

Healthy Workplaces Good Practice Awards 2020-2022

CASE STUDY



Planning and designing technical modifications on a sweet factory production line based on ergonomic principles



ORGANISATION/COMPANY

F&F Ltd.

COUNTRY

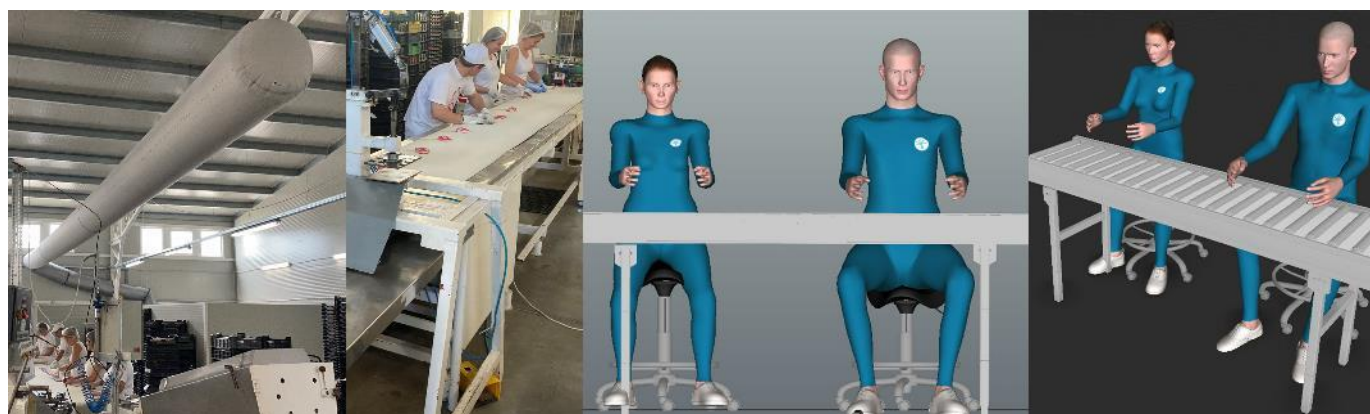
Hungary

SECTOR

Manufacture of cocoa, chocolate and sugar confectionery

TASKS

Production line work



Source: F&F Kft.

Background

F&F Ltd is a family-run business that places great importance on worker retention and a positive workforce attitude. It employs 16 people in the production of lollipops, 3 for office tasks, and 1 for maintenance and repair.

Management identified some musculoskeletal disorder (MSD) problems when they became involved in production.

Aims

To improve occupational safety and health (OSH) conditions and reduce MSDs, the company planned and designed technical modifications based on identified risks on the production line.

What was done and how?

- F&F Ltd carried out a systematic risk assessment with the help of ergonomists to first identify the main ergonomic risks.
- An ergonomics consultancy examined posture, workstation design, load, exertion, mental load, work schedule, environment and occupational
- Workers were dressed in motion capture suits to record their movements while working. The resulting data was used to measure height and assess tool and component appropriateness, storage, assembly activities, load handling, layout and specific features of each work process.
- On the production line, different body heights were identified as a primary ergonomics problem because they led to harmful bending of the spine and neck. The high load on the wrists and arms while using the cutting scissors and press was also highlighted in connection to some processes.
- On the production line, machine solutions replaced some tools. For example, a cutting machine was used instead of scissors, and pneumatic solutions were introduced at the press.
- Due to the growing number of orders, the company submitted a tender for an automated production line to use for orders where the handmade nature of the product is not a factor.
- For standing work, F&F Ltd ordered an anti-fatigue mat and employees were given new, more optimal footwear.

- During sugar preparation, a platform handcart was procured to remove the need to work with arms bent and raised.
- F&F Ltd also installed an air conditioning system alongside the production technology to provide more favourable temperature conditions.
- F&F Ltd plans to transform the current line of workplaces into sit-stand jobs and build a suitable station for packaging.

What was achieved?

Employees participated in the project and provided actionable feedback to develop practical solutions, including changes to equipment and tools. They understood the importance of the issue.

F&F Ltd was also able to incorporate other improvements in the manufacturing plant, but results of additional changes made recently are not yet evident.



Source: F&F Kft.

Success factors

- F&F Ltd constantly involved employees in the development.
- Financial resources were made available to carry out the technical modifications.
- External experts were involved, whose analysis concerned the use of motion capture suits in risk assessment to pinpoint where the problems were.



Source: F&F Kft.

Transferability

This is a good example of an ergonomics intervention in a small company, including a systematic risk assessment. The active involvement and participation of workers could be transferred to other Member States (regardless of the specificity of the risks identified and the preventive measures adopted).

Costs and benefits

The costs of the air conditioning, scissor lifting equipment and the cutting machine were reduced.

By introducing all the changes, the OSH conditions of employees are expected to improve, thus reducing MSDs.

Key features of the good practice example

- This example from a small company made good use of systematic risk assessment with the support of an ergonomics consultancy. A computerised analysis of work movements and postures was made using an innovative motion capture approach. This was combined with active worker participation to assess risks and determine solutions.
- The company reduced ergonomic risks through a mix of automation, where possible, and technical solutions. Modified tools and equipment were introduced, for example, pneumatic tools and a platform handcart.

- This was complemented by more basic measures, such as the purchase of anti-fatigue mats and better work shoes for employees.
- At the same time, attention was given to safety issues, including the installation of an air conditioning system.

Further information

Further information can be found at <http://www.foltinandfoltin.hu>

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