



Parts4Laser

COLD AIR SKIN COOLING SYSTEM

Evo CoolSkin Pro Chiller

User Manual



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SECTION 1

Foreword

Thank you for choosing the Evo CoolSkin Pro Chiller. This device is an intelligent cold air skin cooling system built to work alongside medical aesthetic energy devices — laser, IPL and radiofrequency — to reduce pain, protect the epidermis and calm the skin after treatment.

This manual standardizes the installation, operation, safe use, routine maintenance and troubleshooting of the unit. It sets out the applicable safety standards, the cooling principle, the contraindications and the precautions that keep both patient and operator safe.

Every operator must read and understand this manual in full before working with the device, and must follow the procedures in it. Do not modify the equipment and do not operate it outside the parameters given here. Parts4Laser accepts no liability for injury or damage arising from non-compliant operation.

SECTION 2

Product overview & specifications

The Evo CoolSkin Pro Chiller is a localized cooling system that uses compressor refrigeration to deliver a continuous stream of chilled, dry air through a flexible insulated hose and nozzle. It cools the skin surface, desensitizes nerve endings, relieves pain, limits laser-induced thermal damage and reduces redness, swelling and post-inflammatory hyperpigmentation.

Cooling comes from the unit's own refrigeration circuit. No cryogen, gas cartridge or spray medium is applied to the patient, and nothing needs refilling between treatments — the only consumables are the air filter and fuses.



Fig. 1 — Unit on castors with articulated nozzle arm and equipment tray.

SPECIFICATION	VALUE
Part number	EVO-SCP (Evo CoolSkin Pro Chiller)
Cooling system	Compressor refrigeration, chilled dry air — no cryogen or consumable medium
Air flow volume	0–800 L/min
Gears	5 selectable levels
Skin temperature	down to $-20\text{ }^{\circ}\text{C}$ (ambient $\leq 25\text{ }^{\circ}\text{C}$)
Evaporator temperature	$-40\text{ }^{\circ}\text{C}$ (ambient $\leq 25\text{ }^{\circ}\text{C}$)
Temperature settings	$0\text{ }^{\circ}\text{C}$ / $-10\text{ }^{\circ}\text{C}$ / $-20\text{ }^{\circ}\text{C}$, selected on screen
Pre-cooling time	5 minutes to nozzle temperature below $0\text{ }^{\circ}\text{C}$ (gear 2, ambient $\leq 25\text{ }^{\circ}\text{C}$)
Defrost cycle	3–10 minutes, automatic or operator-initiated
Continuous working time	4 hours at humidity $\leq 45\%$
Noise	45 dB maximum (gear 5)
Power supply	Confirm voltage and current against the unit nameplate before connecting
Operating environment	Ambient $\leq 25\text{ }^{\circ}\text{C}$ for rated performance, humidity $\leq 45\%$, ventilated, level surface
Storage environment	$5\text{ }^{\circ}\text{C}$ to $30\text{ }^{\circ}\text{C}$, humidity 40–70 %, out of direct sunlight
Included	Power cord $\times 1$, spare fuses $\times 2$, nozzle arm and bracket, equipment tray, user manual

Specifications may be revised without notice as the product is improved. The nameplate on the unit governs its electrical rating.

SECTION 3

Standards and compliance

The Evo CoolSkin Pro Chiller is a Class II aesthetic electrical device, supplied as an auxiliary cooling accessory to energy-based skin treatments. It is designed, produced and tested against the frameworks below. Ask your Parts4Laser representative for the current certificate set and declaration of conformity for your market before placing the unit into clinical service.

3.1 European Union

- **Regulation (EU) 2017/745 (MDR)** — risk classification, technical documentation, conformity assessment and Notified Body review.
- **EN 60601 series** — safety of medical electrical equipment: insulation, protection against electric shock, overload protection and essential performance, addressing leakage current and short-circuit hazards.
- **EN 60601-1-2** — electromagnetic compatibility, so the unit neither disturbs nor is disturbed by other devices in the treatment room.
- **EN ISO 14971** — risk management across the product life cycle, with controls defined for cold injury, electrical fault and mechanical hazards.

3.2 United States

- FDA establishment and device listing, with premarket notification where the intended use requires it.
- **21 CFR 820 (QSR)** and **ISO 13485** quality management across procurement, assembly, final test, factory calibration and post-sale traceability.
- Labeling that states intended use, contraindications, operating parameters, warnings and management of adverse reactions.

