

# EO

Split Direct  
Expansion Units



R410A  
ECO FRIENDLY





**ORRIS**  
Creating Your Climate




R410A  
ECO FRIENDLY





# COMPANY PROFILE



**ORRIS K.S. Industries Ltd.** was established in 1988. Since then, it has been a leading market supplier in Israel of customized HVAC refrigeration systems and solutions, with focusing on friendly environment, highest reliability products and state-of-the-art technologies.

**ORRIS** specializes in tailor made solutions, including designing, manufacturing and assembling air conditioning systems for a variety of uses.

ORRIS' products include packaged units, belt driven air handling units, fan coils, direct expansion air conditioning systems and water source units.

**ORRIS** is known for producing special units for fresh air, clean room systems, operating rooms, computer and server rooms, garbage disposal rooms, designated units for tents, and mobile units. Our long experienced team at the Engineering Department develops and designs units according to special specifications and requirements of each project and meets the diverse needs of every customer.

At ORRIS, we take pride in all we have achieved over the last twenty years. Our products are consistently approved by top air conditioning consultants and designers. ORRIS' units and comprehensive systems have been installed in commercial, industrial and institutional buildings, as well as residential neighborhoods, including hospitals, hotels, universities and shopping malls. Our capabilities reach far beyond the Israeli borders and we have successfully supplied air conditioning systems and solutions to satisfied customers in Europe, Africa and South America.

In recent years, ORRIS' constant striving for innovation has led to the development of a new line of niche heating and air conditioning units, allowing the manufacturing of tailor made solutions for urban environment buildings, in which local city laws prevent installing common air conditioning systems. As a leading company using the latest air conditioning technology, ORRIS custom designs HVAC systems that operate with high energy efficiency. This creates

synergy between what the customer wants and what the environment needs.

Quality is the key word in all of ORRIS' activities. We believe in relentless pursuit of quality products and forward thinking technologies. Thus, we use only the very best parts available worldwide. Manufacturing is supervised under the highest standards including ISO9001. ORRIS has received a special certificate for "Safety Standard" by the Standards Institution of Israel.

**ORRIS** sees itself as a part of the global effort to improve the environment, therefore we encourage using 'green' and safe refrigerants subjected to the highest standards.

As a part of our ongoing investment in research and development, we plan and manufacture air conditioning units with an emphasis on low noise level, such as ORRIS' 'Super Quiet' units, in collaboration with acoustics engineers and consultants.

We believe in a fundamental sense of citizenship and responsibility. Therefore, we actively support the community through a variety of means.

**ORRIS** embraces the community; we believe in deep involvement between the company and the society.

Our web site has been created to serve all, while keeping designers and constructors in mind; it includes designed calculators to facilitate the choosing of the most suitable solution more quickly and easily. The electronic catalog enables designing and selecting from various A.C. units and system in a professional and convenient way.

**ORRIS K.S. Industries Ltd.** is synonymous with innovative, state-of-the-art, environmentally-friendly air conditioning solutions.

We look forward to continued development and growth in coming years.



## REGULAR UNITS

Model	Cooling Capacity		Heating Capacity		Page	A	B
	KBTU/h	kW	KBTU/h	kW			
EO-G40-1	38.5	11.3	39.5	11.6	6-7	√	
EO-G40	38.2	11.3	39.2	11.5	6-7	√	
EO-G49	51.5	15.1	52.9	15.5	8-9	√	
EO-G60	63.0	18.5	64.8	19.0	10-11	√	
EO-G72	72.3	21.2	74.1	21.7	12-13	√	
EO-G78	78.5	23.0	80.6	23.6	14-15	√	√
EO-G90	89.9	26.6	92.4	27.1	16-17	√	√
EO-G102	103.5	30.4	106.0	31.1	18-19	√	√
EO-G120	120.2	35.2	123.4	36.2	20-21	√	√
EO-G150	155.0	45.5	159.5	46.8	22-23	√	√
EO-G180	180.3	52.9	184.8	54.2	24-25	√	√

## SPECIAL APPLICATIONS

Model		Page	A	C
EO-GFAH	Fresh air units for medium air supplied temperature	28	√	√
EO-GFAL	Fresh air units for deep care	28	√	√
EO-GLT	Air conditioning unit for low temperature rooms	29	√	√

## FEATURES BY CLASS

### Class A

- Heat pump.
- Controller including electronic thermostat with delay for compressor.
- Condenser's motor velocity switching for head pressure limit.
- All electric motors are protected by thermal overload.
- All condensers' steel parts are galvanized and coated with baked epoxy painting for double corrosion protection.
- Evaporators' structures are built with dismantled walls, service panels on both sides and bottom access in most units.
- Thermo-acoustic fiberglass isolation 1" thick for evaporators.
- Statically and dynamically balanced centrifugal blowers.
- Overload protection for triple phased units.
- Sealed and waterproof outdoor electrical system.

### Class B

- Bi-directional expansion valve instead of capillary tube.
- Liquid separator.
- Sight glass.
- Low pressure protection.
- High pressure protection.
- Filter dryer.

### Class C

- Cooling only refrigerant system with optional heating elements.
- Expansion valve.
- Sight glass.
- Low pressure protection.
- High pressure protection.
- Filter dryer.
- Hot gas bypass.

# Split Direct Expansion Units

## The EO series

Cooling and heating units, manufactured in various sizes, for a wide variety of applications for indoor & outdoor installation. Easy access is provided to all internal components. Manufacturing special outdoor conditions structure is optional.

## Features

### Compressors

EO Models use high quality scroll and rotary compressors featuring:

- High C.O.P
- Hermetically sealed
- Extremely quiet operation
- Complete motor protection
- Internal and external vibration absorbers

### Housing

Housing construction is made of high quality galvanized metal sheet. Most evaporator units have bottom access doors for more efficient service.

### Insulation

Evaporator units are covered with 1" neoprene coated thermo-acoustic fiberglass insulation.

### Condenser & Evaporator Coils

Constructed of seamless 7mm and 3/8" corrugated edge aluminum fins for the evaporator and 7mm rifled and louvered pattern for the condenser in galvanized steel frames. Tubes are mechanically expanded into die-formed fin collars, providing a uniform mechanical bond that assures maximum heat transfer efficiency. Optional left or right piping.

### Evaporator Fans

Furnished with double-inlet, forward-curved blades, constructed of galvanized steel. Fan motors in most units are direct driven with 5 velocity stages, which enable complete suitability for the required pressure. Furthermore, an option to adjust the motor to the customer needs is available. Motors life span is more than 40,000 hours.

### Condenser Fans

Aerofoil profile blades high efficiency low noise direct driven axial fan, statically and dynamically balanced.

### Electronic Controller

- Step capacity control, cooling & heating- up to 8 steps
- Condenser fans control
- Condensing temperature control
- Automatic defrosting 4-way reversing valve in heat pump mode
- Phase control relay - optional
- Remote display

### Safety Control

- High Pressure pressurestat (C class)
- Low Pressure pressurestat (C class)

- Overload protection (compressors & fans)
- Contactor for fire hazard (alarm system) - optional

### Refrigerant System

- High quality, carefully selected components ensure reliable and efficient system operation
- Capillary tube for low capacity units
- Expansion valve, sight glass, filter-dryer & suction accumulator for high capacity units

### Filters

- Washable high quality Poli-flo filters – 1/2" thick
- All filters produced under the highest fire hazard international standards

Each unit is factory-run and pre-tested

### Optional Features

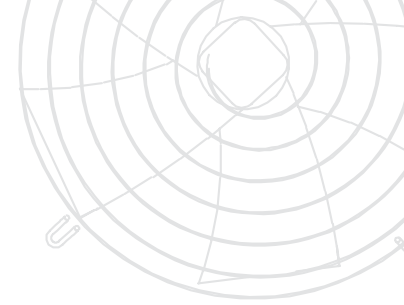
- Evaporator coil 6 rows deep (or other)
- Double skin construction
- Super quiet operation
- Cooling-only mode
- Copper-fin coils, coil coating (Blygold, Thermo-guard, Energy-guard, Epoxy or anti-bacterial coating, hydrophobic or hydrophilic coatings) and marine aluminum fins
- Capacitors for cos.  $\phi$  correction
- High ambient operation
- Electrical heater
- Mixing box with manual or motorized dampers
- Hot gas bypass
- Compressor attenuator cover
- Special rigid, 4 seasons, outdoor units
- Pressure gauge for suction and discharge indication

### Glossary

EO	Orris' split direct expansion series
CF	Flat Condenser version
CS	Square Condenser version
CV	Vertical Condenser (2 fans)
SQ	Super quiet unit
Q	Quiet evaporator
LT	Low Temperature unit
FA	Fresh air unit
L	Low unit
H	High unit
V	Vertical unit
D	Double Condenser units
HA	High Ambient unit
DS	Double Skin structure
OD	Outdoor Condition evaporator
1	Single phased unit
G	Green refrigerant
TF, TB, FF, FB	Please see page 31

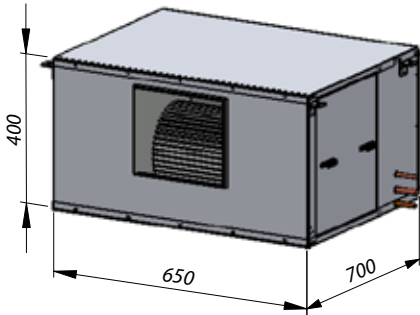
# EO-G40

Split Direct Expansion Units

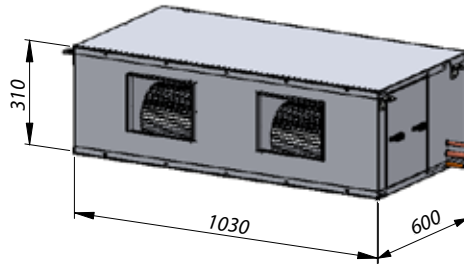


## EVAPORATOR SELECTION

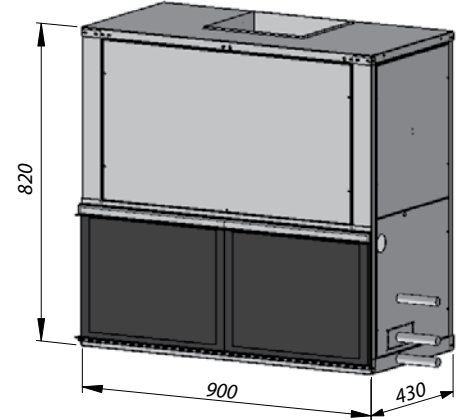
ED-40



ED-40L

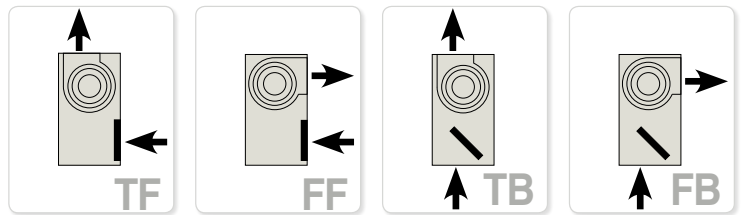


ED-40V



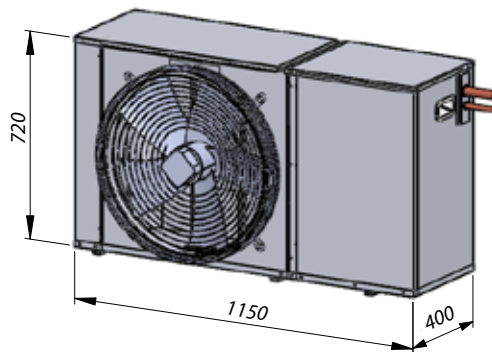
### Available for outdoor installation

- Galvanized & Painted roof
- 2" thick thermal insulation
- Oven epoxy painted unit
- Optional - Short legs



## CONDENSER SELECTION

CF-G40-1 / CF-G40  
CF-G40SQ



For detailed dimensions please see page 30



<b>Cooling Capacity</b>	BTU/h	38,500
	kW	11.3
<b>Air Flow</b>	CFM	1200
	m <sup>3</sup> /h	1870
<b>Refrigerant</b>	<b>R410A</b>	

TECHNICAL DATA		EO-G40	EO-G40-1
Cooling Capacity	BTU/h	38,500	38,600
	kW	11.3	11.3
Heating Capacity	BTU/h	39,400	39,500
	kW	11.5	11.6
COP - Cooling		3.2	3.3
Power Supply		400v/3PH/50Hz	220v/1PH/50Hz
Operating Current	A	3x7.65	17.2
Power Consumption Cooling	kW	3.5	3.5
Time Delay Fuse	A	3x10	1x20

**NOTES:**

Cooling at 35°C (95°F) outdoor ambient, 19.4°C (67°F) entering wet bulb 26.7°C (80°F) entering dry bulb.  
 Heating at 6°C (42.8°F) ambient, 21°C (70°F) entering dry bulb.

