Instruction Manual

HM 162.59  Instrument Carriage

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Instruction Manual

Please read and follow the safety regulations before the first installation!
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1 Introduction

The unit **HM 162.59 Instrument Carriage** was designed as a holder for the accessory units **Pitot Static Tube HM 162.50** and **Level Gauge HM 162.52**. The above additional units can therefore be moved to almost any point within the working area of the **Modular Flow Channel HM 162**.

The instrument holder has smooth-running plastic rollers which lie on the guide rails of the flow channel. This allows the instrument holder to be moved along the entire length of the channel. The unit can be moved on sliding rails transverse to the flow.

The instrument holder can be fixed in any position. A longitudinal and transverse scale with mm markings permits precise positioning of the instrument holder with the additional units.

Experiments in, among others, the following subject areas are possible in conjunction with the wide range of G.U.N.T. accessory units:

- Measuring **flow velocities**
- Recording **flow profiles**
- Measuring **levels**
- Measuring **wave distances**
2 Unit description

The accessory unit **HM 162.59 Instrument Carriage** is supplied ready-assembled and is used to accommodate the accessory units Pitot Static Tube HM 162.50 or Level Gauge HM 162.52. Guide rails are arranged on the center elements of the flow channel on which the entire unit is placed and can then be moved as required along the flow channel.

2.1 Components

The unit HM 162.59 Instrument Carriage consists of the components

- **Carriage** (1) for longitudinal movements along the flow channel, with **clamping fixture** (2) and **scale** for position measurement in the flow direction (3).
- **Support plate** (4) for movements transverse to the flow direction, with **clamping fixture** (5) and **scale** for position measurement transverse to the flow direction (6, not visible).

Fig 2.1 also shows the guide rails (7) of the Modular Flow Channel HM 162.

2.2 Placement on the flow channel

We recommend that you pay attention to the following when placing the instrument carrier:

- The hook of the clamping fixture for the longitudinal adjustment must engage under the guide rails so that the carriage can be fixed (arrow). Undo the clamping screw (2) slightly during positioning.
- Do not clamp the carriage during positioning. It must run smoothly on the guide rails.
In the case of accessories already in use (e.g. Level Gauge HM 162.52), there may be a risk of tipping over in some circumstances.

In order to prevent objects dropping into the water current, please do not mount the instrument holder above the flowing water!

2.3 Operation

Movement of the instrument holder on the Modular Flow Channel HM 162 is very simple:

- **Longitudinal movement**: Undo the knurled screw on the clamping fixture (2). Move the carriage into the required position and tighten the knurled screw again. The new position can be read off on the scale (3)

- **Transverse movement**: Undo the knurled screw of the clamping fixture (5), move the support plate (4) transverse to the flow direction into the required position, tighten the knurled screw again. The scale (6) shows the transverse position of the unit

2.4 Mounting additional units

The support plate (4) is used to accommodate the additional units (e.g. Level Gauge HM 162.52).

On the support plate there is a hole with 4 threads. The additional units are inserted into this hole and are secured with 4 screws. Refer to the relevant instructions for further information on mounting the additional units.
In all circumstances, it is essential to prevent screws or other small parts from being rinsed into the outlet opening of the Modular Flow Channel HM 162 by water. **Contact with these parts would destroy the centrifugal pump.** Therefore, always follow the safety instructions below:

- **After assembly, do not leave any tools in the flow channel!**
- There is a danger of **tipping over** if the additional units project a long way up!
- **Do not move the instrument holder against the stops too quickly.** This also involves a **risk of tipping over!**
- **Undo the fixing screws before moving the instrument holder.** Otherwise, parts can be bent or can break!
4 Appendix

4.1 Technical Data

**Travel ranges:**

in the longitudinal flow direction:

length of working section (up to 16 m)

**Dimensions:**

l x w x h: 430 x 350 x 140 mm

weight: approx. 4 kg