



ISO 9001:2008 / ISO 14001 : 2004
EUROPE CE CERTIFICATION

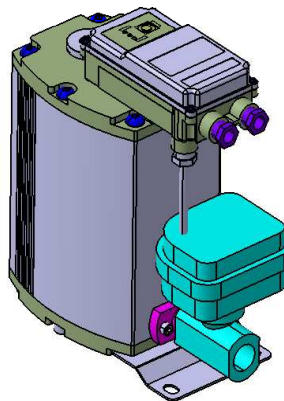


Technical Data

Condensate Auto Drain Trap

Electric Actuator Ball Valve Type

Model : DM-150B



Condensate Auto Drain Trap

DRAIN MASTER B

TECHNICAL DATA

Model	DM - 150B		
Order Ref.	DM 150 BA		
Working Pressure (min/max)	0 ~16 bar		
Temperature (min/max)	+1 °C ~ +80 °C		
Safety Class	IP 65		
Condensate Feed	G3/4"(NPT 3/4") x 3 point		
Venting Line	G3/4"(NPT 3/4")		
Condensate Discharge	G1/2"(NPT 1/2")		
Weight (empty)	3.9 kg		
Scope of Application	Oil-Free Condensate or Oil-Contaminated Condensate		
Material	Housing	Aluminium, Hardcoated	
	O-ring	NBR	
	Valve	Body : SCS13A . Ball : SUS 304	
	PCB Board Casing	ABS	

	Climatic zone	Peak compressor performance m ³ /min	Peak dryer performance m ³ /min	Peak filter performance m ³ /min
DM-150B	Green	170	340	1700
	Blue	150	300	1500
	Red	105	210	1050

***Green** –Dry and cool climate(such as in Northern Europe, Canada, Northern states of the USA, Central Asia)

***Blue** –temperate climate(such as in Central and Southern Europe, Central America)

***Red** –humid, tropical climate(such as in the coastal regions of South-East Asia, Oceania, Amazon and Congo regions)

Discharge Capacity of DRAIN MASTER B (DM-150B)

Working pressure	1 bar	2 bar	3 bar	4 bar	5 bar	6 bar	7 bar
Peak load (l/h)	180	210	240	275	310	352	400

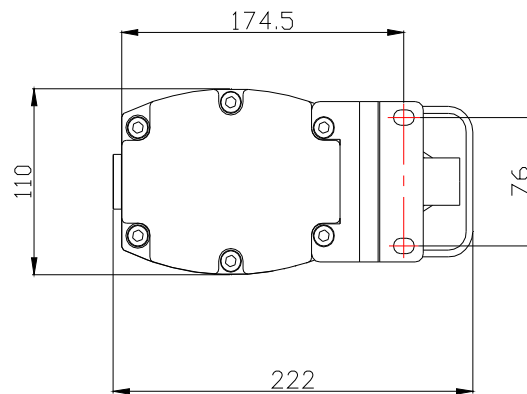
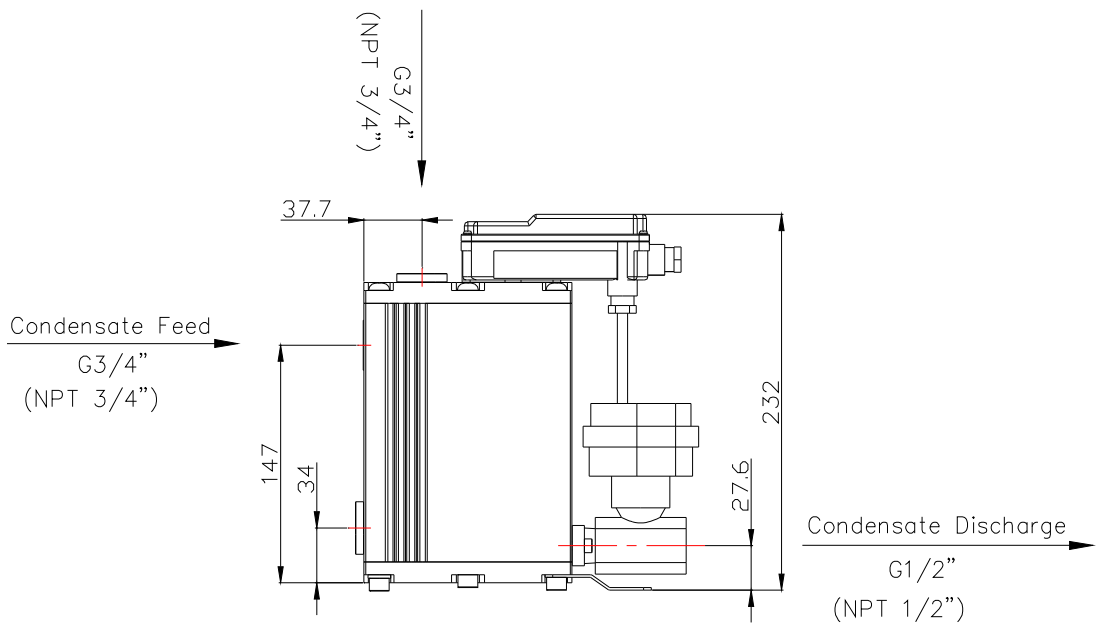
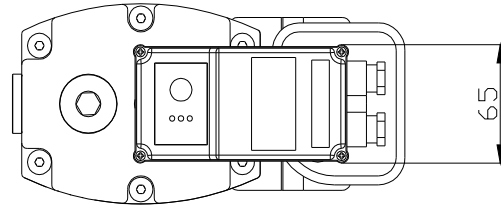
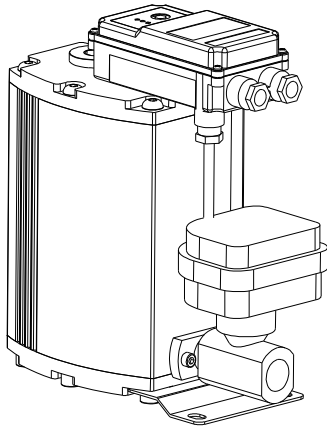
Voltage	Standard	100~240Vac(Free Voltage) / 50~60Hz	
	Order Voltages	24Vac.48Vac /24Vdc.48Vdc	
Power Input	10.0 VA	Fuse protection(normal lag)	0.5 A
Cable cross section	Ø 6.0 ~ 8.0 mm; 3 x 0.75mm		

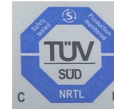
Thermostatically controlled heating (Option)

Designation	Heater Unit	
Order Ref.	A DM00-1	A DM00-2
Power	220Vac/50~60Hz/125W	110Vac/50~60Hz/125W
Operating Pressure(max)	25 bar	
with heating unit and proper insulation; down to -25 °C		

DIMENSION

DRAIN MASTER B (DM-150B)





