

## X-PAQ<sup>TM</sup> Products: SD2500 and EH2

Products and Solutions for Assembly



## | About ASG

**We are personally committed** to understanding and exceeding our customers' requirements. We are committed to continuously improving our products and processes.

**We are dedicated** to delivering products, services, and solutions on time and at a competitive value.

ASG, Division of Jergens, Inc. is an ISO 9001:2008 certified manufacturer, distributor and service center for products and solutions focused around threaded assembly. Since the 1970s, we have developed a first-class reputation unrivaled in the industry offering a wide range of world class products.

We offer a wide selection of ASG brand products including torque control, error-proofing and process control products, digital calibration equipment, X-PAQ™ precision fastening systems, production aides and assembly workstation accessories. ASG is proud to be a long-time U.S. Premier Distributor of HIOS® electric torque control screwdrivers and accessories, and the exclusive North American Master Distributor of Fiam® air tools.

ASG also offers a selection of value-added products and solutions including engineering and consulting services, financing, and extended protection and maintenance plans.



## Industry Commitment

ASG is committed to the highest quality standards, ensuring that all processes and procedures are followed to produce the best products for our customers. We maintain ISO 9001:2008 certification for the manufacture, distribution, and service of assembly tools. Maintaining membership in key industry organizations in order to stay abreast of the most current industry trends and information is vital to serving our customers.



# | About X-PAQ™

ASG introduced the X-PAQ™ transducerized, torque/angle control brushless DC tools in 2010. The focus of this product line is to offer an affordable precision torque control and data management system with intuitive, user friendly programming. This coupled with ASG’s reputation for being “easy to do business with” and a strong capable distribution network has made the X-PAQ™ very successful.

# | Precision Fastening Product Group Controlled Performance



The ASG Precision Fastening product group fills the needs of manufacturers requiring tight tolerances, high levels of error-proofing and traceability. Our line of transducerized DC electric torque control screwdrivers and nutrunners work with X-PAQ™ controllers for applications covering a torque range from 1 to 309.8 lbf.in (0.1 to 35 N.m) across the full range of products.



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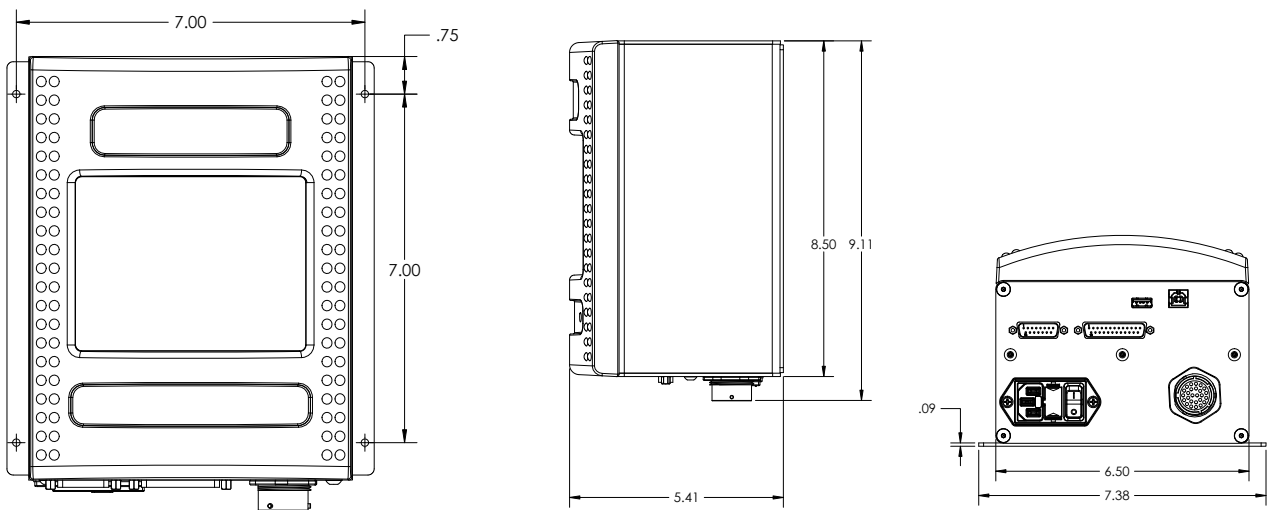


# | Section 1: X-PAQ™ Controller for SD2500 Series Tools

X-PAQ™ SD2500 controller features a large, color touch screen for intuitive setup, eliminating the need for external software. A variety of integration options are possible.

- Torque and angle control monitoring with color coded results
- 32 task storage keys for multiple assembly setups with 8 available parameters within each task
- Easily import/export task files with USB drive
- Multi-bolt programmable fastening
- Programmable I/O for process control
- Parameter status bar
- Data collection and rundown graphing
- Automatic tool recognition
- Selectable tool triggering and trigger sensitivity control
- Password protection for 3 users
- Universal power supply (international power cords available)

