



LABELLING MACHINE

HEUFT TORNADO R



Perfect labelling all around

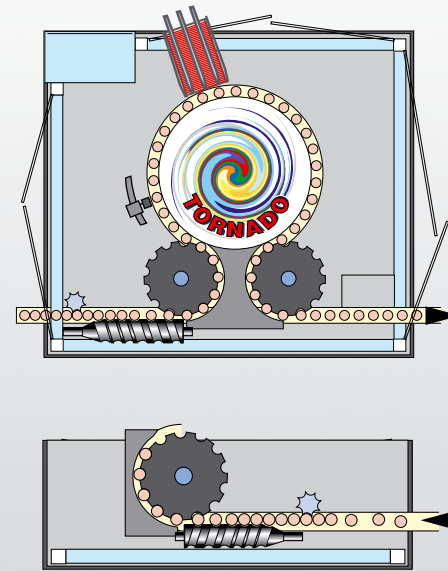


Well-rounded: the new HEUFT *TORNADO R* is the expert for applying wrap-around labels to bottles, jars and cans. It applies these labels to a maximum of 60,000 containers per hour using either parallel or linear transport. This new development optimised for a precise container rotation for a particularly accurate application with the least possible offset provides the best labelling results.

Brand changes are extremely fast: the inconvenient, time-consuming and labour-intensive replacement of certain change parts are finally a thing of the past with the HEUFT *TORNADO R*. The clever combination of different materials minimises wear and tear as well as the noise level of the wrap-around labelling machine and ensures maximum hygiene and operator convenience. In addition the closed hot glue

system of the HEUFT *TORNADO R* ensures a high level of cleanliness with minimum glue consumption.

The integrated bottle burst detection protects the machine against damage due to burst bottles. Optional inspection modules which can be integrated subject the containers to an intensive final check immediately after the labelling process.



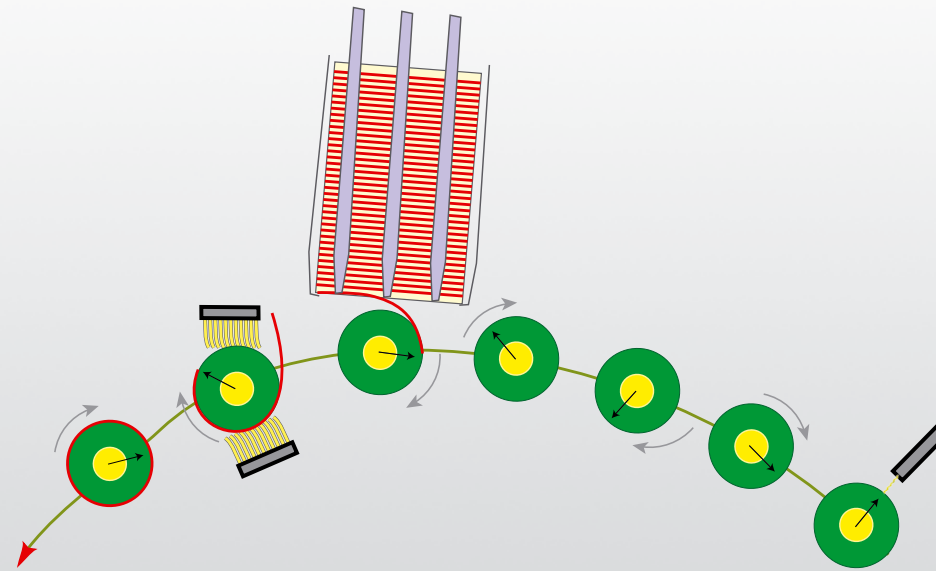
Completely tailor-made to on-site requirements



The HEUFT *TORNADO R* achieves top speeds of up to 60,000 containers per hour when applying wrap-around labels. The wrap-around labeller can be tailor-made exactly to on-site requirements depending on the size and output of your filling line and the type of container to be labelled. Its strictly upward compatible, modular construction guarantees this.

Whether a linear or a parallel transport system: both are possible with the HEUFT *TORNADO R*. Consequently it is particularly easy to integrate the wrap-around labeller into existing lines. Installation and commissioning function smoothly, extremely fast and without “cable spaghetti” - the integrated control cabinet which accommodates the machine control system ensures this.

