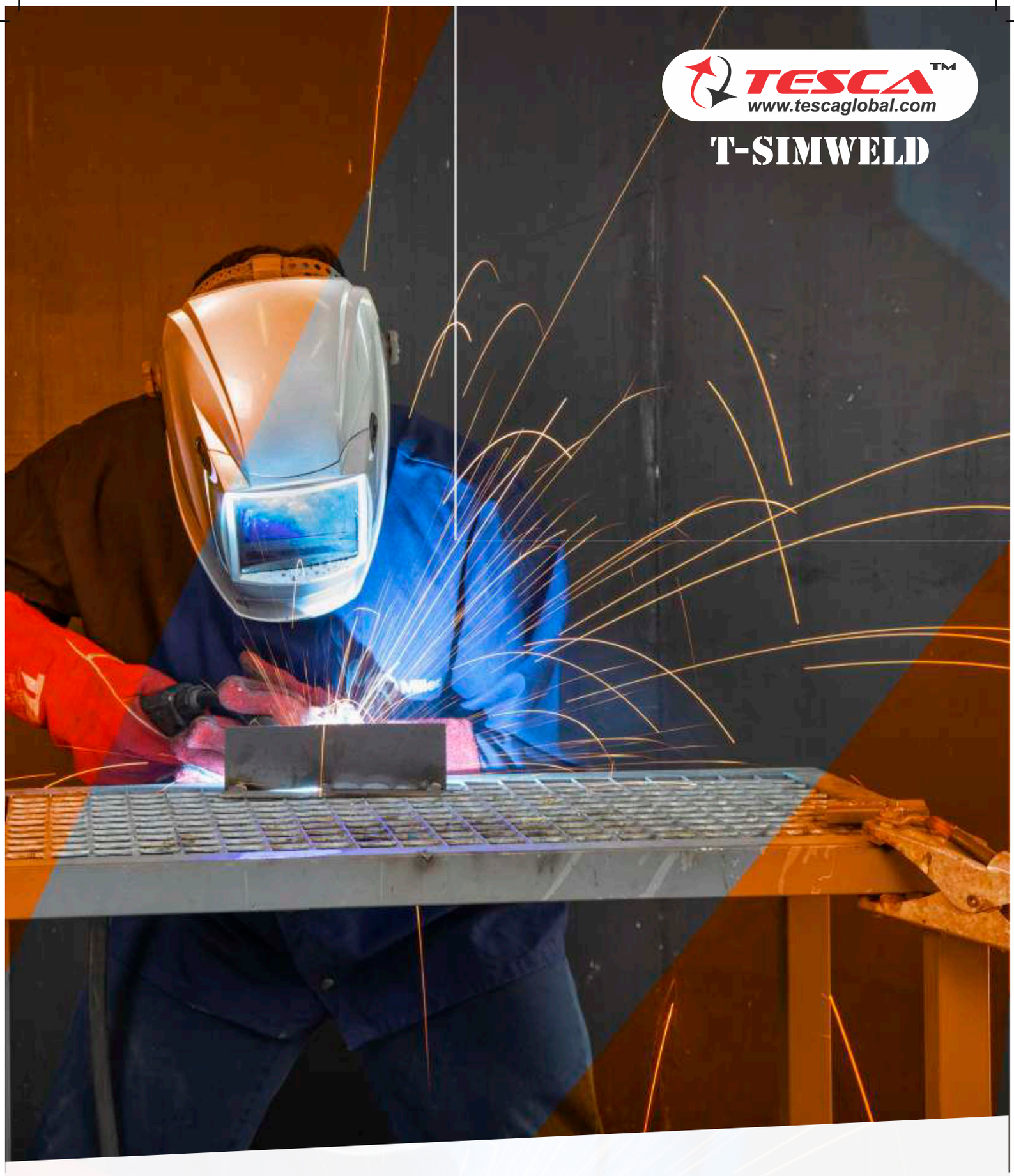


TESCA™
www.tescaglobal.com

# T-SIMWELD

The best virtual welding training solution

www.tescaglobal.com

# T-SIMWELD

## KEY FEATURES

- 5 Physical welding coupons: Overlapped plate, V-Butt plate T-Angled plate to plate, V-Butt pipe, T-Angled pipe to plate

Real welding torches: GTAW, GMAW, SMAW

1 to 25 mm thickness

5 Physical welding coupons: Overlapped plate, V-Butt Plate T-Angled Plate to plate, V-Butt pipe, T-Angled pipe to plate

Advanced features: bend test, safety checks

Aluminum, carbon steel, stainless steel

E-learning, Analysis Module

National and International contents and curricula

Hindi, English and other languages available

## KEY BENEFITS

### PROVEN EFFECTIVE WELDING TRAINING SOLUTION

# ENGAGING LEARNING EXPERIENCES

**AUGMENTED LAB** **SIMULATED LAB + REAL LAB**

## AUGMENTED TRAINING METHODOLOGY

First weld it in Augmented, then in real, using quality contents and managing your students in a personalized way.






# MORE REALISTIC EXPERIENCE POWERED BY AUGMENTED REALITY

**AUGMENTED REALITY**

| | |
|---|---|
| | ✓ |
| | ✓ |
| | ✓ |
| | |
| | Is an enhanced, real-world experience |

**AR IS REAL, NOT A VIDEO GAME**

# DEVELOPED BY SEABERY, THE WORLDWIDE #1 MANUFACTURER OF AR WELDING TRAINING SOLUTIONS

TESCA™



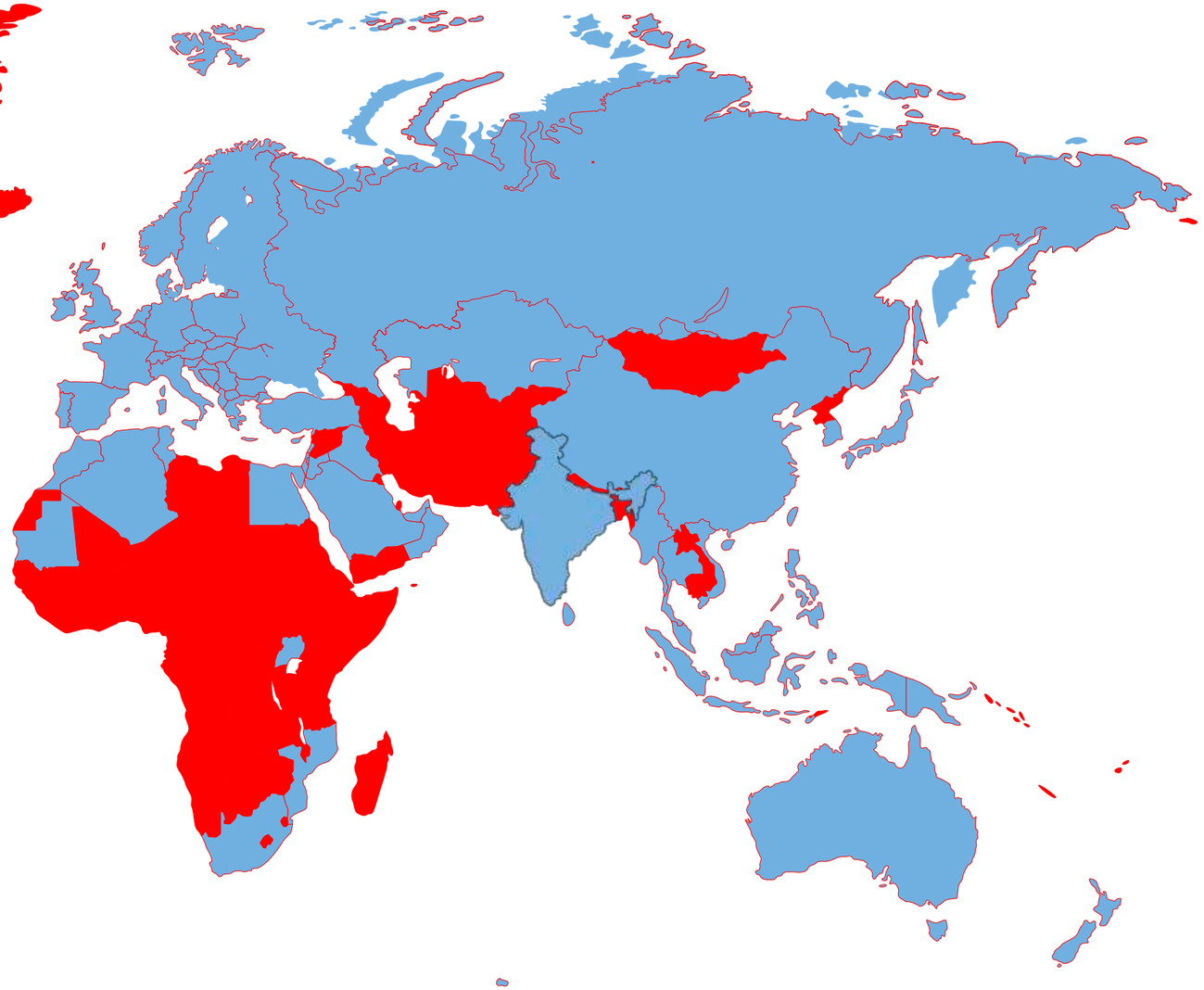
THE BEST VALUE WELDING TRAINING SOLUTION

