



Cembre



Certified Quality
Management System



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Certified Occupational
Health & Safety
Management System

ENGLISH

FRANÇAIS

DEUTSCH

ESPAÑOL

ITALIANO

**HYDRAULIC CUTTING TOOL
COUPE CABLE HYDRAULIQUE
HYDRAULISCHES SCHNEIDWERKZEUG
HERRAMIENTA HIDRAULICA DE CORTE
UTENSILE OLEODINAMICO DA TAGLIO**

HT-TC041N



**OPERATION AND MAINTENANCE MANUAL
NOTICE D'UTILISATION ET ENTRETIEN
BEDIENUNGSANLEITUNG
MANUAL DE USO Y MANTENIMIENTO
MANUALE D'USO E MANUTENZIONE**



WARNING LABELS - ETIQUETTES SIGNALÉTIQUES - WARNSCHILDER - ETIQUETAS DE ATENCION - ETICHETTE D'AVVERTENZA



1	– Before using the tool, carefully read the instructions in this manual. – Avant d'utiliser cet outil, lire attentivement les instructions de cette notice. – Vor Inbetriebnahme unbedingt die Bedienungsanleitung durchlesen. – Antes de utilizar la herramienta, leer atentamente las instrucciones contenidas en este manual. – Prima di utilizzare l'utensile, leggere attentamente le istruzioni contenute in questo manuale.
2	– Keep hands clear of cutting blades. – Au cours du coupage, tenir les mains éloignées des lames. – Während des Schneidens, die Hände von den Messern fernhalten. – Durante el corte, tener las manos alejadas de las cuchillas. – Durante il taglio, tenere le mani lontane dalle lame.
3	– Ensure appropriate Personal Protective Equipment (PPE) is used - including hand and eye protection. – Assurez-vous d'utiliser équipements de protection individuelle (EPI) y com pris la protection pour les mains et les yeux. – Achten Sie darauf geeignete persönliche Schutzausrüstung (PSA) zu verwenden, einschließlich für Hände und Augen.
4	– Asegúrese de utilizar el equipo de protección personal (EPP) que incluye protección para las manos y los ojos. – Assicurarsi di utilizzare adeguati dispositivi di protezione personale (DPI) incluse protezioni per mani e occhi.

	①	②	③
	– Tool type – Outil type – Handwerkzeug Typ – Herramienta tipo – Tipo di utensile	– max cutting diam. – ø maxi de coupe – max. Schneid. ø – ø max de corte – ø max di taglio	– Year – Année – Jahr – Año – Anno

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HYDRAULIC CUTTING TOOL

HT-TC041N

WARNING

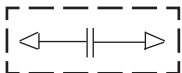
- Wear eye protection. Metal chips can fly from blades when cutting.
- Do not cut short, unsecured pieces of steel rod or rope as they may fly off dangerously, causing injury to the operator or persons nearby.
- Inspect the blades before each use. Do not use damaged blades.
- Damaged blades can break and cause injury or damage to the tool.
- Work in a clean, uncluttered area. Keep persons away from immediate work area.
- Use this cutting tool for the manufacturer's intended purpose only.
- Do not cut live cables or conductors.

1. GENERAL CHARACTERISTICS

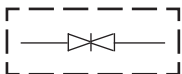
- **Application range:** suitable for cutting steel ropes and conductors with max. overall diameter of 45 mm (1-25/32"), as indicated in § 7.
- **Rated operating pressure:** 700 bar (10,000 psi)
- **Dimensions:** length 552 mm (21.7 in.)
width 144 mm (5.6 in.)
- **Weight:** 5,8 kg (12.8 lbs)
- **Oil:** **ENI ARNICA ISO 32** or
SHELL TELLUS S2 V 32 or equivalent
- **Operating positions:** the three operating positions are identified on the main handle (04), which rotates relative to the reference symbol  (see Fig. 1).



Rest position (Handles locked): lock handles together when tool is not in use.



Release position: close the moveable handle (52) against the main handle (04), in order to discharge the oil pressure and retract the lower blade.



Operating position: operate the moveable handle (52), to build up pressure and close the lower blade.

