**AX-C Open Architecture / PC Based Robot Controller**

### CONTROLLER FEATURES

- **Open Architecture**
  - PC based controller makes easy to adapt to Communicated System (Ethernet I/F included).
- **Easy Teach Operation System**
  - Touch Screen: Operates with easy learning.
  - Visual Display: Operates with easy teaching.
- **Network Capability**
  - Optional Ethernet, Device-net, and Profi-bus network (and more)
  - Optional “RS” Retract Start, Synchro MIG & TIG, FC-MIG, etc.
  - Standard memory capacity is 160,000 teach points. I/O can be controlled by one controller up to 54 axes and 9 mechanisms (up to 6 manipulators).
- **Incredible New Functions for Arc Welding**
  - Edit ladder diagram on the Teach Pendant. Offline editing provides clear viewing.
- **Large Memory Capacity and I/O Control Signals**
  - Up to 54 axes and 9 mechanisms (up to 6 manipulators)
- **Advanced PLC Functions**
  - Increased Safety
  - Realistic 256 Color Screen
- **User Friendly Operation by Visual Display**
  - Icon Displays
  - “Easy Teach” Pendant
  - Arc Welding, Cutting, Spot Welding, Material Handling, Customized Systems (Windows NT embedded)
- **Compatible to Abundant Applications**
  - PC based controller provides more flexibility to adapt to applications.
- **Open Architecture**
  - Further Evolution of our popular 3 position teach enable switch.

### STANDARD SPECIFICATIONS

<table>
<thead>
<tr>
<th>Item</th>
<th>AX-V6</th>
<th>AX-V6L</th>
<th>AX-V16</th>
</tr>
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<tbody>
<tr>
<td><strong>AX-C Controller</strong></td>
<td></td>
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<tr>
<td>Model</td>
<td>AX-V6</td>
<td>AX-V6L</td>
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<tr>
<td>System</td>
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<tr>
<td>Drive System</td>
<td>AC Servo System</td>
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<td>AC Servo System</td>
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<tr>
<td>Number of Axes</td>
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<td><strong>Sequence Command</strong></td>
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<td>Supports 5 languages</td>
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<td><strong>Protection Function</strong></td>
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<td></td>
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<tr>
<td>Mechanical stopper</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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<td>IEC1131-3 Overrun Limit SW</td>
<td>Yes</td>
<td>Yes</td>
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<td><strong>General Physical I/O</strong></td>
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<tr>
<td>Relay Unit</td>
<td>32 Points</td>
<td>64 Points</td>
<td>64 Points</td>
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<td>Input Power</td>
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<td>3 phase, AC200V <strong>+10%,-15%</strong></td>
<td>3 phase, AC200V <strong>+10%,-15%</strong></td>
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<td><strong>Program Capacity</strong></td>
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<td>32K WORD</td>
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<td>32K WORD</td>
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<td><strong>Safety Function</strong></td>
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<td>Auto Mode Interlock</td>
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<td>Yes</td>
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<td>Door Interlock, Teach &amp; Memory</td>
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<td>Yes</td>
<td>Yes</td>
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<td>Parallel, Cylindrical, Symmetric</td>
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<tr>
<td><strong>Controller</strong></td>
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<td>Control System</td>
<td>AC Servo System</td>
<td>AC Servo System</td>
<td>AC Servo System</td>
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<tr>
<td>Drive Capacity</td>
<td>2750W</td>
<td>5200W</td>
<td>5600W</td>
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<td><strong>Position Feedback</strong></td>
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<tr>
<td>Absolute Encoder</td>
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<td><strong>Wrist 5th Axis Bending</strong></td>
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<td>Maximum Angle</td>
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<td>340°/sec</td>
<td>335°/sec</td>
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<td><strong>Wrist 5th Axis Torsion</strong></td>
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<td>Maximum Angle</td>
<td>±360°</td>
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<td>±360°</td>
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<tr>
<td><strong>1st Axis Rotation</strong></td>
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<tr>
<td>Maximum Angle</td>
<td>±170°</td>
<td>±50° **</td>
<td>±170°</td>
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<td><strong>6th Axis Torsion</strong></td>
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<td>Maximum Angle</td>
<td>±360°</td>
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<td>±360°</td>
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<tr>
<td><strong>1st Axis Torsion</strong></td>
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<td></td>
</tr>
<tr>
<td>Maximum Angle</td>
<td>±170°</td>
<td>±50° **</td>
<td>±170°</td>
</tr>
<tr>
<td><strong>Program Memory</strong></td>
<td></td>
<td></td>
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<tr>
<td>Compact Flash Card (OP)</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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<tr>
<td><strong>Shock Sensor, Servo</strong></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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</tr>
</tbody>
</table>

