

# COMPRESSED AIR DRYERS

**mikropor**

## INSTRUCTION MANUAL

IS SERIES (IS 10 to IS 260)



### WARRANTY NOTICE

Failure to follow the instructions and procedures in this manual or misuse of this equipment will VOID its warranty !

**Behsan**  
**PUMP & MOTOR**

**کمپرسور بهسان**

کارخانه : کیلومتر ۱۷ جاده قدیم کرج ، کمر بندی شهریار

اندیشه شهرک صنعتی زاگرس، خیابان صنعت، پلاک ۵

تلفن : ۰۲۱ ۴۶۸ ۵۳ ۱۱۱-۳ فاکس : ۰۲۱ ۴۶۸ ۵۳ ۱۱۳

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## TABLE OF CONTENTS


<b>1.</b>	IMPORTANT SAFETY NOTES - Please read .....	<b>1</b>
1.1.	Transportation .....	<b>6</b>
1.2.	Positioning .....	<b>6</b>
1.3.	Installation .....	<b>6</b>
1.4.	Before operating .....	<b>6</b>
1.5.	Qualified service personnel .....	<b>7</b>
1.6.	Maintenance by the user .....	<b>7</b>
<b>2.</b>	INTRODUCTION TO THE IS DRYER .....	<b>7</b>
<b>3.</b>	OPERATION .....	<b>11</b>
<b>4.</b>	ELECTRICAL CONTROLLER .....	<b>13</b>
4.1.	Digi-Pro .....	<b>13</b>
4.2.	ESD 3.....	<b>15</b>
<b>5.</b>	TECHNICAL SPECIFICATIONS.....	<b>21</b>
<b>6.</b>	DIAGRAMS.....	<b>22</b>
6.1.	Air Flow Diagrams.....	<b>22</b>
6.2.	Electrical Diagrams.....	<b>26</b>
<b>7.</b>	ID DIAGRAMS.....	<b>42</b>
	GENERAL ARRANGEMENTS.....	<b>70</b>
<b>8.</b>	EXPLODED DIAGRAMS .....	<b>71</b>
<b>9.</b>	COMPONENTS LOCATION .....	<b>126</b>
<b>10.</b>	TROUBLESHOOTING .....	<b>127</b>
<b>11.</b>	WARRANTY .....	<b>129</b>



# Declaration of Conformity

## PED 2014/68/EU

(NB No : 0408)

<b>Manufacturer</b>	Mikropor Filters I.OSB Büyük Selçuklu Caddesi, No:4 06935 Ankara/Turkey Phone: 0312 267 0770 Fax: 0312 267 0552
<b>Product Description</b>  <b>Serial No of Set (device)</b>  <b>Type of Product</b>  <b>Module</b>	Air Dryer IS 10 (...), IS 20 (...), IS 30 (...), IS 35 (...), IS 40 (...), IS 50 (...), IS 60 (...), IS 70 (...), IS 80 (...), IS 90 (...), IS 100 (...), IS 110 (...), IS 120 (...), IS 130 (...), IS 140 (...), IS 150 (...), IS 160 (...), IS 170 (...), IS 180 (...), IS 190 (...), IS 200 (...), IS 210 (...), IS 220 (...), IS 230 (...), IS 240 (...), IS 250 (...), IS 260 (...),  0117MA00001 to 5217MA99999  CAT II Air Dryer  Module A2
<b>Assesment Modele</b>  <b>Confirmed By</b> <b>TÜV Austria Service GMBH</b> <b>Kind of inspection certification supplied standards</b> <b>Certificate No:</b> <b>Modules for compatibility assesment of pressure in-build elements;</b>  <b>Exchanger</b> <b>Receiver</b> <b>Separator</b> <b>Compressor</b>	Module A2 type compatibility  Notified Body No 0408 Adress; Deutschstreaase 10 1230 Wien/Österreich PED (2014/68/EU) Certification EN378-2  ZSTS / SWZE / 1790  CAT II MODUL A2 CAT I MODUL A2 CAT I MODUL A2 CAT I MODUL A2
<b>Product Responsibility</b>	Mikropor Filter is responsible for product in conditions it was delivered. Any modifications are forbidden. Product be operated according to its application. In case of breaking above conditions realized manufacturer from responsibility for the product CE mark of the product will be not valid.
<b>Signature</b>	
<b>Local Quality Manager, Pressure Vessel</b>	Ahmet Emin ÇAMLIBEL Date; 29.03.2017



# EC DECLARATION OF CONFORMITY



## MANUFACTURER

**NAME** : MİKROPOR MAK. SAN. VE TİC. A.Ş.  
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*Name and Address of the  
Person authorised to compile the technical file* : Ahmet Emin ÇAMLIBEL  
Organize Sanayi Bölgesi Büyük Selçuklu  
Bulvarı No. 4, 06935, Ankara -Türkiye

The undersigned declares that the described products meet the essential requirements of the below mentioned standards as based on Machinery Directive 2006/42/EC, Low Voltage Directive 2014/35/EU, Electromagnetic Compatibility Directive 2014/30/EU

The item of equipments which identified below has been subject to internal manufacturing checks with monitoring of the final assesment by Mikropor

### MACHINE DESCRIPTION MODELS : Air Dryer

IS 10 (...), IS 20 (...), IS 30 (...), IS 35 (...), IS 40 (...), IS 50 (...), IS 60 (...), IS 70 (...), IS 80 (...), IS 90 (...), IS 100 (...), IS 110 (...), IS 120 (...), IS 130 (...), IS 140 (...),  
IS 150 (...), IS 160 (...), IS 170 (...), IS 180 (...), IS 190 (...), IS 200 (...), IS 210 (...),  
IS 220 (...), IS 230 (...), IS 240 (...), IS 250 (...), IS 260 (...),

**Serial No of Set (device):** 0117MA00001 to 5217MA99999

### APPLICABLE DIRECTIVES :

2006/42/EC MACHINE SAFETY DIRECTIVE  
2014/35/EU LOW VOLTAGE DIRECTIVE  
2014/30/EU ELECTROMAGNETIC COMPATIBILITY DIRECTIVE

**Certificate No:** 16-PS-0279-TAT-16-MAD-1059

### APPLICABLE REGULATIONS :

EN ISO 12100:2010; EN 60204-1:2006/AC:2010; EN 61000-6-2:2005; EN 61000-6-4:2007+A1:2011  
EN 378-2

### SIGNED ON BE HALF OF THE MANUFACTURER

**NAME** : Mustafa Uslu  
**POSITION** : R&D Manager  
**PLACE/ DATE** : ANKARA / 03.04.2017

**SIGNATURE** :



## I. IMPORTANT SAFETY NOTES



When operating the air dryer the operator must apply safe working methods and observe all local safety instructions and relevant regulations.

- A)** Prior to installation, the dryer and the compressed air system are to be depressurized and disconnected from the electrical main supply.
- B)** The user is responsible for safe operating conditions. Parts and accessories must be replaced if inspection shows that safe operation cannot be assured.
- C)** Installation, operation, maintenance and repair are only to be authorized, trained and skilled engineers.
- D)** The minimum and maximum values stated must be observed, as well as all of the safety precautions described in this manual.
- E)** If any statement in this manual does not comply with the local legislation, the strongest standard is to be applied.

### 1.1. Transportation

- A)** Use care and caution when transporting the dryer. Avoid dropping and other physical abuse.
- B)** A forklift can be used to transport the dryers provided the forks are long enough to support its full width or length and caution is used throughout the move.

### 1.2. Positioning

- A)** The dryer must be installed horizontally. A minimum of 50 cm clearance around the dryer is necessary to allow a good ventilation and easy access for servicing.
- B)** The ambient temperature in the room should not exceed 45°C and should not be below 4°C, taking the heat radiated by the dryer into account.
- C)** (40 watt for each liter/sec under ISO 7183-A condition or 18 watts for each SCFM under ISO 7183-B condition).
- D)** There should be no chemicals in the atmosphere that will damage the copper source. (Ammonia gas etc.)

### 1.3. Installation

In addition to the general mechanical construction procedures and local regulations, the following instructions need to be emphasized:

- 1)** Only authorized, trained and skilled engineers should install the compressed air dryer.
- 2)** Safety devices, protecting covers or insulation in the dryers never to be dismantled or modified. Each pressure vessel or accessory installed outside the dryer with air above atmospheric pressure must be fitted with the required pressure relief safety valves.

### 1.4. Before Operating

The following points must be observed before operating the air dryer:

- A)** Review all safety precautions.
- B)** The dryer connection piping measurements must be selected correctly. (See Technical specifications)
- C)** The dryer connection piping must be adapted to the operating pressure. (See Technical specifications)
- D)** Never operate the dryer at pressure above the maximum specified on the dryer label (check the technical specs too).
- E)** The drains should be opened to atmosphere. If the drains are connected to a pipe / hose, the diameter of the hose / pipe should be large enough to create no back pressure during drain. It is not recommended to reduce the diameter of the hose / pipe less than port that is given at the drain outlet of the unit. The hose / pipe should be at atmospheric pressure at all time. Back pressure in relevant pipe will result in permanent damage on drain system and the affect function of the filters and / or dryers.

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## 1.5. Qualified service personnel

- A) Maintenance and repairs should only be performed when the air dryer is shut down and depressurized and when the main power switch is turned off.
- B) Use only the appropriate tools for maintenance and repair.
- C) Before dismantling a part under pressure, disconnect the pressure sources and depressurize the system.
- D) Proceed carefully during maintenance and repair. Prevent dirt from entering by covering parts and orifices with a clean cloth, paper or tape. A receiver should never be welded or modified in any way.
- E) Never leave tools, loose parts or cleaning rags in or on the air dryer.
- F) Before returning the dryer into service, check the setting of the control and safety devices as well as the pressure and the temperature of the compressed air circuit.

## 1.6. Maintenance by the user

- A) Keep the dryer clean.
- B) Regularly check the correct operation of the condensate drain trap.
- C) Every six months, check and clean the drain strainer by undoing the access screw and rinsing the filter with tap water to remove the trapped dirt from the inside.
- D) For aircooled dryers, clean the air condenser as soon as it's dirty or clogged.
- E) For optional water-cooled condensers, use only clean water and install a water filter if needed. Use water counter flow to clean condenser if need.
- F) Check the trouble-shooting list in case of maintenance troubles.
- G) Check operating pressures, temperatures and time settings after maintenance. If operating and safety devices function properly, the air dryer may be used.

## 2. INTRODUCTION TO THE DRYER

### A) Manufacturer:

MiKROPOR / [www.mikropor.com](http://www.mikropor.com)


### B) Purpose of this dryer

- 1) This refrigerated compressed air dryer has been designed to remove water vapor from industrial compressed air.
- 2) This dryer has been designed for indoor operation.
- 3) The minimum and maximum values stated must be observed, as well as the safety precautions described in this manual.



## C) Dryer label

The following label is affixed on the cabinet of the refrigerant compressed air dryer.

REFRIGERANT AIR DRYER	
<b>Model No:</b>	<b>MODEL NO</b>
<b>Serial No:</b>	
Max. Pressure	Refrigerant
Max. Amper	Ref.Quantity
Fuse Amper	Voltage
Element Type	Power
	Address:
Manufactured In : Organize Sanayi Bolgesi, Buyuk Selcuklu Bulvari, No:4, 06935 Ankara/TURKEY	

### Dryer label descriptions

<b>Model No:</b>	Dryer Model No
<b>Serial No:</b>	Dryer Serial No
<b>Max Pressure:</b>	Dryer maximum working pressure
<b>Max Amper:</b>	Maximum allowed amount of current
<b>Fuse Amp</b>	Maximum size of protector
<b>Element Type:</b>	Filter element type in Air Dryer
<b>Refrigerant :</b>	Type of refrigerant gas used
<b>Refri Quantity:</b>	Amount of refrigerant gas used
<b>Voltage:</b>	Main supply voltage
<b>Power:</b>	Nominal input power under conditions specified for this type of dryer

## D) Working details

### 1) Refrigerant circuit:

The refrigerant circuit can be divided in **3** parts:

- A) Low pressure section with an evaporator (heat exchanger)
- B) High-pressure section including: Condenser, liquid receiver, (if installed) and the filter dryer.
- C) Control circuit including: Compressor, Expansion valve, by-pass valve (if installed), Fan pressure switch (if installed)

### 2) For water - cooled dryers:

- A) Water valve
- B) Safety high pressure switch (if installed)

### 3) The Refrigerant circuit operates as follows:

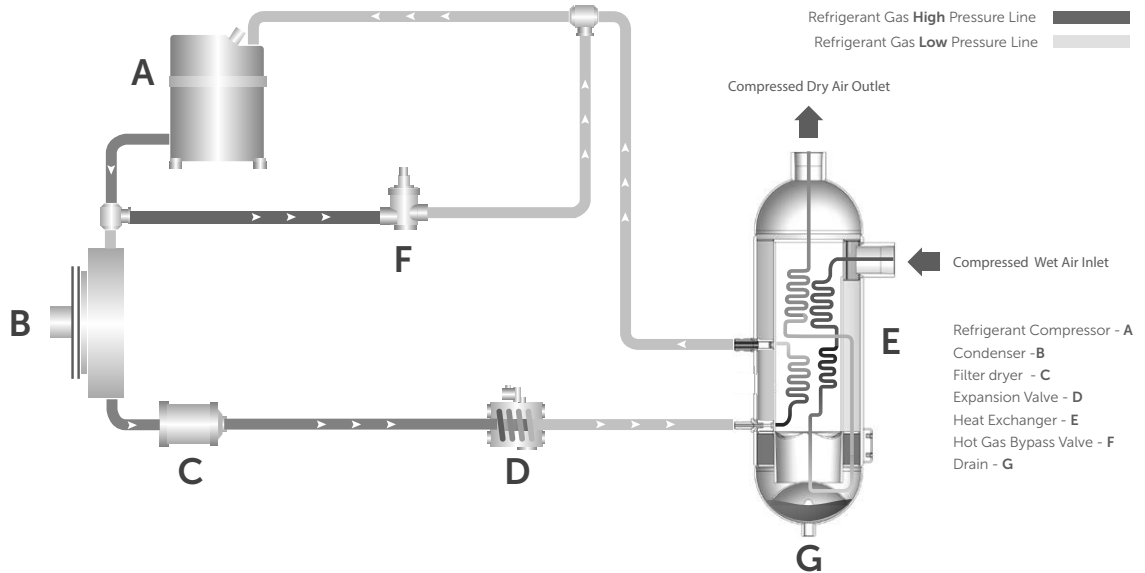
- A) The compressor compresses gaseous refrigerant to a high temperature.
- B) The hot refrigerant condenses in the condenser. Being liquefied it is stored in the liquid receiver (if installed).
- C) The liquid is taken out the storage vessel and injected in the evaporator (heat exchanger) by an expansion valve. This expansion valve is protected by a filter, which removes particles and humidity that could be in the circuit.
- D) The injected liquid fills in the refrigerant section of the air / refrigerant heat exchanger and evaporates by taking out the calories from the compressed air. The gaseous refrigerant is sucked in the compressor and the cycle carries on.
- E) In order to keep the evaporation pressure steady, and thus the refrigerant temperature in the heat exchanger, a by-pass valve is injecting hot gaseous refrigerant in the circuit. On certain dryers, an automatic expansion valve regulates this.

### 4) Compressed air circuit:

- A) The saturated hot compressed air flows into the Economiser where it is pre-cooled by the out flowing dry chilled air. In the cold zone of the air refrigerant section it continues to cool down to dew point and enters the separator where condensates are collected. The outgoing chilled air is then warmed up in the economizer by the hot incoming air.

- B)** The condensates are collected after centrifugal separation and drained out through the automatic trap.
- C)** As long as the compressed air temperature does not drop below dew point, there will be no condensation in the air circuit.

## Compressed Air Dryer Working Principle



### 5) Refrigerant compressor

Increases the pressure and temperature of refrigerant. There are two type of compressors commonly used according to refrigerant capacity on this application:

- Piston type
- Scroll type

### 6) Condenser

Dissipates the heat provided by evaporator and compressor.

There are two type of condensers used on the application:

- Air Cooled Type (standard)

These condensers are designed to dissipate the heat to the ambient air.

The fans are used to force the air flow through the fins to enhance the heat transfer.

- Water Cooled Type (optional)

These condensers are designed to dissipate the heat to a water flow.

A shell and tube heat exchanger is used for this purpose.

### 7) Refrigerant circuit protection

**A)** Klixon: The single phase compressors are equipped with a klixon which is a thermal sensitive switch controlling the temperature of the compressor and possible overintensity.

In case of malfunction, the klixon trips but switches on again automatically as soon as the compressor has cooled down.

**B)** High Pressure Security Switch: Refrigerant line is considered as a pressure vessel. That is why it is protected against bursts by the help of manually reset switch. It is set to 25 bars for dryers working with R134a

**C)** Filter dryer: A refrigerant circuit is a closed circuit and total water removal in the refrigerant circuit is paramount in order to obtain a correct functioning.

**D)** To avoid problems, the refrigerant circuit must be vacuumed before loading the refrigerant.

It is equipped with a filter dryer, which also traps any solid particles, which may have migrated into the circuit during assembly.

**E)** Water-cooled dryers have a safety high-pressure switch.

In case of cooling water failure, the safety switch stops the dryer. When the safety switch has tripped out, it has to be manually resettled before switching on the dryer.



## 8) Refrigerant circuit controls

a) Liquid refrigerant injection: The liquid refrigerant is into the evaporator by a control valve. This valve is a thermostatic or pressostatic one maintaining a constant overheats of the refrigerant in the evaporator(s).

b) Constant evaporating pressure: In the dryers equipped with a by-pass valve, the evaporating pressure is kept constant by a controlled injection of hot gas from the high-pressure side into the low-pressure section of the circuit.

## 9) Condensate drain - trap assembly

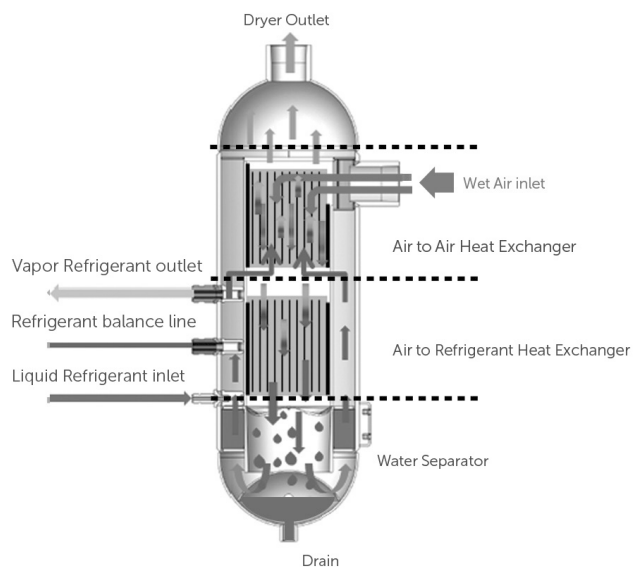
Dismantling the drain is easy because it can be isolated from the air circuit under pressure with a ball valve. The drain has to be depressurized before being dismantled.

## 10) Heat Exchanger Modular design

**A)** The dryers are equipped with a compact Mono Bloc Heat Exchanger module.

This assembly has been specially designed to dry compressed air and is made of:

- 1) An Economiser which pre-cools the entering hot air with the out flowing cold air.
- 2) An air/refrigerant exchanger cooling down the compressed air.
- 3) A centrifugal separator concentrating all condensates and requiring no maintenance.



## 11) Accessories

Temperature switch: Temperature switch: Located inside the dryer, this temperature switch is adjustable from 0° up to 35 °C.

Digital Controller –DigiPro: This device helps dryer save energy when there is not any compressed air flow in the dryer. Those information can be reached; Dewpoint value, periodic maintenance interval display, status report, run time meter, temperature unit selection (°F or °C)

Digital Controller – ESD3: Energy Saving Device: (ESD) This device helps dryer save energy when there is not any compressed air flow in the dryer. Those information can be reached; Dewpoint value, periodic maintenance interval display, status report, run time meter, temperature unit selection (°F or °C)  
(Please see the models have standard and optional in next page)

### 3. OPERATION

## Control panels for IS Series

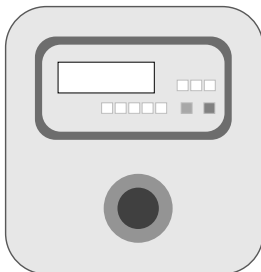
The control panel of the dryer includes the following elements:



Monophase	Digital Controller	
IS 10 - IS 110	Digi-Pro	



Triphase	Digital Controller	Accessories
IS 120 - IS 190	Digi-Pro	Main Switch



Triphase	Digital Controller	Accessories
IS 200 - IS 260	ESD3	Emergency Stop



#### IMPORTANT NOTE

The Dryer has two Compressed Air Filter inside.

It is better to change filter element for the best efficiency when the alarm status is active.

It is recommended to keep replacement filter elements in your stock in order to replace them when needed.



#### ATTENTION

IS range dryers have low pressure drop according its competitors.

Do not use IS range dryers together with other dryers which have higher pressure drop without getting the confirmation from our technical team.



### 3.1. During Operation

Regularly check the digital temperature controller ESD3 or Digi-Pro on dryer.

### 3.2 Start up and shut-down

Warning: Avoid leaving the dryer off when compressed air is still flowing through it.

### 3.3 Starting for the first time or after a long stop

1) Set the rotary switch to "I" This preheats the dryer and turns the drain system on. It is recommended to leave the dryer power on permanently so the crankcase heater runs continuously.



#### **IMPORTANT NOTE!**

2) After a long stop of the dryer it is MANDATORY to allow a preheating period of minimum 4 hours before starting again, to avoid any compressed air flow during preheating.

3) Follow the daily starting and shut down procedure.

### 3.4 Daily starting and shut-down

1) Push on the ON button to start the dryer.

2) The start light or Dryer Active will indicate that the dryer is running.

3) To stop the dryer, first stop the airflow (either shut-down the air compressor or close the inlet/outlet or by-pass valve) When the air flow is stopped, set the rotary switch on " 0 " Set it again on " I " in order to keep the preheating on.



#### **IMPORTANT NOTE !**

4) Avoid leaving the dryer stopped when compressed air is still flowing through it.

5) To switch the already preheated dryer on again, simply push the green start button.



## 4) ELECTRICAL CONTROLLER

### 4.1 DIGI-PRO

#### 4.1.1 Description

With the Digi-Pro series controllers, air dryers have outstanding technology for both functionality and dynamism, as well as appearance. The multi-functional display provides an accurate digital dew point display as well as coded alarm monitoring of the refrigerant dryer.

#### DIGITAL CONTROLLER ADVANTAGES;

- Digital dew point monitoring
- Energy-saving mode display
- Periodic maintenance interval display
- Status report
- Run time meter
- Fahrenheit and Centigrade selection

#### 4.1.2 Operation

Using the Digi Pro controller as shown in the picture below:



#### 4.1.3 Menu Buttons



**PROGRAM**

To modify the parameter, press and release button set. The menu is used by service team. To disable the Key Lock: Press and hold the SET for 4 sec.



**POWER**

This button is used for starting and stopping the dryer. Press and hold for 4 seconds to start or stop.



**MENU**

These buttons are used to navigate between screens and adjust values.



**MANUAL DRAIN**

This button is used for manual control of the drain output. Press and hold for 4 seconds to drain manually.



## 4.1.4 ALARM DISPLAY



Alarms / warnings are displayed on the digital screen. That means the dryer is not working under normal operating conditions, which are outside the range of set values.

Alarm Code	Alarm Description	Reason for Alarm
tAL	Low Temperature Alarm	Refrigerant line temperature is lower than specified set values
tAH	High Temperature Alarm	Refrigerant line temperature is higher than specified set values
FIL	Filter Change Alarm	Filter element needs to be replaced
SEr	General Service Alarm	General service time of the dryer
HPr	High Pressure Alarm	Refrigerant high line pressure is higher than specified set values
Pr1	Temperature Probe Alarm	Temperature sensor is faulty.
hFl	Working Hours Alarm	The dryer working hours allowed has been reached.



Please contact to the service when an alarm/warning occurs.

## 4.1.5 MODE DISPLAY



**DRYER ACTIVE MODE**

This mark indicates that the dryer is performed in active state and drying.



**AUTOMATIC DRAIN MODE**

Shows if the drain system is activated.



**ENERGY SAVING MODE**

Shows if the energy saving mode is activated



**CELSIUS UNIT MODE**

Indicates that Celsius temperature unit is selected.



**FAHRENHEIT UNIT MODE**

Indicates that Fahrenheit temperature unit is selected.



**COMPRESSOR STANDBY MODE**

This mode shows that the dryer is ready for drying operation.



**SERVICE MODE**

This mode shows that the dryer in the service time.

## 4.2 ESD 3

### 4.2.1 DESCRIPTION

E-687 is designed as a controller for refrigerant type compressed air dryers. The controller has 8 temperature sensor inputs.

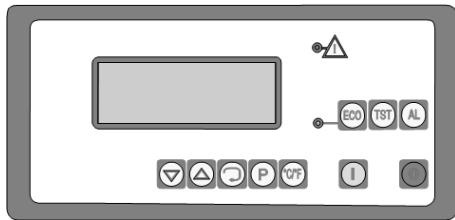
The controller has an RS-485 communication interface that can be used for remotely monitoring channel temperatures, set points, input and output states. Modbus RTU protocol is used for communication.

The front panel of the controller contains a four line 20 character LCD display and buttons that are used in configuration and manual control operations.

The dimensions of the controller are 96 x 192 mm (front panel) with a depth of 110 mm. The panel cutout should be 90x185 mm. The operating voltage of the controller is 20 - 60V AC or 20 - 85V DC.

### 4.2.2 OPERATION

The front panel view of E-687 controller is given in the below figure. The front panel of the controller contains a four line 20 character LCD display, 10 buttons and 2 indicator leds.



The Front Panel View of E-687 Controller

button is used to enable or disable the ECO (economy) mode. Pressing this button complements the state of ECO, i.e. if it is enabled; disables, if it is disabled; enables the ECO mode. The green led on the left side of the button lights if the ECO mode is enabled.

button is used for manual control of the drain output.

button is used for alarm acknowledge. The dryer is automatically stopped if an anomaly is detected. In that case, the alarm output and the alarm indicator led (red) on the front panel become activated. In order to restart the dryer, alarm should be acknowledged and "restart delay" period should be timed out. Pressing button acknowledges the alarm and reenergizes the alarm output and alarm led.

The buttons below the LCD display ( , , and ) are used in screen selection and configuration operations.

button is used to change the temperature unit from °C to °F or vice versa.

and buttons are used for starting and stopping the dryer respectively. If the dryer is stopped manually, it can not be started before "restart delay" period is timed out.

, , , , and buttons are disabled during configuration operations.



## 4.2.3 OPERATION SCREENS

### 4.2.3.1 The Normal Operation Screen

When the controller is powered on, it displays the type and version message, and then the restart delay timer is set to 5 seconds. After 5 seconds, the normal operation screen is displayed as shown in below figure

```
NO NAME
DEW POINT . 16°C
READY
```

The exchanger temperature (Dew Point) and operation state of the dryer is displayed in this screen. If there is a situation which will prevent the operation of the dryer then the "READY" message in the last line will become "DISABLED". See below figure

```
NO NAME
DEW POINT . 16°C
DISABLED
```

**In order to start the dryer, the following conditions must be satisfied.**

1. All the temperatures except the exchanger temperature and condenser outlet temperature must be between their low and high limits. The low pressure line temperature can be 'HIGH'.
2. Digital Input 3 (Compressor Fault) is not activated.
3. Digital Input 4 (Compressor Overload) is not activated.
4. Digital Input 5 (Fan Fault) is not activated.
5. Digital Input 6 (Fan Overload) is not activated.
6. Digital Input 7 (Phase Sequence Error) is not activated.
7. Digital Input 8 (Remote Disable) is not activated.
8. Digital Input 11 (High Pressure) is not activated.
9. Digital Input 12 (Low Pressure) is not activated.

If all the above conditions are satisfied, the message in the last line of the normal operation screen will be "READY" and the dryer can be started either pressing button on the front panel or activating Digital Input 1 (Remote Start) or activating Digital Input 13 (Remote Control). When the dryer is started, the normal operation screen is displayed as shown in below figure.

```
NO NAME
DEW POINT . 16°C
RUNNING DRAIN ON
```

In the beginning, Digital Output 1 (Compressor Motor), Digital Output 2 (Drain Output) and Digital Output 3 (Dryer is Running) become active. While in normal operation, the drain output is controlled according to the configured "drain on" and "drain off" periods. "DRAIN ON" message is displayed in the end of the last line while the drain output is active.

When the Digital Input 9 (Fan Motor is on) is activated, "FAN MOTOR IS ON" message is displayed in the second line as shown in below figure.

```
NO NAME
FAN MOTOR IS ON
DEW POINT . 16°C
RUNNING
```

Digital Input 14 (Water Pump is on) activates "WATER PUMP IS ON" message as shown in below figure.

```
NO NAME
WATER PUMP IS ON
DEW POINT . 16°C
RUNNING
```

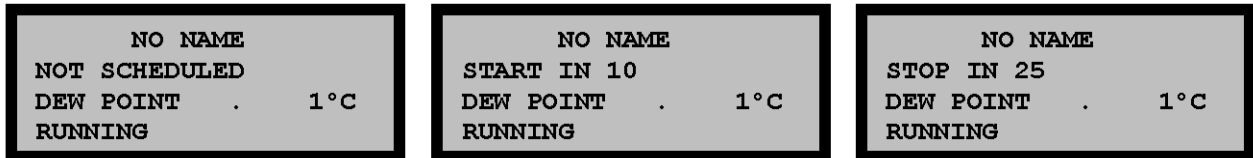
When ECO mode is enabled and the exchanger temperature is less than or equal to "ECO Start Set point" and this condition is prevailed more than "ECO Start Delay", then, the compressor motor is stopped and ECO operation starts. During the ECO operation the appearance of the display is given in below figure. The value at the end of the second row indicates the time in seconds since beginning of the ECO operation.

```
NO NAME
ECO (SEC.) : 324
DEW POINT . 1°C
RUNNING
```

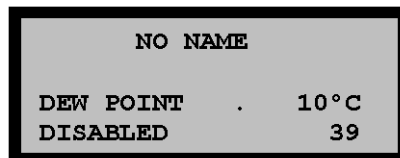


Pressing and keys simultaneously at this page toggles the controller between automatic and manual mode. In manual mode, the dryer starts and stops manually by using and buttons. Unlike the manual mode, automatic mode enables the controller start and stop automatically at pre-programmed times on a daily basis

When running in automatic mode, current scheduling information messages are also activated in the second line of the displays as show in below figure. "NOT SCHEDULED" message is displayed when no schedule exists. "START IN XXX" shows the time to the next scheduled program in minutes and "STOP IN XXX" message shows the time to the end of current running program in minutes.



If the dryer is stopped manually by using button, or activating Digital Input 2 (Remote Stop) or deactivating Digital Input 13 (Remote Control), the normal operating screen is displayed as shown in below figure. The number at the end of the last line indicates the remaining time in seconds from the restart delay. If this number becomes zero and there is no anomaly, the dryer can be restarted.



The first line in the normal operation screen (NO NAME) is user configurable. If the exchanger temperature sensor is broken, dew point temperature will be displayed as 1000°C.

### 4.3.3. The Info Screens

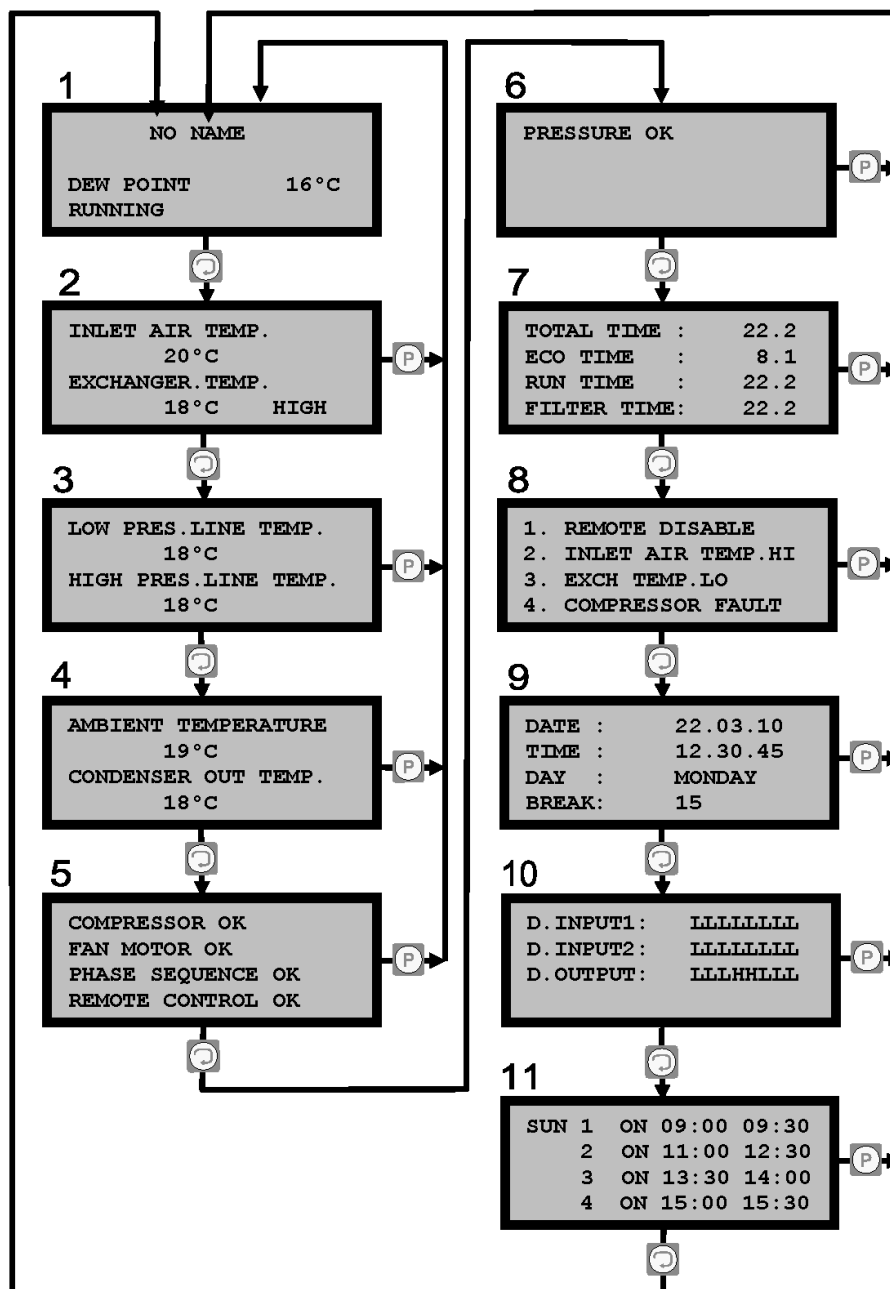
Various data related to the dryer can be monitored by sequentially pressing button. Pressing button, changes the display screen. While one screen is displayed, pressing button reverts to the normal operation screen. The flow chart for monitoring the dryer data is given in Figure 2.13. In this figure, screen numbers are shown on the upper left of the screens.

Screen1 is the normal operation screen. While this screen is displayed, pressing button selects Screen2. By successively pressing button, all the screens can be accessed. Screens may also be selected by and buttons.

In Screen2, Screen3 and Screen4, the sensor temperatures are displayed. If the measured temperatures are between their low and high limits, only the temperature value is displayed, otherwise **"LOW"** or **"HIGH"** message is added in the end of the line. In case of sensor break, only **"SENSOR BREAK"** message is displayed.

In screen 5 and 6 the states of the compressor motor, fan motor, the phase sequence, remote disable and air pressure are displayed. Actually this data is derived from the digital inputs.

The message in the first line of Screen5 is determined by Digital Input 3 and Digital Input 4 (Compressor Fault and Compressor Overload). in the below table shows the relation between digital inputs and the message.





Screen8 displays the last four events that caused the dryer to be stopped automatically. The possible alternatives for the messages are given below.

INLET AIR TEMP.LO	COMPRESSOR FAULT
INLET AIR TEMP.HI	COMP.OVERLOAD
EXCH.TEMP.LO	FAN MOTOR FAULT
EXCH.TEMP.HI	FAN MOT.OVERLOAD
LO.PRES.L.TEMP.LO	PHASE SEQ.ERROR
LO.PRES.L.TEMP.HI	REMOTE DISABLE
HI.PRES.L.TEMP.LO	PRESSURE HIGH
HI.PRES.L.TEMP.HI	PRESSURE LOW
AMB.TEMP.LO	CONDENSER FAULT
AMB.TEMP.HI	

Screen9 displays the date and time.

Screen10 displays the states of the digital inputs and digital outputs. The letters 'L' and 'H' stands for 'not activated' and 'activated' states respectively.

The data in the first line of Screen10 (D.INPUT1), from right to left corresponds to Digital Input 1 to 8.

The data in the second line of Screen10 (D.INPUT2), from right to left corresponds to Digital Input 9 to 16.

The data in the third line of Screen10 (D.OUTPUT), from right to left corresponds to Digital Output 1 to 8.

Screen11 displays automatic mode scheduling of the day. Please see Section 2.3.3 for scheduling for auto/manual selection.

### 4.3.4 Operation Principles

**In order to start the dryer, the following conditions must be satisfied.**

1. All the temperatures except the exchanger temperature and condenser outlet temperature must be between their low and high limits. The low pressure line temperature can be 'HIGH'.
2. Digital Input 3 (Compressor Fault) is not activated.
3. Digital Input 4 (Compressor Overload) is not activated.
4. Digital Input 5 (Fan Fault) is not activated.
5. Digital Input 6 (Fan Overload) is not activated.
6. Digital Input 7 (Phase Sequence Error) is not activated.
7. Digital Input 8 (Remote Disable) is not activated.
8. Digital Input 11 (High Pressure) is not activated.
9. Digital Input 12 (Low Pressure) is not activated.

If all the above conditions are satisfied, the dryer can be started.





## 5. TECHNICAL SPECIFICATIONS

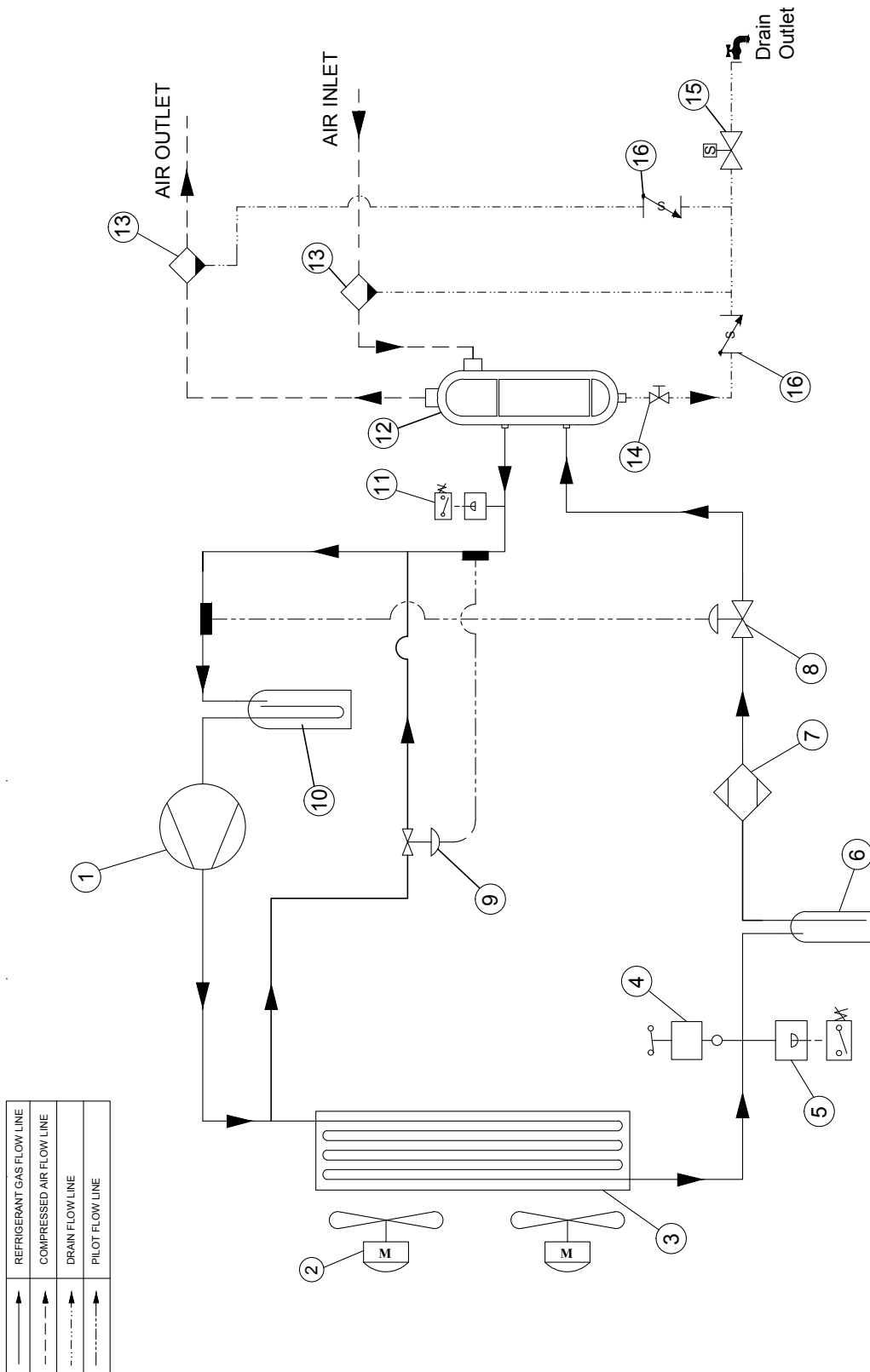
Model	Capacity (m <sup>3</sup> /h)	Con-nection Size	Voltage	Absorbed Power (kw)	Nominal Current (Amp)	MCA (A)	Total LRA (A)	Fuse (Amp)	Amount of Refrigerant (gr)	Refrigerant gas	Pressure drop (mbar)
IS 10	23	1/2"	230V / 1 / 50 Hz	0,32	1,71	2,10	9,6	4	280	R134a	115
IS 20	38	1/2"	230V / 1 / 50 Hz	0,33	1,72	2,10	9,6	4	300	R134a	170
IS 30	53	1/2"	230V / 1 / 50 Hz	0,36	1,87	2,60	10,6	4	320	R134a	280
IS 35	70	1/2"	230V / 1 / 50 Hz	0,37	1,9	2,60	10,6	4	320	R134a	250
IS 40	100	3/4"	230V / 1 / 50 Hz	0,37	1,9	2,35	10	4	500	R134a	100
IS 50	155	3/4"	230V / 1 / 50 Hz	0,59	3,32	4,08	15	6	550	R134a	220
IS 60	190	3/4"	230V / 1 / 50 Hz	0,68	3,93	4,83	19,6	6	600	R134a	320
IS 70	210	1 1/2"	230V / 1 / 50 Hz	0,82	5,22	6,58	25,8	8	1000	R134a	220
IS 80	305	1 1/2"	230V / 1 / 50 Hz	1,07	6,48	8,08	29,8	10	1000	R134a	320
IS 90	375	1 1/2"	230V / 1 / 50 Hz	1,19	5,56	7,33	31,8	8	1000	R134a	200
IS 100	495	2"	230V / 1 / 50 Hz	1,23	5,74	7,33	31,8	8	2500	R134a	310
IS 110	623	2"	230V / 1 / 50 Hz	1,32	6,63	8,20	37,3	10	2500	R134a	240
IS 120	930	2"	230V / 1 / 50 Hz	1,84	9,65	11,25	48,9	15	4500	R134a	150
IS 130	1200	2"	230V / 1 / 50 Hz	2,35	12,7	13,75	57,9	15	4500	R134a	190
IS 140	1388	3"	400V / 3 / 50 Hz	2,97	6,41	10,99	53,22	15	7000	R134a	350
IS 150	1800	3"	400V / 3 / 50 Hz	3,38	7,71	13,36	68,72	15	7000	R134a	290
IS 160	2500	3"	400V / 3 / 50 Hz	4,85	11,53	16,31	97,86	20	10000	R134a	190
IS 170	2775	3"	400V / 3 / 50 Hz	4,86	11,53	16,31	97,86	20	10000	R134a	350
IS 180	3330	DN100	400V / 3 / 50 Hz	5,61	13,34	20,37	115,48	25	10500	R134a	270
IS 190	3915	DN100	400V / 3 / 50 Hz	6,33	13,24	25,12	122,48	30	10500	R134a	380
IS 200	5085	DN100	400V / 3 / 50 Hz	7,92	17,1	31,70	146,4	35	20000	R134a	320
IS 210	5850	DN100	400V / 3 / 50 Hz	9,22	21,6	37,33	180,4	45	20000	R134a	350
IS 220	6975	DN150	400V / 3 / 50 Hz	11,66	23,7	41,33	231,4	50	22000	R134a	320
IS 230	7875	DN150	400V / 3 / 50 Hz	12,27	25,05	42,68	234,1	50	23000	R134a	350
IS 240	9000	DN150	400V / 3 / 50 Hz	14,71	31,65	55,45	289,1	65	24000	R134a	350
IS 250	10500	DN200	400V / 3 / 50 Hz	14,77	31,85	55,45	289,1	65	26000	R134a	350
IS 260	12500	DN200	400V / 3 / 50 Hz	18,57	44,9	69,63	365,2	80	27000	R134a	350

FOR ALL MODELS	
Nominal Working Pressure	7 bar
Maximum Working Pressure	16 bar
Maximum Ambient Temperature	45°C
Minimum Ambient Temperature	4°C
Maximum Inlet Temperature	50°C



## 6. DIAGRAMS

### 6.1 AIR FLOW DIAGRAMS IS 10 - IS 150



**IMPORTANT NOTICE:**

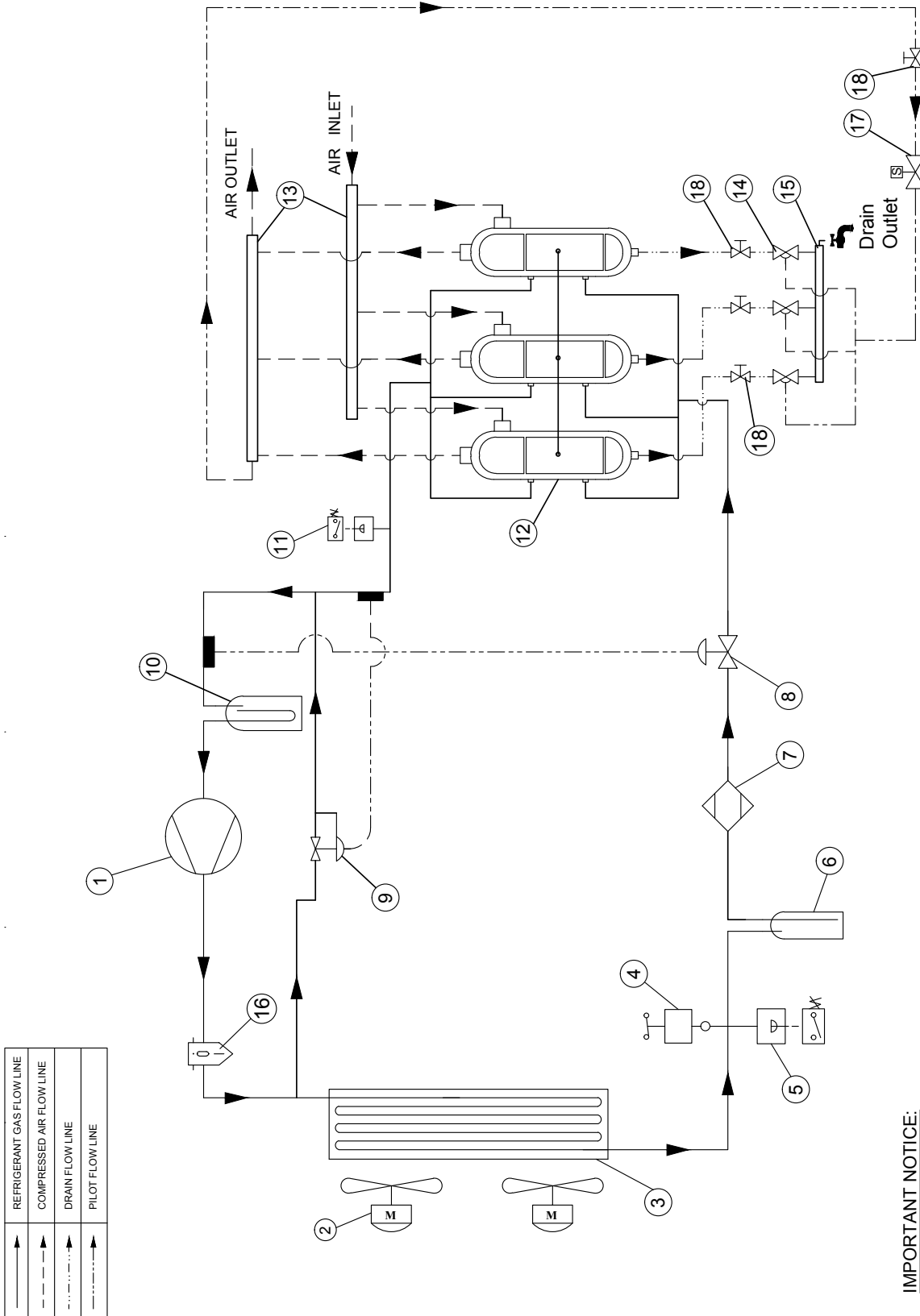
- High Pressure Switch (Part No:5) is not used from MKE 23 to MKE 70.
- Hot Gas By Pass Valve (Part No:9) is not used from MKE 23 to MKE 190.
- Liquid Receiver (Part No:6) is not used from MKE 23 to MKE 375.
- Liquid Separator (Part No:10) is used from MKE 930 to MKE 1800.
- Low Pressure Switch (Part No:11) is only MKE 1388 and MKE 1800.

6.1 AIR FLOW DIAGRAMS  
**IS 10 - IS 150**

16	CHECK VALVE
15	SOLENOID VALVE
14	MANUAL VALVE
13	FILTER
12	HEAT EXCHANGER
11	LOW PRESSURE SWITCH
10	LIQUID SEPARATOR
9	BY-PASS VALVE
8	EXPANSION VALVE
7	FILTER DRIER
6	LIQUID RECEIVER
5	HIGH PRESSURE SWITCH
4	FAN SWITCH
3	CONDENSER
2	FAN MOTOR
1	COMPRESSOR
POS.	DESCRIPTION



# 6.1 AIR FLOW DIAGRAMS IS 160 - IS 260



6.1 AIR FLOW DIAGRAMS  
**IS 160 - IS 260**

18	MANUAL VALVE
17	SOLENOID VALVE
16	OIL SEPARATOR
15	DRAIN COLLECTOR
14	MEMBRANE VALVE
13	AIR COLLECTOR
12	HEAT EXCHANGER
11	LOW PRESSURE SWITCH
10	LIQUID SEPARATOR
9	BY-PASS VALVE
8	EXPANSION VALVE
7	FILTER DRIER
6	LIQUID RECEIVER
5	HIGH PRESSURE SWITCH
4	FAN SWITCH
3	CONDENSER
2	FAN MOTOR
1	COMPRESSOR
POS.	DESCRIPTION



## 6.2

# IS

## ELECTRICAL DIAGRAMS

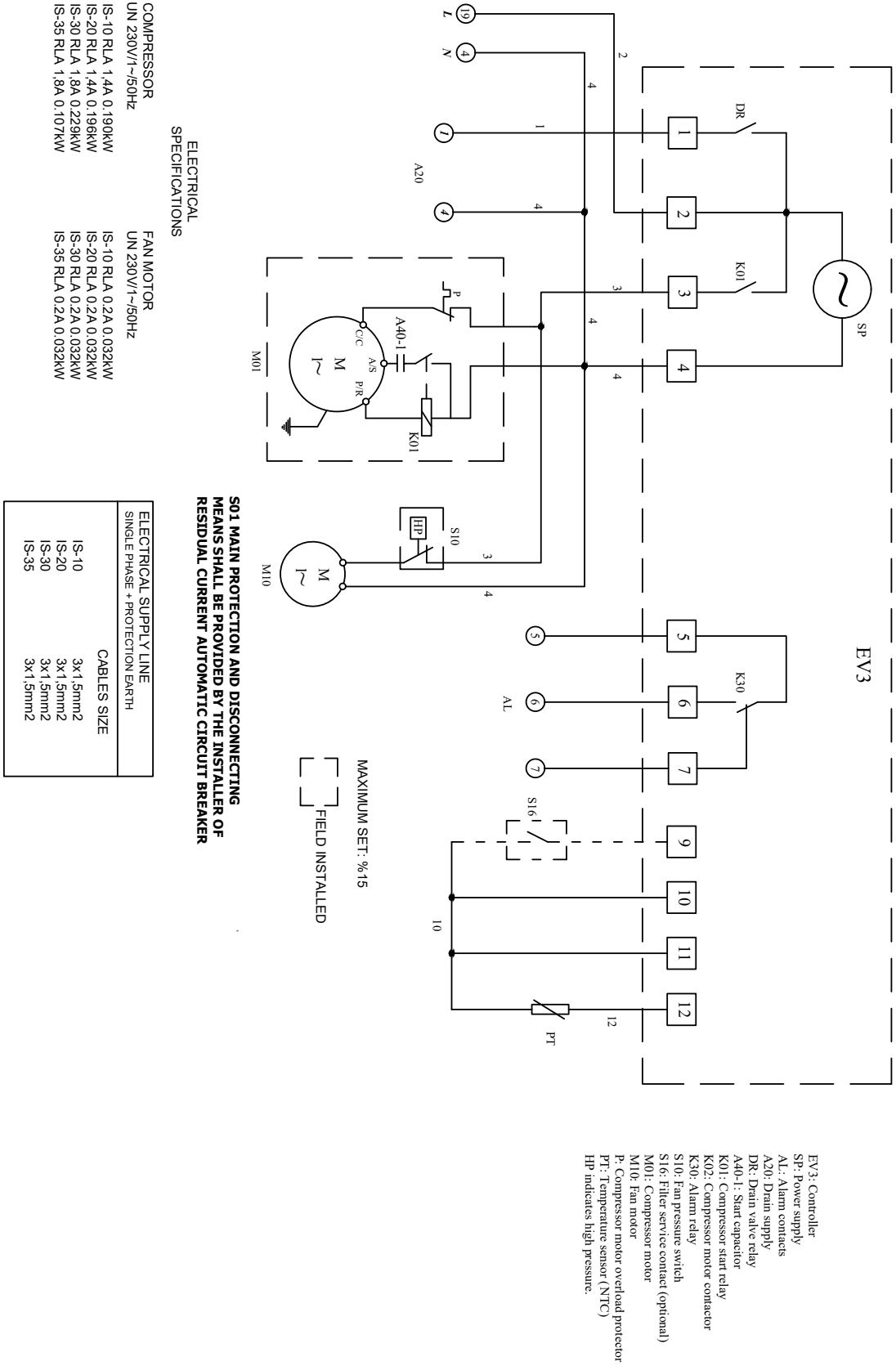
### With Control & Power

“User must supply the protective earth conductor of the dryer. The conductor is to be connected to the point on the conducting body of the dryer, specified by a sticker with the protective earth symbol next to it. The size of the protective earth conductor should be minimum the size of the power conductor, minimum 16 mm<sup>2</sup> for power conductor size between 16 and 35 mm<sup>2</sup>, minimum half the size of the conductor if it is larger than 35 mm<sup>2</sup>.”