			Basic	Low	Vertical	
Evaporator (indoor) unit	MODEL		ED-40	ED-40L	ED-40V	
	Air flow	CFM		1200	1200	1200
		m <sup>3</sup> /h		2040	2040	2040
	Coils face area	ft <sup>2</sup>		2.3	2.3	2.3
		m <sup>2</sup>		0.21	0.21	0.21
	Fan model		DD 9x9	DD 7x10	DD 9x9	
	Number of fans		1	2	1	
	Fan motor	W	245	93	245	
	Number of speeds		3	5	3	
	Dimensions L x D x H	cm	65x70x40	103x60x31	90x43x82	
	Weight	Kg	38	43	56	
	Noise level	dBA	45	43	45	

\* Noise level at 1.5m distance, the supply air with 1.5m duct and without return air duct

\*\* At 6mm external pressure - rigid motors for higher pressure are available

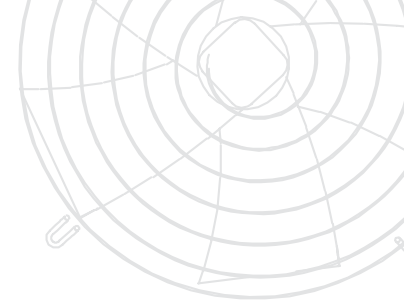
\*\*\* Please visit our web site (www.orris.co.il) for noise level updated information

			Basic Version		
			Standard	Super Quiet	
Condenser (outdoor) unit	MODEL		CF-G40	CF-G40SQ	
	Air Flow	CFM		3500	2200
		m <sup>3</sup> /h		5950	3740
	Coil's Face Area	ft <sup>2</sup>		6.0	6.0
		m <sup>2</sup>		0.6	0.6
	Rows Deep \ Fins spacing		3 / 10	4 / 11	
	Axial Fan Diameter	cm	56	56	
	Number of Fans		1	1	
	Fan Motor	W	245	245	
	Number of Speeds		2	2	
	Dimensions L x D x H	cm	115x40x72	115x40x72	
	Weight	Kg	90	91	
Noise Level	dBA	50	42		

\* Noise level at 4M distance in free field

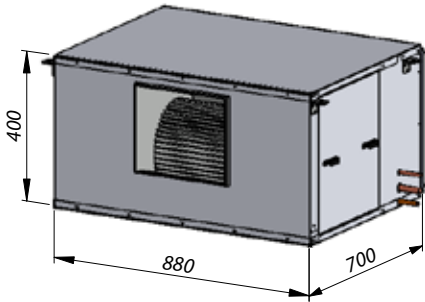
# EO-G49

Split Direct Expansion Units

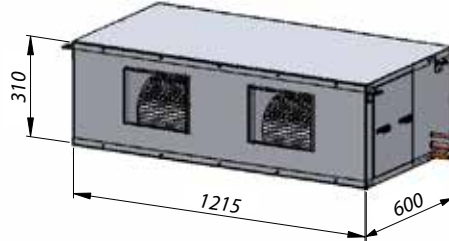


## EVAPORATOR SELECTION

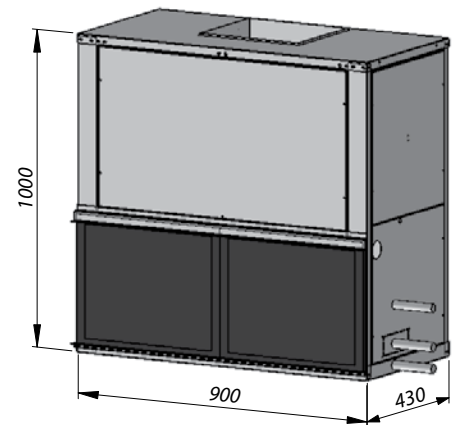
ED-49



ED-49L

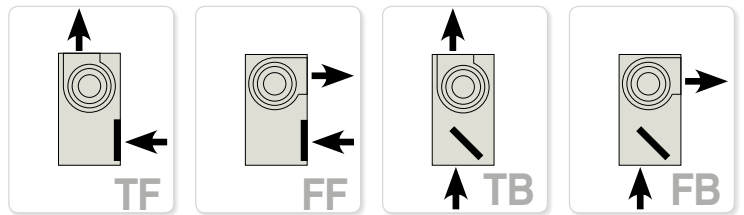


ED-49V



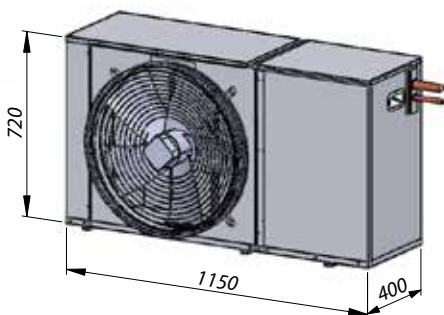
### Available for outdoor installation

- Galvanized & Painted roof
- 2" thick thermal insulation
- Oven epoxy painted unit
- Optional - Short legs

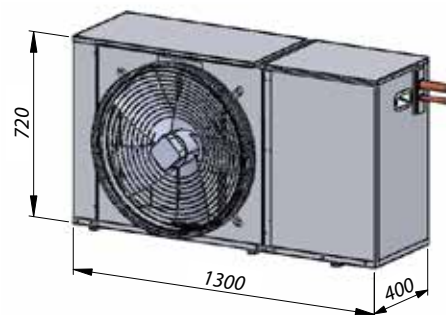


## CONDENSER SELECTION

CF-G49



CF-G49SQ



For detailed dimensions please see page 30



<b>Cooling Capacity</b>	BTU/h	51,500
	kW	15.1
<b>Air Flow</b>	CFM	1600
	m <sup>3</sup> /h	2720
<b>Refrigerant</b>	<b>R410A</b>	

TECHNICAL DATA		
Cooling Capacity	BTU/h	51,500
	kW	15.1
Heating Capacity	BTU/h	52,900
	kW	15.5
COP - Cooling		3.3
Power Supply		400v/3PH/50Hz
Operating Current	A	3x10.9
Power Consumption Cooling	kW	4.6
Time Delay Fuse	A	3x16

**NOTES:**

Cooling at 35°C (95°F) outdoor ambient, 19.4°C (67°F) entering wet bulb 26.7°C (80°F) entering dry bulb.

Heating at 6°C (42.8°F) ambient, 21°C (70°F) entering dry bulb.

			Basic	Low	Vertical
<b>Evaporator (indoor) unit</b>	<b>MODEL</b>		<b>ED-49</b>	<b>ED-49L</b>	<b>ED-49V</b>
	Air flow	CFM	1600	1600	1600
		m <sup>3</sup> /h	2720	2720	2720
	Coils face area	ft <sup>2</sup>	3.1	3.2	3.2
		m <sup>2</sup>	0.29	0.3	0.3
	Fan model		DD 9x10	DD 7x10	DD 9x10
	Number of fans		1	2	1
	Fan motor	W	370	93	370
	Number of speeds		3	3	3
	Dimensions L x D x H	cm	88x70x40	121.5x60x31	90x43x100
	Weight	Kg	45	47	54
	Noise level	dBA	43	44	43

\* Noise level at 1.5m distance, the supply air with 1.5m duct and without return air duct

\*\* At 6mm external pressure - rigid motors for higher pressure are available

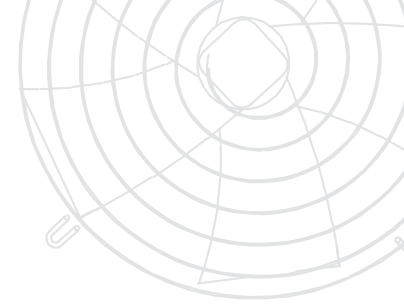
\*\*\* Please visit our web site (www.orris.co.il) for noise level updated information

			Basic Version	
			Standard	Super Quiet
<b>Condenser (outdoor) unit</b>	<b>MODEL</b>		<b>CF-G49</b>	<b>CF-G49SQ</b>
	Air Flow	CFM	3500	3500
		m <sup>3</sup> /h	5950	5950
	Coil's Face Area	ft <sup>2</sup>	6.0	8.6
		m <sup>2</sup>	0.6	0.8
	Rows Deep \ Fins spacing		4 / 11	3 / 11
	Axial Fan Diameter	cm	56	61
	Number of Fans		1	1
	Fan Motor	W	245	370
	Number of Speeds		2	2
	Dimensions L x D x H	cm	115x40x72	130x40x72
	Weight	Kg	94	99
Noise Level	dBA	54	42	

\* Noise level at 4M distance in free field

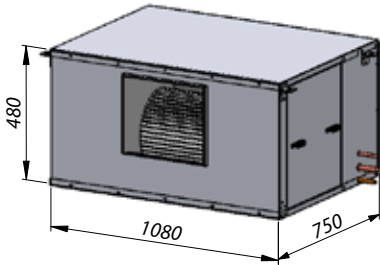
# EO-G60

Split Direct Expansion Units

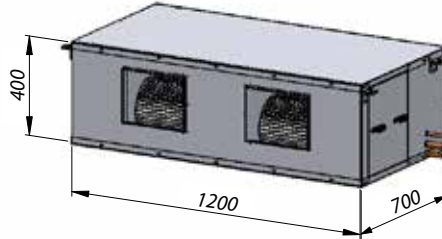


## EVAPORATOR SELECTION

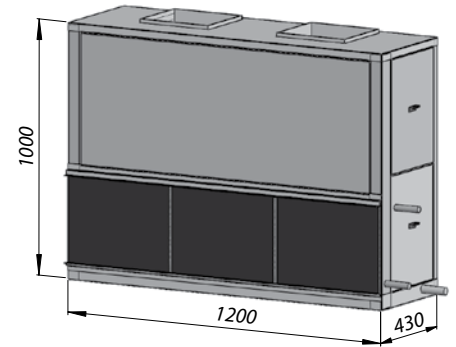
ED-60



ED-60L

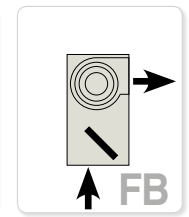
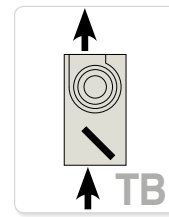
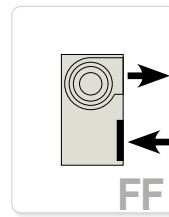
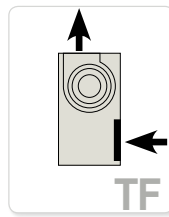


ED-60V



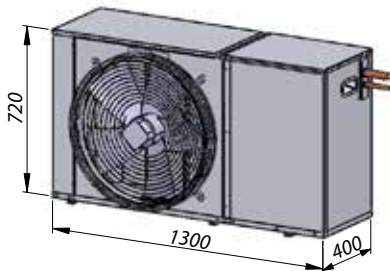
### Available for outdoor installation

- Galvanized & Painted roof
- 2" thick thermal insulation
- Oven epoxy painted unit
- Optional - Short legs

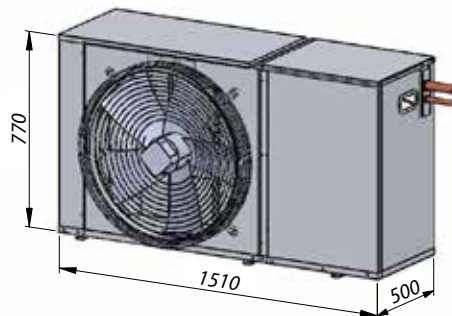


## CONDENSER SELECTION

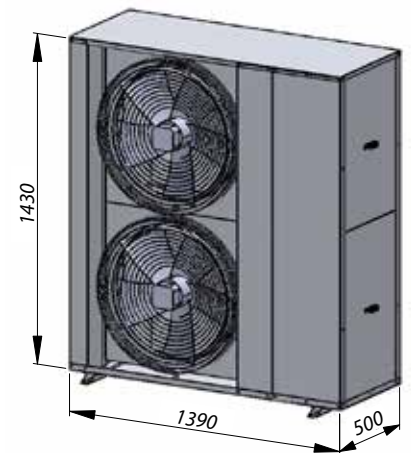
CF-G60



CF-G60SQ



CV-G60SQ



For detailed dimensions please see page 30



<b>Cooling Capacity</b>	BTU/h	63,000
	kW	18.5
<b>Air Flow</b>	CFM	2000
	m <sup>3</sup> /h	3400
<b>Refrigerant</b>	<b>R410A</b>	

TECHNICAL DATA		
Cooling Capacity	BTU/h	63,000
	kW	18.5
Heating Capacity	BTU/h	64,800
	kW	19.0
COP - Cooling		3.2
Power Supply		400v/3PH/50Hz
Operating Current	A	3x13
Power Consumption Cooling	kW	5.8
Time Delay Fuse	A	3x20

**NOTES:**

Cooling at 35°C (95°F) outdoor ambient, 19.4°C (67°F) entering wet bulb 26.7°C (80°F) entering dry bulb.  
 Heating at 6°C (42.8°F) ambient, 21°C (70°F) entering dry bulb.

