

DIN EN 12480:2018-05 (E)

Gas meters - Rotary displacement gas meters

Contents

Page

European foreword.....	4
1 Scope.....	5
2 Normative references.....	5
3 Terms, definitions, symbols and abbreviations.....	11
3.1 Terms and definitions	11
3.2 Symbols and abbreviations	15
4 Operating range.....	15
4.1 General.....	15
4.2 Flow rate range (conformity/individual).....	15
4.3 Operating pressure range (conformity/individual).....	16
4.4 Operating temperature range (conformity/individual).....	16
5 Metrological performance	16
5.1 General.....	16
5.2 Error of indication (conformity/individual).....	16
5.3 Pressure loss (conformity/individual)	18
5.4 Metrological repeatability (conformity)	18
5.5 Operating pressure (conformity/individual)	19
5.6 Temperature ranges (conformity)	19
5.7 Condensing ambient conditions (conformity).....	21
5.8 Bidirectional meters (conformity)	21
5.9 Influence of oil filling (conformity)	21
6 Design and manufacturing.....	21
6.1 General (conformity/individual)	21
6.2 Material.....	22
6.3 Robustness.....	25
6.4 Transportation and storage (conformity/individual).....	29
6.5 Connections (conformity)	30
6.6 Pressure and temperature tappings (conformity)	30
6.7 Manufacturing.....	31
7 Meter output (conformity)	32
7.1 Index.....	32
7.2 Index window	33
7.3 Output drive shafts	34
7.4 Pulse generators.....	37
8 Durability (conformity)	39
8.1 Requirements	39
8.2 Tests.....	39
9 Marking, labelling and packaging (conformity/individual).....	39
9.1 General.....	39
9.2 Direction of flow	40
9.3 Pressure tappings	40
9.4 Durability and legibility of marking.....	40
10 Documentation (conformity).....	40

10.1	General	40
10.2	Documentation related to the manufacturer's tests.....	40
10.3	Declaration of conformity	41
10.4	Instruction manual	41
Annex A	(normative) Pattern approval.....	42
Annex B	(normative) Individual meter testing.....	44
Annex C	(normative) Resistance to high temperature.....	45
C.1	General	45
C.2	Requirements.....	45
C.3	Test	45
C.4	Marking	47
Annex D	(normative) Compliance evaluation for gas meters.....	48
D.1	General	48
D.2	Quality Management System	48
Annex E	(normative) Non-destructive testing (NDT)	49
Annex F	(normative) Materials for pressurized parts	51
Annex G	(normative) Additional tests for meters to be used in open locations	63
G.1	General	63
G.2	Weathering	63
Annex H	(normative) Meter family	64
H.1	Definition of meter family	64
H.2	Criteria for grouping meters together in order to form a family	64
Annex ZA	(informative) Relationship between this European Standard and the essential requirements of EU Directive 2014/32/EU aimed to be covered.....	65
Annex ZB	(informative) Relationship between this European Standard and the essential requirements of EU Directive 2014/68/EU aimed to be covered.....	70
Bibliography		72