

ISO 23308-1:2025-06 (E)

Energy efficiency of industrial trucks - Test methods - Part 1: General

Contents		Page
Foreword		iv
Introduction		v
1	Scope	1
2	Normative references	2
3	Terms and definitions	2
4	Test conditions	3
4.1	General	3
4.2	Test equipment	3
4.2.1	Test area	3
4.2.2	Test track	3
4.2.3	Test load and / or towing capacity	3
4.3	Truck conditions	4
4.4	Environmental conditions	4
4.5	Truck maintenance	4
4.6	Battery condition	5
5	Measurement procedure	5
5.1	General	5
5.2	Operating sequence	5
5.3	Electric trucks	5
5.3.1	General	5
5.3.2	Truck measurement	6
5.3.3	Battery efficiency	6
5.3.4	Charger efficiency	7
5.4	Internal combustion (IC) trucks	7
5.5	Hybrid trucks	8
5.6	Measurement accuracy	8
5.7	Calculation	8
6	Documentation	8
6.1	Test report	8
6.2	Declaration	9
6.2.1	Truck energy consumption	9
6.2.2	Battery efficiency	9
6.2.3	Charger efficiency	9
Annex A (normative) Determination of battery efficiency by using the synthetic discharge cycle		10
Annex B (normative) Simplified procedure to calculate the battery and charging efficiency for lead-acid batteries		15
Annex C (informative) Calculation of the carbon dioxide equivalent		17
Bibliography		20