	QZMZ-16-18	750
53-54	QZMZ-16-23	1000

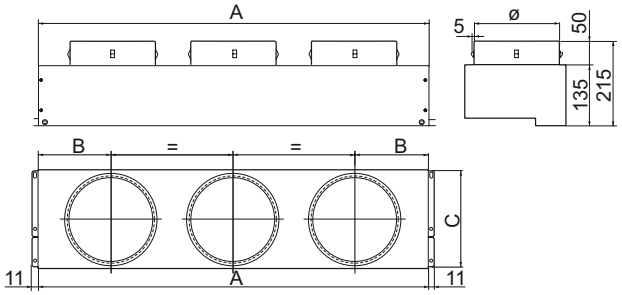
[1)] Except for electrical heating element.

Accessories for QZT

Note! Accessories are not installed/mounted when delivered

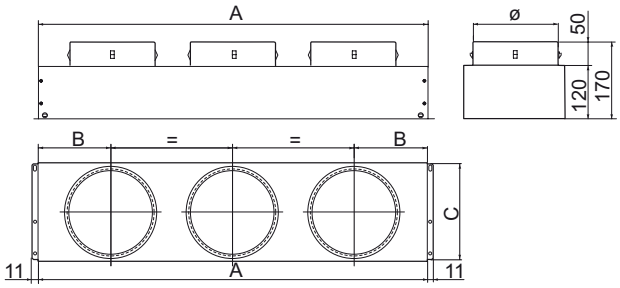
Outlet Plenum box with internal insulation and standard spigots

Sizes	Product code	A	B	C	ø
13-14	QZMZ-17-11-020	432	112	216	150
23-24	QZMZ-17-12-020	647	166	216	190
33-44	QZMZ-17-13-030	862	161	216	190
53-54	QZMZ-17-15-030	1077	188.5	216	190



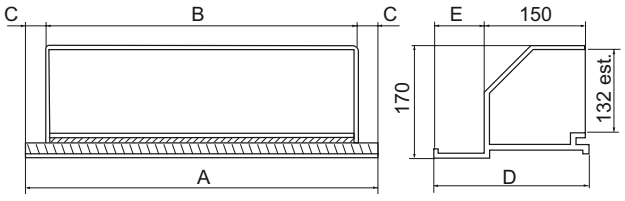
Inlet Plenum box with internal insulation and standard spigots

Sizes	Product code	A	B	C	ø
13-14	QZMZ-17-11-020	432	112	216	150
23-24	QZMZ-17-12-020	647	166	216	190
33-44	QZMZ-17-13-030	862	161	216	190
53-54	QZMZ-17-15-030	1077	188.5	216	190



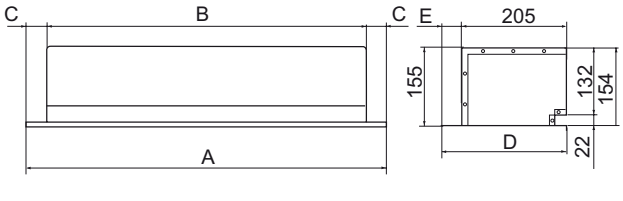
Outlet connection bend 90° - with internal insulation

Sizes	Product code	A	B	C	D	E
13-14	QZMZ-17-19-000	454	390	32	205	55
23-24	QZMZ-17-29-000	669	590	39.5	205	55
33-44	QZMZ-17-39-000	884	790	47	205	55
53-54	QZMZ-17-49-000	1099	990	54.5	205	55



Inlet connection bend 90° - with internal insulation

Sizes	Product code	A	B	C	D	E
13-14	QZMZ-18-19-000	454	390	32	216	11
23-24	QZMZ-18-29-000	669	590	39.5	216	11
33-44	QZMZ-18-39-000	884	790	47	216	11
53-54	QZMZ-18-59-000	1099	990	54.5	216	11



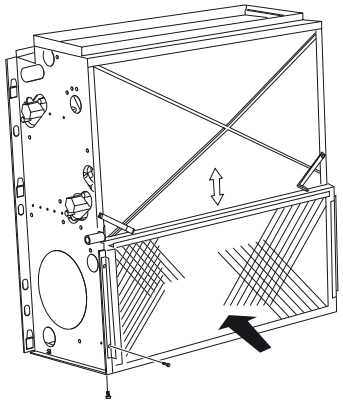
Accessories for QZT

Note! Accessories are not installed/mounted when delivered

Frontal air intake kit

(for vertical/horizontal unit without cabinet)
Consist of bottom closing panel and filter sliding guides

