



*Advanced aesthetic and medical Equipment*

*Commitment to quality and excellence*

*Telemedicine*



*ARB Systems Proyectos electrónicos SL, founded in 2006, is a Spanish company dedicated to research, Fout and innovation, as well as manufacturing in the fields of biotechnology, medical equipment and advanced aesthetic equipment.*

*In recent years, ARB Systems has specialized in the research and development of equipment aimed at the medical sector, developing devices as **BRS for the treatment of bladder cancer** for the firm Combat Ltd, or the **PRS Equipment, for Ovarian cancer treatment, Colorectal cancer, Gastric cancer**, for the company Biosurgical SL, among some others...*

***Investigation, development, manufacturing in the medical-aesthetic sector***



*Some of the products developed by ARB Systems  
for medical /hospital sector like:*

*Laboratorios Cair, Galmaz Biotech, Combat ltd, Biosurgical, Celsius medical, Haake Alemania, ...*



*Normothermia products line, for heating blood,  
fluids...*



*Chemo-Hyperthermia Treatment Equipment for the  
treatment of Bladder cancer, Ovarian cancer,  
Colorectal cancer, Gastric cancer, ...*

# ***THERAPY CARE***

*Well-being our reason for being*

***Worldwide Novelty***

***International Patent***



***Therapy Care***



***Therapy Care C***

*Only cold and compresion, portable  
equipment - All cold power without  
ice - Cold without limit*



***Therapy Care Plus***

***Applications of cold, heat and thermal contrasts***

# THERAPY CARE



*Well-being our reason for being*

Therapy Care helps you recover your physical shape better and faster, after an injury or an intervention and it does so by strengthening the natural mechanisms of recovery of the organism, using the power of thermal contrasts, heat applications and cold applications, combined with the application of sequential hydraulic compressions.

## THERAPY CARE PLUS

Equipment for the realization of applications of heat, applications of cold and thermal contrasts, (**contrast in less than 1 min**), with active hydraulic compression massage, **able to work with four simultaneous treatment zones, in one or two users at a time, allowing each user to use a different application: heat applications, cold applications or thermal contract applications.**

**Sequential compression therapies** help reduce edema and inflammation, stimulate oxygenation and cellular nutrition of the treated area with increased blood supply, increase the lymphatic flow and drainage and help adapt the exchanger to the treated area by increasing the contact.





# THERAPY CARE

*Well-being our reason for being*



## THERAPY CARE PLUS

### CHARACTERISTICS:

- 4 fluid outlets with two independent circuits, with two outputs each one, (total 4 treatment zones, for one or two users)
- Able to combine treatments with heat, cold treatments and treatments with thermal contrasts, at the same time.
- **Heat / cold contrast (in less than one minute)**
- 6 levels of active hydraulic compression (**adjustable in both pressure and frequency**)
- Regulation of the number of heat / cold contrast cycles.
- Temperature regulation of the hot fluid, from 20 to 45°C .
- Temperature regulation of the cold fluid, from 20°C to -5°C
  - Cold power: In 3 min. it is prepared at 0° C / in 5 min. at -5°C.
- Regulation of the treatment duration from 1 min. to 59 min.



# THERAPY CARE

*Well-being our reason for being*



## THERAPY CARE

Equipment for the realization of applications of heat, applications of cold and thermal contrasts, (**contrast in less than 1 min**), with active hydraulic compression massage, **capable of working with two simultaneous treatment zones, in one or two users at a time.**

**Sequential compression therapies** help reduce edema and inflammation, stimulate oxygenation and cellular nutrition of the treated area with increased blood supply, increase the lymphatic flow and drainage and help adapt the exchanger to the treated area by increasing the contact.



# ***THERAPY CARE***

*Well-being our reason for being*



## ***THERAPY CARE***

### **CHARACTERISTICS:**

- 2 Fluid outlets: (**2 treatment zones, in one or two users**)
- **Heat / cold contrast (in less than 1 minute)**
- 6 levels of active hydraulic compression (**adjustable in both pressure and frequency**)
- Regulation of the number of heat / cold contrast cycles.
- Temperature regulation of the hot fluid, from 20 to 45°C .
- Temperature regulation of the cold fluid, from 20°C to -5°C
- Regulation of the treatment duration from 1 min. to 59 min.



