



Operating manual

HDM 60/80 eco box

Item. No.: 110 700 960, 110 700 980

Important!

The operating manual is always to be read before commissioning the equipment. No warranty claim will be granted for faults and damage to the equipment arising from insufficient knowledge of the operating manual.

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1 Safety instructions

The device is a state of the art piece of equipment and has been constructed according to recognised safety specifications. It is nevertheless possible that use of the device will present hazards to the operator or to third parties, or may damage the device or other property. It is therefore essential to act in accordance with these safety instructions, and in particular with those sections identified as warnings.

Warning notices and symbols

In the operating manual, the following signs are used for highlighting important information.



Special information for economical usage of the equipment.



Special information or 'do and do not's for damage prevention.



Information or 'do and do not's for the prevention of damage to persons or equipment.

Intended use



The device shall only be used if it is in specified condition. The device shall only be used for its intended usage, in compliance with all relevant safety regulations, with awareness of the potential risks, and according to the operating manual. Any faults that may impair the safety must be rectified immediately.



The device and its components are only to be used for handling the liquids listed and the purpose described. Using the machine for any other purpose would constitute inappropriate use. The manufacturer is not responsible for any loss arising as a result of this. The risk for this is borne only by the operating company.

Organisational measures



This operating manual should always be available at the site of operation! Each person who is involved with the assembling, commissioning, maintenance and operation of the equipment must have read and understood the entire operating manual. The type plate and the warning notices attached to the device have to be observed and maintained in a fully readable condition.

Qualified personnel



The person operating, maintaining and assembling must be appropriately qualified for their work. The areas of responsibility, competences and supervision of the personnel must be precisely regulated by the operating company. If the operators do not have the required knowledge, they must be trained and instructed. The operating company must also ensure that the contents of the operating manual are properly understood by the operator.

Waters protection



The device is designed to handle water hazardous substances. The relevant regulations to protect the environment have to be fulfilled at the operating place.

Hydraulics



Only persons with special knowledge and experience with hydraulic systems are permitted to work on hydraulic parts and equipment. All lines, hoses and screw joints should regularly be checked for leaks and visible external damage. Any damage must be rectified immediately. Pressurised fluid can cause injuries and fire.

During handling oils, greases or other chemical substances the relevant safety regulations for the product must be observed!

Maintenance and Service



For maintenance works at devices for flammable and/or water endangering substances consider the regulations of the water resources law. Use only authorized service companies.

Before starting any kind of maintenance ensure that all fuel lines are pressureless, completely empty and aerated.

Any changes, modifications or additions to the device are prohibited without consent of the manufacturer. Spare parts have to fulfil the specifications of the manufacturer. This is only guaranteed by original spare parts from the manufacturer.

Electric power



Only qualified electrician or trained persons under the guidance and supervision of a qualified electrician according to electro-technical guidelines are permitted to work on the electrical equipment. Before starting any kind of maintenance or repair work ensure that the device is de-energised.

2 Technical description

2.1 Description / Intended use

The HDM eco box pump system is an electrically driven pump for the refuelling of motor vehicles and the filling of containers with diesel fuel and fuel oil el.



The pump system may be operated exclusively with diesel fuel according to DIN EN 590 or DIN 51628 and fuel oil EL according to DIN 51603-1. In particular, combustible liquids with a flash point below 55°C or liquids with a temperature above their flash point must not be pumped!

The device comprises the delivery system fully mounted in a sheet steel housing. The main components are the feed pump, a flow meter, the dispensing hose with automatic nozzle and an automatic dispenser for controlling the dispensing procedure.

The used HDA eco automatic dispenser is optimised for the administration of small and medium-sized vehicle fleets and enables the administration of users and vehicles. Please also refer to the HDA eco operating manual, which is provided separately.

The installed pumping equipment is designed for a reliable performance with a maximum annual consumption of 150.000 litre of fuel. Users with higher annual consumption rates should select a device from the Horn-Tecalemit dispenser range that is better suited to their application.

2.2 Versions

The pump system HDM eco Box is available in the following variations:

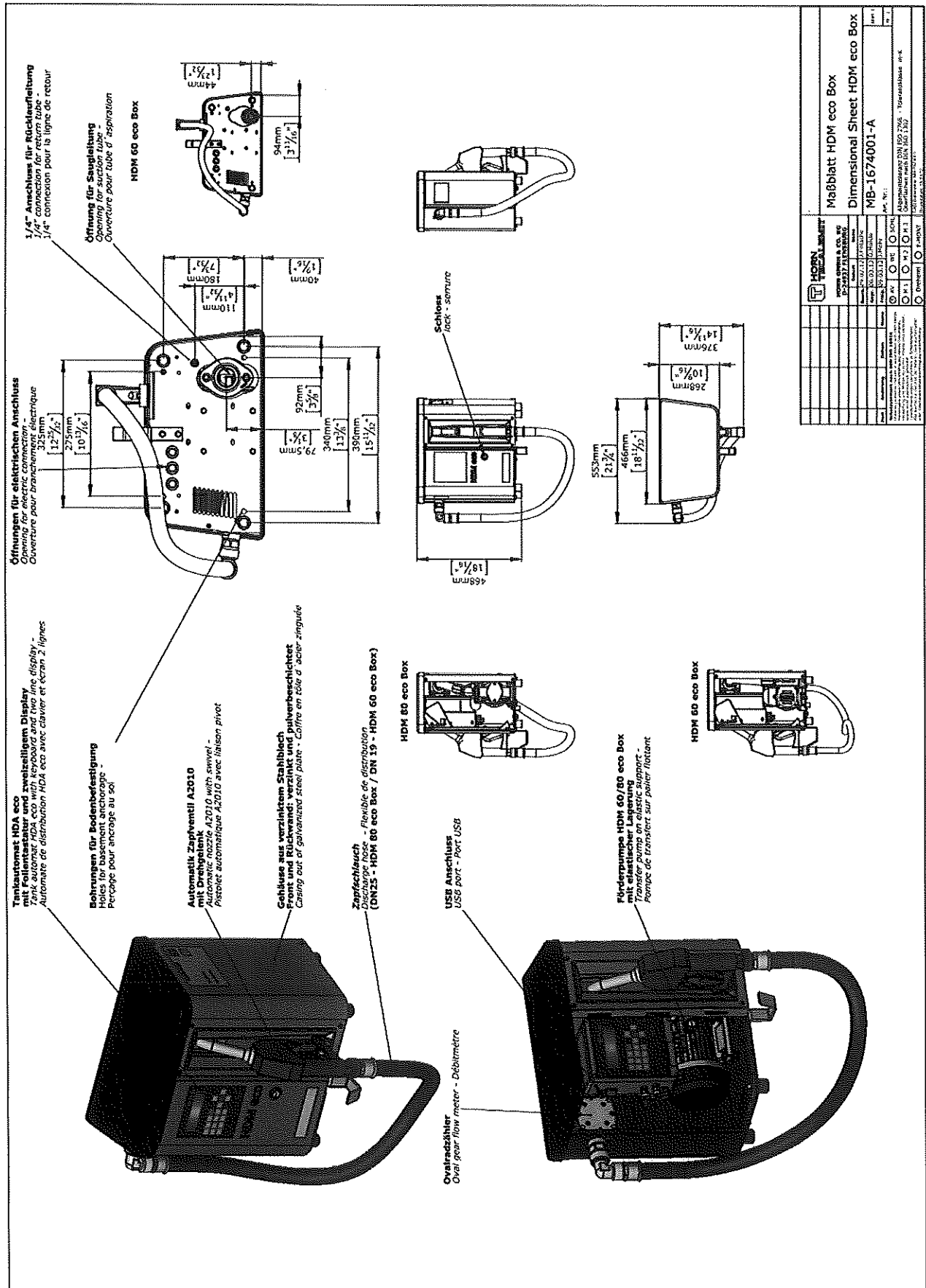
HDM 60 eco Box Art. Nr.: 110 700 960

HDM 80 eco Box Art. Nr.: 110 700 980

2.3 Technical data

| | HDM 60 eco box | HDM 80 eco box |
|-----------------------------------|-------------------------------|-------------------------------------|
| Dimensions (WxHxD) | approx 550x470x340mm | |
| Media temperature | -10°C bis +35°C | |
| Ambient temperature | -20°C bis +55°C | |
| Suction connection | G1" internal thread | G1 1/4" flange with internal thread |
| Nominal suction height | | 3,5m |
| Rated delivery rate | approx. 55 L/min | approx. 75 L/min |
| Voltage | | 230V 50Hz |
| Power input | 0,5kW | 0,8kW |
| Protection class | | IP 54 |
| Viscosity range | > 1mPa s bis 20 mPa s at 20°C | |
| * depending on systemandviscosity | | |

2.4 Dimensional drawing



2.5 Accessories

The following accessories are available for the HDM eco box dispenser:

| | | |
|--------------------------------------|--|-----------|
| Wall mounting bracket HDM eco box | | 233400374 |
| Adjustment foot kit HDM eco box | | 233400375 |
| Suction hose kit HDM 60 eco box | | 234338003 |
| Suction hose kit HDM 80 eco box | | 234338001 |
| | | |
| Angle check valve G1" | Siphon protection, aboveground tank, HDM 60 eco | 233400181 |
| Angle check valve G1 1/4" | Siphon protection, aboveground tank, HDM 80 eco | 233400182 |
| | | |
| Angle check valve G1" | f. underground tank, HDM 60 eco | 233400187 |
| Angle check valve G1 1/4" | f. underground tank, HDM 80 eco | 233400188 |
| | | |
| Filter including filter holder | (Installation in pressure line; including water absorber) | 233400180 |
| Bevel seat filter 1" | | 233400185 |
| Bevel seat filter 1 1/4" | | 233400186 |

3 Assembly instructions

Before assembling and commissioning the device, check that the equipment is complete and undamaged.

Be aware and follow the regulations of health and safety.



Commissioning of incomplete or damaged equipment is not allowed!

3.1 Place / option of installation

The HDM eco box pump system is designed for outdoor operation. The place of installation must guarantee that harmful environmental influences – such as sea water – cannot attack the components.

The local regulations for installation and operation of devices for handling substances hazardous to water and environment as well as any official approvals are to be observed or obtained by the operator.

Installation, commissioning and maintenance are to be carried out by a specialist company which has ability and approval for hydraulic and electric installations.



The equipment is to be installed and operated on even and adequately stable (floor) surface. In case of limited deviations in height it is possible to use the adjustment foot kit from the accessory list. For space requirements, see the technical data.

As an alternative it is possible to use the wall bracket from the accessory list. Use only suitable fastening elements in dependency of the wall or ground.



The equipment must not be used in explosive areas!

3.2 Suction line

The suction line for the pump system is equipped with a G1" female thread (HDM 60 eco box) or rather with a G1 ¼" flange (HDM 80 eco box).

Installation of a corrugated pipe or similar compensating element between the pump flange and suction line is required for a stress-relieved connection. Otherwise damage to the lines or excessive noise generation cannot be excluded.

To avoid negative effects of sound generation or reliability take care that there is no contact between any part of the suction line and the housing.

The length of the suction pipe and the suction height has a considerable effect on the pumping capacity of the pump system. In order to obtain the optimum pumping capacity of the pump system, the suction line must be kept as short as possible (<2m).

The nominal diameter of the suction line must be at least DN25 (HDM 60eco box) or rather DN32(HDM 80 eco box).

Suctions lines with diameters of 1 ¼" may not exceed 6 m in length. The suction height should be no more than 3,5m.

For the position on top of a tank you can find a complete suction hose set in the accessory list.

For the right dimensioning of the suction pipe ask the Horn-Tecalemit service.



For all systems, pressure relief of the pump system must be possible via the suction line. No additional non-return valve without pressure relief is permitted to be installed in the suction line if no return pipe is used.



