

DIN EN 15383:2014-02 (E)

Plastics piping systems for drainage and sewerage - Glass-reinforced thermosetting plastics (GRP) based on polyester resin (UP) - Manholes and inspection chambers (includes Amendment A1:2013)

Contents		Page
Foreword		4
1	Scope	5
2	Normative references	5
3	Terms, definitions and symbols	6
4	General requirements	12
4.1	Classification	12
4.1.1	Categories	12
4.1.2	Nominal stiffness	12
4.2	Materials for shaft or chamber units	12
4.2.1	General	12
4.2.2	Elastomers	12
4.2.3	Metals	12
4.3	Reference conditions for testing	13
4.3.1	Temperature	13
4.3.2	Properties of water for testing	13
4.3.3	Loading conditions	13
4.3.4	Preconditioning	13
4.3.5	Measurement of dimensions	13
4.4	Joints	13
4.4.1	Types of joint	13
4.4.2	Length and diameter of joint	13
4.4.3	Flexibility of the jointing system	13
4.4.4	Sealing ring	13
4.4.5	Adhesives	13
4.5	Joint performance	14
4.5.1	Performance requirements	14
4.5.2	Interchangeability	14
4.5.3	Test pieces	15
4.5.4	Number of test pieces for type test purposes	15
4.5.5	Test temperature	15
4.5.6	Flexible joints with elastomeric sealing rings	15
4.5.7	Rigid joints of the wrapped or cemented type	15
4.5.8	Test parameters	15
5	Geometrical characteristics	16
5.1	Diameter, wall thickness and length of GRP-UP shaft and chamber components Dimensional requirement	16
5.2	Size of openings in manholes	16
6	Mechanical characteristics	16
6.1	General	16
6.2	Longitudinal compressive strength	16
6.2.1	Initial longitudinal compressive stress at break	16
6.2.2	Requirements	16
6.3	Longitudinal compressive load	17

6.3.1	General	17
6.3.2	Ultimate longitudinal load, Fult	17
6.3.3	Manufacturer's declared load for which a manhole or inspection chamber ring is designed, Fj and the permissible force, Fperm, p	17
7	Leak-tightness of manholes and inspection chambers and their joints	18
8	Minimum required marking	18
9	Ancillary products	19
9.1	Manhole and inspection chamber tops	19
9.2	Manhole steps and ladders	19
9.2.1	Location of steps	19
9.2.2	Load bearing capacity of installed steps	20
9.3	Precast concrete components	21
10	Dangerous substances	21
11	Manufacturer's installation recommendations	21
12	Evaluation of conformity	21
Annex A (normative) Determination of the longitudinal compressive properties measured on prism shaped test pieces		
22		
A.1	Scope	22
A.2	General	22
A.3	Test-pieces	22
A.4	Test equipment	25
A.5	Test procedure	25
A.6	Calculation and expression of results	25
A.7	Test report	26
Annex B (normative) Determination of the resistance of installed steps to vertical or horizontal loading		
..... 27		
B.1	Scope	27
B.2	Principle	27
B.3	Apparatus	27
B.4	Preparation	27
B.5	Procedure	28
B.6	Test report	29