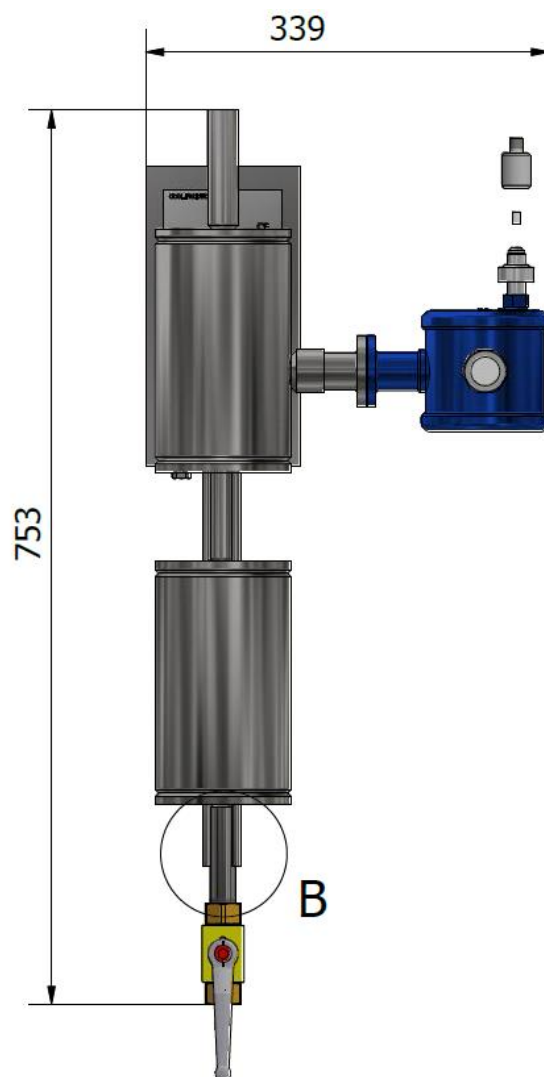


User Manual

CPWM



Index

1	.....	Introduction and description
2	.....	System type
2.1	.....	Technical specifications
2.2	.....	The intended use of the system
3	.....	Safety information
3.1	.....	Use of the operating instructions and other instructions
4	.....	Users
4.1	.....	Requirements for users
5	.....	Compliance with
6	.....	Installation
6.1	.....	Description of the system
6.2	.....	Assembly and installation
6.2.1	.....	Fixation
7	.....	Commissioning
7.1	.....	Before commissioning
8	.....	Operation of the system
9	.....	Servicing the CPWM
10	.....	Further information
11	.....	PID & drawing

1 Introduction and description


CPWM is a water purger for small Industrial ammonia refrigeration systems and all sizes industrial ammonia chiller units.

Water purging function:

The LP liquid containing water is fed to the water purger through a float valve, where it is evaporated in a very accurate controlled way by the build in regulation system. The controlled evaporation allows the ammonia to evaporate and keeps as much water (and other contaminants) as possible in the water purger at the given pressure / temperature. The heat is generated by the coil in the water purger and the evaporation is controlled by the automatic special regulation device placed over the coil. The water purger has a water reservoir mounted below it with a heat input from the coil line into and out of the water purger going through the water reservoir. During operation the water content in the water purger and its water reservoir will rise over time and the evaporating temperature of the water-ammonia mixture will rise.

2 System type

The system is equipped with name plates:

Ammonia WATER PURGER	Baujahr/Built: xx	 COOL PRODUCTS Cool Products ApS Bøgekildevej 21 DK-8361 Hasselager CE
TYPE: CPWM	Serien-Nr/Seriel-No: xx	
Medium/Fluid: NH3/R717	TS: -50°C / +50°C	
Inhalt/Volume: 1,9 L	PS: 25 bar	
Leergew./Weight: 6 kg	PT: 36 bar	

2.1 Technical specifications:

Water purger nominal ammonia evaporating capacity: approx. 2 kW

2.2 The intended use of the system

The plant may only be used according to the documentation. It is expected that the plant will be used in accordance with Cool Product's instructions. Special care must be taken following the instructions that have a safety significance.

