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EUR[★]TOP

50GZ

Nominal cooling capacity 42.9-116.1 kW

The 50GZ packaged rooftop units are versatile and efficient air conditioners, designed for outdoor installation. The units are self-contained and can be installed in commercial and industrial applications.

Features

- The new refrigerant R-407C is a blend of R-32, R-125 and R-134a, ensures similar performances to those achieved with R-22 and offers an economical solution to environmental protection problems.
- The components of these units are specifically designed for the new refrigerant, and the units have been submitted to the necessary laboratory tests to ensure perfect operation.
- The unit cabinet is made of prepainted sheet metal, specially suitable for outdoor use.
- Hinged panels
- Reduced size and weight make these units ideal for today's lightweight building structures.
- Models 016 and 028 have scroll compressors; the other sizes have reciprocating hermetic compressors. All are designed for use with R-407C and include a thermal cut-out to protect the motor against overloads and overtemperatures.
- The compressors have built-in silencers for extra-quiet operation and are mounted on vibration isolators.
- Double-inlet indoor fans have forward-curved blades. They are statically and dynamically balanced for quiet, vibration-free operation. They are factory-set to supply nominal air

volume and static pressure. The fans are powered by generously sized three-phase motors via adjustable belt and pulley transmission.

- Fan motors are corrosion-resistant, protected to IP54 and designed for quiet operation and long maintenance-free life. The motor is protected by a built-in thermal cut-out against overheating.
- The heat exchangers are made of high-quality staggered copper tubing, mechanically bonded in pretreated corrugated aluminium fins, with a high level of corrosion protection.
- The refrigerant circuit uses deoxidized and dehydrated copper tubes with obus type access valves. It includes a sight-glass with moisture indicator, expansion valves, filter driers and all components required for correct unit operation.
- The units are fully wired in accordance with EN standards and include thermo magnetic circuit breakers and a main disconnect switch.

Master Link

The Master Link electronic control system controls unit operation and enhances performance. The control system comprises the following components

- Base module
- Extension module
- Temperature probe
- Safety transformer

- A basic service tool and an advanced tool are available as accessories.
- Start-up, service and maintenance operations can be carried out on the unit itself via Master Link, but they can also be done using either of the two following tools:

Basic tool

The basic service tool is a very useful device for start-up, service and maintenance operations. It offers a real-time display of the status of the room thermostat signals, the unit, and each of the main refrigerant circuit and protection elements of the unit. The basic tool has an option to access several submenus with maintenance and service operations: module and list selection, editing lists (parameters, totalizers, timers, temperatures, fault identification), data transmission (parameters, totalizers), alarm.

Advanced tool

This tool provides an effective way of supervising air conditioning installations which include units equipped with the Master Link control. Its functions include: automatic recognition of units present in the supervision network (SCAN function), display of the unit real time status, editing of unit data lists (parameters, totalizers and fault identification), advanced unit test functions, thermostat sequence evaluation, unit status and history reports.

Options and accessories

	Option	Accessory
Economizer	X	X
Enthalpy control	X	X
Shielded electric heaters	X	X
Electric strip heaters	X	X
Front discharge		X
Adjustable longitudinal roof curb, vertical discharge		X
Fixed position vertical discharge		X
Adjustable transverse roof curb, vertical discharge		X
Exhaust fan		X
Power exhaust		X
Superior drive (indoor fan)	X	
Hot water coils	X	X
Hot water coil with 3-way valve	X	X
Head pressure control	X	X
Basic Tool for Master Link control system		X
Advanced Tool for Master Link control system		X
High-efficiency filters	X	X
Rotalock valves	X	
Smoke detector with damper	X	X
Manual outdoor air damper	X	X
Smoke detector without damper (for units with Economizer)	X	X
Thermostat		X
Unit without neutral	X	

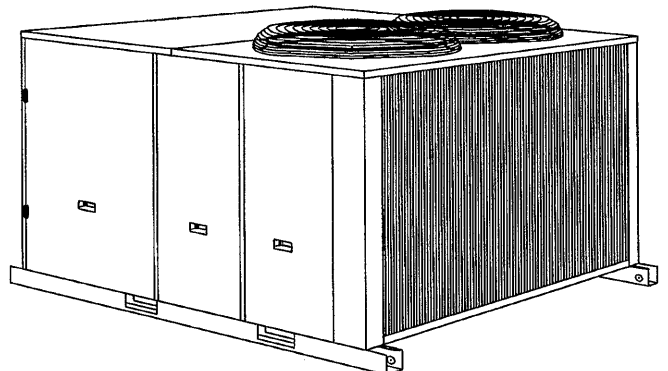
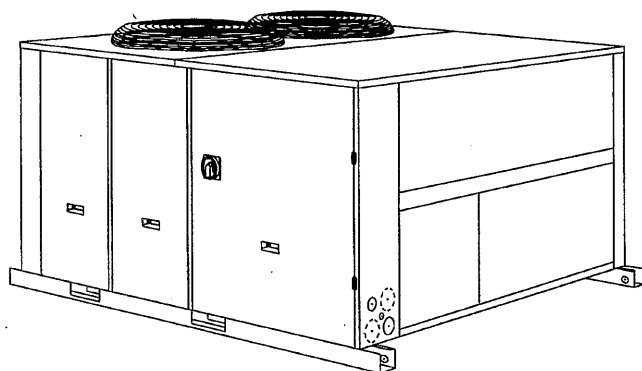
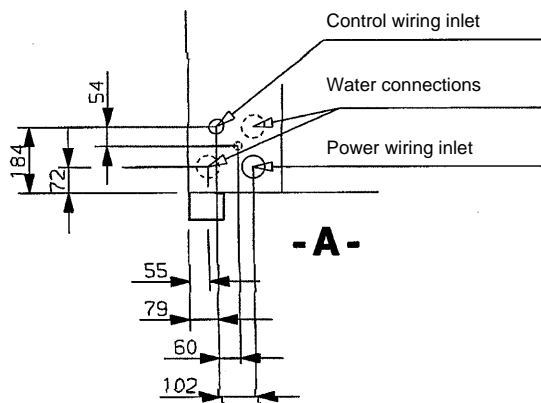
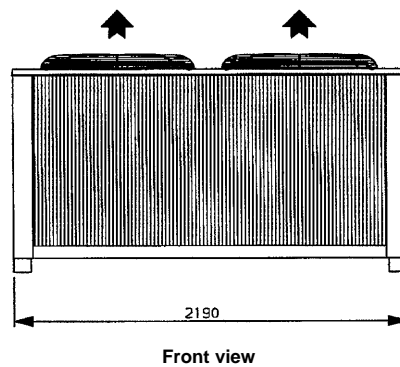
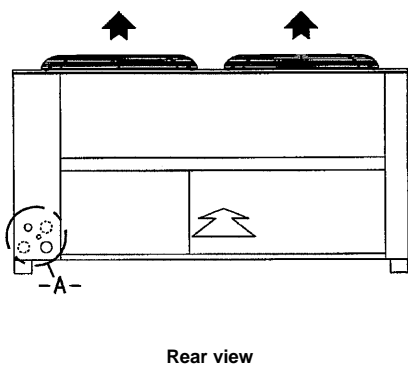
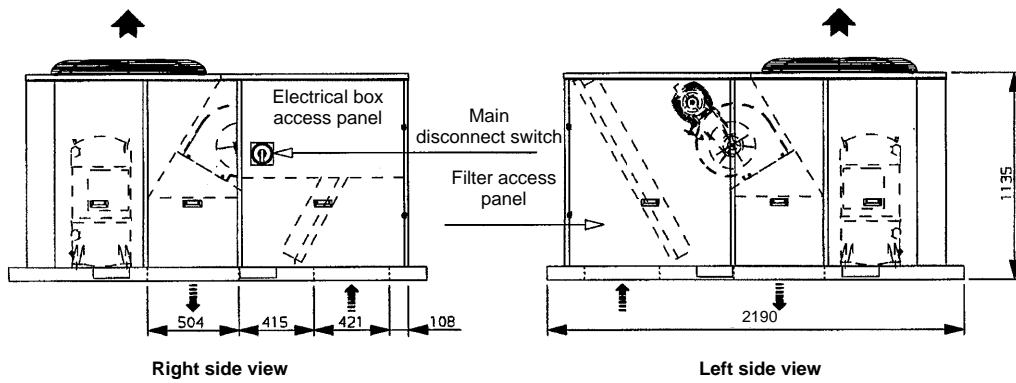
Physical data

