



From Robert Bosch GmbH	<b>TEST SUMMARY</b>	Issue/Amendment 1.2	Page 1/9
	LITHIUM CELLS OR BATTERIES TEST SUMMARY IN ACCORDANCE WITH SUB-SECTION 38.3 OF UN MANUAL OF TESTS AND CRITERIA	Our Reference EB-BP/ENG5	Date 05-March-2021

**1 Product Manufacturer**

Name	Robert Bosch GmbH Bosch eBike Systems
Address	Gerhard-Kindler-Str. 3 72770 Reutlingen, Germany
Telephone	+49 180 730 3003
Email	<a href="mailto:contact@bosch-ebike.de">contact@bosch-ebike.de</a>
Website	<a href="http://www.bosch-ebike.com">www.bosch-ebike.com</a>

**2 Description**

Cell / Battery used in	Bosch eBike battery (PowerPack / PowerTube)
Cell / Battery type	Lithium ion battery
UN classification	UN 3480
Proper shipping name	Lithium ion batteries

The products listed below have been successfully tested and comply with UN Model Regulation, Manual of Tests and Criteria, Part III sub-section 38.3.

PERFORMED TESTS		RESULTS
38.3.4.1	T1 Altitude Simulation	Passed
38.3.4.2	T2 Thermal Test	Passed
38.3.4.3	T3 Vibration	Passed
38.3.4.4	T4 Shock	Passed
38.3.4.5	T5 External Short Circuit	Passed
38.3.4.6	T6 Impact / Crush	Not applicable
38.3.4.7	T7 Overcharge	Passed
38.3.4.8	T8 Forced Discharge	Not applicable

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(Note that tests T6 and T8 are not applicable to batteries)

Reference to assembled battery testing requirements (38.3.3 (f), 38.3.3 (g)):

Tested under 38.3.3 (f)

**3 Test houses**

The UN 38.3 tests were performed by one of the following test houses and were tested to UN Manual of Tests and Criteria Revision 3 Amendment 1 or subsequent revisions or amendments.

Test house	Address and telephone	Website	Email
Johnson Matthey Battery Systems	ul. Alberta Einsteina 36 44-109 Gliwice, Poland +48 (0) 32 330 2650	<a href="http://www.jmbatterysystems.com">www.jmbatterysystems.com</a>	<a href="mailto:contact.pl@jmbatterysystems.com">contact.pl@jmbatterysystems.com</a>
SLG Prüf- und Zertifizierungs GmbH	Burgstädter Strasse 20, 09232 Hartmannsdorf, Germany  +49 (0)3722 7323-0	<a href="http://www.slg.de.com">www.slg.de.com</a>	<a href="mailto:service@slg.de.com">service@slg.de.com</a>
VDE Testing and Certification Institute	.Merianstrasse 28, 63069 Offenbach/Main, Germany  Testing location: Goethering 43, 63067, Offenbach/Main, Germany  +49 (0) 69 8306-0	<a href="http://www.vde.com">www.vde.com</a>	<a href="mailto:vde-institut@vde.com">vde-institut@vde.com</a>
TÜV Singapore	No. 1 Science Park Drive, Singapore 118221  +65 6885 1333	<a href="http://www.tuv-sud-psb.sg">www.tuv-sud-psb.sg</a>	<a href="mailto:enquiries@tuv-sud-psb.sg">enquiries@tuv-sud-psb.sg</a>
CETECOM ICT Services GmbH	Untertürkheimerstr. 6-10 66117 Saarbrücken, Germany  +49 (0)681 598 - 0	<a href="http://www.cetecom.com">www.cetecom.com</a>	<a href="mailto:contact@cetecom.com">contact@cetecom.com</a>

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Test house	Address and telephone	Website	Email
Kiwa Primara GmbH	Gewerbestr. 28, 87600 Kaufbeuren, Germany +49 (0)8341 99726-60	<a href="http://www.primara.net">www.primara.net</a>	de.primara.info@kiwa.com

