

Operator's Manual

Hydraulic Safety Cable Cutting System

Art. 216416



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1. Introduction

The cable cutting devices are used acc. to DIN VDE 0105, para. 9.6.4 when the activated cable cannot be properly ascertained.

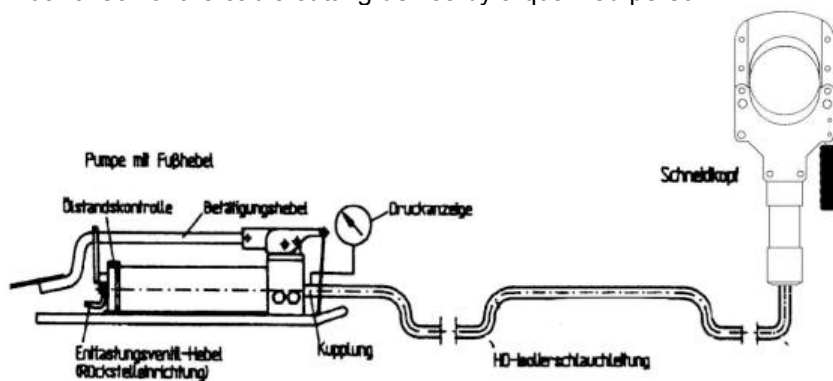
These safety cable cutting systems are approved for DIN EN 50110-1 (VDE 0105 part 1, section 6.2.3). They are employed for cutting low-voltage and medium-voltage cables up to 30 kV. They are manufactured acc. to DIN EN 50340 (VDE 0682 part 661).

Special information

1. **The cable cutting device is used for cutting cables with design voltages up to 60 kV and nominal frequencies up to 60 Hz.**
2. **The cable cutting device is suitable for cutting cables up to a total diameter of 120 mm.**
3. Cables with special-reinforcement (for example shaft-cables, self-supporting air-cables, sea cables and so on) are not permitted to be cut with the cable-cutting appliance.
4. If the minimum distance (10 m) while cutting can not be rendered other precautions like earthworks or protection-walls have to be installed to protect the operators against electric arcs.
5. Before the beginning of the cutting-process a security-zone in a distance of 10m has to be installed for defending the cutting place against unauthorised persons.

The cable cutting device is a tool to work on live parts and is to be handled as such in compliance with DIN EN 50110-1 (VDE 0105 part 1) § 6.2.3, i.e.:

- maintain perfect condition of the device
- check for external damages before using the device
- clean after each use
- secure and proper storage in the associated transport case
- maintain and restore the clean and dry condition after each use
- annual check of the cable cutting device by a qualified person



max. Betriebsdruck: 625 bar

2. Behaviour in the case of disturbances

In the event of malfunction (e.g. short-circuit fault) during the cutting process, the cable can nevertheless be cut by the cable cutting device.

- Always check the cutting head's safe isolation from supply following a malfunction.
- If the cutting-process could not be properly completed, actuate the reverse valve and remove the cutting head from the cable interface using an insulating rod.
- Afterwards, query the company in charge of the network whether there is any fault message.
- Check the cable cutting device after removing it from the cable trench.
- Independent opening of the blades can be prevented by accidental arc impact. Any faulty components have to be immediately replaced once the cutting head should have been damaged in the cutting process.
- Do not cut using a damaged cutting head, rather return it to the manufacturer for checking, please.
- Immediately stop the cutting process upon any insulating liquid leaking out during the cutting process.
- Return the cable cutting device to the manufacturer for inspection.



Photo: Electric arc in a short-circuit fault

3. Maintaining the safety cable cutting system

Clean the cable cutting device at regular intervals, especially the insulating tube and the quick-connect coupling. Carefully roll up the insulating tube line for transport.

Do not bend the insulating tube line!

Check the oil level on the foot-operated pump pedal periodically. Only use the original insulating oil (Shell Naturell) for an oil change.

Change the oil every 2 years and document this. See 'Maintenance Instructions'.

Only the manufacturer may change the oil.

