



# STANLEY ASSEMBLY TECHNOLOGIES QBE CONTROLLERS

# QBE Controllers

**THE QBE CONTROLLER PLATFORM** delivers industry-leading advanced process control, system configuration flexibility, ease of set-up options both on-screen and with embedded software utilities, and exceedingly high performance. From an error proofing system to assembly line control system, STANLEY QBE Controllers are the standard for all others in precision threaded fastening control.

## THE QBE CONTROLLER PLATFORM FEATURES:

- **Low Cost of Ownership:** Single control platform for the complete range of STANLEY Assembly Technologies Tools to 2000 Nm, handheld and fixtured.
- **Durability:** All controllers have an Ingress Protection rating 54 (IP 54)
- **Flexibility:** Connectivity options include 24V I/O, USB, Ethernet, Serial and Fieldbus
- **Ease of Use:** QBE Expert, Specialist, Advanced and Standard controllers can be setup from the front panel or from a computer's web browser using the Alpha Toolbox Ethernet connection
- **Intelligent Connectivity:** Alpha Toolbox, included in every QBE Controller, is used to program strategies, collect fastening cycle and trace data, and perform online diagnostics of the tool and controller (see page 84)
- **Intuitive Design:** The Wizard provides an easy method to control programming directly from the keypad on the controller or with Alpha Toolbox software
- **Inexpensive Upgrade Path:** The QBE Controller is designed to power the complete STANLEY Assembly Technologies tool product line:
  - » EB-Series Corded Tools
  - » EB-Series Corded Fixtured Tools
  - » B-Series Cordless Tools
  - » E-Series Corded and Fixtured Tools
  - » Previous generations (EA-Series and EC-Series Tools)

The QBE Controller platform includes options that are based on our customer's requirements. Please choose from our range of controller options:

- **QBE Expert Controller** is the premier Single Tool Controller and Lead Controller in a Multi-Spindle System
- **QBE Specialist Controller** is a Multi-Spindle and Cordless Tool Controller
- **QBE Advanced Controller** is a Single Spindle Controller or a Lead Controller for a Dual-Spindle System
- **QBE Standard Plus Controller** is a Single Spindle Controller without Ethernet or Fieldbus Options
- **QBE Node Controller** is a Single Spindle Controller used for trailing spindles in Multiple Tool (Fixtured) Applications or in Multi-Tool Systems
- **QBE Network Node Controller** is a Cordless Tool Controller for up to 6 B-Series Cordless Tools

## SPECIFICATIONS FOR QBE CONTROLLERS:

- **Dimensions (W x H x D):** 15 cm x 36 cm x 26 cm (6 in x 14 in x 10 in)
- **Weight:** 7.6 kg (16.7 lb)
- **I/O Power Supply:** 24V DC, 1A Internal, Ready for External Power Supply
- **AC Power Source:** Auto Detect 100 – 126.5V or 200 – 253V AC, 50 or 60 Hz
- **Humidity:** 0 to 95% non-condensing
- **Temperature:** 32 – 122 °F (0 – 50 °C)



# How to Order

**STEP 1:** Refer to the matrix on the specific controller page to identify the Model Number and Options based requirements.

**STEP 2:** Select a power cord by the supply voltage and country, if required. Or select No Power Cord.

| Power Cord Description        | Part No.  |
|-------------------------------|-----------|
| Argentina Power Cord 230V, 2m | 20C105202 |
| Australia Power Cord 230V, 2m | 20C102103 |
| Brazil Power Cord 230V, 2m    | 20C102104 |
| China Power Cord 230V, 2m     | 21C103905 |
| Euro Power Cord 230V, 2m      | 20C102102 |
| Japan Power Cord 125V, 2m     | 20C102101 |
| Japan Power Cord 250V, 2m     | 20C102105 |
| US Power Cord 115V, 2m        | 20C102002 |
| US Power Cord 115V, 7m        | 20C102007 |
| US Power Cord 230V, 2m        | 21C103902 |

| Power Cord Description            | Part No.  |
|-----------------------------------|-----------|
| UK Power Cord 230V, 2m            | 20C102202 |
| Power Distribution Panel Cord, 1m | 20C203401 |
| Power Distribution Panel Cord, 2m | 20C203402 |
| Twist Lock Power Cord 115V, 2m    | 20C103802 |
| Twist Lock Power Cord 115V, 4m    | 20C103804 |
| Twist Lock Power Cord 115V, 7m    | 20C103807 |
| Twist Lock Power Cord 230V, 2m    | 20C106302 |
| Twist Lock Power Cord 230V, 7m    | 20C106307 |
| GFI 30ma 250V Assembly for Europe | 21E102300 |
| India Power Cord 250V, 2m         | 20C102106 |

