

USER'S MANUAL

GC_50-H700-E GC_100-H700-E



SAFETY CABLE CUTTING SET TYPE GC_50-H700-E AND GC_100-H700-E

#VGCE20111108

Producent / Producer / Производитель

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**Thank you for buying our product
Before using this equipment, please carefully read the user's manual and
maintenance recommendations.**

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* ERKO sp. j. has the right to modify the product as a result of a modernization.



AIO 89



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**ISO 9001
ISO 14001**

Prior to start working read the user's manual and health and safety recommendations

1. SPECIFICATION

MODEL	GC_50-H700-E	GC_100-H700-E
Max. nominal voltage	60kV	
Max. diameter for Al and Cu wires	50mm	96mm
Max. diameter for Al and Cu wires reinforced with steel wire or stranded wire	30mm	-----
Weight pump / hydraulic head	9,5kg / 3,6kg	9,5kg / 7,0kg
Max. lever torque	110 Nm	
Working medium	Hydraulic oil L-HM 22	
Oil tank volume	0,5 dm ³	
Fast hydraulic circuit pressure	20 bar	
Fast hydraulic circuit output	5,5 cm ³ / cycle	
Max. working pressure	630 bar	
Working pressure output	0,9 cm ³ / cycle	
Temperature of work	-20÷50 °C	
Hydraulic hose	High pressure Carrying no electric charge 10m (Standard length)	
Drive	foot-operated	

2. APPLICATION

Type GC_50-H700-E and GC_100-H700-E safety cable cutting sets are portable foot-operated tools designed to cut copper and aluminum wires also reinforced with steel wire or stranded wire in which it is not possible to determine unequivocally state without tension.

GC_50-H700-E - Designed to cut wires with a diameter up to 50mm. In the case of reinforced wires (including the AFL) or with a steel band maximum diameter must not exceed 30mm.

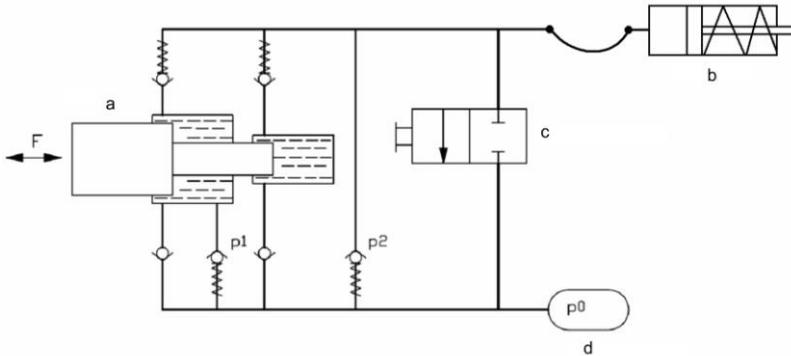
GC_100-H700-E - Designed to cut wires with a diameter up to 96mm.

Should not be used for cutting reinforced wires (including the AFL).



3. CONSTRUCTION

Sets for safe cutting type GC_50-H700-E and GC_100-H700-E consist of double-circuit pump H700 Hydraulic cutting heads type: GC_50 or GC_100. The pump head is connected with hydraulic hose carrying no electric charge. The entire system is filled with oil of electrical breakdown reduced resistance. The cutting head is equipped with earthing wire.



- a- piston
- b- actuator
- c- draining valve
- d- oil tank

Rys. 1. Hydraulic diagram.

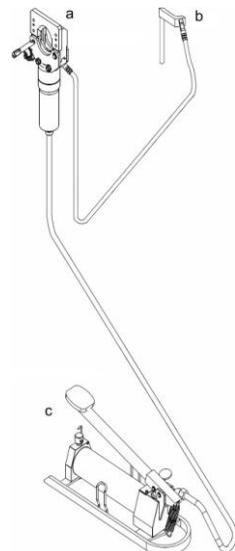
4. PRINCIPLES OF OPERATION

Description of the hydraulic system:

- a- głowica tnąca
- b- przyłącze uziemiające
- c- pompa zasilająca

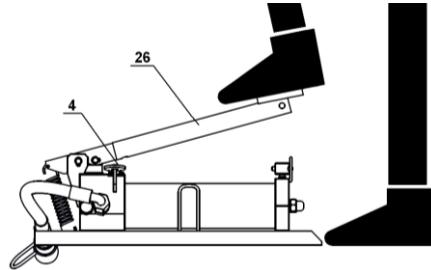
1. Prepare the earthing connection of the hydraulic head, for example by connecting the grounding wire to a stationary earthing element or grounding to the earth. Make sure that the potential of the earthing connection is close to the earth potential. **Grounding element should be made in accordance with regulations in force to ensure safe operation.** Install the head to cut the cord. **The head has to be mounted using suitable protective gloves for live-wire working. Working without proper gloves can cause electric shock and death. If the bare overhead conductors are cut, unconditionally and beforehand such conductors must be ground in**

Hydraulic system



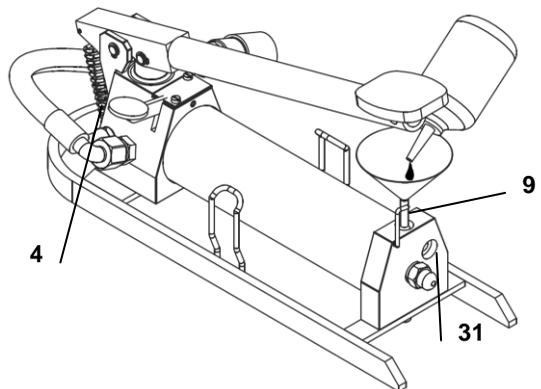
order to protect working person from electric shock possible during installing the head.

- Uncoil the hydraulic hose to its full length. Place the pump on a level and paved ground protecting the pump from falling during operation. **loosen the oil filler cap by about one turn** (in order to unseal of oil tank). The user should be located as far as possible from the cut cable. The earthing wire should be placed in the opposite direction than the hydraulic hoses (uncoil wires to their full length).
- In order to initiate the process of cutting press the pedal in cycles [26] observing the pressure gauge. The cable is cut, when after a significant pressure increase on the manometer a pressure drop occurs and it will not grow in spite of continuing to pump the pedal. Once the process is finished press on the pressure release lever [4]. Press the lever until the pressure gauge indicates 0 value, then hold the lever still for several seconds in order to let the hydraulic head return to its initial position. **Turn the oil filler cap tight having finished**. Make sure that the cap is tightened, otherwise a storage in a humid environment the oil may lose the parameter of non conductivity. Check if the cutting process has been successful with caution.



OIL REFILL

The tank should be refilled with oil recommended by the manufacturer. An oil other than the manufacturer recommends may not fulfill the condition of non conductivity. Place the pump and the head on a level surface. The head should be placed lower than the pump. Loosen the oil filler cap [9], press the pressure release lever [4] to let the oil move back into the tank, then unscrew the oil filler cap [9] and the oil level control plug [31], top up the oil (till the oil overflows through the oil level control plug [31]). After refilling the oil tighten the plugs (no. [31] and [4]). Check the condition of the seals before tightening the plugs (if they are damaged or worn out, they has to be replaced).





DEAERATION

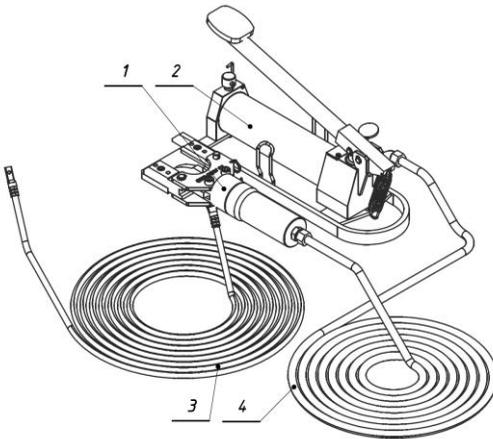
To aerate the pump:

- Place the pump on a level surface. The head should be placed lower than the pump.
- Loosen the oil filler cap[9].
- Press several times the pump pedal then press the pressure release lever[4]. Wait a minute. Repeat the action 4-5 times.

