

TermoFan



TermoFan
Air Conditioning Systems

TSEC

Döşeme Tipi Fan Coil Üniteleri
Floor Type Fan Coil Units







TSEC serisi fan coil üniteleri; Performans ihtiyaçlarını karşılayabilen, sessiz çalışan, düşük enerji tüketimine sahip, kurulumu ve bakımı kolay cihazlardır.

Talep üzerine ; özellikle düşük enerji tüketimine sahip, invertör kontrollü EC olarak tanımlanan yenilikçi elektronik motorlar santrifüj ve tanjensiyel fanlı fancoil ünitelerde kullanılabilir. EC motorlar geleneksel motorlarla karşılaştırıldığında elektrik tüketimi %50 oranında azalmaktadır. Bu motorlar sayesinde hava akışı ve ortam sıcaklığı hassas olarak kontrol edilebilmektedir.

TSEC serisi fan coil üniteleri; kasetli veya kasetlessiz, duvar veya tavan tipi olarak 4 modele ve 2 borulu sistemleri çini 3 sıralı veya 4 sıralı bataryaya, 4 borulu sistemler için 1 sıralı bataryaya sahiptir. Bu özellikleri sayesinde kurulumlarda büyük esneklik sağlar ve düşük sıcaklıkta sıcak su kullanımına olanak sağlar. TSEC modellerinde; çeşitli tipte ayarlanabilir valfler, bağlantı ayakları, arka kaplama panelleri, elektrikli ısıtıcı, yoğuşma pompası, taze hava giriş panjuru ve hava giriş/ çıkış difüzörleri gibi aksesuar seçenekleri mevcuttur.

Elektrik ve Elektronik Kontrol:
 Döşeme tipi modellerde kabin içi kumandalı olarak kontrol seçeneği mevcuttur. Free patentli kablosuz kontrol, istenilen konfor şartlarının sürdürülebilmesini sağlamakta ve ünitelerin kurulumunda büyük esneklik sunmaktadır.

The TSEC series fan coils are units that meet the requirements of performance, silent, low power consumption, easy to install and easy to maintain.

On demand, especially the innovative low energys consumption electric motors, called EC (motor control module) with inverter control, can be used in units with centrifugal and tangential fans. Compared to EC motors with conventional motors, there is a 50% reduction in electricity consumption. With these motors it is possible to control the airflow and the ambient temperature with precision.

TSEC series fan coil units by type of location: have 4 models cassette or without, wall or ceiling type; by system design and by type of heat exchanger (air cooler): 2-tube systems with 3-row or 4-row batteries and 1-row batteries for 4-tube systems. These features provide greater flexibility in installation and allow the use of hot water at low temperatures. TSEC models are equipped with various types of accessories including adjustable valves, connecting feet, rear cladding panels, electric heater, condensation pump, fresh air inlet louvers and air inlet/outlet diffusers.

*Electric and electronic control:
 Floor-type models have the ability to be remotely controlled from the cab. Loose patented wireless control ensures that desired comfort conditions are maintained and offers greater flexibility when installing units.*



