



H to H

Post-Operative Solution
From **H**ospital to **H**ome

Surgical · Physio · Rehab · Sports · Beauty · Health
Since 1986



The Leading Pneumatic Technology

DS MAREF is a leading company having the most selections in various pneumatic medical systems like DVT prevention, Lymph edema, Thermo therapy, Tourniquet, Rehabilitation, home care since 1986.

We are exporting our products in surgical, orthopedic, sports/rehabilitation, beauty and home fields world widely through international certificates. We are growing by highly annually with powerful competitiveness of the products in quality, design and price. We will do our best to provide high quality pneumatic medical systems through constant developing.

Marketing sectors of DS MAREF

Surgical

Physio

Rehab

Sports

Beauty

Health

Welcome to DS MAREF.

A company that promotes
the health and happiness of all mankind

DS MAREF is a leading global producer of medical devices with its own pneumatic compression technology, providing solution for DVT prevention, Lymph edema. The company also provides Tourniquet, Rehabilitating devices and Homecare products since 1986.

80

Export to countries

204

Well-trained
employees

We develop and manufacture a wide range of products, from surgery assistive devices, physiotherapy and rehabilitation devices for purpose of life extension and prevention to diseases to medical devices usable in life, such as beauty devices and home care devices that are close to our daily lives.

We are the reading pneumatic technology company in Korea to a trustworthy brand that is now ahead to DS MAREF. But we didn't give up and knocked on the world global market. with this constant challenge, we've been through Korea's leading pneumatic technology has become a world-recognized brand.

World-wide
Certificates

1500
Hours of durable test

34
Years of History

**Professional R&D,
and Billions of exportation.**

H2H Post-Oper

Total pneumatic post-operative cares as the

Medical Market Changes

Medical cost
Increasing



Medical budget
Falling



Earlier discharging
From hospital



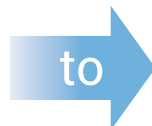
Home care
Increasing

Early Discharge & Recovery

MOH, Insurance, and hospitals want to discharge patients earlier to save money.
Patients want to recovery for their health and returning normal life quickly.

H

Hospital



H

Home

Post-Operative Cares

DVT
Prevention

Pain
Relief

Lymphedema
Wound

Rehab

ative Solution

best option of for alternative medicine



PRE / INTRA
OPERATIVE (OR)

Tourniquet

DTS-3000

DVT Prevention

DVT-4000s
DVT-2600



POST OPERATIVE CARE
(ICU / RECOVERY ROOM)

Pain Relief

CTC-7

Lymph

LF400 / LX9

DVT Prevention

DVT-4000s
DVT-2600



PHYSIO THERAPY
ROOM

Pain Relief

CTC-7
IW-2000

Rehab

RL-500

Lymph

MK-400L



HOME
(PRESCRIPTION / RENTAL)

Pain Relief

CTC-7
CTC-Band

Rehab

RL-500

Lymph

LF400 / LX9

DVT Prevention

DVT-pro

PRE & INTRA OPERATIVE

DTS-3000

The Pneumatic Tourniquet System



DTS-3000 is a smart tourniquet system having advanced Functions like automatic, IOP sensor, recording function, max pressure, 700mmHg, 7" TFT LCD touch key screen, visible alarm system with sound for safety, and a built-in battery.

| Main features

- + 2 channels for two extremities (2 Ports for 2 double cuffs or single cuffs)
- + Graphic 7" TFT LCD screen : Easy checking and cleaning
- + Operation recording (Date, cuff, pressure, battery, time, error)
- + Automatic Individual Occlusion Pressure (IOP) Setting
- + Safety alarm system (cuff, pressure, battery, time)
- + Built-in battery: At least 8hours
- + Max pressure: 20~700mmHg
- + Voltage: Free voltage (AC 100 - 240V~ 50/60Hz)
- + Noise dB: Below 60dB
- + Time range: 5~240 Min. Tourniquet cuffs have generally a pinch inner side.
- + So it can be a cause of skin damage or blood leakage.

Individual Occlusion Pressure (IOP) Sensing

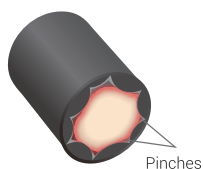
DTS-3000 can recommend individual IOP(Individual Occlusion Pressure) RTP parameter by analyzing oxygen saturation with SPO2 sensor.



Records informations with SD Card

DTS-3000 records effectively operation time, pressure and error during operation by real time clock.

RTC(Real Time Clock) is mounted all the information that may occur during operation of the apparatus. You can record to SD Card in real-time.



+ General Cuff

Tourniquet cuffs have generally a pinch inner side.
So it can be a cause of skin damage or blood leakage.

VS



+ No-Pinch Cuff

Our **No-Pinch Cuff** is our won patented technology.
it focused on preventing any skin damage or blood leakage.



