



Waterworks

BERMAD Meters

Merging monitoring & control



Sensor MUT1100J

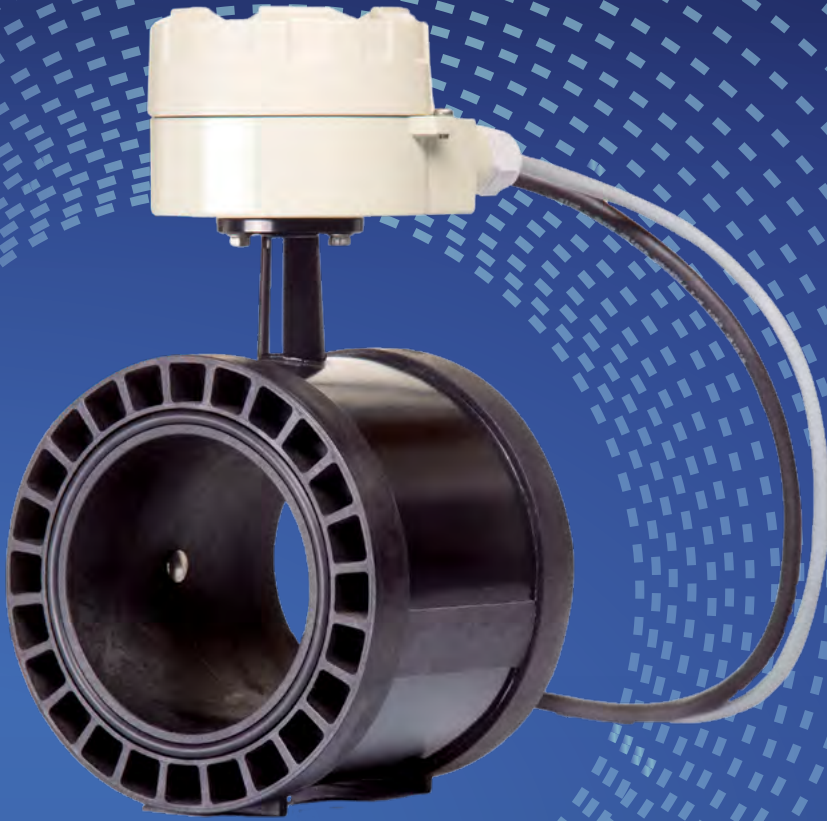
Euromag Electromagnetic Flowmeter



Sensor MUT1100J

EUROMAG INTERNATIONAL MUT1100J are flangeless sensors that cover all diameters from DN40 to DN150. When light weight and compact dimensions are required, the choice of sensors cannot be other than MUT1100J. These models are installed between two flanges surrounded by studs. For this reason they are also called "wafer sensors."





— The electromagnetic flowmeter designed for irrigation —

Body and flange

The MUT1100J have a flow tube made in Noryl™ and fiber glass, the coils housing is in carbon steel acrylic painted. It is equipped with a junction box to connect the cables to the converter. The degree of protection is IP 67. It may be installed between flanges UNI 2223 from PN 16 to PN 40 or ANSI 150, 300. The sensor and the flange are sealed by two O-rings supplied with the sensor. It can be operated with pressures up to 16 bar.

Internal lining

The sensor body is in Noryl™ with fiber glass at 20%, thus the temperature of the liquid to be measured has to be between 0°C and + 60°C.

Electrodes and grounding

In the Standard version the MUT1100J has three electrodes in AISI 316L and, on request they can be supplied in other materials. It should be noted that if the sensor is installed in a plastic or lined pipe line, the liquid grounding does not require the use of grounding rings, because of the presence of the third electrode.

Coupling and connecting to sensor

MUT1100J sensors can be coupled to all converters produced by EUROMAG. In the separate version the sensor is connected to the converter by means of two cables whose length should not exceed 100 meters on the mains powered version and 30 meters on the battery version.

Choice of diameter

The recommended full scale velocity, in normal applications, is around 2÷3 m/s. It should be noted that the full scale flowrate can be selected in the field through the converter keyboard. The maximum value that may be selected is the one corresponding to a velocity of 10 m/s.

Liquid temperature

The maximum temperature the liquid can reach is +60 °C.





Calibration and maximum error

MUT1100J sensors belong to the reference Group B1 (ISO 11631). Each sensor is calibrated by a hydraulic bench equipped with a reference weighting system SIT certified. The uncertainty of the measure is equal to 0.2% of the read value, when the velocity of the liquid is more than 0.2 m/s. The repeatability of the measure is in the order of 0.1%.

