

DIN EN 13203-6:2022-11 (E)

Gas-fired domestic appliances producing hot water - Part 6: Assessment of energy consumption of adsorption and absorption heat pumps

| Contents | | Page |
|--------------------------------------------------------------------------|----------------------------------------------------------------------------------|-------------|
| European foreword | | 4 |
| Introduction | | 5 |
| 1 | Scope | 6 |
| 2 | Normative references | 6 |
| 3 | Terms and definitions | 6 |
| 4 | General test conditions | 7 |
| 4.1 | Reference conditions | 7 |
| 4.2 | Measurement uncertainties | 9 |
| 4.2.1 | General | 9 |
| 4.2.2 | Steady-state conditions | 9 |
| 4.3 | Test conditions | 10 |
| 4.3.1 | General | 10 |
| 4.3.2 | Test room | 10 |
| 4.3.3 | Water supply | 10 |
| 4.3.4 | Initial adjustment of the appliance | 10 |
| 4.3.5 | Conditions for the determination of the maximum load profile | 10 |
| 4.3.6 | Electrical supply | 10 |
| 5 | Determination of the energy consumption of the appliance | 11 |
| 5.1 | General | 11 |
| 5.1.1 | Filling of the storage | 12 |
| 5.1.2 | Stabilization at cold | 13 |
| 5.1.3 | Heating up time [M1] | 13 |
| 5.1.4 | Standby gas and electrical power input [M2] | 14 |
| 5.2 | Load profiles (M3) | 16 |
| 5.3 | Determination of the energy recovered by the useful water | 16 |
| 5.4 | Calculation of gas energy | 16 |
| 5.5 | Calculation of electrical energy | 17 |
| 5.5.1 | Calculation of daily electrical energy consumption | 17 |
| 5.5.2 | Corrections to apply for fans and circulation water pumps | 18 |
| 5.6 | Measurement of energy consumption in standby mode | 20 |
| 5.7 | Determination of daily auxiliary electrical energy consumption in off mode | 20 |
| 6 | Eco design related products data | 20 |
| 6.1 | Water heating energy efficiency | 20 |
| 6.2 | Smart control factor (SCF) and smart | 21 |
| 6.3 | Annual fuel consumption (AFC) | 21 |
| 6.4 | Annual electricity consumption (AEC) | 21 |
| 6.5 | Mixed water at 40 °C (V40) for storage water heaters | 21 |
| Annex A (informative) Test conditions | | 23 |
| Annex B (informative) Exemples of test rig and measurement devices | | 24 |
| Annex C (informative) Declaration of the Maximum Load Profile | | 25 |

| | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| Annex ZA (informative) Relationship between this European Standard and the ecodesign requirements of Commission Regulation (EU) n° 814/2013 [OJEU L239 of 6 September 2013] aimed to be covered | 26 |
| Annex ZB (informative) Relationship between this European Standard and the energy labelling requirements of Commission Delegated Regulation (EU) No 812/2013 [OJEU L239 of 6 September 2013] aimed to be covered | 27 |
| Annex ZC (informative) Relationship between this European Standard and the ecodesign requirements of Commission Regulation (EU) n° 813/2013 [OJEU L239 of 6 September 2013] aimed to be covered | 29 |
| Annex ZD (informative) Relationship between this European Standard and the energy labelling requirements of Commission Delegated Regulation (EU) No 811/2013 [OJEU L239 of 6 September 2013] aimed to be covered | 30 |
| Bibliography | 32 |