**+750**
CLIENTS IN EDUCATION & INDUSTRY

**+90,000**
PROFESSIONALS TRAINED

**+75**
COUNTRIES

Governments, educational institutions, universities and large industrial corporations are using Seabery solutions.



| | |
|---|---|
| DIMENSIONS (WITHOUT ACCESSORIES) | 259x424x236mm |
| WEIGHT (WITHOUT HELMET) | 8.8 kg |
| WEIGHT (WITH HELMET) | 9.8 kg |
| WELDING PROCESSES SUPPORTED | GMAW (MIG/MAG) & FCAW G/S, SMAW (MMA Electrode), GTAW (TIG) |
| WELDING POSITIONS | 1F, 2F, 3F, 4F, 1G, 2G, 3G, 4G, 5G, 5F, 6G, 6F |
| DEFAULT WELDING JOINTS INCLUDED | YES, Education Welding Joints: Overlapped plate, V-Butt plate, T-Angled plate to plate, V-Butt pipe, T-Angled pipe to plate |
| REAL WELDING TORCHES | Yes |
| WELDING SOUNDS | Recorded in a real welding lab |
| ACCESORIES | Filler rod, welding gloves, Wi-Fi antennas.<br>OPTIONAL: Workstand, lab server including router, and flight case |
| VOLTAGE SELECTION | YES, it can be modified during the exercise |
| INTENSITY (AMPERAGE) SELECTION | YES, it can be modified during the exercise |
| SHIELDING GAS SELECTION | YES, the flow can be modified during the exercise |
| WIRE SPEED SELECTION | YES, in GMAW (MIG/MAG) and FCAW, it can be modified during the exercise |
| COUPON MATERIAL SELECTION | Carbon steel, stainless steel, aluminum |
| GAS COMPOSITION | MATERIAL / GMAW / GTAW / FCAW<br>Carbon Steel / Argon - $Co^2$, $CO^2$ / Argon / Argon - $Co^2$, $CO^2$<br>Aluminium / Argon / Argon / -<br>Stainless Steel / Argon - $O^2$ / Argon / - |
| COUPON THICKNESS SELECTION | 3mm, 6mm, 10 mm<br>1mm, 15mm,20 mm & 25mm |
| ELECTRODE STICK /FILLER ROD DIAMETER SELECTION | GMAW: carbon and stainless steel: 0.8mm 1mm 1.2 mm aluminum: 1mm 1.2mm<br>SMAW: carbon and stainless steel: 2.5 mm 3.25mm 4mm<br>GTAW: carbon steel, stainless steel and aluminum: 2mm 2.4 mm 3.2 mm<br>FCAW: carbon steel: 1.0, 1.2mm |
| ELECTRODE STICK / FILLER ROD SELECTION | GMAW: carbon steel: ER70S-6 stainless steel: E316LSi aluminum: ER5356<br>SMAW: carbon steel: E7018, E6010, E6013 stainless steel: E316L<br>GTAW: carbon steel: ER70S-6 stainless steel: ER316L Aluminum: ER5356<br>FCAW: carbon steel: E71T-1, E71T-7 |
| MULTIPASS EXERCISE WITH DIFFERENT PROCESSES | YES |
| WELDING PROCESSES | Straight, Triangle, Convex, Circle, Zigzag |
| WELDING PATTERN/WEAVE | Push / Drag |
| TRANSFERENCE MODES | Short circuit, globular, spray |

| | |
|---|---|
| DEFECTS ANALYZED | Porosity, spatter, slag inclusion |
| REPORT FEATURES | CTWD, Travel Speed, Work Angle, Travel Angle, Trajectory, Voltage, Wirefeed Speed, Technical Parameters, Equipment Settings |
| ANALYSIS MODULE | YES |
| ON-SCREEN HELP GUIDES | YES, they can be added/removed |
| PREDEFINED WELDING EXERCISES | YES, AT Welding curricula |
| LMS APPLICATION | YES, E-Learning: manage students, create curricula and exercises and monitor the training |
| LMS APPLICATION: STUDENTS ACCESS | YES, Visualize contents, progress, take tests |
| REMOTE TRAINING / DISTANCE LEARNING | Yes |
| STUDENT PERSONALIZED PROFILE | YES, practices report and progression |
| CUSTOMIZED PRACTICES | YES, customized in E-Learning |
| POSSIBILITY TO TRY DIFFERENT SETTINGS DURING THE EXERCISE AND THEIR EFFECTS IN THE WELDING BEAD | YES |
| VISION TECHNOLOGY | Augmented Reality |
| PIECE CAN BE MANIPULATED SEPARATELY | YES, it can be manipulated at any time during the exercise to perform a visual inspection of the welding bead. The workpiece is not attached in any way to the workstand |
| REAL ENVIRONMENT DURING SIMULATION | YES |
| UNIT CAN BE USED WITH GLASSES | YES |
| POWER SUPPLY | NOX Hummer Bronce 500W |
| PROCESSOR | Intel® Core™ i5-9500E |
| CHIPSET | Intel H310 |
| RAM | 8+8 GB DDR4 |
| GRAPHIC CARD | Intel UHD Graphics |
| HARD DISK | M.2 SSD 128Gb |
| AUDIO | Realtek Audio |
| OPERATING SYSTEM | Seabery Operating System optimized for AT Weldsim |
| BACK PANEL PORTS | 1 x HDMI<br>4 x USB<br>2 x Ethernet<br>2 x Wifi Antennas<br>1 x jack |
| AR VISION MODULE RESOLUTION | MIPI LCD 4,7”<br>HDMI Display input up to 1280x720<br>Ultra-low video distortion<br>24-bit True Colour |

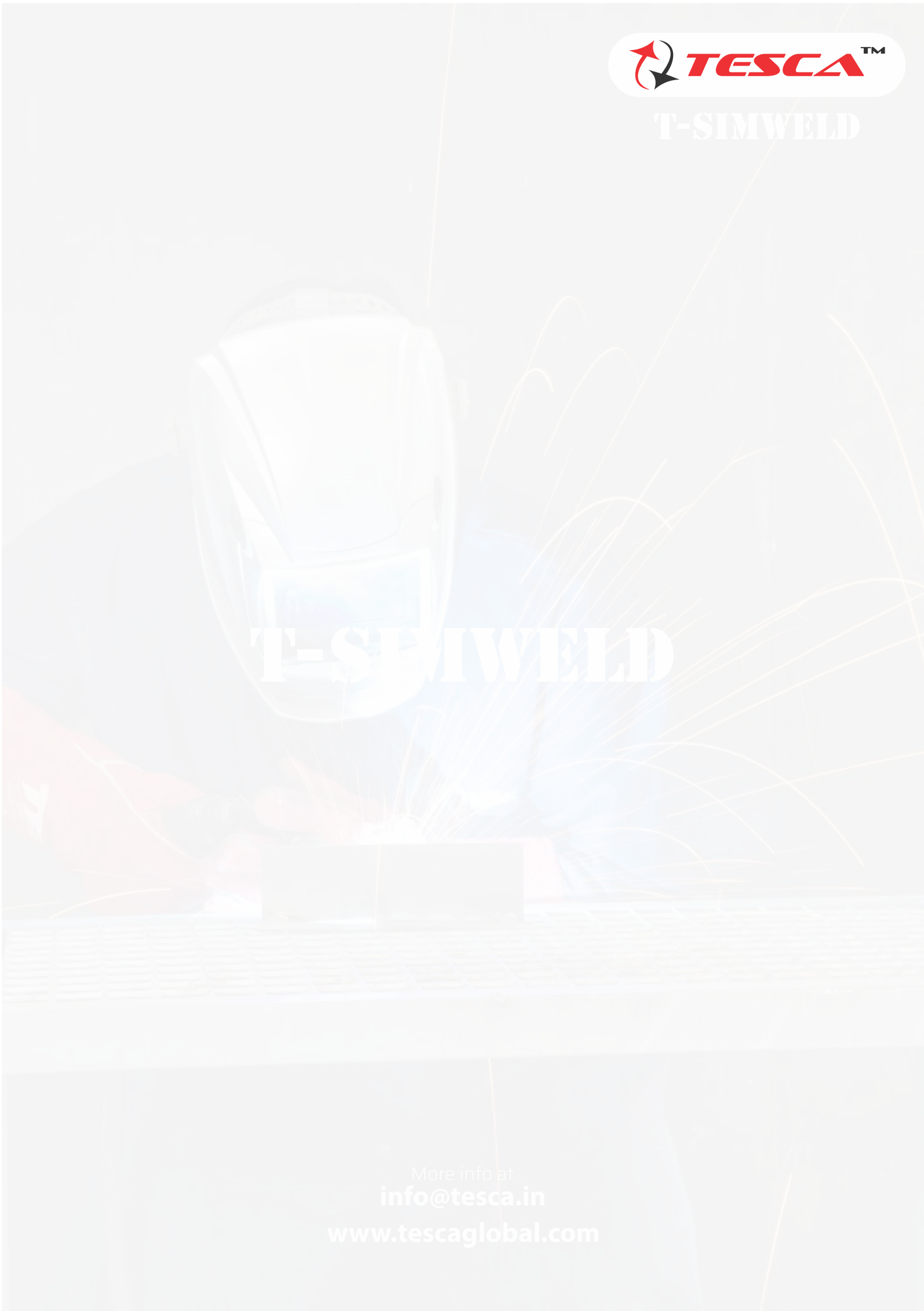
| | |
|---|---|
| CAMERAS RESOLUTION (X2) | 640x480 / 800x600 Autofocus |
| OPERATING TEMPERATURE | -30 ~ +70° Celsius |
| HUMIDITY | 10 to 90 percent relative humidity non-condensing |
| UPDATES | Software updates and bugfixing (Same version) included |
| REMOTE MAINTENACE | Yes |
| REGULATIONS | ISO 9001 Quality Management System<br>ISO 14001 Environmental Management System |
| WARRANTY | 1 year. Up to 2 more years optional |
| SERVER | |
| INSTALLATION TYPE | On-Premise |
| RAM MEMORY | 4GB DDR4 2400MHz |
| MOTHERBOARD | ASUS H110M-D |
| MICROPROCESSOR | Intel Core I3-7100 |
| POWER SUPPLY | 550W 100-240Vac |
| HARD DISK | 1TB SATA3 |
| NETWORK CARD | Gigabit Ethernet PCIe 10/100/1000Mbps |
| E-LEARNING REQUIREMENTS | |