Reference standards

The Euromag magnetic meters are marked CE and are manufactured according to the following standards:

- 2014/35/EU - EN 61010-1:2013 (LVD)
- 2014/30/EU - EN 61326-1:2013 (EMC)

Standard diameters

| | | | | | | |
|------------------|-----|-----|----|----|-----|-----|
| millimeters (mm) | 40 | 50 | 65 | 80 | 100 | 150 |
| inches (") | 1½" | 2½" | 2" | 3" | 4" | 6" |

Available electrodes

* AISI 316 L (standard)

* Titanio

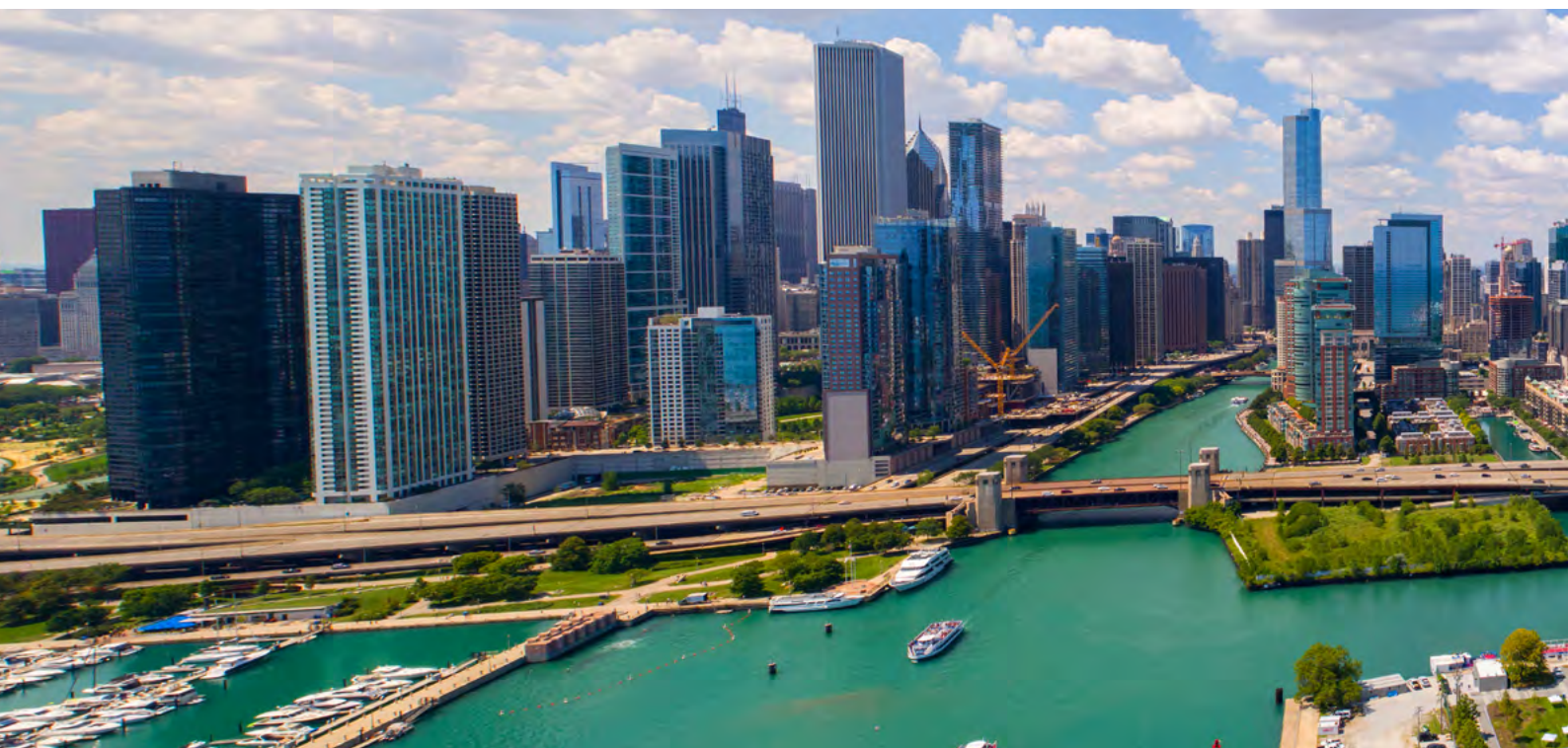
* Hastelloy C

* Hastelloy B

Usable FLANGE, Diameter and Number of bolts and Tightening torque

| DN | | PN16 | | | PN25 | | | PN40 | | | ANSI150 | | | ANSI300 | | | Length |
|------|-------|------|----|--------|------|----|--------|------|----|--------|---------|----|--------|---------|----|--------|----------|
| [mm] | ["] | Db | Nb | T [Nm] | Db | Nb | T [Nm] | Db | Nb | T [Nm] | Db | Nb | T [Nm] | Db | Nb | T [Nm] | MUT1100J |
| 40 | 1½" | M16 | 4 | 30 | M16 | 4 | 35 | M16 | 4 | 41 | ½" | 4 | 23 | ¾" | 4 | 30 | 96 mm |
| 50 | 2" | M16 | 4 | 35 | M16 | 4 | 40 | M16 | 4 | 47 | ⅝" | 4 | 33 | ⅝" | 8 | 23 | 86 mm |
| 65 | 2½" | M16 | 4 | 48 | M16 | 8 | 38 | M16 | 8 | 38 | ⅝" | 8 | 47 | ¾" | 8 | 30 | 104 mm |
| 80 | 3" | M16 | 8 | 35 | M16 | 8 | 40 | M16 | 8 | 47 | ⅝" | 8 | 60 | ¾" | 8 | 48 | 112 mm |