**AX-V6**
- 3 point teach enable switch
- Total Solutions from the Single Source Provider

**AX-V6L**
- 3 point teach enable switch
- Total Solutions from the Single Source Provider

**AX-V16**
- 3 point teach enable switch
- Total Solutions from the Single Source Provider

**MANUFACTURERS**

- **Almega AX SERIES**
  - Total Solutions from the Single Source Provider
  - ARWELDING AND HANDLING ROBOTS

**STANDARD SPECIFICATIONS**

- **Dimensions**
  - Width: 1400 mm, Height: 1100 mm, Depth: 700 mm
- **Mass (weight)**
  - 0°~ 45°C 20 ~ 80%RH
  - 0°~ 45°C 20 ~ 80%RH
  - 0°~ 45°C 20 ~ 80%RH
- **Input / Output**
  - 22(W) x 19.8(D) x 34(H) inch
  - 32 Points
  - Outside Dimensions: 558(W) x 503(D) x 865(H) mm
  - Approx. 176 lbs. (80 kg)
- **Position Feedback**
  - Absolute Encoder
- **Drive Capacity**
  - 2750W
  - 5200W
  - 5600W
- **Wrist 5th Axis Bending**
  - 340°/sec
  - 340°/sec
  - 335°/sec
- **Wrist 5th Axis Torsion**
  - ±360°
  - ±360°
  - ±360°
- **1st Axis Rotation**
  - ±170°
  - ±50° **
  - ±170°
  - ±50° **
- **6th Axis Torsion**
  - ±360°
  - ±360°
  - ±360°
- **1st Axis Torsion**
  - ±170°
  - ±50° **
  - ±170°
  - ±50° **
- **Program Memory**
  - Compact Flash Card (OP)
  - Arc Welding, Spot Welding, Material Handling, Customized Systems (Windows NT embedded)

**NOTE :** The positional Repeatability shows the measured value in a status where automatic operation is repeated and the action conditions of the manipulator are stabilized.

**Installation method**
- Floor, Hanging, Upside down Floor, Hanging, Upside down Floor, Hanging, Upside down Floor, Hanging, Upside down Floor
- Mass (weight)
  - 0°~ 45°C 20 ~ 80%RH
  - 0°~ 45°C 20 ~ 80%RH
  - 0°~ 45°C 20 ~ 80%RH

**ALMEGA AX SERIES**
- Total Solutions from the Single Source Provider

**AX-V6**
- For welding large workpieces
- Extended reach up to 8000mm

**AX-V6L**
- For welding large workpieces
- Extended reach up to 8000mm

**AX-V16**
- For welding large workpieces
- Extended reach up to 8000mm

**MANIPULATORS**

- **High-Speed – Smooth Movement** robots
- **Optional Spellout Motor** – optional units to use same control system with advanced assistance models.
- **Independently articulated arm** – side to side independent articulation for a full range of motion.
- **Facilities available in a robot** – fully automatic cleaning within other cleaning at maximum speed.