WINDOWS
WINDOWS 10 64 BITS
Processor: Intel i5 2.5ghz
RAM: 8GB
Graphic card specifications: Nvidia Geforce 950

| |
|---|
| LANGUAGES AVAILABLE |
| ENGLISH / HINDI / TELUGU / MARATHI /TAMIL |

TESCA™

# T-SIMWELD




More info at
**info@tesca.in**
**www.tescaglobal.com**


# ROBOTICS WELDING TRAINING

SOLDAMATIC®
ROBOTIC TRAINING
TESCA™
www.tescaglobal.com

# 01.
# Worldwide growing trends

## INDUSTRY 4.0 IS ACCELERATING AUTOMATION:
Automated tasks in factories are expected to grow from 5% to 8% by 2028. Collaboration between people and machines requires increased skills for operators.

## GLOBAL SHORTAGE OF WELDERS:
**Global demand** for welders is increasing by 8% globally.
Existing welders are retiring.

**attract** young **people**.

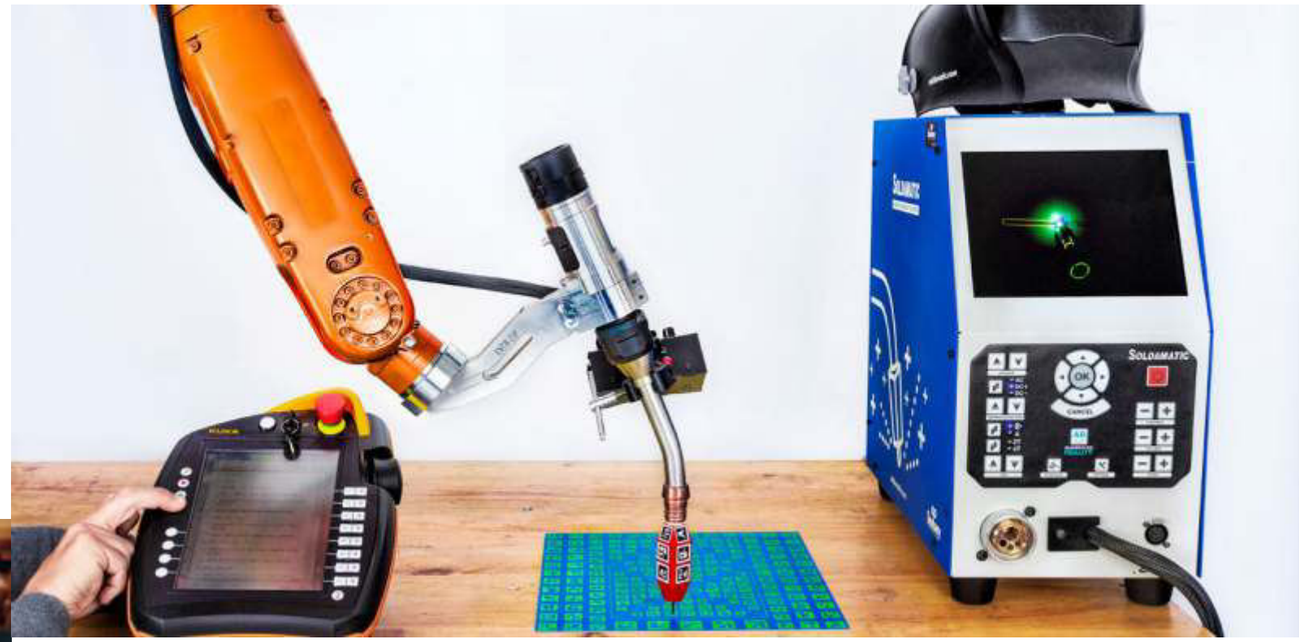
## ROBOTICS ARE THE BACKBONE OF AUTOMATION:
Since 2009, the number of **manufacturing robots** has more than doubled.
Manufacturing Industrial Robots are expected to grow by **80% by 2026.**

**ACCELERATION OF ROBOTICS WILL UNLOCK THE PRODUCTIVITY**

**ROBOTICS WELDING TRAINING IS THE OPPORTUNITY**



# 02.
# Robotic Welding Training



SOLDAMATIC®
ROBOTIC TRAINING

First-of-its-kind working with Augmented Reality and real components such as the robot and the Teach Pendant, and supported by a robotics welding curricula

**FIRST OF ITS KIND WORKING WITH AUGMENTED REALITY**

**REAL COMPONENTS**

**SUPPORTED BY A ROBOTICS WELDING CURRICULA**

# 02.
# Robotics Welding Training

SOLDAMATIC®
ROBOTIC TRAINING
TESCA™

## INNOVATE
State-of-the-art AR technology.

HyperReal·SIM
The most realistic training experience aside from actual welding.

## SCALABLE

**ADAPTABLE TO ANY EDUCATIONAL INSTITUTION**

**WELDING JOINTS FOR DIFFERENT LEVELS FLEXIBLE CURRICULUM**

**REAL TIME INTERACTION**
Shared visibility of practices between trainer & students.

## COMPREHENSIVE

**PROVEN CURRICULUM WITH HUNDREDS OF BUILT-IN PRACTICES**

**ON-PREMISE & REMOTE ACCESS**
Transparent and consistent experience. Access anytime, from anywhere.

**SOLDAMATIC COULD INTEGRATE WITH ANY ROBOT IN THE MARKET**
On demand.

# 03.
# How it works

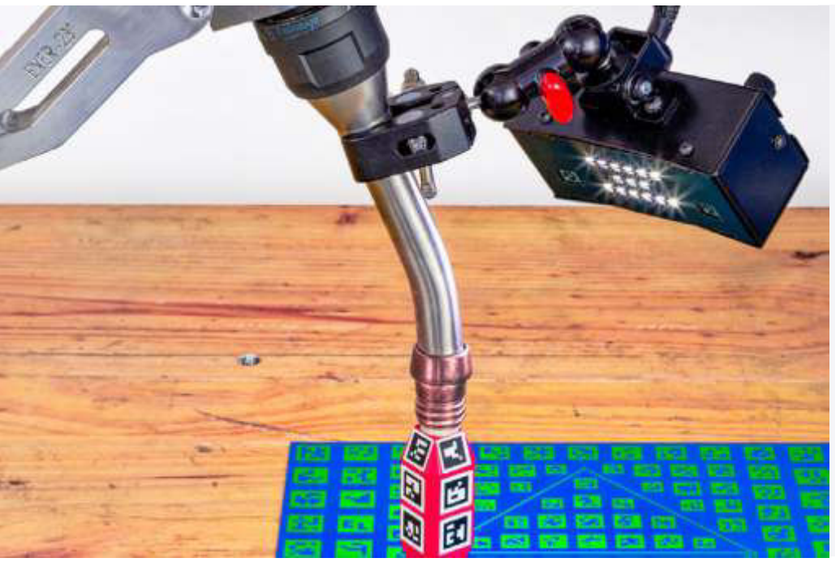
## HARDWARE

SOLDAMATIC®
AUGMENTED TRAINING FOR WELDING BY SEABERY

**SOLDAMATIC WELDING SIMULATOR**

**ROBOTICS WELDING TORCH OR VISION MODULE**

**EDUCATION WELDING JOINTS**



**WELDING JOINTS**

Wide range of joints for robot welding.