Enclosure type:
4X "Watertight"
EnE System, co., Ltd

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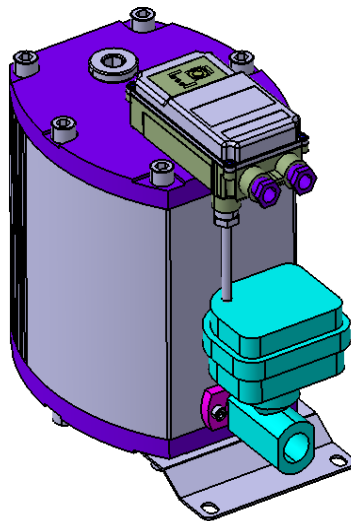


Technical Data

Condensate Auto Drain Trap

Electric Actuator Ball Valve Type

Model : DM-500B



Condensate Auto Drain Trap

DRAIN MASTER B

TECHNICAL DATA

Model	DM - 500B		
Order Ref.	DM 500 BA		
Working Pressure (min/max)	0 ~16 bar		
Temperature (min/max)	+1°C ~ +80°C		
Safety Class	IP 65		
Condensate Feed	G3/4"(NPT 3/4") x 3 point		
Venting Line	G3/4"(NPT 3/4")		
Condensate Discharge	G3/4"(NPT 3/4")		
Weight (empty)	6.0 kg		
Scope of Application	Oil-Free Condensate or Oil-Contaminated Condensate		
Material	Housing	Aluminium, Hardcoated	
	O-ring	NBR	
	Valve	Body : SCS13A . Ball : SUS 304	
	PCB Board Casing	ABS	

	Climatic zone	Peak compressor performance m ³ /min	Peak dryer performance m ³ /min	Peak filter performance m ³ /min
DM-500B	Green	570	1140	.
	Blue	500	1000	.
	Red	350	700	.

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Discharge Capacity of DRAIN MASTER B (DM-500B)

Working pressure	1 bar	2 bar	3 bar	4 bar	5 bar	6 bar	7 bar
Peak load (l/h)	400	460	520	590	670	750	850

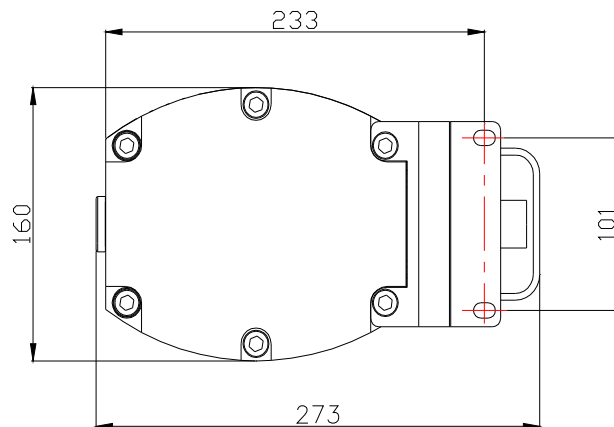
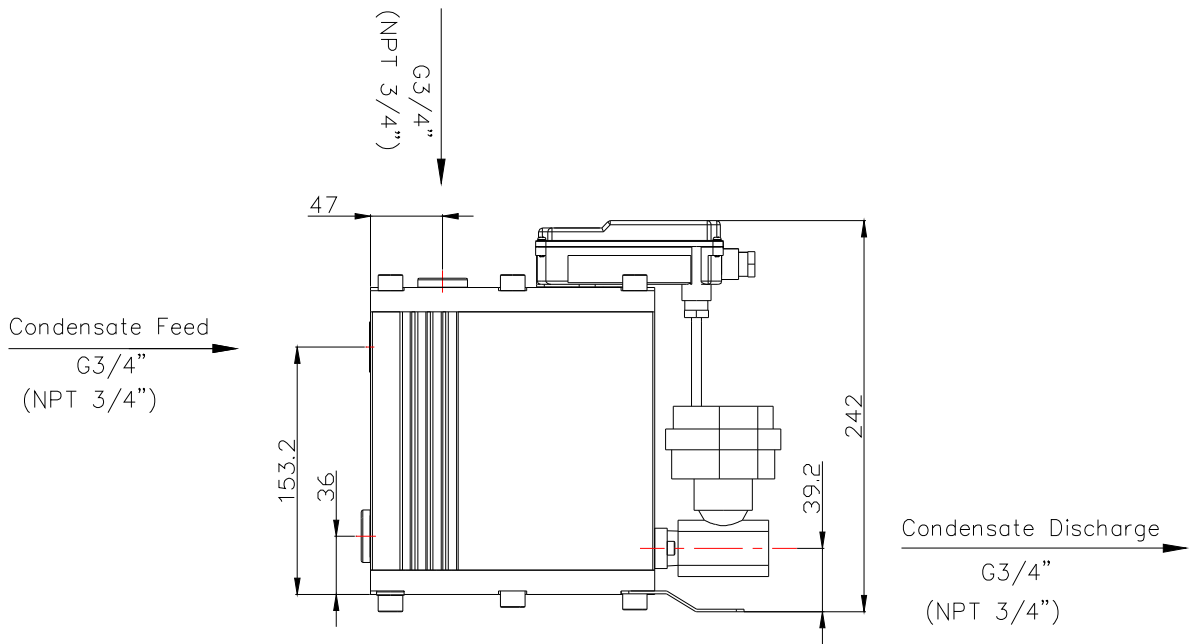
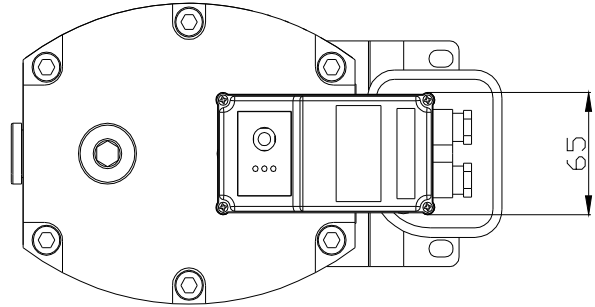
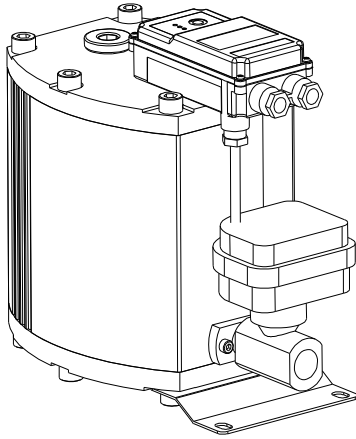
Voltage	Standard	100~240Vac(Free Voltage) / 50~60Hz	
	Order Voltages	24Vac.48Vac /24Vdc.48Vdc	
Power Input	10.0 VA	Fuse protection(normal lag)	0.5 A
Cable cross section	Ø 6.0 ~ 8.0 mm; 3 x 0.75mm		

Thermostatically controlled heating (Option)

Designation	Heater Unit	
Order Ref.	A DM00-1	A DM00-2
Power	220Vac/50~60Hz/125W	110Vac/50~60Hz/125W
Operating Pressure(max)	25 bar	
with heating unit and proper insulation; down to -25°C		

DIMENSION

DRAIN MASTER B (DM-500B)



Subject to technical changes without prior notice, errors not excluded.



