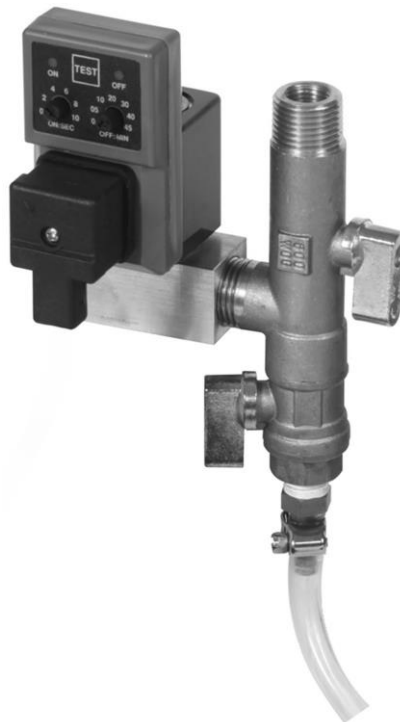


# KLUTCH

## Condensate Timer Drain

### Owner's Manual



**!** **WARNING:** Read carefully and understand all ASSEMBLY AND OPERATION INSTRUCTIONS before operating. Failure to follow the safety rules and other basic safety precautions may result in serious personal injury.

Item # 407116

**SAVE THESE INSTRUCTIONS**

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## Intended Use

The function of the electronic drain valve is to drain condensation from tank reservoirs of air compressors, air dryers, condensate separators, and air filters.

## Technical Specifications

Property	Specification
PSI	230 PSI (Max)
Voltage	115 VAC
Operating Temperature	40°F to 140°F
Orifice	4 mm

## Important Safety Information

### ⚠ WARNING

- Read and understand all instructions. Failure to follow all instructions may result in serious injury or property damage.
- The warnings, cautions, and instructions in this manual cannot cover all possible conditions or situations that could occur. Exercise common sense and caution when using this tool. Always be aware of the environment and ensure that the tool is used in a safe and responsible manner.
- Do not allow persons to operate or assemble the drain until they have read this manual and have developed a thorough understanding of how it works.
- Do not modify this drain in any way. Unauthorized modification may impair the function and/or safety and could affect the life of the product. There are specific applications for which the product was designed.
- Use the right tool for the job. DO NOT attempt to force small equipment to do the work of larger industrial equipment. There are certain applications for which this drain was designed. It will be safer and do a better job at the capacity for which it was intended. DO NOT use this equipment for a purpose for which it was not intended.
- Industrial or commercial applications must follow OSHA requirements.

### ⚠ WARNING

- This product may contain chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.
- Handling power cords on corded products may expose you to lead, a chemical known to the State of California to cause cancer and birth defects or other reproductive harm. Wash your hands after handling.

### ⚠ WARNING

#### WORK AREA SAFETY

- Inspect the work area before each use. Keep work area clean, dry, free of clutter, and well lit. Cluttered, wet, or dark work areas can result in injury. Using the Condensate Timer Drain in confined work areas may put you dangerously close to other cutting tools and rotating parts.

- Do not use the Condensate Timer Drain where there is a risk of causing a fire or an explosion; e.g., in the presence of flammable liquids, gases, or dust. The drain can create sparks, which may ignite the flammable liquids, gases, or dust.
- Do not allow the Condensate Timer Drain to come into contact with an electrical source. The Condensate Timer Drain is not insulated and contact will cause electrical shock.
- Keep children and bystanders away from the work area while operating the drain. Do not allow children to handle the Condensate Timer Drain.
- Be aware of all power lines, electrical circuits, water pipes, and other mechanical hazards in your work area. Some of these hazards may be hidden from your view and may cause personal injury and/or property damage if contacted.

