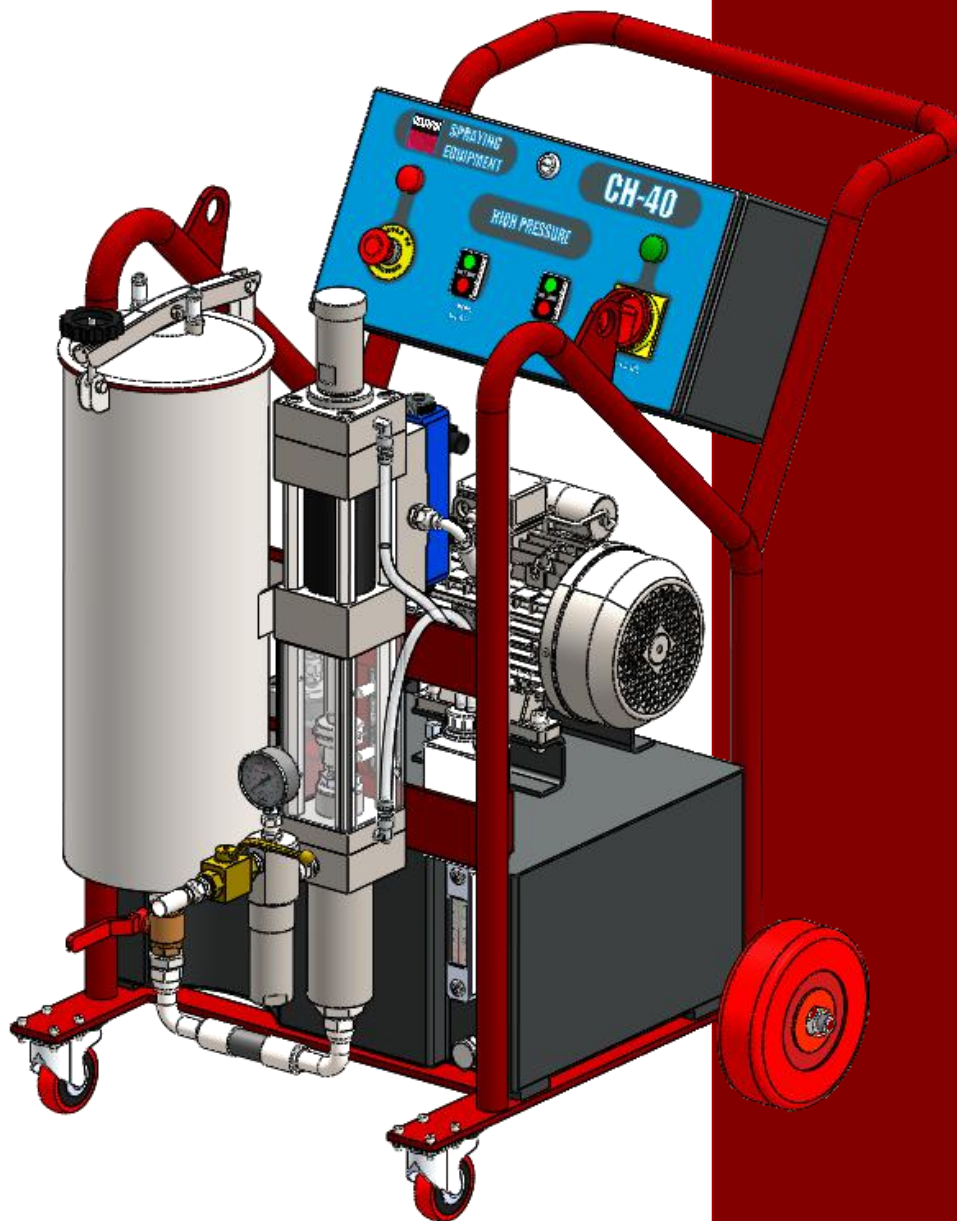


TECHNICAL MANUAL 2023



CH-40

HIGH PRESSURE HYDRAULIC EQUIPMENT FOR SINGLE
COMPONENT APPLICATION

CELTIPOL



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1. GENERAL CONDITIONS.



Before installing and starting up the Machine, read all the technical and safety documentation included in this manual carefully. It is important to pay particular attention to the information included here in order to become acquainted with handling and operating conditions of the Unit. All information is focused on bolstering User Safety and avoiding any possible breakdown arising from the incorrect use of the Unit.

Careful reading of this Technical Manual will give you a better knowledge of the system and procedures. Following the instructions and recommendations included here will reduce the potential risk of accident during installation, use or maintenance of the Machine, and will make it possible to have an incident-free operation for a longer period of time, better performance and the possibility to detect and solve problems in a swift and simple manner.

Keep this Technical Manual. You will be able to make consultations in the future, with access to useful information at all times. In the event of misplacing the manual, please request a copy from Celtipol.

2. SAFETY CONDITIONS

The first consideration to take into account is that during the design and project stage of the CH-40 machine, the regulations in force regarding machine Safety and Prevention of Risk in the Work Place have been scrupulously respected.

Nevertheless, in common with any machine or tool, incorrect use of the same may cause more or less hazardous situations. These recommendations have been drafted to avoid such situations to ensure safe use and handling of the system.

3. APPLICATION SAFETY.

In order to minimize the possible risks that may occur during the use of this equipment, it is important to be aware of the following dangers



Fire and explosion hazard

- Paints and solvents can emit flammable vapors.
- To prevent fire and explosion, avoid spraying near a flame or ignition source.
- Do not spray flammable fluids in a confined area, keep spray area well ventilated. If necessary, use forced ventilation to ensure proper ventilation.
- Do not smoke or operate switches or start motors in the spray area.
- Maintain adequate ventilation.



Danger due to toxic vapors or fluids

- Las pinturas o disolventes pueden emitir vapores tóxicos al ser respirados.
- Paint or solvents can cause serious injury on contact with skin or eyes.
- Read the safety data sheets of the products used (paints and solvents) to know the toxicity of the products used and the actions to be taken in the event of an accident.
- Store dangerous products in suitable containers.
- If it is not possible to guarantee adequate ventilation, both the people who apply and those who work in the area of influence of the vapors must use an approved air respirator.
- Users will use the appropriate protective equipment at all times (gloves, breathing masks, goggles, protective clothing, etc).
- Dispose of and store paints or solvents safely, following the manufacturers recommendations and current regulations.

Danger due to pressurized elements

- The machine works with hydraulic fluid and high pressure mono-components.
- High pressure spraying or projection can inject toxins or cause serious injury into the body.
- Do not open any connections or carry out maintenance work on components under pressure, until the pressure has been released.
- Do not point the spray gun or spray at people and animals.
- Check connections and hoses before using the equipment.
- Users will use the appropriate protective equipment at all times (gloves, breathing masks, protective clothing, etc.).