Checking the oil level

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Place the pump to a horizontal position and open the oil filler plug. No oil should flow out. It has to be shortly beneath the edge of the oil filler plug and may only overflow after slightly lifting the pump on the hose side. Top up the oil if this is not the case. (See 'Filling with insulating fluid').

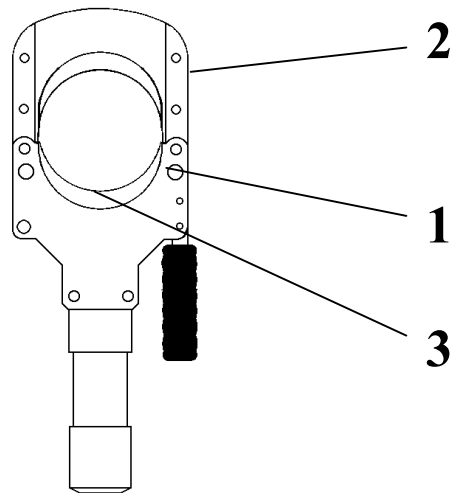
Cutting head, insulating tube line and pump should be generally interconnected when checking the oil level.

Filling insulating fluid

Top up the insulating fluid to the lower edge of the oil filler plug if the oil level should be insufficient. Use the original insulating oil only.

Close the oil filler plug after filling is completed. While refilling the cutting head, the insulating hose and the pump has to be connected as a rule.

4. Handling of the cable-cutting device Art. 216416



- Hold the cutting head with one hand at the grip and with the other one at the cylinder-body. Place the cutting head with an angle of 90° towards the cable which has to be cut. Herewith the cutting head has to be based upon the wall of the cable-trench or the ground with underlay-items. Close the bolting device pin and put the latch in. The head has to be closed completely and the bolt locked!
- DO NOT CARRY THE CUTTING SYSTEM WITH THE INSULATING HOSE
- For cutting single conductor cables you have to cut all the three wires.
- Roll out the insulating hose completely (10m), but take into account that the hose will extend under pressure.
- Choose for the foot pump the maximum distanced location (10m) to the cutting place..
- The fast-lock-coupling has to be connected good and has to be locked with a secure-screw-ring. Take away the dust protecting cap of the cutting head as well as from the hydraulic hose and connect the coupling-male of the cutting head with the coupling of the hydraulic hose. After that please put the dust protecting cap from the coupling and from the male-coupling together. Herewith you can prevent that you make them dirty during the work

- Before starting the cutting –process you have to communicate with the agency of the system because of a release.
- The cutting process starts by operating the foot pump. It must be pumped until the cut is completely finished..
- Statement for the end of the cutting process:

After the cable cut is done the demonstrated pressure on the pressure-gauge drops to the direction of “0”. You have to pump more until the security valve opens itself – (max. pressure). After that you have to work with the relief valve until the blades are going to their standard positions.

- After the end of the cutting process communicate with the agency of the system and have a query about special occurrences!
- Take the cutting head away from the cutting-place. By carrying with the one hand at the grip and the other at the cylinder-body. Before opening the blades must be in their starting positions!
- After each use, the fast-lock-coupling has to be cleaned and the cable-cutting appliance has to be packed good in its transport case
- If an interruption is there please read the paragraph “behaviour at interruptions”.

In case of need please call our technical service.

5. Potential equalisation

There are fastening possibilities for an interconnection line to the potential equalisation right on the foot pump and on the cutting head.

6. Notes on safety

- The hydraulic hand cutter must only be used for the intended specific purpose.
- Only install original spare parts.
- Cutting is restricted to aluminium and copper cables. Cables and leads with steel cores or steel armour must not be cut.
- The blades must always be used at right angles to the cable.
- Do not reach into the danger zone of the blades.
- The Operator's Manual has always to be on the device at any time.
- **The operating company has to ensure that the operator has read and understood the Operator's Manual and the Notes on Safety in particular.**

7. Maintenance instructions

Deploy safety cable cutting systems to prevent any risks posed by live power cables.

