FULL CASE CHECK

HEUFT VGX

Boston Beer Co
Line Z

HEUFT SPECTRUM GX
Full Case Check System

Proposal number: 30054B_20Rev1
March 25th, 2020

Prepared especially for:

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Project Conditions:

Location: post- Tray Packer
Container, Production Rate: *(Long -Side Leading)*

CAN SIZE AND TYPE	MULTIPACK SIZE	Configuration	Pack Type	Pack (L) in.	Pack (W) in.	Pack (H) in.	Z WSL
12 oz Sleek	6 pack	2x3	Paperboard Carton	6.75	4.45	6.19	
12 oz Sleek	12 pack	3x4	Paperboard Carton	9.08	6.75	6.19	15
12 oz Sleek	15 pack	3x5	Paperboard Carton	12.00	6.75	6.19	15
12 oz Sleek	24 pack	4x6	Paperboard Carton	13.63	9.08	6.19	25
12 oz Sleek	30 pack	5x6	Paperboard Carton	13.63	11.25	6.19	20
12 oz Standard	6 pack	2x3	Paperboard Carton	7.69	5.00	4.94	
12 oz Standard	12 pack	3x4	Paperboard Carton	10.44	7.81	4.94	15
12 oz Standard	15 pack	3x5	Paperboard Carton	12.88	7.81	4.94	30
12 oz Standard	18 pack	3x6	Paperboard Carton	15.69	7.81	4.94	25
12 oz Standard	24 pack	4x6	Paperboard Carton	15.69	10.50	4.94	20
16 oz Standard	4 pack	2x2	Paperboard Carton	5.20	5.20	6.19	

Task: Full Case Check
Gross Under-Fills

Proposed Conveyor Height: Line Z: 910mm

Max Allowable Conveyor Speed: **1.0 m/s**

Max Production Rate: *7,200 cph*

Application Conditions:

1. Selling price for x-ray inspection does not include any special guarding. Cost for any special guarding will be paid by the customer. All registration and/or reciprocity fees associated with the x-ray inspection module will be paid by the customer.

2. The cases are fully conveyed, long-side leading, onto the inspection conveyor in a slip-free condition prior to entering the inspection device. HEUFT Recommends Low Friction conveyor belt for improved rejection and Gap requirements.

3. **Gap(s) Between Case:** Based on the clarification of the Production Rates/Conveyor Speed(s), minimum gap(s) TBD to determine Performance and Reliability of the quoted device.

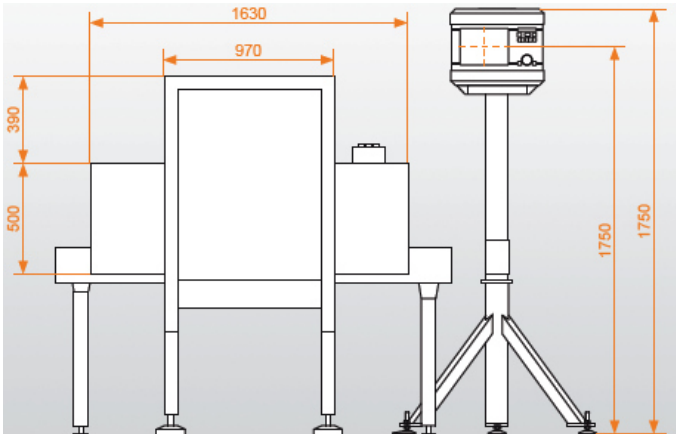
4. At no time should cases be stopped inside of the Case Inspector.

5. **Conveyor Speed/Production Rates:** Technical clarification is required to determine the performance and reliability of the quoted inspection equipment based on the submitted production conditions. Please provide pitch by case type information at your earliest convenience for further evaluation.

6. Based on the customer provided information, this quote is an approximate calculation based upon written and/or verbal customer provided information. Any changes associated with the delivery of updated technical data or product samples for the purpose of application testing after receipt of this quote may constitute a change in configuration and an increase in price.

SPECTRUM GXTI99 Control unit including:

HEUFT *SPECTRUM* Housing



- Powder coated aluminum enclosure protected against humidity-equivalent to IP54 protection.
- Stainless steel inspection tunnel, floor stand and mounting hardware
- High resolution color TFT touchscreen with jog shuttle control.
- EMC (Electro-Magnetic Compatibility) protection
- 3 Bay stainless steel framed enclosure including four adjustable legs for easy installation over existing free running conveyor. Includes infeed and outfeed guarding.
- Will accommodate case lengths 200-500mm and case widths 110-500mm

HEUFT *SPECTRUM* Electronics

- HEUFT Pilot Graphical User Interface with context sensitive help displays
- Expandable real time multiprocessor
- Permanent self diagnostic system with status display
- Encoder for accurate container tracking of container movement and rejection regardless of changes in conveyor speed.

HEUFT Pilot-Terminal Software

- Built in Logic Analyzer for diagnostics and set-up
- Graphic overview of device status and current values
- Different password protected user access levels
- Built in electronic documentation covering all system components
- Exploded view drawings for part number and description identification

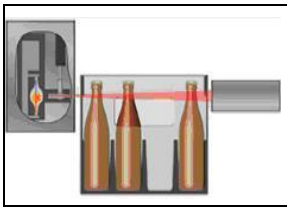
HEUFT HLAN-Network components

- Internet/Intranet compatible
- Service interface port for laptop terminal, keyboard, mouse and printer
- Optional DDE and SQL data acquisition systems
- Personal event manager for sending of selected system text messages to an email, pager or cellular phone address. This information can include all counter data for the shift or for a product run.

HEUFT-Additional Features

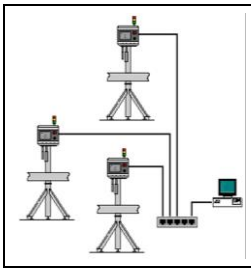
- Sequential fault option which allows signaling of consecutive faults.
- 1 Operator's manual
- Random sampling routines
- 1 CD for installing HEUFT Pilot on a PC for offline access to documentation, exploded view drawings, spare parts lists and operator's manual.
- Optional remote service for diagnostic work and new brand programming.
- Good case, bad case, and total production case counters
- Machine status signal-up to 12 isolated contacts available

Equipment Features:



X-Ray2 Full Case Check:

Checks each passing "long-side" leading case by means of X-Ray absorption and evaluates every case for missing containers and grossly under filled containers.



Network Capabilities:

Integrated Ethernet interface as well as TCP/IP access

- Connection capability to a preconfigured DDE interface and SQL database.
- HEUFT PILOT graphical user interface with a logical menu structure for easy operating.
- Operation via jog shuttle or touch screen on the TFT screen at the device or via a network PC.
- Automatic transfer of counter readings or fault messages by SMS to a mobile phone or e-mail.

***maxi-Laner* Rejector:**

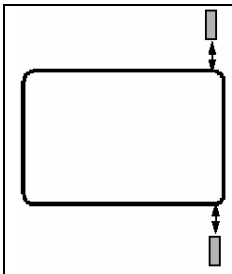
Pneumatically controlled cylinder that moves in a 90° direction for reliable rejection. The rejection function is mass sensitive to provide a smooth rejection regardless of the case weight.
Includes Air Pressure Control.

Signal - Warning Light: 3 color stack light for visible machine status

Green: Normal Production Operation
Yellow: Limited Device Function: Production runs with faults; too many rejects
Red: Device Function Disturbed: Incorrect device function; Rejector deactivated

Total Price Ex-Works: US $68,120.00/per device*
Ex-Works Burgbrohl, Germany
(price excludes any applicable sales tax, freight, duty or documentation)

Optional Features:



Tray Side Flap Check:

Using "*Distance Sensing*" Ultrasonic Sensors, the flap position is measured. Flaps that are detected out of proper position (*30-60° from Vertical) will cause the evaluation software to determine that the tray is out of square, therefore faulty.

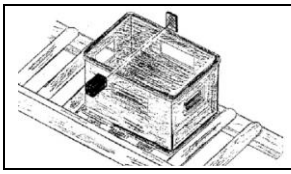
Note: Leading/Trailing Flaps are not detected, though being out of position may cause either side flap to be out of proper position*.

