

DIN EN 17278:2022-01 (E)

Natural gas vehicles - Vehicle fuelling appliances

Contents		Page
European foreword		4
1	Scope	5
2	Normative references	5
3	Terms and definitions	7
4	Abbreviations	10
5	Risk management	10
6	General principles of design	11
6.1	General construction	11
6.2	General requirements	11
6.3	Materials	12
6.4	Internal systems and components of VFA	12
6.4.1	Fuel delivery system	12
6.4.2	Fuelling pressure discharge system	14
6.4.3	Locking system	14
6.4.4	Compressor	14
6.4.5	Gas containment system	14
6.4.6	Temperature compensation system	15
6.4.7	Dryer	16
6.4.8	Safety means	16
6.4.9	Pipework	17
6.5	Permanent joining	17
6.6	Connection to the distribution gas network	17
6.7	Gas composition and odorization	18
6.8	Noise attenuation	18
6.9	Ventilation	18
7	Enclosure	18
8	Testing	19
8.1	General	19
8.2	Strength pressure (proof) test	19
8.2.1	General	19
8.2.2	Procedure of strength pressure (proof) test	19
8.2.3	Fatigue test	20
8.3	Leak testing	20
8.3.1	General	20
8.3.2	Procedure for gas leakage test	20
8.3.3	Liquid leakage testing	20
8.4	Checking of safety devices	20
8.5	Periodic inspection	21
8.5.1	General	21
8.5.2	Periodic inspection of cylinders	21
8.5.3	Periodic inspection of fuelling hose	21
9	Installation	21
9.1	General	21

9.2	VFA location	21
9.3	VFA installation outdoors	23
9.3.1	VFA location outdoors	23
9.3.2	Installation conditions	23
9.3.3	Ventilation conditions	23
9.4	VFA installation indoors	23
9.4.1	VFA location indoors	23
9.4.2	Installation conditions	24
9.4.3	Ventilation conditions	24
9.4.4	Compatibility with other gas appliances	25
9.5	Commissioning	25
10	Operation	25
10.1	General	25
10.2	Installation and servicing manual	25
10.2.1	General	25
10.2.2	Installation instructions	26
10.2.3	Maintenance instructions	27
10.2.4	Removal instructions for VFA	28
10.2.5	Servicing and inspection instructions	28
10.3	User's manual	28
10.3.1	General	28
10.3.2	Front cover	28
10.3.3	Safety section	29
10.3.4	Additional safety information	29
11	User of VFA	30
12	Marking and labelling	31
13	Maintenance and testing frequency of gas detection system	31
Annex A (informative) Additional safety precautions for indoor fuelling of NGV by means of VFA installed outdoors		32
Annex ZA (informative) Relationship between this European Standard and the Essential requirements of EU Directive 2014/68/EU (Pressure equipment Directive) aimed to be covered		33
Bibliography		34