TRANE Danfoss Dual Transducer Waterbox Mounting Instruction Manual

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Product Information: Danfoss Dual Transducer

The Danfoss Dual Transducer is a piece of equipment used for heating, ventilating, and air-conditioning systems. This product comes with a user manual that provides detailed installation instructions and safety warnings. It is important to note that only qualified personnel should install and service the equipment to avoid potential hazards. The product is designed to measure flow in a wide variety of water boxes, including marine type and non-marine type, for both 150 and 300 PSI applications in both fabricated steel and cast-iron construction. The transducer has 3/4-inch connections.

Product Usage Instructions: Waterbox Mounting

Before operating or servicing the Danfoss Dual Transducer, it is important to read the user manual thoroughly. The manual contains safety advisories that must be strictly observed to ensure personal safety and proper operation of the machine.

When installing the equipment, it is crucial to follow the guidelines provided in the manual to avoid potential hazards, including death or serious injury. All field wiring must be performed by qualified personnel to avoid fire and electrocution hazards. It is recommended to follow requirements for field wiring installation and grounding as described in NEC and your local/state/national electrical codes.

Technicians must wear proper personal protective equipment (PPE) for the job being undertaken to protect themselves from potential electrical, mechanical, and chemical hazards. The manual provides specific instructions on the use of PPE.

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SAFETY WARNING

Only qualified personnel should install and service the equipment. The installation, starting up, and servicing of heating, ventilating, and air-conditioning equipment can be hazardous and requires specific knowledge and training. Improperly installed, adjusted or altered equipment by an unqualified person could result in death or serious injury. When working on the equipment, observe all precautions in the literature and on the tags, stickers, and labels that are attached to the equipment.

Introduction

Read this manual thoroughly before operating or servicing this unit.

Warnings, Cautions, and Notices
Safety advisories appear throughout this manual as required. Your personal safety and the proper operation of this machine depend upon the strict observance of these precautions.

The three types of advisories are defined as follows:

WARNING Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
CAUTIONs Indicates a potentially hazardous situation which, if not avoided, could result in minor or moderate injury. It could also be used to alert against unsafe practices.
NOTICE Indicates a situation that could result in equipment or property-damage only accidents.

Important Environmental Concerns
Scientific research has shown that certain man-made chemicals can affect the earth's naturally occurring stratospheric ozone layer when released to the atmosphere. In particular, several of the identified chemicals that may affect the ozone layer are refrigerants that contain Chlorine, Fluorine and Carbon (CFCs) and those containing Hydrogen, Chlorine, Fluorine and Carbon (HCFCs). Not all refrigerants containing these compounds have the same potential impact to the environment. Trane advocates the responsible handling of all refrigerants-including industry replacements for CFCs and HCFCs such as saturated or unsaturated HFCs and HCFCs.

Important Responsible Refrigerant Practices
Trane believes that responsible refrigerant practices are important to the environment, our customers, and the air conditioning industry. All technicians who handle refrigerants must be certified according to local rules. For the USA, the Federal Clean Air Act (Section 608) sets forth the requirements for handling, reclaiming, recovering and recycling of certain refrigerants and the equipment that is used in these service procedures. In addition, some states or municipalities may have additional requirements that must also be adhered to for responsible management of refrigerants. Know the applicable laws and follow them.

WARNING
Proper Field Wiring and Grounding Required!
Failure to follow code could result in death or serious injury. All field wiring MUST be performed by qualified personnel. Improperly installed and grounded field wiring poses FIRE and ELECTROCUTION hazards. To avoid these hazards, you MUST follow requirements for field wiring installation and grounding as described in NEC and your local/state/national electrical codes.

Personal Protective Equipment (PPE) Required!
Failure to wear proper PPE for the job being undertaken could result in death or serious injury. Technicians, in order to protect themselves from potential electrical, mechanical, and chemical hazards, MUST follow precautions in this manual and on the tags, stickers, and labels, as well as the instructions below:

- Before installing/servicing this unit, technicians MUST put on all PPE required for the work being undertaken (Examples; cut resistant gloves/sleeves, butyl gloves, safety glasses, hard hat/bump cap, fall protection, electrical PPE and arc flash clothing). ALWAYS refer to appropriate Safety Data Sheets (SDS) and OSHA guidelines for proper PPE.