**STEP 3:** A plinth is selected as standard. If no plinth is required, select No Plinth.

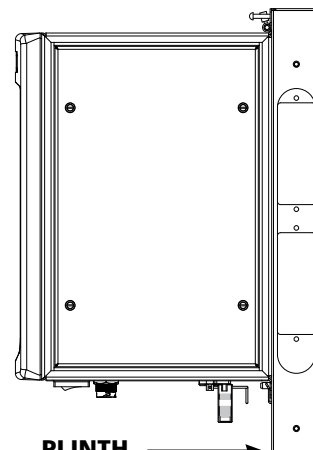
**STEP 4:** Select I/O Cable options, if required.

| I/O Mating Connector Description                                                                 | Standard/Optional | Part No.  |
|--------------------------------------------------------------------------------------------------|-------------------|-----------|
| 24V I/O Mating Connector, Phoenix for Basic Alpha                                                | Standard          | 21C104806 |
| 24V I/O Mating Connector, Solder Cup [Standard, Advanced, Expert, Network Node]                  | Standard          | 21C104800 |
| 24V I/O Mating Connector, Crimp Pins [Standard, Advanced, Expert, Network Node]                  | Optional          | 21C104802 |
| 24V I/O Mating Connector, Crimp Pins, with Crimp Tool [Standard, Advanced, Expert, Network Node] | Optional          | 21C104804 |
| 5M, 24V I/O Ext. Cable [I/O Connector to Pigtail]                                                | Optional          | 21C202005 |
| 20M, 24V I/O Ext. Cable [I/O Connector to Pigtail]                                               | Optional          | 21C202010 |
| 10M, 24V I/O Ext. Cable [I/O Connector to Pigtail]                                               | Optional          | 21C202020 |
| I/O Bracket Assembly, 19-Pin to Phoenix                                                          | Optional          | 21E102202 |

**STEP 5:** Select a floor stand, if required.

| Floor Stand Description           | No. of Spindles | Dimensions           | Part No.            |
|-----------------------------------|-----------------|----------------------|---------------------|
| Floor Stand Kit                   | 1 to 6          | 198H x 61W x 56D cm  | 21F100404           |
| Assembled System with Floor Stand | 1 to 6          | 78H x 24W x 22D in   | Add /F to Model No. |
| Floor Stand Kit                   | 7 to 12         | 198H x 61W x 88D cm  | 21F100402           |
| Assembled System with Floor Stand | 7 to 12         | 78H x 24W x 34.5D in | Add /F to Model No. |

**Please Note:** If UL or CSA certification are required, please contact the STANLEY team to have this quoted to you.

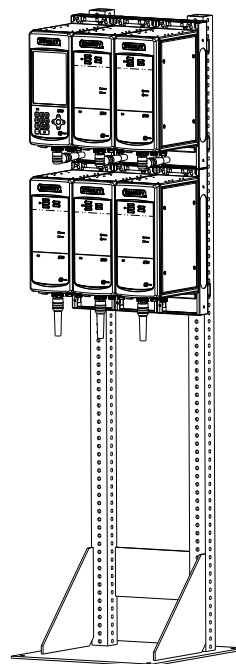


**PLINTH**

- Quick-change mounting by hand
- Cable management and routing

## FLOOR STAND

- Top row of controllers require a 90° Extension.
- See pages 52-55 for Cable Options



# QBE Expert Controller



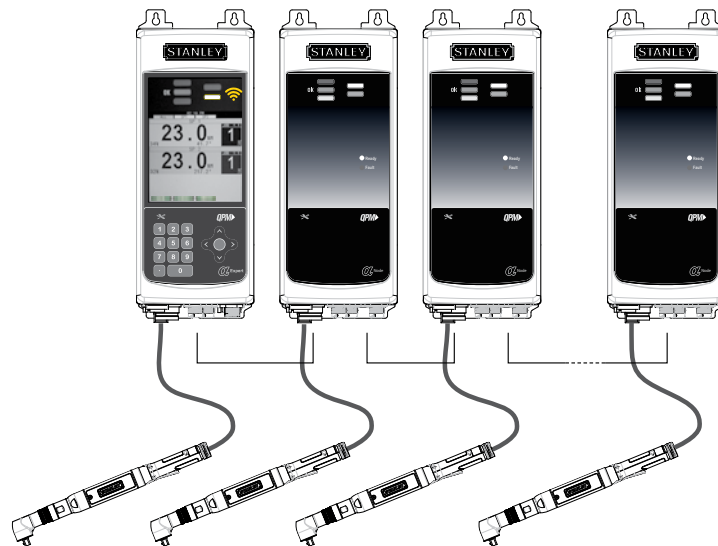
## QBE Expert Controller is the premier Multi-Spindle Controller