It must be ensured by the customer that no dirt can reach the meter and the pump. To guarantee this a filter must be installed in the suction pipe by the customer. (A suitable filter you can find in the accessory list)



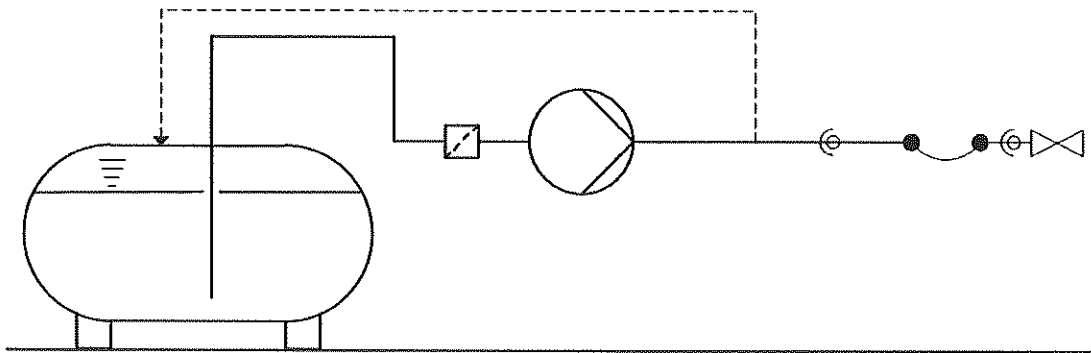
It must be ensured by the customer that no rise in pressure above 1,5bar is possible, for example, due to thermal expansion.



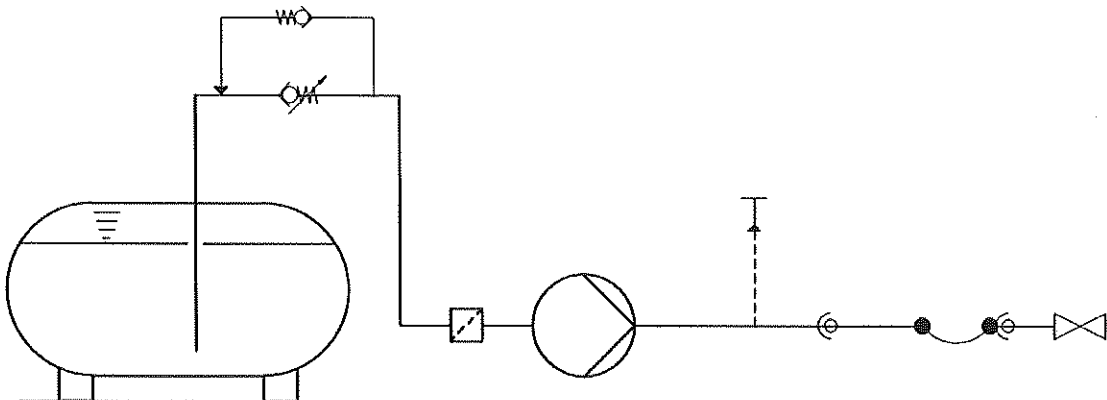
In the case of above-ground tanks, a suitable anti-syphon valve or return pipe must be installed by the customer. This avoids environmental damages by unintentional emptying of the tank.

In the following diagrams you can see the possible variants of installation.

1. Standard case: Installation above fluid level with DN10 return pipe (customer installed)

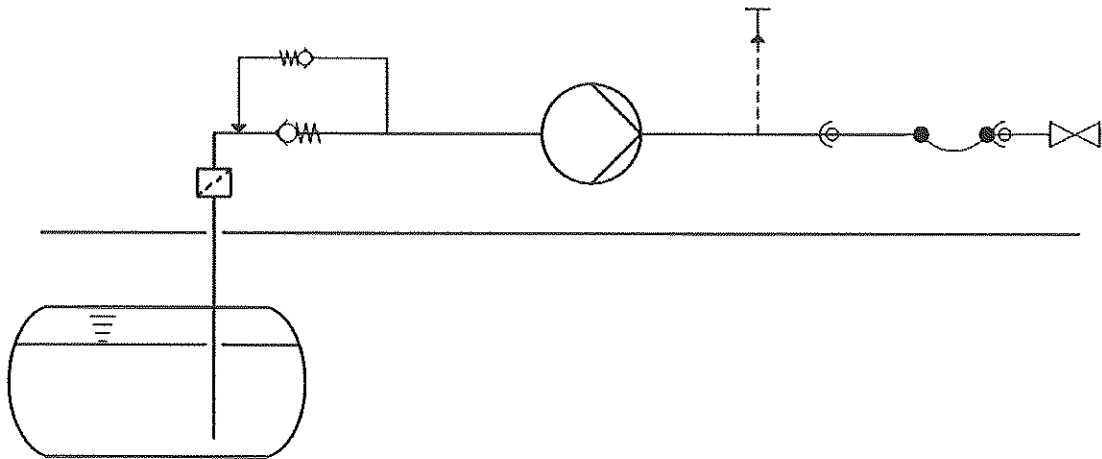


2. Special case: Installation below fluid level. For this kind of installation an angel check valve with preselected suction pressure and pressure release is necessary and recommended. G1" - 233400181 or G1 ¼" - 233400182



Special case: Installation with buried tank. For this kind of installation an angel check valve and pressure release is also recommended. This avoids the breakdown of the liquid column in the suction line.

G1" -233400187 or G1 ¼" - 233400188



3.3 Electrical connection



Work on the electrical equipment of the device may only be carried out by a qualified electrician or by trained persons under the guidance and supervision of a qualified electrician according to electro-technical guidelines.



For the failure-free operation, an electrical connection from the distribution box with residual current circuit breaker must be used!



'Protective earth' *must* always be connected.

The power supply is to be connected according to the circuit diagram shown in the HDM eco operating manual.

Data interfaces and floating switches / fill level probes may also be connected to the HDA eco. For more information, please refer to the HDA eco operating manual.

4 Commissioning

4.1.1 First and subsequent priming

The pump is a self-priming vane-cell pump. For commissioning, therefore, all that is required is to carry out a 'normal refuelling' as described in section Fehler! Verweisquelle konnte nicht gefunden werden., in which medium is sucked out of the tank. In order to prevent damage to the pump and seals, it must be ensured that the pump does not run dry for an unnecessarily long period. A normal priming procedure should not take longer than 2 minutes. If the medium has not been primed within this time, the suction line must be inspected for leaks and the function of the return pipe must be checked.