			Basic	Low	Vertical
<b>Evaporator (indoor) unit</b>	<b>MODEL</b>		<b>ED-60</b>	<b>ED-60L</b>	<b>ED-60V</b>
	Air flow	CFM	2000	2000	2000
		m <sup>3</sup> /h	3400	3400	3400
	Coils face area	ft <sup>2</sup>	4.2	4.0	4.0
		m <sup>2</sup>	0.39	0.36	0.36
	Fan model		DD 10x10	DD 9x9	DD 9x9
	Number of fans		1	2	2
	Fan motor	W	370	2 x 245	2 x 245
	Number of speeds		3	3	3
	Dimensions L x D x H	cm	108x75x48	120x70x40	120x43x100
	Weight	Kg	75	87	85
	Noise level	dBA	47	48	48

\* Noise level at 1.5m distance, the supply air with 1.5m duct and without return air duct

\*\* At 6mm external pressure - rigid motors for higher pressure are available

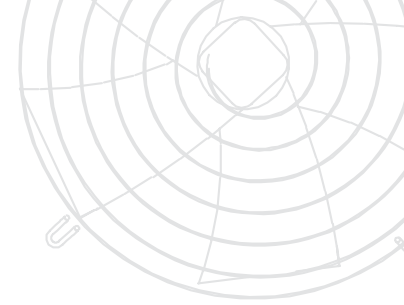
\*\*\* Please visit our web site (www.orris.co.il) for noise level updated information

			Basic Version		Vertical Version	
			Standard	Super Quiet	Standard	Super Quiet
<b>Condenser (outdoor) unit</b>	<b>MODEL</b>		<b>CF-G60</b>	<b>CF-G60SQ</b>	<b>Not available</b>	<b>CV-G60SQ</b>
	Air Flow	CFM	5500	4200		5000
		m <sup>3</sup> /h	9350	7140		8500
	Coil's Face Area	ft <sup>2</sup>	8.6	10.3		12.0
		m <sup>2</sup>	0.8	0.96		1.1
	Rows Deep \ Fins spacing		3 / 11	3 / 11		3 / 10
	Axial Fan Diameter	cm	61	61		56
	Number of Fans		1	1		2
	Fan Motor	W	370	370		245
	Number of Speeds		2	2		2
	Dimensions L x D x H	cm	130x40x72	151x50x77		139x50x143
	Weight	Kg	120	146		140
Noise Level	dBA	55	46	47		

\* Noise level at 4M distance in free field

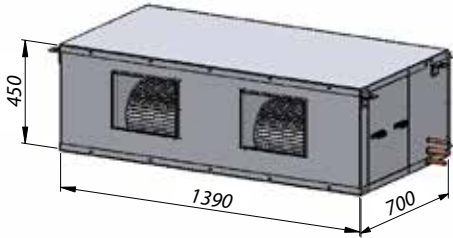
# EO-G72

Split Direct Expansion Units

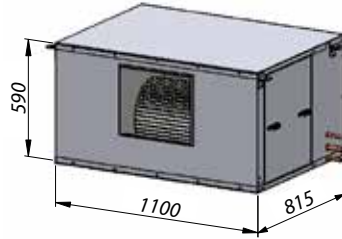


## EVAPORATOR SELECTION

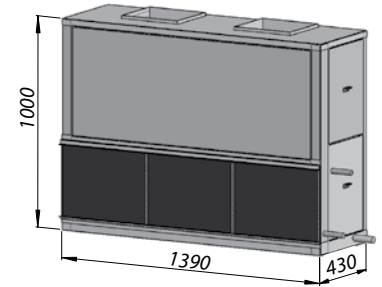
ED-78



ED-78H

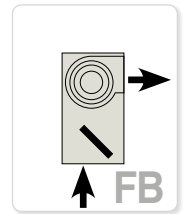
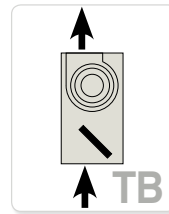
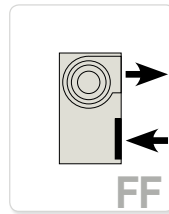
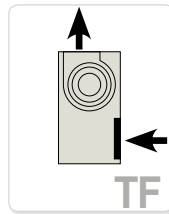


ED-78V



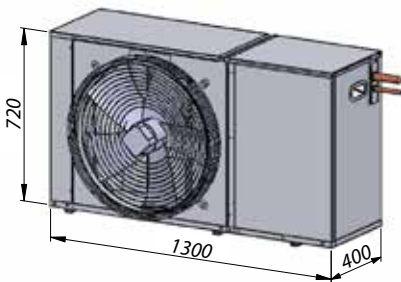
### Available for outdoor installation

- Galvanized & Painted roof
- 2" thick thermal insulation
- Oven epoxy painted unit
- Optional - Short legs

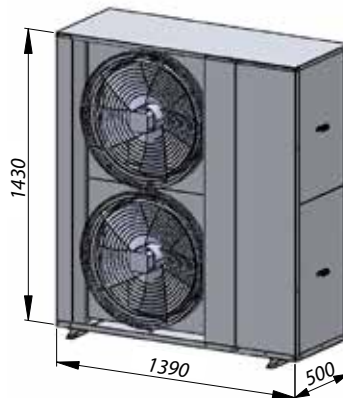


## CONDENSER SELECTION

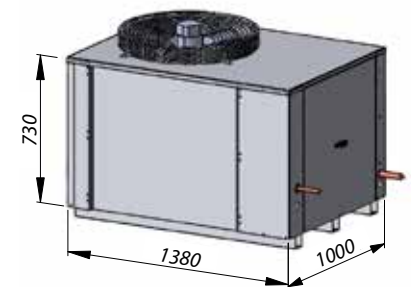
CF-G72



CV-G72SQ



CS-G72  
CS-G72SQ



For detailed dimensions please see page 30



<b>COOLING Capacity</b>	BTU/h	72,500
	kW	21.3
<b>Air Flow</b>	CFM	2500
	m <sup>3</sup> /h	4250
<b>Refrigerant</b>	<b>R410A</b>	

TECHNICAL DATA		
Cooling Capacity	BTU/h	72,500
	kW	21.3
Heating Capacity	BTU/h	74,100
	kW	21.7
COP - Cooling		3.2
Power Supply		400v/3PH/50Hz
Operating Current	A	3x16
Power Consumption Cooling	kW	6.8
Time Delay Fuse	A	3x20

**NOTES:**

Cooling at 35°C (95°F) outdoor ambient, 19.4°C (67°F) entering wet bulb 26.7°C (80°F) entering dry bulb.  
 Heating at 6°C (42.8°F) ambient, 21°C (70°F) entering dry bulb.

			Basic	High	Vertical
<b>Evaporator (indoor) unit</b>	<b>MODEL</b>		<b>ED-78</b>	<b>ED-78H</b>	<b>ED-78V</b>
	Air flow	CFM	2500	2500	2500
		m <sup>3</sup> /h	4250	4250	4250
	Coils face area	ft <sup>2</sup>	5.2	5.2	5.2
		m <sup>2</sup>	0.48	0.48	0.48
	Fan model		DD 9x9	DD 12x12	DD 9x9
	Number of fans		2	1	2
	Fan motor	W	245	560	245
	Number of speeds		3	3	3
	Dimensions L x D x H	cm	139x70x45	110x81.5x59	139x43x100
	Weight	Kg	94	110	92
	Noise level	dBA	49	51	49

\* Noise level at 1.5m distance, the supply air with 1.5m duct and without return air duct

\*\* At 6mm external pressure - rigid motors for higher pressure are available

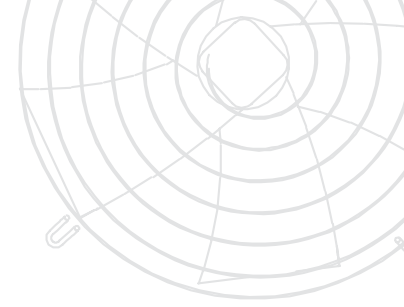
\*\*\* Please visit our web site (www.orris.co.il) for noise level updated information

			Basic Version	Vertical Version	CS (Square) version	
			Standard	Super Quiet	Standard	Super Quiet
<b>Condenser (outdoor) unit</b>	<b>MODEL</b>		<b>CF-G72</b>	<b>CV-G72SQ</b>	<b>CS-G72</b>	<b>CS-G72SQ</b>
	Air Flow	CFM	5500	5800	6000	4400
		m <sup>3</sup> /h	9350	9860	10200	7480
	Coil's Face Area	ft <sup>2</sup>	8.6	12.0	12.0	12.0
		m <sup>2</sup>	0.8	1.1	1.1	1.6
	Rows Deep \ Fins spacing		3/11	3/10	3/10	4/11
	Axial Fan Diameter	cm	61	56	66	66
	Number of Fans		1	2	1	1
	Fan Motor	W	370	245	560	560
	Number of Speeds		2	2	2	2
	Dimensions L x D x H	cm	130x40x72	139x50x143	138x100x73	138x100x73
	Weight	Kg	145	160	160	160
Noise Level	dBA	58	49	57	49	

\* Noise level at 4M distance in free field

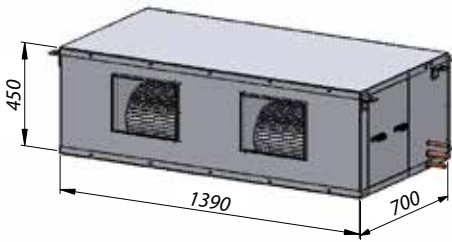
# EO-G78

Split Direct Expansion Units

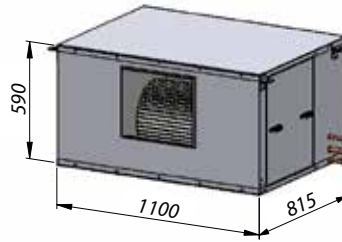


## EVAPORATOR SELECTION

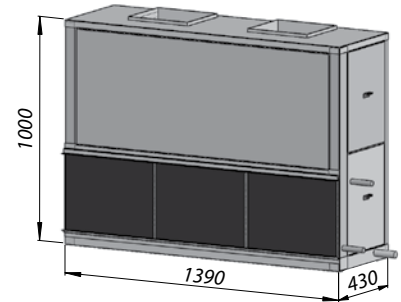
ED-78



ED-78H

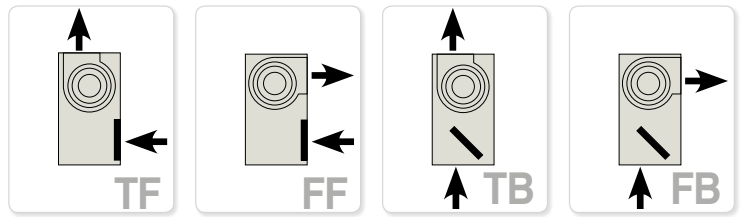


ED-78V



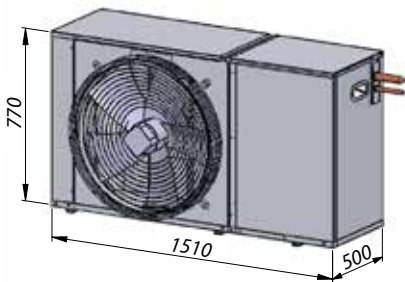
### Available for outdoor installation

- Galvanized & Painted roof
- 2" thick thermal insulation
- Oven epoxy painted unit
- Optional - Short legs

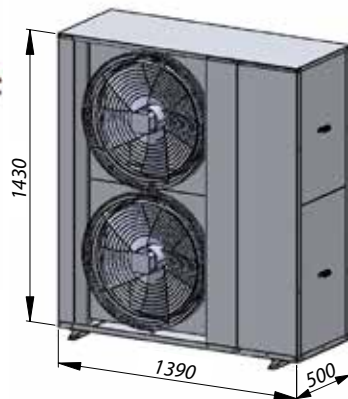


## CONDENSER SELECTION

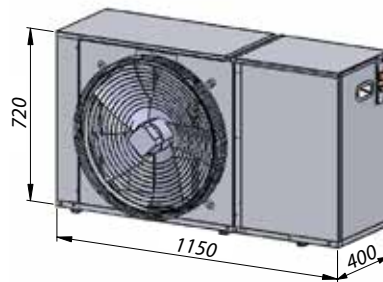
CF-G78



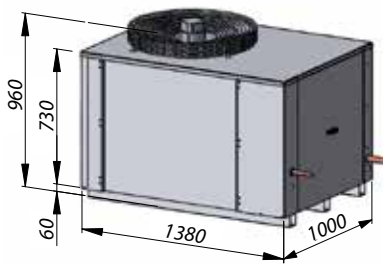
CV-G78  
CV-G78SQ



2 x CF-G40  
2 x CF-G40SQ



CS-G78  
CS-G78SQ



For detailed dimensions please see page 30



<b>COOLING Capacity</b>	BTU/h	78,500
	kW	23.0
<b>Air Flow</b>	CFM	2500
	m <sup>3</sup> /h	4250
<b>Refrigerant</b>	<b>R410A</b>	

TECHNICAL DATA		
Cooling Capacity	BTU/h	78,500
	kW	23.0
Heating Capacity	BTU/h	80,600
	kW	23.6
COP - Cooling		3.2
Power Supply		400v/3PH/50Hz
Operating Current	A	3x17
Power Consumption Cooling	kW	7.2
Time Delay Fuse	A	3x20

**NOTES:**

Cooling at 35°C (95°F) outdoor ambient, 19.4°C (67°F) entering wet bulb 26.7°C (80°F) entering dry bulb.  
 Heating at 6°C (42.8°F) ambient, 21°C (70°F) entering dry bulb.