**Danger due to incorrect use of the machine**

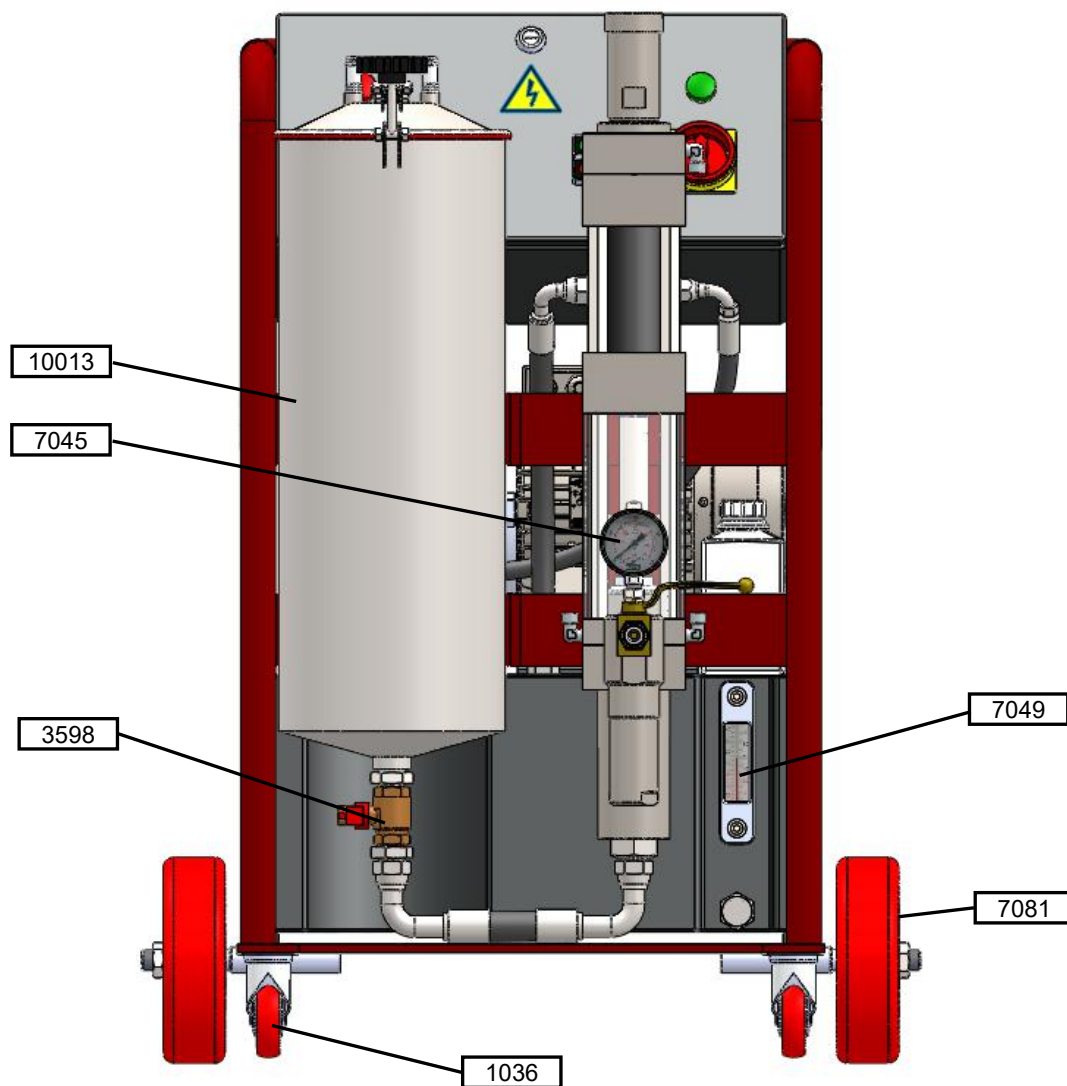
- Improper use of the machine can cause death or serious injury.
- Do not work with the machine without the safety protections duly installed.
- Do not use the machine if you are tired or under the influence of drugs or alcohol.
- Do not leave the machine while it is running or pressurized. Shut down equipment and bleed of pressure while not in use.
- Check equipment daily. Repair or replace damaged or worn parts with original parts only.
- Use the machine only for the use for which it has been designated.
- Do not bend the hoses or pull on them to move the equipment from place.
- Users will use the appropriate protective equipment at all times (gloves, breathing masks, protective clothing, etc.).

4. EQUIPMENT TECHNICAL SHEET.

HYDRAULIC EQUIPMENT CH-40	
<u>1. TECHNICAL CHARACTERISTICS:</u>	
WORK PRESSURE	400bar
ELECTRIC MOTOR POWER	3 Kw
MAXIMUM PRODUCTION	8,5 lt/min
WEIGHT OF THE MACHINE	100Kg
DIMENSIONS	760x1200x1020 mm (width x bottom x height)
<u>2. EQUIPAMIENTOS Y SISTEMAS:</u>	
➤ PRODUCT OUTLET PROTECTIVE FILTERS.	
➤ PRODUCT HYDRAULIC PRESSURE MANOMETER.	
➤ LIMIT SWITCHES INDUCTIVE.	
➤ TRANSPORT WHEELS.	

