



# HighTech Components Made in Germany





# Manufacturer of measurement technology for elevators and

escalators

#### Transporting people safely

A breakthrough in cloud-based condition monitoring devices has led to a path-clearing transformation in the field of lift maintenance. The demand for lift companies and technicians to carry out maintenance in the context of networked monitoring systems is now stronger than ever! At Henning GmbH, we are consistently working on putting together and developing the know-how for this.

We are making a substantial contribution to providing you with products which you are shaping the field of lift maintenance and making modern technologies available to your customers. Cloud-based monitoring devices and sensors are continually being developed and improved.

Our motto is "People in lifts - safe on every floor". With this thought in mind we develop and sell products for the safe use of lifts from our Schwelm headquaters.

Henning GmbH is renowned around the world for its long-standing experience in the measurement,



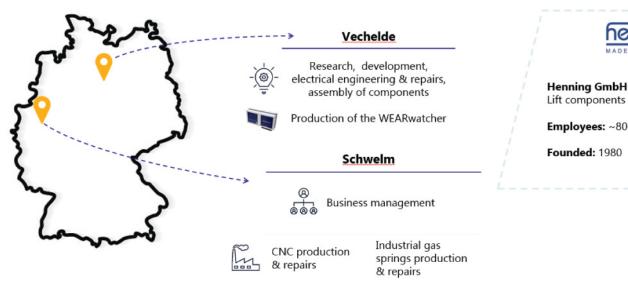
analysis and assessment of data of elevators and escalators. Our customers value our in-house development department for hardware, software and AI (Artificial Intelligence), which develops tailor-made solutions. Backed by profound knowledge of elevators and escalators and the growing demand for measurement technology, we are able to offer products that save time and costs during maintenance and servicing.

## Leading edge through experience

... far ahead of the times







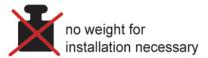


Henning GmbH & Co KG.

## Global standard for **Load Measurement**

## weight watcher







#### **Evaluation Unit AE 12 Permanent overload control system**

The weightwatcher overload measuring system is based on an absolute measuring principle. The special feature is that the sensors do not have to be calibrated with weights and can be used directly. Each sensor module covers different rope / threaded rod diameters.

In just a few minutes, a complete rope set can be optimally adjusted using the integrated rope load assistant. This and the permanent rope load tension monitoring reliably prevent unnecessary wear on traction sheaves and ropes.

#### Features:

- Calibration with weights not necessary thanks to the patented measuring principle
- Suitable for different rope diameters and rope types and belts
- 4 programmable alarm relays with or without analog output or CANopen (depending on the evaluation unit)
- Up to 12 rope sensors per evaluation unit
- Integrated slack rope alarm
- Permanent monitoring of the rope tensioning
- Equipped with USB interface and free PC software
- Software wizard for the adjustment of the optimum single rope tension to avoid unnecessary wear
- automatic compensation of chains and rope measurement







LS<sub>2</sub>



LS2000



Donut



## weight watcher +









#### **Evaluation Unit AE light**

The weightwatcher light overload measurement system is particularly designed for its attractive price/performance ratio. During the development of the sensors, care was taken to ensure a high ease of installation.

In just a few minutes, a complete rope set can be optimally adjusted using the integrated rope load assistant. This and the permanent rope load tension monitoring reliably prevent unnecessary wear on traction sheaves and ropes.

#### Features:

- Extremely attractive value for money option
- Ease of installation
- Extremely compact rope load sensors
- Freely programmable output relays
- Measurements possible on up to 8, 12 or 16 ropes / belts / polyropes



**Donut Light** 



**Beam** 

### Mobile Rope load measurement

### weight watcher

ROPELOAD MEASUREMENT SYSTEM











#### **Mobile evaluation unit MSM 12**

Inadequately set ropes and excessive overall weights cause an undesired and premature wear. The weight watcher rope load measuring system allows ropes / belts to be set and lift car and counterweight loads to be weighed in no time at all.

The LSM Belt sensor especially developed for belts allows measurements to be carried out on 30 to 60 mm wide belts (3 models available: for Otis, Schindler or CONTI Tech belts). The integrated rope setting assistant guides you through the rope setting procedure and records every measurement with a report that can later be printed out on the PC.