		Basic	High	Vertical	
<b>Evaporator (indoor) unit</b>	<b>MODEL</b>	<b>ED-78</b>	<b>ED-78H</b>	<b>ED-78V</b>	
	Air flow	CFM	2500	2500	2500
		m <sup>3</sup> /h	4250	4250	4250
	Coils face area	ft <sup>2</sup>	5.2	5.2	5.2
		m <sup>2</sup>	0.48	0.48	0.48
	Fan model		DD 9x9	DD 12x12	DD 9x9
	Number of fans		2	1	2
	Fan motor	W	245	560	245
	Number of speeds		3	3	3
	Dimensions L x D x H	cm	139x70x45	110x81.5x59	139x43x100
	Weight	Kg	94	110	100
	Noise level	dBA	49	51	49

\* Noise level at 1.5m distance, the supply air with 1.5m duct and without return air duct

\*\* At 6mm external pressure - rigid motors for higher pressure are available

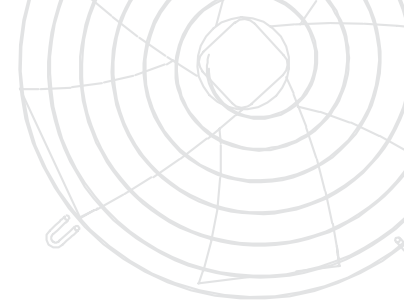
\*\*\* Please visit our web site (www.orris.co.il) for noise level updated information

		Basic Version	Vertical Version			2 Stages Version		CS (Square) version	
		Standard	Standard	Super Quiet	Standard	Super Quiet	Standard	Super Quiet	
<b>Condenser (outdoor) unit</b>	<b>MODEL</b>	<b>CF-G78</b>	<b>CV-G78</b>	<b>CV-G78SQ</b>	<b>2 x CF-G40</b>	<b>2 x CF-G40SQ</b>	<b>CS-G78</b>	<b>CS-G78SQ</b>	
	Air Flow	CFM	5500	6400	4400	3500	2200	6400	4400
		m <sup>3</sup> /h	9350	10880	7480	5950	3740	10880	7480
	Coil's Face Area	ft <sup>2</sup>	10.3	12.0	12.0	6.0	6.0	12.0	12.0
		m <sup>2</sup>	0.96	1.1	1.1	0.6	0.6	1.1	1.1
	Rows Deep \ Fans spacing		3/11	3/10	4/11	3/10	4/11	3/10	4/11
	Axial Fan Diameter	cm	61	56	56	56	56	66	61
	Number of Fans		1	2	2	1	1	1	1
	Fan Motor	W	370	245	245	245	245	560	370
	Number of Speeds		2	2	2	2	2	2	2
	Dimensions L x D x H	cm	151x50x77	139x50x143	139x50x143	115x40x72	115x40x72	138x100x73	138x100x73
	Weight	Kg	145	140	190	90	91	160	160
Noise Level	dBA	58	57	48	50	42	57	47	

\* Noise level at 4M distance in free field

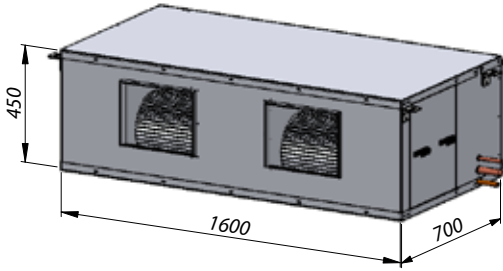
# EO-G90

Split Direct Expansion Units

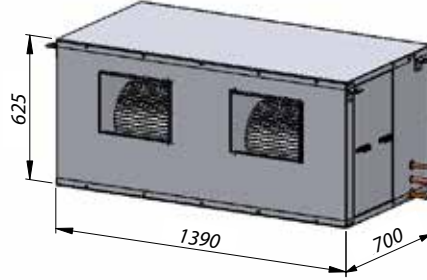


## EVAPORATOR SELECTION

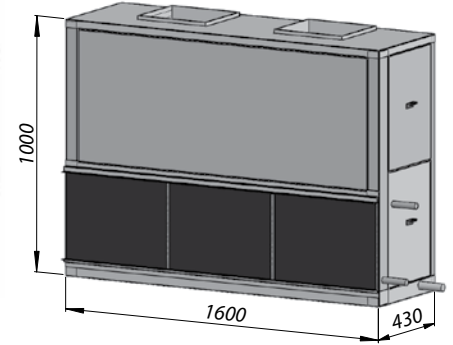
ED-90



ED-90H

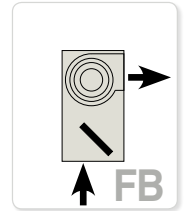
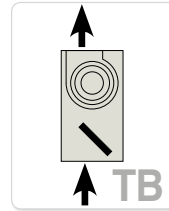
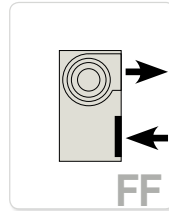
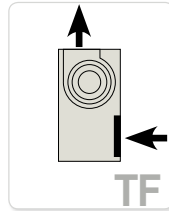


ED-90V



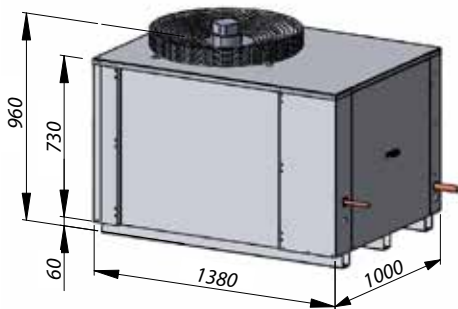
### Available for outdoor installation

- Galvanized & Painted roof
- 2" thick thermal insulation
- Oven epoxy painted unit
- Optional - Short legs

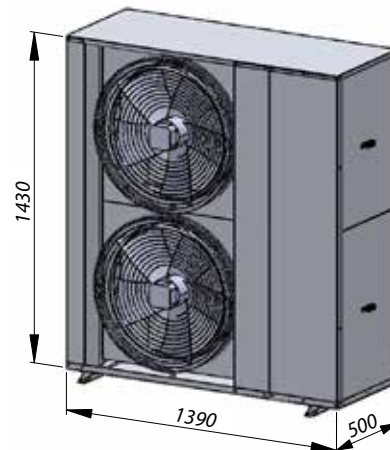


## CONDENSER SELECTION

CS-G90  
CS-G90SQ



CV-G90  
CV-G90SQ



For detailed dimensions please see page 30



<b>COOLING Capacity</b>	BTU/h	91,000
	kW	26.7
<b>Air Flow</b>	CFM	3000
	m <sup>3</sup> /h	5100
<b>Refrigerant</b>	<b>R410A</b>	

TECHNICAL DATA		
Cooling Capacity	BTU/h	91,000
	kW	26.7
Heating Capacity	BTU/h	92,400
	kW	27.1
COP - Cooling		3.25
Power Supply		400v/3PH/50Hz
Operating Current	A	3x20
Power Consumption Cooling	kW	8.3
Time Delay Fuse	A	3x25

**NOTES:**

Cooling at 35°C (95°F) outdoor ambient, 19.4°C (67°F) entering wet bulb 26.7°C (80°F) entering dry bulb.  
 Heating at 6°C (42.8°F) ambient, 21°C (70°F) entering dry bulb.

			Basic	High	Vertical
<b>Evaporator (indoor) unit</b>	<b>MODEL</b>		<b>ED-90</b>	<b>ED-90H</b>	<b>ED-90V</b>
	Air flow	CFM	3000	3000	3000
		m <sup>3</sup> /h	5100	5100	5100
	Coils face area	ft <sup>2</sup>	6.2	6.2	6.2
		m <sup>2</sup>	0.57	0.57	0.57
	Fan model		DD 9x10	DD 9x10	DD 9x10
	Number of fans		2	2	2
	Fan motor	W	370	370	370
	Number of speeds		3	3	3
	Dimensions L x D x H	cm	160x70x45	139x70x62.5	160x43x100
	Weight	Kg	115	115	115
	Noise level	dBA	50	50	50

\* Noise level at 1.5m distance, the supply air with 1.5m duct and without return air duct

\*\* At 6mm external pressure - rigid motors for higher pressure are available

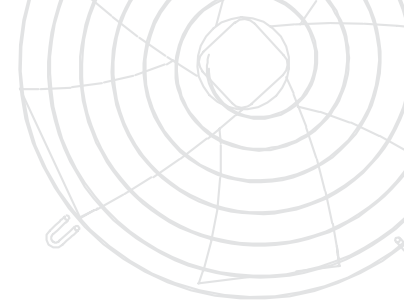
\*\*\* Please visit our web site (www.orris.co.il) for noise level updated information

			CS Basic Version		Vertical Version	
			Standard	Super Quiet	Standard	Super Quiet
<b>Condenser (outdoor) unit</b>	<b>MODEL</b>		<b>CS-G90</b>	<b>CS-G90SQ</b>	<b>CV-G90</b>	<b>CV-G90SQ</b>
	Air Flow	CFM	5500	5500	5500	5600
		m <sup>3</sup> /h	9350	9350	9350	9520
	Coil's Face Area	ft <sup>2</sup>	12.0	17.2	12.0	17.2
		m <sup>2</sup>	1.1	1.6	1.1	1.6
	Rows Deep \ Fins spacing		4/11	3/11	4/11	3/11
	Axial Fan Diameter	cm	61	66	56	61
	Number of Fans		1	1	2	2
	Fan Motor	W	370	560	245	370
	Number of Speeds		2	2	2	2
	Dimensions L x D x H	cm	138x100x73	138x100x73	139x50x143	139x50x143
	Weight	Kg	180	180	165	165
Noise Level	dBA	59	50	57	49	

\* Noise level at 4M distance in free field

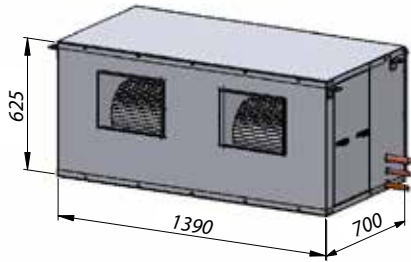
# EO-G102

Split Direct Expansion Units

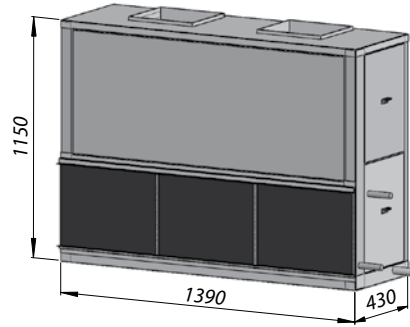


## EVAPORATOR SELECTION

ED-102

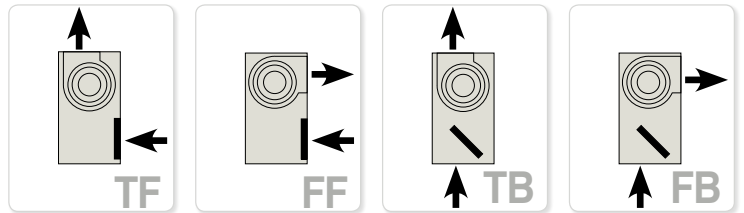


ED-102V



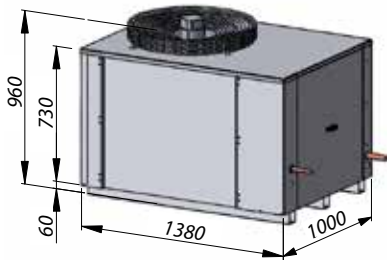
### Available for outdoor installation

- Galvanized & Painted roof
- 2" thick thermal insulation
- Oven epoxy painted unit
- Optional - Short legs

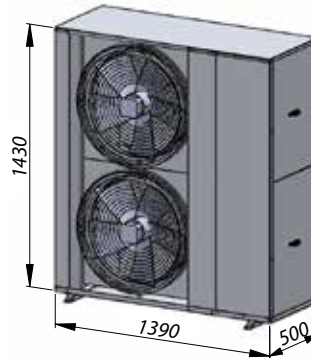


## CONDENSER SELECTION

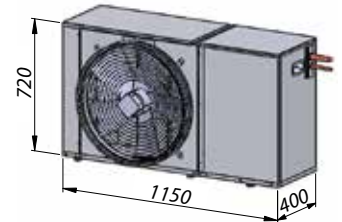
CS-G102  
CS-G102SQ



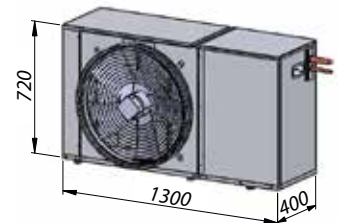
CV-G102  
CV-G102SQ



2 x CF-G49



2 x CF-G49SQ



For detailed dimensions please see page 30



<b>Cooling Capacity</b>	BTU/h	103,500
	kW	30.4
<b>Air Flow</b>	CFM	3200
	m <sup>3</sup> /h	5440
<b>Refrigerant</b>	<b>R410A</b>	

TECHNICAL DATA		
Cooling Capacity	BTU/h	103,500
	kW	30.4
Heating Capacity	BTU/h	106,100
	kW	31.1
COP - Cooling		3.2
Power Supply		400v/3PH/50Hz
Operating Current	A	3x22.5
Power Consumption Cooling	kW	9.5
Time Delay Fuse	A	3x32

**NOTES:**

Cooling at 35°C (95°F) outdoor ambient, 19.4°C (67°F) entering wet bulb 26.7°C (80°F) entering dry bulb.  
 Heating at 6°C (42.8°F) ambient, 21°C (70°F) entering dry bulb.