- **Advancing speed.** The tool automatically switches from a fast advancing speed of blades to a slower cutting speed.
- **Safety.** The tool is provided with max pressure valve; MPC1 special manometer, is available upon request to check the proper setting of the valve.

2. INSTRUCTIONS FOR USE (Ref. to Fig. 1 and 6)

2.1) Setting

With the tool in rest position  operate as follows:

- Insert the conductor between the blades at the desired cutting point.
For a running conductor, remove the locking pin (57) and open the tool head.



OPENING THE UPPER BLADE MUST ONLY BE DONE WHEN THE TOOL IS IN REST POSITION (LOWER BLADE FULLY RETRACTED).

- With the conductor on the lower blade (24), close the tool head and fully insert the locking pin (57).

BEFORE CARRYING OUT FURTHER CUTTING OPERATIONS MAKE SURE THE LOCKING PIN IS COMPLETELY INSERTED: A PARTIAL INSERTION MAY DAMAGE THE TOOL HEAD.

2.2) Blade advancement

- Rotate clockwise main handle (04), to position  thus releasing the moveable handle (52). Hold tool by both handles during the cutting operation.
- Rotate main handle to operating position .
- Operate moveable handle (52) for lower blade advancement. This first stage rapidly closes the lower blade (24) to the conductor. Make sure that blades are exactly positioned on desired cutting point, otherwise re-open blades following instructions as § 2.4 and position the conductor again.

2.3) Cutting

- Continue operating the moveable handle, the lower blade advances gradually until the conductor is fully cut.

2.4) Blade retraction

- Rotate main handle clockwise to release position .
Completely close handles and the lower blade will retract.

2.5) Rest setting

- Completely retract the ram as § 2.4.
- Close handles and rotate main handle to rest position ; the moveable handle will be locked.
- Store the tool in the plastic case.

2.6) Blade replacement (Ref. to Figs. 2 and 3)

After extended use, the blades may loose their cutting edge.

Replace the blades as follows:

2.6.1) Lower blade:

- Remove locking pin (57) and open tool head.
- Pump the moveable handle (52) to make the lower blade (24) advance until spring pins (35) are visible on ram (22).
- Remove spring pins (35 and 88) using a drift and remove the lower blade.
- Insert the new blade and secure with spring pins.



BEFORE CLOSING THE TOOL HEAD, RELEASE THE OIL PRESSURE AND RETRACT THE LOWER BLADE, OTHERWISE THE BLADE MAY STRIKE AND DAMAGE THE LOWER BLADE EDGE.

2.6.2) Upper blade:

- With the lower blade (24) fully retracted, the tool head closed and the locking pin (57) fully secured, hold the tool on the blade spacer (33) or (29) in a bench vice (fig. 3).
- By an 8 mm wrench, unscrew 4-set pins (30), remove the two holding plates (32) and the upper blade (28) noting the position of the cutting edge bevel.
- Insert the new blade, noting the position of the cutting edge bevel.
- Fit the 2 holding plates (32) and secure with 4-set pins (30).

3. WARNING

The tool is robust and requires very little daily maintenance.

Compliance with the following points, should help to maintain the optimum performance of the tool:

3.1) Accurate cleaning

Dust, sand and dirt are a danger for any hydraulic device.

Every day, after use, the tool must be wiped with a clean cloth, taking care to remove any residue, especially close to pivots and moveable parts.

3.2) Storage (Ref. to Fig. 5)

When not in use, the tool should be stored and transported in the plastic case, to prevent damage. The plastic case (**VAL P7**), has dimensions 727x202x115 mm (19.5x9.84x3.94 in.) and weight 1,3 kg (17.2 lbs).

3.3) Head rotation

For ease of operation, the tool head can rotate through 180°.



DO NOT ATTEMPT TO TURN THE HEAD IF THE HYDRAULIC CIRCUIT IS PRESSURISED.

4. MAINTENANCE (Ref. to Fig. 4 and 6)

Air in the hydraulic circuit may affect the performance of the tool; e.g: no advancement or slow advancement of the lower blade; lower blade pulsating.