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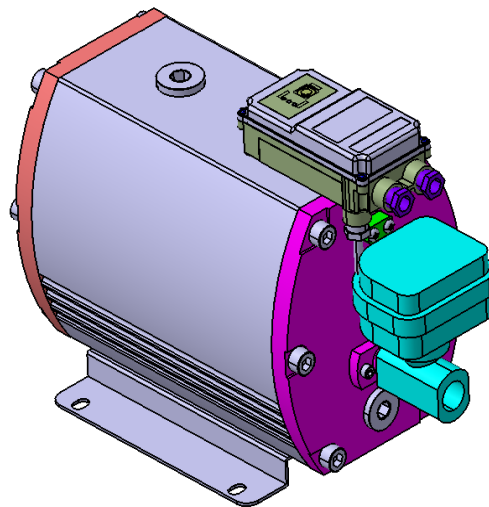


Technical Data

Condensate Auto Drain Trap

Electric Actuator Ball Valve Type

Model : DM-1500B



Condensate Auto Drain Trap

DRAIN MASTER B

TECHNICAL DATA

Model	DM - 1500B		
Order Ref.	DM 1500 BA		
Working Pressure (min/max)	0 ~16 bar		
Temperature (min/max)	+1 °C ~ +80 °C		
Safety Class	IP 65		
Condensate Feed	G3/4"(NPT 3/4") x 2 point, G1"(NPT 1") x 1 point		
Venting Line	G3/4"(NPT 3/4")		
Condensate Discharge	G3/4"(NPT 3/4")		
Weight (empty)	7.5 kg		
Scope of Application	Oil-Free Condensate or Oil-Contaminated Condensate		
Material	Housing	Aluminium, Hardcoated	
	O-ring	NBR	
	Valve	Body : SCS13A . Ball : SUS 304	
	PCB Board Casing	ABS	

	Climatic zone	Peak compressor performance m ³ /min	Peak dryer performance m ³ /min	Peak filter performance m ³ /min
DM-1500B	Green	1750	3500	.
	Blue	1500	3000	.
	Red	1050	2100	.

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Discharge Capacity of DRAIN MASTER B (DM-1500B)

Working pressure	1 bar	2 bar	3 bar	4 bar	5 bar	6 bar	7 bar
Peak load (l/h)	950	1,150	1,320	1,400	1,460	1,580	1,700

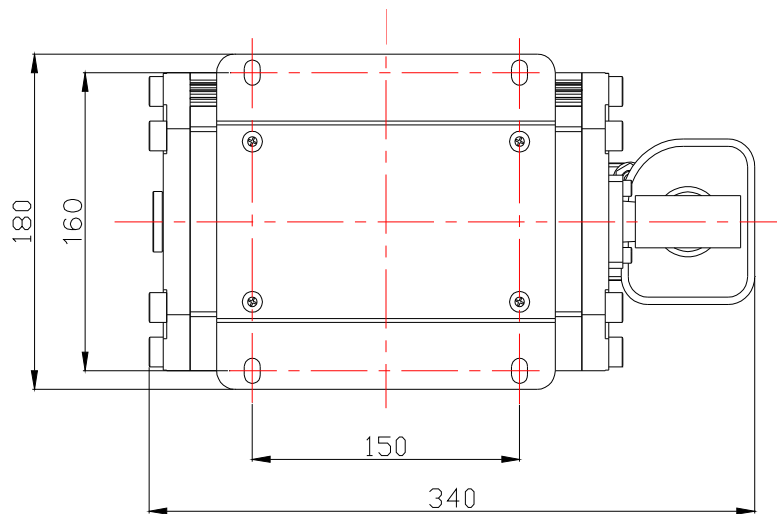
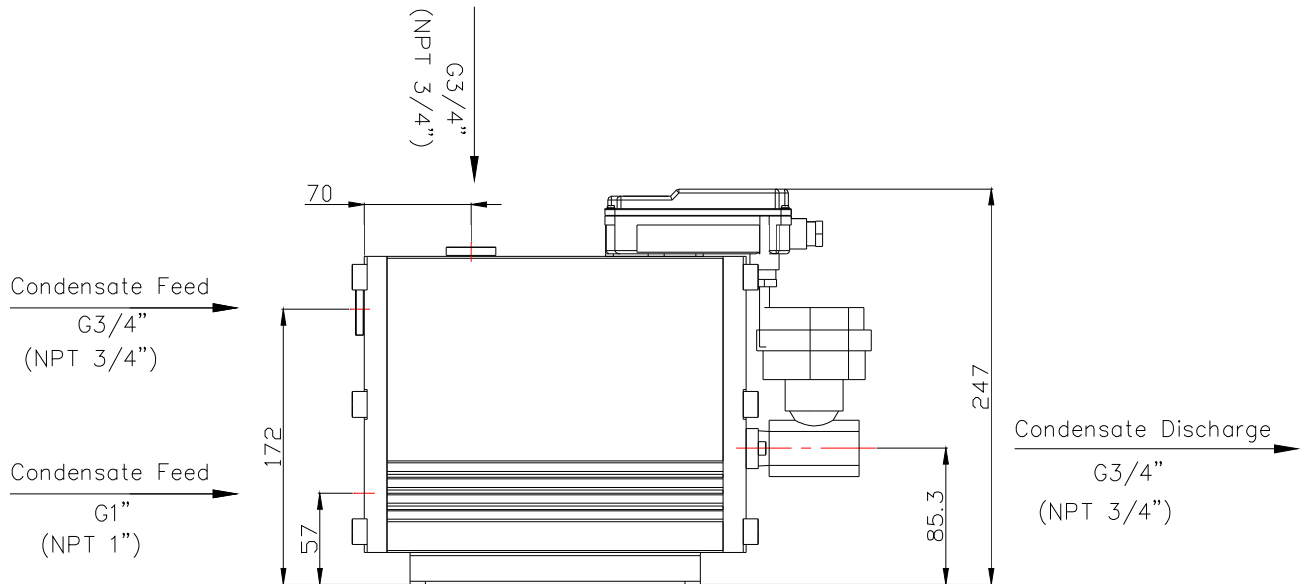
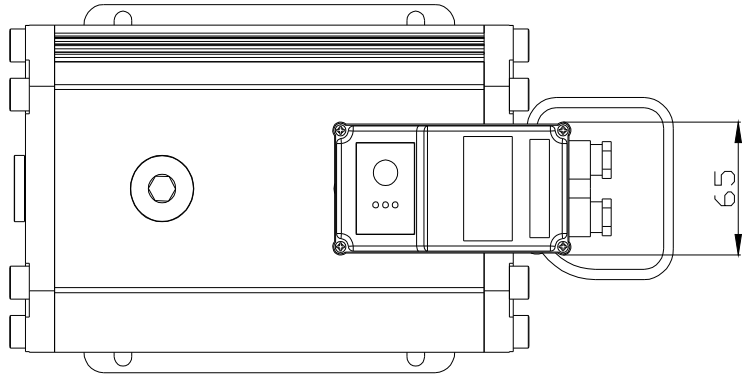
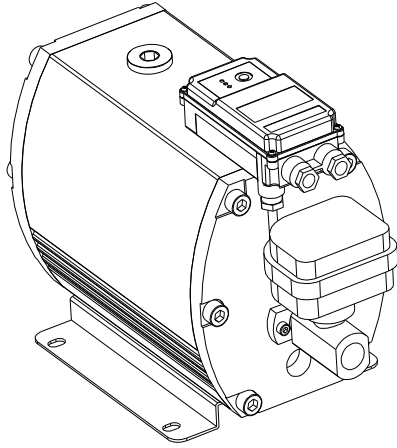
Voltage	Standard	100~240Vac(Free Voltage) / 50~60Hz					
	Order Voltages	24Vac.48Vac /24Vdc.48Vdc					
Power Input	10 VA	Fuse protection(normal lag)				0.5 A	
Cable cross section	Ø 6.0 ~ 8.0 mm; 3 x 0.75mm						