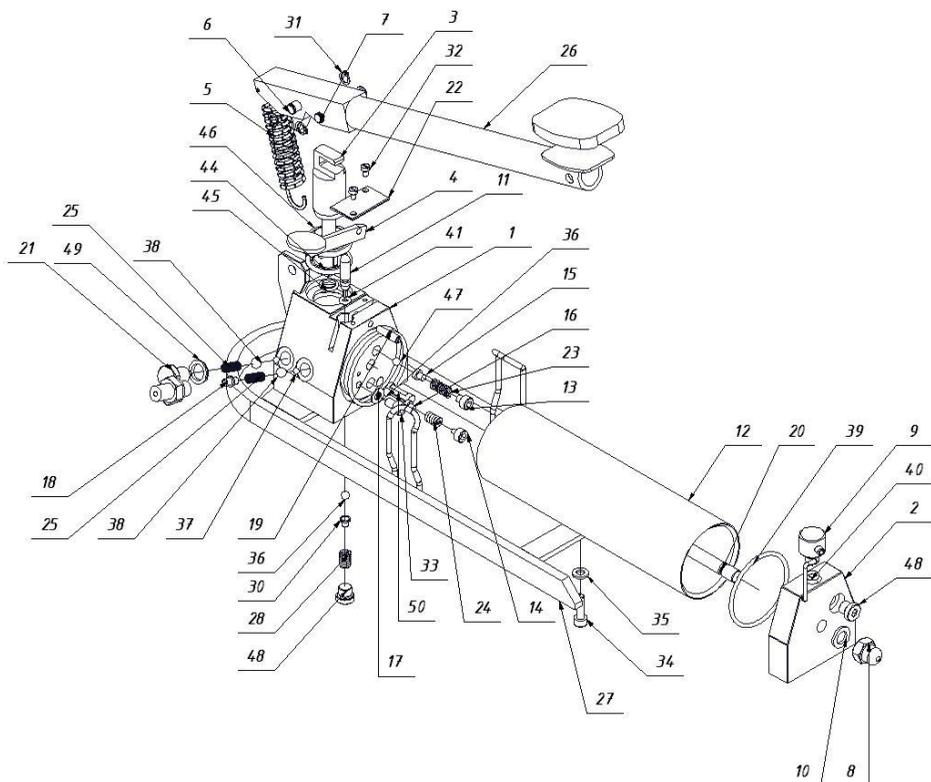
[Check the oil level, refill if necessary \(see the oil refill\).](#)

5. SPARE PARTS

Under no circumstances do not disconnect the hydraulic hose or the earthing wire. Use only original spare parts and oils for repairs and maintenance. To ensure safe operation, we suggest to leave any repairs to the manufacturer.



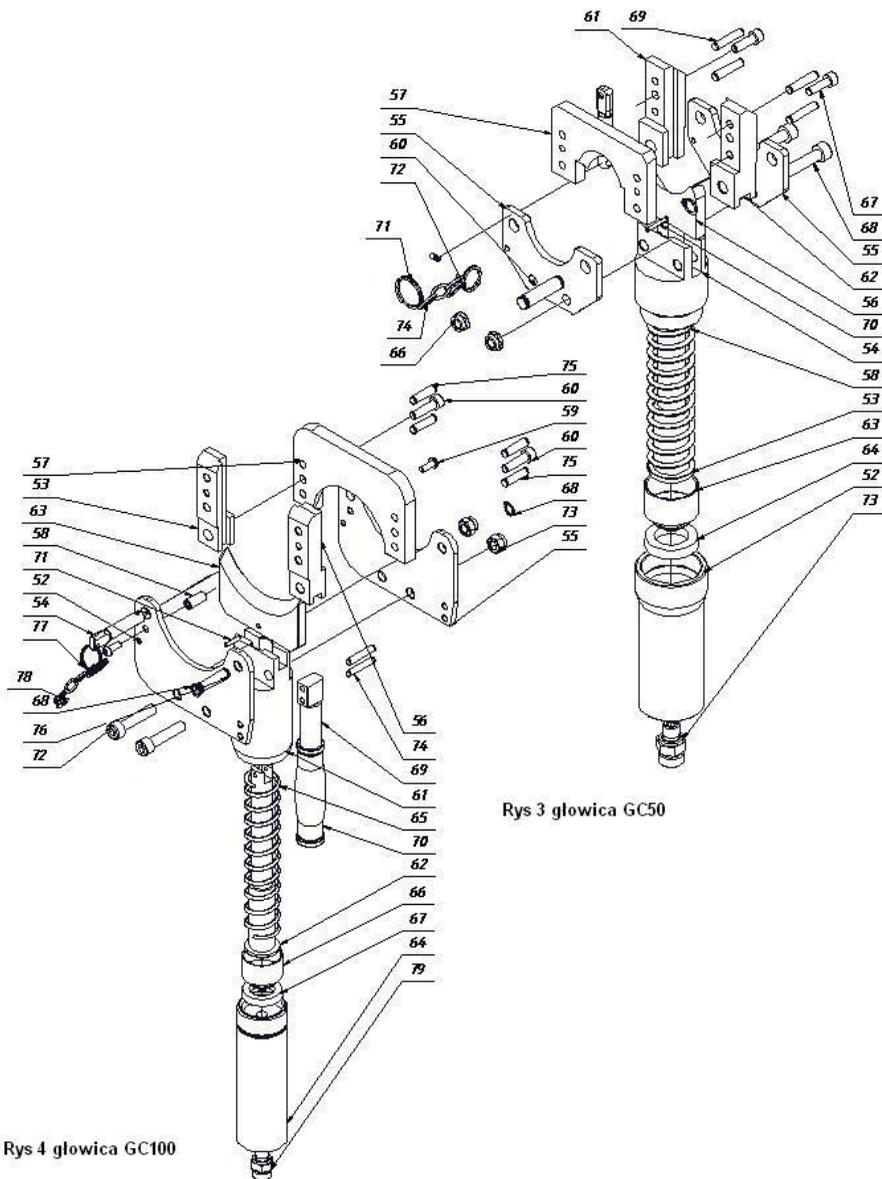
No.	Quantity	Name	Code
1	1	Hydraulic cutting head GC50 / GC100	
2	1	Hydraulic pump	
3	1	Earthing wire 10m.	EPCU_HOOS-D-25-1,5
4	1	Carryinh no electric charge high pressure hydraulic hose	HPWC_090-100-70