50GZ	016	020	024	028	034	040	
Nominal capacity*	kW	42.9	56.1	67.4	81.3	99.5	116.1
Operating weight	kg	670	680	750	977	1390	1440
Refrigerant charge R-407C	kg	14.2	7.8 x 2	8.6 x 2	13.0 x 2	14.6 x 2	15.5 x 2
Compressor		Scroll	Hermetic	Hermetic	Scroll	Hermetic	Hermetic
Quantity		1	2	2	2	2	2
Oil charge (each)	l	6.6	4.0	4.0	6.6	7.6	7.6
Indoor coil		Copper tubes, pretreated aluminium fins					
Face area	m ²	1.71	1.71	1.71	1.71	2.56	2.56
Rows ...fin spacing	mm	3 ... 1,81	3 ... 1,81	4 ... 1,70	4 ... 1,70	3 ... 1,70	2
2		Copper tubes, pretreated aluminium fins					
Face area	m ²	2.05	1.93	1.93	2.78	5.20	5.20
Rows ...fin spacing	mm	4 ... 1,81	4 ... 1,70	5 ... 1,70	5 ... 1,70	3 ... 1,81	4 ... 1,81
Indoor fan		Centrifugal					
Quantity		1	1	1	1	1	1
Air flow	l/s	2528	3278	3472	3944	5550	5550
Fan speed	r/s	15.41	18.08	19.41	16.50	13.88	14.21
Nominal power input	kW	2.95	4.05	5.50	5.50	6.40	6.74
Outdoor fan		Axial					
Quantity		2	2	2	2	2	2
Diameter	mm	650	760	760	760	910	910
Fan speed	r/s	14.66	16.66	16.66	16.66	14.40	14.40
Nominal power input (each)	kW	0.75	1.50	1.50	1.50	1.36	1.36
Air filter		Washable					
Quantity		2	2	2	2	2	2
Width x height	mm	900 x 1000	900 x 1000	900 x 1000	900 x 1000	900 x 1000	900 x 1000
Thickness	mm	13	13	13	13	13	13

* Based on an outdoor air dry bulb temperature of 35°C and an indoor air wet bulb temperature of 19°C.

Dimensions, mm

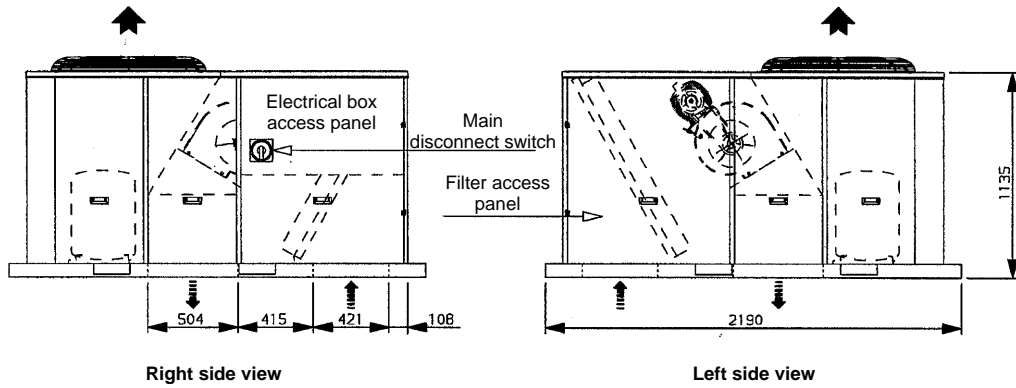
50GZ 016



When designing an installation, always use up-to-date drawings, available from your local Carrier office.

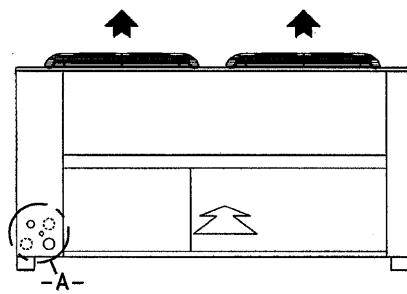
Dimensions, mm

50GZ 020,024

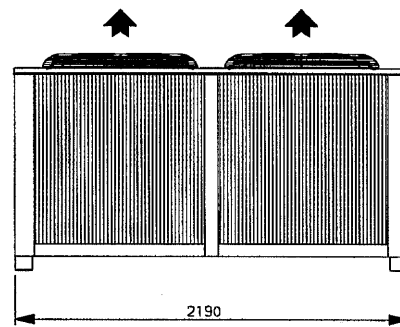


Right side view

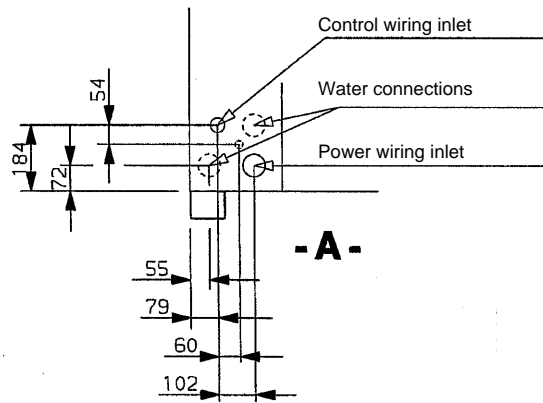
Left side view



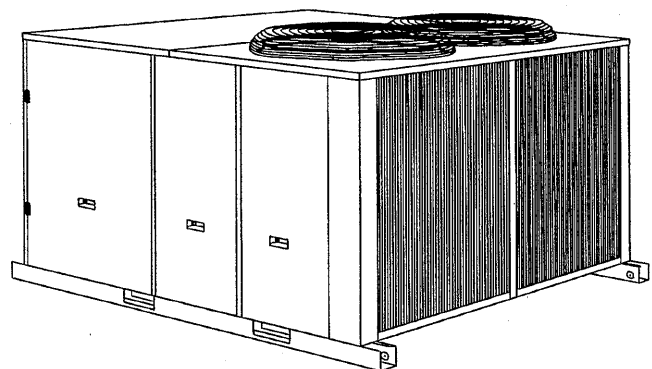
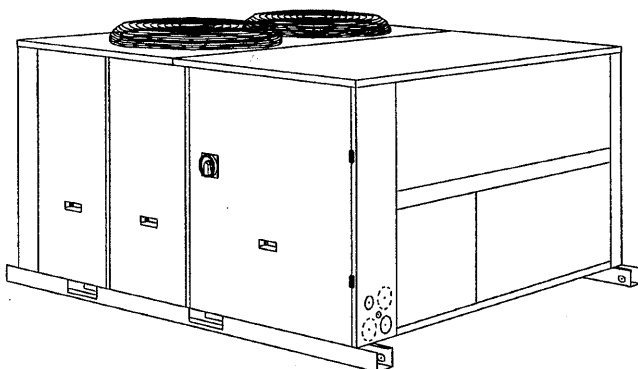
Rear view