In which case proceed as follows:

4.1) To purge air bubbles from hydraulic circuit

- a – Hold tool upright position in a vice with handles open (Fig. 4).
- b – With an hexagonal 2,5 mm key, remove screw (68) and main handle (04) to expose oil reservoir (03).
- c – Remove reservoir cap (01).
- d – Operate the moveable handle (52) three or four times, to advance the ram (22).
- e – Depress pressure release pin (76) until ram is fully retracted.
- f – Repeat points (d - e) at least five times, to ensure all air bubbles in the hydraulic circuit are purged into the reservoir.
- g – If the oil level is low, top up as per § 4.2.
- h – Remove all air from reservoir and fit cap (01).
- i – Assemble main handle (04) and holding screw (68).

If the tool continues to malfunction return the tool for service/repair as per § 5.

4.2) Oil top up

Every six months check the oil level in the reservoir. If necessary, top up the oil level to the top lip of the reservoir and remove all air from reservoir, see § 3.1, points a, b, c, e, g, h and i.

Always use clean recommended oil, see § 1.

Do not use old or recycled oil.

Do not use hydraulic brake fluid.



ENSURE THAT DISPOSAL OF USED OIL IS IN ACCORDANCE WITH CURRENT LEGISLATION.

5. RETURN TO Cembre FOR OVERHAUL

In the case of a breakdown contact our Area Agent who will advise you on the problem and give you the necessary instructions on how to dispatch the tool to our nearest service Centre; if possible, attach a copy of the Test Certificate supplied by **Cembre** together with the tool or fill in and attach the form available in the "ASSISTANCE" section of the **Cembre** website.

6. PARTS LIST (Ref. to Fig. 6)

Code N°	Item	DESCRIPTION	Qty	Code N°	Item	DESCRIPTION	Qty
6800040	01	RESERVOIR CAP	1	6620382	47	PUMPING RAM	1
6380265	● 02	MAIN HANDLE GRIP	1	6760320	✚ 48	SPRING PIN D. 5x30	1
6720100	03	OIL RESERVOIR	1	6780265	✚ 49	MOVEABLE HANDLE SUPPORT	1
-	● 04	MAIN HANDLE	1	6200030	✚ 50	MOVEABLE HANDLE LATCH	1
6760014	● 05	PIN D. 3x4	1	6760280	✚ 51	SPRING PIN D. 4x30	1
6780105	● 06	MAIN HANDLE SUPPORT	1	6480269	✚ 52	MOVEABLE HANDLE	1
6360260	★ 07	O-RING	1	6380240	✚ 53	MOVEABLE HANDLE GRIP	1
6040685	08	GUIDING RING	2	6520570	■ 54	BALL SPRING	1
6900621	09	COMPLETE SUCTION SCREW	1	6740020	■ 55	1/4" BALL	1
6360160	★ 10	O-RING	1	6080100	▲ 56	BUSHING PIN	1
6740060	★ 11	3/16" BALL	1	6560740	■ 57	LOCKING PIN	1
6520765	★ 12	SUCTION SPRING	1	6080100	▲ 60	BUSHING PIN	1
6160232	13	BODY	1	6232038	61	LABEL TG 0352	1
6740060	★ 14	3/16" BALL	1	6650118	62	RIVET D. 2,5x3,5	2
6520765	★ 15	SUCTION SPRING	1	6232157	63	METAL LABEL TG 0357	1
6740140	★ 16	9/32" BALL	1	6170080	64	CHAIN	1
6520180	★ 17	SPRING	1	6740020	★ 65	1/4" BALL	1
6340566	18	BALL POSITIONING DOWEL	1	6520280	66	SPRING	1
6900059	19	M 4x8 SCREW	1	6640205	67	M4 WASHER	1
6100030	20	KEY	1	6900080	68	M 4x8 SCREW	1
6520300	21	RAM RETURN SPRING	1	6895050	69	COMPLETE VALVE	1
6620140	22	RAM	1	6360160	★ 70	O-RING	1
6361800	★ 23	SEAL	1	6740120	★ 71	7/32" BALL	1
6420140	24	LOWER BLADE	1	6600100	72	BALL POSITIONING DOWEL	1
6180300	25	M8 NUT	1	6520260	73	SPRING	1
6650140	26	ø 8,4x17 WASHER	1	6740080	★ 74	5/16" BALL	1
6560400	27	MOVEABLE PIN	1	6340540	75	M 10x8 DOWEL	1
6420160	▲ 28	UPPER BLADE	1	6620120	76	PRESSURE RELEASE PIN	1
6220040	▲ 29	LEFT BLADE SPACER	1	6360120	★ 77	O-RING	1
6900380	▲ 30	M 10x35 SCREW	4	6040060	★ 78	BACK-UP RING	1
6780020	▲ 31	BLADE SUPPORT	1	6080080	79	PRES. RELEASE RAM BUSHING	1
6580060	▲ 32	PLATE	2	6900280	✚ 80	M 5x18 SCREW	1
6220020	▲ 33	RIGHT BLADE SPACER	1	6180200	✚ 81	M5 NUT	1
6760340	34	SPRING PIN D. 5x40	1	6340566	82	BALL POSITIONING DOWEL	1
6760240	35	SPRING PIN D. 4x20	1	6520180	★ 83	NO RETURN SPRING	1
6280080	36	FORK	1	6740140	★ 84	9/32" BALL	1
6040425	37	CHAIN RING	2	6635011	85	PRESSURE RELEASE PIN	1
6040280	★ 38	BACK-UP RING	1	6520861	86	PRESSURE RELEASE SPRING	1
6360360	★ 39	O-RING	1	6340720	87	PRESSURE RELEASE DOWEL	1
6362010	★ 40	SEAL	1	6760011	88	SPRING PIN D 2,5x20	1
6641140	★ 41	BACK-UP RING	1	6480042	●	COMPLETE MAIN HANDLE	
6360240	★ 42	O-RING	1	6480194	✚	COMPLETE MOVEABLE HANDLE	
6700100	★ 43	SPRING RING	4	6860110	▲	COMPLETE HEAD	
6080060	✚ 44	MOVEABLE HANDLE BUSHING	4	6560450	■	COMPLETE LOCKING PIN	
6560420	45	MOVEABLE HANDLE PIN	2	6000019	★	SPARE PARTS PACKAGE	
6362020	★ 46	SEAL	1				