## **⚠ WARNING**

### **PERSONAL SAFETY**

- Stay alert, watch what you are doing, and use common sense when operating the drain. Do not use the drain while you are tired or under the influence of drugs, alcohol, or medication. A moment of inattention while operating the tool may result in serious personal injury.
- Dress properly. Do not wear loose clothing, dangling objects, or jewelry. Keep your hair, clothing and gloves away from moving parts. Loose clothes, jewelry, or long hair can be caught in moving parts. Air vents on the tool often cover moving parts and should be avoided.
- Wear the proper personal protective equipment when necessary. Use ANSI Z87.1 compliant safety goggles (not safety glasses) with side shields, or when needed, a face shield. Use a dust mask in dusty work conditions. Also use non-skid safety shoes, hardhat, gloves, dust collection systems, and hearing protection when appropriate. This applies to all persons in the work area.
- Do not overreach. Keep proper footing and balance at all times.
- Remove keys or wrenches before connecting the drain to an air supply, power supply, or turning on the tool. A wrench or key that is left attached to a rotating part of the tool may cause personal injury.
- Secure the work with clamps or a vise instead of your hand when practical. This safety precaution allows for proper tool operation using both hands.

## **⚠ WARNING**

### **ELECTRICAL SAFETY**

- Grounded tools must be plugged into an outlet, properly installed, and grounded in accordance with all codes and ordinances. Never remove the grounding prong or modify the plug in any way. Do not use any adapter plugs. Check with a qualified electrician if you are in doubt as to whether the outlet is properly grounded. If the Condensate Timer Drain should electrically malfunction or break down, grounding provides a low resistance path to carry electricity away from the user.
- Do not allow the drain to come into contact with an electrical source. The drain is not insulated and contact will cause electrical shock.
- Avoid body contact with grounded surfaces such as pipes, radiators, ranges, and refrigerators. There is an increased risk of electric shock if your body is grounded.
- Do not expose the condensate timer or power cord to rain or wet conditions. Water entering the timer will increase the risk of electric shock.
- Do not abuse the power cord. Never use the power cord to carry the drain or pull the plug from an outlet. Keep the power cord away from heat, oil, sharp edges, or moving parts. Replace damaged power cords immediately. Damaged power cords increase the risk of electric shock.

## **⚠ CAUTION**

### **CONDENSATE TIMER DRAIN USE AND CARE**

- Do not force the Condensate Timer Drain. Products are safer and do a better job when used in the manner for which they are designed. Plan your work, and use the correct product for the job.
- Check for damaged parts before each use. Carefully check that the Condensate Timer Drain will operate properly and perform its intended function. Replace damaged or worn parts immediately. Never operate the Condensate Timer Drain with a damaged part.
- Unplug the Condensate Timer Drain before cleaning or changing the screen in the strainer portion of the unit. Such preventive safety measures reduce the risk of starting the Condensate Timer Drain accidentally.
- Store the Condensate Timer Drain when it is not in use. Store it in a dry, secure place out of the reach of children. Inspect the tool for good working condition prior to storage and before re-use.
- Use only accessories that are recommended by the manufacturer for use with your Condensate Timer Drain. Accessories that may be suitable for one product may create a risk of injury when used with another tool. Never use an accessory that has a lower operating speed or operating pressure than the tool itself.
- Keep guards in place and in working order. Never operate the product without the guards in place.

## **Specific Operation Warnings**

### **⚠ WARNING**

- When installing the electronic drain valve, make sure the power is turned off and the air system is drained to zero pressure.
- Secure the condensate tubing to prevent “whipping” when the valve is actuated.
- Check local codes for draining condensate into the floor drain. It may be necessary to install an oil/water separator before draining condensate into the floor drain.

## **Grounding**

### **⚠ WARNING**

- This unit must be grounded while in use to protect the operator from electrical shock. This drain is equipped with an electrical cord that has an equipment grounding conductor and a grounding plug. The plug **MUST** be plugged into a matching receptacle that is properly installed and grounded in accordance with ALL local codes and ordinances.
- **DO NOT MODIFY THE PROVIDED PLUG.** If it will not fit the receptacle. Have the proper receptacle installed by a qualified electrician.
- Check with a qualified electrician or service person if you do not completely understand the grounding instructions, or if you are not sure the drain is properly grounded.