3.3 Obligations of the user

- Keep the nameplate, warning labels and interface markings legible; do not remove or overwrite them.
- Do not alter rated parameters or internal settings. Modification voids conformity and warranty.
- Report device-related adverse events to Parts4Laser so they can be forwarded to the relevant authority.
- Retain the usage and maintenance log — traceability is part of the compliance chain.

SECTION 4

How the device works

A built-in compression refrigeration circuit chills and dehumidifies ambient air, which is delivered through the insulated hose to the nozzle. Directed at the treatment area, the airflow lowers the temperature of the epidermis and superficial dermis (roughly 0–2 mm) within a few seconds, without contact and without depositing anything on the skin.

Cold analgesia

Chilled air slows conduction in cutaneous nerve endings and raises the pain threshold, dulling the sting and burn of each pulse on its way to the central nervous system.

Vasoconstriction

Capillaries constrict, reducing intra-operative erythema, oedema and exudate as well as post-treatment bruising and the risk of hyperpigmentation.

Epidermal protection

A uniform cooled layer before and after each pulse buffers laser or RF heat, limiting thermal injury to surrounding tissue and reducing blistering, crusting and scarring.

No anaesthetic

No injection and no topical cream: no allergy or toxicity risk, no waiting period, and cooling can be started and stopped freely during long or large-area sessions.

4.1 Design advantages

- **Set-point control.** Three cooling set points and five airflow gears, so the cooling level suits the procedure, the body area and the patient.
- **Even airflow.** A wide-angle nozzle and tuned air duct cover the treatment field without cold spots.
- **Clean operation.** Cooling comes from the refrigeration circuit alone — nothing is sprayed, nothing is consumed, and running noise stays at or below 45 dB.
- **Hands-free positioning.** The articulated arm holds the nozzle on the treatment field so the operator keeps both hands on the primary device.
- **Better experience.** Less pain during treatment and fewer post-procedure complaints, which raises tolerance for higher-energy settings.

SECTION 5

Indications and clinical use

The Evo CoolSkin Pro Chiller is intended for pre-, intra- and post-procedure cooling in support of:

1. **Laser treatments** — tattoo and exogenous pigment removal, pigmentary lesions, hair removal, fractional resurfacing and vascular lesions.
2. **Intense pulsed light** (IPL / DPL / OPT / AOPT) — vascular lesions, pigment lightening and hair removal.
3. **Radiofrequency** — skin tightening and lifting procedures.
4. **Post-invasive soothing** — microneedling and similar procedures.
5. **Any heat-generating skin procedure** where the epidermis needs protection.
6. **Acute musculoskeletal cooling** — acute swelling and contusion, muscle strain, ligament sprain, bursitis, tenosynovitis, spasm and stiffness, myofascial trigger points.



Fig. 2 — Cooling the field during laser tattoo removal.

5.1 Modes of clinical application

1. **Pre-cooling.** Cooling the field before energy delivery lowers the temperature of basal keratinocytes and melanocytes, reducing the burning sensation and protecting the epidermis.
2. **Synchronous dynamic cooling.** Cooling during the pulse or between pulses removes part of the deposited heat and blunts erythema and oedema.
3. **Post-treatment soothing.** Continuous cooling after the session constricts capillaries, reduces the inflammatory response and relieves the burning or stinging sensation.
4. **Injury cooling.** Localized cooling of acute injuries reduces pain and inflammation and improves range of motion during recovery.

5.2 Principles of use

This is an auxiliary device: its use is synchronized with the treatment cycle of the primary energy device, typically before, during and after each pulse. Cooling duration, frequency and temperature are set by the treating physician on the basis of:

1. The type and parameters of the main device (fluence, pulse width, and so on).
2. The indication — pigment, hair removal, rejuvenation, CO₂ or thulium laser, RF.
3. Skin thickness and sensitivity at the site — face, underarms, bikini line.
4. The patient's individual tolerance.

SECTION 6

Unpacking and installation

Inspect the carton on arrival and report shipping damage to Parts4Laser before installation. If the unit was transported on its side or in cold weather, let it stand upright for at least four hours before first power-on.