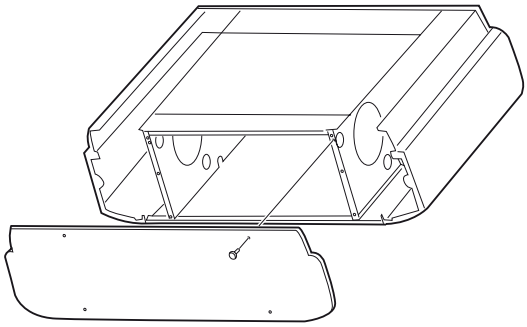
Sizes	Product code
13-14	QZMZ-11-10
23-24	QZMZ-11-20
33-44	QZMZ-11-30
53-54	QZMZ-11-50



Decorative back panel

(only for horizontal units with decorative cabinet)
Intended for QZMT/QZTT

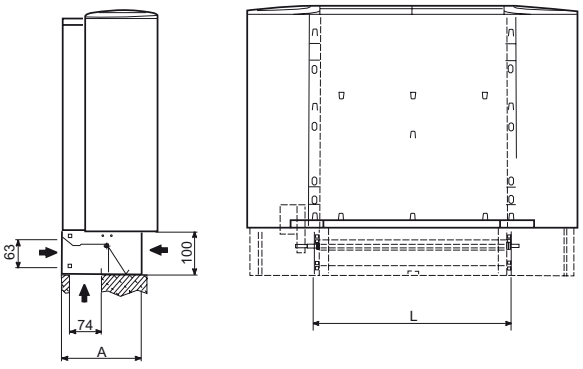
Sizes	Product code
13-14	QZMZ-19-11
23-24	QZMZ-19-21
33-44	QZMZ-19-31
53-54	QZMZ-19-51



Manual mixing damper (fresh air)

Can be motorized -
detailed information available on request

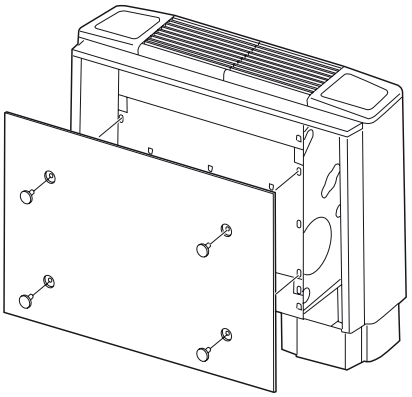
Sizes	Product code	A	L
13-14	QZMZ-10-10	185	454
23-24	QZMZ-10-20	185	669
33-44	QZMZ-10-30	185	884
53-54	QZMZ-10-50	185	1099



Decorative back panel

(only for vertical units with decorative cabinet)
Intended for QZMF/QZTF and QZMM/QZTM

Sizes	Product code
13-14	QZMZ-19-10
23-24	QZMZ-19-20
33-44	QZMZ-19-30
53-54	QZMZ-19-50



Condensate pump

(for horizontal units)

Intended for QZT	All Sizes	Product code
Unit NOT fitted	–	QZMZ-07-08
Unit fitted	–	QZMZ-07-10

Aluminium filter

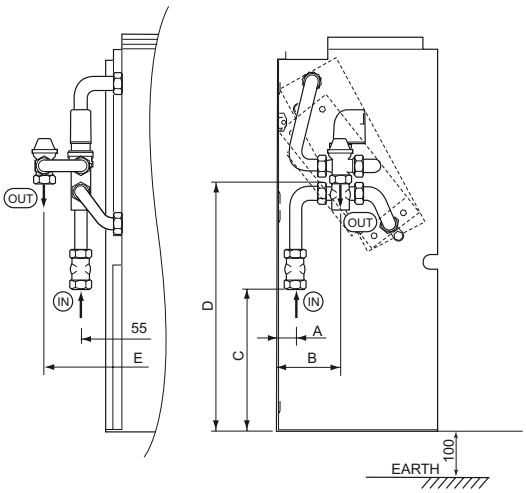
Sizes	Product code
13-14	QZMZ-09-10
23-24	QZMZ-09-20
33-44	QZMZ-09-30
53-54	QZMZ-09-50

Control valve kits for QZT

4-way control valve kit - ON/OFF (230V) - 2-pipe system

Unit mounted - Cooling or Heating

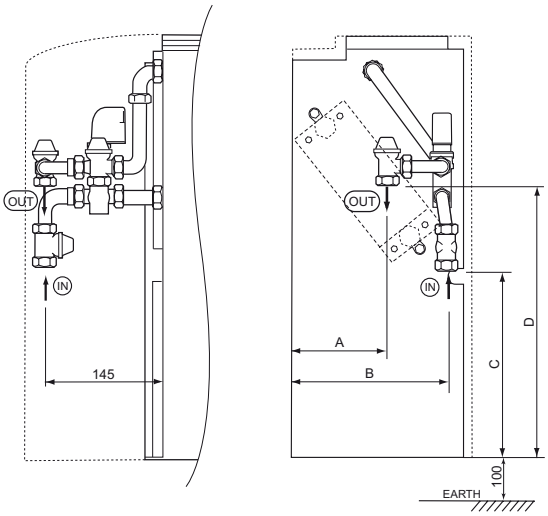
Sizes	Product code[1)]	Dia	A	B	C	D	E
13-34	QZMZ-22-31	1/2"	25	85	190	290	105
43-54	QZMZ-22-34	3/4"	25	85	190	290	105



