

After Cooler Operating Manual



- Please read this manual before using this equipment must.
- Learn all the safety precautions before using this equipment, please keep.

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■ Preliminary

The usability and the life cycle of the refrigerating After Cooler(referred to below as cooler) as well as the avoidance of premature repairs depends on proper operation, care and competent repair under consideration on these operating instructions.

Structure of this operating instructions

- User information
- Description
- Installation
- Operation
- Maintenance
 - Flow Diagram
 - Wiring diagram

■ Product information

Due to our position as suppliers of components we do not always know the final usage and total range of products' applications. We constantly improve our products to the latest state of science and technology and therefore, we assume that our products are free from defects in the sense of product liability. However, it cannot be excluded that during faulty operation in critical areas of application especially at danger to life and limb of persons involved, additionally safety measures may be necessary.

Therefore, we request the user of our components / units, to ensure in his own interest, to inform us about the application of our products in order to initiate additional safety measures, if necessary.

■ Electric

The electric design accords to EN60335-1/T24 resp.
(EN 60335-1/T24 resp.if applicable)

■ General notes

The Company does not accepts responsibility if these safety measures are not met during handling, operation, maintenance and repair, even though this is not strictly stated in these operating instructions.

We recommend receipt and notice of these operating instructions verified by the operating personnel in writing (personnel file).

We request strict observation of these notes as otherwise we do not accept any liability in respect of this machine (plant).



Attention!

The operator has to observe the national working-, operating- and safety regulations. Also existing internal factory regulations must be met.

Maintenance and repair work must only be carried out by specially trained personnel and, if necessary, under supervision of a person qualified of this work.

■ Safety regulations

- Protective or safety devices must not be removed, modified or readjusted.
- During operation of the Cooler none of the protective or safety devices must be removed, modified or readjusted temporarily or permanently.
- Use proper tools for maintenance and repair work only.
- Use original spare parts only.
- All maintenance works must be performed at stopped machine, disconnected power supply and pulled mains plug only. Ensure that the Cooler cannot be switched on by mistake.
- Prior to dismounting a part under pressure disconnect the Cooler from all pressure sources or depressurize the complete system respectively.
- Do not use inflammable solvents for cleaning the parts. Keep the environment absolutely clean during maintenance and repair works. Keep free of dirt by covering the parts and free openings with clean cloth, paper or adhesive tape.
- Never weld the pressure vessel or modify it in any way.
- Ensure that no tools, loose parts or similar are left in the system.

■ Sound pressure level

Sound pressure level value is less than 70 dB.

2. Description

■ Designation

After Cooler

■ Purpose

Installed in front of Air Dryer and make it lower temperature of compressed air witch is suitable in entrance use dryer temperature. And removes moisture of some.

■ Symbol



Operating switch "ON / OFF"

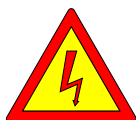
INLET

OUTLET

Compressed air inlet / outlet respect.



If the Cooler is not disconnected the risk of injuries, caused by free rotating fan wings, is existing.

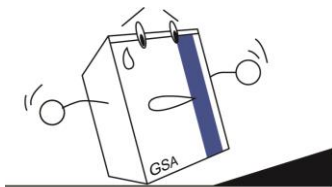


Electrical danger.

■ Technical data

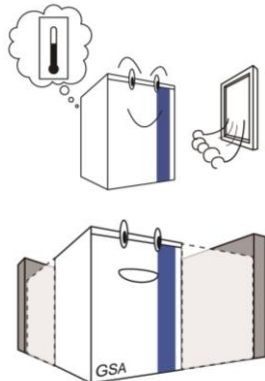
	Type-No.	20	25	40	50	80	100	150	200	300	400	500	600	
1	Volume flow	nm ³ /min	1.0	3.2	5.1	7.8	12.7	17.5	28.0	41.0	52.0	65.0	75.0	95.0
2	Applied air compressor	HP	7.5	25	35	50	75	130	170	200	300	400	500	600
3	Design pressure	kg/cm ²	9.9											
4	Test pressure (Hydraulic)	kg/cm ²	12											
5	Working pressure	kg/cm ²	7.0											
6	Inlet temperature (Max.)	°C	80											
7	Pressure drop (Max.)	kg/cm ²	0.2											
8	Ambient temperature (Max.)	°C	45 (Approach 8°C)											
9	Nominal voltage	V-Ph-Hz	220V – 1Ph – 50/60Hz											
10	Connection (In/Outlet)		PT 1"		PT1 -1/2"	PT 2"		PT 3"	FLG. 4"		FLG. 5"	FLG. 6"		
11	Dimension (W x D x H)	mm	230 500 590	300 600 700	370 900 710	370 1030 760	400 1160 810	460 1690 1095	425 1780 1245	480 1880 1360	470 1830 1615	475 1975 1685	530 2075 1840	
12	Total weight	kg	15	16	23	40	46	55	180	210	230	300	350	370
13	Drain connection		PT 1/2"											
14	Fan diameter	mm	230	300	250	300	350	450	500	550	450	500	550	
15	Motor quantity	EA	1			2					4			

■ Transportation



The Cooler can be transported for a short time in an inclined position of up to 45°C . In case of greater inclination or horizontal transportation over longer distances, there is the risk that e.g. the refrigerant compressor is damaged in its suspension. The Cooler may be trans-ported by two men or forklift truck. Transportation has to be carried out in the normal operating position of the Cooler. The cover sheets at the front side must not be damaged.

