Content

Title：	Directions Governing Type Approval of Diaphragm Gas Meters Ch
Date：	2023.08.25
Legislative：	1. Enacted and promulgated by Order Ching-Piao-Szu-Tzu No.09340001640 of the Bureau of Standards, Metrology and Inspection, Ministry of Economic Affairs on 23 April 2004 2. Item 3, 4, 5, 7 and 9 amended and promulgated by Order Ching-Piao-Szu-Tzu No. 10540014300 of the Bureau of Standards, Metrology and Inspection, Ministry of Economic Affairs on 13 September 2016 3. Item 2, 4 and 6 amended and promulgated by Order Ching-Piao-Szu-Tzu No. 10640004260 of the Bureau of Standards, Metrology and Inspection, Ministry of Economic Affairs on 26 July 2017 4. Amended and promulgated by Order Ching-Piao-Szu-Tzu No. 11240005270 of the Bureau of Standards, Metrology and Inspection, Ministry of Economic Affairs on 25 August 2023
Content：	1. These Directions are enacted for conducting type approval and series type approval of diaphragm gas meters and relevant activities. 2. The applicant applying for type approval, series type approval or approbation shall submit the following documents: (1) Diagrams of seal location and lists of patterns of seals and stamps (exempted for applications for series approval or approbation); (2) Original certificate of type approval (exempted for applications for type approval); (3) Documents showing the difference due to alteration (exempted for applications for type approval). (4) Test reports (exempted for applications for series approval or approbation provided that tests are not required). (5) Declaration. For gas meters complying with the family characteristics defined in the Technical Specification for Type Approval of Diaphragm Gas Meters (hereinafter referred “the Technical Specification”), the applicant shall submit classification table of family when apply for type approval as a family of gas meters. 3. The applicant applying for type approval, series type approval or approbation shall submit the following photographs of external appearance: (1) Total of six photographs of the view for upper, lower, left, right, front, and back of the instrument. (2) The image of the instrument shall occupy at least 4/5 of the photograph area, and the wording and marking on the sample shall be clearly shown. The photographs as referred to in the preceding paragraph shall be printed or attached on A4 papers and stapled together. The size of the photographs shall not be smaller than 12.7 × 8.8 cm2. The photographs could also be provided in electronic files. 4. The applicant shall submit the following technical documents and test samples to the designated laboratory approved by the dedicated weights and measures authority (hereinafter referred “the Authority”) to apply for the test reports as referred to in Subparagraph 4, Paragraph 1, Article 2. The technical documents as referred to in the preceding paragraph shall include the contents listed in 9.2 of the Technical Specification. To apply for type approval of a family, the applicants shall submit the classification table for the family of gas meters. The test samples as referred to in Paragraph 1 shall include gas meters, nonmetallic and metallic materials constituting the outer casing and internal parts in direct contact with gas. Their quantities are as follows:

(1) Mechanic gas meters: 4 samples.
(2) Gas meters with maximum working pressure more than 10 kPa: 5 samples.
(3) Gas meters with micro-computer: 7 samples.
(4) Gas meters with electronic indicating devices: 9 samples.
(5) A family of gas meters: same as one of the quantities specified in the preceding subparagraphs for each type chosen according to the Annex D of the Technical Specification.
(6) Nonmetallic materials constituting the outer casing and internal parts in direct contact with gas: 3 pieces for each.
(7) Metallic materials constituting the outer casing and internal parts in direct contact with gas: 1 piece for each.

5. Application for series type approval or approbation is not required for a type-approved diaphragm
gas meter with one of the following alterations been made:
(1) Color of outer casing.
(2) Coating material and coating method on the outer casing.
(3) Color of counter sets.
(4) Material of counter sets.
(5) Other alterations approved by the Authority.

6. When one of the following alterations has been made, the type-approved diaphragm gas meter do
not have to be tested for metering performance but shall apply for series type approval or approbation:
(1) Marking of data plate or face plate, and sealing method or seal dimension.
(2) Marking of counter sets.