OPTIONAL ACCESORIES					
DTC-S02	Single Cuff	SINGLE 40 X 7 cm NO PINCH CUFF RED (Child)	DTC-CD25	Contoured Double Cuff	CONE DOUBLE 70 X 10 cm NO PINCH CUFF RED (Thigh - M)
DTC-S04		SINGLE 52 X 7.5 cm NO PINCH CUFF BLUE (ARM-M)	DTC-CD26		CONE DOUBLE 90 X 12 cm NO PINCH CUFF BLUE (Thigh - L)
DTC-S05		SINGLE 61 X 9 cm NO PINCH CUFF RED (ARM - L / Thigh - S)	DTC-CD27		CONE DOUBLE 107 X 14 cm NO PINCH CUFF BLUE (Thigh - XL)
DTC-S06		SINGLE 80 X 9 cm NO PINCH CUFF BLUE (Thigh - M)	DTC-SA01	Silicon Bladder Cuff	AC SINGLE 30 X 11 cm NO PINCH CUFF
DTC-S07		SINGLE 86 X 10 cm NO PINCH CUFF RED (Thigh - L)	DTC-SA02		AC SINGLE 46 X 11 cm NO PINCH CUFF
DTC-S08		SINGLE 107 X 10 cm NO PINCH CUFF BLUE (Thigh - XL)	DTC-SA05		AC SINGLE 61 X 11 cm NO PINCH CUFF
DTC-C25	Contoured Single Cuff	CONE SINGLE 70 X 10 cm NO PINCH CUFF RED (Thigh - M)	DTC-SA06		AC SINGLE 76 X 11 cm NO PINCH CUFF
DTC-C26		CONE SINGLE 90 X 12 cm NO PINCH CUFF BLUE (Thigh - L)	DTC-SA07		AC SINGLE 86 X 11 cm NO PINCH CUFF
DTC-D04	Double Cuff	DOUBLE 57 X 10 cm NO PINCH CUFF BLUE (ARM - M)			
DTC-D07		DOUBLE 57 X 15 cm NO PINCH CUFF BLUE			
DTC-D05		DOUBLE 80 X 15 cm NO PINCH CUFF RED (Thigh - M)			
DTC-D06		DOUBLE 107 X 15 cm NO PINCH CUFF BLUE (Thigh - L)			



DVT-4000s ART

Professional DVT Prevention system

DVT-4000s is designed to manage and monitor continually the status and progress of DVT prophylaxis in high-risk patients, especially those requiring long-term prevention at home after leaving hospital as well as pre-operative.



| Main features

- + Automatic Refilling time
- + Optimized for thrombosis prevention auto cuff detection function
- + Suitable for hospital or use at home (before and after surgery)
- + Patient status record (record usage time and number)
- + Convenient one-touch method
- + Full touch screen system for convenient operation status
- + Language selection function

DVT-2600

Professional DVT Prevention System

DVT-2600 is a professional DVT prevention system that works simultaneously, sequentially and comfortably for patients and meets their satisfaction and effective results.

| Main features

- + Optimized program for thrombosis prevention auto operation
- + Cuff connection automatic recognize and program operation
- + Automatic pressure maintenance system
- + Check setting and easy operation through LCD display
- + Automatic battery mode change when power supply fails
- + Built-in battery (max 6~8 hrs)



| Infection Control of Pump



FRONT

Infection control sheet to prevent from occurring bacteria in a gap of button



REUSABLE TUBBING

International Patented tube
(No.10-1631016)



REAR

All the holes was filled by lubber to prevent from infection



Walkable & Wearable DVT Pump

DVT-Pro

Walkable & Wearable Portable DVT



DVT-pro is based on the same clinical background (Simultaneous compression, 28 secs refilling time) as DVT-2600 and DVT-4000, which are hospital facility DVT pumps.

Its main difference is that it is designed to be easy to move outdoor as well as indoor after leaving the hospital.

The set values are stored(saved) by a doctor's prescription and locked so that a patient can safely use the prescription as home care. The usage history can be monitored by a doctor when they visit the hospital.

DVT-pro provides reusable sleeves for continuous care to maintain an individual's health as well as DVT prevention under a prescription after leaving the hospital.