Pic. 2. Spare parts for pump.



No.	Ilość	Name of element	Ordering code
1	1	Main body	H700-01-01
2	1	Block	H700-01-02-B
3	1	Piston	H700-01-03-A
4	1	Pressure release lever	H700-01-04-C
5	1	Spring	H700-01-05-B
6	1	Bolt	H700-01-06-A
7	1	Bolt	H700-01-07-A
8	1	Pin's nut	H700-01-08
9	1	Deaerator	H700-01-09-A
10	1	Washer	H700-01-10
11	1	Valve's slide	H700-01-12-C
12	1	Tank	H700-01-13
13	1	Valve's screw	H700-01-14-A
14	1	Valve's screw	H700-01-15-A
15	1	Valve's clamp	H700-01-16-A
16	1	Valve's clamp	H700-01-17-A
17	1	Washer	H700-01-18-B
18	1	Reduction	H700-01-19-A
19	1	Valve's axis	H700-01-20
20	1	Pin	H700-01-21-A
21	1	Protection cap	H700-01-22-A
22	1	Valve's shield	H700-01-23
23	1	Spring	H700-01-24-A
24	1	Spring	H700-01-25
25	2	Spring	H700-01-26-A
26	1	Pedal assembly	H700-02-00-A
27	1	Basis	H700-03-00-A
28	1	Spring	WH10-01-22-A
29			
30	1	Valve's clamp	HR300-17-A
31	4	Ring	NEZO_PZ-8
32	2	Tap screw	NEZS_WP-M4-6-OC
33	1	Screw	NEZS_WI-M6-10-8.8OC
34	3	Screw	NEZS_WI-M6-20-8.8OC
35	3	Washer	NEZP_P1A-6.4-OC
36	2	Ball	NLKU_6,35
37	2	Ball	NLKU_4,75
38	2	Ball	NLKU_8
39	2	O-ring	HUOR_OR57-3
40	1	O-ring	HUOR_OR8,3-2,4
41	1	O-ring	HUOR_OR3,3-2,4
42			
43	1	Manometer	HMAN_63-1000-G1/4-T
44	1	Sealing ring	HUTR_RR1300250-Z52N
45	1	Sealing ring	HUTR_RS1500100-T46N
46	1	Wiper ring	HPZG_WSA-000250-N9MMN
47	2	Ball	HUTR_DB0000635-N7696
48	2	Cap	HOKO_S-VSTI-M10-1-ED
49	1	Washer	HOPO_KDS12A3C
50	1	Filter	HFIL_H-700-FSO
51	1	Rubber casing	NANP_TYP-126-P