			Basic	Vertical	
Evaporator (indoor) unit	MODEL		ED-102	ED-102V	
	Air flow	CFM		3200	3200
		m <sup>3</sup> /h		5440	5440
	Coils face area	ft <sup>2</sup>		7.1	7.1
		m <sup>2</sup>		0.65	0.65
	Fan model		DD 9x10	DD 9x10	
	Number of fans		2	2	
	Fan motor	W	370	370	
	Number of speeds		3	3	
	Dimensions L x D x H	cm	139x70x62.5	139x43x115	
	Weight	Kg	120	120	
	Noise level	dBA	51	51	

\* Noise level at 1.5m distance, the supply air with 1.5m duct and without return air duct

\*\* At 6mm external pressure - rigid motors for higher pressure are available

\*\*\* Please visit our web site (www.orris.co.il) for noise level updated information

			Basic Version		Vertical Version		2 Stages Version	
			Standard	Super Quiet	Standard	Super Quiet	Standard	Super Quiet
Condenser (outdoor) unit	MODEL		CS-G102	CS-G102SQ	CV-G102	CV-G102SQ	2 x CF-G49	2 x CF-G49SQ
	Air Flow	CFM	6000	7000	6200	7000	3500	3500
		m <sup>3</sup> /h	10200	11900	10540	11900	5950	5950
	Coil's Face Area	ft <sup>2</sup>	12.0	17.2	12.0	17.2	6.0	8.6
		m <sup>2</sup>	1.1	1.6	1.1	1.6	0.6	0.8
	Rows Deep \ Fans spacing		4/11	3/11	4/11	3/11	4/11	3/11
	Axial Fan Diameter	cm	66	71	56	61	56	61
	Number of Fans		1	1	2	2	1	1
	Fan Motor	W	560	560	245	370	245	370
	Number of Speeds		2	2	2	2	2	2
	Dimensions L x D x H	cm	138x100x73	138x100x73	139x50x143	139x50x143	115X40X72	130x40x72
	Weight	Kg	180	190	165	165	94	99
Noise Level	dBA	59	50	57	49	54	42	

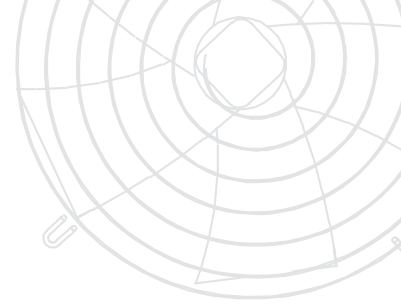
\* Noise level at 4M distance in free field

# EO-G120

Split Direct Expansion Units

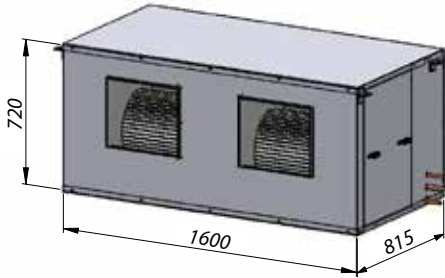


R410A  
ECO FRIENDLY

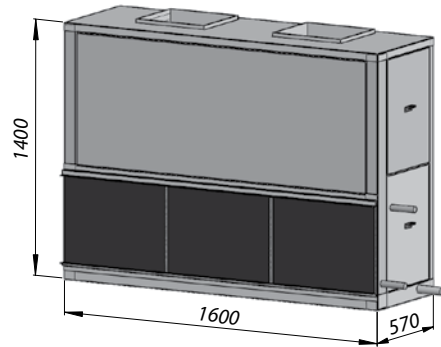


## EVAPORATOR SELECTION

ED-120

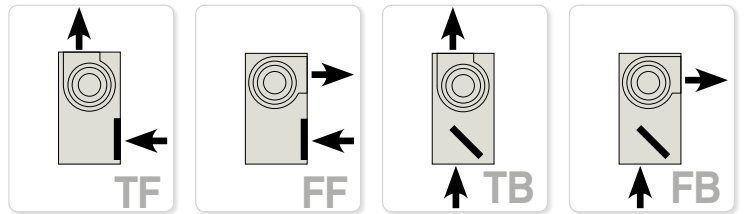


ED-120V



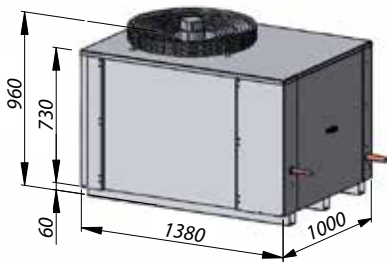
### Available for outdoor installation

- Galvanized & Painted roof
- 2" thick thermal insulation
- Oven epoxy painted unit
- Optional - Short legs

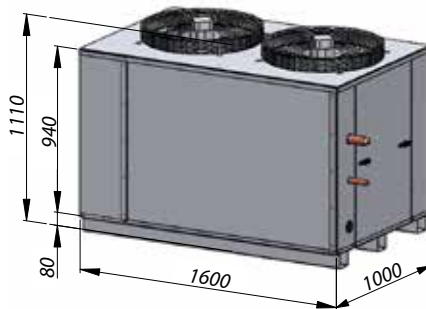


## CONDENSER SELECTION

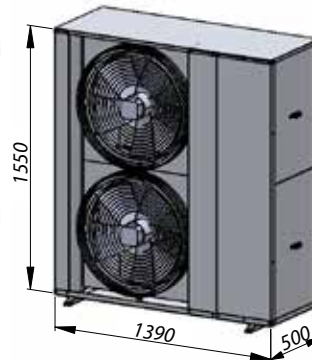
CS-G120



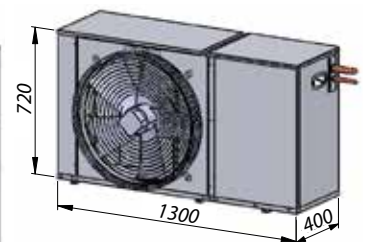
CS-G120SQ



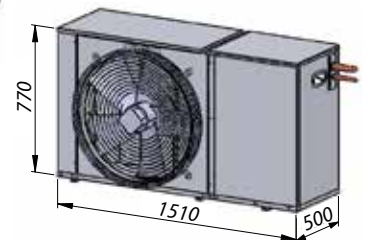
CV-G120  
CV-G120SQ



2 x CF-G60



2 x CF-G60SQ



For detailed dimensions please see page 30



<b>Cooling Capacity</b>	BTU/h	120,000
	kW	35.2
<b>Air Flow</b>	CFM	4000
	m <sup>3</sup> /h	6800
<b>Refrigerant</b>	<b>R410A</b>	

TECHNICAL DATA		
Cooling Capacity	BTU/h	120,000
	kW	35.2
Heating Capacity	BTU/h	123,400
	kW	36.2
COP - Cooling		3.3
Power Supply		400v/3PH/50Hz
Operating Current	A	3x25
Power Consumption Cooling	kW	10.7
Time Delay Fuse	A	3x32

**NOTES:**

Cooling at 35°C (95°F) outdoor ambient, 19.4°C (67°F) entering wet bulb 26.7°C (80°F) entering dry bulb.  
 Heating at 6°C (42.8°F) ambient, 21°C (70°F) entering dry bulb.

			Basic	Vertical
<b>Evaporator (indoor) unit</b>	<b>MODEL</b>		<b>ED-120</b>	<b>ED-120V</b>
	Air flow	CFM	4000	4000
		m <sup>3</sup> /h	6800	6800
	Coils face area	ft <sup>2</sup>	8.35	8.35
		m <sup>2</sup>	0.77	0.77
	Fan model		DD 10x10	DD 10x10
	Number of fans		2	2
	Fan motor	W	370	370
	Number of speeds		3	3
	Dimensions L x D x H	cm	160x81.5x72	160x57x140
	Weight	Kg	170	170
	Noise level	dBA	53	53

\* Noise level at 1.5m distance, the supply air with 1.5m duct and without return air duct

\*\* At 6mm external pressure - rigid motors for higher pressure are available

\*\*\* Please visit our web site (www.orris.co.il) for noise level updated information

			Basic Version		Vertical Version		2 Stages Version	
			Standard	Super Quiet	Standard	Super Quiet	Standard	Super Quiet
<b>Condenser (outdoor) unit</b>	<b>MODEL</b>		<b>CS-G120</b>	<b>CS-G120SQ</b>	<b>CV-G120</b>	<b>CV-G120SQ</b>	<b>2 x CF-G60</b>	<b>2 x CF-G60SQ</b>
	Air Flow	CFM	8500	7000	9000	8000	5500	4200
		m <sup>3</sup> /h	14450	11900	15300	13600	9350	7140
	Coil's Face Area	ft <sup>2</sup>	17.2	25.0	17.2	17.2	8.6	10.3
		m <sup>2</sup>	1.6	2.32	1.6	1.6	0.8	0.96
	Rows Deep \ Fins spacing		3 / 11	3 / 11	3 / 11	3 / 11	3 / 11	3 / 11
	Axial Fan Diameter	cm	71	61	61	61	61	61
	Number of Fans		1	2	2	2	1	1
	Fan Motor	W	560	370	370	370	370	370
	Number of Speeds		2	2	2	2	2	2
	Dimensions L x D x H	cm	138x100x73	160x100x94	139x50x155	139x50x155	130x40x72	151x50x77
	Weight	Kg	190	290	175	175	120	146
Noise Level	dBA	60	51	60	51	55	46	

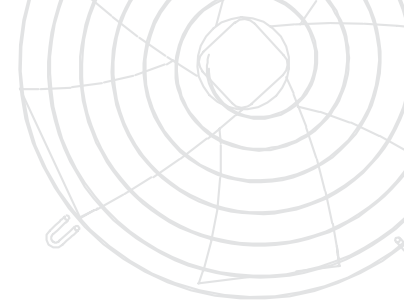
\* Noise level at 4M distance in free field

# EO-G150

Split Direct Expansion Units

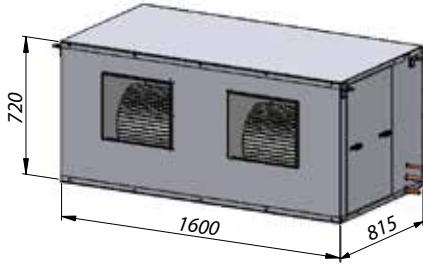


R410A  
ECO FRIENDLY

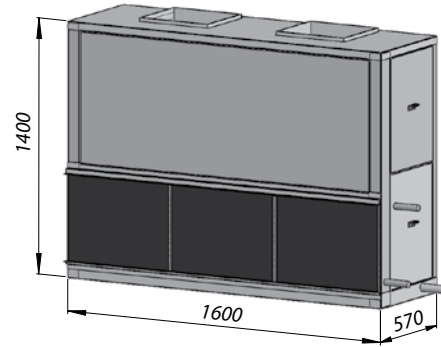


## EVAPORATOR SELECTION

ED-150

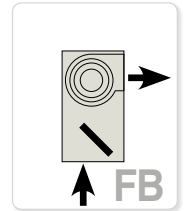
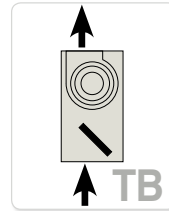
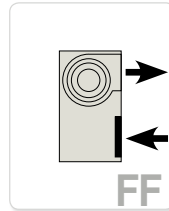
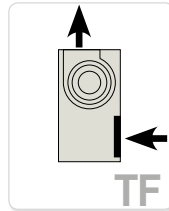


ED-150V



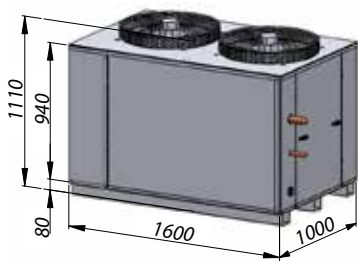
### Available for outdoor installation

- Galvanized & Painted roof
- 2" thick thermal insulation
- Oven epoxy painted unit
- Optional - Short legs

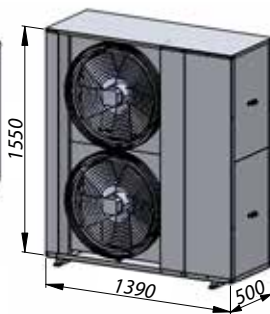


## CONDENSER SELECTION

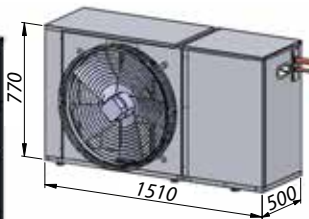
CS-G150



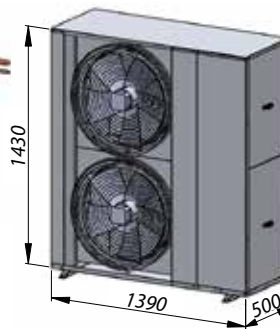
CV-G150



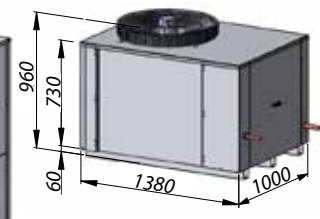
2 x CF-G78



2 x CV-G78  
2 x CV-G78SQ



2 x CS-G78  
2 x CS-G78SQ



For detailed dimensions please see page 30



<b>Cooling Capacity</b>	BTU/h	155,000
	kW	45.5
<b>Air Flow</b>	CFM	5000
	m <sup>3</sup> /h	8500
<b>Refrigerant</b>	<b>R410A</b>	

TECHNICAL DATA		
Cooling Capacity	BTU/h	155,000
	kW	45.5
Heating Capacity	BTU/h	159,500
	kW	46.8
COP - Cooling		3.2
Power Supply		400v/3PH/50Hz
Operating Current	A	3x33
Power Consumption Cooling	kW	14.2
Time Delay Fuse	A	3x40

**NOTES:**

Cooling at 35°C (95°F) outdoor ambient, 19.4°C (67°F) entering wet bulb 26.7°C (80°F) entering dry bulb.  
 Heating at 6°C (42.8°F) ambient, 21°C (70°F) entering dry bulb.