3 Safety information

Read these instructions carefully before installing, operating, maintaining or inspecting the system. In this manual, a number of pictograms for safe operation are classified as "Warning" or "Information" as shown below.

This instruction provides a brief overview of the most important safety conditions when setting up, maintaining and using the equipment. Attention is drawn to the fact that it is the responsibility of the end user that the entire plant is maintained and inspected according to the regulations for the individual installation parts.

Use that violates the instructions contained in this manual and which causes injury to persons, animals and equipment, voids any warranty from Cool Products.

Modifications to the equipment that affect the safety of the equipment are not permitted. Before using the equipment, check that the equipment is undamaged and installed as directed by Cool Products.

Attention is especially drawn to:

- National safety rules
- National health and safety requirements at work
- National installation rules for the type of installation concerned
- Recognized standards
- The safety information in this guide
- Data and information about permissible installation and operating conditions on the equipment label plate
- Instructions for and any type certificates for equipment installed on the plant.

Failure to follow these instructions can result in loss of warranty on the system!

3.1 Use of the operating instructions and other instructions

- It is the responsibility of the owner to maintain the system, so that it meets the requirements in relation to the installation of refrigeration systems at all times.
- The operating instructions and associated instructions, plans and other documentation provided are considered as part of the installation.
- Operating instructions, etc. must be stored, maintained and updated throughout the life of the plant.
- The operating instructions should be stored at the plant.
- If the unit is transferred to another owner or user, the user manual must be transferred with the unit.

4 Users

The plant may only be used, serviced and repaired by instructed / trained personnel, who are at least 18 years of age.

4.1 Requirements for users



Users	Description of education level
Assembly or disassembly	<p>Persons who carry out assembly or disassembly must read and understand the operating instructions for this area, as well as the information available at the plant.</p> <p>The person must also be in possession of the necessary professional education for the area in question.</p>
Service / Maintenance	<p>Persons who carry out Service / Maintenance must read and understand the operating instructions for this area, as well as the information available at the plant.</p> <p>The person must also be in possession of the necessary professional education for the area in question.</p>

5 Compliance with

This system complies with the following directives:

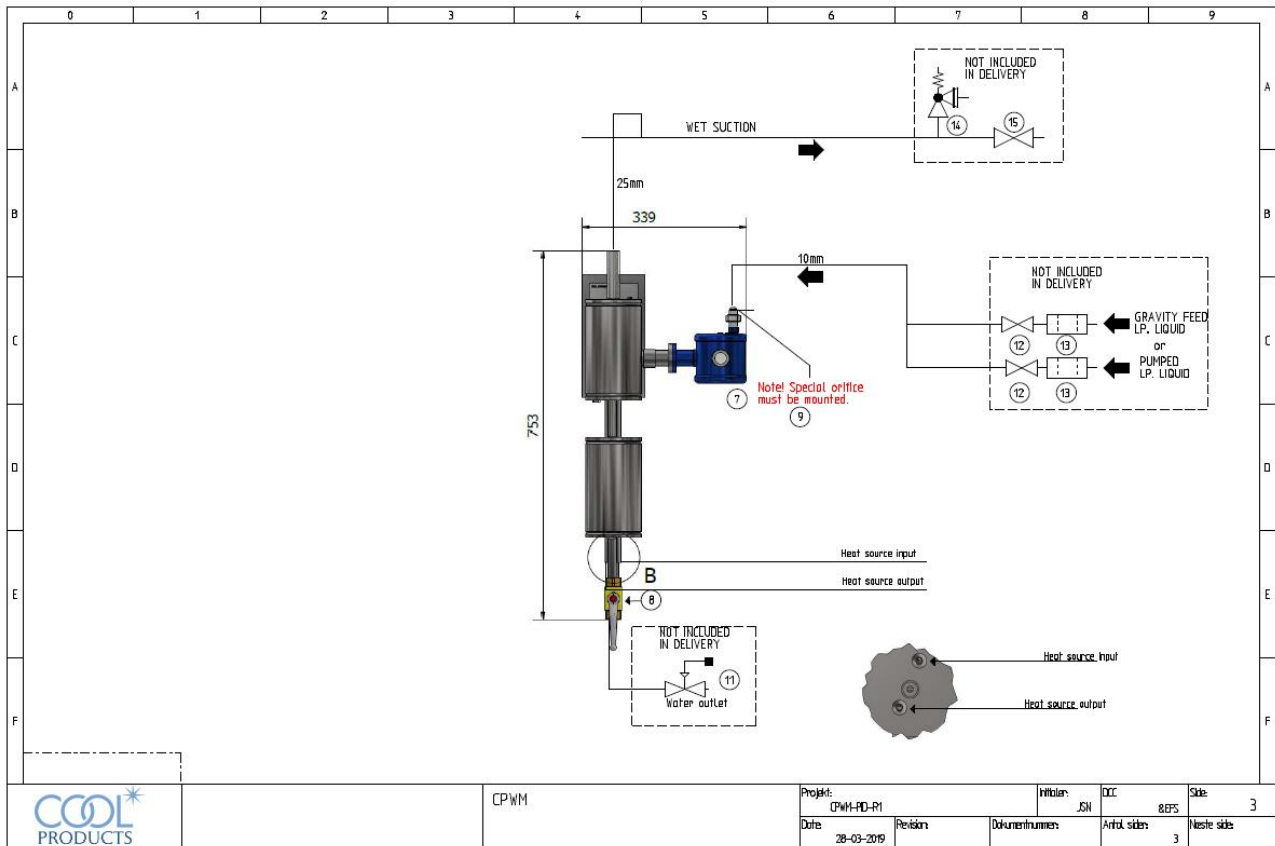
- PED

Declarations of Conformity for this system are found in the supplied documentation.

6 Installation

6.1 Description of the system

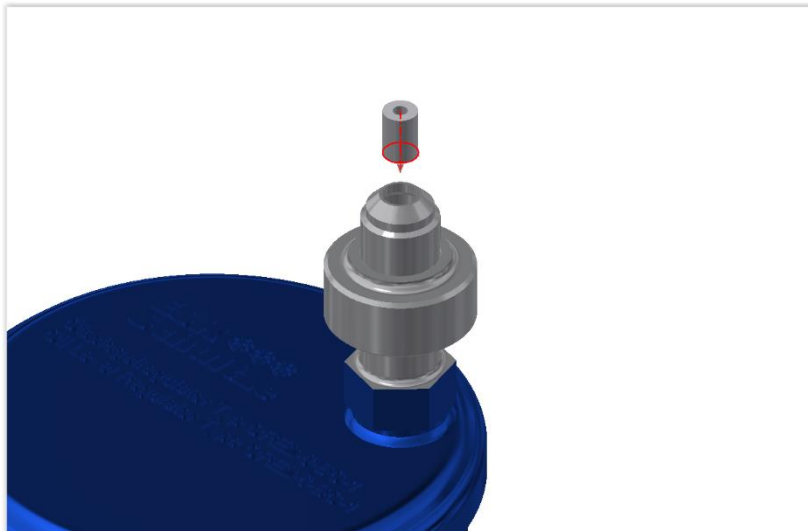
P&I diagram of CPWM with pos. no.



Pos. No. explanation:

- 7) Float valve
- 8) Stop valve for water drainage

- 9) Special orifice \varnothing 1,5 mm for service with gravity feed liquid supply and 0,5 mm with pumped liquid supply. INCLUDED IN DELIVERY. The correct size orifice for the application must be mounted before the unit is put into operation.



- 11) Quick closing drain valve. NOT INCLUDED IN DELIVERY. Must be mounted according to local rules and regulations.
12) Service stop valve. NOT INCLUDED IN DELEVERY.
13) Filter. NOT INCLUDED IN DELIVERY. Filter must be mounted to ensure the very small orifices in the CPAW is not clogged.
14) Safety valve. NOT INCLUDED IN DELIVERY. Must be mounted according to local rules and regulations.
15) Service stop valve. NOT INCLUDED IN DELIVERY.