**OUR BEST SELLING ROBOTS**

- AX-V6
- AX-V6L
- AX-V16

**Almega AX SERIES**
- Total Solutions from the Single Source Provider

**AX-V6**
- Arc Welding
- Multi-Purpose

**AX-V6L**
- Arc Welding
- Handling

**AX-V16**
- Arc Welding
- Handling
AX-C Open Architecture / PC Based Robot Controller

**AX-C Controller Features**

- **Open Architecture**: Provides modular expandability to add options to suit your application needs.
- **Multilingual Feature**: Select 2 languages from 10 available languages.
- **Network Capability**: Optional Ethernet, Device-net, and Profi-bus network and more.
- **Large Memory Capacity and I/O Control Signals**: Optional "RS" Retract Start, Synchro MIG & TIG, control signal can be optionally enhanced up to 64 IN/OUT.
- **Enhanced System Configuration Ability**: Standard memory capacity is 160,000 teach points. I/O can be controlled by one controller up to 54 axes and 9 mechanisms (up to 6 manipulators) through Commercial Programming tool.
- **User Friendly Operation by Visual Display**: Friendly assistance and guidance by built-in tutorial functions.
- **Compatible to Abundant Applications**: Arc Welding, Cutting, Spot Welding, Material Handling, Customized Systems (Windows NT embedded).

**Controllable Applications**

- **On Screen Service System**
  - **Multi-Screen Function**
  - **Instruction Manual and Data**
  - **Screen Display**
  - **Optional Touch**

**AX-C Controller Specifications**

<table>
<thead>
<tr>
<th>Feature</th>
<th>AX-V6</th>
<th>AX-V6L</th>
<th>AX-V16</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dimensions</strong></td>
<td>22(W) x 19.8(D) x 34(H) inch</td>
<td>22(W) x 19.8(D) x 34(H) inch</td>
<td>22(W) x 19.8(D) x 34(H) inch</td>
</tr>
<tr>
<td><strong>Mass (weight)</strong></td>
<td>341 lb (155 kg)</td>
<td>550 lb (250 kg)</td>
<td>550 lb (250 kg)</td>
</tr>
<tr>
<td><strong>Maximum Speed</strong></td>
<td>340°/sec</td>
<td>350°/sec</td>
<td>350°/sec</td>
</tr>
<tr>
<td><strong>Positional Repeatability</strong></td>
<td>2750W</td>
<td>5200W</td>
<td>5600W</td>
</tr>
<tr>
<td><strong>AC Servo Motor</strong></td>
<td>AC Servo Motor</td>
<td>AC Servo Motor</td>
<td>AC Servo Motor</td>
</tr>
<tr>
<td><strong>Program Capacity</strong></td>
<td>32K WORD</td>
<td>32K WORD</td>
<td>32K WORD</td>
</tr>
<tr>
<td><strong>Position feedback</strong></td>
<td>2750W</td>
<td>5200W</td>
<td>5600W</td>
</tr>
<tr>
<td><strong>AC Servo Motor</strong></td>
<td>AC Servo System</td>
<td>AC Servo System</td>
<td>AC Servo System</td>
</tr>
<tr>
<td><strong>External Memory</strong></td>
<td>Compact Flash Card (OP)</td>
<td>Compact Flash Card (OP)</td>
<td>Compact Flash Card (OP)</td>
</tr>
<tr>
<td><strong>Programmable Logic Control</strong></td>
<td>Safety Function</td>
<td>Auto Mode</td>
<td>Interlock</td>
</tr>
<tr>
<td><strong>Teaching System</strong></td>
<td>Teaching System</td>
<td>Teaching System</td>
<td>Teaching System</td>
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<tr>
<td><strong>Teaching Playback</strong></td>
<td>Teaching Playback</td>
<td>Teaching Playback</td>
<td>Teaching Playback</td>
</tr>
<tr>
<td><strong>Edit Function</strong></td>
<td>Copy, Add, Cut &amp; Paste</td>
<td>Copy, Add, Cut &amp; Paste</td>
<td>Copy, Add, Cut &amp; Paste</td>
</tr>
<tr>
<td><strong>Multi-Tasking</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Synchro-Motion</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td><strong>Software PLC (Standard)</strong></td>
<td></td>
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</tbody>
</table>

**STANDARD SPECIFICATIONS**

- **Independently articulated arm**
- **Faster, yet smoother motion**
- **High Speed – Smooth Movement**: Shortens production time, reduced cycle time by new servo control system with advanced acceleration method.
- **Virtually eliminates vibration even when stopping at maximum speed**

**AXMEGA AX SERIES**

**Total Solutions from the Single Source Provider**

**Remarkable Enhancements in Motion Performance**

**High-Speed – Smooth Movement**

- **Robot: AX-V6L**: Speeds up to 165°/sec (150°/sec**), extended reach up to 78.98" (2006mm).
- **Robot: AX-V16**: Speeds up to 165°/sec (150°/sec**), extended reach up to 13.78" (350mm), 16kg handling of workpieces.