Thermostatically controlled heating (Option)

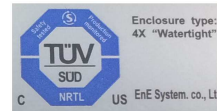
Designation	Heater Unit	
Order Ref.	A DM00-1	A DM00-2
Power	220Vac/50~60Hz/125W	110Vac/50~60Hz/125W
Operating Pressure(max)	25 bar	
with heating unit and proper insulation; down to -25 °C		

DIMENSION

DRAIN MASTER B (DM-1500B)



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Enclosure type:
4X "Watertight"

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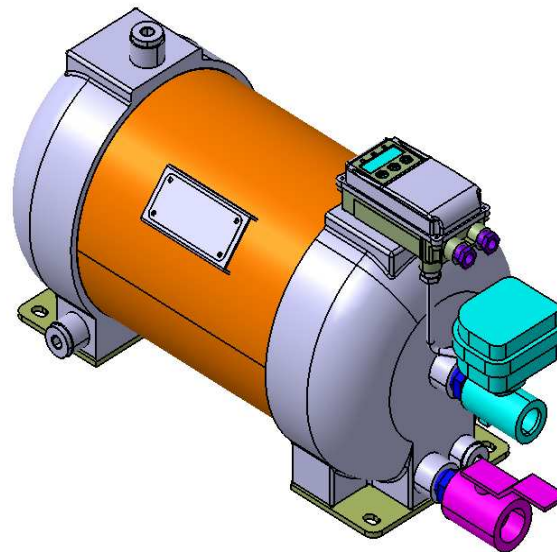


Technical Data

Condensate Auto Drain Trap

Electric Actuator Ball Valve Type

Model : DM-2500B



Condensate Auto Drain Trap

DRAIN MASTER B

TECHNICAL DATA

Model	DM - 2500B		
Order Ref.	DM 2500 BA		
Working Pressure (min/max)	0 ~12 bar		
Temperature (min/max)	+1℃ ~ +80℃		
Safety Class	IP 65		
Condensate Feed	G1"(NPT 1") x 1 point		
Venting Line	G1/2"(NPT 1/2")		
Condensate Discharge	G3/4"(NPT 3/4")		
Hand operated discharge	G3/4"(NPT 3/4")		
Weight (empty)	28.0 kg		
Scope of Application	Oil-Free Condensate or Oil-Contaminated Condensate		
Material	Housing	Stainless steel(No.1.4571 / SUS304)	
	O-ring	NBR	
	Valve	Body : SCS13A . Ball : SUS 304	
	PCB Board Casing	ABS	

	Climatic zone	Peak compressor performance m ³ /min	Peak dryer performance m ³ /min	Peak filter performance m ³ /min
DM-2500B	Green	2900	5800	.
	Blue	2500	5000	.
	Red	1750	3500	.

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Discharge Capacity of DRAIN MASTER B (DM-2500B)

Working pressure	1 bar	2 bar	4 bar	6 bar	8 bar	10 bar	12 bar
Peak load (l/h)	1,650	2,450	3,380	3,950	4,220	4,450	4,950

Voltage	Standard	100~240Vac(Free Voltage) / 50~60Hz					
	Order Voltages	24Vac.48Vac /24Vdc.48Vdc					
Power Input	10.0 VA	Fuse protection(normal lag)				0.5 A	
Cable cross section	Ø 6.0 ~ 8.0 mm; 3 x 0.75mm						