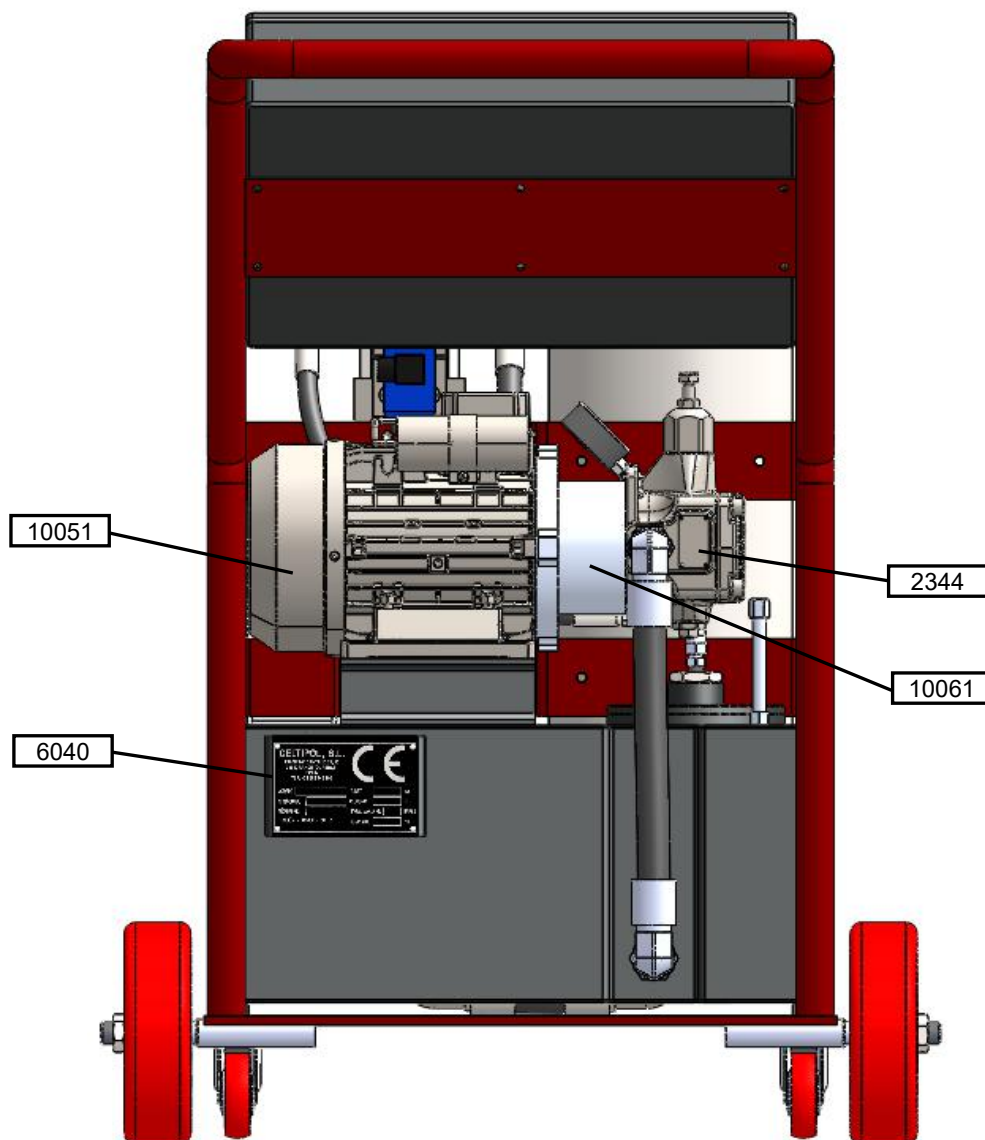
5. OVERVIEW

- FRONT VIEW



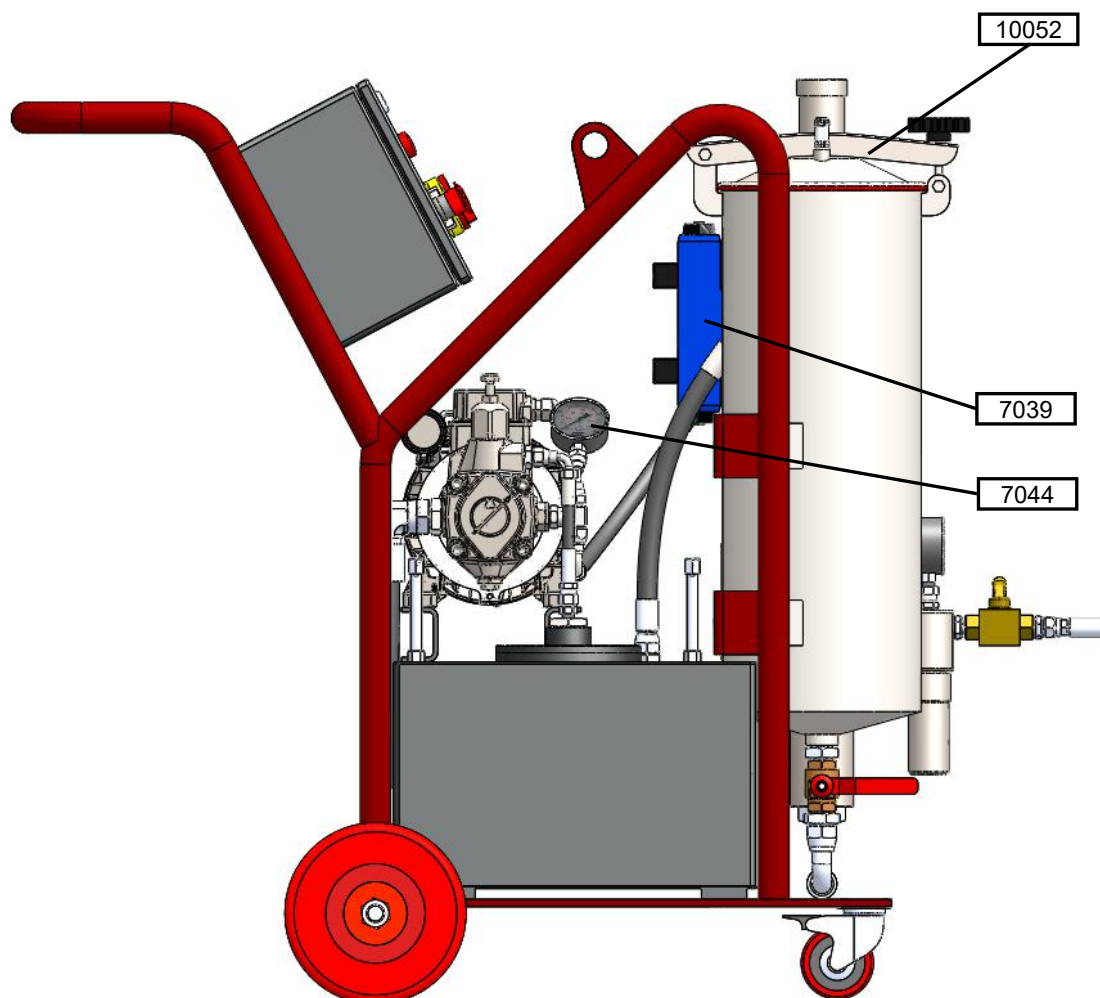
Ref.	DESCRIPTION
1036	Wheel with brake
3598	Stopcock
7045	Ø62 product pressure gauge
7049	Thermometer and oil level
7081	Wheel Ø200
10013	Product tank (22lt)

- REAR.