The **trade association rules for work with cable cutting devices** indicate that 'an electrically qualified person has to check the safety cable cutting systems for adherence to the limit value as specified in the electric rules in accordance with the manufacturer information (every 2 years). The insulating fluid has to be changed at the intervals as specified by the producer (2 years). At the same time, this point of time has to be documented so that it will be replicable in the next use whether the liquid has been properly replaced.' (Trade association rule in its version 6/95*)

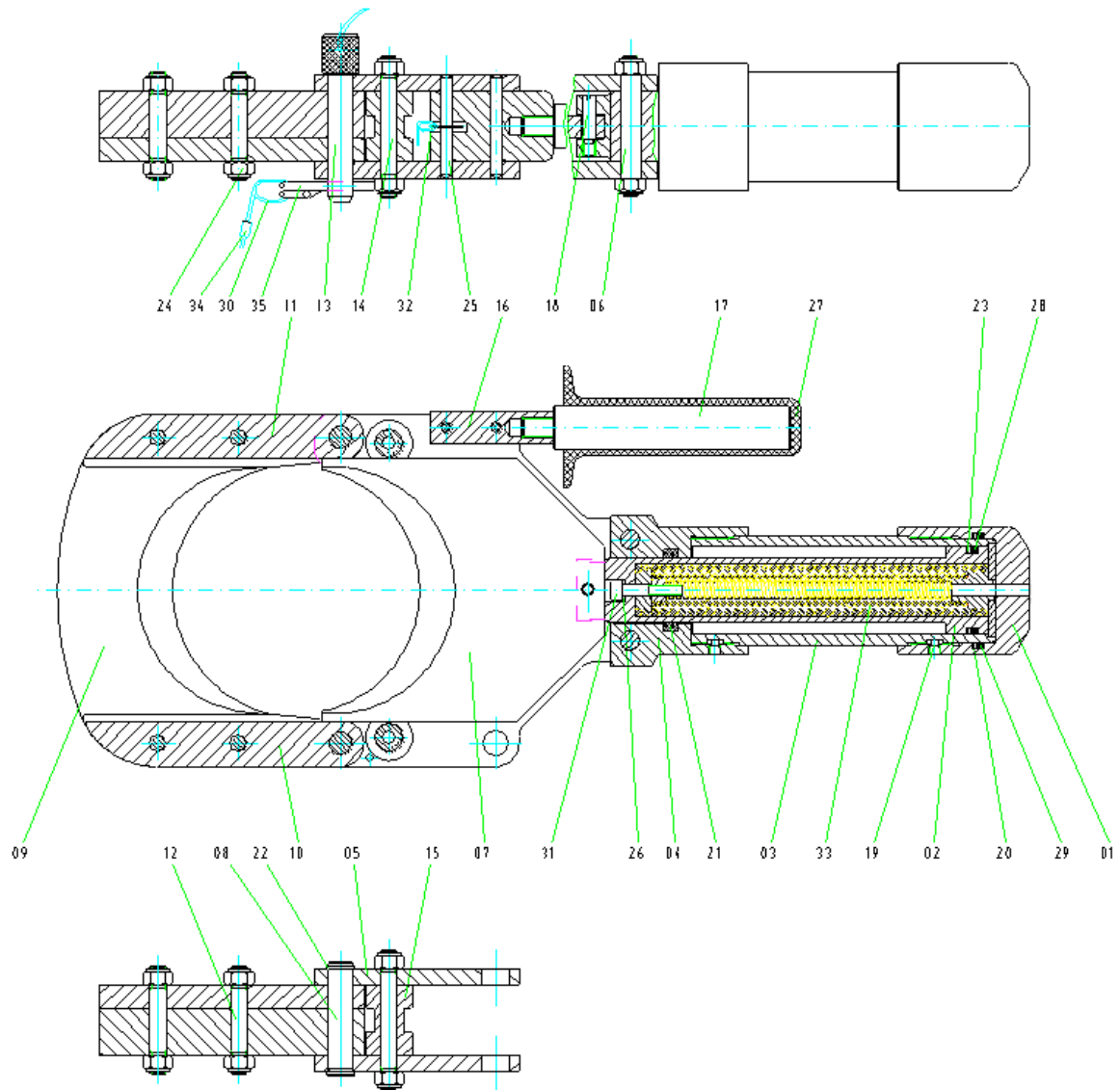
The check has to be performed every two years to ensure that the insulating property of the hydraulic oil is guaranteed to the full extent.

