

ISO 19880-2:2025-02 (E)

Gaseous hydrogen - Fuelling stations - Part 2: Dispensers and dispensing systems

Contents		Page
Foreword		v
Introduction		vi
1	Scope	1
2	Normative references	1
3	Terms and definitions	2
4	General	7
5	Requirements	8
5.1	General material requirements	8
5.2	Construction and assembly requirements	9
5.2.1	General construction and assembly	9
5.2.2	Housings and cabinets	10
5.3	Dispenser hydrogen systems	10
5.4	Piping and fittings	11
5.5	Overpressure protection devices	12
5.6	Filters	12
5.7	Valves	13
5.8	Venting	13
5.9	Dispenser fuelling assembly	13
5.10	Breakaway devices	14
5.11	Instruments for gaseous hydrogen systems	14
5.12	Metering	15
5.13	Precoolers and pre-cooler control	15
5.14	Electrical equipment and wiring	15
5.14.1	General electrical requirements	15
5.14.2	Bonding and grounding	15
5.14.3	Safety instrumented systems	15
5.14.4	Illumination	16
5.14.5	Payment terminals or fuelling authorizing systems	16
5.14.6	Electromagnetic compatibility and interference (EMC)	16
5.15	Emergency shutdown system (ESS)	16
6	Dispensing requirements	17
6.1	Control of dispensing	17
6.2	Dispensing temperature, pressure and flow rate	17
6.3	Pressure integrity check (leak check)	17
6.4	Fuelling protocol and process limits	18
6.5	Post dispensing	18
7	Dispenser fault management	18
8	Marking	18
8.1	General requirements	18
8.2	Dispenser name plate	19
8.3	Self-serve dispenser instructions	19
9	Qualification tests	19

9.1	General	19
9.2	Standard test conditions	19
9.3	Proof pressure test	20
9.3.1	Acceptance criteria	20
9.3.2	Test method	20
9.4	Leakage test	20
9.4.1	Acceptance criteria	20
9.4.2	Test method	20
9.5	Impact test	20
9.5.1	Acceptance criteria	20
9.5.2	Test method	21
9.6	Dispenser shutdown test	21
9.6.1	Acceptance criteria	21
9.6.2	Test method	21
9.7	Hose rupture	22
9.7.1	General	22
9.7.2	Acceptance criteria	22
9.7.3	Test method	22
9.8	Hose breakaway test	23
9.8.1	Acceptance criteria	23
9.8.2	Test method	23
9.9	Prevention of electrostatic discharge	23
9.9.1	Acceptance criteria	23
9.9.2	Test method	23
9.10	Dispenser ground continuity test	24
9.10.1	Acceptance criteria	24
9.10.2	Test method	24
9.11	Dielectric voltage-withstand test	24
9.11.1	Acceptance criteria	24
9.11.2	Test method	24
9.12	Dispenser cabinet test	25
9.12.1	Acceptance criteria	25
9.12.2	Test method	25
9.13	Marking material adhesion and legibility test	25
9.13.1	Acceptance criteria	25
9.13.2	Test method	25
10	Routine tests	26
11	Product literature	26
11.1	General	26
11.2	Installation	26
11.3	Maintenance and service	26
11.4	Operation	27
Annex A (informative) Dispenser system types		28
Annex B (informative) Examples of hazardous area classification		30
Annex C (normative) Marking class requirements		33
Bibliography		35