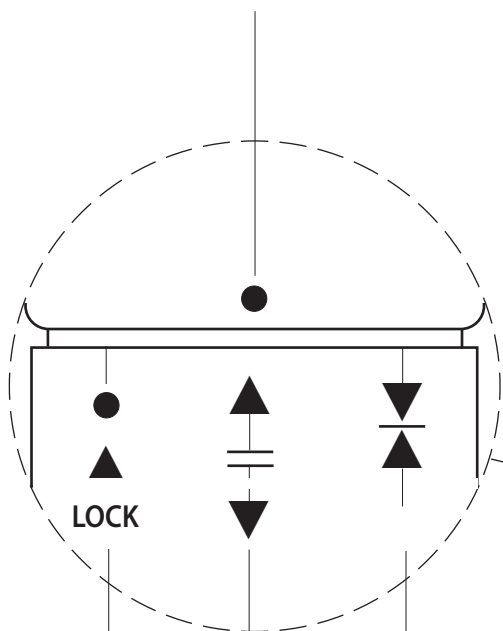
The items marked (★) are those **Cembre** recommend replacing if the tool is disassembled. These items are supplied on request in the "HT-TC041N Spare Parts Package"

When ordering spare parts always specify the following:

- code number of item
- name of item
- type of tool
- tool serial number

The guarantee is void if parts used are not **Cembre** original spares.