$5,945.00

***maxi-Laner* Rejector, Additional:**

Pneumatically controlled cylinder that moves in a 90° direction for reliable rejection. The rejection function is mass sensitive to provide a smooth rejection regardless of the case weight. Includes Air Pressure Control.

$10,201.00



***Excessive Case Height*:**

Pneumatically controlled cylinder that moves in a 90° direction for reliable rejection. The rejection function is mass sensitive to provide a smooth rejection regardless of the case weight. Includes Air Pressure Control.

$2,945.00

Offer: Validity of offer: 45 days

Terms: Payment Terms: Net 30 Days
70% upon shipment
30% upon receipt

Service: Prices do not include installation, commissioning or training costs. All installation and training costs will be invoiced per the prevailing rates listed on the HEUFT Service Policy attached.

Training: All Training costs will be invoiced per the prevailing rates listed on the HEUFT Training Policy attached. It is highly recommended that efforts be made to minimize interruptions to the personnel assigned to attend this training class.

Shipping: Prices do not include freight, duty or documentation costs. HEUFT USA will be named as the Importer of Record and HEUFT will be responsible for transport insurance to the Customer's facility.

Delivery: Estimated 12 weeks + Shipping from the receipt of purchase order and technical clarification.
And let us know if you are in a hurry, we will see what we can do!

Warranty: All HEUFT equipment is warranted against defects in quality and workmanship from 15 months from shipment.

Performance: All HEUFT equipment is developed, designed and manufactured to consistently perform at reliability rates exceeding 99%. Adherence to a Recommended Preventative Maintenance Schedule is paramount in maintaining HEUFT equipment in an optimal condition.

X-Ray: Selling price for x-ray fill level inspection does not include any special guarding. Cost for any special guarding will be paid by the customer. All registration fees associated with the x-ray inspection module will be paid by the customer.

The Terms and Conditions described on the following page constitute the entire agreement between Seller and Buyer and no other terms or conditions shall be of any effect.

TERMS AND CONDITIONS

UNLESS OTHERWISE SPECIFICALLY PROVIDED BY SEPARATE WRITTEN AGREEMENT DULY SIGNED BY HEUFT USA, INC. "SELLER," THE TERMS AND CONDITIONS ON FACE SIDE AND SPECIFIED BELOW CONSTITUTE THE ENTIRE AGREEMENT BETWEEN SELLER AND BUYER, AND NO OTHER TERMS AND CONDITIONS SHALL BE OF ANY EFFECT. BUYER WILL BE DEEMED TO HAVE ASSENTED TO ALL SUCH TERMS AND CONDITIONS IF ANY PART OF THE DESCRIBED GOODS IS ACCEPTED. IF BUYER FINDS ANY TERM OR CONDITION NOT ACCEPTABLE, BUYER MUST SO NOTIFY SELLER AT ONCE. ANY ADDITIONAL OR DIFFERENT TERMS OR CONDITIONS CONTAINED IN BUYER'S ORDER OR RESPONSE HERETO SHALL BE DEEMED OBJECTED TO BY SELLER AND SHALL BE OF NO EFFECT.

1. PRICE CHANGE

(a) Seller may at any time change its f.o.b. price ("regular price") of any Goods, without notice, to that in effect at the time of shipment. Seller may at any time and without prior notice to Buyer withdraw any meet-competition price or allowance and return to Seller's regular price.

(b) Seller may at any time and without prior notice to Buyer increase the regular price of any Goods by the amount of any new or increased tax (excluding franchise, net income and excess profits) which Seller may be required to pay on the manufacture, sale, transportation, delivery or use of any Goods or the materials required for its manufacture or which affects the cost of such materials.

2. DELIVERY TERMS

(a) Goods hall be sold and delivered f.o.b. to Seller's factory designated herein or at Seller's option f.o.b. any of its other factories or facilities.

(b) Buyer shall, subject to Seller's available facilities at the delivery point, determine its desired mode of transportation and notify Seller thereof at least ten (10) days before the requested delivery date. If Buyer fails so to notify, Seller may select any commercial motor, air or rail carrier. Seller will make deliveries as near as possible to Buyer's requested delivery dates but Seller shall not be liable to Buyer for (1) delays or (2) damage to Goods while in transit, irrespective of whether Seller or Buyer determines the mode of transportation.

3. TERMS OF PAYMENT

(a) If Seller extends credit, all invoices shall be due and payable as specified on the face side hereof. All indebtedness outstanding after due date shall be subject to a monthly service charge at the current prime rate plus 3% unless this rate exceeds the highest rate permitted by applicable state law, in which event the rate shall be the highest permissible by law. Extensions of credit may be changed or withdrawn at any time.

(b) If Seller does not, or ceases to extend credit, payment terms shall be, at Seller's option, any type of cash terms or any type of secured transaction terms.

(c) Buyer shall make payments without expense to Seller.

4. CANCELLATION OF ORDER

(a) **Cancellation of order by the customer** After acceptance of a Purchase Order at HEUFT USA, Inc., payment of not less than 75% of the original contract amount will be due in full.

(b) **Delay of order by the customer** If delivery date or installation is delayed by the customer, payment terms will still be based on contracted delivery date (30% with Purchase Order, 70% upon contracted delivery date).

5. CONTINGENCIES

Seller shall not be liable to Buyer or any other person for any failure or delay in the performance of any obligation under this agreement due to events beyond its reasonable control including, but not limited to, fire, storm, flood, earthquake, explosion, accident, acts of the public enemy, sabotage, strikes, terrorism, lockouts, labor disputes, labor shortages, work stoppages, transportation embargoes or delays, failure or shortage of materials, supplies or machinery, acts of God, acts of regulations or priorities of the Federal, State or local governments or branches or agencies thereof, and government contracts or shipments or purchasers to fulfill government contracts which are not readily salable without loss to Seller.

Buyer shall not be liable for delay or failure to take Goods as ordered due to any such events, except that Buyer shall be liable for such delay or failure with respect to Goods already in transit or specially made for Seller which are not readily salable without loss to Seller. When the events operating to excuse performance to either party shall cease, this agreement shall continue in full force until all deliveries have been completed.

6. CLAIMS, WARRANTIES AND LIMITATIONS OF LIABILITY

(a) Buyer waives all claims relating to described Goods unless received in writing by Seller within thirty (30) days after installation.

(b) Seller warrants that the goods described on the face side of this document will be free of defects in materials or workmanship. THE FOREGOING WARRANTY IS THE SOLE WARRANTY MADE BY SELLER, AND SELLER HEREBY EXPRESSLY DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY IMPLIED WARRANTY OF MERCHANTABILITY, NON-INFRINGEMENT OR FITNESS FOR A PARTICULAR PURPOSE.

(C) SELLER'S SOLE OBLIGATION AND BUYER'S SOLE REMEDY FOR ANY CLAIM, WHETHER BASED ON TORT, CONTRACT, WARRANTY OR ANY OTHER THEORY, SHALL BE LIMITED TO REPAIR OR REPLACEMENT OF GOODS NOT IN CONFORMITY WITH THE WARRANTY MADE IN THE FIRST SENTENCE OF PARAGRAPH 5 (B) OR, AT THE SOLE OPTION OF THE SELLER, REFUND OF THE PURCHASE PRICE IN EXCHANGE FOR THE RETURN OF THE GOODS. IN NO EVENT WILL SELLER'S LIABILITY ARISING OUT OF ANY CLAIM BY BUYER EXCEED THE PURCHASE PRICE OF THE GOODS THAT GAVE RISE TO THE CLAIM. IN NO EVENT SHALL SELLER BE RESPONSIBLE FOR ANY INCIDENTAL, SPECIAL, EXEMPLARY OR CONSEQUENTIAL DAMAGES, WHETHER OR NOT SELLER WAS AWARE OF THE POSSIBILITY THEREOF.