### BENEFITS:

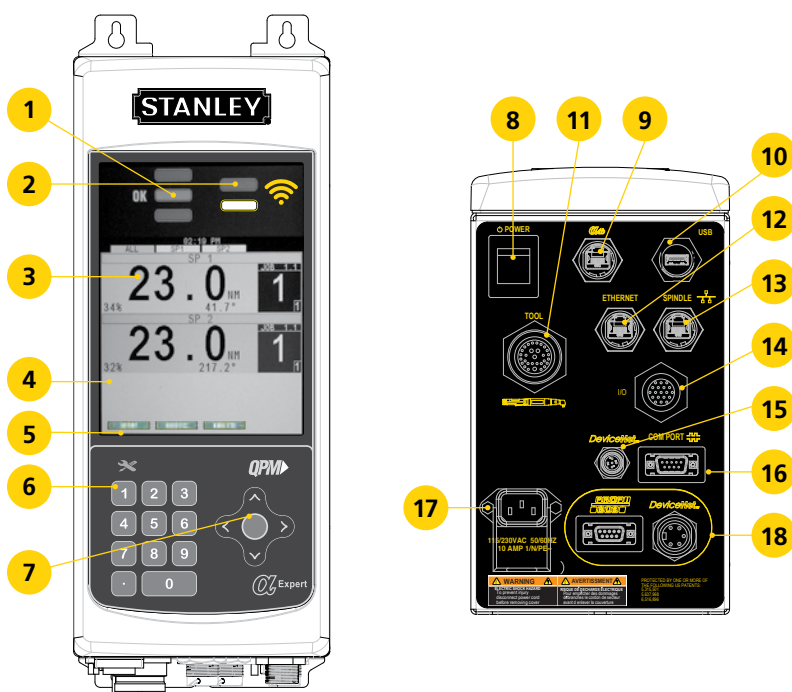
- Large Touchscreen, Color Display and Keypad
- Quick Set-up from the Controller Keypad, or with a PC, tablet, or smart phone
- Alpha Toolbox, STANLEY's web-based software for programming, collecting data and performing diagnostics
- Less training, less inventory and spare parts: STANLEY offers the same Controller platform for Cordless B-Series Battery Tools as well as Corded Handheld and Fixtured EB-Series, E-Series and EA-Series Tools

### TECHNICAL FEATURES:

- One Network Connection for Multiple Spindles
- Operates as a Standalone Controller or as the Lead Controller of a multiple (fixtured) system
- Manages up to 24 trailing spindles (Advanced or Nodes) or Cordless Tools
- A maximum of 15 Cordless Connections are supported
- An 802.11 b/g/n wireless access point for B-Series Cordless Tools to connect as trailing spindles
- Stores Trace Data for 30,000 Fastening Cycles for Corded Tools
- 255 jobs, 99 tasks, 12 steps including smart steps and all advanced strategies
- Includes a USB port, a plant network Ethernet port, a Spindle network Ethernet port, a Serial port, and an emulated PLC function
- Embedded Modbus TCP
- Fieldbus options: Profibus, Profinet, DeviceNet and Ethernet IP
- 24V DC I/O, 8 Inputs / 8 Outputs, assignable



Spindles 1-24 connect  
using an isolated Ethernet  
Spindle Network



| Description |                                                   |
|-------------|---------------------------------------------------|
| 1           | Red, Green, Yellow LEDs for Limits Evaluation     |
| 2           | Programmable and Tool Ready LEDs                  |
| 3           | Display                                           |
| 4           | Function Keys with Active Label Above             |
| 5           | Maintenance Due Indicator                         |
| 6           | Numeric Keypad to Enter Numbers or Select Options |
| 7           | Cursor Keys with Center Button to Expand Lists    |
| 8           | Power Switch                                      |
| 9           | Alpha Toolbox Connector                           |
| 10          | USB Port for Data Transfer                        |
| 11          | Tool Connector                                    |
| 12          | Plant Network Ethernet Connector                  |
| 13          | Spindle Network Ethernet Connector                |
| 14          | 24V DC Input/Output Connector                     |
| 15          | Optional Master DeviceNet Connector               |
| 16          | Serial Port Connector                             |
| 17          | Power Input                                       |
| 18          | Optional Fieldbus Connector(s)                    |

| Standard Features | Serial | Ethernet | USB | 24V DC I/O | Modbus/TCP | Alpha Toolbox |
|-------------------|--------|----------|-----|------------|------------|---------------|
| All Models        | ✓      | ✓        | ✓   | ✓          | ✓          | ✓             |

Note: M12 Ethernet port available upon request. Contact STANLEY for more details.