			Basic	Vertical	
Evaporator (indoor) unit	MODEL		ED-150	ED-150V	
	Air flow	CFM		5000	5000
		m <sup>3</sup> /h		8500	8500
	Coils face area	ft <sup>2</sup>		10.1	10.1
		m <sup>2</sup>		0.93	0.93
	Fan model		DD 12x12	DD 12x12	
	Number of fans		2	2	
	Fan motor	W	560	560	
	Number of speeds		2	2	
	Dimensions L x D x H	cm	160x81.5x72	160x57x140	
	Weight	Kg	197	197	
	Noise level	dBA	55	55	

\* Noise level at 1.5m distance, the supply air with 1.5m duct and without return air duct

\*\* At 6mm external pressure - rigid motors for higher pressure are available

\*\*\* Please visit our web site (www.orris.co.il) for noise level updated information

		Basic Version	Vertical Version	2 Stages Version	2 Stages Vertical Version		2 Stages (Square) version		
		Standard	Standard	Standard	Standard	Super Quiet	Standard	Super Quiet	
Condenser (outdoor) unit	MODEL	CS-G150	CV-G150	2 x CF-G78	2 x CV-G78	2 x CV-G78SQ	2 x CS-G78	2 x CS-G78SQ	
	Air Flow	CFM	10000	11000	5500	6400	4400	6400	4400
		m <sup>3</sup> /h	10700	18700	9350	10880	7480	10880	7480
	Coil's Face Area	ft <sup>2</sup>	25.0	20.6	10.3	12.0	12.0	12.0	12.0
		m <sup>2</sup>	2.32	1.9	0.96	1.1	1.1	1.1	1.1
	Rows Deep \ Fins spacing		3/11	3/11	3/11	3/10	4/11	3/10	4/11
	Axial Fan Diameter	cm	61	61	61	56	56	66	61
	Number of Fans		2	2	1	2	2	1	1
	Fan Motor	W	370	370	370	245	245	560	370
	Number of Speeds		2	2	2	2	2	2	2
	Dimensions L x D x H	cm	160x100x94	139x50x155	151x50x77	139x50x143	139x50x143	138x100x73	138x100x73
	Weight	Kg	320	290	145	140	190	160	160
Noise Level	dBA	62	62	58	57	48	57	47	

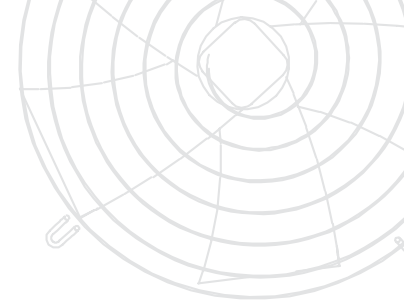
\* Noise level at 4M distance in free field

# EO-G180

Split Direct Expansion Units

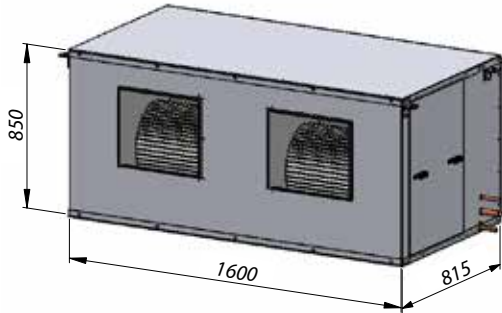


R410A  
ECO FRIENDLY

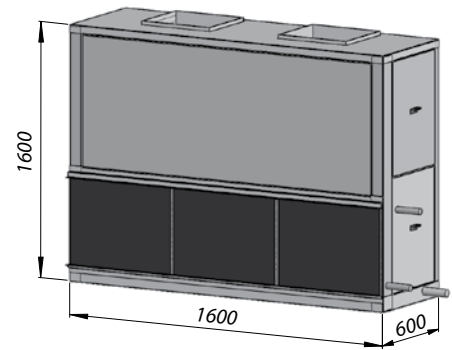


## EVAPORATOR SELECTION

ED-180

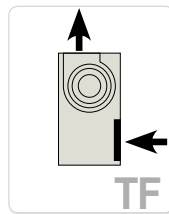


ED-180V

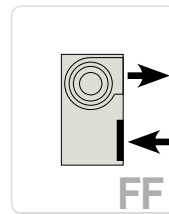


### Available for outdoor installation

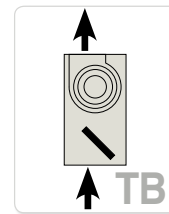
- Galvanized & Painted roof
- 2" thick thermal insulation
- Oven epoxy painted unit
- Optional - Short legs



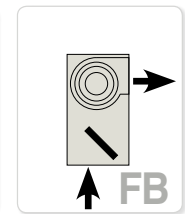
TF



FF



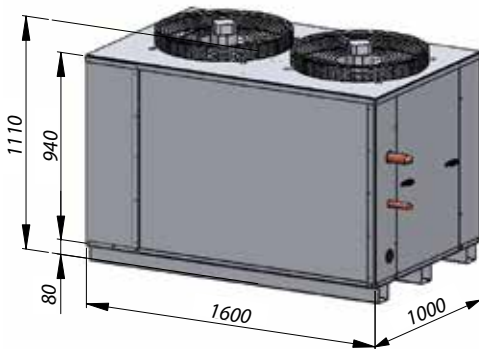
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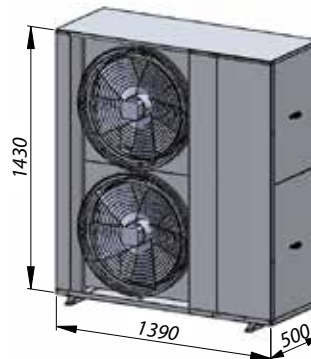
FB

## CONDENSER SELECTION

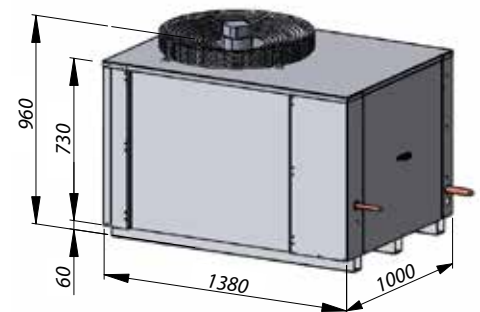
CS-G180



2 x CV-G90  
2 x CV-G90SQ



2 x CS-G90  
2 x CS-G90SQ



For detailed dimensions please see page 30



<b>Cooling Capacity</b>	BTU/h	182,000
	kW	53.4
<b>Air Flow</b>	CFM	6000
	m <sup>3</sup> /h	10200
<b>Refrigerant</b>	<b>R410A</b>	

TECHNICAL DATA		
Cooling Capacity	BTU/h	182,000
	kW	53.4
Heating Capacity	BTU/h	184.800
	kW	54.2
COP - Cooling		3.4
Power Supply		400v/3PH/50Hz
Operating Current	A	3x34
Power Consumption Cooling	kW	15.9
Time Delay Fuse	A	3x40

**NOTES:**

Cooling at 35°C (95°F) outdoor ambient, 19.4°C (67°F) entering wet bulb 26.7°C (80°F) entering dry bulb.  
 Heating at 6°C (42.8°F) ambient, 21°C (70°F) entering dry bulb.

			Basic	Vertical
<b>Evaporator (indoor) unit</b>	<b>MODEL</b>		<b>ED-180</b>	<b>ED-180V</b>
	Air flow	CFM	6000	6000
		m <sup>3</sup> /h	10200	10200
	Coils face area	ft <sup>2</sup>	12	12
		m <sup>2</sup>	1.11	1.11
	Fan model		DD 12x12	DD 12x12
	Number of fans		2	2
	Fan motor	W	750 - 3PH	750 - 3PH
	Number of speeds		1	1
	Dimensions L x D x H	cm	160x81.5x85	160x60x160
	Weight	Kg	230	237
	Noise level	dBA	56	56

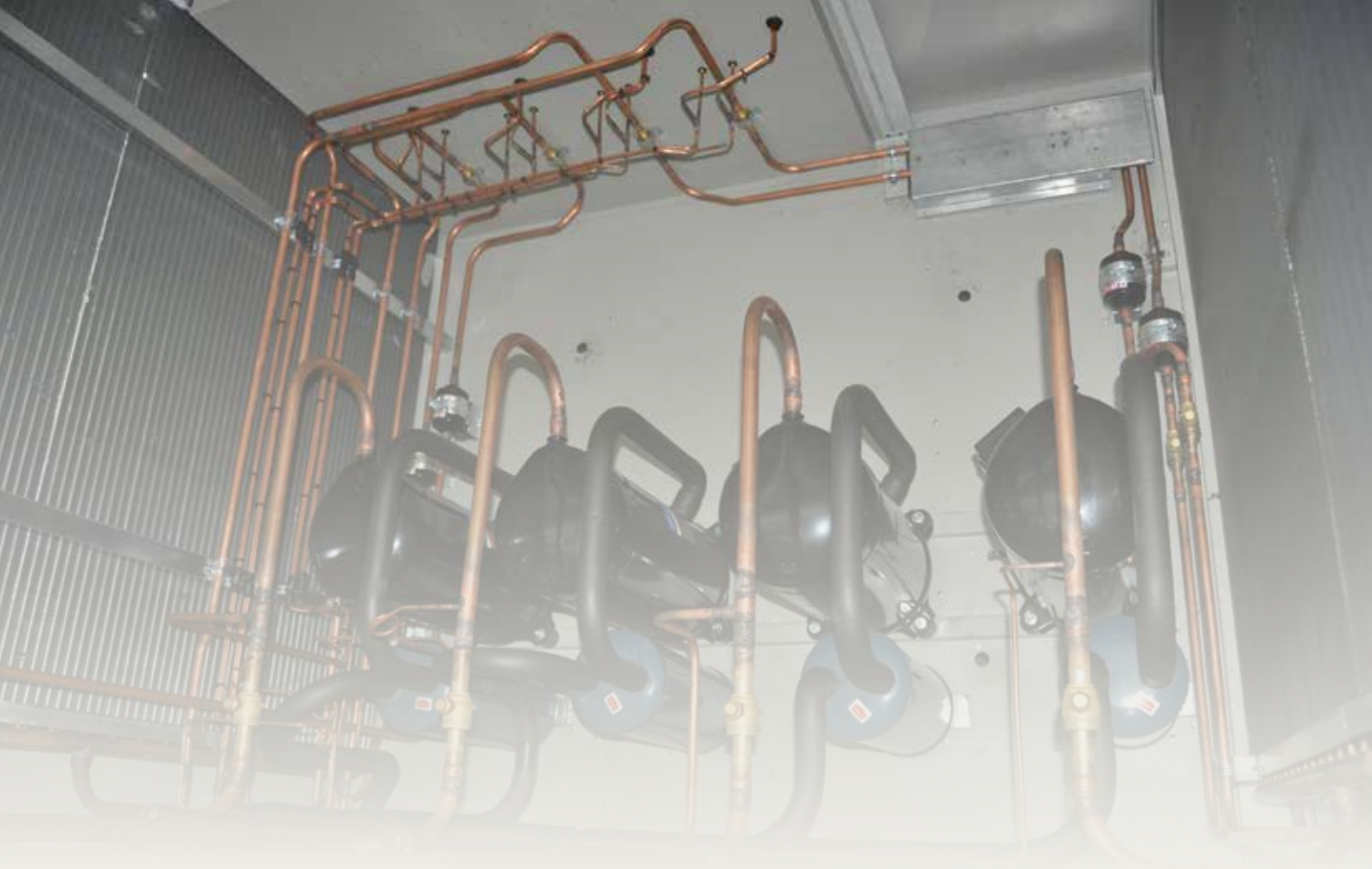
\* Noise level at 1.5m distance, the supply air with 1.5m duct and without return air duct

\*\* At 6mm external pressure

\*\*\* Please visit our web site ([www.orris.co.il](http://www.orris.co.il)) for noise level updated information

			Basic Version	2 Stages (Vertical)		2 Stages (Square) Version	
			Standard	Standard	Super Quiet	Standard	Super Quiet
<b>Condenser (outdoor) unit</b>	<b>MODEL</b>		<b>CS-G180</b>	<b>2 x CV-G90</b>	<b>2 x CV-G90SQ</b>	<b>2 x CS-G90</b>	<b>2 x CS-G90SQ</b>
	Air Flow	CFM	12000	5500	5500	5500	5500
		m <sup>3</sup> /h	20400	9350	9350	9350	9350
	Coil's Face Area	ft <sup>2</sup>	25.0	12.0	17.2	12.0	17.2
		m <sup>2</sup>	2.32	1.1	1.6	1.1	1.6
	Rows Deep \ Fins spacing		4/11	4/11	3/11	4/11	3/11
	Axial Fan Diameter	cm	66	56	61	61	66
	Number of Fans		2	2	2	1	1
	Fan Motor	W	560	245	370	370	560
	Number of Speeds		2	2	2	2	2
	Dimensions L x D x H	cm	160x100x111	139x50x143	139x50x143	138x100x73	138x100x73
	Weight	Kg	340	165	165	180	180
Noise Level	dBA	63	57	49	59	50	

\* Noise level at 4M distance in free field



# *Split Direct Expansion*

*Split Direct Expansion*



# Split Direct Expansion

Split Direct Expansion  
**Split Direct Expansion**  
Split Direct Expansion



# EO Fresh Air series



## Fresh Air units

While standard units are designed to achieve comfort conditions, **Fresh Air units** are designed to handle of 100% fresh air for filtering, cooling, heating, and sometimes also moisture controlling is required.

The Features which distinguish this application usage are the parameters leading the planning and design, which are air flow and supplied temperature (and sometimes moisture), hence the system's capacity. Usually, the outlet temperature is not a precise value, but a range of temperatures. The inlet air temperature and moisture which enter the evaporator coil are in a wide range of values, and obliged a flexible system with a wide operation range. Therefore, it is advisable for the system to consist of several stages of cooling and heating.