Functions for applying and checking the best-before date (BBD) and the barcode are just as easy to retrofit as are modules for the inspection of labels, checking fill level and closure, measuring the pressure, detecting serial faults and controlling the conveyors. Regardless of what you wish: the HEUFT experts will work out the right solution for your individual requirements with you.



Clean and safe all around: this is how the HEUFT TORNADO R works

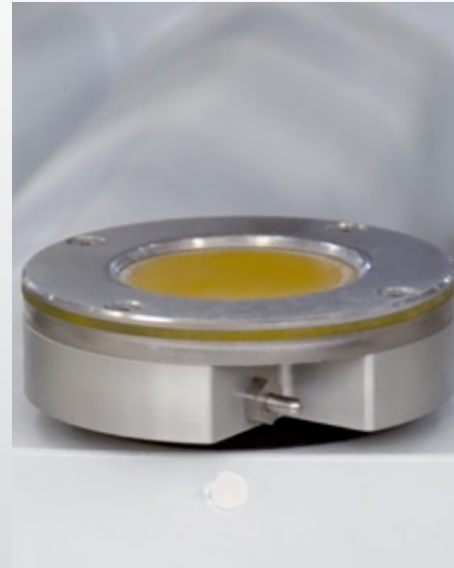


The nozzles which can be individually activated apply small spots of glue properly measured and precisely onto the containers which are fixed in plat-forms by means of centring bells. The HEUFT TORNADO R is equipped with a specially developed servo-controlled belt drive in order to apply the wrap-around labels particularly precisely. It causes the containers to rotate harmo-niously so that the wrap-around labels can entwine them completely. The rotation speed can be electronically

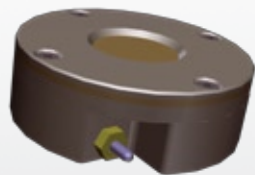
adapted to the most different container sizes. The result: a particularly simple and fast adjustment to other container and label sizes.

The rotating container pulls the respect-ive label from the magazine by means of the spots of glue. At the same time a final gluing nozzle applies a thin line of glue to the end of the label so that the overlap can be stuck precisely with the smallest possible offset and brushed on carefully.

The closed hot glue system of the HEUFT TORNADO R halves the glue consumption compared with a conven-tional roller application. At the same time it ensures that the glue is protected from ambient air and contamination. This reduces maintenance costs and increases operating reliability.



Container rotation and centring



The HEUFT development team has designed a belt drive which is not driven mechanically but by means of a servomotor in order to rotate the containers particularly evenly thus achieving an exact label application without creases. It adapts to different container sizes exactly and rotates cylindrical bottles and jars as well as shaped containers especially harmoniously. In this way wrap-around labels can be applied very precisely, without creases and almost without

an offset at the overlap - depending on the paper quality. The centring elements of the HEUFT *TORNADO R* have also been developed by HEUFT. Two small springs have been installed instead of one large one which are centred by means of a spacer sleeve. The new construction proved its suitability for daily use and its extremely low wear and tear during long-term tests. The centring bells can be replaced in no time at all without a problem if required - for example when

changing the closure type. The HEUFT *TORNADO R* is also equipped with specially constructed centring plates for a high level of precision when applying wrap-around labels and an exact label fit. These guide all the containers exactly past the dispensing plate. Its wear and slip resistant construction combines non-slip friction with a particularly high container stability.



Achieving one's target in next to no time



Time is money - this is particularly true as regards the installation and maintenance of a machine. A wrap-around labeller has been designed with the HEUFT *TORNADO R* with which this is possible with minimum expenditure.

The integrated control cabinet makes a fast and uncomplicated installation possible. Brand changes are dealt with in no time at all because no tools what-

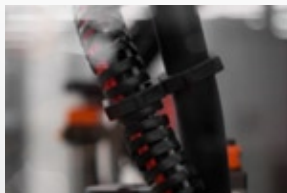
soever are required in order to replace the change parts. The servo-controlled belt drive ensures a container-specific rotation without mechanical intervention and adapts itself to different container sizes and label positions in the same way as the automatic glue nozzles which can be activated individually. The same applies to the integrated and optional detection functions for quality control and assurance. The bottle carousel

can be moved forwards and backwards precisely using the hand terminal.

