



**International
Standard**

**Norme
internationale**

ISO 5053-3

**Industrial trucks — Vocabulary —
Part 3:
Accessories and components**

**Chariots de manutention —
Vocabulaire —
Partie 3:
Composants et équipements**

**First edition
Première édition
2024-08**

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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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This document was prepared by Technical Committee ISO/TC 110, *Industrial trucks*, Subcommittee SC 1, *General terminology*.

In addition to text written in the official ISO languages (English, French), this document gives text in German, Italian and Chinese. This text is published under the responsibility of the member bodies for Germany (DIN), Italy (UNI) and China (SAC), and is given for information only. Only the text given in the official languages can be considered as ISO text.

A list of all parts in the ISO 5053 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Industrial trucks — Vocabulary —

Part 3: Accessories and components

1 Scope

This document establishes the vocabulary of accessories and components of industrial trucks (hereafter referred to as trucks) as defined in ISO 5053-1.

For the purposes of this document, the terms accessories and components are describing parts and assemblies which are, or can be, fitted to a truck.

Accessories and components of typical trucks are given in [Annex A](#).

Due to the variance of the individual truck types and the ongoing development of new combinations, it is not possible to include all the different variations of accessories and components. Therefore, this document defines, shows and/or describes the typical variances.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at <https://www.iso.org/obp>

— IEC Electropedia: available at <https://www.electropedia.org/>

3.1

access gate

section of guard rail possible to open and close for operator access and egress

3.2

auxiliary lift device

lift mechanism additional to the main lifting device

3.3

battery compartment

enclosure, integral to the truck, that houses the traction battery(ies)

Note 1 to entry: Truck(s) designed with parts of a modular lithium-ion battery can be integrated throughout the chassis can and have no battery compartment according to this definition.

3.4

bumper

pressure-sensitive protective device (PSPD) fitted to the truck that generates a signal to stop the truck upon physical contact

3.5

cabin

operator position completely enclosed by rigid materials (for example door(s), glass) to shield the operator from environmental influence

Note 1 to entry: If a truck is equipped with flexible PVC doors or open sides, it is not considered to have a cabin.

3.6

chassis

main frame structure to which the various units of the truck (for example engine, transmission, lifting gear, mast) are fixed

3.7

controls

control device

means for the operator to actuate truck functions

3.8

controls for operating alongside

means for control of travelling and/or lifting/lowering functions from outside the truck

3.9

counterweight

mass fixed to the truck intended to counterbalance the load

3.10

damping and tilting system

actuators for damping and tilting of the spreader

3.11

double mast

mast composed of one fixed and one moving upright

3.12

drive wheel

wheel which transmits the tractive effort to the ground

Note 1 to entry: A drive wheel can also be the steered wheel.

3.13

driving axle

axle of a self-propelled truck that transmits torque to the drive wheel(s)

3.14

emergency stop device

manually actuated control device used to initiate an emergency stop function

3.15

enabling device

additional manually operated device used in conjunction with a start control and which, when continuously actuated, allows a machine to function

3.16

engine cover

cover over part of a truck where the engine is mounted

3.17

exhaust system

all parts used to contain, process and direct gaseous and particulate emissions from an internal combustion engine between the joint face of the cylinder head(s) and the end of outlet pipe(s)

Note 1 to entry: The exhaust system can contain an after-treatment system.

3.18

foldable lateral support arms

structural part of the truck that, when in the extended position, provides lateral support to the operator when standing on the platform, and which can be folded or pivoted to a stowed position

Note 1 to entry: Lateral support for the operator allows faster travelling speed for stand-on trucks.

3.19

foldable operator platform

operator platform that can be stowed away to permit pedestrian controlled operation

3.20

fork arm

blade cantilevered from a shank which is provided with means of attachment (for example bolted, shaft-mounted, hook-mounted) to a fork carrier and usually two or more fork arms are mounted together to handle, for example, palletized loads

[SOURCE: ISO 5053-2:2019, 3.1]

3.21

fork carrier

fork arm carrier

load carriage

carriage

component of the mast bearing the load handling device

3.22

free lift height

lifting of the fork carrier without extending the telescopic mast above the fixed mast

3.23

grab rail

structure designed for the operator to grip to assist with operator stability while the truck is travelling

Note 1 to entry: It can be used also to assist operator stability when the truck is stationary (for example egress, ingress).