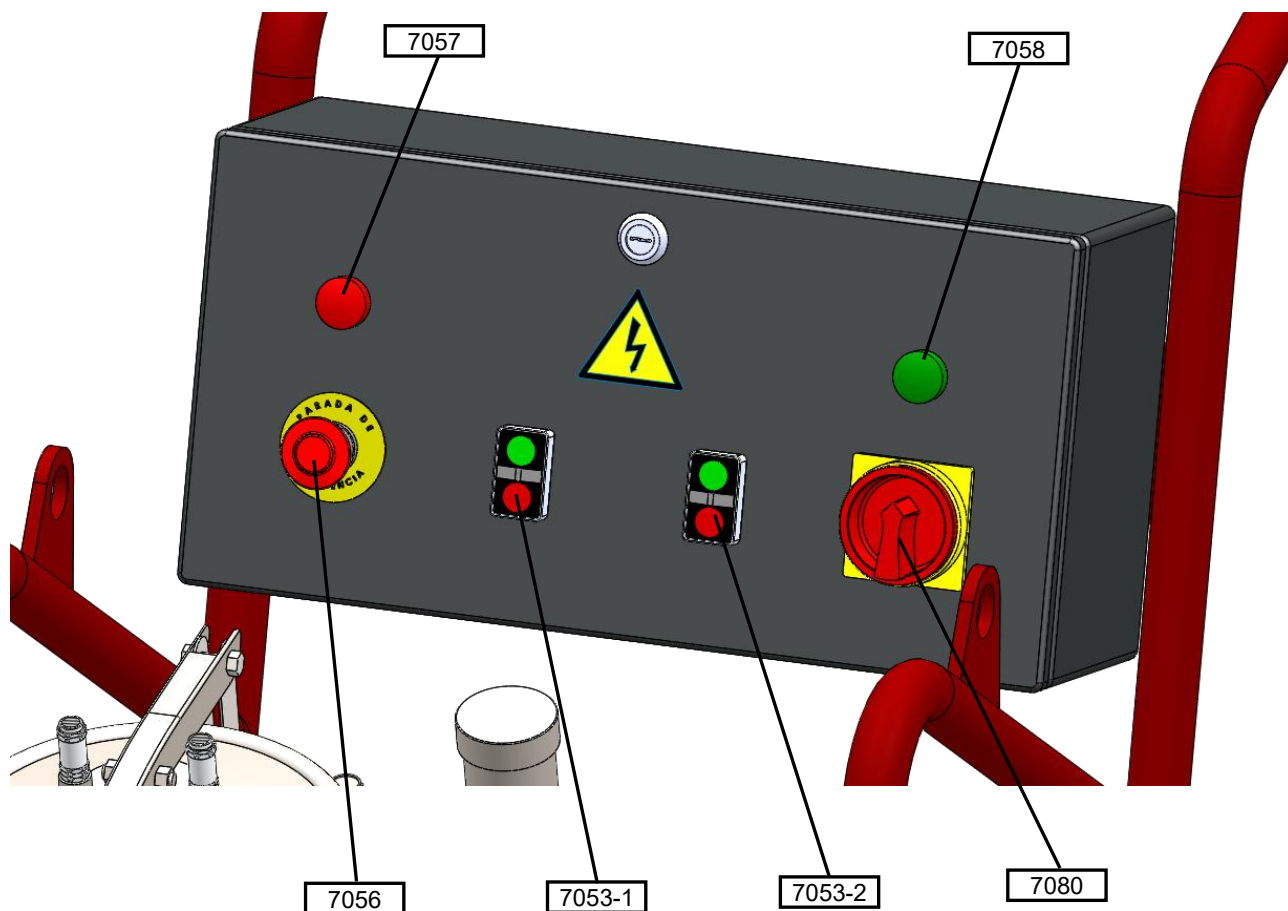
Ref.	DESCRIPTION
2344	Hydraulic oil pump
6040	Identificative plate
10051	Electric motor
10061	Coupling motor-pump

- RIGHT SIDE.



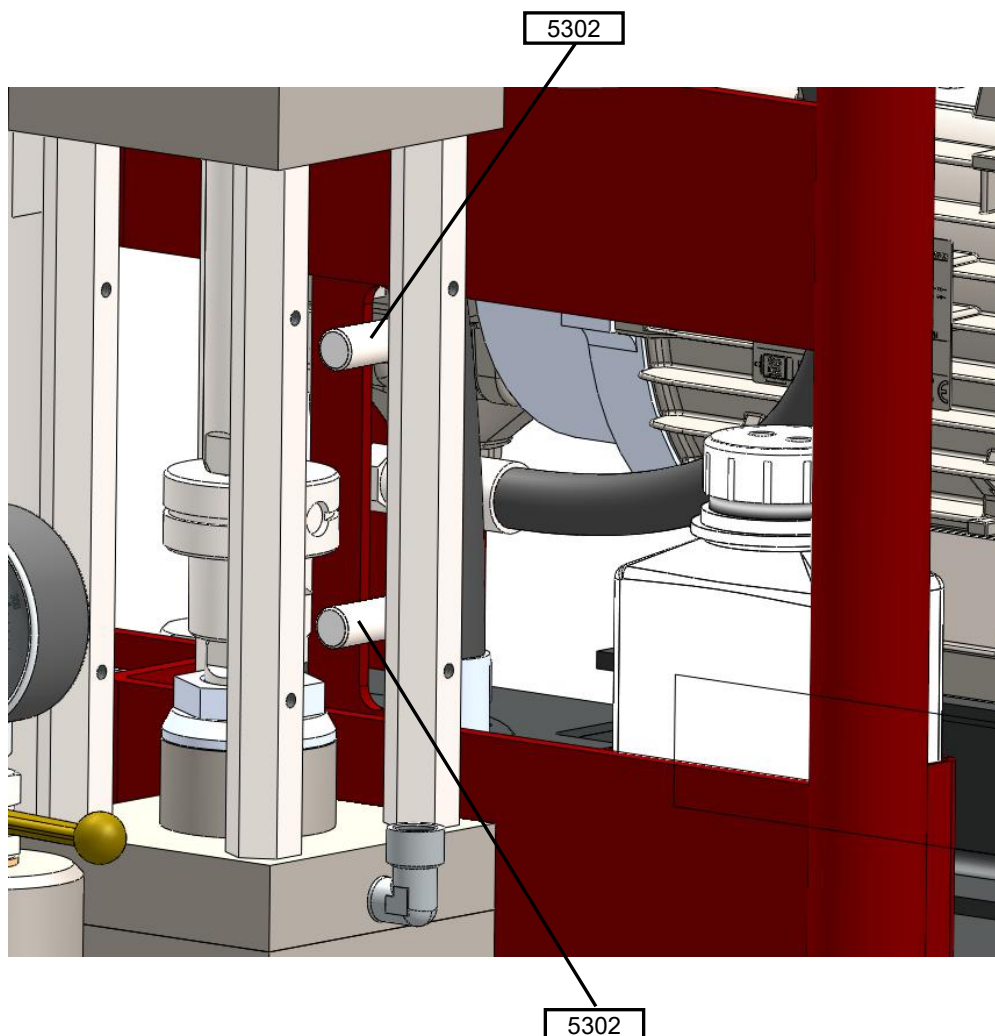
Ref.	DESCRIPTION
7039	Solenoid valve
7044	Oil pressure manometer Ø62
10052	Closing of the product tank

- CONTROL PANEL.



