

Drain Cooler *Water tempering device*



Installation instructions
& user manual
READ AND SAVE THESE INSTRUCTIONS



Foreword

1. These installation instructions and operation manual have been developed to facilitate the installation and the operation of the **Drain Cooler**. The strict application of these instructions will ensure the conformity of your installation and operation as per manufacturer's recommendations.
2. The application of these instructions is one of the conditions for the application of the warranty.
3. The application of these instructions does not ensure at any time conformity to procedures, regulation or local codes, regarding connection to local water supply.
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Manufacturer Presentation

National Environmental Products Ltd. (NEP) is the owner of the Neptronic® brand.

NEP develops, manufactures and services a complete line of:

- Steam humidifiers,
- Humidistat among the most precise and the most reliable on the market,
- Actuators to regulate air damper or valves,
- Electric heaters.
- Thermostats and other control peripherals used to control HVAC equipment.

For more information about our products, visit our web site at www.neptronic.com

Each Neptronic® product benefits from over 25 years of experience of our qualified staff.

From the inspiration to realization, innovation has been the standard in design. As the result of this dedication, NEP Ltd. owns several patents, notably the ENERDRIVE system and the AFEC system.

Manufacturing is conducted on the premises of our modern 80,000 sq.ft. (7 000m²) facility in Montreal, Canada.

Our quality system is built on the ISO 9001 model.

Our vision "**A Customer for Life**" is realized by listening our customers' needs and by supplying them with products, which exceed their expectations in quality, functionality and durability.

National Environmental Products Ltd.

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1. General

Unless otherwise arranged, in writing, the acceptance of the Order Confirmation by the purchaser includes acceptance of the "General Conditions of Sale and Warranty" of National Environmental Products, Ltd hereafter referred to as NEP.

2. Incoterms

The international rules for interpretation of trade terms "Incoterms" as defined by the ICC Incoterms publication no. 460 from 1990, shall apply to the commercial terms used herein.

3. Confirmation of Order

- NEP shall not be deemed to have accepted an order until written "**Order Confirmation**" from NEP is issued to the purchaser.
- It is the responsibility of the purchaser to verify that all information concerning his/her order is correct and to notify NEP in writing, of any discrepancy prior to the order being shipped. In the event of a change or correction to an existing order, a second "Order Confirmation" will be issued by NEP.

4. Price

- Our prices are net, Ex-works Montreal in U.S. Currency, unless stated otherwise.
- Minimum orders shall be \$50.00 minimum.
- Shipping and Handling charges are \$5.00 minimum per order unless the shipment is billed to the purchaser's account or shipped freight collect.
- NEP reserves the right to adjust accepted prices in the event of alterations in rates of exchange, variations in costs of materials, changes in wages, interference on the part of the Government or similar conditions over which NEP has no control.

5. Payments terms

- Major credit cards, C.O.D., Prepayment.
- For open account, invoices are payable within 30 days from the date of invoice without no deduction, unless specify otherwise.
- An interest charge of 2% per month will be included on all overdue payments.
- No new order will be process if invoices are not paid within 45 days.

6. Transfer of ownership

The goods shall remain the property of NEP until the full payment for the goods has been received by NEP.

7. Delivery terms

- Shipments are Ex-works **400 Lebeau, St Laurent, Quebec, H4N 1R6, CANADA** unless notified otherwise.
- Unless special instructions, the order will be delivery in the way which NEP deems best without guaranteeing this to be the cheapest way of transport.
- For International Order, a written designation naming the freight forwarding agent is required and will remain in effect until notified otherwise.
- Any discrepancy, damage or breakage should be reported in writing both to NEP and to the Carrier within 5 working days from the receipt date.

8. Risk

From the moment of delivery, the purchaser shall bear all risks for the goods and NEP shall not be responsible for loss and damage incurred during transportation.

9. Delivery time

- Delivery time is stated approximately and depends on the product ordered, please allow a minimum of:
 - a) 2 weeks for processing North American order.
 - b) 6 weeks for processing International order.
- We will make every effort to adhere to our delivery promises, but will not accept order or contract cancellation or any liability for any direct or indirect losses that may arise for any reason whatsoever as a result of our failure to adhere to such promises.