# ***THERAPY CARE***

*Well-being our reason for being*



## ***THERAPY CARE C***

**Only cold portable equipment - All cold power without ice - Cold without limit**

**Equipment for performing cold applications, combined with up to 6 levels of active hydraulic compression massage.**

### **FEATURES:**

- Temperature regulation of the cold fluid, from 20 to -2°C.
- Regulation of the duration of treatment, from 1 min to 59 min.
- 6 levels of active hydraulic compression, adjustable both in pressure and frequency.
- Tailored treatments and fully configurable in temperature, time and compression.
- **Fully portable Equipment**
  - **Dimensions: width: 38 cm, height: 32 cm, depth: 35 cm**



**Without ice, without cold water, you only need a plug, the cold is produced by a mini compressor, which guarantees the cold power throughout the treatment.**



# THERAPY CARE



## EXCHANGERS THERAPY CARE

Flexible exchangers, totally adaptable to the areas to be treated, made of a highly conductive material of temperature, able to transmit and distribute the different temperatures, uniformly and constantly to the areas to be treated.

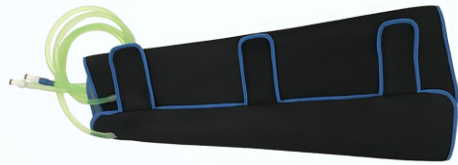
### DIRECT APPLICATOR OF CONTRASTS (ADC):

Exclusive accessory of **Therapy Care**, designed for applications in very specific areas, usually small, in which we need to act directly and very locally, **even applying a massage or draining with the ADC**, either with contrasts, with only heat or with only cold.

- Cervical
- Lumbar
- Knee
- Elbow
- Forearm
- Thigh
- Calf
- Shoulder
- Ankle
- Abdomen
- Full leg
- ADC Direct Applicator of Contrasts



**Full leg**



**Shoulder exchanger**



**Knee exchanger**



**ADC Direct Applicator of Contrasts**





# DRY BALNEOTHERAPY

*Technology of contrasts at the  
service of well-being*



# THERAPY CARE

*Well-being our reason for being*



*We and Therapy Care*

*ARB Systems Proyectos Electrónicos SL, is a company specialized in the design of equipment for the medical sector, with more than 20 years of experience in the use and design of balneotherapy and physiotherapy treatments, with applications of thermal contrasts, with applications of heat and with applications of cold.*

*Therapy Care, is equipment based on the techniques and ancestral knowledge of balneotherapy treatments, with the aim of making available to the professional, really effective treatments, that until now could only be performed in spas and thermal facilities.*

*Therapy Care is not a medical device, it is a high technology equipment, extraordinarily simple to use and designed for the realization of applications of cold, applications of heat and thermal contrasts, (dry balneotherapy), and that in any case, its use in physiotherapy, rehabilitation, etc treatments will always be carried out under the supervision of a health professional: sports doctor, physiotherapist, etc ... who will be the one who will supervise and determine each and every one of the equipment's operating parameters.*

**Therapy Care** a piece of equipment designed to be installed in any center and that **only needs a plug** for its operation.

*There are numerous studies that support the highly beneficial effects of thermotherapy applications, cryotherapy and thermal contrasts, as well as compression therapies, in physiotherapy, rehabilitation treatments and in all those conditions related to the locomotor system.*

*In this document we are going to reflect some of those applications and their most notable effects*



## ***Treatments with thermal contrasts***

- *Rehabilitation / Physiotherapy*
- *Injury treatment*
- *Pre and Post Workout Treatments*
- *Post-surgery treatments*
- *Preparation and treatment of high performance athletes*
- *---*

## ***Treatments with cold***

- *Sports Cryo Therapy*
- *Treatment of injuries*
- *Rehabilitation Treatments*
- *Treatment of inflammations*
- *Post-operative injuries*
- *Tears of muscle fibers*
- *Treatment to reduce pain*
- *Treatment to reduce muscle spasm*
- *Bruises*
- *Sprains*
- *Twists*
- *Etc.*

## ***Heat treatments***

- *Muscle tears*
- *Contractures*
- *Chronic inflammatory processes*
- *Treatment of injuries*
- *Etc...*

## *Effects of treatments with cryotherapy, thermotherapy and thermal contrasts, in sports and in physiotherapy and rehabilitation treatments*