Front view



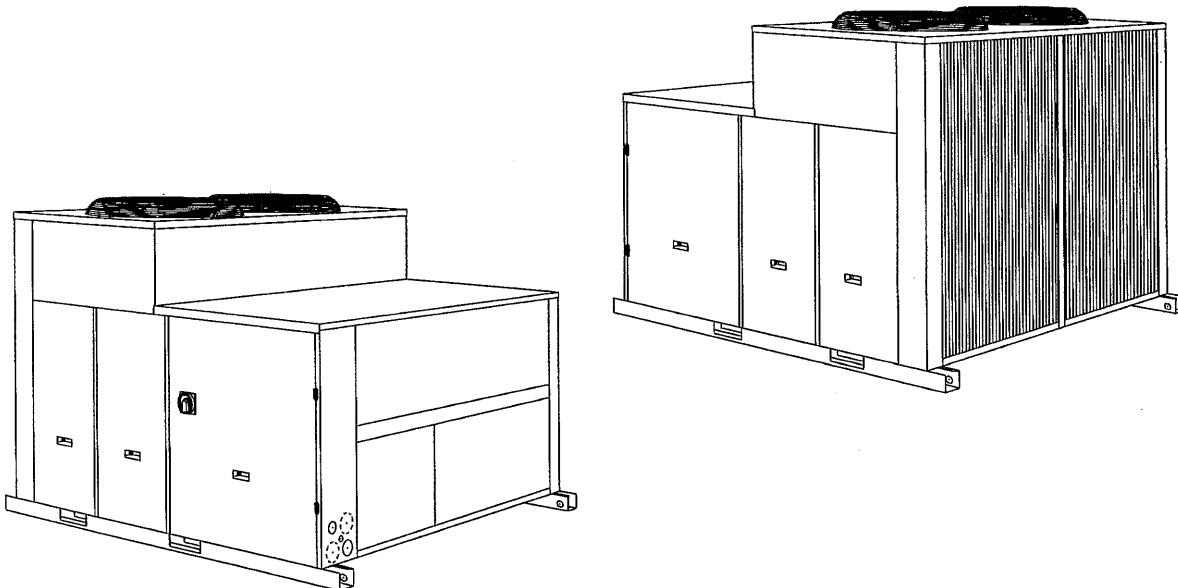
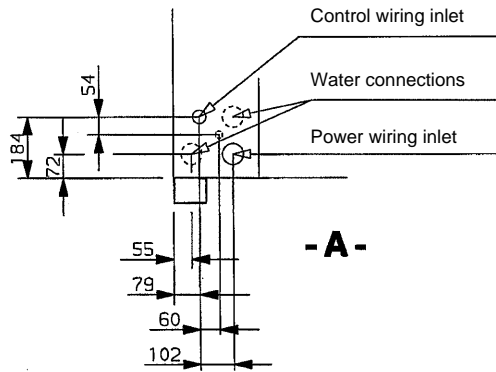
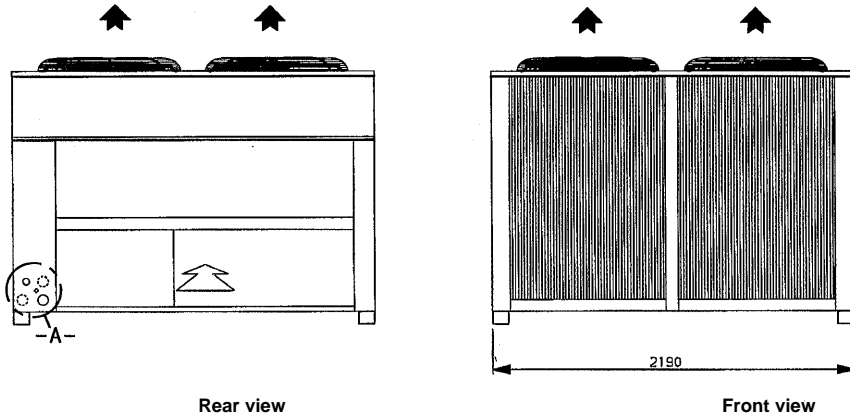
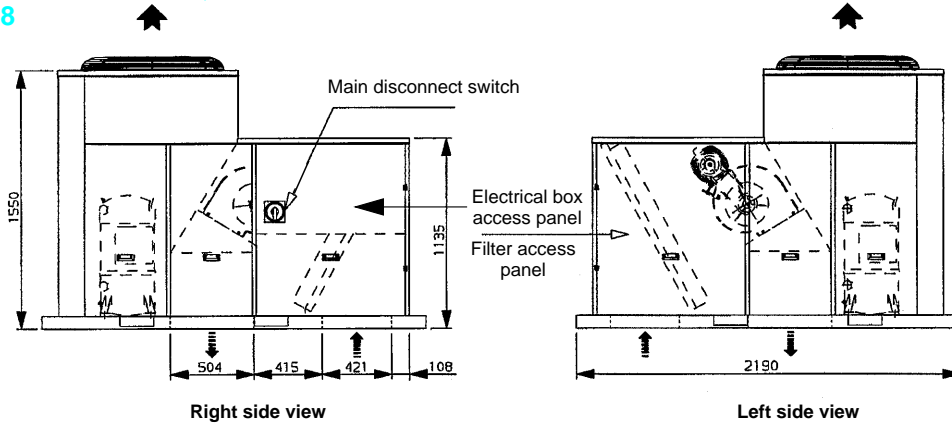
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When designing an installation, always use up-to-date drawings, available from your local Carrier office.

Dimensions, mm

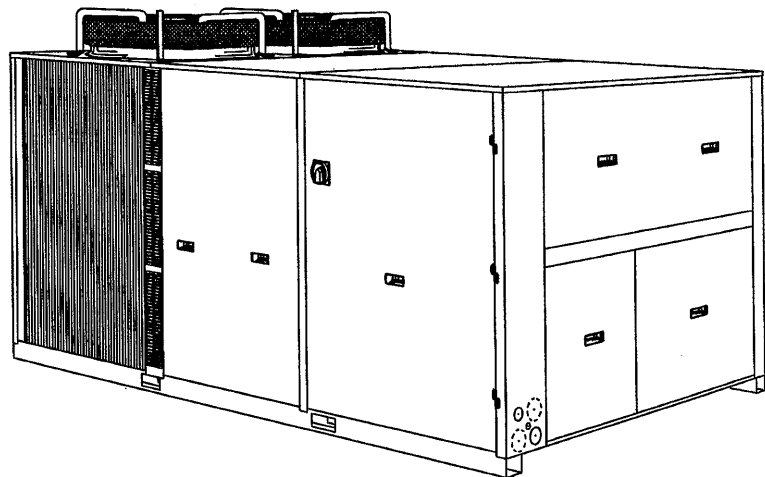
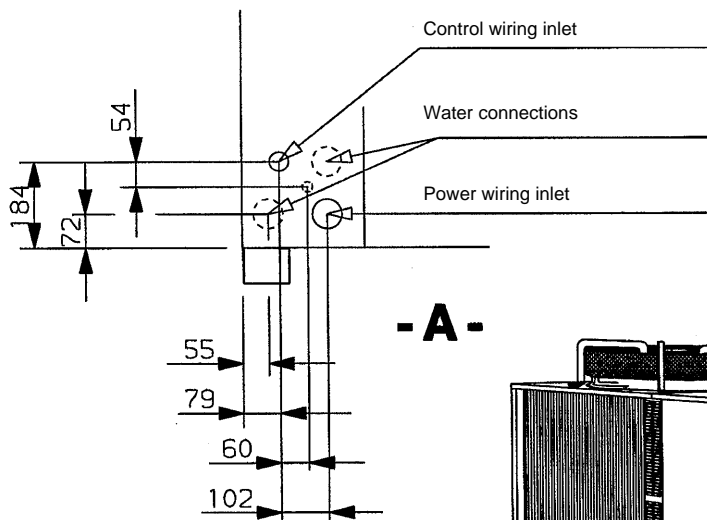
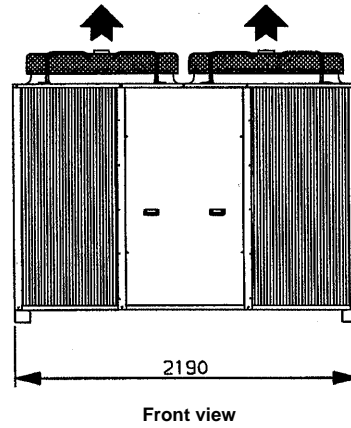
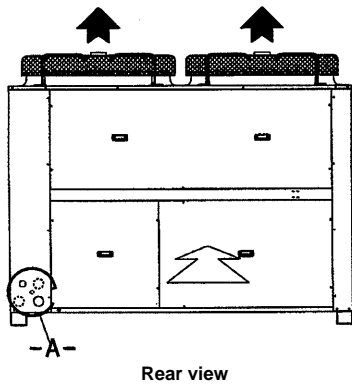
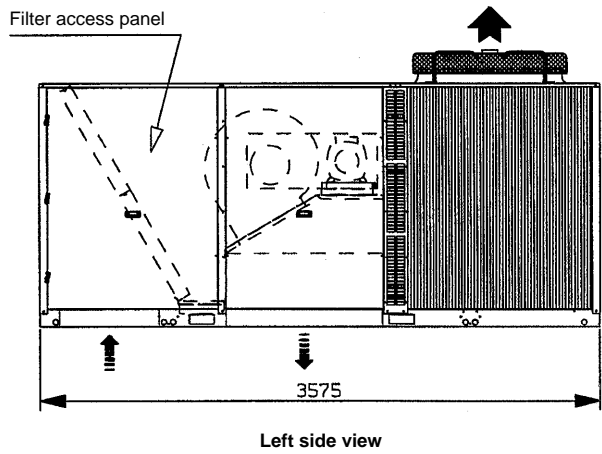
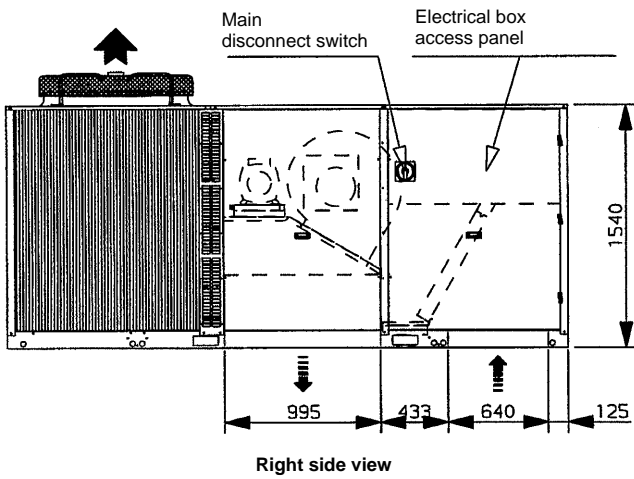
50GZ 028