| Alpha Model Number for Optional Features | DeviceNet | PROFIBUS | EtherNet/IP | PROFINET | GM Ports | Lead DeviceNet Available | M12 Ethernet/IP ports |
|------------------------------------------|-----------|----------|-------------|----------|----------|--------------------------|-----------------------|
| QB4101-MGV                               |           |          |             |          | ✓        | ✓                        |                       |
| QB4101-MXV                               |           |          |             |          |          | ✓                        |                       |
| QB4101-XEV                               |           |          | ✓           |          |          |                          |                       |
| QB4101-XDV                               | ✓         |          |             |          |          |                          |                       |
| QB4101-XGV                               |           |          |             | ✓        |          |                          |                       |
| QB4101-XMV                               |           |          | ✓           |          |          |                          | ✓                     |
| QB4101-XNV                               |           |          | ✓           |          |          |                          |                       |
| QB4101-XPV                               |           | ✓        |             |          |          |                          |                       |
| QB4101-XXV                               |           |          |             |          |          |                          |                       |





# QBE Specialist Controller



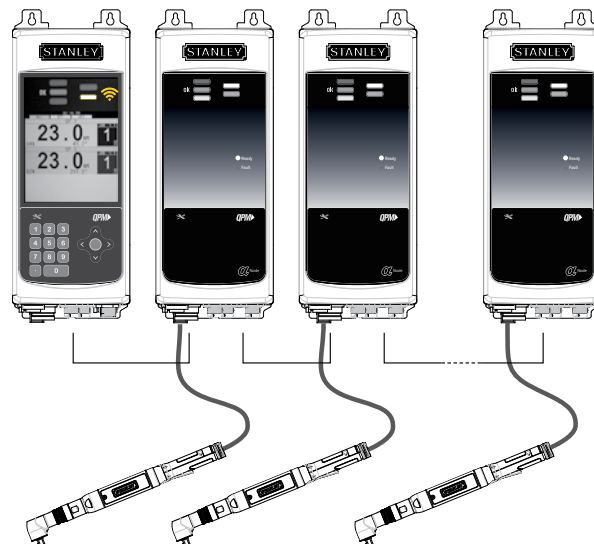
## QBE Specialist Controller is a Multi-Spindle and Cordless Tool Controller

### BENEFITS:

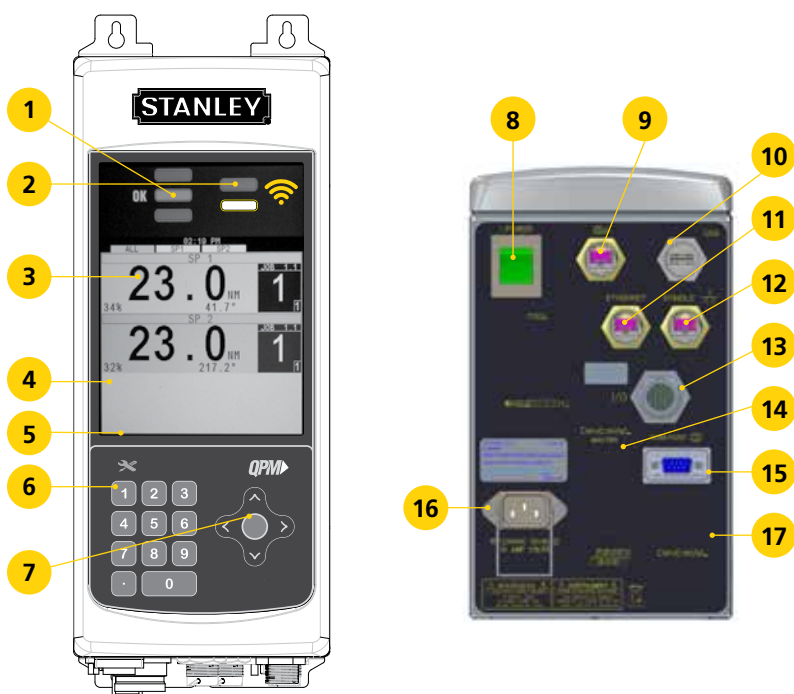
- Large Touchscreen, Color Display and Keypad
- Quick Set-up from the Controller Keypad, or with a PC, tablet, or smart phone
- Alpha Toolbox, STANLEY's web-based software for programming, collecting data and performing diagnostics
- Less training, less inventory and spare parts: STANLEY offers the same Controller platform for Cordless B-Series Battery Tools as well as Corded Handheld and Fixtured EB-Series, E-Series and EA-Series Tools

### TECHNICAL FEATURES:

- Large touchscreen, color display and on-screen keypad
- Operates as the Lead Controller of a multiple (fixtured) system and manages up to 24 trailing spindles (Advanced or Nodes) or Cordless Tools
- A maximum of 15 Cordless Connections are supported
- 802.11 b/g/n and 802.15.4 (Option) wireless access point for B-Series Cordless Tools to connect as trailing spindles
- Includes a USB port, a plant network Ethernet port, a Spindle network Ethernet port, a Serial port, fieldbus options, and an emulated PLC function
- 24V DC I/O, 8 Inputs / 8 Outputs, assignable



