

DIN EN 12897:2020-05 (E)

Water supply - Specification for indirectly heated unvented (closed) storage water heaters (includes Amendment :2020)

Contents		Page
European foreword		4
Introduction		5
1	Scope	6
2	Normative references	6
3	Terms, definitions and symbols	7
3.1	Terms and definitions	7
3.2	Symbols	8
4	Requirements	8
4.1	Constructional requirements	8
4.1.1	Inspection access	8
4.1.2	Draining	8
4.1.3	Hydraulic connections	8
4.2	Temperature control	9
4.3	Mechanical resistance and stability	9
4.3.1	Pressure resistance of water storage vessel	9
4.3.2	Pressure resistance of primary heater	9
4.3.3	Durability	9
4.3.4	Leakage test on double-walled primary heater	11
4.4	Safety equipment	11
4.4.1	General	11
4.4.2	Energy cut-out device	11
4.4.3	Temperature relief valve	11
4.4.4	Pressure relief/expansion valve	11
4.4.5	Pressure reducing valve	11
4.4.6	Provision for expansion	12
4.4.7	Backflow prevention	12
5	Marking	12
6	Evaluation of conformity	12
6.1	General	12
6.1.1	Compliance testing	12
6.1.2	Market surveillance	13
6.2	Initial type testing	13
6.2.1	General	13
6.2.2	Actual volume	13
6.2.3	Rated storage volume	13
6.2.4	Hot water volume	13
6.2.5	Primary heating power (heat exchanger performance)	14
6.2.6	Durability testing	14
6.2.7	Double-walled primary heaters	14
6.2.8	Standing heat loss	14
6.2.9	Pressure resistance	14
6.2.10	Temperature control devices	14
6.2.11	Heat exchanger pressure drop	14
6.3	Production testing	14

6.4	Factory production control (FPC)	15
7	Technical documents	15
7.1	General	15
7.2	Assembly and maintenance instructions	15
7.3	Operating instructions	16
Annex A(normative)Hot water safety and performance testing		17
A.1	Tests required	17
A.2	Test apparatus and tolerances	17
A.3	Performance tests	19
A.4	Interpretation and calculation of hot water performance results	21
A.5	Function of safety devices	22
Annex B(normative)Measurement of standing heat loss for factory insulated storage water heaters		23
B.1	General	23
B.2	Apparatus	23
B.3	Test Procedure	25
B.4	Calculation of Results	26
Annex C(informative)Inspection access		28
Annex ZA (informative) !Relationship between this European Standard and the requirements of Commission Delegated Regulation (EU) No 812/2013 of 18 February 2013 supplementing Directive 2010/30/EU regarding energy labelling of water heaters, hot water storage tanks and packages of water heater and solar device		30
Annex ZB(informative) !Relationship between this European Standard and the requirements of Commission Regulation (EU) No 814/2013 of 2 August 2013 implementing Directive 2009/125/EC with regard to ecodesign requirements for water heaters and hot water storage tanks		32
Bibliography		34