- Reference symbol
- Repère fixe
- Referenzsymbol
- Reference ideogram
- Simbolo de referencia
- Simbolo di riferimento



- Rest position

- Repère de repos

- Ruhestellungsposition

- Posición de reposo

- Posizione di riposo

- Release position

- Repère de décompression

- Druckablassposition

- Posición de liberación

- Posizione di rilascio

- Operating position

- Repère de travail

- Arbeitsposition

- Posición de trabajo

- Posizione di lavoro

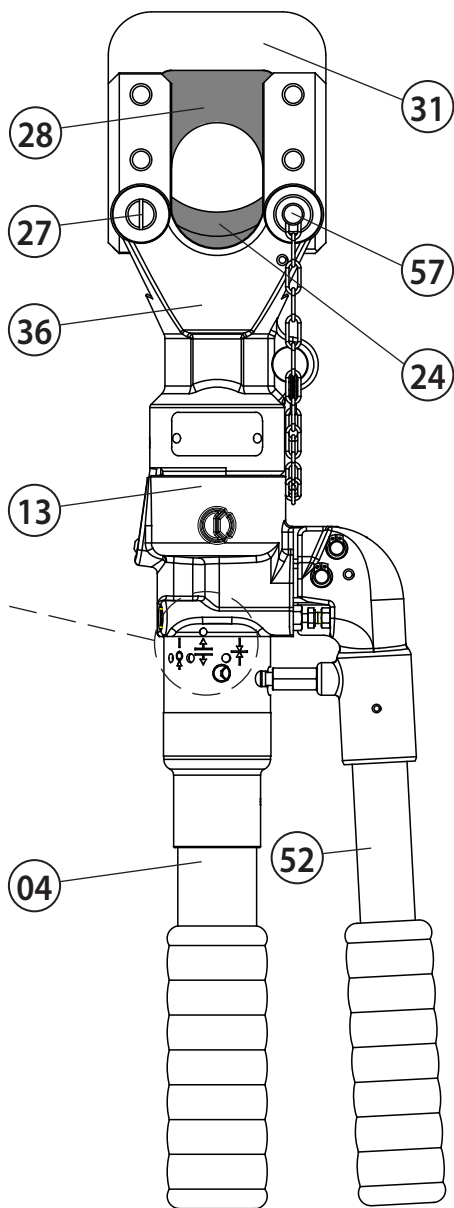


FIG. 1 OVERALL VIEW
VUE D'ENSEMBLE
GESAMTANSICHT
VISTA DEL CONJUNTO
VISTA D'ASSIEME

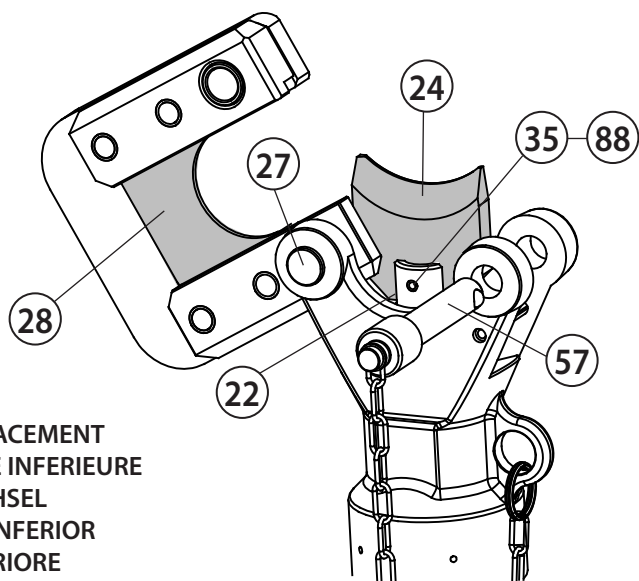


FIG. 2
LOWER BLADE REPLACEMENT
CHANGEMENT LAME INFÉRIEURE
GEGENMESSERWECHSEL
CAMBIO CUCHILLA INFERIOR
CAMBIO LAMA INFERIORE