Spindles 1-24 connect using an isolated Ethernet Spindle Network



| Description |                                                   |
|-------------|---------------------------------------------------|
| 1           | Red, Green, Yellow LEDs for Limits Evaluation     |
| 2           | Programmable and Tool Ready LEDs                  |
| 3           | Touchscreen Color Display                         |
| 4           | Function Keys with Active Label Above             |
| 5           | Maintenance Due Indicator                         |
| 6           | Numeric Keypad to Enter Numbers or Select Options |
| 7           | Cursor Keys with Center Button to Expand Lists    |
| 8           | Power Switch                                      |
| 9           | Alpha Toolbox Connector                           |
| 10          | USB Port for Data Transfer                        |
| 11          | Plant Network Ethernet Connector                  |
| 12          | Spindle Network Ethernet Connector                |
| 13          | 24V DC Input/Output Connector                     |
| 14          | Optional Master DeviceNet Connector               |
| 15          | Serial Port Connector                             |
| 16          | Power Input                                       |
| 17          | Optional Fieldbus Connector(s)                    |

| Standard Features | Serial | Ethernet | USB | 24VDC I/O | Modbus/TCP | Alpha Toolbox |
|-------------------|--------|----------|-----|-----------|------------|---------------|
| All Models        | ✓      | ✓        | ✓   | ✓         | ✓          | ✓             |

Note: M12 Ethernet port available upon request. Contact STANLEY for more details.

| Alpha Model Number for Optional Features | DeviceNet | PROFIBUS | EtherNet/IP | PROFINET | GM Ports | Lead DeviceNet Available | M12 EtherNet/IP ports |
|------------------------------------------|-----------|----------|-------------|----------|----------|--------------------------|-----------------------|
| QB5100-MGV                               |           |          |             |          | ✓        | ✓                        | IEEE 802.11           |
| QB5100-MXV                               |           |          |             |          |          | ✓                        | IEEE 802.11           |
| QB5100-XDV                               | ✓         |          |             |          |          |                          | IEEE 802.11 b/g/n     |
| QB5100-XEV                               |           |          | ✓           |          |          |                          | IEEE 802.11 b/g/n     |
| QB5100-XGV                               |           |          |             |          | ✓        | ✓                        | IEEE 802.11           |
| QB5100-XMV                               |           |          | ✓           |          |          |                          | IEEE 802.11 b/g/n     |
| QB5100-XNV                               |           |          |             | ✓        |          |                          | IEEE 802.11 b/g/n     |
| QB5100-XPV                               |           | ✓        |             |          |          | ✓                        | IEEE 802.11 b/g/n     |
| QB5100-XXV                               |           |          |             |          |          | ✓                        | IEEE 802.11 b/g/n     |
| QB5300-XXV                               |           |          |             |          |          | ✓                        | IEEE 802.15.4         |



# QBE Advanced Controller



QBE Advanced Controller is a Single Spindle Controller or a Lead Controller for a Dual-Spindle System

## **BENEFITS:**

- **Color Display with Keypad**
- **Quick Set-up from the Controller Keypad, or with a PC through Ethernet**
- **Alpha Toolbox, STANLEY's web-based software for programming, collecting data and performing diagnostics**
- **Less training, less inventory and spare parts: STANLEY offers the same Controller platform for Cordless B-Series Battery Tools as well as Corded Handheld and Fixtured EB-Series, E-Series and EA-Series Tools**