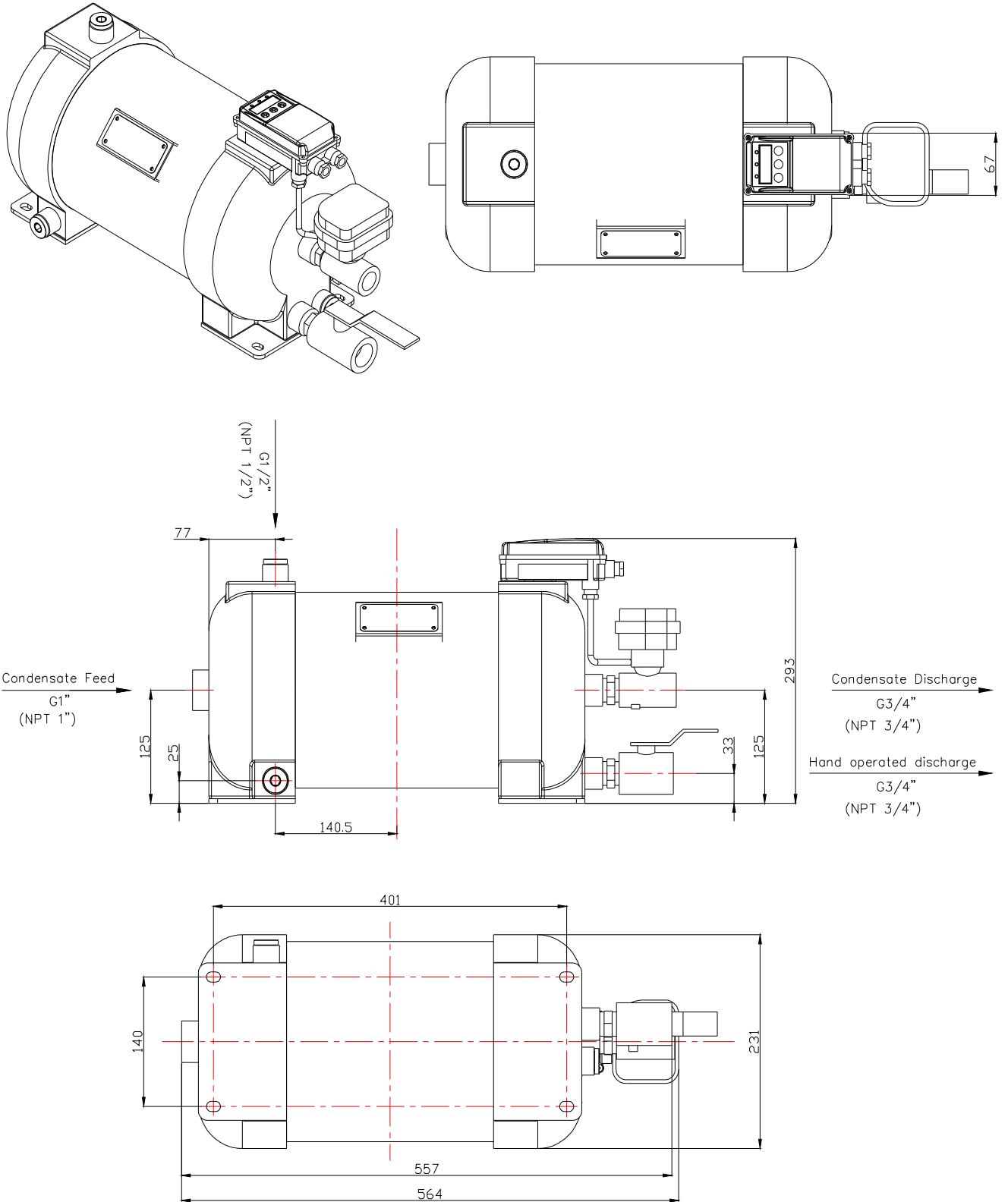
Thermostatically controlled heating (Option)

Designation	Heater Unit	
Order Ref.	A DM01-1	A DM01-2
Power	220Vac/50~60Hz/180W	110Vac/50~60Hz/180W
Operating Pressure(max)	25 bar	

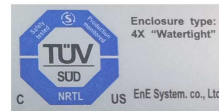
with heating unit and proper insulation; down to -25℃

DIMENSION

DRAIN MASTER B (DM-2500B)



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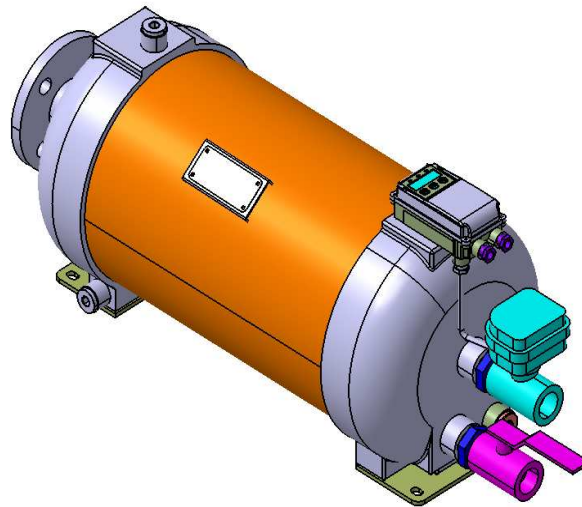


Technical Data

Condensate Auto Drain Trap

Electric Actuator Ball Valve Type

Model : DM-5000B



Condensate Auto Drain Trap

DRAIN MASTER B

TECHNICAL DATA

Model	DM - 5000B		
Order Ref.	DM 5000 BA		
Working Pressure (min/max)	0 ~12 bar		
Temperature (min/max)	+1℃ ~ +80℃		
Safety Class	IP 65		
Condensate Feed	FL 2" x 1 point		
Venting Line	G1/2"(NPT 1/2")		
Condensate Discharge	G 1"(NPT 1")		
Hand operated discharge	G1"(NPT 1")		
Weight (empty)	40.0 kg		
Scope of Application	Oil-Free Condensate or Oil-Contaminated Condensate		
Material	Housing	Stainless steel(No.1.4571 / SUS304)	
	O-ring	NBR	
	Valve	Body : SCS13A . Ball : SUS 304	
	PCB Board Casing	ABS	

	Climatic zone	Peak compressor performance m ³ /min	Peak dryer performance m ³ /min	Peak filter performance m ³ /min
DM-5000B	Green	5800	.	.
	Blue	5000	.	.
	Red	3500	.	.

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Discharge Capacity of DRAIN MASTER B (DM-5000B)

Working pressure	1 bar	2 bar	4 bar	6 bar	8 bar	10 bar	12 bar
Peak load (l/h)	3,300	4,900	6,750	7,900	8,450	8,890	9,850