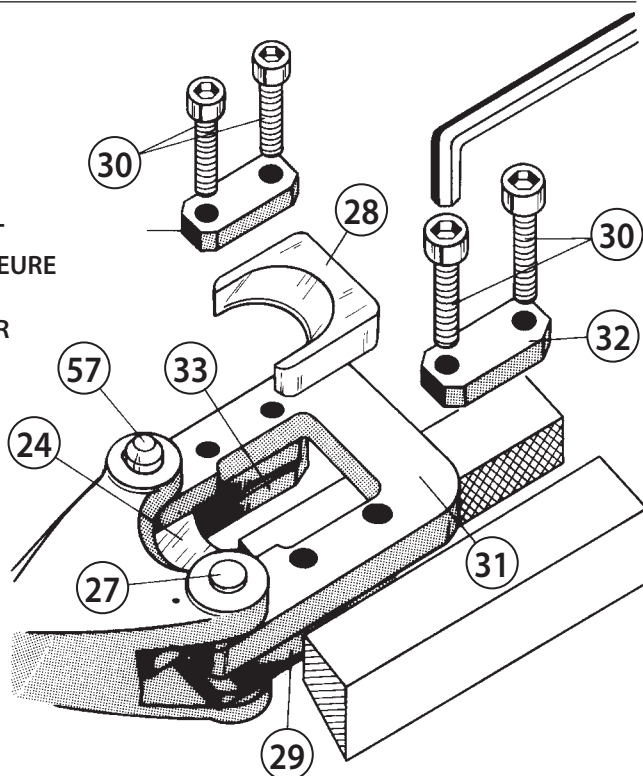


FIG. 3
UPPER BLADE REPLACEMENT
CHANGEMENT LAME SUPÉRIEURE
SCHNEIDMESSERWECHSEL
CAMBIO CUCHILLA SUPERIOR
CAMBIO LAMA SUPERIORE