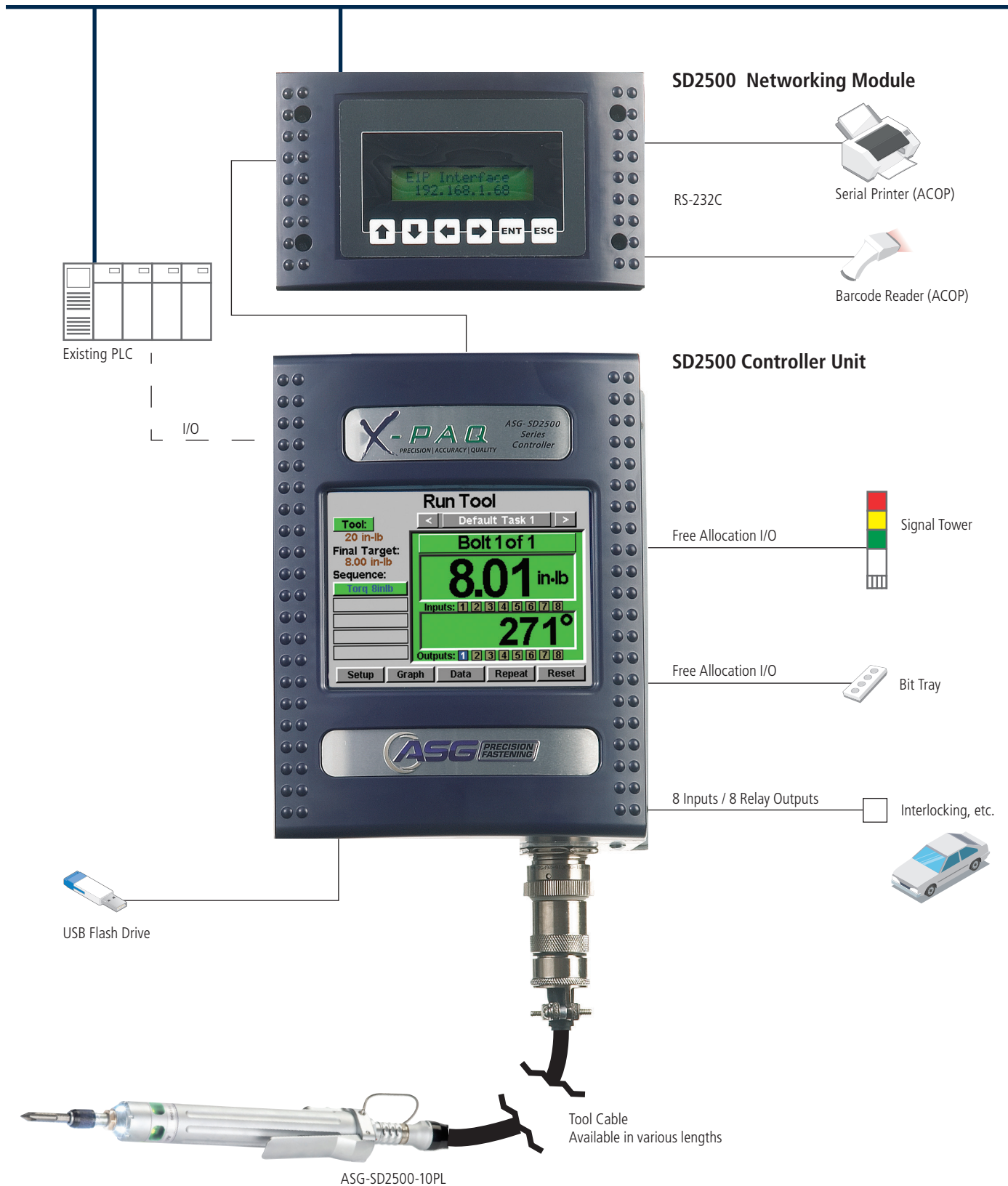
## ASG-CT2500 Controller



Dimensional drawings in inches



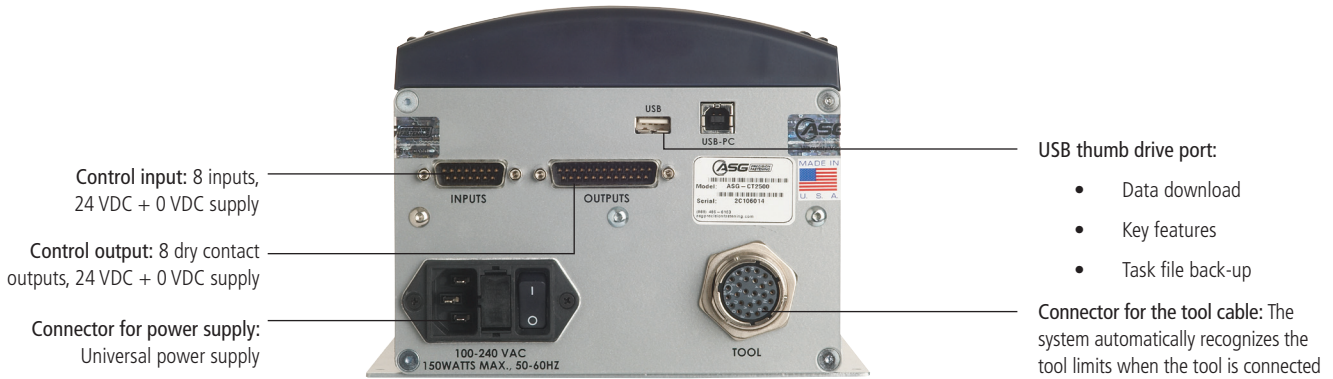
Fieldbus (Optional), Ethernet IP, ACOP, PFCs



ASG-SD2500-10PL

# X-PAQ™ Controller for SD2500 Series Tools

## Controller Bottom Panel



SD2500 Controller			
Model Number	Description	Weight	
		lb.	kg
ASG-CT2500	X-PAQ™ Controller for SD2500 Series Tools	9	4.1

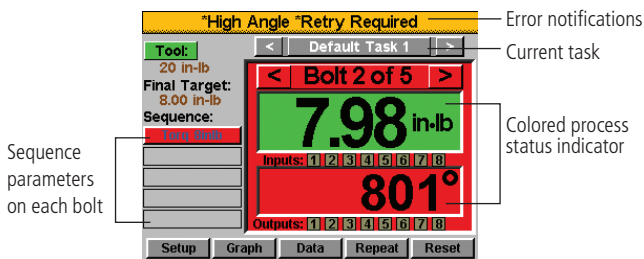
\* Consult ASG for additional options



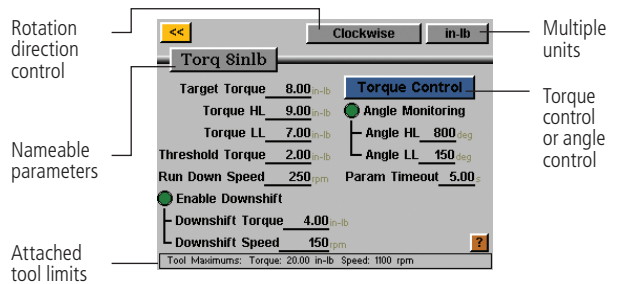
SD2500 Networking Modules			
Model Number	Ethernet IP	ACOP	RF Wireless
ASG-NW2500-EIP	•		
ASG-NW2500-ACOP		•	
ASG-NW2500-RFT			•

## Program Screens and Menus

### Run Tool Screen

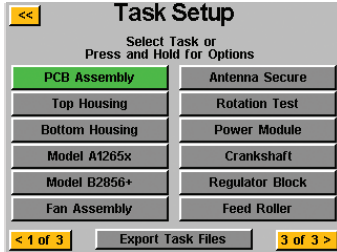


### Torque Rundown Parameter



# X-PAQ™ Controller for SD2500 Series Tools

## Task Menu

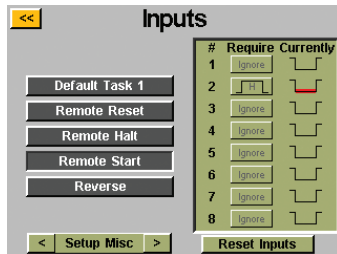


- 32 available tasks



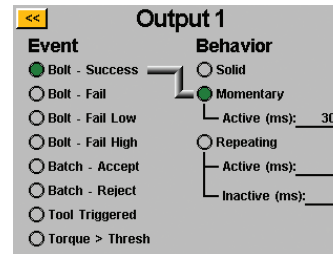
- Nameable tasks for easy selection and recognition
- Task file export to USB

## Inputs



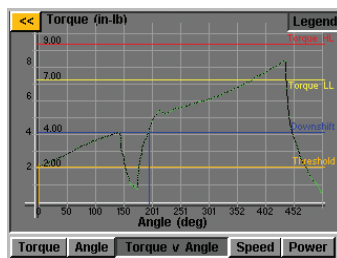
- 8 available 24 VDC opto-isolated inputs
- Assignable inputs for each command. No dedicated channels
- Binary combination compatible

## Outputs



- 8 available mechanical dry-contact relay outputs
- Programmable outputs
- Most output durations may be set. Trigger and threshold outputs are only available in solid mode

## Graphing Data



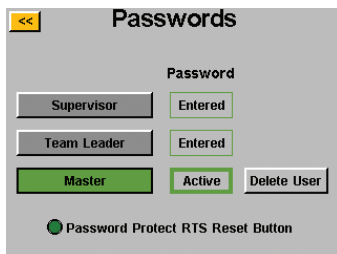
- On screen graphing capability for joint evaluation
- Graph data points export to USB possible during rundown

## Rundown Data

Time	Bolt	Cycle	Target	Prevail applied	Final	Angle	Result
6/14/12							
9:02:39	2	181561	8.00 in-lb	0.00	8.01	8.01	1831 ^ Bad
9:02:21	2	181560	8.00 in-lb	0.00	8.03	8.03	4090 ^ Bad
9:02:38	2	181559	8.00 in-lb	0.00	7.98	7.98	1634 ^ Bad
9:01:48	2	181558	8.00 in-lb	0.00	7.98	7.98	801 ^ Bad
9:01:46	1	181557	8.00 in-lb	0.00	8.03	8.03	201 Good
9:01:01	1	181556	8.00 in-lb	0.00	8.03	8.03	181 Good
9:00:59	5	181555	8.00 in-lb	0.00	7.98	7.98	151 Good
9:00:57	4	181554	8.00 in-lb	0.00	8.03	8.03	259 Good
9:00:55	3	181553	8.00 in-lb	0.00	8.01	8.01	198 Good
9:00:53	2	181552	8.00 in-lb	0.00	8.01	8.01	209 Good
9:00:51	1	181551	8.00 in-lb	0.00	7.98	7.98	192 Good
9:00:48	5	181550	8.00 in-lb	0.00	7.98	7.98	211 Good
9:00:46	4	181549	8.00 in-lb	0.00	8.03	8.03	184 Good
9:00:42	3	181548	8.00 in-lb	0.00	8.01	8.01	267 Good
9:00:21	3	181547	8.00 in-lb	0.00	0.02	0.02	794 ^ Bad
9:00:17	2	181546	8.00 in-lb	0.00	7.98	7.98	393 Good
9:00:13	1	181545	8.00 in-lb	0.00	7.98	7.98	470 Good