TEKNİK ÖZELLİKLER / TECHNICAL SPECIFICATIONS

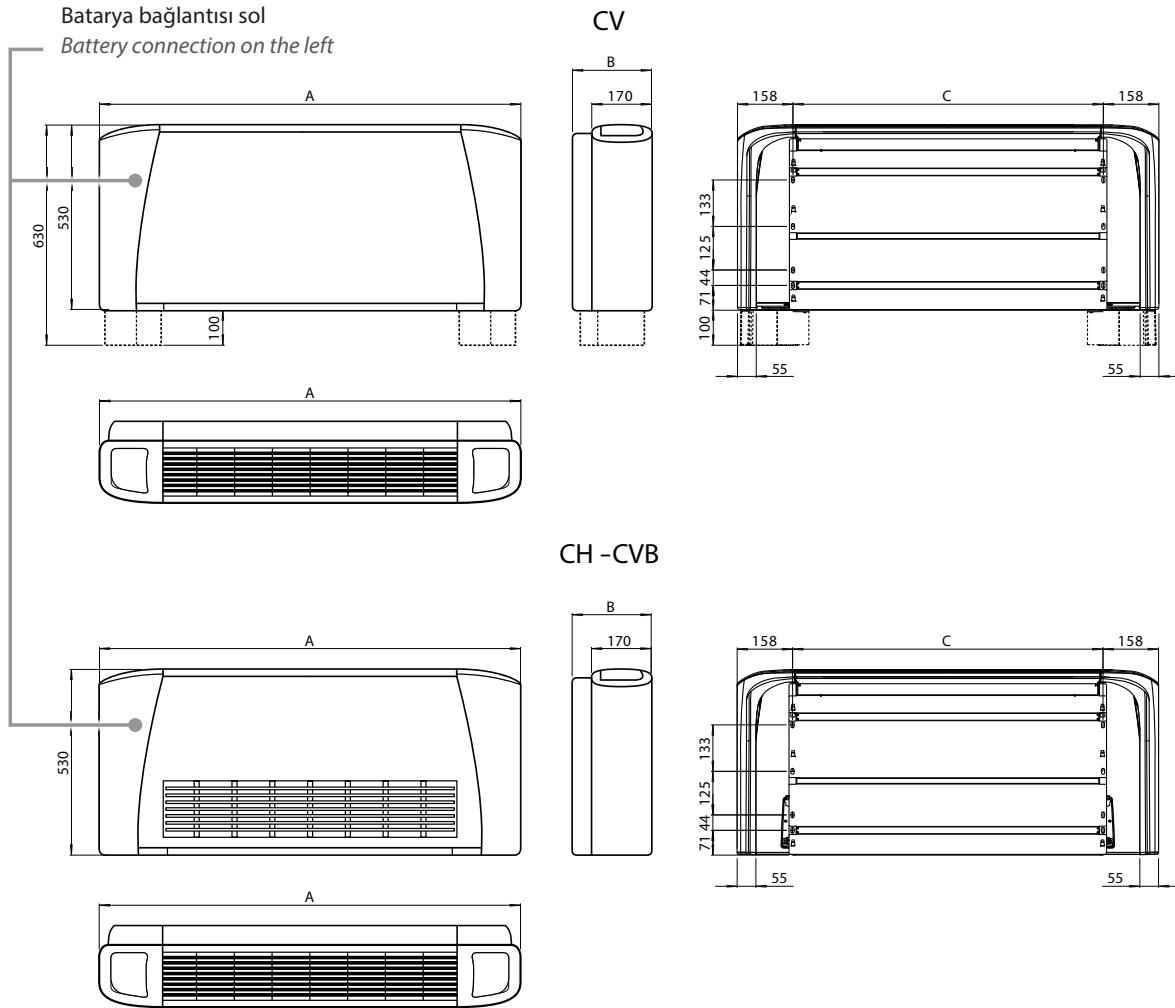


TSEC	Su Debisi	Su/Water	Hava	Toplam	Duyulur	Toplam	Ses	Motor	Bağlantı çapları Connection diameters	
	Water flow	Basınç d. Pressure reduction	Air flow	Overall performance of cooling	Explicit performance in cooling mode	Overall performance in heating mode	Sound pressure level	Engine power	Su Supply/ return of water	İlave batarya Additional battery
	l/h	kPa	m ³ /h	W	W	W	dB(A)	Watt	İnç	İnç
TSEC 1.3-2T	0,051	2,6	220	1.069	815	2.894	36	33	1/2 - 1/2	1/2
TSEC 1.4-2T	0,063	6,3	220	1.312	930	3.192	36	33	1/2 - 1/2	1/2
TSEC 2.3-2T	0,078	7,3	295	1.642	1.165	4.157	38	32	1/2 - 1/2	1/2
TSEC 2.4-2T	0,094	16,0	295	1.964	1.334	4.499	38	32	1/2 - 1/2	1/2
TSEC 3.3-2T	0,123	22,9	385	2.582	1.740	5.981	40	41	1/2 - 1/2	1/2
TSEC 3.4-2T	0,136	13,7	385	2.844	1.885	6.298	40	41	1/2 - 1/2	1/2
TSEC 4.3-2T	0,146	31,0	485	3.056	2.092	7.282	38	44	1/2 - 1/2	1/2
TSEC 4.4-2T	0,164	18,4	485	3.422	2.296	7.753	38	44	1/2 - 1/2	1/2
TSEC 5.3-2T	0,183	17,9	650	3.825	2.655	9.229	39	61	1/2 - 1/2	1/2
TSEC 5.4-2T	0,210	35,7	650	4.402	2.959	9.888	39	61	1/2 - 1/2	1/2
TSEC 6.3-2T	0,203	21,6	760	4.250	2.989	10.463	43	78	1/2 - 1/2	1/2
TSEC 6.4-2T	0,247	42,1	760	5.173	3.480	12.019	43	78	1/2 - 1/2	1/2
TSEC 7.3-2T	0,254	37,3	925	5.315	3.695	12.856	47	103	1/2 - 1/2	1/2
TSEC 7.4-2T	0,284	31,1	925	5.947	4.037	13.757	47	103	1/2 - 1/2	1/2
TSEC 8.3-2T	0,286	20,4	1.200	5.994	4.320	15.937	51	130	1/2 - 1/2	1/2
TSEC 8.4-2T	0,326	19,0	1.200	6.825	4.758	17.283	51	130	1/2 - 1/2	1/2
TSEC 9.3-2T	0,328	26,1	1.500	6.866	5.061	18.816	55	176	1/2 - 1/2	1/2
TSEC 9.4-2T	0,378	24,8	1.500	7.911	5.616	20.661	55	176	1/2 - 1/2	1/2