(d) Seller shall not be liable under any circumstances to Buyer or any other person where the Goods are not handled, used, or installed in accordance with the customary and good commercial practices of the trade.

(e) Buyer may not bring any action under or arising from this agreement unless such action is commenced within one (1) year after the cause of action has accrued.

7. DEFAULT AND WAIVER

(a) If Buyer fails with respect to this or any other agreement with Seller to pay any invoice when due or to accept any shipment as scheduled, Seller may, without prejudice to other remedies, defer further shipments until the default is corrected or terminate this agreement.

(b) No course of conduct, nor any delay of Seller in exercising any rights hereunder, shall waive any rights of Seller or modify this agreement.

8. GOVERNING LAW

This agreement shall be construed to be between merchants. Any question concerning its validity, construction or performance shall be governed by the internal laws of the State of Illinois.

Customer information No. 10.1
Case Check HEUFT *SPECTRUM*

This customer information applies to the following standard devices:

HEUFT *SPECTRUM GX*

HEUFT *SPECTRUM LX*

Ambient conditions

The HEUFT *SPECTRUM* device has been designed for the following ambient conditions:

- Air temperature: 5 ° to 40 °C
- Air humidity: 30 % to 95 % relative air humidity, non-condensing

A cooling unit can be used as an option.

The limit values cover the requirements of the German standard DIN EN 60204-1:2007.

DIN EN 60204-1:2007 corresponds to the classifications: EN 60204-1:2006
IEC 60204-1:2005

Sudden fluctuations in temperature should be avoided as they could result in condensation forming. Strong sunlight should be avoided because it can cause the casings to heat up or interference to the optical check devices.

Protection class

The HEUFT *SPECTRUM* device as a complete device is assigned to protection class IP 54 (protected against dust and splashing water) in accordance with IEC 60529. The system of protection IP 64 (dust tight and protected against splashing water) can be achieved when using the function module ”Positive Air” in the device. In isolated cases additional sealing and protective measures must be taken after consultation with the HEUFT company if a device is to be operated outside these specifications.

EMC protection (electromagnetic compatibility)

The devices are manufactured in accordance with the valid EMC standards and are class A devices. They fulfil the limit values for industrial environments and are not designed for domestic use. Improper use or modifications to the device may cause malfunctions.

Power supply (to be provided on site)

The supply line, the connection and the possible official acceptance necessary for an extension to the low-voltage mains have to be carried out by the customer in accordance with BGV A3, the VDE standards and the legal regulations of the country.

- Mains: 1-phase alternating current (L, N, PE)
- Wiring: TN-S mains according to IEC 60364-4-41 / DIN VDE 0100-410
- Nominal voltage: 115 V or 230 V or 240 V (phase voltage)
  optional for external uninterruptible power supply in addition:
  115 V or 230 V or 240 V
- Frequency: 50/60 Hz
- Max. continuous current: 15 A / 115 V, 7,5 A / 230 V (apparent current)
- Max. constant power: Output up to 4.800 cases/h (depends on dimensions and rejector)
  1.4 kW (active power)
  1.7 kVA (apparent power)
  Note: The apparent power is used for rating the upstream electrical equipment (e.g. the transformer and the uninterruptible power supply). The active power describes the power consumption.
- Fuse protection provided by the customer: 16 A gG/gL fuse
  Note: Fuses are stipulated in order to protect the main power switch because only these can reliably protect the main power switch in the case of a short circuit. In this way the function of the main power switch as a disconnecting switch can also be guaranteed after a short circuit. Circuit breakers do not limit the maximum current sufficiently.
- Supply line: max. connectable conductor cross section:
  3 x 2.5 mm^2 (terminals for the main switch)
  max. cable diameter:
  20 mm (cable entry to main power switch)
  Note: The conductor cross section of the supply line is to be selected by the customer in accordance with IEC 60364-5-523 / DIN VDE 0298-4. The method of installation, the type of cable, temperatures, cable accumulation and the number of loaded wires must be taken into consideration in addition to the fuse protection stipulated. A sub-distribution has to be provided near the device if the determined conductor cross section exceeds the specified maximum connectable conductor cross section, unless there are other measures that can be taken.

Please refer to page 3 for the installation instructions.

Attention

Signal lines should not be laid together with power cables (e.g. mains supply, motor or high-voltage cables) in cable channels or parallel to each other as a matter of principle!

(Further specifications available upon request)

Compressed air for Positive Air (optional)

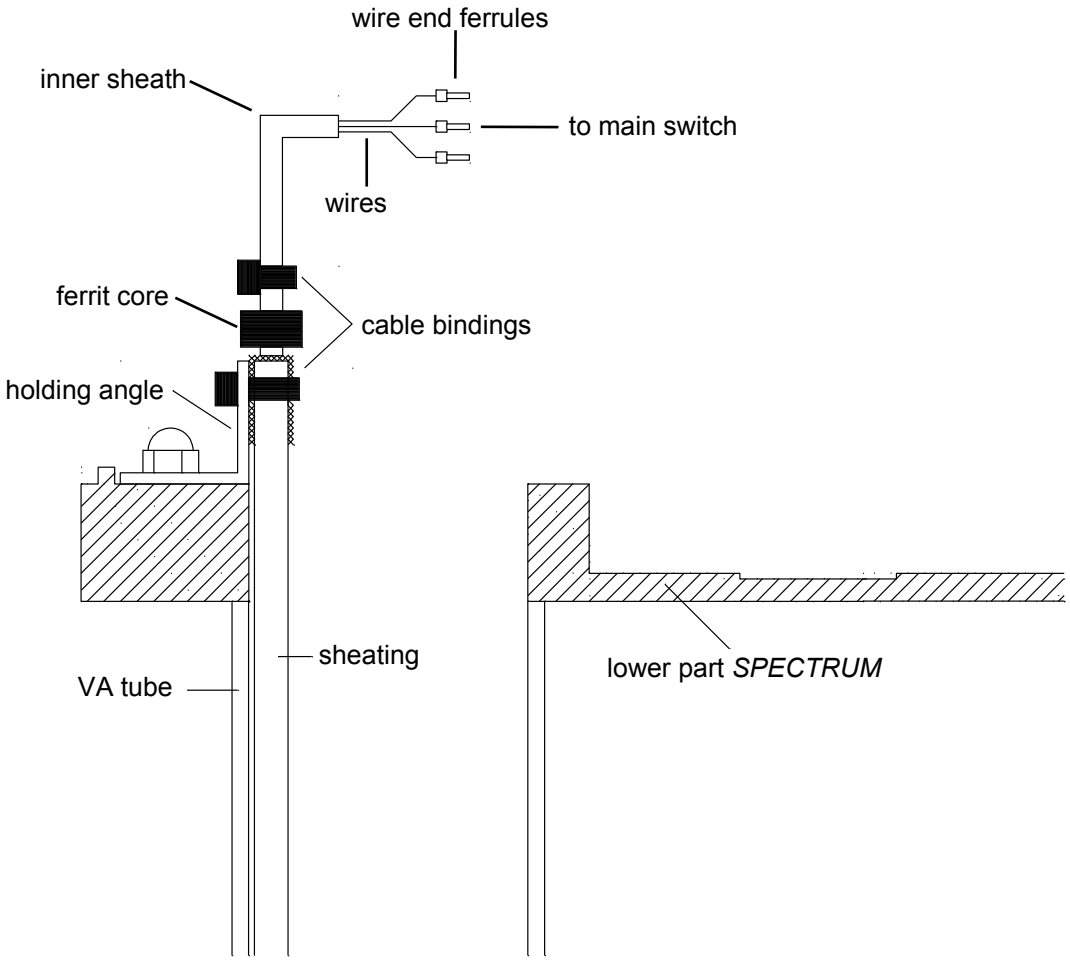
Customer information — No. 10.1
Case Check HEUFT *SPECTRUM*

- Air connection: minimum 5 bar, maximum 10 bar
  1.27 cm (½") connection, water- and oil free,
- Air quality: in accordance with ISO-DIN 8573-1
  Instrument quality (clean, dry, oil-free)

Dust particles	Quality category 4
Water	Quality category 4
Oil content	Quality category 4

- Air consumption: 3 m^3/h

Installation instructions – mains supply for the HEUFT *SPECTRUM GX*



Note:
The supply line of the HEUFT *SPECTRUM LX* is pulled through on the inside of one of the four support legs and connected in contrast to the HEUFT *SPECTRUM GX*.