| 100 | 4" | M16 | 8 | 48 | M20 | 8 | 98 | M20 | 8 | 116 | ⅝" | 8 | 47 | ¾" | 8 | 68 | 130 mm |
| 150 | 6" | M20 | 8 | 85 | M22 | 8 | 110 | M22 | 8 | 131 | ¾" | 8 | 81 | ¾" | 12 | 90 | 196 mm |

Bolt and nuts are considered new and duly lube.



General characteristics of MUT1100J sensors

| | | | | | | |
|------------------------------|---------------------------------|-------------|--------------|---------------|--------------|--------------|
| Available diameters | 40 mm 1½" | 50 mm 2" | 65 mm 2½" | 80 mm 3" | 100 mm 4" | 150 mm 6" |
| Connections: flanges [1] | EN1092-1/ANSI150 | | | | | |
| Max pressure [1] | 16 bar | | | | | |
| Max temperature | 80°C | | | | | |
| Protection degree | IP67 (IP68 on request) | | | | | |
| Compatible converters [2] | MC608A/B/P/R/I | | | MC406 | | |
| Parts in contact with liquid | Flow tube: Noryl™ + Fiber glass | | | O - Ring: NBR | | |

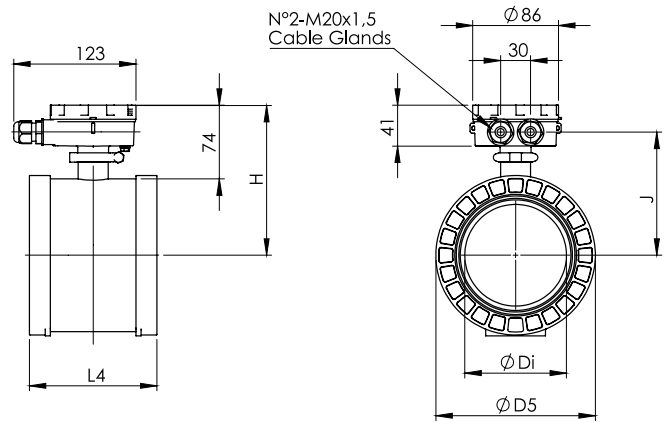
Weight of MUT1100J sensors in the separate version without packing

| | | | | | | | |
|--------|-------|-----|-----|-----|----|-----|-----|
| DN | [mm] | 40 | 50 | 65 | 80 | 100 | 150 |
| DN | ["] | 1½" | 2" | 2½" | 3" | 4" | 6" |
| WEIGHT | [kg] | 1.5 | 1.8 | 2.5 | 3 | 4 | 6.5 |



