

Precaution for Handling and Installation of Water Meters



General Precaution for Your Safety

- Be aware of handling of heavy materials to protect your feet and hands
- Wear gloves and safety shoes during works
- Do not disassemble the electronic display unit to avoid fatal malfunction and possible burn injury
- Use proper tools with good workmanship



Prohibitions

- Do not drop or inflict strong shaking and/or vibrating the meters during storage, handling or installation
- Store in warehouse within -20 ~ 40°C room temperature to prevent sensitive parts like inside electronic transmitters from possible deteriorations.
- Do not remove the protection caps at inlet and outlet of meter for delivering to avoid unintended rotation of wheel by natural ventilation
- Do not remove the protection caps to prevent clean inside from debris during storage
- Do not use hot water over 30°C to protect inside mechanism
- Do not install where continuously submerged into water
- Do not install where flammable gases concentrated



Precautions

Preference of Location

- Secure horizontal installation, flow direction based on embossing arrow and reading glass facing upward
- Consider ease of installation, replacement, reading and maintenance
- Prevent meter from direct sunshine, rain and snow for long lasting of cover plate made of synthetic resin
- Consider covering by thermal insulation to prevent meter from freezing, where extreme cold region
- Locate where less pressure fluctuation and maintain maximum pressure less than 1 Mpa
- Locate where no affection by continuous vibration
- Locate where no affection by electric noise produced by high voltage motor for instance
- Ensure surrounding magnetic strength less than 0.2 Tesla (2000 Gal) where electronic meter

When installation

- Ensure proper spacing suitable for meter prior to installation in accordance with technical data for concerned
- Remove the meter while welding nearby
- To secure precise measurement, maintain 5 times diameter straight pipe length for upstream and at least 3 times for downstream
- To avoid leakage, use proper gasket suitable for union connection
- Prior to installation, clean up upstream piping by flushing
- When commissioning, open stop valve gradually, not at once to protect meter from sudden high pressure damage like water hammer
- Remove air from inside of meter
Temporarily install the meter on slant or upside-down and run water through the meter to expel inside air. After no more air expelled, install the meter in the proper position

Warranty Period

- Meter subject to Measurement Law ----- 1 year from the month of certification
- Meter not subject to Measurement Law ---- 1 year from Ex-Factory

Indemnity

- <> Malfunction caused by force majeure
- <> Malfunction caused by improper use
- <> Malfunction caused by repair, change by others
- <> Secondary effects caused by failure of meter
- <> Malfunction caused by factors supplied by others

Tightening Torque for Union Nut

Diameter(mm)	Rough Torque (N.m)
13	6 - 10
20	14 - 22
25	17 - 27
30	25 - 35
40	40 - 50