*Both treatments with Applications of Thermal Contrasts as well as cold or hot treatments, have important effects in the treatment of injuries, muscle aches, back pain, contractures, inflammations, rehabilitation and physiotherapy treatment, in short in all the treatments of the locomotor apparatus in which the applications of contrasts, hot and/or cold, have a very important **restorative effect** and **they act to significantly accelerate the recovery processes** of patients, allowing them a quick return to normal activity, **both work or sports...***

*The heat relaxes the nervous system and promotes muscle relaxation, is antispasmodic and analgesic, .. “, but **Heat / Cold** applications have much deeper effects on the factors that cause pain.*

*Basically the effect produced by the thermal contrasts, is the contribution of a greater blood flow and oxygenation to the whole organism, caused by the vasodilation and the vasoconstricción successive that produce the thermal contrasts, this stimulates the function of all the organic systems.*

## *Effects of treatments with cryotherapy, thermotherapy and thermal contrasts, in sports and in physiotherapy and rehabilitation treatments*

*On the other hand, the great contribution of blood flow produced by contraceptive applications at all levels, notably increases the level of cellular oxygenation, the regeneration of damaged tissues, nutrition and strengthening of tissues and muscles and reduces inflammation and muscle spasm....*

*The analgesic effects of controlled heat applications on the organism are well known. The heat relaxes the nervous system and promotes muscle relaxation, it is antispasmodic ... ", but the applications of Heat / Cold, (thermal contrasts), have much more profound effects on the factors that cause pain.*

*Behind a pain there is undoubtedly an inflammation accompanied by a degeneration of the affected tissue. The use of thermal contrast applications, has very remarkable effects on: cell nutrition, elimination of pathogens, (thereby obtaining a clean tissue and in general of the entire blood flow), activates tissue proliferation and restoration, has very important anti-inflammatory effects, as well as a bactericidal action produced especially by heat applications, ...*

## *Physiological effects of thermotherapy applications*

*The heat increases the elasticity of the tissue, also the application of heat significantly increases the blood circulation in the treated area with what is achieved on the one hand the elimination of waste and on the other a very important increase in the amount of nutrients and oxygen in the treated tissues, which produces a significant increase in metabolism in the treated area.*

*The application of heat accelerates the healing of tissues in the treatment of injuries such as sprains, muscle contusions, tendinitis, ligament injuries, etc. ...*

*It must be kept in mind that the application of heat is especially useful in the treatment of injuries when the acute phase has ended. (Its application in the acute inflammation phase is not recommended).*

*The application of heat is very effective to increase mobility and elasticity in the joints, (ankle, knees, elbow, wrist, etc ...), after an injury and always after the acute phase of inflammation and never forcing beyond from pain. (apply 10/20 min of heat in the area to be treated before starting the stretching exercise of the joint)*

*The recommended application, in normal conditions is between 15 and 20 minutes, if the intention is to reach deeper structures, muscles, ligaments, tendons, in that case it will be necessary to prolong the exposure time.*

## ***Physiological effects of thermotherapy applications***

### ***Analgesic action***

*It is based on the action of heat on sensitivity and especially on painful sensitivity, which is why it is indicated as an analgesic and sedative agent. The analgesic action is obtained in a few minutes and is more or less intense, depending on the degree of temperature, time of application and personal conditions of the process or the patient. The analgesic action manifests itself in all painful processes. (It helps in a very significant way to provide the patient with a feeling of relaxation).*

### ***Anti-inflammatory action***

*Helps to treat inflammations in a chronic state, is based on the set of effects on circulation, blood, local metabolism, etc., encompassing hyperemia. Except for some cases of very acute inflammation (appendicitis), in other cases of superficial inflammations, thermotherapy is a therapeutic resource to be used in conjunction with other procedures.*

### ***Anti-spasmodic action***

*The application of heat acts on the spasms and contractures of skeletal muscles and on spasmodic states of smooth muscles and visceral organs. Hence its indications in contractures and muscle spasms such as torticollis, lumbago, polio, visceral, gastric and vesicular pain, and colic pains of all kinds*



