

MARCH-X



MEDICAL·X
ADVANCING SIMULATION

MARCH-X

Introducing **MARCH-X**: Your Premier Tactical Casualty Care Training Solution.

Step into the future of tactical casualty care training with **MARCH-X** – the ultimate full-body patient simulator meticulously crafted for military personnel.

Designed to replicate human anatomy with unparalleled precision, **MARCH-X** mirrors realistic height and weight proportions, ensuring a true-to-life training experience. Crafted with a robust stainless-steel skeleton, it stands resilient against the rigors of field training scenarios.

Featuring flexible joints and resilient silicone skin, **MARCH-X** is engineered to endure the most demanding training sessions in challenging environmental conditions.

MARCH-X offers immersive training on life-saving techniques and strategies for trauma care on the battlefield, preparing medical personnel and first responders to effectively manage casualties in high-stress, dynamic environments, ultimately improving patient outcomes and enhancing overall readiness for emergency situations.

The **MARCH** Protocol

This evidence-based protocol deals with traumatic medical events in a tactical environment. It gives the victim a greater chance of survival and is applied for TCCC - Tactical Combat Casualty Care and TECC - Tactical Emergency Casualty Care.

- ▶ **M**assive bleeding
- ▶ **A**irway
- ▶ **R**espiration
- ▶ **C**irculation
- ▶ **H**ypothermia Prevention

MARCH-X has been meticulously designed to provide immersive and realistic training across all stages of the MARCH Protocol.

MARCH-X aims to provide hands-on training to medical personnel, including military teams, law enforcement officers, and first responders, in managing casualties in high-stress situations such as combat zones, active shooter incidents, or other emergencies.

- Height: 1.95m
- Weight: 70kg
- Skin tone:  Dark  Medium  Light
- Reliability and realism make MARCH-X the perfect tool for casualty care training, resisting the rigorous TCCC and TECC guidelines
- Evacuating the casualty from the battlefield
- Enhance the preparedness and reaction times of all combatants



GENERAL

Flexible joints, upper body rotation, forward flexion, and backward extension



Interchangeable eyes: dilated and constricted pupils, eye injuries



Possibility to change the simulator's skin and genitalia



Airway

- Airway maneuvers: head tilt, chin lift, and jaw thrust
- Insertion of oropharyngeal and nasopharyngeal airways
- Insertion of laryngeal mask
- Orotracheal intubation and nasotracheal intubation
- Needle and surgical cricothyrotomy







BREATHING

- Bag-valve-mask ventilation
- Chest rise and fall when ventilated
- Bilateral needle decompression
- Chest seal placement





RESUSCITATION

- Anatomical landmarks for heart massage
- Realistic compression resistance



TRAUMA

- A variety of bleeding wounds provide full-immersive training scenarios
- Practical training in traumatic wound care and hemorrhage control
- Possibility to apply different moulage wounds/trauma sleeves¹



Bleeding feature: Independent connections for each wound:



¹. Optional: Moulage wounds and trauma sleeves can be purchased separately.

Compatible with HEMORRHAGE-X

MARCH-X features several wounds connected through individual tubes to deliver realistic bleeding. You can pump simulated blood through the wounds using a squeeze bottle or elevate the authenticity of the training by using our bleeding simulation pump, **HEMORRHAGE-X**.

Portable and easy to use, **HEMORRHAGE-X** is available in two different models: **HEMORRHAGE-X1**, with one output; and **HEMORRHAGE-X3**, with three outputs.



The tutor can control several bleeding parameters using a smartphone, tablet, or laptop with the HEMORRHAGE-X App. When using the **HEMORRHAGE-X1**, a device's direct control is also available.

- Arterial and venous bleeding
- Regulate the bleeding flow and the pulse rate
- Sensors detect pressure applied
- One or three outputs with independent flows
- Remote control by a web application



*The HEMORRHAGE-X is available as an optional add-on and can be purchased separately.