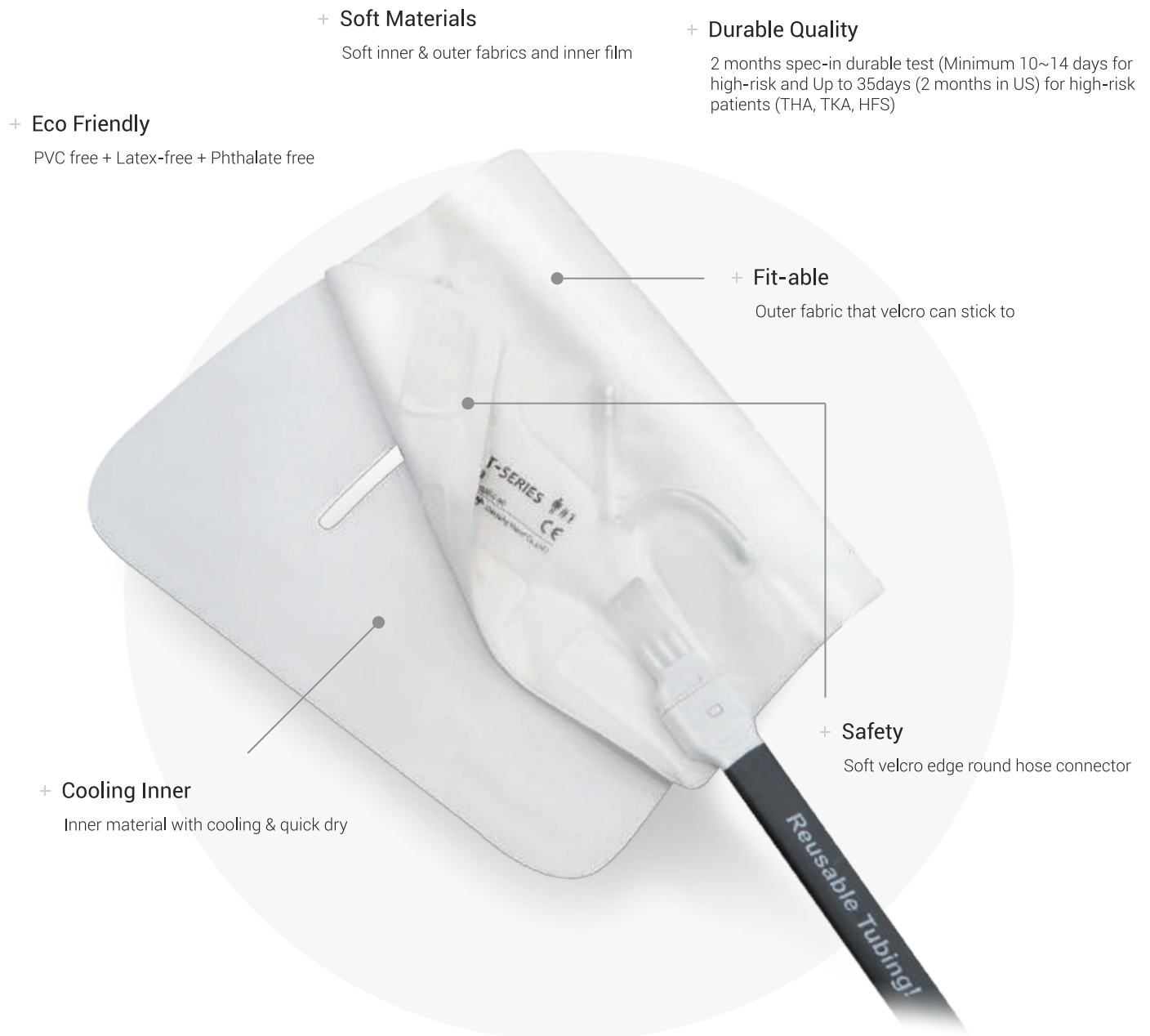
Main features

- + Cryotherapy with Air compression
- + Sequential Three Chamber Gradient, Simultaneous
- + Compression (2 x Venous Return)
- + Simple one-touch operation
- + Digital LCD (Visible day & Night)
- + Adjustable locking settings
- + Auto sleeve detection & system check
- + Patient Compliance Recorder
- + Lithium-ion battery (up to 8 hr.)



Soft DVT Sleeves

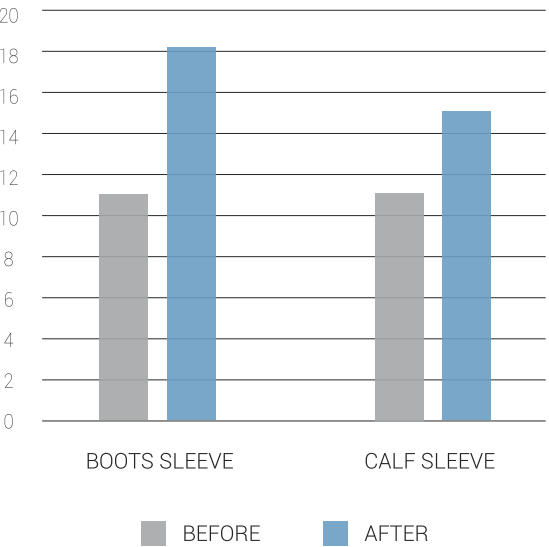
We proud of provision superior soft touch of feeling and eco-friendly materials for patients comfortable use careful attachments material and edge design. All sleeves are performed under a quality test of 2 months and appssed without any defect. The soft sleeves are very epoch-making. We provide a personal reusable sleeves as well as diposable sleeves for patient's long term care by beging comparable with our portable DVT system. **All sleeves are compatible with DVT-4000s, DVT-2600 and DVT-pro**



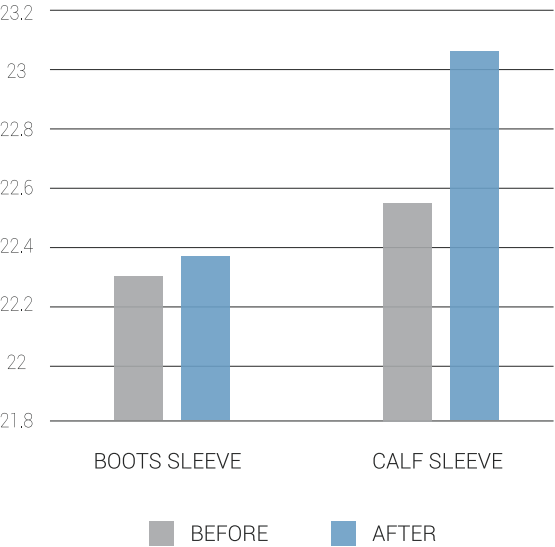
| Comparison study between Calf sleeves and boots sleeves

Calf sleeves(Ref. DS222) and Boots sleeves(Ref. DS241)

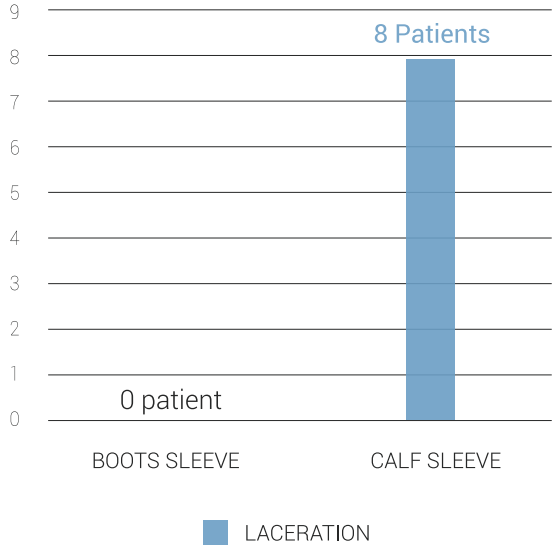
DVT/PE development : 0%
Blood velocity Calf 35% / Boots 65.3% (P value < 0.01)



Edema of dorsum
Calf 1.8% decrease / Boots 2.3% increase



Laceration
Calf 8 patients / Boots 0 patient



A study on the prevention of deep vein thrombosis and skin response of patients after interactional surgery between by boots and calf intermittent pneumatic compression device .

