

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/A12:2023
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)	
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 60704-2-4:2025

Requirements testing Washer-dryers

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_{WD}	EN IEC 62512:2020
$E_{WD,full}$, $E_{WD,1/2}$, $E_{WD,1/4}$	EN ISO 62512:2020/A11:2020
Weighted energy consumption (E_{WD})	
$W_{WD,full}$, $W_{WD,1/2}$, $W_{WD,1/4}$	
Weighted water consumption (W_{WD})	
Washing efficiency index (J_W)	
Rinsing effectiveness (J_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 60704-2-16:2019

Requirements testing Tumble dryers

The requirements as laid down in:

1. Delegated Regulation: (EU) No. 2023/2534
2. Delegated Regulation: (EU) No. 2025/1353
3. The relevant standard: see below

Tests and to report on the following subjects and standards:

Subject	Standard
E dry and E dry ^{1/2}	EN 61121: 2013
Eg dry and Eg dry ^{1/2}	
Eg dry,a and Eg dry ^{1/2} ,a	
Weighted condensation efficiency of the eco programme (C _t)	
Programme duration for the eco programme T dry and T dry ^{1/2}	
power consumption of the off mode (P _o), power consumption of the standby mode (P _{sm}) and power consumption of the delay start (P _{ds})	
Acoustic airborne noise emissions	EN IEC 60704-1:2021 EN 60704-2-6: 2012
Repairability index	

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
Eco programme energy consumption (EPEC)	EN 60436:2020/A11:2020 EN 60436:2020/AC:2020-06
Eco programme water consumption (EPWC)	EN 60436:2020/A12:2022
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 60704-2-3:2025

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 IEC 62552-1:2015+A1:2020+A2:2025-CSV
Auxiliary energy, E_{aux}	EN 62552-2:2020 IEC 62552-2:2015+A1:2020+A2:2025-CSV
Annual energy consumption, AE	EN 62552-3:2020 IEC 62552-3:2015+A1:2020+A2:2025-CSV
Temperature rise time	*Also companies must be able to comply with the requirement laid down in this standard
Airborne acoustical noise emissions	EN IEC 60704-1:2021 IEC 60704-2-14:2013+A1:2019+A2:2024-CSV EN 60704-2-14:2013 EN 60704-2-14:2013/A2:2024 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 62087-2:2023 EN 62087-3:2023
Visible screen diagonal in centimetres (and inches if declared)	
Visible screen area in dm ²	
The screen resolution in horizontal and vertical pixels	
Peak white luminance	
Length of time in on mode before the electronic display automatically switches to standby, off mode, or another condition which does not exceed the applicable power demand requirements for off mode or standby mode	
For televisions: the length of time, following the last user interaction, before the television automatically switches to standby, off-mode, or another condition which does not exceed the applicable power consumption requirements for off-mode or standby-mode	
For televisions equipped with room presence sensor: the length of time, when no presence is detected, before the television automatically switches to standby, off-mode, or another condition which does not exceed the applicable power demand requirements for off mode or standby mode	
For electronic displays other than televisions and broadcast displays: the length of time, when no input is detected, before the electronic display automatically switches to standby, off-mode, or another condition which does not exceed the applicable power consumption requirements for off mode or standby mode	

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 60350-1:2023+A1:2025-CSV
Volume of the cavity of the oven (V)	EN 60350-1:2023
$EC_{electric\ cavity}$	IEC 60704-2-10:2024

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]	IEC 62612:2013+A1:2015 +A2:2018 CSV
Useful luminous flux Φ_{use} [lm]	
Standby power P_{sb} and networked standby power P_{net} [W]	EN 13032-1:2004+A1:2012 EN 13032-4:2015+A1:2019
CRI and R9 [0-100]	
Flicker [Pst LM] and stroboscopic effect [SVM]	EN 62442-3:2018 (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]	

Requirements testing Range hoods

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_{hood}	EN 61591:1997
W_{BEP} , W_L	IEC 61591:1997
Q_{BEP} , P_{BEP}	EN 61591:1997/A2:2011
Q_{max}	IEC 61591:1997/A2:2010
E_{middle}	EN 61591:1997/A1:2006
GFE_{hood}	IEC 61591:1997/A1:2005
P_o , P_s	EN 61591:1997/A12:2015
	EN 61591:1997/A11:2014
	EN 61591:2023
Sound power level, L_{WA}	EN IEC 60704-1:2021 EN 60704-2-13:2023