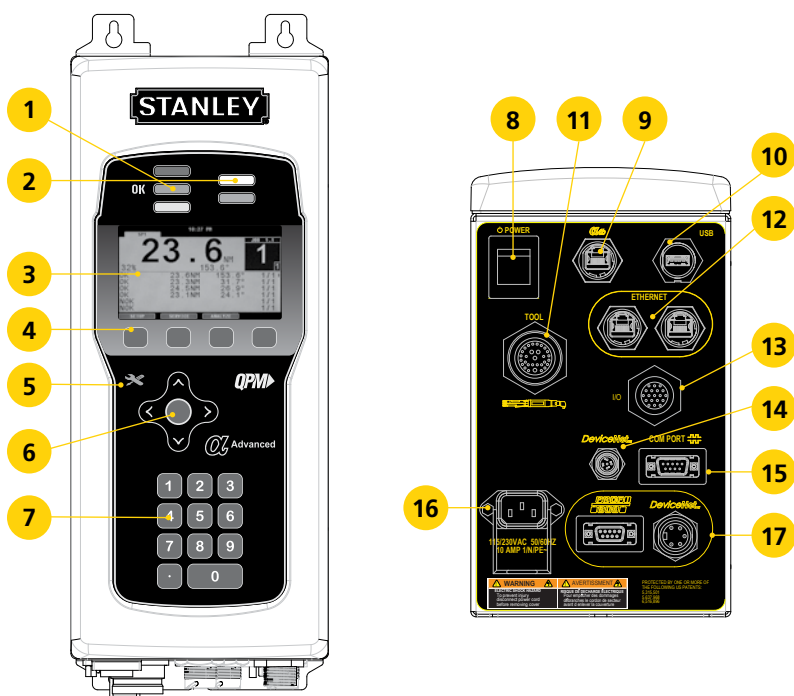
## **TECHNICAL FEATURES:**

- Two-line color display and soft key keypad
- Operates as a Standalone Controller or as part of a dual spindle system
- The Advanced controller can control up to 2 spindles including its own (typically Nodes or Advanced controllers can be used)
- Stores Trace Data for 30,000 Fastening Cycles
- 255 jobs, 99 tasks, 12 steps including smart steps and all advanced strategies
- Includes a USB port and 2 Ethernet ports, a Serial port, fieldbus options, an integrated PLC
- 24V DC I/O, 8 Inputs / 8 Outputs, assignable



Dual Spindle Operation





| Description |                                                   |
|-------------|---------------------------------------------------|
| 1           | Red, Green, Yellow LEDs for Limits Evaluation     |
| 2           | Programmable and Tool Ready LEDs                  |
| 3           | Display                                           |
| 4           | Function Keys with Active Label Above             |
| 5           | Maintenance Due Indicator                         |
| 6           | Numeric Keypad to Enter Numbers or Select Options |
| 7           | Cursor Keys with Center Button to Expand Lists    |
| 8           | Power Switch                                      |
| 9           | Alpha Toolbox Connector                           |
| 10          | USB Port for Data Transfer                        |
| 11          | Tool Connector                                    |
| 12          | Plant / Spindle Network Ethernet Connectors       |
| 13          | 24V DC Input/Output Connector                     |
| 14          | Optional Master DeviceNet Connector               |
| 15          | Serial Port Connector                             |
| 16          | Power Input                                       |
| 17          | Optional Fieldbus Connector(s)                    |

| Standard Features | Serial | Ethernet | USB | 24VDC I/O | Modbus/TCP | Alpha Toolbox |
|-------------------|--------|----------|-----|-----------|------------|---------------|
| All Models        | ✓      | ✓        | ✓   | ✓         | ✓          | ✓             |

Note: M12 Ethernet port available upon request. Contact STANLEY for more details.

| Alpha Model Number for Optional Features | DeviceNet | PROFIBUS | EtherNet/IP | PROFINET | GM Ports | Lead DeviceNet Available | M12 Ethernet/IP ports |
|------------------------------------------|-----------|----------|-------------|----------|----------|--------------------------|-----------------------|
| QB3101-MGV                               |           |          |             |          | ✓        | ✓                        |                       |
| QB3101-MXV                               |           |          |             |          |          | ✓                        |                       |
| QB3101-XDV                               | ✓         |          |             |          |          |                          |                       |
| QB3101-XEV                               |           |          | ✓           |          |          |                          |                       |
| QB3101-XGV                               |           |          |             | ✓        |          |                          |                       |
| QB3101-XMV                               |           |          | ✓           |          |          |                          | ✓                     |
| QB3101-XNV                               |           |          |             | ✓        |          |                          |                       |
| QB3101-XPV                               |           | ✓        |             |          |          |                          |                       |
| QB3101-XXV                               |           |          |             |          |          |                          |                       |



# QBE Standard Plus Controller



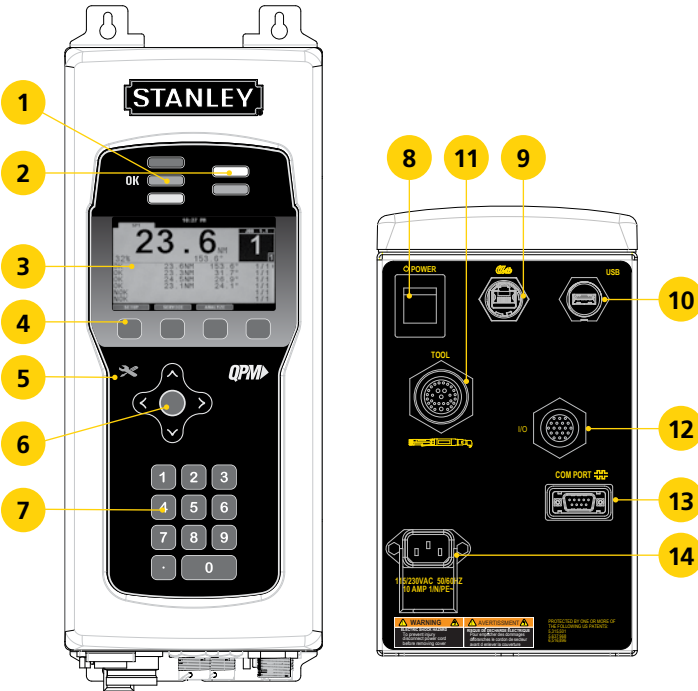
QBE Standard Plus Controller is a Single Spindle Controller

