



## Installation Instructions

# Danfoss Dual Transducer

## Waterbox Mounting

This document applies to service offering applications only.

### 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.
- ⚠ CAUTION** 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.

## 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.

**⚠ WARNING**

**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.**

**⚠ WARNING****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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## Revision History

Document updated to reflect Service Offering number.

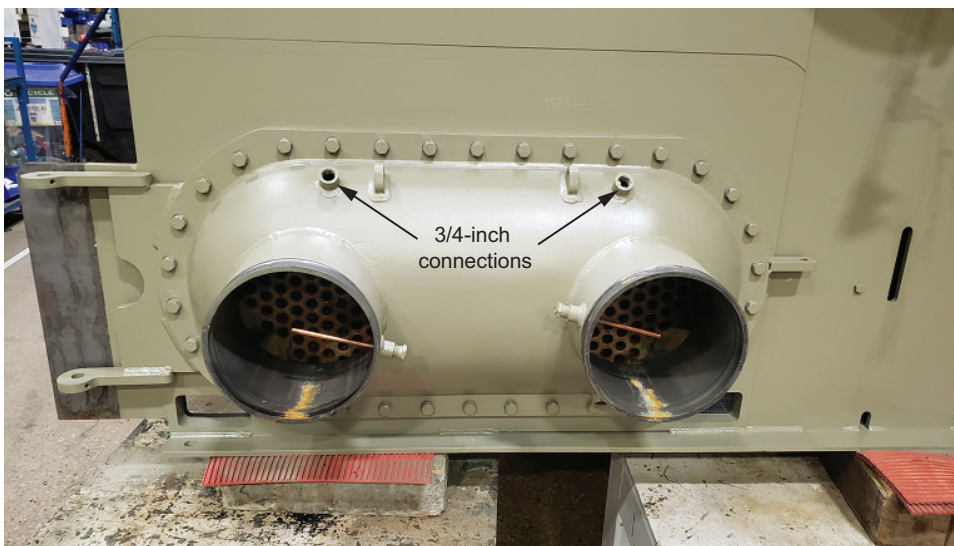
# General Information

## Mounting of Flow Measurement Assembly

This guidance is for mounting transducers on a wide variety of water boxes including marine type, non-marine type, for both 150 and 300 PSI applications in both fabricated steel and cast-iron construction.

### Waterbox Types

**Figure 1. Fabricated non-marine – 3/4-inch NPTI port (requires 3/4-inch NPTI to 1/2-inch NPTI bushing)**



**Figure 2. Fabricated marine – 3/4-inch NPTI port (requires 3/4-inch NPTI to 1/2-inch NPTI bushing)**

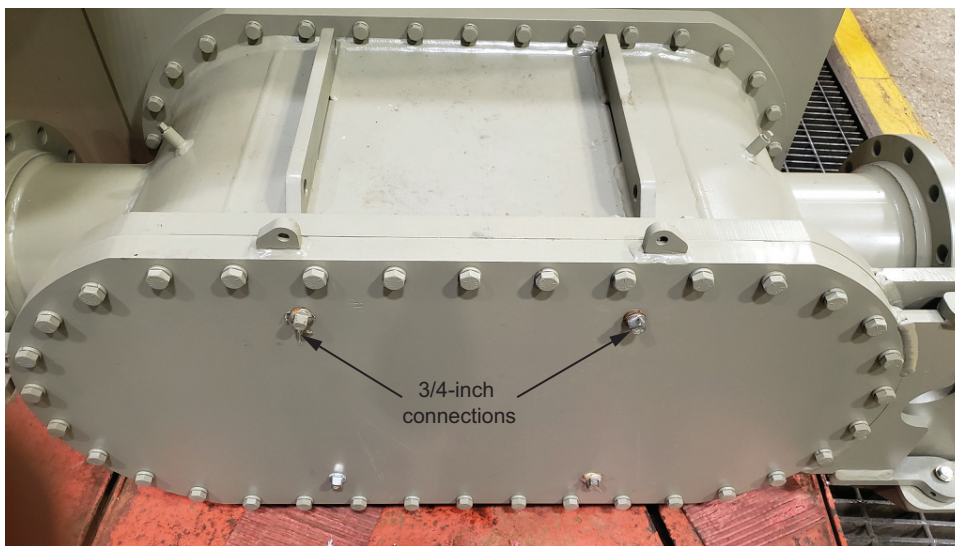
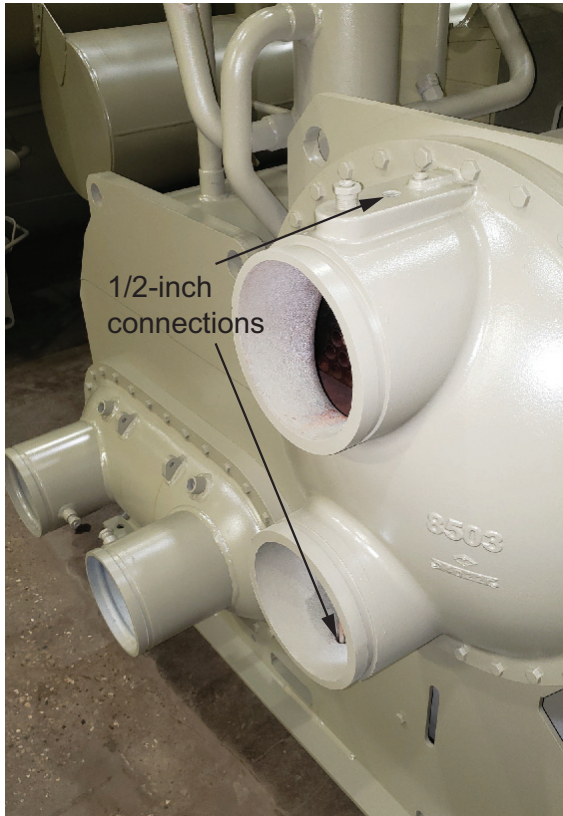