# 03.
# How it works

**GMAW (MIG/MAG) WELDING PROCESS**

**CARBON STEEL WELDING MATERIAL**

**3, 6 & 10 MM THICKNESSES**

**TRAIN THE TRAINER SUPPORT**

**TECHNICAL SUPPORT**

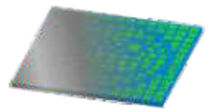
**SOLDAMATIC E-LEARNING (LMS)**

**CONTENTS:**

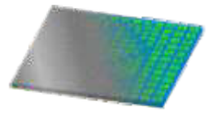
- Introduction to Robotics Welding
- Augmented Training Methodology course for welding teachers

**1 YEAR WARRANTY (EXTENDABLE)**

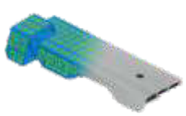
AWM-001 Foundational ambidex



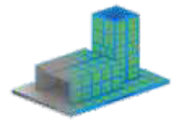
AWM-010 Robotic Foundational ?Face? ?



AWM-009 Robotic Foundational ?House?

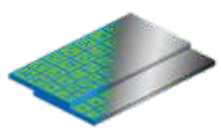


AWM-004 Automotive Chassis Assembly



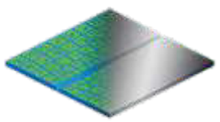
AWM-015 Robotic Foundational Assembly

T-Angled plate to plate

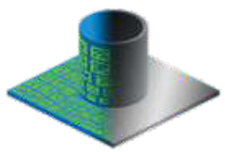


Overlapped Plate

V-Butt pipe



V-Butt Plate

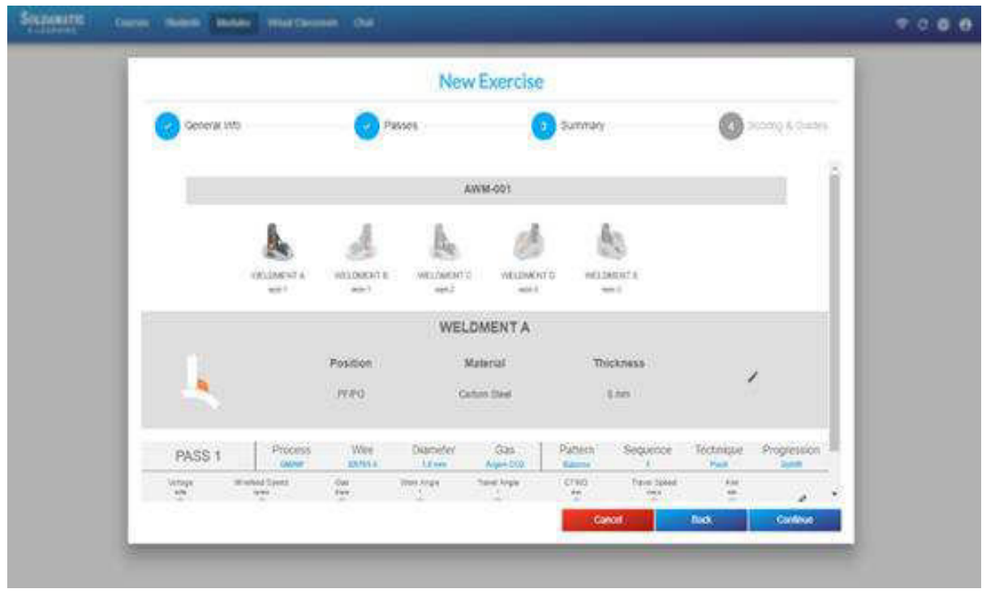


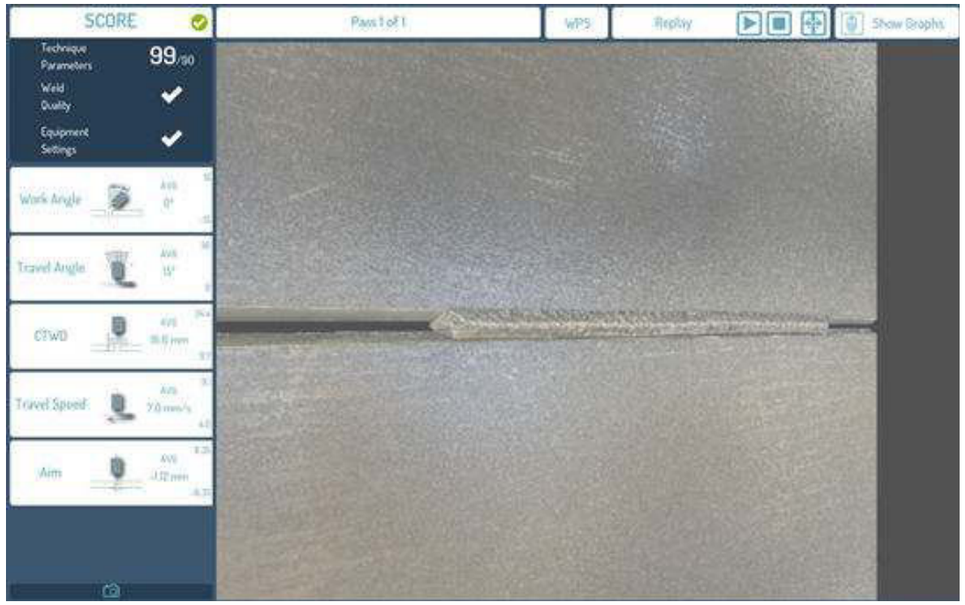
T-Angled pipe to plate

# 03.
# Robotics Welding Curricula

## INTRODUCTION TO ROBOTIC WELDING

It Includes 2 modules with tests and theorical (PDF and HTML5) aand practical contents with 15 practices



| | |
|---|---|
| VISION TECHNOLOGY | AUGMENTED REALITY |
| WELDING PROCESSES SUPPORTED | MANUAL: GMAW (MIG/MAG) &FCAW G/S, SMAW (MMAElectrode), GTAW (TIG)<br>ROBOTICS: GMAW (MIG/MAG) &FCAW G/S |
| WELDING POSITIONS | PA, PB, PC, PD, PF/PG, PE, PH/PJ, HL045/JL045 - 1F, 2F, 3F, 4F, 5F, 6F, 1G, 2G, 3G, 4G, 5G, 6G<br>HL045 (6G) available in AWM-002, AWM-008, AWM-011, AWM-012 and AWM-016. 6GR available in AWM-011 (Pipeline 6GR) |
| DEFAULT WELDING JOINTS INCLUDED | |
| ADDITIONAL WELDING JOINTS AVAILABLE | 20 Additional Advanced Welding Multijoints available for manual and robot welding based on Foundational, Automotive, Railway, Shipbuilding and Oil&Gas industries<br>Manual: AWM001, AWM002, AWM003, AWM004, AWM005, AWM006, AWM007, AWM008, AWM011, AWM012, AWM013, AWM014, AWM020 available for AWS training content<br>Robotics: AWM001, AWM004, AWM009, AWM010, AWM015, AWM016, AWM017, AWM018, AWM019 |
| WELDING JOINTS FOR SPECIFIC INDUSTRIAL NEEDS | With Industrial Welding Services |
| ON DEMAND TAILOR MADE COUPONS | Including the physical workpiece. Industrial Welding Services |
| PIECE CAN BE MANIPULATED SEPARATELY | It can be manipulated at any time during the exercise to perform a visual inspection of the welding bead. The |
| REAL WELDING TORCHES | MANUAL: YES, by Abicor Binzel |
| REAL ADVANCED WELDING TORCHES | Handle ergonomics by Abicor Binzel |
| HAPTICS | Advanced GMAW/FCAW torch includes vibration feature |
| WELDING SOUNDS | Recorded in a real welding lab |
| REAL WELDING MASK | YES |
| VOLTAGE SELECTION | ROBOTICS: in job selection |
| | |
| SHIELDING GAS SELECTION | |
| WIRE SPEED SELECTION | during the exercise<br>ROBOTICS: in job selection |
| PLUG WELDING | In AWM-005 (Automotive Thin Plates) and Industrial Services |
| COUPON MATERIAL SELECTION | Carbon Steel, Stainless Steel, Aluminium |
| GAS COMPOSITION | MATERIAL / GMAW / GTAW / FCAW<br>Carbon Steel / Argon - $Co^2$, $CO^2$ / Helium* / Argon - $Co^2$, $CO^2$<br>Aluminium / Argon / Argon / -<br>Stainless Steel / Argon - $O^2$ / Argon / - |
| COUPON THICKNESS SELECTION | YES: 3mm, 6mm, 10mm<br>1mm, 2mm, 7mm, 8mm, 15mm, 16mm, 20mm, 25mm available with Advanced license |
| POSSIBILITY TO USE OTHER THICKNESSES | On demand with Industrial Welding Services |