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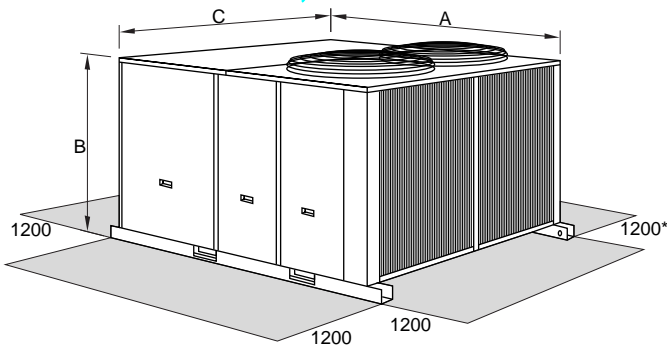
Dimensions, mm

50GZ 034,040



When designing an installation, always use up-to-date drawings, available from your local Carrier office.

Clearances, mm



■ Clearances required

* If the unit includes the optional electric heater or the optional hot water coil this clearance should be 2000 mm.

Cooling capacities

50GZ 016 Air flow - 2528 l/s

Ewb	Edb		Outdoor air temperature °C, db				
			25	30	35	40	46
15	CAP		43.40	39.95	36.30	32.90	29.20
		kW	11.05	11.55	12.15	13.10	14.85
	19	SHC	24.70	23.65	22.50	21.80	21.20
	21	SHC	29.00	27.95	26.90	26.15	25.40
	23	SHC	33.65	32.50	31.40	30.75	30.00
25	SHC	39.10	37.60	36.25	32.80	29.10	
17	CAP		46.00	42.55	39.30	36.40	32.40
		kW	11.15	11.80	12.45	13.60	15.15
	21	SHC	25.30	24.25	23.10	22.40	21.80
	23	SHC	29.60	28.55	27.50	26.75	26.00
	25	SHC	34.25	33.10	32.00	31.35	30.65
27	SHC	39.70	38.20	37.35	36.30	32.30	
19	CAP		49.15	45.85	42.90	39.65	35.85
		kW	11.45	12.05	12.82	13.75	15.30
	23	SHC	25.90	24.85	23.70	23.00	22.40
	25	SHC	30.20	29.15	28.10	27.35	26.60
	27	SHC	34.85	33.70	32.65	31.95	31.25
29	SHC	40.30	38.80	37.95	37.30	35.80	
21	CAP		52.50	48.90	45.60	42.80	39.15
		kW	11.55	12.15	12.90	13.80	15.40
	25	SHC	26.50	25.45	24.30	23.60	23.00
	27	SHC	30.80	29.78	28.70	27.95	27.30
	29	SHC	35.15	34.00	33.25	32.55	31.85
31	SHC	41.00	39.40	38.55	37.90	37.20	

50GZ 020 Air flow - 3278 l/s

Ewb	Edb		Outdoor air temperature °C, db				
			25	30	35	40	46
15	CAP		56.10	51.60	47.05	42.55	36.85
		kW	17.69	18.05	19.10	20.20	21.90
	19	SHC	32.30	29.30	26.25	24.30	22.35
	21	SHC	39.40	36.40	33.30	31.40	29.40
	23	SHC	46.50	43.50	40.40	38.45	36.50
25	SHC	53.40	50.30	47.00	42.50	36.80	
17	CAP		61.10	56.50	51.80	47.25	41.65
		kW	18.60	19.20	19.60	21.15	22.25
	21	SHC	33.55	30.50	27.45	25.50	23.55
	23	SHC	40.65	37.60	34.55	32.60	30.60
	25	SHC	47.75	44.70	41.60	39.65	37.70
27	SHC	54.60	51.50	48.50	46.55	41.60	
19	CAP		65.70	61.10	56.09	51.90	46.35
		kW	18.90	19.60	20.29	21.45	23.10
	23	SHC	34.75	31.70	28.65	26.70	24.75
	25	SHC	41.85	38.80	35.75	33.80	31.80
	27	SHC	48.95	45.90	42.85	40.85	38.90
29	SHC	55.80	52.75	49.70	47.75	45.80	
21	CAP		70.60	66.10	61.60	56.40	51.40
		kW	19.30	20.10	20.90	21.65	23.45
	25	SHC	36.00	32.90	29.90	27.90	26.00
	27	SHC	43.00	40.00	36.95	35.00	33.00
	29	SHC	50.10	47.10	44.00	42.00	40.10
31	SHC	57.00	53.90	50.90	48.95	47.00	

50GZ 024 Air flow - 3472 l/s

Ewb	Edb		Outdoor air temperature °C, db				
			25	30	35	40	46
15	CAP		68.00	62.70	57.45	52.20	46.10
		kW	22.80	23.35	24.25	24.90	26.40
	19	SHC	38.50	36.00	33.60	31.10	28.60
	21	SHC	45.40	42.90	40.40	37.90	35.45
	23	SHC	53.10	50.70	48.10	45.60	43.10
25	SHC	59.60	57.20	54.70	52.10	48.00	
17	CAP		73.25	68.00	62.70	57.25	51.00
		kW	23.90	24.50	25.30	25.95	27.45
	21	SHC	39.25	36.75	34.30	31.80	29.30
	23	SHC	46.10	43.60	41.10	38.60	36.15
	25	SHC	53.80	51.40	48.80	46.30	43.80
27	SHC	60.30	57.90	55.40	52.90	50.40	
19	CAP		78.70	73.45	68.15	62.60	56.00
		kW	24.70	25.20	26.01	27.10	28.65
	23	SHC	39.95	37.45	35.00	32.50	30.00
	25	SHC	46.80	44.30	41.80	39.35	36.85
	27	SHC	54.55	52.10	49.50	47.00	44.50
29	SHC	61.05	58.60	56.10	53.60	51.15	
21	CAP		82.80	77.60	72.35	67.00	60.80
		kW	25.05	25.75	26.75	27.75	29.55
	25	SHC	40.60	38.20	35.70	33.20	30.70
	27	SHC	47.50	45.00	42.50	40.00	37.50
	29	SHC	55.25	52.80	50.20	47.70	45.20
31	SHC	61.75	59.30	56.80	54.30	51.85	