## 6.2 ELECTRICAL DIAGRAMS IS 10 to IS 35





## 6.2 ELECTRICAL DIAGRAMS

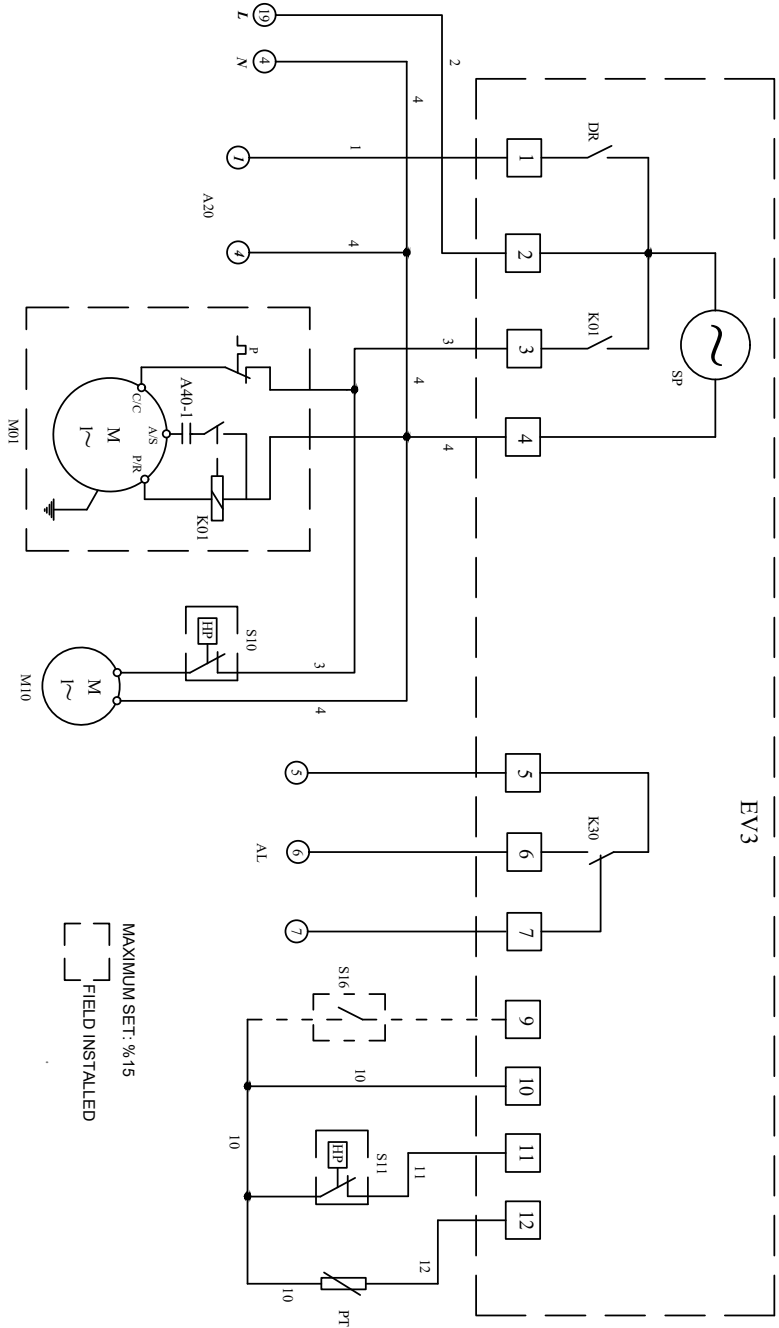
### IS 40 to IS 80

COMPRESSOR		FAN MOTOR			
UN 230V/1~/50Hz					
IS-40 RLA	1.6A	0.240kW	IS-40 RLA	0.20A	0.032kW
IS-50 RLA	2.5A	0.393kW	IS-50 RLA	0.68A	0.095kW
IS-60 RLA	3.1A	0.484kW	IS-60 RLA	0.68A	0.095kW
IS-70 RLA	4.5A	0.620kW	IS-70 RLA	0.68A	0.095kW
IS-80 RLA	5.6A	0.870kW	IS-80 RLA	0.68A	0.095kW

#### ELECTRICAL SPECIFICATIONS

**S01 MAIN PROTECTION AND DISCONNECTING MEANS SHALL BE PROVIDED BY THE INSTALLER OF RESIDUAL CURRENT AUTOMATIC CIRCUIT BREAKER**

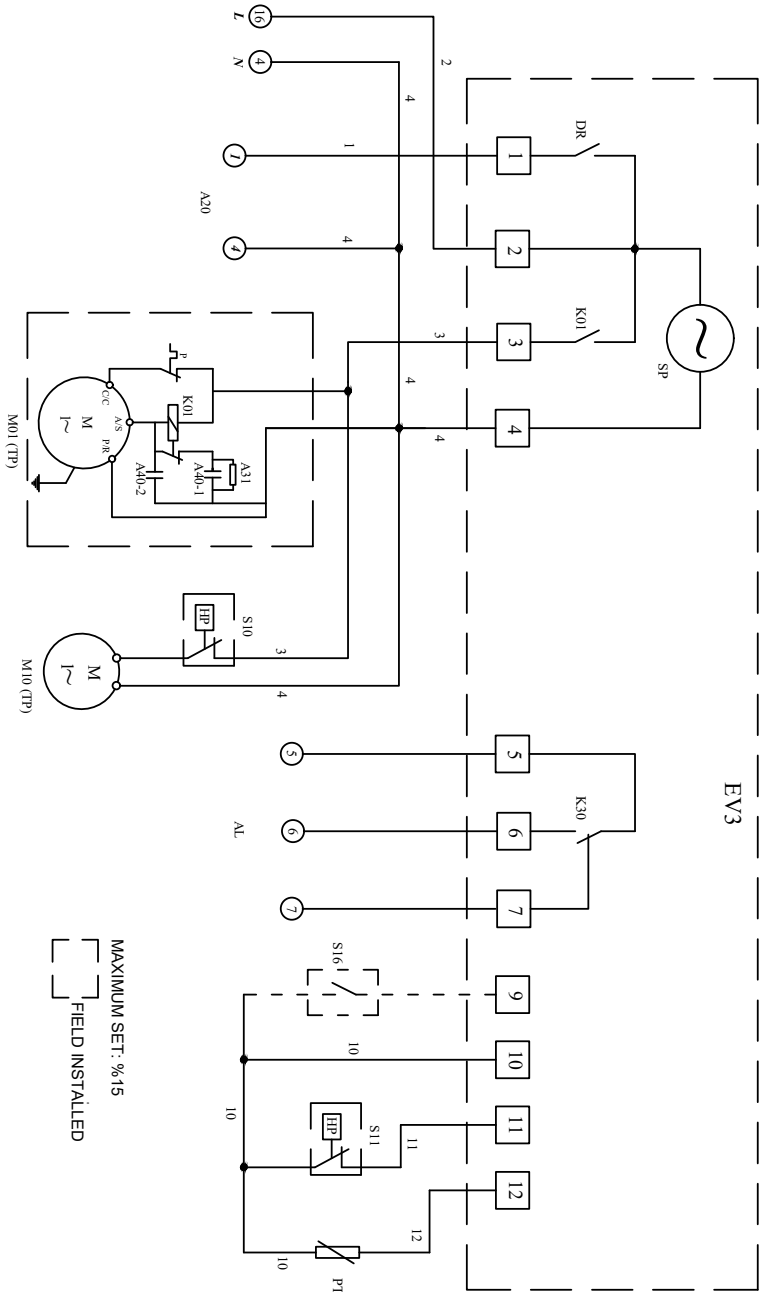
ELECTRICAL SUPPLY LINE		CABLES SIZE	
SINGLE PHASE + PROTECTION EARTH			
IS-40		3x1.5mm <sup>2</sup>	
IS-50		3x1.5mm <sup>2</sup>	
IS-60		3x1.5mm <sup>2</sup>	
IS-70		3x1.5mm <sup>2</sup>	
IS-80		3x1.5mm <sup>2</sup>	



- EV3: Controller
- SP: Power supply
- AL: Alarm contacts
- A20: Drain supply
- DR: Drain valve relay
- A40-1: Start capacitor
- K01: Compressor start relay
- K02: Compressor motor contactor
- K30: Alarm relay
- S10: Fan pressure switch
- S11: High pressure switch
- S16: Filter service contact (optional)
- M10: Compressor motor
- P: Compressor motor overload protector
- PT: Temperature sensor (NTC)
- HP indicates high pressure



## 6.2 ELECTRICAL DIAGRAMS IS 90 to IS 110



- EV3: Controller  
 SP: Power supply  
 AL: Alarm contact  
 A20: Drain supply  
 DR: Drain valve relay  
 A31: Bleeder resistor  
 A40-1: Start capacitor  
 A40-2: Run capacitor  
 K01: Compressor start relay  
 K02: Compressor motor contactor  
 K30: Alarm relay  
 S10: Fan pressure switch  
 S11: High pressure switch  
 S16: Filter service contact (optional)  
 M01: Compressor motor  
 M10: Fan motor  
 P: Compressor motor overload protector  
 PT: Temperature sensor (NTC)  
 HP indicates high pressure  
 TP indicates thermal protection

ELECTRICAL SPECIFICATIONS	
COMPRESSOR UN 230V/1~/50HZ	FAN MOTOR UN 230V/1~/50HZ
IS-90 RLA 5.1A 0.996KW	IS-90 RLA 0.7A 0.095KW
IS-100 RLA 5.1A 1.033KW	IS-100 RLA 0.7A 0.095KW
IS-110 RLA 5.8A 1.120KW	IS-110 RLA 0.7A 0.095KW

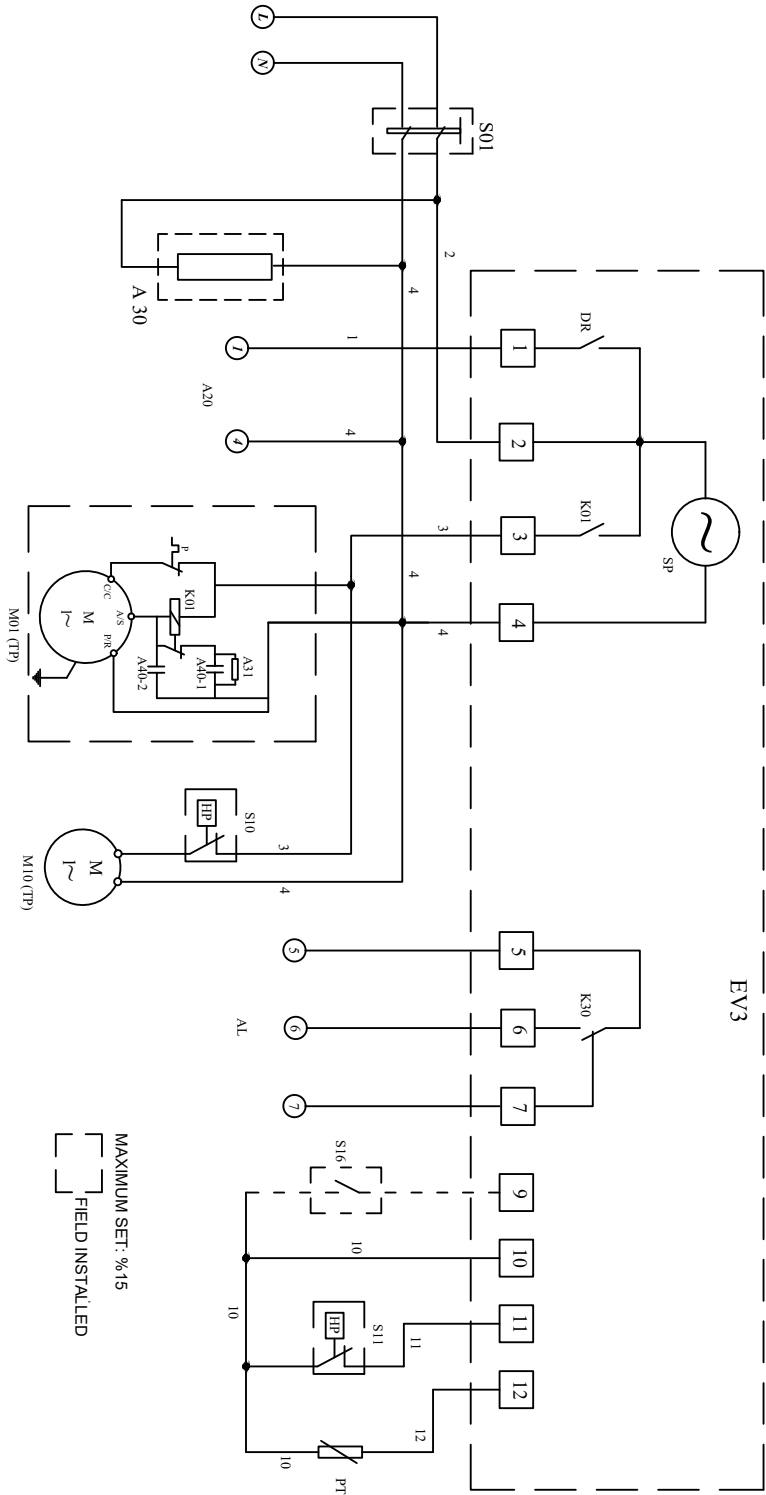
**SOI MAIN PROTECTION AND DISCONNECTING MEANS  
SHALL BE PROVIDED BY THE INSTALLER OF RESIDUAL  
CURRENT AUTOMATIC CIRCUIT BREAKER**

ELECTRICAL SUPPLY LINE	
SINGLE PHASE + PROTECTION EARTH	
IS-90	3x1.5mm <sup>2</sup>
IS-100	3x1.5mm <sup>2</sup>
IS-110	3x1.5mm <sup>2</sup>

MAXIMUM SET: %15  
 [ ] FIELD INSTALLED



## 6.2 ELECTRICAL DIAGRAMS IS 120 - IS 130



- EV3: Controller  
 S01: Main switch  
 SP: Power supply  
 AL: Alarm contact  
 A20: Drain supply  
 A30: Compressor heater  
 DR: Drain valve relay  
 A31: Bleeder resistor  
 A40-1: Start capacitor  
 A40-2: Run capacitor  
 K01: Compressor start relay  
 K02: Compressor motor contactor  
 K30: Alarm relay  
 S10: Fan pressure switch  
 S11: High pressure switch  
 S16: Filter service switch (optional)  
 M10: Fan motor  
 M01: Compressor motor overload protector  
 P: Compressor motor (NTC)  
 HP: indicates high pressure  
 TP: indicates thermal protection

**ELECTRICAL SPECIFICATIONS**  
 COMPRESSOR  
 UN 230V/1~/50Hz  
 IS-120 RLA 7.8A 1.612kW  
 IS-130 RLA 9.8A 2.186kW

**FAN MOTOR**  
 UN 230V/1~/50Hz  
 IS-120 RLA 1.0A 0.20kW  
 IS-130 RLA 1.0A 0.20kW

**S01 MAIN PROTECTION AND DISCONNECTING MEANS SHALL BE PROVIDED BY THE INSTALLER OF RESIDUAL CURRENT AUTOMATIC CIRCUIT BREAKER**  
 SUPPLY LINE VOLTAGE RATING - 600 VAC

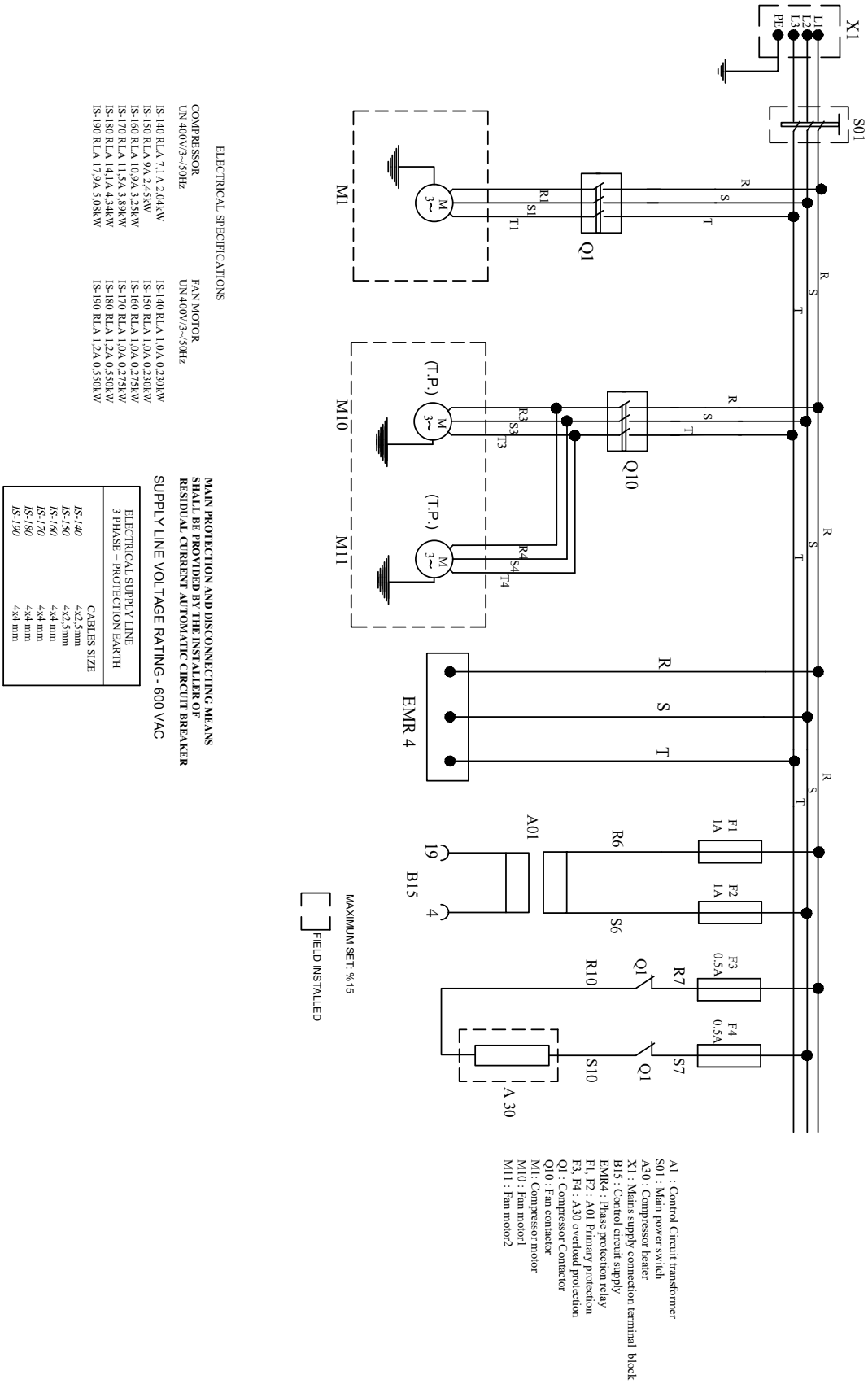
ELECTRICAL SUPPLY LINE	
SINGLE PHASE + PROTECTION EARTH	
IS-120	CABLES SIZE
IS-130	3x2.5mm <sup>2</sup>
	3x2.5mm <sup>2</sup>

MAXIMUM SET: %15  
 FIELD INSTALLED



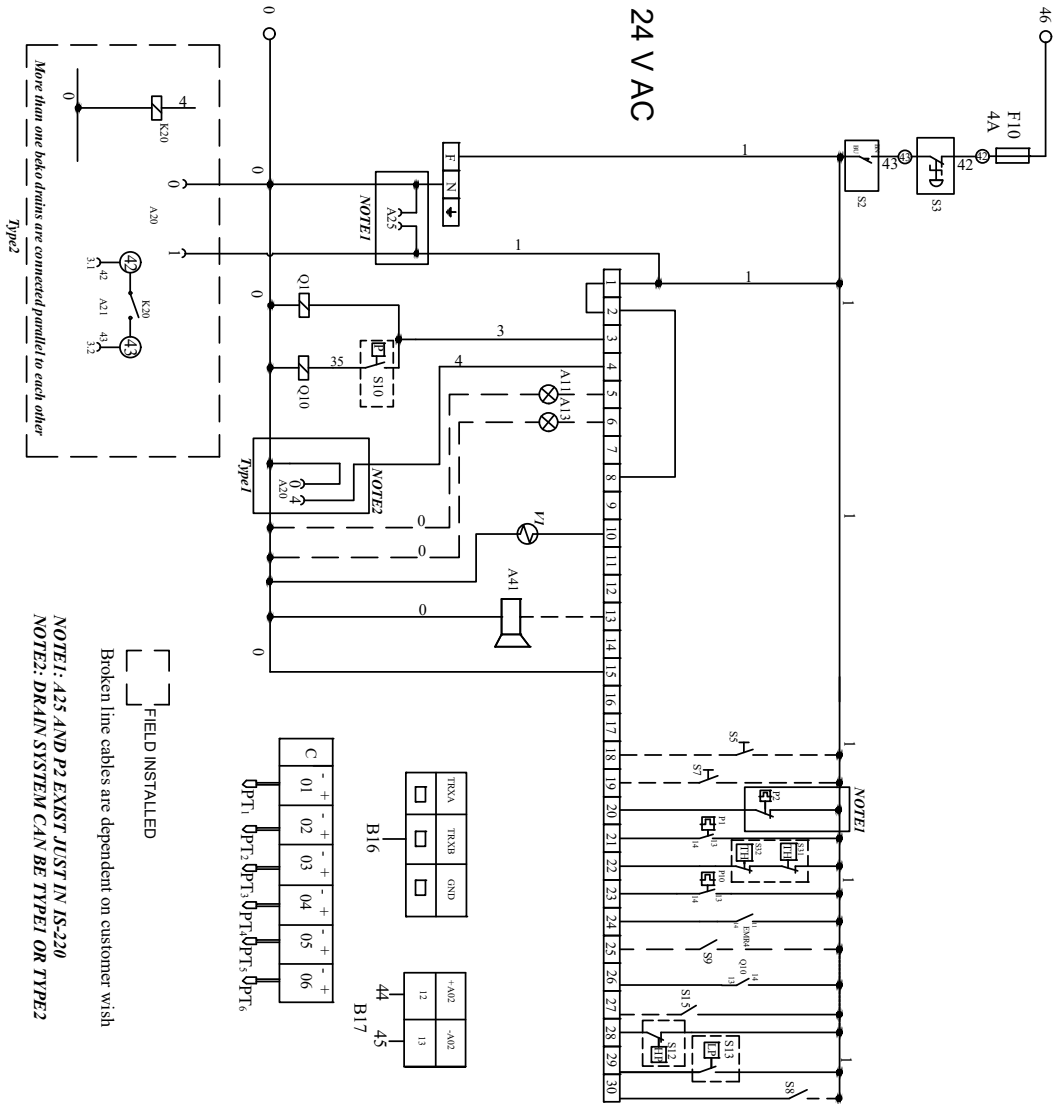


## 6.2 ELECTRICAL DIAGRAMS IS 140 to 3915 POWER



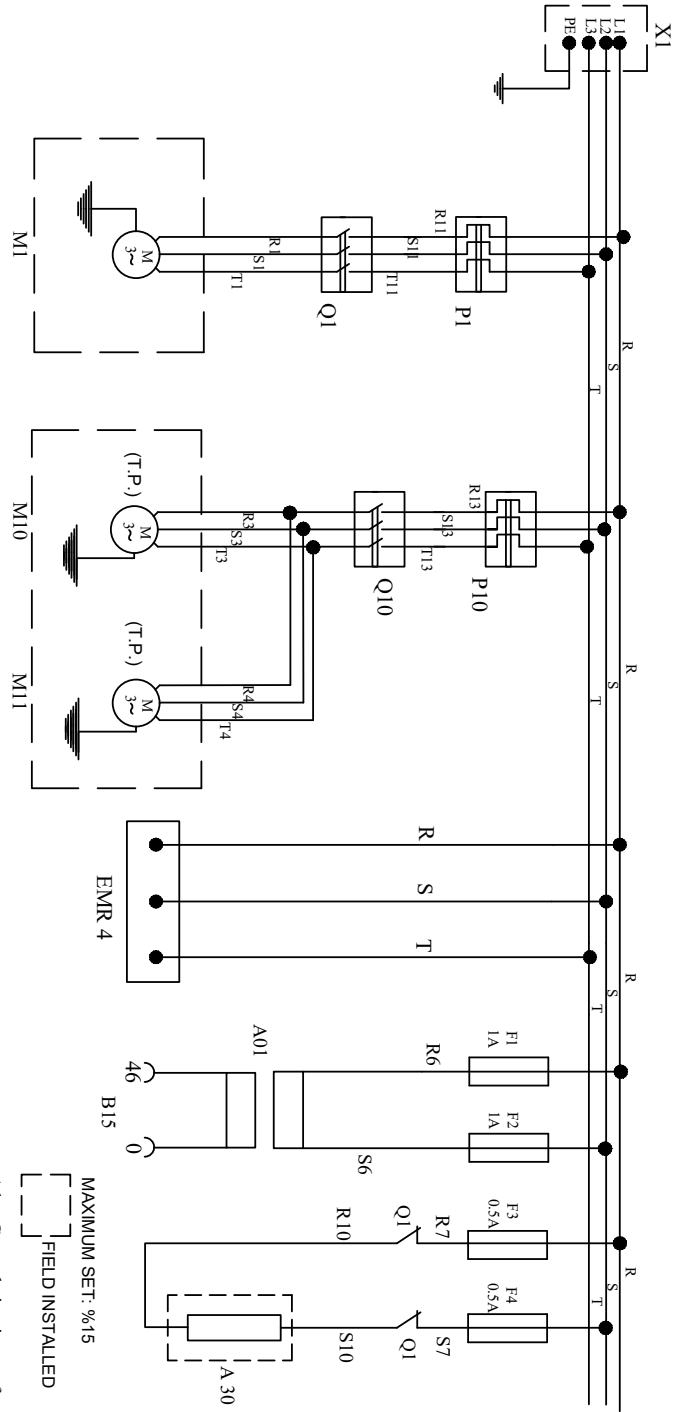


## 6.2 ELECTRICAL DIAGRAMS IS 200 to 220 CONTROL



- F10: F11 : Control circuit protection
- S2: Limit Switch
- S5 : Remote control start button
- S7 : Remote control stop button
- S3 : Emergency Button
- P1 : Overload protector of compressor
- P2: Compressor thermal protection
- P10 : Overload protector of fan motor
- S31: Fan heat thermal 1
- S32: Fan heat thermal 2
- EMR4 : Phase protection relay
- S8 : Remote control contact
- S9 : Obstruction for manual on/off
- S15 : Service contact
- S10 : Fan pressure switch
- S12 : High Pressure safety switch
- S13 : Low Pressure safety switch
- Q1 : Compressor motor contactor
- Q10 : Fan motor contactor
- V1: Bypass valve
- A20 : Electronic timer-drain supply (Optional)
- K20: Drain supply test relay
- A21: Drain test
- A25: Compressor heat thermal supply
- A11 : Remote control running lamp (green)
- A13 : Remote control stand-by lamp (red)
- A41 : Remote control alarm contact
- PT1 : Inlet air temperature sensor (PT100)
- PT2 : Heat exchanger temperature sensor (PT100)
- PT3 : Low pressure line sensor (PT100)
- PT4 : High pressure line sensor (PT100)
- PT5 : Ambient temperature sensor (PT100)
- PT6 : Condenser outlet temperature sensor (PT100)
- B16 : Computer/Communication connection (RS 485)
- B17 : Dew point analog output (+20mA/0-100 C)
- HP indicates high pressure
- LP indicates low pressure
- TH indicates thermal

## 6.2 ELECTRICAL DIAGRAMS IS 200 to 220 POWER



### ELECTRICAL SPECIFICATIONS

COMPRESSOR  
UN 400V/3/50

FAN MOTOR  
UN 400V/3/50

IS 200 RLA 22,4A 6,25kW  
IS 210 RLA 26,9A 7,55kW  
IS 220 RLA 30,1A 9,99kW

IS 200 RLA 1,6A 0,85kW (x2)  
IS 210 RLA 1,6A 0,85kW (x2)  
IS 220 RLA 1,6A 0,85kW (x2)

### MAIN PROTECTION AND DISCONNECTING MEANS SHALL BE PROVIDED BY THE INSTALLER OF RESIDUAL CURRENT AUTOMATIC CIRCUIT BREAKER

SUPPLY LINE VOLTAGE RATING - 600 VAC

ELECTRICAL SUPPLY LINE 3 PHASE + PROTECTION EARTH		CABLES SIZE	
IS 200	4G10 mm	IS 200	4G10 mm
IS 210	4G10 mm	IS 210	4G10 mm
IS 220	4G16 mm	IS 220	4G16 mm

MAXIMUM SET: %15  
FIELD INSTALLED

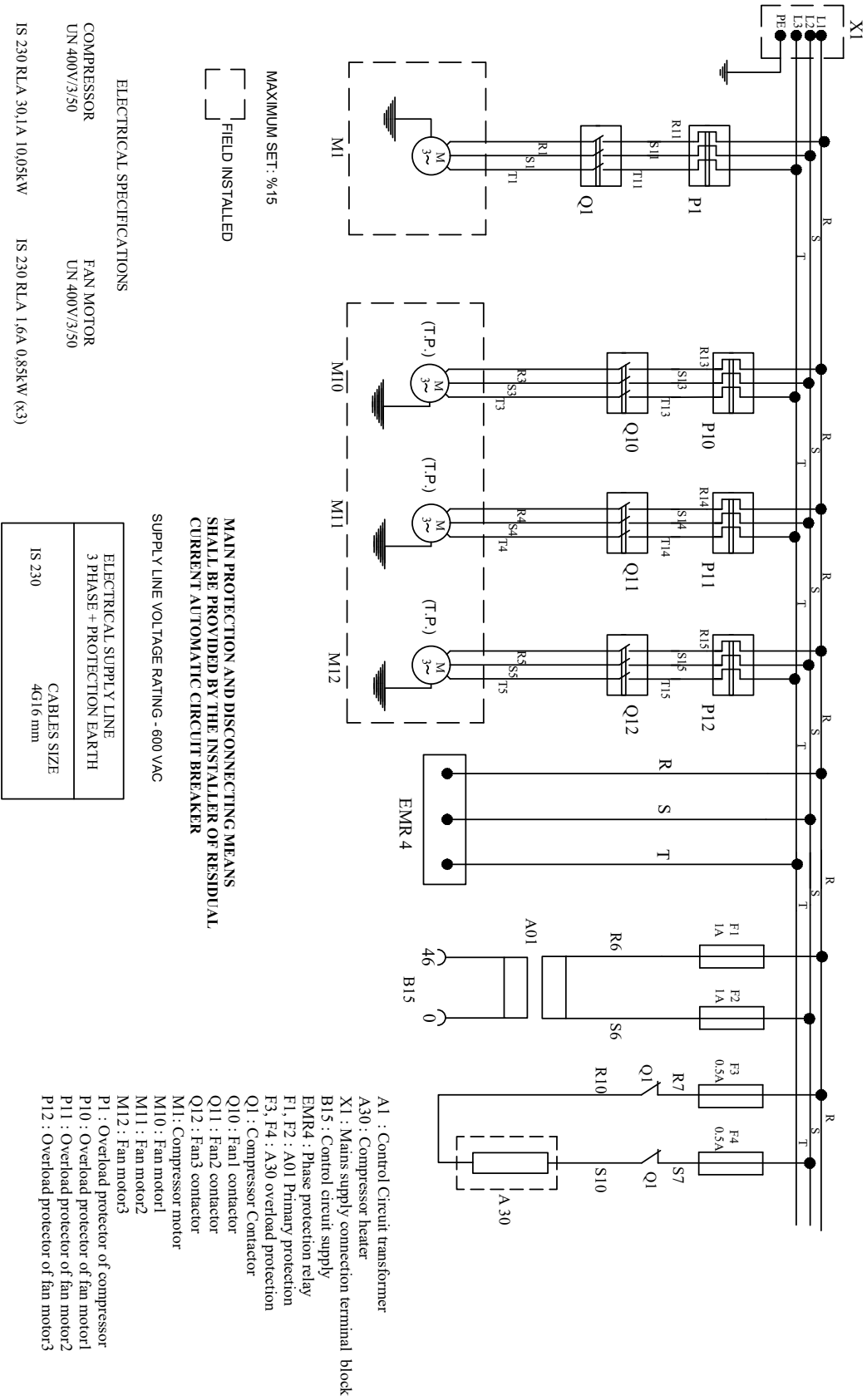
- A1 : Control circuit transformer
- A30 : Compressor heater
- X1 : Mains supply connection terminal block
- B15 : Control circuit supply
- EMR4 : Phase protection relay
- F1, F2 : A01 Primary protection
- F3, F4 : A30 overload protection
- Q1 : Compressor Contactor
- Q10 : Fan contactor
- M1 : Compressor motor
- M10 : Fan motor1
- M11 : Fan motor2
- P1 : Overload protector of compressor
- P10 : Overload protector of fan motor





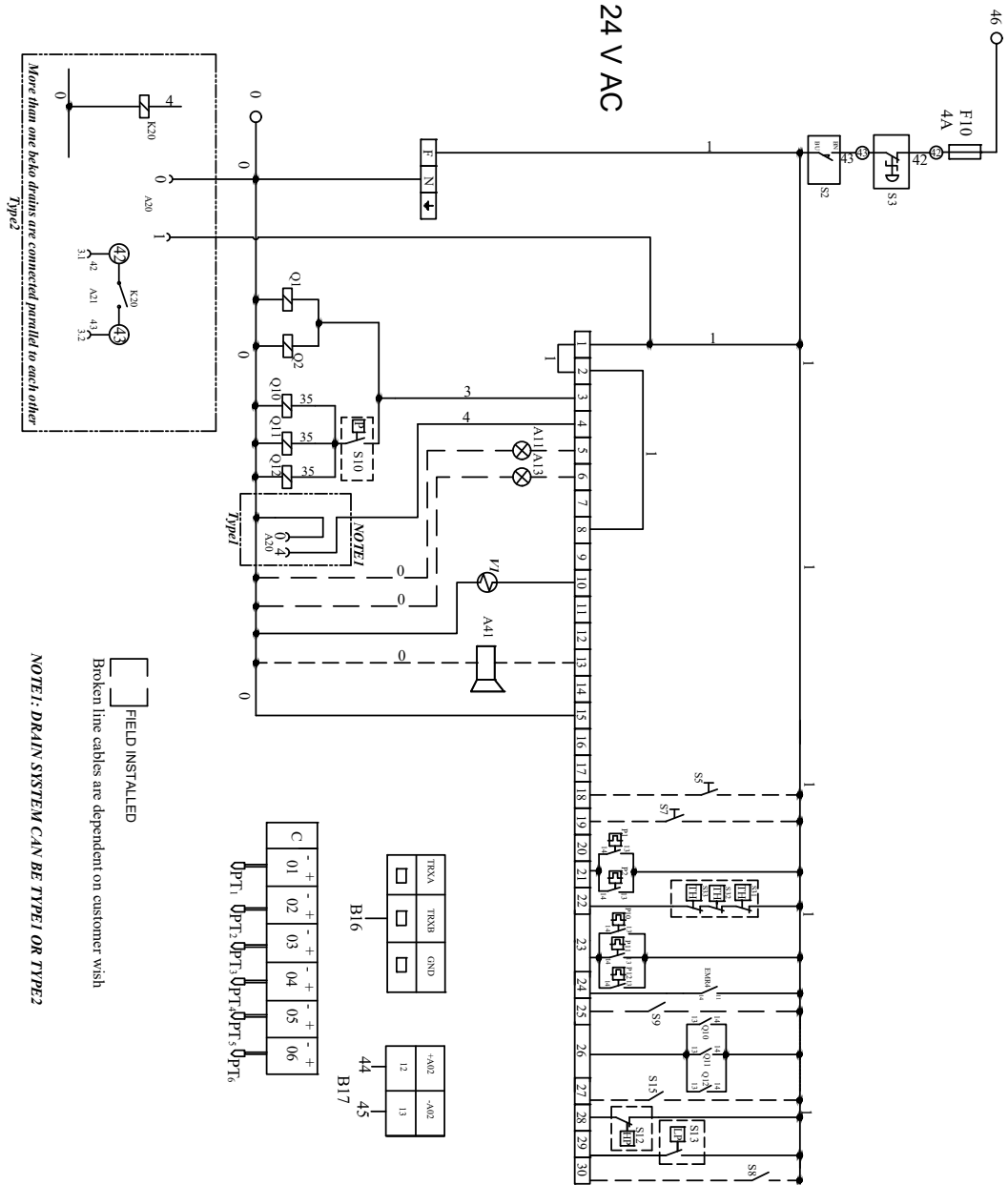
## 6.2 ELECTRICAL DIAGRAMS

### IS 230 POWER





## 6.2 ELECTRICAL DIAGRAMS IS 240 - 250 CONTROL

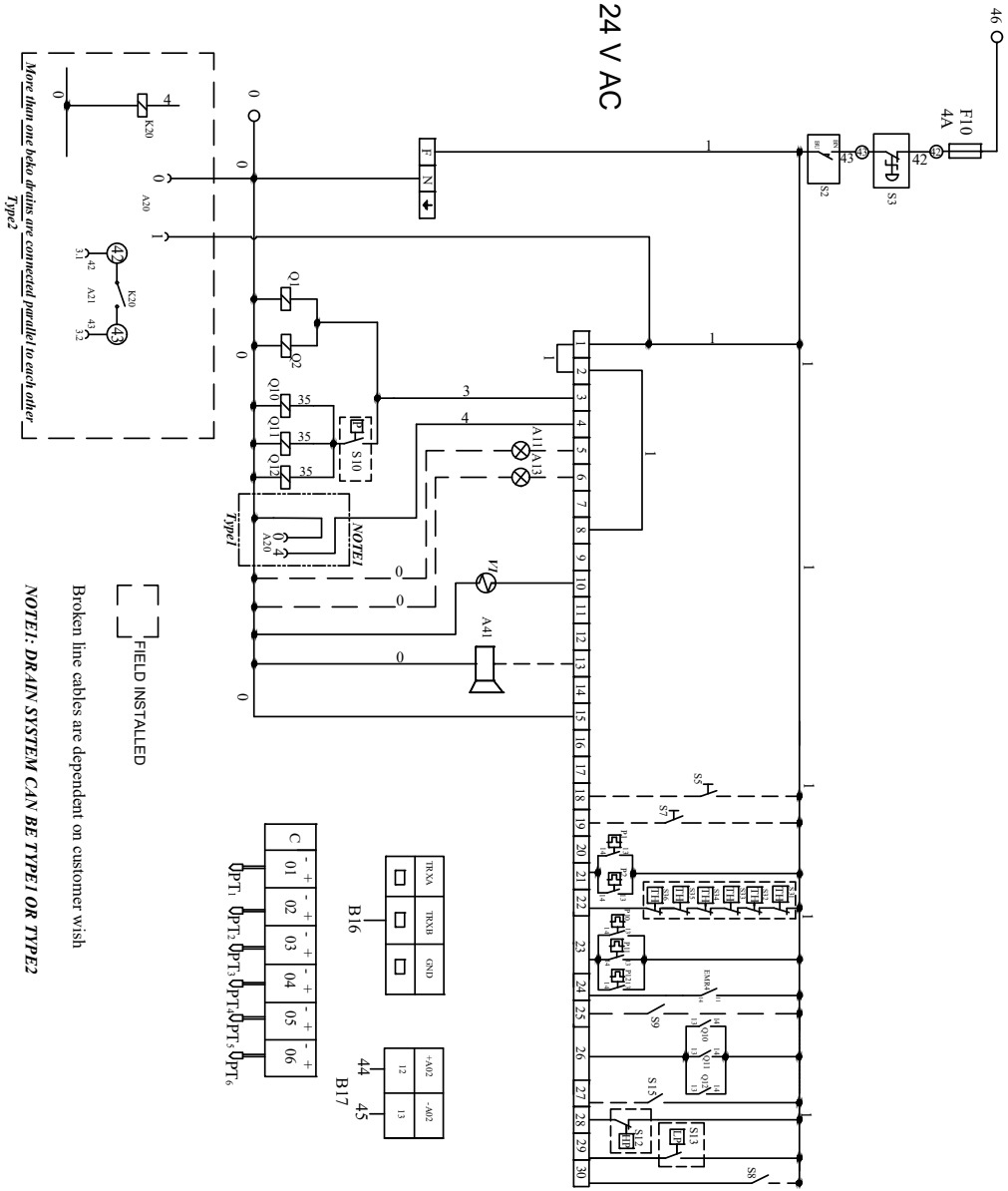


- F10: F11 : Control circuit protection
- S2: Limit Switch
- S5 : Remote control start button
- S7 : Remote control stop button
- S3 : Emergency Button
- P1 : Overload protector of compressor
- P2 : Overload protector of fan motor
- P10 : Overload protector of fan motor
- P11 : Overload protector of fan motor
- P12 : Overload protector of fan motor
- S31: Fan heat thermal 1
- S32: Fan heat thermal 2
- S33: Fan heat thermal 3
- EMR4 : Phase protection relay
- S8 : Remote control contact
- S9 : Obstruction for manual on/off
- S15 : Service contact
- S10 : Fan pressure switch
- S12 : High Pressure safety switch
- S13 : Low Pressure safety switch
- Q1 : Compressor motor contactor
- Q2 : Compressor motor contactor
- Q10 : Fan motor contactor
- Q11 : Fan motor contactor
- Q12 : Fan motor contactor
- V1: Bypass valve
- A20 : Electronic timer-drain supply (Optional)
- K20: Drain supply test relay
- A21:Drain test
- A11 : Remote control running lamp (green)
- A13 : Remote control stand-by lamp (red)
- A41 : Remote control alarm contact
- PT1 : Inlet air temperature sensor (PT100)
- PT2 : Heat exchanger temperature sensor (PT100)
- PT3 : Low pressure line sensor (PT100)
- PT4 : High pressure line sensor (PT100)
- PT5 : Ambient temperature sensor (PT100)
- PT6 : Condenser outlet temperature sensor (PT100)
- B16 : Computer/Communication connection (RS 485)
- B17 : Dew point analog output (4-20mA/0-100 C)
- HP indicates high pressure
- LP indicates low pressure
- TH indicates thermal





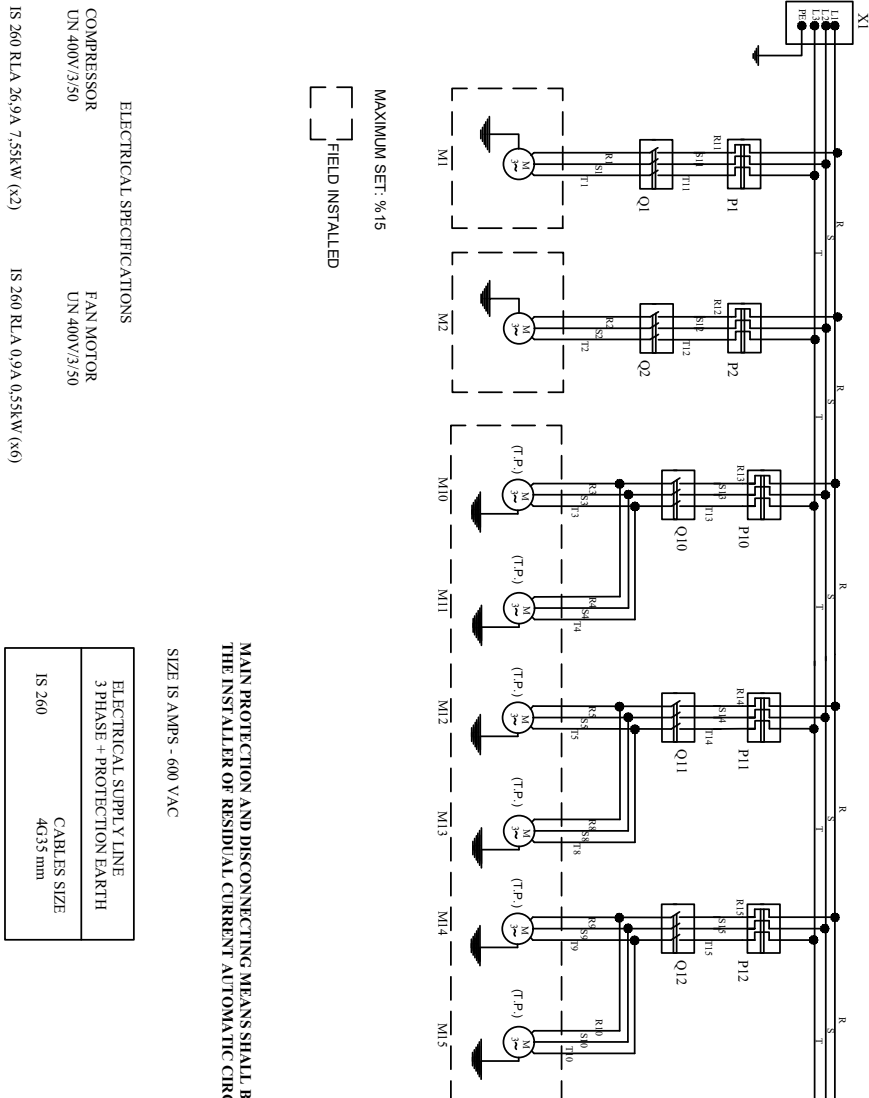
## 6.2 ELECTRICAL DIAGRAMS IS 260 CONTROL



- F10: F11 : Control circuit protection
- S2: Limit Switch
- S5 : Remote control start button
- S7 : Remote control stop button
- S3 : Emergency Button
- P1 : Overload protector of compressor
- P2 : Overload protector of compressor
- P10 : Overload protector of fan motor
- P11 : Overload protector of fan motor
- P12 : Overload protector of fan motor
- S31: Fan heat thermal 1
- S32: Fan heat thermal 2
- S33: Fan heat thermal 3
- S34: Fan heat thermal 4
- S35: Fan heat thermal 5
- S36: Fan heat thermal 6
- EMR4 : Phase protection relay
- S8 : Remote control contact
- S9 : Obstruction for manual on/off
- S15 : Service contact
- S10 : Fan pressure switch
- S12 : High Pressure safety switch
- S13 : Low Pressure safety switch
- Q1 : Compressor motor contactor
- Q2 : Compressor motor contactor
- Q10 : Fan motor contactor
- Q11 : Fan motor contactor
- Q12 : Fan motor contactor
- V1: Bypass valve
- A20 : Electronic timer-drain supply (Optional)
- K20: Drain supply test relay
- A21: Drain test
- A11 : Remote control running lamp (green)
- A13 : Remote control stand-by lamp (red)
- A41 : Remote control alarm contact
- PT1 : Inlet air temperature sensor (PT100)
- PT2 : Heat exchanger temperature sensor (PT100)
- PT3 : Low pressure line sensor (PT100)
- PT4 : High pressure line sensor (PT100)
- PT5 : Ambient temperature sensor (PT100)
- PT6 : Condenser outlet temperature sensor (PT100)
- B16 : Computer/Communication connection (RS 485)
- B17 : Dew point analog output (4-20mA/0-100 C)
- HP indicates high pressure
- LP indicates low pressure
- TH indicates thermal



## 6.2 ELECTRICAL DIAGRAMS IS 260 POWER



MAXIMUM SET: %15  
FIELD INSTALLED

### ELECTRICAL SPECIFICATIONS

COMPRESSOR  
UN 400V/3/50

FAN MOTOR  
UN 400V/3/50

IS 260 RLA 26.9A 7.55kW (x2)

IS 260 RLA 0.9A 0.251kW (x6)

MAIN PROTECTION AND DISCONNECTING MEANS SHALL BE PROVIDED BY  
THE INSTALLER OF RESIDUAL CURRENT AUTOMATIC CIRCUIT BREAKER

SIZE IS AMPS - 600 VAC

ELECTRICAL SUPPLY LINE 3 PHASE + PROTECTION EARTH	IS 260
CABLES SIZE	4G35 mm

- A1 : Control Circuit transformer
- A30 : Compressor heater1
- A31 : Compressor heater2
- X1 : Mains supply connection terminal block
- B15 : Control circuit supply
- EMR4 : Phase protection relay
- F1, F2 : A01 Primary protection
- F3, F4 : A30 overload protection
- Q1 : Compressor Contactor
- Q2 : Compressor Contactor
- Q10 : Fan contactor
- Q11 : Fan contactor
- Q12 : Fan contactor
- M1 : Compressor motor1
- M2 : Compressor motor2
- M10 : Fan motor1
- M11 : Fan motor2
- M12 : Fan motor3
- M13 : Fan motor4
- M14 : Fan motor5
- M15 : Fan motor6
- P1 : Overload protector of compressor1
- P2 : Overload protector of compressor2
- P10 : Overload protector of fan motor
- P11 : Overload protector of fan motor
- P12 : Overload protector of fan motor



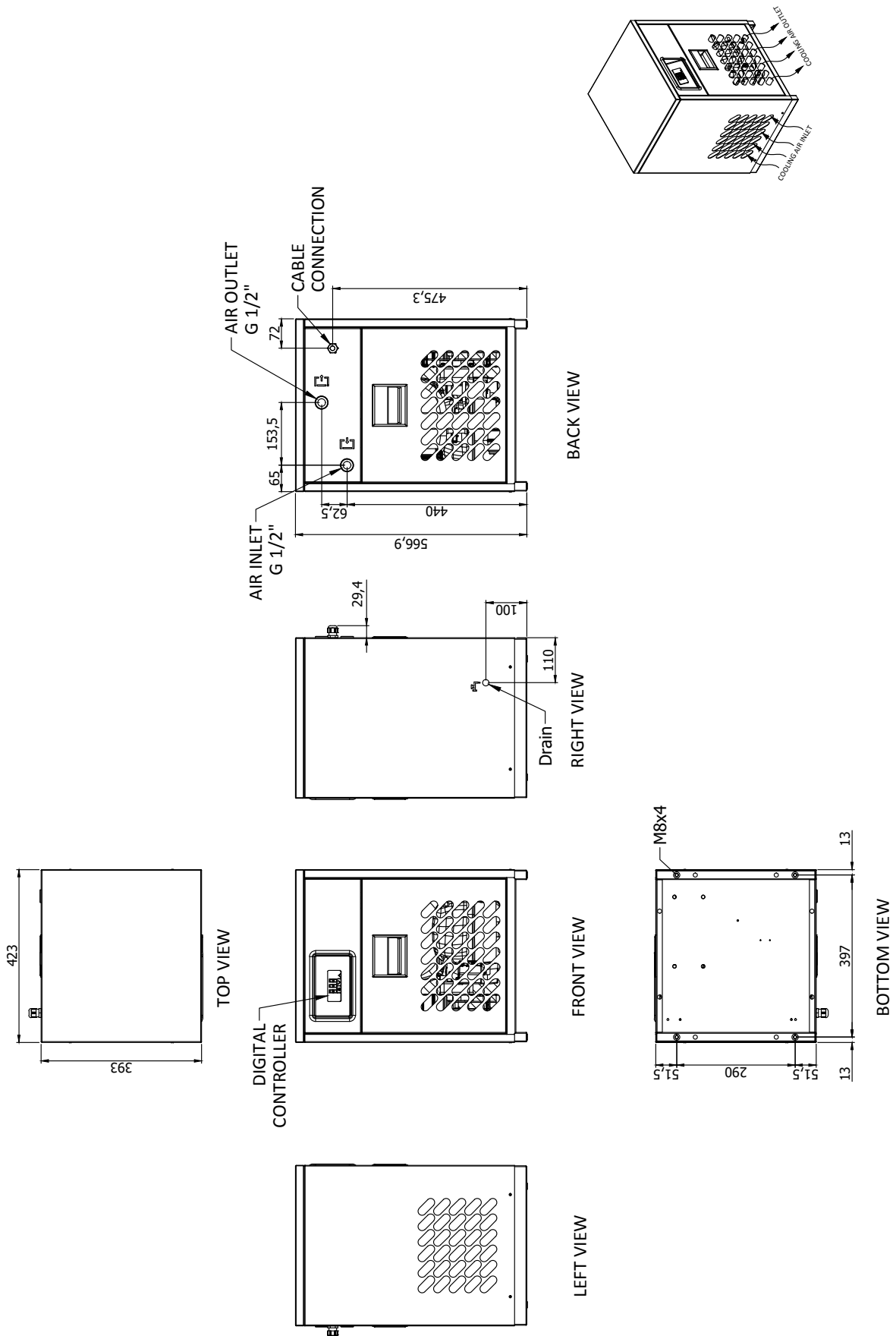
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## 8. IS

# ID DIAGRAM DRAWINGS & GENERAL ARRANGEMENTS

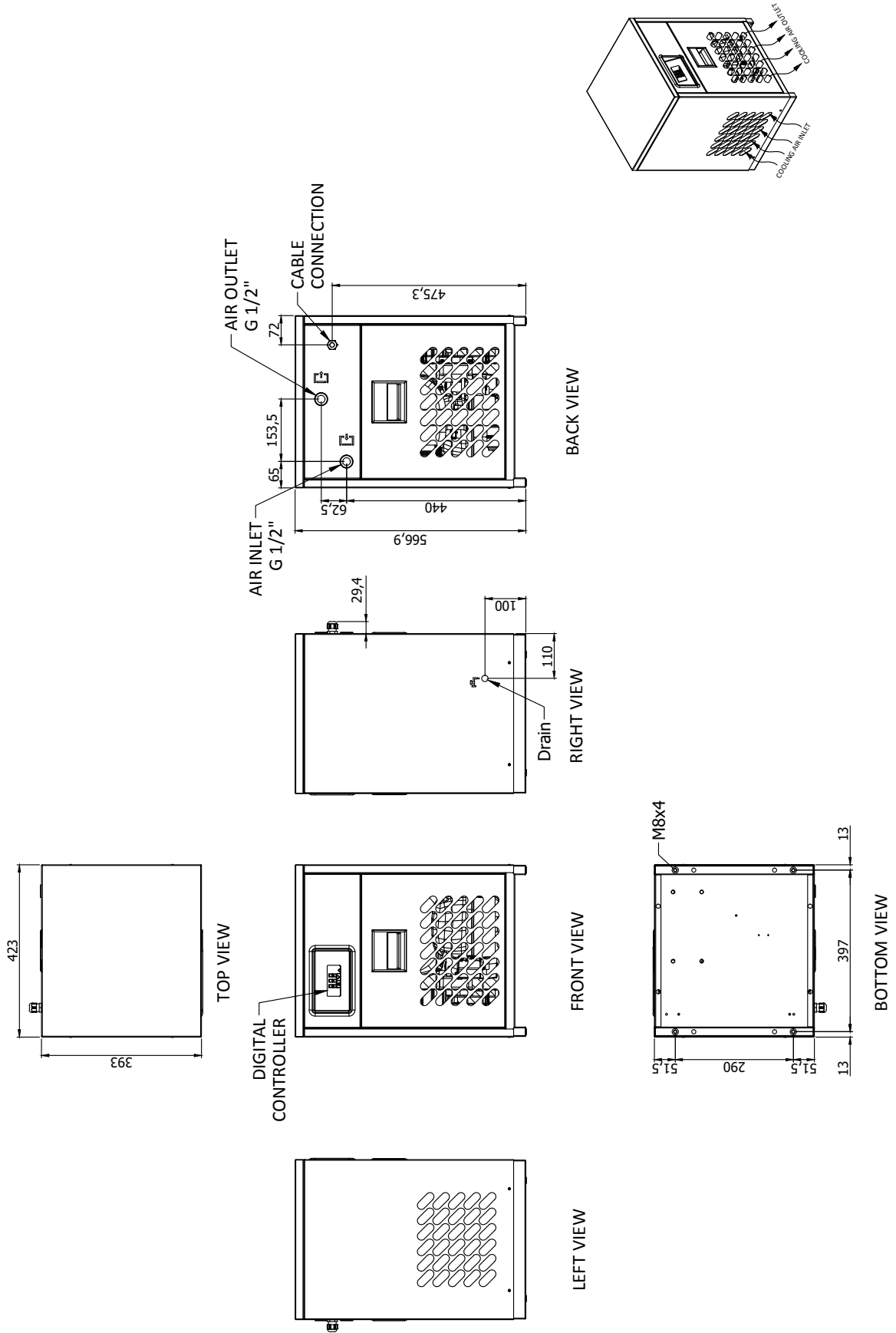


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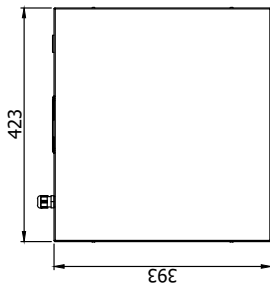
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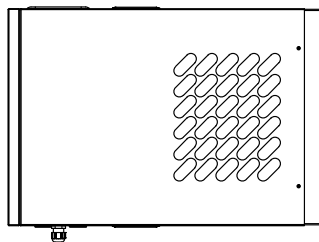




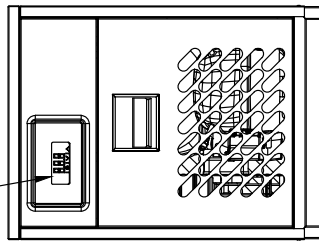
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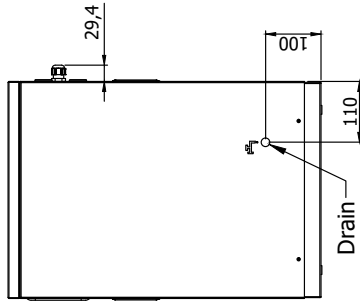
TOP VIEW



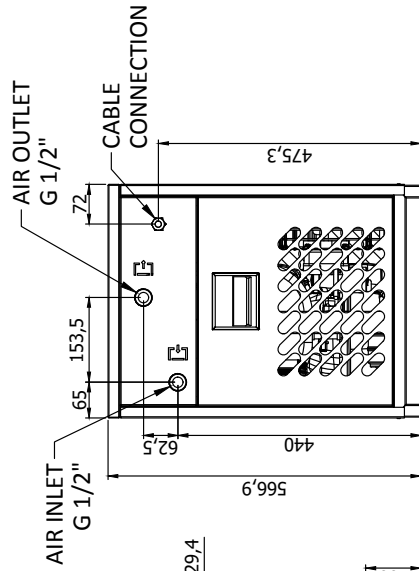
LEFT VIEW



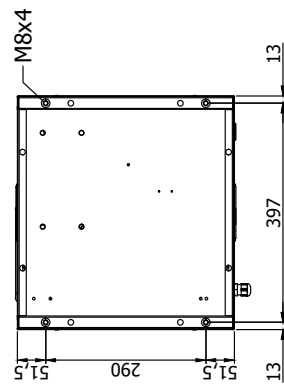
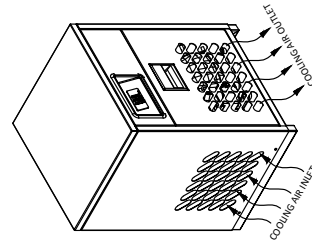
FRONT VIEW



