Hako-Med Italia di Hansjoerg Dellavaja & Co. Sas sede legale - invoice adress: Via Campi 4, 39040 Termeno sulla Strada del Vino (BZ) tel +39 0471 82 05 83 - fax +39 0471 82 15 70 info@hakomed.it - hakomed@pec.it



Q – 0202 qmd[®] cryo thermal complete system with trolley and pc-system



to feel better - qmd medical device

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General specifications

Power supply	100 – 240 V~ , 50/60 Hz
Max absorption	150 W
full color touch screen 10.4"	
included trolley	
dispensing system with command touch screen	
Color display touch screen 10.4"	
Dimensions (I x w x h)	538 x 360 x 821 mm
Weight qmd [®] cryo - thermal	6,2 kg
Type of service	Continuously

Technical specifications of qmd® Cryo-thermal

nominal power	150 W
frequency	50/60 KHz +/- 10 Hz
Cryo temperature	-15°C to +5°C
Thermal temperature	+25°C to + 45°C
Thermal shock ΔT	30°C
Thermal shock Δt	45 s
Contrast therapy®	40°C to 5°C (ΔT increases by 2°C at each cycle)
Operating mode: continuous	

Medical Devices Directive

The **qmd® Cryo-thermal** is in compliance with the standard 93/42/EEC and it is marked with the number "CE 0476"



qmd[®] - summary instructions for use

CRYO THERMAL

cryo

- recommended temperature 0 ° C (maximum 5 minutes, because then the reversible effect occurs);
- recommend cold for vasoconstriction, anti-inflammatory in the <u>acute phase</u> and analgesia.

thermal

- recommended temperature 40 ° C;
- We recommend the heat for vasodilatation, myorelaxing, anti-inflammatory in the <u>chronic phase</u>, and always when we need more oxygenation and nourishment.

thermal-shock

- it is not a therapeutic effect, but simply an anesthetic effect;
- to be advised before a painful treatment (frozen shoulder, connective tissue massage, shock waves, etc.).

contrast therapy

- heat / cold alteration like Kneipp-therapy;
- important is with what we end (acute phase: with cold; chronic phase: with warm; myorelaxing: with heat; pain: with cold; but the duration depends on joint or muscle pain).

LASER INTERACTION WITH CRYO-THERMAL

In case of an acute inflammation

- An excessive concentration of water molecules prevents a good therapeutic result, so we recommend:
 - o start with contrast therapy (anti-inflammatory),
 - then laser (anti-inflammatory),
 - finish with3 minutes of cryo with joint problems, with muscle problems only 1 minute.

In the case of a chronical inflammation

- Since the cold is contra-indicated, we recommend:
 - o start directly with laser,
 - only then apply the "contrast therapy anti-inflammatory effect chronic", because it finishes with warm (=vasodilatation).

In case of edema

- An excessive concentration of water molecules prevents a good therapeutic result, so we recommend:
 - o start with 1 minute of cryo,
 - o then laser (antiedemigenous)),
 - o and finish with contrast therapy (antiedemigenous).

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In general, we use/recommend cryo for

- To lower the local temperature after a laser session,
- to promote penetration of the laser beam itself.
- In the single session you can give more Joules in the tissue without creating overheating problems, so you can make more distant sessions, helping patients who have problems to come more frequently.

Thermal even before the laser?

• Never! Apply thermal always only after a laser application.

TREATMENT CYCLES - GENERAL INDICATIONS

Acute inflammations

• we recommend 10 sessions every day

Degeneration or chronic inflammation

• 2-3 weekly treatments are recommended for several weeks

Muscle contractions (without trauma)

• the first week we recommend daily treatments, then every other day

Traumatic outcomes

- 1st phase (edema) daily treatments are recommended
- 2nd phase we recommend 2 to 3 treatments per week