

Annex. Requirements household appliances

Market orientation 'Energy consumption testing of household appliances'

Requirements testing Washing machines

The requirements as laid down in:

1. Delegated Regulation: (EU) No. 2019/2014
2. The relevant standard: see below

Tests and to report on the following subjects and standards:

Subject	Standard
Energy Efficiency Index, EEI_W	EN 60456: 2016
$E_{W,full}$, $E_{W,1/2}$, $E_{W,1/4}$	EN 60456:2016/A11:2020
Weighted energy consumption (E_W)	
$W_{W,full}$, $W_{W,1/2}$, $W_{W,1/4}$	
Weighted water consumption (W_W)	
Washing efficiency index (I_W)	
Rinsing effectiveness (I_R)	
Programme or cycle duration	
Maximum temperature inside the laundry (T)	
D_{full} , $D_{1/2}$, $D_{1/4}$	
Remaining moisture content after washing (D)	
Final moisture content after drying	
Spin speed (S)	
Power consumption in off mode (P_o)	
Power consumption in standby mode (P_{sm})	
Power consumption in delay start (P_{ds})	
Airborne acoustical noise emissions	EN IEC 60704-1:2021 EN 60704-2-4:2012 EN 60704-2-4:2012/A11:2020

Requirements testing Tumble dryers

The requirements as laid down in:

1. Delegated Regulation: (EU) No. 392/2012
2. The relevant standard: see below

Tests and to report on the following subjects and standards:

Subject	Standard
Energy Efficiency Index, EEI	EN 61121: 2013
Weighted annual energy consumption (AE _c)	
Weighted energy consumption (E _t)	
Weighted condensation efficiency (C _t)	
Weighted programme time (T _t)	
Power consumption in off-mode and left-on mode (P _o and P _i)	
Sound power level L _{WA}	EN IEC 60704-1:2021 EN 60704-2-6: 2012

Requirements testing Dishwashers

The requirements as laid down in:

1. Delegated Regulation: (EU) No. 2019/2017
2. The relevant standard: see below

Tests and to report on the following subjects and standards:

Subject	Standard
Energy Efficiency Index, EEI	EN 60436:2020 EN 60436:2020/A11:2020 EN 60436:2020/AC:2020-6
Eco programme energy consumption (EPEC)	
Eco programme water consumption (EPWC)	
Cleaning performance index (I_C)	
Drying performance index (I_D)	
Programme duration (T_t)	
Power consumption in off mode (P_o)	
Power consumption in standby mode (P_{sm})	
Power consumption in delay start (P_{ds})	
Airborne acoustic noise emissions	EN IEC 60704-1:2021 EN 60704-2-3:2019 EN 60704-2-3:2019/A11:2019

Requirements testing refrigerating appliances

The requirements as laid down in:

1. Delegated Regulation: (EU) No. 2019/2016
2. The relevant standard: see below

Tests and to report on the following subjects and standards:

Subject	Standard
Energy Efficiency Index, EEI	EN 62552:2013*
Total volume and compartment volume	
Freezing capacity	
Energy consumption at an ambient temperature of 16 °C and 32 °C, E_{16} , E_{32}	EN 62552-1:2020 EN 62552-2:2020 EN 62552-3:2020
Auxiliary energy, E_{aux}	*Also companies must be able to comply with the requirement laid down in this standard
Annual energy consumption, AE	
Temperature rise time	
Airborne acoustical noise emissions	EN IEC 60704-1:2021 EN 60704-2-14:2013 EN 60704-2-14:2013/A1:2019 EN 60704-2-14:2013/A11:2015

Requirements testing electronic displays

The requirements as laid down in:

1. Delegated Regulation: (EU) No. 2019/2013
2. The relevant standard: see below

Tests and to report on the following subjects and standards::

Subject	Standard
On mode power demand (P_{measured} , Watts)	EN 62087-1:2016
Off mode, standby, and networked standby mode power demand in Watts, as applicable	EN 62087-2:2016 EN 62087-3:2016
Visible screen diagonal in centimetres (and inches if declared)	
Visible screen area in dm ²	
The screen resolution in horizontal and vertical pixels	

Requirements testing ovens

The requirements as laid down in:

1. Delegated Regulation: (EU) No. 65/2014
2. The relevant standard: see below

Tests and to report on the following subjects and standards:

Subject	Standard
Energy Efficiency Index, EEI_{cavity}	EN 60350-1:2016
Volume of the cavity of the oven (V)	EN 60350-1:2016/A1:2021
$EC_{electric\ cavity}$	

Requirements testing light sources

The requirements as laid down in:

1. Delegated Regulation: (EU) No. 2019/2015
2. The relevant standard: see below

Tests and to report on the following subjects and standards:

Subject	Standard
Full-load on-mode power P_{on} [W]: $P_{on} \leq 2W$ $2W < P_{on} \leq 5W$ $5W < P_{on} \leq 25W$ $25W < P_{on} \leq 100W$ $100W < P_{on}$	EN 62612:2013 EN 62612:2013/A1:2017 EN 62612:2013/A11:2017 EN 62612:2013/A11:2017/C11:2017 EN 62612:2013/A2:2018 EN 62612:2013/C1:2016
Displacement factor [0-1]	
Useful luminous flux Φ_{use} [lm]	EN 13032-1:2004+A1:2012
Standby power P_{sb} and networked standby power P_{net} [W]	EN 13032-4:2015+A1:2019
CRI and R9 [0-100]	EN 62442-3:2018
Flicker [Pst LM] and stroboscopic effect [SVM]	(also EN IEC 62442-3:2022)
Colour consistency [MacAdam ellips steps]	CIE 13.3:1995 CIE 13:1995
Beam angle (degrees)	
Total mains efficacy η_{TM} [lm/W]	CIE 15:2004
Lumen maintenance factor (for LED and OLED)	CIE 18.2:1983
Survival factor (for LED and OLED)	
Lumen maintenance factor (for FL and HID)	CIE 84:1989
Survival factor (for FL and HID)	CIE 177:2007
Excitation purity [%]	
Correlated colour temperature [K]	
Luminous peak intensity [cd]	