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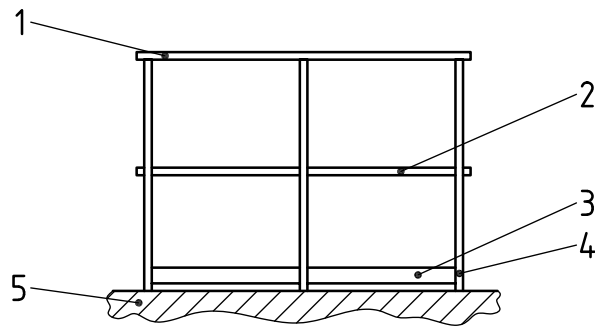
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3.24

guard rail

structure for protection against accidental falls from stair(s)/step(s), ladders, landings, platforms and walkways

Note 1 to entry: See [Figure 1](#).



Key

- 1 top rail
- 2 intermediate rail
- 3 toe board
- 4 stanchion
- 5 walkway/platform

Figure 1 — Guard rail

3.25

guidance system

system which guides the truck on a predetermined path not directly controlled by the operator

3.26

intermediate rail

knee rail

mid rail

rigid element of the guard rail placed parallel with the top rail, giving extra protection against the passage of a body

3.27

lifting boom

telescopic boom for raising/lowering and extension of the load handling device

3.28

lifting boom suspension

upper rear part of the chassis where the lifting boom is mounted and pivoting

3.29

lifting cylinder

actuator for raising and lowering the load handling device

3.30

load backrest extension

vertical structure connected to the fork carrier extending the vertical part of the fork arms to increase the load restraining area

3.31

load carrying platform

plain surface on which the load can be carried

3.32

load handler

structural part of the truck connecting the load handling device with the traverse frame

3.33

load handling device

means that supports the load

EXAMPLE Fork arms, platform, attachment.

3.34

load wheel

wheel(s), located on the load end of a truck, which predominantly bear the dynamic and static forces due to load carried by the truck to which it is fitted

3.35

mast

assembly that guides the vertical movement and supports the fork carrier or load handling device

3.36

mast suspension

supports between mast and chassis to reduce mast sway and deflection

3.37

non-telescopic mast

mast composed only of fixed uprights

3.38

operator backrest

part of the operator's compartment to support the back of the operator

3.39

operator enclosure

fixed vertical structure(s) added to the operator platform, generally to the sides or to the rear of that platform

3.40

operator platform

standing surface provided for a ride-on operator to operate the truck

Note 1 to entry: Operator platforms can also be equipped with an operator seat.

3.41

operator presence control

opc

system which uses a device to detect the presence of the operator in the normal operating position

3.42

operator seat

portion of the truck provided for the purpose of supporting the buttocks and back of the seated operator, including any suspension system and other mechanisms provided (for example for adjusting the seat position)

3.43

operator restraint system

device or system that is permanently installed to keep the operator within the protective structure of the truck

3.44

outrigger

support arm

supporting structure of the truck extending the profile of the chassis to enable the positioning of the load centre of gravity within the stability limits

3.45

overhead guard

structure fitted to the truck for the purpose of protecting the operator against falling objects

3.46

personnel detection means

system to detect person(s) in the path of a truck

Note 1 to entry: Bumper and virtual bumper are both types of personnel detection means.

3.47

pivot steer bearing

mechanical joint with rotation around the pivot axis which connects the front wheels and mast to the rear of an articulated counterbalance truck

3.48

quadruple mast

mast composed of one fixed upright and three moving uprights

3.49

reach carriage with fixed mast

carriage used in reach trucks with fixed masts to extend the fork carrier forward or backward in the longitudinal centre plane of the truck

Note 1 to entry: The reach carriage allows retrieving the load at a position between steering and load axle. This principle reduces the overall length of the truck and improves stability.

