

# DIN EN 13203-2:2022-10 (E)

## Gas-fired domestic appliances producing hot water - Part 2: Assessment of energy consumption

---

<b>Contents</b>		<b>Page</b>
European foreword .....		4
Introduction .....		5
1	Scope .....	6
2	Normative references .....	6
3	Terms and definitions .....	6
4	General test conditions .....	8
4.1	Reference conditions .....	8
4.2	Measurement uncertainties .....	9
4.2.1	General .....	9
4.2.2	Steady-state conditions .....	9
4.3	Test conditions .....	9
4.3.1	General .....	9
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 .....	11
4.3.6	Electrical supply .....	11
5	Determination of the energy consumption of the appliance .....	11
5.1	General .....	11
5.2	Load profiles .....	11
5.3	Determination of the energy recovered by the useful water .....	20
5.4	Calculation of gas energy .....	20
5.4.1	Calculation of daily gas energy consumption in summer mode .....	20
5.4.2	Calculation of daily gas energy consumption in winter mode .....	21
5.4.3	Daily gas energy consumption seasonally weighted .....	22
5.5	Calculation of daily electrical energy consumption .....	22
5.6	Measurement of energy consumption in standby mode .....	23
5.6.1	General .....	23
5.6.2	Calculation of daily gas energy consumption in standby mode .....	23
5.6.3	Calculation of daily auxiliary electrical energy consumption in standby mode .....	24
5.7	Determination of daily auxiliary electrical energy consumption in off mode .....	24
6	Determination of the ratio of wasted water to total water .....	24
7	Eco design related products data .....	25
7.1	Water heating energy efficiency .....	25
7.2	Smart control factor (SCF) and smart .....	26
7.3	Annual fuel consumption (AFC) .....	27
7.4	Annual electricity consumption (AEC) .....	27
Annex A (informative) Test conditions .....		29
Annex B (informative) Examples of test rig and measurement devices .....		32
B.1	General .....	32

<b>B.2</b>	<b>Pressure measurement .....</b>	<b>33</b>
<b>B.3</b>	<b>Temperature measurement .....</b>	<b>33</b>
<b>Annex C (informative) Declaration of the maximum load profile .....</b>		<b>37</b>
<b>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 .....</b>		<b>38</b>
<b>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 .....</b>		<b>40</b>
<b>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 .....</b>		<b>41</b>
<b>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 .....</b>		<b>42</b>
<b>Bibliography .....</b>		<b>43</b>