Hanyang University and Bundang Jaesaeng General Hospital



Lympha-Flow

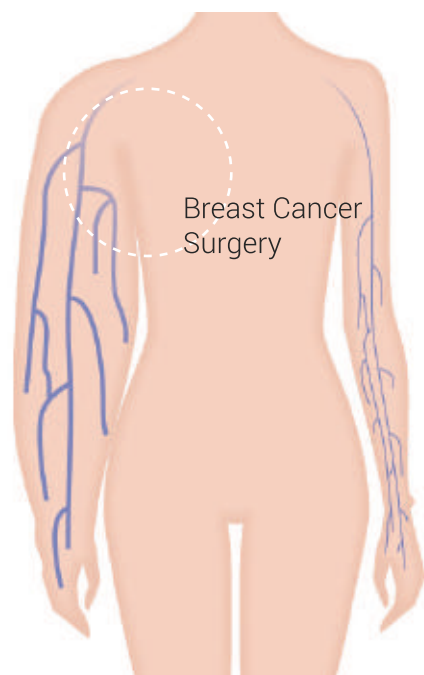
Sequential Compression
Therapy Device

| Upper Limb Sleeve

Arm Chest(AC) overlapping sleeve effectively treats lymphatic edema by releasing stagnant lymphatic fluid from the lymphatic damage area due to breast cancer surgery.



