Honeywell

Ultrasonic Flow Meter Series 6
Q.Sonic®

Manual
Shipping and Storage

Contact

Honeywell Process Solutions
Elster GmbH (manufacturer)

Steinern Straße 19-21

55252 Mainz-Kastel/Germany

Phone: +49 6134 605-0

E-mail: **customerfirst@honeywell.com**

Support phone: +49 6134 605 123

Support portal: **process.honeywell.com/us/en/support/request-support**

Website: **process.honeywell.com/us/en/site/elster-instromet**

Content

1   General information

1.1   About these instructions

This document provides general instructions for packing, handling, and storage of an Elster Series 6 Ultrasonic Flow Meter (UFM). For general information, please refer to the Operation and Maintenance Manual for your particular flow meter (latest valid revision).

> **Be familiar with the safety instructions!**
>
> Before starting any work on the ultrasonic gas meter, familiarize yourself with ⇨ UFM Series 6 "Safety instructions".

1.2   Relevant user documentation

Elster Gas Metering business provides the user documentations such as manuals, certificates, technical information for your UFM Series 6 meter in a ZIP file. The download information for this ZIP file is supplied with your device. Manuals referenced by this manual are included in this ZIP, such as UFM Series 6 "Safety Instructions".

Single documents are published in the Docuthek. The documents are updated regularly.

www.docuthek.com/
Use the device series or the device type as search term:
UFM Series 6 or **Q.Sonic-max**

1.3   Limitation of liability

This manual is based on the latest information. It is provided subject to alterations. We reserve the right to change the construction and/or configuration of our products at any time without obligation to update previously shipped equipment.

The warranty conditions specified in the manufacturer's terms of delivery apply to the product. Warranty claims are excluded in the following cases:

- The repair or replacement of the equipment or parts thereof has been required by natural wear and tear, in whole or in part due to a catastrophe, or because of a defect or fault on the part of the purchaser.
- Maintenance or repair of the device or device parts has not been carried out by an authorized representative of the manufacturer, or modifications have been made to the device or device parts without prior express written consent of the manufacturer.
- No original parts are used.
- The device has been used incorrectly, carelessly, improperly or not in accordance with its nature and/or intended use.
- The product has been used with unauthorized components or peripherals such as cables, test equipment, computers, or with unauthorized voltages.

The manufacturer is not liable for incidental or consequential damages arising from breach of express or implied warranties, including property damage, and to the extent permitted by law, personal injury.

> **Read this manual carefully.**
>
> Read the wiring instructions carefully before starting any work.
>
> The manufacturer accepts no liability for loss or defects resulting from failure to comply with this manual.

We reserve the right to make technical changes within the scope of optimizing the performance characteristics and continuous further development of the device.

The current warranty conditions in the General Terms and Conditions are available on our website:

process.honeywell.com/us/en/site/elster-instromet/about-us

2   Preservation

The preservation of an ultrasonic gas flow meter is meant to guarantee a proper and safe condition of the device during packing, transport, installation, and operating lifetime. Preservation includes quality control of coating as described by painting procedure, quality control of packing and packing material and visual inspection of the product before and after transport.

2.1   Application

This procedure applies to the required inspections, treatment, and handling of an Elster Series 6 UFM before shipment of the equipment to a calibration site or to the delivery address as specified by the contractor.

2.2   Conditions of preservation

In order to start the preservation procedure the following conditions must be met:

- A successful hydrostatic pressure test of the ultrasonic gas flow meter body, confirmed with a hydrostatic test certificate, wet stamped and duly signed by an inspecting and certifying authority.
- A fully completed painting and/or finishing procedure of the spool piece(s) according to the contractor's specification or otherwise to the Elster company protocol. A supporting painting report has to be available.
- A successfully completed assembly and Factory Acceptance Test (FAT) of the ultrasonic gas flow meter confirmed by a Factory Acceptance Test Report by Elster.

The above-mentioned conditions are parts of the Inspection Test Plan (ITP) of Elster and are inspected correspondingly.

2.3   Specification of preservation

After completion of the Factory Acceptance Test the ultrasonic gas flow meter will be ready for shipment. The following precautions shall be taken in order to prevent any damage to the meter:

- The spool piece(s) to be transported shall be visually inspected before packing. Dirty, damaged, or corroded surfaces are not allowed. Defects shall be reported and repaired before continuing the packing and shipping of the ultrasonic gas flow meter.
- The pipe ends and uncovered flange faces of the ultrasonic gas flow meter shall be covered with caps. This is to prevent the spool piece from getting dirty or damaged during transport and/or storage.
- A suitable packaging, for instance a cardboard or wooden box made according to company specification (⇨ 5 Package examples, p. 13), has to be available which is able to carry the ultrasonic flow meter and guarantees protection of the ultrasonic flow meter against damage during transport.
- A set of documents shall be shipped together with the equipment:
  - A correctly addressed packing list, one enclosed in the box and one or more on the outside of the box.
  - Safety prescriptions for the ultrasonic flow meter.
  - Additional export documents (when applicable).

3   Packing

3.1   Packing preparations for re-transportation of an UFM from a site

Before packing the UFM:

- Depressurize the measuring line and make sure the dismounting of the UFM can take place in a safe environment. Unwire the UFM from the Flow Computer according to your user manual.