**Spare parts for GC50/H700/E**

No.	Quantity	Name of element	Ordering code
52	1	Cylinder	GC50-01
53	1	Follower	GC50-02
54	1	Bushing	GC50-03
55	2	Joint	GC50-04
56	1	Movable knife	GC50-05
57	1	Fixed knife	GC50-06
58	1	Spring	GC50-07
59	1	Bolt	GC50-08
60	1	Pin	GC50-09
61	1	Guide bar	GC50-10
62	1	Guide bar	GC50-11
63	1	Piston	HR100-02-A
64	1	Sealing ring	HUPU_U1-25-7,5
65	2	Ring	NEZO_PZ-10
66	2	Nut	NEZN_HNB-M8-OC
67	2	Screw	NEZS_WI-M6-20-8.8OC
68	2	Screw	NEZS_WI-M8-40-8.8OC
69	4	Pin	NEZK_WH-6M6-28
70	1	Spring pin	NEZK_S2-3-20
71	1	Ring	NAKO_KOL-25
72	1	Ring	NAKO_KOL-16
73	1	Hydraulic port	HOPP_S10-M12-70
74	1	Chain	NALG_LAN-2M

Spare parts for GC100/H700/E

No.	Quantity	Name of element	Ordering code
52	1	Left joint	GC100-06-L
53	1	Left guide bar	GC100-08
54	1	Stud complete	GC100-05
55	1	Right joint	GC100-06-P
56	1	Right bar	GC100-07
57	1	Fixed knife	GC100-01
58	1	Distancing elements	GC100-12
59	2	Screw	NEZS_WKI-M8-16-10.9OC
60	2	Screw	NEZS_WI-M8-30-8.8OC
61	1	Joint's sleeve	GC100-04
62	1	Follower	GC100-10-A
63	1	Movable knife	GC100-02
64	1	Cylinder	GC100-03
65	1	Spring	GC100-14-A
66	1	Piston	HR100-02-A
67	1	Sealing ring	HUPU_U1-25-7,5
68	2	Ring	NEZO_PZ-10
69	1	Handle complete	GC100-11
70	1	Grip	NAHK_TYP-738
71	1	Pin	NEZK_S2-4-18
72	2	Screw	GC100-13
73	2	Nut	NEZN_HNB-M10-OC
74	2	Pin	NEZK_WH-6M6-35
75	4	Pin	NEZK_WH-8M6-30
76	1	Pin	GC50-09
77	2	Ring	NAKO_KOL-25
78	1	Chain	NALG_LAN-2M
79	1	Hydraulic port	HOPP_S10-M12-70

6. MAINTENANCE RECOMMENDATION

1. Work may be carried out by an adult person, sober, having adequate training
2. Before starting work, check the technical condition of the set.
3. Maximum working pressure was set by the manufacturer at the overflow valve on the value of 630 bar and can't be adjusted during operation of the tool.
4. In case of oil loss, the oil should be refilled and the pump deaerated if necessary. **USE ONLY OIL RECOMMENDED BY THE MANUFACTURER. OIL OF A DIFFERENT TYPE MAY NOT FULFILL THE CONDITION OF ELECTRIC CHARGE NON CONDUCTIVITY.**
5. The oil should be CHANGED every 12 months. Use oils in accordance with DIN 51524 Part 3, Class HVLP or ISO 6743/4 Class HV, with a viscosity of ISO VG 32. Use oil Hydrol ® L-HV 32).
6. The oil used in the hydraulic system must meet the minimum requirement of 60 kV during the certification test with the device. Electrical properties of oil may change over time therefore regular changing of the oil is very important.
7. It is recommended to inspect the cleanliness of the hydraulic system, rinsing, changing oil, pressure adjustment every 12 months. Performing these service by the manufacturer gives guarantee that oil used for change was appropriate and free of moisture (that could affect the fulfillment of requirements described by standards)
8. The conservation of oil purity and the periodic oil change is essential for the sustainability of hydraulic components and extends much of their durability and reliability. Oil Purity: Grade 9 (recommended 8) according to NAS 1638.
9. Protect the device from influence of weather factors, corrosion, contamination and mechanical damage. If the tool became accidentally wet, it has to be dried. If the hydraulic system becomes affected by moisture, it has to be rinsed. These actions should be performed by manufacturer in order to be performed correctly. If the tool will not be used for a longer time it has to be preserved and keep in a dry place (the deaeration cap should be closed)
10. **Do not leave the hydraulic system under pressure (always release pressure after work)**
11. Use appropriate required working cloths

7. REMARKS

8. RECYCLING

Once the products cycle comes to an end, all the elements of the tool must be recycled according to existing law.

9. SERVICE

Erko insures warranty and after warranty service.