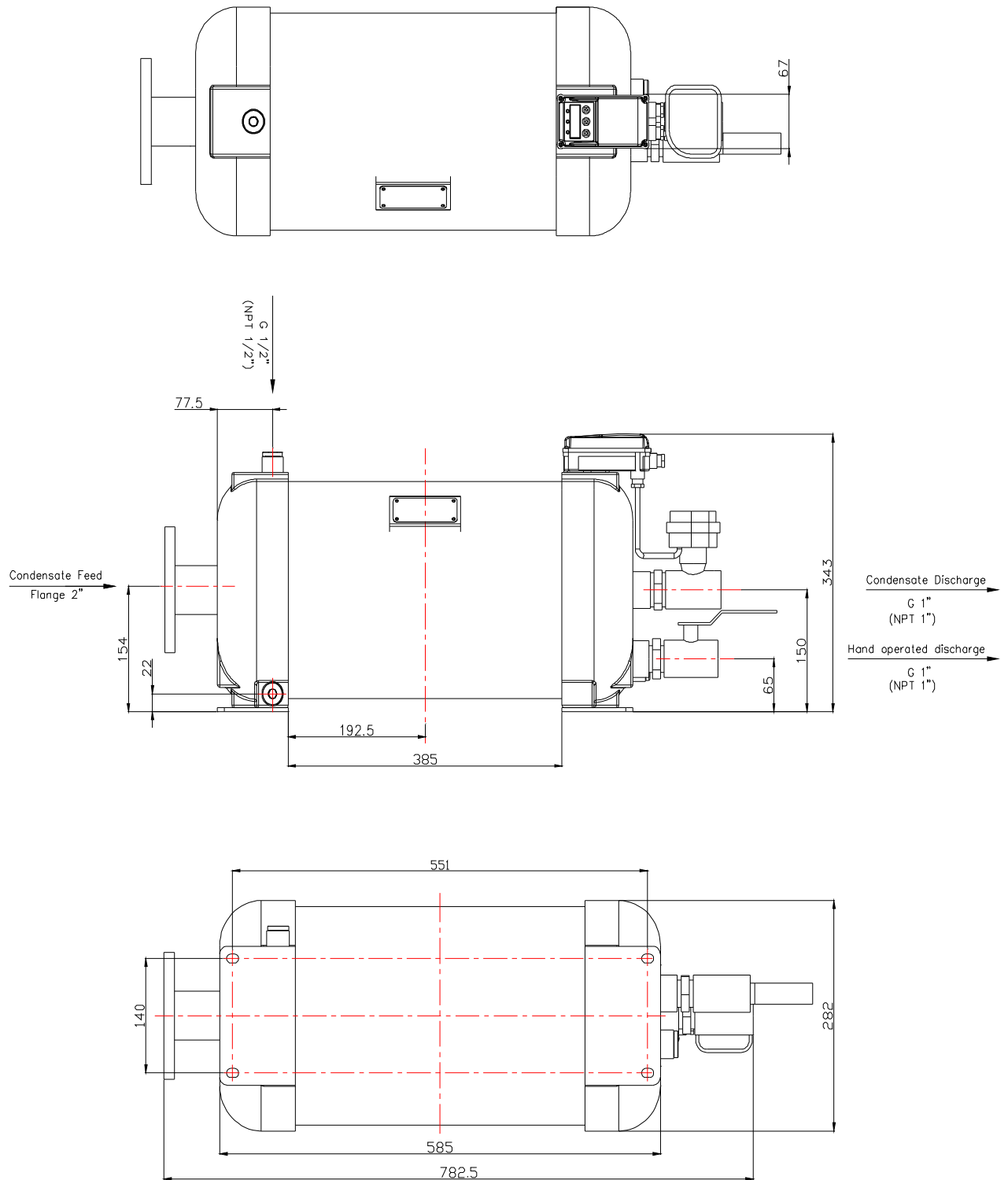
Voltage	Standard	100~240Vac(Free Voltage) / 50~60Hz					
	Order Voltages	24Vac.48Vac /24Vdc.48Vdc					
Power Input	18.0 VA	Fuse protection(normal lag)				0.5 A	
Cable cross section	Ø 6.0 ~ 8.0 mm; 3 x 0.75mm						

Thermostatically controlled heating (Option)

Designation	Heater Unit	
Order Ref.	A DM01-1	A DM01-2
Power	220Vac/50~60Hz/180W	110Vac/50~60Hz/180W
Operating Pressure(max)	25 bar	
with heating unit and proper insulation; down to -25℃		

DIMENSION

DRAIN MASTER B (DM-5000B)





Specification No. Es-430-009

Published April. 19. 2021

APPROVAL FOR SPECIFICATION

Receiving company	
Year Month Day	Receipt number

Name	Condensate Auto Drain Trap
Model	DM-150BS

APPROVE	DRAW

	SPECIFICATION	Date	
	AUTO DRAIN TRAP (DM-150BS)	Revision data	

REVISION RECORD

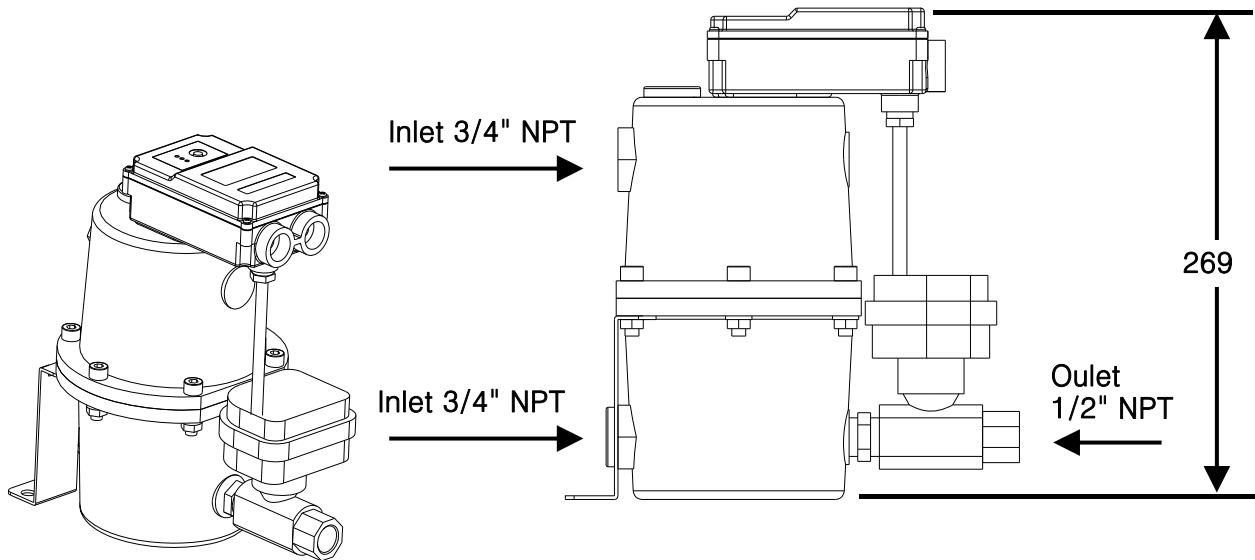
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1		New revision	S.S.OH	IS.Jeon
2		Revision1	S.S.OH	IS.Jeon
3		MOUNT BRACKET Modified	S.S.OH	IS.Jeon

DATE	REVISION RECORD			APPROVAL			
Page. 2/8	SHEET NO.	ES-430-009	SIGN	APPR	CHECK	DESIGN	DRAW
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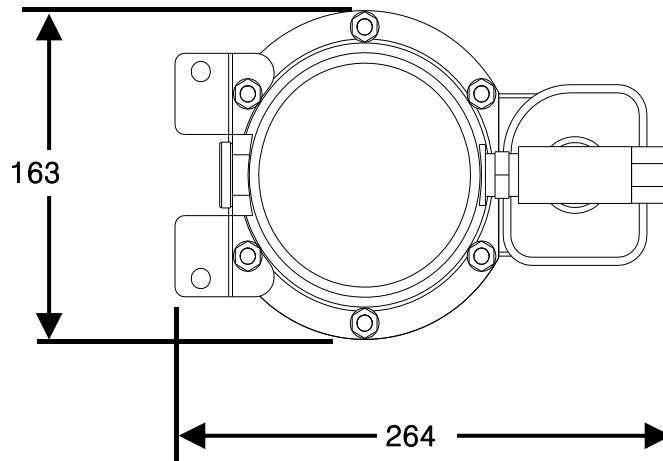
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		AUTO DRAIN TRAP (DM-150BS)		Revision data				
<p>1. APPLICATION : This specification is applied to AUTO DRAIN TRAP (DM-150BS) Model</p> <p>2. CONFIGURATION : Refer to DRAWING No. 6012000014</p> <p>3. SPECIFICATION (DM-150BS) :</p>								
■. TECHNICAL DATA				Housing protection : IP 65				
Model		DM - 150BS						
Order Ref.		DM 150 SA						
Short term peak load(from 7.0 bar)		650 ℓ / hr						
Operating Pressure(min/max)		0 ~16 bar						
Temperature(min/max)		. +1℃ ~ +80℃						
Condensate Inlet		3/4" x 3 point NPT						
Condensate Discharge		1/2" x 1 point NPT						
Weight		9.2 kg						
Application		Oil Free Compressor						
Power	Standard	24Vdc						
	Order Voltages							
Material	Housing	SUS 304						
	O-ring	NBR						
	Valve	Body SCS13A / Ball SUS 304						
	Casing	SUS 304						
■. REMARKS								
Designation		SPEC						
Power input		1/2"						
The alarm input		1/2"						
DATE		REVISION RECORD				APPROVAL		
Page. 3/8	SHEET NO.	ES-430-009		SIGN	APPR	CHECK	DESIGN	DRAW
	DWG NO.	6012000014			IS.Jeon	IS.Jeon	S.S.OH	S.S.OH
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	SPECIFICATION	Date	
	AUTO DRAIN TRAP (DM-150BS)	Revision data	