- Last 100 rundown data viewable on screen with larger data sample downloadable to USB in .csv format

## Password Protection



- 3 programmable access passwords to prevent unintended access by production line operators
- All passwords have the same access, the controller is either locked or unlocked
- Reset button on 'Run Tool' screen may even be enabled or disabled when the controller is locked



# | SD2500 Screwdrivers and Nutrunners

Sleek, compact and durable, the SD2500 is the ultimate lightweight tool for transducerized precision fastening.

SD2500 screwdrivers and nutrunners are premium quality transducerized DC electric tools. Inline screwdrivers are available with push, lever or remote start operation and 1/4 in. hex drive. Fixture mount models with threaded end are available in each torque range for automated or robotic applications. Right angle nutrunners are available with either 1/4 in. hex or 1/4 in. square drive.

- Transducerized torque and angle control with compact, lightweight, brushless motor for unparalleled clean, quiet and accurate operation
- Sleek aluminum body with high intensity LED tool indicator lights
- Foam grip included is standard with all inline models to provide ergonomic comfort for the operator



RQ Model



RP Model



FX Model  
Threaded End  
(Fixture)



PL Model  
(Push or Lever Start)



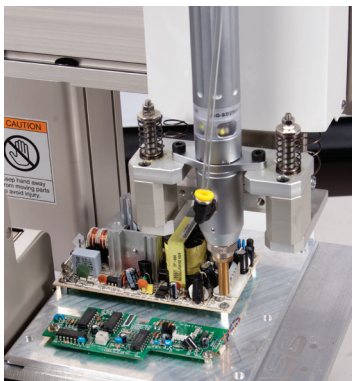
PS Model  
(Push to Start Only)

## Purchase a System or Configure Your Own

ASG offers the X-PAQ™ SD2500 as both pre-packaged systems (in the U.S., Canada, and Mexico only) and individually sold items.











Systems are available with each tool as follows:


- **Complete X-PAQ™ System:** includes X-PAQ™ controller, SD2500 tool and 10ft (3m) heavy weight strain relief tool cable. To determine the model number for a complete system: add '-SY' to the SD2500 tool model number.  
Example: ASG-SD2500-10PL-SY
- **X-PAQ™ System without Tool Cable:** includes X-PAQ™ controller and SD2500 tool. To determine the model number for a system without the tool cable: add '-SY-NC' to the SD2500 tool model number. Customers may then order their preferred cable separately.  
Example: ASG-SD2500-10PL-SY-NC



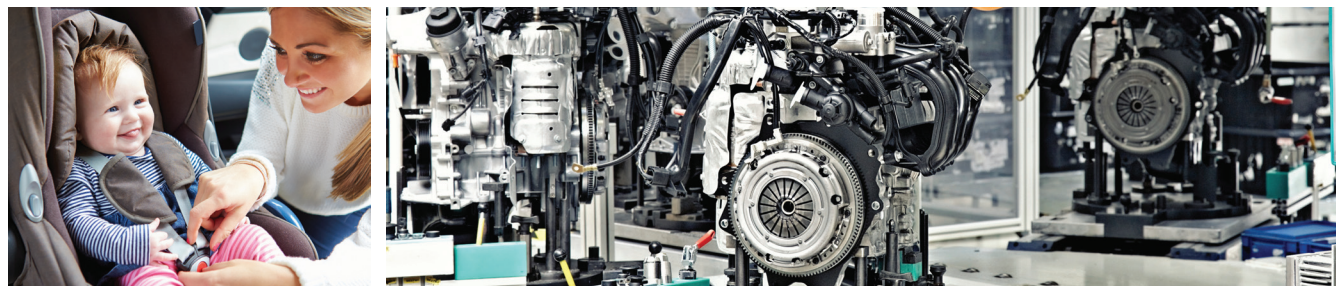
Easy robotic integration with a vacuum pick-up option.

# | SD2500 Tool Specifications

Model Number	Driver Type	Torque Range		Length		Weight		Max. RPM	Drive Size
		lbf.in	N.m	in.	mm	lb.	kg		
ASG-SD2500-10PL		1 - 10	0.1 - 1.1	9.5	240	1.00	0.46	1700	1/4 Hex
ASG-SD2500-10PS		1 - 10	0.1 - 1.1	9.5	240	1.00	0.46	1700	1/4 Hex
ASG-SD2500-10FX		1 - 10	0.1 - 1.1	9.5	240	1.00	0.46	1700	1/4 Hex
ASG-SD2500-10RP		1 - 10	0.1 - 1.1	10.4	264	1.25	0.57	1700	1/4 Square
ASG-SD2500-10RQ		1 - 10	0.1 - 1.1	10.4	264	1.25	0.57	1700	1/4 Hex*
ASG-SD2500-20PL		2 - 20	0.2 - 2.3	9.5	240	1.00	0.46	1100	1/4 Hex
ASG-SD2500-20PS		2 - 20	0.2 - 2.3	9.5	240	1.00	0.46	1100	1/4 Hex
ASG-SD2500-20FX		2 - 20	0.2 - 2.3	9.5	240	1.00	0.46	1100	1/4 Hex
ASG-SD2500-20RP		2 - 20	0.2 - 2.3	10.4	264	1.25	0.57	1100	1/4 Square
ASG-SD2500-20RQ		2 - 20	0.2 - 2.3	10.4	264	1.25	0.57	1100	1/4 Hex*
ASG-SD2500-35PL		3.5 - 35	0.4 - 3.9	9.5	240	1.00	0.45	800	1/4 Hex
ASG-SD2500-35PS		3.5 - 35	0.4 - 3.9	9.5	240	1.00	0.45	800	1/4 Hex
ASG-SD2500-35FX		3.5 - 35	0.4 - 3.9	9.5	240	1.00	0.45	800	1/4 Hex
ASG-SD2500-35RP		3.5 - 35	0.4 - 3.9	10.4	264	1.25	0.57	800	1/4 Square
ASG-SD2500-35RQ		3.5 - 35	0.4 - 3.9	10.4	264	1.25	0.57	800	1/4 Hex*
ASG-SD2500-50PL		5 - 50	0.6 - 5.6	9.7	246	1.10	0.49	500	1/4 Hex
ASG-SD2500-50PS		5 - 50	0.6 - 5.6	9.7	246	1.10	0.49	500	1/4 Hex
ASG-SD2500-50FX		5 - 50	0.6 - 5.6	9.7	246	1.10	0.49	500	1/4 Hex
ASG-SD2500-50RP		5 - 50	0.6 - 5.6	10.7	271	1.35	0.61	500	1/4 Square
ASG-SD2500-50RQ		5 - 50	0.6 - 5.6	10.7	271	1.35	0.61	500	1/4 Hex*

