

Type Approval Certificate

This is to certify that the undernoted product(s) has/have been tested with satisfactory results in accordance with the relevant requirements of the Lloyd's Register Type Approval System.

Manufacturer	Miele & Cie. KG
Address	Carl-Miele-Str. 29, Guetersloh, 33332, Germany
Place of Production	Miele & Cie. KG Carl-Miele-Str. 29, Guetersloh, 33332, Germany
Place of Production	Miele technika s.r.o. Sumperska 1345-1348, 783 91 Unicov, Czech Republic
Type	Commercial and Domestic Appliances
Description	Professional washing machines & tumble dryers Washing machines: PWM507 DP MAR PWM906 DP MAR PWM908 DP MAR Tumble dryers: PDR507 EL MAR PDR507 HP MAR PDR908 EL MAR PDR908 HP MAR
Trade Name	PWM507, PWM906, PWM908, PDR507, PDR908

71 Fenchurch Street, London, EC3M 4BS, United Kingdom

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Application	Washing machines and tumbler dryers for the use on-board ships in general power distribution zone.
Specified Standard	<p>IEC 60335-1: 2010 + AMD1: 2013 + AMD2: 2016 IACS E10 Rev. 8/2021</p> <p>For Washing Machines only: IEC 60335-2-7: 2019 UL 1206 (4th Edition) 2003 + Revision 2019 UL 2157 (4th Edition) 2018 + Revision 2019 CSA C22.2 No. 53-1968 (4th Edition) + Rev. 1 (1969) + Rev. 2 (1969), reaffirmed 2019 CSA C22.2 No. 169-18 (5th Edition) + Update 1 (2019)</p> <p>For Tumble Dryers only: IEC 60335-2-11: 2019 UL 1240 (4th Edition) 2005 + Revision 2021 (PDR508EL, PDR908EL) UL 1240 (4th Edition) 2005 + Revision 2019 (PDR508HP, PDR908HP) UL 2158 (5th Edition) 2018 + Revision 2019 (PDR508HP, PDR908HP) CSA C22.2 No. 112-18 (11th Edition) + Update 1 (2019) (PDR508HP, PDR908HP) CSAC22.2 No. 309-16 (1st Edition)</p>
Ratings	<p>Power supply: Washing machines: 230 VAC / 400 VAC / 440 VAC / 480 VAC (50/60 Hz) 208-240 VAC (60 Hz)</p> <p>Tumble dryers: 230 VAC / 400 VAC / 440 VAC / 480 VAC (50/60 Hz) 208-240 VAC (60 Hz)</p> <p>Power consumption: Washing machines: 2.8 kW to 5.5 kW Tumble dryers: 1.2 kW to 6.4 kW</p>

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Operating temperatures:
Washing machines: +5 °C to +35 °C
Tumble dryers: +5 °C to +35 °C

For detailed ratings, pls. refer to appendix.

Additional Tests

Tests according to LR Test Specification Number No. 1, 12/2021:

Visual inspection

Performance test

Insulation resistance

Power supply variation

Power supply failure

Damp heat test 2 – steady state: +35 °C / 80 % / 96 h

Low temperature test: +5 °C / 16 h

Vibration test 1, Resonance search: 5 – 13.2 Hz (± 1.0 mm) / 13.2 – 100 Hz (± 0.7 g (6.9 ms⁻²))

High voltage

Immunity to conducted low frequency interference

Immunity to conducted radio interference

Immunity to radiated radio frequency fields

Immunity to fast low-energy transients (bursts)

Immunity to slow high-energy transients (surges)

Immunity to electrostatic discharge (ESD)

Radiated emission (acc. to general power distribution zone)

Conducted emission (acc. to general power distribution zone)

Tests according to IEC 60068-2-2: 2007

Dry heat test: +35 °C / 16 h (for washing machine)

Dry heat test: +55 °C / 16 h (for tumble dryer)

Tests according to IEC 60068-2-64: 2008

Vibration, broadband random: 3 – 100 Hz / 1 g (r.m.s.) / 2.5 h

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Other Conditions

Type Approval does not eliminate the need for normal inspection and survey procedures required by the Rules and Regulations.

If the specified standards are amended during the validity of this certificate, the product is to be re-approved prior to it being supplied to vessels to which the amended standards apply.

This certificate is not valid for equipment, the design, ratings or operating parameters of which have been varied from the specimen tested. The manufacturer should notify Lloyd's Register EMEA of any modification or changes to the equipment in order to obtain a valid Certificate.

Previous Version:

This certificate supersedes certificate number LR2003359TA-01 issued on 25 June 2020 which is hereby cancelled.

The Design Appraisal Document HPC1962020-22/MK and its supplementary Type Approval Terms and Conditions form part of this Certificate.

Appendix

DESCRIPTION

Professional washing machines & tumble dryers

RATINGS

Type	Nom. power supply	Max. power consumption
Washing machines		
PWM507 DP MAR	1N AC, 230 V, 50/60 Hz 2 AC 208-240 VAC, 60 Hz 2N AC, 400 V, 50/60 Hz 3 AC, 230 V, 50/60 Hz 3 AC, 400/440/480 V, 50/60 Hz 3N AC, 400 V, 50/60 Hz	max. 2.85 kW max. 4.0/5.2 kW max. 5.5 kW max. 5.5 kW max. 3.6/4.2/5.0 kW max. 4.8 kW
PWM906 DP MAR	2 AC 208-240 VAC, 60 Hz 2N AC, 400 V, 50/60 Hz 3 AC, 230 V, 50/60 Hz 3 AC, 400/440/480 V, 50/60 Hz 3N AC, 400 V, 50/60 Hz	max. 4.0/5.2 kW max. 5.5 kW max. 4.4 kW max. 3.6/4.2/5.0 kW max. 4.8 kW
PWM908 DP MAR	2 AC 208-240 VAC, 60 Hz 2N AC, 400 V, 50/60 Hz 3 AC, 230 V, 50/60 Hz 3 AC, 400/440/480 V, 50/60 Hz 3N AC, 400 V, 50/60 Hz	max. 4.0/5.2 kW max. 5.5 kW max. 4.4 kW max. 3.6/4.2/5.0 kW max. 4.8 kW
Tumble dryers		
PDR507EL MAR	1N AC, 230 V, 50/60 Hz 2 AC 208-240 VAC, 60 Hz 3 AC, 230 V, 50/60 Hz 3 AC, 400/440/480 V, 50/60 Hz 3N AC, 400 V, 50/60 Hz	max. 5.47 kW max. 3.2/4.3 kW max. 6.4 kW max. 4.5/5.4/6.4 kW max. 6.4 kW
PDR507HP MAR	1N AC, 230 V, 50 Hz 1N AC, 230 V, 60 Hz 2 AC 208-240 VAC, 60 Hz	max. 1.44 kW max. 1.2 kW max. 1.2 kW
PDR908EL MAR	1N AC, 230 V, 50/60 Hz 2 AC 208-240 VAC, 60 Hz 3 AC, 230 V, 50/60 Hz 3 AC, 400/440/480 V, 50/60 Hz 3N AC, 400 V, 50/60 Hz	max. 5.47 kW max. 3.2/4.3 kW max. 6.4 kW max. 4.5/5.4/6.4 kW max. 6.4 kW
PDR908HP MAR	1N AC, 230 V, 50 Hz 1N AC, 230 V, 60 Hz 2 AC 208-240 VAC, 60 Hz	max. 1.44 kW max. 1.2 kW max. 1.2 kW

Operating temperatures:

Washing machines: +5 °C to +35 °C

Tumble dryers: +5 °C to +35 °C