RIGHT VIEW



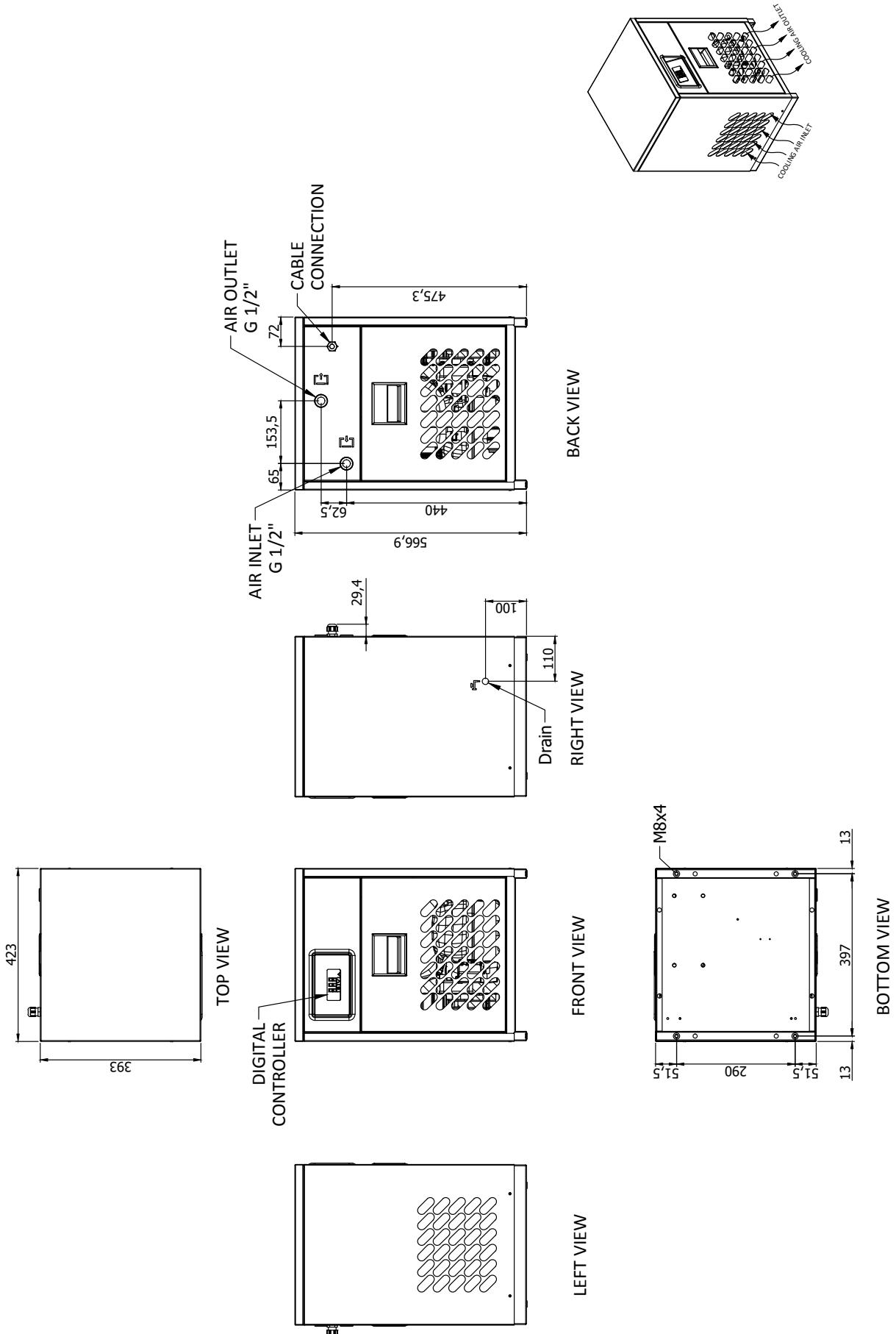
BACK VIEW



BOTTOM VIEW

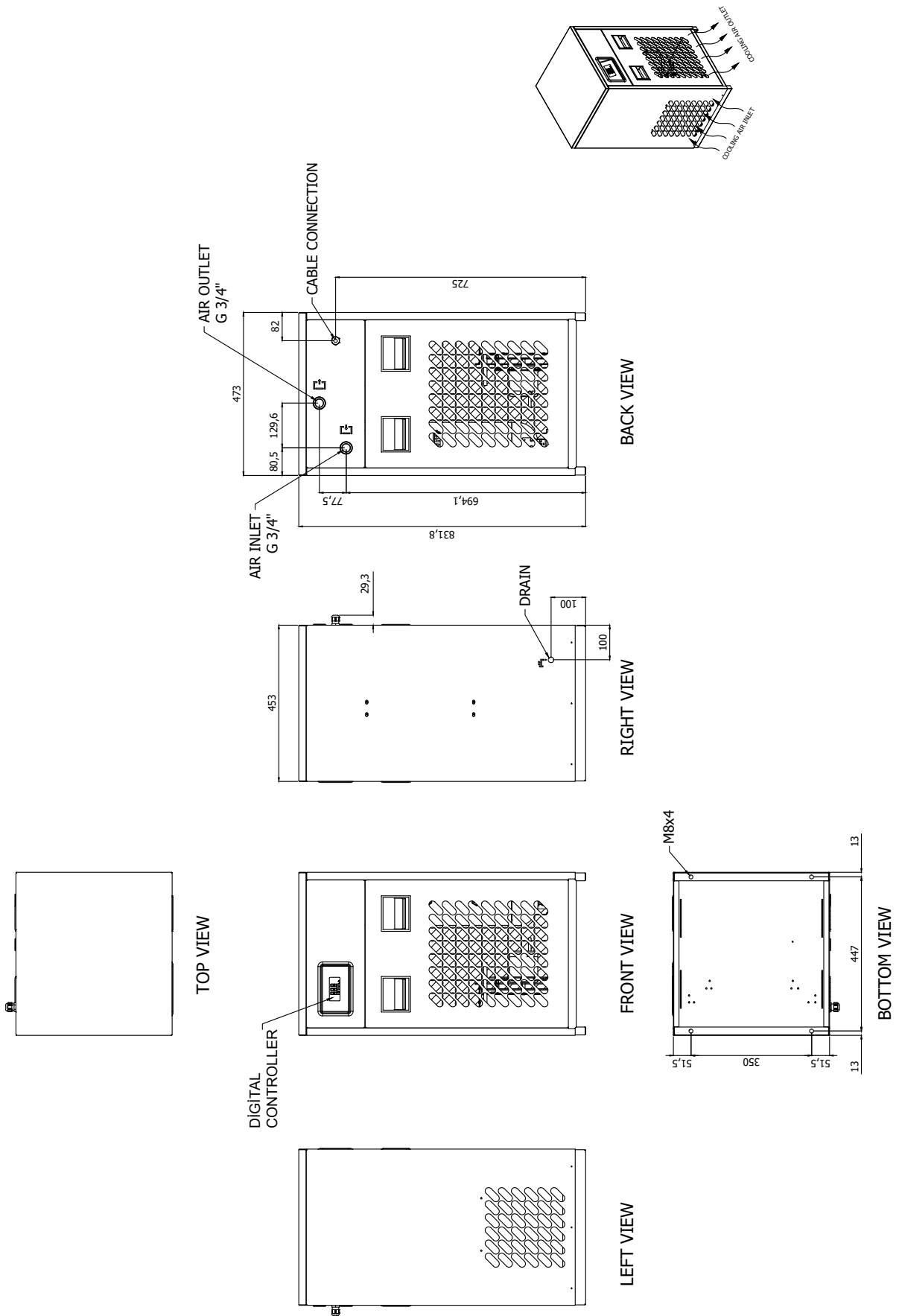


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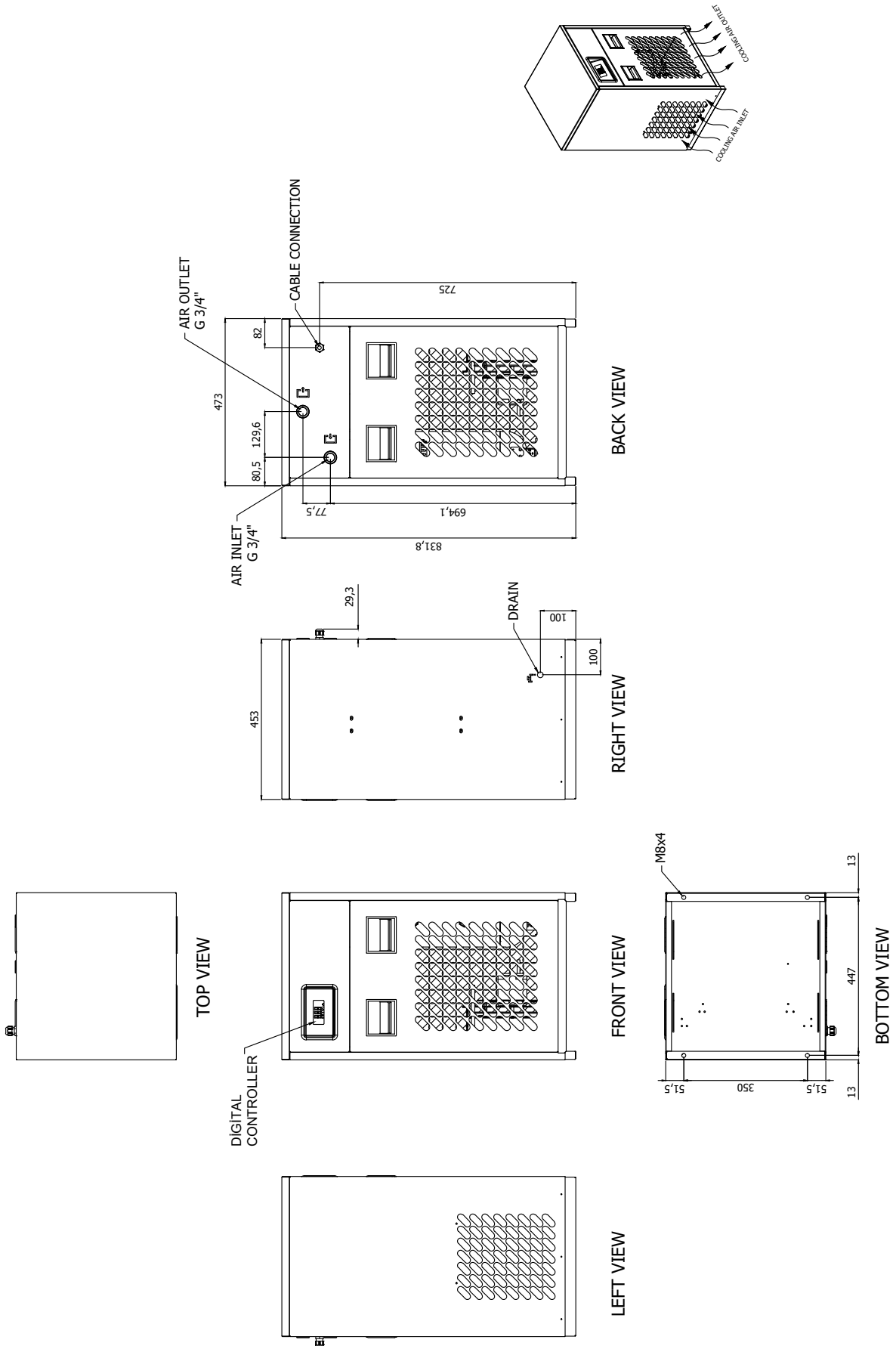


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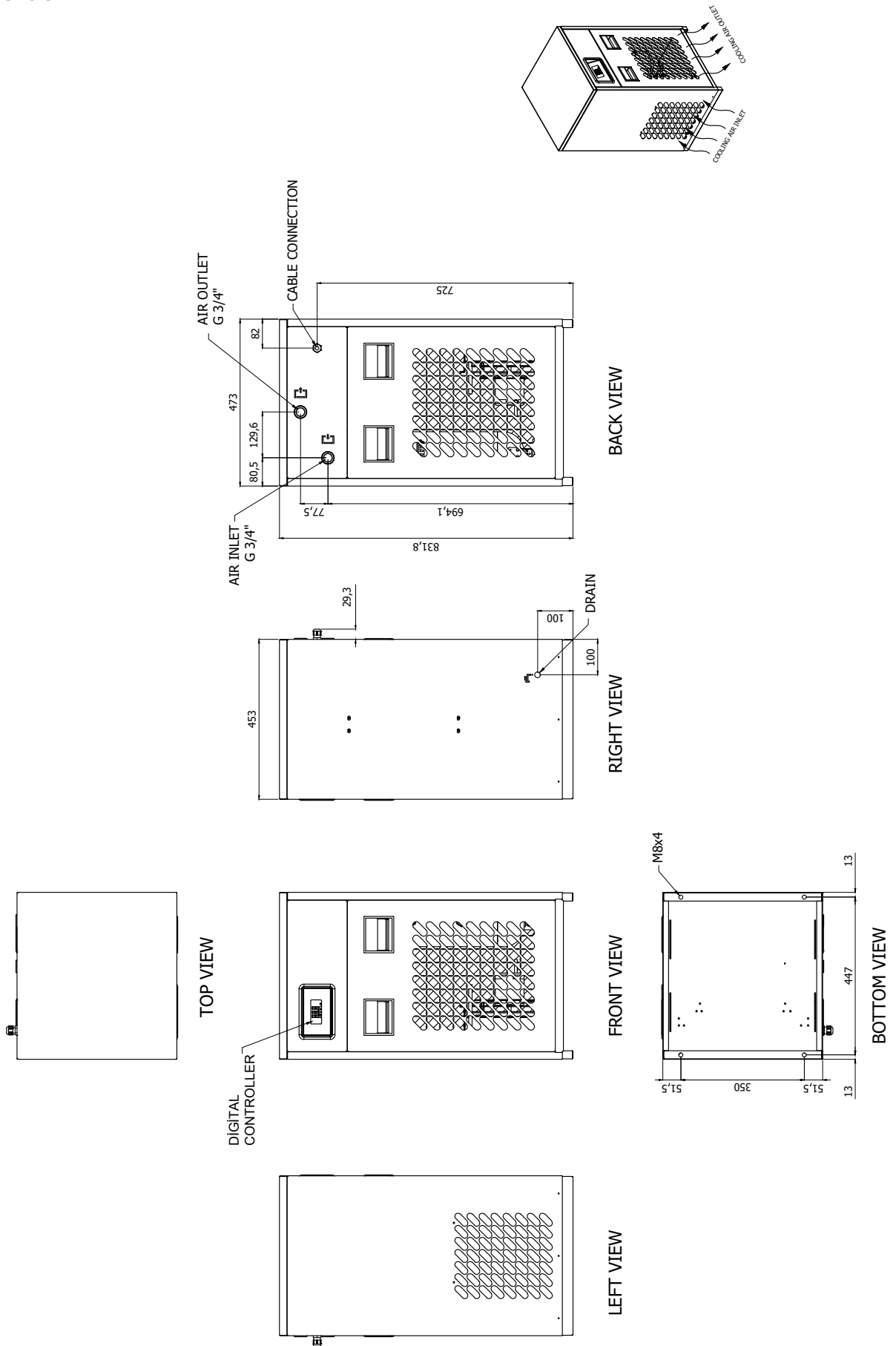


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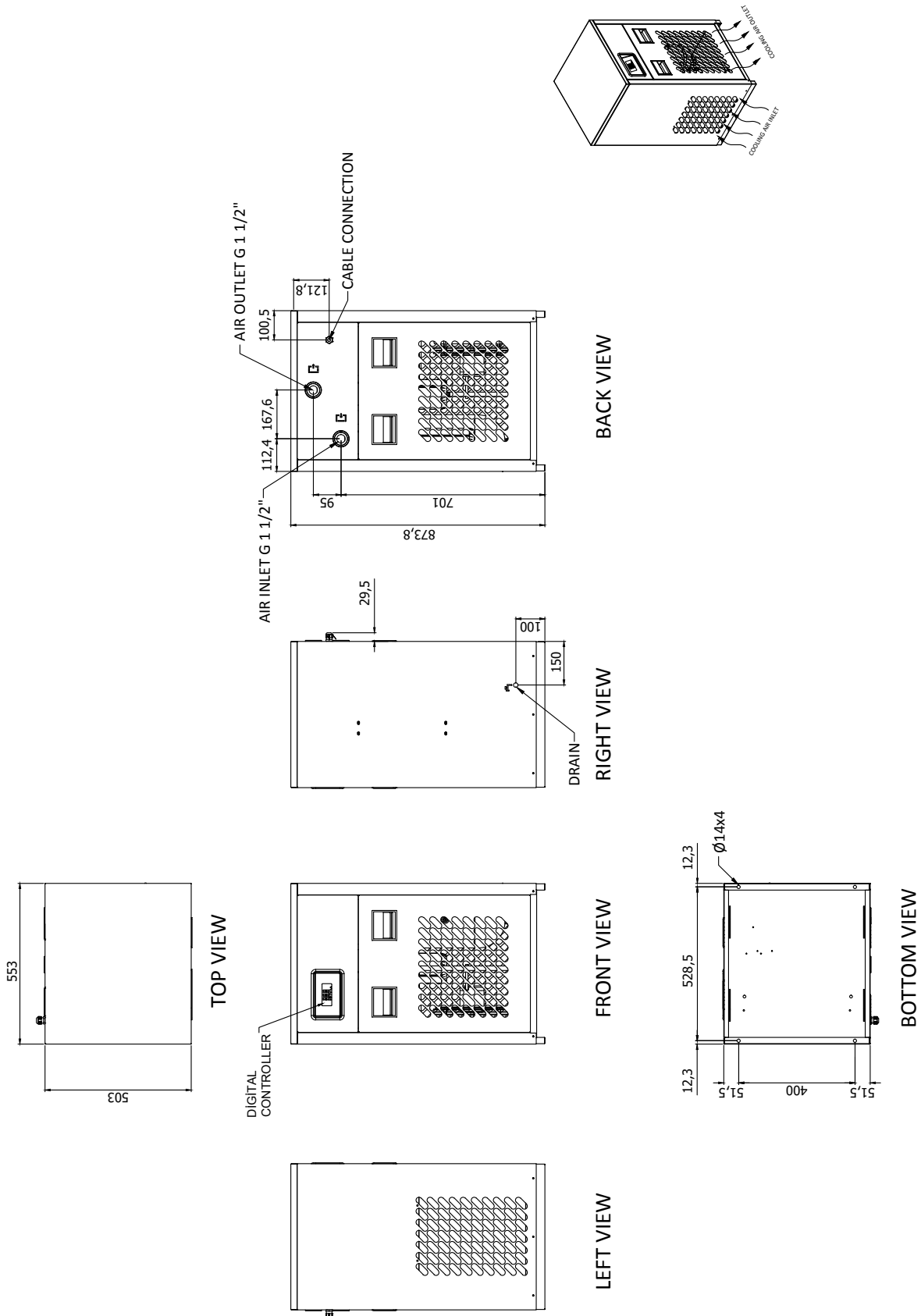


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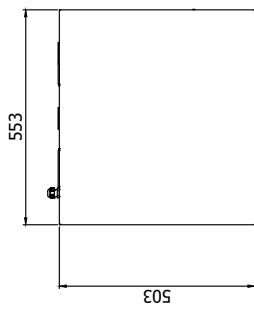


# 6.3 ID DIAGRAM DRAWINGS IS 70

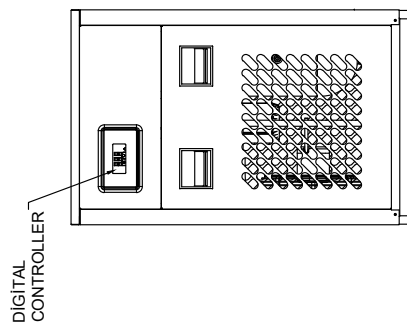




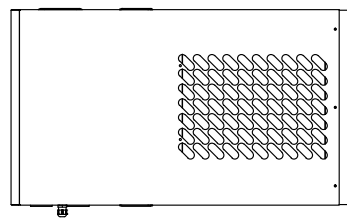
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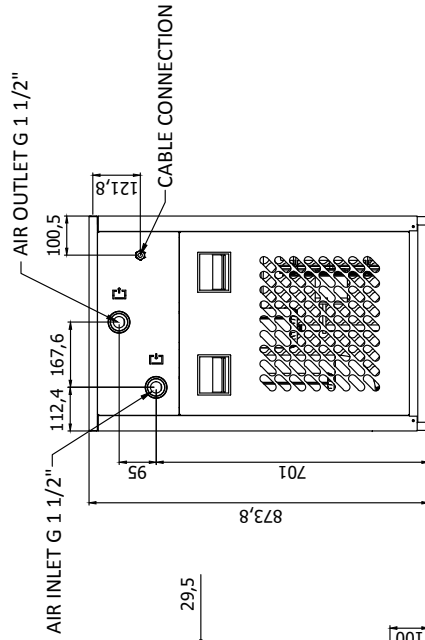
TOP VIEW



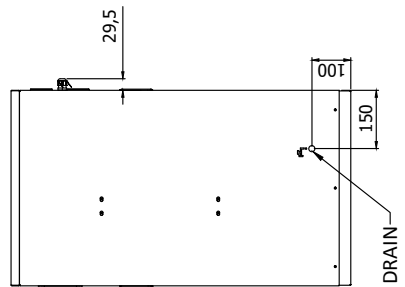
FRONT VIEW



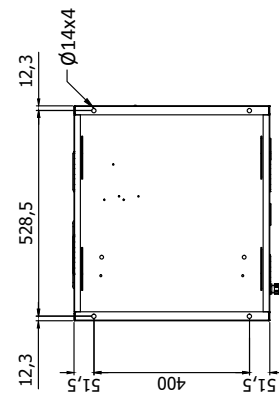
LEFT VIEW



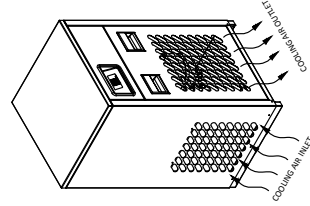
BACK VIEW



RIGHT VIEW

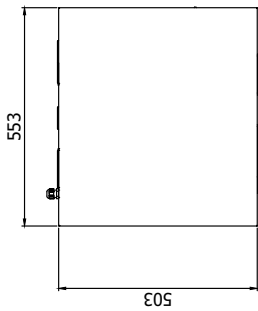


BOTTOM VIEW

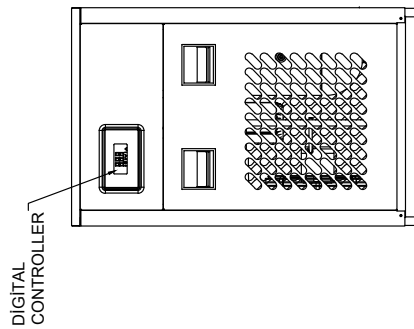




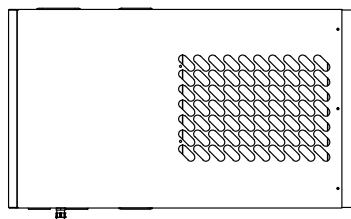
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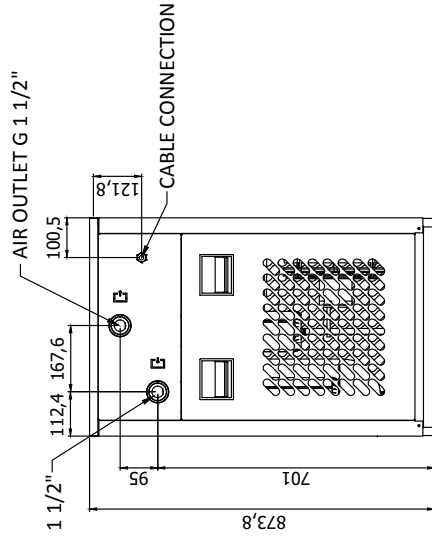
TOP VIEW



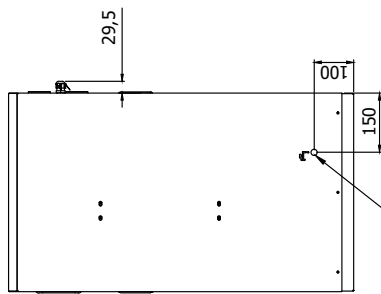
FRONT VIEW



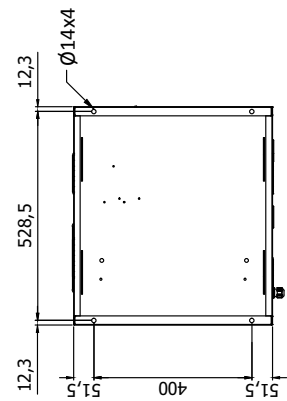
LEFT VIEW



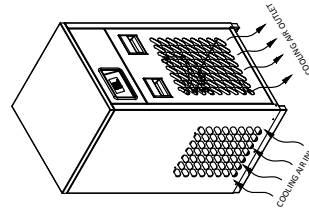
BACK VIEW



RIGHT VIEW

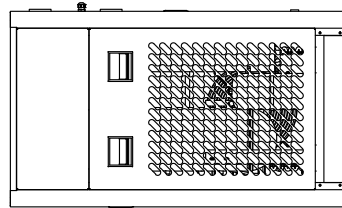
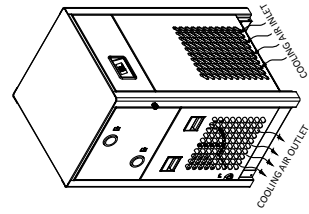


BOTTOM VIEW

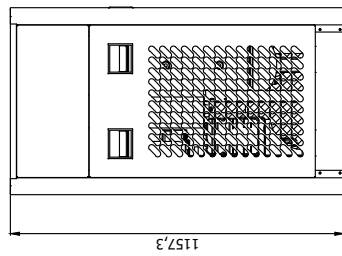




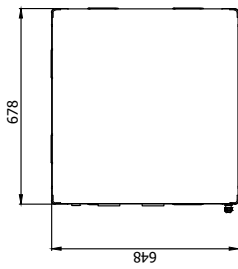
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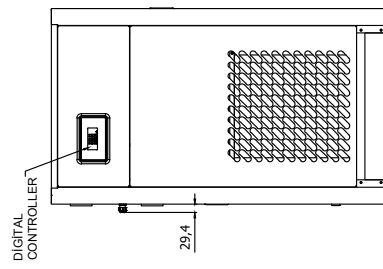
BACK VIEW



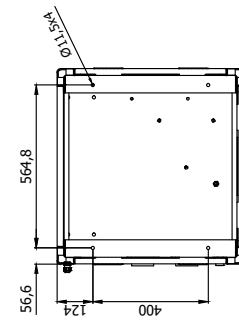
RIGHT VIEW



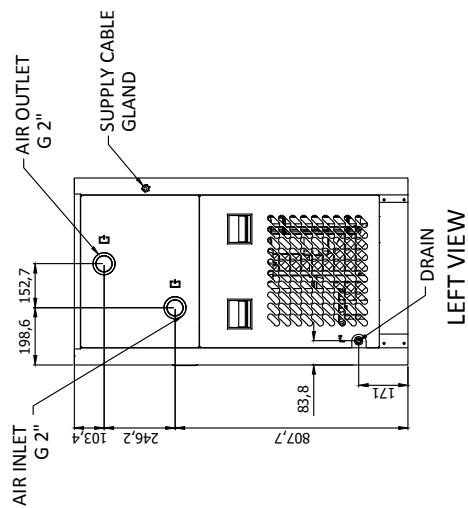
TOP VIEW



FRONT VIEW



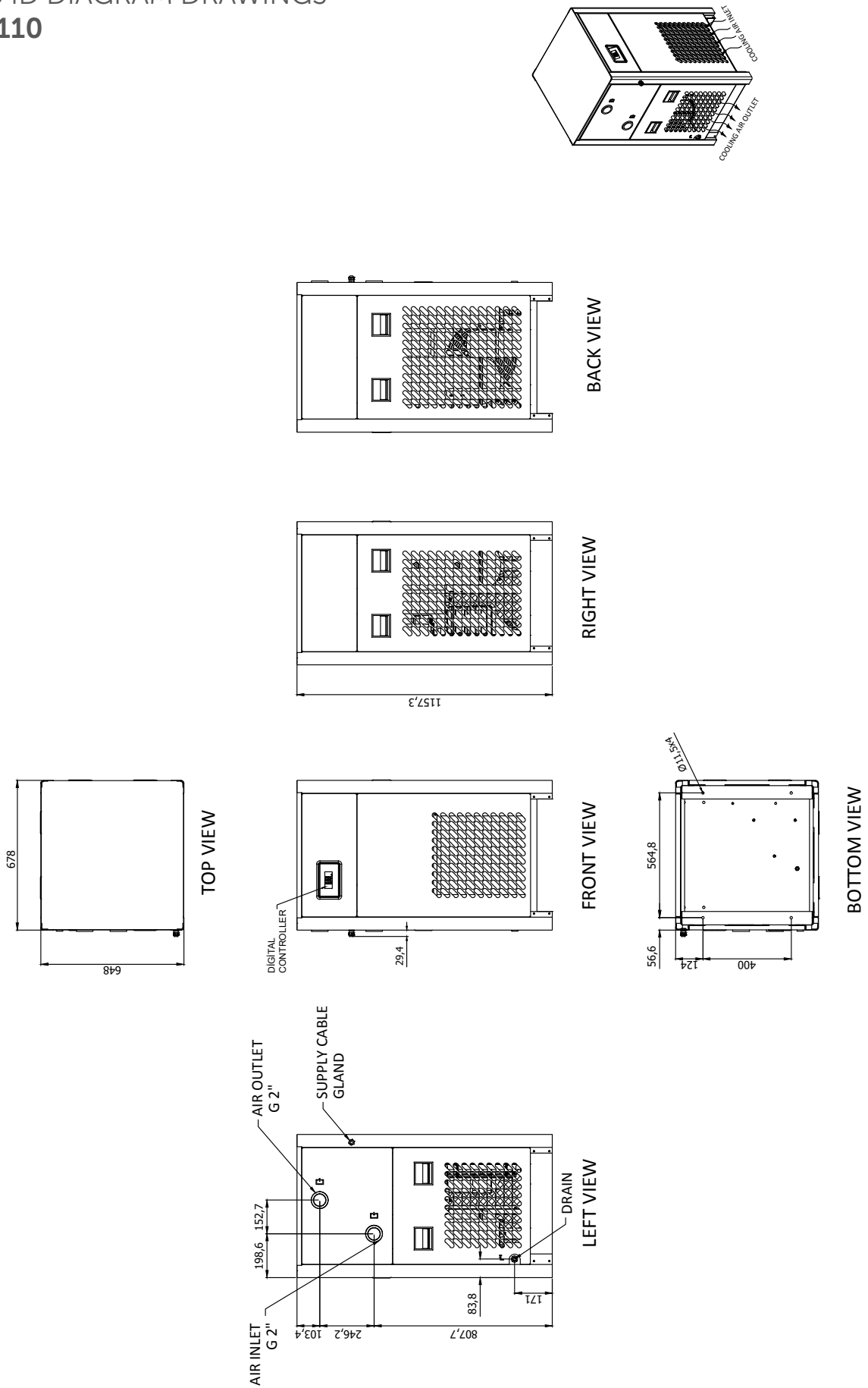
BOTTOM VIEW



LEFT VIEW

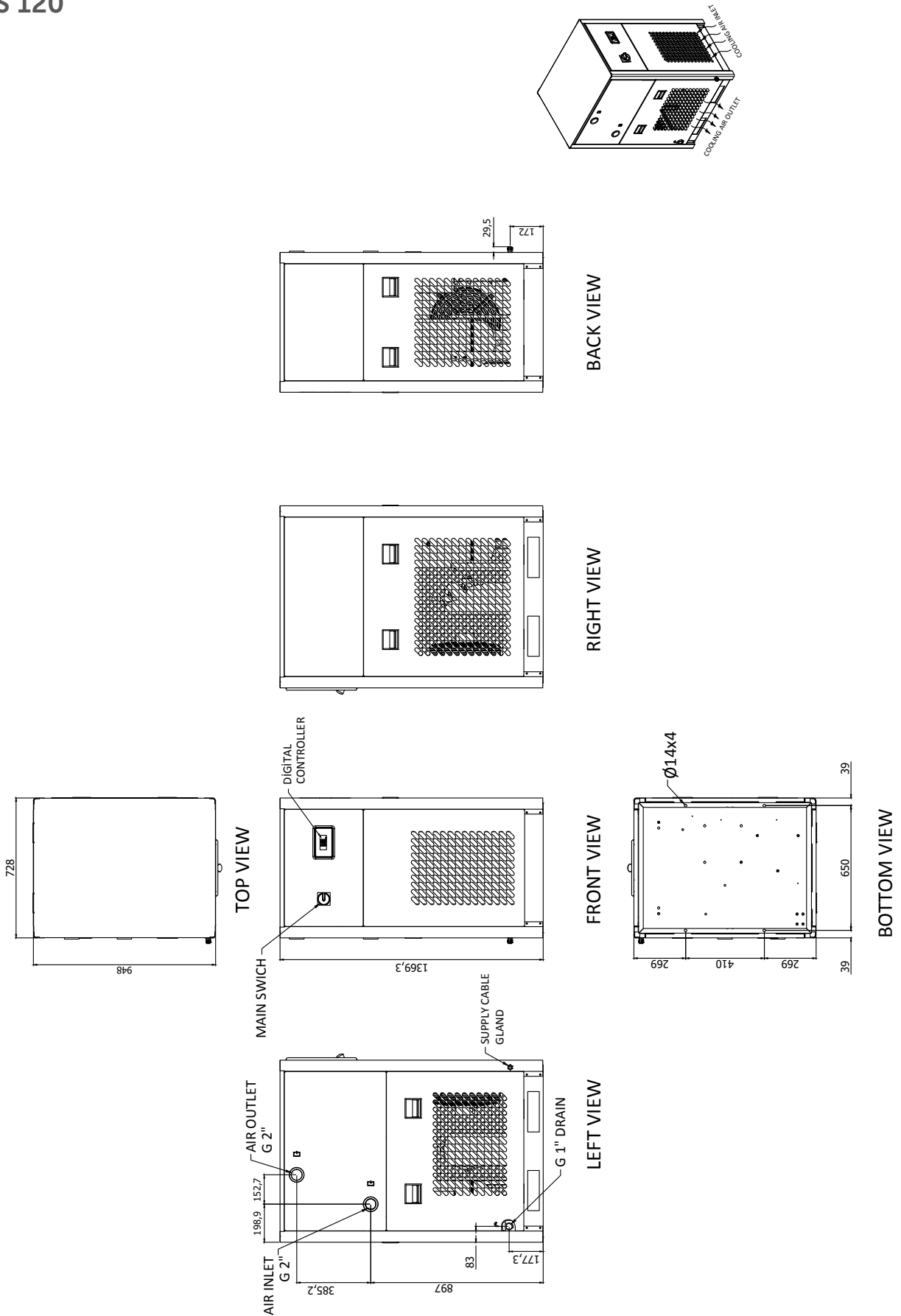


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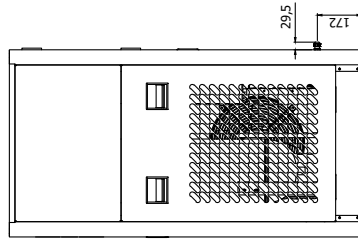
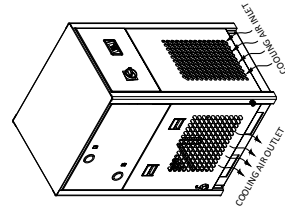


# 6.3 ID DIAGRAM DRAWINGS IS 120

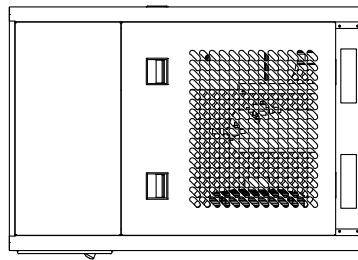




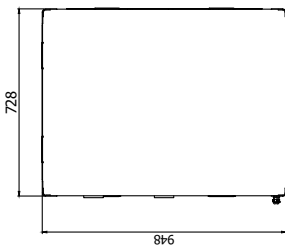
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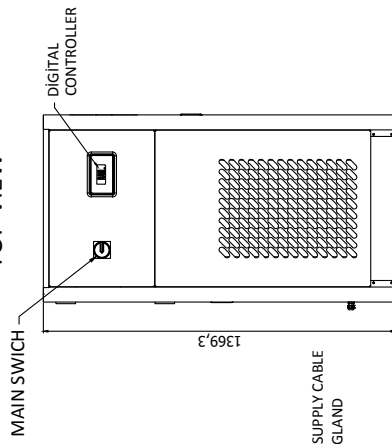
BACK VIEW



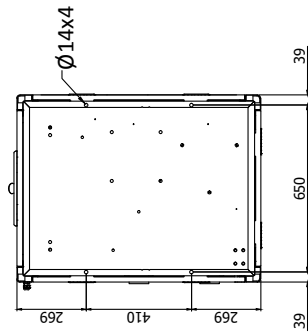
RIGHT VIEW



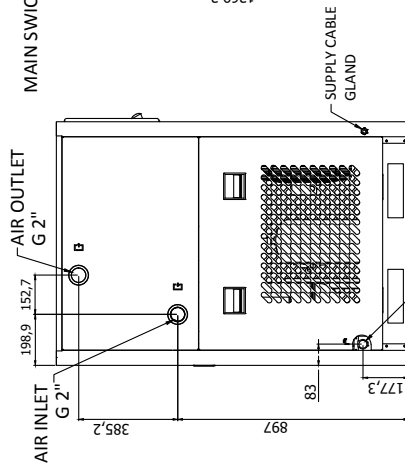
TOP VIEW



FRONT VIEW



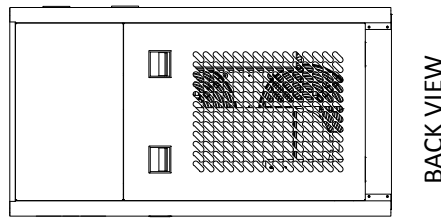
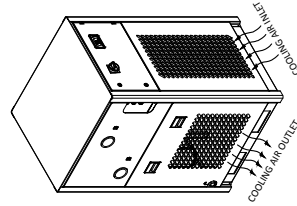
BOTTOM VIEW



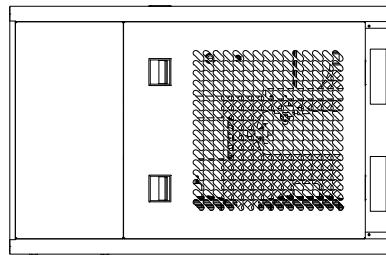
LEFT VIEW



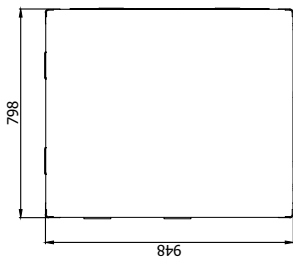
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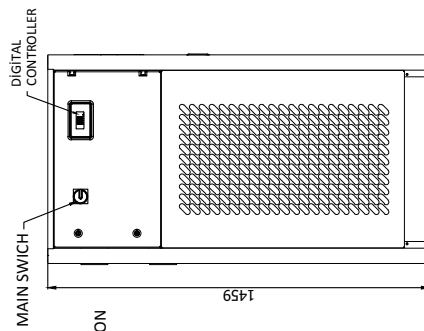
BACK VIEW



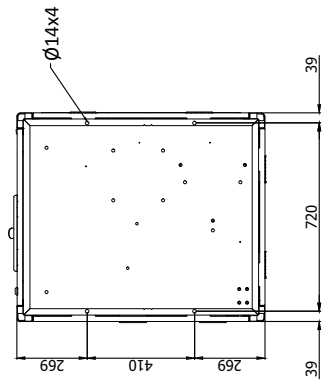
RIGHT VIEW



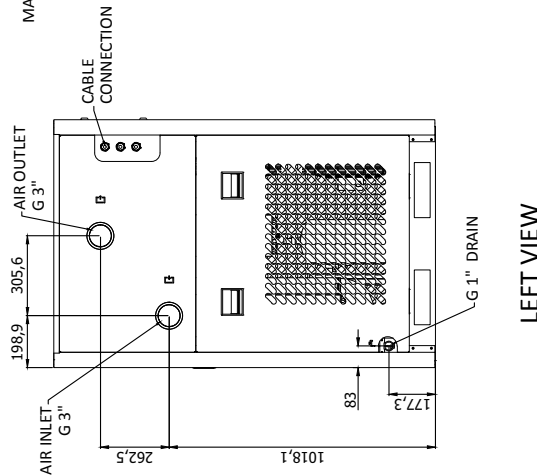
TOP VIEW



FRONT VIEW



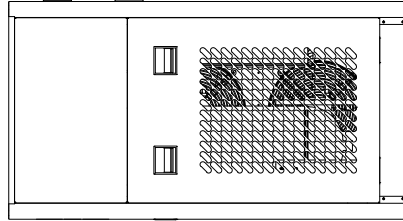
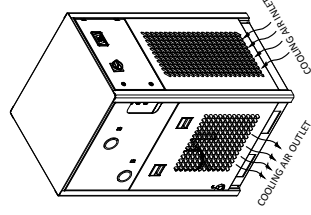
BOTTOM VIEW



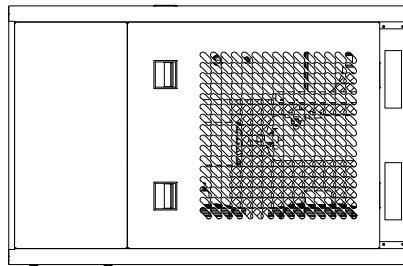
LEFT VIEW



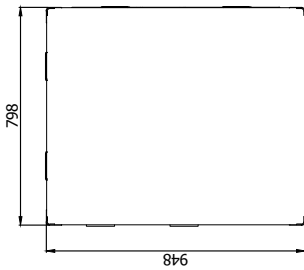
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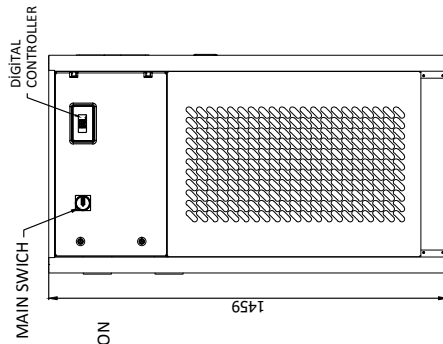
BACK VIEW



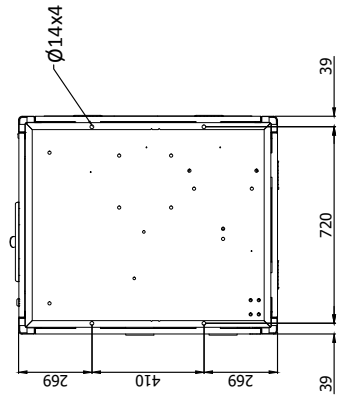
RIGHT VIEW



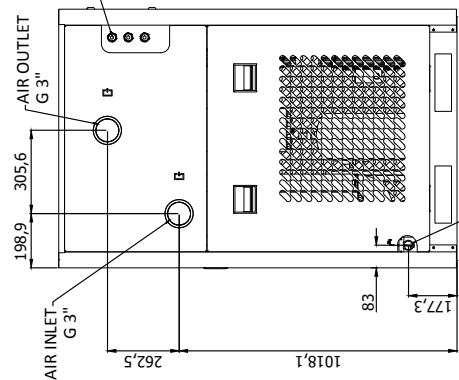
TOP VIEW



FRONT VIEW



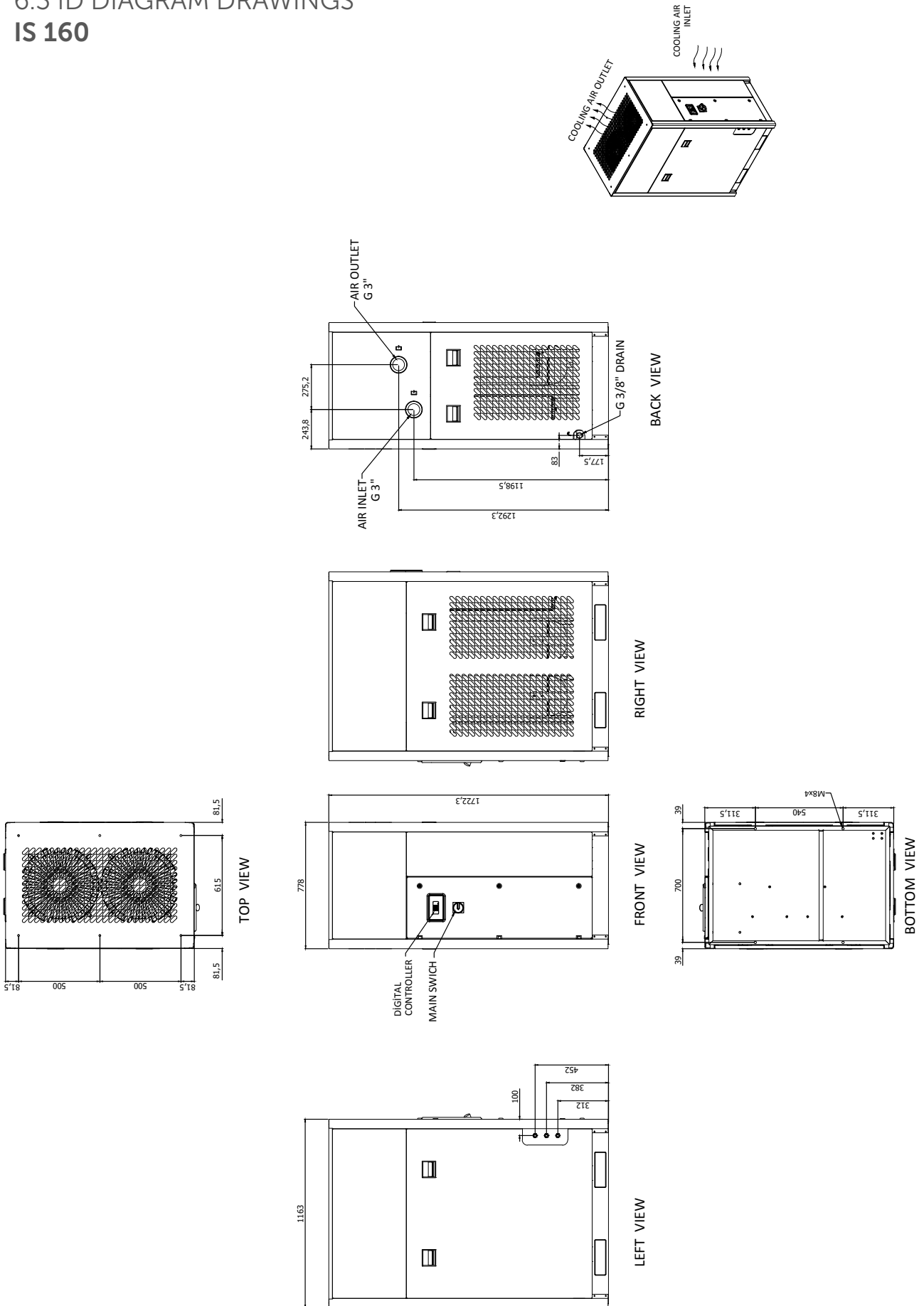
BOTTOM VIEW



LEFT VIEW

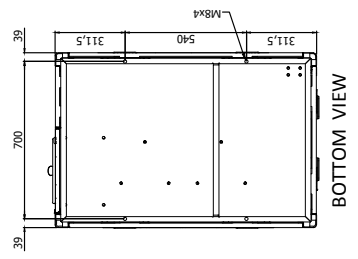
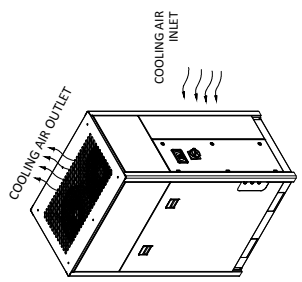
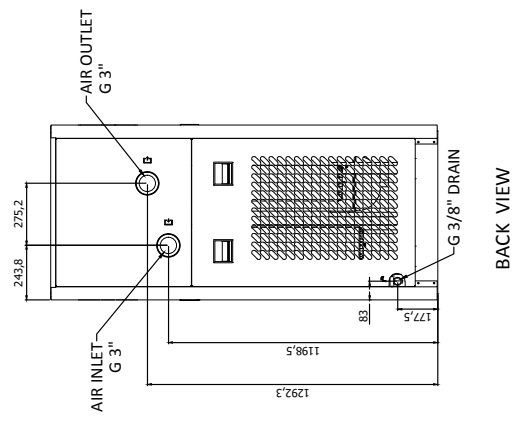
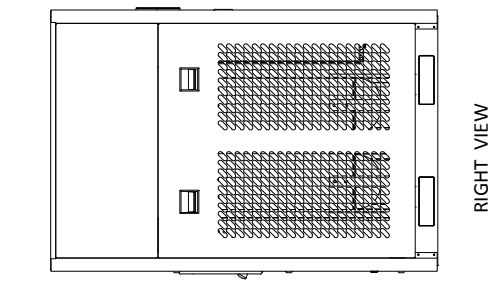
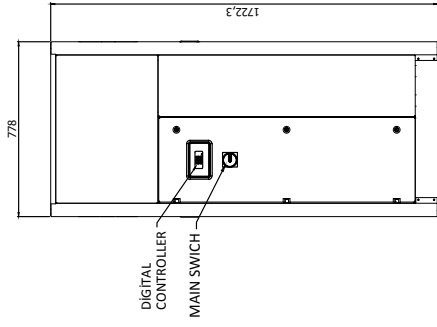
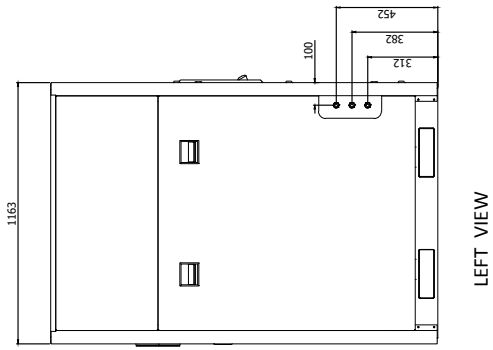
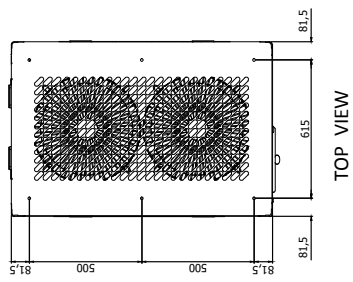


# 6.3 ID DIAGRAM DRAWINGS IS 160





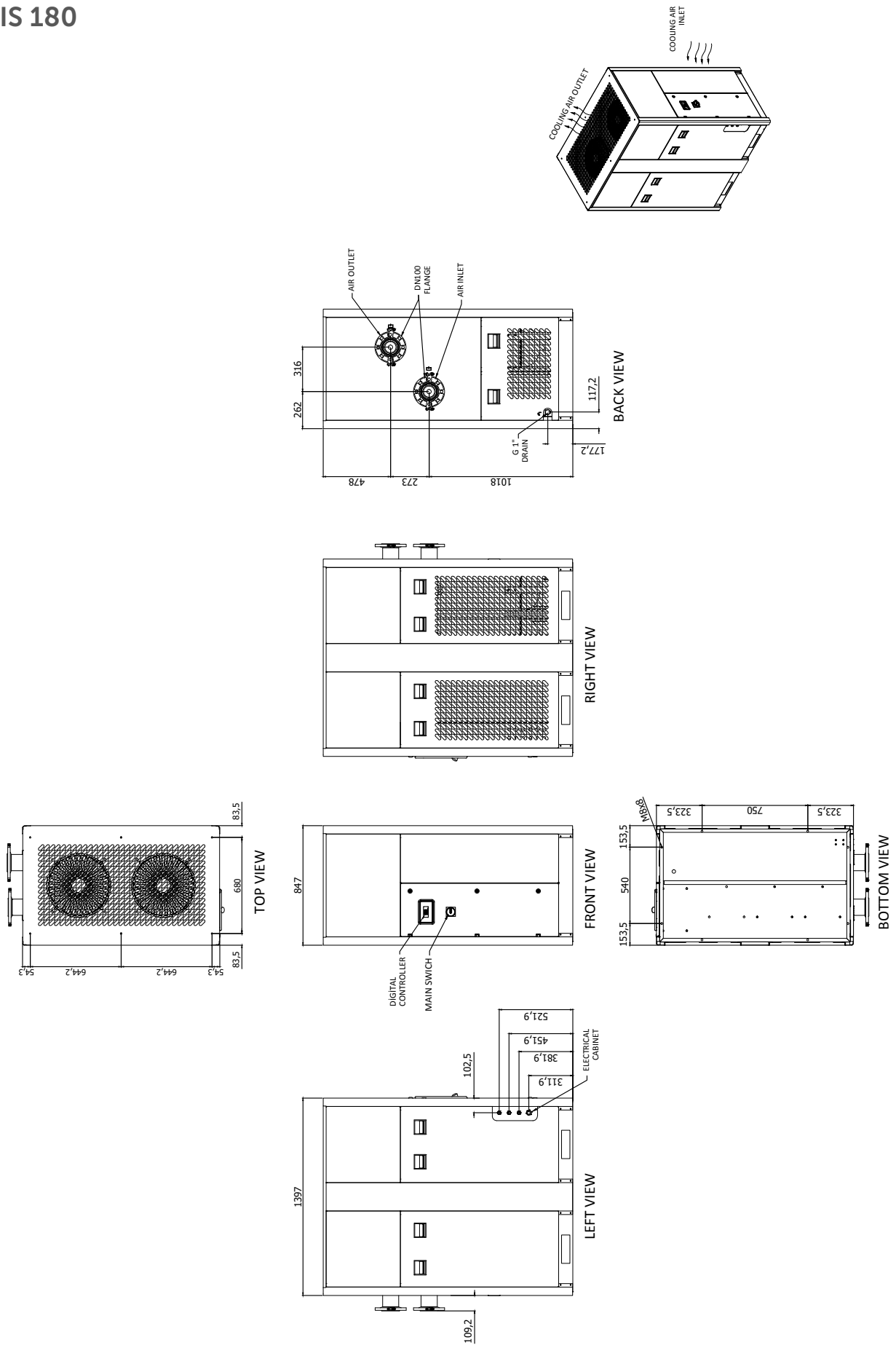
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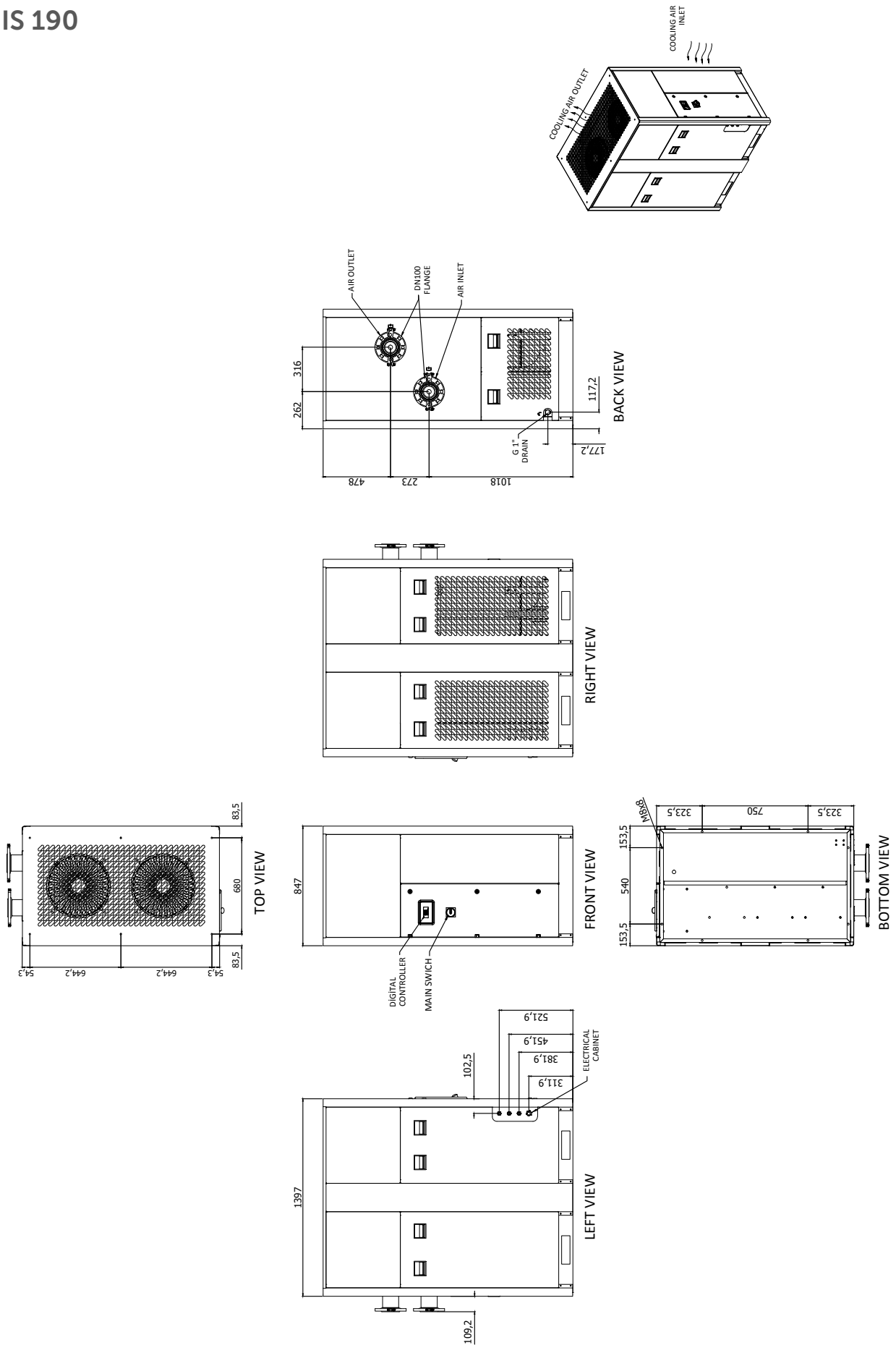


