

# DIN EN 15181:2017-07 (E)

## Measuring method of the energy consumption of gas fired ovens

---

<b>Contents</b>		<b>Page</b>
European foreword .....		4
Introduction .....		5
1	Scope .....	6
2	Normative references .....	6
3	Terms and definitions .....	7
4	List of measurements .....	7
4.1	Dimensions and mass .....	7
4.2	Energy consumption and heating time .....	7
5	General conditions for measurements .....	8
5.1	General .....	8
5.2	Ambient temperature .....	8
5.3	Test gases and test pressures .....	9
5.4	Electrical supply .....	9
5.5	Load .....	9
5.6	Instrumentation .....	9
5.7	Positioning of the appliance .....	10
5.8	Auxiliary electrical energy .....	10
6	Calculated oven volume and mass .....	10
6.1	Calculation of the oven volume .....	10
6.2	General .....	10
6.2.1	Introduction .....	10
6.2.2	Usable height .....	12
6.2.3	Usable width .....	12
6.2.4	Usable depth .....	12
6.2.5	Calculated volume .....	13
6.3	Mass of the oven .....	13
7	Energy consumption and time .....	13
7.1	Measurement of oven temperature .....	13
7.2	Energy consumption and time for heating a load .....	13
7.2.1	Purpose .....	13
7.2.2	Preparation .....	13
7.2.3	Measurement .....	14
8	Data to be provided for the technical file .....	18
9	Uncertainty and verification procedures .....	19
9.1	Energy consumption .....	19
9.2	Oven volume .....	19
9.3	Measured oven temperature .....	19
9.4	Mass of the oven .....	19
Annex A (normative)	Description of the test brick and position of the thermocouples .....	20
A.1	Specification .....	20

<b>A.2</b>	<b>Position of the thermocouples .....</b>	<b>20</b>
	<b>Annex B (informative) Explanation of the formulae .....</b>	<b>21</b>
<b>B.1</b>	<b>Explanation of the Formulae Subscripts .....</b>	<b>21</b>
<b>B.2</b>	<b>Explanation of the Formulae Superscripts .....</b>	<b>21</b>
	<b>Annex C (normative) Calculation sheet .....</b>	<b>22</b>
	<b>Annex D (informative) Marking the temperature setting for checking the oven temperature .....</b>	<b>24</b>
	<b>Annex ZA (informative) Coverage of Requirements of Delegated Regulation (EC) No 65/2014/EU and of Commission Regulation No 66/2014/EU .....</b>	<b>25</b>
	<b>Bibliography .....</b>	<b>26</b>