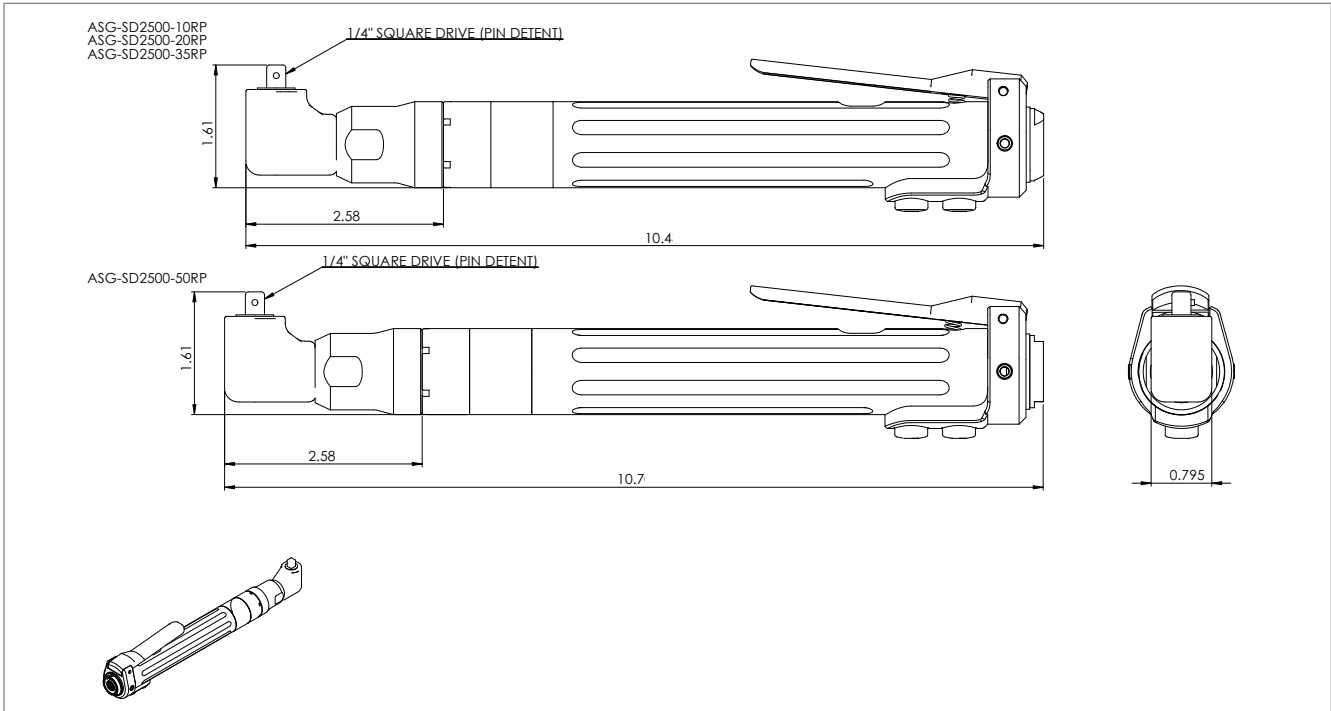
Legend				
				* 1/4 in. hex insert bits recommended
Inline Push / Lever Start Combination	Inline Push to Start	Inline Fixture Mount (Push to Start)	90° Angle Lever Start	

All tools remote start capable  
For applications requiring less than 2 lbf.in (0.2 N.m) torque, please consult ASG