Unnecessarily long dry running (> 1 min) has to be avoided since otherwise important components may be destroyed.

Approx. 30 litres should be discharged into a collecting vessel to ensure that any air bubbles in the suction line are thoroughly flushed out. Dispose of this amount as flushing fluid.

5 Operation

The following must be observed for normal operation:

- ! **Avoid dry running (>1min).**
- ! **A defective hose can cause contamination.**
- ! **If the nozzle is closed and the pump is filled with medium, the pump may be operated for a maximum of 2 minutes, otherwise excessive heating up may occur, resulting in the destruction of important components.**
- ! **After the filling procedure, the nozzle must be hung up in the nozzle holder and the hose protected against being driven over by hanging it on the hose holder.**
- ! **Only vehicle tanks and suitable containers may be filled. The dispensing procedure must be supervised.**

To draw off fuel in normal operation, proceed as follows:

1. Identify yourself at the dispensing station as described in the HDA eco operating manual in order to activate the station.
2. Switch on the pump by drawing the nozzle.
3. Put the nozzle into the container or the vehicle tank.
4. Open the nozzle until the desired quantity has been dispensed.
5. Replace the nozzle to the nozzle holder. The electric pump switches off automatically.

Please follow the nozzle operation manual or section 9 as well.

6 Emergency operation

HDM eco box pump systems are equipped with an emergency operation mode which enables emergency operation of the pump, if the HDA automatic dispenser unit is not functional.

To do this, proceed as follows:

- Open the housing with the key.
- Activate the emergency operation mode on the underside of the HDA eco. The filling pump starts up automatically.
- Implement the tanking process.
- Immediately after completing the tanking process, the filling pump must be deactivated by switching off at the emergency operation switch
- To protect from unauthorised use, the housing must be closed after each tanking process.

7 A2010 nozzle

7.1 Description

The HDM eco dispenser is equipped with an automatic nozzle of the type A2010. It is an automatically closing full-hose nozzle for dispensing the liquids specified above. The A2010 automatic nozzle has been tested in accordance with the DIN EN 13012 standard.

The standard features of the nozzles include: a safety switch-off and a covering that protects against wear and cold conditions.

Moreover, the type A2010 nozzles feature a 3-stage holding clip for the control lever and a spring around the outlet pipe to lock the latter in the tank filler pipe.

Other nozzles can also be used as special equipment. The corresponding operating manuals are to be followed for these.

7.2 Intended use



The automatic nozzles are manufactured state of the art and failsafe.

However these products may pose great risk when not used according to specifications.

Persons concerned with assembly, commissioning, maintenance and operation of the automatic nozzle must have read and understood the entire manual.



The A2010 automatic nozzles are certified exclusively for dispensing diesel fuel in accordance with DIN 590 or DIN 51628, biodiesel (RME) in accordance with DIN EN 14214 and fuel oil EL in accordance with DIN 51603-1.



Using the machine for any other purpose would constitute inappropriate use. The manufacturer accepts no liability for resulting damages; the risk shall be borne by the operating company alone in such cases.

Intended use also means complying with the assembly, commissioning, operating and maintenance conditions specified by the manufacturer.

The local safety and accident prevention regulations apply to the operation of the automatic nozzles.

Use extends to:

- Dispensing installations at petrol stations (in Germany: TRbF 40, No.4.1.1.6 and TRWS 781-2)

- Filling of mobile containers and fuel tanks of working machinery outdoors (in Germany: TRbF 30, annex 4)
- Filling single tanks with a capacity of up to 264 gallons for the storage of diesel fuel and heating oil (in Germany: TRbF 20, no. 9.3.2.3, section 3)

7.3 Function / safety equipment

The closing valve of the A2010 automatic nozzle can only be opened manually using the control lever. An automatic shutdown occurs as a result of negative pressure or shaking when

- the tank is full, i.e. fuel fills the sensor jet on the outlet pipe.
- the nozzle is held vertically (see fig. B).
- the nozzle with locked control lever falls down.

Switching-off can also be performed manually by releasing the holding clip (if present) on the control lever.

7.4 Operating instructions

The A2010 automatic nozzles are ready for use. No adjustment or lubrication needs to be carried out.



Smoking is generally prohibited, also when drawing off diesel and heating oil EL. Sources of ignition, such as fire, flying sparks etc., must be eliminated.

1. Insert the outlet pipe into the tank filler pipe to the extent that it will remain securely in the tank filler pipe (see fig. A). This also ensures that the nozzle shuts down when the fuel tank is full.
2. For product variants with a holding clip guide the latter towards the protective bracket and latch the control lever.

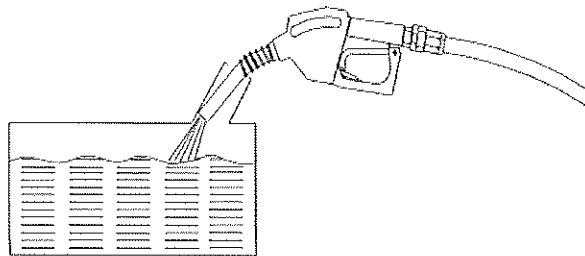


Fig A

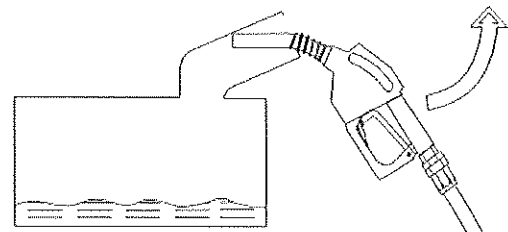
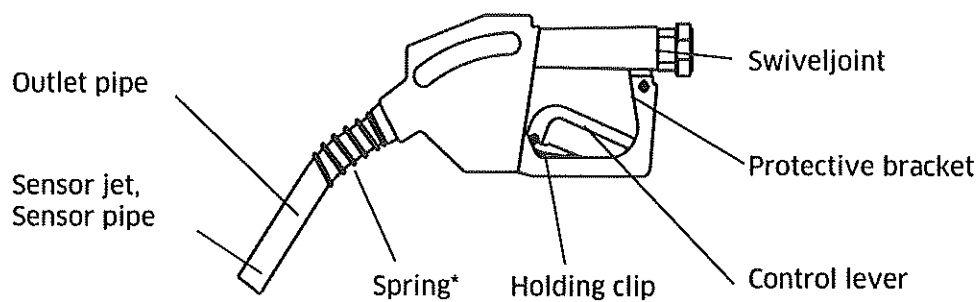