HEUFT SYSTEMTECHNIK GMBH
Am Wind 1 - D-56659 Burgbrohl - info@heuft.com
Phone +49 2636 56 0 / Fax +49 2636 56 256

Customer information No. 1.2
HEUFT signal connections to the customer's devices

This customer information applies to the following standard devices:

HEUFT *SPECTRUM VX*	**HEUFT *eXaminer XA, XAC, XB, XO, XT***
HEUFT *SPECTRUM SX*	**HEUFT *squeezer QA, QS, QL***
HEUFT *SPECTRUM GX*	**HEUFT *FinalView FO, FO6***
HEUFT *SPECTRUM LX*	**HEUFT *TORNADO***
HEUFT *SPECTRUM XY*	**HEUFT *canLine***
HEUFT *InLine IN, IR, IS*	**HEUFT *spotter SF***

All electrical connections to the customer‘s devices must be potential-free.

All output signals of the HEUFT *SPECTRUM* devices are provided with the potential separation by HEUFT. The input signals to the HEUFT *SPECTRUM* devices must be provided potential-free by the customer.

General information regarding the EMERGENCY STOP signal exchange

An EMERGENCY STOP signal interface with two EMERGENCY STOP outputs and two EMERGENCY STOP inputs is available if the HEUFT machines are equipped with EMERGENCY STOP control devices (red mushroom-shaped button with a yellow background).

The EMERGENCY STOP is an emergency command device for safely stopping the drive systems. In comparison the term "EMERGENCY OFF" is used for emergency command devices which stops risks which are of an electrical origin (e.g. X-radiation or high voltage). The EMERGENCY STOP control devices in HEUFT machines can possibly fulfil both functions.

A corresponding signal can be emitted from the EMERGENCY OFF safety circuit if it is the customer's wish to also extend this safety circuit as an EMERGENCY STOP to the surrounding conveyors.

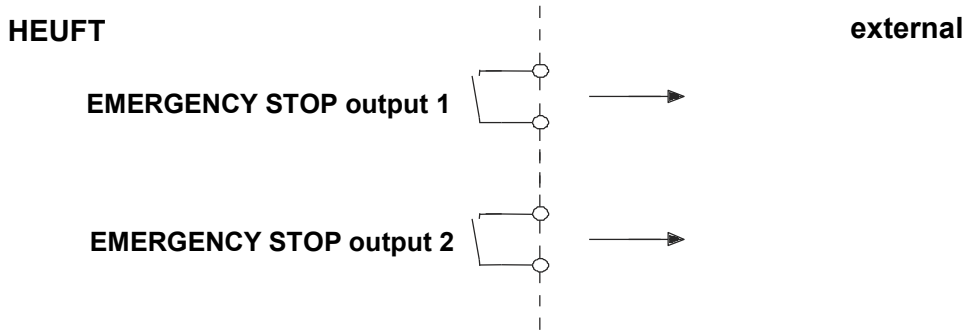
The EMERGENCY STOP outputs as well as the EMERGENCY STOP inputs are designed in accordance with EN ISO 13849-1 **Category 1 / Performance Level C**.

EMERGENCY STOP outputs

The status of the EMERGENCY STOP control device (red mushroom-shaped button with a yellow background) is displayed at these outputs and not the status of the EMERGENCY STOP / EMERGENCY OFF safety relay of the HEUFT machine. This makes it possible to interconnect larger areas of the equipment without having to take a confirmation sequence into consideration.

Both outputs are designed as potential-free mechanical contacts which each have two terminals available.

Customer information No. 1.2
HEUFT signal connections to the customer's devices



Contact open	=	the EMERGENCY STOP control device has been activated (the mushroom-shaped button has been pressed)
Contact closed	=	the EMERGENCY STOP control device has been reset (the mushroom-shaped button has been pulled out)

Note

There are other output signals available in the case of certain HEUFT machines which can be optionally integrated into the EMERGENCY STOP control (e.g. a signal for confirming an external EMERGENCY STOP relay or a signal which displays the status of the EMERGENCY STOP safety relay of the HEUFT machines). (These additional outputs are not safe outputs in terms of EN 13849-1 and EN 13849-2.)

EMERGENCY STOP inputs

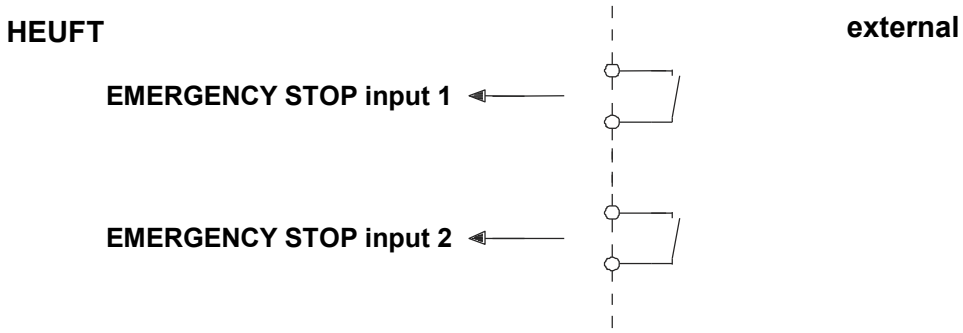
The drive systems of the HEUFT machines can be safely stopped by means of the two inputs.

The EMERGENCY STOP inputs described here also stop risks which are of an electrical origin (X-radiation or high voltage) but only as regards Category 1 / Performance Level C if the EMERGENCY STOP control devices in the HEUFT machines also have the EMERGENCY OFF function in addition to the EMERGENCY STOP function.

It makes sense if possible to allow the status of the external EMERGENCY STOP button to have an effect on the inputs as in the case of the EMERGENCY STOP outputs and not the status of the external EMERGENCY STOP safety relay so that a confirmation sequence does not have to be kept to in this case either. All the systems can then be confirmed independently of each other.

There are two terminals available for each EMERGENCY STOP input which may only be switched externally by means of potential-free contacts (short-circuited).

Customer information No. 1.2
HEUFT signal connections to the customer's devices



Input open	=	HEUFT drive systems are safely stopped / EMERGENCY STOP / EMERGENCY OFF safety relay in the HEUFT machines drops out
Input closed	=	HEUFT drive systems can be restarted / EMERGENCY STOP / EMERGENCY OFF safety relay in the HEUFT machines can be confirmed again

Technical specifications

Type:	mechanical switching contact
Operating voltage:	24 VDC (± 10 %)
Contact load:	2 A max.
Safety level:	Category 1 / Performance Level C in accordance with EN ISO 13849-1

Wiring information

Please observe the following when wiring the EMERGENCY STOP interface:

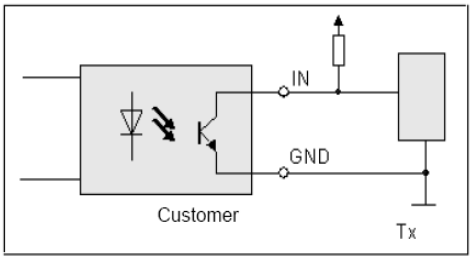
- Wiring must be carried out using fundamental and proven safety principles in accordance with the EN 13849-1 and EN 13849-2 standards.
- The voltage supply of the switching circuit at the EMEREGENCY STOP output must correspond to the protective extra-low voltage (PELV) in accordance with EN 60204 / 6.4.1. The switching circuit must be protected with a fuse of 2 A maximum (quick-acting and fusing time at 12 A <= 20 ms).
- No other switching circuits must be fed through this cable apart from the switching circuits required for the EMERGENCY STOP.
- The cable cross section must be greater than or equal to 0.34 mm².
- The cable must be shielded and the shielding must have a low-resistance connection to the protective earth conductor system.
- Signal lines should not be laid together with power cables (e.g. mains supply, motor or high-voltage cables) in cable ducts or parallel to each other as a matter of principle.

