



*Seasonal Inverter*



***Airfel***  
***Seasonal Inverter***  
***Air Conditioner***

[www.airfel.com.tr](http://www.airfel.com.tr)

# Seasonal efficiency

## Challenging 20-20-20 environmental targets

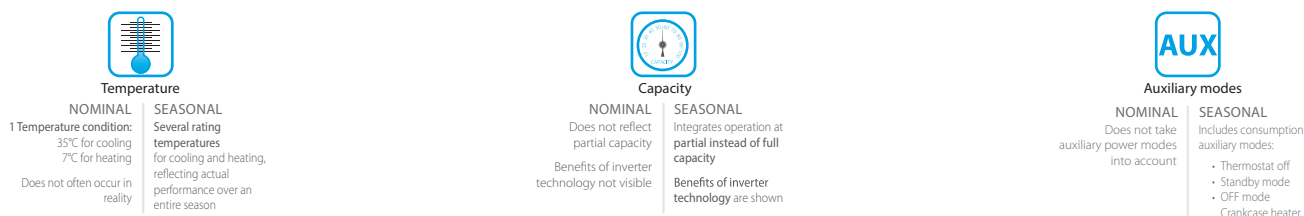
The European Commission has set challenging targets for improving energy efficiency in the EU.

Europe issued the Eco-Design Directive [2009/125/EC]. This sets minimum efficiency requirements for energy related products. After 2013, all air conditioners and air to air heat pumps 12 kW and under come into scope of this Eco-Design Directive.

## Major change: seasonal efficiency in line with real-life performance

Not only does the Eco-Design Directive systematically raise the minimum requirements with respect to environmental performance, the method used to measure this performance has also been changed to better reflect real-life conditions.

The new method, seasonal efficiency, measures heating and cooling performance across a range of outdoor temperatures that give a better representation of actual efficiency over an entire heating or cooling season.



**Nominal efficiency** gives an indication on how efficient an air conditioner is when operating in a nominal condition.

**Seasonal efficiency** gives an indication on how efficient an air conditioner is when operating over an entire cooling or heating season.

## Europe's new energy label: raising the bar on energy efficiency

To inform consumers concerning these new energy performance standards, Europe is also introducing a new energy label.

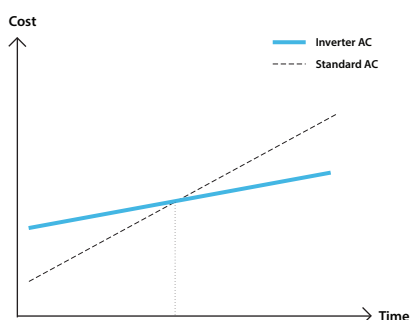
The energy label includes multiple classifications from A+++ to D reflected in colour shadings ranging from dark green (most energy efficient) to red (least efficient). Information on the label includes not only the new seasonal efficiency ratings for heating (SCOP) and cooling (SEER), but also annual energy consumption and sound levels.

## INVERTER

- Compressor is the most electricity consuming component of an air conditioner
- The compressor adjusts its capacity according to desired conditions thanks to inverter technology
- The air conditioner operates continuously without stop-start cycles
- Inverter technology is more efficient, comfortable and quieter

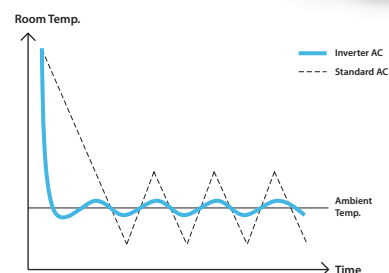
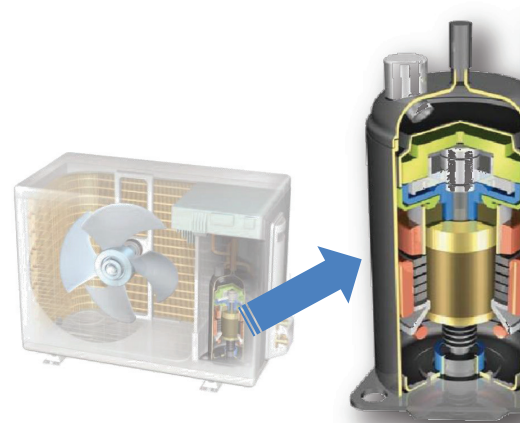
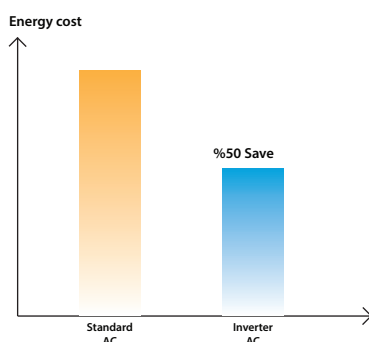
### Price Difference