**Multi-Phase Handling Robot**

- Includes a multi-wristed robot with 5 DOF.

**Long Arm Arc Welding Robot**

- End-of-Tool center to 3072" (7800mm) travel distance in 10 axis configurations.

**Corresponding Robots**

- **Improves Job efficiency by time and torch attitude devices to improve cycle time**
- **Synchronously controls manipulator and peripheral devices**
- **3rd axis Upper Arm**: 340°/sec, 175°/sec, 180°/sec
- **Wrist 5th axis Bending**: 340°/sec, -50°~ +230°
- **Wrist 3rd axis Swivel (Up)**: 340°/sec, -170°~ +205°
- **Wrist 1st axis Swivel (Lower)**: 150°/sec, 165°/sec, 165°/sec (150°/sec**)
- **3rd axis Swivel (Up)**: 170°/sec, 175°/sec, 175°/sec
- **3rd axis Swivel (Lower)**: -170°~ +190°, -170°~ +205°, -170°~ +205°
- **Speed & Acceleration**: Improved acceleration method for faster and smoother operation.

**For more information on Almega products from DAIHEN INC. visit our web site at daihen-usa.com, or send us E-mail at sales@daihen-usa.com**
AX-C Open Architecture / PC Based Robot Controller

STANDARD SPECIFICATIONS

<table>
<thead>
<tr>
<th>Feature</th>
<th>AX-C</th>
<th>AX-V6</th>
<th>AX-V6L</th>
<th>AX-V16</th>
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<tbody>
<tr>
<td>Model</td>
<td>AX-C</td>
<td>AX-V6</td>
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<td>14&quot; LCD Color Screen</td>
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<td>RS-232</td>
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<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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</tbody>
</table>

**AX-C Controller**

- **Software PLC (Chamfer-6)**: Supports both 2D and 3D chamfering applications
- **Software Motion Control**: Simplifies motion control for 2D and 3D tasks
- **Software Teach Pendant**: Provides an intuitive interface for teaching new programs
- **Software Libraries**: Offers pre-built libraries for common applications
- **Software Programming**: Supports both ladder diagram and instruction block (IL) programming

**AX-V6L Robot**

- **High Performance Servo System**: Reduces cycle time and improves precision
- **Advanced Motion Control**: Enables smooth and precise movement
- **Sealing System**: Ensures durability and reliability in demanding environments
- **CSS Technology**: Enhances system stability and performance

**MANIPULATORS**

- **High-Speed, Smooth Movement**: Achieves high-speed movement with smooth acceleration and deceleration
- **Independently Articulated Arms**: Allows for full range of motion in each axis
- **Optimized Design**: Ensures durability and longevity in various applications

**STANDARD SPECIFICATIONS**

- **Dimensions**: Width x Depth x Height
  - AX-C: 650 x 650 x 850 mm
  - AX-V6: 700 x 700 x 850 mm
  - AX-V6L: 700 x 700 x 850 mm
  - AX-V16: 700 x 700 x 850 mm
- **Weight**: 150 kg
- **Power Supply**: 220 V AC, 50/60 Hz

**APPLICATIONS**

- **Arc Welding**: Ideal for precision welding tasks
- **Spot Welding**: Suitable for high-speed jointing
- **Handling**: Versatile for material handling and assembly tasks

**Maintenance & Software Features**

- **On-Screen Service Guides**: Assists in quick, easy teaching
- **Icon Displays**: Enhances user experience and accessibility
- **Multi-Tasking**: Performs multiple programs simultaneously
- **Efficiency Desktop PC**: Provides greater efficiency for applications

**Contact Information**

- **DAIHEN INC.**
  - Charlotte, NC 28269
  - Ph: 937-667-0800
  - Fax: 937-667-0885
  - Tipp City, OH 45371-2471
  - 1400 Blauser Drive
  - DAHM INC.
  - Move. Text