**BENEFITS:**

- Color Display with Keypad
- Economical, single Controller system option
- Quick Set-up from the Controller Keypad, or with a PC through Ethernet Alpha Toolbox, STANLEY’s web-based software for programming, collecting data and performing diagnostics
- Less training, less inventory and spare parts: STANLEY offers the same Controller platform for Cordless B-Series Battery Tools as well as Corded Handheld and Fixtured EB-Series, E-Series and EA-Series Tools

**TECHNICAL FEATURES:**

- Two-line color display and soft key keypad
- Operates as a Standalone Controller
- Stores Trace Data for 30,000 Fastening Cycles
- 255 jobs, 99 tasks, 12 steps including smart steps and all advanced strategies
- Includes a USB port and a Serial port
- 24V DC I/O, 8 Inputs / 8 Outputs, assignable



| Alpha Model Number | Serial | Ethernet | USB | 24V DC I/O | Modbus/TCP | Alpha Toolbox |
|--------------------|--------|----------|-----|------------|------------|---------------|
| QB2201             | ✓      |          | ✓   | ✓          |            | ✓             |

|    | Description                                       |
|----|---------------------------------------------------|
| 1  | Red, Green, Yellow LEDs for Limits Evaluation     |
| 2  | Programmable and Tool Ready LEDs                  |
| 3  | Display                                           |
| 4  | Function Keys with Active Label Above             |
| 5  | Maintenance Due Indicator                         |
| 6  | Cursor Keys with Center Button to Expand Lists    |
| 7  | Numeric Keypad to Enter Numbers or Select Options |
| 8  | Power Switch                                      |
| 9  | Alpha Toolbox Connector                           |
| 10 | USB Port for Data Transfer                        |
| 11 | Tool Connector                                    |
| 12 | 24V DC Input/Output Connector                     |
| 13 | Serial Port Connector                             |
| 14 | Power Input                                       |

# QBE Node Controller



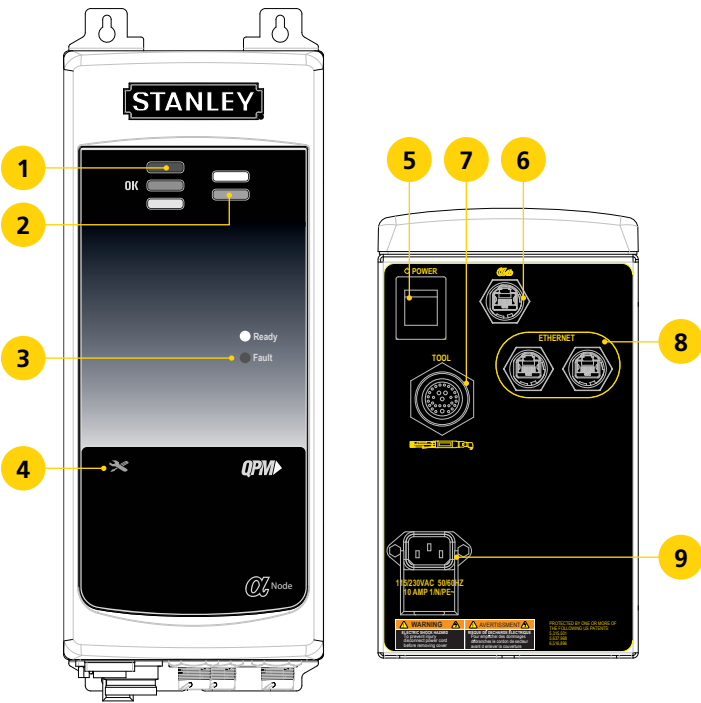
QBE Node Controller is a Single Spindle Controller used for trailing spindles in Multiple Tool (Fixtured) Applications

**BENEFITS:**

- Simplified user interface with LEDs
- Program through the USB port with Alpha Toolbox or through the Lead Controller
- Alpha Toolbox, STANLEY’s web-based software for programming, collecting data and performing diagnostics
- Less training, less inventory and spare parts: STANLEY offers the same Controller platform for Cordless B-Series Battery Tools as well as Coded Handheld and Fixtured EB-Series, E-Series and EA-Series Tools