4.DIMENSION :



DM-150BS

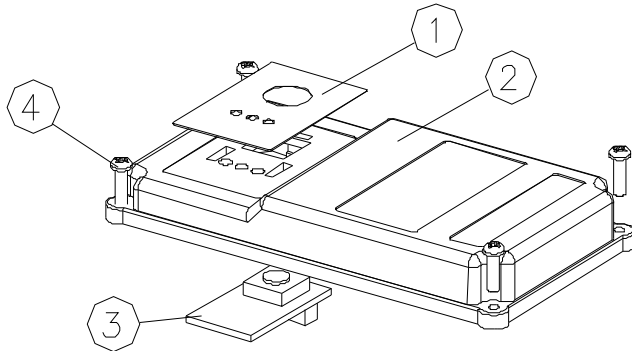


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	USER NAME.						

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	AUTO DRAIN TRAP (DM-150BS)	Revision data	

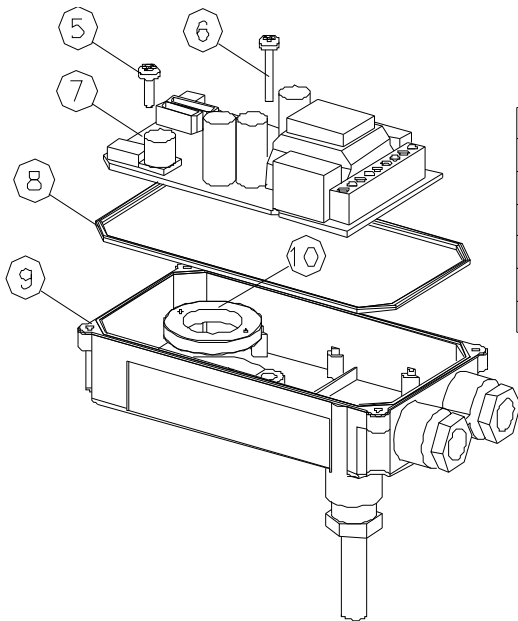
4. EXPLODE :

Case Top Assy



NO	Designation	MATERIAL	Amount
1	Board for test button	Film	1
2	Pcb top cover	SUS304	1
3	Tact switch for PCB	FR4	1
4	Pan head screw(M3X10)	SUS	4

Case Bottom Assy



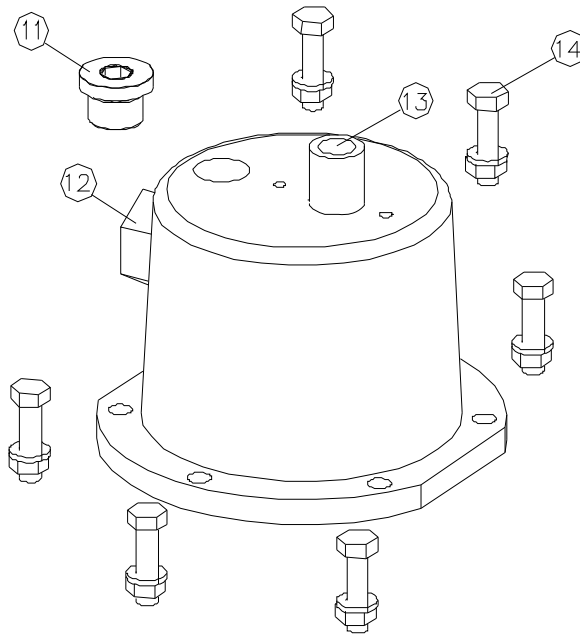
NO	Designation	MATERIAL	Amount
5	Pan head screw(M4X10)	SUS	1
6	Pan head screw(M4X18)	SUS	1
7	Main PCB	FR4	1
8	O RING [Cord Packing (315X1.5)]	AU	1
9	Bottom case	SUS 304	1
10	Mounting element	PC	1

DATE		REVISION RECORD				APPROVAL	
Page. 5/8	SHEET NO.	ES-430-009	SIGN	APPR	CHECK	DESIGN	DRAW
	DWG NO.	6012000014		IS.Jeon	IS.Jeon	S.S.OH	S.S.OH
	USER NAME.						

SPECIFICATION		Date	2012. 05. 02
AUTO DRAIN TRAP (DM-150BS)		Revision data	. .

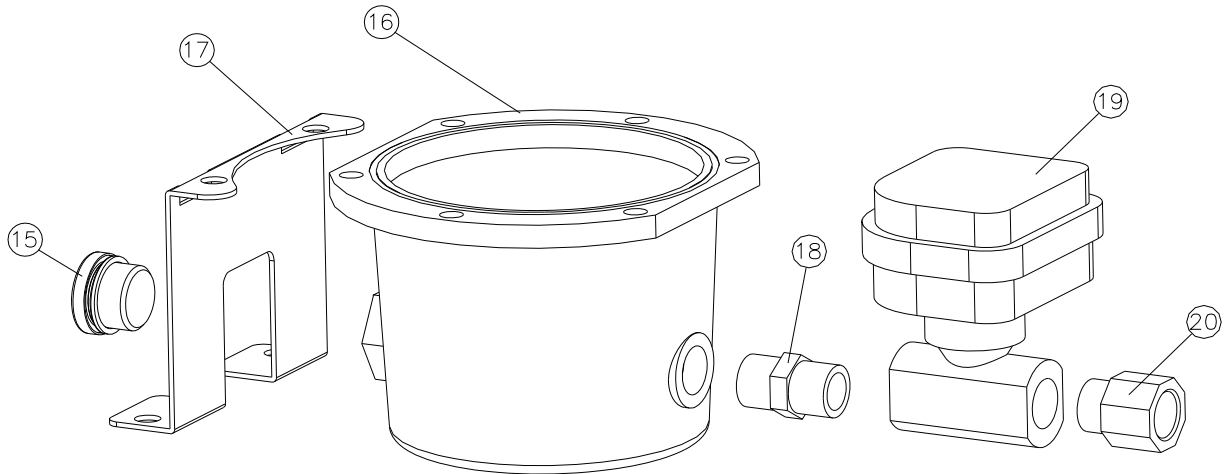
4. EXPLODE :