Initial cost of inverter air conditioner is higher than on-off air conditioner, in contrast the inverter pays for itself within a few years and becomes more economical.



### Electricity Consumption

Inverter air conditioners are up to 50% more energy saving than on-off air conditioners.







AS09/12/18/24-1605/SINV38

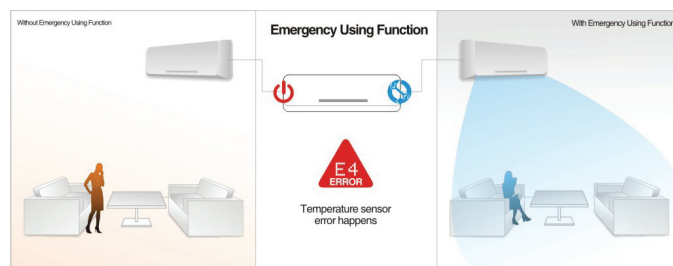
### Refrigerant Leakage Detect

Indoor unit will show error code "EC" and stop automatically when refrigerant leakage is detected. This function protects the compressor from being damaged by high temperature due to refrigerant leakage.



### Emergency Using Function

With this function, when temperature sensor gives an error the air conditioner will display error code and to operate in urgent need, it continues running in a proper status, instead of stopping immediately.



### Louver Position Memory Function

Horizontal louver will automatically move to the same position as you set last time when the unit is turned on.

### 1 W Standby

Intelligent on-off technology enables Airfel products to automatically enter energy-saving mode during standby. Thus energy consumption is decreased from 5W to 1W per hour which counts up to 80% of saving.

### Anti-cold Air Function

Indoor fan speed operates at lowest level in the beginning of heating operation. This function prevents cold air blowing out to avoid discomfort of the users.

### Cold Catalyst Filter

Eliminate formaldehyde and other volatile organic compounds (VOCs) as well as harmful gases and odors.

### Low Ambient Cooling

With built-in low ambient kit or special designed PCB, outdoor fan speed can be changed automatically according to condensation temperature. The air conditioner can run cooling operation even when the outdoor ambient temperature is down to -15°C.

### Turbo Mode

With this function, the air conditioner maximizes the output of cooling or heating capacity and attains the desired temperature in the shortest time.

### 12 Grades Indoor Fan Speeds

Up to 12 grades of indoor fan speed ensure more accurate control and bring more comfortable air flow.

### 5 Grades Outdoor Fan Speeds

Due to the DC fan motor, outdoor fan speeds increased from 2 grades to 5 grades, more comfortable and energy saving.

### Sleep Mode

The function enables the air conditioner to automatically increase cooling or decrease heating 1°C per hour for the first 2 hours, then holds steady for the next 5 hours, after that it will switch off. This function maintains both energy saving and comfort during night.