## Grounded Tools: Tools with 3-Prong Plugs

Tools marked with **Grounding Required** have a 3-wire cord and 3-prong grounding plug. The plug must be connected to a properly grounded outlet. If the tool should electrically malfunction or break down, grounding provides a low resistance path to carry electricity away from the user, reducing the risk of electric shock. (See Figure A.)

The grounding prong in the plug is connected through the green wire inside the cord to the grounding system in the drain. The green wire in the cord must be the only wire connected to the drain's grounding system and must never be attached to an electrically live terminal.

Your drain must be plugged into an appropriate outlet, properly installed and grounded in accordance with all codes and ordinances. The plug and outlet should look like those in the following illustration.

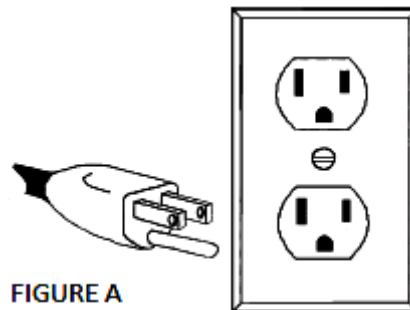


FIGURE A

## Double Insulated Tools: Tools with Two-Prong Plugs

Tools marked **Double Insulated** do not require grounding. They have a special double insulation system which satisfies OSHA requirements and complies with the applicable standards of Underwriters Laboratories, Inc., the Canadian Standard Association, and the National Electrical Code. (See Figure B.)

Double insulated tools may be used in either of the 120 volt outlets shown in the following illustration.

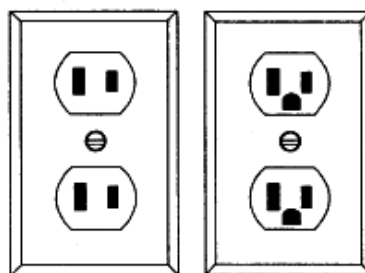


FIGURE B

## Extension Cords

### ⚠ WARNING

- **USE A PROPER EXTENSION CORD.** Make sure your extension cord is in good condition. When using an extension cord, be sure to use one heavy enough to carry the current your drain will draw. An undersized cord will cause a drop in line voltage, resulting in loss of power and cause overheating.
- Be sure your extension cord is properly wired and in good condition. Always replace a damaged extension cord or have it repaired by a qualified person before using it. Protect your extension cords from sharp objects, excessive heat and damp or wet areas.

Grounded tools require a 3-wire extension cord. Double Insulated tools can use either a 2- or 3-wire extension cord.

As the distance from the supply outlet increases, you must use a heavier gauge extension cord. Using extension cords with inadequately sized wires causes a serious drop in voltage, resulting in loss of power and possible tool damage.

The smaller the gauge number of the wire, the greater the capacity of the cord. For example, a 14-gauge cord can carry a higher current than a 16-gauge cord. Minimum extension cord wire size is shown in the following table:

Minimum Wire Size Of Extension Cords				
Nameplate AMPS	Cord Length			
	25'	50'	100'	150'
0-6	18 AWG	16 AWG	16 AWG	14 AWG
6-10	18 AWG	16 AWG	14 AWG	12 AWG
10-12	16 AWG	16 AWG	14 AWG	12 AWG
12-16	14 AWG	12 AWG	NOT RECOMMENDED	


- When using more than one extension cord to make up the total length, make sure each cord contains at least the minimum wire size required.
- If you are using one extension cord for more than one tool, add the nameplate amperes and use the sum to determine the required minimum cord size.
- If you are using an extension cord outdoors, make sure it is marked with the suffix **W-A** (**W** in Canada) to indicate it is acceptable for outdoor use.
- Make sure your extension cord is properly wired and in good electrical condition. Always replace a damaged extension cord or have it repaired by a qualified electrician before using it.
- Protect your extension cords from sharp objects, excessive heat, and damp or wet areas.