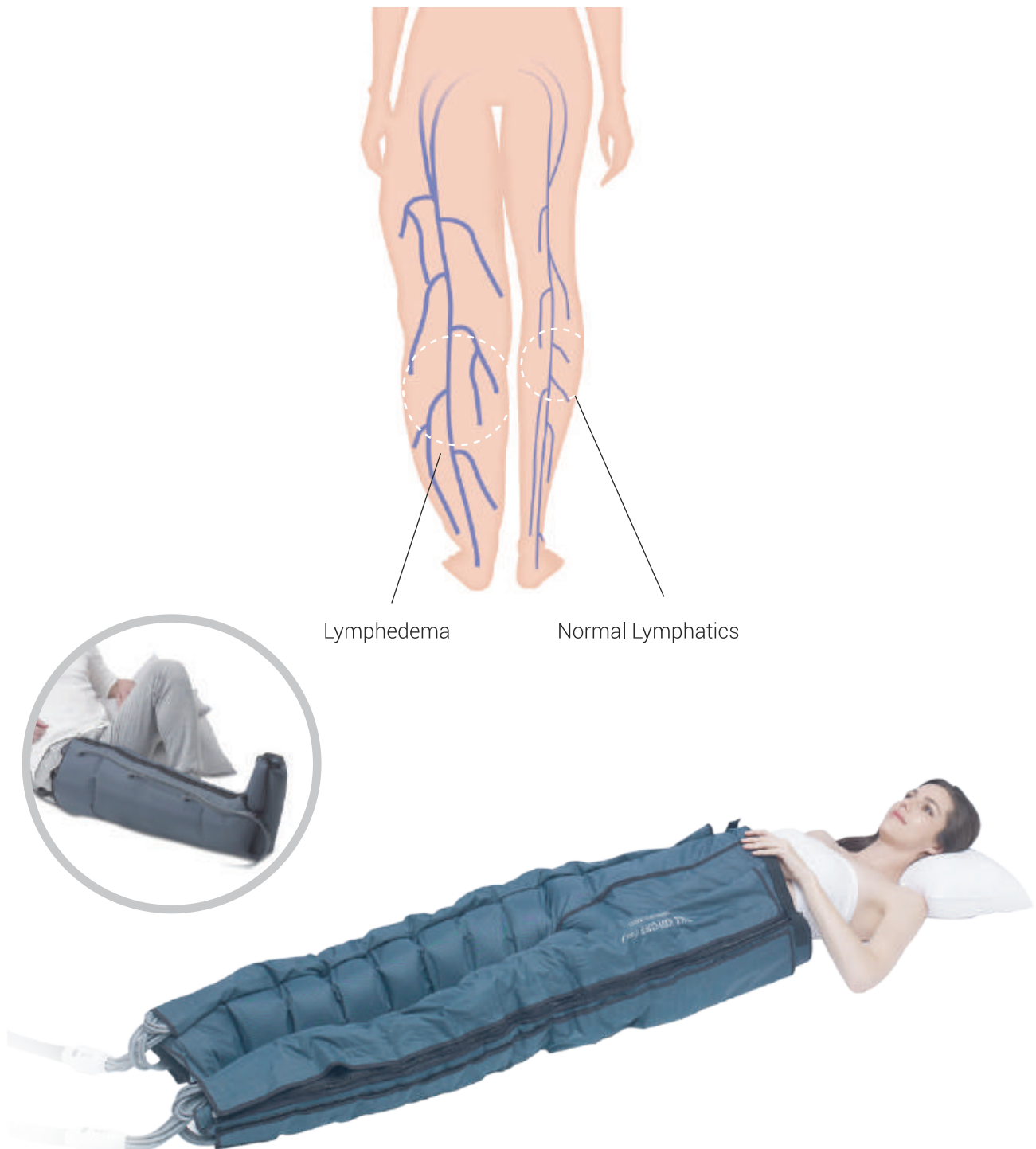
Arm Chest (AC) after breast cancer



Lower Limb Sleeve

Leg overlapping sleeves have 8 sizes, small, small wide, small X-wide, Medium, Medium X-wide, Large, Large wide, Half medium, Half Medium Wide for post-operative care after orthopedic surgery like Total Knee Arthroplasty (TKA), Total Hip Arthroplasty (THA), Hip Fracture Surgery (HFS).

Center body sleeve can be used as a pre-therapy sleeve to open the lymph node of the center of the body before Upper limb or Lower limb and covers the genital and lower abdominal regions for post-care due to hysterectomy or ovarian cancer.



MK400L

Professional Model for Physiotherapy Room

MK400L is a sequential intermittent pneumatic compression (SIPC) system. This model has the optimized functions for professional uses and the sleeves of 6 chambers compressing more minutely. Especially the selection of reverse mode can help arterial circulation by sending blood from the distal part to the proximal parts of a body as well as venous and lymphatic circulation.

| Main features

- + Use durable domestic air motors
- + Periodic reverse pressurization of selection mode
- + Use various cuffs according to user's area
- + Detailed pressure / time / speed setting function
- + Care for your choice of foot / calf / knee / thigh



LF-900

Personal Model for Recovery Room

LF-900 is a semi-professional compression system with a compact design and effective therapy programs including four compression modes. The device provides automatic operation with an easy START / STOP button or you can select more tailored programs like time, pressure, speed, chamber to be inflated and mode.

| Main features

- + Use durable domestic air motors
- + Operation time setting massage time 5~90 minutes
- + Use various cuffs according to user's area
- + Detailed pressure / time / speed setting function
- + Care for your choice of foot / calf / knee / thigh