Customer information No. 1.2
HEUFT signal connections to the customer's devices

Specification of the HEUFT *SPECTRUM* input signals:

- Output signal from the customer's device : potential-free signal, reverse protection
- Switching power of the optocoupler: minimum 5 mA
- Power loss via optocoupler in the switched condition: max. 2 V
- Signal length: minimum 2 ms

- Input signal, optocoupler:



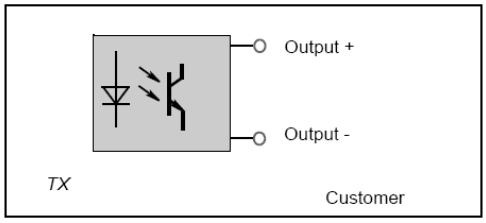
Specification of the HEUFT *SPECTRUM* output signals:

- Input signal to customer's device: potential-free and bounce-free signal, short-circuit proof

	T186-PINT Opto-output	T186-P Opto-output	T186-P Relay-output
Max. voltage [VDC]	30	30	30
Max. current [mA]	50	150	500
Max. switching frequency [KHz]	1	1	0.1

The customer's device provides the voltage at the signal output.

- Output signal, optocoupler:



Customer information No. 1.5
Types of power supply network and device connection

This Customer Information is applicable to all HEUFT devices

1. General

The German standard DIN EN 60204-1:2007 (VDE0113, part 1) which among other things determines the quality of alternating current systems in industrial plants in general is principally valid for the connection of HEUFT devices. This standard corresponds to IEC 60204-1:2005 and is thus an international standard.

We refer to the CENELEC recommendations HD472-S1 dated 04.11.1993 for operating equipment with a nominal voltage of 240 / 415 V within the European Community.

The relevant important contents of the standards listed / recommendations regarding the voltage supply are described below.

An adjustment has to be made with regard to the above-mentioned requirements if the quality of the voltage supply is not available, depending on the operating location, by means of on-site measures (separate voltage supply, transformers, voltage stabilisers, UPSs etc.).

2. Power supply specification according to DIN EN 60204-1:2007 / EN 60204-1:2006 / IEC 60204-1:2005:

Permanent voltage deviation

- Nominal voltage 115 V: +/- 10 % nominal voltage
- Nominal voltage 230 V (400 V): +/- 10 % nominal voltage
- Nominal voltage 240 V (415 V): + 6 %, - 10 % nominal voltage*

Mains frequency deviation

- Permanent: +/- 1 % rated frequency
- Momentary: +/- 2 % rated frequency

Voltage type: sinus

Harmonic oscillations, harmonic distortion**

- Total of 2^{nd} to 5^{th} harmonic oscillation: ≤ 10 %
- Total of 6^{th} to 30^{th} harmonic oscillation: ≤ 2 %

Voltage cutoffs: ≤ 3 ms (a maximum of once per second)

Voltage drops: ≤ 20 % peak voltage for a maximum of 1 period (a maximum of once per second)

* This information complies with the recommendations of CENELEC HD472-S1.

** These values describe the ratio between the effective voltage of the harmonic oscillations specified and the total effective voltage.

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2.1 Information

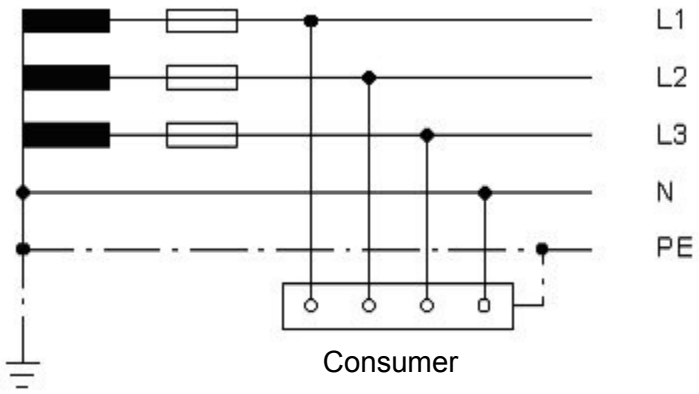
A UPS (Uninterruptible Power Supply) must be connected between the HEUFT device and the supply network if the quality of the customer's electric power supply does not meet the specifications mentioned.

A second supply line has to be laid to the device if the device is partially connected to a UPS (only to stabilise the control components).

3. Three-phase current connection

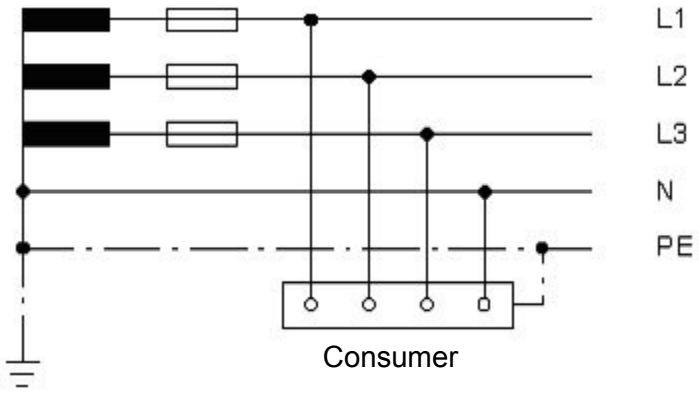
HEUFT devices are designed for connection to a TN-S network as described in 3.1. by default. Measures have to be taken on site in order to connect our device if such a network is not available.

3.1 TN-S network (400 V / 230 V)



3.2 Other three-phase systems

A three-phase transformer has to be provided on site for other types of three-phase systems. A TN-S network is then produced as from the transformer.

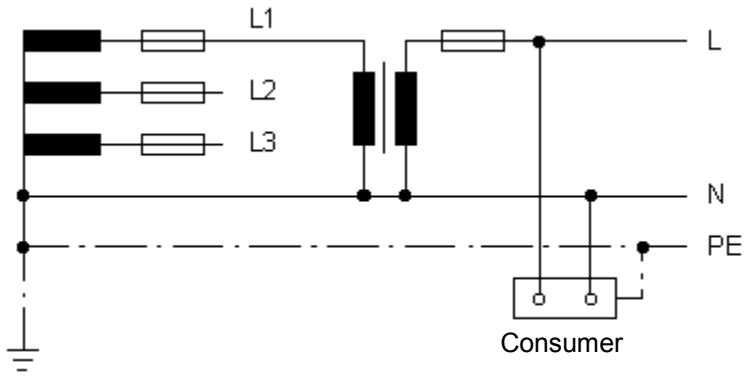


It has to be checked on site whether such a network is permissible on site.

4. Single-phase connection of 230 V devices

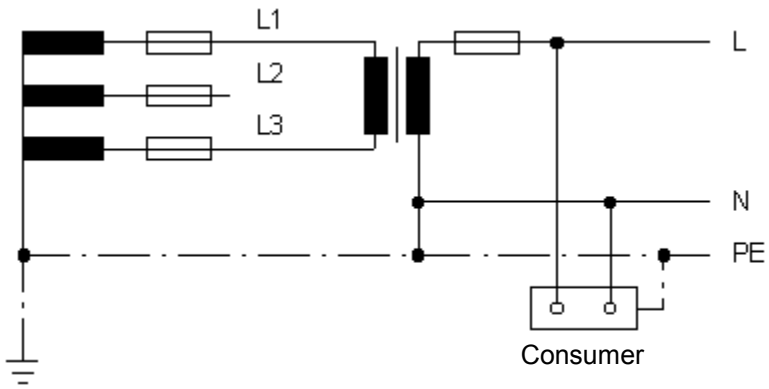
Some devices require an additional single-phase 230 V power supply or only require one. For this one of the three phases L1 / L2 / L3 can simply be used in the TN-S networks as described in 3.1. The following measures have to be taken in other cases.