Fig B

3. Once the nozzle has automatically shut down, tilt the nozzle towards the tank for a few seconds until the last drops have dripped out of the outlet pipe. This is also to be recommended when the filling procedure is ended manually.
4. If the nozzle can only be locked as shown in fig. B, it is not possible to fill the fuel tank. The nozzle shuts down immediately. Guide the nozzle in the direction of the arrow (see fig. B) to a position as shown in fig. A. The nozzle must be held in this position throughout the filling procedure. Items 2 and 3 apply accordingly.

! **If small amounts are re-filled manually and when filling with the control lever locked, the volume flow may be less than the minimum allowed. In this case, the automatic shutdown of the nozzle can no longer work reliably! The fuel tank may be overfilled.**

! **The filling process must be supervised even when using an automatically-closing nozzle!**



8 Spare parts

Housing, see drawing ET-1674001

| | | |
|----|---|-----------|
| 10 | Housing including door | 816740001 |
| 20 | Hose holder, complete | 816748004 |
| 30 | Door, complete | 816740003 |
| 40 | Nozzle holder with nozzle switch (including screws) | 816658006 |
| 50 | Plastic cover including screws | 816748001 |
| 60 | Lock including 2 keys | 816748002 |

Hydraulic system, see drawing ET-1674002

| | | |
|-----|--|-----------|
| 10 | Pump, HDM 80 eco, with attachments | 816740002 |
| 20 | Rubber buffer set, pump support | 816748007 |
| 30 | Connection hose HDM 80 eco | 421301540 |
| 40 | Pump, HDM 60 eco, with attachments | 816740002 |
| 50 | Return pipe HDM eco box | 816748005 |
| 60 | Connection hose HDM 60 eco (BSP Thread) | 421301560 |
| 70 | Threaded part (BSP Thread) | 516670004 |
| 80 | Clamp ring | 516670005 |
| 90 | Oval gear meter, FMOG-100 | 916670001 |
| 100 | Flange for wall opening | 516670006 |
| 110 | Seal & screw set for meter installation | 816748006 |
| 120 | Swivel joint for wall opening G1" IA BSP | 616650008 |
| 130 | Elbow 90° G1" BSP | 406000950 |
| 140 | Dispensing hose, DN19 4m | 421202250 |
| 150 | Dispensing hose, DN25 4m | 421301100 |
| 160 | Swivel joint for nozzle 1" I - 3/4" A | 616650006 |
| 170 | A2010 nozzle | 405301800 |

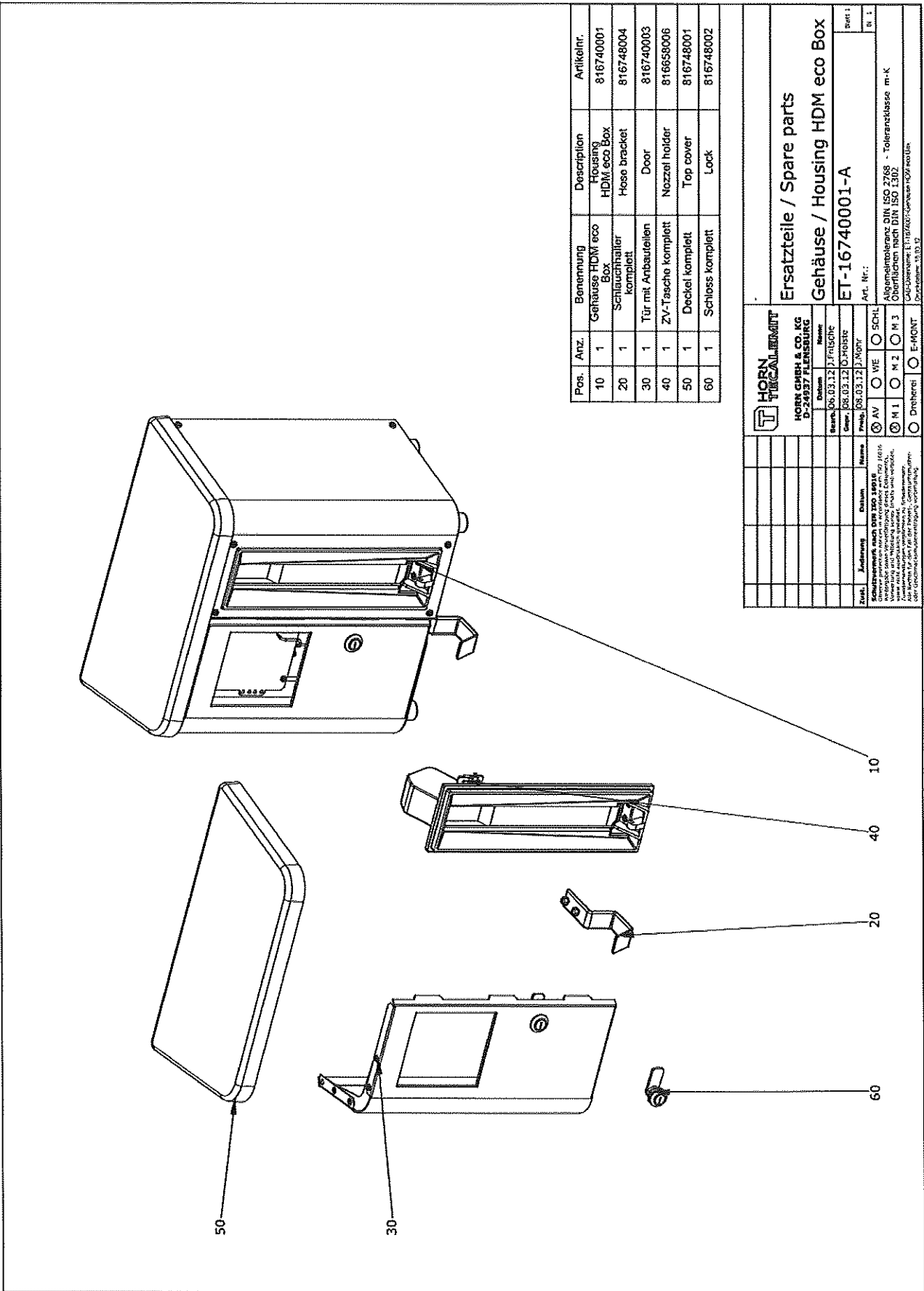
Electronic system, see drawing ET-1670001