- Make sure that all entries are properly closed. Close open glands with e.g., piece of cable to prevent dust or water entering the SPU.

> **Do not remove transducer cables!**
>
> Do not remove transducer cables or disassemble any transducers. Some transducer models do not contain serviceable parts and may not be disassembled, tightened, or loosened at all!

- If a Flow Computer is shipped along as well, this must be packed in a separate box. Take necessary precautions when putting that package in the box together with the UFM.

- A flow conditioner can be transported in the same box with the UFM.

- The UFM should be transported in a suitable box, ensuring the UFM cannot roll over and with extra support of the SPU (this can be either cardboard, wood, or ….). For re-transportation, it is easiest to use the same box the meter has arrived in. However, check if this box is still suitable and in perfect condition!

After these preparations are made, continue with the packing instructions listed below.

3.2 Packing instructions

The following packing instructions ensure a safe and secure transport for an UFM:

- Protect the flow cell from corrosion during long term storage by applying a long-term coating (e.g., Tectyl, ENSIS DW 2462 or VCI [Vapor Corrosion Inhibitor] impregnated foam) on unpainted surfaces (inner wall, flange faces). Do not coat the transducer and sensor faces.
    - In case of short-term coating, it's sufficient to moisten the inside of the spool piece with an oil coating. Do not coat the transducer and sensor faces.
    - On the attached safety prescriptions, it should be clear which corrosion protective method is used.

- Use a suitable crane or fork-truck to lift the spool piece and place it on the spool supporting parts of the box. While the spool piece is lifted in the air, remove the supporting legs from the ultrasonic flow meter. Place them in a secure place in the box.
- When packed by Elster, a document with Safety prescriptions for the UFM is clearly attached to the explosion proof box in a visible location.
- Depending on the type of transportation box being used, extra care needs to be taken to ensure the meter is in a stable and fixed position.
- If applicable, the flow conditioner can be packed in the box as well. Ensure it is properly fixed.
- Before closing the box, take pictures of the gas flow meter fixed in the box (and the flow conditioner, if applicable).
- Put the shipping documents on the outside of the box in a fixed and secure position.

4 Shipping and storage

4.1 Shipping instructions

Always use a fork-lift or fork-truck for transportation, loading onto and unloading of the packed ultrasonic gas flow meter from a lorry. The wooden cover of the box is not suitable for the use of strap belts and a crane.

> ⚠️ **CAUTION!**
>
> A crane and strap belts are only to be used to lift the ultrasonic gas flow meter from the box by means of the lifting lugs.

The dimensions and weight of the package depend on the type and size of the ultrasonic flow meter and are to be specified on the packing list.

> 📖 **Tip!**
>
> For larger ultrasonic gas flow meters and complete stations, the center of gravity is roughly to be found in the center of the bottom plane of the box and at 1/3 of the total box height.

4.2 Storage instructions

If the ultrasonic gas flow meter equipment needs to be stored for a certain period of time before installation the following storage conditions apply:

- Do not ever pile packages (crates or boxes).
- To protect the meter from corrosion; it is recommended to use one of the following:
  - VCI (Vapor Corrosion Inhibitor) impregnated foam,
  - Tectyl coating on all non-coated areas of the spool piece (e.g., inside, flange surfaces, etc.).

Please see the following safety information regarding the Tectyl coating:

> **❶ Be Aware!**
>
> Do not spray the optional pressure sensor opening and never use any coating on the surface of the transducers. This could permanently damage the transducers!
>
> When the Tectyl coating has dried out, removal may take some effort. Use a cloth and a solvent for this (e.g., solvent thinner). However, do not clean the face of the transducer with solvent. If cleaning of the transducer is needed, which should not be the case, use only a dry cloth.

- Storage air temperature: −20 °C to +60 °C
- Storage relative air humidity: 5% – 95% (non-condensing)
- If a flow conditioner is provided with the meter, treat this as a non-coated area of the meter and apply Tectyl coating to protect it from corrosion.

4.2.1 Long-term storage:

If the meter is going to be stored for a very long time or when the storage-period is unknown, please also follow these *extra* restrictions:
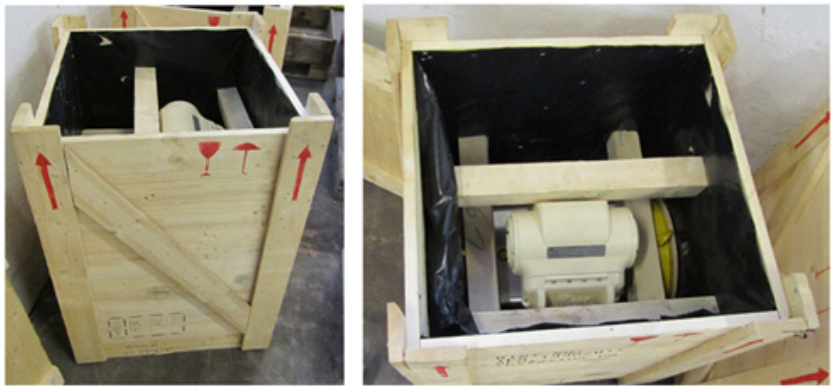
- Store the meter inside, in sheltered conditions.
- Keep storage temperature between 0°C and +60°C.

5   Package examples

5.1   Cardboard box package

5.2   Wooden box package

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