### Main Parts of the Condensate Timer Drain

Reference	Subassembly
1	Timer Condensate Drain
2	BABC (Complete Assembly BPS and MVBS)
3	Hose Assembly DHAK



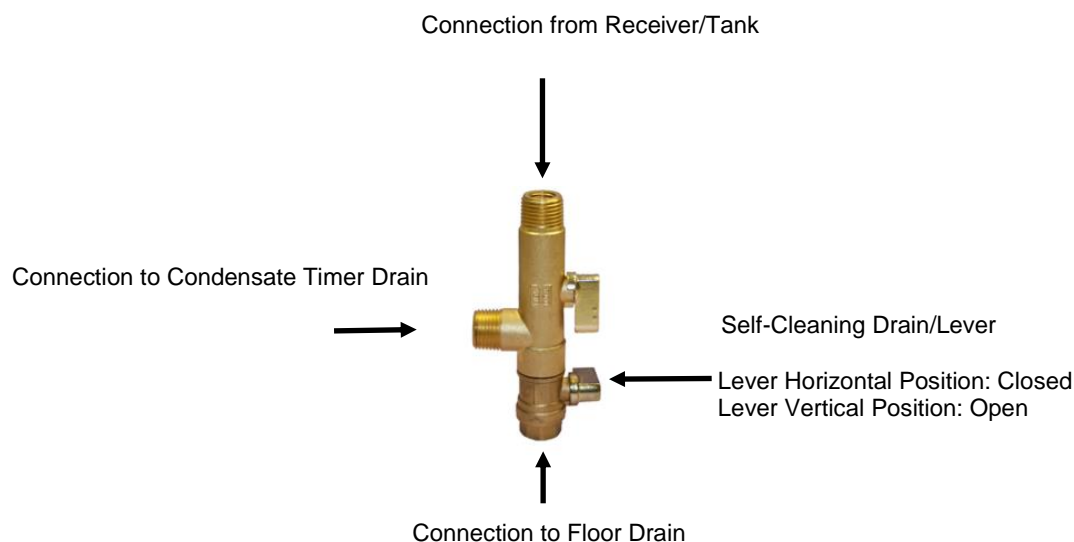
### Safety Labels

 Check with your local municipality before installation to determine if an oil water separator is required before draining the condensate into the floor drain.

 **Caution** - To prevent movement or whipping of the drain hose during operation, the end of the hose must be secured to a suitable drain line or container.

## Assembly Instructions

### ⚠ WARNING



The self-cleaning valve (BABC) ships as a complete assembly, which consists of the combination ball valve strainer (BPS) and the self-cleaning drain (MVBS-25).

- Disassemble the BPS combo ball valve strainer from the MVBS self-cleaning valve.
- Connect the BPS strainer to the inlet side of the drain.
- Insert the strainer screen.
- Connect the MVBS-25 self-cleaning valve to the BPS (combo ball valve).
- Add the hose assembly to the bottom of the self-cleaning drain valve and connect to the floor drain.
- Secure tubing to prevent “whipping” when valve is actuated.

## Operating Instructions

### ⚠ WARNING

- Verify direction of flow (stamped on valve body).
- Valve can be mounted in any position.
- See instructions on how to install the BABC drain valve.
- Install drain piping or tubing on outlet side of the drain valve to ensure proper collection and draining of condensate.
- Setting the Timer:
  - Set the discharge timer with the left dial. This determines how long the drain will stay open to drain the condensate (.05 to 10 seconds).
  - Set the interval timer using the right dial. The interval timer determines the amount of time before the drain opens to drain the condensate (.05 to 45 minutes).



## Maintenance

### ⚠ WARNING

Maintain the Condensate Timer Drain by adopting a program of conscientious repair and maintenance in accordance with the following recommended procedures. It is recommended that the general condition of any drain be examined before it is used. Keep your drain in good repair. The following chart is based on a normal operation schedule.

Maintenance Interval	Maintenance Point
Weekly	Open the self-cleaning valve and discharge the debris, if any.
Monthly/Yearly	Inspect the strainer screen and replace if necessary.

## Troubleshooting

### ⚠ WARNING

Use the table below to troubleshoot problems before contacting service personnel or your local dealer. If the problem continues after troubleshooting, call your local dealer for assistance.

Failure	Possible Cause	Corrective Action
Drain is not opening or closing properly.	Debris is caught in screen/drain valve.	Clean screen/ remove debris from drain valve.