| | | |
|----|--|-----------|
| 10 | PCB, HDA eco automatic dispenser | 816708004 |
| 20 | USB cover set | 816708002 |
| 30 | HDA eco cover including keyboard membrane & RFID antenna | 816708003 |
| 40 | Buffer battery (exchange every 5 years) | 450600900 |
| 50 | Fuse, HDA eco | 450506200 |

Signs

| | |
|------------------------|------------|
| Type plate, HDM 60 eco | 420004171* |
| Type plate, HDM 80 eco | 420004172* |

* Please indicate the serial number, year of manufacture and features of the dispenser when ordering type plates



| Pos. | Anz. | Benennung | Description | Artikelnr. |
|------|------|-------------------------|---------------------|------------|
| 10 | 1 | Gehäuse HDM eco Box | Housing HDM eco Box | 816740001 |
| 20 | 1 | Schlauchhalter komplett | Hose bracket | 816748004 |
| 30 | 1 | Tür mit Anbauteilen | Door | 816740003 |
| 40 | 1 | ZV-Tasche komplett | Nozzel holder | 816658006 |
| 50 | 1 | Deckel komplett | Top cover | 816748001 |
| 60 | 1 | Schloss komplett | Lock | 816748002 |

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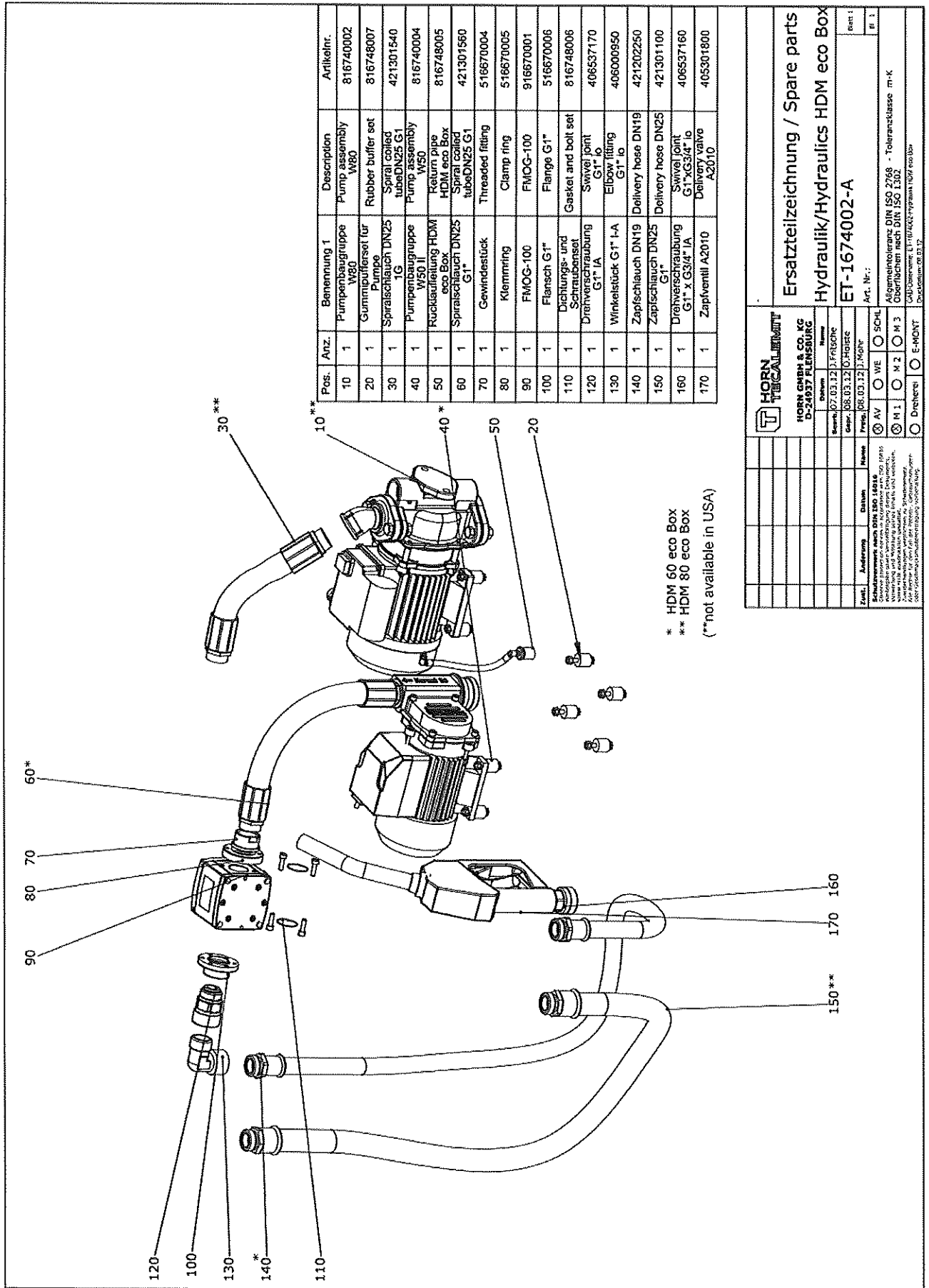
Bestell-Nr.: 06.03.12, 07.11.01
 Serien-Nr.: 06.03.12, 07.11.01