| | |
|---|---|
| | <table><tr><th>MATERIAL</th><th>GMAW</th><th>SMAW</th><th>GTAW</th></tr><tr><td>Carbon</td><td rowspan="2">0.8mm, 1mm, 1.2 mm</td><td rowspan="2">2.5mm, 3.25mm, 4mm</td><td rowspan="2">2mm, 2.4mm, 3.2 mm</td></tr><tr><td>Stainless Steel</td></tr><tr><td>Aluminium</td><td>1mm, 1.2mm</td><td>-</td></tr></table> |
| | <table><tr><th>MATERIAL</th><th>GMAW</th><th>SMAW</th><th>GTAW</th><th>FCAW</th></tr><tr><td>Carbon Steel</td><td>ER70S-6</td><td>E7018, E6010, E6013</td><td>ER70S-6</td><td>E71T-1, E71T-7</td></tr><tr><td>Stainless Steel</td><td>E316LSi</td><td>E316L</td><td>ER316L</td><td></td></tr><tr><td>Aluminium</td><td>ER5356</td><td>-</td><td>ER5356</td><td></td></tr></table> |
| POSSIBILITY TO TRY DIFFERENT SETTINGS DURING THE EXERCISE AND THEIR EFFECTS IN THE WELDING BEAD | YES |
| MULTIPASS EXERCISE WITH DIFFERENT WELDING PROCESSES | YES |
| WELDING TECHNIQUE | Push / Drag |
| | Straight, Triangle, Convex, Circle, Zigzag |
| WELDING DIRECTION | ROBOTICS: Right to left/ Left to right |
| OPEN ROOT WELDING | In AWM-006, AWM-008, AWM-011, AWM-012, AWM-013 and AWM-015 |
| TRANSFER MODES | Short circuit, globular, spray, pulsed-arc (available for AWM welding joints) |
| UNDO WELDING | It is possible to undo a pass or weldment repeating only a certain part of the exercise |
| | They can be added/removed |
| POSSIBILITY TO CONNECT THE UNIT TO A ROBOTIC ARM | Robotics license needed |
| ANALYSIS MODULE | YES |
| ADVANCED ANALYSIS MODULE | Included in Advanced licenses. Mechanical Resistance and Cross Section |
| DEFECTS ANALYZED | AWM welding joints) |

| | |
|---|---|
| REPORT FEATURES | CTWD, Travel Speed, Work Angle, Travel Angle, Trajectory, Voltage, Wirefeed Speed, Technical Parameters, Equipment |
| AUGMENTED TRAINING CONTENT | Developed by Seabery: Augmented Training Soldamatic Welding Course; Augmented Training Methodology; Introduction to Robot Welding; MAG position PF / PD / PH |
| INTERNATIONAL PUBLISHERS CONTENT | AWS, CESOL, DVS, Ludo Breemans |
| LMS APPLICATION | Soldamatic e-Learning for Teachers and Students |
| LMS APPLICATION:TEACHER ACCESS | Easy web access and also desktop application |
| LMS APPLICATION:STUDENTS ACCESS | Web access. Visualize contents, progress, take tests, live chat |
| LMS APPLICATION:LIVE CHAT | Available for teachers and students |
| LMS APPLICATION:SHAREVIEW | Teachers can see what the students see in real time in their laptop, either within the same classroom or online |
| | Synchronous and asynchronous options<br><br>centers online, seeing in real time their progress and the welders? point of view while welding |
| STUDENT PERSONALIZED PROFILE | Practices report and progression |
| REPORTS | Exercises, courses, students and diploma reports. Also CSV format available for end-user custom reports |
| CUSTOMIZED PRACTICES | Customized in Soldamatic E-Learning |
| REAL ENVIRONMENT DURING SIMULATION | YES |
| SUBSCRIPTION OPTIONS | Anual or Lifetime |
| UPDATES | <br>the license with no additional cost<br>New system versions included in the anual license with no additional cost |
| REMOTE MAINTENACE | YES |
| SPECIFIC CUSTOMER ADAPTATIONS ON DEMAND | YES |
| REGULATIONS | CE and FCC |
| CERTIFICATIONS | ISO 9001 Quality Management System<br>ISO 14001 Environmental Management System |
| WARRANTY | 1 year by default, up to 2 more years optional |
| **SOLDAMATIC SIMULATOR** | |
| | 442,5x239,5x457,5mm (17.42x94.29x18.72 in.) |
| | 9.46 Kilograms (20.85 lbs.) |
| | 10.5 Kilograms (23.15 lbs.) |
| ACCESORIES | <br>ROBOTICS: Vision Module, Robotics educational torch and Robotics advanced torch<br><br>OPTIONAL: GTAW (TIG) Pedal, Workstand, Augmented Lab |

| | |
|---|---|
| POWER SUPPLY | 100V-240V |
| PROCESSOR | Intel® Core i5 10th gen |
| CHIPSET | Intel® Q470E |
| RAM | 16 GB (2 x 8GB Dual-Channel) DDR4 2400Mhz |
| GRAPHIC CARD | NVIDIA Quadro T1000 |
| HARD DISK | M.2 SSD 128GB |
| AUDIO | |
| OPERATING SYSTEM | Seabery Operating System optimized for Soldamatic 2023 |
| AUTOMATIC SHUTDOWN | |
| DISPLAY SIZE | 9.7 |
| DISPLAY RESOLUTION | HD LCD 1024 x 768 XGA |
| BACK PANEL PORTS | Screen: HDMI/Display Ports USB: 4 x USB 3.2 Gen 1<br>Connection: 2x LAN 2x Antennas Intel® WiFi6 Dual Band<br>Audio: microphone &speakers ports<br>Others: Robotics port |
| FRONT PANEL PORTS | 1 X USB type A, 1 X USB type B |
| AR VISION MODULE RESOLUTION | MIPI LCD 4,7<br>HDMI Display input up to 1280x720 Ultra-low video distortion<br>24-bit True Colour |
| | 640x480 / 800x600 Autofocus |
| UNIT CAN BE USED WITH GLASSES | YES |
| OPERATING TEMPERATURE | 0 - 45° |
| HUMIDITY | 10 - 80% |

| SOLDAMATIC SERVER | |
|---|---|
| INSTALLATION TYPE | ON-PREMISE OR CLOUD |
| | |
| RAM MEMORY | 8GB DDR4 3200MH |
| MOTHERBOARD | Asus H110M-E |
| MICROPROCESSOR | Intel Core i3-12100 |
| POWER SUPPLY | Fuente 500w |
| HARD DISK 1 | SSD 240GB SATA3 |
| | 1TB SATA3 |
| NETWORK CARD | TP-Link TG-3468 |

| WINDOWS | MacOS |
|---|---|
| WINDOWS 10 64 BITS<br>Processor: Intel I5 2.5GHz<br>RAM: 8GB | OS Min: High Sierra 10.13<br>Processor: Intel I5 1.86GHz<br>RAM: 8GB<br>Graphic card: Intel Iris Plus Graphics 640 |

MADE IN SPAIN

SOLDAMATIC®

AUGMENTED TRAINING FOR WELDING

Seabery is the international leader in professional skills training with augmented reality-based simulation training solutions for the 21st century workforce, with partners and presence in more than 80 countries.

