



TNT minimized injuries and maximized productivity in handling incoming and outgoing parcels with Vaculex TP

Customer:

TNT is a world leader in global express and logistics services. With a presence in more than 200 countries, TNT is a division of the Dutch TNT Post Group (TPG), which is quoted on the New York, London, Amsterdam and Frankfurt stock exchanges. — www.tnt.com

Working operation:

Sorting of parcels to specific zip codes. Frequent lifts below knee and above shoulder level. The majority of the parcels weigh between 3-12kg (6.6-26.4 lbs) with a maximum weight of 35kg (77 lbs). The manual sorting takes on average 15 seconds per parcel.

Case description:

TNT had problems with injuries due to manual lifting with the associated sick leave and rehabilitation costs. As part of a worldwide Health & Safety Program, the challenge was to find a lifting aid that maintained or increased speed and productivity during lifts. The lifting aid should be able to handle 75% of the parcels. The solution also had to be user-friendly and adaptable to both left and right handed persons.

Solution:

After installing several Vaculex TP at TNT, injuries were reduced to a minimum. The vacuum tube lifts maintained or increased speed and productivity as parcels became weightless and easier to handle, no matter what size or shape. Vaculex TP proved to handle 99% of the parcels with ease.

Thomas Engman, Operations Manager at TNT, Sweden, 2003

— *Vaculex was the only contractor that could offer a lifting system where the usage didn't decrease productivity. The cooperation worked out very well and afterwards we can certify that the lifts are working even better than we had hoped for. TP is very easy to operate and only a short instruction is needed for beginners. The ergonomic benefits of TP also involve economic benefits due to cut down sick leave and lower rehabilitation costs, which in turn will make it easier to attract and maintain qualified staff.*



TNT decreased the risk for injuries by 41% with Vaculex TP

To help TNT in the decision-making process of the investment in lifting aids for express parcel handling, Vaculex and TNT let an independent company, Xdin, make an ergonomic study of the existing manual lifts in comparison with lifts with Vaculex TP. We wanted to see how much the TP could decrease the risk for injury.

The analysis

A total ergonomic analysis of the working process at TNT for express parcel handling was a big task. We concentrated on the lower back which is the most common area for backache. We made a NIOSH (National Institute for Occupational Safety and Health, USA) analysis. This analysis gives information about various workplace safety and health concerns. The analysis was performed with software from EDS, VisJack®. The software works through a digital human being that performs all the tasks and movements of a real human being.

Conditions for the analysis

1. Operator
 - 187 cm (73,6") tall male in fit condition
2. Parcels
 - 75 % between 3-12kg (6.6 – 26.4 lbs)
 - 15 % over 20kg (44 lbs)
 - 10 % less than 3kg (6.6 lbs)
3. Working time
 - 2 hours per day, 5 days per week
4. Frequency
 - 15 seconds on average.
5. Positioning and lifting heights
 - From belt conveyer to cage or pallets or vice versa with 180% turning/twist.
 - Lifting heights from 90 cm (35,4"), belt conveyer to cage or pallets at 10 cm-180 cm (3,9'- 70,9") or vice versa.

Result

With the NIOSH analysis we proved that TNT would decrease the risk for injuries by 41 % (!) with the conditions above.