## *Physiological effects of thermotherapy applications*

*Therefore, the **biological effects** derived from the application of heat include a marked increase in the metabolic rate, increased blood supply, increased tissue oxygenation, reduced nervous excitability, myorelaxing effect, analgesic and anti-inflammatory effect, decrease of blood pressure, and increased sweating.*

*Both cold and superficial heat have therapeutic effects. By different mechanisms both can break the pain-spasm-pain muscle cycle, reduce inflammation and significantly speed up the recovery process.*

*It is known that heat increases the compliance of collagen tissues, decreases joint stiffness, reduces pain and inflammation, increases blood flow and relieves muscle spasm.*

*Cryotherapy in sports and rehabilitation is widely used for various purposes and with very positive qualitative results. There are effects in the reduction of pain, metabolism, oedema, inflammation, muscle spasm and facilitates and accelerates the recovery process after an injury.*

## *Physiological effects of cryotherapy applications*

*The analgesic, relaxing and anti-inflammatory properties of cold are well known, since it slows down nerve transmission.*

*The application of discontinuous and intermittent cold, immediately after an injury (especially in acute injuries), decreases the effects of inflammation and tearing of muscle fibers.*

*Cryotherapy is very effective in the treatment of any acute inflammatory process, caused by any type of injury, including postoperative injuries, those produced by surgery, those inflammations produced by rheumatic processes, bruises, sprains, among others.*

*In general we can say that the cold acts mainly producing four effects:*

## *Physiological effects of cryotherapy applications*

### ***Vasoconstriction:***

*Produced by cutaneous and deep tissue caloric loss that occurs with the cold. This vasoconstriction is produced by a direct action and by a reflex action by means of spinal reflexes. The vasoconstriction decreases the blood supply, (It slows down the cellular metabolism, which slows down the production of inflammatory chemical mediators). It is considered the main mechanism to reduce swelling and haemorrhage after trauma and to reduce oedema in inflammatory reactions, which decreases the initial severity of the lesions. The vasoconstriction to be followed by a vasodilation reactivates the normal mechanisms of microcirculation. This vasodilatation usually occurs after 12-15 minutes*

### ***Reduction of tissue hypoxia:***

*The cold inhibits the release of chemical mediators such as histamine (involved in the excitation of nociceptive receptors).*

*On the other hand, the cold induces a state of hibernation in the tissues that causes a decrease in the oxygen needs due to the lower metabolic demand of it. These two factors together with vasoconstriction are those that explain the decrease in inflammation.*

## *Physiological effects of cryotherapy applications*

### ***Pain decreasing:***

*The application of cold is able to cause pain or relieve it.*

*Cold reduces musculoskeletal pain. The application of cold reduces pain, by interrupting the pain-spasm-pain cycle triggered by the injury. The cold acts reducing pain and muscle spasm. The theories that try to explain this fact are based on the decrease of influx of sensory impulses and the reflex mechanism.*

### ***Muscle spasm decreasing:***

*The application of cold produces a myorelaxing action. The most significant reduction in spasticity occurs while the cold is applied but may remain for a few hours. The reason why muscle relaxation occurs is not very clear. Some authors say that it is due to an action at the level of the neuromuscular spindles whose excitability decreases. According to other authors, gamma efferent fibers (static and dynamic) are blocked. Local cooling would be more effective in cases where there is hyperactivity of the gamma system than when there is hyperactivity of the alpha system.*

*It must be considered that when the exposure to cold is very intense it produces a destruction of the tissues. For example, dry ice and carbonic acid are frequently used by dermatologists for this purpose.*

*Some of the treatments and benefits provided by the treatments with cryotherapy, thermotherapy and thermal contracts in the sports field are:*

- *Pre-training Treatments, (preparation and heating of the muscles, to avoid muscular tensions and injuries).*
- *Pos-training treatments, (accelerates recovery, relaxes and regains muscle).*
- *Improves circulation, increasing muscle performance and avoiding muscle fatigue.*
- *Empowerment of the musculature.*
- *Relieves joint pain and reduces muscle stiffness.*
- *Reduces nervous muscle tension, (acts very directly on the nervous system).*
- *Treatments for high performance athletes.*
- *Physiotherapy treatments.*
- *Rehabilitation Treatments*
- *Treats most sports injuries, accelerating their recovery and helping to consolidate results.*
- *Reinforces the immune system and enhances the body's defenses.*