50GZ 028 Air flow - 3944 l/s

Ewb	Edb		Outdoor air temperature °C, db				
			25	30	35	40	46
15	CAP		81.35	76.30	71.25	66.15	59.95
		kW	21.95	23.10	24.85	27.35	30.80
	19	SHC	47.80	44.95	42.40	39.80	37.30
	21	SHC	55.50	52.90	50.35	47.40	45.20
	23	SHC	63.15	60.60	58.05	65.50	52.90
25	SHC	71.15	68.60	66.00	63.45	59.90	
17	CAP		87.15	81.75	76.80	71.75	65.55
		kW	22.50	23.85	25.65	27.95	31.75
	21	SHC	47.90	45.35	42.80	40.20	37.70
	23	SHC	55.90	53.30	50.75	47.80	45.60
	25	SHC	63.55	61.00	58.45	55.90	53.30
27	SHC	71.55	69.00	66.40	63.85	61.30	
19	CAP		92.15	87.35	82.29	77.40	71.40
		kW	23.15	24.65	26.52	29.00	32.30
	23	SHC	48.30	45.75	43.20	40.60	38.10
	25	SHC	56.30	53.70	51.15	48.20	46.00
	27	SHC	63.95	61.40	58.85	56.30	53.70
29	SHC	71.95	69.40	66.80	64.25	61.70	
21	CAP		97.20	92.15	87.25	82.20	76.10
		kW	23.75	25.30	27.00	29.40	32.95
	25	SHC	48.70	46.02	43.60	41.00	38.50
	27	SHC	56.70	54.10	51.55	48.60	46.40
	29	SHC	64.35	61.80	59.25	56.70	54.10
31	SHC	72.35	69.80	67.20	64.65	62.10	

Legend

CAP - Total cooling capacity, kW

Ewb - Indoor unit entering air wet bulb temperature, °C

Edb - Indoor unit entering air dry bulb temperature, °C

kW - Compressor power input

SHC - Sensible heating capacity, kW

50GZ 034 - Air flow - 5550 ls

Ewb	Edb		Outdoor air temperature °C, db				
			25	30	35	40	46
15	CAP		102.90	95.65	88.50	81.15	72.40
		kW	31.00	32.60	34.05	35.70	37.55
	19	SHC	60.45	56.00	51.65	47.30	42.00
	21	SHC	70.45	66.00	61.60	57.25	51.95
	23	SHC	80.35	76.00	71.60	67.25	62.00
25	SHC	90.40	85.95	81.55	77.20	71.95	
17	CAP		108.25	101.15	93.90	86.65	78.00
		kW	32.05	33.75	35.40	37.05	38.95
	21	SHC	60.95	56.50	52.15	47.80	42.50
	23	SHC	70.95	66.50	62.10	67.75	62.50
	25	SHC	80.85	76.50	72.10	67.75	62.50
27	SHC	90.90	86.45	82.05	77.70	72.45	
19	CAP		113.75	106.85	99.50	92.20	83.50
		kW	33.25	34.90	36.60	38.30	40.23
	23	SHC	61.45	57.00	52.65	48.30	43.00
	25	SHC	71.45	67.00	62.60	58.25	52.95
	27	SHC	81.35	77.00	72.60	68.25	63.00
29	SHC	91.40	86.95	82.55	78.20	72.95	
21	CAP		119.15	112.55	105.35	97.95	89.00
		kW	34.15	35.90	37.65	39.60	41.65
	25	SHC	61.95	57.50	53.15	48.80	43.50
	27	SHC	71.95	67.50	63.10	58.75	53.45
	29	SHC	81.85	77.50	73.10	68.75	63.50
31	SHC	91.90	87.45	83.05	78.70	73.45	

Legend

CAP - Total cooling capacity, kW

Ewb - Indoor unit entering air wet bulb temperature, °C

Edb - Indoor unit entering air dry bulb temperature, °C

kW - Compressor power input

SHC - Sensible heating capacity, kW

50GZ 040 - Air flow - 5550 ls

Ewb	Edb		Outdoor air temperature °C, db				
			25	30	35	40	46
15	CAP		117.95	110.45	103.20	95.30	87.15
		kW	37.20	39.30	41.15	43.15	45.45
	19	SHC	68.95	64.40	59.95	56.40	52.85
	21	SHC	79.50	75.05	70.50	66.75	63.45
	23	SHC	90.15	85.60	81.10	77.55	74.00
25	SHC	101.05	96.15	91.60	88.10	84.45	
17	CAP		124.15	116.75	109.50	102.00	93.80
		kW	38.95	40.85	42.95	44.95	47.45
	21	SHC	69.95	65.40	60.95	57.40	53.85
	23	SHC	80.50	76.05	71.50	67.75	64.45
	25	SHC	91.15	86.60	82.10	78.55	75.00
27	SHC	102.05	97.15	92.60	89.10	85.45	
19	CAP		130.40	123.40	116.10	109.05	100.45
		kW	40.35	42.55	44.65	46.65	49.15
	23	SHC	70.95	66.40	61.95	58.40	54.85
	25	SHC	81.50	77.05	72.50	68.95	65.45
	27	SHC	92.15	87.60	83.10	79.55	76.00
29	SHC	103.05	98.15	93.60	90.10	86.55	
21	CAP		136.70	130.00	122.85	115.15	107.05
		kW	42.30	44.35	46.35	48.35	50.65
	25	SHC	71.95	67.40	62.95	59.40	55.85
	27	SHC	82.50	78.05	73.50	69.95	66.45
	29	SHC	93.15	88.60	84.10	80.55	77.00
31	SHC	104.05	99.15	94.60	91.10	87.55	

Correction factors

Cooling operation

50GZ	Multiplier	% Nominal air flow		
		90	100	110
016-040	CAP	0.98	1.00	1.02
	SHC	0.96	1.00	1.03
	kW	0.99	1.00	1.01

Legend:

CAP - Total cooling capacity, kW

SHC - Sensible heating capacity, kW

kW - Compressor power input

Operating limits

Zone	Air temperature °C	
	Dry bulb	Wet bulb
Indoor		
Maximum	35	21
Minimum	19	14
Outdoor		
Maximum	46	-
Minimum	19*	-

* With optional head pressure control the unit can operate at temperatures below 19°C.

Fan performance (standard)

50GZ 016

Motor pulley position		Air flow l/s					
		2022	2222	2361	2638	2916	3033
Closed 17.83 r/s	Pa	308	291	279	245	226	190
	kW	2.26	2.50	2.68	3.04	3.20	3.50
1 turn open 17.33 r/s	Pa	286	270	256	224	208	170
	kW	2.10	2.30	2.48	2.80	2.96	3.28
2 turns open 16.23 r/s	Pa	264	246	231	193	180	144
	kW	1.98	2.18	2.32	2.65	2.80	3.10
3 turns open 15.91 r/s	Pa	238	220	206	173	154	116
	kW	1.86	2.05	2.20	2.50	2.62	2.90
4 turns open 15.41 r/s	Pa	214	194	180	146	126	90
	kW	1.76	1.92	2.06	2.34	2.45	2.70
4.5 turns open 15.16 r/s	Pa	198	180	165	132	112	76
	kW	1.70	1.86	2.00	2.25	2.36	2.60
Factory setting 15.41 r/s	Pa	214	194	180	146	126	90
	kW	1.76	1.92	2.06	2.34	2.45	2.70

50GZ 024

Motor pulley position		Air flow l/s					
		2777	3055	3333	3611	3888	4166
Closed 21.16 r/s	Pa	345	320	289	250	208	139
	kW	4.60	4.90	5.20	5.65	6.15	6.70
1 turn open 20.66 r/s	Pa	318	292	261	226	180	100
	kW	4.35	4.60	4.90	5.25	5.75	6.35
2 turns open 20.16 r/s	Pa	290	265	234	196	146	65
	kW	4.15	4.35	4.60	4.95	5.45	5.90
3 turns open 19.66 r/s	Pa	262	236	205	165	110	30
	kW	4.05	4.15	4.40	4.70	5.15	5.70
4 turns open 19.16 r/s	Pa	236	210	175	132	78	---
	kW	3.75	3.90	4.18	4.48	4.90	---
4.5 turns open 18.91 r/s	Pa	222	198	164	120	62	---
	kW	3.65	3.80	4.05	4.38	4.80	---
Factory setting 19.41 r/s	Pa	248	224	190	156	90	10
	kW	3.85	4.00	4.25	4.58	5.00	5.58

50GZ 034

Motor pulley position		Air flow l/s					
		5000	5277	5550	5695	5833	6111
Closed 14.71 r/s	Pa	300	270	240	224	204	164
	kW	5.97	6.50	7.03	7.28	7.52	7.90
1 turn open 14.30 r/s	Pa	270	240	210	192	174	130
	kW	5.77	6.23	6.70	6.89	7.08	7.42
2 turns open 13.88 r/s	Pa	240	212	180	164	146	100
	kW	5.58	6.00	6.40	6.65	6.99	7.13
3 turns open 13.46 r/s	Pa	210	180	150	132	116	72
	kW	5.29	5.65	6.02	6.31	6.50	6.87
4 turns open 13.05 r/s	Pa	180	152	122	105	88	46
	kW	5.05	5.38	5.77	6.00	6.21	6.45
Factory setting 13.88 r/s	Pa	240	212	210	164	146	100
	kW	5.58	6.00	6.40	6.65	6.99	7.13