Ref.	DESCRIPTION
7053-1	ON/OFF hidraulic pump button
7053-2	ON/OFF cilinder button
7056	Emergency stop
7057	Red light pilot
7058	Green light pilot
7080	Main switch

6. LIMIT SWITCHES.

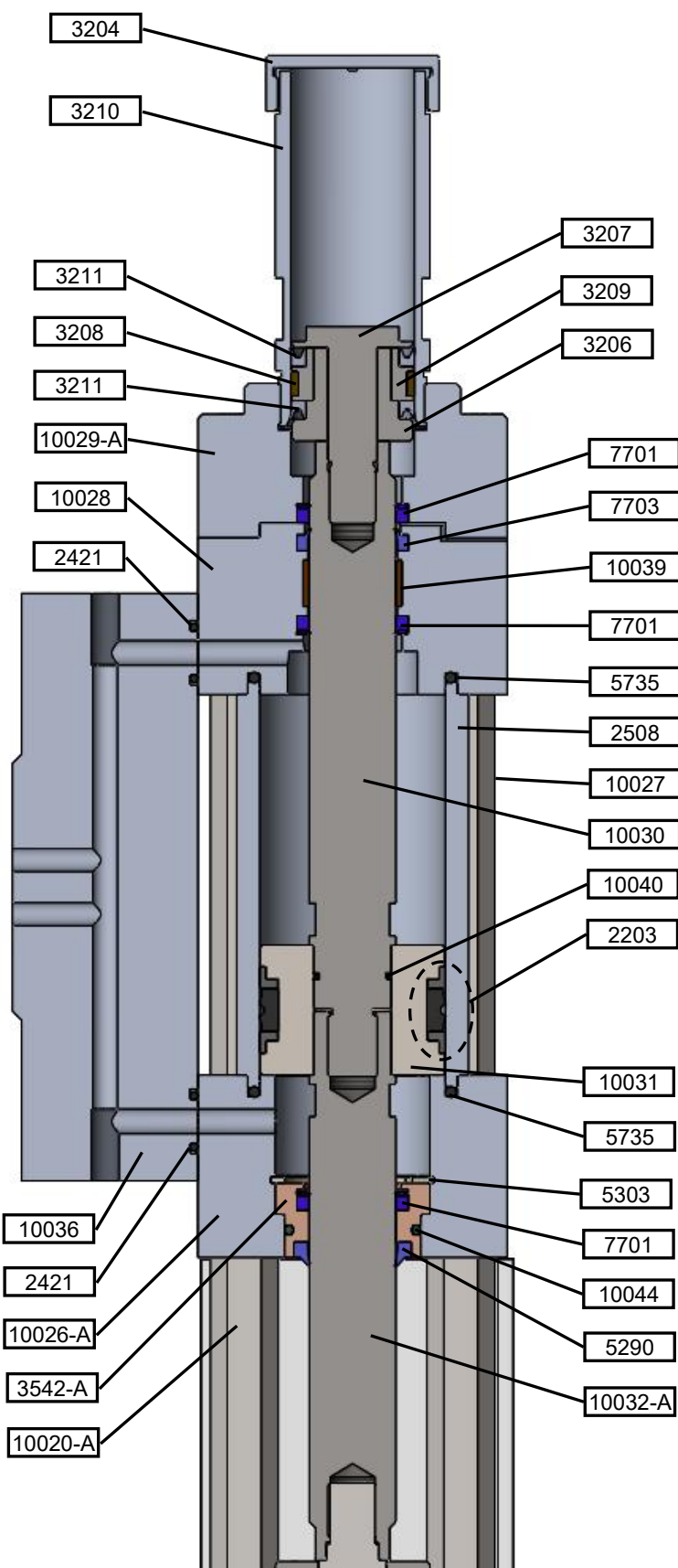


Ref.	DESCRIPTION
5302	Inductive limit switches

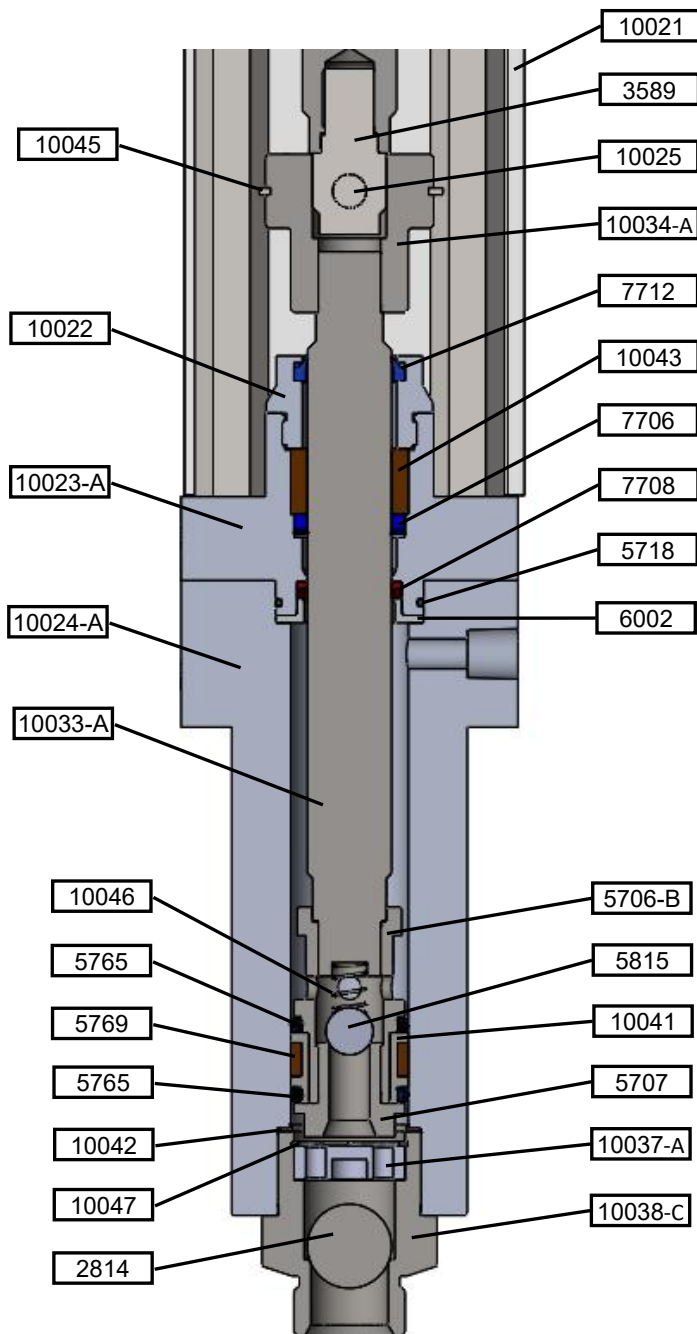
7. PUMPING SYSTEM.