■ Installation place



- Easy wiring one place from electric-power.
- The place the bottom will be able to maintain a stability and horizontality.
- Inspection of the product and maintenance conservativeness easy one place.
- It is not recirculation of air and the place where the ventilation is good..



Installation in outdoor

- The place where it is not exposed to the direct light.
- The place where it does not over snow and the rain.
- The place where the ambient temperature does not descend with a sub-zero.

■ Piping outline

- The connection of piping uses two pipe range and to tighten.
- Do not put on a damage in piping and case when plumbing.
- Not to be a portion which gets broken off on the case center which will use a piping with the inside pressure hose to pay attention.
- To the drain exit it becomes the drain and the a lot of water is discharged until the drainage ditch to arrange pipe.

■ Attention of piping

- To connect in the air in/out tube size use the proper tube.
- Attention to vibration of AIR COMPRESSOR not to become delivery in AFTER COOLER.
- Weight of piping hot to become charge in the AFTER COOLER main body.



Inadequate place in installation

- The place where a direct effect to external environment such as rain and wind.
- A lot of moisture and the place where the dust are many, narrow place.
- The place where there is vibration, ambient temperature low-end place.
(under below zero)

■ Electric wiring work

- Electric wiring work is electric power wiring and ground connection wiring are necessary.
- Ground connection work it is necessary to do 3 kinds ground connection constructions.
- To connect the AC240V/AC415V which is AFTER COOLER supply electric power and the single-phase/3-phase after confirming.



- Must install a suitable earth leakage circuit breaker.



Attention!

Test run after installation, completing after checking the fact afterwards case enough, to operate

■ Check of each part

- Is no trouble to the installation place and piping and wiring work?
- Is the STOP VALVE being shut in BY PASS piping?
- Is the STOP VALVE being shut in drain exhaust VALVE?

■ Check electric power

- Is the voltage are correct?
- Is the ground connection becoming accurately?

■ Operation process

- Press the power switch.
- The power switch LAMP lights and the FAN MOTOR LAMP lights.
- The FAN MOTOR is operated and when with the MOTOR side from these heat-exchangers which cooling air flow it flows and it is a normal operation.

■ Maintenance

- When the condenser(heat-exchangers) dirty by impurities, clean with the AIR at anytime.
- MOTOR becomes breakdown when the broken wire where electric power is at 3-phase, so check the wire condition in 6 months.
- Open a DRAIN exhaust VALVE for prevent the frozen to burst from long time it does not use and the ambient temperature sill fall with a sub-zero.

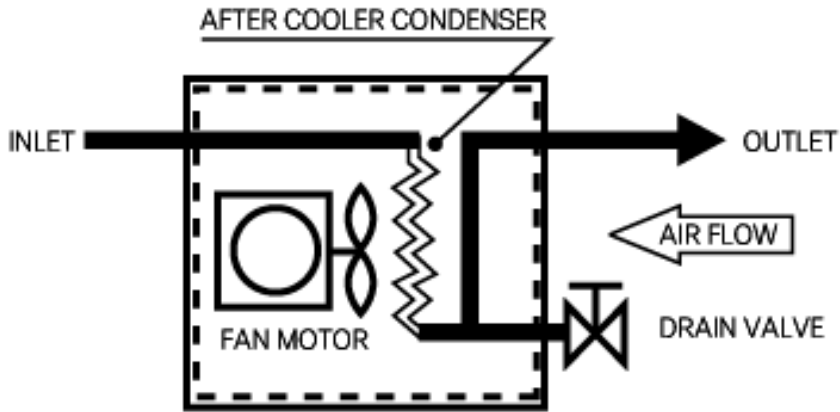
■ OPTION

- Select AUTO DRAIN in 2 type when installation.
- Electric VALVE / Auto VALVE(float)

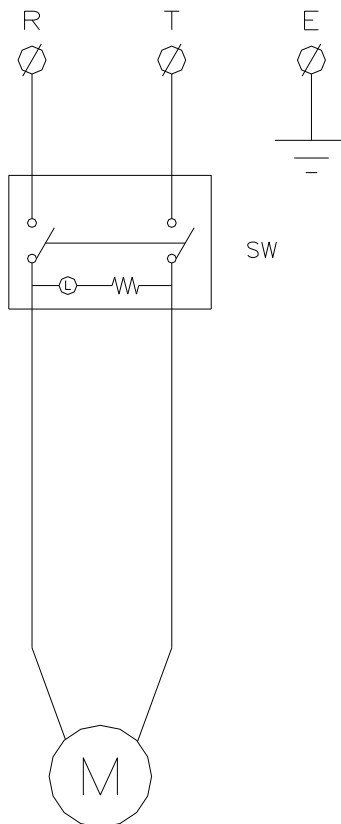
■ Appendix(Wiring diagram)

(* Technical modifications are subject to change without notice.)