Legend:

Pa - External static pressure
kW - Fan power input

50GZ 020

Motor pulley position		Air flow l/s					
		2611	2777	3055	3333	3611	3944
Closed 18.91 r/s	Pa	314	296	264	224	180	115
	kW	3.20	2.35	3.65	3.95	4.40	5.00
1 turn open 18.08 r/s	Pa	275	256	224	185	140	78
	kW	2.95	3.10	3.45	3.75	4.20	4.80
2 turns open 17.25 r/s	Pa	235	216	184	164	102	40
	kW	2.70	2.90	3.25	3.60	4.00	4.60
3 turns open 16.41 r/s	Pa	200	180	148	106	62	2
	kW	2.55	2.70	3.00	3.40	3.75	4.40
4 turns open 15.88 r/s	Pa	162	145	112	72	26	---
	kW	2.25	2.40	2.75	3.10	3.45	---
4.5 turns open 15.16 r/s	Pa	146	128	95	55	10	---
	kW	2.15	2.30	2.65	2.95	3.35	---
Factory setting 18.08 r/s	Pa	275	256	224	185	140	78
	kW	2.95	3.10	3.45	3.75	4.20	4.80

50GZ 028

Motor pulley position		Air flow l/s					
		3138	3333	3611	3888	4166	4750
Closed 18.08 r/s	Pa	334	320	296	266	231	128
	kW	4.55	4.75	5.05	5.40	5.85	7.30
1 turn open 17.41 r/s	Pa	303	289	265	235	200	97
	kW	4.25	4.45	4.75	5.10	5.55	7.00
2 turns open 16.75 r/s	Pa	272	258	234	204	169	66
	kW	4.00	4.15	4.45	4.80	5.20	6.40
3 turns open 16.08 r/s	Pa	240	225	201	171	136	---
	kW	3.75	3.90	4.20	4.50	4.70	---
4 turns open 15.41 r/s	Pa	209	195	171	141	106	---
	kW	3.55	3.70	4.00	4.30	4.55	---
4.5 turns open 15.08 r/s	Pa	194	180	156	126	91	---
	kW	3.45	3.60	3.90	4.20	4.45	---
Factory setting 16.41 r/s	Pa	256	242	218	188	153	50
	kW	3.85	4.05	4.35	4.65	4.95	6.00

50GZ 040

Motor pulley position		Air flow l/s					
		5000	5277	5550	5695	5833	6111
Closed 14.63 r/s	Pa	259	236	204	185	164	112
	kW	6.05	6.55	6.95	7.25	7.45	7.90
1 turn open 14.21 r/s	Pa	234	210	180	162	142	90
	kW	5.80	6.30	6.74	7.00	7.25	7.70
2 turns open 13.80 r/s	Pa	210	182	150	132	112	60
	kW	5.45	5.95	6.45	6.70	6.90	7.25
3 turns open 13.38 r/s	Pa	182	156	124	106	84	30
	kW	5.15	5.60	6.10	6.30	6.55	6.90
4 turns open 12.96 r/s	Pa	164	136	104	86	64	10
	kW	4.95	5.45	5.90	6.10	6.35	6.70
Factory setting 14.21 r/s	Pa	234	210	180	162	142	90
	kW	5.80	6.30	6.74	7.00	7.25	7.70

Fan performance (optional drive)

50GZ 016

Motor pulley position		Air flow l/s					
		2022	2222	2361	2638	2777	3033
Closed 21.08 r/s	Pa	430	406	390	368	362	344
	kW	3.40	3.65	3.85	4.20	4.38	4.68
1 turn open 20.25 r/s	Pa	395	368	352	334	328	306
	kW	3.15	3.40	3.58	3.92	4.10	4.45
2 turns open 19.58 r/s	Pa	360	335	322	306	298	272
	kW	2.86	3.10	3.28	3.62	3.80	4.12
3 turns open 19.41 r/s	Pa	330	305	290	275	268	242
	kW	2.62	2.85	3.02	3.32	3.48	3.80
4 turns open 18.75 r/s	Pa	300	276	260	248	240	214
	kW	2.50	2.68	2.84	3.14	3.28	3.58
4.5 turns open 18.41 r/s	Pa	286	260	245	233	226	200
	kW	2.40	2.60	2.74	3.04	3.18	3.50

50GZ 020

Motor pulley position		Air flow l/s					
		2611	2777	3055	3333	3611	3944
Closed 25.00 r/s	Pa	585	570	530	470	390	250
	kW	5.24	5.50	6.00	6.48	6.96	7.58
1 turn open 24.16 r/s	Pa	542	530	495	432	348	198
	kW	4.95	5.20	5.50	6.06	6.50	7.10
2 turns open 23.33 r/s	Pa	514	501	464	388	272	70
	kW	4.50	4.72	5.05	5.44	5.80	6.30
3 turns open 22.50 r/s	Pa	486	474	432	342	215	30
	kW	3.98	4.15	4.15	4.82	4.15	5.55
4 turns open 21.66 r/s	Pa	466	450	405	312	180	-
	kW	3.58	3.74	4.00	4.26	4.52	-
4.5 turns open 21.25 r/s	Pa	452	436	390	296	162	-
	kW	3.38	3.52	3.74	4.00	4.24	-

50GZ 024

Motor pulley position		Air flow l/s				
		2777	3055	3333	3611	3888
Closed 24.16 r/s	Pa	466	442	420	388	350
	kW	5.75	6.05	6.35	6.65	7.00
1 turn open 23.58 r/s	Pa	436	412	390	356	318
	kW	5.65	5.90	6.20	6.50	6.90
2 turns open 22.91 r/s	Pa	406	385	358	325	285
	kW	5.50	5.75	6.05	6.40	6.75
3 turns open 22.33 r/s	Pa	375	355	330	300	255
	kW	5.20	5.45	5.75	6.05	6.45
4 turns open 21.66 r/s	Pa	346	326	302	270	225
	kW	4.80	5.05	5.35	5.65	6.10
4.5 turns open 21.41 r/s	Pa	334	312	288	255	206
	kW	4.65	4.90	5.15	5.45	5.90

50GZ 028

Motor pulley position		Air flow l/s				
		3138	3333	3611	3888	4166
Closed 20.41 r/s	Pa	525	510	486	460	426
	kW	5.45	5.85	6.20	6.65	6.90
1 turn open 19.75 r/s	Pa	478	464	446	415	382
	kW	5.05	5.45	5.80	6.15	6.50
2 turns open 19.08 r/s	Pa	440	426	404	372	340
	kW	4.75	5.20	5.50	5.80	6.10
3 turns open 18.41 r/s	Pa	398	382	360	330	296
	kW	4.35	4.90	5.20	5.45	5.75
4 turns open 17.75 r/s	Pa	364	348	322	290	256
	kW	4.20	4.70	4.95	5.15	5.35
4.5 turns open 17.41 r/s	Pa	342	326	300	268	232
	kW	4.10	4.60	4.80	5.00	5.20

50GZ 034

Motor pulley position		Air flow l/s					
		5138	5277	5550	5833	6111	6388
Closed 15.83 r/s	Pa	398	390	365	334	298	260
	kW	8.00	8.25	8.90	9.40	9.85	10.25
1 turn open 15.41 r/s	Pa	345	364	340	305	272	235
	kW	7.10	7.40	8.00	8.50	9.05	9.50
2 turns open 15.00 r/s	Pa	345	335	305	272	238	200
	kW	6.70	6.95	7.55	8.10	8.45	9.00
3 turns open 14.58 r/s	Pa	310	300	272	240	205	175
	kW	6.40	6.70	7.20	7.75	8.25	8.60
4 turns open 14.16 r/s	Pa	275	262	235	205	170	130
	kW	6.15	6.40	7.00	7.55	7.95	8.10