4.1. TN-S network – however the voltage to the neutral conductor deviates from the required voltage (230 V / 115 V)



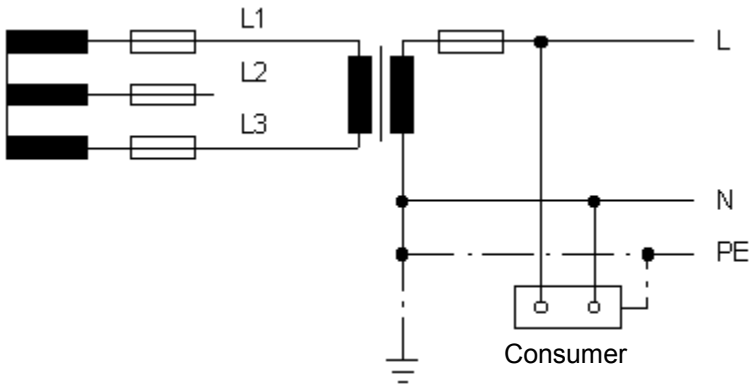
A transformer has to be provided on site in a TN-S network which supplies the necessary voltage of 230 V / 115 V as in the above diagram. The transformer can also be an autotransformer.

4.2. TN-S network without a neutral conductor



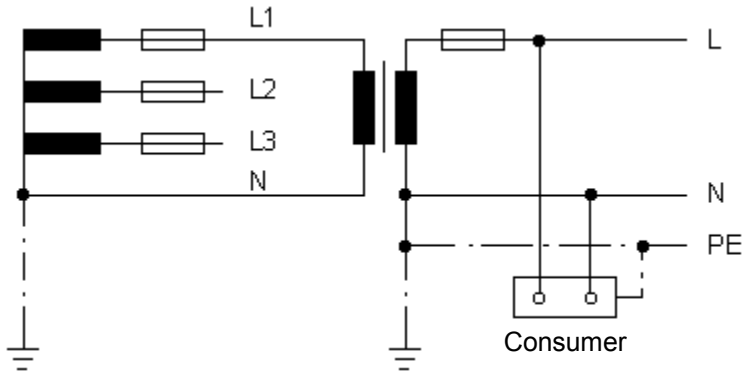
Directly connecting the HEUFT devices to two external conductors is not permissible if there is no neutral conductor available even if the voltage is within the specified voltage limits. A transformer has to be used as in the above diagram.

4.3. IT network



A transformer has to be used as in the above diagram. A TN-S network is then produced as from the transformer. A suitable earth has to be provided. It has to be checked on site whether such a network is permissible on site.

4.4. TT network



TT networks have a neutral conductor but the PE conductor is not run separately in the system. A transformer has to be used as in the above diagram. A TN-S network is then produced as from the transformer. Other possible options are disapproved of for safety reasons.

Customer information No. 6.3
HEUFT rejection systems - crates

This customer information applies to the following rejection systems:

HEUFT *maxi-flip* **HEUFT *xcase***
HEUFT *maxi-laner* **HEUFT *xtray***

Ambient conditions

- The gap between the rollers of a roller conveyor must be at least 20 mm but no more than 30 mm.
- The friction of the rollers in the area of the rejector must be slight i.e. rubber coated rollers must not be used in this area.
- The cases must be transported smoothly. Bottles must be firmly in the case.
- The speed between the detection and the rejector must be constant and must not vary.
- The minimum gap between cases must not be fallen short of and the maximum conveyor speed must not be exceeded. Corresponding values will be determined by HEUFT during the project planning stage.
- In the case of the HEUFT *maxi-flip* and the HEUFT *maxi-laner*: The frictional resistance must be minimised when using conveyor chains. The use of conveyor lubrication is recommended.

Installation

- There must be a suitable guide rail which separates the stream of good cases and the stream of faulty cases at least 800 mm after the rejector.
- Assembly and wiring material are included in the scope of delivery of the rejection systems.
- A maximum of two case rejection systems can be installed per line. There should be a gap of at least 1 m between the systems.

Note

- It must be ensured that the area of the rejector remains free of jams by taking suitable conveyor control measures.

Additional requirements due to the HEUFT *logic* case check with rejection system:

- The gap between the cases in the area of the detection and the case pusher must be at least 150 mm at a conveyor speed of 0.5 m/s. A larger gap is required at higher speeds.
- The gap between the detection and the rejector must be less than the width of a case.

Customer information No. 6.3
HEUFT rejection systems - crates

Compressed air for rejection systems

- Air connection: minimum 5 bar, maximum 10 bar
  1.27 (½") connection, water- and oil-free
- Air quality: in accordance with ISO-DIN 8573-1
  Instrument quality (clean, dry, oil-free)

Dust particles	Quality category 4
Water	Quality category 3
Oil content	Quality category 4

- Air consumption:

HEUFT *maxi-flip*	approx. 0.7 standard litre per rejection
HEUFT *maxi-laner*	approx. 0.7 standard litre per rejection
HEUFT *xcase*	approx. 0.7 standard litre per rejection
HEUFT *xtray*	approx. 1.5 standard litre per rejection

The compressed air consumption depends, among other things, on the weight of the product and the conveyor speed. The values specified here refer to the maximum stroke.

Customer information No. 7.4
HEUFT X-ray

Legal foundations

A licence is always required for operating X-ray equipment. The licensing procedure normally takes several weeks and is a requirement for the commercial use of the device along a production line. An X-ray device may be installed and tested by a HEUFT technician, specially trained in handling X-ray equipment, without a licence but it has to be taken out of service afterwards. Therefore it is important that the licence is applied for and the technical qualification is achieved as a radiation protection officer / the course completed **before** the machine is delivered.

Under German law a **radiation protection officer** must be appointed in writing in accordance with **occupation group 3** for operating checking equipment with X-rays. Various institutions offer courses in order to acquire the necessary technical qualifications of a radiation protection officer.

Note: Current training courses and providers of radiation protection courses can be found on the website of the "Bundesamtes für Strahlenschutz" (the German federal Office for Radiation Protection): http://www.bfs.de/DE/home/home_node.html

A certificate of the technical qualifications together with the technical documents from the HEUFT company and the application for the operating licence have to be submitted to the respective authorities. The supervisory authorities provide sample application forms on their Internet pages in many federal states.

It must be checked before using HEUFT devices with X-ray components that the functions, operating parameters, safety standards and the documentation including the device marking regarding the X-ray modules comply with the current country-specific requirements in each case.

Type approval

German legislators have introduced the type approval procedure in order to expedite the licensing procedure. This procedure is used for devices which always have the same construction and have been approved. The German authorities simplify the licensing of "known" X-ray devices in this way. The Federal Office for Radiation Protection tests that the construction is correct and the manufacturer receives a type approval.

A licence is not required for commissioning type-approved devices but the operator has to report the intended use of X-ray equipment with type approval at least three days before commissioning. The advantage of the type approval is therefore the fact that commissioning can be carried out faster. A type approval reveals nothing about the quality or safety of an X-ray device. However notice regarding intended use must be given in accordance with § 4 of the X-ray ordinance.

Notice regarding the intended use of an X-ray apparatus must be submitted to the local trade board together with the certificate of qualification acquired, the approval certificate (this is sent with the order confirmation), the unit check for the generator (supplied with the device) and the acceptance certificate regarding local radiation protection by an officially appointed inspector (e.g. the TÜV).

Customer information No. 7.4
HEUFT X-ray

Documents available about HEUFT X-ray equipment

Technical documents regarding HEUFT X-ray equipment can be obtained from the HEUFT company. The responsible official at the authorities can take the specific information from these documents. These documents are partly available in the language of the country.

The documents are specifically for a device and are revised in the case of modifications to the devices.

Manufacture

A compulsory test record is drawn up for each X-ray generator during the HEUFT in-house device acceptance. This **unit check** is then sent by email to the person placing the order afterwards.
The operator must forward the unit check to the supervisory authorities responsible for him.

The serial number of the X-ray generator and therefore the unit check can only be forwarded after in-house manufacture and the concluding acceptance.It is not possible to reserve numbers and with it the advanced delivery of the document.

