

DIN EN 1106:2010-09 (E)

Manually operated taps for gas burning appliances

Contents		Page
Foreword		5
1	Scope	6
2	Normative references	6
3	Terms and definitions	6
4	Classification	11
4.1	Classes of control	11
4.2	Groups of taps	12
4.3	Classes of control functions	12
5	Units of measurement and test conditions	12
6	Construction requirements	12
6.1	General	12
6.2	Mechanical parts of the control	12
6.2.1	Appearance	12
6.2.2	Holes	12
6.2.3	Breather holes	12
6.2.4	Test for leakage of breather holes	12
6.2.5	Screwed fastenings	12
6.2.6	Jointing	12
6.2.7	Moving parts	12
6.2.8	Sealing caps	12
6.2.9	Dismantling and reassembly	13
6.2.101	Operating parts of taps	13
6.3	Materials	13
6.3.1	General material requirements	13
6.3.2	Housing	13
6.3.3	Test for leakage of housing after removal of non-metallic parts	13
6.3.4	Zinc alloys	13
6.3.5	Springs providing closing and/or sealing force	13
6.3.6	Resistance to corrosion and surface protection	13
6.3.7	Impregnation	13
6.3.8	Seals for glands for moving parts	14
6.3.101	Tap closure member	14
6.4	Gas connections	14
6.5	Electronic parts of the control	14
6.6	Protection against internal faults for the purpose of functional safety	14
6.101	Component parts	14
6.101.1	General	14
6.101.2	Turning angles	14
6.101.2.1	General	14
6.101.2.2	Opening at maximum flow	15
6.101.2.3	Opening at minimum flow	15
6.101.2.4	Single outlet tap	15
6.101.3	Lubrication	15
6.101.4	Stops	15
6.101.5	Safety lock	15
6.101.6	Bearing seal	15

6.101.7	Taper angle	16
6.101.8	Pre-setting devices	16
6.101.9	Open and closed position of a tap	16
6.101.10	Compensation means for taps	16
6.101.11	Spring effect in taps	16
7	Performance	16
7.1	General	16
7.2	Leak-tightness	16
7.3	Test for leak-tightness	16
7.4	Torsion and bending	16
7.5	Torsion and bending tests	16
7.6	Rated flow rate	17
7.7	Test for rated flow rate	17
7.7.1	Apparatus	17
7.7.2	Test procedure	17
7.7.3	Conversion of air flow rate	17
7.8	Durability	17
7.9	Performance tests for electronic controls	17
7.10	Long-term performance for electronic controls	17
7.101	Operating torque and force	17
7.101.1	Requirements for operating torque	17
7.101.2	Test for operating torque	18
7.101.3	Requirements for operating force	18
7.101.4	Test for operating force	18
7.101.5	Requirements for operating torque for safety lock	18
7.101.6	Test for operating torque for safety lock	19
7.102	Endurance	19
7.102.1	Requirement	19
7.102.2	Endurance test	19
8	EMC/Electrical requirements	19
9	Marking, installation and operating instructions	20
9.1	Marking	20
9.2	Installation and operating instructions	20
9.3	Warning notice	20
Annex A (normative) Gas connections in common use in the various countries		21
Annex B (informative) Leak-tightness test - volumetric method		22
Annex C (informative) Leak-tightness test - pressure loss method		23
Annex D (normative) Conversion of pressure loss into leakage rate		24
Annex E (normative) Electrical/electronic component fault modes		25
Annex F (normative) Additional requirements for safety accessories and pressure accessories as defined in EU Directive 97/23/EC		26
Annex G (normative) Materials for pressurized parts		27
Annex H (informative) Additional materials for pressurized parts		28
Annex I (normative) Requirements for controls used in DC supplied gas burners and gas burning appliances		29
Annex ZA (informative) Relationship between this European Standard and the Essential Requirements of EU Directive 2009/142/EC relating to appliances burning gaseous fuels		30
Bibliography		32

Figures	
Figure 1 -- Taper plug tap	7
Figure 2 -- Disc tap	8
Figure 3 -- Linear disc tap	9
Figure 4 -- Parallel plug tap	10
Figure 5 -- Needle valve	11
Tables	
Table 1 -- Marking	14
Table 2 -- Maximum operating torque	18
Table 3 -- Maximum operating force	18
Table ZA.1 -- Correspondence between this European Standard and Directive 2009/142/EC relating to appliances burning gaseous fuels	30