50GZ 040

Motor pulley position		Air flow l/s					
		5138	5277	5550	5833	6111	6388
Closed 15.75 r/s	Pa	343	340	310	275	239	195
	kW	8.00	8.25	8.85	9.35	9.80	10.20
1 turn open 15.33 r/s	Pa	322	318	291	257	221	175
	kW	7.05	7.41	7.95	8.45	9.00	9.48
2 turns open 14.91 r/s	Pa	302	287	254	218	182	135
	kW	6.65	6.90	7.50	8.05	8.40	8.95
3 turns open 14.51 r/s	Pa	268	260	224	192	148	108
	kW	6.35	6.65	7.15	7.70	8.20	8.55
4 turns open 14.50 r/s	Pa	250	234	200	168	126	88
	kW	6.10	6.35	6.95	7.50	7.95	8.05

Legend:

Pa - External static pressure
kW - Fan power input

Electrical data (3 ph, 50 Hz)

		016		020		024		028		034		040	
Nominal supply	V	230	400	230	400	230	400	230	400	230	400	230	400
Voltage range	V												
Min.		207	360	207	360	207	360	207	360	207	360	207	360
Max.		253	440	253	440	253	440	253	440	253	440	253	440
Nom. power input*	kW	16.29	16.29	26.90	26.90	33.61	33.61	35.08	35.08	45.70	45.70	54.10	54.10
Effective power input	kW	14.94	14.94	25.04	25.04	31.64	31.64	32.71	32.71	42.37	42.37	50.81	50.81
Nom. current drawn*	A	56.46	33.00	77.85	45.05	97.15	56.25	107.75	62.70	136.95	79.70	159.45	92.80
Effective current drawn	A	51.80	30.25	72.45	41.95	91.45	52.95	100.45	58.45	126.95	73.90	149.75	87.15
Maximum power input**	kW	18.87	18.87	30.05	30.05	37.15	37.15	41.51	41.51	50.75	50.75	60.10	60.10
Maximum current drawn**	A	65.40	38.20	86.90	50.30	114.05	62.15	127.45	74.20	152.10	88.50	177.15	103.10
Starting current	A	340	191	287	173	346	210	415	235	530	315	588	340

* Based on an outdoor air dry bulb temperature of 35°C and an indoor air wet bulb temperature of 19°C.

** Based on an outdoor air dry bulb temperature of 46°C.

Note: The optional electric heater consumption is not included. Control circuit voltage 220-1-50.

Effective power input according to EUROVENT.

Accessories

Hot water coil data (sizes 016-028) (60 kW coil)

Air Flow l/s		2000						2500						3000						3600						4000					
% glycol		0		20		35		0		20		35		0		20		35		0		20		35		0		20		35	
EWT	EDB	kW	l/s	kW	l/s	kW	l/s	kW	l/s	kW	l/s	kW	l/s	kW	l/s	kW	l/s	kW	l/s	kW	l/s	kW	l/s	kW	l/s	kW	l/s	kW	l/s		
90	13	62.2	0.74	56.9	0.71	53.7	0.71	65.8	0.79	50.9	0.76	57.7	0.76	59.0	0.82	64.5	0.80	61.3	0.81	72.2	0.86	68.1	0.84	65.0	0.86	73.8	0.88	70.0	0.86	67.1	0.89
70		44.9	0.54	38.8	0.48	36.6	0.48	48.3	0.58	44.0	0.54	40.9	0.54	51.6	0.62	47.8	0.59	44.4	0.59	55.3	0.66	50.6	0.63	47.5	0.63	57.4	0.68	52.1	0.65	49.2	0.65
60		29.0	0.35	25.5	0.32	23.2	0.31	32.1	0.38	27.9	0.35	25.6	0.34	34.8	0.42	30.0	0.37	27.7	0.37	37.5	0.45	32.0	0.40	29.7	0.39	39.1	0.47	33.3	0.42	30.8	0.42
90	17	55.8	0.67	50.5	0.63	47.9	0.63	60.2	0.72	54.9	0.68	51.8	0.69	63.6	0.76	58.5	0.72	55.0	0.73	66.3	0.79	61.5	0.76	57.9	0.77	67.7	0.80	63.2	0.76	59.8	0.79
70		38.4	0.46	32.6	0.40	31.2	0.41	42.8	0.51	37.1	0.46	34.9	0.46	46.3	0.55	40.6	0.50	38.1	0.50	49.3	0.59	43.4	0.54	41.0	0.54	51.1	0.60	44.7	0.55	42.4	0.55
60		24.9	0.30	22.9	0.28	20.5	0.27	27.5	0.33	26.5	0.33	22.5	0.30	29.9	0.36	28.6	0.35	24.2	0.32	32.6	0.39	29.2	0.36	26.1	0.35	34.0	0.40	30.4	0.37	27.0	0.37
90	21	49.4	0.59	43.9	0.54	41.9	0.55	53.6	0.64	47.1	0.58	46.1	0.61	56.6	0.68	50.2	0.65	49.0	0.65	58.9	0.70	53.5	0.75	50.8	0.67	60.1	0.71	55.0	0.75	52.4	0.69
70		32.5	0.39	28.4	0.35	26.2	0.35	36.4	0.43	30.9	0.38	28.8	0.38	39.3	0.47	33.2	0.41	31.1	0.41	41.4	0.50	35.8	0.44	33.6	0.44	42.9	0.51	36.8	0.45	34.7	0.45
60		21.1	0.25	--	--	--	--	23.3	0.28	22.1	0.27	18.9	0.25	25.5	0.30	23.8	0.30	20.6	0.27	27.9	0.33	24.9	0.31	22.0	0.29	29.1	0.33	25.9	0.32	23.0	0.30
90	24	45.3	0.54	39.6	0.49	37.3	0.49	47.2	0.56	41.5	0.51	39.2	0.52	49.4	0.59	43.9	0.54	41.6	0.55	52.2	0.63	47.4	0.59	45.1	0.60	53.5	0.64	48.7	0.59	46.5	0.61
70		29.0	0.35	25.9	0.32	23.2	0.31	31.0	0.37	27.2	0.34	25.0	0.33	33.0	0.39	28.6	0.35	26.7	0.35	35.2	0.42	30.6	0.38	28.5	0.38	36.4	0.43	31.4	0.39	29.4	0.39
60		--	--	--	--	--	--	--	--	--	--	--	--	21.6	0.26	21.7	0.27	--	--	23.3	0.28	22.8	0.28	20.2	0.27	24.3	0.28	23.7	0.29	21.1	0.28
90	27	38.3	0.46	32.5	0.40	30.2	0.47	41.2	0.49	35.3	0.44	32.8	0.43	43.5	0.52	37.5	0.47	35.0	0.46	45.5	0.54	39.6	0.49	37.2	0.49	46.3	0.55	40.6	0.49	38.3	0.50
70		24.8	0.30	23.7	0.29	20.3	0.27	26.1	0.31	24.3	0.30	21.8	0.29	27.4	0.33	24.9	0.31	22.8	0.30	28.9	0.35	25.8	0.32	23.6	0.31	29.9	0.36	26.4	0.33	24.3	0.32
60		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	

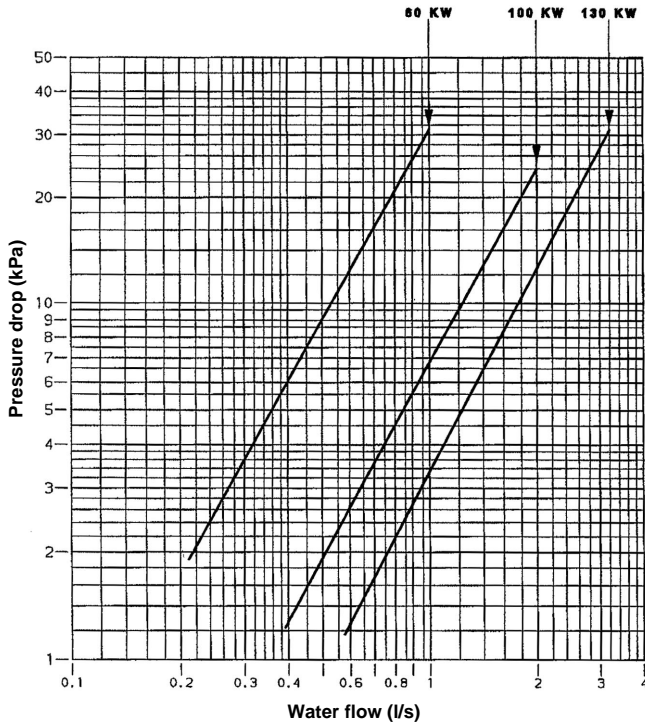
(100 kW coil) (sizes 016-028)