Soldamatic is leading welding training with a State-of-the-art, Turn-Key, and Scalable solution to create the next generation

Seabery

AUGMENTED TECHNOLOGY

TESCA™

www.tescaglobal.com

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More info at

**info@tesca.in**

**www.tescaglobal.com**


# SOLDAMATIC®

AUGMENTED TRAINING FOR WELDING

## STATE OF THE ART, TURNKEY, SCALABLE AND EFFECTIVE WELDING TRAINING SOLUTION

POWERED BY AUGMENTED REALITY

Seabery
AUGMENTED TECHNOLOGY

TESCA™
www.tescaglobal.com

## CONTEXT

### GLOBAL SHORTAGE OF WELDERS

**is well documented and increasing**, hence requiring the need to recruit the future generation of welders

### TRADITIONAL WELDING TRAINING

is **inefficient**, risky, costly and **polluting the environment**

### NEW GENERATIONS

**demand** modern and engaging training solutions

## STATE OF THE ART TECHNOLOGY

**Soldamatic** is the world's leading simulated welding training with state-of-the-art, scalable, proven effective and proprietary, augmented reality-based training solution, created by welders for welders with standarized welding curricula and official certification content.


Soldamatic is being used in **80+ COUNTRIES**

Soldamatic is available in **33 LANGUAGES**

**56%** decrease of real time in learning

**68%** decrease of workshop costs

**GREEN TECHNOLOGY**

**84%** less accidents

**34%** more certified welders than traditional methodology

## HyperReal·SIM ®

AN EXCLUSIVE AND PATENTED PLAFTORM PROVIDED ONLY BY SOLDAMATIC THAT OFFERS THE MOST REALISTIC WELDING TRAINING SYSTEM ASIDE FROM REAL LIFE WELDING

- Real welding mask and gloves
- Real torches with haptic technology
- Welding Joints based on industry best practices
- Power source-like controls
- Welding bead quality & Settings
- Remastered HD Welding Sound
- Precisely calibrated

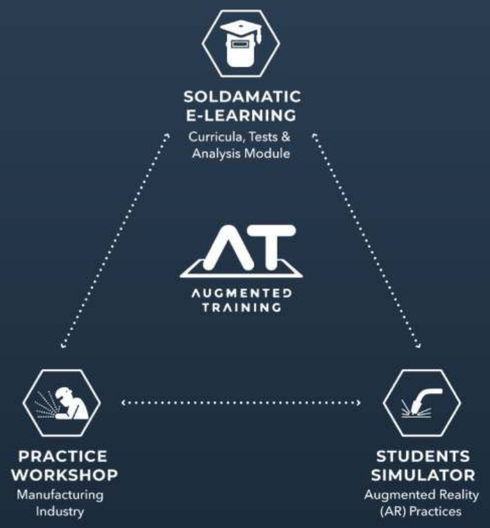
Examples of Soldamatic's real time welding simulation


ALL THE WELDING PARAMETERS, VISUALS AND SOUND HAVE BEEN CALIBRATED AT THE REAL WELDING LAB

# AUGMENTED TRAINING

## FULLY FLEXIBLE TRAINING SOLUTION - TRANSPARENT AND CONSISTENT EXPERIENCE ON-PREMISE, REMOTE AND VIDEO LEARNING

- Transparent and consistent learning experience from classroom or remote locations with video recording
- Real time server connection is not required, all information is updated once the connection is re-established
- Trainers and students can access the virtual classroom, share their screen and chat in real time




## THE AUGMENTED TRAINING METHODOLOGY

- New educational paradigm
- Combine AR simulation with real welding practice
- Allows instructors to manage numerous courses and students

Soldamatic

Real Welding

AUGMENTED LAB

## GLOBAL DEPLOYMENT IN EDUCATION AND INDUSTRY 4.0

**Seabery – Augmented Training** methodology combines the practical part of Augmented Reality with the practical part of reality. This is the concept of Augmented Lab, which allows the students to immerse in simulation environments in which they can practice in the most realistic way without limitations, risk-free, and without additional costs, until they acquire the abilities and skills necessary to move to a real environment.

Augmented Lab Real Workshop

Content by International Publishers

DVS VERBAND

AWS American Welding Society

CESOL

Weld Australia

High quality welding curricula developed by international experts to be performed with Soldamatic IE.

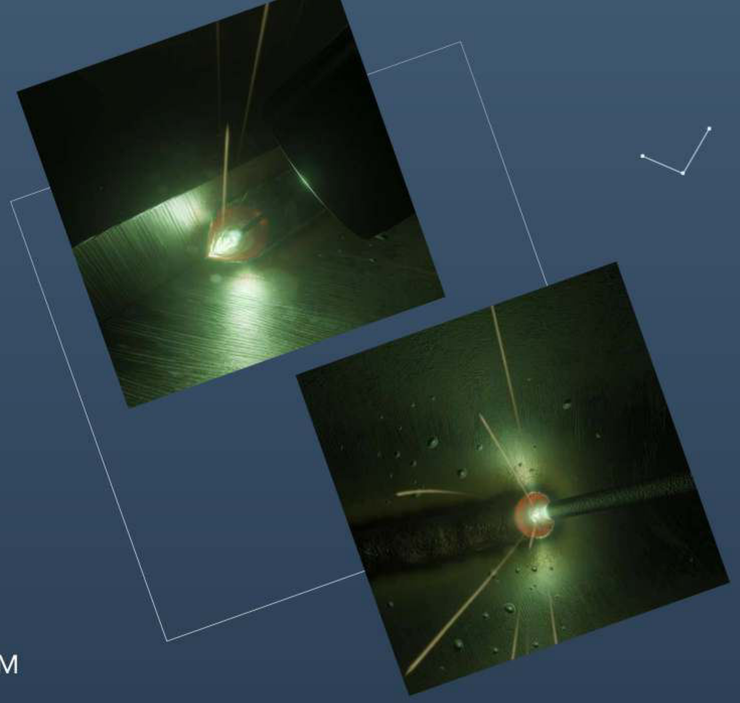
SOLDAMATIC E-LEARNING

## E-LEARNING MANAGEMENT SYSTEM (LMS) APPLICATION SPECIFICALLY DESIGNED TO WORK UNDER THE AUGMENTED TRAINING METHODOLOGY

- Create and manage courses: Theory, practice and tests
- Review exercises and generate statistics and reports
- Share exercises, review the virtual classroom and chat live
- Students have their own access to their courses, contents, practices and reports

TESCA™ www.tescaglobal.com

# WHAT'S NEW



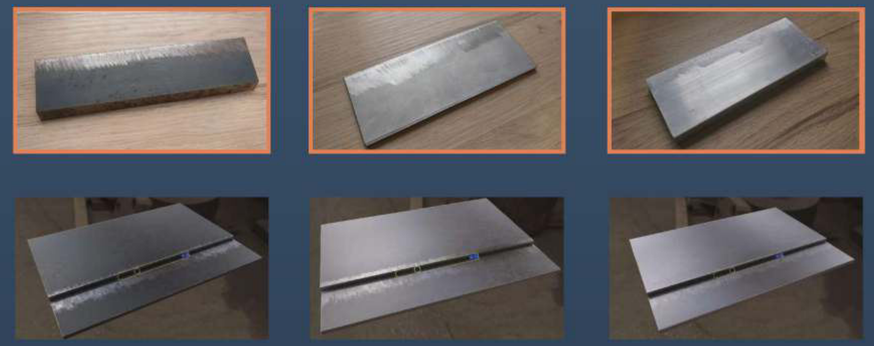
## HIGH REALISM GRAPHIC BASED ON PBR

The graphics are based on photorealism and physical rendering (PBR), which uses realistic shading and lighting models along with measured surface values to accurately represent real-world materials.

## ADVANCED TORCHES

- New Advanced Torches with - New AWM
  - New camera added to the tip of the torch to allow vision of blind spots
  - Accuracy of solution improved due to use of multiple cameras
  - Icons have been added to the simulation to show detailed detection
  - SMAW electrode holder can be rotated to accommodate better to different welding positions
- Focus on TIG/GTAW Advance Torches : Patented New Advanced GTAW rod that simulates dipping technique

## METALS

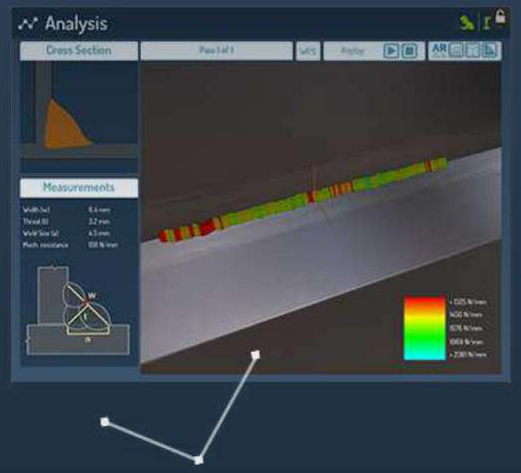



## WELDS


## GTAW IMPROVEMENT

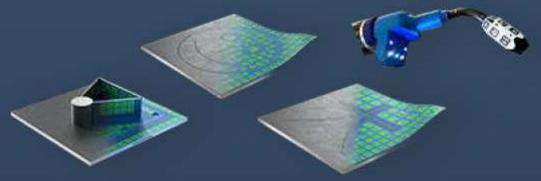
- Improved weld bead geometry and surface detail
- Overhauled weld puddle simulation for a more true-to-life TIG welding experience. See how the filler rod melts into the weld puddle
- Enhanced weld arc graphics representative of the real TIG welding process
- New real time guide to help students learn how to establish weld puddle and use filler rod to lay weld bead of uniform size
- New Advanced GTAW rod that simulates dipping technique