The HEUFT *TORNADO R* has been equipped with a central lubrication system in order to supply the moving parts with grease sparingly but effectively. It greases the main bearings independently and informs the operator when the lubricant has run out.



The HEUFT CleanDesign



Labellers are particular critical as regards hygiene during the production process. Liquids which have escaped from the product can for instance cause contamination here.

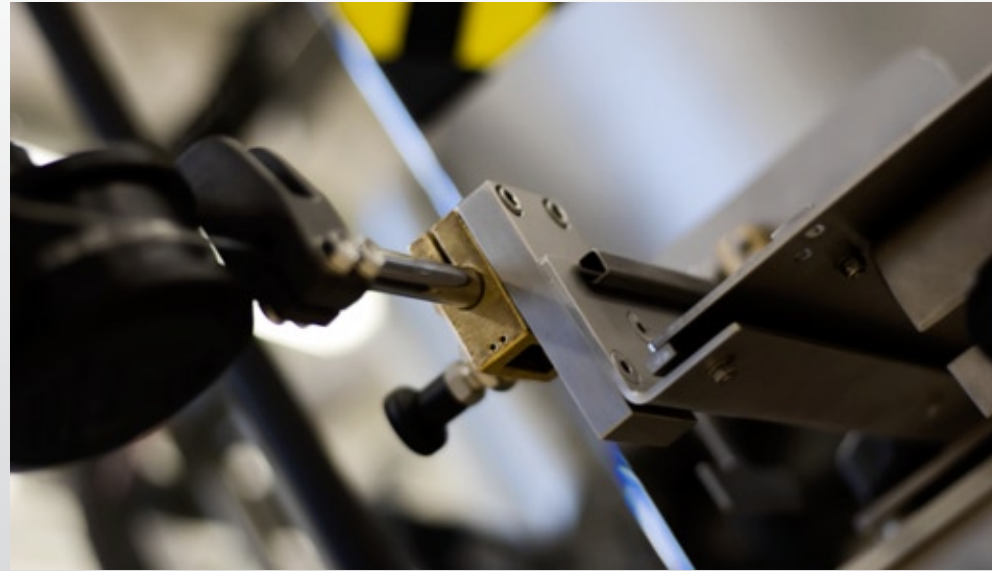
The HEUFT *TORNADO R* is equipped with a special construction as is the case with all HEUFT devices which are used for the production process: the HEUFT *CleanDesign*.

This is not just a set phrase but a firm intention not to provide contamination with a contact surface.

HEUFT understands this in terms of easy cleaning using a hose. Sealing relevant areas and smooth surfaces are basic requirements. Fragments, e.g. glass splinters, must not be allowed to settle - tedious and time-consuming cleaning is surplus to requirements. The cabling

has been completely laid in loops. As a result contamination does not occur as is the case in a closed cable duct.

You not only save money with the HEUFT *CleanDesign* but also make an important contribution to your product quality!



What makes a good construction?



Intelligent detailed solutions and a striving for perfection have made the HEUFT *TORNADO R* a precision machine of special value. The total torsionally rigid construction is made of stainless steel and hot-dip galvanised components.

All the parts which touch the containers are made of plastic in order to reduce the level of noise. Plastic and steel

toothed wheels have been combined for the same reason and in order to minimise wear and tear.

The closed hot glue system is not only clean and economical. Furthermore the specially protected hot glue hoses ensure a maximum amount of safety for the operators - injury to burns is almost impossible. All these factors make the wrap-around labeller an extremely

solid and low-maintenance machine with the proven HEUFT quality.



Additional functions for the final label inspection



More than just labelling: the highly efficient labelling machines of the HEUFT TORNADO series provide a wide range of additional functions due to their modular construction. Not only can you apply labels precisely but you can inspect their presence, fit and imprints directly afterwards with one and the same device.

A light scanner makes sure that the label has really been applied. Camera-based modules check that the labels fit well, are correctly positioned and exactly aligned. A final inspection as regards contents is also possible with it: mislabelled containers (for example where non-brand labels have been applied) are identified in good time.

Special detections which examine the lettering, such as the HEUFT *vio* OCR, prevent containers with incorrectly coded labels reaching the market.