Air Flow l/s		2000						2500						3000						3600						4000					
% glycol		0		20		35		0		20		35		0		20		35		0		20		35		0		20		35	
EWT	EDB	kW	l/s	kW	l/s	kW	l/s	kW	l/s	kW	l/s	kW	l/s	kW	l/s	kW	l/s	kW	l/s	kW	l/s	kW	l/s	kW	l/s	kW	l/s	kW	l/s		
90	13	82.9	0.99	76.7	0.95	73.2	0.97	93.0	1.11	85.9	1.07	81.5	1.08	101.5	1.21	93.8	1.16	89.0	1.18	109.6	1.31	101.8	1.26	97.0	1.28	113.0	1.32	107.6	1.32	101.2	1.33
70		55.8	0.67	50.1	0.62	45.5	0.60	61.4	0.73	56.1	0.69	50.4	0.67	66.6	0.80	61.1	0.76	55.0	0.73	72.0	0.86	66.1	0.82	59.9	0.79	74.6	0.87	70.0	0.86	62.5	0.82
60		35.1	0.42	31.1	0.39	22.6	0.30	40.2	0.48	35.6	0.44	25.6	0.34	44.9	0.54	38.5	0.49	28.2	0.37	49.9	0.60	43.5	0.54	30.7	0.41	51.7	0.61	46.0	0.57	31.9	0.42
90	17	72.6	0.87	66.6	0.83	62.6	0.83	89.9	0.97	73.9	0.92	69.4	0.92	87.9	1.05	80.2	0.99	75.5	1.00	94.5	1.13	86.4	1.07	81.8	1.08	97.4	1.14	91.3	1.12	85.3	1.12
70		48.6	0.58	42.9	0.53	38.2	0.51	53.6	0.64	47.8	0.59	42.5	0.56	58.1	0.69	52.1	0.65	46.2	0.61	63.2	0.75	56.7	0.70	49.9	0.66	65.5	0.76	60.0	0.73	52.0	0.68
60		30.4	0.36	26.1	0.32	20.3	0.27	34.6	0.41	29.9	0.37	23.0	0.30	38.1	0.46	33.2	0.41	25.3	0.33	41.1	0.49	36.3	0.45	27.5	0.36	42.9	0.50	38.4	0.47	28.6	0.37
90	21	63.5	0.76	57.6	0.71	53.0	0.70	70.4	0.84	63.7	0.79	58.8	0.78	76.3	0.94	68.9	0.85	64.0	0.85	82.0	0.98	74.1	0.92	69.3	0.92	84.5	0.99	78.3	0.96	72.2	0.96
70		41.9	0.50	36.4	0.45	31.3	0.41	46.2	0.55	40.4	0.50	35.0	0.76	50.2	0.60	44.0	0.55	38.1	0.50	54.6	0.65	47.9	0.59	40.9	0.54	56.6	0.66	50.7	0.61	42.6	0.56
60		26.2	0.31	22.0	0.27	--	--	29.7	0.35	25.1	0.31	20.4	0.27	32.4	0.39	27.6	0.34	22.5	0.30	34.6	0.41	29.9	0.37	24.5	0.32	35.8	0.42	30.8	0.38	25.5	0.33
90	24	57.5	0.69	51.6	0.64	46.4	0.61	63.7	0.76	57.2	0.71	51.8	0.69	69.0	0.82	62.1	0.77	56.7	0.75	74.2	0.89	66.9	0.83	61.8	0.82	76.4	0.90	70.7	0.86	64.4	0.85
70		37.3	0.45	32.0	0.40	26.5	0.35	41.1	0.49	35.4	0.44	29.7	0.39	44.6	0.53	38.6	0.48	32.4	0.43	48.4	0.58	41.8	0.52	34.8	0.46	50.1	0.59	44.2	0.53	36.2	0.48
60		23.4	0.28	--	--	--	--	26.5	0.32	21.9	0.27	--	--	28.8	0.37	23.8	0.30	20.6	0.27	30.6	0.37	25.6	0.32	22.4	0.30	31.6	0.38	26.4	0.33	23.3	0.31
90	27	52.2	0.62	46.2	0.57	40.4	0.53	57.8	0.69	51.9	0.64	45.6	0.60	62.8	0.76	56.7	0.70	50.5	0.67	67.9	0.81	61.4	0.76	55.7	0.74	69.9	0.82	64.9	0.79	58.0	0.76
70		32.9	0.39	27.9	0.35	21.9	0.29	36.3	0.43	31.0	0.38	24.7	0.33	38.3	0.47	33.6	0.45	27.0	0.36	42.3	0.51	36.0	0.45	29.2	0.39	43.8	0.52	38.0	0.45	30.4	0.40
60		21.5	0.25	--	--	--	--	23.6	0.28	--	--	--	--	25.7	0.31	20.4	0.25	--	--	27.5	0.33	21.8	0.27	20.4	0.27	28.4	0.34	22.5	0.28	21.2	0.28

(130 kW coil) (sizes 034-040)

Air Flow l/s		5050						5550						6100					
% glycol		0		20		35		0		20		35		0		20		35	
EWT	EDB	kW	l/s	kW	l/s	kW	l/s	kW	l/s	kW	l/s	kW	l/s	kW	l/s	kW	l/s	kW	l/s
90	13	167.0	2.00	155.7	1.92	148.4	1.95	172.9	2.06	164.6	2.03	154.8	2.03	178.2	2.12	173.2	2.14	161.4	2.12
70		110.1	1.31	101.1	1.25	91.0	1.19	114.1	1.36	107.1	1.32	95.6	1.25	117.6	1.40	113.1	1.39	99.7	1.31
60		76.3	0.91	66.5	0.82	46.9	0.61	79.1	0.94	70.4	0.87	48.8	0.64	81.5	0.97	74.3	0.91	50.9	0.66
90	17	144.5	1.72	132.2	1.63	125.0	1.64	149.0	1.78	139.7	1.72	130.5	1.71	153.4	1.83	147.5	1.82	136.1	1.78
70		96.7	1.15	86.7	1.07	76.3	1.00	100.2	1.19	91.8	1.13	79.5	1.04	103.2	1.23	96.9	1.19	82.9	1.09
60		62.9	0.75	55.5	0.68	42.0	0.55	65.6	0.78	58.7	0.72	43.7	0.57	67.5	0.80	61.9	0.76	45.6	0.60
90	21	125.4	1.49	113.4	1.40	106.0	1.39	130.0	1.55										

Water pressure drop



Control sequence

When the unit is switched on, the electronic control is energized. The control checks and if no protection has tripped the control actuates according to the thermostat-selected commands.

Specification guide

Rooftop unit model 50GZ __ with the following specification:

Total cooling capacity __ kW, sensible heating capacity __ kW at an indoor air dry bulb temperature of __ °C, an indoor air wet bulb temperature of __ °C and an outdoor air dry bulb temperature of __ °C.

Indoor air flow __ l/s.
 Available static pressure __ Pa.
 Power supply __ V/3 Ph/50 Hz.
 Nominal power consumption __ kW, __ A
 Starting current __ A

Unit dimensions:
 Length __ mm, Width __ mm, Height __ mm
 Weight __ kg

Static pressure loss, options

Options	Air flow (l/s)				
	2000	2500	3000	3600	4000
	Pressure drop (Pa)				
Electrical heater	16	24	32	43	51
Economizer	8	13	20	28	35
Hot water coil					
60 kW	40	60	80	100	115
100 kW	70	90	120	160	185

Options	Air flow (l/s)		
	5050	5550	6100
	Pressure drop (Pa)		
Electrical heater	70	78	85
Economizer	50	65	80
Hot water coil			
130 kW	95	110	127

Electric heaters

kW
 18 (one stage)
 27 (one stage)
 54 (27+27) two stages
 72 (36 + 36)

The unit incorporates three-phase reciprocating hermetic or scroll compressors with thermal protection.

The refrigerant circuit is made of deoxidized and dehydrated copper piping. The copper tubes are expanded into pretreated aluminium fins with a high level of anti-corrosion protection. Supply air fans have double-inlet forward-curved blades, and are statically and dynamically balanced for quiet vibration-free operation. They are powered by a generously sized three-phase motor via an adjustable belt and pulley transmission.