## CROSS SECTION, MECHANICAL RESISTANCE AND BEND TEST


## ROBOTICS

- Educational Partnership with COMAU & KUKA
- FANUC & ABB
- New Robotics Torches Options
  1) Robotic vision module 2) Robotic educational 3) Robotics advanced torch
- New robots connection (Hiwin, Staubli)
- New User interface improvements
- New I/O mapping signals
- New AWMs based on International Welding Association

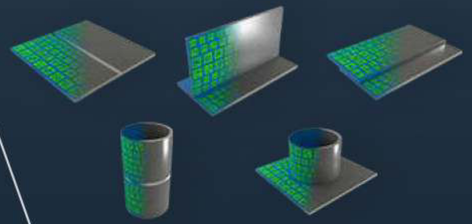


## WELDING JOINTS

**MOST COMPREHENSIVE AND ADVANCED WELDING TRAINING JOINTS TO TRAIN EVERY TYPE AND LEVEL OF WELDER, AND NEARLY EVERY WELDING PROCESS SEQUENCE**

### TRAINING WELDING JOINTS

The most used welding joints for training in the world in accordance with the UNE-EN ISO 9606 norm.

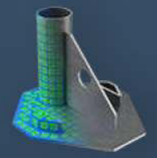


### INDUSTRIAL WELDING MULTIJOINTS

Bring real welding joints to Augmented Reality. Developed to cover specific welding training and performance needs.

# ADVANCED WELDING MULTIJOINTS

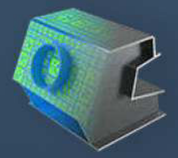
**DESIGNED FOR VERTICAL SECTORS AND ADVANCED WELDERS.**



Foundational Ambidex

*GMAW (MIG/MAG)*
Carbon Steel
Positions: PB & PF

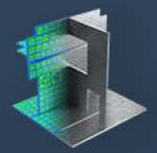
AWM-001



Foundational Complex Sequence

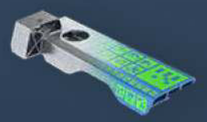
*GMAW (MIG/MAG)*
Carbon Steel
Positions: PB, PF, PD & PH

AWM-002



Heavy Industry Specific Practices

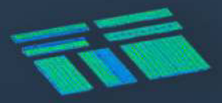
*GMAW (MIG/MAG)*
Carbon Steel
Positions: PB, PF, PD & PA



Automotive Chassis Assembly

*GMAW (MIG/MAG)*
Carbon Steel
Positions: PB

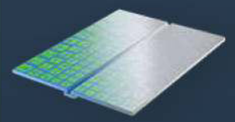
AWM-004



Automotive Thin Plates

*GMAW (MIG/MAG)*
Carbon Steel
Positions: PA, PB, PC, PD, PE, PF

AWM-005



Shipbuildind Open Root

*GMAW (MIG/MAG)*
Carbon Steel
Positions: PF

AWM-006

Shipbuilding Backing Strip

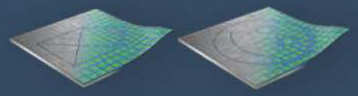
*GMAW (MIG/MAG)*
Carbon Steel
Positions: PF

AWM-007

Pipeline 6' Schedule 80

*GMAW (MIG/MAG) & FCAW*
Carbon Steel
Positions: 6G

AWM-008



Robotic Foundacional "House" / Robotic Foundacional "Face"

*GMAW (MIG/MAG)*
Carbon Steel
Positions: PA

AWM-009 /AWM-10

Pipeline 6GR

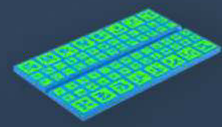
*GMAW (MIG/MAG)*
Carbon Steel
Positions: 6G

AWM-011

Pipeline Monster Coupon

*GMAW (MIG/MAG)*
Carbon Steel
Positions: 6G

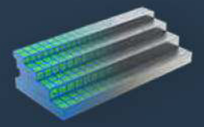
AWM-012



Open root with V-Groove

*GMAW (MIG/MAG)*
Aluminium
Positions: PA

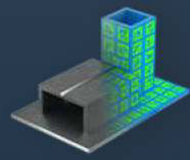
AWM-013



Foundational Multilap

*GMAW (MIG/MAG)*
Carbon Steel
Positions: PA

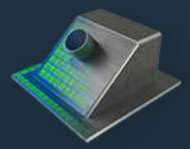
AWM-014



Robotic Foundational Assembly

*GMAW (MIG/MAG)*
Carbon Steel
Positions: PA

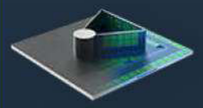
AWM-015



Robotics Foundational Complex Sequence

*GMAW (MIG/MAG)*
Carbon Steel
Positions: PB, PF, HL045

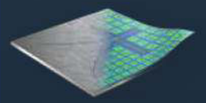
AWM-016



Robotics AWS CRAW

*GMAW (MIG/MAG)*
Carbon Steel
Positions: pb, pf

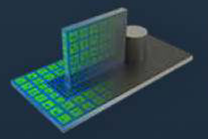
AWM-017



Robotics Foundational "Chinese character - 大"

*GMAW (MIG/MAG)*
Carbon Steel
Positions: PA

AWM-018



Robotics AWS CRAW

*GMAW (MIG/MAG)*
Carbon Steel
Positions: PB, PF

AWM-019

AWS EDU coupons

*GMAW, FCAW, SMAW, GTAW*
Carbon Steel
Positions: PA, PB, PC, PD/PE

AWM-020

TESCA™
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SOLDAMATIC®
ROBOTICS

## SOLDAMATIC ROBOTICS

IS THE MOST REALISTIC, COMPLETE, FLEXIBLE, AND PROGRAMMABLE ROBOTIC WELDING TRAINING SOLUTION.

## SOLDAMATIC ROBOTICS IS CONNECTED TO A ROBOT ARM

Training operators in robot programming for specific welding routines

Modernizes the welding training center by training students in the latest industry requirements

Augmented Reality technology allows the use of the teach pendant of a real robot, thus reducing; consumption and risk

Soldamatic Robotics software works with almost any robot on the market

It incorporates different welding parts based on real market practices

- Tested content with **hundreds of practices available.**
- **Remote access,** from any place and any time.
- It can be **integrated in almost any robot** in the actual market.

| | |
|---|---|
| VISION TECHNOLOGY | AUGMENTED REALITY |
| WELDING PROCESSES SUPPORTED | MANUAL: GMAW (MIG/MAG) &FCAW G/S, SMAW (MMAElectrode), GTAW (TIG)<br><br>ROBOTICS: GMAW (MIG/MAG) &FCAW G/S |
| WELDING POSITIONS | PA, PB, PC, PD, PF/PG, PE, PH/PJ, HL045/JL045 - 1F, 2F, 3F, 4F, 5F, 6F, 1G, 2G, 3G, 4G, 5G, 6G<br>HL045 (6G) available in AWM-002, AWM-008, AWM-011, AWM-012 and AWM-016. 6GR available in AWM-011 (Pipeline 6GR) |
| DEFAULT WELDING JOINTS INCLUDED | |
| ADDITIONAL WELDING JOINTS AVAILABLE | 20 Additional Advanced Welding Multijoints available for manual and robot welding based on Foundational, Automotive, Railway, Shipbuilding and Oil&Gas industries<br><br>Manual: AWM001, AWM002, AWM003, AWM004, AWM005, AWM006, AWM007, AWM008, AWM011, AWM012, AWM013, AWM014, AWM020 available for AWS training content<br><br>Robotics: AWM001, AWM004, AWM009, AWM010, AWM015, AWM016, AWM017, AWM018, AWM019 |
| WELDING JOINTS FOR SPECIFIC INDUSTRIAL NEEDS | With Industrial Welding Services |
| ON DEMAND TAILOR MADE COUPONS | Including the physical workpiece. Industrial Welding Services |
| PIECE CAN BE MANIPULATED SEPARATELY | It can be manipulated at any time during the exercise to perform a visual inspection of the welding bead. The |
| REAL WELDING TORCHES | MANUAL: YES, by Abicor Binzel |
| REAL ADVANCED WELDING TORCHES | Handle ergonomics by Abicor Binzel |
| HAPTICS | Advanced GMAW/FCAW torch includes vibration feature |
| WELDING SOUNDS | Recorded in a real welding lab |
| REAL WELDING MASK | YES |
| VOLTAGE SELECTION | <br><br>ROBOTICS: in job selection |
| | |
| SHIELDING GAS SELECTION | |
| WIRE SPEED SELECTION | <br>during the exercise<br><br>ROBOTICS: in job selection |
| PLUG WELDING | In AWM-005 (Automotive Thin Plates) and Industrial Services |
| COUPON MATERIAL SELECTION | Carbon Steel, Stainless Steel, Aluminium |
| GAS COMPOSITION | <table><tr><th>MATERIAL</th><th>GMAW</th><th>GTAW</th><th>FCAW</th></tr><tr><td>Carbon Steel</td><td>Argon - $Co^2$, $CO^2$</td><td>Helium*</td><td>Argon - $Co^2$, $CO^2$</td></tr><tr><td>Aluminium</td><td>Argon</td><td>Argon</td><td>-</td></tr><tr><td>Stainless Steel</td><td>Argon - $O^2$</td><td>Argon</td><td>-</td></tr></table> |
| COUPON THICKNESS SELECTION | YES: 3mm, 6mm, 10mm<br>1mm, 2mm, 7mm, 8mm, 15mm, 16mm, 20mm, 25mm available with Advanced license |
| POSSIBILITY TO USE OTHER THICKNESSES | On demand with Industrial Welding Services |