4-way control valve kit - ON/OFF (230V) - 4-pipe system

Unit mounted - Cooling and Heating

Sizes	Product code[1)]	Dia	A	B	C	D	E
13-34	QZMZ-42-31	1/2"+1/22"	120	195	240	340	105
43-54	QZMZ-42-54	3/4"+1/2"	120	195	240	340	105



2-way control valve kit - ON/OFF (230V) - 2-pipe system

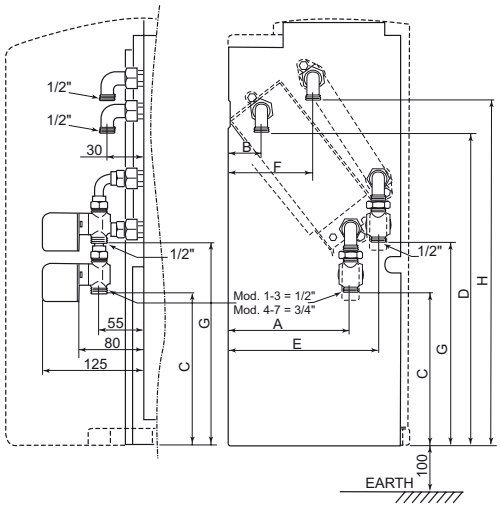
Unit mounted - Cooling or Heating

Sizes	Product code[1)]	Dia
13-34	QZMZ-21-21	1/2"
43-54	QZMZ-21-24	3/4"

2-way control valve kit - ON/OFF (230V) - 4-pipe system

Unit mounted - Cooling or Heating

Sizes	Product code[1)]	Dia	A	B	C	D	E	F	G	H
13-34	QZMZ-41-21	1/2"+1/2"	149	41	180	386	186	103	239	456
43-54	QZMZ-41-24	3/4"+1/2"	176	40	175	422	210	104	237	440



[1)] Use this code if ordered separately. **Note!** If the valve kit is ordered with this code, the valve kit will not be mounted on fan coil.

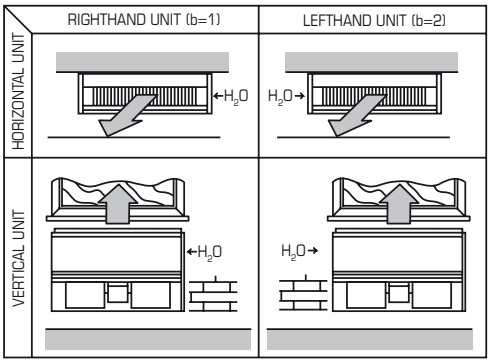
Product code

"Silent" fan coil unit **QZT . -aa-b-c-1-ee**

Version (.)
A = vertical/horizontal basic unit - without decorative cabinet
F = vertical/horizontal unit - with decorative cabinet
M = vertical unit - with decorative cabinet - front air intake
T = horizontal unit- with decorative cabinet - underside air intake

Size (aa)
13, 14, 23, 24, 33, 34, 43, 44, 53, 54

Water connection (b)
Vertical unit = Horizontal unit Looking into the air outlet
1 = right hand unit - water connections on the right side of the unit
2 = left hand unit - water connections on the left side of the unit



Coil arrangement (c)
2 = 2-pipe system (one water coil) - cooling or heating
4 = 4-pipe system (two water coils) - cooling and heating

Unit voltage (d)
1 = 230 V / 1 / 50 Hz according to IEC publ. 38

Accessories 'mounted' on the unit (ee)
00 = without electrical element, 2-way valves kit, 4-way valves kit and electrostatic filter
01 = with standard electrical element (see accessories list)
02 = with standard 2-way valves kit (see accessories list)
03 = with standard 4-way valves kit (see accessories list)
04 = with electrostatic filter (see accessories list)
05 = with standard electrical element and with standard 2-way valves kit (see accessories list)
06 = with standard electrical element and with standard 4-way valves kit (see accessories list)
07 = with electrostatic filter and with standard 2-way valves kit (see accessories list)
08 = with electrostatic filter and with standard 4-way valves kit (see accessories list)

Remark: Do not use an electrical element in combination with an electrostatic filter.

Accessories

Accessories must be specified separately. They are ordered and delivered separately (not electrical element). For accessories list see pages 15 and 18.

Control equipment

Control equipment is included in a separate catalogue "Control equipment" and must be specified separately.