There are 2 common sorts of Fresh Air units:

1. **EO-G Fresh Air High** units, which goal is to infiltrate fresh air at "comfort" temperatures. Thus, achieving several air exchanges, or as a compensation for air exhaust from kitchens, lavatories etc. The air supply may be channeled directly into the air conditioned area and may be connected to the returned air systems of the air conditioning units in the facility. In this sort of units the air flow capacity ratio is similar to standard air conditioning units. Never the less there is a need for

a designated unit due to special operation conditions, protective devices, regulation and special controllers. It is recommended to place the temperature sensor in fresh air, and use set a control system calibrated to (about) 4°C difference between stages.

2. **EO-G Fresh Air Low** units achieve full air conditioning by maximum fresh air, for example in laboratories, which require massive ventilation. In these units the air is not supplied in comfort temperatures, but requires cold air outlet for cooling and hot air outlet for heating. A ratio of 200 CFM/TR is common in these units. The temperature sensor will be placed in the air conditioned area to achieve the desired conditions.

**Filtering** – Occasionally, in Fresh Air units, several stages of filtering are required, and possibly a scent neutralization depending to the environment conditions and the customer's needs. Thus, choosing the suitable blower in accordance with the total pressure drop.

**Heating** – Due to the special matching of evaporator coils, these units are capable of operation in heat pump mode only at narrow range of outdoor conditions. Therefore, if heating is required, it will be based on heating elements operated gradually, binary or continuously.

## EO-GFAL SERIES

Model	Air Flow		Cooling Capacity		Evaporator Model	Condenser Model
	CFM	m³/h	Btu/h	kW		
EO-G36FAL	600	1020	35700	10.5	ED-16/6FA	CF-G36
EO-G48FAL	800	1360	48200	14.1	ED-24/6FA	CF-G40
EO-G60FAL	1000	1700	62000	18.2	ED-28/6FA	CF-G60
EO-G70FAL	1200	2040	70800	20.8	ED-49/6FA	2 x CF-G36
EO-G92FAL	1500	2550	63600	27.4	ED-60/6LFA	2 x CFG49
EO-G120FAL	2000	3400	124000	36.4	ED-60/6FA	2 x CFG60
EO-G150FAL	2500	4250	154000	45.2	ED-78/6HFA	2 x CFG72
EO-G200FAL	3000	5100	194000	56.9	ED-90/6HFA	2 x CFG102
EO-G250FAL	4000	6800	252000	73.9	ED-120/6FA	2 x CSG120

Air supply temperature 17.5-18.5°C (63.5-65.3°F)  
35°C (95°F) entering dry bulb  
26.1°C (79°F) entering wet bulb

## EO-GFAH SERIES

Model	Air Flow		Cooling Capacity		Evaporator Model	Condenser Model
	CFM	m³/h	Btu/h	kW		
EO-G28FAH	600	1020	28000	8.2	ED-16FA	CF-G30
EO-G36FAH	800	1360	36000	10.6	ED-24FA	CF-G40
EO-G48FAH	1000	1700	48100	14.1	ED-28FA	CF-G49
EO-G55FAH	1200	2040	55500	16.3	ED-49FA	CF-G49
EO-G72FAH	1500	2550	69600	20.4	ED-60LFA	2 x CF-G40
EO-G96FAH	2000	3400	96200	28.2	ED-60FA	2 x CF-G49
EO-G115FAH	2500	4250	111000	32.6	ED-78HFA	2 x CF-G49
EO-G140FAH	3000	5100	137000	40.2	ED-90HFA	2 x CF-G72
EO-G200FAH	4000	6800	195000	57.2	ED-120FA	2 x CSG102

Air supply temperature 21-22°C (70-71.6°F)  
35°C (95°F) entering dry bulb  
26.1°C (79°F) entering wet bulb

## Low Temperature series



### Low Temperature units

EO-G Low Temperature are special units which were adapted to operate in very low returned air temperatures, ranging 14°C - 20°C. Common uses are garbage disposal rooms, wineries, cool storage etc.

Such units will almost always be used for cooling only. Adjustment is needed for 4-seasoned cooling operation. Units will be designed with enlarged evaporators and stronger compressors which operate in low evaporation temperature. Systems will include expansion valves, protective pressurestats, freezing prevention and high pressure control.

### EO-GLT SERIES

Model	Air Flow		Cooling Capacity	
	CFM	m3/h	BTU/h	kW
EO-G36LT	1800	3060	37161	10.9
EO-G49LT	2400	4080	49842	14.6
EO-G60LT	3000	5100	60851	17.8
EO-G72LT	3200	5440	73845	21.7

Cooling at 35°C (95°F) ambient temperature  
 15.6°C (60°F) entering dry bulb  
 11.6°C (53°F) entering wet bulb

# Refrigerant Line Sizing

Length m		EO-G40	EO-G49	EO-G60	EO-G72	EO-G78	EO-G90	EO-G102	EO-G120	EO-G150	EO-G180
5	Suction line	5/8	5/8	3/4	3/4	3/4	7/8	7/8	7/8	7/8	1 1/8
	Liquid line	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	5/8
10	Suction line	5/8	3/4	3/4	7/8	7/8	7/8	7/8	1 1/8	1 1/8	1 1/8
	Liquid line	1/2	1/2	1/2	1/2	1/2	1/2	1/2	5/8	5/8	5/8
15	Suction line	3/4	7/8	7/8	7/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 3/8
	Liquid line	1/2	1/2	1/2	1/2	5/8	5/8	5/8	5/8	5/8	3/4
20	Suction line	3/4	7/8	7/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 3/8	1 3/8
	Liquid line	1/2	1/2	1/2	1/2	5/8	5/8	5/8	5/8	3/4	3/4
30	Suction line	3/4	7/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 3/8	1 3/8
	Liquid line	1/2	1/2	5/8	5/8	5/8	5/8	5/8	3/4	3/4	7/8
40	Suction line	7/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 3/8	1 3/8	1 3/8	1 5/8
	Liquid line	1/2	1/2	5/8	5/8	5/8	5/8	3/4	3/4	3/4	7/8
50	Suction line	7/8	1 1/8	1 1/8	1 1/8	1 3/8	1 3/8	1 3/8	1 3/8	1 3/8	1 5/8
	Liquid line	1/2	5/8	5/8	5/8	3/4	3/4	3/4	3/4	7/8	7/8

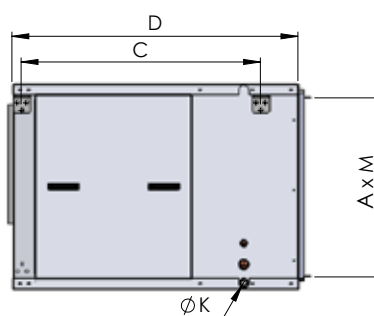
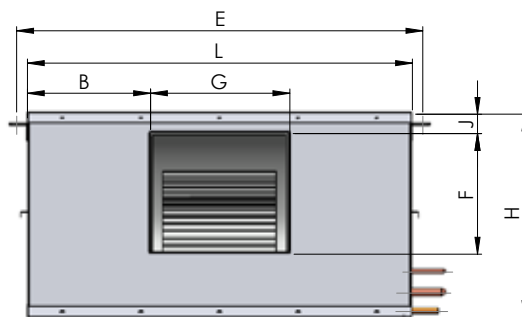
Suction line  $\Delta t=1.1^{\circ}\text{K}$  (2°F)  
 Liquid line  $\Delta t=0.8^{\circ}\text{K}$  (1°F)

# General Dimensions

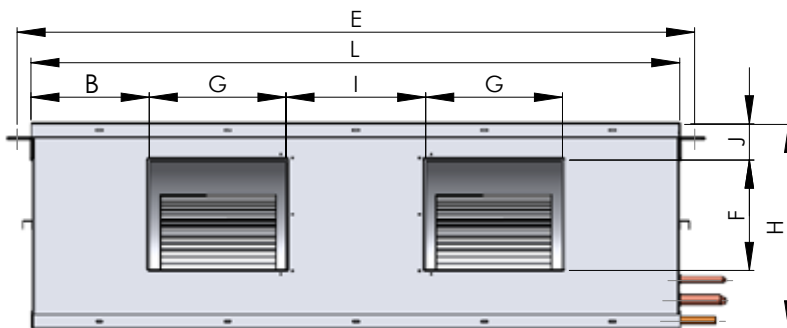
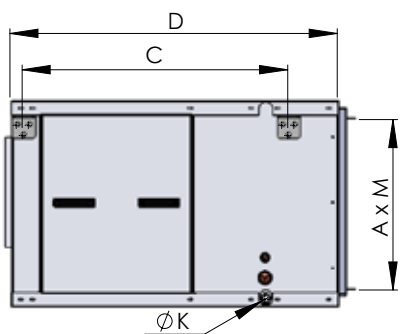


## SINGLE FAN UNITS

	ED-40	ED-49	ED-60	ED-78
L	650	880	1080	1100
D	700	700	750	815
H	400	400	480	590
C	550	545	620	720
F	263	263	292	345
G	300	335	333	400
B	170	270	373	350
J	15	15	25	50
E	705	935	1144	1164
M	373	373	440	520
L	600	873	1080	1100
K	19	19	22	22

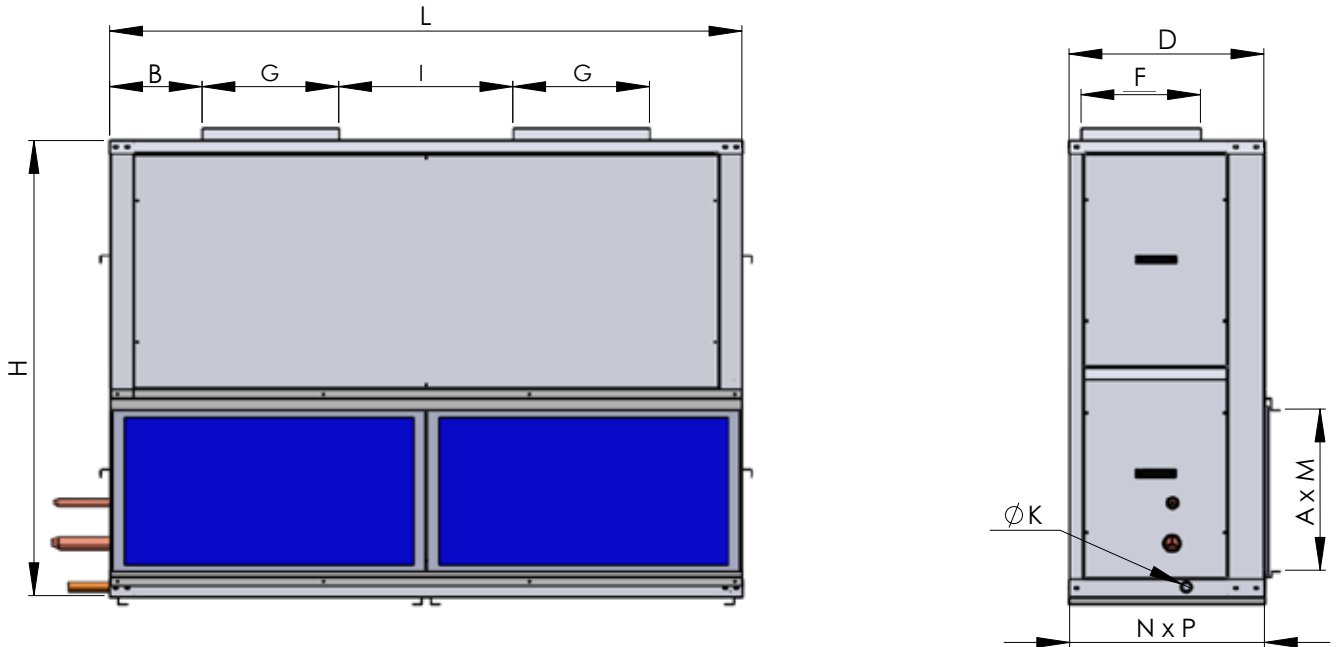


## DOUBLE FAN UNITS

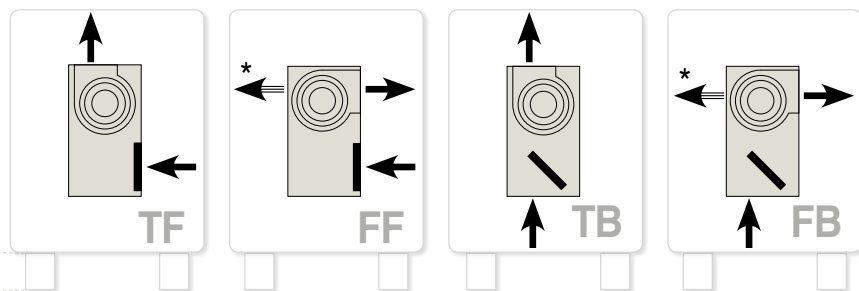


	ED-40L	ED-49L	ED-60L	ED-78	ED-90	ED-102	ED-120	ED-150	ED-180
L	1030	1215	1200	1390	1600	1390	1600	1600	1600
D	600	600	700	700	700	700	815	815	815
H	310	310	400	450	450	625	720	720	850
C	480	480	567	570	570	570	710	710	710
F	120	120	266	265	265	265	293	345	345
G	310	311	303	338	338	365	334	400	400
B	105	195	177	185	253	185	242.5	242.5	242.5
I	200	200	240	290	418	290	319	319	319
J	15	15	57	100	40	100	120	120	120
K	19	19	22	22	22	22	22	22	22
A	285	285	320	415	395	570	672	672	800
M	1020	1205	1200	1390	1600	1390	1600	1600	1600
E	1085	1270	1255	1455	1665	1455	1665	1665	1665