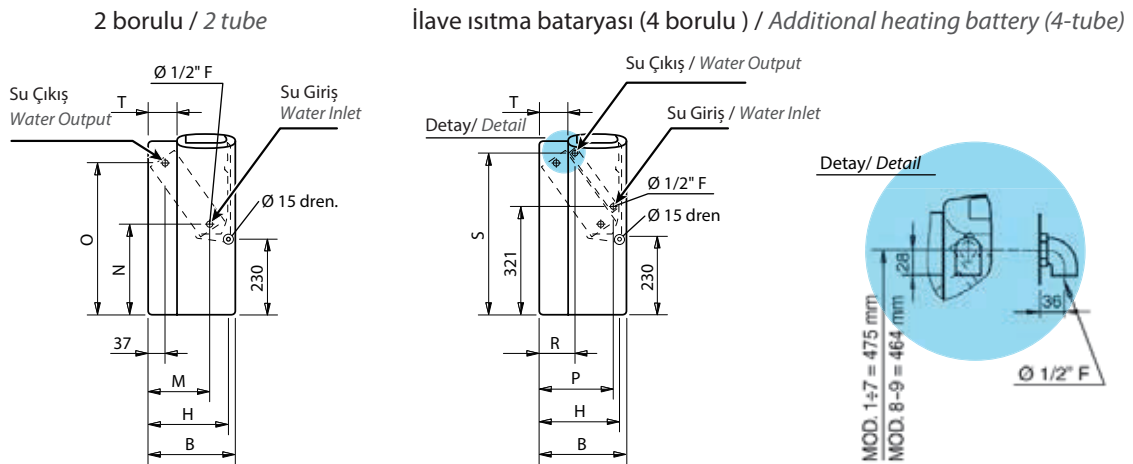
Yüksek fan hızında, soğutma konumunda ortam sıcaklığı 27C, bağıl nem %50, 7/12C soğuk su rejiminde, Isıtma konumunda 20C iç ortam sıcaklığı, 80C sıcak su rejiminde geçerlidir. ***Ses basınç seviyeleri ölçülürken, 100m3 hacme sahip bir odada ve 0.5 saniyelik yansımaya sürelerinde ölçüm yapılmıştır.

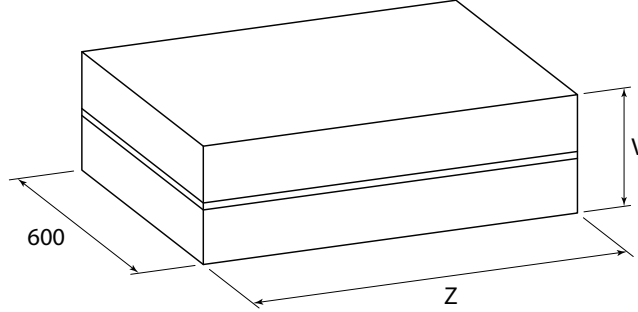
In the cooling mode at high phase velocity the ambient temperature is 27 °C, in the cold water mode with a temperature of 7/12 °C relative humidity is 50%. In the heating mode the temperature of the internal environment is 20°C, indeed in the hot water mode it is 80°C. ***Measurement of the sound pressure level was made in the room with the volume of 100m3 and with the temporal reflection of 0.5 sec.

BATARYA BAĞLANTI DETAYLARI / BATTERY CONNECTION DETAILS



BATARYA BAĞLANTISI / BATTERY CONNECTION



ÖLÇÜLER / DIMENSIONS

Ölçüler / Dimensions (mm)

Model	1.3/1.4	2.3/2.4	3.3/3.4	4.3/4.4	5.3/5.4	6.3/6.4	7.3/7.4	8.3/8.4	9.3/9.4
A	670	770	985	985	1200	1200	1415	1415	1415
B	225	225	225	225	225	225	225	255	255
C	354	454	669	669	884	884	1099	1099	1099
H	205	205	205	205	205	205	205	235	235
M	145	145	145	145	145	145	145	170	170
N	260	260	260	260	260	260	260	270	270
O	460	460	460	460	460	460	460	450	450
P	185	185	185	185	185	185	185	210	210
R	105	105	105	105	105	105	105	110	110
S	475	475	475	475	475	475	475	465	465
T	55	55	55	55	55	55	55	85	85
V	260	260	260	260	260	260	260	290	290
Z	720	820	1.035	1.035	1.250	1.250	1.465	1.465	1.465