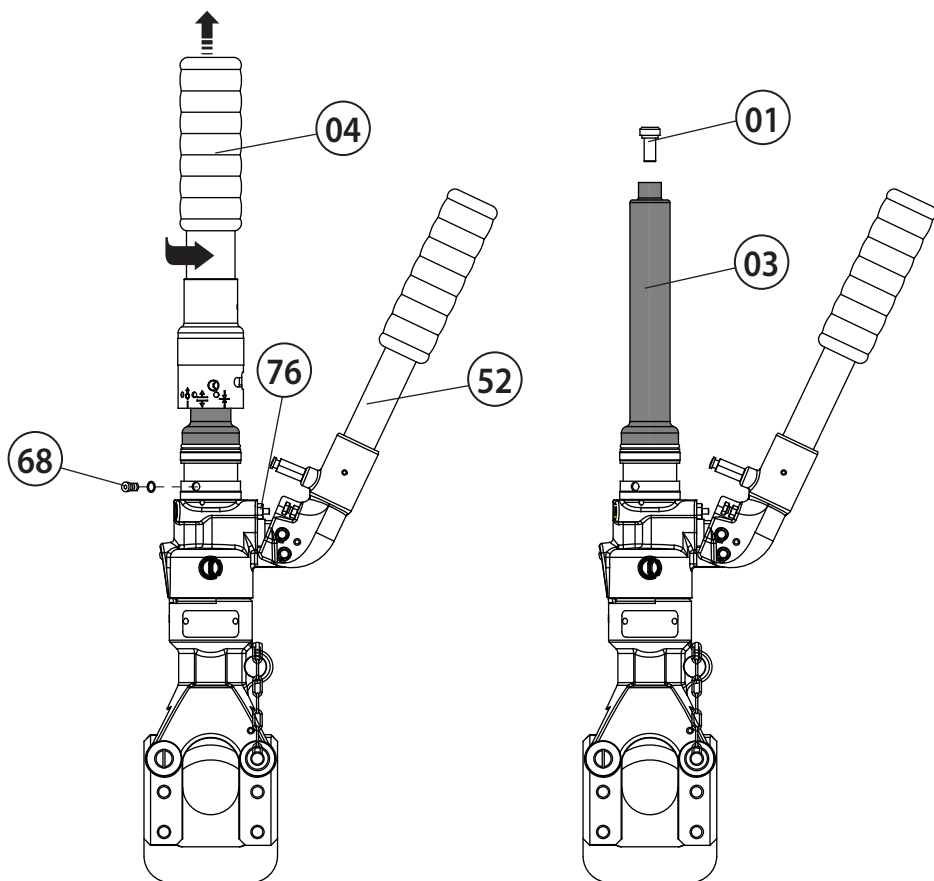
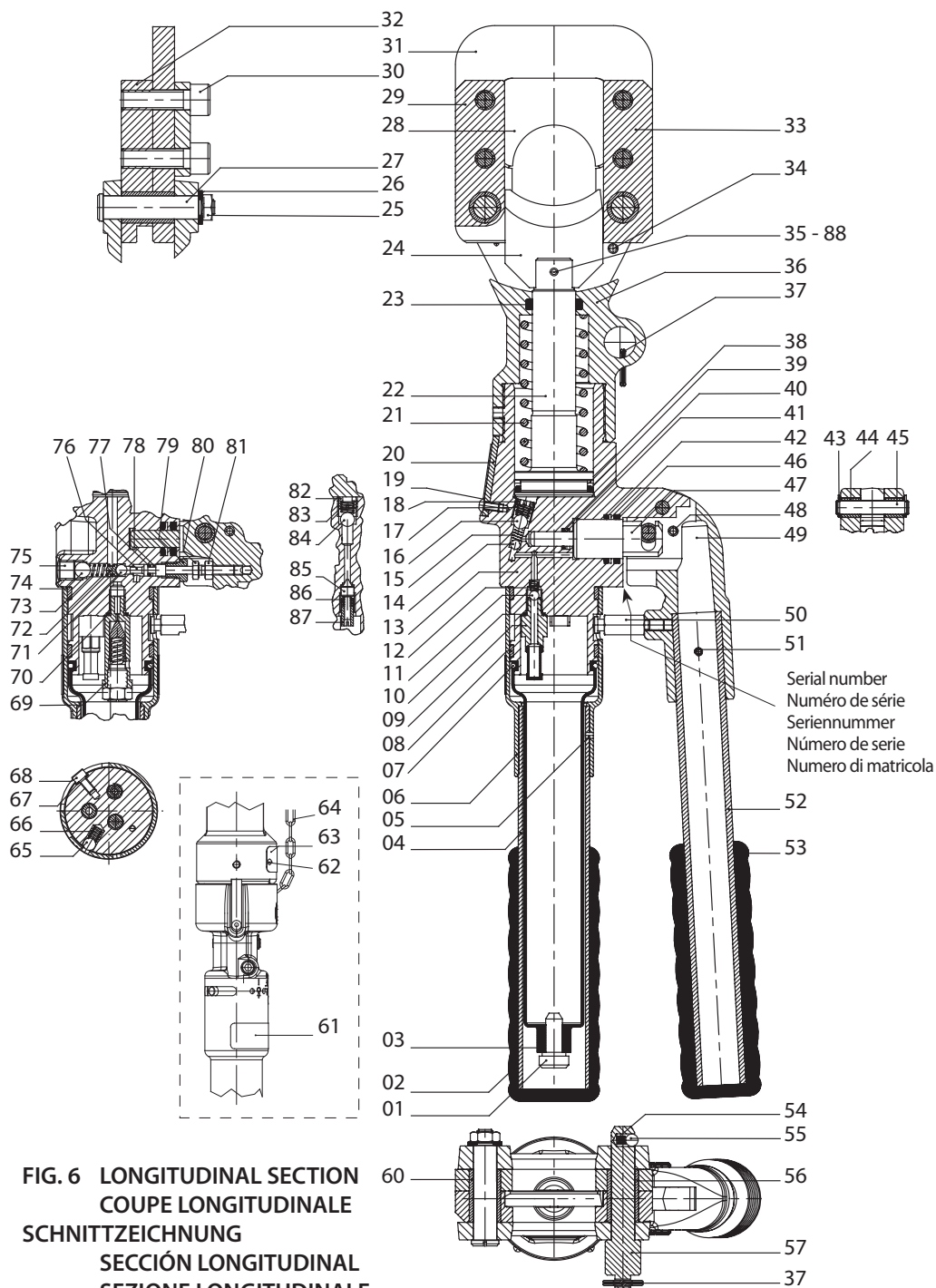