ITEM	QUANTITY
Power cord	1 pc
Fuse (same rating as fitted)	2 pcs
Nozzle arm, bracket and fixings	1 set
Equipment tray / countertop	1 pc
User manual	1 pc

- 1. Position the unit.** Place it on a level, hard surface with clear space around the intake and exhaust vents, away from flammable or corrosive materials. Lock the castors.
- 2. Connect power.** Plug the cord into a properly grounded outlet matching the nameplate rating. Do not use extension leads or unearthed adapters.
- 3. Fit the bracket and arm.** Bolt the bracket to the mounting plate, secure both screws, then seat the arm in the bracket collar so the nozzle reaches the treatment couch without kinking the hose.
- 4. Fit the tray.** The tray takes a desktop device, so the cooling unit and the treatment device can be operated side by side during the procedure.
- 5. Check status.** With the unit off, the body light strip is dark. Turn the key switch to power on: the light strip illuminates, confirming the unit is live.

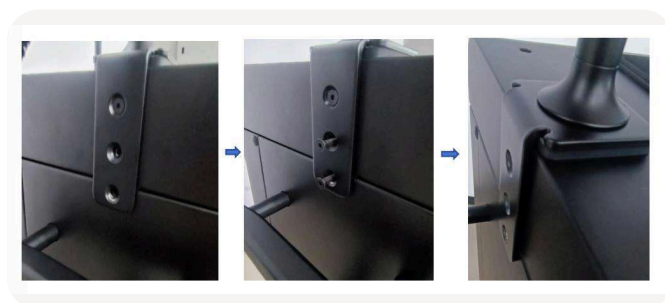


Fig. 3 — Bracket assembly: locate the plate, fit and tighten both screws, then seat the arm collar.

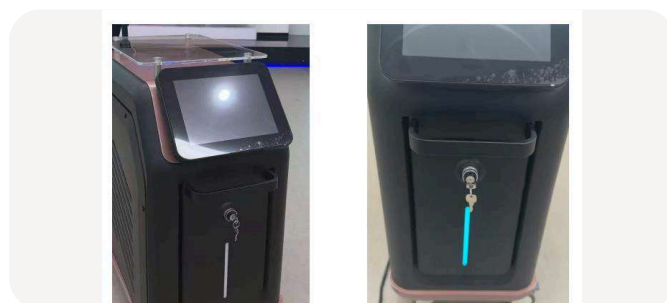


Fig. 4 — Light strip before start-up (left) and after the key switch is turned on (right).

SECTION 7

Contraindications

Screen every patient before treatment. Cooling with this device is contraindicated in the following cases.

7.1 Systemic

1. Severe cardiovascular or cerebrovascular disease, uncontrolled hypertension, coronary heart disease, coagulation disorders, leukaemia or other blood disorders.
2. Autoimmune disease, including vitiligo, psoriasis, systemic lupus erythematosus and scleroderma.
3. Cold sensitivity, cold urticaria, Raynaud's phenomenon, cryoglobulinaemia or other cold-induced conditions.
4. Diabetes, particularly with peripheral neuropathy — impaired healing makes cold injury slow to resolve.
5. Circulatory disorders, peripheral vascular disease or impaired cutaneous sensation.
6. Pregnancy and breastfeeding; minors under 16; frail patients aged 65 and over.
7. Psychiatric conditions or any state in which the patient cannot cooperate or report sensation reliably.

7.2 Local skin

1. Broken skin, ulceration, suppuration, active inflammation, acute allergic reaction, fungal infection or herpes in the field.
2. Hypertrophic scarring, fresh or unhealed wounds, or localized infection.
3. Any aesthetic procedure in the same area within the past 7 days — laser, chemical peel, cryotherapy — where the barrier has not recovered.
4. Highly sensitive skin with a very thin stratum corneum and marked telangiectasia.

SECTION 8

Standard operating procedure

8.1 Before the session

1. **Room.** Clear the working area, keep flammable and corrosive materials away, confirm ventilation and verify that the outlet is properly grounded.
2. **Equipment.** Check the housing for damage, the cord for cracking or ageing, and the hose for kinks, crushing or leaks. Confirm the intake and exhaust vents are clean and unobstructed.
3. **Staff and patient.** Wear disposable gloves and a mask. Clean the treatment area of oil, cosmetics and dust and wipe it completely dry — surface moisture increases the risk of cold injury.