**4 Product Test Information**

Model number	Physical description	Battery weight [kg]	Wh rating [Wh]	Test report number	Test report date	Edition of UN Manual used
EB12.100.00W EB12.100.00X EB12.100.00Y EB12.100.00Z	PowerTube 750	4.32	750	1058-20-MM-21-PP004	08.03.2021	Rev. 7
EB12.100.00W-02/-97 EB12.100.00X-02/-97 EB12.100.00Y-02/-97 EB12.100.00Z-02/-97	PowerTube 750	4.32	750	1058-20-MM-20-PP001	04.12.2020	Rev. 7
0275007543 0275007544 0275007545 0275007546	PowerTube 625	3.63 3.54 3.52 3.52	625	1042-18-MM-19-PP021 1042-18-MM-19-PP019 1042-18-MM-19-PP017 1042-18-MM-19-PP014	19.08.2019 16.08.2019 14.08.2019 14.03.2019	Rev. 6 A1 Rev. 6 A1 Rev. 6 A1 Rev. 6 A1

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		3.52		1042-18-MM-19-PP013	14.03.2019	Rev. 6 A1	
0275007539	PowerTube 500	2.91	500	1075-17-MM-19-PP017	03.06.2019	Rev. 6	
0275007540		2.96		1075-17-MM-19-PP027	22.06.2019	Rev. 6 A1	
0275007541							
0275007542		2.96		1075-17-MM-19-PP024	13.03.2018	Rev. 6 A1	
		2.91		1075-17-MM-19-PP019	06.06.2019	Rev. 6	
		2.89		7191216588-EEC19	05.08.2019	Rev. 6 A1	
		2.96		1075-17-MM-18-PP011	22.06.2018	Rev. 6 A1	
		2.89		1075-17-MM-18-PP007	13.03.2018	Rev. 6 A1	
	2.91	1075-17-MM-17-PP001	13.07.2017	Rev. 6			
				1075-17-MM-17-PP002	10.07.2017	Rev. 6	
0275007555	PowerTube 400	2.89	400	1075-17MM-19-PP013	30.01.2019	Rev. 6 A1	
0275007556							
0275007557		2.96		1075-17MM-19-PP014	30.01.2019	Rev. 6 A1	
0275007558							
0275007555	PowerTube 400	2.91	400	1075-17-MM-20-PP029	18.02.2020	Rev. 6 A1	
0275007557							
0275007556	PowerTube 400	2.91	400	1075-17-MM-20-PP028	18.02.2020	Rev. 6 A1	
0275007558							

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Model number	Physical description	Battery weight [kg]	Wh rating [Wh]	Test report number	Test report date	Edition of UN Manual used		
0275007529	PowerPack 500 Frame	2.65	500	1012-16-MM-17-PP003	24.10.2017	Rev. 6 A1		
0275007530		2.56		1003-16-MM-16-PP005	08.12.2016	Rev. 5 A2		
0275007533				1003-16-MM-16-PP003	15.11.2016	Rev. 5 A2		
0275007534					1003-16-MM-16-PP001	17.02.2016	Rev. 5 A2	
						1137-14-MM-15-PP001	02.02.2015	Rev. 5 A2
							1135-14-MM-15-PP001	19.01.2015
0275007531	PowerPack 500 Rack	2.72	500	1150-17-MM-15-PP001	05.02.2018	Rev. 5 A2		
0275007532		2.70		1005-15-MM-15-PP001	17.03.2015	Rev. 5		
0275007535				1004-15-MM-15-PP001	17.03.2015	Rev. 5		
0275007536								
0275007510	PowerPack 400 Frame	2.41	400	1018-20-MM-20-PP002	31.03.2020	Rev. 7		
0275007512		2.40		261047-TL7-3	09.04.2019	Rev. 6 A1		
0275007524				1147-13-MM-13-PP001	30.01.2014	Rev. 5		
0275007514	PowerPack 400 Rack	2.56	400	1019-20-MM-20-PP001	31.03.2020	Rev. 7		
0275007522		2.56		261047-TL7-1	09.04.2019	Rev. 6 A1		
0275007525				UN_BBR26x	13.03.2014	Rev. 5		