FIG. 4 TOOL POSITION FOR MAINTENANCE OPERATIONS
POSITION DE L'OUTIL POUR L'ENTRETIEN
WERKZEUG WARTUNGSPPOSITION
COLOCACION PARA LAS OPERACIONES DE MANTENIMIENTO
POSIZIONAMENTO PER LE OPERAZIONI DI MANUTENZIONE



FIG. 5 STORAGE CASE
RANGEMENT
LAGERUNG
ALMACENAMIENTO
CUSTODIA



7. CUTTING RANGE CAPACITE DE COUPE SCHNEIDBEREICH CAPACIDAD DE CORTE CAPACITÀ DI TAGLIO

	MATERIAL MATIERE WERKSTOFF MATERIAL MATERIALE	TENSILE STRENGTH CHARGE DE RUPTURE A LA TRACTION ZUGFESTIGKEIT CARGA DE ROTURA CARICO DI ROTTURA A TRAZIONE (daN/mm ²) (lbs/sq.in.)		MAX CUTTING DIAMETER DIAMETRE EXTERIEUR MAX. SECTIONNABLE MAX SCHNEIDDURCHMESSER DIAMETRO MAX DE CORTE DIAMETRO ESTERNO MAX TAGLIABILE (mm) (inches)	
ROPE & CONDUCTORS CABLE CABLES Y CONDUCTORES SEILE & LEITER	Copper Cuivre Kupfer Cobre Rame	≤ 41	≤ 59,450	45	1-25/32"
	Aluminium Aluminium Aluminium Aluminio Alluminio	≤ 20	≤ 29,000	45	1-25/32"
	Almelec Almelec Alu-Legierung Almelec Aldrey	≤ 34	≤ 49,300	45	1-25/32"
	Steel Acier Stahl Acero Acciaio	≤ 180	≤ 261,000	(*) 7 x 3,0 : $\sigma = 9,0$ mm 19 x 2,1 : $\sigma = 10,5$ mm 19 x 2,3 : $\sigma = 11,5$ mm	(*) 7 x 0.118 = σ out. 0.354 19 x 0.083 = σ out. 0.413 19 x 0.091 = σ out. 0.453
	Multi-strand steel (strands qty. ≥ 200) Acier extra-souple (≥ 200 brins) Mehrdrähtiger Stahl (Draht ≥ 200) Acero flex (≥ 200 Hilos) Acciaio extraflex (N° fili elem. ≥ 200)	≤ 180	≤ 261,000	18	0.709
	ACSR Aluminium-Acier Aluminium/Stahl ACSR Alluminio/Acciaio	≤ 180	≤ 261,000	45 (*) 26 x 2,50 + 7 x 1,95 : $\sigma = 15,85$ 26 x 3,06 + 7 x 2,38 : $\sigma = 19,38$ 26 x 3,60 + 7 x 2,80 : $\sigma = 22,80$ 54 x 3,50 + 19 x 2,10 : $\sigma = 31,50$ 54 x 4,36 + 19 x 2,62 : $\sigma = 39,20$	1-25/32" (*) 26 x 0.098 + 7 x 0.077 : σ out 0.624 26 x 0.120 + 7 x 0.094 : σ out 0.763 26 x 0.142 + 7 x 0.110 : σ out 0.897 54 x 0.138 + 19 x 0.082 : σ out 1.240 54 x 0.172 + 19 x 0.103 : σ out 1.543
RODS ROND MASSIF STANGEN VARILLAS TONDO	Steel Acier Stahl Acero Acciaio	≤ 60	≤ 87,000	18	0.709
		≤ 42	≤ 60,900	20	0.787
	Copper Cuivre Kupfer Cobre Rame	≤ 30	≤ 43,000	30	1.181
		≤ 25	≤ 36,250	32	1.260
	Aluminium Aluminium Aluminium Aluminio Alluminio	≤ 16	≤ 23,200	45	1.772

(*) TYPICAL EXAMPLES
ALGUNOS EJEMPLOS INDICATIVOS

A TITRE D' EXEMPLES
ESEMPLI INDICATIVI

EINIGE BEDEUTENDE ANWENDUNGEN



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