3.50

reach carriage with mast holder

reach carriage with mast carrier

carriage used in reach trucks that contains a mechanical structure to fix the mast and that can be moved backwards and forwards in the direction of the longitudinal centre plane of the truck

Note 1 to entry: The reach carriage allows retrieving the load at a position between steering and load axle. This principle reduces the overall length of the truck and improves stability.

3.51

reach cylinder

actuator that extends or retracts the reach carriage with mast holder and load handling device on reach trucks, or the lifting boom on variable-reach trucks

3.52

scissor mechanism

mechanism comprising one or more pairs of arms having a pivot near the centre of each arm, which moves the load handling device (for example forks) to position or interface with a load

3.53

slewing mechanism

drive unit for rotating the revolving part of the truck in a horizontal plane

3.54

slewing upper structure

elements mounted on top of a slewing mechanism, for example cabin and load handling devices, where provided

3.55

spreader

lifting device for handling ISO containers of one size (fixed length) or of several sizes (telescopic spreader)

3.56

stabilizer block

stabilizer pad
skid bar

design feature which is not a wheel that is fixed to the truck chassis, that comes into contact with the floor if the truck is tipping and that reduces the risk of a tip over

Note 1 to entry: The feature can be part of the chassis or counterweight or can be mounted to the chassis.

3.57

stabilizer wheel

auxiliary wheels or castors, usually in pairs, solidly or resiliently mounted to the chassis of a truck, to assist in maintaining stability

3.58

stabilizing device

extendable or pivoting mechanical support used to improve the stability of a truck when stationary

3.59

stanchion

vertical structural element of the guard rail to anchor the guard rail to the platform

3.60

steered wheel

steer wheel

wheel whose orientation is controlled to change the path of travel

3.61

steering axle

steer axle

axle that supports the steered wheel

3.62

steering wheel

device to be controlled by the operator which determines the steered path of travel

[ISO 5053-3:2024](https://standards.iteh.ai/ISO/5053-3:2024)

3.63

step

part of the truck including a tread on which the foot/feet is/are placed to access or egress

3.64

telescopic mast

mast composed of fixed uprights, and one (or more) moving uprights

3.65

tiller

bar used by the operator on a truck for the purpose of steering

Note 1 to entry: It can incorporate other functions.

3.66

tiller head safety device

pressure sensitive device at the control end of the tiller

3.67

tilting system

actuator to adjust the tilt of the mast or load handling device within defined mechanical limits

EXAMPLE Hydraulic cylinder(s) for tilting of the mast or the load handling device.

3.68

toe board

toe-plate

rigid lower part of a guard rail intended to hinder a person's foot from slipping off the edge of a platform, step or walkway and/or to prevent the falling of objects from platform level

3.69

top rail

handrail

rigid top element designed to be grasped by the hand for body support which can be used individually or as the upper part of a guard rail

3.70

trailer coupling

part fixed to the chassis of the truck, used to couple the truck with trailer(s)

3.71

transverse operator seat

seat for a side-facing seated operator, where the centre plane of the seat is orientated approximately perpendicular to the longitudinal centre plane of truck

3.72

travel switch

travel control device(s) located on the tiller enabling the operator to adjust travel direction and speed

3.73

traverse frame

device for connecting the load handler to the truck enabling lateral movement of the load handling device

3.74

triple mast

mast composed of one fixed upright and two moving uprights

3.75

twistlock

standardized rotating connector for securing freight containers

3.76

virtual bumper

electro sensitive (non-contact) protective equipment (ESPE) fitted to the truck, having one or more detection zones that generates a signal for the truck to take further actions when actuated

EXAMPLE Active opto-electronic protective devices responsive to diffuse reflection (AOPDDR).

Note 1 to entry: Further action can include stopping the truck or changing its path or speed.