Therefore, we offer you a **comprehensive maintenance of safety cable cutting systems for all brands** at a **fixed price of 200.00 EUR**:

- All components will be checked carefully
- The insulating oil will be changed
- All worn seals will be replaced
- You will receive a cost estimate for spare parts to be replaced
- Maintenance documentation with pressure test record acc. to ISO DIN 9000 ff.

Take advantage of this offer and have your tools **regularly** maintained by our authorised specialized staff **for your safety**.

8. Spare Parts List



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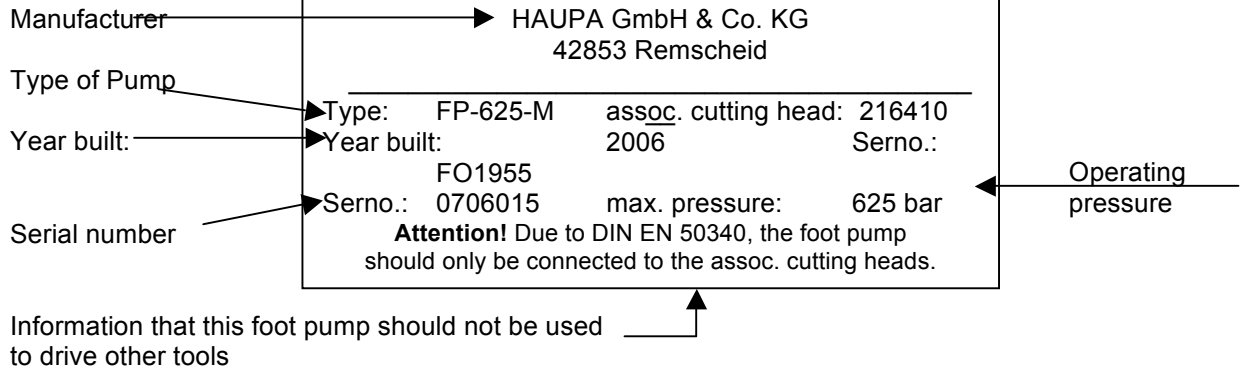
Item	Designation	Article number
01a	Cylinder base G $\frac{1}{4}$ "IG.....	100328-NPT
01b	Cylinder base NPT $\frac{3}{8}$ "IG	100328-G
02	Piston.....	100315
03	Cylinder	100316
04	Cylinder head (disk holding device).....	100344
05	Side plate (2x)	100345
06	Stud bolt M10 (2x)	100324
07	Cutting blade	100317
08	Pivot pin D12	100330
09	Counter blade	100318
10	Blade guide, left.....	100320
11	Blade guide, right.....	100346
12	Stud bolt M8x53 (4x)	100325
13	Locking bolt	100327
14	Stud bolt M8x72 (2x)	100326
15	Guide roll (2x)	100321
16	Bloch for handle.....	100322
17	Grip bar.....	100323
18	Locking sleeve D6, short	100226
19	Threaded pin M6	100228
20	Back-up ring, large	100343
21	Scraper ring	100334
22	Locking ring	100335
23	Back-up ring, small	100343
24	Nut M8 HF, self-locking (12x).....	100229
25	Locking sleeve D6, long (2x)	100337
26	screw seal M6.....	100224
27	Rubber handle	100269
28	O-ring, small	100343
29	O-ring, large.....	100343
31	Screw M6/M5.....	100219
33	Spring pack.....	102760
30+32+34+35	Clip connector, cpl.	102761

Version a: With screwed in coupling plug


Version b: With screwed on high-pressure hose

9. Key to the inscriptions

Foot pump:

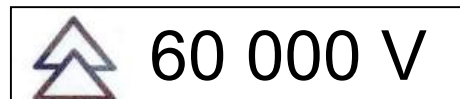


Indicator for the insulating oil to be used

 Special hydraulic oil, biodegradable
Ölsorte: Finke Aviaticon TRS-60
Do not mix with hydraulic oil based on mineral oil
Contains non-conductive oil – do not mix!