7. When one of the following alterations has been made, the type-approved diaphragm gas meter shall apply for series type approval or approbation after related metering performance test has been done.
(1) For those with outer casing material altered, their performance shall comply with 4.1.3 and 4.1.4 of the Technical Specification.
(2) For those with valve material or dimension altered but the maximum flow rate (Qmax) kept unaltered, their performance shall comply with 3.9, 9.6.1 and 9.6.3 of the Technical Specification.
(3) For those with diaphragm dimension or material altered, their performance shall comply with 4.1.3.2 of the Technical Specification.
(4) For those with dimension of connecting rods altered but the maximum flow rate kept unaltered, their performance shall comply with 3.9, 9.6.1 and 9.6.3 of the Technical Specification.
(5) For those with shut-off valve altered, their performance shall comply with 4.1.4, B.6.7.2, B.6.8.2,
B.6.9, B.6.10, B.6.11, B.6.12, B.6.13, B.6.15, B.6.16, B.6.17, B.6.18, B.6.19, B.6.20, B.6.21 and
B.6.22 of the Technical Specification.
(6) For those with pressure switch altered, their performance shall comply with B.6.18.2 and B.6.19
of the Technical Specification.
(7) For those with earthquake sensor altered, their performance shall comply with B.6.18.1 of the Technical Specification.
(8) For those with inlet and outlet diameter altered, their performance for pressure absorption (tested
for six times) at Qmax shall comply with 3.9 of the Technical Specification, and for error at Qt and Qmax (each flow rate tested for six times) shall comply with 9.6.1 of the Technical Specification.
(9) In case the mechanical structure for metrological performance, maximum flow rate and cyclic volume of both mechanical gas meters and gas meters with micro-computer are identical, the performance of mechanical gas meters remodeled from gas meters with micro-computer shall comply with 3.9, 9.6.1 and 9.6.3 of the Technical Specification, and the performance of gas meters with micro-computer remodeled from mechanical gas meters shall comply with 3.9, 4.1.4, 9.6.1, 9.6.3 and B.6 of the Technical Specification.
(10) For those with circuit board altered, their performance shall comply with B.6.8.2, B.6.11, B.6.12, B.6.13, B.6.20, B.6.21, B.6.22 and B.6.23 of the Technical Specification.
(11) For those with maximum working pressure altered to more than 10 kPa, their performance shall
comply with Annex C of the Technical Specification.

(12) For those with total digits of counter altered, their performance shall comply with 9.6.1 of the Technical Specification.
(13) For those with pulse generator added, their performance shall comply with 3.9, 4.1.4 and 4.4.3
of the Technical Specification, and their performance for errors tested at Qmax and Qt shall comply with 9.6.1 of the Technical Specification.
(14) For those with power source altered, their performance shall comply with B.6.5, B.6.9, B.6.10,
B.6.11, B.6.12, B.6.13, B.6.15, B.6.16, B.6.20, B.6.21, B.6.22 and B.6.23 of the Technical Specification.
(15) In case of those with indicating devices altered from mechanical type to electronic type, their performance shall comply with 3.9, 4.1.4, 9.6.1, 9.6.3, Annex A and B.6 of the Technical Specification.
(16) In case of those with new members added to a family of gas meters, their tests shall be conducted in accordance with Annex D of the Technical Specification.

8. A type-approved diaphragm gas meter shall apply for type approval whenever its maximum flow has been altered.
In case the type approval mentioned in the preceding paragraph was applied for as a family of gas meters by combining with different flow rates, the testing rules and selection of test samples of the Annex D shall be followed.

9. In case of the type-approved diaphragm gas meters with alterations not listed in the preceding three articles, the related documents submitted by the applicant shall be reviewed by the Authority or its designated laboratory to determine the testing items.

10. For application for extension of the validity period of a type-approval certificate, the original applicant or his successor shall submit the following documents:
(1) Diagrams of seal location, lists of patterns of seals and stamps, and declaration as listed in Article 2.
(2) Photographs as listed in Article 3.
(3) Technical documents as listed in Article 4.

Data Source：Ministry of Economic Affairs R.O.C.(Taiwan) Laws and Regulations Retrieving System