- When working with or around hazardous chemicals, ALWAYS refer to the appropriate SDS and OSHA/GHS (Global Harmonized System of Classification and Labeling of Chemicals) guidelines for information on allowable personal exposure levels, proper respiratory protection and handling instructions.
- If there is a risk of energized electrical contact, arc, or flash, technicians MUST put on all PPE in accordance with OSHA, NFPA 70E, or other country-specific requirements for arc flash protection, PRIOR to servicing the unit. NEVER PERFORM ANY SWITCHING, DISCONNECTING, OR VOLTAGE TESTING WITHOUT PROPER ELECTRICAL PPE AND ARC FLASH CLOTHING. ENSURE ELECTRICAL METERS AND EQUIPMENT ARE PROPERLY RATED FOR INTENDED VOLTAGE.

Follow EHS Policies!
Failure to follow instructions below could result in death or serious injury.

- All Trane personnel must follow the company's Environmental, Health and Safety (EHS) policies when performing work such as hot work, electrical, fall protection, lockout/tagout, refrigerant handling, etc. Where local regulations are more stringent than these policies, those regulations supersede these policies.
- Non-Trane personnel should always follow local regulations.

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Waterbox Types

Figure 1. Fabricated non-marine – ¾ inch NPTI port (requires ¾" NPTI to ½" NPTI bushing)

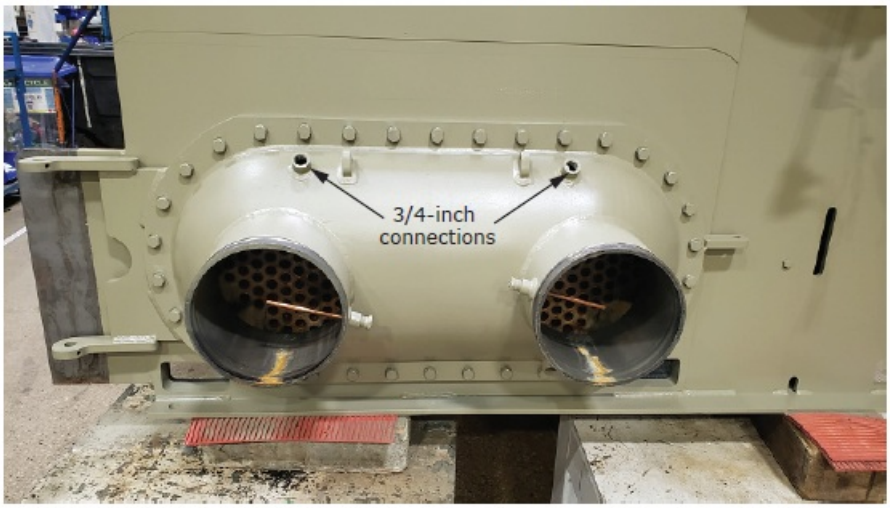


Figure 2. Fabricated marine – ¾ inch NPTI port (requires ¾" NPTI to ½" NPTI bushing)

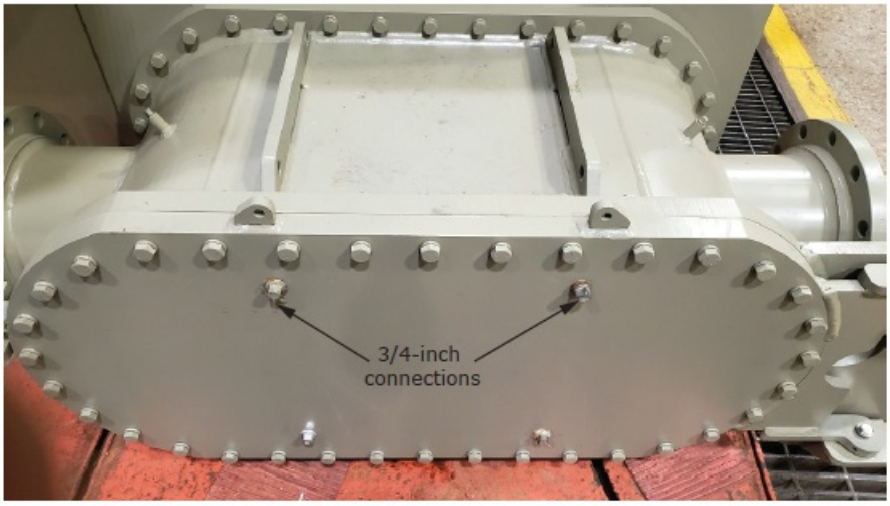
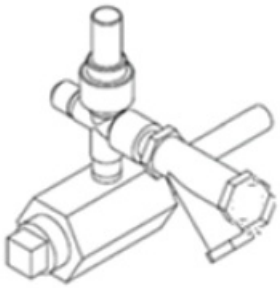


Figure 3. Cast – ½" inch NPTI port (threads directly into port)