10. Return of good

- Goods received by the purchaser cannot be returned unless a completed "**R.M.A. Form**" (Return Material Authorization Form) has been issued by NEP's **Customer Service**.
- Any returned goods must be sent to NEP 400 Lebeau, St Laurent, Quebec, H4N 1R6, CANADA, unless stated otherwise by the R.M.A. Form, accompanied with the completed "R.M.A. Form", the **R.M.A. number** shall be prominently displayed on the shipping box. Unauthorized returns will be refused.
- Any returned goods must be sent freight prepaid. Any goods that come to us freight collect will be refused and returned to sender unless previously agreed to by us in writing on the "R.M.A. Form".
- Goods returned for credit shall be in condition for resale in the original box and properly packaged. Units, accessories or components that have been installed are not returnable and not refundable.

Credit is subject to an overhead charge of 30% of the invoice plus shipping & handling if returned within 30 days of the invoice date and 50% from 30 to 60 days.

- Non standard product (SK units with special feature), Multisteam manifolds and any DI unit are not returnable and not refundable.

11. Warranty

- Provided that the terms of payment are observed, the purchaser is offered a warranty of **24 months** from the original purchase date of delivery for any NEP's **standard product**, provided the equipment has been properly installed and operated in accordance with NEP instructions.
- The warranty covers faulty manufacture, design and/or defective materials. The warranty shall cease to be valid in the event of misapplication, incorrect installation, **improper maintenance** or any other incorrect uses or misuse of the product.
- For the SK series, the warranty furthermore ceases to be valid if the user disconnects or removes any electronic or mechanical components prior disconnecting the input power. NEP assumes no responsibility for repairs made on equipment, unless performed by NEP's authorized personnel.
- The defective product or component shall be returned in accordance with the paragraph 10 (Returns of goods) as described in this document.
- NEP agrees under the warranty to repair or replace (at the discretion of NEP) such standard product or component, which upon examination by NEP are found to be defective.
- Product or component replaced or repaired under warranty will be sent back to the purchaser, standard freight paid by NEP
- Expenses in connection with travelling time, dismantling and mounting shall not be paid by NEP
- Guarantee for products or components sold but not manufactured by NEP, is only given to the same extent as given to NEP, however, not exceeding the normal NEP warranty.
- Parts used for repairs are warranted for the balance of the term of the warranty on the original humidifier or 90 days, whichever is longer.
- Any repair made, after the original warranty period, at the NEP facilities are warranted for 1 month from the date of repair.

12. Proper law and jurisdiction

This contract is and shall be deemed to have been made in the province of Quebec, CANADA, and shall in all respects, be governed by the province of Quebec laws.



Table of contents

Foreword & Manufacturer Presentation.....	i
General condition of sales & warranty.....	ii
1. Presentation	2
2. Definition	2
2.1. Cooling chamber	2
3. Mechanical installation	2
3.1. General recommendations	2
4. Plumbing connections.....	3
4.1. Cold Water supply	3
4.2. Hot Water Drain inlet	3
4.3. Tempered Water Drain connection	3
5. Start up procedure	4
6. Description of operation of the Drain Cooler.....	4
7. Maintenance.....	4
7.1. General.....	4
7.2. Cooling chamber cleaning.....	4
8. Troubleshooting guide.....	5