# 6.3 ID DIAGRAM DRAWINGS IS 180



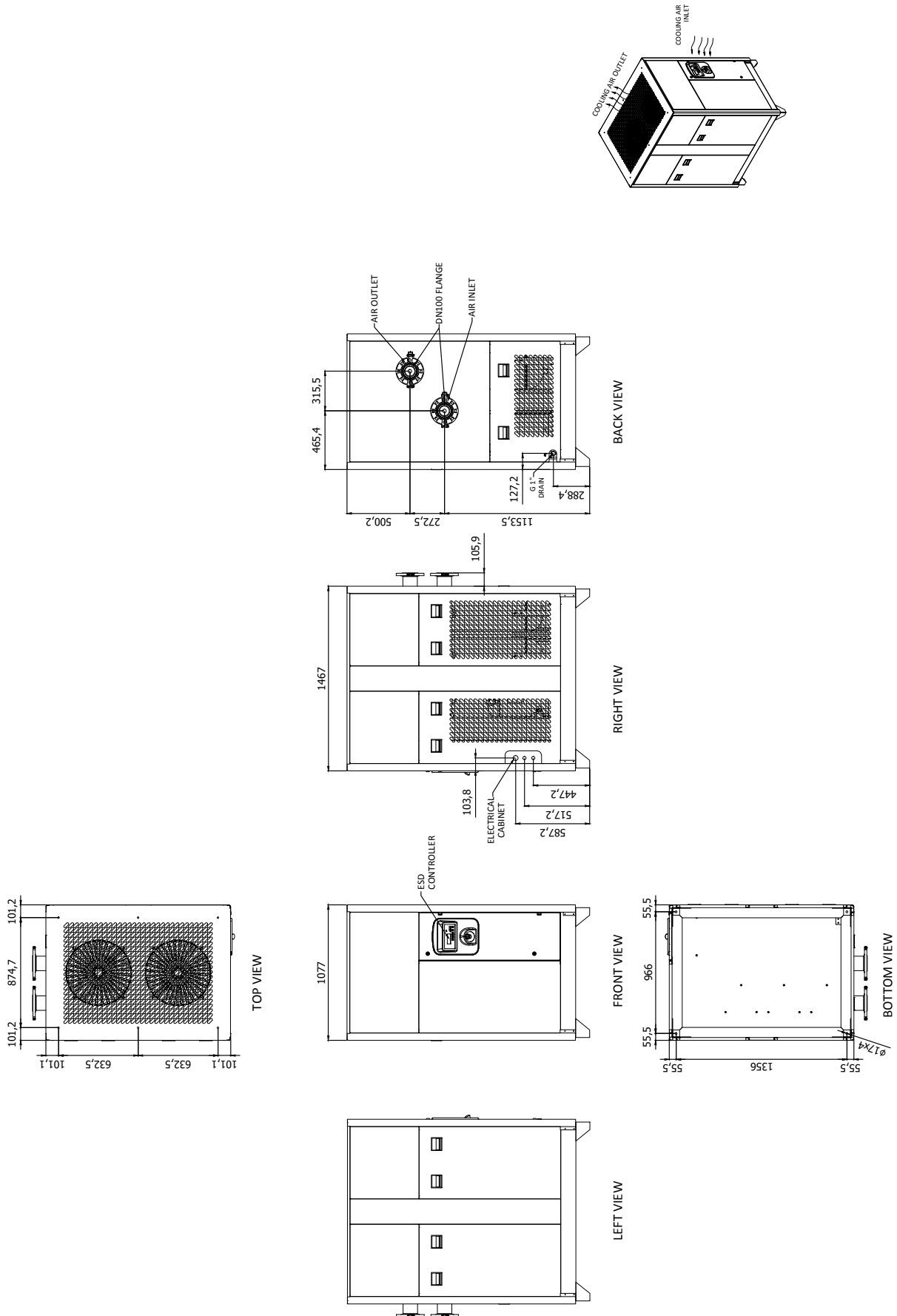


# 6.3 ID DIAGRAM DRAWINGS IS 190



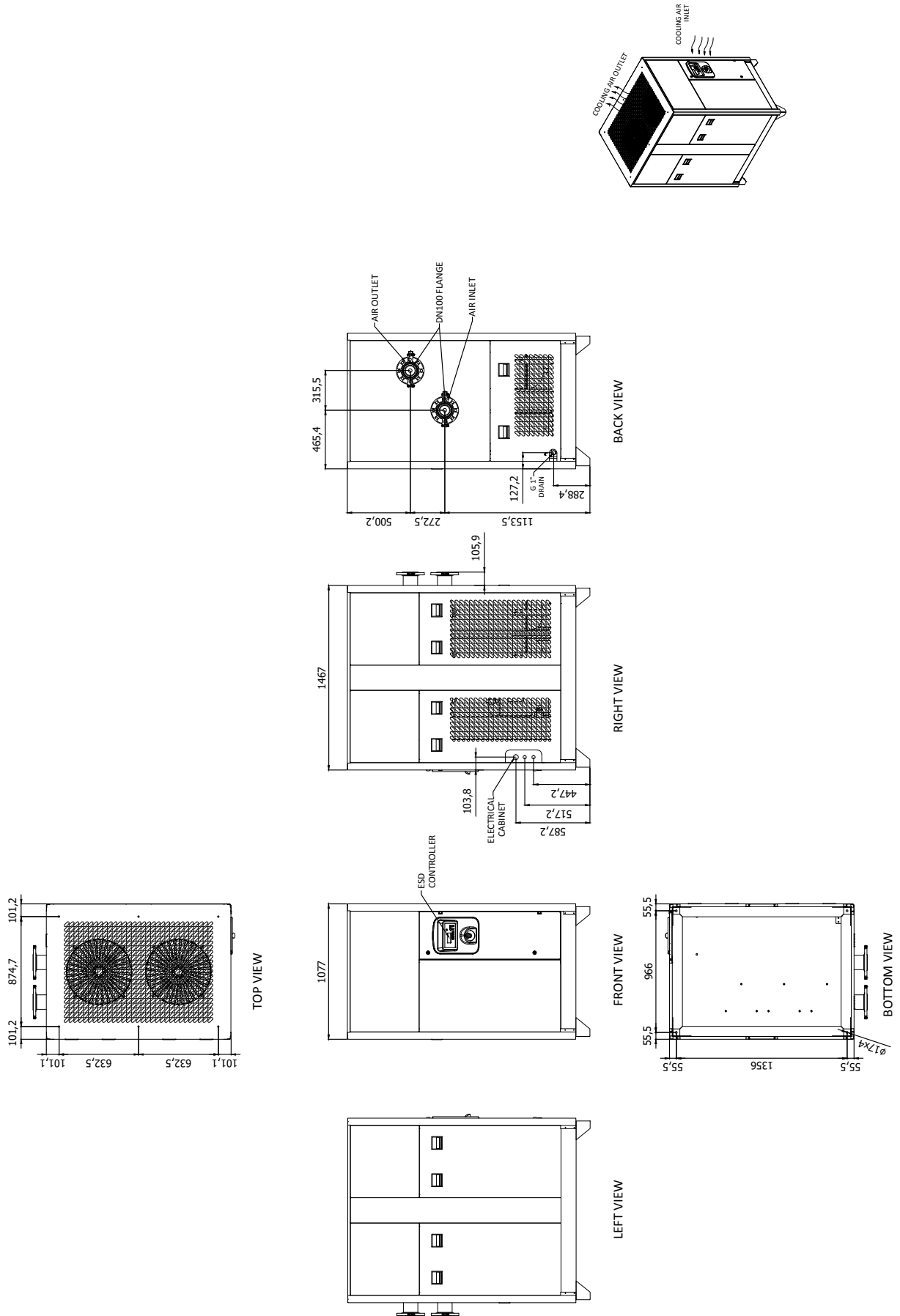


# 6.3 ID DIAGRAM DRAWINGS IS 200



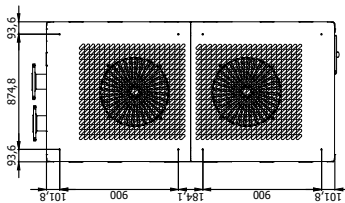


# 6.3 ID DIAGRAM DRAWINGS IS 210

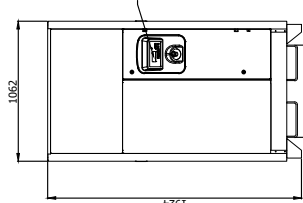




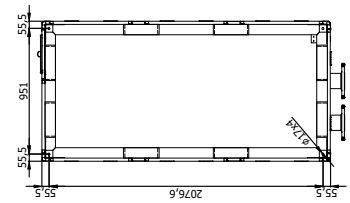
# 6.3 ID DIAGRAM DRAWINGS IS 220



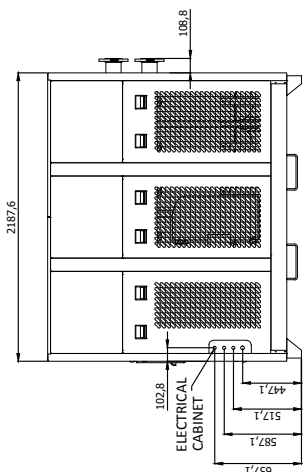
TOP VIEW



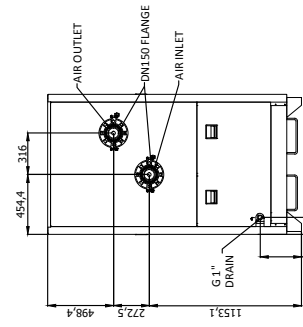
FRONT VIEW



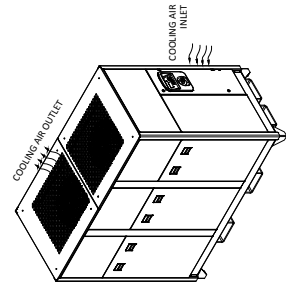
BOTTOM VIEW



RIGHT VIEW

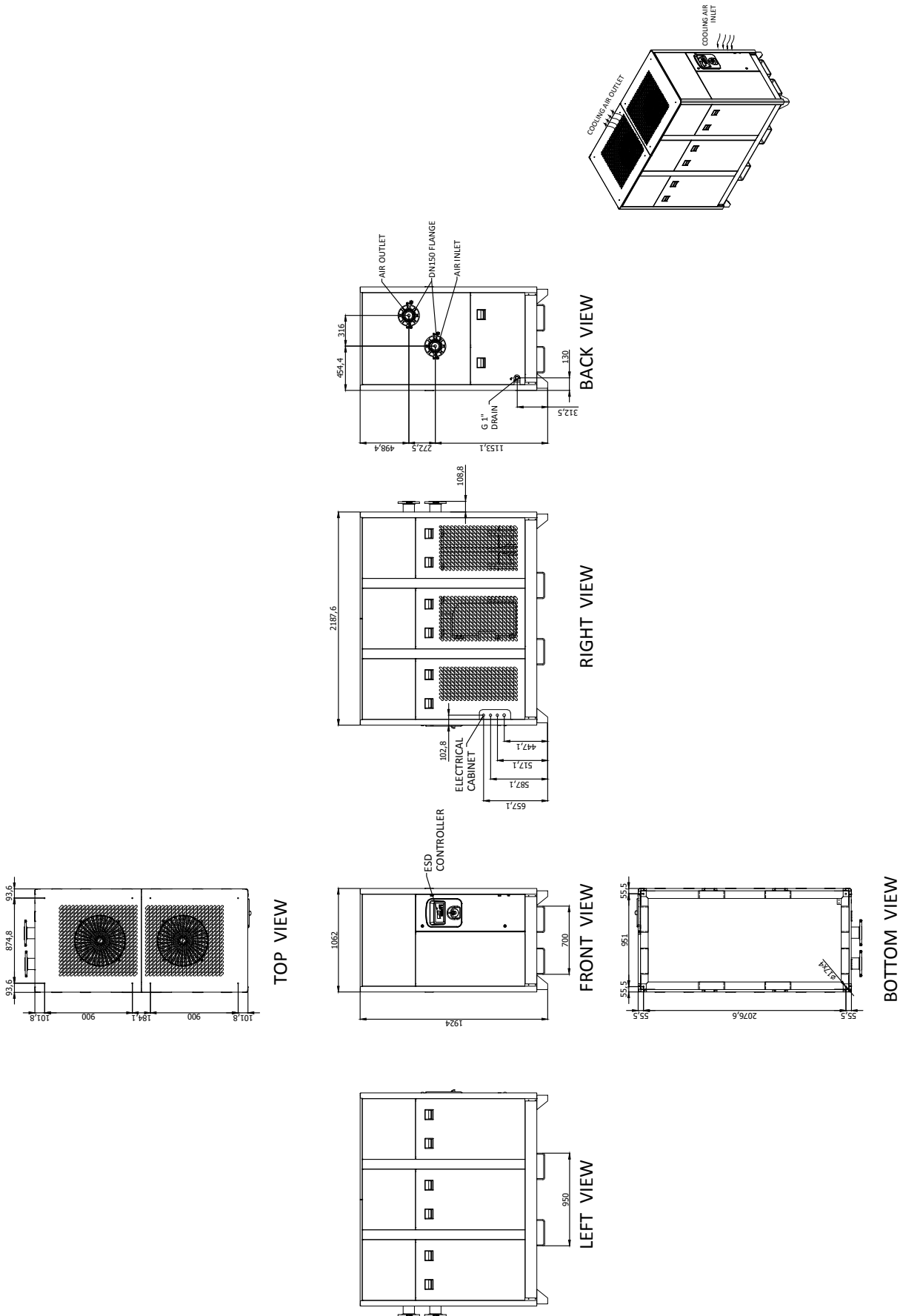


BACK VIEW



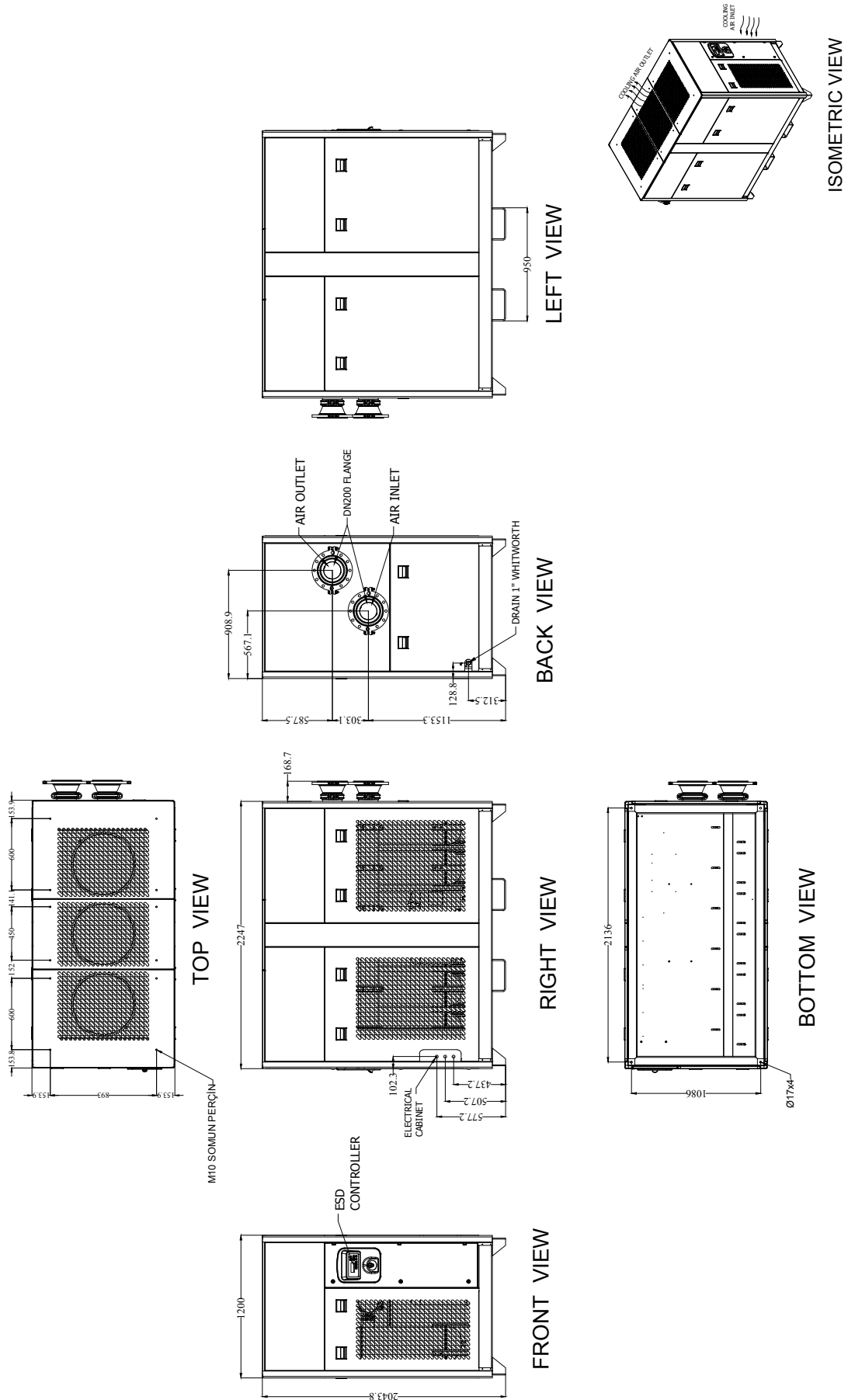


# 6.3 ID DIAGRAM DRAWINGS IS 230



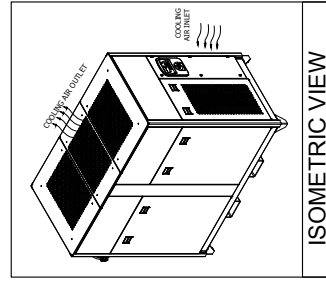
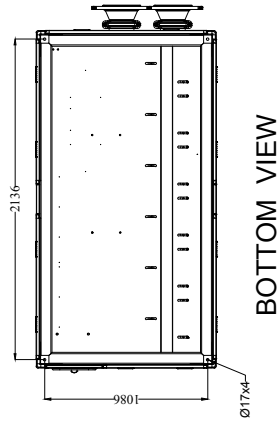
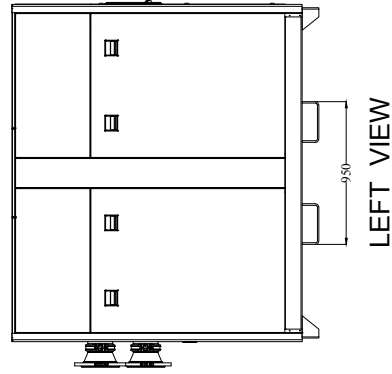
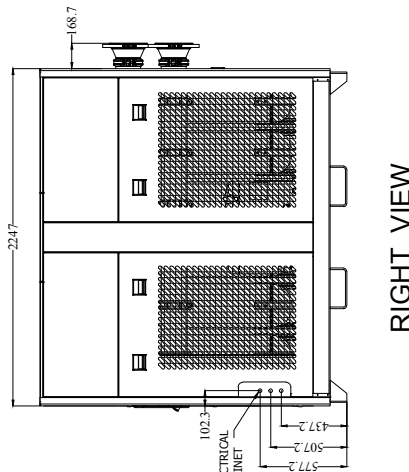
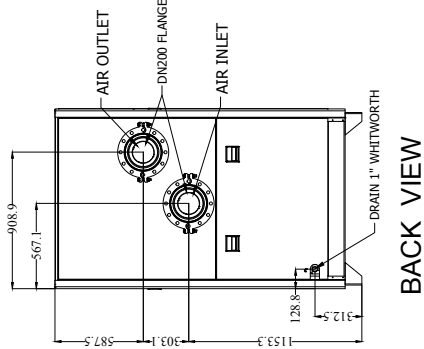
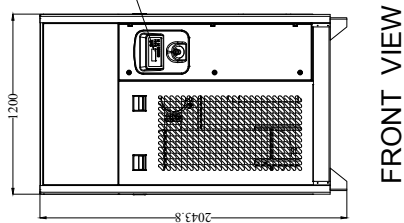
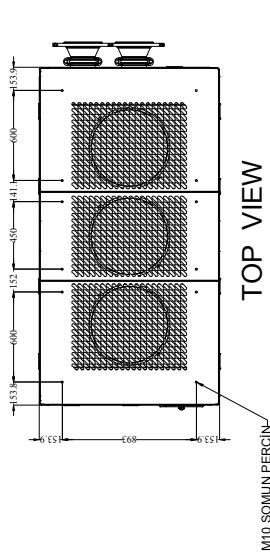


# 6.3 ID DIAGRAM DRAWINGS IS 240



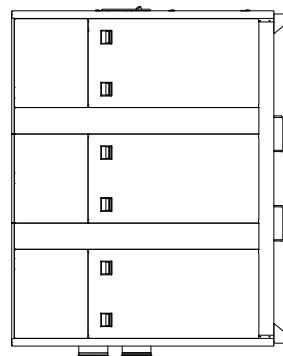
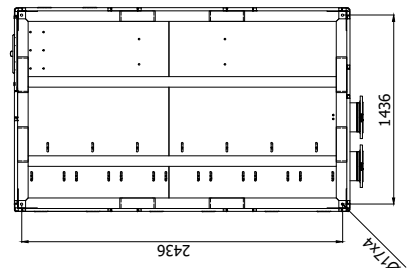
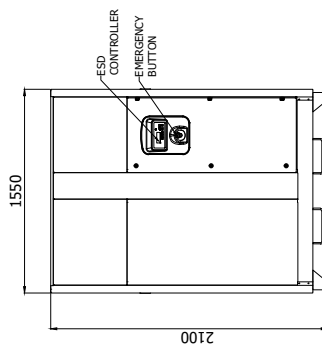
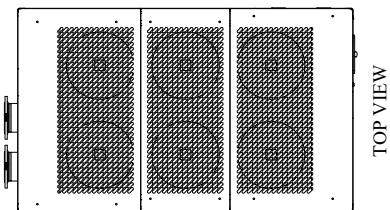
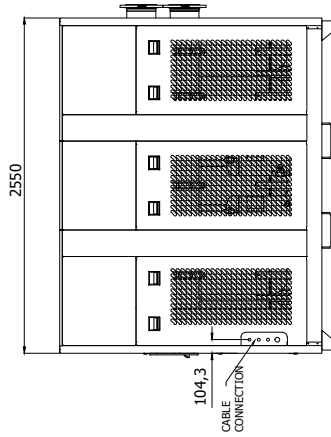
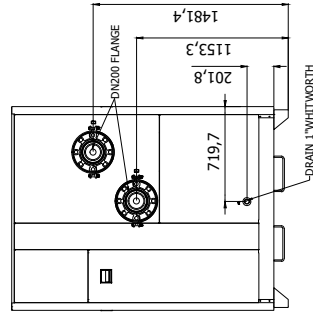
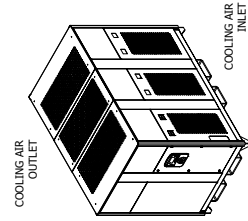


# 6.3 ID DIAGRAM DRAWINGS IS 250





# 6.3 ID DIAGRAM DRAWINGS IS 260





## 7.GENERAL ARRANGEMENTS

Model	Filter Quantity and Type	Element Type	Control Type	Length (mm)	Width (mm)	Height (mm)	Weight (kg)
IS 10	1*GKO45M X + 1*GKO45M Y	MKO 45 KIT	DigiPro	423	393	567	32
IS 20	1*GKO45M X + 1*GKO45M Y	MKO 45 KIT	DigiPro	423	393	567	32
IS 30	1*GKO45M X + 1*GKO45M Y	MKO 45 KIT	DigiPro	423	393	567	32
IS 35	1*GKO70M X + 1*GKO70M Y	MKO 70 KIT	DigiPro	423	393	567	35
IS 40	1*GKO150M X + 1*GKO150M Y	MKO 150 KIT	DigiPro	473	453	832	51
IS 50	1*GKO150M X + 1*GKO150M Y	MKO 150 KIT	DigiPro	473	453	832	53
IS 60	1*GKO150M X + 1*GKO150M Y	MKO 150 KIT	DigiPro	473	453	832	55
IS 70	1*GKO500M X + 1*GKO500M Y	MKO 500 KIT	DigiPro	553	503	874	78
IS 80	1*GKO500M X + 1*GKO500M Y	MKO 500 KIT	DigiPro	553	503	874	83
IS 90	1*GKO500M X + 1*GKO500M Y	MKO 500 KIT	DigiPro	553	503	874	86
IS 100	1*GKO851M X + 1*GKO851M Y	MKO 851 KIT	DigiPro	678	648	1157	160
IS 110	1*GKO1210M X + 1*GKO1210M Y	MKO 1210 KIT	DigiPro	678	648	1157	165
IS 120	1*GKO1210M X + 1*GKO1210M Y	MKO 1210 KIT	DigiPro	948	728	1370	220
IS 130	1*GKO1210M X + 1*GKO1210M Y	MKO 1210 KIT	DigiPro	948	728	1370	230
IS 140	1*GKO1820M X + 1*GKO1820M Y	MKO 1820 KIT	DigiPro	948	798	1460	270
IS 150	1*GKO1820M X + 1*GKO1820M Y	MKO 1820 KIT	DigiPro	948	798	1460	285
IS 160	1*GKO2700M X + 1*GKO2700M Y	MKO 2700 KIT	DigiPro	1163	778	1725	392
IS 170	1*GKO2700M X + 1*GKO2700M Y	MKO 2700 KIT	DigiPro	1163	778	1725	410
IS 180	Not Included	Not Included	DigiPro	1397	847	1770	492
IS 190	Not Included	Not Included	DigiPro	1397	847	1770	520
IS 200	Not Included	Not Included	ESD-3	1467	1077	1930	696
IS 210	Not Included	Not Included	ESD-3	1467	1077	1930	718
IS 220	Not Included	Not Included	ESD-3	2188	1062	1925	900
IS 230	Not Included	Not Included	ESD-3	2188	1062	1925	925
IS 240	Not Included	Not Included	ESD-3	2697	897	1975	975
IS 250	Not Included	Not Included	ESD-3	2697	897	1975	1100
IS 260	Not Included	Not Included	ESD-3	2550	1550	2100	1400

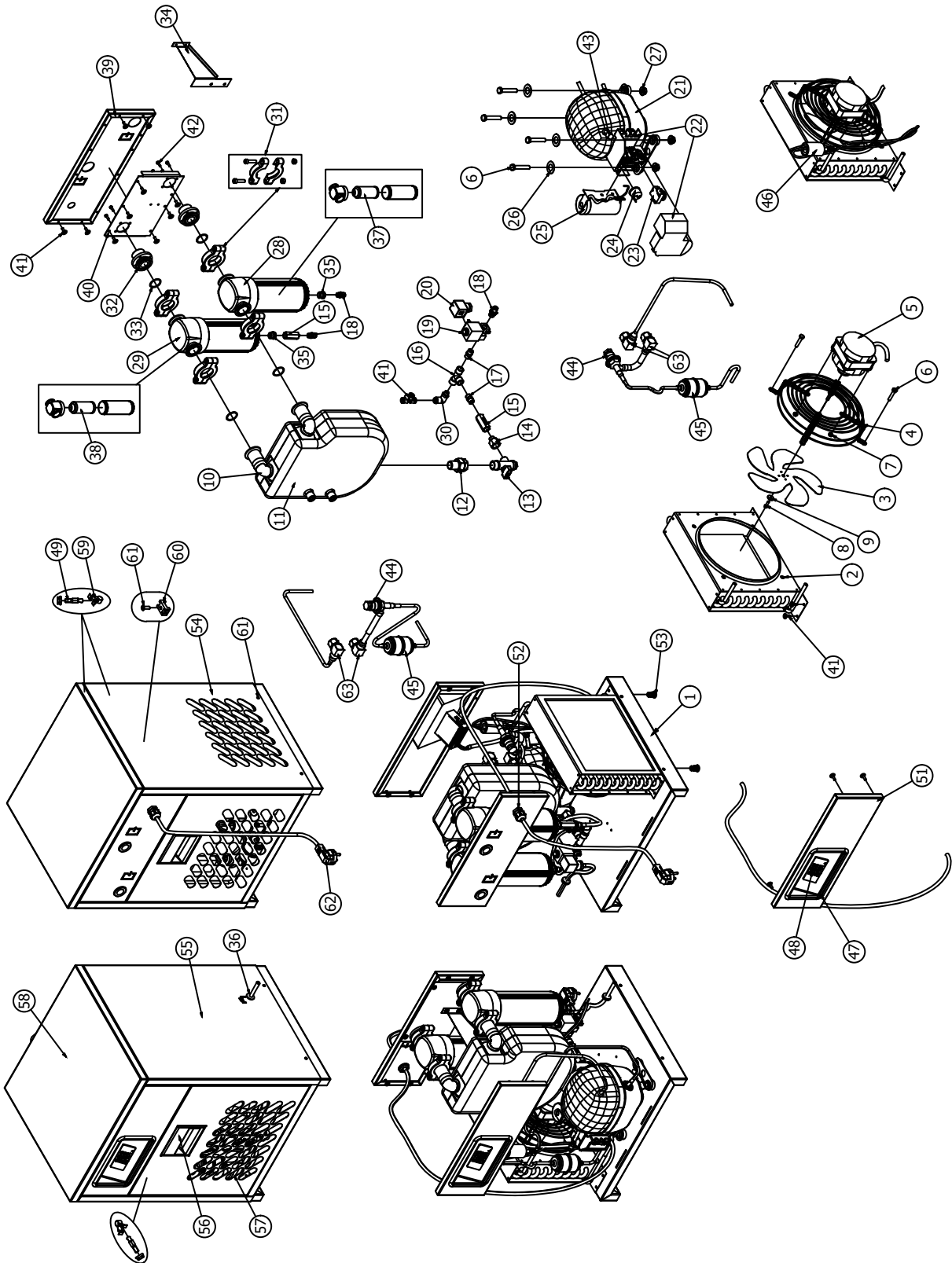
ALL MODELS	Superheat of thermostatic expansion valve	Evaporating pressure	Fan pressure switch	Security high pressure switch	Security low pressure switch	Drain timer	Refrigerant temperature switch	Water flow valve (if water condenser)
	5°C - 10°C	2.05 bar	9 - 12 bar	25 bar	1.6 bar	5 min. -5sec.	45°C	11 bar

# 8. IS EXPLODED DIAGRAMS & SPARE PART LISTS



# 8.1 - ED & Spare Part List

## IS 10





8.1 - ED & Spare Part List

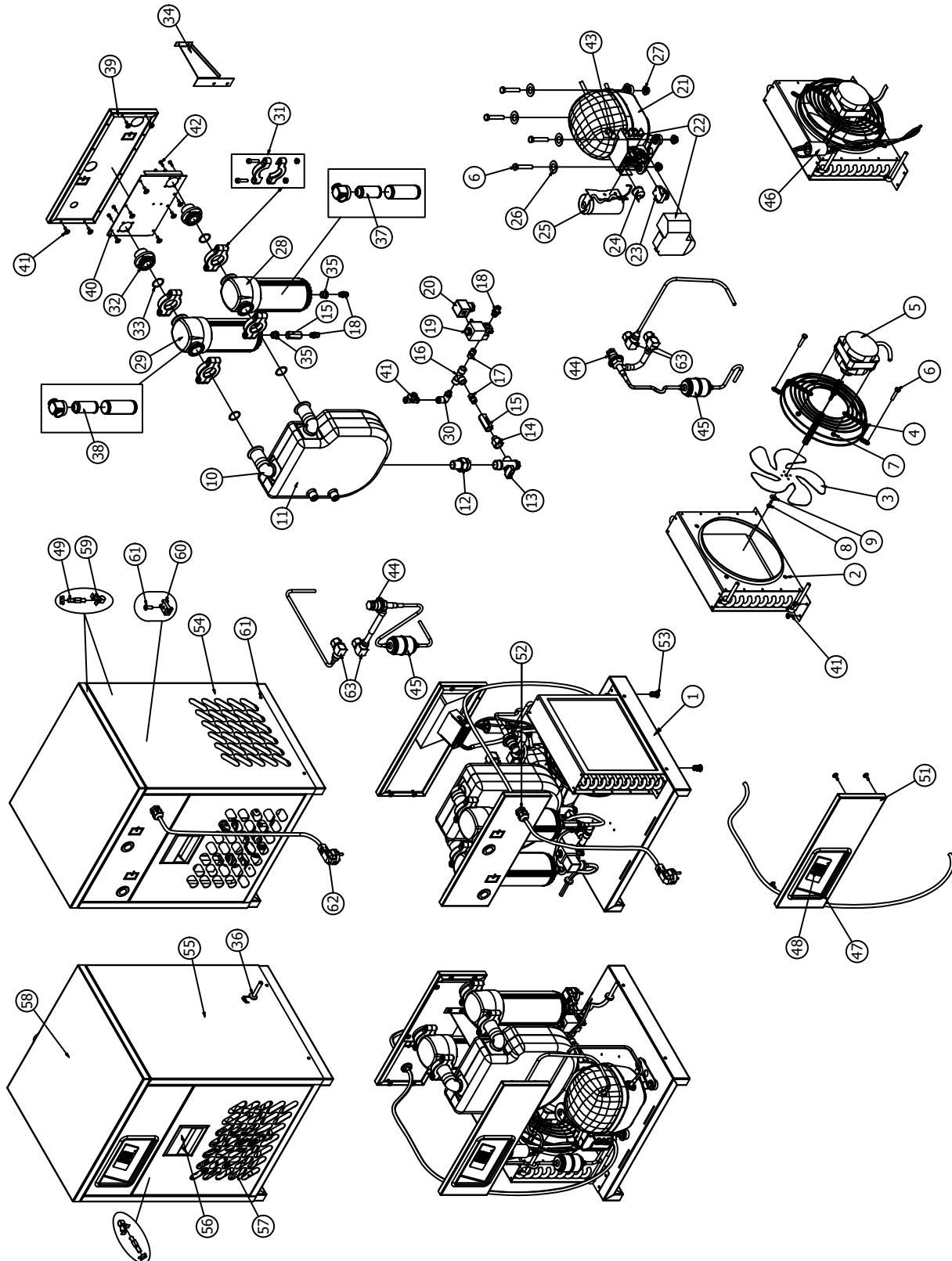
**IS 10**

63	MK60E-RTA2		ROTOLOCK ADAPTOR2		2
62	MK130E-PWC		POWER CABLE		1
61	MK90E-RVT3,5		RIVET Ø3,5		25
60	MK90E-CSP		CABLE STRAP		3
59	M-FAS-6000		CABINET FASTENER		8
58	MK30E-CAT		CABINET TOP		1
57	MK30E-CSG		CABINET STRIPPING		2
56	M-CHN-6000		CABINET HANDLE (NEW)		2
55	MK30E-CBR		CABINET RIGHT		1
54	MK30E-CLT		CABINET LEFT		1
53	MK260E-RNT8		RIVET NUT M8		4
52	MK260E-CG11		CABLE GLAND PG11		1
51	MK30E-COP		CONTROLLER PANEL		1
50	N/A		N/A		-
49	M-STU-6000		CABINET STUD AND NUT		8
48	SEE.REF TABLE		DIGITAL CONTROLLER		1
47	MK260E-PCP		PLASTIC CONTROL PANEL		1
46	M-FNS-0200		FAN ON/OFF SWITCH		1
45	M-DRI-0200		DRYER-DEHYDRATOR		1
44	M-BYV-0100		EXPANSION VALVE		1
43	MK260E-STC		SETTING THE CONNECTION		1
42	MK60E-BLT48		BOLT M4x8		8
41	MK35E-FTT-T		TEE FITTING		1
40	MK30E-CAI		CABINET INSIDE		1
39	MK30E-CRT		CABINET REAR TOP		1
38	MK30E-FIE-Y		COMPRESSED AIR FILTER ELEMENT (Y)		1
37	MK30E-FIE-X		COMPRESSED AIR FILTER ELEMENT (X)		1
36	MK90E-GFD		GASKET FOR DRAIN		1
35	MK260E-RDC		REDUCTION 1 / 2" - 1 / 4"		1
34	MK30E-EXS		HEAT EXCHANGER SUPPORT STEEL		1
33	MK30E-ORG		ORING		4
32	MK30E-CNK		CONNECTION CIT		2
31	MK30E-CPG		COUPLING CLAMP		4
30	MK170E-EWF		90* 1 / 4" - 6mm ELBOW		1
29	MK30E-ELK-X		COMPRESSED AIR FILTER KIT (X)		1
28	MK30E-ELK-Y		COMPRESSED AIR FILTER KIT (Y)		1
27	MK30E-NT6		NUT M6		4
26	MK30E-WSR18		WASHER 18x7x1mm		4
25	SEE.REF TABLE		COMPRESSOR START CAPACITOR		1
24	SEE.REF TABLE		COMPRESSOR OVERLOAD PROTECTOR		1
23	SEE.REF TABLE		COMPRESSOR START RELAY		1
22	MK40E-CEC		COMPRESSOR ELECTRICAL BOX COVER		1
21	SEE.REF TABLE		COMPRESSOR		1
20	MK260E-SVC		SOLENOID VALVE COIL		1
19	M-SLV-0325-230		SOLENOID VALVE		1
18	MK150E-FIT6		1 / 4" - 6mm FITTINGS		3
17	MK170E-NIP1/4		1 / 4" NIPPLE		2
16	MK170E-T1/4		1 / 4" T CONNECTOR		1
15	MK170E-CHV		CHECH VALVE		2
14	MK150E-RDC		REDUCTION 3/8" - 1/4"		1
13	M-DBV-0200		DRAIN BALL VALVE		1
12	MK260E-RCD		1/2" RECORD		1
11	MK30E-IHE		INSULATION OF HEAT EXCHANGER		1
10	MK30E-EXC		HEAT EXCHANGER		1
9	MK110E-WHR20		WASHER 20x4,3x1,5		1
8	MK110E-BLT414		BOLT M4x14mm		1
7	MK110E-NT4		NUT M4		4
6	MK260E-BLT630		BOLT M6x30mm		8
5	SEE.REF TABLE		FAN MOTOR		1
4	M-GRL-0075		FAN GRILL		1
3	M-FAN-0075		FAN GLADE		1
2	MK30E-CON		CONDANSER		1
1	MK30E-CAB		CABINET BASE		1
DWG SIZE	ITEM NO.	PART NO.	DESCRIPTION	REV	QTY
PART LIST					



# 8.1 - ED & Spare Part List

## IS 20





8.1 - ED & Spare Part List

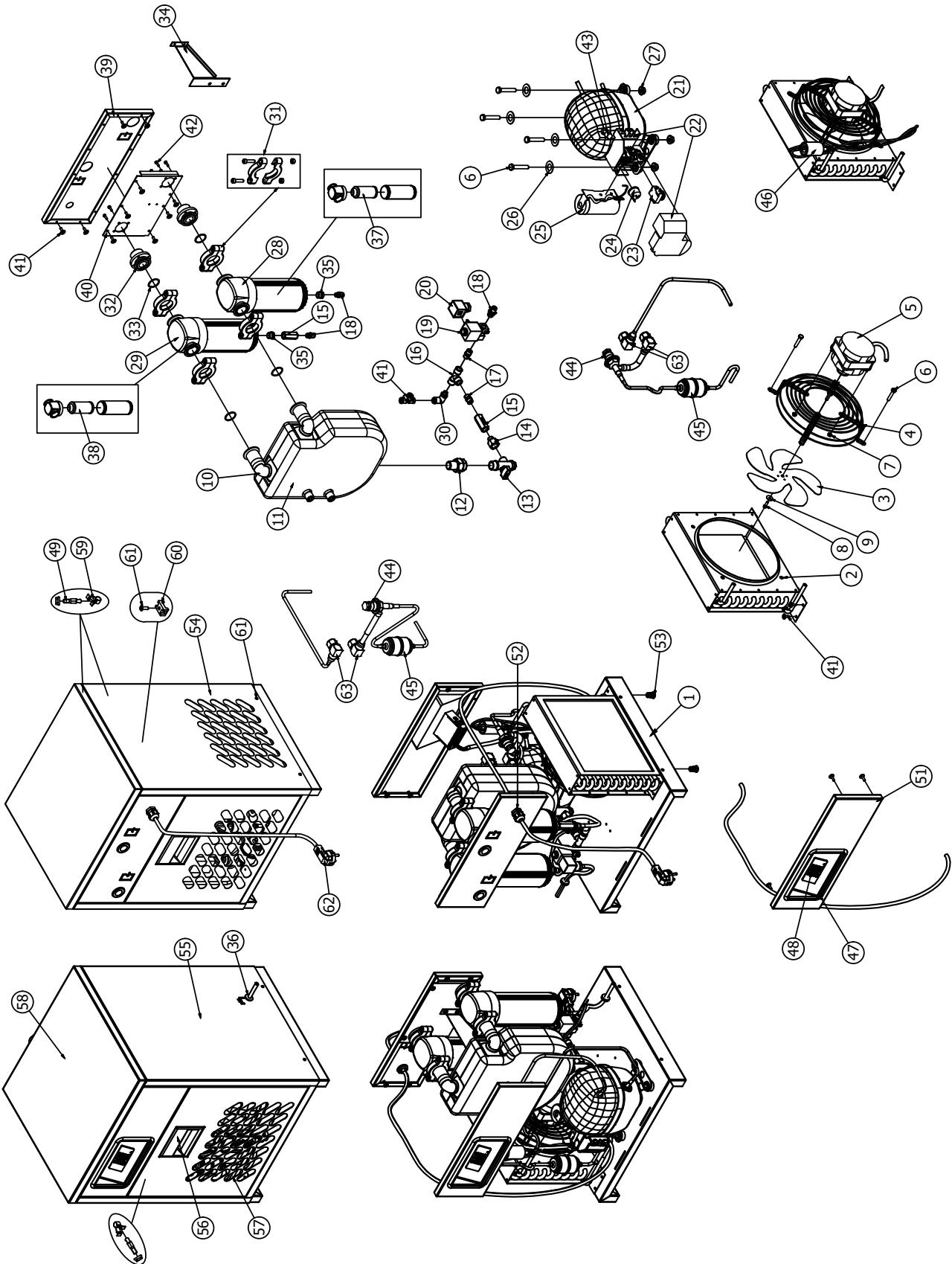
IS 20

63	MK60E-RTA2		ROTOLOCK ADAPTOR2		2
62	MK130E-PWC		POWER CABLE		1
61	MK90E-RVT3,5		RIVET Ø3,5		25
60	MK90E-CSP		CABLE STRAP		3
59	M-FAS-6000		CABINET FASTENER		8
58	MK30E-CAT		CABINET TOP		1
57	MK30E-CSG		CABINET STRIPPING		2
56	M-CHN-6000		CABINET HANDLE (NEW)		2
55	MK30E-CBR		CABINET RIGHT		1
54	MK30E-CLT		CABINET LEFT		1
53	MK260E-RNT8		RIVET NUT M8		4
52	MK260E-CG11		CABLE GLAND PG11		1
51	MK30E-COP		CONTROLLER PANEL		1
50	N/A		N/A		-
49	M-STU-6000		CABINET STUD AND NUT		8
48	SEE.REF TABLE		DIGITAL CONTROLLER		1
47	MK260E-PCP		PLASTIC CONTROL PANEL		1
46	M-FNS-0200		FAN ON/OFF SWITCH		1
45	M-DRI-0200		DRYER-DEHYDRATOR		1
44	M-BYV-0100		EXPANSION VALVE		1
43	MK260E-STC		SETTING THE CONNECTION		1
42	MK60E-BLT48		BOLT M4x8		8
41	MK35E-FTT-T		TEE FITTING		1
40	MK30E-CAI		CABINET INSIDE		1
39	MK30E-CRT		CABINET REAR TOP		1
38	MK30E-FIE-Y		COMPRESSED AIR FILTER ELEMENT (Y)		1
37	MK30E-FIE-X		COMPRESSED AIR FILTER ELEMENT (X)		1
36	MK90E-GFD		GASKET FOR DRAIN		1
35	MK260E-RDC		REDUCTION 1 / 2" - 1 / 4"		1
34	MK30E-EXS		HEAT EXCHANGER SUPPORT STEEL		1
33	MK30E-ORG		ORING		4
32	MK30E-CNK		CONNECTION CIT		2
31	MK30E-CPG		COUPLING CLAMP		4
30	MK170E-EWF		90* 1 / 4" - 6mm ELBOW		1
29	MK30E-ELK-X		COMPRESSED AIR FILTER KIT (X)		1
28	MK30E-ELK-Y		COMPRESSED AIR FILTER KIT (Y)		1
27	MK30E-NT6		NUT M6		4
26	MK30E-WSR18		WASHER 18x7x1mm		4
25	SEE.REF TABLE		COMPRESSOR START CAPACITOR		1
24	SEE.REF TABLE		COMPRESSOR OVERLOAD PROTECTOR		1
23	SEE.REF TABLE		COMPRESSOR START RELAY		1
22	MK40E-CEC		COMPRESSOR ELECTRICAL BOX COVER		1
21	SEE.REF TABLE		COMPRESSOR		1
20	MK260E-SVC		SOLENOID VALVE COIL		1
19	M-SLV-0325-230		SOLENOID VALVE		1
18	MK150E-FIT6		1 / 4" - 6mm FITTINGS		3
17	MK170E-NIP1/4		1 / 4" NIPPLE		2
16	MK170E-T1/4		1 / 4" T CONNECTOR		1
15	MK170E-CHV		CHECH VALVE		2
14	MK150E-RDC		REDUCTION 3/8" - 1/4"		1
13	M-DBV-0200		DRAIN BALL VALVE		1
12	MK260E-RCD		1/2" RECORD		1
11	MK30E-IHE		INSULATION OF HEAT EXCHANGER		1
10	MK30E-EXC		HEAT EXCHANGER		1
9	MK110E-WHR20		WASHER 20x4,3x1,5		1
8	MK110E-BLT414		BOLT M4x14mm		1
7	MK110E-NT4		NUT M4		4
6	MK260E-BLT630		BOLT M6x30mm		8
5	SEE.REF TABLE		FAN MOTOR		1
4	M-GRL-0075		FAN GRILL		1
3	M-FAN-0075		FAN GLADE		1
2	MK30E-CON		CONDANSER		1
1	MK30E-CAB		CABINET BASE		1
DWG SIZE	ITEM NO.	PART NO.	DESCRIPTION	REV	QTY
PART LIST					



# 8.1 - ED & Spare Part List

## IS 30







8.1 - ED & Spare Part List

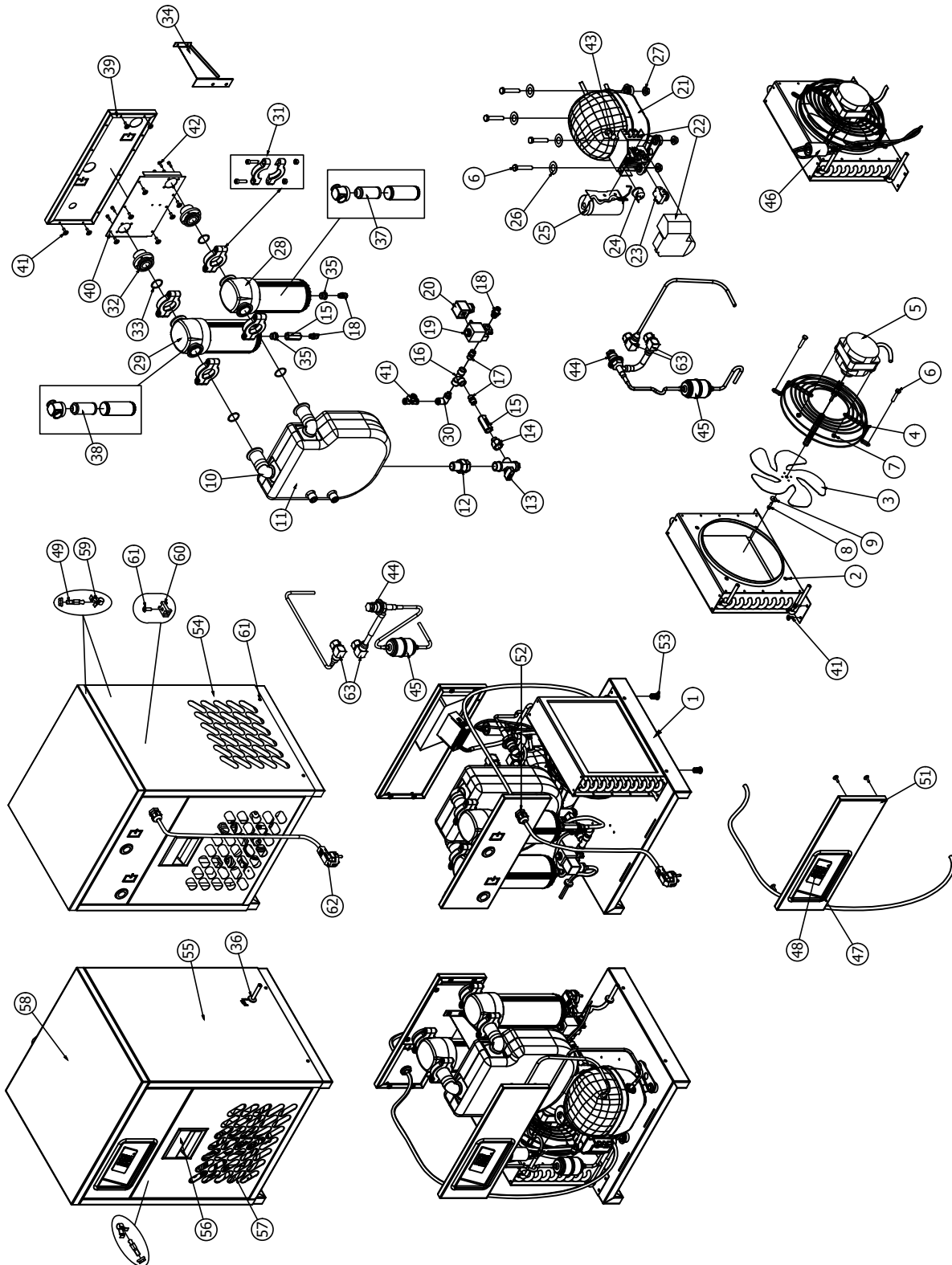
**IS 30**

	63	MK60E-RTA2		ROTOLOCK ADAPTOR2		2
	62	MK130E-PWC		POWER CABLE		1
	61	MK90E-RVT3,5		RIVET Ø3,5		25
	60	MK90E-CSP		CABLE STRAP		3
	59	M-FAS-6000		CABINET FASTENER		8
	58	MK30E-CAT		CABINET TOP		1
	57	MK30E-CSG		CABINET STRIPPING		2
	56	M-CHN-6000		CABINET HANDLE (NEW)		2
	55	MK30E-CBR		CABINET RIGHT		1
	54	MK30E-CLT		CABINET LEFT		1
	53	MK260E-RNT8		RIVET NUT M8		4
	52	MK260E-CG11		CABLE GLAND PG11		1
	51	MK30E-COP		CONTROLLER PANEL		1
	50	N/A		N/A		-
	49	M-STU-6000		CABINET STUD AND NUT		8
	48	SEE.REF TABLE		DIGITAL CONTROLLER		1
	47	MK260E-PCP		PLASTIC CONTROL PANEL		1
	46	M-FNS-0200		FAN ON/OFF SWITCH		1
	45	M-DRI-0200		DRYER-DEHYDRATOR		1
	44	M-BYV-0100		EXPANSION VALVE		1
	43	MK260E-STC		SETTING THE CONNECTION		1
	42	MK60E-BLT48		BOLT M4x8		8
	41	MK35E-FTT-T		TEE FITTING		1
	40	MK30E-CAI		CABINET INSIDE		1
	39	MK30E-CRT		CABINET REAR TOP		1
	38	MK30E-FIE-Y		COMPRESSED AIR FILTER ELEMENT (Y)		1
	37	MK30E-FIE-X		COMPRESSED AIR FILTER ELEMENT (X)		1
	36	MK90E-GFD		GASKET FOR DRAIN		1
	35	MK260E-RDC		REDUCTION 1 / 2" - 1 / 4"		1
	34	MK30E-EXS		HEAT EXCHANGER SUPPORT STEEL		1
	33	MK30E-ORG		ORING		4
	32	MK30E-CNK		CONNECTION CIT		2
	31	MK30E-CPG		COUPLING CLAMP		4
	30	MK170E-EWF		90* 1 / 4" - 6mm ELBOW		1
	29	MK30E-ELK-X		COMPRESSED AIR FILTER KIT (X)		1
	28	MK30E-ELK-Y		COMPRESSED AIR FILTER KIT (Y)		1
	27	MK30E-NT6		NUT M6		4
	26	MK30E-WSR18		WASHER 18x7x1mm		4
	25	SEE.REF TABLE		COMPRESSOR START CAPACITOR		1
	24	SEE.REF TABLE		COMPRESSOR OVERLOAD PROTECTOR		1
	23	SEE.REF TABLE		COMPRESSOR START RELAY		1
	22	MK40E-CEC		COMPRESSOR ELECTRICAL BOX COVER		1
	21	SEE.REF TABLE		COMPRESSOR		1
	20	MK260E-SVC		SOLENOID VALVE COIL		1
	19	M-SLV-0325-230		SOLENOID VALVE		1
	18	MK150E-FIT6		1 / 4" - 6mm FITTINGS		3
	17	MK170E-NIP1/4		1 / 4" NIPPLE		2
	16	MK170E-T1/4		1 / 4" T CONNECTOR		1
	15	MK170E-CHV		CHECH VALVE		2
	14	MK150E-RDC		REDUCTION 3/8" - 1/4"		1
	13	M-DBV-0200		DRAIN BALL VALVE		1
	12	MK260E-RCD		1/2" RECORD		1
	11	MK30E-IHE		INSULATION OF HEAT EXCHANGER		1
	10	MK30E-EXC		HEAT EXCHANGER		1
	9	MK110E-WHR20		WASHER 20x4,3x1,5		1
	8	MK110E-BLT414		BOLT M4x14mm		1
	7	MK110E-NT4		NUT M4		4
	6	MK260E-BLT630		BOLT M6x30mm		8
	5	SEE.REF TABLE		FAN MOTOR		1
	4	M-GRL-0075		FAN GRILL		1
	3	M-FAN-0075		FAN GLADE		1
	2	MK30E-CON		CONDANSER		1
	1	MK30E-CAB		CABINET BASE		1
DWG SIZE	ITEM NO.	PART NO.		DESCRIPTION	REV	QTY
<b>PART LIST</b>						



# 8.1 - ED & Spare Part List

## IS 35





8.1 - ED & Spare Part List

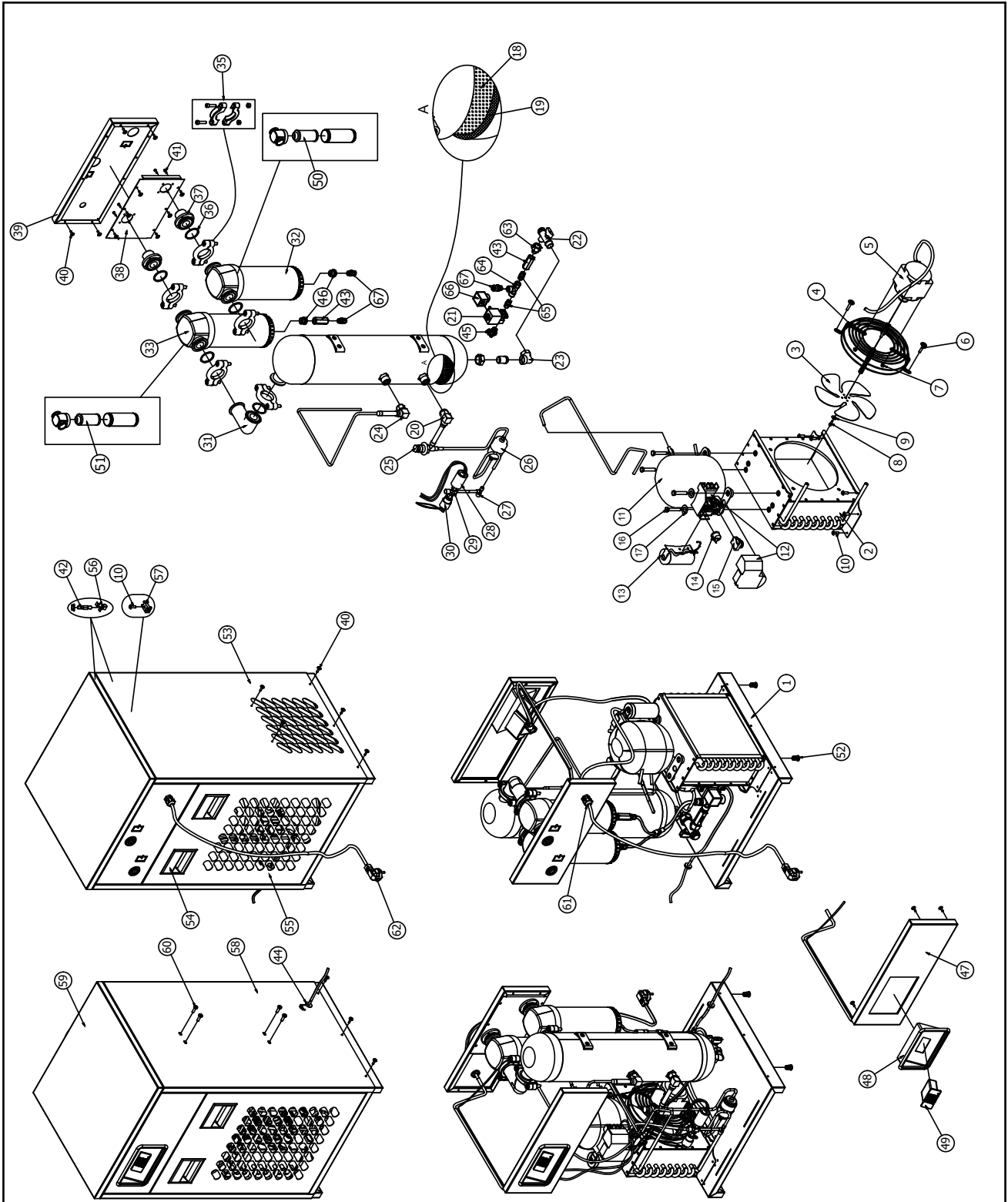
**IS 35**

63	MK60E-RTA2		ROTOLOCK ADAPTOR2		2
62	MK130E-PWC		POWER CABLE		1
61	MK90E-RVT3,5		RIVET Ø3,5		25
60	MK90E-CSP		CABLE STRAP		3
59	M-FAS-6000		CABINET FASTENER		8
58	MK30E-CAT		CABINET TOP		1
57	MK30E-CSG		CABINET STRIPPING		2
56	M-CHN-6000		CABINET HANDLE (NEW)		2
55	MK30E-CBR		CABINET RIGHT		1
54	MK30E-CLT		CABINET LEFT		1
53	MK260E-RNT8		RIVET NUT M8		4
52	MK260E-CG11		CABLE GLAND PG11		1
51	MK30E-COP		CONTROLLER PANEL		1
50	N/A		N/A		-
49	M-STU-6000		CABINET STUD AND NUT		8
48	SEE.REF TABLE		DIGITAL CONTROLLER		1
47	MK260E-PCP		PLASTIC CONTROL PANEL		1
46	M-FNS-0200		FAN ON/OFF SWITCH		1
45	M-DRI-0200		DRYER-DEHYDRATOR		1
44	M-BYV-0100		EXPANSION VALVE		1
43	MK260E-STC		SETTING THE CONNECTION		1
42	MK60E-BLT48		BOLT M4x8		8
41	MK35E-FTT-T		TEE FITTING		1
40	MK30E-CAI		CABINET INSIDE		1
39	MK30E-CRT		CABINET REAR TOP		1
38	MK35E-FIE-Y		COMPRESSED AIR FILTER ELEMENT (Y)		1
37	MK35E-FIE-X		COMPRESSED AIR FILTER ELEMENT (X)		1
36	MK90E-GFD		GASKET FOR DRAIN		1
35	MK260E-RDC		REDUCTION 1 / 2" - 1 / 4"		1
34	MK30E-EXS		HEAT EXCHANGER SUPPORT STEEL		1
33	MK30E-ORG		ORING		4
32	MK30E-CNK		CONNECTION CIT		2
31	MK30E-CPG		COUPLING CLAMP		4
30	MK170E-EWF		90* 1 / 4" - 6mm ELBOW		1
29	MK35E-ELK-X		COMPRESSED AIR FILTER KIT (X)		1
28	MK35E-ELK-Y		COMPRESSED AIR FILTER KIT (Y)		1
27	MK30E-NT6		NUT M6		4
26	MK30E-WSR18		WASHER 18x7x1mm		4
25	SEE.REF TABLE		COMPRESSOR START CAPACITOR		1
24	SEE.REF TABLE		COMPRESSOR OVERLOAD PROTECTOR		1
23	SEE.REF TABLE		COMPRESSOR START RELAY		1
22	MK40E-CEC		COMPRESSOR ELECTRICAL BOX COVER		1
21	SEE.REF TABLE		COMPRESSOR		1
20	MK260E-SVC		SOLENOID VALVE COIL		1
19	M-SLV-0325-230		SOLENOID VALVE		1
18	MK150E-FIT6		1 / 4" - 6mm FITTINGS		3
17	MK170E-NIP1/4		1 / 4" NIPPLE		2
16	MK170E-T1/4		1 / 4" T CONNECTOR		1
15	MK170E-CHV		CHECH VALVE		2
14	MK150E-RDC		REDUCTION 3/8" - 1/4"		1
13	M-DBV-0200		DRAIN BALL VALVE		1
12	MK260E-RCD		1/2" RECORD		1
11	MK30E-IHE		INSULATION OF HEAT EXCHANGER		1
10	MK30E-EXC		HEAT EXCHANGER		1
9	MK110E-WHR20		WASHER 20x4,3x1,5		1
8	MK110E-BLT414		BOLT M4x14mm		1
7	MK110E-NT4		NUT M4		4
6	MK260E-BLT630		BOLT M6x30mm		8
5	SEE.REF TABLE		FAN MOTOR		1
4	M-GRL-0075		FAN GRILL		1
3	M-FAN-0075		FAN GLADE		1
2	MK30E-CON		CONDANSER		1
1	MK30E-CAB		CABINET BASE		1
DWG SIZE	ITEM NO.	PART NO.	DESCRIPTION	REV	QTY
<b>PART LIST</b>					