The HEUFT vio OCR



Experience in the code reading field has confirmed again and again that individual dots of the best-before date are not in the correct position. As a result the customer cannot estimate how long the goods will keep.

HEUFT has created its own detection for this which checks and validates the date which has been printed at top speed.

Astonishing misprints were already evident when first employed proving the importance of this inspection.

The HEUFT vio OCR can reliably inspect up to 72,000 bottles per hour. The HEUFT *reflex* technology, an image processing system developed for taking high-speed pictures, guarantees this.



Additional functions for the quality assurance of the filled product



The HEUFT *TORNADO R* can be equipped with optional functions and modules in order to check the quality features of the filled product in addition to the integrated bottle burst detection which identifies burst bottles in the infeed in time and emits a stop signal.

Checking the fill height of the newly labelled container - detections carried out using camera, high frequency or X-ray technology depending on the requirements. Overfilling and underfilling are reliably identified in

this way. Special sensors check the closures for presence, correct position and excessive height. The HEUFT *VISION* module checks that the closure has been precisely fitted and that its safety elements are intact using a superior camera technology. A 360 degree inspection is even possible with it. Also camera-based: the closure logo detection which identifies containers which have been fitted with non-brand closures. The HEUFT *sonic* module checks whether the closures have a leak. It makes them oscil-

late by means of an electromagnetic pulse and analyses the characteristic tones which occur as a result. The values determined make it possible to draw concrete conclusions about the internal pressure of a container and consequently the tightness of the closure. A serial fault detection, which emits a switch-off pulse when required, rounds off the spectrum of optional additional functions. Containers which are identified as faulty can be specifically rejected or distributed onto different lanes.



Specifications



The HEUFT TORNADO R applies wrap-around labels to cylindrical jars and bottles as well as all types of shaped containers within the following specifications:

- up to 60,000 containers per hour
- minimum container diameter - 50 mm
- maximum container diameter - 100 mm
- servo-controlled belt drive for the highly precise adaptation of the circumferential speed of the different containers
- offset at the overlap +/- 1 mm
- deviation of the gluing height +/- 1 mm



Your cost advantages with HEUFT



We do everything in order to combine the very highest quality with fair prices:

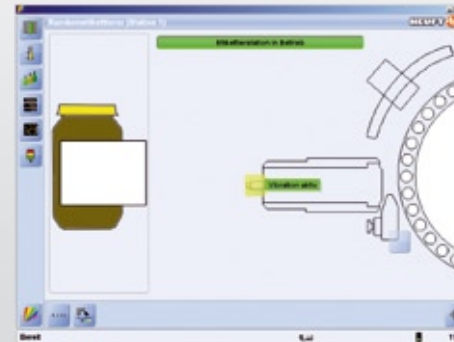
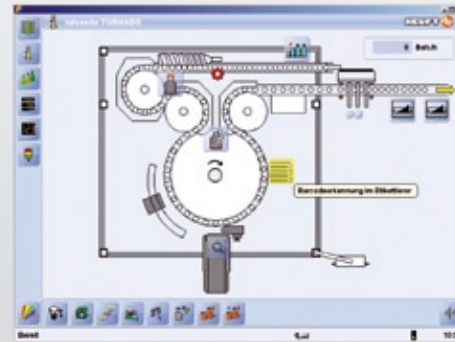
- extremely good value spare parts and change parts
- simple and therefore a particularly cost-effective integration into existing lines
- individual components with a high life expectancy
- integrated control cabinet
- easy cleaning due to the special design of the machine
- advantageous spare parts storage
- versatile connection options for auxiliary equipment
- trouble-free and easy brand changeover
- fast changeover times
- short maintenance times
- robust and stable components
- low wear and tear
- high degree of reliability/availability
- modular construction and easy to retrofit
- the HEUFT *TeleService* - cost savings: the service technician must not be called out



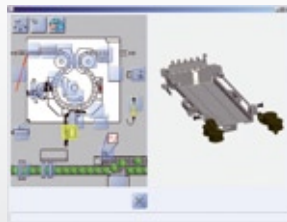
Networking



- integrated Ethernet interfaces as well as TCP/IP access to all networks
- connection capability to a pre-configured DDE interface and SQL database
- the HEUFT *PILOT* graphical user surface with a comprehensible menu structure for easy operating
- operation possible either via jog shuttle or touchscreen on the TFT screen at the device or via a network
- automatic transfer of counter readings or fault messages by SMS to a mobile phone or by e-mail if required
- firewall protected connection to the remote service by Ethernet – the HEUFT *TeleService* can access the line directly and rectify faults at short notice by means of remote diagnosis if the customer wishes