Commissioning

The **HEUFT service technician** responsible must provide training regarding the correct and safe handling on the basis of the operator's manual when handing the device over to the customer. At the same time a report is drawn up which the **operator** should forward to his authorities. The contents of the report are e.g. the successful implementation of a mutual safety check on the device. The extent of the report has to be determined in each case in accordance with the legal requirements of the country of implementation.

This handover report must include a measurement of the dose rates at particular points which are of importance for the safety of the operator for all HEUFT devices with a higher radiation intensity (e.g. the HEUFT *eXaminer*).

Official inspection regarding local radiation protection

An independent test centre checks the proper installation and draws up an inspection report **on behalf of the operator** upon completion of installation and commissioning (in Germany e.g. the TÜV, technical inspection agency, or a similar organisation).

An independent test centre checks the proper installation and draws up an inspection report **on behalf of the operator** upon completion of installation and during the commissioning of the first brand (in Germany e.g. the TÜV, technical inspection agency, or a similar organisation).

The independent inspection of the device is generally the customer's official proof for his employees and his supervisory authorities that handling the X-ray equipment is safe.

Replacing the X-ray generator

Replacing the X-ray generator is an intervention in the device which may only be carried out by a trained person (e.g. a **HEUFT service technician**).

The **operator** arranges another inspection by an expert after it has been replaced as in the case of initial commissioning.

The valid unit check for this part is delivered to the customer with the spare part. It is required for the documentation relating to the device modification.
The shortened licensing procedure is used again upon presentation of a type approval.

Retrofitting

The same measures have to be carried out by **HEUFT service technicians** for all retrofits which concern the X-ray function or the passive/active safety equipment of the device as in the case of a new installation.

The **operator** receives adapted technical documents from the HEUFT company and has to apply for an extension to his operating licence and go through the procedure of calling in expert advice again.

The resale of used devices

Please note that there are additional legal requirements for the sale, import or commissioning of X-ray devices when reselling abroad. Our companies in the individual countries which have been trained and licensed accordingly will be pleased to help you with information and import formalities.

Customer information No. 12.1
HEUFT *HLAN* network - HEUFT *PILOT*

HEUFT *PILOT* software

The HEUFT *PILOT* software is the standard operator interface for all HEUFT *SPECTRUM TX* devices.

Each HEUFT *SPECTRUM TX* device includes a customer CD. It is possible to install a HEUFT *PILOT* on any PC with this CD.

All manuals and spare parts lists (provided they are part of the scope of delivery) can be viewed with the HEUFT *PILOT* software installation even without a device connection i.e. offline.

The HEUFT *PILOT* is network-compatible and can therefore access a real HEUFT *SPECTRUM TX* device.

Ambient conditions

- A PC with the Ethernet TCP/IP LAN network connection is required in order to access a HEUFT *SPECTRUM TX* device via a network.

System requirements

- Processor Pentium IV with 2000 MHz and 1 GB working memory
- 1 GB available memory on hard disk
- CD-ROM drive
- ETHERNET 100 BaseT network card
- Operating system Microsoft Windows ™ 2000, XP or Windows 7

Please note!

Device licences

Each HEUFT *SPECTRUM TX* device which is to be accessed via the network by means of the HEUFT *PILOT* software must have a sufficient number of licences (HBGZUGPIL). The same amount of licences is required as simultaneous accesses.

Installation

The installation and commissioning of the HEUFT *PILOT* software is carried out by the customer.

Reliability values — No. 10.2
Full Case Check HEUFT *SPECTRUM GX*

The detection properties listed below are reference values. Samples of the customer's original crates are required in order to check their validity in individual cases.
The values are achieved regularly with the Full Case Check HEUFT *SPECTRUM GX* provided that this is operated in accordance with the HEUFT care and maintenance instructions and equipped with the detections mentioned below. Faults which vary in size or type from those listed below may cause deviating detection results.

Detection	Fault type	Fault size		Good Container	
		Reliability value (ES) *A)	Undefined inspection reliability	False rejection rate (FAR) *B)	
Crate colour	Deviating basic colour	≥ 99.9 %	Colour shade of the same basic colour	< 0.1 %	*3)
Logo detection	Deviating logo structure	≥ 99.0 %	Comparable logo structure	< 0.1 %	*4)
Presence check - inductive	Completeness (missing container)	≥ 99.5 %		< 0.1 %	*5) *6)
Presence check - optical	Completeness (missing container)	≥ 99.5 %		< 0.1 %	*6) *7)
Presence check - ultrasound	Completeness (missing container)	≥ 99.5 %		< 0.1 %	
Presence check - X-rays	Completeness (missing container)	≥ 99.5 %		< 0.1 %	*1) *2)
Shape measurement Body diagonal	Measurement of the space diagonals > +/- 1,0 cm	≥ 99.5 %	Space diagonals 0,5 cm < x < 1,0 cm	< 0.1 %	
Barcode detection	Faulty barcode	≥ 99.0 %	Badly printed barcode	< 0.1 %	*8) *9)
Cardboard box check Flap position	Open cardboard box	≥ 98.0 %		< 0.1 %	*10)

Reliability values No. 10.2
Full Case Check HEUFT *SPECTRUM GX*

Remarks:

*1) A broken container in the crate at the height of the measuring beam is not evaluated as a fault. Only a rough underfill of approximately 50 mm can be detected.

*2) False measurements may occur if the bottles fall over or are staggered in the case of crates without compartments (e.g. pin-partition crates). This also applies to cardboard boxes without compartments.

*3) The basic colour of the crates has to be clearly different in the scanning area of the colour camera. Dirty crates, crates with stickers, logos as well as faded crate material which affect the detection are not evaluated as a fault detection.

*4) The detection of foreign logos is possible using window technology (16 windows) if the foreign logo differs in a significant area. Faded or damaged logos can also be identified using this detection provided that the damage is within the range of the 16 windows. Logos covered with labels do not necessarily result in a rejection if these reflect accordingly in the area of the measuring window.

*5) Foil on the closure may influence the measurement. It is not possible to detect the presence of containers in plastic cases because the distance between the upper edge of the case and the closure on the containers is too large. The switching distance is ≤ 40 mm. This detection can only be used for cardboard boxes.

*6) The number of sensors doubles for honeycomb cases or cases with staggered compartments when compared with a linear case.

*7) Light reflected from foam, incorrectly applied labels or the open finish of a container results in a "container present" detection. This does not count as a fault detection. It is not possible to detect whether closures are present.

*8) Only possible for EAN 8 or EAN 13 barcodes. Additional barcode types can only be tested upon request and after providing samples.

*9) Minimum module width = 0.24 mm with a minimum barcode length of 2 cm. The scanning range of the sensor on the label is a maximum of 50 mm. The barcode must be printed on matt paper.

*10) This detection can only be used for sealed cardboard boxes.

Reliability values — No. 10.2
Full Case Check HEUFT *SPECTRUM GX*

Notes:

The technical machine availability (R_S) of the inspection device according to DIN 8743 is 99.0 %.

*A) The reliability value (RV) is defined according to DIN 8784:2013-09 and is calculated as follows:

$$RV = (B \times 100) / A$$

[B = Number of rejected faulty containers / A = Number of inspected faulty containers]

Determination of the reliability value over 1,000 faulty containers (10 individual faulty containers x 100 passes) with subsequent counting of the rejected containers.

The range of a good container needs to include the production tolerances and has to be added to the fault size definitions.

*B) The false rejection rate (FRR) is defined according to DIN 8784:2013-09 and calculated as follows:

$$FRR = (Y \times 100) / X$$

[Y = Number of false rejections / X = Number of inspected containers]

Determination of the false rejection rate over 5,000 production containers with subsequent evaluation of the rejected containers.

Rejected containers with foreign objects in the fault area (see above in columns 3 and 4 – fault size) are considered to be properly rejected and are not regarded as false rejections.