For more information or to order, please visit our website at daihen-usa.com or contact sales@daihen-usa.com.
Advancing the Science of GMAW Applications

- High Quality Aluminum MIG Welding
  - Optimal Features
    - Retract Start Function (RS) for excellent arc start for high-quality welds
    - Synchro MIG for high deposition rate
    - Tandem Pulsed MAG Welding for improved CO2 profile
  - Improved Synchronizing control for dual feed system
  - AC Servo Wire Feeder for ultra-precision and high deposition rate

- Ultra Precision TIG Welding
  - Optional AC Servo Wire Feed System
  - Virtually spatter free and high-speed welding
  - High deposition rate
  - Two independent electrodes
  - High-speed tandem pulsed MAG welding

High Quality Plasma Cutting

- Synchro TIG Welding Function
  - Optimal features with synchronized welding current and pulsed wire feed

Significant Developments in GTAW Applications

- Standard Features
  - Very high quality arc starts
  - Excellent synchronization of welding current and pulsed wire feed

- Optional Features
  - RS Arc Start Function (Retract Start)
  - Improved CO2 profile at the arc start point
  - 100% CO2 when using mixed shielding gases or Arc voltage tolerance and arc stability are drastically improved
  - Available for high-speed aluminum applications
  - Very fast travel speeds are easily attainable

- Advancing the Science of GMAW Applications
  - Significant Developments in GTAW Applications
  - Flexibility in Plasma Cutting Applications

TYPICAL SYSTEM CONFIGURATION

- DAIHEN Inc.
  - Water cooled electrodes and high durability cutting tips
  - Coaxial Power Cable
  - Conduit
  - Operation Box
  - Teach Pendant
  - Welding Torch
  - Plasma cutting torch for the D-12000 is water cooled

Ask about these products and other positioner.
**High Quality Aluminum MIG Welding**

- Optional AC Servo Wire Feed System
- Improved CO2
  - Improves instantaneous arc start ratio, and bead inpenetration
  - By using an AC servo pull type wire feeder / torch, performance is improved when using mixed shielding gases or Arc voltage tolerance and arc stability are drastically increased for thin and thick plate applications

**Ultra High Speed Welding**

- Improved arc stability and reduced spatter
- Reduced welding time
- Superior weld quality

**Improved CO2**

- By using an AC servo pull type wire feeder / torch, performance is improved when using mixed shielding gases or Arc voltage tolerance and arc stability are drastically increased for thin and thick plate applications

**High Speed Tandem Pulsed MAG Welding**

- Reduced welding time
- Superior weld quality
- Improved arc stability and reduced spatter

**Fillet Weld**


**High Quality Plasma Cutting**

- Cutting up to 2 inch thick material
- High quality cuts up to 2 inch thick material

**GTAW Applications**

- Flexibility in Plasma Cutting Applications
- Significant Developments in GTAW Applications
- Flexibility in Arc Welding Applications

**TIG Welding**

- Improved arc start ratio
- Reduced spatter
- Faster welding speeds

**MIG Welding**

- Reduced welding time
- Superior weld quality
- Improved arc stability and reduced spatter

**Pulsed Welding**

- Reduced welding time
- Superior weld quality
- Improved arc stability and reduced spatter

**Current Waveform Function**

- Sine wave, square wave, or combinations of the two can be selected.

**TYPICAL SYSTEM CONFIGURATION**

1. Manipulator
2. Teach Pendant
3. Wire Feeder
4. Wire Feeder
5. Water Cooled Electrode
6. High Durability Cutting Tips
7. Built-In Torch Guard Function
8. High Quality Duty Cycle
9. High Speed and Heavy Duty Capacity
10. High Speed and Heavy Duty Capacity
Advancing the Science of GMAW Applications

Tandem MIG

• Two Independent Electrodes
•bö profile at the arc start point
• Improves instantaneous arc start ratio, and bead wire feedability is improved during high speed welding

100% CO2

Arc voltage tolerance and arc stability are drastically achievable for thin and thick plate applications

Very fast travel speeds are easily attainable

HIGH QUALITY MAG / CO2 WELDING

Reduced Spatter

High Deposition Speed Lap Weld

Ultra High Speed Fillet Weld

Comparison (g/min)