Device operation and the HEUFT PILOT



- multilingual, simply arranged, comprehensible menu structure with extensive help boxes and complete on-line user's manual - the user interface can be supplied in any language / graphic characters if required
- easy identification of spare parts with online and offline spare parts list with photographs and exploded views - the order can be sent from the device either to an internal purchasing department or directly to HEUFT
- password-protected operator levels which can be freely adjusted to suit the tasks of the operating staff, the quality assurance department etc.
- the operator receives information during a brand changeover regarding the necessary steps in order to exclude possible operating errors
- clear fault messages with service notes and support in order to avoid downtimes

The HEUFT *flip*The HEUFT *DELTA-K*The HEUFT *DELTA-FW*

The HEUFT *rejector*

There are different HEUFT rejection systems available for the HEUFT TORNADO R depending on the application:

The HEUFT *DELTA-FW*

- robust, all-round system for outputs of up to 72,000 containers per hour
- can be used for conveyor speeds of up to 2.7m/s

The HEUFT *flip*

- a single-segment rejector for cylindrical containers
- particularly smooth transversal acceleration of the containers
- an extremely compact, hygienic construction

The HEUFT *mono*

- a single-segment rejector for cylindrical containers

- an extremely compact, hygienic construction

The HEUFT *DELTA-K*

- multi-segment rejector
- smooth rejection even of shaped or unstable containers by means of a single-point guidance





The HEUFT TORNADO W



The HEUFT TORNADO S



The HEUFT FinalView

Other HEUFT products



The following systems are also part of the HEUFT programme for the precise application and inspection of all types of labels:

The HEUFT TORNADO W

- high-performance labeller
- wet and hot glue labels
- labelling of PET and glass containers
- up to 72,000 containers per hour

The HEUFT TORNADO S

- labelling with self-adhesive plastic and paper labels
- labelling in the no label look for the premium segment
- alignment of all types of containers

The HEUFT FinalView

- optical all-around check of the finished product

- examining the label alignment (absolute and alignment in relation to one another) as well as label verification
- checking the BBD printed



CONTACT DETAILS

HEUFT SYSTEMTECHNIK GMBH

Burgbrohl, GERMANY
Phone: +49 2636 56 0
info@heuft.com

HEUFT LTD.

Tamworth, GREAT BRITAIN
Phone: +44 1 827 25 5800
uk@heuft.com

HEUFT HISPANIA, S.A.

Madrid, SPAIN
Phone: +34 91 6667 300
spain@heuft.com

HEUFT QUALIPLUS B.V.

Deventer, NETHERLANDS
Phone: + 31 570 6617 00
netherlands@heuft.com

HEUFT FRANCE S.A.

Brumath, FRANCE
Phone: +33 388 59 3000
france@heuft.com

HEUFT ITALIA s.r.l.

Vigevano, ITALY
Phone: +39 0381 290411
italy@heuft.com

HEUFT SCAN Aps

Gilleleje, DENMARK
Phone: +45 4836 5070
scandinavia@heuft.com

HEUFT USA Inc.

Downers Grove, USA
Phone: +1 630 968 9011
usa@heuft.com

HEUFT DO BRASIL Ltda.

Alphaville-Barueri-SP-BRASIL
Phone: +55 11 4195 7671
brasil@heuft.com

HEUFT S.A.

Beccar, ARGENTINA
Phone: +54 11 4707 0936
argentina@heuft.com

HEUFT MEXICO S.A. de C.V.

Naucalpan de Juárez, MEXICO
Phone: +52 55 5374 3280
mexico@heuft.com

HEUFT Systems Technology Co., Ltd.