4. **Pre-cool.** Power on, select the temperature set point and gear, and allow about 5 minutes for the nozzle to reach temperature (gear 2, ambient $\leq 25^{\circ}\text{C}$). Use 0°C for standard fields and -10°C or -20°C where the stratum corneum is thicker.

8.2 Operating steps

1. **Run up.** Direct the nozzle away from the patient for 2–3 seconds and confirm the airflow is steady and dry, with no droplets or frost flakes.
2. **Pre-cool the field.** Hold the nozzle 2–3 cm from the skin, perpendicular to the surface, and move in a steady circular path for 5–10 seconds until the skin feels cool. Do not cool to blanching.
3. **Treat with cooling.** Deliver the primary treatment as soon as analgesia is achieved, cooling in the "blow – pulse – blow" pattern or continuously as the treatment head moves. For large fields, work zone by zone so cooling stays continuous.
4. **Soothe.** After the field is finished, cool from 3–5 cm over a wide area for 3–5 minutes until the burning sensation has largely subsided.

General timing guide

- Pre-treatment cooling: 3–5 seconds per zone, until surface temperature is clearly reduced.
- Intra-operative cooling: 1–3 seconds immediately after each pulse, repeated as needed.
- Post-treatment soothing: 3–10 minutes over the whole treated area.
- Injury cooling: once daily, 15–30 minutes, according to severity.

SECTION 9

Control panel



Fig. 5 — Standby: press **Start** to begin cooling.



Fig. 6 — Working: wind setting, temperature set point and actual nozzle temperature.

- **Wind Setting.** Airflow gear 1–5, adjusted with the up and down arrows. Higher gears move more air and cool faster, at up to 45 dB.

- **Temperature Setting.** Choose 0 °C, -10 °C or -20 °C. The large reading on the right is the actual nozzle temperature — wait for it to settle at the set point before treating.
- **Start / Stop.** Start brings the unit into operation; Stop ends the cycle. Do not press Stop mid-pass. Leave at least 30 seconds between stopping and restarting to protect the compressor.
- **Defrost.** Runs a 3–10 minute defrost cycle. Airflow pauses while the evaporator clears, then normal operation resumes. Use it if output weakens or frost appears at the nozzle; do not press it mid-treatment.

SECTION 10

Recommended treatment parameters

PHASE	TREATMENT TYPE	SET POINT	GEAR	METHOD AND NOTES
Pre-cooling	All procedures	0 °C	2–3	Lower baseline skin temperature and raise the pain threshold before thermal shock. Circular motion at constant speed, 2–3 cm from the skin, 5–10 s until the skin feels cool. Avoid excess vasoconstriction, which can blunt the treatment.
Intra-operative	High-energy treatments (fractional laser, high-energy RF)	–10 °C	3–4	Deep pre-cooling and enhanced epidermal protection. Focus 3–5 s on the zone about to be treated and watch the skin closely for blanching.
	IPL hair removal	–10 °C	3–4	One pulse, one blow: 1–2 s of air immediately after each light pulse to carry heat away. Synchronize with the pulse rhythm; darker skin types or higher fluence may need the –20 °C set point.
	Non-ablative fractional laser, plasma	–20 °C	4–5	Strong heat accumulation demands strong immediate cooling to prevent burns and marked oedema. Use "blow – pulse – blow": 1 s pre-cool, pulse, 2 s post-cool.
	Radiofrequency, thermal lifting	0 to –10 °C	2–3	Continuous heating needs continuous dynamic cooling: the airflow follows the treatment head at constant speed, 2–3 cm from the skin, protecting the epidermis while heat still reaches the dermis.
Post-treatment	All procedures	0 to –10 °C	2–3	Soothe burning, constrict capillaries and reduce erythema and oedema. Hold 3–5 cm away and move slowly over a wide area for 3–5 minutes.
	After high-energy treatment, pronounced reaction	–10 to –20 °C	2–3	Rapid heat removal and inflammation control. Never dwell on one point: keep at least 5 cm distance, move faster, and extend total time to 5–8 minutes.

Parameters are guidance, not a prescription

The treating physician adjusts these settings to the patient's skin tone, thickness and sensitivity, to the energy parameters of the primary device, and to the response seen in real time. Patient tolerance is the deciding factor. If a patient cannot tolerate -20°C , the -10°C set point with adequate cooling time and correct technique still gives a good result.