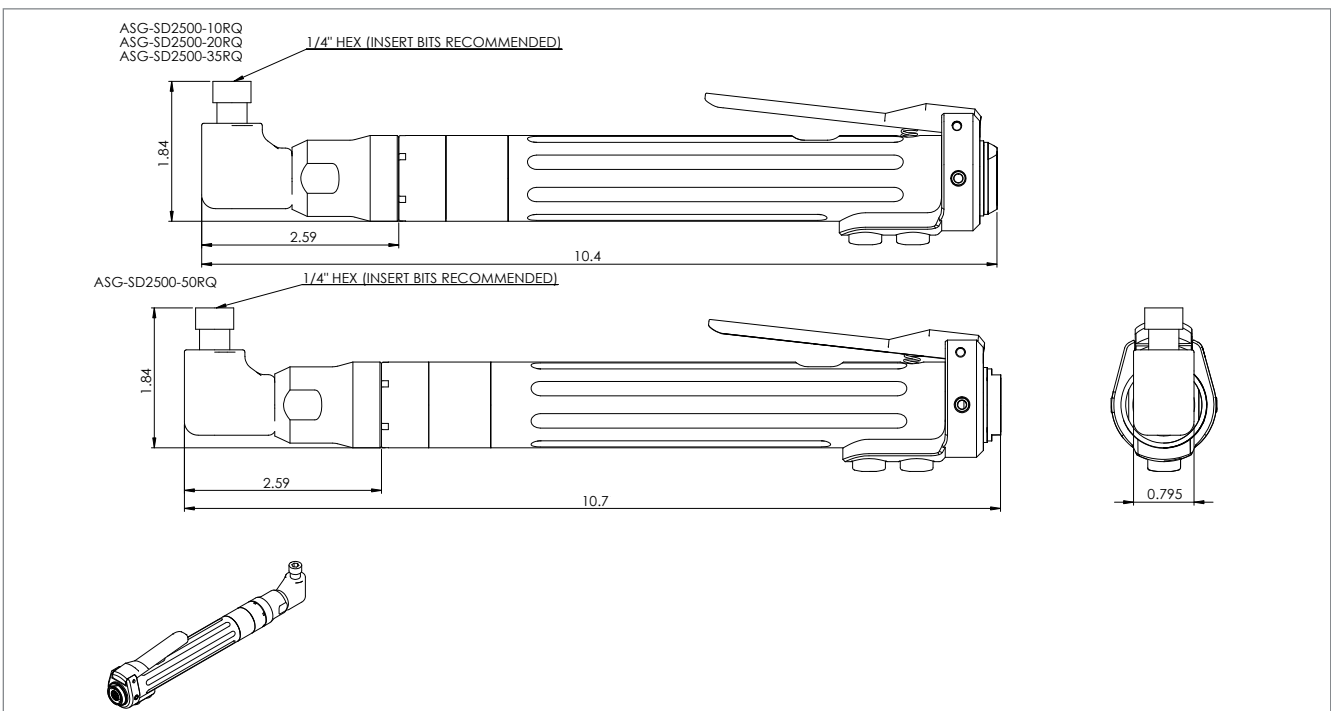


# | Right Angle Dimensions

## SD2500 RP



## SD2500 RQ

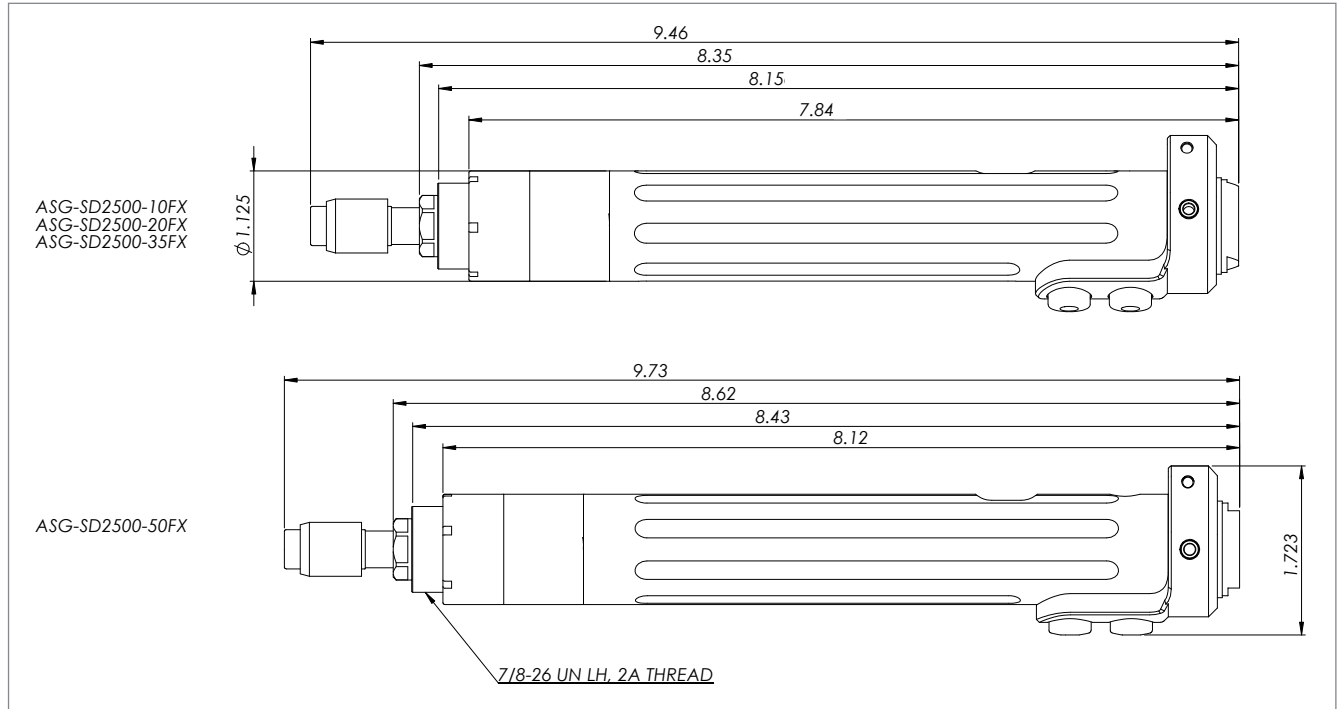


Dimensional drawings in inches

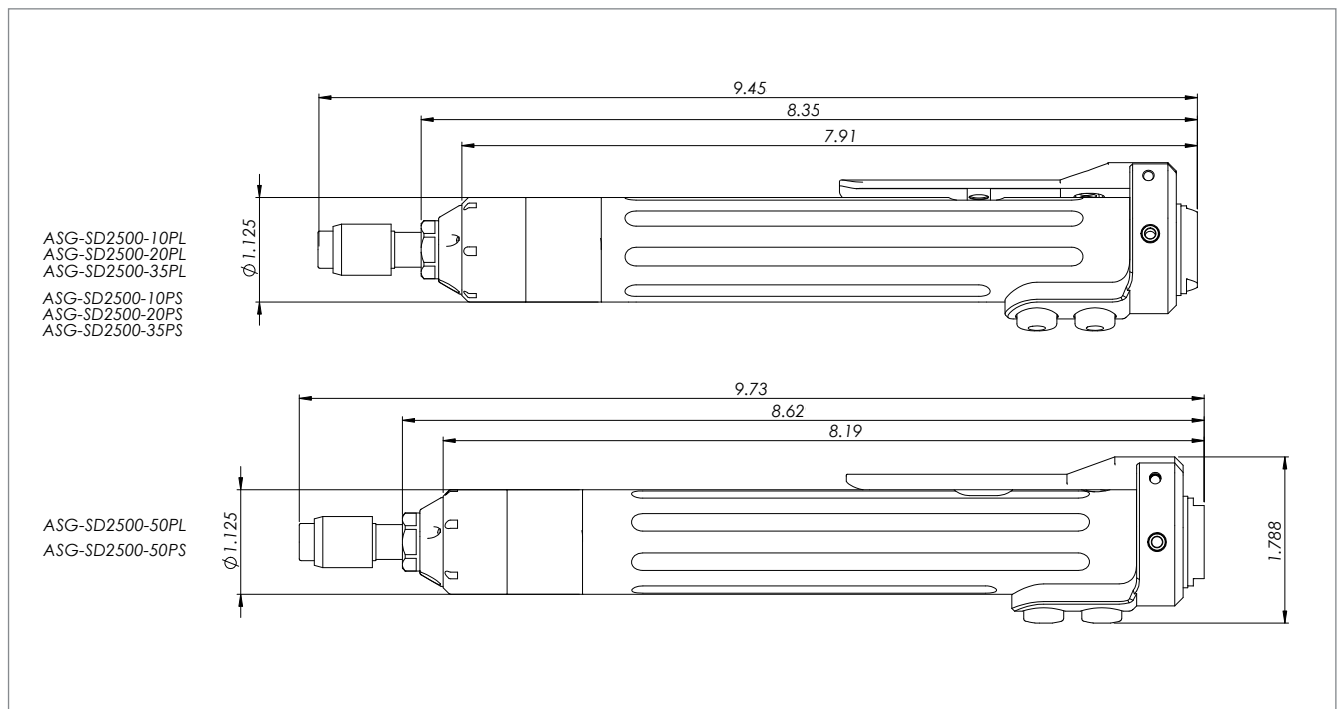


# Inline Dimensions

## SD2500 FX



## SD2500 PL and SD2500 PS



Dimensional drawings in inches

# SD2500 Tool Cables and Accessories

## Tool Cables

Tool cables are available in lengths 01 - 50 ft. (0.3 - 15.2 m) for connecting between the X-PAQ™ controller and SD2500 tools. Extension cables are available in lengths to 70 ft. (21.3 m). Maximum total length with tool and extension cables combined is 90 ft. (27.4 m).



ASG-CB2500  
Heavy Weight Strain Relief  
(HW) 10 models



ASG-CB2500  
ESD Safe (ESD)  
5 models



ASG-CB2500  
Right Angle (RA)  
10 models



ASG-CB2500  
Extension Cable (EX)  
5 models



ASG-CB2500  
Right Angle Extension (RAEX)  
1 model

Beginning Model Number	Add Length Code (ft)										Add Type Code	Popular Model Number
ASG-CB2500-	05	10	15	20	25	30	35	40	45	50	HW	ASG-CB2500-10HW
	05	10	15	20	25						ESD	ASG-CB2500-10ESD
	05	10	15	20	25	30	25	40	45	50	RA	ASG-CB2500-05RA
	10	20	30	50	70						EX	ASG-CB2500-20EX
	01										RAEX	ASG-CB2500-01RAEX

## Tool and Controller Accessories

### FX Tool Mounting Plates



ASG-AC2500-MPSF  
Single Flange



ASG-AC2500-MPJR  
Double Flange with  
External Thread



ASG-AC2500-MPDF  
Double Flange

### Hangers



ASG-AC2500-SC  
Suspension Clip  
(Pistol Grip and Right  
Angle Tools)



ASG-AC2500-SB  
Suspension Bail  
(Inline Tools)

### Grips



ASG-AC2500-PG  
Pistol Grip  
(shown installed)



ASG-AC2500-FGNC  
Non-Lever Tool



ASG-AC2500-FG  
Lever Tool

### Torque Arm Mounts



ASG-AC2500-TMA  
For use with ASG Articulating Arm



ASG-AC2500-TML  
For use with ASG Linear Arm

# SD2500 Tool Cables and Accessories

## Vacuum Pick-up Kits

\* Brass finder sold separately.



ASG-AC2500-VP  
Handheld



ASG-AC2500-VPM  
Mounted

## Spindle Unit Kit



ASG-AC2500-SP  
Standard



← Set screws for locking bits into place.

ASG-AC2500-SPEX  
Extended

## LED Signal Towers

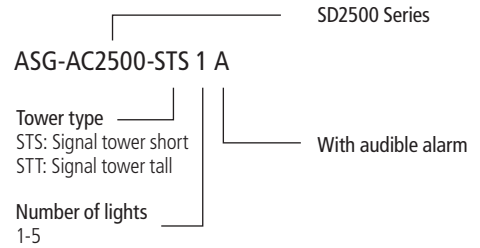
Consult ASG for your specific application.

