Ergo/IBV
Ergonomic risk assessment

Evaluation and design recommendations software, related to ergonomic and psychosocial risks at the workplace

version 18

ergoibv.com
Ergo/IBV is a programme to assess workstation-related ergonomic risks.

The basic configuration contains several assessment modules with different fields of application, and an anthropometric design module. **In addition, this configuration can be extended with other optional modules.**

It includes integrated video to facilitate the analysis of tasks, and provides recommendations to reduce the risks detected. It is a dynamic application that is annually updated.

It allows the user to configure the calculation according to the criteria contained in the ISO standards series ISO-11228, ISO-8995 and ISO-7730. These criteria directly affect the modules Load Handling Single, OCRA and Office, and indirectly affect the other modules of Manual Load Handling (Multiple, Variable and Sequential).

**Basic Configuration:**

**ASSESSMENT VIEW:**

- Wizard to select modules:
  - ErgoCheck
  - Manual Load Handling – Single
  - Manual Load Handling – Multiple
  - Manual Load Handling – Injured (available only in Spanish)
  - Postures [OWAS]
  - Postures [REBA]
  - UNE EN 1005-3 [FORCES]
  - Office
  - Ergo +50
  - Repetitive Tasks
  - ErgoMater

**DESIGN VIEW:**

- Module of Anthropometric Design of the Workstation

**Optionals Modules:**

- Manual Load Handling – Variable (available only in Spanish)
- Manual Load Handling – Sequential (available only in Spanish)
- OCRA Multitask
- Manual Patient Handling - MAPO
Since Version 15, Ergo/IBV Tool mobile application is included. This app facilitates field data collection and transferring such data to the Ergo/IBV software. The application:

- captures data and multimedia files from any mobile device without connection to the network;
- stores the data in an orderly manner for subsequent management and processing;
- automatically imports files to Ergo/IBV (v16) and transfers them to the corresponding assessment method/module;
- is intuitive and user friendly.

For the time being, Ergo/IBV Tool is available for devices using Android operative system; it is free and can be downloaded on Google Play.

The mobile application allows the user to record video and audio, take photos notes, and sketches in order to facilitate the subsequent risk analysis.
Wizard – Assistant to select modules

The wizard helps identify the most appropriate modules to assess the risk of a task. As the conditions of the analysis are defined, the selector disables the incompatible options, which makes the selection faster and more efficient. In the event that more than one type of risk is identified in the task, the wizard will allow you to select multiple working conditions.

Module – ErgoCheck

This module allows you to initially identify, in a qualitative and simple way, the ergonomic and psychosocial risk factors of a company, workplace or task.

The purpose of applying this module is, on the one hand, to provide a map of the potential ergonomic risks and obtain initial recommendations to improve them and, on the other hand, to offer information about which risk assessment modules included in ErgoIBV can be used to (quantitatively) assess the risks identified using ErgoCheck.

In addition, the results obtained in the analysis can be exported to be used as work requirements in the NedLabor/IBV software.
Modules – Single MMH and Multiple MMH

These modules analyse tasks that involve lifting, carrying, pushing and pulling loads, as well as certain combinations of these actions; they calculate a risk index for the back and offer recommendations for an interactive redesign of the task.

In the classic configuration, they are based on the NIOSH equation, the technical guide of the INSHT (Spanish National Institute for Health and Safety at Work), the Snook and Ciriello tables, and the UNE-EN 1005-2 standard.

The ISO configuration considers the criteria of the ISO 11228 standard for lifting, pushing and pulling.

Module – Variable MMC

This module analyses tasks involving manual lifting of loads with high variability in the weights and handling conditions, and calculates the Variable Lifting Index (VLI) that represents the risk level of the task. This simplifies the entry and subsequent analysis of a large amount of data, which would not be possible to analyse with the Multiple MMH module.
Module – Sequential MMH

A module that analyses rotations between several tasks that involve manual lifting of loads (single, multiple and/or variable) during the working day; it calculates the Sequential Lifting Index (SLI), which represents the level of risk to the back associated with these tasks.

Module – Injured MMH

Manual load lifting tasks performed by injured workers are analysed with this module; it contains criteria and recommendations to minimise the risk of recurrent lumbar disorders when returning to work after an injury.
Module – Repetitive Tasks

This module analyses tasks that imply repetitive movements of the upper limbs. The level of risk to the neck-shoulder and hand-wrist area is calculated from the exposure time, the repetitiveness of the movements of arms and hands, and the posture encoding. Recommendations to reduce the risk are also included.

Module – OCRA Multitask

Tasks implying repetitive movements of the upper limbs are analysed with this module. The OCRA index representing the level of risk is calculated from the task variables (force, posture, repetitiveness, additional factors, duration and recovery). It allows the user to apply the current regulations on risk assessment for repetitive handling at high frequency.
Module – **Postures [OWAS]**

The Postures [OWAS] module analyses tasks that involve awkward postures of the back, arms and legs. The working posture is encoded at certain regular time intervals (sampling), specifying the position of the body and the force exerted. The procedure is based on the OWAS method for postural analysis and provides the level of risk associated with the postures being analysed.

Module – **Postures [REBA]**

This module analyses tasks implying awkward postures of the trunk, neck, and upper and lower limbs, and codifies the position of the body segments along with the force, type of grip and muscle activity involved. It is based on the REBA method for postural analysis, and obtains a score that represents the risk level of the posture and level of action required to reduce the risk.
Module – UNE EN 1005-3 [FORCES]
The UNE EN 1005-3 [FORCES] module allows you to analyse tasks in which the force exerted by the worker is related to the use of controls, pedals or pushing/pulling objects in a standing position without the help of wheels, guides, rollers, etc., and which may require muscular efforts and therefore cause fatigue, discomfort and even musculoskeletal disorders.

Module – Office
This module applies to office tasks where the worker spends more than 2 hours of effective work with display screens. Risk factors related to the computer, chair, table, accessories, environment and work organization are analysed. When required, recommendations are offered to improve the problems that were detected.
Module – ErgoMater

The ErgoMater module detects risk factors for pregnant workers in relation to the physical demands of the task, the environment and the organization of the work. The risk to the mother and/or the fetus is shown for each factor, along with some examples of tasks that could involve such factor. Some recommendations to help control the risks are offered.

Module – Ergo +50

The module is applicable to work environments where there are workers aged 50 or over. It provides a report including recommendations to help control the risks detected in the workstations. Such report is obtained through a questionnaire for assessing the working conditions, which must be filled out by the company.

In addition, the module offers information on the relationship between the working conditions and the workers’ assessments of their ability to meet the job requirements. This questionnaire can be completed by each older worker in the company optionally and anonymously.
Module – Anthropometric design of the workstation

This module provides dimensional recommendations for workstations, both general and adapted to the anthropometric measurements of a worker. According to the description of the workstation and the tasks, the dimensions suggested refer to the working height, space requirements for legs and feet, recommended reach area for the arms, space requirements to access the seat, and the field of view. The value of each dimension is calculated according to the UNE-EN ISO 14738 standard, Safety of machinery - Anthropometric requirements for the design of workstations at machinery, which makes it possible to personalise the information for each worker.
You can subscribe to an annual SUPPORT SERVICE, which allows you to:

- Consult with an expert on Ergo/IBV to answer questions about the use of the different modules for risk assessment
- Upgrade—at no additional cost—to the latest versions of the basic configuration of Ergo/IBV which are released each calendar year