SECTION 11

Safety precautions and warnings

Warning — risk of cold injury

Set points at or below -10°C are a deep-cooling range and carry a real risk of frostbite. During operation you must:

- **Keep moving.** Never hold the nozzle on one spot on the skin — more than 2 seconds in place is a risky operation.
- **Keep distance.** Hold the nozzle at least 2 cm from the skin.
- **Watch the skin.** Slight redness is normal. White patches, grey-white discoloration or firmness of the skin are early frostbite: stop cooling immediately.
- **Start warm on delicate skin.** On thin or sensitive areas — periorbital, neck — and on very fair skin, start at 0°C and step down only as tolerance allows.

11.1 General

1. This device is for non-invasive cooling of the human epidermis and may only be operated by trained, licensed professionals in a clinical or aesthetic setting. Use for surgical or deep-tissue anaesthesia is prohibited. Minors and untrained persons must not operate it.
2. The supply must remain reliably grounded throughout use. Do not handle the plug with wet hands, do not touch live parts, and do not operate above 85 % humidity — rated performance requires 45 % or below.
3. Do not open the housing or disturb the refrigeration or electrical control assemblies. Service is performed only by engineers authorized by Parts4Laser.
4. Use only Parts4Laser original parts and accessories. Alcohol, cryogenic sprays and third-party media must never be introduced into the airflow path.
5. Do not exceed 4 hours of continuous operation. After 4 hours, shut down and rest for 30 minutes until the refrigeration system has fully cooled.

11.2 During treatment

1. Never direct the airflow at the eyes, lips, nostrils, ear canals or genital area. When working on the face, shield the periorbital mucosa in advance.
2. Keep a single pass on the same skin area under 10 seconds, with at least 15 seconds between passes, so cold does not accumulate into blanching or blistering.
3. Maintain a constant 2–5 cm distance and keep the nozzle moving. Do not concentrate the airflow on one point.
4. Stop immediately if the patient reports stinging, unbearable numbness, or if the skin turns pale or purple. Observe the skin and apply a warm compress if needed.
5. Remember that cold anaesthesia can mask the sensation of energy delivery. Do not let a numb field lead to over-treatment with the primary device.
6. Do not block the intake or exhaust vents with hands, drapes or other objects while the unit runs.

11.3 After treatment

1. Cooled skin stays more sensitive for a short period. Advise the patient to avoid direct sun, hot water, friction, steam rooms and saunas for 24 hours.
2. Slight pallor or numbness is a normal cold response and resolves on its own within 10–30 minutes; no intervention is required.
3. If mild cold injury appears — persistent redness or blistering — suspend treatment of that area, apply a medical repair cream and do not open blisters. Refer for medical care if symptoms are severe.

SECTION 12

Cleaning and shutdown

1. **Shut down in order.** Stop the airflow, allow about 3 minutes for the refrigeration system to settle, then switch off the main power and unplug the cord. Always power down before unplugging.
2. **Wipe down.** Once nozzle and body have returned to room temperature, wipe them with a lint-free cloth, dry or lightly dampened with a neutral disinfectant. Never let liquid enter the device and never spray disinfectant onto the control panel or vents.
3. **Clean the outlet grille and filter.** Remove periodically, rinse with clean water and let dry completely before refitting.
4. **Store tidily.** Coil the hose and cord without sharp bends, park the arm and keep the unit in a cool, dry place out of direct sunlight.
5. **Log the session.** Record running hours, set points used and any fault observed in the equipment log.

SECTION 13

Maintenance schedule

INTERVAL	TASKS
Daily	Wipe body and nozzle with a dry, dust-free cloth. Check the cord and hose for wear or looseness. Clean the work surface and complete the usage log.
Weekly	Clear dust from the intake grille, vents and cooling fan. Check hose and fitting connections and tighten anything loose. Run a no-load test and confirm the nozzle reaches the set point within ± 2 °C. Check that buttons, display and switches respond.
Monthly	Clean or replace the air filter element. Have qualified personnel check compressor operation, electrical insulation and ground resistance, and perform electrical safety testing. Update the maintenance log with faults, wear and calibration results.
Idle over 30 days	Run the unit at no load for 10–15 minutes once a month to keep the refrigeration circuit healthy.
Long-term storage	Clean the unit, disconnect power and store at 5–30 °C and 40–70 % humidity, away from acids, alkalis, flammables and direct sunlight.