Pneumatic cylinder

Ref.	Description
2203	Ø60 piston replacement kit
2421	Base plate o-ring
2508	Cylinder body
3204	Top
3206	Collar support
3207	Tip piston
3208	DOP Guide pump
3209	Guide housing
3210	Rod protection
3211	DOP pump gasket (x2)
3542-A	Bronze bushing
5290	Rigid wiper seal
5303	Safety ring
5735	Cylinder O-ring (x2)
7701	Rod seal (x3)
7703	Wiper seal
10020-A	Lower hexagonal pillar
10026-A	Bottom cylinder base
10027	Upper hexagonal pillar
10028	Upper cilinder head
10029-A	Pump supplement
10030	Upper cylinder rod
10031	Hydraulic piston
10032-A	Lower cylinder rod
10036	Base plate
10039	Rod guide
10040	Hydraulic piston o-ring
10044	Bronze bushing o-ring



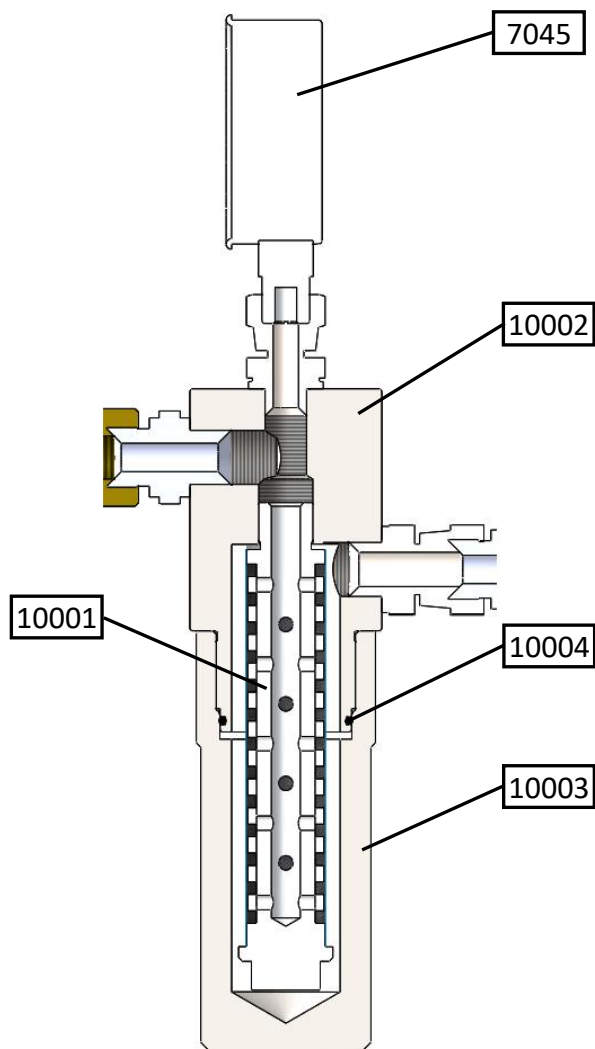
Sistema de bombeo.



Ref.	Description
2814	Ø25 sphere
3589	Piston union head
5706-B	Piston with holes
5707	Piston head
5718	O-ring
5765	Varisel collar
5769	Piston guide
5815	Ø15 sphere
6002	Collar stop ring
7706	Rod seal
7708	Rod seal
7712	Whiper seal
10021	Plastic protector
10022	Whiper seal holder
10023-A	Packing support
10024-A	Cylinder block
10025	Rod union bolt
10033-A	Pump rod
10034-A	Rod union
10037-A	Pump suction disk
10038-C	Lower base
10041	Collar housing
10042	Lower base ring
10043	Guide
10045	Safety ring
10046	Piston spring
10047	Safety ring

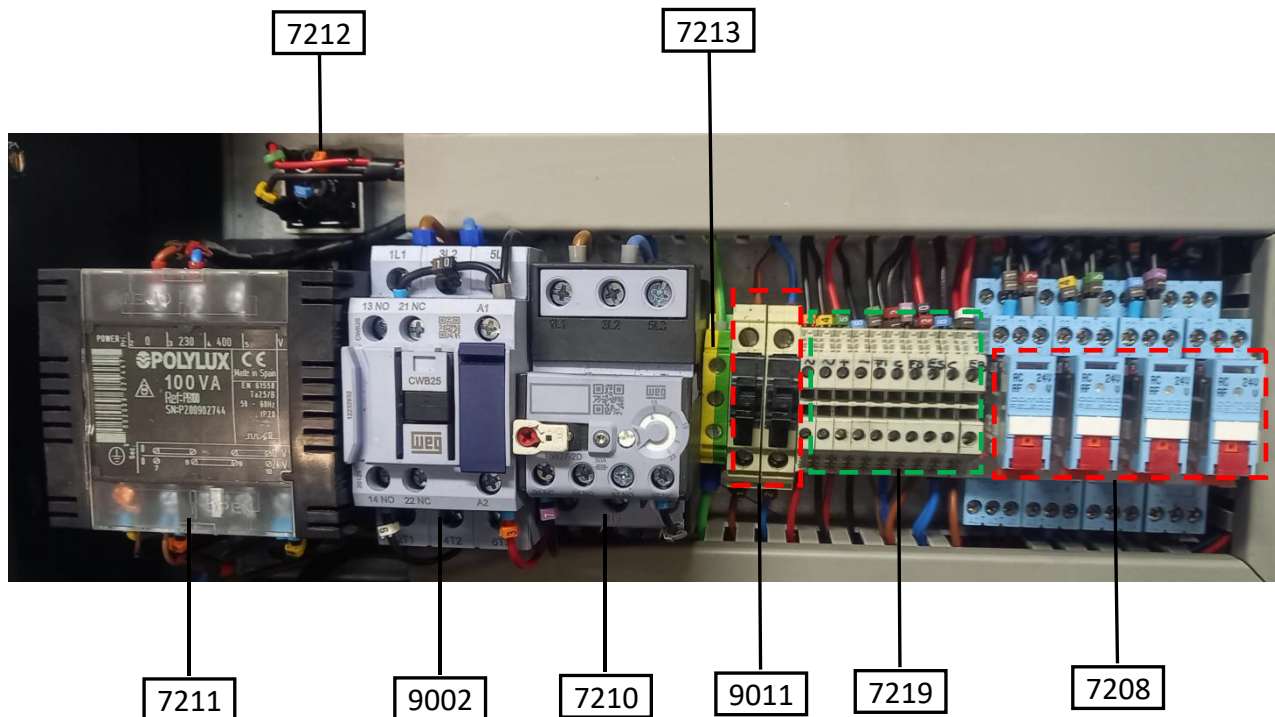
Spare KIT CH-40		
Ref.	Qty	Description
2203	1	Ø60 piston replacement kit
2421	2	O-ring Øint14x3
3208	2	DOP pump guide
3211	2	DOP pump seal
5290	1	Rigid wiper seal Ø28
5718	1	O-ring Øin 40x2
5735	2	O-ring Øint60x3,5
5765	2	VARISEL collar extØ35
5769	1	Piston guide
7701	3	Rod seal poliurethane Ø28
7703	1	Rod wiper poliurethane Ø28
7706	1	Rod seal poliurethane Ø25
7708	1	VARISEL collar intØ25
7712	1	Rod wiper poliurethane Ø25
10039	1	Rod gide
10043	1	Gide
10044	1	O-ring Øint38x3