High Speed Welding

High Quality – Previous model

3 mm plate welded to 4 mm plate.
Advancing the Science of GMAW Applications

**High Quality Mag / CO2 Welding**
- **Ultra Precision TIG Welding**
- Optional AC Servo Wire Feed System
- Tandem MIG
- High Deposition Rate
- Two Independent Electrodes
- Improved CO2 profile at the arc start point
  - By using an AC servo pull type wire feeder / torch,
  - 100% CO2ly improved when using mixed shielding gases or
  - Arc voltage tolerance and arc stability are drastically achievable for thin and thick plate applications
  - Very fast travel speeds are easily attainable

**Tandem Pulsed Mag Welding**
- High Speed Tapered MAG-Welding
- MAG Welding is very dynamic and extreme welding
- Auto match of Wire Feed speed and gap
- Tapered MAG Welding
- Bridge Welding
- High speed MAG Welding
- High Current MAG Welding
- MAG Welding for Dissimilar Thicknesses
- Spatter Generation
- Conventional Wire Feeder
- Servo Pull Wire Feeder / Torch

**High Quality Aluminum MAG Welding**
- Optional Features
  - Remote Spot Positioner (RS) Control
  - Remote Tip / Shield Gas Flow Finder
  - Synchro MAG and TIG / high Current MAG Welding Functions
  - Wire feed speed synchronize by welding current
  - Jogging / Spot MAG Welder / Torch

**Syncro MIG and FC (Feed Control) MIG Functions**
- Retract Start Function – RS Control
- Spatter Ratio (g/min)
- Conventional
- AC Servo Wire Feeder / Torch
- Retract Start provides excellent arc start
- Present model
- 3 mm plate welded to 4 mm plate.
- Excellent for welding dissimilar thicknesses.

**Synchro Pulse: 2 Hz**
- Pulsed welding current and pulsated wire feed is synchronized with weaving frequency.
- Pulsed welding current and pulsated wire feed is synchronized with weaving frequency.
- Total control of process with incredible bead appearance.

**Pulse Waveforms are Programmed with the Robot Teach Pendant**
- With the teach pendant, pulse waveform is programmed.
- Pulse waveform is programmed.
- Synchronizing wire feed with pulse waveform.
- Pulsed welding current and pulsated wire feed is synchronized with weaving frequency.
- Total control of process with incredible bead appearance.

**Arc Start Ratio (%)**
- 40
- 0
- 1
- 2
- 3
- 4
- 5
- 6

**Conventional Wire Feeder**
- Wire feeding is always stable and unaffected by robot movement
- Synchronizing wire feed with pulse waveform.
- Pulsed welding current and pulsated wire feed is synchronized with weaving frequency.
- Total control of process with incredible bead appearance.

**Built-In Torch Guard Function**
- Alarm indicates replacement time of tip and electrode
- Water cooled electrodes and high durability cutting tips
- Reduces down time for changing consumables

**Typical System Configuration**
- 1. Manipulator
- 2. Teach Pendant
- 3. Controller
- 4. Wire Feeder
- 5. Welding Torch
- 6. Wire Reel Stand
- 7. Shielding Gas
- 8. Conduit
- 9. Operation Box
- 10. Shielding Flame Scissors

**High Speed and Heavy Duty Capacity**
- High speed gas cutting for machining general material at convenient
- High quality cut, up to 2 thick steel material

**Typical Cutting Conditions**
- Use a current of over 100A for cutting 1/8-inch thick material

**Flexible in Plasma Cutting Applications**
- Fast response to changes of material
- Ideal for aluminum applications requiring TIG-like bead appearance.
- Ideal for aluminum applications requiring TIG-like bead appearance.
- Very fast travel speeds are easily attainable
- Synchronizing wire feed with pulse waveform.
- Pulsed welding current and pulsated wire feed is synchronized with weaving frequency.
- Total control of process with incredible bead appearance.