Shanghai, CHINA
Phone: +86 21 6434 3911
china@heuft.com

HEUFT ASIA LTD

Hong Kong, CHINA
Phone: +86 21 6434 3911
asia@heuft.com

HEUFT AUSTRIA GMBH

Leobersdorf, AUSTRIA
Phone: +43 2256 65556 0
austria@heuft.com

OOO HEUFT EURASIA

Moscow, RUSSIA
Phone: +7-495-935-8704
eurasia@heuft.com

INTERNET:

www.heuft.com
E-MAIL:
info@heuft.com

The HEUFT **TORNADO R** labelling machine

Wrap-around labeller



- either parallel or linear transport
- integrated bottle burst detection [\[more\]*](#)

FUNCTIONS

- wrap-around labelling with paper labels or cut foil
- servo-controlled toothed belt which rotates the container precisely for a particularly accurate application
- hot glue technology for initial and final gluing

The following can be integrated:

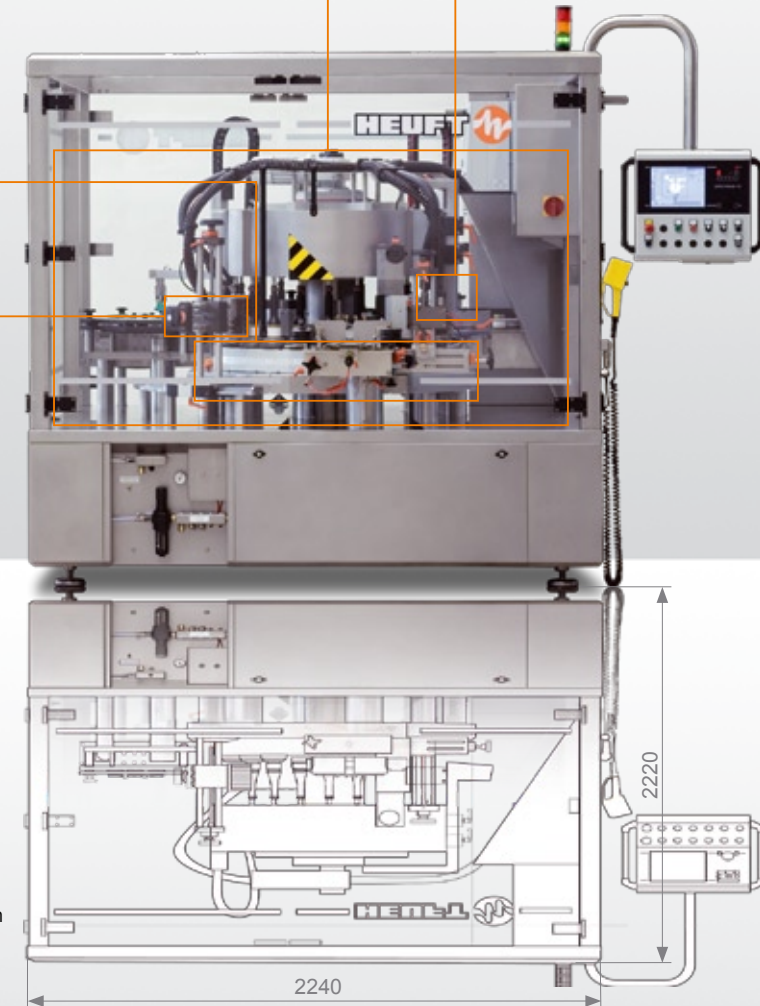
- label inspection
- conveyor control system
- barcode and BBD check
- fill level and closure detection
- internal container pressure measurement
- serial fault detection
- container distribution onto different lanes
- the rejection of faulty containers

The HEUFT *CleanDesign* for easy cleaning and maintaining hygiene [\[more\]*](#)

Servo-controlled container rotation [\[more\]*](#)

Exactly measured amounts of glue due to the use of precisely activated nozzles [\[more\]*](#)

Code reading for checking the BBD [\[more\]*](#)



THE ADVANTAGES

- fast brand changes without replacing certain change parts
- very quiet due to the use of hardwearing plastic parts for guiding the bottles
- galvanised steel substructure
- hardwearing, hygiene-friendly and easy to maintain construction
- integrated control cabinet for particularly fast installation and commissioning
- integrated future-proof network interface (Industrial Ethernet, TCP/IP)
- remote service connection via the Internet and the SQL/DDE database interface for storing all the production data [\[more\]*](#)

* [\[more\]](#) Detailed information on www.heuft.com/tr