6.2 Assembly and installation

Installation environment

The area where the equipment is installed must be chosen or arranged so the parts of the plant are not unnecessarily exposed to mechanical impacts from the surrounding area, which can cause damage to the equipment, especially the electrical parts of the system.

Ambient temperature

To ensure compliance with the equipment's temperature (TS), the ambient temperature range interval (indicated on the name plate) must not be exceeded. Therefore, when installing the system, it is necessary to consider any external heat sources that could affect the ambient temperature in the area, where the equipment is installed.

Assembly and disassembly

The equipment must be assembled as indicated in drawings provided by Cool Products (see the supplied drawings). This also applies when replacing spare parts. It is not permitted to use spare parts that are not approved / directed by Cool Products, as this may affect the safety of the system.

6.2.1 Fixation

The foundations and anchoring points to which the system is attached must be able to withstand the physical conditions to which the plant can be exposed, including;

- The weight of the installations
- Impacts / loads during use
- Vibrations
- Heat dissipation Conditions

7 Commissioning

7.1 Before commissioning



Before commissioning, make sure that the following are correctly performed:

- Leak test

8 Operation of the system

The water purger will in a very controlled way evaporate liquid ammonia and hold back the water dissolved in the ammonia liquid in the water purger.

When the water purger's water reservoir temperature is approx. 10 to 15 °C or higher than the evaporation temperature the water purger should be drained for water after a pump down.

Draining the water purger:

First an ammonia pump down is done. Close the LP liquid supply line to the water purger using stop valve (pos. 12) and let the water purger run for approx. 48 hours.

Before the next steps are carried out, it must be secured that there is no access to the area for people without protective gear against ammonia gas like protective glasses, gasmask and gloves.

When the water purger's water reservoir is close to or equal to ambient temperature the service stop drain valve (pos. 8) and the quick closing drain valve (pos. 11) can be carefully opened and water with a small content of ammonia liquid can be drained off. Note: There might be a strong smell of ammonia from the water / ammonia mixture drained out. If there is a risk of ammonia alarms going off it is advisable to mount a hose and collect the water/ammonia mixture in a safe area. Note: if the evaporating pressure is below atmospheric pressure the suction stop valve to the water purger must be closed before draining off the water.

After draining the water / ammonia mixture of, close the service stop valve and the quick closing drain valve and open the service stop valve for LP liquid. The water purger is back in operation again.

9 Servicing the CPWM:

The only parts which can be serviced are the filters (pos 13) on the coil line and on the LP liquid line to the CPWM as well as the small orifice (pos. 9), which is mounted where the LP liquid enters the float valve.

The water purger can be evacuated for ammonia by closing all connections to it and draining water and ammonia out through the water drain connection.

Repair, service and maintenance must be done in accordance with the instructions of Cool Products and must be carried out by personnel who possess the necessary qualifications in relation to the handling of the equipment.

Particular attention must be paid to the mechanical parts;

- Lifetime of wearing parts
- Damage to mechanical parts
- Corrosion on mechanical parts
- Tightening of bolts, screws