**TYPICAL SYSTEM CONFIGURATION**
- 1. Manipulator
- 2. Shielding Torch
- 3. Controller
- 4. Wire Feeder
- 5. Teach Pendant
- 6. Conical Power Cable
- 7. Operation Box
- 8. Shielding Flame Scissors

**CLEAN CUT RANGE**

<table>
<thead>
<tr>
<th>Thickness (in.)</th>
<th>1/2</th>
<th>3/4</th>
<th>1</th>
<th>1-1/2</th>
<th>2</th>
<th>2-1/2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stainless Steel</td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

**Current Waveform Function**
- For more efficient cutting, in combinations of the two can be selected for butt joint welding of the same material range.
- AC Hard Arc Mode
- AC Standard Mode
- AC Hard Arc Mode
- AC Standard Mode
- AC Hard Arc Mode
- AC Standard Mode
- AC Hard Arc Mode
**AX-C Open Architecture / PC Based Robot Controller**

### STANDARD SPECIFICATIONS

<table>
<thead>
<tr>
<th>Feature</th>
<th>AX-V6</th>
<th>AX-V6L</th>
<th>AX-V16</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fine Workspace and Precision</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Maximum Payload</strong></td>
<td>5.51”</td>
<td>5.51”</td>
<td>5.51”</td>
</tr>
<tr>
<td><strong>Maximum Speed</strong></td>
<td>341 lb (155 kg)</td>
<td>550 lb (250 kg)</td>
<td>550 lb (250 kg)</td>
</tr>
<tr>
<td><strong>Operating Range</strong></td>
<td>170°/sec</td>
<td>175°/sec</td>
<td>175°/sec</td>
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<tr>
<td><strong>Positional Repeatability</strong></td>
<td>15.94”</td>
<td>15.94”</td>
<td>15.94”</td>
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<tr>
<td><strong>Number of Axes</strong></td>
<td>6</td>
<td>6</td>
<td>6</td>
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<tr>
<td><strong>Memory</strong></td>
<td>160,000</td>
<td>160,000</td>
<td>160,000</td>
</tr>
<tr>
<td><strong>Sequence Command</strong></td>
<td>Supports 5 languages</td>
<td>Supports 5 languages</td>
<td>Supports 5 languages</td>
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<tr>
<td><strong>Control</strong></td>
<td>IEC 1131-3</td>
<td>IEC 1131-3</td>
<td>IEC 1131-3</td>
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<tr>
<td><strong>Signal</strong></td>
<td>Chord, Servo, Safety</td>
<td>Chord, Servo, Safety</td>
<td>Chord, Servo, Safety</td>
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<tr>
<td><strong>External Output</strong></td>
<td>48 points</td>
<td>48 points</td>
<td>48 points</td>
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<tr>
<td><strong>Optional Output</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Input Power</strong></td>
<td>3 phase, AC200V***+10%,-15%</td>
<td>3 phase, AC200V***+10%,-15%</td>
<td>3 phase, AC200V***+10%,-15%</td>
</tr>
</tbody>
</table>

**Remarkable Enhancements in Motion Performance**

- Independently articulated arm
- High speed – Smooth Movement
- Shortens production time
- Virtually eliminates vibration
- Full range of motion
- Reduced cycle time by new servo control system with advanced acceleration method

**MANIPULATORS**

- **High-Speed – Smooth Movement**: Streamlined motion for welding and handling applications
- **Independently Articulated Arm**: Optimized for welding and handling tasks
- **Increased Safety**: Improved safety features for better operator protection

**AX-V6 ROBOTS**

- **Total Solutions from the Single Source Provider**
- **Remarkable Enhancements**: Enhanced performance for various applications

**AX SERIES ROBOTS**

- **Improved Performance**: Enhanced features for better efficiency
- **Multi-Purpose Handling**: Versatile systems for different industries

**AX-C Controller**

- **On-Screen Service Guides**: Clear viewing for quick teaching
- **“Easy Teach” Pendant**: Assists in teaching
- **Software PLC**: Standard for greater efficiency
- **Multi-Screen Function**: Improved visualization

**AX SERIES ROBOTS**

- **Total Solutions from the Single Source Provider**: Comprehensive solutions for various applications

For more information, visit www.daihen-usa.com or contact us at sales@daihen-usa.com