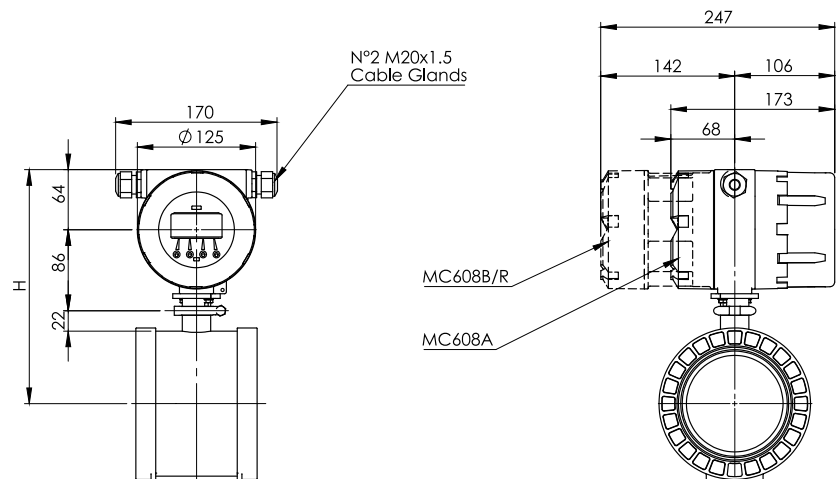
MUT1100J

| DN | L4 | Di | D5 | H | J |
|-----|-----|-------|-------|-----|-----|
| 40 | 96 | 37.6 | 86 | 113 | 87 |
| 50 | 86 | 45.9 | 103.2 | 122 | 95 |
| 65 | 104 | 62.5 | 122 | 131 | 105 |
| 80 | 112 | 78.0 | 134 | 137 | 111 |
| 100 | 128 | 102.0 | 160 | 150 | 124 |
| 150 | 196 | 147.0 | 220 | 180 | 154 |