Required Parts

Qty	Part Number	Description
4	BUS00006	¾-in. NPTI to ½-in. NPTI reducer bushing
4	BUS00589	Reducer Pipe; Hex Bushing, 0.75 NPTE x 0.25 NPTI
4	WEL00859	Bulb Assembly, 1/2-14-in. NPT, 4.62-in. Overall
4	PLU00001	Plug; Pipe, 1/4-in. NPT
4	NIP00095	Nipple; 0.25 NPS x 1.50
4	VAL11188	Valve; Angle; 0.25 NPTF x 0.25 ACC x 0.25 NPTF
4	NIP00428	Nipple; 0.25 NPS x 0.88 304 SSTL
4	SRA00199	Strainer; Y-Type, 1/4-in. FPT - Cleanable
4	ADP01517	Brass angle fitting
4	TDR00735	Transducer: pressure; 475 PSIA, female flare
4	CAB01147	Harness; Branching, Male to 2 Female 39.37

Preparation of Wells
Install the provided well using bushings as needed.



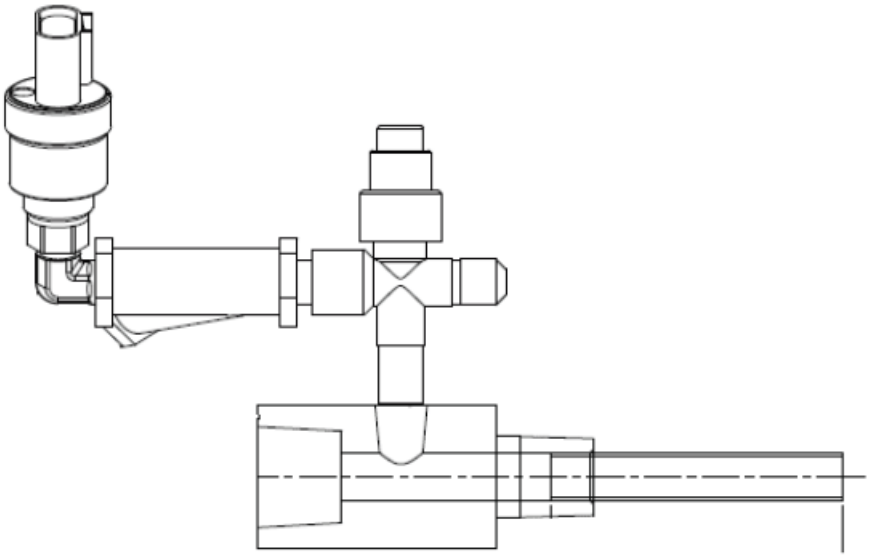
Waterbox Valve Mounting

Mount transducers on the entering and leaving side water box locations with;

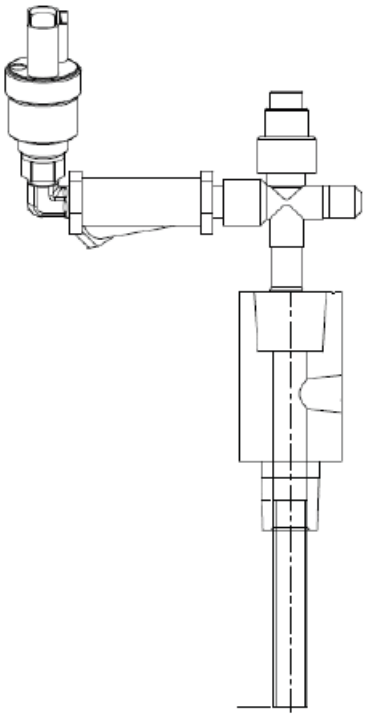
- the strainer horizontal
- the strainer cleanout port pointing down
- the transducer facing upwards

After system is filled, loosen the transducer in its threaded fitting. Then crack the isolation valve until water starts dripping from threads. Close the valve and re-tighten the transducer, then reopen the valve for use. Connect pressure to unit control buss after bleeding and bind to AdaptiView or Symbio controller.

For horizontal well mounting place ¾-in. to ¼-in. bushing and ¼-in. plug in end of well.



For vertical well mounting place ¾-in. to ¼-in. bushing in end of well and ¼-in. plug on the side of well.



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Documents / Resources

	**TRANE Danfoss Dual Transducer Waterbox Mounting** [pdf] Instruction Manual Danfoss Dual Transducer Waterbox Mounting, Danfoss, Dual Transducer Waterbox Mounting, Transducer Waterbox Mounting, Waterbox Mounting, Mounting

References

- Trane Heating & Air Conditioning
- Trane Technologies | A Leader in Climate and Sustainability