# 8.1 - ED & Spare Part List

## IS 40





8.1 - ED & Spare Part List

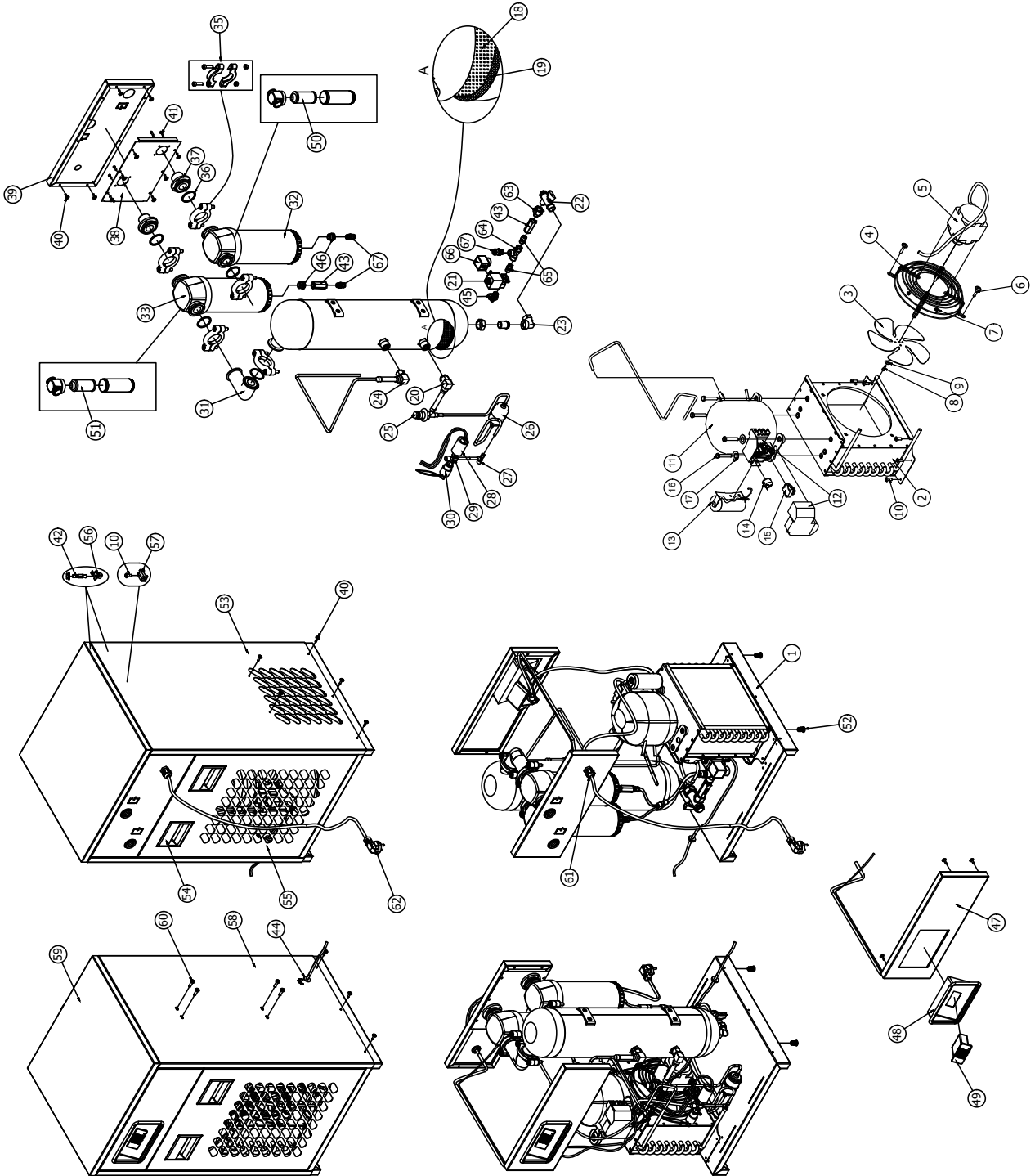
**IS 40**

67	MK150E-FIT6		1 / 4" - 6mm FITTINGS		3
66	MK260E-SVC		SOLENOID VALVE COIL		1
65	MK170E-NIP1/4		1 / 4" NIPPLE		2
64	MK170E-T1/4		1 / 4" T CONNECTOR		1
63	MK150E-RDC		REDUCTION 3/8" - 1/4"		1
62	MK130E-PWC		POWER CABLE		1
61	MK260E-CG11		CABLE GLAND PG11		1
60	MK90E-BLT615		BOLT M6x15		1
59	MK60E-CAT		CABINET TOP		4
58	MK60E-CBR		CABINET RIGHT		1
57	MK90E-CSP		CABLE STRAP		1
56	M-FAS-6000		CABINET FASTENER		8
55	MK60E-CSG		CABINET STRIPPING		2
54	M-CHN-6000		CABINET HANDLE (NEW)		4
53	MK60E-CLT		CABINET LEFT		4
52	MK260E-RNT8		RIVET NUT M8		1
51	MK60E-FIE-Y		COMPRESSED AIR FILTER ELEMENT (Y)		1
50	MK60E-FIE-X		COMPRESSED AIR FILTER ELEMENT (X)		1
49	SEE.REF TABLE		DIGITAL CONTROLLER		1
48	MK260E-PCP		PLASTIC CONTROL PANEL		1
47	MK60E-COP		CONTROLLER PANEL		1
46	MK260E-RDC		REDUCTION 1 / 2" - 1 / 4"		2
45	MK170E-EWF		90° 1 / 4" - 6mm ELBOW		1
44	MK90E-GFD		GASKET FOR DRAIN		1
43	MK170E-CHV		CHECH VALVE		2
42	M-STU-6000		CABINET STUD AND NUT		8
41	MK60E-BLT48		BOLT M4x8		2
40	MK90E-BLT412		BOLT M4x12		8
39	MK60E-CRT		CABINET REAR TOP		22
38	MK60E-CAI		CABINET INSIDE		1
37	MK60E-CNK2		CONNECTION CIT2		2
36	MK60E-ORG		ORING		5
35	MK60E-CPG		COUPLING CLAMP		5
34	N/A		N/A		-
33	MK60E-ELK-Y		COMPRESSED AIR FILTER KIT (Y)		1
32	MK60E-ELK-X		COMPRESSED AIR FILTER KIT (X)		1
31	MK60E-CNK1		CONNECTION CIT1		1
30	M-HPS-0200		HIGH PRESSURE SWITCH		1
29	MK90E-TDP		ADAPTOR T		1
28	M-FNS-0200		FAN ON/OFF SWITCH		1
27	MK90E-CPT1		CUPPER T1		1
26	M-DRI-0200		DRYER-DEHYDRATOR		1
25	M-BYV-0100		EXPANSION VALVE		1
24	MK70E-RTA3		ROTOLOCK ADAPTOR3		1
23	MK260E-ELW2		ELBOW 2		1
22	M-DBV-0200		DRAIN BALL VALVE		1
21	M-SLV-0325-230		SOLENOID VALVE		1
20	MK60E-RTA2		ROTOLOCK ADAPTOR2		1
19	MK60E-IHE		INSULATION OF HEAT EXCHANGER		1
18	MK60E-EXC		HEAT EXCHANGER		1
17	MK260E-WHR22		WASHER Ø22xØ8,5x2,5		4
16	MK150E-BLT840		BOLT M8x40		4
15	SEE.REF TABLE		COMPRESSOR START RELAY		1
14	SEE.REF TABLE		COMPRESSOR OVERLOAD PROTECTOR		1
13	SEE.REF TABLE		COMPRESSOR START CAPACITOR		1
12	MK40E-CEC		COMPRESSOR ELECTRICAL BOX COVER		1
11	SEE.REF TABLE		COMPRESSOR		1
10	MK90E-RVT3,5		RIVET Ø3,5		9
9	MK110E-WHR20		WASHER Ø20xØ4,3x1,5		1
8	MK110E-BLT414		BOLT M4x14mm		1
7	MK110E-NT4		NUT M4		4
6	MK260E-BLT630		BOLT M6x30		4
5	SEE.REF TABLE		FAN MOTOR		1
4	M-GRL-0075		FAN GRILL		1
3	M-FAN-0075		FAN BLADE		1
2	MK40E-CON		CONDANSER		1
1	MK60E-CAB		CABINET BASE		1
DWG SIZE	ITEM NO.	PART NO.	DESCRIPTION	REV	QTY
PART LIST					



# 8.1 - ED & Spare Part List

## IS 50





8.1 - ED & Spare Part List

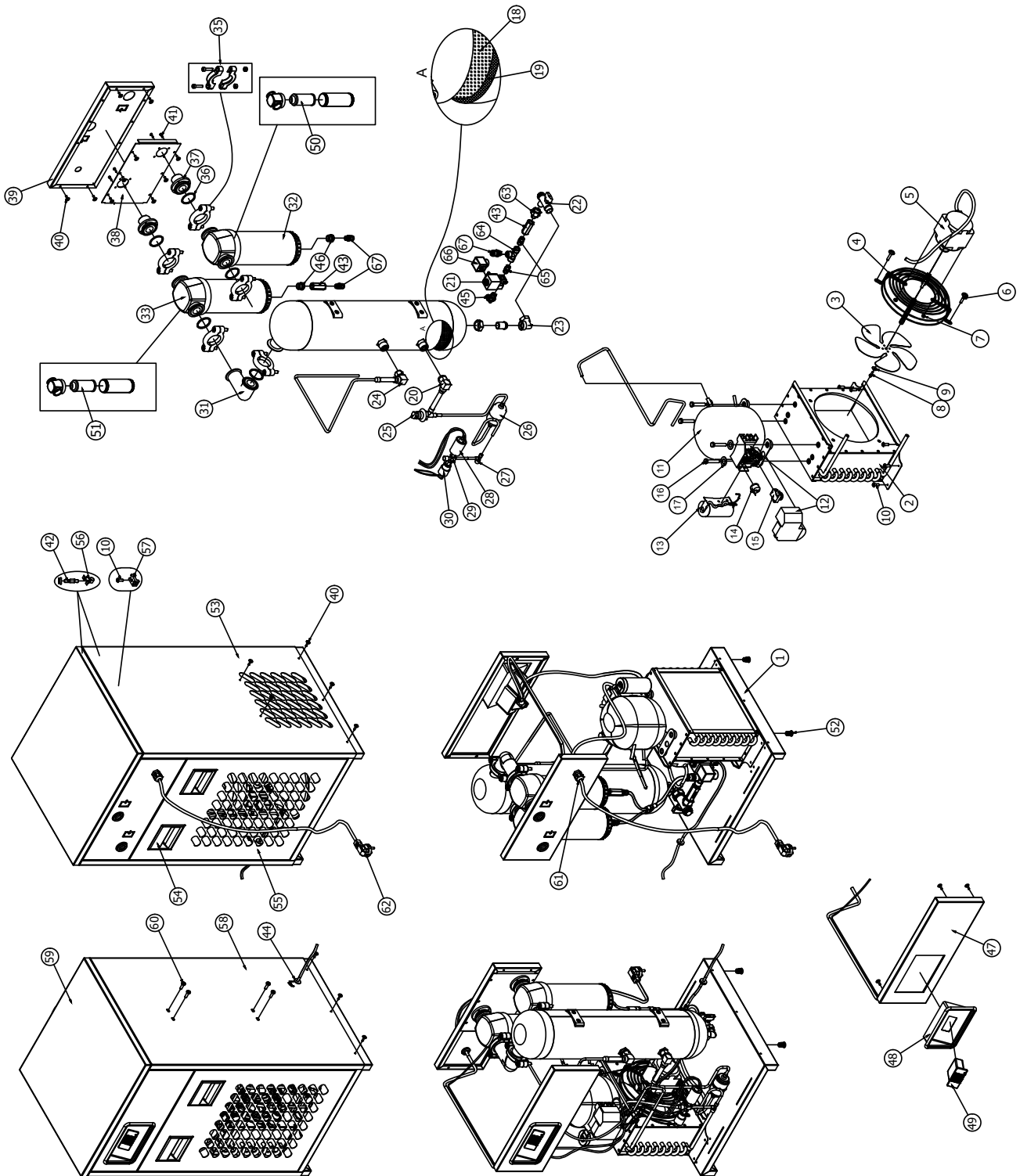
**IS 50**

67	MK150E-FIT6		1 / 4" - 6mm FITTINGS		3
66	MK260E-SVC		SOLENOID VALVE COIL		1
65	MK170E-NIP1/4		1 / 4" NIPPLE		2
64	MK170E-T1/4		1 / 4" T CONNECTOR		1
63	MK150E-RDC		REDUCTION 3/8" - 1/4"		1
62	MK130E-PWC		POWER CABLE		1
61	MK260E-CG11		CABLE GLAND PG11		1
60	MK90E-BLT615		BOLT M6x15		1
59	MK60E-CAT		CABINET TOP		4
58	MK60E-CBR		CABINET RIGHT		1
57	MK90E-CSP		CABLE STRAP		1
56	M-FAS-6000		CABINET FASTENER		8
55	MK60E-CSG		CABINET STRIPPING		2
54	M-CHN-6000		CABINET HANDLE (NEW)		4
53	MK60E-CLT		CABINET LEFT		4
52	MK260E-RNT8		RIVET NUT M8		1
51	MK60E-FIE-Y		COMPRESSED AIR FILTER ELEMENT (Y)		1
50	MK60E-FIE-X		COMPRESSED AIR FILTER ELEMENT (X)		1
49	SEE.REF TABLE		DIGITAL CONTROLLER		1
48	MK260E-PCP		PLASTIC CONTROL PANEL		1
47	MK60E-COP		CONTROLLER PANEL		1
46	MK260E-RDC		REDUCTION 1 / 2" - 1 / 4"		2
45	MK170E-EWF		90* 1 / 4" - 6mm ELBOW		1
44	MK90E-GFD		GASKET FOR DRAIN		1
43	MK170E-CHV		CHECH VALVE		1
42	M-STU-6000		CABINET STUD AND NUT		8
41	MK60E-BLT48		BOLT M4x8		2
40	MK90E-BLT412		BOLT M4x12		8
39	MK60E-CRT		CABINET REAR TOP		22
38	MK60E-CAI		CABINET INSIDE		1
37	MK60E-CNK2		CONNECTION CIT2		2
36	MK60E-ORG		ORING		5
35	MK60E-CPG		COUPLING CLAMP		5
34	N/A		N/A		-
33	MK60E-ELK-Y		COMPRESSED AIR FILTER KIT (Y)		1
32	MK60E-ELK-X		COMPRESSED AIR FILTER KIT (X)		1
31	MK60E-CNK1		CONNECTION CIT1		1
30	M-HPS-0200		HIGH PRESSURE SWITCH		1
29	MK90E-TDP		ADAPTOR T		1
28	M-FNS-0200		FAN ON/OFF SWITCH		1
27	MK90E-CPT1		CUPPER T1		1
26	M-DRI-0200		DRYER-DEHYDRATOR		1
25	M-BYV-0100		EXPANSION VALVE		1
24	MK70E-RTA3		ROTOLOCK ADAPTOR3		1
23	MK260E-ELW2		ELBOW 2		1
22	M-DBV-0200		DRAIN BALL VALVE		1
21	M-SLV-0325-230		SOLENOID VALVE		1
20	MK60E-RTA2		ROTOLOCK ADAPTOR2		1
19	MK60E-IHE		INSULATION OF HEAT EXCHANGER		1
18	MK60E-EXC		HEAT EXCHANGER		1
17	MK260E-WHR22		WASHER Ø22xØ8,5x2,5		4
16	MK150E-BLT840		BOLT M8x40		4
15	SEE.REF TABLE		COMPRESSOR START RELAY		1
14	SEE.REF TABLE		COMPRESSOR OVERLOAD PROTECTOR		1
13	SEE.REF TABLE		COMPRESSOR START CAPACITOR		1
12	MK50E-CEC		COMPRESSOR ELECTRICAL BOX COVER		1
11	SEE.REF TABLE		COMPRESSOR		1
10	MK90E-RVT3,5		RIVET Ø3,5		9
9	MK110E-WHR20		WASHER Ø20xØ4,3x1,5		1
8	MK110E-BLT414		BOLT M4x14mm		1
7	MK110E-NT4		NUT M4		4
6	MK260E-BLT630		BOLT M6x30		4
5	SEE.REF TABLE		FAN MOTOR		1
4	M-GRL-0150		FAN GRILL		1
3	M-FAN-0150		FAN BLADE		1
2	MK60E-CON		CONDANSER		1
1	MK60E-CAB		CABINET BASE		1
DWG SIZE	ITEM NO.	PART NO.	DESCRIPTION	REV	QTY
<b>PART LIST</b>					



# 8.1 - ED & Spare Part List

## IS 60







8.1 - ED & Spare Part List

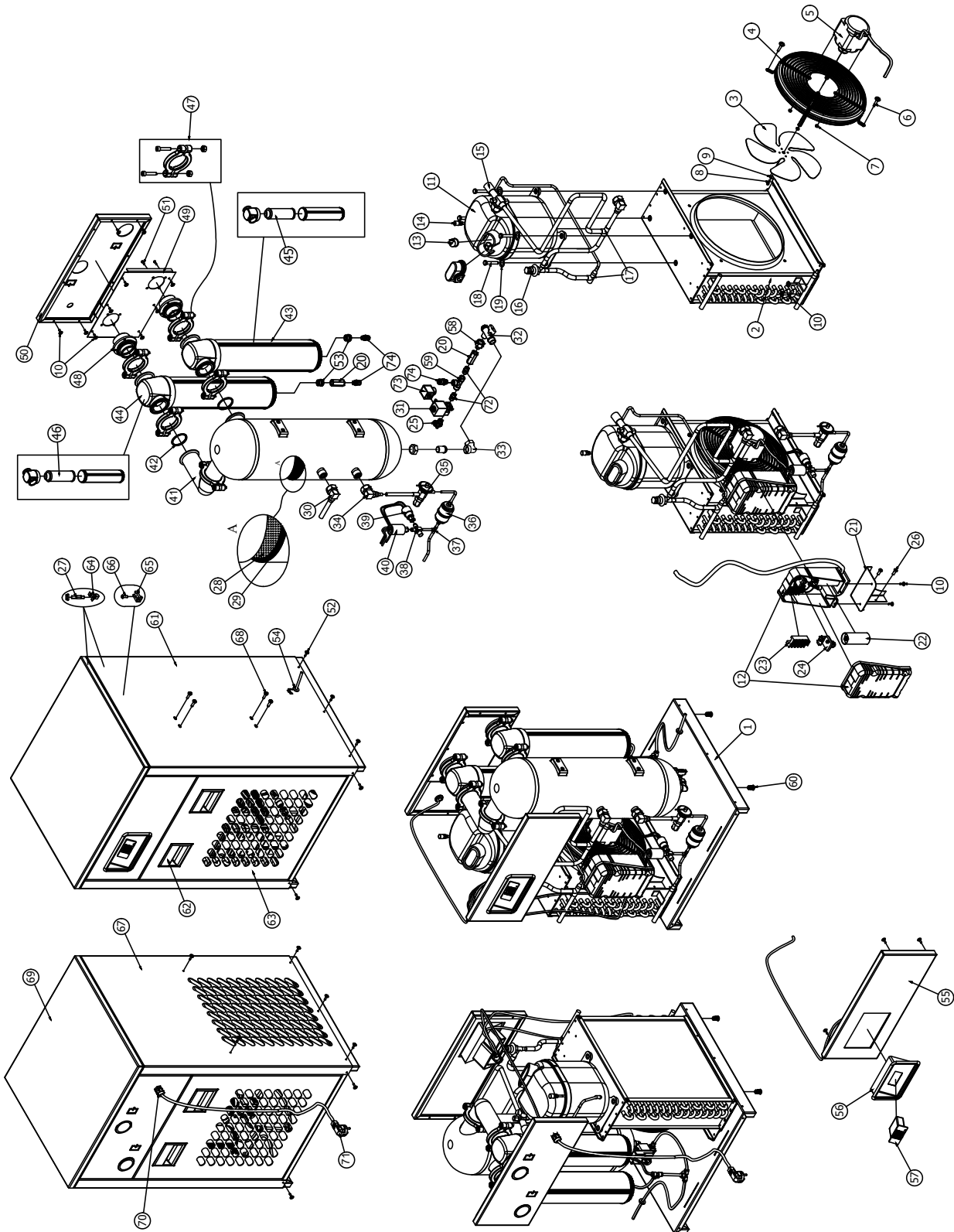
**IS 60**

67	MK150E-FIT6		1 / 4" - 6mm FITTINGS		3
66	MK260E-SVC		SOLENOID VALVE COIL		1
65	MK170E-NIP1/4		1 / 4" NIPPLE		2
64	MK170E-T1/4		1 / 4" T CONNECTOR		1
63	MK150E-RDC		REDUCTION 3/8" - 1/4"		1
62	MK130E-PWC		POWER CABLE		1
61	MK260E-CG11		CABLE GLAND PG11		1
60	MK90E-BLT615		BOLT M6x15		1
59	MK60E-CAT		CABINET TOP		4
58	MK60E-CBR		CABINET RIGHT		1
57	MK90E-CSP		CABLE STRAP		1
56	M-FAS-6000		CABINET FASTENER		8
55	MK60E-CSG		CABINET STRIPPING		2
54	M-CHN-6000		CABINET HANDLE (NEW)		4
53	MK60E-CLT		CABINET LEFT		4
52	MK260E-RNT8		RIVET NUT M8		1
51	MK60E-FIE-Y		COMPRESSED AIR FILTER ELEMENT (Y)		1
50	MK60E-FIE-X		COMPRESSED AIR FILTER ELEMENT (X)		1
49	SEE.REF TABLE		DIGITAL CONTROLLER		1
48	MK260E-PCP		PLASTIC CONTROL PANEL		1
47	MK60E-COP		CONTROLLER PANEL		1
46	MK260E-RDC		REDUCTION 1 / 2" - 1 / 4"		2
45	MK170E-EWF		90* 1 / 4" - 6mm ELBOW		1
44	MK90E-GFD		GASKET FOR DRAIN		1
43	MK170E-CHV		CHECK VALVE		2
42	M-STU-6000		CABINET STUD AND NUT		8
41	MK60E-BLT48		BOLT M4x8		2
40	MK90E-BLT412		BOLT M4x12		8
39	MK60E-CRT		CABINET REAR TOP		22
38	MK60E-CAI		CABINET INSIDE		1
37	MK60E-CNK2		CONNECTION CIT2		2
36	MK60E-ORG		ORING		5
35	MK60E-CPG		COUPLING CLAMP		5
34	N/A		N/A		-
33	MK60E-ELK-Y		COMPRESSED AIR FILTER KIT (Y)		1
32	MK60E-ELK-X		COMPRESSED AIR FILTER KIT (X)		1
31	MK60E-CNK1		CONNECTION CIT1		1
30	M-HPS-0200		HIGH PRESSURE SWITCH		1
29	MK90E-TDP		ADAPTOR T		1
28	M-FNS-0200		FAN ON/OFF SWITCH		1
27	MK90E-CPT1		CUPPER T1		1
26	M-DRI-0200		DRYER-DEHYDRATOR		1
25	M-BYV-0100		EXPANSION VALVE		1
24	MK70E-RTA3		ROTOLOCK ADAPTOR3		1
23	MK260E-ELW2		ELBOW 2		1
22	M-DBV-0200		DRAIN BALL VALVE		1
21	M-SLV-0325-230		SOLENOID VALVE		1
20	MK60E-RTA2		ROTOLOCK ADAPTOR2		1
19	MK60E-IHE		INSULATION OF HEAT EXCHANGER		1
18	MK60E-EXC		HEAT EXCHANGER		1
17	MK260E-WHR22		WASHER Ø22xØ8,5x2,5		4
16	MK150E-BLT840		BOLT M8x40		4
15	SEE.REF TABLE		COMPRESSOR START RELAY		1
14	SEE.REF TABLE		COMPRESSOR OVERLOAD PROTECTOR		1
13	SEE.REF TABLE		COMPRESSOR START CAPACITOR		1
12	MK60E-CEC		COMPRESSOR ELECTRICAL BOX COVER		1
11	SEE.REF TABLE		COMPRESSOR		1
10	MK90E-RVT3,5		RIVET Ø3,5		9
9	MK110E-WHR20		WASHER Ø20xØ4,3x1,5		1
8	MK110E-BLT414		BOLT M4x14mm		1
7	MK110E-NT4		NUT M4		4
6	MK260E-BLT630		BOLT M6x30		4
5	SEE.REF TABLE		FAN MOTOR		1
4	M-GRL-0150		FAN GRILL		1
3	M-FAN-0150		FAN BLADE		1
2	MK60E-CON		CONDANSER		1
1	MK60E-CAB		CABINET BASE		1
DWG SIZE	ITEM NO.	PART NO.	DESCRIPTION	REV	QTY
PART LIST					



# 8.1 - ED & Spare Part List

## IS 70





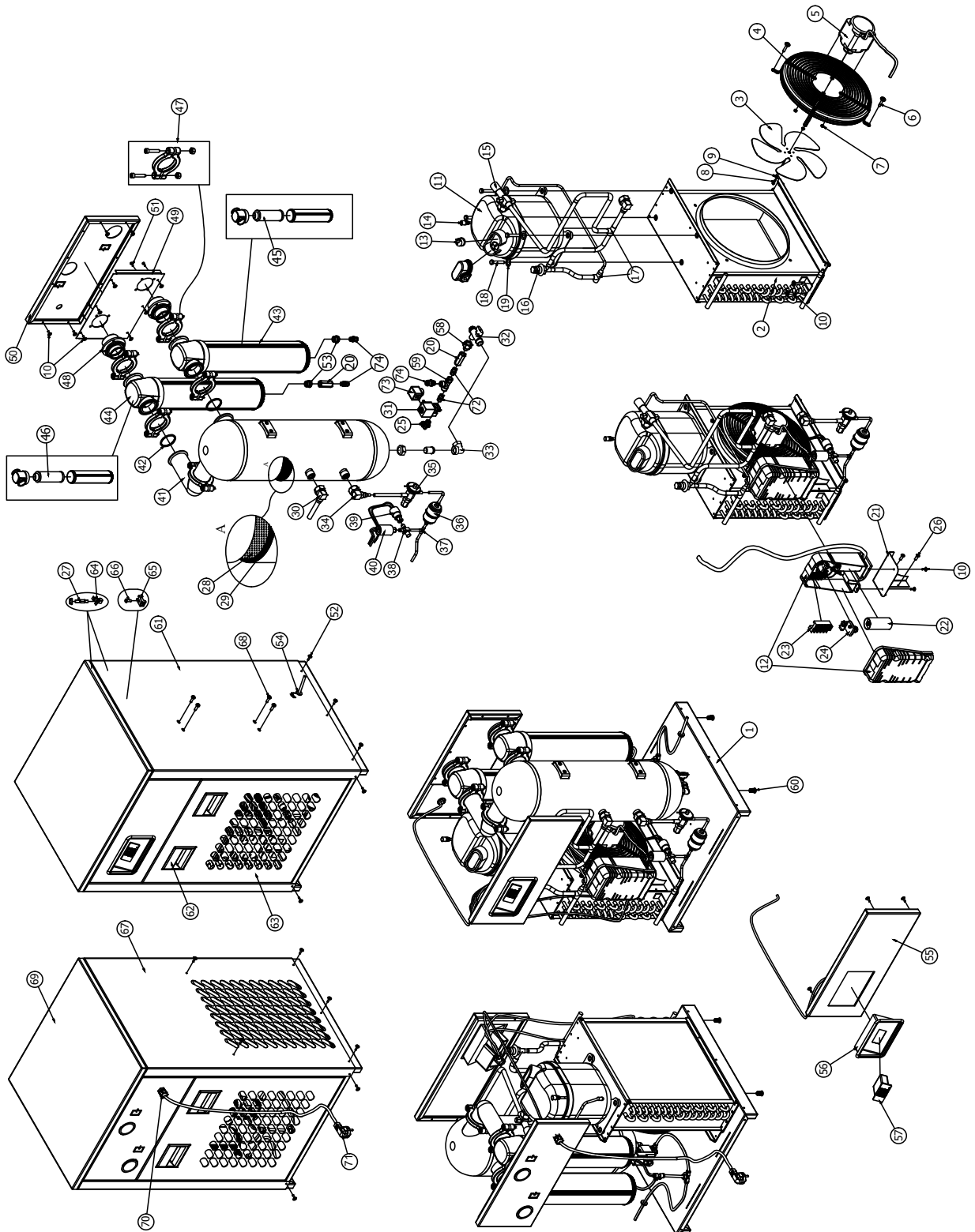
8.1 - ED & Spare Part List  
**IS70**

74	MK150E-FIT6		1 / 4" - 6mm FITTINGS		3
73	MK260E-SVC		SOLENOID VALVE COIL		1
72	MK170E-NIP1/4		1 / 4" NIPPLE		2
71	MK130E-PWC		POWER CABLE		1
70	MK260E-CG11		CABLE GLAND PG11		1
69	MK90E-CAT		CABINET TOP		1
68	MK90E-BLT615		BOLT M6x15		4
67	MK90E-CLT		CABINET LEFT		1
66	MK90E-RVT3,5		RIVET Ø3,5		6
65	MK90E-CSP		CABLE STRAP		6
64	M-FAS-6000		CABINET FASTENER		8
63	MK90E-CSG		CABINET STRIPPING		2
62	M-CHN-6000		CABINET HANDLE (NEW)		4
61	MK90E-CBR		CABINET RIGHT		1
60	MK260E-RNT8		RIVET NUT M8		4
59	MK170E-T1/4		1 / 4" T CONNECTOR		1
58	MK150E-RDC		REDUCTION 3/8" - 1/4"		1
57	SEE.REF TABLE		DIGITAL CONTROLLER		1
56	MK260E-PCP		PLASTIC CONTROL PANEL		1
55	MK90E-COP		CONTROLLER PANEL		1
54	MK90E-GFD		GASKET FOR DRAIN		1
53	MK260E-RDC		REDUCTION 1 / 2" - 1 / 4"		2
52	N/A		N/A		-
51	MK90E-BLT610		BOLT M6x10		8
50	MK90E-CRT		CABINET REAR TOP		1
49	MK90E-CAI		CABINET INSIDE		1
48	MK90E-CNK2		CONNECTION CIT2		2
47	MK90E-CPG		COUPLING CLAMP		5
46	MK90E-FIE-Y		COMPRESSED AIR FILTER ELEMENT (Y)		1
45	MK90E-FIE-X		COMPRESSED AIR FILTER ELEMENT (X)		1
44	MK90E-ELK-Y		COMPRESSED AIR FILTER KIT (Y)		1
43	MK90E-ELK-X		COMPRESSED AIR FILTER KIT (X)		1
42	MK90E-ORG		ORING		5
41	MK90E-CNK1		CONNECTION CIT1		1
40	M-FNS-0200		FAN ON/OFF SWITCH		1
39	M-HPS-0200		HIGH PRESSURE SWITCH		1
38	MK90E-TDP		ADAPTOR T		1
37	MK90E-CPT2		CUPPER T2		1
36	M-DRI-0200		DRYER-DEHYDRATOR		1
35	MK70E-EXV		EXPANSION VALVE		1
34	MK70E-RTA3		ROTOLOCK ADAPTOR2		1
33	MK260E-ELW2		ELBOW 2		1
32	M-DBV-0200		DRAIN BALL VALVE		1
31	M-SLV-0325-230		SOLENOID VALVE		1
30	MK110E-RTA2		ROTOLOCK ADAPTOR2		1
29	MK90E-IHE		INSULATION OF HEAT EXCHANGER		1
28	MK90E-EXC		HEAT EXCHANGER		1
27	M-STU-6000		CABINET STUD AND NUT		8
26	MK90E-RVT4		RIVET Ø4		2
25	MK170E-EWF		90° 1 / 4" - 6mm ELBOW		1
24	SEE.REF TABLE		COMPRESSOR START RELAY		1
23	MK110E-TRM		THERMINAL BLOCK		1
22	SEE.REF TABLE		COMPRESSOR START CAPACITOR		1
21	MK90E-ELBS		ELECTRICAL BOX LOWER SUPPORT PLATE		1
20	MK170E-CHV		CHECH VALVE		2
19	MK260E-WHR22		WASHER Ø22xØ8,5x2,5		4
18	MK150E-BLT840		BOLT M8x40		4
17	MK90E-CPT1		CUPPER T1		2
16	M-BYV-0100		BY-PASS VALVE		1
15	MK130E-RTA1		ROTOLOCK ADAPTOR1		1
14	MK260E-STC		SETTING THE CONNECTION		1
13	SEE.REF TABLE		COMPRESSOR OVERLOAD PROTECTOR		1
12	SEE.REF TABLE		COMPRESSOR ELECTRICAL BOX		1
11	SEE.REF TABLE		COMPRESSOR		1
10	MK90E-BLT412		BOLT M4x12		30
9	MK110E-WHR20		WASHER Ø20xØ4,3x1,5		1
8	MK110E-BLT414		BOLT M4x14mm		1
7	MK110E-NT4		NUT M4		4
6	MK260E-BLT630		BOLT M6x30		4
5	SEE.REF TABLE		FAN MOTOR		1
4	M-GRL-0150		FAN GRILL		1
3	M-FAN-0150		FAN BLADE		1
2	MK70E-CON		CONDANSER		1
1	MK90E-CAB		CABINET BASE		1
DWG SIZE	ITEM NO.	PART NO.	DESCRIPTION	REV	QTY
PART LIST					



# 8.1 - ED & Spare Part List

## IS 80





8.1 - ED & Spare Part List  
**IS 80**

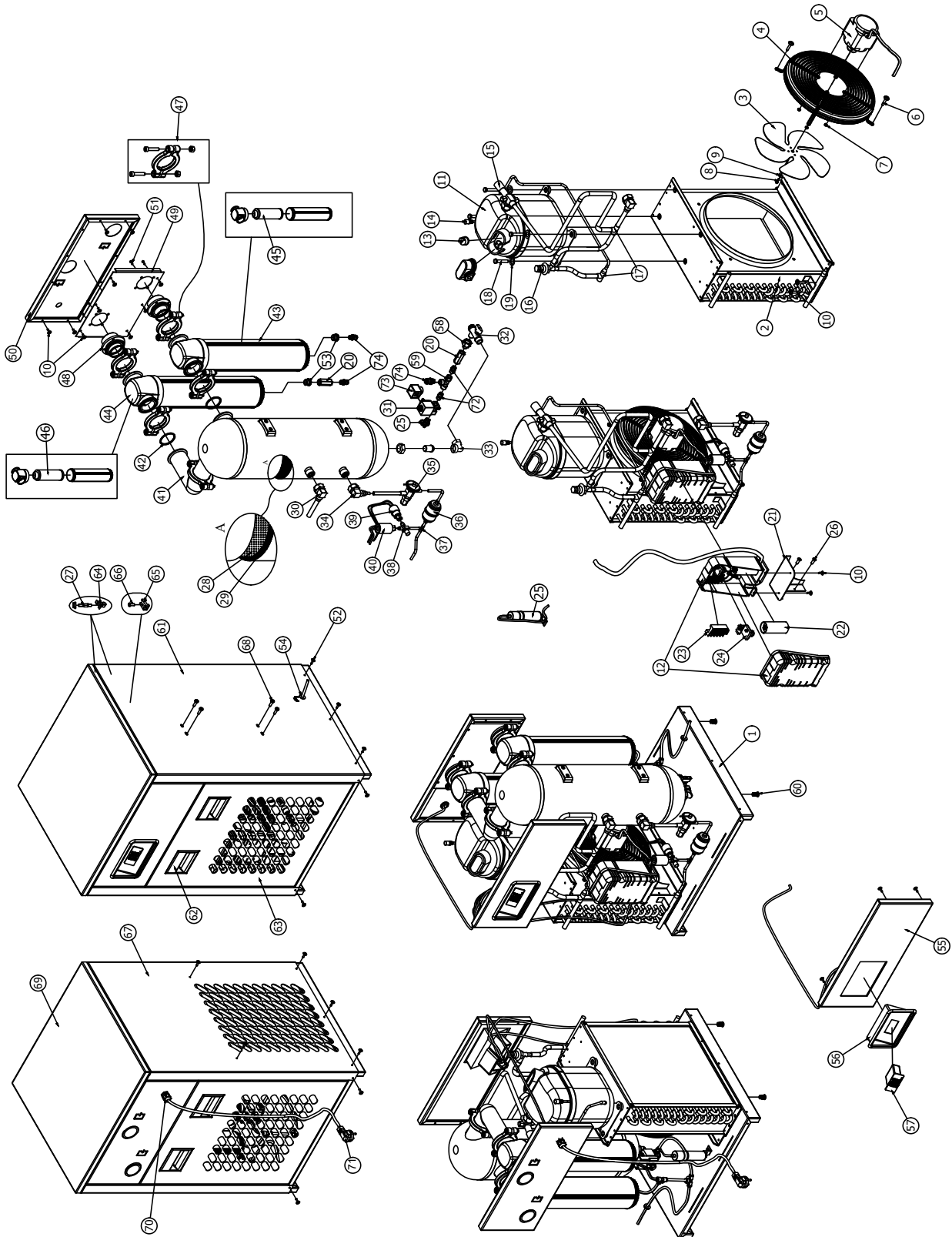
74	MK150E-FIT6		1 / 4" - 6mm FITTINGS		3
73	MK260E-SVC		SOLENOID VALVE		1
72	MK170E-NIP1/4		1 / 4" NIPPLE		2
71	MK130E-PWC		POWER CABLE		1
70	MK260E-CG11		CABLE GLAND PG11		1
69	MK90E-CAT		CABINET TOP		1
68	MK90E-BLT615		BOLT M6x15		4
67	MK90E-CLT		CABINET LEFT		1
66	MK90E-RVT3,5		RIVET Ø3,5		6
65	MK90E-CSP		CABLE STRAP		6
64	M-FAS-6000		CABINET FASTENER		8
63	MK90E-CSG		CABINET STRIPPING		2
62	M-CHN-6000		CABINET HANDLE (NEW)		4
61	MK90E-CBR		CABINET RIGHT		1
60	MK260E-RNT8		RIVET NUT M8		4
59	MK170E-T1/4		1 / 4" T CONNECTOR		1
58	MK150E-RDC		REDUCTION 3/8" - 1/4"		1
57	SEE.REF TABLE		DIGITAL CONTROLLER		1
56	MK260E-PCP		PLASTIC CONTROL PANEL		1
55	MK90E-COP		CONTROLLER PANEL		1
54	MK90E-GFD		GASKET FOR DRAIN		1
53	MK260E-RDC		REDUCTION 1 / 2" - 1 / 4"		2
52	N/A		N/A		-
51	MK90E-BLT610		BOLT M6x10		8
50	MK90E-CRT		CABINET REAR TOP		1
49	MK90E-CAI		CABINET INSIDE		1
48	MK90E-CNK2		CONNECTION CIT2		2
47	MK90E-CPG		COUPLING CLAMP		5
46	MK90E-FIE-Y		COMPRESSED AIR FILTER ELEMENT (Y)		1
45	MK90E-FIE-X		COMPRESSED AIR FILTER ELEMENT (X)		1
44	MK90E-ELK-Y		COMPRESSED AIR FILTER KIT (Y)		1
43	MK90E-ELK-X		COMPRESSED AIR FILTER KIT (X)		1
42	MK90E-ORG		ORING		5
41	MK90E-CNK1		CONNECTION CIT1		1
40	M-FNS-0200		FAN ON/OFF SWITCH		1
39	M-HPS-0200		HIGH PRESSURE SWITCH		1
38	MK90E-TDP		ADAPTOR T		1
37	MK90E-CPT2		CUPPER T2		1
36	M-DRI-0200		DRYER-DEHYDRATOR		1
35	M-EXV-0200		EXPANSION VALVE		1
34	N/A		N/A		-
33	MK260E-ELW2		ELBOW 2		1
32	M-DBV-0200		DRAIN BALL VALVE		1
31	M-SLV-0325-230		SOLENOID VALVE		1
30	MK110E-RTA2		ROTOLOCK ADAPTOR2		2
29	MK90E-IHE		INSULATION OF HEAT EXCHANGER		1
28	MK90E-EXC		HEAT EXCHANGER		1
27	M-STU-6000		CABINET STUD AND NUT		8
26	MK90E-RVT4		RIVET Ø4		2
25	MK170E-EWF		90* 1 / 4" - 6mm ELBOW		1
24	SEE.REF TABLE		COMPRESSOR START RELAY		1
23	MK110E-TRM		THERMINAL BLOCK		1
22	SEE.REF TABLE		COMPRESSOR START CAPACITOR		1
21	MK90E-ELBS		ELECTRICAL BOX LOWER SUPPORT PLATE		1
20	MK170E-CHV		CHECH VALVE		2
19	MK260E-WHR22		WASHER Ø22xØ8,5x2,5		4
18	MK150E-BLT840		BOLT M8x40		4
17	MK90E-CPT1		CUPPER T1		2
16	M-BYV-0400		BY-PASS VALVE		1
15	MK130E-RTA1		ROTOLOCK ADAPTOR1		1
14	MK260E-STC		SETTING THE CONNECTION		1
13	SEE.REF TABLE		COMPRESSOR OVERLOAD PROTECTOR		1
12	SEE.REF TABLE		COMPRESSOR ELECTRICAL BOX		1
11	SEE.REF TABLE		COMPRESSOR		1
10	MK90E-BLT412		BOLT M4x12		30
9	MK110E-WHR20		WASHER Ø20xØ4,3x1,5		1
8	MK110E-BLT414		BOLT M4x14mm		1
7	MK110E-NT4		NUT M4		4
6	MK260E-BLT630		BOLT M6x30		4
5	SEE.REF TABLE		FAN MOTOR		1
4	M-GRL-0200		FAN GRILL		1
3	SEE.REF TABLE		FAN BLADE		1
2	MK90E-CON		CONDANSER		1
1	MK90E-CAB		CABINET BASE		1
DWG SIZE	ITEM NO.	PART NO.	DESCRIPTION	REV	QTY

PART LIST



# 8.1 - ED & Spare Part List

## IS 90





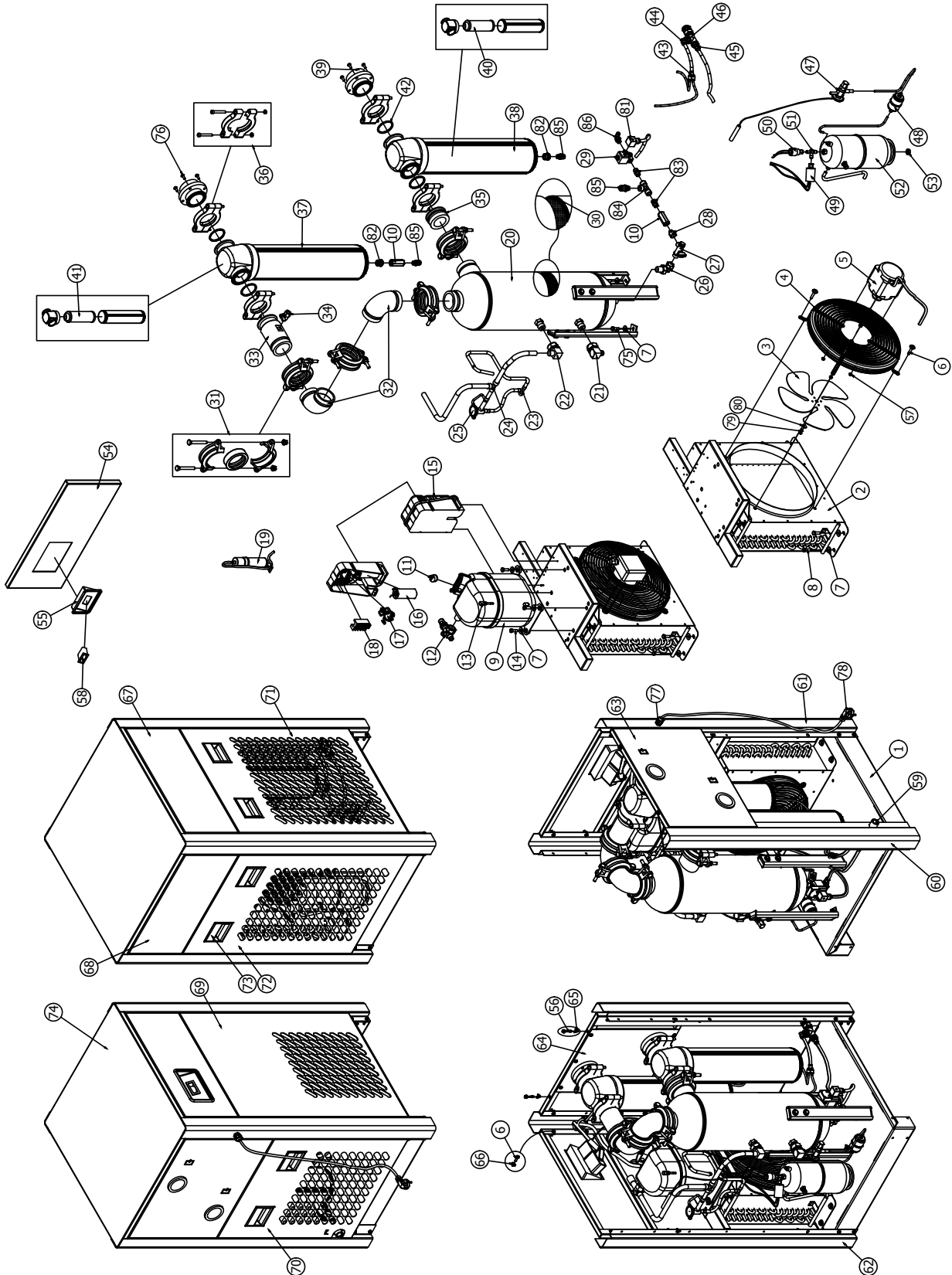
8.1 - ED & Spare Part List  
**IS 90**

	75	MK170E-EWF		90° 1 / 4" - 6mm ELBOW		1
	74	MK150E-FIT6		1 / 4" - 6mm FITTINGS		3
	73	MK260E-SVC		SOLENOID VALVE		1
	72	MK170E-NIP1/4		1 / 4" NIPPLE		2
	71	MK130E-PWC		POWER CABLE		1
	70	MK260E-CG11		CABLE GLAND PG11		1
	69	MK90E-CAT		CABINET TOP		1
	68	MK90E-BLT615		BOLT M6x15		4
	67	MK90E-CLT		CABINET LEFT		1
	66	MK90E-RVT3,5		RIVET Ø3,5		6
	65	MK90E-CSP		CABLE STRAP		6
	64	M-FAS-6000		CABINET FASTENER		8
	63	MK90E-CSG		CABINET STRIPPING		2
	62	M-CHN-6000		CABINET HANDLE (NEW)		4
	61	MK90E-CBR		CABINET RIGHT		1
	60	MK260E-RNT8		RIVET NUT M8		4
	59	MK170E-T1/4		1 / 4" T CONNECTOR		1
	58	MK150E-RDC		REDUCTION 3/8" - 1/4"		1
	57	MK130E-DPI		DIGITAL CONTROLLER		1
	56	MK260E-PCP		PLASTIC CONTROL PANEL		1
	55	MK90E-COP		CONTROLLER PANEL		1
	54	MK90E-GFD		GASKET FOR DRAIN		1
	53	MK260E-RDC		REDUCTION 1 / 2" - 1 / 4"		2
	52	N/A		N/A		-
	51	MK90E-BLT610		BOLT M6x10		8
	50	MK90E-CRT		CABINET REAR TOP		1
	49	MK90E-CAI		CABINET INSIDE		1
	48	MK90E-CNK2		CONNECTION CIT2		2
	47	MK90E-CPG		COUPLING CLAMP		5
	46	MK90E-FIE-Y		COMPRESSED AIR FILTER ELEMENT (Y)		1
	45	MK90E-FIE-X		COMPRESSED AIR FILTER ELEMENT (X)		1
	44	MK90E-ELK-Y		COMPRESSED AIR FILTER KIT (Y)		1
	43	MK90E-ELK-X		COMPRESSED AIR FILTER KIT (X)		1
	42	MK90E-ORG		ORING		5
	41	MK90E-CNK1		CONNECTION CIT1		1
	40	M-FNS-0200		FAN ON/OFF SWITCH		1
	39	M-HPS-0200		HIGH PRESSURE SWITCH		1
	38	MK90E-TDP		ADAPTOR T		1
	37	MK90E-CPT2		CUPPER T2		1
	36	M-DRI-0200		DRYER-DEHYDRATOR		1
	35	M-EXV-0200		EXPANSION VALVE		1
	34	MK100E-RTA3		ROTOLOCK ADAPTOR3		1
	33	MK260E-ELW2		ELBOW 2		1
	32	M-DBV-0200		DRAIN BALL VALVE		1
	31	M-SLV-0325-230		SOLENOID VALVE		1
	30	MK110E-RTA2		ROTOLOCK ADAPTOR2		1
	29	MK90E-IHE		INSULATION OF HEAT EXCHANGER		1
	28	MK90E-EXC		HEAT EXCHANGER		1
	27	M-STU-6000		CABINET STUD AND NUT		8
	26	MK90E-RVT4		RIVET Ø4		2
	25	M-RUN-0200		RUN CAPACITOR		1
	24	SEE.REF TABLE		COMPRESSOR START RELAY		1
	23	MK110E-TRM		THERMINAL BLOCK		1
	22	SEE.REF TABLE		COMPRESSOR START CAPACITOR		1
	21	MK90E-ELBS		ELECTRICAL BOX LOWER SUPPORT PLATE		1
	20	MK170E-CHV		CHECH VALVE		2
	19	MK260E-WHR22		WASHER Ø22xØ8,5x2,5		4
	18	MK150E-BLT840		BOLT M8x40		4
	17	MK90E-CPT1		CUPPER T1		2
	16	M-BYV-0400		BY-PASS VALVE		1
	15	MK130E-RTA1		ROTOLOCK ADAPTOR1		1
	14	MK260E-STC		SETTING THE CONNECTION		1
	13	SEE.REF TABLE		COMPRESSOR OVERLOAD PROTECTOR		1
	12	SEE.REF TABLE		COMPRESSOR ELECTRICAL BOX		1
	11	SEE.REF TABLE		COMPRESSOR		1
	10	MK90E-BLT412		BOLT M4x12		30
	9	MK110E-WHR20		WASHER Ø20xØ4,3x1,5		1
	8	MK110E-BLT414		BOLT M4x14mm		1
	7	MK110E-NT4		NUT M4		4
	6	MK260E-BLT630		BOLT M6x30		4
	5	SEE.REF TABLE		FAN MOTOR		1
	4	M-GRL-0200		FAN GRILL		1
	3	SEE.REF TABLE		FAN BLADE		1
	2	MK90E-CON		CONDANSER		1
	1	MK90E-CAB		CABINET BASE		1
DWG SIZE	ITEM NO.	PART NO.		DESCRIPTION	REV	QTY
<b>PART LIST</b>						



# 8.1 - ED & Spare Part List

## IS 100







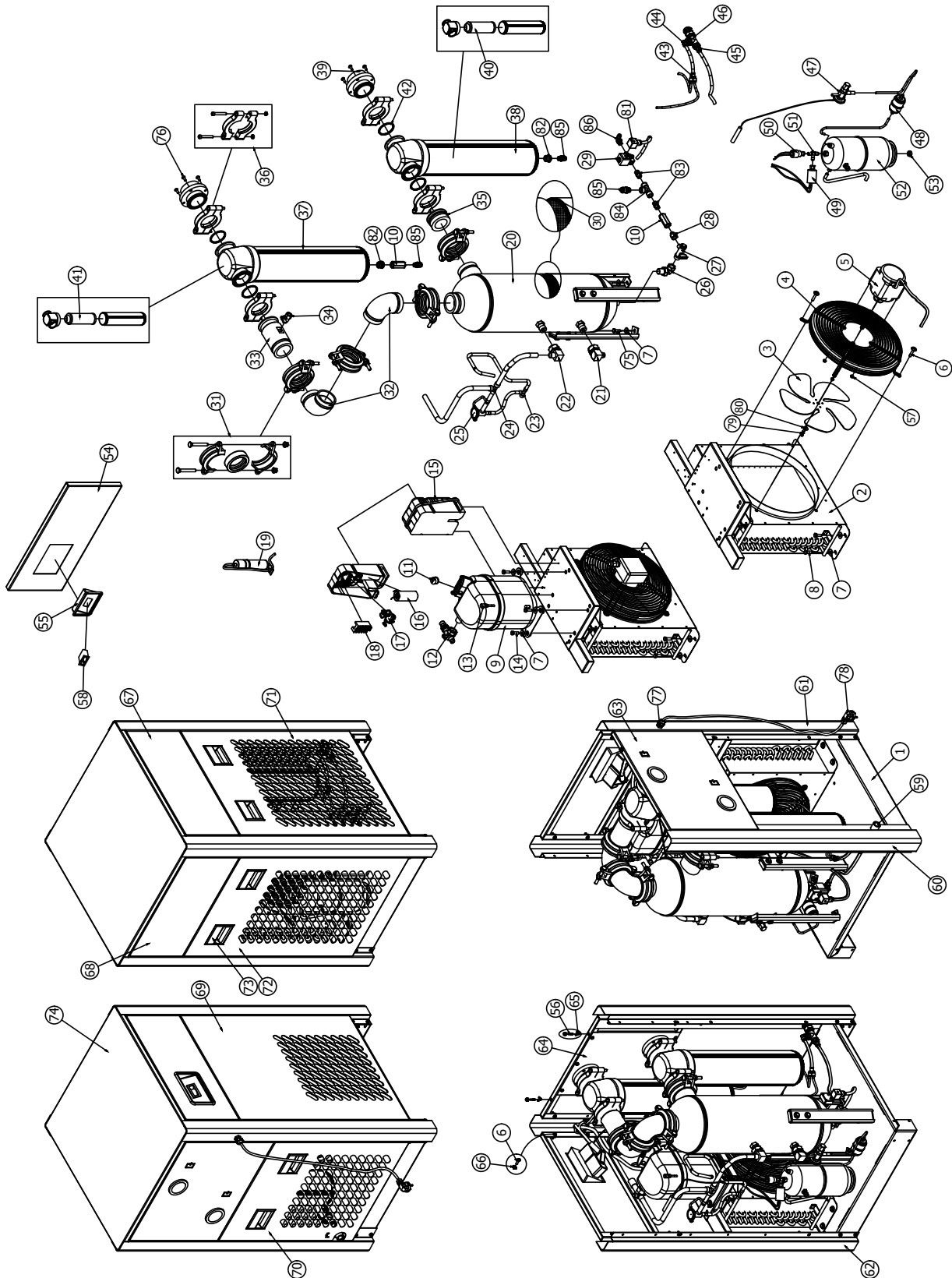
8.1 - ED & Spare Part List  
**IS 100**

	86	MK170E-EWF		90° 1 / 4" - 6mm ELBOW		1
	85	MK150E-FIT6		1 / 4" - 6mm FITTINGS		3
	84	MK170E-T1/4		1 / 4" T CONNECTOR		1
	83	MK170E-NIP1/4		1 / 4" NIPPLE		2
	82	MK260E-RDC		REDUCTION 1 / 2" - 1 / 4"		2
	81	MK260E-SVC		SOLENOID VALVE COIL		1
	80	MK110E-WHR		WASHER Ø20xØ4,3x1,5		1
	79	MK110E-BLT414		BOLT M4x14mm		1
	78	MK130E-PWC		POWER CABLE		1
	77	MK260E-CG11		CABLE GLAND PG11		1
	76	MK170E-BLT815		BOLT M8x15		8
	75	MK260E-BLT830		BOLT M8x30		3
	74	MK110E-CAT		CABINET TOP		1
	73	M-CHN-6000		CABINET HANDLE (NEW)		6
	72	MK110E-CLR		CABINET LOWER RIGHT		1
	71	MK110E-CRB		CABINET REAR BOTTOM		1
	70	MK110E-CBL		CABINET BOTTOM LEFT		1
	69	MK110E-CFB		CABINET FRONT BOTTOM		1
	68	MK110E-CUR		CABINET UPPER RIGHT		1
	67	MK110E-CRT		CABINET REAR TOP		1
	66	M-NUT-6000		CAGE NUTS		16
	65	M-FAS-6000		CABINET FASTENER		14
	64	MK110E-CAI		CABINET INSIDE		1
	63	MK110E-CUL		CABINET UPPER LEFT		1
	62	MK110E-CAL3		CABINET LEG3		2
	61	MK110E-CAL2		CABINET LEG2		1
	60	MK110E-CAL1		CABINET LEG1		1
	59	MK130E-DRS		DRAIN SLEEVE		1
	58	MK130E-DPI		DIGITAL CONTROLLER		1
	57	MK110E-NT4		NUT M4		4
	56	M-STU-6000		CABINET STUD AND NUT		14
	55	MK260E-PCP		PLASTIC CONTROL PANEL		1
	54	MK110E-COP		CONTROLLER PANEL		1
	53	MK150E-NT10		NUT M10		1
	52	MK110E-LIQ		LIQUID RECEIVER		1
	51	M-TSC-6000		T CONNECTION FOR SWITCH CAPILLARY		1
	50	M-HPS-0200		HIGH PRESSURE SWITCH		1
	49	M-FNS-0200		FAN ON/OFF SWITCH		1
	48	MK110E-DR1		DEHYDRATOR / FILTER DRIER		1
	47	M-EXV-0200		EXPANSION VALVE		1
	46	M-DFD-1200		DRAIN FIXING DEVICE		1
	45	MK260E-FTT2		FITTING 2		1
	44	MK260E-ELW		ELBOW FITTING		1
	43	MK170E-FTT1		FITTING 1		1
	42	MK170E-ORG		ORING		4
	41	MK100E-FIE-Y		COMPRESSED AIR FILTER ELEMENT (Y)		1
	40	MK100E-FIE-X		COMPRESSED AIR FILTER ELEMENT (X)		1
	39	MK110E-CNK3		CONNECTION CIT3		2
	38	MK100E-ELK-X		COMPRESSED AIR FILTER KIT (X)		1
	37	MK100E-ELK-Y		COMPRESSED AIR FILTER KIT (Y)		1
	36	MK170E-CPG2		COUPLING CLAMP2		4
	35	MK110E-CNK2		CONNECTION CIT2		1
	34	MK260E-BLV		BALL VALVE		1
	33	MK110E-CNK1		CONNECTION CIT1		1
	32	MK170E-ELW2		ELBOW 2		2
	31	MK260E-CPG1		COUPLING CLAMP1		4
	30	MK110E-IHE		INSULATION OF HEAT EXCHANGER		1
	29	M-SLV-0325-230		SOLENOID VALVE		1
	28	MK260E-DRN		DRAIN NUT		1
	27	M-DBV-0200		DRAIN BALL VALVE		1
	26	MK260E-ELW2		ELBOW 2		1
	25	M-BYV-0400		BY-PASS VALVE		1
	24	MK260E-CPT2		CUPPER T2		1
	23	MK260E-CPT1		CUPPER T1		1
	22	MK100E-RTA3		ROTOLOCK ADAPTOR3		1
	21	MK110E-RTA2		ROTOLOCK ADAPTOR2		1
	20	MK110E-EXC		HEAT EXCHANGER		1
	19	M-RUN-0200		RUN CAPACITOR		1
	18	MK110E-TRM		THERMINAL BLOCK		1
	17	SEE REF TABLE		COMPRESSOR START RELAY		1
	16	SEE REF TABLE		COMPRESSOR START CAPASITOR		1
	15	SEE REF TABLE		COMPRESSOR ELECTRICAL BOX		1
	14	MK150E-BLT840		BOLT M8x40		4
	13	MK260E-STC		SETTING THE CONNECTION		1
	12	MK130E-RTA1		ROTOLOCK ADAPTOR1		1
	11	SEE REF TABLE		COMPRESSOR OVERLOAD PROTECTOR		1
	10	MK170E-CHV		CHECH VALVE		2
	9	SEE REF TABLE		COMPRESSOR		1
	8	MK150E-BLT825		BOLT M8x25		4
	7	MK260E-WHR		WASHER Ø22x8,2x2,4		11
	6	MK260E-BLT630		BOLT M6x30		20
	5	SEE REF TABLE		FAN MOTOR		1
	4	M-GRL-0200		FAN GRILL		1
	3	SEE REF TABLE		FAN BLADE		1
	2	MK110E-CON		CONDANSER		1
	1	MK110E-CAB		CABINET BASE		1
DWG SIZE	ITEM NO.	PART NO.		DESCRIPTION	REV	QTY
PART LIST						