System must be pressure relieved before uncoupling!

System is approved up to a nominal voltage of 60,000 V



Cutting Head:

Manufacturer	→	HAUPA GmbH & Co. KG 42853 Remscheid Tel.
Type of Cutter	→	216410
Year built:	→	Year built: 2006
Max. cutting diameter	→	Diameter: 120 mm Pressure: 625 bar

Information, that this cutting head is not allowed to be driven by other pumps.

Attention!
The cutting head must only be connected to the associated foot pump acc. to DIN EN 50340.

Insulated hydraulic hose:

SYNFLEX – 3VEO - 03 – 3/16in. ID – 690 bar – 131713 – ‘Do not bend hose’

Hose manufacturer	_____
Insulating tube type	_____
Inner diameter	_____
Connection thread	_____
Max. allowable working pressure	_____
Manufacturer code	_____
Note that the hose must not be bent	_____

Month and year of production engraved on compression.

10. Shipping instructions

The safety cable cutting system has to be secured upright in the associated transport case in such a way that it does not have to absorb any lateral forces and from above. Attach the following labelling onto the transport container:

Not to be dropped

Handle with care

↑ Top ↑

13. Declaration of Conformity

**EC/EU/UE
KONFORMITÄTSERKLÄRUNG
DECLARATION OF CONFORMITY
DECLARATION DE CONFORMITE
DICHIARAZIONE DI CONFORMITÀ**

Wir
We
Nous
Noi

HAUPA GmbH & Co. KG

(Name des Ausstellers / supplier's name / nom du fournisseur / nome del fornitore)

Königstr. 165-169, 42853 Remscheid, Deutschland

(Anschrift / address / adresse / indirizzo)

erklären in alleiniger Verantwortung, dass das Produkt
declare under our sole responsibility that the product
déclarons sous notre seule responsabilité que le produit
dichiariamo sotto nostra unica responsabilità che il prodotto

Hydraulische Sicherheitsschneidanlage Art. 216416

(Typ / type / type / tipo)

see delivery note

(Seriennummer / serial number / no de série / numero di serie)

auf das sich diese Erklärung bezieht mit der/den folgenden Norm(en) oder normativen Dokument(en)
übereinstimmt.

to which this declaration relates is in conformity with the following standard(s) or other normative
document(s).

auquel cette déclaration se réfère est conforme à la (aux) norme(s) ou autre(s) document(s) normatif(s).
al quale si riferisce questa dichiarazionie è conforme alla(e) norma(e) o altro(i) documento(i) normativc(i).

EN 292-1, EN 292-2, EN 249, EN 394, pr DIN EN 982, CEE 20, CEE Amd.2, EN 60555-1/2/3, CEE (Titel und
(oder) Nummer / title and (or) number / titre et (ou) numéro / titolo e (o) numero)

Gemäß den Bestimmungen der Richtlinie(n).

Following the provisions of Directive(s).

Conformément aux dispositions de(s) Directive(s).

Conformemente alle disposizioni della(e) direttiva(e).

98/79/EC, 91/368/CEE, 93/44/CEE, 93/68/CEE

98/37/EC, 73/23/EEG, 89/336/EEG

(Titel und (oder) Nummer / title and (or) number / titre et (ou) numéro / titolo e (o) numero)

Remscheid, 11/11/2009

(Ort und Datum der Ausstellung)

Geschäftsführers)

(Place and date of issue)

(Lieu et date)

(Luogo e data di emissione)

(Name und Unterschrift oder gleichwertige Kennzeichnung des

(name and signature or equivalent marking of authorized person)

(nom et signature du signataire autorisé)

(nome e firma di persona autorizzata)

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