

Turnstiles - WATT System Solutions with PROFI-line P6000

The company KOHLHOFF Hygienetechnik GmbH & Co. KG, based in D-59423 Unna, deals with equipping the food- and meat processing industry with hygiene-technical devices. One of those products are turnstiles, which, equipped with Watt Drive drive systems, guarantee reliable operating. Thereby the proven Watt frequency inverter PROFI-line P6000 is coming into service with integrated SPS- functionality ...

In many public as well as industrial areas, turnstiles (see picture 1) are to be found. They serve to control the regulated passing of people or for separation in waiting queues.



Picture 1: Turnstile

In matters of selecting the drive, the Kohlhoff company has chosen a complete system of our Watt Drive company:

Thereby the compact helical worm geared motor SFA 454A 72N6 IG with encoder is coming into service, as well as the proven *PROFI-line P6000* as inverter (see picture 2).

Functionality:

The axis of the turnstile is turned 120° further, whereas several details have to be considered:

- drift free turning:

The frequency inverter has to perform the 120°- steps free from drift, that means, the arms must not "wander off" after several turns.

- Torque controlled sequences:

The force, with which the arms are turned, is important concerning the risk of injury. On the one hand at standstill, meaning in „blocking function“, the drive shall bring up a distinct counterforce. After the release shall be oscillated back into zero setting.

Have the arms been given free for passing, the drive shall only move the arms, but not "push" the passing people.



KOHLHOFF
Hygienetechnik GmbH & Co. KG

Emergency characteristics:

The drive has to fulfill one important condition in case of emergency. The turnstiles must be easily turnable in case of power blackout. The Watt helical worm gear with high efficiency are ideally suited for this.

Pass-through comfort:

In order to reach a high pass-through comfort after the unblocking, the arms should only begin to turn, after the passer-by has exerted only a minor pressure onto the turning arm. Therefore this low counter torque will be measured onto the motor from the P6000 and in reaching of a distinct level the turning process will be triggered.

The arms will automatically be set into blocking status, if nobody passes after the elapse of a certain time.

All the functions needed, can be realised with the help of the standardised integrated SPS-control (PLC) of the P6000. The perfect interaction between electronic and mechanic is directly implemented by Watt application-engineers at the customers.



Picture 2: PROFI-line P6000

For further information concerning the Watt product program please visit our Website under www.wattdrive.com.