# 8.1 - ED & Spare Part List

## IS 110





8.1 - ED & Spare Part List  
**IS 110**

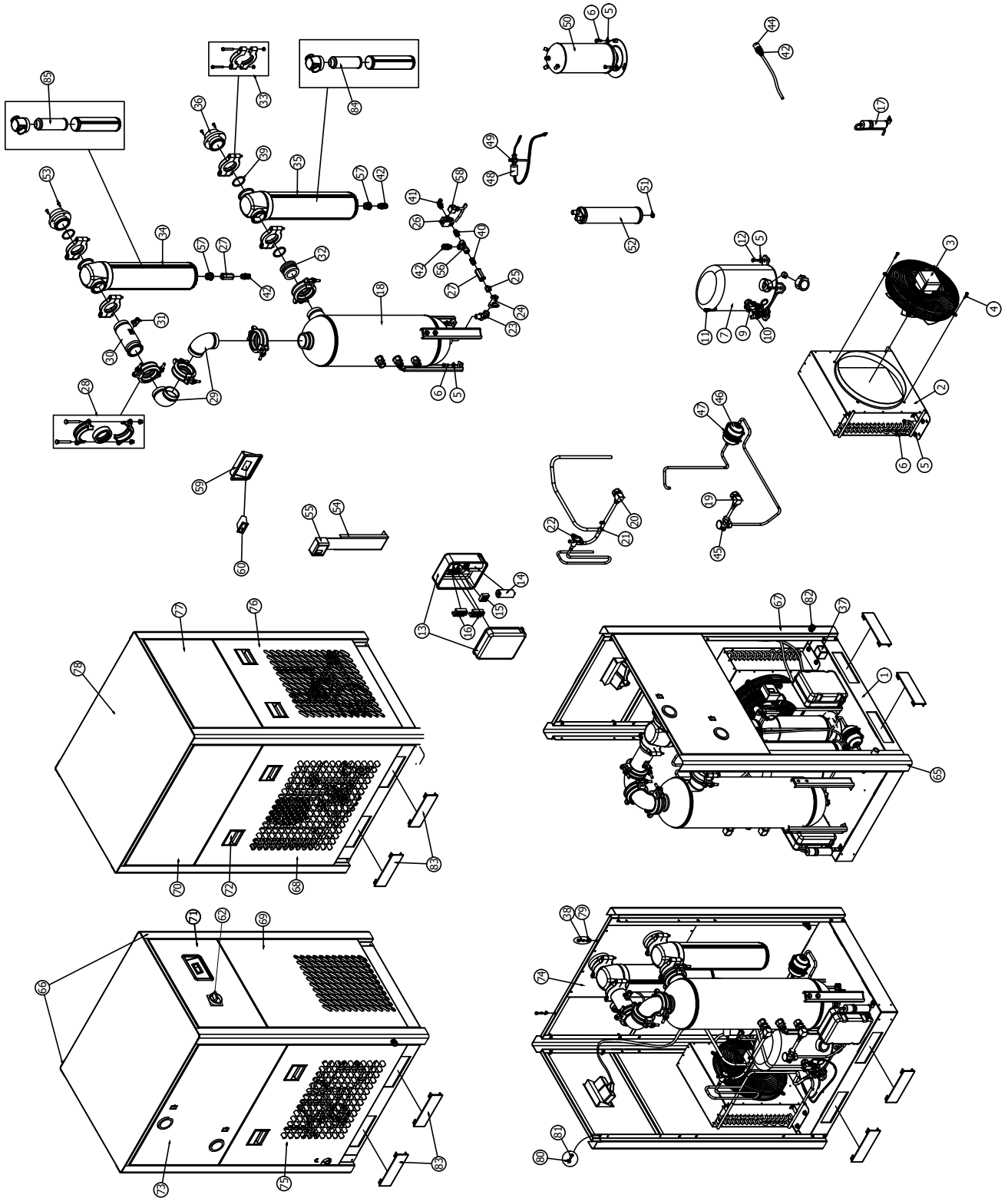
86	MK170E-EWF	90° 1 / 4" - 6mm ELBOW	1		
85	MK150E-FIT6	1 / 4" - 6mm FITTINGS	3		
84	MK170E-T1/4	1 / 4" T CONNECTOR	1		
83	MK170E-NIP1/4	1 / 4" NIPPLE	2		
82	MK260E-RDC	REDUCTION 1 / 2" - 1 / 4"	2		
81	MK260E-SVC	SOLENOID VALVE COIL	1		
80	MK110E-WHR	WASHER Ø20xØ4.3x1,5	1		
79	MK110E-BLT414	BOLT M4x14mm	1		
78	MK130E-PWC	POWER CABLE	1		
77	MK260E-CG11	CABLE GLAND PG11	1		
76	MK170E-BLT815	BOLT M8x15	8		
75	MK260E-BLT830	BOLT M8x30	3		
74	MK110E-CAT	CABINET TOP	1		
73	M-CHN-6000	CABINET HANDLE (NEW)	6		
72	MK110E-CLR	CABINET LOWER RIGHT	1		
71	MK110E-CRB	CABINET REAR BOTTOM	1		
70	MK110E-CBL	CABINET BOTTOM LEFT	1		
69	MK110E-CFB	CABINET FRONT BOTTOM	1		
68	MK110E-CUR	CABINET UPPER RIGHT	1		
67	MK110E-CRT	CABINET REAR TOP	1		
66	M-NUT-6000	CAGE NUTS	16		
65	M-FAS-6000	CABINET FASTENER	14		
64	MK110E-CAI	CABINET INSIDE	1		
63	MK110E-CUL	CABINET UPPER LEFT	1		
62	MK110E-CAL3	CABINET LEG3	2		
61	MK110E-CAL2	CABINET LEG2	1		
60	MK110E-CAL1	CABINET LEG1	1		
59	MK130E-DRS	DRAIN SLEEVE	1		
58	MK130E-DPI	DIGITAL CONTROLLER	1		
57	MK110E-NT4	NUT M4	4		
56	M-STU-6000	CABINET STUD AND NUT	14		
55	MK260E-PCP	PLASTIC CONTROL PANEL	1		
54	MK110E-COP	CONTROLLER PANEL	1		
53	MK150E-NT10	NUT M10	1		
52	MK110E-LIQ	LIQUID RECEIVER	1		
51	M-TSC-6000	T CONNECTION FOR SWITCH CAPILLARY	1		
50	M-HPS-0200	HIGH PRESSURE SWITCH	1		
49	M-FNS-0200	FAN ON/OFF SWITCH	1		
48	SEE.REF TABLE	DEHYDRATOR / FILTER DRIER	1		
47	M-EXV-0250	EXPANSION VALVE	1		
46	M-DFD-1200	DRAIN FIXING DEVICE	1		
45	MK260E-FTT2	FITTING 2	1		
44	MK260E-ELW	ELBOW FITTING	1		
43	MK170E-FTT1	FITTING 1	1		
42	MK170E-ORG	ORING	4		
41	MK100E-FIE-Y	COMPRESSED AIR FILTER ELEMENT (Y)	1		
40	MK100E-FIE-X	COMPRESSED AIR FILTER ELEMENT (X)	1		
39	MK110E-CNK3	CONNECTION CIT3	2		
38	MK100E-ELK-X	COMPRESSED AIR FILTER KIT (X)	1		
37	MK100E-ELK-Y	COMPRESSED AIR FILTER KIT (Y)	1		
36	MK170E-CPG2	COUPLING CLAMP2	4		
35	MK110E-CNK2	CONNECTION CIT2	1		
34	MK260E-BLV	BALL VALVE	1		
33	MK110E-CNK1	CONNECTION CIT1	1		
32	MK170E-ELW2	ELBOW 2	2		
31	MK260E-CPG1	COUPLING CLAMP1	4		
30	MK110E-IHE	INSULATION OF HEAT EXCHANGER	1		
29	M-SLV-0325-230	SOLENOID VALVE	1		
28	MK260E-DRN	DRAIN NUT	1		
27	M-DBV-0200	DRAIN BALL VALVE	1		
26	MK260E-ELW2	ELBOW 2	1		
25	M-BYV-0400	BY-PASS VALVE	1		
24	MK260E-CPT2	CUPPER T2	1		
23	MK260E-CPT1	CUPPER T1	1		
22	MK100E-RTA3	ROTOLOCK ADAPTOR3	1		
21	MK110E-RTA2	ROTOLOCK ADAPTOR2	1		
20	MK110E-EXC	HEAT EXCHANGER	1		
19	M-RUN-0200	RUN CAPACITOR	1		
18	MK110E-TRM	THERMINAL BLOCK	1		
17	SEE.REF TABLE	COMPRESSOR START RELAY	1		
16	SEE.REF TABLE	COMPRESSOR START CAPASITOR	1		
15	SEE.REF TABLE	COMPRESSOR ELECTRICAL BOX	1		
14	MK150E-BLT840	BOLT M8x40	4		
13	MK260E-STC	SETTING THE CONNECTION	1		
12	MK130E-RTA1	ROTOLOCK ADAPTOR1	1		
11	SEE.REF TABLE	COMPRESSOR OVERLOAD PROTECTOR	1		
10	MK170E-CHV	CHECH VALVE	2		
9	SEE.REF TABLE	COMPRESSOR	1		
8	MK150E-BLT825	BOLT M8x25	4		
7	MK260E-WHR	WASHER Ø22x8.2x2,4	11		
6	MK260E-BLT630	BOLT M6x30	20		
5	SEE.REF TABLE	FAN MOTOR	1		
4	M-GRL-0200	FAN GRILL	1		
3	SEE.REF TABLE	FAN BLADE	1		
2	MK110E-CON	CONDANSER	1		
1	MK110E-CAB	CABINET BASE	1		
DWG SIZE	ITEM NO.	PART NO.	DESCRIPTION	REV	QTY

PART LIST



# 8.1 - ED & Spare Part List

## IS 120





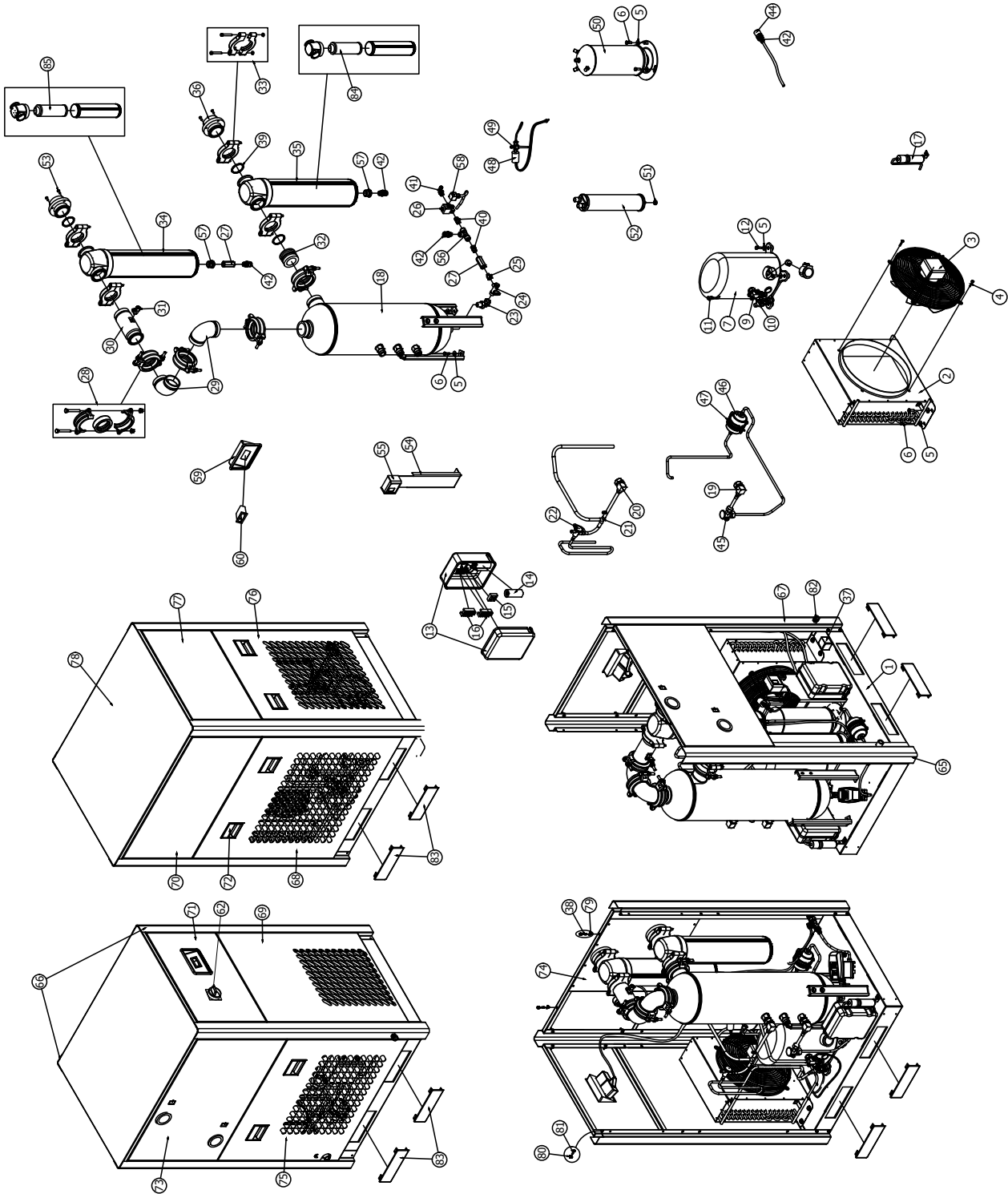
8.1 - ED & Spare Part List  
**IS 120**

85	MK130E-FIE-Y		COMPRESSED AIR FILTER ELEMENT (Y)		1
84	MK130E-FIE-X		COMPRESSED AIR FILTER ELEMENT (X)		1
83	MK190E-CFS		REMOVABLE SHIELD		4
82	M-CCP-6000		CONDUIT FOR CONTROL PANEL		1
81	MK260E-BLT825		BOLT M8x25		24
80	M-NUT-6000		CAGE NUTS		24
79	M-FAS-6000		CABINET FASTENER		14
78	MK130E-CAT		CABINET TOP		1
77	MK130E-CRT		CABINET REAR TOP		1
76	MK130E-CRB		CABINET REAR BOTTOM		1
75	MK130E-CBL		CABINET BOTTOM LEFT		1
74	MK130E-CAI		CABINET INSIDE		1
73	MK130E-CUL		CABINET UPPER LEFT		1
72	M-CHN-6000		CABINET HANDLE (NEW)		6
71	MK130E-COP		CONTROLLER PANEL		1
70	MK130E-CUR		CABINET UPPER RIGHT		1
69	MK130E-CFB		CABINET FRONT BOTTOM		1
68	MK130E-CLR		CABINET LOWER RIGHT		1
67	MK130E-CAL3		CABINET LEG3		1
66	MK130E-CAL2		CABINET LEG2		2
65	MK130E-CAL1		CABINET LEG1		1
64	N/A		N/A		-
63	N/A		N/A		-
62	M-MNS-1200		MAIN SWITCH		1
61	N/A		N/A		-
60	MK130E-DPI		DIGITAL CONTROLLER		1
59	MK260E-PCP		PLASTIC CONTROL PANEL		1
58	MK260E-SVC		SOLENOID VALVE COIL		1
57	MK260E-RDC		REDUCTION 1 / 2" - 1 / 4"		2
56	MK170E-T1/4		1 / 4" T CONNECTOR		1
55	M-HPS-0150-115-1-60		HIGH PRESSURE SWICH		1
54	MK130E-SPJ		SUPPORT PLATE JUNCTION		1
53	MK170E-BLT815		BOLT M8x15		8
52	M-SPR-0400		SEPARATOR		1
51	MK150E-NT10		NUT M10		1
50	MK130E-LIQ		LIQUID RECEIVER		1
49	M-TSC-6000		T CONNECTION FOR SWITCH CAPILLARY		1
48	M-FNS-0200		FAN ON/OFF SWITCH		1
47	M-CLP-1200		CLAMP		1
46	M-DR-0400		DRYER-DEHYDRATOR		1
45	M-EXV-0250		EXPANSION VALVE		1
44	MK130E-DRS		DRAIN SLEEVE		1
43	N/A		N/A		-
42	MK150E-FIT6		1 / 4" - 6mm FITTINGS		4
41	MK260E-EWF		ELBOW FITTING		1
40	MK170E-NIP1/4		1 / 4" NIPPLE		2
39	MK170E-ORG		ORING		4
38	M-STU-6000		CABINET STUD AND NUT		14
37	MK130E-PBX		POWER BOX		1
36	MK130E-CNK3		CONNECTION CIT3		2
35	MK130E-ELK-X		COMPRESSED AIR FILTER KIT (X)		1
34	MK130E-ELK-Y		COMPRESSED AIR FILTER KIT (Y)		1
33	MK170E-CPG2		COUPLING CLAMP2		4
32	MK130E-CNK2		CONNECTION CIT2		2
31	MK260E-BLV		BALL VALVE		1
30	MK130E-CNK1		CONNECTION CIT1		1
29	MK170E-ELW2		ELBOW2		2
28	MK260E-CPG1		COUPLING CLAMP1		3
27	MK170E-CHV		CHECH VALVE		2
26	SEE.REF TABLE		SOLENOID VALVE		1
25	MK260E-DRN		DRAIN NUT		1
24	M-DBV-0200		DRAIN BALL VALVE		1
23	MK260E-ELW2		ELBOW2		1
22	M-BYV-0400		BY-PASS VALVE		1
21	MK130E-CPT1		CUPPER T1		1
20	M-RTA-5000-2		ROTOLOCK VALVE ADAPTOR FOR HEAT EXCHANGER		1
19	MK260E-RTA3		ROTOLOCK ADAPTOR3		1
18	MK170E-EXC		HEAT EXCHANGER		1
17	SEE.REF TABLE		RUN CAPACITOR		1
16	MK130E-TRM1		THERMINAL BLOCK1		1
15	SEE.REF TABLE		COMPRESSOR START RELAY		1
14	SEE.REF TABLE		COMPRESSOR START CAPACITOR		1
13	SEE.REF TABLE		COMPRESSOR ELECTRIC BOX		1
12	MK260E-BLT850		BOLT M8x50		4
11	MK260E-STC		SETTING THE CONNECTION		1
10	MK130E-RTA2		ROTOLOCK ADAPTOR2		1
9	MK130E-RTA1		ROTOLOCK ADAPTOR1		1
8	N/A		N/A		-
7	SEE.REF TABLE		COMPRESSOR		1
6	MK150E-BLT825		BOLT M8x25		34
5	MK260E-WHR22		WASHER Ø22x8,2x2,4		14
4	MK260E-BLT630		BOLT M6x30		4
3	SEE.REF TABLE		FAN MOTOR		1
2	MK120E-CON		CONDANSER		1
1	MK130E-CAB		CABINET BASE		1
DWG SIZE	ITEM NO.	PART NO.	DESCRIPTION	REV	QTY
PART LIST					



# 8.1 - ED & Spare Part List

## IS 130





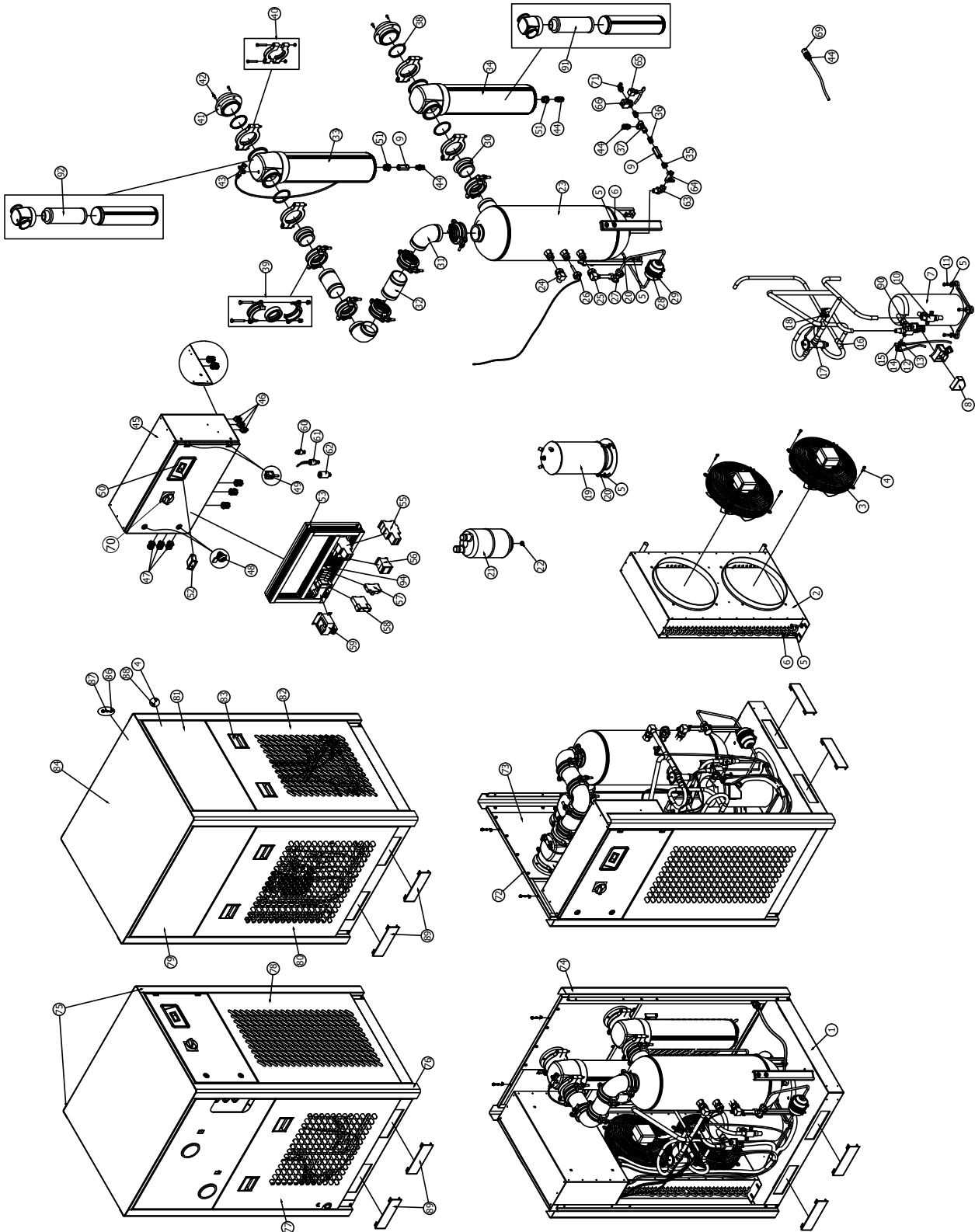
8.1 - ED & Spare Part List  
**IS 130**

	85	MK130E-FIE-Y	COMPRESSED AIR FILTER ELEMENT (Y)	1	
	84	MK130E-FIE-X	COMPRESSED AIR FILTER ELEMENT (X)	1	
	83	MK190E-CFS	REMOVABLE SHIELD	4	
	82	M-CCP-6000	CONDUIT FOR CONTROL PANEL	1	
	81	MK260E-BLT630	BOLT M6x30	24	
	80	M-NUT-6000	CAGE NUTS	24	
	79	M-FAS-6000	CABINET FASTENER	14	
	78	MK130E-CAT	CABINET TOP	1	
	77	MK130E-CRT	CABINET REAR TOP	1	
	76	MK130E-CRB	CABINET REAR BOTTOM	1	
	75	MK130E-CBL	CABINET BOTTOM LEFT	1	
	74	MK130E-CAI	CABINET INSIDE	1	
	73	MK130E-CUL	CABINET UPPER LEFT	1	
	72	M-CHN-6000	CABINET HANDLE (NEW)	6	
	71	MK130E-COP	CONTROLLER PANEL	1	
	70	MK130E-CUR	CABINET UPPER RIGHT	1	
	69	MK130E-CFB	CABINET FRONT BOTTOM	1	
	68	MK130E-CLR	CABINET LOWER RIGHT	1	
	67	MK130E-CAL3	CABINET LEG3	1	
	66	MK130E-CAL2	CABINET LEG2	2	
	65	MK130E-CAL1	CABINET LEG1	1	
	64	N/A	N/A	-	
	63	N/A	N/A	-	
	62	M-MNS-1200	MAIN SWITCH	1	
	61	N/A	N/A	-	
	60	MK130E-DPI	DIGITAL CONTROLLER	1	
	59	MK260E-PCP	PLASTIC CONTROL PANEL	1	
	58	MK260E-SVC	SOLENOID VALVE COIL	1	
	57	MK260E-RDC	REDUCTION 1 / 2" - 1 / 4"	2	
	56	MK170E-T1/4	1 / 4" T CONNECTOR	1	
	55	M-HPS-0150-115-1-60	HIGH PRESSURE SECURITY SWITCH	1	
	54	MK130E-SPJ	SUPPORT PLATE JUNCTION	1	
	53	MK170E-BLT815	BOLT M8x15	8	
	52	M-SPR-0400	SEPARATOR	1	
	51	MK150E-NT10	NUT M10	1	
	50	MK130E-LIQ	LIQUID RECEIVER	1	
	49	M-TSC-6000	T CONNECTION FOR SWITCH CAPILLARY	1	
	48	M-FNS-0200	FAN ON/OFF SWITCH	1	
	47	M-CLP-1200	CLAMP	1	
	46	M-DR1-0400	DRYER-DEHYDRATOR	1	
	45	M-EXV-0500	EXPANSION VALVE	1	
	44	MK130E-DRS	DRAIN SLEEVE	1	
	43	M-DFD-1200	DRAIN FIXING DEVICE	1	
	42	MK150E-FIT6	1 / 4" - 6mm FITTINGS	4	
	41	MK260E-EWF	ELBOW FITTING	1	
	40	MK170E-NIP1/4	1 / 4" NIPPLE	2	
	39	MK170E-ORG	ORING	4	
	38	M-STU-6000	CABINET STUD AND NUT	14	
	37	MK130E-PBX	POWER BOX	1	
	36	MK130E-CNK3	CONNECTION CIT3	2	
	35	MK130E-ELK-X	COMPRESSED AIR FILTER KIT (X)	1	
	34	MK130E-ELK-Y	COMPRESSED AIR FILTER KIT (Y)	1	
	33	MK170E-CPG2	COUPLING CLAMP2	4	
	32	MK130E-CNK2	CONNECTION CIT2	2	
	31	MK260E-BLV	BALL VALVE	1	
	30	MK130E-CNK1	CONNECTION CIT1	1	
	29	MK170E-ELW2	ELBOW2	2	
	28	MK260E-CPG1	COUPLING CLAMP1	3	
	27	MK170E-CHV	CHECH VALVE	2	
	26	SEE.REF TABLE	SOLENOID VALVE	1	
	25	MK260E-DRN	DRAIN NUT	1	
	24	M-DBV-0200	DRAIN BALL VALVE	1	
	23	MK260E-ELW2	ELBOW2	1	
	22	M-BYV-0400	BY-PASS VALVE	1	
	21	MK130E-CPT1	CUPPER T1	1	
	20	M-RTA-5000-2	ROTOLOCK VALVE ADAPTOR FOR HEAT EXCHANGER	1	
	19	MK260E-RTA3	ROTOLOCK ADAPTOR3	1	
	18	MK170E-EXC	HEAT EXCHANGER	1	
	17	SEE.REF TABLE	RUN CAPACITOR	1	
	16	MK130E-TRM1	THERMIAL BLOCK1	1	
	15	SEE.REF TABLE	COMPRESSOR START RELAY	1	
	14	SEE.REF TABLE	COMPRESSOR START CAPACITOR	1	
	13	SEE.REF TABLE	COMPRESSOR ELECTRICAL BOX	1	
	12	MK260E-BLT850	BOLT M6x50	4	
	11	MK260E-STC	SETTING THE CONNECTION	1	
	10	MK130E-RTA2	ROTOLOCK ADAPTOR2	1	
	9	MK130E-RTA1	ROTOLOCK ADAPTOR1	1	
	8	N/A	N/A	-	
	7	SEE.REF TABLE	COMPRESSOR	1	
	6	MK150E-BLT825	BOLT M8x25	34	
	5	MK260E-WHR22	WASHER Ø22x8,2x2,4	14	
	4	MK260E-BLT630	BOLT M6x30	4	
	3	SEE.REF TABLE	FAN MOTOR	1	
	2	MK130E-CON	CONDANSER	1	
	1	MK130E-CAB	CABINET BASE	1	
DWG SIZE	ITEM NO.	PART NO.	DESCRIPTION	REV	QTY
PART LIST					



# 8.1 - ED & Spare Part List

## IS 140







8.1 - ED & Spare Part List

**IS 140**

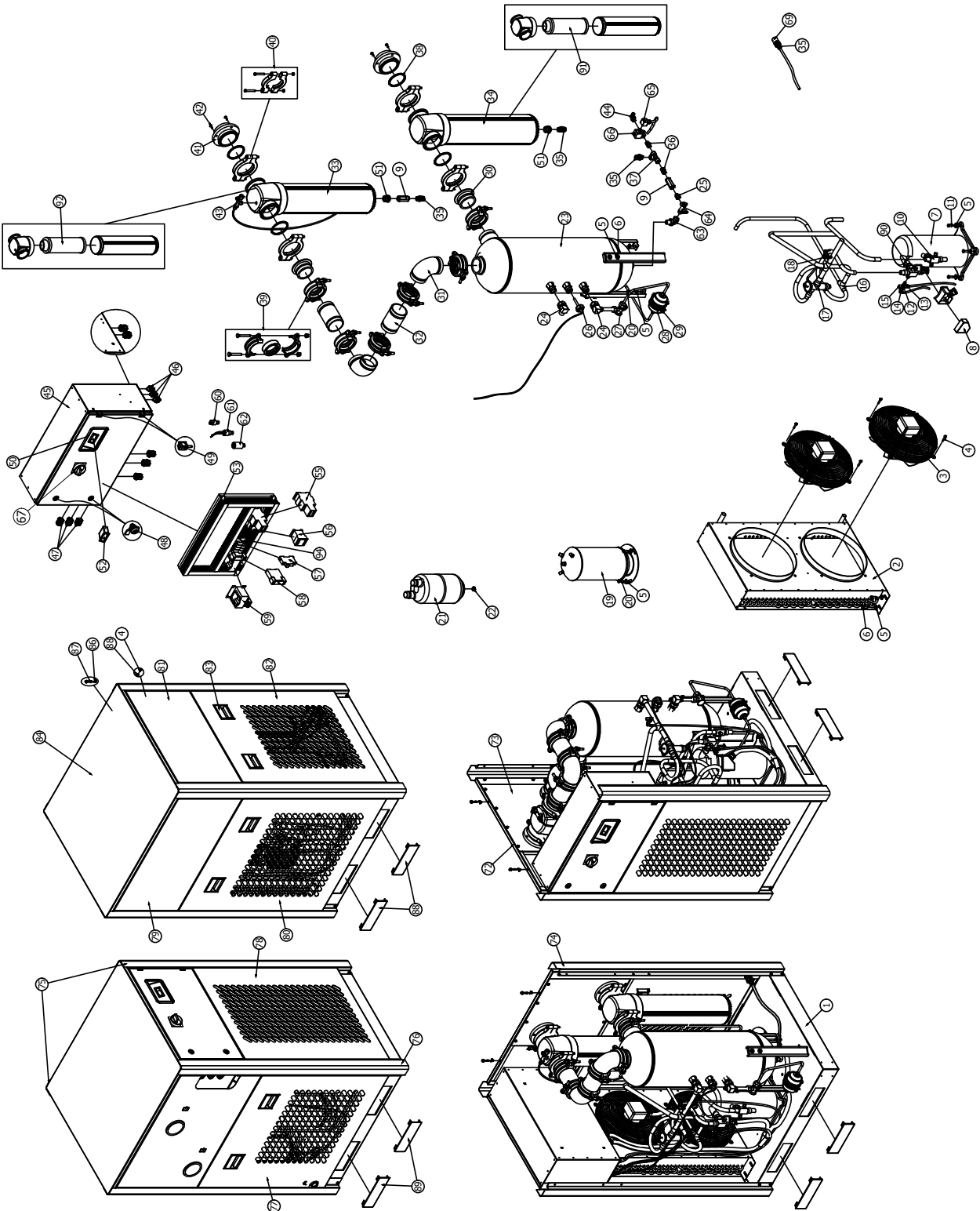
	94	M-FHL-6000		LOW VOLTAGE FUSE HOLDER		1
	93	N/A		N/A		-
	92	MK150E-FIE-Y		COMPRESSED AIR FILTER ELEMENT (Y)		1
	91	MK150E-FIE-X		COMPRESSED AIR FILTER ELEMENT (X)		1
	90	MK150E-RTA2		ROTOLOCK ADAPTOR2		1
	89	MK190E-CFS		REMOVABLE SHIELD		4
	88	M-NUT-6000		CAGE NUTS		26
	87	M-STU-6000		CABINET STUD AND NUT		14
	86	M-FAS-6000		CABINET FASTENER		14
	85	N/A		N/A		-
	84	MK150E-CAT		CABINET TOP		1
	83	M-CHN-6000		CABINET HANDLE (NEW)		1
	82	MK150E-CRB		CABINET REAR BOTTOM		1
	81	MK150E-CRT		CABINET REAR TOP		1
	80	MK150E-CLR		CABINET LOWER RIGHT		1
	79	MK150E-CUR		CABINET UPPER RIGHT		1
	78	MK150E-CFB		CABINET FRONT BOTTOM		1
	77	MK150E-CBL		CABINET BOTTOM LEFT		1
	76	MK150E-CAL3		CABINET LEG3		1
	75	MK150E-CAL2		CABINET LEG2		2
	74	MK150E-CAL1		CABINET LEG1		1
	73	MK150E-CAI		CABINET INSIDE		1
	72	MK150E-CUL		CABINET UPPER LEFT		1
	71	MK170E-EWF		ELBOW FITTINGS		2
	70	MK190E-MNS		MAIN SWITCH		1
	69	MK150E-DRS		DRAIN SLEEVE		1
	68	M-DFD-1200		DRAIN FIXING DEVICE		1
	67	M-MMV-6000		MEMBRANE VALVE		1
	66	M-SLV-0325-230		SOLENOID VALVE		1
	65	MK260E-SVC		SOLENOID VALVE COIL		1
	64	M-DBV-6000		DRAIN BALL VALVE		1
	63	MK260E-ELW2		ELBOW2		1
	62	M-FNS-0200		FAN ON/OFF SWITCH		1
	61	M-HPS-0200		HIGH PRESSURE SECURITY SWITCH		1
	60	MK260E-LPS		LOW PRESSURE SWITCH		1
	59	MK260E-TRF		TRANSFORMERS		1
	58	M-PPR-6000		PHASE PROTECTION RELAY		1
	57	M-FHH-6000		HIGH VOLTAGE FUSE HOLDER		4
	56	M-FCN-1200		FAN CONTACTOR		1
	55	M-CNT-1200		CONTACTOR		1
	54	N/A		N/A		-
	53	MK150E-ELP		ELECTRICAL PANEL		1
	52	MK190E-DPI-24		DIGITAL CONTROLLER		1
	51	MK260E-RDC		REDUCTION 1 / 2" - 1 / 4"		2
	50	MK260E-PCP		PLASTIC CONTROL PANEL		1
	49	MK260E-HNG		HINGE		2
	48	MK260E-DLK		DOOR LOCK		2
	47	M-CCP-6000		CONDUIT FOR CONTROL PANEL		8
	46	MK260E-SCF		SWITCH CONNECTION FITTING		3
	45	MK150E-ELB		ELECTRICAL BOX		1
	44	MK150E-FIT6		1 / 4" - 6mm FITTINGS		4
	43	MK260E-BLV		BALL VALVE		1
	42	MK170E-BLT815		BOLT M8x15		8
	41	MK170E-CNK2		CONNECTION CIT2		2
	40	MK170E-CPG2		COUPLING CLAMP 2		4
	39	MK260E-CPG1		COUPLING CLAMP 1		6
	38	MK170E-ORG		ORING		1
	37	MK170E-T1/4		1 / 4" T CONNECTOR		1
	36	MK170E-NIP1/4		1 / 4" NIPPLE		2
	35	MK260E-DRN		DRAIN NUT		1
	34	MK150E-ELK-X		COMPRESSED AIR FILTER KIT (X)		1
	33	MK150E-ELK-Y		COMPRESSED AIR FILTER KIT (Y)		1
	32	MK150E-CPP		COUPLING PIPE		2
	31	MK170E-ELW1		ELBOW1		2
	30	MK150E-CNK1		CONNECTION CIT1		2
	29	M-CLP-1200		CLAMP		1
	28	M-DRI-0400		DRIER-DEHYDRATOR		1
	27	M-EXV-1000		EXPANSION VALVE		1
	26	MK150E-SSD		SENSOR ADAPTOR		1
	25	MK260E-RTA3		ROTOLOCK ADAPTOR3		1
	24	M-RTA-5000-1		ROTOLOCK VALVE ADAPTOR FOR HEAT EXCHANGER		2
	23	MK260E-EXC		HEAT EXCHANGER		1
	22	MK150E-NT10		NUT M10		1
	21	M-SPR-0850		SEPARATOR		1
	20	MK260E-BLT830		BOLT M8x30		6
	19	MK150E-LIQ		LIQUID RECEIVER		1
	18	MK260E-CPT2		CUPPER T2		1
	17	M-BYV-1200		BY-PASS VALVE		1
	16	MK260E-CPT1		CUPPER T1		2
	15	MK260E-STC		SETTING THE CONNECTION		1
	14	MK260E-CTC2		CAPILLARY TUBE CONNECTION2		2
	13	MK260E-CTC1		CAPILLARY TUBE CONNECTION1		1
	12	M-TSC-6000		T CONNECTION FOR SWITCH CAPILLARY		1
	11	MK260E-BLT850		BOLT M8x50		4
	10	MK160E-RTA1		ROTOLOCK ADAPTOR1		1
	9	MK170E-CHV		CHECH VALVE		2
	8	MK150E-CEC		COMPRESSOR ELECTRICAL BOX - COVER		1
	7	SEE.REF TABLE		COMPRESSOR		1
	6	MK150E-BLT825		BOLT M8x25		13
	5	MK260E-WHR		WASHER 22x8,2x2,4		23
	4	MK260E-BLT630		BOLT M6x30		30
	3	SEE.REF TABLE		FAN MOTOR		2
	2	MK140E-CON		CONDANSER		1
	1	MK150E-CAB		CABINET BASE		1
DWG SIZE	ITEM NO.	PART NO.		DESCRIPTION	REV	QTY

PART LIST



# 8.1 - ED & Spare Part List

## IS 150





8.1 - ED & Spare Part List  
**IS 150**

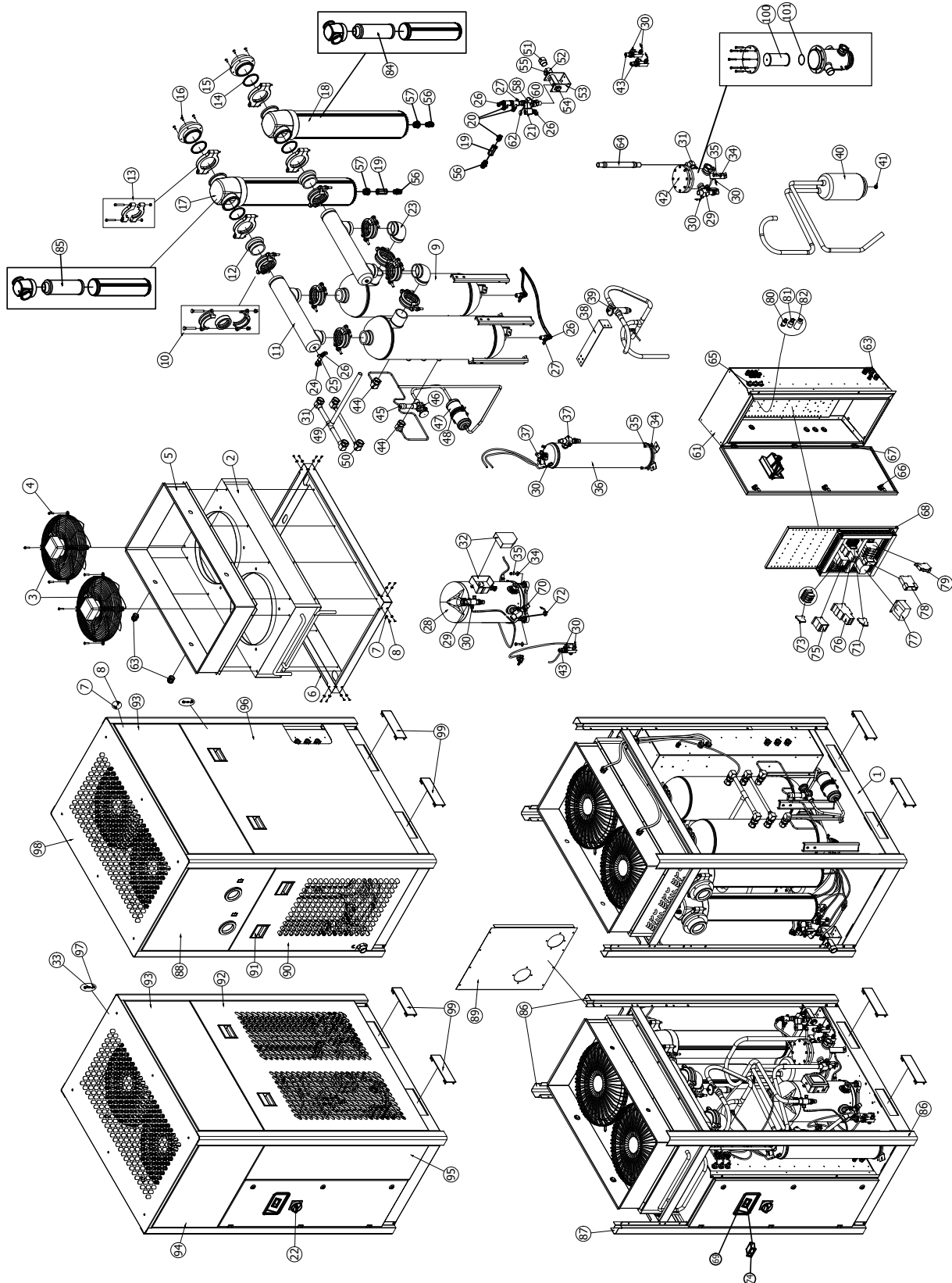
	94	M-FHL-6000		LOW VOLTAGE FUSE HOLDER		1
	93	N/A		N/A		-
	92	MK150E-FIE-Y		COMPRESSED AIR FILTER ELEMENT (Y)		1
	91	MK150E-FIE-X		COMPRESSED AIR FILTER ELEMENT (X)		1
	90	MK150E-RTA2		ROTOLOCK ADAPTOR2		1
	89	MK190E-CFS		REMOVABLE SHIELD		4
	88	M-NUT-6000		CAGE NUTS		26
	87	M-STU-6000		CABINET STUD AND NUT		14
	86	M-FAS-6000		CABINET FASTENER		14
	85	N/A		N/A		-
	84	MK150E-CAT		CABINET TOP		1
	83	M-CHN-6000		CABINET HANDLE (NEW)		6
	82	MK150E-CRB		CABINET REAR BOTTOM		1
	81	MK150E-CRT		CABINET REAR TOP		1
	80	MK150E-CLR		CABINET LOWER RIGHT		1
	79	MK150E-CUR		CABINET UPPER RIGHT		1
	78	MK150E-CFB		CABINET FRONT BOTTOM		1
	77	MK150E-CBL		CABINET BOTTOM LEFT		1
	76	MK150E-CAL3		CABINET LEG3		1
	75	MK150E-CAL2		CABINET LEG2		2
	74	MK150E-CAL1		CABINET LEG1		1
	73	MK150E-CAI		CABINET INSIDE		1
	72	MK150E-CUL		CABINET UPPER LEFT		1
	71	N/A		N/A		-
	70	N/A		N/A		-
	69	MK150E-DRS		DRAIN SLEEVE		1
	68	N/A		N/A		-
	67	MK190E-MNS		MAIN SWITCH		1
	66	M-SLV-0325-230		SOLENOID VALVE		1
	65	MK260E-SVC		SOLENOID VALVE COIL		1
	64	M-DBV-0200		DRAIN BALL VALVE		1
	63	MK260E-ELW2		ELBOW2		1
	62	M-FNS-0200		FAN ON/OFF SWITCH		1
	61	M-HPS-0200		HIGH PRESSURE SECURITY SWITCH		1
	60	MK260E-LPS		LOW PRESSURE SWITCH		1
	59	MK260E-TRF		TRANSFORMERS		1
	58	M-PPR-6000		PHASE PROTECTION RELAY		1
	57	M-FHH-6000		HIGH VOLTAGE FUSE HOLDER		4
	56	M-FCN-1200		FAN CONTACTOR		1
	55	M-CNT-1200		CONTACTOR		1
	54	N/A		N/A		-
	53	MK150E-ELP		ELECTRICAL PANEL		1
	52	MK190E-DPI-24		DIGITAL CONTROLLER		1
	51	MK260E-RDC		REDUCTION 1/2" - 1/4"		2
	50	MK260E-PCP		PLASTIC CONTROL PANEL		1
	49	MK260E-HNG		HINGE		2
	48	MK260E-DLK		DOOR LOCK		2
	47	M-CCP-6000		CONDUIT FOR CONTROL PANEL		8
	46	MK260E-SCF		SWITCH CONNECTION FITTING		3
	45	MK150E-ELB		ELECTRICAL BOX		1
	44	MK170E-EWF		ELBOW FITTINGS		2
	43	MK260E-BLV		BALL VALVE		1
	42	MK170E-BLT815		BOLT M8x15		8
	41	MK170E-CNK2		CONNECTION CIT2		2
	40	MK170E-CPG2		COUPLING CLAMP 2		4
	39	MK260E-CPG1		COUPLING CLAMP 1		6
	38	MK170E-ORG		ORING		1
	37	MK170E-T1/4		1/4" T CONNECTOR		1
	36	MK170E-NIP1/4		1/4" NIPPLE		2
	35	MK150E-FIT6		1/4" - 6mm FITTINGS		4
	34	MK150E-ELK-X		COMPRESSED AIR FILTER KIT (X)		1
	33	MK150E-ELK-Y		COMPRESSED AIR FILTER KIT (Y)		1
	32	MK150E-CPP		COUPLING PIPE		2
	31	MK170E-ELW1		ELBOW1		2
	30	MK150E-CNK1		CONNECTION CIT1		2
	29	M-CLP-1200		CLAMP		1
	28	M-DRI-0400		DRIER-DEHYDRATOR		1
	27	MK150E-EXP		EXPANSION VALVE		1
	26	MK150E-SSD		SENSOR ADAPTOR		1
	25	MK260E-DRN		DRAIN NUT		1
	24	M-RTA-5000-1		ROTOLOCK VALVE ADAPTOR FOR HEAT EXCHANGER		2
	23	MK260E-EXC		HEAT EXCHANGER		1
	22	MK150E-NT10		NUT M10		1
	21	M-SPR-0850		SEPARATOR		1
	20	MK260E-BLT830		BOLT M8x30		6
	19	MK150E-LIQ		LIQUID RECEIVER		1
	18	MK260E-CPT2		CUPPER T2		1
	17	M-BYV-1200		BY-PASS VALVE		1
	16	MK260E-CPT1		CUPPER T1		2
	15	MK260E-STC		SETTING THE CONNECTION		1
	14	MK260E-CTC2		CAPILLARY TUBE CONNECTION2		2
	13	MK260E-CTC1		CAPILLARY TUBE CONNECTION1		1
	12	M-TSC-6000		T CONNECTION FOR SWITCH CAPILLARY		1
	11	MK260E-BLT850		BOLT M8x50		4
	10	MK160E-RTA1		ROTOLOCK ADAPTOR1		1
	9	MK170E-CHV		CHECH VALVE		2
	8	MK150E-CEC		COMPRESSOR ELECTRICAL BOX - COVER		1
	7	SEE REF TABLE		COMPRESSOR		1
	6	MK150E-BLT825		BOLT M8x25		13
	5	MK260E-WHR		WASHER 22x8,2x2,4		23
	4	MK260E-BLT630		BOLT M6x30		30
	3	SEE REF TABLE		FAN MOTOR		2
	2	MK150E-CON		CONDANSER		1
	1	MK150E-CAB		CABINET BASE		1
DWG SIZE	ITEM NO.	PART NO.		DESCRIPTION	REV	QTY

PART LIST



# 8.1 - ED & Spare Part List

## IS 160





8.1 - ED & Spare Part List  
**IS 160**

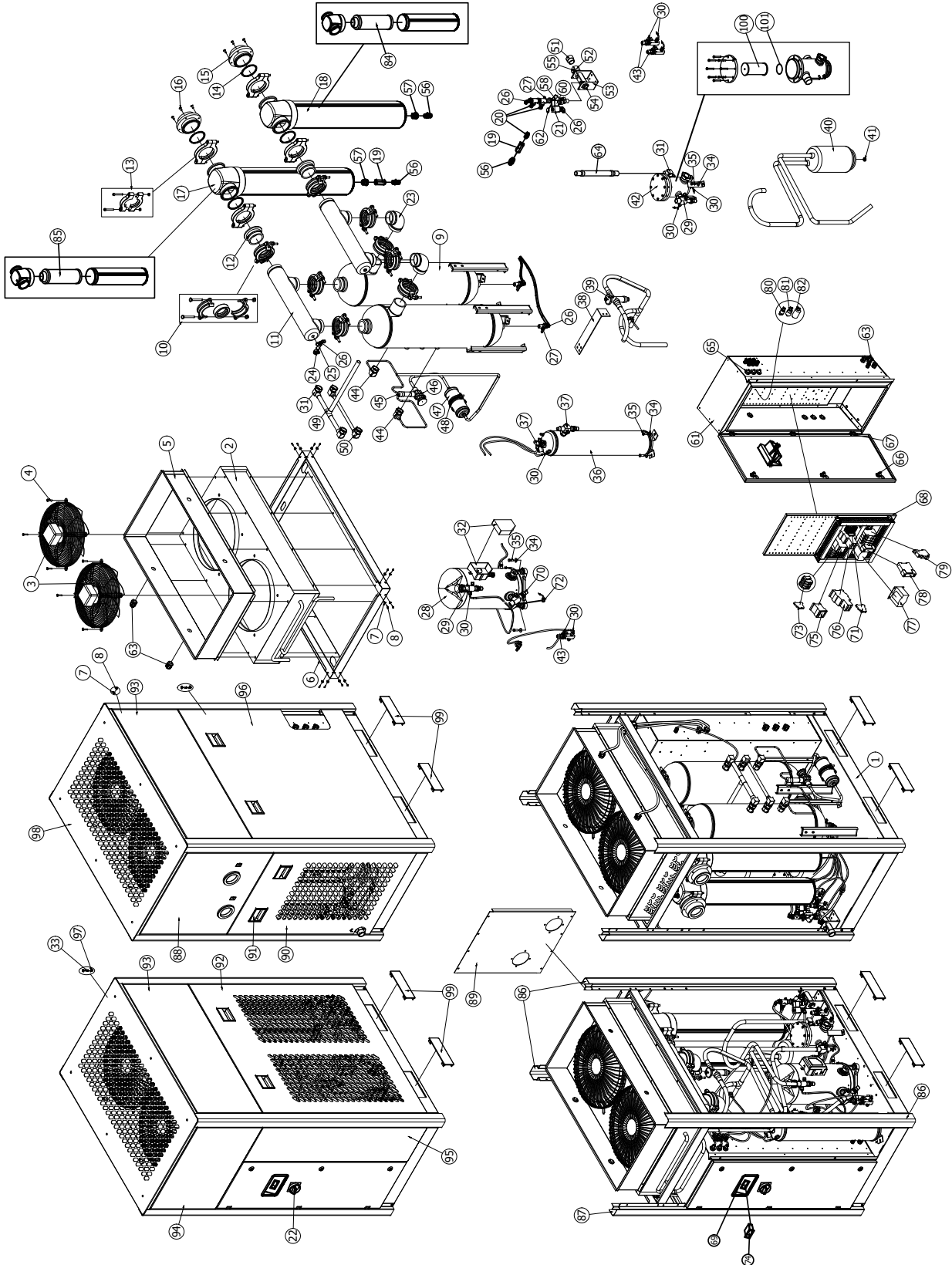
	101	M-OSO-1600		OIL SEPARATOR ORING		1
	100	M-OSE-1600		OIL SEPARATOR ELEMENT		1
	99	MK190E-RMS		REMOVABLE SHIELD		4
	98	MK170E-CAT		CABINET TOP		1
	97	M-FAS-6000		CABINET FASTENER		14
	96	MK170E-CSB2		CABINET SIDE BOTTOM2		1
	95	MK170E-CFB		CABINET FRONT BOTTOM		1
	94	MK170E-CFT		CABINET FRONT TOP		1
	93	MK170E-CST		CABINET SIDE TOP		2
	92	MK170E-CSB1		CABINET SIDE BOTTOM1		1
	91	M-CHN-6000		CABINET HANDLE (NEW)		6
	90	MK170E-CRB		CABINET REAR BOTTOM		1
	89	MK170E-CAI		CABINET INSIDE		1
	88	MK170E-CRT		CABINET REAR TOP		1
	87	MK170E-CAL2		CABINET LEG2		1
	86	MK170E-CAL1		CABINET LEG1		3
	85	MK170E-FIE-Y		COMPRESSED AIR FILTER ELEMENT (Y)		1
	84	MK170E-FIE-X		COMPRESSED AIR FILTER ELEMENT (X)		1
	83	MK260E-ODR		FILTER AUTOMATIC DRAIN		2
	82	M-FNS-0200		FAN ON/OFF SWITCH		1
	81	M-HPS-0200		HIGH PRESSURE SECURITY SWITCH		1
	80	MK260E-LPS		LOW PRESSURE SWITCH		1
	79	M-FHH-6000		HIGH VOLTAGE FUSE HOLDER		4
	78	M-PPR-6000		PHASE PROTECTION RELAY		1
	77	MK260E-TRF		TRANSFORMERS		1
	76	M-CNT-1200		CONTACTOR		1
	75	M-FCN-1200		FAN CONTACTOR		1
	74	MK190E-DPI-24		DIGITAL CONTROLLER		1
	73	M-PWC-1200		POWER CONNECTOR		3
	72	M-CPF-6000-O		1/4 90° ORIFICE CUPPER PIPE FITTING		1
	71	M-FHL-6000		LOW VOLTAGE FUSE HOLDER		1
	70	MK160E-RTA1		ROTOLOCK ADAPTOR1		1
	69	MK260E-PCP		PLASTIC CONTROL PANEL		1
	68	MK170E-ELP		ELECTRICAL PANEL		1
	67	MK260E-HNG		HINGE		3
	66	MK260E-DLK		DOOR LOCK		3
	65	MK260E-SCF		SWITCH CONNECTION FITTING		3
	64	MK210E-ASF		ASTROFLEX		1
	63	M-CCP-6000		CONDUIT FOR CONTROL PANEL		8
	62	M-MMM-6000		MEMBRANE		1
	61	MK170E-ELB		ELECTRICAL BOX		1
	60	MK260E-SVC		SOLENOID VALVE COIL		1
	59	N/A		N/A		-
	58	M-MMV-6000		MEMBRAN VALVE		1
	57	MK260E-RDC		REDUCTION 1/2" - 1/4"		2
	56	MK260E-FTT		FITTINGS		4
	55	MK260E-MBC2		MANIFOLD BLIND CAP2		2
	54	MK260E-MBC1		MANIFOLD BLIND CAP1		1
	53	MK260E-MRS		MANIFOLD REINFORCEMENT SHEET METAL		1
	52	MK190E-DRM		DRAIN MANIFOLD		1
	51	MK260E-DRS		DRAIN SLEEVE		1
	50	M-RTA-5000-2		ROTOLOCK VALVE ADAPTOR FOR HEAT EXCHANGER		2
	49	MK260E-CPT		CUPPER T		2
	48	M-CLP-1200		CLAMP		1
	47	M-DRJ-0700		DEHYDRATOR / FILTER DRIER		1
	46	M-EXV-1200		EXPANSION VALVE		1
	45	MK190E-DST		DISTRIBUTOR		1
	44	MK260E-RTA4		ROTOLOCK ADAPTOR4		2
	43	MK260E-RSV		ROTOLOCK SERVICE VALVE		3
	42	M-OSP-1600		OIL SEPARATOR		1
	41	MK170E-NUT10		NUT M10		1
	40	MK160E-SPR		SEPARATOR		1
	39	M-BYV-1200		BY-PASS VALVE		1
	38	MK170E-RSM		REINFORCEMENT SHEET METAL		1
	37	MK170E-RTA2		ROTOLOCK ADAPTOR2		2
	36	MK170E-RCV		LIQUID RECEIVER		1
	35	MK260E-BLT850		BOLT M8x50		10
	34	MK260E-WHR22		WASHER 22x8,2x2,4		10
	33	M-STU-6000		CABINET STUD AND NUT		14
	32	MK160E-CEC		COMPRESSOR ELECTRICAL BOX - COVER		1
	31	M-RTA-5000-1		ROTOLOCK VALVE ADAPTOR FOR HEAT EXCHANGER		3
	30	M-CPF-6000-90		1/4 90° ORIFICE CUPPER PIPE FITTING		15
	29	MK160E-RTA2		ROTOLOCK ADAPTOR2		2
	28	SEE REF TABLE		COMPRESSOR		1
	27	M-DBV-6000		DRAIN VALVE		3
	26	MK260E-EWF		ELBOW FITTINGS		6
	25	MK260E-TCN		T CONNECTION		1
	24	MK260E-BLV		BALL VALVE		1
	23	MK170E-ELW		ELBOW		2
	22	MK190E-4MS		MAIN SWITCH		1
	21	MK190E-SLV-230		SOLENOID VALVE		1
	20	MK170E-NIP1/4		1 / 4" NIPPLE		2
	19	MK170E-CHV		CHECH VALVE		2
	18	MK170E-ELK-X		COMPRESSED AIR FILTER ELEMENT KIT (X)		1
	17	MK170E-ELK-Y		COMPRESSED AIR FILTER ELEMENT KIT (Y)		1
	16	MK170E-BLT815		BOLT M8x15		8
	15	MK170E-CNK2		CONNECTION KIT 2		2
	14	MK170E-ORG		ORING		4
	13	MK170E-CPG2		COUPLING CLAMP 2		4
	12	MK170E-CNK1		CONNECTION KIT 1		2
	11	MK170E-CLL		COLLECTOR		2
	10	MK260E-CPG1		COUPLING CLAMP 1		8
	9	MK170E-EXC		HEAT EXCHANGER		2
	8	MK260E-BLT630		BOLT M8x30		48
	7	M-NUT-6000		CAGE NUTS		48
	6	MK170E-CRP		CONDENSER REINFORCEMENT PLATE		1
	5	MK170E-FPRT		FAN PROTECTOR		1
	4	MK260E-BLT830		BOLT M8x30		8
	3	SEE REF TABLE		FAN MOTOR		2
	2	MK170E-CON		CONDANSER		1
	1	MK170E-CAB		CABINET BASE		1
DWG SIZE	ITEM NO.	PART NO.		DESCRIPTION	REV	QTY