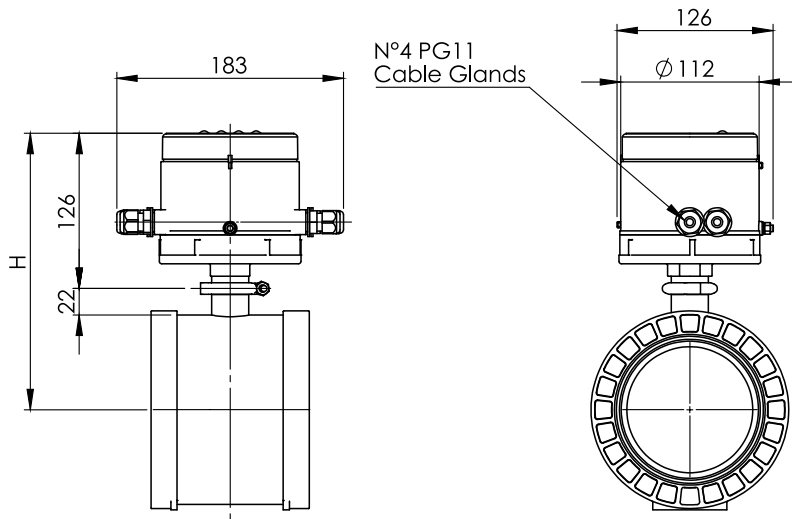


MUT1100J - MC608A/B/R

| DN | H |
|-----|-----|
| 40 | 211 |
| 50 | 220 |
| 65 | 229 |
| 80 | 235 |
| 100 | 248 |
| 150 | 278 |

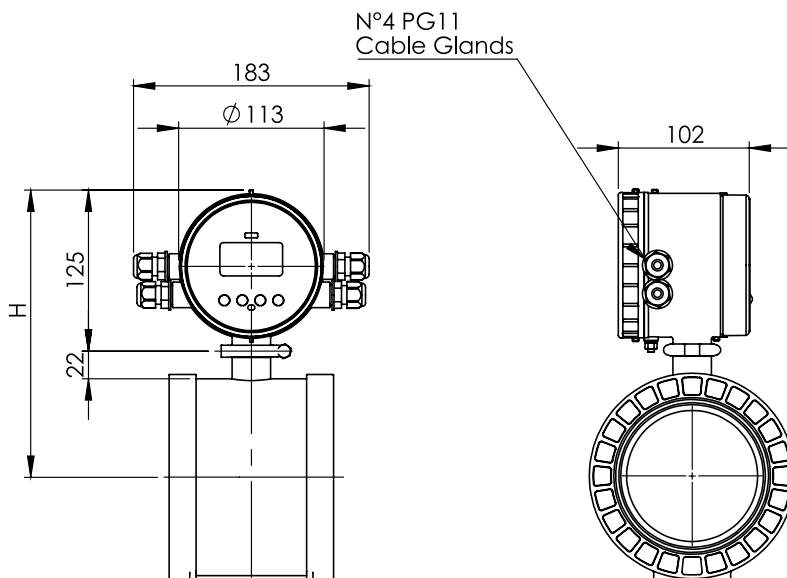


MUT1100J - MC406 VERTICAL

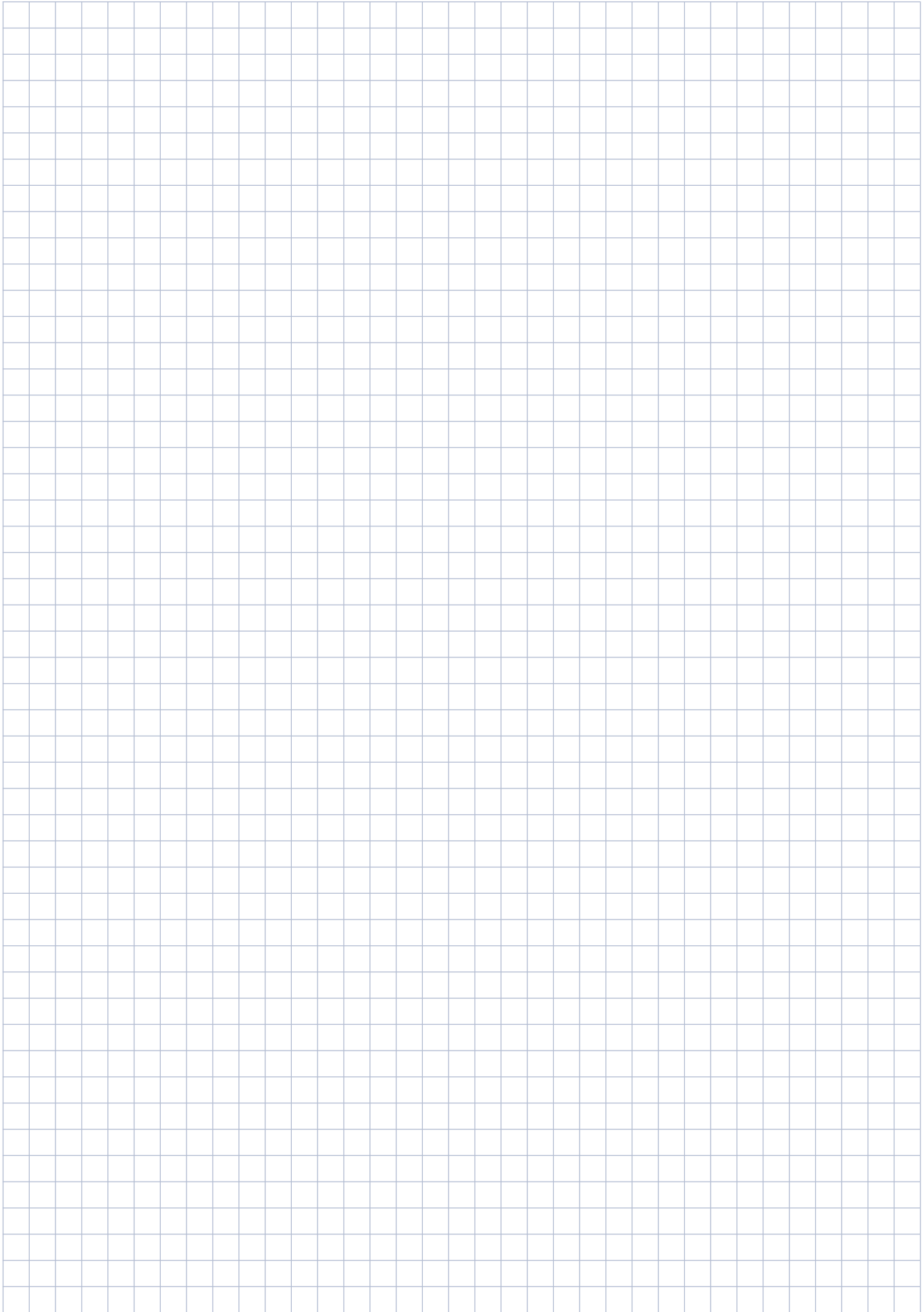


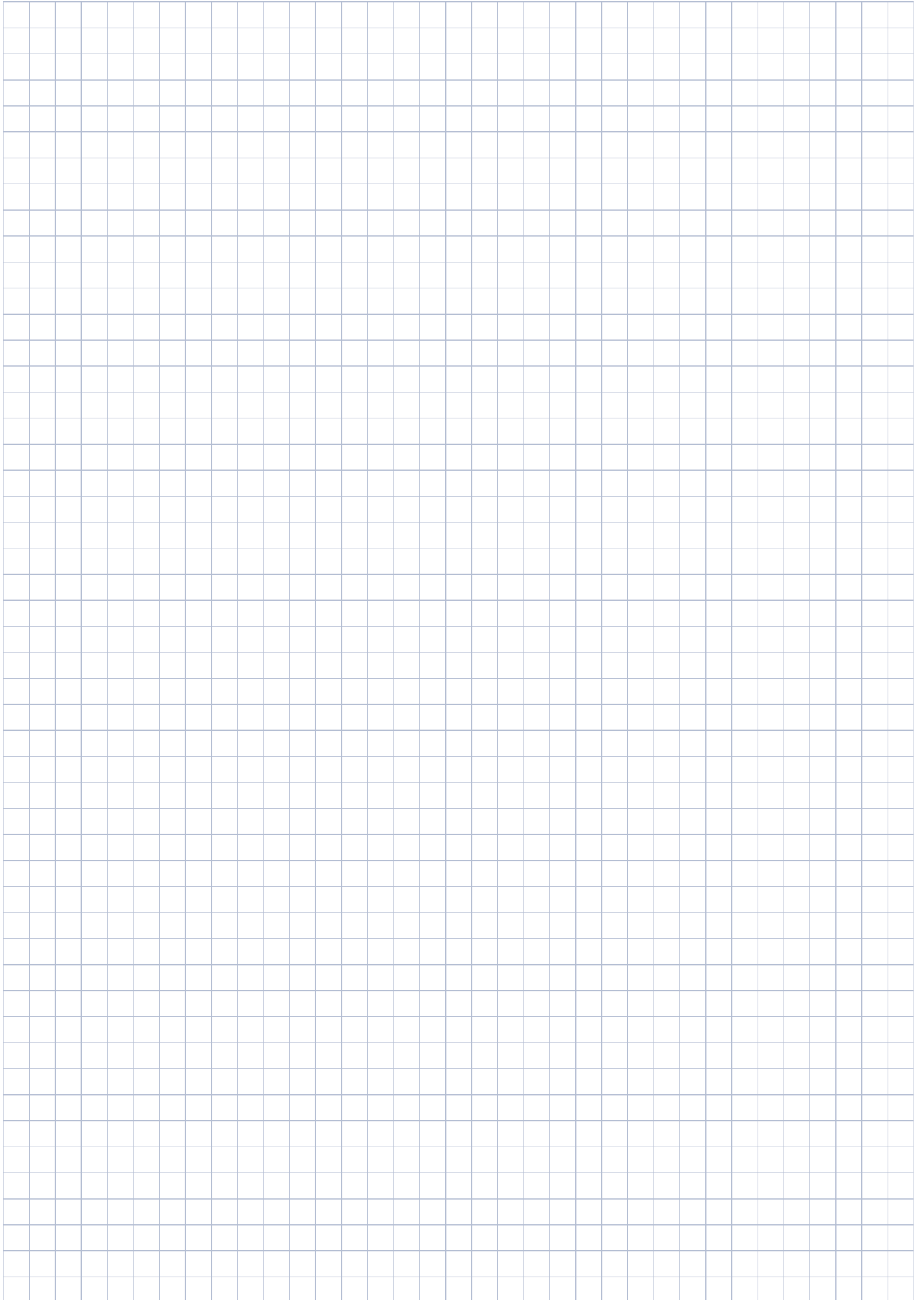
| DN | H |
|-----|-----|
| 40 | 187 |
| 50 | 196 |
| 65 | 205 |
| 80 | 211 |
| 100 | 224 |
| 150 | 254 |

MUT1100J - MC406 HORIZONTAL



| DN | H |
|-----|-----|
| 40 | 186 |
| 50 | 195 |
| 65 | 204 |
| 80 | 210 |
| 100 | 223 |
| 150 | 253 |





About BERMAD

BERMAD is a leading, privately-owned global company that designs, develops and manufactures tailor-made water & flow management solutions that include state-of-the-art hydraulic control valves, air valves and advanced metering solutions.

Founded in 1965, we have spent over 50 years interacting with the world's major end users,

and accumulating knowledge and experience in multiple markets and industries. Today, we are recognized as a pioneer and established world-leading provider of water & flow management solutions that give our customers the unprecedented operational efficiency, and superior quality, durability and performance they need to meet the demanding challenges of the 21st century.



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