**TECHNICAL FEATURES:**

- No onscreen display, Red, Green, Yellow LEDs for Limits Evaluation, Tool Ready and Fault
- Operates as part of a multiple (fixtured) system
- Stores Trace Data for 30,000 Fastening Cycles
- 255 Jobs and 99 Tasks with 12 Steps
- 1 Serial ports and Ethernet Port for Spindle Network Connections



| Alpha Model Number | Serial | Ethernet | USB | 24V DC I/O | Modbus/TCP | Alpha Toolbox |
|--------------------|--------|----------|-----|------------|------------|---------------|
| QB0101             |        | ✓        |     |            |            | ✓             |

|   | Description                                   |
|---|-----------------------------------------------|
| 1 | Red, Green, Yellow LEDs for Limits Evaluation |
| 2 | Programmable and Tool Ready LEDs              |
| 3 | Ready / Fault LEDs                            |
| 4 | Maintenance Due Indicator                     |
| 5 | Power Switch                                  |
| 6 | Alpha Toolbox Connector                       |
| 7 | Tool Connector                                |
| 8 | Spindle Network Ethernet Connectors           |
| 9 | Power Input                                   |

# QBE Network Node Controller



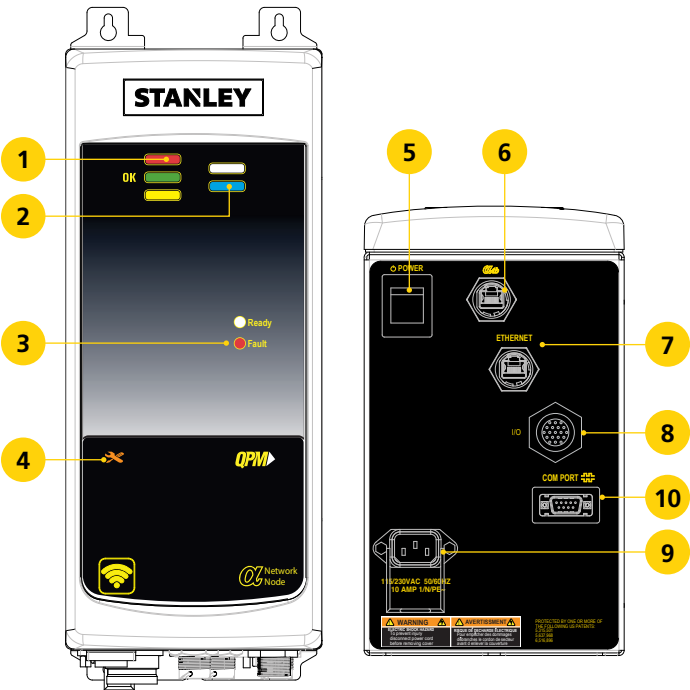
QBE Network Node Controller is a Cordless Tool Controller for up to 6 B-Series Cordless Tools

**BENEFITS:**

- Simplified user interface with LEDs
- Alpha Toolbox, STANLEY’s web-based software for programming, collecting data and performing diagnostics
- Less training, less inventory and spare parts: STANLEY offers the same Controller platform for Cordless B-Series Battery Tools as well as Corded Handheld and Fixtured EB-Series, E-Series and EA-Series Tools

**TECHNICAL FEATURES:**

- No onscreen display, Red, Green, Yellow LEDs for Limits Evaluation, Tool Ready and Faults
- One-to-One wireless connection (802.15.4)
- Operates as an interface between the B-Series Cordless tools and customers’ Error Proofing or Data Collection system
- Up to 6 B-Series Cordless Connections (802.11 b/g/n)
- Node controllers include an Ethernet port and a Serial port
- IEEE 802.15.4 wireless option communication to Network Node (QB0301)
- 24V DC I/O, 8 Inputs / 8 Outputs, assignable



| Alpha Model Number | Serial | Ethernet | USB | 24V DC I/O | Modbus/TCP | Alpha Toolbox |                   |
|--------------------|--------|----------|-----|------------|------------|---------------|-------------------|
| QB0201             | ✓      | ✓        |     | ✓          | ✓          | ✓             | IEEE 802.11 b/g/n |
| QB0301             | ✓      | ✓        |     | ✓          | ✓          | ✓             | IEEE 802.15.4     |

| Description |                                               |
|-------------|-----------------------------------------------|
| 1           | Red, Green, Yellow LEDs for Limits Evaluation |
| 2           | Programmable and Tool Ready LEDs              |
| 3           | Ready / Fault LEDs                            |
| 4           | Maintenance Due Indicator                     |
| 5           | Power Switch                                  |
| 6           | Alpha Toolbox Connector                       |
| 7           | Network Ethernet Connector                    |
| 8           | 24V DC Input/Output Connector                 |
| 9           | Power Input                                   |
| 10          | Serial Port Connector                         |