• Flow Diagram



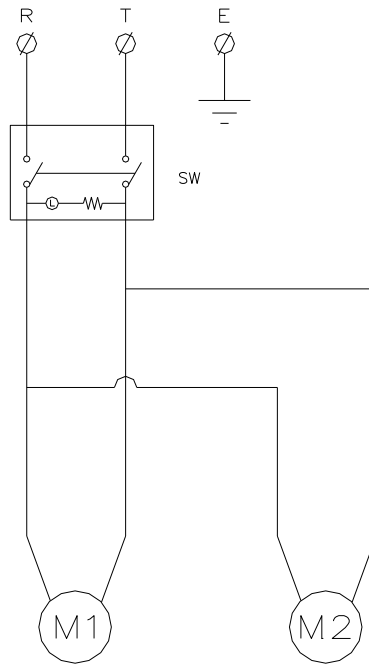
• Electric Diagram
(20A ~ 40A)



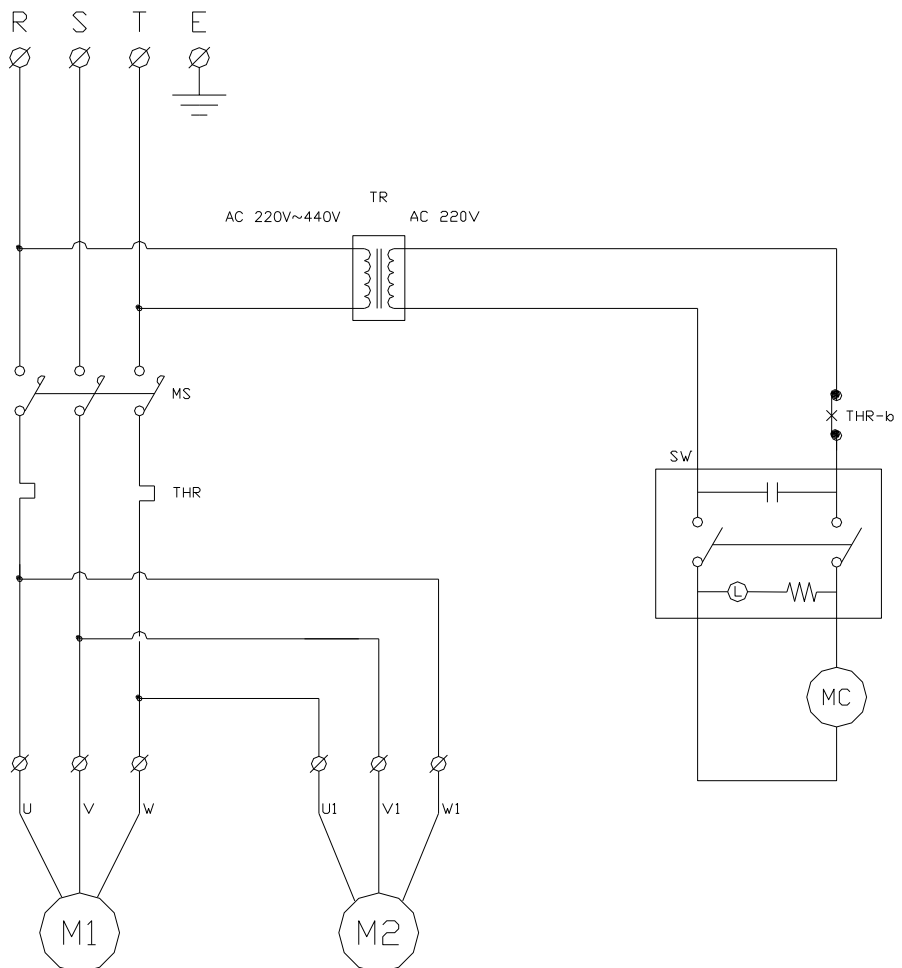
■ Appendix(Wiring diagram)

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• Electric Diagram (50A ~ 100A)



• Electric Diagram (150A ~ 300A)



■ Appendix(Wiring diagram)

(* Technical modifications are subject to change without notice.)

• Electric Diagram (400A ~ 600A)