- Choose from 20 models
- Tall or short body style
- With or without audible alarm
- 1, 2, 3, 4, or 5 Color LEDs



ASG-AC2500-ST51A

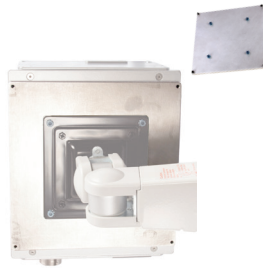
## How to Read the Model Numbers



## Controller Mounts



ASG-AC2500-CM  
For use with 65003 and 65006



ASG-AC2500-VESA  
For use with ASG monitor arms

## Bit Trays



ASG-AC2500-BT4  
4 position



ASG-AC2500-BT6  
6 position

## International Power Cords

Consult ASG for additional country options.



China  
ASG-CT2500-PCI



France/Belgium  
ASG-CT2500-PCE



India  
ASG-CT2500-PCD

## I/O Cables



Input: ASG-AC2500-IC20

Output: ASG-AC2500-OC20  
(shown)



# | SD2500 Sequence Recognition System

Every SR system must be specified according to custom application requirements.



The sequence recognition system is the solution for applications such as those requiring uniform compression of all components within your product assembly. The ASG SRS ensures that the operator installs fasteners in a specific pre-programmed sequence.

- Integrate with the ASG X-PAQ™ Precision Fastening System to help control manufacturing processes by ensuring that proper torque, sequence and revolution tolerance is achieved
- Provides feedback to disable or enable the handheld tool based upon preprogrammed characteristics for proper fastener tightening sequence

Model Number	Typical SRS Components
ASG-SRS-SY	Standard Infra Red Vision Camera & Software, Basic PLC Program, I/O Cable, Ethernet Cable, 24VDC Power Supply, PLC & Power Supply Enclosure

## Key Features and Information

**Infrared Camera Technology:** The IR camera detects the position of the tool, monitors fastener tightening sequence and minimizes the effects of workstation lighting on the assembly process.

**Multiple Assembly Sequence Storage Capability:** Provides outstanding process flexibility for multiple assemblies at a single workstation (high mix/low volume).

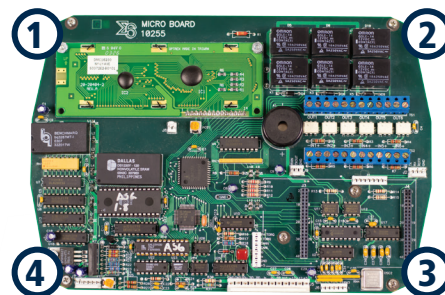
**Tight Center to Center Distances:** Allows the ability to distinguish between fasteners with 0.25 in. (6.35 mm) center to center distances and greater.  
\*Subject to application analysis

**Workstation Controls Integration Capability:** Allows further process control using workstation clamping, signal lights, bar code readers, etc.

**Single Sensor Mounted High above Operator Work Envelope:** Similar products incorporate several sensors mounted along the torque arm. The SRS single sensor mounted outside the operator work envelope eliminates the risk of accidental damage and wear and tear due to exposure to operator movement.

## Example: Incorporating the SRS in Assembly

Visit our website, [www.asg-jergens.com](http://www.asg-jergens.com) and submit your application analysis to begin the quote process.



Step 1: Part is inserted into workstation fixture (clamps close).

Step 2: Fasteners are tightened to 1 N.m at 4 locations.

Step 3: Batch complete signals finished part (clamps open).

# | SD2500 Protection and Investment Plans

## X-Guard Protection Plan



Additional Months	6 Months	12 Month	18 Months	24 Months
Additional Cycles	500,000	1,000,000	1,500,000	2,000,000
X-Guard Model Number	ASG-XG2500-6SY	ASG-XG2500-12SY	ASG-XG2500-18SY	SG-XG2500-24SY
<b>X-PAQ™ Controller</b>				
Firmware updates*	•	•	•	•
Replacement or repair of parts required to restore functionality	•	•	•	•
<b>SD2500 Screwdrivers</b>				
Recalibration	1	1	2	2
Preventative maintenance	—	1	1	2
Replacement or repair of parts required to restore functionality**	•	•	•	•
<b>CB2500 Screwdriver Cables</b>				
Replacement or repair of parts required to restore functionality***	•	•	•	•

Additional Months	6 Months	12 Months	18 Months	24 Months
X-Guard Model Number	ASG-XG2500-6NW	ASG-XG2500-12NW	ASG-XG2500-18NW	ASG-XG2500-24NW
<b>X-PAQ™ Networking Modules</b>				
Firmware updates*	•	•	•	•
Replacement or repair of parts required to restore functionality	•	•	•	•

\* Within original controller firmware level

\*\* Consumable items such as suspension bails, bits, sockets and mounting brackets are not covered

\*\*\* ASG reserves the right to deem a cable damaged by abuse due to misuse or improper cable management and deny warranty claims

## X-Lease Financing



ASG offers flexible financing for X-PAQ™ systems and products, including X-GUARD™ extended protection and maintenance plans covering X-PAQ™ systems.

**Opt for a monthly lease investment and you can:**

- Acquire equipment without a large cash outlay
- Avoid affecting lines of credit
- Match payments to cash flow
- X-GUARD™ protection plans can be built into your financing plan

Financing provided by:  **FirstLease**<sup>INC</sup>

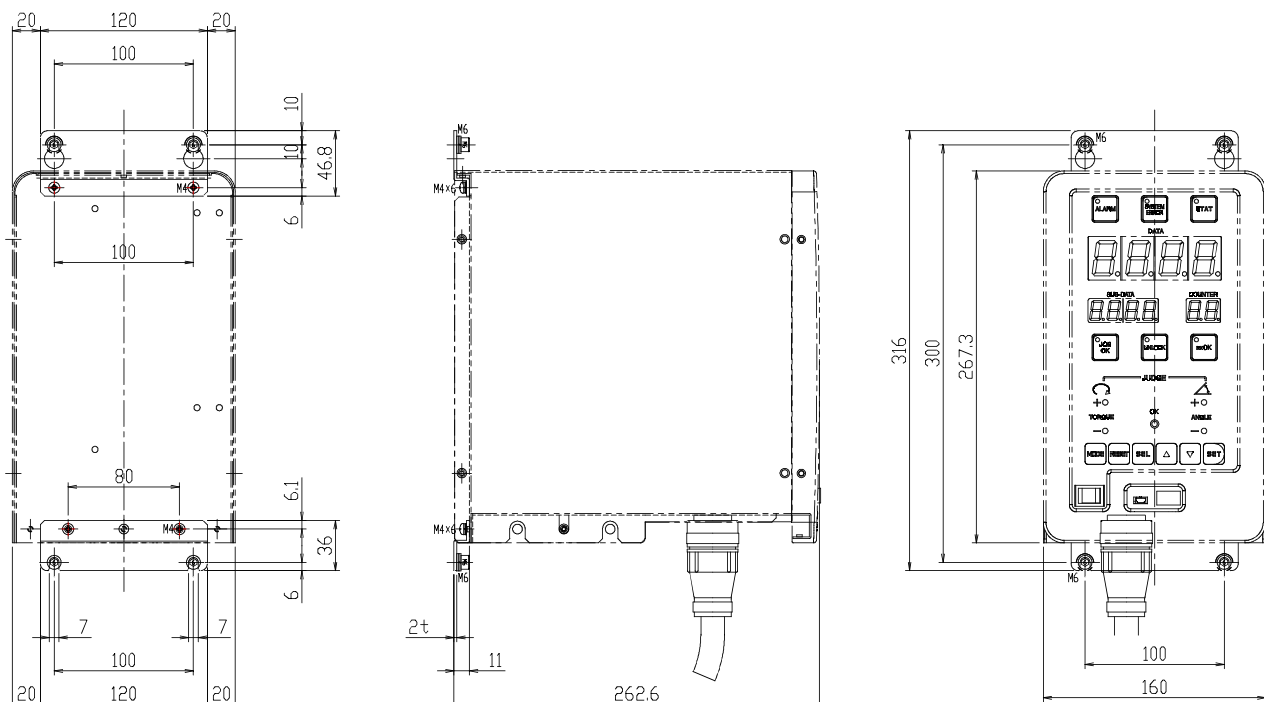
For more information, please contact ASG.