LF-400

Personal Model for Recovery Room

Physio
Therapy

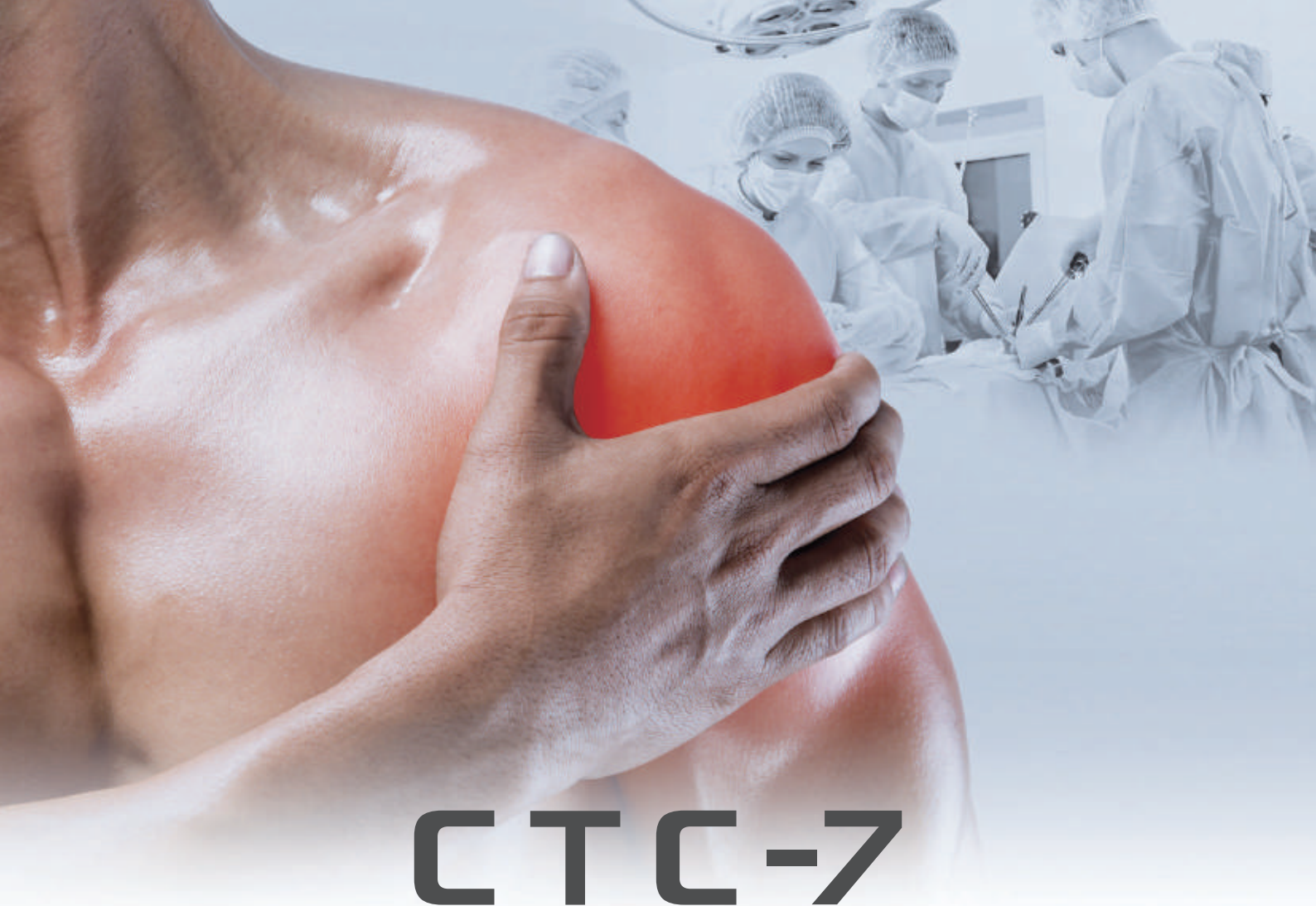
Post
operative
&
Home



LF400 is designed specifically for the effective drainage of the lymphatic system. It features three treatment modes that are pre-therapy. Pre-therapy mode prepares the lymph system for drainage by clearing the lymph nodes. Straight sequential mode with gradient gently and effectively moves excess fluid proximal towards the body.

| Main features

- + Sequential pressurization for effective lymphatic edema
- + Optimization of lymphatic edema due to breast-related disease
- + Pre-therapy mode for effective lymphatic drainage
- + Lock mode prevents malfunction due to keypresses during operation
- + Easy to operate with 3.5 inch wide LCD screen



CTC-7

Cryo.Thermo.Compression system

Purpose of CTC-7

To accelerate patient's recovery and shorten hospital stay



CTC-7

Continuous Thermo Compression System

| Main features

- + Cold + Heat + Contrast therapy
- + It can be drained automatically, so much easier to use
- + Easy maintenance with digital temperature control
- + It has no ice or hot substances, only needs water
- + Definite care for selectable body parts wraps



CTC-7 wraps simultaneously deliver heat or cold water and active air-compression to help prevent and treat your body injuries. Active air compression helps to reduce the swelling and stimulate the flow of rich oxygen blood. Cooling and heating further reduces swelling, muscle spasm and pain.

| Benefits of CTC-7

**COLD +
Compression**

**HOT +
Compression**

**CONTRAST+
Compression**

**STEAM
Cleaning**

**AUTO
Drain**

**AUTO
Water Check**

CTC-7

Veterinary Treatment

CTC-7 system helps an animal's fast recovery from various surgical treatments, including joint damage, trauma, postoperative recovery, and inflammation as well as pain relief.



Chronic & Acute pain relief, inflammation, relief
fast recovery of Wound, Ulcers, Sores

Muscular contracture
Muscular sprains and strains
Musculoskeletal trauma

Fractures

Degenerative articular



CTC BAND

Cryo Thermo Compression Band



CTC band is representative brand of our pain relief which maximizes pain relief effect by applying pneumatic technology at the same time to cold treatment can be used effectively in professional medical facilities or fitness.

| Main features

- + Usable temperature is $-15^{\circ}\text{C} \sim 60^{\circ}\text{C}$, both cold and warm
- + Cryo and thermo therapies are available because required temperature range is within -15°C to 60°C
- + Wearing fit is good as the fabric quickly takes away the surface moisture from the condensation
- + Strong pressure of velcro provides effective cooling and warming effect





REHABILITATION

Hand Pneumatic Rehabilitation
REHA PRO (RL-500)