Ağırlık / Weight (kg)

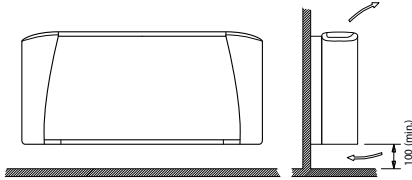
Model	Ağırlık ambalajlı / Weight with packing									Ağırlık ambalajsız / Weight without packing									
	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9	
Sıra Sayısı Row count	3	14	16	21	22	24	25	30	39	40	13	14	18	19	21	22	26	35	36
	3+1	15	19	27	28	30	31	37	47	48	14	17	24	25	27	28	33	43	44
	3+2	15	22	33	34	36	37	44	55	56	14	20	30	31	33	34	40	51	52
	4	14	18	24	25	27	28	34	45	46	13	16	21	22	24	25	30	41	42
	4+1	15	21	29	30	32	33	40	52	54	14	19	26	27	29	30	36	48	50

Su Hacmi (litre) / Water volume (liter)

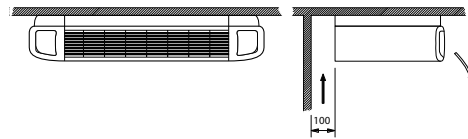
Model	1	2	3	4	5	6	7	8	9	
Sıra Sayısı	3	0,5	0,6	0,9	0,9	1,3	1,6	1,7	1,9	1,9
	4	0,7	0,8	1,3	1,3	1,7	2,2	2,4	2,8	2,8
	+1	0,2	0,2	0,3	0,3	0,4	0,5	0,5	0,6	0,6
	+2	0,4	0,4	0,6	0,6	0,8	1,0	1,0	1,2	1,2

MONTAJ ŞEKİLLERİ / MOUNTING TYPE

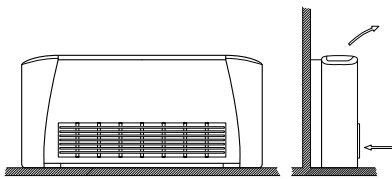
CV
Dikey montaj - Duvar montajı / Vertical mounting - Wall mounting



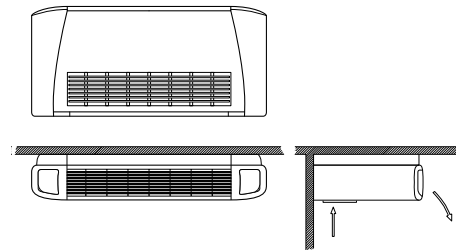
CV
Yatay montaj - Tavan montajı / Horizontal mounting - Ceiling mounting



CVB
Dikey kullanım - Yere montaj / Vertical mounting - Flush mounting



CH
Yatay kullanım / Horizontal execution



TSEC-T TERMOSTAT / THERMOSTAT



- ON-OFF switch.
- 3 speed switch.
- Summer/Winter switch.
- Electronic room thermostat for fan or valves control (ON-OFF)

- It allows to control the low temperature cut-out thermostat (TMM).
- * It allows to control the chilled water valve (ON-OFF) and the heating electric resistance (BEL) only in case that hot water is not used in winter (otherwise please use CB-R-IAQ control with on/off switch for the electric resistance).

CONTROL OPERATIONS	C. IDENTIFICATION
ON-OFF switch	✓
ON-OFF switch for Crystall electrostatic filter or electric resistance	
Manual 3 speed switch	✓
Manual/Automatic 3 speed selection	
Summer/Winter switch	✓
Remote centralized Summer/Winter switch or by an automatic change-over fitted on the water pipe	
Automatic Summer/Winter switch with neutral zone for 4 pipe installation with 2 valves	
Room thermostat for fan control (ON-OFF)	✓
Room thermostat for 1 valve control (2 pipe installation)	✓
Room thermostat for 2 valve control (4 pipe installation)	✓
Simultaneous thermostatic control of the valves and fan	
Room thermostat for chilled water valve (SUMMER) and electric resistance (WINTER) control (In winter only the resistance is working)	✓
Room thermostat for fan and electric resistance control (not for CRYSTALL)	
Installation of electronic low temperature CUT-OUT thermostat (TME)	
Installation of bimetallic low temperature CUT-OUT thermostat (TMM)	✓

SİPARİŞ NOTASYONU / ORDER NOTATION