AV WE SCHL
 M1 M2 M3
 Drehbetrie E-MONT

Art. Nr.:
ET-16740001-A

Ersatzteile / Spare parts
 Gehäuse / Housing HDM eco Box

Algemeintoleranz DIN ISO 2768 - Toleranzklasse m-K
 Oberflächen nach DIN ISO 15005
 Capabilities: 1.16740001-001.eco31
 Zeichnung: 01.02.12



* HDM 60 eco Box
 ** HDM 80 eco Box
 (**not available in USA)

| Pos. | Anz. | Benennung 1 | Description | Artikelnr. |
|------|------|------------------------------------|-----------------------------|------------|
| 10 | 1 | Pumpenbaugruppe W80 | Pump assembly W80 | 816740002 |
| 20 | 1 | Gummipuffer für Pumpe | Rubber buffer set | 816748007 |
| 30 | 1 | Spiralschlauch DN25 1G | Spiral coiled tube DN25 G1 | 421301540 |
| 40 | 1 | Pumpenbaugruppe W50 II | Pump assembly W50 | 816740004 |
| 50 | 1 | Rücklaufleitung HDM eco Box | Return pipe HDM eco Box | 816748005 |
| 60 | 1 | Spiralschlauch DN25 G1* | Spiral coiled tube DN25 G1 | 421301560 |
| 70 | 1 | Gewindestück | Threaded fitting | 516670004 |
| 80 | 1 | Klemmring | Clamp ring | 516670005 |
| 90 | 1 | FMOG-100 | FMOG-100 | 916670001 |
| 100 | 1 | Flansch G1" | Flange G1" | 516670006 |
| 110 | 1 | Dichtungs- und Schraubenset G1" IA | Gasket and bolt set | 816748006 |
| 120 | 1 | Drehverschraubung G1" IA | Swivel joint G1" IA | 406537170 |
| 130 | 1 | Winkelstück G1" I-A | Elbow fitting G1" IA | 406000950 |
| 140 | 1 | Zapfschlauch DN19 G1" | Delivery hose DN19 G1" | 421202250 |
| 150 | 1 | Zapfschlauch DN25 G1" | Delivery hose DN25 G1" | 421301100 |
| 160 | 1 | Drehverschraubung G1" x G3/4" IA | Swivel joint G1" x G3/4" IA | 406537160 |
| 170 | 1 | Zapfventil A2010 | Delivery valve A2010 | 465301800 |

HORN TUBCALMINIT
HORN GMBH & CO. KG
D-24193 FLENSBURG

Bestell-Nr.: 02.03.12 | 1.FRSRNG
 Gebr. 08.03.12 | 0.FRSRNG
 Preis: 08.03.12 | 1.FRSRNG

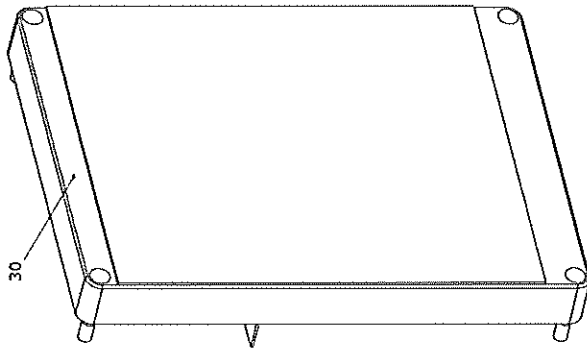
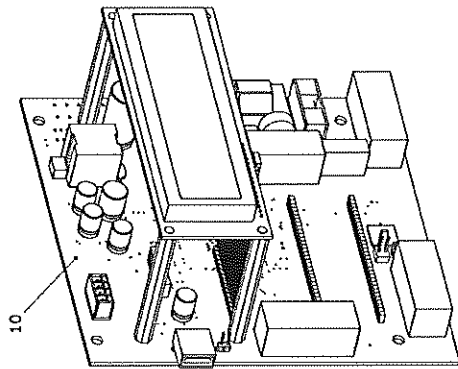
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 Schweißnorm nach DIN EN ISO 15614
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 mit einer anderen Maßnahme verbunden ist.
 Alle Rechte für den Fall der Nachbearbeitung
 oder Wiederherstellung vorbehalten.

Dreherei E-MONT

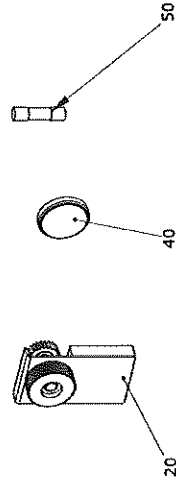
Art. Nr.:
 Allgemeineinzeichnung DIN ISO 2768 - Toleranzklasse m-k
 Oberflächennach DIN ISO 1302
 CAD-Datenname: ET-1674002-Hydraulik HDM eco Box
 Dateiname: 08.03.17

Ersatzteilzeichnung / Spare parts
 Hydraulik/Hydraulics HDM eco Box
 ET-1674002-A

10
 Platine inkl. Pufferbatterie und Programmierung
 PCB incl. battery and programming
 Platine avec batterie et programmation



Abdeckung inkl. Tastaturfolie und RFID Antenne
 Cover incl. keypad and RFID antenna
 Couverture avec clavier et antenne RFID



| Pos. | Benennung 1 | Benennung 2 |
|------|---------------------------------|-----------------------------------|
| 10 | Platine HDA eco | Ersatzteil |
| 20 | Set USB Abdeckung | Ersatzteil HDA eco |
| 30 | Abdeckung inkl. Tastaturfolie & | RFID Antenne - Ersatzteil HDA eco |
| 40 | Batterie CR2032-3V | |
| 50 | Glaselcheneinsatz | 6.3A träge |

| | | | |
|---|--------------|---|----------|
| HORN | | TECHNICAL UNIT | |
| HORN GMBH & CO. KG | | | |
| D-25357 FLENSBURG | | | |
| Bestell-Nr. | Bestell-Nr. | Art. Nr.: | Blatt n. |
| 06.05.11 | 05.11.09 | ET-1670001-B | 01 |
| Best-Nr. | Best-Nr. | | |
| 09.05.11 | 14.10.08 | | |
| Zust. | Aufzeichnung | Zeich. | |
| 0721 | 10.05.13 | NO | |
| Nachdruck ist nach DIN ISO 9001:2008 zertifiziert. Die Fertigung erfolgt unter Berücksichtigung der ISO 14001:2004 Zertifizierung. Die Fertigung erfolgt unter Berücksichtigung der ISO 13001:2004 Zertifizierung. | | | |
| <input type="radio"/> Drehfest <input type="radio"/> E-MONT | | Allgemeintoleranz DIN ISO 2769 - Toleranzklasse m-K Oberflächenbeschaffenheit nach DIN ISO 2768 2003 Tabelle EI 13.030/12.030.000 Drahtmaß nach DIN 9133 | |