## Parts Diagram



1. BPS-Screen



2. Timer

3. 1/4" Valve



4. BABC



5. Drain Hose

## Parts List

Reference	Part Number	Part Description	Quantity
1	BPS-Screen	Screen	1
2	MCDV-P2	Timer	1
3	MCDV-P3-1	1/4" Valve	1
4	BABC	BPS Strainer w/ Self Cleaning Valve	1
5	DHAK-2525	3 Ft Drain Hose Assembly	1
6	MCDV-P1	Cord (Not Shown)	1

## Replacement Parts

- For replacement parts and technical questions, please call Customer Service at **1-800-222-5381**.
- Not all product components are available for replacement. The illustrations provided are a convenient reference to the location and position of parts in the assembly sequence.
- When ordering parts, the following information will be required: item description, item model number, item serial number/item lot date code, and the replacement part reference number.
- The distributor reserves the rights to make design changes and or improvements to product lines and manuals without notice.

## Limited Warranty

Northern Tool and Equipment Company, Inc. ("We" or "Us") warrants to the original purchaser only ("You" or "Your") that the Klutch product purchased will be free from material defects in both materials and workmanship, normal wear and tear excepted, for a period of **one year** from date of purchase. The foregoing warranty is valid only if the installation and use of the product is strictly in accordance with product instructions. There are no other warranties, express or implied, including the warranty of merchantability or fitness for a particular purpose. If the product does not comply with this limited warranty, Your sole and exclusive remedy is that We will, at our sole option and within a commercially reasonable time, either replace the product or product component without charge to You or refund the purchase price (less shipping). This limited warranty is not transferable.

### Limitations on the Warranty

This limited warranty does not cover: (a) normal wear and tear; (b) damage through abuse, neglect, misuse, or as a result of any accident or in any other manner; (c) damage from misapplication, overloading, or improper installation; (d) improper maintenance and repair; and (e) product alteration in any manner by anyone other than Us, with the sole exception of alterations made pursuant to product instructions and in a workmanlike manner.

### Obligations of Purchaser

You must retain Your product purchase receipt to verify date of purchase and that You are the original purchaser. To make a warranty claim, contact Us at 1-800-222-5381, identify the product by make and model number, and follow the claim instructions that will be provided. The product and the purchase receipt must be provided to Us in order to process Your warranty claim. Any returned product that is replaced or refunded by Us becomes our property. You will be responsible for return shipping costs or costs related to Your return visit to a retail store.

### Remedy Limits

Product replacement or a refund of the purchase price is Your sole remedy under this limited warranty or any other warranty related to the product. We shall not be liable for: service or labor charges or damage to Your property incurred in removing or replacing the product; any damages, including, without limitation, damages to tangible personal property or personal injury, related to Your improper use, installation, or maintenance of the product or product component; or any indirect, incidental or consequential damages of any kind for any reason.

### Assumption of Risk

You acknowledge and agree that any use of the product for any purpose other than the specified use(s) stated in the product instructions is at Your own risk.

### Governing Law

This limited warranty gives You specific legal rights, and You also may have other rights which vary from state to state. Some states do not allow limitations or exclusions on implied warranties or incidental or consequential damages, so the above limitations may not apply to You. This limited warranty is governed by the laws of the State of Minnesota, without regard to rules pertaining to conflicts of law. The state courts located in Dakota County, Minnesota shall have exclusive jurisdiction for any disputes relating to this warranty.

Thank you very much for choosing a Klutch product!

For future reference, please complete the owner's record below:

Serial Number/Lot Date Code: \_\_\_\_\_

Purchase Date: \_\_\_\_\_

Save the receipt, warranty, and this manual. It is important that you read the entire manual to become familiar with this product before you begin using it.

This Condensate Timer Drain is designed for certain applications only. Northern Tool and Equipment is not responsible for issues arising from modification or improper use of this product such as an application for which it was not designed. We strongly recommend that this product not be modified and/or used for any application other than that for which it was designed.

For technical questions, please call **1-800-222-5381**.



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