Reliability values No. 10.2
Full Case Check HEUFT *SPECTRUM GX*

Ambient conditions to be provided on site:

- The guide rail has to guide the crates safely at least 2 m in front of the device and below the detections.
- It has to be ensured that the crates do not stop below the detection or in the rejection area when there is a jam in the outfeed of the crate check or a shortage of crates.
- A steady crate flow has to be ensured before / below the detection and in the area of the rejector.
- The crates have to pass the measuring device with a minimum gap of 150 mm. The required crate gap depends on the conveyor speed and the length of the production crate. The gap actually required between the crates has to be clearly specified during the project clarification.
- A potential-free signal output is emitted at the excessive height protection detector for integration into the customer's conveyor control system when the "excessive height protection" message is displayed. Display and Confirmation have to be provided by the customer. It has to be ensured by means of the conveyor control system that restarting is only possible after the excessive height protection detector has been confirmed. The excessive height protection monitoring is not active when the empty case inspector has been switched off. The incoming crates have to be manually monitored if production takes place when the empty case inspector is switched off. Alternatively a confirmation button and a visualisation system can be requested from HEUFT.
- A flat-top chain table without an upright conveyor side frame is required in the area of the rejector in the case of a HEUFT rejection system (HEUFT *maxi-flip* or HEUFT *maxi-laner*).
- The conveyor and the rejection table have to run at the same speed (synchronously).
- The crates must not slide about as in this case a reliable rejection cannot be guaranteed.
- A constant pressure of at least 6 bar with a ½ inch connection must be provided for the HEUFT rejection system.
- Conveyor lubrication may possibly be required for a precise rejection procedure.
- A suitable guide rail has to separate the flow of good and faulty cases approximately 800 mm after the rejector.
- Samples of all the cases and bottle brands are required in order to ensure that all the detections can be implemented technically.

HEUFT USA, Inc. Service Policy

The services of an authorized HEUFT Technical Representative are available at the customer's request. HEUFT recommends installation supervision, startup, commissioning and training support by our Service Engineers. We can also provide an overhaul service for all HEUFT equipment.

A minimum of fourteen (14) days prior notice is required to accurately schedule technical personnel.

UNLESS IT IS EXPRESSLY NOTED OTHERWISE IN THE RECAP PORTION OF THE TEXT OF ANY HEUFT PROPOSAL, THE STATEMENTS AND RATES DELINEATED BELOW ARE APPLICABLE.

The charges for service by an authorized HEUFT Technical Representative are determined as follows:

1. The customer is to pay all reasonable traveling expenses incurred by the Technical Representative on the customer's behalf. These expenses include transportation to and from airports, trains, or bus depots; air, train or bus fare, auto rental, taxi or limousine fare. Traveling expenses will be billed at actual. If private automobiles are used, the rate of $0.58 cents per mile will apply.

2. The customer is obligated to pay all reasonable living expenses incurred by the Technical Representative on the customer's behalf. Lodging expenses will be invoiced at actual. Meals and incidentals will be invoiced on a $50.00 per diem basis.

3. Daily or hourly rates are as follows:

A. **Service Engineer**

1. $150.00 per hour will be charged for work performed during a normal workday (up to 8 hours). $195.00 per hour will be charged for overtime hours (over 8 hours per normal workday).

2. $195.00 per hour will be charged for work performed on Saturday (up to 8 hours). $210.00 per hour will be charged for overtime hours (over 8 hours).

3. $210.00 per hour will be charged for work performed on Sunday and/or holidays (up to 8 hours). $240.00 per hour will be charged for overtime hours (over 8 hours).

4. No work will be done on the following national holidays unless previously agreed to by HEUFT: New Years Eve, New Years Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Day after Thanksgiving, Christmas Eve, Christmas Day, Good Friday, and Easter Sunday.

5. Traveling time is chargeable at the applicable rate for the day of travel.

6. If because of local practices, or any reason beyond HEUFT's control, a Technical Representative is prevented or prohibited from working in a plant, the customer will be charged at the applicable rate for the idle hours. In such cases, the customer may either instruct the Technical Representative to proceed to their next assignment thereby minimizing additional charges; or if the customer judges the situation to be of short duration, may accept the extra expense of having the Technical Representative wait. The position of HEUFT and that of the Technical Representative with respect to local plant or trade union practices is one of strict neutrality. If a temporary union card and dues are necessary while the Technical Representative is working in the plant, the expense for this temporary card and dues is to be paid by the customer.

7. Should service stop and start times necessitate a HEUFT employee to remain on location over the weekend or at the customers request, a minimum charge of 8 hours per day at the weekend rates will be applicable. This will be considered as "On call and available hours" (example… The HEUFT technician works late on Friday and is required to return early Monday morning, requiring him to fly back on Sunday evening. It is usually more cost effective for the customer and convenient for the Technician if he remains on location.). Additionally, there is an 8 hour minimum daily charge for all non-travel days (example…The HEUFT Technician travels on Monday, works 8 hours Tuesday and Thursday but only 6 hours on Wednesday, then travels back home on Friday, Wednesday's charge will be for 8 hours even though he worked only 6 hours.).

8. The customer will be responsible for procuring all necessary approvals and documentation to ensure that the HEUFT Technical Representative complies with all local work permit regulations, especially in foreign countries.

9. It is further understood and agreed that the customer will indemnify and hold harmless HEUFT from and against any and all claims for injury and death to persons or damage to property (including cost of litigation and attorney's fees) in any manner caused by, arising from, incident to, connected with, or growing out of the work to be performed hereunder. HEUFT shall not be liable for consequential or incidental damages arising from performance of this policy.

10. The service rates are subject to change without notice.

Effective 01/01/20

HEUFT USA, INC. TRAINING SERVICE POLICY

The services for an authorized HEUFT Technical Representative for training are available at the customer's request. A minimum of fourteen (14) days prior notice is required to accurately schedule technical personnel. Should you opt to use one HEUFT trainer, a minimum of 12 hours between 8 hour training sessions is required.

Training Class held at HEUFT USA, Inc.

The charges for a training class at HEUFT USA by an authorized HEUFT Technical Representative are determined as follows:

$1,775.00 per day for 1-6 people; $155.00 per day for each additional person. This price includes training, manuals, certificate of completion and HEUFT promotional item. Breakfast and lunch are also included.

Training Class held at Customer location

The charges for a training class at a customer's location by an authorized HEUFT Technical Representative are determined as follows:

$1,585.00 per day for 1-6 people, $100.00 per day for each additional person, for classes held between the hours of 7am and 4pm Monday through Friday.

$1,925.00 per day for 1-6 people, $100.00 per day for each additional person, for classes held between the hours of 4pm and 7am, weekends and holidays.

Prices include training, manuals, certificate of completion and HEUFT promotional item.

1. $195.00 per hour will be charged for overtime hours (over 8 hours per normal working day). $210.00 per hour will be charged for overtime hours (over 8 hours) on Saturdays. $240.00 per hour will be charged for overtime hours (over 8 hours) on Sunday and/or holidays.

2. The customer is to pay all reasonable traveling expenses incurred by the Technical Representative on the customer's behalf. These expenses include transportation to and from airports, trains, or bus depots; air, train, or bus fare, auto rental, taxi or limousine fare. Traveling expenses will be billed at actual. If private automobiles are used, the rate of $0.58 cents per mile will apply.

3. The customer is obligated to pay all reasonable living expenses incurred by the Technical Representative on the customer's behalf. Lodging will be invoiced at actual. Meals and incidentals will be invoiced on a $50.00 per diem basis.

4. Traveling time is chargeable at the applicable rate for the day of travel: Monday through Friday (up to 8 hours) $150.00 per hour, $195.00 per hour overtime; Saturdays (up to 8 hours) $195.00 per hour, $210.00 per hour overtime; Sundays and holidays (up to 8 hours) $210.00 per hour, $240.00 per hour overtime.

5. No training classes will be held on the following national holidays unless previously agreed to by HEUFT: New Year's Eve, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Day after Thanksgiving, Christmas Eve, Christmas Day, Good Friday, and Easter Sunday.

A purchase order number will be required in order to schedule the class date(s).

Effective 01/01/20