9 Fault display – What to do if ... ?

- ... the pump runs, but the automatic nozzle immediately shuts off again?
 - The sensor pipe of the automatic nozzle is clogged: The nozzle must be cleaned.
- ... the pump runs, but no medium is pumped?
 - Storage tank is empty: hang up the nozzle immediately and refill the tank
 - Air has entered the suction line: hang up the nozzle immediately and fill the suction line as described above.
- ...the pump does not start up after drawing the nozzle?
 - The dispenser is disabled due to too many zero refuelling procedures: Enable the dispenser as described in sections Fehler! Verweisquelle konnte nicht gefunden werden. and Fehler! Verweisquelle konnte nicht gefunden werden. and check whether there is a technical defect.
- ...the pump runs, but insufficient medium is pumped?
 - The filter in the suction line is blocked and must be cleaned.
 - The optional fine filter at the pressure site is blocked and the filter cartridge must be changed.

Please also refer to the troubleshooting information in the HDA eco operating manual.

10 Maintenance



For any maintenance the valid and applicable accident prevention regulations must be observed. Disconnect the device from the power supply and depressurise it when carrying out maintenance work. Secure it against being unintentionally switched on. Maintenance and repair work may only be carried out by specially-trained service technicians.

Although the HDM eco dispenser is to a large extent maintenance-free, the following work should be performed regularly in order to ensure reliable operation.

10.1 Regular inspections / maintenance work

| Components | Inspections / maintenance work | Frequency | | |
|----------------------|--|-----------|---------|--------------------------------------|
| | | Weekly | Monthly | As required / in case of malfunction |
| Automatic nozzle | Check the automatic function | | X | X |
| Nozzle holder | Clean with water and non-aggressive household cleaning agent | | | X |
| | Lubricate the switch flap with non-resinating spray oil | | X | X |
| Discharge hose | Check the discharge hose for damage and increased wear | | X | X |
| Hydraulic components | Check the system visually for tightness | | X | X |

The maintenance intervals are maximum periods that must be shortened in the case of difficult operating conditions (e.g. heavy use, careless users).

10.2 Cleaning the system

Clean dirty outsides carefully with a damp cloth and gentle household cleaner. Do not use aggressive (e.g. abrasive, chlorinated) cleaning agents or solvents. The equipment must not be cleaned with a high-pressure cleaner or water jet.

10.3 Maintenance of the nozzle

Make sure that the sensor jet on the outlet pipe is always open. The nozzle does not work if the sensor jet is dirty. Any dirt particles can be removed using a suitable wire. Greasing or oiling is not necessary.

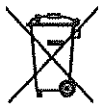
10.4 Type Plate and Warning Signs

- ! The warning signs attached to the device and the type plate must be well readable. Dirty signs must be cleaned, and replaced if necessary.

11 Disposal

The device is to be emptied completely and the liquids properly disposed of in case it is taken out of service.

The equipment is to be disposed of properly when taken permanently out of service:



- Return old metal for recycling.
- Return plastic parts for recycling.
- Return electronic waste for recycling.



The water legal regulations are to be followed.

11.1 Return of batteries

Batteries must not be disposed of with the domestic waste. Batteries can be returned free of charge via a suitable collecting point or to the dispatch stores. Consumers are legally obliged to return used batteries.

Batteries that contain harmful substances are marked with a crossed out dustbin (see above) and the chemical symbol (Cd, Hg or Pb) of the heavy metal that is decisive for the classification as containing harmful substances:

1. "Cd" stands for cadmium.
2. "Pb" stands for lead.
3. "Hg" stands for mercury.



Konformitätserklärung
Declaration of Conformity

Hiermit erklären wir, dass die Bauart
We herewith declare that the construction type

Typ: **HDM eco Box**
Type:
Bezeichnung: **Pumpsystem für Diesel**
Designation: **Pump system for Diesel**
Artikel-Nr.: **110700960, 110700980**
Item No.:

in der von uns gelieferten Ausführung folgenden einschlägigen Bestimmungen entspricht:
in the form as delivered by us complies with the following applicable regulations:

- Maschinenrichtlinie 2006/42/EG
Machinery safety 2006/42/EC
- EMV-Richtlinie 2004/108/EG
Electromagnetic compatibility 2004/108/EC

Angewendete harmonisierte Normen:
Applied harmonised standards:

EN ISO 12100-1, -2 EN 60204-1

EG-Dokumentationsbevollmächtigter: Jörg Mohr Horn GmbH & Co. KG
EC official agent for documentation: Munketoft 42
24937 Flensburg

09.03.2012
Datum
Date


.....
i.V. Dipl.-Ing. Jörg Mohr
Entwicklungsleiter / *Engineering Manager*

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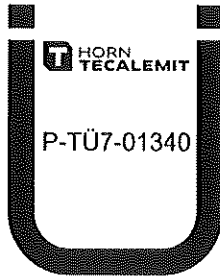
Geschäftsführer:
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Amtsgericht Flensburg HRA 4264
USt-IdNr. DE813038919

Appendix B: Declaration of conformity of the A2010 nozzle

Horn GmbH & Co. KG hereby declares the conformity of the A2010 automatic nozzle to DIN EN 13012 and the general building authority test certificate P-TÜ7-01340.





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