Figure 3. Cast – 1/2-inch NPTI port (threads directly into port)



## Parts List

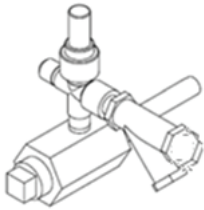
Qty	Part Number	Description
4	BUS00006	3/4-in. NPTI to 1/2-in. NPTI reducer bushing
4	BUS00589	Reducer Pipe; Hex Bushing, 0.75 NPTE x 0.25 NPTI
4	WEL00859	Bulb Assembly, 1/2-14-in. NPT, 4.62-in. Overall
4	PLU00001	Plug; Pipe, 1/4-in. NPT
4	NIP00095	Nipple; 0.25 NPS x 1.50
4	VAL11188	Valve; Angle; 0.25 NPTF x 0.25 ACC x 0.25 NPTF
4	NIP00428	Nipple; 0.25 NPS x 0.88 304 SSSL
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



# Installation

## Preparation of Wells

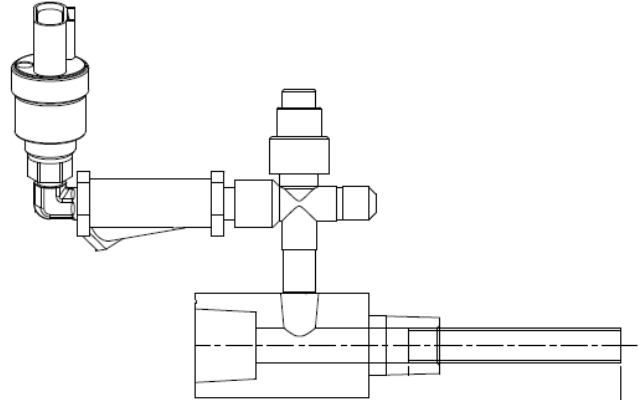
Install the provided well using bushings as needed.



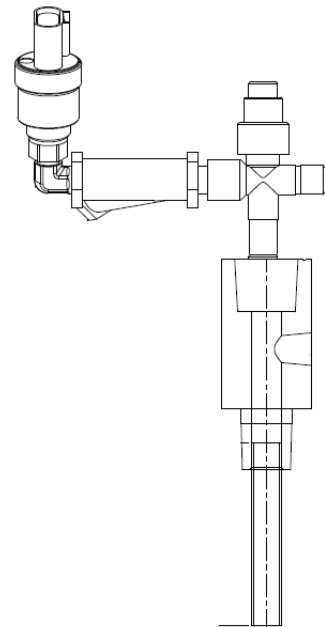
## Waterbox Valve Mounting

1. 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
2. After system is filled, loosen the transducer in its threaded fitting.
3. Crack the isolation valve until water starts dripping from threads.
4. Close the valve and re-tighten the transducer.
5. Reopen the valve for use.
6. Connect pressure to unit control buss after bleeding and bind to AdaptiView or Symbio controller.

- For horizontal well mounting place 3/4-in. to 1/4-in. bushing and 1/4-in. plug in end of well.



- For vertical well mounting place 3/4-in. to 1/4-in. bushing in end of well and 1/4-in. plug on the side of well.





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