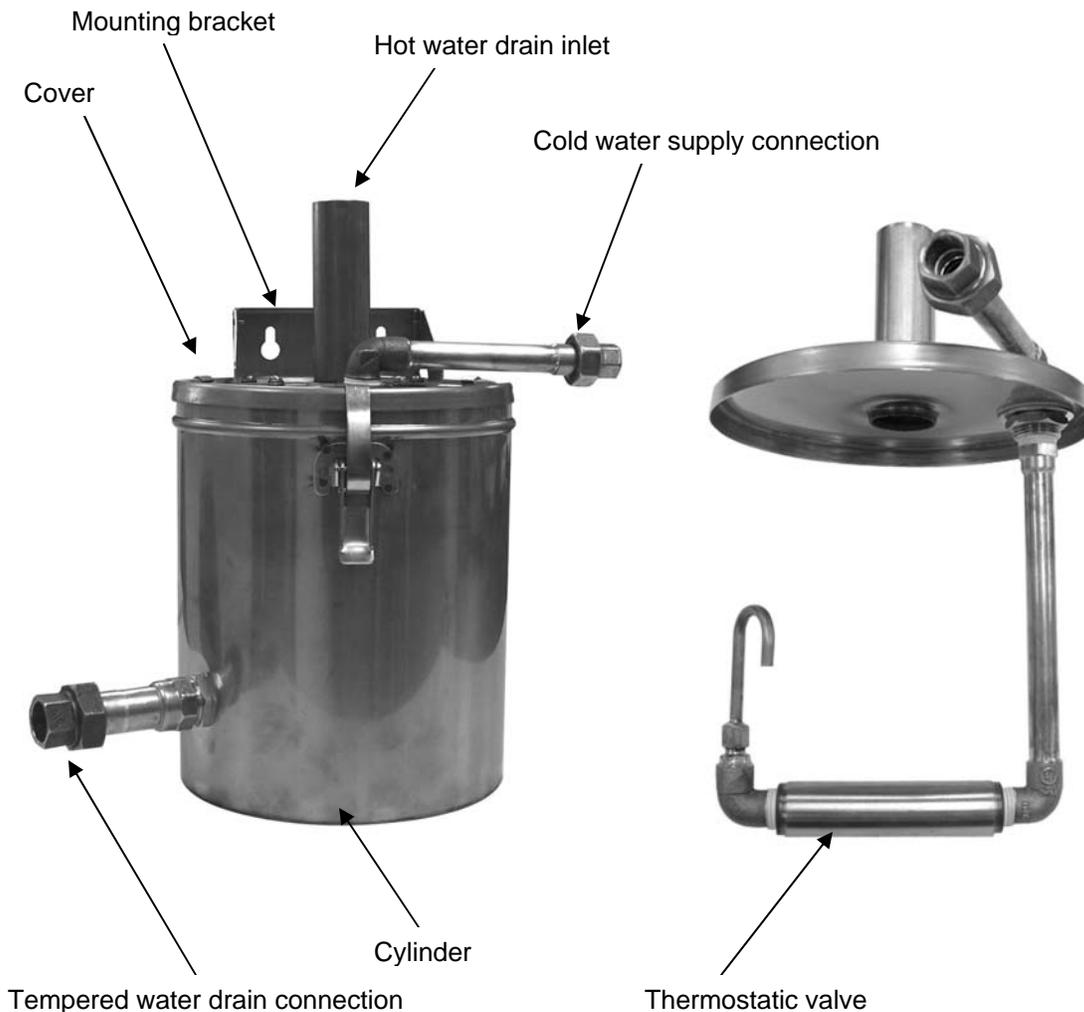
1. Presentation

Thank you for choosing a Neptronic® product. The Drain Cooler is a stainless steel cylindrical mixing chamber that blends cold water from a humidifier or condensate of a steam dispersion system. The result is drain water cooled to a temperature below 140°F (60°C).

2. Definition

2.1. Cooling chamber

Assembly including the stainless steel cylinder and a cover equipped with a thermostatic valve.



3. Mechanical installation

3.1. General recommendations

- **IMPORTANT:** Mechanical installation should conform to Local and National Codes.
- Location: Plan a location which is easy to access in order to permit a proper inspection and servicing of the Drain Cooler.
Do not install Drain Cooler where failure of the appliance could cause damage to the building structure or to costly equipment.



4. Plumbing connections

IMPORTANT: Plumbing installation should conform to Local and National Codes.