| | |
|---|---|
| | MATERIAL / GMAW / SMAW / GTAW<br>Carbon: 0.8mm, 1mm, 1.2 mm / 2.5mm, 3.25mm, 4mm / 2mm, 2.4mm, 3.2 mm<br>Stainless Steel: 0.8mm, 1mm, 1.2 mm / 2.5mm, 3.25mm, 4mm / 2mm, 2.4mm, 3.2 mm<br>Aluminium: 1mm, 1.2mm / - / 2mm, 2.4mm, 3.2 mm |
| | MATERIAL / GMAW / SMAW / GTAW / FCAW<br>Carbon Steel: ER70S-6 / E7018, E6010, E6013 / ER70S-6 / E71T-1, E71T-7<br>Stainless Steel: E316LSi / E316L / ER316L /<br>Aluminium: ER5356 / - / ER5356 / |
| POSSIBILITY TO TRY DIFFERENT SETTINGS DURING THE EXERCISE AND THEIR EFFECTS IN THE WELDING BEAD | YES |
| MULTIPASS EXERCISE WITH DIFFERENT WELDING PROCESSES | YES |
| WELDING TECHNIQUE | Push / Drag |
| | Straight, Triangle, Convex, Circle, Zigzag |
| WELDING DIRECTION | ROBOTICS: Right to left/ Left to right |
| OPEN ROOT WELDING | In AWM-006, AWM-008, AWM-011, AWM-012, AWM-013 and AWM-015 |
| TRANSFER MODES | Short circuit, globular, spray, pulsed-arc (available for AWM welding joints) |
| UNDO WELDING | It is possible to undo a pass or weldment repeating only a certain part of the exercise |
| | They can be added/removed |
| POSSIBILITY TO CONNECT THE UNIT TO A ROBOTIC ARM | Robotics license needed |
| ANALYSIS MODULE | YES |
| ADVANCED ANALYSIS MODULE | Included in Advanced licenses. Mechanical Resistance and Cross Section |
| DEFECTS ANALYZED | AWM welding joints) |

| | |
|---|---|
| REPORT FEATURES | CTWD, Travel Speed, Work Angle, Travel Angle, Trajectory, Voltage, Wirefeed Speed, Technical Parameters, Equipment |
| AUGMENTED TRAINING CONTENT | Developed by Seabery: Augmented Training Soldamatic Welding Course; Augmented Training Methodology; Introduction to Robot Welding; MAG position PF / PD / PH |
| INTERNATIONAL PUBLISHERS CONTENT | AWS, CESOL, DVS, Ludo Breemans |
| LMS APPLICATION | Soldamatic e-Learning for Teachers and Students |
| LMS APPLICATION:TEACHER ACCESS | Easy web access and also desktop application |
| LMS APPLICATION:STUDENTS ACCESS | Web access. Visualize contents, progress, take tests, live chat |
| LMS APPLICATION:LIVE CHAT | Available for teachers and students |
| LMS APPLICATION:SHAREVIEW | Teachers can see what the students see in real time in their laptop, either within the same classroom or online |
| | Synchronous and asynchronous options<br><br>centers online, seeing in real time their progress and the welders? point of view while welding |
| STUDENT PERSONALIZED PROFILE | Practices report and progression |
| REPORTS | Exercises, courses, students and diploma reports. Also CSV format available for end-user custom reports |
| CUSTOMIZED PRACTICES | Customized in Soldamatic E-Learning |
| REAL ENVIRONMENT DURING SIMULATION | YES |
| SUBSCRIPTION OPTIONS | Anual or Lifetime |
| UPDATES | the license with no additional cost<br>New system versions included in the anual license with no additional cost |
| REMOTE MAINTENACE | YES |
| SPECIFIC CUSTOMER ADAPTATIONS ON DEMAND | YES |
| REGULATIONS | CE and FCC |
| CERTIFICATIONS | ISO 9001 Quality Management System<br>ISO 14001 Environmental Management System |
| WARRANTY | 1 year by default, up to 2 more years optional |
| **SOLDAMATIC SIMULATOR** | |
| | 442,5x239,5x457,5mm (17.42x94.29x18.72 in.) |
| | 9.46 Kilograms (20.85 lbs.) |
| | 10.5 Kilograms (23.15 lbs.) |
| ACCESORIES | ROBOTICS: Vision Module, Robotics educational torch and Robotics advanced torch<br><br>OPTIONAL: GTAW (TIG) Pedal, Workstand, Augmented Lab |

| | |
|---|---|
| POWER SUPPLY | 100V-240V |
| PROCESSOR | Intel® Core i5 10th gen |
| CHIPSET | Intel® Q470E |
| RAM | 16 GB (2 x 8GB Dual-Channel) DDR4 2400Mhz |
| GRAPHIC CARD | NVIDIA Quadro T1000 |
| HARD DISK | M.2 SSD 128GB |
| AUDIO | |
| OPERATING SYSTEM | Seabery Operating System optimized for Soldamatic 2023 |
| AUTOMATIC SHUTDOWN | |
| DISPLAY SIZE | 9.7 |
| DISPLAY RESOLUTION | HD LCD 1024 x 768 XGA |
| BACK PANEL PORTS | Screen: HDMI/Display Ports USB: 4 x USB 3.2 Gen 1<br>Connection: 2x LAN 2x Antennas Intel® WiFi6 Dual Band<br>Audio: microphone &speakers ports<br>Others: Robotics port |
| FRONT PANEL PORTS | 1 X USB type A, 1 X USB type B |
| AR VISION MODULE RESOLUTION | MIPI LCD 4,7<br>HDMI Display input up to 1280x720 Ultra-low video distortion<br>24-bit True Colour |
| | 640x480 / 800x600 Autofocus |
| UNIT CAN BE USED WITH GLASSES | YES |
| OPERATING TEMPERATURE | 0 - 45° |
| HUMIDITY | 10 - 80% |

| SOLDAMATIC SERVER | |
|---|---|
| INSTALLATION TYPE | ON-PREMISE OR CLOUD |
| | |
| RAM MEMORY | 8GB DDR4 3200MH |
| MOTHERBOARD | Asus H110M-E |
| MICROPROCESSOR | Intel Core i3-12100 |
| POWER SUPPLY | Fuente 500w |
| HARD DISK 1 | SSD 240GB SATA3 |
| | 1TB SATA3 |
| NETWORK CARD | TP-Link TG-3468 |

| | |
|---|---|
| WINDOWS | MacOS |
| WINDOWS 10 64 BITS<br>Processor: Intel I5 2.5GHz<br>RAM: 8GB | OS Min: High Sierra 10.13<br>Processor: Intel I5 1.86GHz<br>RAM: 8GB<br>Graphic card: Intel Iris Plus Graphics 640 |

MADE IN SPAIN

SOLDAMATIC®

*AUGMENTED TRAINING FOR WELDING*

Seabery is the international leader in professional skills training with augmented reality-based simulation training solutions for the 21st century workforce, with partners and presence in more than 80 countries.

Soldamatic is leading welding training with a State-of-the-art, Turn-Key, and Scalable solution to create the next generation

Seabery AUGMENTED TECHNOLOGY

TESCA™ www.tescaglobal.com

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**www.tescaglobal.com**