Do not

- Rinse the unit, the control panel or the vents with water.
- Dismantle the compressor, temperature control board or valve assembly.
- Fit non-original filters, hoses or nozzle parts.

SECTION 14

Troubleshooting

The operator may resolve the simple items below. For faults in the electrical or refrigeration core, do not open the unit — contact Parts4Laser service.

SYMPTOM	POSSIBLE CAUSE	ACTION	NOTE
No response at power-on; display dark	Outlet fault or cord not seated; broken cord; blown fuse; power section of the mainboard damaged	Try a compliant grounded outlet; inspect the cord; replace the fuse with one of identical rating; if still dead, contact service	Never dismantle the mainboard yourself.
Unit powers on but no airflow	Defrost cycle running; blocked intake or outlet; crushed hose; fan fault	Wait for the defrost cycle to finish (3–10 min); clear the vents and straighten the hose; if airflow does not return, contact service	Do not start a defrost cycle mid-treatment.
Air flows but cooling is weak or slow to fall	Vents or filter heavily dust-clogged; ambient above 25 °C; low refrigerant charge; compressor worn	Clean vents and filter; lower room temperature; have the charge and compressor checked by service	Rated performance needs ambient ≤ 25 °C.
Frost or water droplets at the nozzle	-20 °C set point in humid air (above 45 %); saturated filter; grille refitted while damp	Run a defrost cycle; raise the set point or reduce humidity; dry the grille and filter completely before refitting	Droplets on skin can cause cold injury — do not treat until clear.
Abnormal noise or heavy vibration	Unit not level or castors unlocked; external screws loose; internal compressor wear	Move to a level, hard surface and lock the castors; tighten external screws; if the noise is loud, stop immediately and contact service	Stop the machine at once on a loud abnormal noise.
Air leak or whistle at a connection	Loose fitting; aged or damaged seal; cracked hose	Tighten the fitting; replace the seal; replace with an original hose assembly	Address leaks before further use.
Temperature reading unstable or implausible	Sensor probe dust-fouled; sensor wiring loose; control board fault	Clean the probe; reseal the connector; have board and sensor inspected by service	Do not treat while the temperature reading is abnormal.

SECTION 15

Emergency response

15.1 Cold injury

1. **Mild** — pallor, numbness, slight redness: stop cooling at once, move the patient away from the cold source, apply a warm towel at 35–40 °C for 5–10 minutes, then a medical moisturizing repair cream.
2. **Moderate** — swelling, stinging pain, blisters: do not apply heat, do not rub, do not open blisters. Cover with sterile gauze, suspend all treatment of the area and apply a medical repair ointment daily.
3. **Severe** — purple discoloration, open sores, tissue necrosis: seek medical care immediately, document the incident and report it to the clinic's responsible officer and to Parts4Laser.

15.2 Electrical fault

1. **Leakage, short circuit, smoke or fire**: cut the main supply immediately and do not touch the unit. Use a dry powder extinguisher on a small fire — never water. If the fire spreads, evacuate and call the fire service.
2. **Electric shock**: cut the supply at once, separate the casualty from the equipment with insulated tools, begin CPR if indicated and call emergency medical services.

SECTION 16

Warranty and service

16.1 Coverage

Parts4Laser warrants the Evo CoolSkin Pro Chiller against defects in materials and workmanship for **one year (12 months)** from the date of delivery. Warranty service covers parts and labour on covered failures, together with technical support during business hours. Consumables — filters, grilles, fuses — and cosmetic wear are excluded.

16.2 Exclusions

- Operation outside the procedures, environment or duty cycle stated in this manual.
- Non-original parts, accessories or media, or service by anyone not authorized by Parts4Laser.
- Unauthorized modification of the equipment or its rated parameters.
- Damage from impact, liquid ingress, unstable or unearthed supply, or transport arranged by the customer.

16.3 Liability

The operator and the operating entity bear responsibility for injury, equipment damage or financial loss arising from operation contrary to this manual, from use of non-original parts, from unauthorized modification, or from treatment given in the presence of a contraindication.

16.4 Requesting service

Have the part number, serial number, date of purchase and a description of the fault ready — including any on-screen message and what the unit was doing when the fault appeared. Photographs and a short video of the fault speed diagnosis considerably.



Parts4Laser Technical Service

Service and parts: service@parts4laser.com · parts4laser.com

Quote part number **EVO-SCP** and your serial number on every request.