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Aircraft ground handling — Checked-in baggage —

Part 3:

Workstation ergonomics

Traitement au sol des aéronefs — Bagages enregistrés —
Partie 3: Ergonomie des postes de travail

ICS: 49.100; 13.180

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ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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

ISO 12604-3 was prepared by Technical Committee ISO/TC 20, *Aircraft and space vehicles*, Subcommittee SC 9, *Air cargo and ground equipment*.

This is the first edition.

ISO 12604 consists of the following parts, under the general title *Aircraft ground handling — Checked-in baggage*:

— *Part 1: Mass and dimensions;*

— *Part 2: Handling guidelines;*

— *Part 3: Workstation ergonomics.*

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Introduction

According to ISO 11228-1:2003 standard, *Ergonomics — Manual handling — Part 1: Lifting and carrying*: “Disorders of the musculoskeletal system are common worldwide and one of the most frequent disorders in occupational health.

Factors such as the size and mass of the object being handled, working posture, and the frequency and duration of manual handling can, alone or in combination, lead to a hazardous handling activity and generate the risk of musculoskeletal disorders.”

This international Standard specifies the workstation ergonomic design requirements of handling personnel for baggage checked-in by airline passengers to be carried into aircraft cargo holds, in order to:

- contribute to improve work conditions for baggage handling agents and reduce the incidence of musculo-skeletal disorders (MSD) in this population;
- facilitate enhancing the overall efficiency of baggage handling;
- provide standards for the design of automatic baggage handling systems increasingly used at airports.

Throughout this international Standard, the minimum essential requirements are identified by use of the keyword “shall”. Recommended requirements are identified by use of the keyword “should” and, while not mandatory, are considered to be of primary importance in providing safe and efficient baggage handling. Any deviation from the recommended requirements should only occur after careful consideration and thorough service assessment have shown alternate methods provide an equivalent level of work safety.

Part 1 of this international Standard specifies standard mass and dimensions requirements for baggage checked-in by airline passengers to be carried into aircraft cargo holds. Part 2 of this international Standard provides guidelines for baggage handling.

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Aircraft ground handling — Checked-in baggage —

Part 3: Workstation ergonomics

1 Scope

This international Standard specifies the requirements of workstation ergonomic design of handling agents for individual pieces of baggage checked-in by airline passengers at airports to be carried into aircraft cargo holds.

This international Standard applies to all manual handling workplaces in the processing chain for sorting, safety handling and baggage routing (containers and bulk baggage, departure and arrival circuits, at terminal and at aircraft, excluding passenger check-in process).

This international Standard is not intended to specify the baggage handling systems in and out of airport terminals, except the baggage masses and dimensions they shall be able to handle, and the critical characteristics of manual workstations.

This international Standard is not intended to specify the baggage handling systems in the aircraft.

This international Standard does not aim to be a substitute for any more stringent law or regulation that can be locally applicable, such as Health and Safety government legislations and regulations applicable to machinery or manual handling of loads. The carrier and handling services provider are responsible for identifying and complying with such legal requirements.

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2 Normative references

The following referenced documents are essential for this international Standard application. For dated references, only the indicated edition applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 12312-3:2017, *Aircraft ground support equipment — Specific requirements — Part 3: Conveyor belt vehicles*

ISO 11228-1, *Ergonomics — Manual handling — Part 1: Lifting and carrying*

ISO 11228-3, *Ergonomics — Manual handling — Part 3: Handling of low loads at high frequency*

ISO/DIS 12604-1:2017, *Aircraft ground handling — Checked-in baggage — Part 1: Mass and dimensions*

ISO/DIS 12604-2, *Aircraft ground handling — Checked-in baggage — Part 2: Handling guidelines*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

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

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

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

3.1

baggage or individual piece of baggage

bag, suitcase, trunk or similar article travelling with a checked passenger and containing those items necessary for the passenger's journey, such as clothing and personal articles within certain limitations in accordance with the applicable carrier conditions of carriage, that is accepted and checked-in for loading and carriage aboard the same aircraft

Note 1 to entry: Does not include freight, express cargo, courier mail, or unaccompanied baggage travelling as freight.

3.2

non-standard baggage

piece of baggage that exceeds any of the requirements set for standard baggage (see ISO/DIS 12604-1:2017 standard, [subclause 4.1](#))

3.3

standard baggage with specific characteristics

piece of baggage that meets mass and dimensions requirements in ISO/DIS 12604 1:2017 standard, [subclause 4.1](#), but with some characteristics that involve stress for conveying and/or handling (e.g. spherical baggage, fragile, light, very small baggage, etc.)

3.4

baggage with stressful handling

piece of baggage whose weight exceeds the limits indicated in Part 1, or which does not satisfy baggage gripping ideal criteria

3.5

baggage with gripping ideal criteria ([standards.iteh.ai](#))

the piece of baggage can be grasped with both hands, with a firm grip, neutral wrist position less than 0,25 m between the centre of mass of the piece of baggage to be handled and the centre of mass of the handling agent (see ISO 11228-1:2003)

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3.6

handling company

carrier, contracted service provider or airport authority that performs all or part of baggage handling, including loading/unloading it into/from aircraft, at an airport

3.7

handling agent

personnel responsible for baggage handling

3.8

operator

company or people using airport facilities and equipment

3.9

spout down

inclined plane receptacle intended for baggage retrieval

3.10

carousel

flat and circular crescent chain (baggage circulates in a closed circuit)

3.11

pier

linear conveying system (belt or rollers) for accumulating baggage for purposes of retrieval

3.12

cart/container

generic term applied to a bulk load trolley or a container (ULD) mounted on a container trailer; both devices are used for baggage conveyance

3.13**trolley or trailer for bulk loads**

open trolley or trailer used for bulk baggage conveyance

3.14**container/ULD**

load or loading unit, more commonly referred to as the acronym ULD (Unit Load Device), which is mounted on a container trailer dedicated to baggage conveyance

3.15**security inspection**

check of pieces of baggage using x-ray, manual or other equipment, in order to move away any item or piece of baggage which is prohibited for transport

3.16**manual indexing station**

barcode reading through handheld scanner or manual keyboard entry

3.17**drop area (temporary storage)**

storage area for baggage waiting to be processed

3.18**baggage reconciliation system (BRS)**

baggage tracking system

3.19**passenger baggage reconciliation security procedure**

baggage removal from the circuit for additional security inspection

3.20**contingencies**

dysfunction or unexpected events that disturb an intended process or organization

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<https://standards.iteh.ai/catalog/standards/sist/bbb47bc8-e906-4eae-9a27-151e7f3d021b/iso-dis-12604-3>**4 Recommendations****4.1 General****4.1.1 Physical surroundings**

As too low or high temperatures can have an impact on physical consequences of handling agents, thermal environment should be considered. Depending on the local climatic conditions, a temperature and hygrometry control system should be provided to ensure comfortable conditions. In case of cold conditions, draughtiness shall be limited as far as possible.

A particular attention shall be paid to noise working environment (equipment, coatings, impact noises, etc.).

Illuminance shall be sufficient. Incoming natural light should be favoured.

4.1.2 Working postures

Stressless standing posture shall be possible at the workplace. Distance between the handling agent's feet ground contact and the ceiling (or equivalent) shall be at least 2,1 m. This height allows the agent to handle baggage while avoiding leaning.