REHA PRO

Pneumatical Rehabilitation System

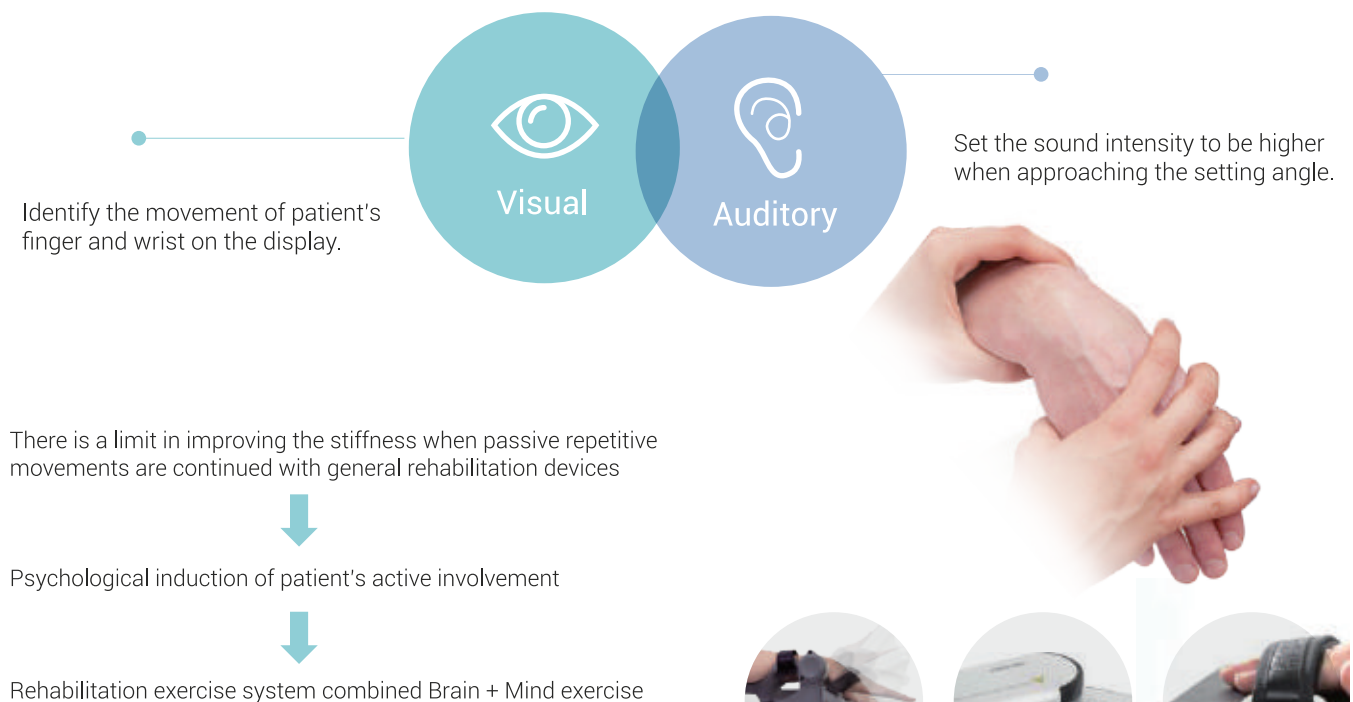


REHA PRO (RL-500) improves functional range of motion in the hand for a variety of neurological post-surgical conditions. Increasing range of motion can be addressed at the wrist and finger joints through repeated passive range.

| Main features

- + Improvements of muscle tone and ROM (range of motion)
- + Brain stimulation & mind motivation
- + Friendly and comfortable design
- + Safety pneumatic motion against sudden convulsion
- + Easy setting on the touch screen
- + Auto Recording of clinical improvement data for treatment term
- + Comfortable universal arm stand
- + Individual hand size adjuster
- + Optional finger Stretching glove

| Brain + Mind through visual + Auditory stimulations





SPORTS & HOME RECOVERY

Portable Compression System

SP-1000, SP-2000

LX7max

SP-3000

SP-1000 & SP-2000

Sports Recovery System



SPO-PRESS series is portable compression system providing refreshed massage with dynamic compression program after sports or fitness exercise. SP-1000 has a time and a pressure controller, whereas SP-2000 has the individual pressure controllers with which the users can adjust the pressure per chamber of the cuff depending on the body conditions.

| Main features (SP-2000)

- + Durable & powerful air motor
- + Easy to set controllers
- + Portable design to carry
- + Convenient handle design
- + Individual pressure setting per each chamber
- + Various sleeves selections of leg, arm, waist and mat

LX7 MAX

The Luxury Home System



LX7 max can be used more professionally by combining with the center body cuff, the final infrared heating system or lower body set. For your healthy and beautiful body, the air compression system is an effective device which effectively drains the stagnant lymph including toxin, waste or fat cells dissolved from the professional slimming are through the lymphatic circulation. It can also be used with ease at home for daily care as well as a professional beauty salons for a healthy and beautiful body.

| Main features

- + - Durable & powerful air motor
- + - Friendly user interface
- + - Desired intensive compression care
- + - Skip mode on the damaged area
- + - Various sleeves selections of leg, arm, Center body, waist and mat



SP-3000 is designed by DS MAREF that has accumulated 30 years of know-how in the pneumatic technology field.

It is designed to be easy to set up for anyone from the user's perspective. It automatically senses the size of each user and the kind of sleeve and provides the optimum feeling to users. 6 chambers provides 6 pneumatic spots with more precise massaging.

SP-3000

Recovery Compression System with 6CH Sleeves



| Main features

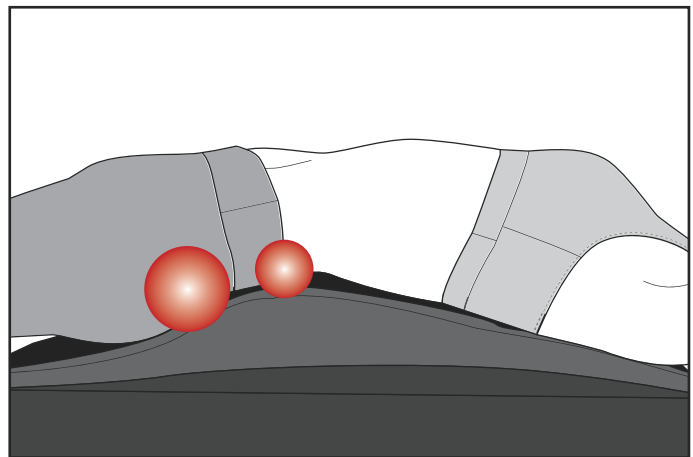
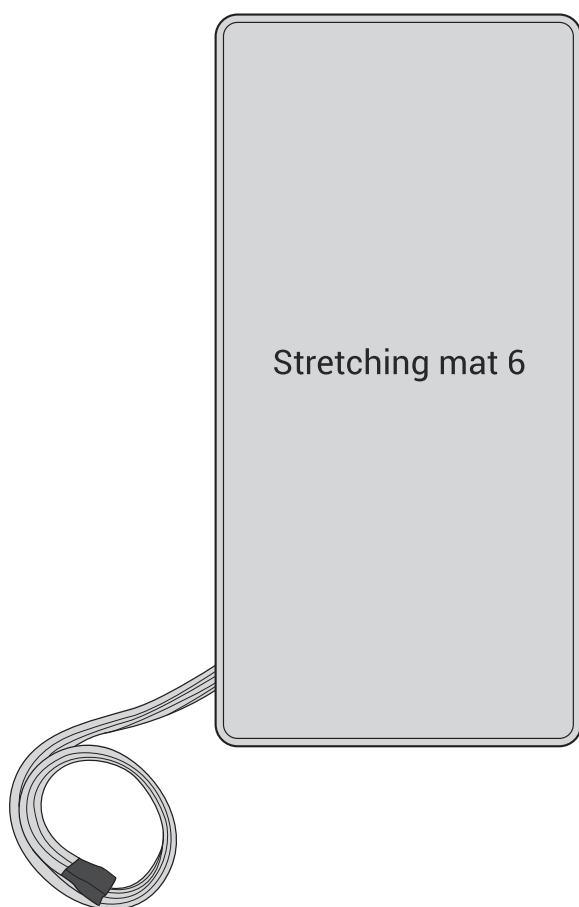
- + Time: 10, 20, 30min
- + Pressure: 50~230mmHg
- + Manual mode: Massage, Circulation, Combination, Intensive, Full mode.
- + Auto mode: It automatically detects each sleeve and works with the optimized protocol for the detected sleeve.
- + Skip function: It can be selected according to safety or intensive care and skipped on the part with ulcer, pain or damage.
- + Sleeve kinds: Leg sleeve, Arm sleeve, Waist sleeve, Stretching Mat 6
- + Sleeve chamber: 6chambers
- + Air sensor: Air sensor detects the set pressure to be working exactly on to the body.
- + Remote controller + Maintenance of pump, solenoid, pump use time