PART LIST



# 8.1 - ED & Spare Part List

## IS 170





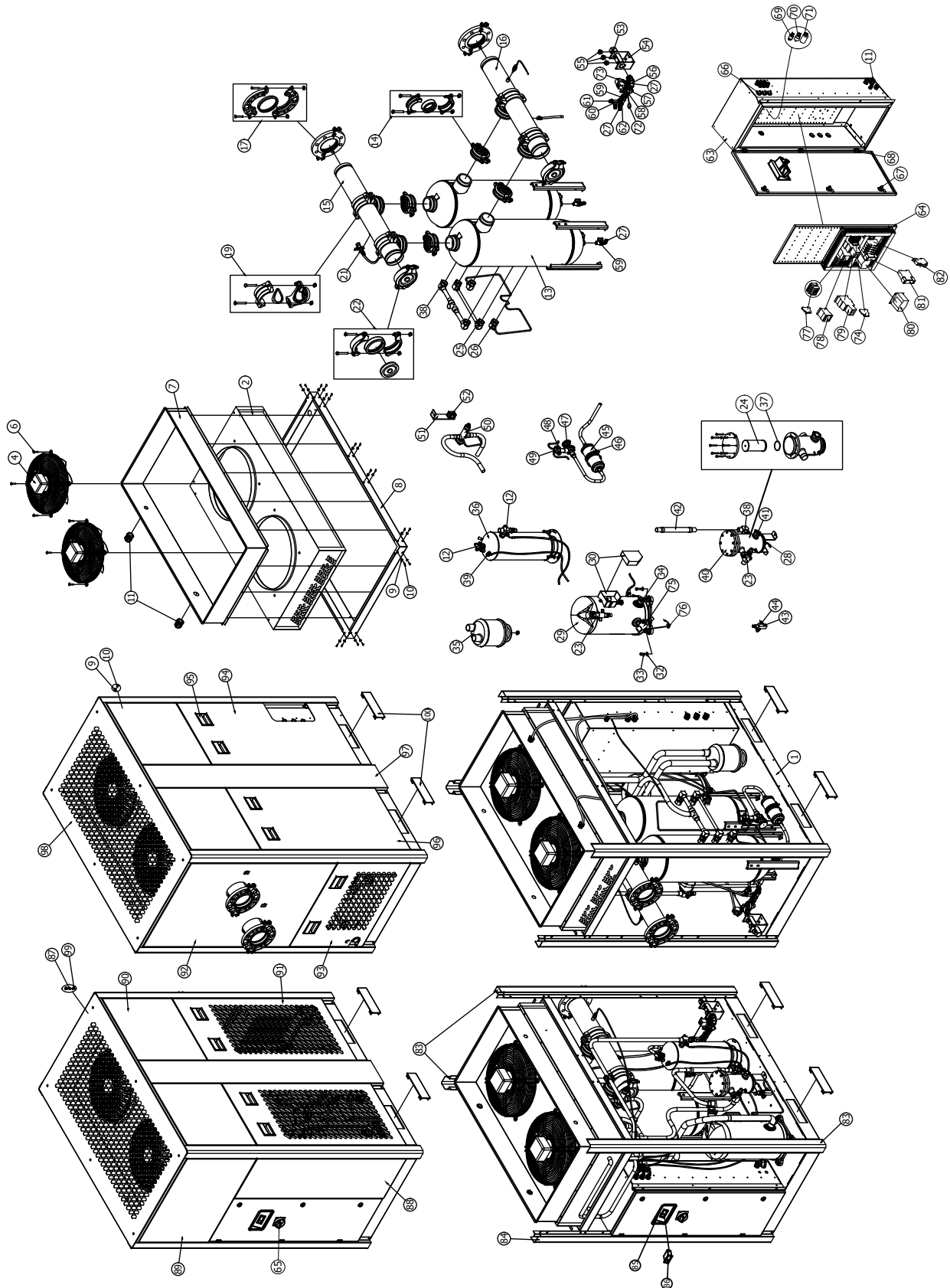
8.1 - ED & Spare Part List  
**IS 170**

DWG SIZE	ITEM NO.	PART NO.	DESCRIPTION	REV	QTY
	101	M-OSO-1600	OIL SEPARATOR ORING		1
	100	M-OSE-1600	OIL SEPARATOR ELEMENT		1
	99	MK190E-RMS	REMOVABLE SHIELD		4
	98	MK170E-CAT	CABINET TOP		1
	97	M-FAS-6000	CABINET FASTENER		14
	96	MK170E-CSB2	CABINET SIDE BOTTOM2		1
	95	MK170E-CFB	CABINET FRONT BOTTOM		1
	94	MK170E-CFT	CABINET FRONT TOP		1
	93	MK170E-CST	CABINET SIDE TOP		2
	92	MK170E-CSB1	CABINET SIDE BOTTOM1		1
	91	M-CHN-6000	CABINET HANDLE (NEW)		6
	90	MK170E-CRB	CABINET REAR BOTTOM		1
	89	MK170E-CAI	CABINET INSIDE		1
	88	MK170E-CRT	CABINET REAR TOP		1
	87	MK170E-CAL2	CABINET LEG2		1
	86	MK170E-CAL1	CABINET LEG1		3
	85	MK170E-FIE-Y	COMPRESSED AIR FILTER ELEMENT (Y)		1
	84	MK170E-FIE-X	COMPRESSED AIR FILTER ELEMENT (X)		1
	83	N/A	N/A		-
	82	M-FNS-0200	FAN ON/OFF SWITCH		1
	81	M-HPS-0200	HIGH PRESSURE SECURITY SWITCH		1
	80	MK260E-LPS	LOW PRESSURE SWITCH		1
	79	M-FHH-6000	HIGH VOLTAGE FUSE HOLDER		4
	78	M-PPR-6000	PHASE PROTECTION RELAY		1
	77	MK260E-TRF	TRANSFORMERS		1
	76	M-CNT-1200	CONTACTOR		1
	75	M-FCN-1200	FAN CONTACTOR		1
	74	MK190E-DPI-24	DIGITAL CONTROLLER		1
	73	M-PWC-1200	POWER CONNECTOR		3
	72	M-CPF-6000-O	1/4 90° ORIFICE CUPPER PIPE FITTING		1
	71	M-FHL-6000	LOW VOLTAGE FUSE HOLDER		1
	70	MK190E-RTA1	ROTOLOCK ADAPTOR1		1
	69	MK260E-PCP	PLASTIC CONTROL PANEL		1
	68	MK170E-ELP	ELECTRICAL PANEL		1
	67	MK260E-HNG	HINGE		3
	66	MK260E-DLK	DOOR LOCK		3
	65	MK260E-SCF	SWITCH CONNECTION FITTING		3
	64	MK210E-ASF	ASTROFLEX		1
	63	M-CCP-6000	CONDUIT FOR CONTROL PANEL		8
	62	M-MMM-6000	MEMBRANE		1
	61	MK170E-ELB	ELECTRICAL BOX		1
	60	MK260E-SVC	SOLENOID VALVE COIL		1
	59	N/A	N/A		-
	58	M-MMV-6000	MEMBRAN VALVE		1
	57	MK260E-RDC	REDUCTION 1 / 2" - 1 / 4"		2
	56	MK260E-FTT	FITTINGS		4
	55	MK260E-MBC2	MANIFOLD BLIND CAP2		2
	54	MK260E-MBC1	MANIFOLD BLIND CAP1		1
	53	MK260E-MRS	MANIFOLD REINFORCEMENT SHEET METAL		1
	52	MK190E-DRM	DRAIN MANIFOLD		1
	51	MK260E-DRS	DRAIN SLEEVE		1
	50	M-RTA-5000-2	ROTOLOCK VALVE ADAPTOR FOR HEAT EXCHANGER		2
	49	MK260E-CPT	CUPPER T		2
	48	M-CLP-1200	CLAMP		1
	47	M-DRI-0700	DEHYDRATOR / FILTER DRIER		1
	46	M-EXV-1200	EXPANSION VALVE		1
	45	MK190E-DST	DISTRIBUTOR		1
	44	MK260E-RTA4	ROTOLOCK ADAPTOR4		2
	43	MK260E-RSV	ROTOLOCK SERVICE VALVE		3
	42	M-OSP-1600	OIL SEPARATOR		1
	41	MK170E-NUT10	NUT M10		1
	40	MK170E-SPR	SEPARATOR		1
	39	M-BYV-1200	BY-PASS VALVE		1
	38	MK170E-RSM	REINFORCEMENT SHEET METAL		1
	37	MK170E-RTA2	ROTOLOCK ADAPTOR2		2
	36	MK170E-RCV	LIQUID RECEIVER		1
	35	MK260E-BLT850	BOLT M8x50		10
	34	MK260E-WHR22	WASHER 22x8,2x2,4		10
	33	M-STU-6000	CABINET STUD AND NUT		14
	32	MK160E-CEC	COMPRESSOR ELECTRICAL BOX - COVER		1
	31	M-RTA-5000-1	ROTOLOCK VALVE ADAPTOR FOR HEAT EXCHANGER		3
	30	M-CPF-6000-90	1/4 90° ORIFICE CUPPER PIPE FITTING		15
	29	MK160E-RTA2	ROTOLOCK ADAPTOR2		2
	28	SEE REF TABLE	COMPRESSOR		1
	27	M-DBV-6000	DRAIN VALVE1		3
	26	MK260E-EWF	ELBOW FITTINGS		6
	25	MK260E-TCN	T CONNECTION		1
	24	MK260E-BLV	BALL VALVE		1
	23	MK170E-ELW	ELBOW		2
	22	MK190E-MNS	MAIN SWITCH		1
	21	MK190E-SLV-230	SOLENOID VALVE		1
	20	MK170E-NIP1/4	1 / 4" NIPPLE		2
	19	MK170E-CHV	CHECH VALVE		2
	18	MK170E-ELK-X	COMPRESSED AIR FILTER ELEMENT KIT (X)		1
	17	MK170E-ELK-Y	COMPRESSED AIR FILTER ELEMENT KIT (Y)		1
	16	MK170E-BLT815	BOLT M8x15		8
	15	MK170E-CNK2	CONNECTION KIT 2		2
	14	MK170E-ORG	ORING		4
	13	MK170E-CPG2	COUPLING CLAMP 2		4
	12	MK170E-CNK1	CONNECTION KIT 1		2
	11	MK170E-CLL	COLLECTOR		2
	10	MK260E-CPG1	COUPLING CLAMP 1		8
	9	MK170E-EXC	HEAT EXCHANGER		2
	8	MK260E-BLT630	BOLT M8x30		48
	7	M-NUT-6000	CAGE NUTS		48
	6	MK170E-CRP	CONDENSER REINFORCEMENT PLATE		1
	5	MK170E-FPRT	FAN PROTECTOR		1
	4	MK260E-BLT830	BOLT M8x30		8
	3	SEE REF TABLE	FAN MOTOR		2
	2	MK170E-CON	CONDANSER		1
	1	MK170E-CAB	CABINET BASE		1
			PART LIST		



# 8.1 - ED & Spare Part List

## IS 180







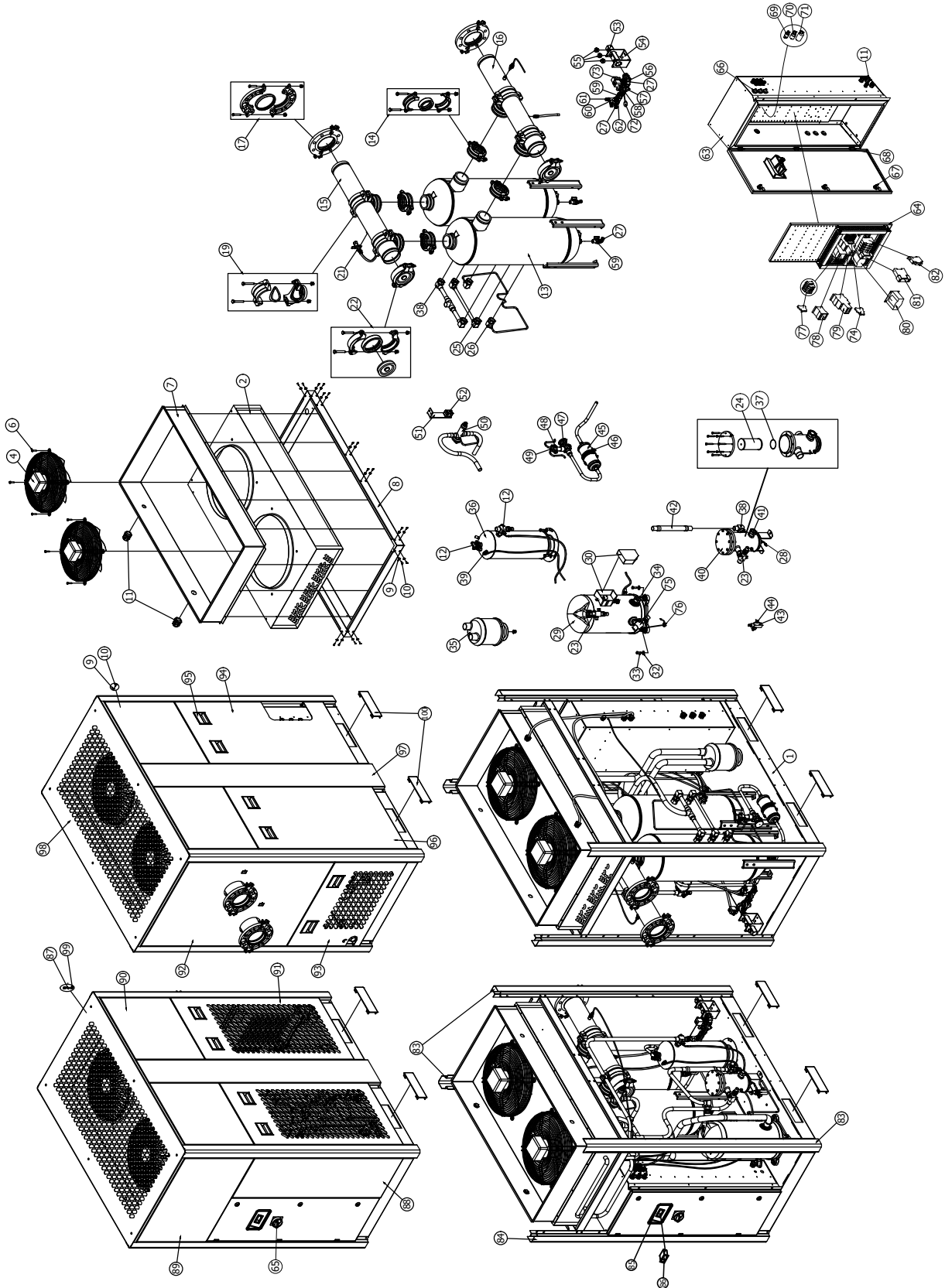
8.1 - ED & Spare Part List  
**IS 180**

	100	MK190E-RMS	REMOVABLE SHIELD		4
	99	M-FAS-6000	CABINET FASTENER		14
	98	MK190E-CAT	CABINET TOP		1
	97	MK190E-CPS	CABINET POST SECONDARY SIDE		2
	96	MK190E-CRS	CABINET REAR SIDE BOTTOM		1
	95	M-CHN-6000	CABINET HANDLE (NEW)		10
	94	MK190E-CSB2	CABINET SIDE BOTTOM2		1
	93	MK190E-CSB1	CABINET REAR BOTTOM1		1
	92	MK190E-CRT	CABINET REAR TOP		1
	91	MK190E-CSB	CABINET SIDE BOTTOM		2
	90	MK190E-CST	CABINET SIDE TOP		4
	89	MK190E-CFT	CABINET FRONT TOP		1
	88	MK190E-CFB	CABINET FRONT BOTTOM		1
	87	M-STU-6000	CABINET STUD AND NUT		14
	86	MK190E-DPI-24	DIGITAL CONTROLLER		1
	85	MK260E-PCP	PLASTIC CONTROL PANEL		1
	84	MK190E-CAL2	CABINET LEG2		1
	83	MK190E-CAL1	CABINET LEG1		3
	82	M-FHH-6000	HIGH VOLTAGE FUSE HOLDER		4
	81	M-PPR-6000	PHASE PROTECTION RELAY		1
	80	MK260E-TRF	TRANSFORMERS		1
	79	M-CNT-1600	CONTACTOR		1
	78	M-CNT-MP	FAN CONTACTOR		1
	77	M-PWC-2400	POWER CONNECTOR		3
	76	M-CPF-6000-O	1/4 90° ORIFICE CUPPER PIPE FITTING		1
	75	MK210E-RTA1	ROTOLOCK ADAPTOR1		1
	74	M-FHL-6000	LOW VOLTAGE FUSE HOLDER		1
	73	MK260E-SVC	SOLENOID VALVE COIL		1
	72	M-MMM-6000	MEMBRANE		1
	71	M-FNS-0200	FAN ON/OFF SWITCH		1
	70	M-HPS-0200	HIGH PRESSURE SECURITY SWITCH		1
	69	MK260E-LPS	LOW PRESSURE SWICH		1
	68	MK260E-HNG	HINGE		3
	67	MK260E-DLK	DOOR LOCK		3
	66	MK260E-SCF	SWITCH CONNECTION FITTING		3
	65	MK190E-MNS	MAIN SWITCH		1
	64	MK190E-ELP	ELECTRICAL PANEL		1
	63	MK190E-ELB	ELECTRICAL BOX		1
	62	MK260E-T12	T 1/2"		1
	61	MK260E-FTS	FLAT FITTINGS		1
	60	MK260E-T14	T 1/4"		1
	59	M-DBV-6000	DRAIN BALL VALVE		3
	58	M-MMV-6000	MEMBRAN VALVE		1
	57	M-SLV-6000-24	SOLENOID VALVE		1
	56	MK260E-EWF2	ELBOW FITTINGS2		1
	55	MK260E-MBC1	MANIFOLD BLIND CAP1		3
	54	MK260E-MRS	MANIFOLD REINFORCEMENT SHEET METAL		1
	53	MK190E-DRM	DRAIN MANIFOLD		1
	52	MK260E-PPC	PLASTIC PIPE CLAMP		1
	51	MK190E-PCS	PIPING CONNECTION SHEET		1
	50	M-BYV-1200	BY-PASS VALVE		1
	49	MK190E-DST	DISTRIBUTOR		1
	48	MK260E-DSTK	DISTRIBUTOR CLAMP		1
	47	M-EXV-1200	EXPANSION VALVE		1
	46	M-CLP-1200	CLAMP		1
	45	MK190E-DRI	DEHYDRATOR / FILTER DRIER		1
	44	M-CPF-6000	1/4 CUPPER PIPE FITTING		2
	43	MK260E-RSV	ROTOLOCK SERVICE VALVE		2
	42	MK210E-ASF	ASTROFLEX		1
	41	MK190E-SGL2	SIGHT GLASS2		1
	40	M-OSP-1600	OIL SEPARATOR		1
	39	MK260E-CTC1	CAPPILARY TUBE CONNECTION1		8
	38	M-RTA-5000-1	ROTALOCK VALVE ADAPTOR FOR HEAT EXCHANGER		3
	37	M-OSO-1600	OIL SEPARATOR ORING		1
	36	MK190E-RCV	LIQUID RECEIVER		1
	35	MK190E-SPR	SEPERATOR		1
	34	MK190E-SGL1	SIGHT GLASS1		1
	33	MK260E-BLT850	BOLT M8x50		10
	32	MK260E-WHR22	WASHER 22x8.2x2.4		10
	31	N/A	N/A		-
	30	MK190E-CEC	COMPRESSOR ELECTRICAL BOX - COVER		1
	29	SEE REF TABLE	COMPRESSOR		1
	28	M-CPF-6000-90	1/4 90° ORIFICE CUPPER PIPE FITTING		3
	27	MK260E-EWF1	ELBOW FITTINGS1		4
	26	MK260E-RTA4	ROTOLOCK ADAPTOR4		2
	25	M-RTA-5000-2	ROTALOCK VALVE ADAPTOR FOR HEAT EXCHANGER		2
	24	M-OSE-1600	OIL SEPARATOR ELEMENT		1
	23	MK160E-RTA2	ROTOLOCK ADAPTOR2		2
	22	MK210E-CPG4	COUPLING CLAMP 4		2
	21	MK260E-BLA	BALL VALVE G 1/4"		1
	20	N/A	N/A		-
	19	MK210E-CPG3	COUPLING CLAMP 3		4
	18	N/A	N/A		-
	17	MK210E-CPG2	COUPLING CLAMP 2		2
	16	MK190E-CLLB	COLLECTOR BOTTOM		1
	15	MK190E-CLLT	COLLECTOR TOP		1
	14	MK260E-CPG1	COUPLING CLAMP 1		4
	13	MK260E-EXC	HEAT EXCHANGER		2
	12	MK150E-RTA2	ROTOLOCK ADAPTOR2		2
	11	M-CCP-6000	CONDUIT FOR CONTROL PANEL		8
	10	MK260E-BLT630	BOLT M6x30		58
	9	M-NUT-6000	CAGE NUTS		58
	8	MK190E-CRP	CONDENSER REINFORCEMENT PLATE		1
	7	MK190E-PPRT	FAN PROTECTOR		1
	6	MK260E-BLT630	BOLT M8x30		8
	5	N/A	N/A		-
	4	SEE REF TABLE	FAN MOTOR		2
	3	N/A	N/A		-
	2	MK190E-CON	CONDANSER		1
	1	MK190E-CAB	CABINET BASE		1
DWG SIZE	ITEM NO.	PART NO.	DESCRIPTION	REV	QTY
PART LIST					



# 8.1 - ED & Spare Part List

## IS 190





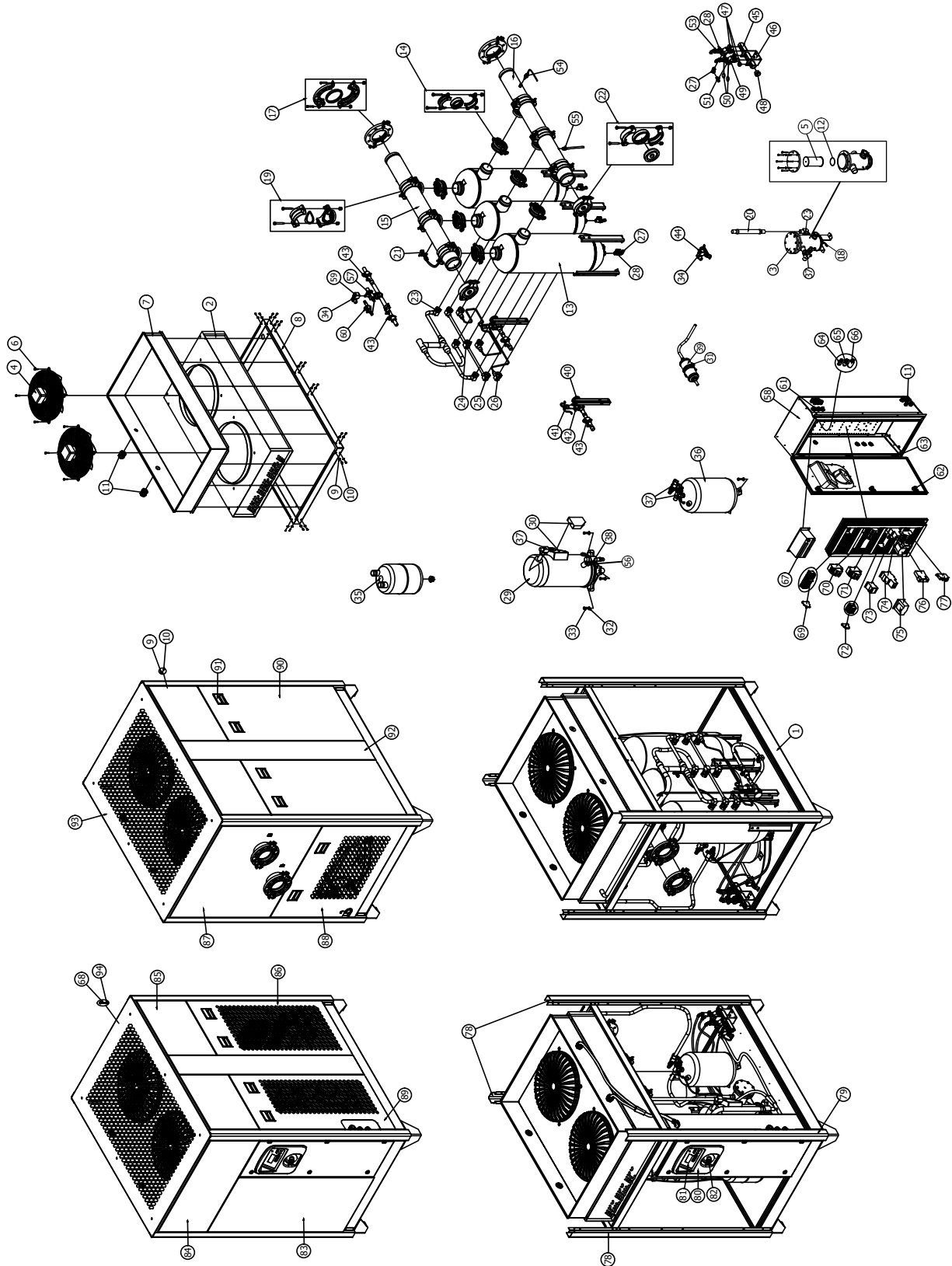
8.1 - ED & Spare Part List  
**IS 190**

	100	MK190E-RMS	REMOVABLE SHIELD		4
	99	M-FAS-6000	CABINET FASTENER		14
	98	MK190E-CAT	CABINET TOP		1
	97	MK190E-CP5	CABINET POST SECONDARY SIDE		2
	96	MK190E-CRS	CABINET REAR SIDE BOTTOM		1
	95	M-CHN-6000	CABINET HANDLE (NEW)		10
	94	MK190E-CSB2	CABINET SIDE BOTTOM2		1
	93	MK190E-CSB1	CABINET REAR BOTTOM1		1
	92	MK190E-CRT	CABINET REAR TOP		1
	91	MK190E-CSB	CABINET SIDE BOTTOM		2
	90	MK190E-CST	CABINET SIDE TOP		4
	89	MK190E-CFT	CABINET FRONT TOP		1
	88	MK190E-CFB	CABINET FRONT BOTTOM		1
	87	M-STU-6000	CABINET STUD AND NUT		14
	86	MK190E-DPI-24	DIGITAL CONTROLLER		1
	85	MK260E-PCP	PLASTIC CONTROL PANEL		1
	84	MK190E-CAL2	CABINET LEG2		1
	83	MK190E-CAL1	CABINET LEG1		3
	82	M-FHH-6000	HIGH VOLTAGE FUSE HOLDER		4
	81	M-PPR-6000	PHASE PROTECTION RELAY		1
	80	MK260E-TRF	TRANSFORMERS		1
	79	M-CNT-1600	CONTACTOR		1
	78	M-CNT-MP	FAN CONTACTOR		1
	77	M-PWC-2400	POWER CONNECTOR		3
	76	M-CPF-6000-O	1/4 90° ORIFICE CUPPER PIPE FITTING		1
	75	MK210E-RTA1	ROTOLOCK ADAPTOR1		1
	74	M-FHL-6000	LOW VOLTAGE FUSE HOLDER		1
	73	MK260E-SVC	SOLENOID VALVE COIL		1
	72	M-MMM-6000	MEMBRANE		1
	71	M-FNS-0200	FAN ON/OFF SWITCH		1
	70	M-HPS-0200	HIGH PRESSURE SECURITY SWITCH		1
	69	MK260E-LPS	LOW PRESSURE SWICH		1
	68	MK260E-HNG	HINGE		3
	67	MK260E-DLK	DOOR LOCK		3
	66	MK260E-SCF	SWITCH CONNECTION FITTING		3
	65	MK190E-MNS	MAIN SWITCH		1
	64	MK190E-ELP	ELECTRICAL PANEL		1
	63	MK190E-ELB	ELECTRICAL BOX		1
	62	MK260E-T12	T 1/2"		1
	61	MK260E-FTS	FLAT FITTINGS		1
	60	MK260E-T14	T 1/4"		1
	59	M-DBV-6000	DRAIN BALL VALVE		3
	58	M-MMV-6000	MEMBRAN VALVE		1
	57	M-SLV-6000-24	SOLENOID VALVE		1
	56	MK260E-EWF2	ELBOW FITTINGS2		1
	55	MK260E-MBC1	MANIFOLD BLIND CAP1		3
	54	MK260E-MRS	MANIFOLD REINFORCEMENT SHEET METAL		1
	53	MK190E-DRM	DRAIN MANIFOLD		1
	52	MK260E-PPC	PLASTIC PIPE CLAMP		1
	51	MK190E-PCS	PIPING CONNECTION SHEET		1
	50	MK190E-BYV	BY-PASS VALVE		1
	49	MK190E-DST	DISTRIBUTOR		1
	48	MK260E-DSTK	DISTRIBUTOR CLAMP		1
	47	M-EXV-1200	EXPANSION VALVE		1
	46	M-CLP-1200	CLAMP		1
	45	MK190E-DRI	DEHYDRATOR / FILTER DRIER		1
	44	M-CPF-6000	1/4 CUPPER PIPE FITTING		2
	43	MK260E-RSV	ROTOLOCK SERVICE VALVE		2
	42	MK210E-ASF	ASTROFLEX		1
	41	MK190E-SGL2	SIGHT GLASS2		1
	40	M-OSP-1600	OIL SEPARATOR		1
	39	MK260E-CTC1	CAPPILARY TUBE CONNECTION1		8
	38	M-RTA-5000-1	ROTALOCK VALVE ADAPTOR FOR HEAT EXCHANGER		3
	37	M-OSO-1600	OIL SEPARATOR ORING		1
	36	MK190E-RCV	LIQUID RECEIVER		1
	35	MK190E-SPR	SEPERATOR		1
	34	MK190E-SGL1	SIGHT GLASS1		1
	33	MK260E-BLT850	BOLT M8x50		10
	32	MK260E-WHR22	WASHER 22x8,2x2,4		10
	31	N/A	N/A		-
	30	MK190E-CEC	COMPRESSOR ELECTRICAL BOX - COVER		1
	29	SEE REF TABLE	COMPRESSOR		1
	28	M-CPF-6000-90	1/4 90° ORIFICE CUPPER PIPE FITTING		3
	27	MK260E-EWF1	ELBOW FITTINGS1		4
	26	MK260E-RTA4	ROTOLOCK ADAPTOR4		2
	25	M-RTA-5000-2	ROTALOCK VALVE ADAPTOR FOR HEAT EXCHANGER		2
	24	M-OSE-1600	OIL SEPARATOR ELEMENT		1
	23	MK160E-RTA2	ROTOLOCK ADAPTOR2		2
	22	MK210E-CPG4	COUPLING CLAMP 4		2
	21	MK260E-BLA	BALL VALVE G 1/4"		1
	20	N/A	N/A		-
	19	MK210E-CPG3	COUPLING CLAMP 3		4
	18	N/A	N/A		-
	17	MK210E-CPG2	COUPLING CLAMP 2		2
	16	MK190E-CLLB	COLLECTOR BOTTOM		1
	15	MK190E-CLLT	COLLECTOR TOP		1
	14	MK260E-CPG1	COUPLING CLAMP 1		4
	13	MK260E-EXC	HEAT EXCHANGER		2
	12	MK150E-RTA2	ROTOLOCK ADAPTOR2		2
	11	M-CCP-6000	CONDUIT FOR CONTROL PANEL		8
	10	MK260E-BLT630	BOLT M6x30		58
	9	M-NUT-6000	CAGE NUTS		58
	8	MK190E-CRP	CONDENSER REINFORCEMENT PLATE		1
	7	MK190E-FPRT	FAN PROTECTOR		1
	6	MK260E-BLT630	BOLT M8x30		8
	5	N/A	N/A		-
	4	SEE REF TABLE	FAN MOTOR		2
	3	N/A	N/A		-
	2	MK190E-CON	CONDANSER		1
	1	MK190E-CAB	CABINET BASE		1
DWG SIZE	ITEM NO.	PART NO.	DESCRIPTION	REV	QTY
PART LIST					



# 8.1 - ED & Spare Part List

## IS 200





8.1 - ED & Spare Part List  
**IS 200**

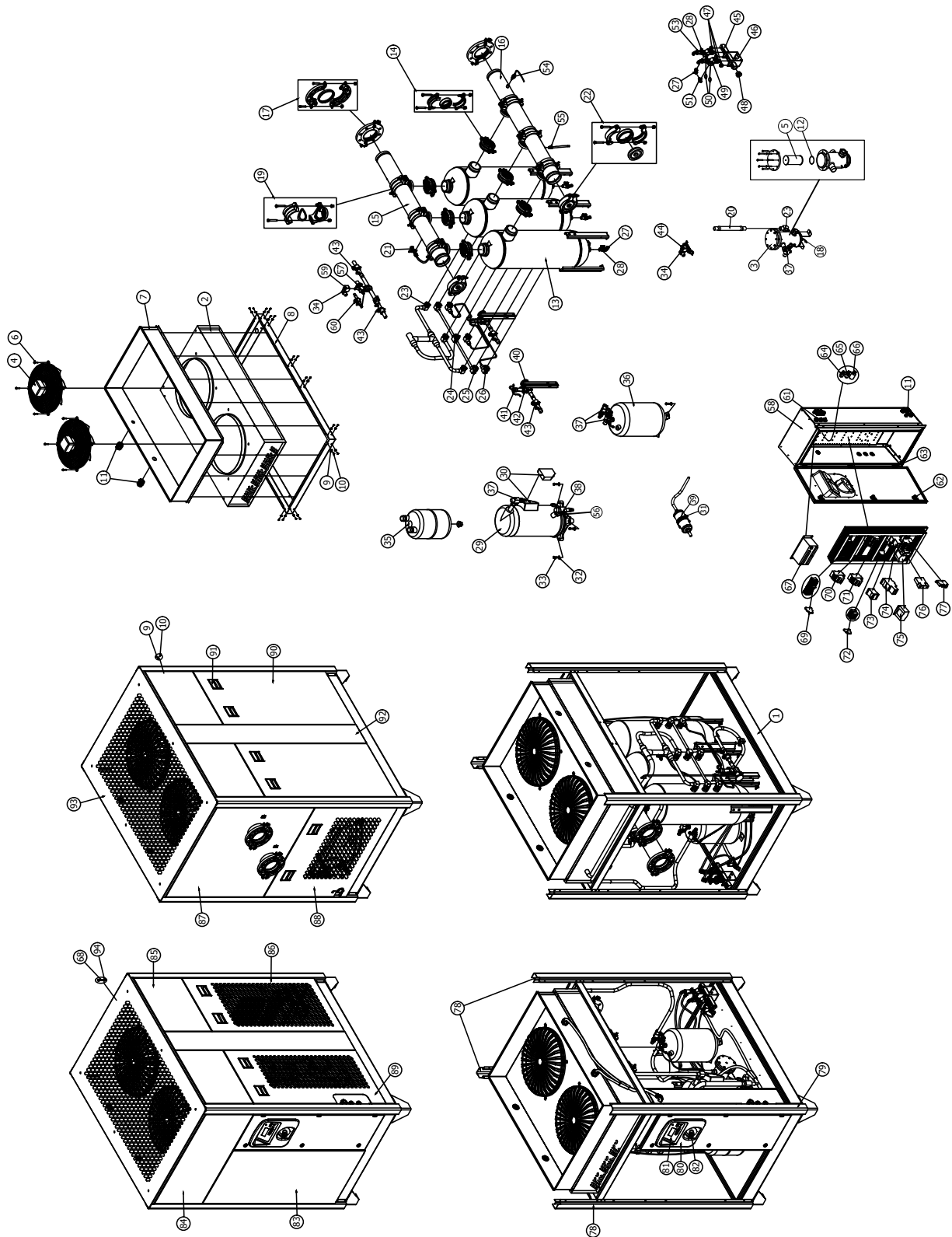
	94	M-FAS-6000		CABINET FASTENER		19
	93	MK190E-CAT		CABINET TOP		1
	92	MK210E-CPS		CABINET POST SECONDARY SIDE		2
	91	M-CHN-6000		CABINET HANDLE		10
	90	MK210E-CRS		CABINET REAR SIDE BOTTOM		2
	89	MK210E-CSB2		CABINET SIDE BOTTOM2		1
	88	MK210E-CSB1		CABINET REAR BOTTOM1		1
	87	MK210E-CRT		CABINET REAR TOP		1
	86	MK210E-CSB		CABINET SIDE BOTTOM		1
	85	MK210E-CST		CABINET SIDE TOP		4
	84	MK210E-CFT		CABINET FRONT TOP		1
	83	MK210E-CFB		CABINET FRONT BOTTOM		1
	82	MK260E-MSW		MAIN SWITCH		1
	81	MK260E-DCC-24		ADVANCED DIGITAL CONTROLLER		1
	80	MK260E-PCP-ESD3		PLASTIC CONTROL PANEL		1
	79	MK210E-CAL2		CABINET LEG2		1
	78	MK210E-CAL1		CABINET LEG1		3
	77	M-FHH-6000		HIGH VOLTAGE FUSE HOLDER		4
	76	M-PPR-6000		PHASE PROTECTION RELAY		1
	75	MK260E-TRF		TRANSFORMERS		1
	74	M-CNT-2400		CONTACTOR		1
	73	M-CNT-MP		FAN CONTACTOR		1
	72	M-PWC-2400		POWER CONNECTOR		3
	71	M-COP-3000		COMPRESSOR OVERLOAD PROTECTOR		1
	70	M-COP-0325		FAN OVERLOAD PROTECTOR		1
	69	M-FHL-6000		LOW VOLTAGE FUSE HOLDER		1
	68	M-STU-6000		CABINET STUD AND NUT		19
	67	MK260E-CTR		CONTROLLER		1
	66	M-FNS-0200		FAN ON/OFF SWITCH		1
	65	M-HPS-0200		HIGH PRESSURE SECURITY SWITCH		1
	64	MK260E-LPS		LOW PRESSURE SWICH		1
	63	MK260E-HNG		HINGE		3
	62	MK260E-DLK		DOOR LOCK		3
	61	MK260E-SCF		SWITCH CONNECTION FITTING		3
	60	MK260E-GBV-1/4		BALL VALVE 1/4		1
	59	MK210E-BSLV		BY BASS SOLENOID VALVE		1
	58	MK210E-ELB		ELECTRICAL BOX		1
	57	M-BYV-1600		BY PASS VALVE		1
	56	M-CPF-6000-O		1/4 90° ORIFICE CUPPER PIPE FITTING		1
	55	MK260E-FTS		FLAT FITTINGS		1
	54	M-SCF-6000		SENSOR CONNECTION FITTING		1
	53	MK260E-MAS		MANSON 1/2"		2
	52	N/A		N/A		-
	51	MK260E-T14		ELBOW FITTINGS T 1/4"		1
	50	M-MMM-6000		MEMBRANE		2
	49	M-MMV-6000		MEMBRAN VALVE		2
	48	MK260E-MBC2		MANIFOLD BLIND CAP2		1
	47	MK260E-MBC1		MANIFOLD BLIND CAP1		3
	46	MK260E-MRS		MANIFOLD REINFORCEMENT SHEET METAL		1
	45	MK210E-DRM		DRAIN MANIFOLD		1
	44	M-SLV-6000-24		SOLENOID VALVE		1
	43	MK260E-GBV		BALL VALVE		5
	42	MK260E-DSTK		DISTRIBUTOR CLAMP		1
	41	MK210E-DST		DISTRIBUTOR		1
	40	M-EXV-2400		EXPANSION VALVE		1
	39	MK210E-DRI		DEHYDRATOR / FILTER DRIER		1
	38	MK260E-RTA3		ROTOLOCK ADAPTOR3		1
	37	MK160E-RTA2		ROTOLOCK ADAPTOR2		4
	36	MK210E-RCV		LIQUID RECEIVER		1
	35	MK210E-SPR		SEPERATOR		1
	34	MK260E-SVC		SOLENOID VALVE COIL		2
	33	MK260E-BLT850		BOLT M8x50		10
	32	MK260E-WHR22		WASHER 22x8,2x2,4		10
	31	M-CLP-1200		CLAMP		1
	30	MK210E-CEC		COMPRESSOR ELECTRICAL BOX - COVER		1
	29	SEE REF TABLE		COMPRESSOR		1
	28	M-DBV-6000		DRAIN BALL VALVE		5
	27	MK260E-EWF1		ELBOW FITTINGS1		10
	26	MK260E-RTA4		ROTOLOCK ADAPTOR4		3
	25	M-RTA-5000-2		ROTOLOCK VALVE ADAPTOR FOR HEAT EXCHANGER		2
	24	M-RTA-5000-T-2		ROTOLOCK VALVE TT ADAPTOR FOR HEAT EXCHANGER		1
	23	M-RTA-5000-1		ROTOLOCK VALVE ADAPTOR FOR HEAT EXCHANGER		4
	22	MK210E-CPG4		COUPLING CLAMP 4		2
	21	MK260E-BLV		BALL VALVE		1
	20	MK230E-ASF		ASTROFLEX		1
	19	MK210E-CPG3		COUPLING CLAMP 3		6
	18	M-CPF-6000-90		1/4 90° ORIFICE CUPPER PIPE FITTING		3
	17	MK210E-CPG2		COUPLING CLAMP 2		2
	16	MK210E-CLLB		COLLECTOR BOTTOM		1
	15	MK210E-CLLT		COLLECTOR TOP		1
	14	MK260E-CPG1		COUPLING CLAMP 1		6
	13	MK260E-EXC		HEAT EXCHANGER		3
	12	M-OSO-2400		OIL SEPARATOR ORING		1
	11	M-CCP-6000		CONDUIT FOR CONTROL PANEL		5
	10	MK260E-BLT630		BOLT M6x30		58
	9	M-NUT-6000		CAGE NUTS		58
	8	MK210E-CRP		CONDENSER REINFORCEMENT PLATE		1
	7	MK210E-FPRT		FAN PROTECTOR		1
	6	MK260E-CRP		BOLT M8x30		8
	5	M-OS-2400		OIL SEPARATOR ELEMENT		1
	4	SEE REF TABLE		FAN MOTOR		2
	3	M-OSP-2400		OIL SEPARATOR		1
	2	MK210E-CON		CONDANSER		1
	1	MK210E-CAB		CABINET BASE		1
DWG SIZE	ITEM NO.	PART NO.		DESCRIPTION	REV	QTY

PART LIST



# 8.1 - ED & Spare Part List

## IS 210





8.1 - ED & Spare Part List  
**IS 210**

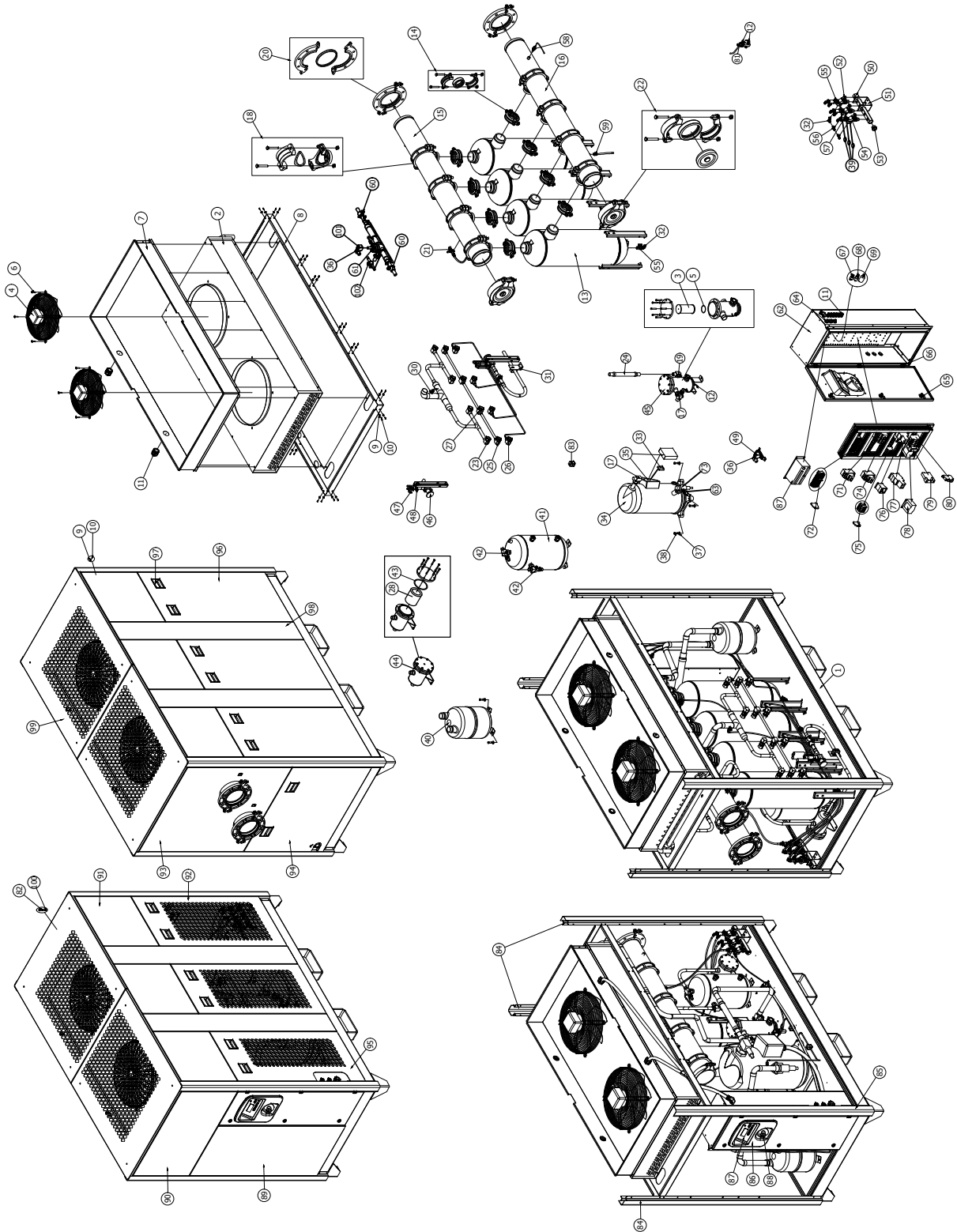
94	M-FAS-6000		CABINET FASTENER		19
93	MK190E-CAT		CABINET TOP		1
92	MK210E-CPS		CABINET POST SECONDARY SIDE		2
91	M-CHN-6000		CABINET HANDLE		10
90	MK210E-CRS		CABINET REAR SIDE BOTTOM		2
89	MK210E-CSB2		CABINET SIDE BOTTOM2		1
88	MK210E-CSB1		CABINET REAR BOTTOM1		1
87	MK210E-CRT		CABINET REAR TOP		1
86	MK210E-CSB		CABINET SIDE BOTTOM		1
85	MK210E-CST		CABINET SIDE TOP		4
84	MK210E-CFT		CABINET FRONT TOP		1
83	MK210E-CFB		CABINET FRONT BOTTOM		1
82	MK260E-MSW		MAIN SWITCH		1
81	MK260E-DCC-24		ADVANCED DIGITAL CONTROLLER		1
80	MK260E-PCP-ESD3		PLASTIC CONTROL PANEL		1
79	MK210E-CAL2		CABINET LEG2		1
78	MK210E-CAL1		CABINET LEG1		3
77	M-FHH-6000		HIGH VOLTAGE FUSE HOLDER		4
76	M-PPR-6000		PHASE PROTECTION RELAY		1
75	MK260E-TRF		TRANSFORMERS		1
74	M-CNT-2400		CONTACTOR		1
73	M-CNT-MP		FAN CONTACTOR		1
72	M-PWC-2400		POWER CONNECTOR		3
71	M-COP-3000		COMPRESSOR OVERLOAD PROTECTOR		1
70	M-COP-0325		FAN OVERLOAD PROTECTOR		1
69	M-FHL-6000		LOW VOLTAGE FUSE HOLDER		1
68	M-STU-6000		CABINET STUD AND NUT		19
67	MK260E-CTR		CONTROLLER		1
66	M-FNS-0200		FAN ON/OFF SWITCH		1
65	M-HPS-0200		HIGH PRESSURE SECURITY SWITCH		1
64	MK260E-LPS		LOW PRESSURE SWICH		1
63	MK260E-HNG		HINGE		3
62	MK260E-DLK		DOOR LOCK		3
61	MK260E-SCF		SWITCH CONNECTION FITTING		3
60	MK260E-GBV-1/4		BALL VALVE 1/4		1
59	MK210E-BSLV		BY BASS SOLENOID VALVE		1
58	MK210E-ELB		ELECTRICAL BOX		1
57	M-BYV-1600		BY PASS VALVE		1
56	M-CPF-6000-O		1/4 90° ORIFICE CUPPER PIPE FITTING		1
55	MK260E-FTS		FLAT FITTINGS		1
54	M-SCF-6000		SENSOR CONNECTION FITTING		1
53	MK260E-MAS		MANSON 1/2"		2
52	N/A		N/A		-
51	MK260E-T14		ELBOW FITTINGS T 1/4"		1
50	M-MMM-6000		MEMBRANE		2
49	M-MMV-6000		MEMBRAN VALVE		2
48	MK260E-MBC2		MANIFOLD BLIND CAP2		1
47	MK260E-MBC1		MANIFOLD BLIND CAP1		3
46	MK260E-MRS		MANIFOLD REINFORCEMENT SHEET METAL		1
45	MK210E-DRM		DRAIN MANIFOLD		1
44	M-SLV-6000-24		SOLENOID VALVE		1
43	MK260E-GBV		BALL VALVE		5
42	MK260E-DSTK		DISTRIBUTOR CLAMP		1
41	MK210E-DST		DISTRIBUTOR		1
40	M-EXV-2400		EXPANSION VALVE		1
39	MK210E-DR1		DEHYDRATOR / FILTER DRIER		1
38	MK260E-RTA3		ROTOLOCK ADAPTOR3		1
37	MK160E-RTA2		ROTOLOCK ADAPTOR2		4
36	MK210E-RCV		LIQUID RECEIVER		1
35	MK210E-SPR		SEPERATOR		1
34	MK260E-SVC		SOLENOID VALVE COIL		2
33	MK260E-BLT850		BOLT M8x50		10
32	MK260E-WHR22		WASHER 22x8.2x2.4		10
31	M-CLP-1200		CLAMP		1
30	MK210E-CEC		COMPRESSOR ELECTRICAL BOX - COVER		1
29	SEE REF TABLE		COMPRESSOR		1
28	M-DBV-6000		DRAIN BALL VALVE		5
27	MK260E-EWF1		ELBOW FITTINGS1		10
26	MK260E-RTA4		ROTOLOCK ADAPTOR4		3
25	M-RTA-5000-2		ROTOLOCK VALVE ADAPTOR FOR HEAT EXCHANGER		2
24	M-RTA-5000-T-2		ROTOLOCK VALVE "T"ADAPTOR FOR HEAT EXCHANGER		1
23	M-RTA-5000-1		ROTOLOCK VALVE ADAPTOR FOR HEAT EXCHANGER		4
22	MK210E-CPG4		COUPLING CLAMP 4		2
21	MK260E-BLV		BALL VALVE		1
20	MK230E-ASF		ASTROFLEX		1
19	MK210E-CPG3		COUPLING CLAMP 3		6
18	M-CPF-6000-90		1/4 90° ORIFICE CUPPER PIPE FITTING		3
17	MK210E-CPG2		COUPLING CLAMP 2		2
16	MK210E-CLLB		COLLECTOR BOTTOM		1
15	MK210E-CLLT		COLLECTOR TOP		1
14	MK260E-CPG1		COUPLING CLAMP 1		6
13	MK260E-EXC		HEAT EXCHANGER		3
12	M-OSO-2400		OIL SEPARATOR ORING		1
11	M-CCP-6000		CONDUIT FOR CONTROL PANEL		5
10	MK260E-BLT630		BOLT M6x30		58
9	M-NUT-6000		CAGE NUTS		58
8	MK210E-CRP		CONDENSER REINFORCEMENT PLATE		1
7	MK210E-FPRT		FAN PROTECTOR		1
6	MK260E-CRP		BOLT M8x30		8
5	M-OSE-2400		OIL SEPARATOR ELEMENT		1
4	SEE REF TABLE		FAN MOTOR		2
3	M-OSP-2400		OIL SEPARATOR		1
2	MK210E-CON		CONDANSER		1
1	MK210E-CAB		CABINET BASE		1
DWG SIZE	ITEM NO.	PART NO.	DESCRIPTION	REV	QTY