Housing Top Assy



NO	Designation	MATERIAL	Amount
11	Screw plug	SUS	1
12	Housing Top	SUS	1
13	Sensor Tube	POM	1
14	M8 Bolt Assy	SUS	6

Housing Bottom Assy

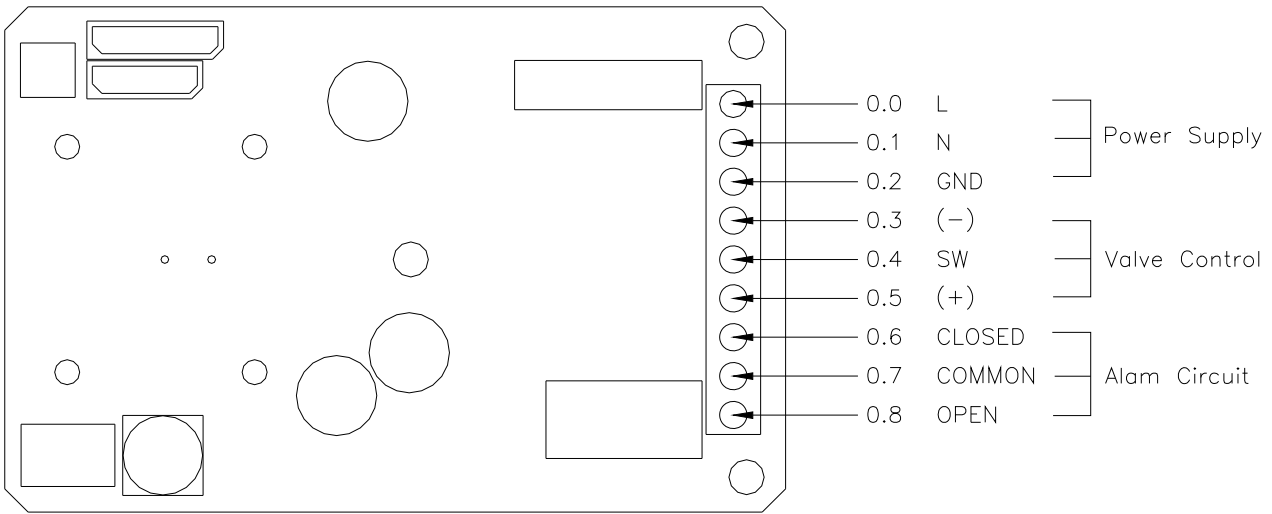


NO	Designation	MATERIAL	Amount
15	Screw plug	SUS	1
16	Housing Bottom	SUS	1
17	BRACKET	SUS	1
18	Nipple	SUS	1
19	Ball Valve Assy	SUS	1
20	BUSHING	SUS	1

DATE	REVISION RECORD				APPROVAL			
Page. 6/8	SHEET NO.	ES-430-009		SIGN	APPR	CHECK	DESIGN	DRAW
	DWG NO.	6012000014			IS.Jeon	IS.Jeon	S.S.OH	S.S.OH
	USER NAME.	SAUDI ARAMCO						

	SPECIFICATION	Date	
	AUTO DRAIN TRAP (DM-150BS)	Revision data	

5. ELECTRICAL :



PCB CONTROL BOARD

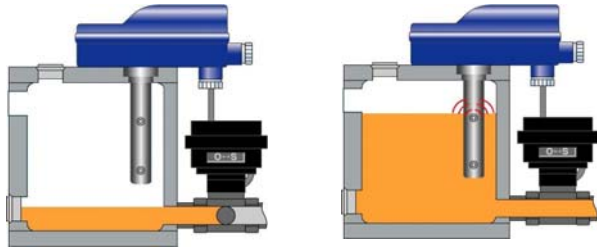
- Alarm Circuit -
 0.6 : normally closed
 0.7 : common
 0.8 : normally open

Power Voltage	Standard	24Vdc
	Order Voltages	
Alam Circuit		10mA
Max. power input		< 2.0 VA
Cable cross-section and fuse protection		ø 5.8 ~ 8.0mm , 0.75mm ² , 0.5A
Contact loading relay or OUT		0.5A

DATE	REVISION RECORD				APPROVAL		
Page. 7/8	SHEET NO.	ES-430-009	SIGN	APPR	CHECK	DESIGN	DRAW
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	USER NAME.						

	SPECIFICATION	Date	
	AUTO DRAIN TRAP (DM-150BS)	Revision data	

6. Function :



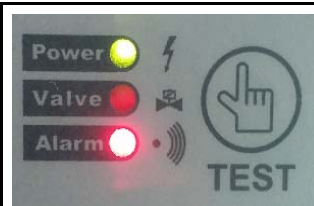
The condensate flowed into feed line can be stored in container. It becomes full water level in container. It is sensed at upper sensor it is discharged by opening electric actuation ball valve. If water level is sensed in lower part sensor, electric motion ball valve shall be closed.



Ready for operation
Voltage is being applied



Discharge procedure
Outlet line is open



Malfunction
Alarm mode is activated

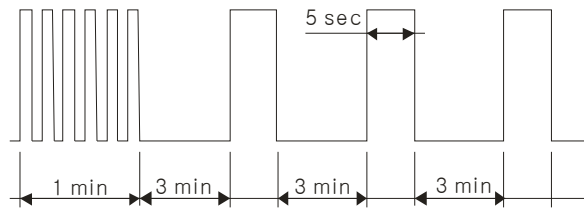


Test
Manual drainage / alarm

Malfunctioning could be caused by ;

- Mistakes during installation.
- Excessive condensate quantity (Overloading).
- Blocked outlet line.
- Occasion that is not discharged because internal pressure is lower than discharge minimum pressure.(0.0bar).

Switching sequence of valve in alarm mode



When the condensate doesn't discharge for 60 seconds by the scales, etc., it makes the user recognize through the alarm signal and it attempts to discharge scales by operating solenoid valve in every 3 minutes for a period of 5 seconds. It comes to return to normal mode when the discharge is done normally.

DATE	REVISION RECORD				APPROVAL			
Page. 8/8	SHEET NO.	ES-430-009		SIGN	APPR	CHECK	DESIGN	DRAW
	DWG NO.	6012000014			IS.Jeon	IS.Jeon	S.S.OH	S.S.OH
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