10 Further information

For further information about the system, please contact Cool Products

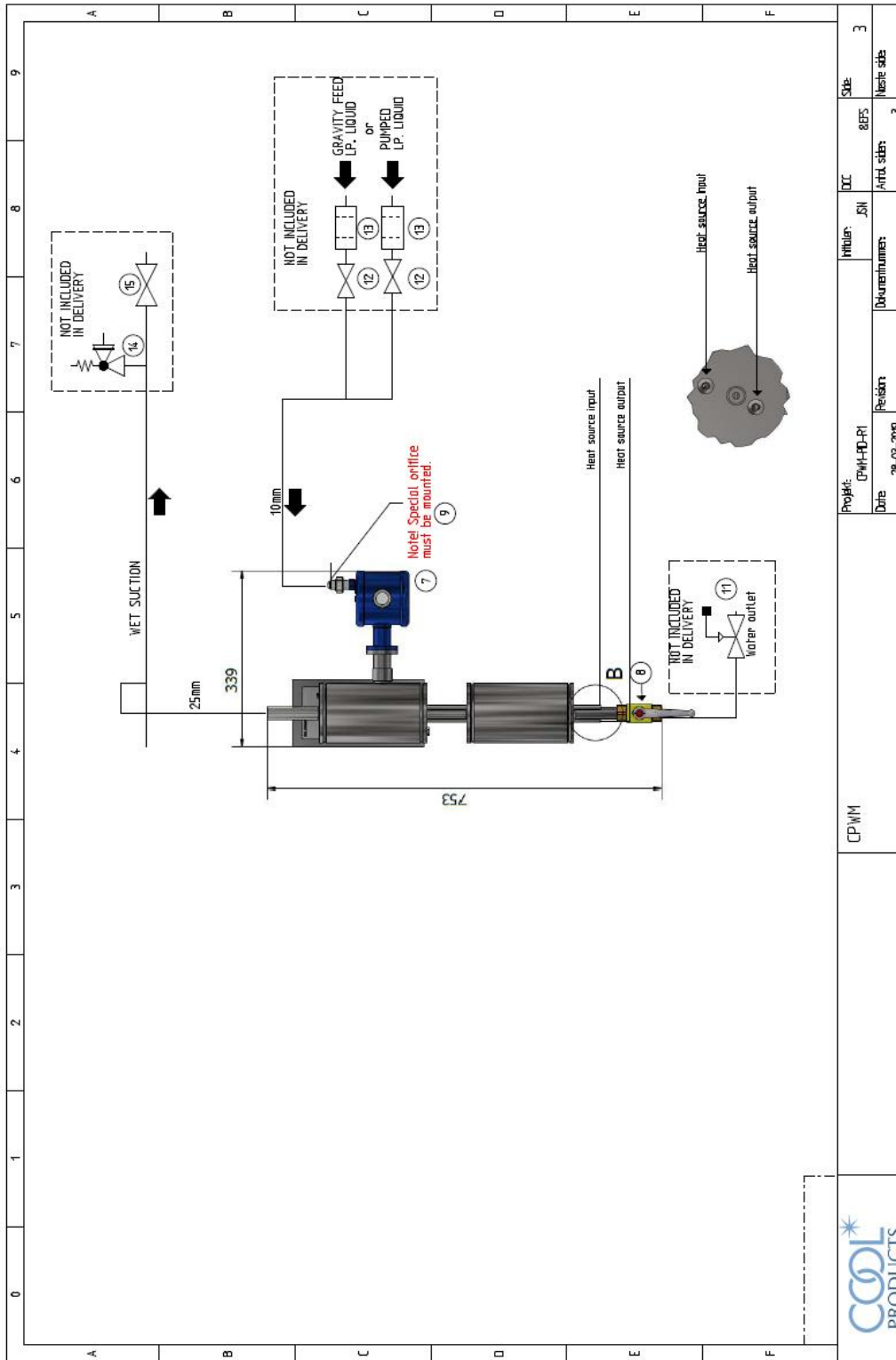


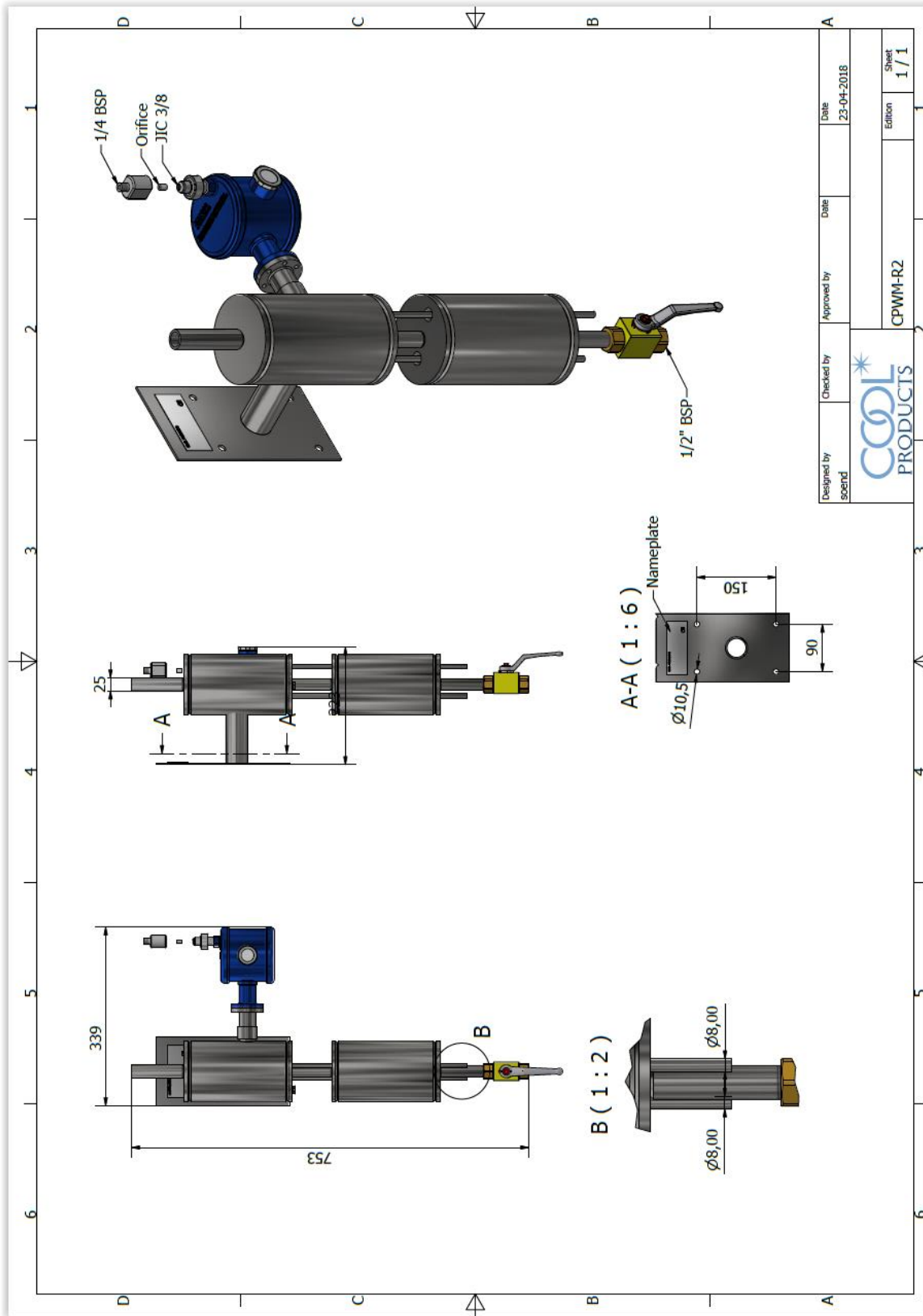
ATLAS Sales GmbH
Twedt 6F
24943 Flensburg
Germany
Ph: +494616799531
sales@atlas-s.de

Cool Products ApS
Bøgekildevej 21
8361 Hasselager
Denmark
Ph: +4528720673
www.coolpartners.dk