4.1. Cold Water supply

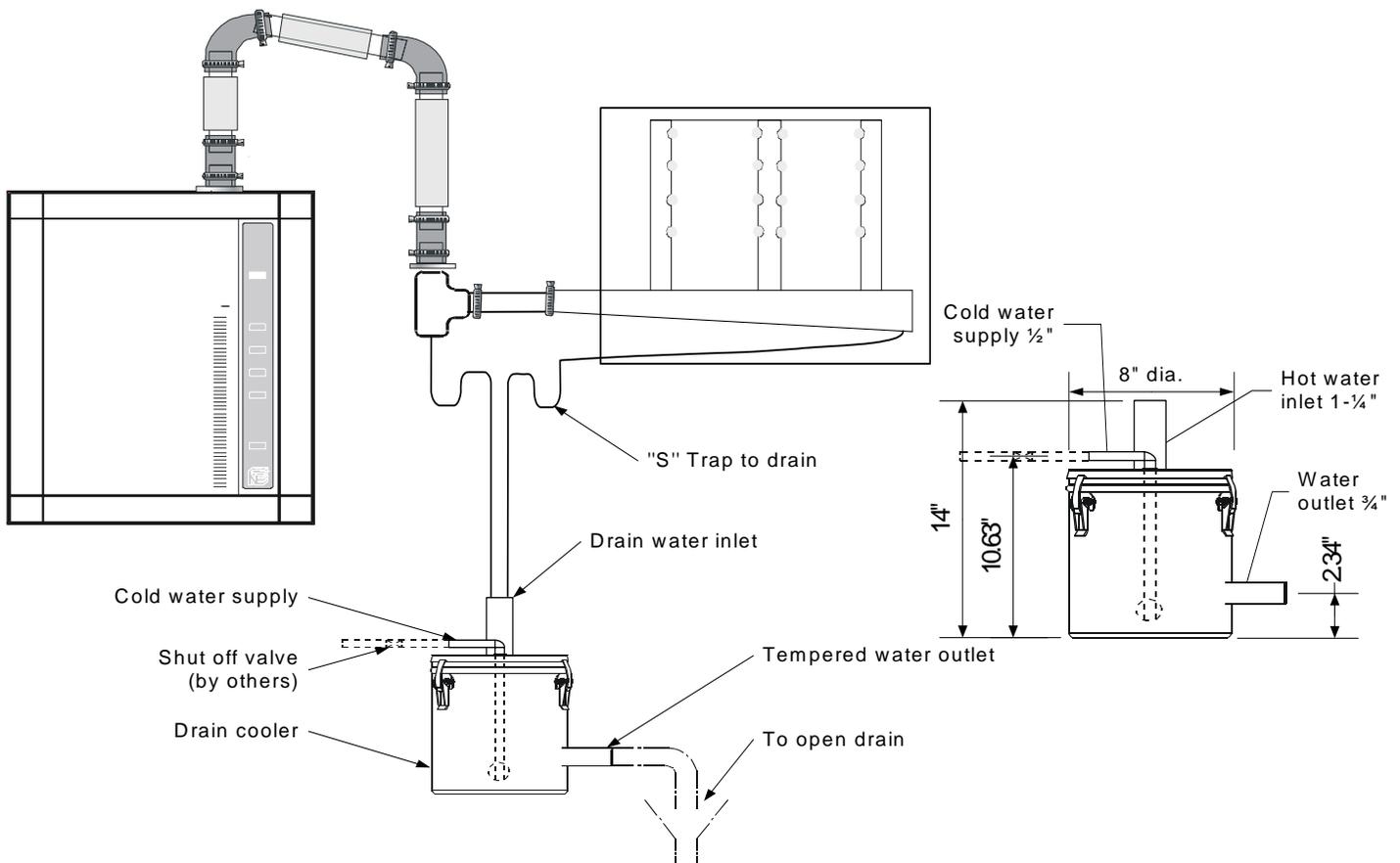
- Water inlet specifications:
 - ✓ Inlet water pressure: 15 to 70 psig (1 to 4,8 bars)
IMPORTANT: Risk of malfunction. Do not reduce water supply flow. Do not connect to a supply water line that is dedicated to other appliances.
 - ✓ Maximum temperature: 70°F (21°C)
 - ✓ 1/2" (15mm) copper sweat connection
- To facilitate servicing, a shut off valve (not supplied) should be installed in the water supply line, close to the Drain Cooler.

4.2. Hot Water Drain inlet

- Hot water inlet specification:
 - ✓ Inlet water opening is 1-1/4" I.D.
 - ✓ Atmospheric pressure condensate, maximum flow 2 gpm
 - ✓ Maximum temperature: 212°F (100°C)
- Run drain pipe as directly as possible from the condensate outlets of the steam line to the Drain Cooler.