# | Section 2: X-PAQ™ Controller for EH2 Series Tools

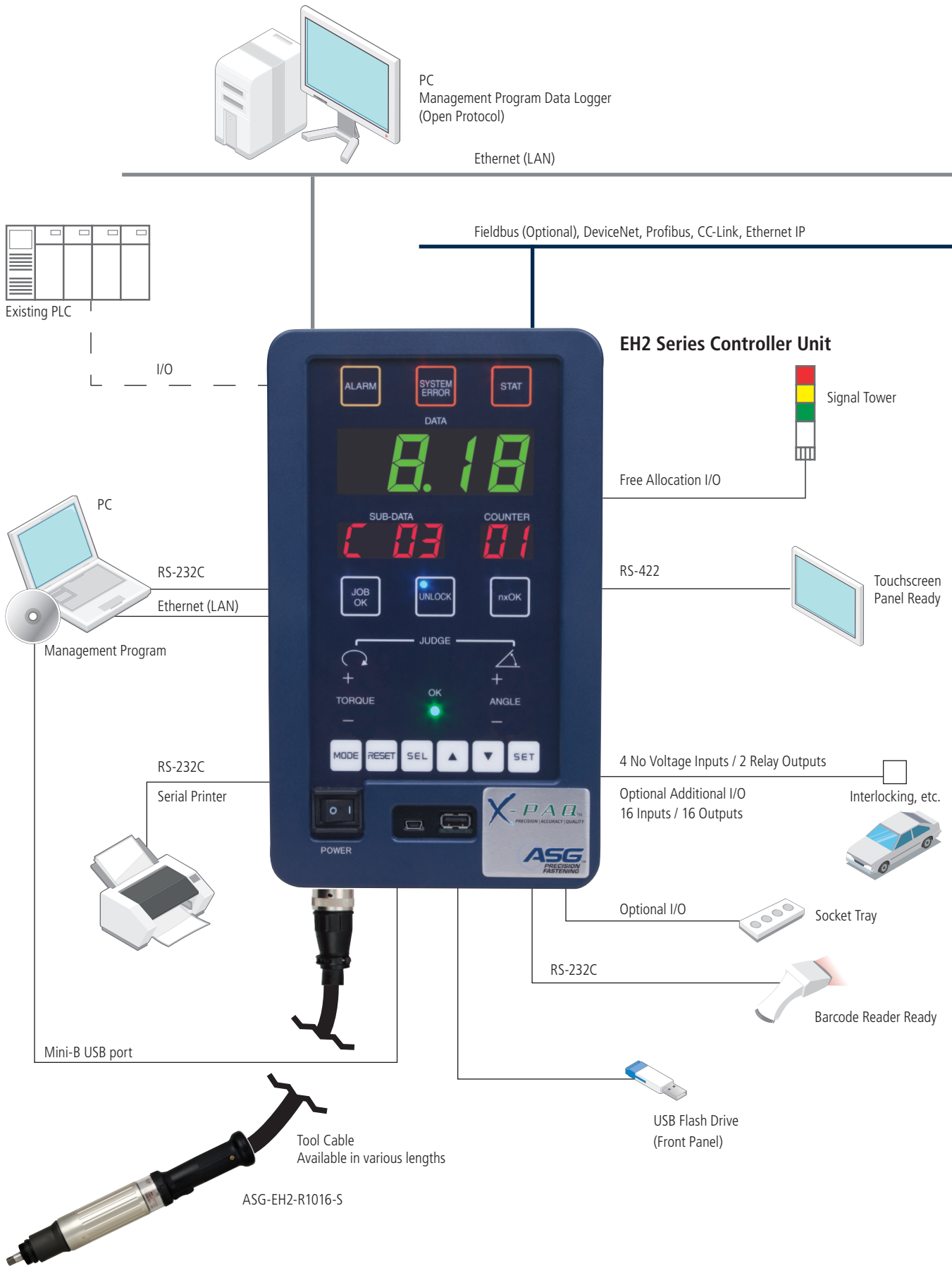
X-PAQ™ EH2 controllers are equipped with simplified PLC functionality. A wide variety of integration options are possible.

- Operates in direct drive or pulse fastening mode with automatic switch from direct mode to pulse fastening at a selectable torque level
- 99 fastening channel settings
- 99 assembly job settings
- Data storage up to 33,000 records (free allocation)
- Torque curve history (last 20 OK / 10 NOK records internally or continuous history via PC)
- Multi-spindle synchronization for up to 10 tools
- Process monitoring
- Automatic over shoot reduction
- Quick set-up
- Built-in PLC functionality with customizable ladder logic capability
- Management software for controlling, monitoring, reporting and maintenance via PC