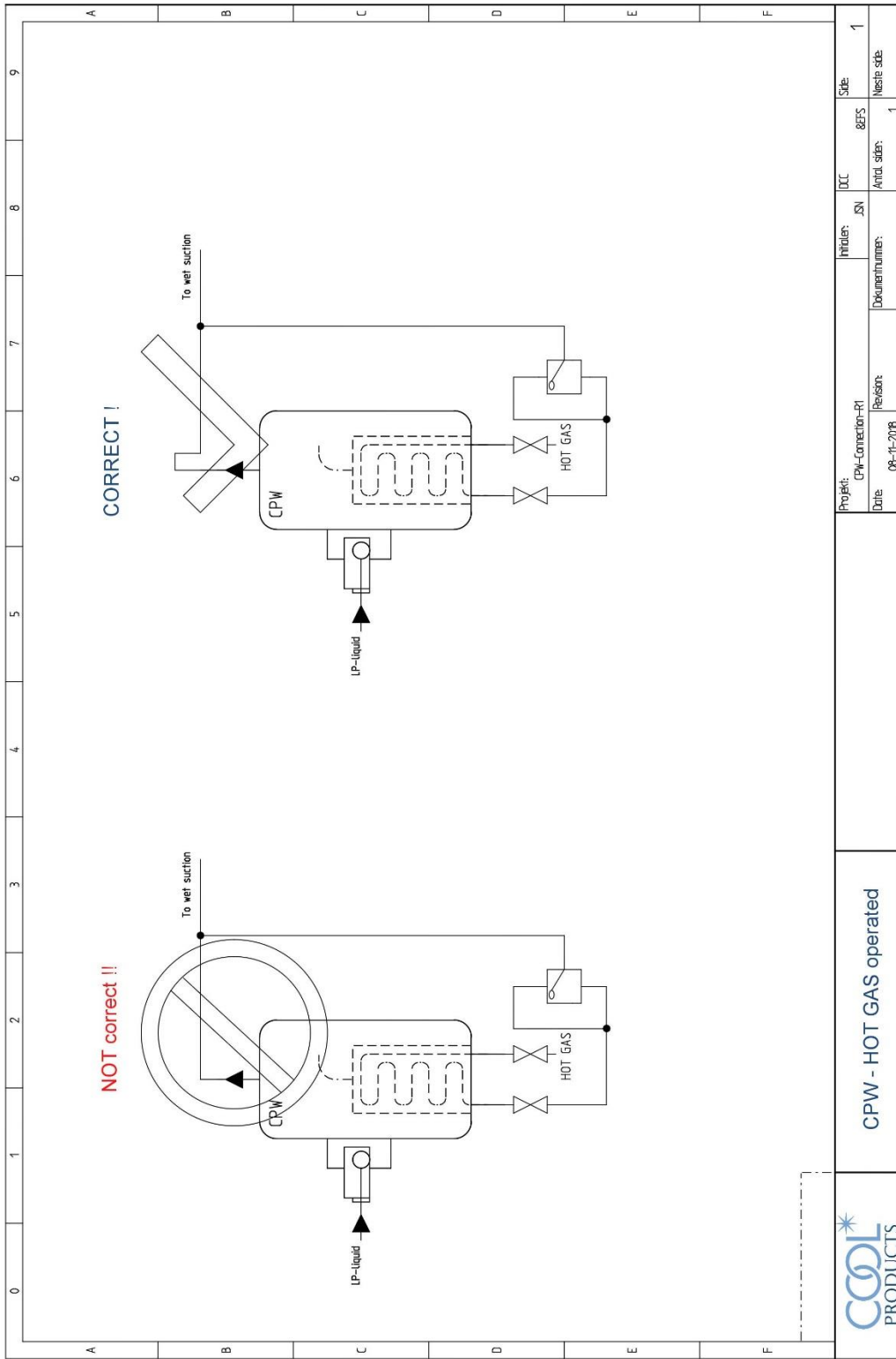


11 PID & drawing





Designed by scoand	Checked by	Approved by	Date 23-04-2018
COOL PRODUCTS			CPWM-R2
			Sheet 1 / 1



CPW - HOT GAS operated

Project: CPW-Connection-P1	Revision: 08-11-2018	Initials: JSN	DIC	8EFS	Site: Nestle site
Date:	Document number:				1



ATLAS Sales GmbH
 Twedt 6F
 24943 Flensburg
 Germany
 Ph: +494616799531
 sales@atlas-s.de

Cool Products ApS
 Bøgekildevej 21
 8361 Hasselager
 Denmark
 Ph: +4528720673
 www.coolpartners.dk