| Stretching mat 6 (Air moving mattress)

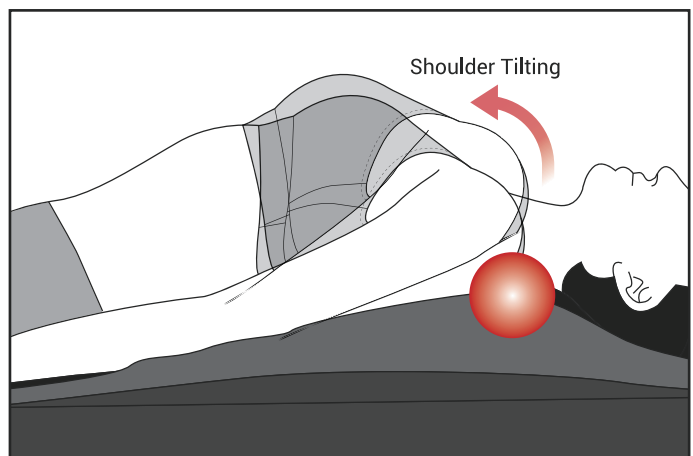
Stretching mat 6 (Air moving mattress) Stretching mat 6 is designed as an alternative exercise item for anyone suffering from movement due to various causes like accident, age, diseases, and obesity.

This mat can improve the range of motion, muscle tone, physical movement from repetitive exercise.

The mat 6 can be used anywhere as it is a portable and light type as well as wellness center, Sports area, Fitness, Beauty salon and home.



1CH ~ 4CH (Waist ~ Neck)



5CH ~ 6CH (Shoulder Tilting)

Recovery Bag

Compression System with Versatile Bag

Robust and delicate materials and high levels of storage.

Meet the Recovery Bag, a combination of convenient and reliable storage separation and refined design!

| Main features

- + Shoes storage
- + Extension zipper
- + Carry to products with sleeve
- + Tower Storage
- + Hose hole
- + Power cord hole
- + **Non-Slip long strip**



Conveniently use various space



The smart storage space, which is separated from the high-quality padding lining, enables convenient and spatial storage. Hand-carrying with a sturdy, stylish handle, and comfortable carrying around on your shoulders with a line of comfortable materials.

- Take it with you in the gym
- Robust and convenient carry-on in parks or outdoors
- Easily take it with you in the office



DL1200H

Professional Circulation System



DL1200H has various sleeves as full-body, leg and arm for effective drainage and minute 12 spots of treatment by a total of 12 chambers. The full-body sleeve can be combined with the patented infrared heating system as 2 in 1 therapy. The solid case and stable inner parts are very quiet while running. Users can set customized protocol with 8 compression modes / pressure / time / hold and interval functions according to a client's conditions.

| Main features

- + 12 chambers sleeves of overlapping structures
- + 8 compression modes
- + Quite operation by solid and thick design
- + Easy to check the setting on LCD display
- + Individual or whole pressure setting
- + Precious gradient pressure setting
- + Attached zippers that can adjust various sizes
- + Various combination with full body sleeve, leg sleeve, arm sleeve, or infrared heating system

| 2 in 1 Infrared & Compression treatment

The combination of compression and IR heating makes a body warmer and promotes a user's metabolism. At the same time, it can discharge faster and easier wastes of body through body's improved circulation system.



MK-300L

Professional Circulation System



MK 300L is a sequential intermittent pneumatic compression (SIPC) system. This model has the optimized functions for professional uses and the cuffs of 6 chambers compressing more minutely. Especially, the selection of reverse mode can help arterial circulation by sending blood from the distal part to the proximal part of a body as well as venous and lymphatic circulation.

| Main features

- + Use durable domestic air motors
- + Periodic reverse pressurization of selection mode
- + Use various cuffs according to user's area
- + Detailed pressure / time / speed setting function
- + Care for your choice of foot / calf / knee / thigh

| MK-300L's three basic modes

There are three optional modes available for MK-300L. You can twist one chamber, or wrap it all around, and go up one step by step. Care your body in the mode you want.

+ A MODE



Which one chamber steps up step by step

+ B MODE



One chamber is added and raised step by step

+ C MODE



Circulation mode mixed with A and B mode



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H to H

Post-Operative Solution
From **H**ospital to **H**ome

Surgical · Physio · Rehab · Sports · Beauty · Health
Since 1986