This makes the mobile weight watcher an optimum tool for your service work. Apart from weighing the lift car and counterweight loads, all single rope loads can be displayed and adjusted within a few minutes to their optimum settings using the integrated rope setting assistant.

#### Features:

- Measurement of single loads and total weight
- rope tension assistant / wizard for quick cable adjustment
- Convenient menu with settings of the suspension variant, unit weight, tolerance
- Storage of complete documentation
- Color touch screen for easy operation
- Available in many languages (list available on request and is constantly expanding)
- Advanced lithium-ion batteries
- I Bluetooth variants Extended / Premium can be connected via android app with smartphones / tablets



## **Mobile Ride Analyzer**

## RideAnalyzer



### RideAnalyzer The multimeter for ride profiles

The RideAnalyzer is a measuring unit with an intuitive operating concept allowing lift rides to be measured an analysed in a comfortable and fast manner. The easy-to-use unit combines measuring sensors and evaluation unit in one robust plastic casing. There is no need for a connection to a laptop or an external evaluation unit. Thanks to the automatic evaluation of the measurements it is possible to use the unit without any lenghty training / instruction and the information needed to adjust or troubleshoot the lift system is supplied very fast and at low cost. This makes the RideAnalyzer extremely useful for fitters, planners and experts. It is the ideal tool for a time-saving adjustment of new systems to check the ride characteristics and the installation and to pinpoint any malfunctions.

#### Features:

#### **Applications**

- Documentation of the ride profile
- Setting the correct ride parameters
- Measuring the acceleration, deceleration, jerk and speed
- Troubleshooting in case of malfunctions

#### Measurement features

- Acceleration and deceleration behaviour in x, y, z axis
- Jerks and vibrations of the lift car
- Measurement of the ride profile

#### **Evaluation features**

- Documents speed, acceleration, deceleration and jerk on the spot
- Automatic evaluation of measurements
- Graphical illustration of the driving profile in x,y,z
- Provides data on ride profile
- Provides information on the location inside the shaft where a malfunction occurs
- Adjustment of individual limit values
- Makes out a report
- Stores measurements in files for import into the Henning Sensor Suite
- Easy and intuitive operation

## **Mobile Ride Analyzer**







#### Stand - Alone-Operation





#### LiftPC Mobile Diagnosis for the:

- Ride comfort
- measurement of escalators / moving Walks
- according to ISO 18738, part 2 (AddOn)
- mobile Diagnosis

#### **LiftPC Mobile Diagnosis**

LiftPC Mobile Diagnosis is a powerful measuring system of modular design, serving for mobile and flexible measurements of acceleration and ride quality of elevators. It is applicable with any laptop in connection with 3D Acceleration Sensor QS 3.0 or as a stand-alone solution. Data of acceleration and ride quality of the elevator can precisely be assessed in terms of the standards ISO 18738 and GB/T 10058-1997. LiftPC Mobile Diagnosis can be applied with rope-traction elevators as well as with hydraulically operated elevators.

#### Features:

- internal power supply
- internal memory
- built in Bluetooth connection
- android app
- QI-charging

#### Range of Application

- Documentation of the quality supplied by pre-post
- Service and maintenance of the status quo
- Specific reaction to arising malfunctions
- Preparation of putting into operation and acceptance tests by the authorities

#### Measuring Characteristics

- Acceleration and deceleration behaviour in all 3 axis
- Stubbing and joggling of the car and at the guide rails
- Recognizing door movements

#### **Evaluation Characteristics**

- Documentation of all important data concerning travel acceleration and ride
- Hints to irregularities with doors, guide rails and driving speed control
- Provides exact information of where the malfunction is to be spotted

#### **Design Characteristics**

- 3D acceleration sensor for online measuring in all 3 axis
- Pre-calibrated in our factory
- On-the-spot evaluation of the data measured by guided software
- Usage of common evaluation procedures such as filtering attenuation.
- peaktopeak evaluation as well as frequency analysis up to 3000 cycles per second, sampling rate up to 6000 cycles per second
- Suitable for all kinds of elevators
- System-integrated monitoring of the measuring instruments

## Non destructive elevator testing

## ELEVATOR INSPECTION N SYSTEM 1 2.0

#### **ELVI System**

The modern and quality-conscious non destructive testing of elevators requires specialized measuring tools and methods without the use of weights or a complicated intervention in the elevator mechanics and electronics

This is based on the one hand on the unique Henning procedures for the testing of elevators and on the other hand the intelligent acceleration sensor, the hydraulic sensor HS1 and the unique Henning rope load sensors.