PART LIST



# 8.1 - ED & Spare Part List

## IS 220







8.1 - ED & Spare Part List  
**IS 220**

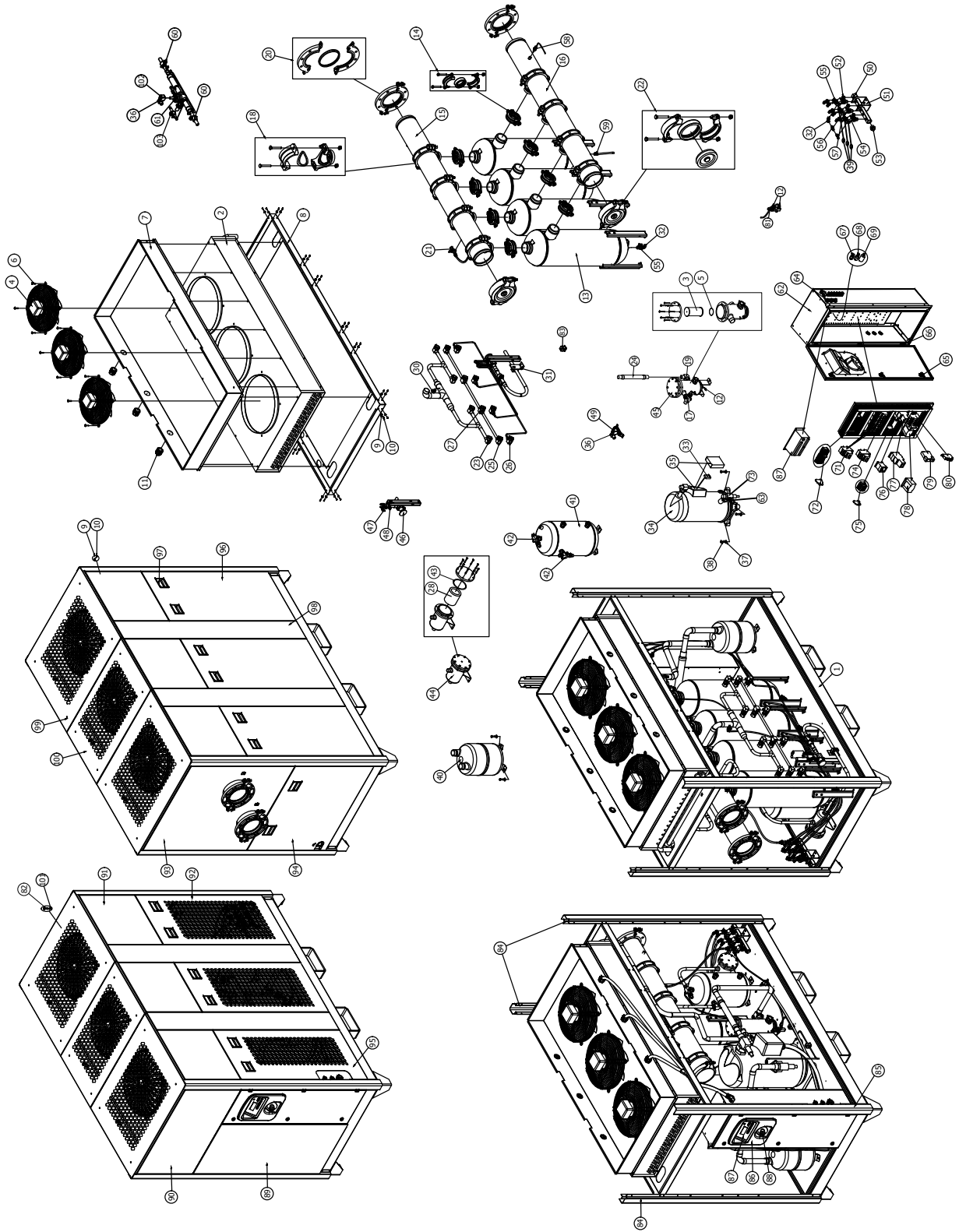
	102	MK260E-GBV-1/4	BALL VALVE 1/4		1
	101	MK260E-BSLV	BY BASS SOLENOID VALVE		1
	100	M-FAS-6000	CABINET FASTENER		28
	99	MK220E-CAT1	CABINET TOP		2
	98	MK230E-CPS	CABINET POST SECONDARY SIDE		4
	97	M-CHN-6000	CABINET HANDLE		14
	96	MK230E-CRS	CABINET REAR SIDE BOTTOM		3
	95	MK230E-CSB2	CABINET SIDE BOTTOM2		1
	94	MK230E-CSB1	CABINET REAR BOTTOM1		1
	93	MK230E-CRT	CABINET REAR TOP		1
	92	MK230E-CRS	CABINET REAR SIDE BOTTOM		2
	91	MK230E-CST	CABINET SIDE TOP		6
	90	MK230E-CFT	CABINET FRONT TOP		1
	89	MK230E-CFB	CABINET FRONT BOTTOM		1
	88	MK260E-MSW	MAIN SWITCH		1
	87	MK260E-ESD3	ESD3 CONTROLLER		1
	86	MK260E-PCP-ESD3	PLASTIC CONTROL PANEL		1
	85	MK230E-CAL2	CABINET LEG2		1
	84	MK230E-CAL1	CABINET LEG1		3
	83	MK260E-CCP2	CUPPER CLAMP2		2
	82	M-STU-6000	CABINET STUD AND NUT		28
	81	MK260E-RSV	ROTOLOCK SERVICE VALVE		1
	80	M-FHH-6000	HIGH VOLTAGE FUSE HOLDER		4
	79	M-PPR-6000	PHASE PROTECTION RELAY		1
	78	MK260E-TRF	TRANSFORMERS		2
	77	M-CNT-3000	CONTACTOR		1
	76	M-CNT-MP	FAN CONTACTOR		1
	75	M-PWC-3800	POWER CONNECTOR		4
	74	M-COP-3000	COMPRESSOR OVERLOAD PROTECTOR		1
	73	MK230E-RTA6	ROTOLOCK VALVE		1
	72	M-FHL-6000	LOW VOLTAGE FUSE HOLDER		1
	71	M-COP-0325	FAN OVERLOAD PROTECTOR		1
	70	N/A	N/A		-
	69	M-FNS-0200	FAN ON/OFF SWITCH		1
	68	M-HPS-0200	HIGH PRESSURE SECURITY SWITCH		1
	67	MK260E-LPS	LOW PRESSURE SWICH		1
	66	MK260E-HNG	HINGE		3
	65	MK260E-DLK	DOOR LOCK		3
	64	MK260E-SCF	SWITCH CONNECTION FITTING		3
	63	M-CPF-6000-O	1/4 90° ORIFICE CUPPER PIPE FITTING		1
	62	MK220E-ELB	ELECTRICAL BOX		1
	61	M-BYV-6000	BY PASS VALVE		1
	60	MK260E-GBV	BALL VALVE		3
	59	MK260E-FTS	FLAT FITTINGS		4
	58	M-SCF-6000	SENSOR CONNECTION FITTING		1
	57	MK260E-MAS	MANSON 1/2"		5
	56	MK260E-T14	ELBOW FITTINGS T 1/4"		2
	55	M-DBV-6000	DRAIN BALL VALVE		7
	54	M-MMV-6000	MEMBRAN VALVE		3
	53	MK260E-MBC2	MANIFOLD BLIND CAP2		1
	52	MK260E-MBC1	MANIFOLD BLIND CAP1		3
	51	MK260E-MRS	MANIFOLD REINFORCEMENT SHEET METAL		1
	50	MK230E-DRM	DRAIN MANIFOLD		1
	49	M-SLV-6000-24	SOLENOID VALVE		1
	48	MK260E-DSTK	DISTRIBUTOR CLAMP		1
	47	MK230E-DST	DISTRIBUTOR		1
	46	M-EXV-3000	EXPANSION VALVE		1
	45	M-OSP-6000	OIL SEPERATOR		1
	44	M-DRI-6000	DRYER-DEHYDRATOR		1
	43	M-DIS-6000	DRIER SEAL		1
	42	MK160E-RTA2	ROTOLOCK ADAPTOR2		2
	41	MK250E-RCV	LIQUID RECEIVER		1
	40	MK230E-SPR	SEPERATOR		1
	39	M-MMM-6000	MEMBRANE		3
	38	MK260E-BLT850	BOLT M8x50		12
	37	MK260E-WHR22	WASHER 22x8,2x2,4		12
	36	MK260E-SVC	SOLENOID VALVE COIL		2
	35	MK230E-CEC	COMPRESSOR ELECTRICAL BOX - COVER		1
	34	SEE. REF TABLE	COMPRESSOR		1
	33	MK230E-CTPR	COMPRESSOR THERMAL PROTECTION RELAY		1
	32	MK260E-EWF1	ELBOW FITTINGS1		8
	31	MK260E-CCP1	CUPPER CLAMP1		1
	30	MK260E-SVT	SETTING VALVE T		1
	29	N/A	N/A		-
	28	M-DIE-6000	DRIER ELEMENT		1
	27	M-RTA-5000-T-2	ROTOLOCK VALVE "T" ADAPTOR FOR HEAT EXCHANGER		2
	26	MK260E-RTA4	ROTOLOCK ADAPTOR4		4
	25	M-RTA-5000-2	ROTOLOCK VALVE ADAPTOR FOR HEAT EXCHANGER		2
	24	MK250E-ASF	ASTROFLEX		1
	23	M-RTA-5000-1	ROTOLOCK VALVE ADAPTOR FOR HEAT EXCHANGER		4
	22	MK250E-CPG4	COUPLING CLAMP 4		2
	21	MK260E-BLV	BALL VALVE		1
	20	MK240E-CPG3	COUPLING CLAMP 3		2
	19	MK250E-RTA5	ROTOLOCK VALVE ADAPTOR		1
	18	MK250E-CPG2	COUPLING CLAMP 2		8
	17	MK260E-RTA3	ROTOLOCK ADAPTOR3		2
	16	MK230E-CLLB	COLLECTOR BOTTOM		1
	15	MK230E-CLLT	COLLECTOR TOP		1
	14	MK260E-CPG1	COUPLING CLAMP 1		8
	13	MK260E-EXC	HEAT EXCHANGER		4
	12	M-CPF-6000-90	1/4 90° ORIFICE CUPPER PIPE FITTING		3
	11	M-CCP-6000	CONDUIT FOR CONTROL PANEL		12
	10	MK260E-BLT630	BOLT M6x30		60
	9	M-NUT-6000	CAGE NUTS		60
	8	MK220E-CRP	CONDENSER REINFORCEMENT PLATE		1
	7	MK220E-FPRT	FAN PROTECTOR		1
	6	MK260E-CRP	BOLT M8x30		8
	5	M-OSO-5000	OIL SEPARATOR ORING		1
	4	SEE. REF TABLE	FAN MOTOR		2
	3	M-OSE-5000	OIL SEPARATOR ELEMENT		1
	2	MK220E-CON	CONDANSER		1
	1	MK230E-CAB	CABINET BASE		1
DWG SIZE	ITEM NO.	PART NO.	DESCRIPTION	REV	QTY

PART LIST



# 8.1 - ED & Spare Part List

## IS 230





8.1 - ED & Spare Part List  
**IS 230**

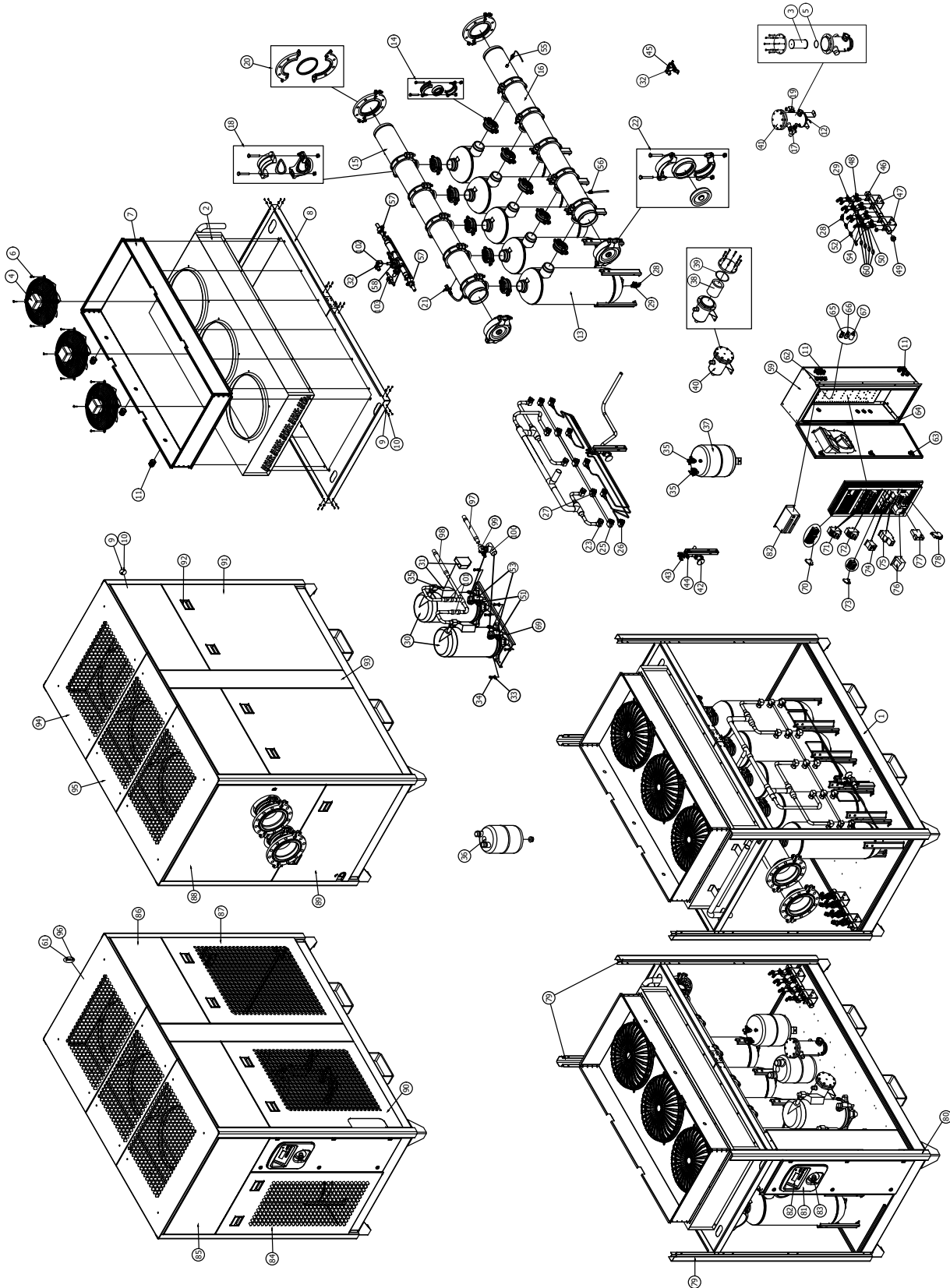
	103	MK260E-GBV-1/4		BALL VALVE 1/4		1
	102	MK260E-BSLV		BY BASS SOLENOID VALVE		1
	101	M-FAS-6000		CABINET FASTENER		32
	100	MK230E-CAT2		CABINET TOP2		1
	99	MK230E-CAT1		CABINET TOP1		2
	98	MK230E-CP5		CABINET POST SECONDARY SIDE		4
	97	M-CHN-6000		CABINET HANDLE		14
	96	MK230E-CRS		CABINET REAR SIDE BOTTOM		3
	95	MK230E-CSB2		CABINET SIDE BOTTOM2		1
	94	MK230E-CSB1		CABINET REAR BOTTOM1		1
	93	MK230E-CRT		CABINET REAR TOP		1
	92	MK230E-CRS		CABINET REAR SIDE BOTTOM		2
	91	MK230E-CST		CABINET SIDE TOP		6
	90	MK230E-CFT		CABINET FRONT TOP		1
	89	MK230E-CFB		CABINET FRONT BOTTOM		1
	88	MK260E-MSW		MAIN SWITCH		1
	87	MK260E-ESD3		ESD3 CONTROLLER		1
	86	MK260E-PCP-ESD3		PLASTIC CONTROL PANEL		1
	85	MK230E-CAL2		CABINET LEG2		1
	84	MK230E-CAL1		CABINET LEG1		3
	83	MK260E-CCP2		CUPPER CLAMP2		2
	82	M-STU-6000		CABINET STUD AND NUT		32
	81	MK260E-RSV		ROTOLOCK SERVICE VALVE		1
	80	M-FHH-6000		HIGH VOLTAGE FUSE HOLDER		4
	79	M-PPR-6000		PHASE PROTECTION RELAY		1
	78	MK260E-TRF		TRANSFORMERS		2
	77	M-CNT-3000		CONTACTOR		1
	76	M-CNT-MP		FAN CONTACTOR		1
	75	M-PWC-3800		POWER CONNECTOR		4
	74	M-COP-3000		COMPRESSOR OVERLOAD PROTECTOR		1
	73	MK230E-RTA6		ROTOLOCK VALVE		1
	72	M-FHL-6000		LOW VOLTAGE FUSE HOLDER		1
	71	M-FOP-6000		FAN OVERLOAD PROTECTOR		3
	70	N/A		N/A		-
	69	M-FNS-0200		FAN ON/OFF SWITCH		1
	68	M-HPS-0200		HIGH PRESSURE SECURITY SWITCH		1
	67	MK260E-LPS		LOW PRESSURE SWICH		1
	66	MK260E-HNG		HINGE		3
	65	MK260E-DLK		DOOR LOCK		3
	64	MK260E-SCF		SWITCH CONNECTION FITTING		3
	63	M-CPF-6000-O		1/4 90° ORIFICE CUPPER PIPE FITTING		1
	62	MK230E-ELB		ELECTRICAL BOX		1
	61	M-BYV-6000		BY PASS VALVE		1
	60	MK260E-GBV		BALL VALVE		3
	59	MK260E-FTS		FLAT FITTINGS		4
	58	M-SCF-6000		SENSOR CONNECTION FITTING		1
	57	MK260E-MAS		MANSON 1/2"		5
	56	MK260E-T14		ELBOW FITTINGS T 1/4"		2
	55	M-DBV-6000		DRAIN BALL VALVE		7
	54	M-MMV-6000		MEMBRAN VALVE		3
	53	MK260E-MBC2		MANIFOLD BLIND CAP2		1
	52	MK260E-MBC1		MANIFOLD BLIND CAP1		3
	51	MK260E-MRS		MANIFOLD REINFORCEMENT SHEET METAL		1
	50	MK230E-DRM		DRAIN MANIFOLD		1
	49	M-SLV-6000-24		SOLENOID VALVE		1
	48	MK260E-DSTK		DISTRIBUTOR CLAMP		1
	47	MK230E-DST		DISTRIBUTOR		1
	46	M-EXV-3000		EXPANSION VALVE		1
	45	M-OSP-5000		OIL SEPERATOR		1
	44	M-DRI-6000		DRYER-DEHYDRATOR		1
	43	M-DIS-6000		DRIER SEAL		1
	42	MK160E-RTA2		ROTOLOCK ADAPTOR2		2
	41	MK250E-RCV		LIQUID RECEIVER		1
	40	MK230E-SPR		SEPERATOR		1
	39	M-MMM-6000		MEMBRANE		3
	38	MK260E-BLT850		BOLT M8x50		12
	37	MK260E-WHR22		WASHER 22x8.2x2.4		12
	36	MK260E-SVC		SOLENOID VALVE COIL		1
	35	MK230E-CEC		COMPRESSOR ELECTRICAL BOX - COVER		1
	34	SEE. REF TABLE		COMPRESSOR		1
	33	MK230E-CTPR		COMPRESSOR THERMAL PROTECTION RELAY		1
	32	MK260E-EWF1		ELBOW FITTINGS1		8
	31	MK260E-CCP1		CUPPER CLAMP1		1
	30	MK260E-SVT		SETTING VALVE T		1
	29	N/A		N/A		-
	28	M-DIE-6000		DRIER ELEMENT		1
	27	M-RTA-5000-T-2		ROTOLOCK VALVE "T" ADAPTOR FOR HEAT EXCHANGER		2
	26	MK260E-RTA4		ROTOLOCK ADAPTOR4		4
	25	M-RTA-5000-2		ROTOLOCK VALVE ADAPTOR FOR HEAT EXCHANGER		2
	24	MK250E-ASF		ASTROFLEX		1
	23	M-RTA-5000-1		ROTOLOCK VALVE ADAPTOR FOR HEAT EXCHANGER		4
	22	MK250E-CPG4		COUPLING CLAMP 4		2
	21	MK260E-BLV		BALL VALVE		1
	20	MK240E-CPG3		COUPLING CLAMP 3		2
	19	MK250E-RTA5		ROTOLOCK VALVE ADAPTOR		1
	18	MK250E-CPG2		COUPLING CLAMP 2		8
	17	MK260E-RTA3		ROTOLOCK ADAPTOR3		2
	16	MK230E-CLLB		COLLECTOR BOTTOM		1
	15	MK230E-CLLT		COLLECTOR TOP		1
	14	MK260E-CPG1		COUPLING CLAMP 1		8
	13	MK260E-EXC		HEAT EXCHANGER		4
	12	M-CPF-6000-90		1/4 90° ORIFICE CUPPER PIPE FITTING		3
	11	M-CCP-6000		CONDUIT FOR CONTROL PANEL		12
	10	MK260E-BLT630		BOLT M6x30		60
	9	M-NUT-6000		CAGE NUTS		60
	8	MK230E-CRP		CONDENSER REINFORCEMENT PLATE		1
	7	MK230E-FPRT		FAN PROTECTOR		1
	6	MK260E-CRP		BOLT M8x30		12
	5	M-OSO-5000		OIL SEPARATOR ORING		1
	4	SEE. REF TABLE		FAN MOTOR		3
	3	M-OSE-5000		OIL SEPARATOR ELEMENT		1
	2	MK230E-CON		CONDANSER		1
	1	MK230E-CAB		CABINET BASE		1
DWG SIZE	ITEM NO.	PART NO.		DESCRIPTION	REV	QTY

PART LIST



# 8.1 - ED & Spare Part List

## IS 240





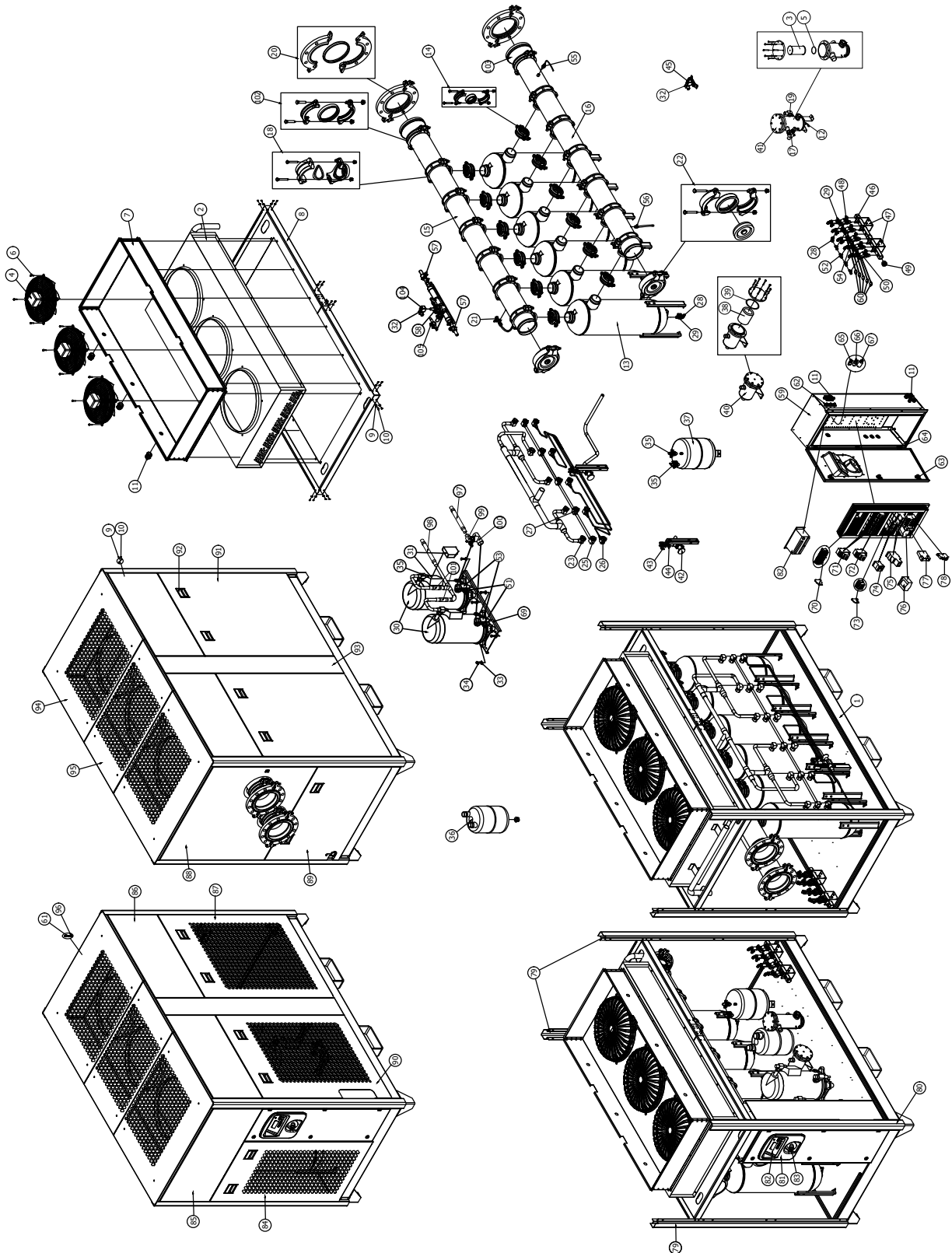
8.1 - ED & Spare Part List  
**IS 240**

DWG SIZE	ITEM NO.	PART NO.	DESCRIPTION	REV	QTY
	103	MK260E-GBV-1/4	BALL VALVE 1/4		1
	102	MK260E-BSLV	BY BASS SOLENOID VALVE		1
	101	MK260E-CKV	CHECK VALVE		2
	100	MK260E-RTA7-T	ROTOLOCK ADAPTOR7-T		1
	99	MK260E-RTA7	ROTOLOCK ADAPTOR7		1
	98	MK250E-ASF	ASTROFLEX		1
	97	MK250E-ASF	ASTROFLEX		1
	96	M-FAS-6000	CABINET FASTENER		28
	95	MK260E-CAT2	CABINET TOP2		1
	94	MK250E-CAT1	CABINET TOP1		2
	93	MK250E-CPS	CABINET POST SECONDARY SIDE		2
	92	M-CHN-6000	CABINET HANDLE		12
	91	MK250E-CRS	CABINET REAR SIDE BOTTOM		2
	90	MK250E-CSB2	CABINET SIDE BOTTOM2		1
	89	MK250E-CSB1	CABINET REAR BOTTOM1		1
	88	MK250E-CRT	CABINET REAR TOP		1
	87	MK250E-CRS	CABINET REAR SIDE BOTTOM		1
	86	MK250E-CST	CABINET SIDE TOP		4
	85	MK250E-CFT	CABINET FRONT TOP		1
	84	MK250E-CFB	CABINET FRONT BOTTOM		1
	83	MK260E-MSW	MAIN SWITCH		1
	82	MK260E-ESD3	ESD3 CONTROLLER		1
	81	MK260E-PCP-ESD3	PLASTIC CONTROL PANEL		1
	80	MK250E-CAL2	CABINET LEG2		1
	79	MK250E-CAL1	CABINET LEG1		3
	78	M-FHH-6000	HIGH VOLTAGE FUSE HOLDER		4
	77	M-PPR-6000	PHASE PROTECTION RELAY		1
	76	MK260E-TRF	TRANSFORMERS		2
	75	M-CNT-2400	CONTACTOR		2
	74	M-CNT-MP	FAN CONTACTOR		3
	73	M-PWC-3800	POWER CONNECTOR		4
	72	M-COP-3000	COMPRESSOR OVERLOAD PROTECTOR		2
	71	M-FOP-6000	FAN OVERLOAD PROTECTOR		3
	70	M-FHL-6000	LOW VOLTAGE FUSE HOLDER		1
	69	MK260E-CLP	COMPRESSOR LOWER PLATE		1
	68	N/A	N/A		-
	67	M-FNS-0200	FAN ON/OFF SWITCH		1
	66	M-HPS-0200	HIGH PRESSURE SECURITY SWITCH		1
	65	MK260E-LPS	LOW PRESSURE SWICH		1
	64	MK260E-HNG	HINGE		3
	63	MK260E-DLK	DOOR LOCK		3
	62	MK260E-SCF	SWITCH CONNECTION FITTING		3
	61	M-STU-6000	CABINET STUD AND NUT		28
	60	M-MMM-6000	MEMBRANE		4
	59	MK250E-ELB	ELECTRICAL BOX		1
	58	M-BYV-6000	BY PASS VALVE		1
	57	MK260E-GBV	BALL VALVE		3
	56	MK260E-FTS	FLAT FITTINGS		4
	55	M-SCF-6000	SENSOR CONNECTION FITTING		1
	54	MK260E-MAS	MANSON 1/2"		6
	53	MK260E-RTA3	ROTOLOCK ADAPTOR3		2
	52	MK260E-T14	ELBOW FITTINGS T 1/4"		3
	51	M-CPF-6000-O	1/4 90° ORIFICE CUPPER PIPE FITTING		2
	50	M-MMV-6000	MEMBRAN VALVE		4
	49	MK260E-MBC2	MANIFOLD BLIND CAP2		1
	48	MK260E-MBC1	MANIFOLD BLIND CAP1		5
	47	MK280E-MRS	MANIFOLD REINFORCEMENT SHEET METAL		2
	46	MK250E-DRM	DRAIN MANIFOLD		1
	45	M-SLV-6000-24	SOLENOID VALVE		1
	44	MK260E-DSTK	DISTRIBUTOR CLAMP		1
	43	MK240E-DST	DISTRIBUTOR		1
	42	M-EXV-5000	EXPANSION VALVE		1
	41	M-OSP-6000	OIL SEPERATOR		1
	40	M-DRI-6000	DRYER-DEHYDRATOR		1
	39	M-DIS-6000	DRIER SEAL		1
	38	M-DIE-6000	DRIER ELEMENT		1
	37	MK250E-RCV	LIQUID RECEIVER		1
	36	MK250E-SPR	SEPERATOR		1
	35	MK180E-RTA2	ROTOLOCK ADAPTOR2		4
	34	MK260E-BLT850	BOLT M8x50		14
	33	MK260E-WHR22	WASHER 22x8.2x2.4		14
	32	MK260E-SVC	SOLENOID VALVE COIL		1
	31	MK210E-CEC	COMPRESSOR ELECTRICAL BOX - COVER		2
	30	SEE REF TABLE	COMPRESSOR		2
	29	M-DBV-6000	DRAIN BALL VALVE		10
	28	MK260E-EWF1	ELBOW FITTINGS1		12
	27	M-RTA-5000-T-2	ROTOLOCK VALVE "T" ADAPTOR FOR HEAT EXCHANGER		3
	26	MK260E-RTA4	ROTOLOCK ADAPTOR4		5
	25	M-RTA-5000-2	ROTOLOCK VALVE ADAPTOR FOR HEAT EXCHANGER		2
	24	N/A	N/A		-
	23	M-RTA-5000-1	ROTOLOCK VALVE ADAPTOR FOR HEAT EXCHANGER		5
	22	MK250E-CPG4	COUPLING CLAMP 4		2
	21	MK260E-BLV	BALL VALVE		1
	20	MK240E-CPG3	COUPLING CLAMP 3		2
	19	MK250E-RTA5	ROTOLOCK VALVE ADAPTOR		1
	18	MK250E-CPG2	COUPLING CLAMP 2		10
	17	MK260E-RTA3	ROTOLOCK ADAPTOR3		1
	16	MK240E-CLLB	COLLECTOR BOTTOM		1
	15	MK240E-CLLT	COLLECTOR TOP		1
	14	MK260E-CPG1	COUPLING CLAMP 1		10
	13	MK260E-EXC	HEAT EXCHANGER		5
	12	M-CPF-6000-90	1/4 90° ORIFICE CUPPER PIPE FITTING		6
	11	M-CCP-6000	CONDUIT FOR CONTROL PANEL		8
	10	MK260E-BLT630	BOLT M6x30		58
	9	M-NUT-6000	CAGE NUT M6		58
	8	MK250E-CRP	CONDENSER REINFORCEMENT PLATE		2
	7	MK250E-FPRT	FAN PROTECTOR		1
	6	MK260E-CRP	BOLT M8x30		12
	5	M-OSO-5000	OIL SEPARATOR ORING		1
	4	SEE REF TABLE	FAN MOTOR		3
	3	M-OSE-5000	OIL SEPARATOR ELEMENT		1
	2	MK250E-CON	CONDANSER		1
	1	MK250E-CAB	CABINET BASE		1
			PART LIST		



# 8.1 - ED & Spare Part List

## IS 250





8.1 - ED & Spare Part List

IS 250

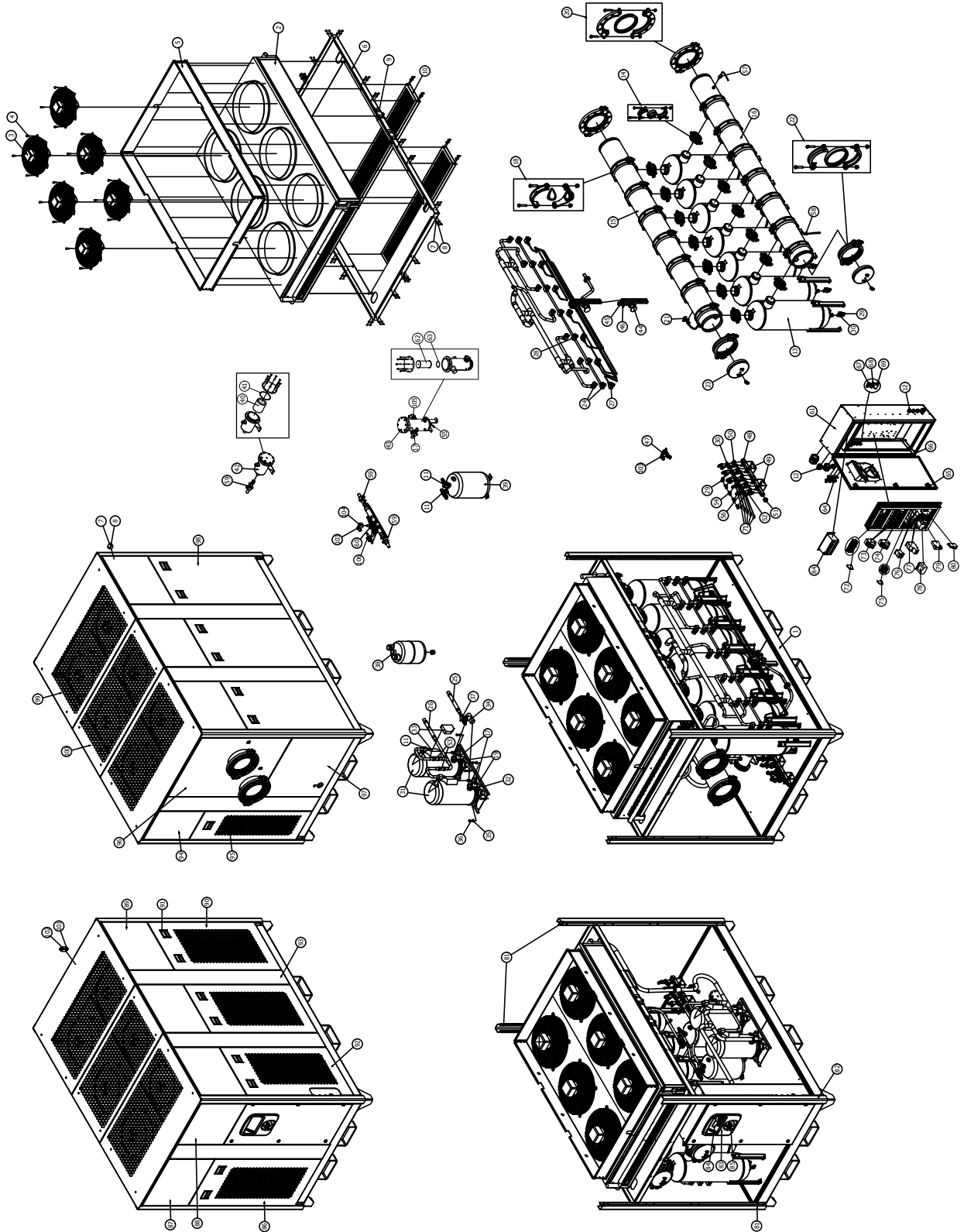
DWG SIZE	ITEM NO.	PART NO.	DESCRIPTION	REV	QTY
	105	MK260E-GBV-1/4	BALL VALVE 1/4		1
	104	MK260E-BSLV	BY BASS SOLENOID VALVE		1
	103	MK250E-RDN	REDUCTION		2
	102	MK260E-CPG3-UL	COUPLING CLAMP 3		2
	101	MK260E-CKV	CHECK VALVE		2
	100	MK260E-RTA7-T	ROTOLOCK ADAPTOR7-T		1
	99	MK260E-RTA7	ROTOLOCK ADAPTOR7		1
	98	MK250E-ASF	ASTROFLEX		1
	97	MK260E-ASF	ASTROFLEX		1
	96	M-FAS-6000	CABINET FASTENER		28
	95	MK260E-CAT2	CABINET TOP2		1
	94	MK250E-CAT1	CABINET TOP1		2
	93	MK250E-CPS	CABINET POST SECONDARY SIDE		2
	92	M-CHN-6000	CABINET HANDLE		12
	91	MK250E-CRS	CABINET REAR SIDE BOTTOM		2
	90	MK250E-CSB2	CABINET SIDE BOTTOM2		1
	89	MK250E-CSB1	CABINET REAR BOTTOM1		1
	88	MK250E-CRT	CABINET REAR TOP		1
	87	MK250E-CRS	CABINET REAR SIDE BOTTOM		1
	86	MK250E-CST	CABINET SIDE TOP		4
	85	MK250E-CFT	CABINET FRONT TOP		1
	84	MK250E-CFB	CABINET FRONT BOTTOM		1
	83	MK260E-MSW	MAIN SWITCH		1
	82	MK260E-ESD3	ESD3 CONTROLLER		1
	81	MK260E-PCP-ESD3	PLASTIC CONTROL PANEL		1
	80	MK250E-CAL2	CABINET LEG2		1
	79	MK250E-CAL1	CABINET LEG1		3
	78	M-FHH-6000	HIGH VOLTAGE FUSE HOLDER		4
	77	M-PPR-6000	PHASE PROTECTION RELAY		1
	76	MK260E-TRF	TRANSFORMERS		2
	75	M-CNT-2400	CONTACTOR		2
	74	M-CNT-MP	FAN CONTACTOR		3
	73	M-PWC-3800	POWER CONNECTOR		4
	72	M-COP-3000	COMPRESSOR OVERLOAD PROTECTOR		2
	71	M-FOP-6000	FAN OVERLOAD PROTECTOR		3
	70	M-FHL-6000	LOW VOLTAGE FUSE HOLDER		1
	69	MK260E-CLP	COMPRESSOR LOWER PLATE		1
	68	N/A	N/A		-
	67	M-FNS-0200	FAN ON/OFF SWITCH		1
	66	M-HPS-0200	HIGH PRESSURE SECURITY SWITCH		1
	65	MK260E-LPS	LOW PRESSURE SWICH		1
	64	MK260E-HNG	HINGE		3
	63	MK260E-DLK	DOOR LOCK		3
	62	MK260E-SCF	SWITCH CONNECTION FITTING		3
	61	M-STU-6000	CABINET STUD AND NUT		28
	60	M-MMM-6000	MEMBRANE		5
	59	MK250E-ELB	ELECTRICAL BOX		1
	58	M-BYV-6000	BY PASS VALVE		1
	57	MK260E-GBV	BALL VALVE		3
	56	MK260E-FTS	FLAT FITTINGS		4
	55	M-SCF-6000	SENSOR CONNECTION FITTING		1
	54	MK260E-MAS	MANSON 1/2"		6
	53	MK260E-RTA3	ROTOLOCK ADAPTOR3		2
	52	MK260E-T14	ELBOW FITTINGS T 1/4"		4
	51	M-CPF-6000-O	1/4 90° ORIFICE CUPPER PIPE FITTING		2
	50	M-MMV-6000	MEMBRAN VALVE		5
	49	MK260E-MBC2	MANIFOLD BLIND CAP2		1
	48	MK260E-MBC1	MANIFOLD BLIND CAP1		5
	47	MK260E-MRS	MANIFOLD REINFORCEMENT SHEET METAL		2
	46	MK250E-DRM	DRAIN MANIFOLD		1
	45	M-SLV-6000-24	SOLENOID VALVE		1
	44	MK260E-DSTK	DISTRIBUTOR CLAMP		1
	43	MK240E-DST	DISTRIBUTOR		1
	42	M-EXV-5000	EXPANSION VALVE		1
	41	M-OSP-5000	OIL SEPERATOR		1
	40	M-DRI-6000	DRYER-DEHYDRATOR		1
	39	M-DIS-6000	DRIER SEAL		1
	38	M-DIE-6000	DRIER ELEMENT		1
	37	MK250E-RCV	LIQUID RECEIVER		1
	36	MK250E-SPR	SEPERATOR		1
	35	MK160E-RTA2	ROTOLOCK ADAPTOR2		4
	34	MK260E-BLT850	BOLT M8x50		14
	33	MK260E-WHR22	WASHER 22x8.2x2.4		14
	32	MK260E-SVC	SOLENOID VALVE COIL		2
	31	MK210E-CEC	COMPRESSOR ELECTRICAL BOX - COVER		2
	30	SEE REF TABLE	COMPRESSOR		2
	29	M-DBV-6000	DRAIN BALL VALVE		10
	28	MK260E-EWF1	ELBOW FITTINGS1		12
	27	M-RTA-5000-T-2	ROTALOCK VALVE "T" ADAPTOR FOR HEAT EXCHANGER		3
	26	MK260E-RTA4	ROTOLOCK ADAPTOR4		5
	25	M-RTA-5000-2	ROTALOCK VALVE ADAPTOR FOR HEAT EXCHANGER		2
	24	N/A	N/A		-
	23	M-RTA-5000-1	ROTALOCK VALVE ADAPTOR FOR HEAT EXCHANGER		5
	22	MK250E-CPG4	COUPLING CLAMP 4		2
	21	MK260E-BLV	BALL VALVE		1
	20	MK260E-CPG3	COUPLING CLAMP 3		2
	19	MK250E-RTA5	ROTALOCK VALVE ADAPTOR		1
	18	MK250E-CPG2	COUPLING CLAMP 2		12
	17	MK260E-RTA3	ROTOLOCK ADAPTOR3		1
	16	MK250E-CLLB	COLLECTOR BOTTOM		1
	15	MK250E-CLLT	COLLECTOR TOP		1
	14	MK260E-CPG1	COUPLING CLAMP 1		12
	13	MK260E-EXC	HEAT EXCHANGER		6
	12	M-CPF-6000-90	1/4 90° ORIFICE CUPPER PIPE FITTING		6
	11	M-CCP-6000	CONDUIT FOR CONTROL PANEL		8
	10	MK260E-BLT630	BOLT M6x30		58
	9	M-NUT-6000	CAGE NUT M6		58
	8	MK250E-CRP	CONDENSER REINFORCEMENT PLATE		2
	7	MK250E-FPRT	FAN PROTECTOR		1
	6	MK260E-CRP	BOLT M8x30		12
	5	M-OSO-5000	OIL SEPARATOR ORING		1
	4	SEE REF TABLE	FAN MOTOR		3
	3	M-OSE-6000	OIL SEPARATOR ELEMENT		1
	2	MK250E-CON	CONDANSER		1
	1	MK250E-CAB	CABINET BASE		1
DWG SIZE	ITEM NO.	PART NO.	DESCRIPTION	REV	QTY

PART LIST



# 8.1 - ED & Spare Part List

## IS 260







8.1 - ED & Spare Part List  
**IS 260**

106	MK260E-GBV-1/4	BALL VALVE 1/4	1		
105	MK250E-RTA5	ROTOLOCK VALVE ADAPTOR	1		
104	MK260E-BSLV	BY BASS SOLENOID VALVE	1		
103	MK260E-SVC	SOLENOID VALVE COIL	2		
102	M-STU-6000	CABINET STUD AND NUT	34		
101	M-FAS-6000	CABINET FASTENER	34		
100	MK260E-CAT2	CABINET TOP2	1		
99	MK260E-CAT1	CABINET TOP1	2		
98	MK260E-CRS2	CABINET REAR SIDE BOTTOM2	3		
97	MK260E-CBR	CABINET BACK BOTTOM RIGHT	1		
96	MK260E-CNR	CABINET BACK TOP RIGHT	1		
95	MK260E-CBB	CABINET LEFT BOTTOM BACK	1		
94	MK260E-CLB	CABINET LEFT TOP BACK	1		
93	MK260E-CPS	CABINET POST SECONDARY SIDE	6		
92	MK260E-CSB2	CABINET SIDE BOTTOM2	1		
91	M-CHN-6000	CABINET HANDLE	15		
90	MK260E-CRS1	CABINET REAR SIDE BOTTOM1	2		
89	MK260E-CST	CABINET SIDE TOP	6		
88	MK260E-CGT	CABINET FRONT RIGHT TOP	1		
87	MK260E-CLT	CABINET FRONT LEFT TOP	1		
86	MK260E-CFB	CABINET FRONT BOTTOM	1		
85	MK260E-MSW	MAIN SWITCH	1		
84	MK260E-ESD3	ESD3 CONTROLLER	1		
83	MK260E-PCP-ESD3	PLASTIC CONTROL PANEL	1		
82	MK260E-CAL2	CABINET LEG2	1		
81	MK260E-CAL1	CABINET LEG1	3		
80	M-FHH-6000	HIGH VOLTAGE FUSE HOLDER	4		
79	M-PPR-6000	PHASE PROTECTION RELAY	1		
78	MK260E-TRF	TRANSFORMER	1		
77	M-CNT-2400	PROTECTION	2		
76	M-CNT-MP	FAN CONTACTOR	3		
75	M-PWC-3800	POWER CONNECTOR	4		
74	M-COP-3000	COMPRESSOR OVERLOAD PROTECTOR	2		
73	M-COP-0325	FAN OVERLOAD PROTECTOR	3		
72	M-FHL-6000	LOW VOLTAGE FUSE HOLDER	1		
71	M-MMM-6000	MEMBRANE	5		
70	N/A	N/A	-		
69	M-FNS-0200	FAN ON/OFF SWITCH	1		
68	M-HPS-0200	HIGH PRESSURE SECURITY SWITCH	1		
67	MK260E-LPS	LOW PRESSURE SWICH	1		
66	MK260E-HNG	HINGE	3		
65	MK260E-DLK	DOOR LOCK	3		
64	MK260E-SCF	SWITCH CONNECTION FITTING	3		
63	M-OSO-5000	OIL SEPARATOR ORING	1		
62	M-OSE-5000	OIL SEPARATOR ELEMENT	1		
61	MK260E-ELB	ELECTRICAL BOX	1		
60	M-BYV-6000	BY PASS VALVE	1		
59	MK260E-GBV	BALL VALVE	3		
58	MK260E-FTS	FLAT FITTINGS	5		
57	M-SCF-6000	SENSOR HOLDER	1		
56	MK260E-MAS	MANSON 1/2"	6		
55	M-CPF-6000-90	1/4 90° ORIFICE CUPPER PIPE FITTING	6		
54	MK260E-T14	ELBOW FITTINGS T 1/4"	4		
53	MK260E-CKV	CHECK VALVE	2		
52	M-MMV-6000	MEMBRAN VALVE	5		
51	MK260E-MBC2	MANIFOLD BLIND CAP2	1		
50	MK260E-MBC1	MANIFOLD BLIND CAP1	5		
49	MK260E-MRS	MANIFOLD REINFORCEMENT SHEET METAL	2		
48	MK260E-DRM	DRAIN MANIFOLD	1		
47	M-SLV-6000-24	SOLENOID VALVE	1		
46	MK260E-DSTK	DISTRIBUTOR CLAMP	1		
45	MK260E-DST	DISTRIBUTOR	1		
44	MK260E-EXV	EXPANSION VALVE	1		
43	M-OSP-8000	OIL SEPERATOR	1		
42	M-DRI-6000	DRYER-DEHYDRATOR	1		
41	M-DIS-6000	DRIER SEAL	1		
40	M-DIE-6000	DRIER ELEMENT	1		
39	MK260E-RCV	LIQUID RECEIVER	1		
38	MK260E-SPR	SEPERATOR	1		
37	MK260E-RTA7	ROTOLOCK ADAPTOR7	1		
36	MK260E-BLT850	BOLT M8x50	16		
35	MK260E-WHR22	WASHER 22x8,2x2,4	16		
34	MK260E-RTA7-T	ROTOLOCK ADAPTOR7-T	1		
33	MK210E-CEC	COMPRESSOR ELECTRICAL BOX - COVER	2		
32	MK260E-CLP	COMPRESSOR LOWER PLATE	1		
31	SEE.REF TABLE	COMPRESSOR	2		
30	M-DBV-6000	DRAIN BALL VALVE	14		
29	MK260E-EWF1	ELBOW FITTINGS1	15		
28	MK260E-RTA5-T	ROTOLOCK ADAPTOR5-T	5		
27	MK260E-RTA4	ROTOLOCK ADAPTOR4	7		
26	MK250E-ASF	ASTROFLEX	1		
25	MK260E-ASF	ASTROFLEX	1		
24	M-RTA-5000-1	ROTOLOCK VALVE ADAPTOR FOR HEAT EXCHANGER	9		
23	MK260E-CPC	COUPLING COVER	2		
22	MK260E-CPG4	COUPLING CLAMP 4	2		
21	MK260E-BLV	BALL VALVE	1		
20	MK260E-CPG3-UL	COUPLING CLAMP 3	2		
19	M-CPF-6000-O	1/4 90° ORIFICE CUPPER PIPE FITTING	2		
18	MK260E-CPG2	COUPLING CLAMP 2	14		
17	MK260E-RTA3	ROTOLOCK ADAPTOR3	3		
16	MK260E-CLLB	COLLECTOR BOTTOM	1		
15	MK260E-CLLT	COLLECTOR TOP	1		
14	MK260E-CPG1	COUPLING CLAMP 1	14		
13	MK260E-EXC	HEAT EXCHANGER	7		
12	M-CCP-6000	CONDUIT FOR CONTROL PANEL	8		
11	MK160E-RTA2	ROTOLOCK ADAPTOR2	4		
10	MK260E-CPS	CONDENSER LOWER PLATE SUPPORT	2		
9	MK260E-CSA	CONDENSER SUPPORT ADDITIONAL	2		
8	MK260E-BLT630	BOLT M6x30	70		
7	M-NUT-6000	CAGE NUT M6	70		
6	MK260E-CRP	CONDENSER REINFORCEMENT PLATE	2		
5	MK260E-FPRT	FAN PROTECTOR	1		
4	MK260E-BLT830	BOLT M8x30	24		
3	SEE.REF TABLE	FAN MOTOR	6		
2	MK260E-CON	CONDANSER	1		
1	MK260E-CAB	CABINET BASE	1		
DWG SIZE	ITEM NO.	PART NO.	DESCRIPTION	REV	QTY

PART LIST



## 9. COMPONENTS LOCATION

All main components located into dryer identified with labels as listed here under.

CAUTION: Due to manufacture design, some components out of the list are not installed into the dryer.

### Electrical components:

#### Accessories :

A01:	Control circuit transformer
A02:	Power circuit transformer
A10:	ON warning light
A11:	OFF warning light
A20:	Drain solenoid valve
A30:	Crankcase heater
A31:	Electrical resistor
A40:	Electrical capacity
EV3	Digital Controller (Digi-Pro)
A50-3:	Energy saving device 3 (ESD3)

#### Relays :

K01:	Compressor motor relay
K10:	Fan motor relay
K20:	Drain timer or Bekomat (optional)
K30:	Temperature Controller

#### Switches :

S01:	Main switch
S02:	Start push button
S03:	Stop push button
S10:	Fan pressure control
S11:	High-low pressure security control
S12:	High pressure security control
S13:	Low pressure security control
S20:	Refrigerant temperature control
S21:	Air temperature control

#### Motors :

M01:	Refrigerant compressor motor
M10:	Fan motor

#### Thermal protections :

P01:	Refrigerant compressor thermal overload
P10:	Fan motor thermal overload

#### Fuses protections :

See complete identification into electrical sketch included in dryer

F--:	Transformer protection
F--:	Fan protection
F--:	Compressor relay protection
F--:	Transformer protection
F--:	Drain protection
F--:	Fan relay protection

#### Refrigerant components:

G01:	Liquid receiver
G02:	Refrigerant drier
G03:	Expansion valve
G04:	Liquid separator
G05:	Hot gas bypass valve
G06:	Refrigerant solenoid valve
G10:	Water cooled condenser
G11:	Water control valve
G20:	Refrigerant evaporating pressure gauge
G21:	Refrigerant evaporating temperature gauge

#### Compressed air components :

H01:	Air inlet prefilter
H11:	Drain filter
H12:	Pneumatic drain valve

#### Terminal boxes:

B01:	Main terminal box
B11:	Refrigerant unit terminal box
B12:	Free of potential terminal box



Problem	Possible Cause	Repair	Comments	
Dryer is switched on, indicator light is lit but the refrigerant compressor does not turn on.	The connection has inverted phases	Invert two phases	3-phase dryers are equipped with a phase controller to avoid the fans from turning in the opposite direction.	
	Refrigeration unit is not functioning	Check refrigeration compressor	Several factors can cause compressor failure. A qualified refrigeration technician needs to check all the electrical and refrigerant circuit and controls.	
	The refrigerant highpressure protection has tripped	The refrigerant safety high pressure switch has tripped.	In case of water cooled condensers, check the water control valve	The dryer is protected against excessively high refrigerant pressure. If the condenser efficiency has reduced, the switch will trip. Manually reset the switch.
		Excessive ambient temperature		
Dryer is switched on, but the refrigerant compressor does not turn on.	Excessive temperature on crankcase of compressor.	Allow time to compressor to cool down. Reason may be a possible incorrect adjustment of hot gas bypass valve or shortage of refrigerant	Compressor is protected against overly high temperatures of the crankcase by a thermal switch.	
	Excessive compressed air inlet temperature.	Be sure that dryer is working in temperatures lower than design conditions.	The dryer is designed for working in calculated conditions (see description in this manual). If conditions are exceeded, the dryer will be overflowed, dew point will go up and protecting devices can switch off.	
	Clogged condenser fins or clogged water condenser. Possible high crankcase temperature Possible loss of phase Possible low voltage causing overload trip Possible failed compressor	Clear fins or water condenser of all obstructions.	The clogged fins in the condenser will restrict the air passage and reduce the refrigeration capacity, causing high temperature in the evaporator. Same will occur if water condenser is clogged with mud or dirt. Air condenser and water condenser should be periodically checked and cleaned. Protect water circuit by an adapted filter.	
	Too much compressed air flow.	Check actual flow through the dryer.	This dryer is designed for a maximum air flow at design conditions. If too much air is pumped into the dryer, water removal capacity may not be sufficient, resulting in liquid carryover down stream. Check the rated output the air compressor.	
	Faulty electrical wiring	Inspect the circuit	The compressor-on light should be wired into the refrigerant compressor circuit. See wiring diagrams in this manual.	
	One electrical protection has tripped.	Reset the protection or replace the blown fuse.	The dryer is protected against high amp draw by fuse and/or overload relay that can trip in case of need. Reset or replace fuse once, but do not persist if it trips again, request assistance from a qualified refrigeration contractor.	
Dryer is switched on but fan is not running.	Fan has to run if refrigerant high pressure reaches upper set point.	Check that compressed air flows through the dryer. Check that fan blades are free to move. Check the fan pressure switch.	Fan operates automatically to keep refrigerant pressure below the maximum value. The fan can stop if pressure is under the recommended setting.	
When compressor starts, it vibrates a lot and makes mechanical noise.	Compressor is slugging liquid refrigerant at start up.	Be sure the pre-heating period of at least 2 hours is respected	Refrigerant may move between receivers when refrigerant compressor is stopped and not heated, especially if stopped for a long time. This migration may cause liquid shock (slugging) in valves specially on large dryers containing more refrigerant	



Problem	Possible Cause	Repair	Comments
Water in system	Compressed Air Inlet and outlet connections are reversed.	Check inlet and outlet connections.	This dryer is designed for air flow in one direction only. Inlet and outlet directions are identified on the dryer.
	Drain system is clogged or inoperative.	Restore a free flow of water condensate. Check water evacuation.	Drain system is timed solenoid valve, pneumatically assisted which has to be adjusted in accordance with values listed in this manual. The Solenoid valve includes a strainer that has to be periodically checked and cleaned. Membranes of pneumatically assisted drain have to be checked or replaced every 6 months.
	Bypass system is open	Check the valves	Important: Bypass piping should be installed around the dryer so the dryer can be isolated for service without shutting down the air supply. During dryer operation, valves must be set so all air goes into the system. Check tightness of the bypass system.
	Free moisture remains in pipe lines.	Blow out the system	Before the dryer is first started all free moisture should be blown out of the system.
	Excessive air flow	Check actual flow through the dryer.	This dryer is designed for a maximum air flow. If too much air is pumped into the dryer, water removal capacity may not be sufficient, resulting in liquid carry over downstream. Check the rated flow of the air compressor.
	Excessive free moisture	Check the separator and drain system and compressor after cooler ahead of the dryer.	In some system there may be an accumulation of free moisture in the line ahead of the dryer. If this moisture is pumped into the dryer intermittently, the water removal capacity may not be sufficient. A water separator should be installed in the line before the dryer.
	Excessive compressed air inlet temperature.	Be sure that dryer is working lower than design conditions	The dryer is designed to work for calculated design conditions. Should the conditions be exceeded, the dryer will be overflowed, dew point will go up and protecting devices can switch off.
	Clogged condenser fins	Clear fins of all obstructions	The clogged fins in the condenser will restrict air passage and reduce refrigerant capacity causing water downstream. Fins should be periodically checked and cleaned.
	Shortage of refrigerant	Fix the leak and add a charge of refrigerant.	Loss of refrigerant will cause improper functioning. A qualified, refrigeration specialist should perform the necessary repairs, or factory should be contacted if the unit is in warranty.
	Refrigeration system is not functioning	Check to be certain refrigerant compressor is running	To check if the compressor is running, check compressor-on light. It is possible for the fan to be operating but not the compressor. Compressor not running can be caused by several factors. A qualified refrigeration technician should check all refrigerant and electrical controls
	Excessive pressure dew point	Readjust refrigerant evaporating pressure	The refrigerant pressure adjustment should be done by a qualified refrigeration engineer. This is a very sensitive device and incorrect settings may create other failures.
High pressure drop	Excessive compressed air flow or too low air inlet pressure.	Check actual pressure and flow through the dryer.	This dryer is designed for a maximum air flow. If too much air is pumped into the dryer, water removal capacity may not be sufficient, resulting in liquid carry-over downstream. Check the rated flow of the air compressor.
	Freeze up	Check that compressor room ambient,	Frosting of the lines is an indication that controls are set too low. The following should be done by an experienced refrigeration technician.
Fan switch could have failed in closed position keeping fan on.		Controls may be adjusted in the fields by means of the hot gas bypass valve. This is to be done by a qualified refrigerant technician.	
The unit will not run or cycles off and on.	Clogged heat exchanger	Clean heat exchanger with reverse air flow.	Dryer are supposed to be used with compressed air free of any aggressive contaminants. Some contamination may require extra maintenance of the heat exchanger.
	Line disconnect switch is open.	Close the start or disconnect switch.	If the dryer is not operating, check the disconnect switch or circuit breaker to be certain it is on.
	Fuse or breaker is open	Replace fuse or reset breaker.	The fuse to the power line should be checked and replaced if needed. Never replace a burnt fuse with an oversized fuse.
	Faulty refrigerant compressor or controls.	Determine the cause and make correction	Failure of compressor to run may be caused by several factors. A qualified refrigeration specialist should check all electrical and refrigeration controls, or factory should be contacted if unit is in warranty.
	Excessive compressed air inlet temperature.	Design conditions and correction factors are described in this manual. Be sure that dryer is working in ambient temperatures below design conditions.	The dryer is designed for working into calculated design conditions. Should the conditions be exceeded, the dryer will be overflowed, dew point will go up and protecting devices may trip.



Problem	Possible Cause	Repair	Comments
The unit will not run or cycles off and on.	Excessive ambient temperature	Designed conditions and correction factors are described in dryer . Be sure that dryer is working lower than design conditions.	A high ambient temperature may cause the refrigerant system to operate at higher than normal pressures. Results will be a higher than normal evaporator temperature. Important: there should be adequate air circulation around the dryer, and proper ventilation in the equipment room should guarantee a low enough ambient temperature.
	Clogged condenser fins	Clear fins of all obstructions.	The clogged fins in the condenser will restrict the air passage and reduce the refrigeration capacity, causing high temperature in the evaporator. Fins should be periodically checked and cleaned.
	Shortage of refrigerant	Fix the leak and add a charge of refrigerant.	Loss of refrigerant will cause improper functioning. Dryers are equipped with a temperature switch which maintains the amount of refrigerant to maintain proper cooling of the compressor. A shortage of refrigerant may cause suction line to become very hot, causing the temperature switch to trip. A qualified refrigeration specialist should perform the necessary repairs.
Error sign occurs on digital temperature control device	The dew point is too low or too high	Check refrigerant gas and make sure that the working conditions are within the correct range.	If there is not enough refrigerant gas or if the working temperature and inlet temperatures are very high, the dew point will increase.
Drain Failure	Back pressure or reduction of drain port.	Back First of all replace the drain / drains. Open drain to atmosphere (no back pressure) - if hose / pipe is used to carry the drain somewhere else; keep or enlarge the diameter.	Max drain hose length after the dryer must not exceed 10 meters.
			Max drain hose height from the dryer must not exceed 3 meters.
			The drain port size should not be reduced.
			There should not be any fitting that may cause pressure drop such as valves, elbow, tees, etc. on the drain connection.
			Drain should be at atmospheric pressure at all times. Any back pressure will result in failure and malfunction.

## Refrigerated Dryer (IS) WARRANTY POLICY



When used under the conditions recommended by the manufacturer Mikropor, IS Dryer is warranted to be free from defects in material and workmanship for a period of twenty-four (24) months from date of receipt, not to exceed thirty (30) months from the factory ship date, provided Mikropor is furnished the customer's name, address, and date of shipment information.

The heat exchanger will be warranted for two (2) years. This warranty is limited to the replacement of the heat exchangers, F.O.B. Factory, and subject to the same restrictions as outlined below concerning misuse, abuse or accident. The standard equipment external float drain and optional automatic drain carry a 90-day warranty. This warranty will apply to equipment installed, operated and maintained in accordance with the procedures and recommendations as outlined in the owner's manual published by Mikropor during the life of this warranty, Mikropor will repair or replace (at Mikropor option) any defective part or assembly free of charge F.O.B. its warehouse if such defect occurred in normal service and was not due to apparent misuse, abuse or accident. This Warranty is not transferable. Any warranty service performed in the field must be authorized by Mikropor Unauthorized service voids the warranty and any resulting charges will not be paid by Mikropor. Mikropor makes no other warranties or guarantees, expressed or implied. The merchantability of the components is expressly excluded. The manufacturer assumes no liability for indirect or consequential damages.

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## **PUMP & MOTOR**

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