Outlet filter



Ref.	Description
7045	Vertical pressure gauge
10001	Filter holder
10002	Filter base
10003	Filter bowl
10004	O-ring Ø33x2
10048	Filter

ELECTRIC CONTROL PANEL



Ref.	Description
7208	2 contact relay
7210	Thermal relay
7211	Transformer
7212	Rectifier
7213	Earth terminal
7219	Connection terminals
9002	Contactor 25A
9011	Fuses 2A

8. START-UP SEQUENCE.

1. Install the machine completely fixed and stable.
2. Unroll the hoses.
3. Open the product tank stopcock.
4. Put the main switch in the ON position.
5. Connect hydraulic pump by start button.
6. Connect the cylinder start button to fill the pump with product.
7. Disengage gun safety and pull trigger to start spray. ¹
8. Use the appropriate means of personal protection. ²

¹. Do not place any part of the body in the direction of the projection nor project towards other people.

². It is recommended to use protective goggles, air mask, protective clothing and other safety equipment. The recommendations of the manufacturers and of the products used must be followed.

9. STOP AND DECOMPRESSION OF THE MACHINE.

1. Put the safety on.
2. Press the cylinder stop button.
3. Press the stop button of the hydraulic pump.
4. Disconnect the main switch.
5. Close the product tank stopcock.
6. Unlock gun and trigger gun to relieve pressure. Check on the product outlet pressure gauge that the pressure reaches zero.
7. Put the gun safety back on.
8. If the gun or hose is clogged, slowly loosen the coupling-nut to the gun or machine and allow pressure to gradually release. Then clear obstruction in hose or gun.

10. CLEANING THE MACHINE.

After using the machine, clean it if you are not going to use it during the day.

1. Carry out the decompression of the machine as indicated above (9.8).
2. Fill a washing fluid into the product tank. ³

³. The washing fluid will depend on the type of product. Use water for water-based paints, mineral spirits for oil-based paints or other solvents for the rest of cases. Read the manufacturer's recommendations.

3. Proceed to start the machine as indicated above (8 Start-up sequence) with the washing fluid instead of product.
4. Activate the gun and discharge the fluid into a waste tank until clean washing fluid starts to come out.
5. Stop the machine when no more liquid comes out.

6. Clean the machine filters and the gun.
7. If water is used to wash the machine, proceed to wash again with mineral alcohol to avoid corrosion or freezing of the machine.

11. SYSTEM MAINTENANCE.

- ✓ Check the hydraulic cylinder and the product pump periodically for leaks.
- ✓ Check the DOP bottle. If the liquid thickens or changes color, change it.
- ✓ Clean the inlet and outlet filters after each use.
- ✓ Check the tightness of the hose connectors (daily).
- ✓ Check periodically the state of the hoses (chafing or cuts).
- ✓ Check the condition of the gun (daily).
- ✓ Clean the machine after use and before the end of the day.

12. GENERAL FAILURES.

The CH-40 machine has been designed and built to withstand severe work conditions, on the condition that it is used and maintained in the appropriate manner. See below for information on possible incidents. ***Repairs conducted by non-qualified personnel or the use of spare parts that are not the originals may cause damage to the equipment or may be hazardous for the operator.***

Posibles incidencias:

1. Failure of the electrical supply:
To switch on the machine, the main switch must be set to the ON position , lighting up the green LED light located above the switch. If this LED does not light up, this indicates that the electrical power does not exist or is faulty. Check:
 - La conexión eléctrica está bien realizada.
→*Check the electrical connection.*
2. Low pressure.
If the machine outlet pressure is lower than normal, check:
 - The inlet filter is clogged or dirty.
→Clean the filter.
 - The product pump piston collars are worn or damaged.
→Change the collars.
 - The product pump inlet check ball is not seating properly.
→Clean the pump.
 - The product pump outlet check ball is not seating properly.
→Clean the pump.
 - The product is too thick.
→*Increase the diameter of the hose or reduce the length of the hose.*

3. High pressure.

If the outlet pressure of the machine is higher than normal, check:

- The gun is clogged.
→*Clean the gun.*
- The machine outlet filter is clogged.
→*Clean the filter.*
- The gun hose is clogged or pinched.
→*Unclog the hose.*

4. The machine has power but the cylinder is moving very slowly or not moving at all.

Check:

- There is enough pressure in the hydraulic pump.
→*Correct the pressure.*
- The electric motor rotates backwards.
→*Correct the connection of the electrical phases.*
- The product pump piston rod is stuck due to the accumulation of dirt or dried product.
→*Disassemble and clean the product pump.*
- There is a fail in the inductive limit switches.
→*Check the electrical connections of the limit switches. Check the relays in the electrical panel.*
- The hydraulic piston seals are damaged.
→*Replace the piston seals.*

5. There are product leaks. Check:

- Tightening of the connections where there are leaks. Be careful with product pressure.*

6. The gun spits product. Check:

- There is air in the pump or hose.
→*Tightening of the connections where there are leaks. Be careful with product pressure.*
- The gun is partially obstructed.
→*Clean the gun.*
- There is little or no product in the tank.
→*Fill the product tank.*

7. Pump does not prime.

If the pump does not prime on startup, check:

- The product stopcock is closed.
→*Open the product stopcock.*
- There is air in the pump.



