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BSI Standards Publication

Energy efficiency of Industrial trucks — Test methods

Part 1: General

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National foreword

This British Standard is the UK implementation of EN 16796-1:2016.

The UK participation in its preparation was entrusted to Technical Committee MHE/7, Industrial trucks.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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Efficacité énergétique des chariots de manutention - Méthodes d'essai - Partie 1 : Généralités

Energieeffizienz von Flurförderzeugen - Testmethoden - Teil 1: Generelles

This European Standard was approved by CEN on 13 August 2016.

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European foreword

This document (EN 16796-1:2016) has been prepared by Technical Committee CEN/TC 150 “Industrial Trucks - Safety”, the secretariat of which is held by BSI.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by May 2017, and conflicting national standards shall be withdrawn at the latest by May 2017.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

EN 16796 consists of the following parts, under the general title *Energy efficiency of Industrial trucks — Test methods*:

— *Part 1: General*;

— *Part 2: Operator controlled self-propelled trucks, towing tractors and burden-carrier trucks*;

— *Part 3: Container handling lift trucks*.

The following parts are under preparation:

— *Part 4: Rough-terrain trucks*;

— *Part 5: Trucks with elevating operator position and trucks specifically designed to travel with elevated loads*.

According to the CEN-CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Introduction

The EN 16796 series deals with the energy efficiency of industrial trucks and aligns with the New Approach Ecodesign Directive 2009/125/EC (ErP).

Part 1 contains the procedures to determine the efficiency of trucks, traction batteries and battery chargers. The other parts provide a specific test cycle for different truck types.

NOTE The test cycles are based on the VDI 2198 guideline. This guideline is widely accepted by industry and is used to measure the energy consumption of electric industrial trucks and internal combustion industrial trucks. The guideline is in place since 1996 and it is used broadly. This approach allows the evaluation of the energy efficiency of trucks by comparison.

The content of this document is of relevance for the following stakeholder groups:

— machine manufacturers (small, medium and large enterprises);

— market surveillance authorities;

— machine users (small, medium and large enterprises);

— service providers, e.g. for consulting activities.

The abovementioned stakeholder groups have been given the opportunity to participate at the drafting process of this document. The machines concerned are indicated in the Scope of this document.

1 Scope

This European Standard specifies general test criteria and requirements to measure the energy consumption for self-propelled industrial trucks (hereafter referred to as trucks) during operation. For electric trucks, the efficiency of the battery and the battery charger is included.

This part of the EN 16796 series is intended to be used in conjunction with the corresponding EN 16796-2 to -5.

The truck specific requirements in EN 16796-2 to -5 take precedence over the respective requirements of EN 16796-1.

Of the product life cycle, EN 16796 is applicable to the in-use phase.

It applies to the following truck types according to ISO 5053-1:

— counterbalance lift truck;

— articulated counterbalance lift truck;

— lorry-mounted truck;

— reach truck (with retractable mast or fork arm carriage);

— straddle truck;

— pallet-stacking truck;

— pallet truck;

— platform and stillage truck;

— pallet truck end controlled;

— order-picking truck;

— centre-controlled order-picking truck;

— towing, pushing tractor and burden carrier;

— towing and stacking tractor;

— side-loading truck (one side only);

— rough-terrain truck;

— rough-terrain variable-reach truck;

— slewing rough-terrain variable-reach truck;

— variable-reach container handler;

— counterbalance container handler;

— lateral-stacking truck (both sides);