

# Revenue Recovery at TNT Neuss

## Volume measurements and identification as an officially-calibrated parcel solution

With the aim of increasing productivity in parcel processing, TNT Express has equipped the depot in Neuss with a completely automated DWS system (Dimensioning Weighing and Scanning). The "Legal for trade" volume measurement system VMS 520 and the OPS 490 omniportal reading system from SICK plus a weigher system from OCS Checkweighers are being used as the "parcel solution".

But improved results here are not merely the by-product of optimised processes, but also of the facility for accounting each customer's actually handled number of parcels and volumes.

Added to that are improved sorting and provisioning and distribution processes in the depot as well as improved process reliability because the barcode, weight and dimensions provide every parcel with its own unique identity, making them uniformly controllable and traceable.

## Accounting the actually rendered services

Officially calibrated system components are prescribed for so-called Revenue Recovery – i.e. the facility to make subsequent charges for the actually rendered logistics services. Along with the weigher, which takes over precise and rapid weight determination, that also involves volume registration. The VMS 520 uses a measuring instrument that has been certified by the Dutch National Measurements Institute (NMI) as EU type approved ("MID certificate") and additionally certified on the basis of the test parameters in the OIML R129 standard. The scale intervals and the calibration error limit is around 0.5 cm – each related to a maximum conveyance velocity of 3 metres per second. Even objects with edge lengths from 50 mm can be measured "calibration exact". That means the measurement system can be integrated with a calibrated weigher and barcode scanners in officially calibrated complete systems.

## Sorter control using omni scanner

An OPS 490 barcode reading system was integrated into the DWS for identifying the parcels in the depot and sorting-system guidance control. The system, along with an analysing unit, is composed of multiple series CLV 490 standard scanners. The scanners, with integrated realtime autofocus, generate a nearly 800 mm x 800 mm scan width in which at least one scanner always correctly reads the barcode label. The analysing unit controls the reading processes in the individual scanners, processes the reading gate and path information and assigns the barcode information to each object. Up to 2.500 parcels per hour

demand realtime communication.

The data from the VMS 520 and the OPS 490 are transmitted to the weighing system with which the weight data is combined into a single data string and sent via Ethernet to the depot's IT host system. That means even during high parcel turnover, all relevant information needed for the sorting and the Revenue-Recovery program is available in realtime.

## Dynamic weight determination

The OCS weighers take care of precise and rapid weighing along with transporting at controlled speed (certified according to MID and OIML R 51Y (a)). In addition, the products are separated by the controller according to the respective product lengths and optimally fed to the weigher. The data records for each individual measurement (volume, weight, barcode) are stored in an alibi memory.

The DWS system amortises itself in a few months through improved processes in the depot and the facility for invoicing the actually rendered transport services, and if applicable, subsequently charging them.

The newly developed A/B sorter and the additional transport systems are supplied by the Schmid Company.



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