4.3. Tempered Water Drain connection

- Drain outlet specifications:
 - ✓ Drain 3/4" (20mm) copper sweat connection.
 - ✓ Water drain temperature: 140°F (60°C) or less.
- Run a 3/4" pipe as directly as possible from the Drain Cooler to the drain.





5. Start up procedure

Follow this start-up procedure to avoid improper system operation:

1. Ensure that plumbing connections have been done in accordance with the instructions in this manual.
 - a) Verify that the supply and drain water connections are connected.
2. Open the water shut off valve (external to the Drain Cooler).
3. Your Drain Cooler is now fully operational. No other action is necessary; your Drain Cooler will temper the drain water automatically.

6. Description of operation of the Drain Cooler

- Hot water from a humidifier or condensate of a steam dispersion system enters the Drain Cooler thru the opening on top of the cover.
- Cold water enters through the thermostatic valve, which ensure the mixing of hot and cold water.
- Tempered water exits the Drain Cooler at 140°F (60°C) or less.

7. Maintenance

7.1. General

- **IMPORTANT:** Failure to perform the required periodic maintenance will void the warranty.
- The routine service is a cleaning of the cooling chamber.

7.2. Cooling chamber cleaning

CAUTION: RISK OF BURN. THE COOLING CHAMBER AND ITS CONTENTS CAN BE HOT, CHECK TEMPERATURE BEFORE HANDLING.

1. Disconnecting the water pipes.

- a) Shut off the cold water supply valve.
- b) Unscrew the supply water coupling.
- c) Unscrew the tempered drain water coupling.

2. Removing the Drain Cooler.

- a) Remove the Drain Cooler from the piping.

3. Opening the cooling chamber.

- a) Unfasten the 3 latches located around the cooling chamber.

Caution: Risk of injury, latches are tight. It is recommended to use pliers or a screwdriver to unfasten the latches.

- b) Remove the cover from the cooling chamber.
- c) Do not misplace the gasket located between the cover and the cylinder.

4. Cleaning the cooling chamber.

- a) Pour out any remaining water and scale from the bottom of the cooling chamber
- b) Clean out the remaining scale, use a non-metallic brush and water. Some vinegar or any weak acid for cleaning stainless steel may be required.

IMPORTANT: The use of wire brush or any non-recommended acid will void the warranty.

- c) If the amount of scale to be removed is significant, increase the frequency of maintenance as necessary. Too much scale may impair the normal operation of the Drain Cooler or damage it.



5. Cleaning the thermostatic valve and cover.

a) The cover of the Drain Cooler and thermostatic valve will, in general, not require cleaning. However, if cleaning is required, proceed as per the cleaning of the cooling chamber.

IMPORTANT: The use of wire brush or any non-recommended acid will void the warranty.

6. Checking the gasket

a) Check the gasket. The gasket should not be cracked. Replace the gasket if required.

7. Reassembling the cooling chamber.

- a) Rinse out the cylinder and the cover with water.
- b) Place the gasket inside the cover before installing the cover on the cooling chamber.
- c) Tighten the three latches around the cover.
- d) Replace the Drain Cooler to the piping.
- e) Tighten the tempered water drain and the supply water couplings.
- f) Open the cold water supply valve.

8. Troubleshooting guide

Problem	Causes	Corrective actions
The temperature of the tempered water is exceeding 140°F (60°C)	<ul style="list-style-type: none"> • The cold water supply valve is closed. • Mineral accumulation inside the cooling chamber. • Mineral accumulation on the thermostatic valve. • Malfunction of the thermostatic valve. • Inadequate cold water flow to the Drain Cooler. 	<ul style="list-style-type: none"> • Open the cold water supply valve. • Do maintenance of the Drain Cooler (section 7). • Replace the thermostatic valve.
Water is leaking thru the top opening of the cover.	<ul style="list-style-type: none"> • Mineral accumulation inside the cooling chamber, the tempered drain opening is blocked. 	<ul style="list-style-type: none"> • Do maintenance of the Drain Cooler (section 7).