

DIN EN ISO 5167-6:2023-08 (E)

Measurement of fluid flow by means of pressure differential devices inserted in circular cross-section conduits running full - Part 6: Wedge meters (ISO 5167-6:2022)

Contents

	Page
European foreword	3
Foreword.....	4
Introduction.....	5
1 Scope	6
2 Normative references.....	6
3 Terms and definitions.....	6
4 Principles of the method of measurement and computation.....	7
5 Wedge meters.....	8
5.1 Field of application.....	8
5.2 General shape	9
5.3 Material and manufacture	10
5.4 Pressure tappings.....	10
5.5 Discharge coefficient, C	11
5.5.1 Limits of use	11
5.5.2 Discharge coefficient of the wedge meter.....	11
5.6 Expansibility [expansion] factor, ε	11
5.7 Uncertainty of the discharge coefficient, C	12
5.8 Uncertainty of the expansibility [expansion] factor, ε	12
5.9 Pressure loss	12
6 Installation requirements	12
6.1 General.....	12
6.2 Minimum upstream and downstream straight lengths for installations between various fittings and the wedge meter.....	12
6.3 Additional specific installation requirements for wedge meters	13
6.3.1 Circularity and cylindricality of the pipe.....	13
6.3.2 Roughness of the upstream and downstream pipe.....	13
6.3.3 Positioning of a thermowell.....	13
6.3.4 Bidirectional wedge meters	14
7 Flow calibration of wedge meters	14
7.1 General.....	14
7.2 Test facility.....	14
7.3 Meter installation.....	14
7.4 Design of the test programme	14
7.5 Reporting the calibration results	15
7.6 Uncertainty analysis of the calibration	15
7.6.1 General	15
7.6.2 Uncertainty of the test facility	15
7.6.3 Uncertainty of the discharge coefficient of the wedge meter	15
Annex A (informative) Table of expansibility [expansion] factor	16
Annex B (informative) Use of Kd^2 parameter.....	17
Bibliography.....	18