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Model number	Physical description	Battery weight [kg]	Wh rating [Wh]	Test report number	Test report date	Edition of UN Manual used
0275007547 0275007548 0275007549	PowerPack 300 Frame	2.41	300	1147-13-MM-13-PP001	30.01.2014	Rev. 5
0275007548 0275007549	PowerPack 300 Frame	2.49 2.40	300	1018-20-MM-20-PP004  Testreport-264094-TL7-3	31.03.2020  18.07.2019	Rev. 7  Rev. 6 A1
0275007550	PowerPack 300 Rack	2.68 2.56 2.58	300	1019-20-MM-20-PP003  Testreport-264094-TL7-1  UN_BBR26x	31.03.2020  18.07.2019  13.03.2014	Rev. 7  Rev. 6 A1  Rev. 5
0275007503 0275007504	Classic+ Frame 400	2.47 2.47 2.53 2.53 2.53	400	Robe_Akkus_20PP164-01_0  Robe_Bosch_20PP138-01_1  1079-12-MM-16-PP004  1079-12-MM-14-PP003  1079-12-MM-12-PP002	26.05.2020  31.03.2020  11.07.2016  20.11.2014  10.09.2012	Rev. 7  Rev. 7  Rev. 5 A2  Rev. 5  Rev. 5

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Model number	Physical description	Battery weight [kg]	Wh rating [Wh]	Test report number	Test report date	Edition of UN Manual used
0275007505	Classic+ Rack 400	2.58	400	Robe_Akkus_20PP164-02_0	26.05.2020	Rev. 7
		2.58		Robe_Bosch_20PP138-02_1	31.03.2020	Rev. 7
		2.65		1077-12-MM-16-PP005	11.07.2016	Rev. 5 A2
		2.65		1077-12-MM-15-PP004	04.05.2015	Rev. 5
		2.65		1077-12-MM-12-PP001	24.08.2012	Rev. 5
0275007500	Classic+ Frame 300	2.47	300	1078-12-MM-12-PP002	10.09.2012	Rev. 5
0275007502	Classic+ Rack 300	2.55	300	1110-12-MM-12-PP001	05.09.2012	Rev. 5
1270020500 1270020504 1270020505 1270020506	Frame 288 Gen1	2.46	288	1-3739-01-02/11-B	28.09.2011	Rev. 5
1270020504	Frame 288 Gen1	2.5	288	1078-12-MM-12-PP001	06.08.2012	Rev. 5
1270020507	Rack 288 Gen1	2.55	288	1055-12-MM-12-PP001	01.06.2012	Rev. 5
1270020503 1270020507	Rack 288 Gen1	2.54	288	1-3739-02-02/11-B	28.09.2011	Rev. 5



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## 5 Additional supplier information

Every Bosch eBike battery is in compliance with the transport regulations (ADR 2.2.9.1.7, SP 230/ IMDG Code, SP 230 / air transport, ICAO TI/IATA DGR 3.9.2.6.1).

Each battery is equipped with a Battery Management System (BMS). The BMS prevents external shorts if the battery is switched on by accident. In switched-off state there is no voltage at the external contacts present and therefore no hazard of an external short.

Each battery with multiple cells or cells in parallel circuit is equipped with effective means of preventing reverse current flow.

Each cell and battery type is manufactured in strict accordance to a quality assurance system. The quality assurance system is regularly audited.

## 6 Authorized signature

Dr. Martin Holzmann  
Senior Vice President  
Battery Packs and Connected Devices  
Bosch eBike Systems

Name, Title

Dr. Thilo Köder  
Director  
Engineering eBike Batteries and Chargers  
Bosch eBike Systems

Name, Title



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**Revision History**

<b>Issue</b>	<b>Date</b>	<b>Editor</b>	<b>Description of amendment</b>
1.0	15.10.2019	AE-EB/ENB3- Godbole	Created document.
1.1	26.11.2019	AE-EB/ENB3- Godbole	Added Classic Plus and Gen1 part numbers.
1.2	15.01.2021	EB-BP/ENG5 - Ebert	Added test house Kiwa and update several part numbers with new test information Added GEN3 batterie certificates