Specifications

GENERAL

Full-body adult male patient simulator
Faithful reproduction of a man's anatomy
Realistic human height and weight: 1.95m – 70kg
Sturdy stainless-steel frame and joints
Life-like looking robust and thick silicon skin
Interchangeable eyes: dilated and constricted pupils, eye injuries, subconjunctival hemorrhage
Realistic movements of the head, torso, arms, and legs
Adaptable to seated posture, upper body rotation, forward flexion, and backward extension
Interchangeable arms and legs¹
Possibility to change the simulator's skin and genitalia
Manikin drag and lift manipulation similar to a real human
Resilient to impact from a fall of up to 3m height
Resistant to adverse environmental conditions: hot and cold weather, rain, sand, mud, stone, grass, and others
Six lateral external connections for HEMORRHAGE-X3²
Easy to clean and disinfect
Ideal for TCCC, TECC, and MARCH protocol training

¹ Trauma limbs with various wounds can be purchased separately.

² HEMORRHAGE-X3 is a portable and easy-to-use bleeding simulation pump with three outputs that deliver realistic bleeding to your trauma scenarios. The HEMORRHAGE-X3 is included with MARCH-X.

AIRWAY

Airway maneuvers: head tilt, chin lift, and jaw thrust
Placement of multiple oxygen delivery systems: nasal cannula, face masks, etc.
Realistic anatomy: tongue, epiglottis, vocal cords, and trachea
Insertion of oropharyngeal and nasopharyngeal airways
Insertion of laryngeal mask airway
Orotracheal intubation and nasotracheal intubation
Oral and nasal fiberoptic intubation
Needle and surgical cricothyrotomy

BREATHING

Bag-valve-mask ventilation
Decompression of pneumothorax – bilateral
Chest seal placement

Specifications

RESUSCITATION

Anatomical landmarks for heart massage
Realistic compression resistance

TORSO & LIMBS

Chest and abdomen: entrance gunshot wound
Right arm: entrance and exit gunshot wounds
Left arm: laceration wound
Right leg: entrance and exit gunshot wounds
Left leg: laceration wound
Compatibility with tourniquet application on arms and legs

OPTIONALS

Interchangeable chest and genitalia
Chest tube placement
IO access in the tibia, sternum, and shoulder
Amputated limbs³
Custom wounds with or without bleeding tubes
Wearable sleeve wounds with or without bleeding tubes
Different skin tones and hair/beard colors
Simulated blood

³ Amputated arms and legs

*The images shown are for illustration purposes only and may not be an exact representation of the product.

**Specifications may be subject to change during development. Please contact MEDICAL-X for the latest specifications.

Contact us

Headquarter & Factory

Address

Hazenkamp 50, 6836BA
Arnhem, The Netherlands.

Tel

+31 10 341 5927

Email

info@medical-x.com

USA office

Tel

+1 904 490 0221

Email

info@medical-x.com

Brazil office

Address

Rua Dona Francisca, 8300
Bloco L, Sala 24, 89219-600
Joinville/SC, Brazil.

Tel

+55 47 3023 2050

Email

contato@medical-x.com

India office

Address

D7-401, Maya Garden City,
140603 - Zirakpur, India.

Email

info.india@medical-x.com

Support

Contact us at:

+31 10 341 5927

info@medical-x.com

Warranty

This product is covered by a 2-year warranty against manufacturing defects. If a defect occurs within this period, MEDICAL-X will repair or replace the defective item at no additional cost. For warranty claims, proof of purchase and detailed documentation of the defect are required. Please contact our customer support team for assistance.

Disclaimer

The warranty does not cover damages resulting from misuse, improper handling, or unauthorized modifications. The warranty does not include normal wear and tear, including discoloration or material degradation due to repeated use. MEDICAL-X assumes no liability for improper usage or failure to follow the product's instructions.



MEDICAL-X
LIVING SIMULATION



About MEDICAL-X

MEDICAL-X is a Dutch company specialized in the design, development, manufacturing, marketing and distribution of simulation products for medical teaching and training.

Our mission is to provide healthcare professionals with simulation-based training solutions and cutting-edge technological simulators that are cost-effective and time-efficient to teach and train clinical skills without risk to actual human patients.

Design philosophy

Realism is the key to our design philosophy! Simulator training gives medical teams the experience, competence, and confidence they desire. Realism adds to the quality and efficacy of training.

Our products are developed through extensive feedback programs to produce an engaging experience for healthcare professionals. Form and function come together in a realistic and interactive simulator, ready to be used in training for all levels of care.



MEDICAL-X

Contact us



 [medical-x.com](https://www.medical-x.com)

 +31 10 341 5927

 info@medical-x.com

 @medicalx

 @MedicalXSimulators

 @medical-x

 /@lapxsimulator