AS09/12/18/24-1605/SINV38



Indoor Unit				AS09-1605/SINV38	AS12-1605/SINV38	AS18-1605/SINV38	AS24-1605/SINV38
Cooling capacity	Min./Nom./Max.		kW	1.1 / 2.9 / 3.1	1.2 / 3.5 / 3.8	1.9 / 5.1 / 5.9	2.3 / 7.0 / 7.9
			BTU	3600 / 10000 / 10500	4100 / 12000 / 13000	6500 / 17500 / 20120	7920 / 24000 / 26880
Heating capacity	Min./Nom./Max.		kW	1.1 / 2.9 / 3.2	1.0 / 3.6 / 4.1	1.3 / 5.3 / 6.2	1.3 / 7.3 / 8.8
			BTU	3000 / 10000 / 11000	3400 / 12300 / 14000	4350 / 18000 / 21240	4600 / 25000 / 30000
"Seasonal efficiency (according to EN14825)"	Cooling	Energy label		A+	A+	A++	A++
		Pdesign	kW	2.9	3.5	5.1	7.0
		SEER		5.8	5.6	6.1	6.6
		Annual energy consumption	kWh	175	219	293	371
	"Heating (Average climate)"	Energy label		A+	A+	A	A+
		Pdesign	kW	2.3	2.5	4.8	5.3
		SCOP		4.0	4.0	3.8	4.0
		Annual energy consumption	kWh	788	875	1978	1855
Net Dimensions	Unit	Height x Width x Depth	mm	715 x 188 x 250	800 x 188 x 275	940 x 205 x 275	1045 x 235 x 315
Package Dimensions	Unit	Height x Width x Depth	mm	775 x 260 x 324	865 x 265 x 350	1015 x 265 x 350	1135 x 315 x 395
Net Weight	Unit		kg	6.5	7.4	9	12
Package Weight	Unit		kg	8.2	9.5	12.5	15.2
Fan - Air flow rate	Cooling	High / Nom. / Min.	m <sup>3</sup> /dk	430/375/300	560/490/395	750/550/480	1150/1070/880
Sound power level	Cooling	High	dBA	54	54	56	63
Sound pressure level	Cooling	High/Nom./Low	dBA	40/35/27	40/36/28	43/37/30	49/43/36
Dehumidifying capacity			L/h	1.0	1.2	1.8	2.2
Power supply	Phase / Frequency / Voltage		Hz/V	1 / 220-240 / 50			
	From			Outdoor			

Outdoor unit				AS09-1605/SINV38	AS12-1605/SINV38	AS18-1605/SINV38	AS24-1605/SINV38
Net Dimensions	Unit	Height x Width x Depth	mm	780 x 250 x 540	780 x 250 x 540	760 x 285 x 590	845 x 320 x 700
Package Dimensions	Unit	Height x Width x Depth	mm	910 x 335 x 585	910 x 335 x 585	887 x 355 x 645	965 x 395 x 755
Net Weight	Unit		kg	26,2	26,9	34,5	50
Package Weight	Unit		kg	28,5	29,3	37,0	53,4
Compressor	Type			Rotary	Rotary	Rotary	Rotary
Sound power level	Cooling	High	dBA	61	61	65	67
Sound pressure level	Cooling	High	dBA	54	54	59	60
Operation range	Cooling	Min.-Max.	°C	-15~50	-15~50	-15~50	-15~50
	Heating	Min.-Max.	°C	-15~30	-15~30	-15~30	-15~30
Refrigerant Type/GWP				R-410A / 2.087,5			
Refrigerant Amount			g	800	800	1250	1950
"Piping connections"	Liquid	DU	inch	1/4"	1/4"	1/4"	3/8"
	Gas	DU	inch	3/8"	3/8"	1/2"	5/8"
	Piping length	IU - OU Max.	m	30	30	30	30
	Level difference	IU - OU Max.	m	20	20	20	20

Seasonal Efficiency values have been calculated under following conditions by testing under different loads, according to new regulations of the European Union.

Cooling Test Conditions: Indoor 27 °C (DB), 19 °C (WB).  
Outdoor 35 °C (DB), 30 °C (DB), 25 °C (DB), 20 °C (DB)

Heating Test Conditions: Indoor 20 °C (DB), 15 °C (WB).  
Outdoor -7 °C (DB), 2 °C (DB), 7 °C (DB), 12 °C (DB)

\*\* Annual energy consumption for the cooling season is a test result obtained by taking into account 350-hour operating conditions under different temperatures.  
\*\* Annual energy consumption for the heating season is a test result obtained by taking into account 1400-hour operating conditions under different temperatures.

As a result of our continuous product development policy, we reserve the right to make changes in all technical specifications without notice.