The ELVI System of Henning GmbH & Co. KG exhibits all features to fulfil these requirements by finding and realizing new ideas, patents and procedures which are widely accepted throughout the business



in case of rope elevators:

- elevator car safeties
- half-load balancing
- traction force
- maschine brake
- rope brake
- rail brake
- oilhydraulic buffers

in case of hydraulically driven elevators:

- pressure-limiting switch
- safety value
- hand pump
- lowering prevention
- line-brake value
- throttle check value
- pipe-break safety divice
- pressure resistance







## **Next level Condition Monitoring System**

**WEAR** watcher

#### **Condition Monitoring System** for Elevators & Escalators:

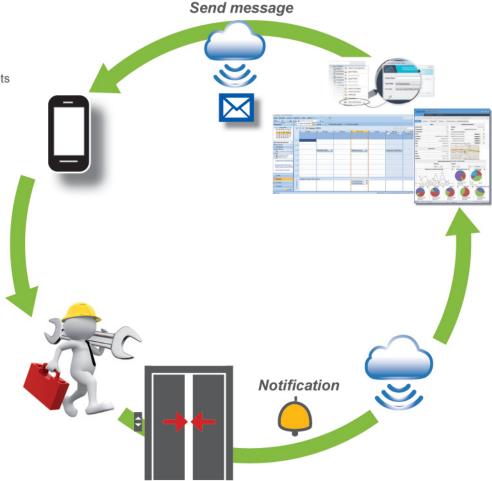
The WEARwatcher is an acceleration sensor combined with an integrated analysis unit. This drives condition monitoring of the most important physical parameters of the elevator/lift. Problems and abnormalities are detected by WEARwatcher before they negatively influence the elevator/lift system.

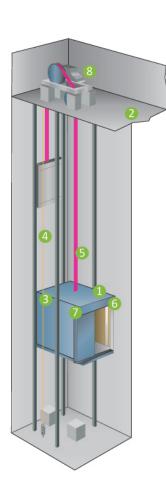
Thanks to the condition-oriented assessment, the use of a technician often becomes necessary only if corresponding indications are present.



#### Features:

- Breakdown Probability
- Increased availability
- Prevention of defects Minimisation of downtimes
- Precise predictable maintenance
- Control-system independent
- Increasing service life of components
- Boost in service quality







WEARwatcher MPU Integrated analysis unit, acceleration embedded



3 APS Sensor Indication of exact lift position



6 Rope Load Sensor Weight measurement



Electric Current Sensor Door Drive Current measurement for door engine analysis



WEARwatcher Satellite PEU Sensor data collection device, commuication with WEARwatcher MPU



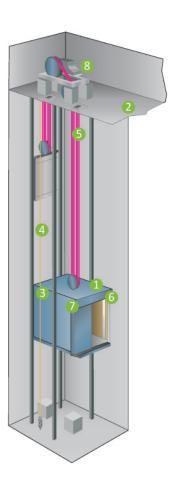
WEARwatcher MPU



6 Door Signal Switch Indicates door open or closed status



8 Electric Current Sensor Engine Drive Current measurement for Elevator Engine Status analysis







Integrated analysis unit, acceleration embedded sensor



3 Donut Load Sensor



1 WEARwatcher MPU 2 WEARwatcher Satellite PEU Sensor data collection device, commuication with WEARwatcher MPU



4 I/O expander Collective fault message Direction of movemnet Operational status Emergency stop button Comb plate switch



Water Intrusion Sensor



6 Electrical Current Sensor Engine Drive

### Smart elevator technology.





Henning GmbH & Co. KG



Mob. : 94049 43042 Tel. : 020-24263267

Email : sales@yantraatech.in Website : www.yantraatech.in

Factory: Gat No. 255/A, Jyotiba Nagar,

Talawade, Pune - 411 062. India.

Loher Straße 4 58332 Schwelm (Germany) Tel.: +49 2336 9298-0 Fax: +49 2336 9298-100 info@henning-gmbh.de

www.henning-gmbh.de