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Translation of the original manual

03/2023

- *Tighten the connections of the pumps with the tank.*
- There is a leak at the pump inlet check ball.
 - *Clean the ball seat and check that it is not chipped or worn.*
- The product pump piston collars are worn.
 - *Change the collars.*

13. LIST OF COMPONENTS.

1036 Wheel w. brake.....	p-8	7701 Rod seal poliurethane Ø28.....	p-13
2203 Ø60 piston replacement kit.....	p-13	7703 Rod wiper poliurethane Ø28.....	p-13
2344 Hydraulic pump.....	p-9	7706 Rod seal poliurethane Ø25.....	p-14
2421 Base plate o-ring Øint14x3.....	p-13	7708 VARISEL collar intØ25.....	p-14
2508 Cylinder body.....	p-13	7712 Rod wiper poliurethane Ø25.....	p-14
2814 Ø25 sphere.....	p-14	9002 Contactor 25A.....	p-16
3204 Top.....	p-13	9011 Fuses 2A.....	p-16
3206 Collar support.....	p-13	10001 Filter holder.....	p-15
3207 Tip piston.....	p-13	10002 Filter base.....	p-15
3208 DOP Guide pump.....	p-13	10003 Filter bowl.....	p-15
3209 Guide housing.....	p-13	10004 O-ring Ø33x2.....	p-15
3210 Rod protection.....	p-13	10013 Product tank 22ltr.....	p-8
3211 DOP pump gasket.....	p-13	10020-A Lower hexagonal pillar.....	p-13
3542-A Bronze bushing.....	p-13	10022 Whiper seal holder.....	p-14
3589 Piston union head.....	p-14	10023-A Packing support.....	p-14
3598 Stopcock 3/4".....	p-8	10024 Cylinder block.....	p-14
5290 Rigid wiper seal Ø28.....	p-13	10025 Rod union bolt.....	p-14
5302 Inductive limit switches.....	p-11	10026-A Bottom cylinder base.....	p-13
5303 Safety ring.....	p-13	10027 Upper hexagonal pillar.....	p-13
5706-B Piston with holes.....	p-14	10028 Upper cilinder head.....	p-13
5707 Piston head.....	p-14	10029-A Pump supplement.....	p-13
5718 O-ring Øint40x2.....	p-14	10030 Upper cylinder rod.....	p-13
5735 O-ring Øint60x3,5.....	p-13	10031 Hydraulic piston.....	p-13
5765 VARISEL collar extØ35.....	p-14	10032-A Lower cylinder rod.....	p-13
5769 Piston guide.....	p-14	10033-A Pump rod.....	p-13
5815 Ø15 sphere.....	p-14	10034-A Rod union.....	p-14
6002 Collar stop ring.....	p-14	10036 Base plate.....	p-13
6040 Identificative plate.....	p-9	10037-A Pump suction disk.....	p-14
7039 Solenoid valve.....	p-10	10038-C Lower base.....	p-14
7044 Ø62 oil pressure gauge.....	p-8	10039 Rod gide.....	p-13
7045 Vertical pressure gauge.....	p-8	10040 Hydraulic piston o-ring Øint21x2.....	p-13
7049 Thermometer and oil level.....	p-8	10041 Collar housing.....	p-14
7053-1 Hydraulic pump on/off button.....	p-9	10042 Lower base ring.....	p-14
7053-2 Cylinder on/off button.....	p-9	10043 Gide.....	p-14
7056 Emergency stop.....	p-9	10044 O-ring Øint38x3.....	p-13
7080 Main switch.....	p-9	10045 Safety ring.....	p-14
7081 Wheel Ø200.....	p-8	10046 Piston spring.....	p-14
7208 2 contact relay.....	p-16	10047 Safety ring.....	p-14
7210 Thermal relay.....	p-16	10048 Filter.....	p-15
7211 Transformer.....	p-16	10051 Electric motor.....	p-9
7212 Rectifier.....	p-16	10052 Closing of the product tank.....	p-10
7213 Earth terminal.....	p-16	10061 Coupling motor-pump.....	p-9
7219 Connection terminals.....	p-16		

14. COMMERCIAL GUARANTEE.

Dear customer,

We thank you for your deference in purchasing this CELTIPOL product and hope you are satisfied with your purchase. In the event that this CELTIPOL product requires any service during the guarantee period, our technical service will assist you at the following address:

Faustino Santalices, Nº 35 - Bande - (Ourense) Spain
Tel: 988 443 105 - Fax: 988 444 410
E-mail: info@celtipol.com

YOUR GUARANTEE:

Through this consumer guarantee, CELTIPOL warrants the product against faults in material and workmanship for a period of 2 years from the original date of purchase.

If during this guarantee period the product has faults in materials or workmanship, CELTIPOL will repair or replace (at CELTIPOL's discretion) the product or its faulty parts, under the conditions specified below and without any charge for workmanship or parts. CELTIPOL reserves the right (at its sole discretion) to replace components of faulty products or to replace low-cost products with new or recycled products, in accordance with the laws of each country.

Conditions:

- 1. This guarantee is valid only when presented with the original invoice or sales receipt (indicating the date of sale and model purchased) along with the faulty product. CELTIPOL reserves the right not to offer the free guarantee service if these documents are not presented or if the information they contain is incomplete or illegible.**
- 2. This guarantee does not cover or pay for damages resulting from changes or adjustments that may be made to the product, without the prior written consent of CELTIPOL in order to comply with safety or technical standards, national or local, in countries other than those for which the product has been designed and manufactured.**
- 3. This guarantee shall not apply if the serial number of the product has been altered, deleted, has disappeared or is illegible.**
- 4. This guarantee does not cover any of the following:**
 - a. Regular maintenance and repair or replacement of parts resulting from normal wear and tear.**
 - b. Damage resulting from misuse, Including:**

- Failure to use the product for purposes other than those for which it is designed or failure to comply with CELTIPOL's instructions for use and maintenance.
- Installation or use of the product in a manner that does not comply with the technical or safety regulations of the country where used.
- Repairs carried out by a non-authorized technical service or by the consumer.
- Accidents, lightning, water, fire, inadequate ventilation or any cause beyond the control of CELTIPOL.
- Electronic components (inside the control panel) affected by bad connections or sudden voltage changes (electrical fluid deficiencies).
- Faults of the system to which this product is incorporated.
- This guarantee has no influence whatsoever on the legal rights of the consumer granted by the applicable national legislation, nor on the rights of the consumer vis-à-vis the distributor deriving from the purchase/sale contract established between the two.

15. EC DECLARATION



Translation of the original

Ec declaration of conformity

Ec declaration of conformity

According to Appendix II, No.1 A of the Machinery Directive 2006/42/CE

The company:

CELTIPOL S.L.

C/ Faustino Santalices, 35

32840 Bande – Ourense-Galicia

SPAIN

Declares that the equipments types:

CH-40

With Serial-No.:

Are in conformance with the provisions of the above-mentioned directive.

Bande, 13.04.2022

Place, Date



José Torres Ambrosio

Manager

Translation of the original

EC declaration of conformity

CELTIPOL

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Made in Spain**