## VERTICAL UNITS



	ED-40V	ED-49V	ED-60V	ED-78V	ED-90V	ED-102V	ED-120V	ED-150V	ED-180V
L	880	1120	1200	1390	1390	1390	1600	1600	1600
D	430	430	430	430	430	430	570	570	570
H	820	820	1000	1000	1150	1150	1300	1400	1600
B	289	391	240	240	147	212	287	228	228
G	302	337	305	305	338	338	338	397	397
I	-	-	300	300	420	290	350	350	350
F	268	268	265	265	265	265	292	341	341
M	375	375	415	415	395	570	672	672	805
A	870	1110	1380	1380	1380	1380	1590	1590	1590
K	19	19	22	22	22	22	22	22	29
N	425	425	425	425	425	425	565	565	565
P	830	1040	1320	1320	1320	1320	1530	1530	1530



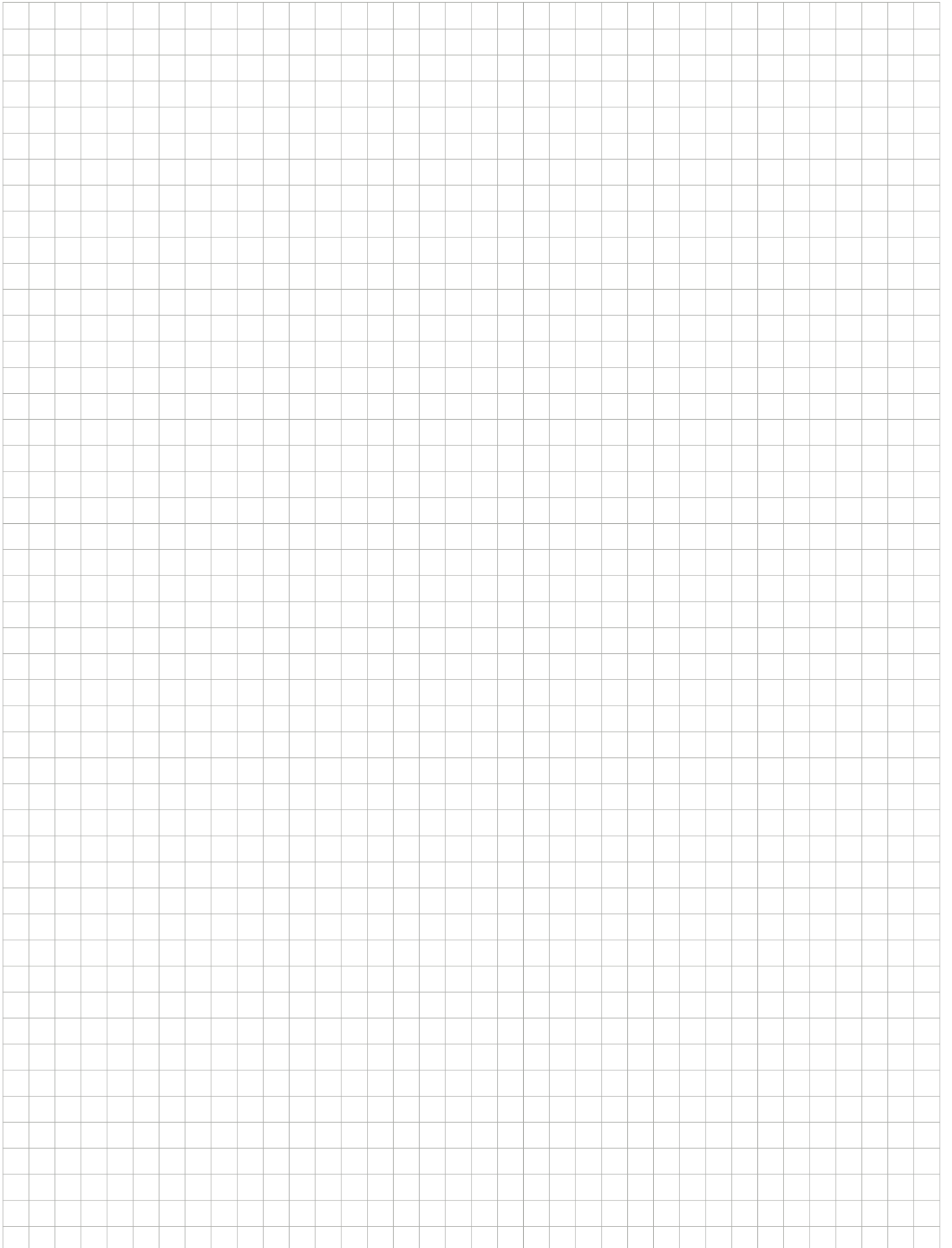
Available leg size: 100 / 200 / 300

T - Top Inlet  
F - Front Inlet/Outlet  
B - Bottom Outlet

\* Optional

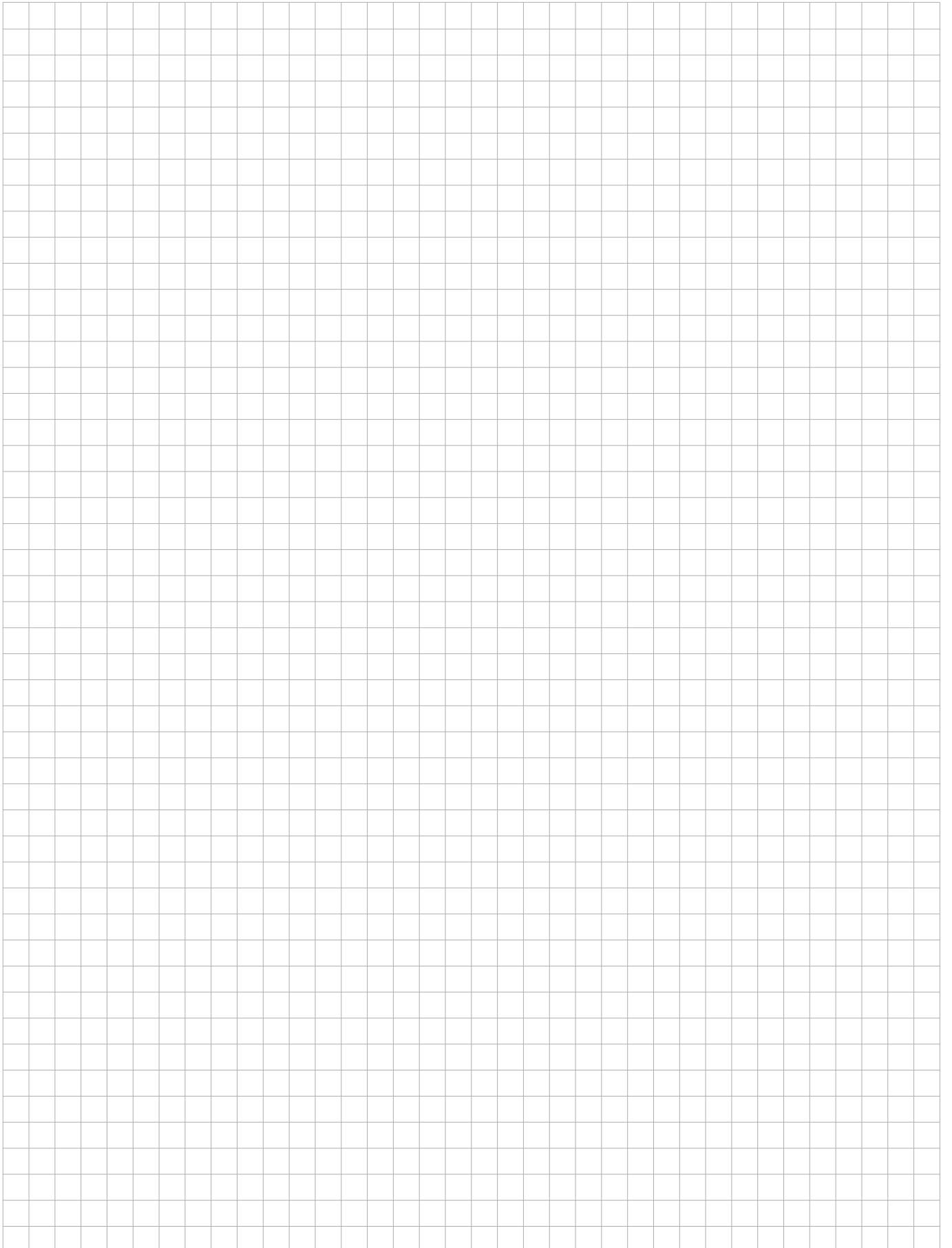


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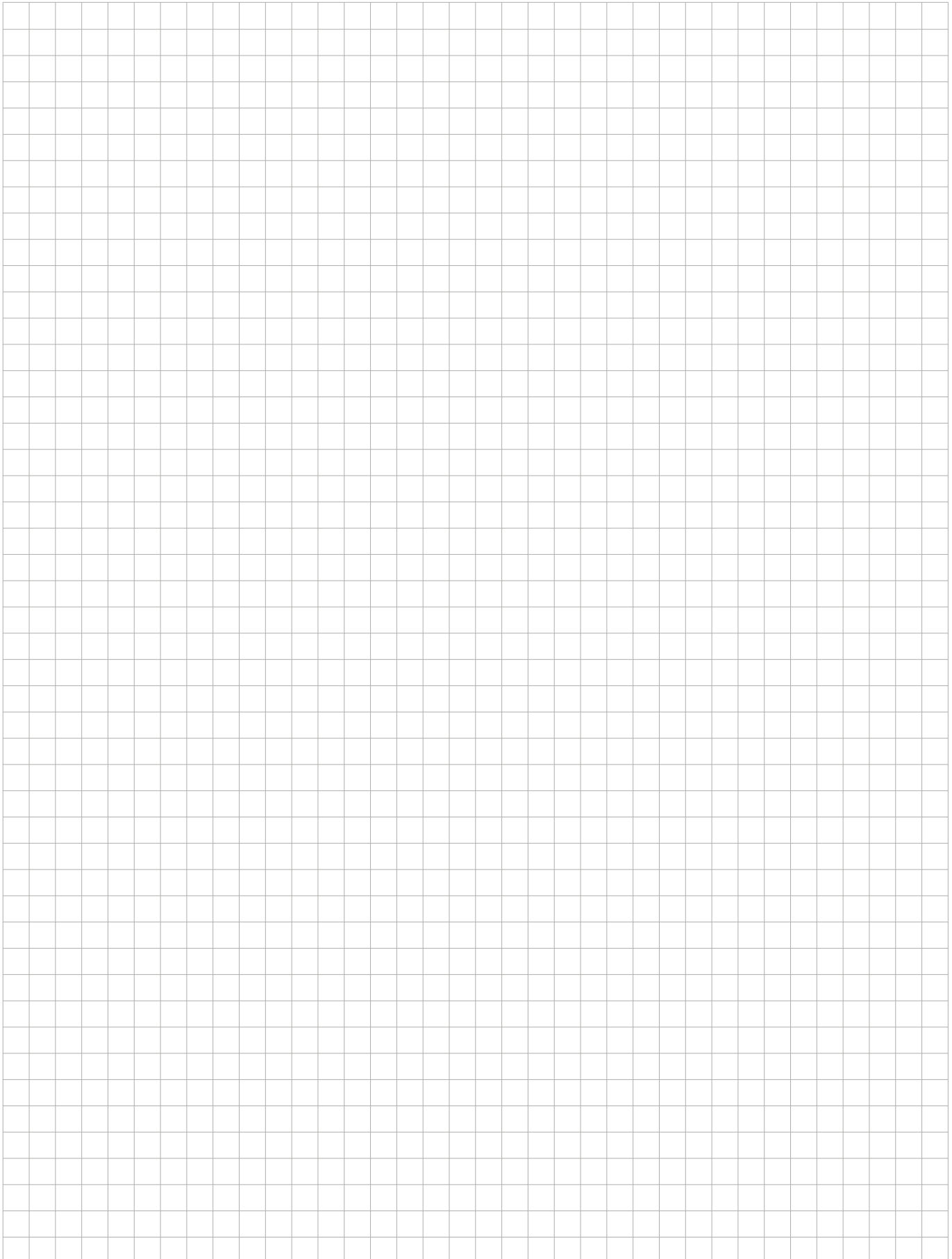


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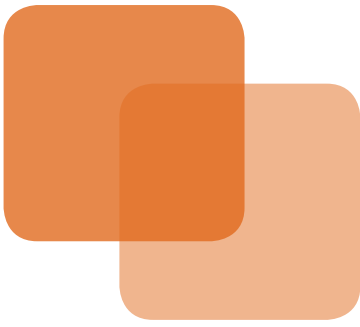


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**ORRIS K.S. Industries Ltd.** is a leading market supplier of customized HVAC systems and solutions, with focusing on friendly environment, highest reliability products and state-of-the-art technologies.

ORRIS specializes in custom made solutions, including designing, manufacturing and assembling air conditioning systems for a variety of uses.

ORRIS' develops and designs units according to designated specifications and requirements of each project and meets the diverse needs of every customer.

ORRIS' units and comprehensive systems have been installed in commercial, industrial and institutional buildings, as well as residential neighborhoods.

ORRIS uses the latest air conditioning technology and custom designs HVAC systems that operate with high energy efficiency and an emphasis on low noise level.

At ORRIS we believe in relentless pursuit of quality products and forward thinking technologies and look forward to continued development and growth in coming years.