## ASG-EH2-HT40-000XXX Controllers



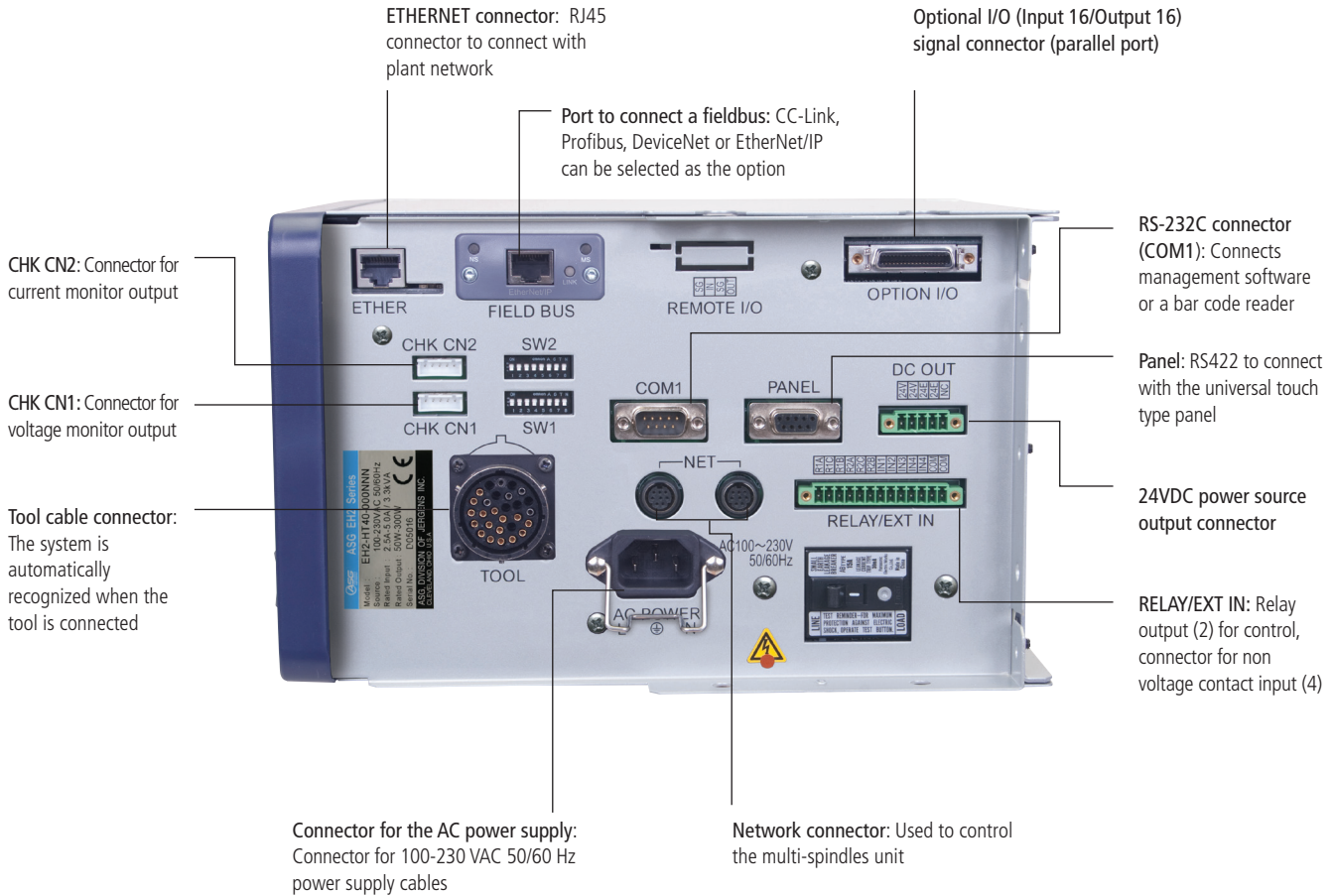
Dimensional drawings in mm





# X-PAQ™ Controller for EH2 Series Tools

## Controller Bottom Panel



## EH2 Series Controllers

Model Number	DeviceNet	Profibus	CC-Link	Ethernet IP	Optional I/O	Weight	
						lb.	kg
ASG-EH2-HT40-000NNN						21	9.5
ASG-EH2-HT40-000NNP					•	21	9.5
ASG-EH2-HT40-000NDN	•					21	9.5
ASG-EH2-HT40-000NPN		•				21	9.5
ASG-EH2-HT40-000NCN			•			21	9.5
ASG-EH2-HT40-000NEN				•		21	9.5
ASG-EH2-HT40-000NDP	•				•	21	9.5
ASG-EH2-HT40-000NPP		•			•	21	9.5
ASG-EH2-HT40-000NCP			•		•	21	9.5
ASG-EH2-HT40-000NEP				•	•	21	9.5

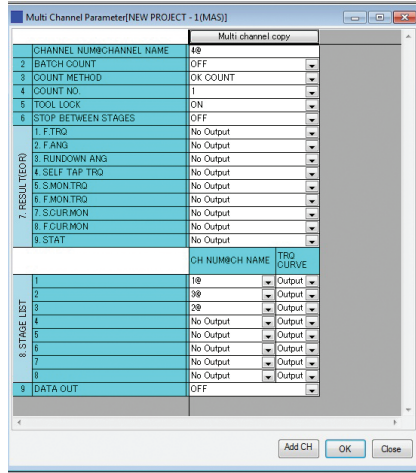
Management software is included with each controller purchase

# EH2 Management Software

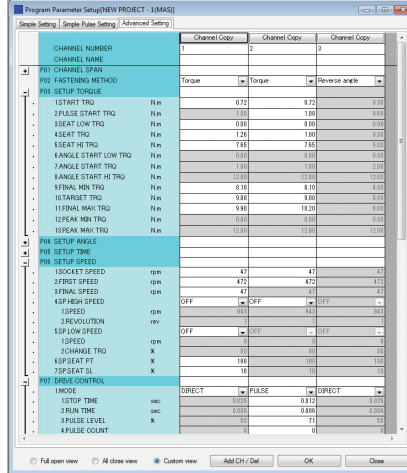
## Application Programming

Using the management software, parameters can be loaded from the controller, written into the controller, stored and printed. A copy function is also provided to help with quick start-ups.

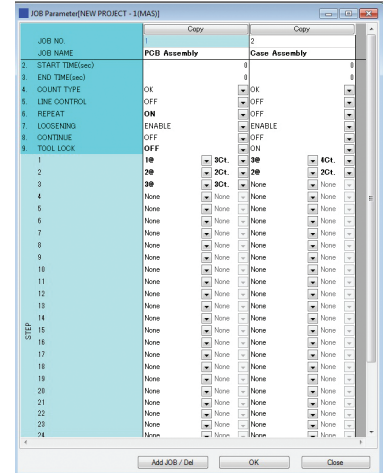
### Multi Channel Parameters



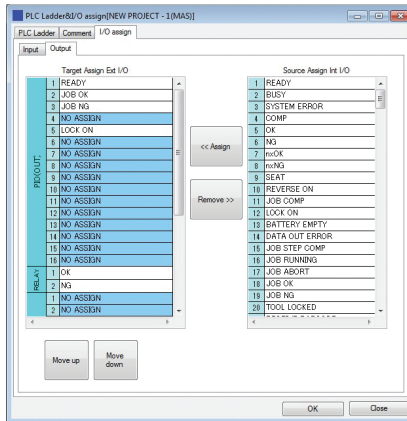
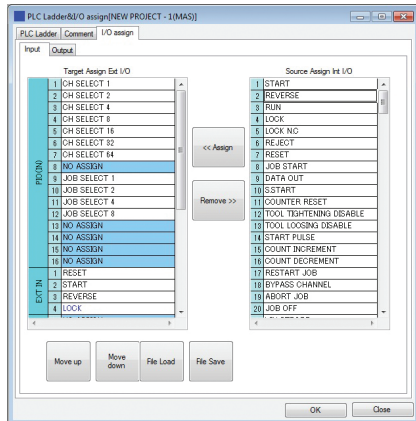
### Program Parameters



### Fastening Jobs



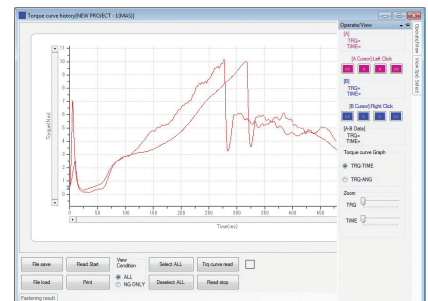
### PLC Ladder and I/O Allocation



## History Function

Fastening results, torque curves and system error data recorded in the controller can be loaded, displayed and printed with the software. Data is stored in .csv file format and can easily be imported into spreadsheets.

### Torque Curve Data



# Eh2 Management Software

(Compatible OS) Windows 2000, SP4/XP, SP2/VISTA and later.

## Monitoring Function

The latest fastening results and torque curve data stored in the controller can be displayed and printed. The data can be automatically or manually stored in .csv file format.

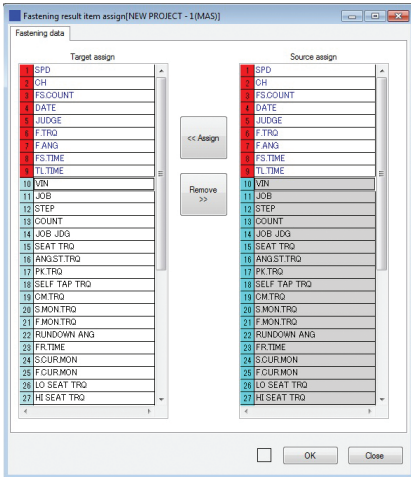
### Fastening Results Displayed

No.	DATE	CH	FS COUNT	DATE	JUDGE	F TRQ	F ANG	FS TIME	FL TIME	VIN	JOB	STEP	JOB
1	1/18	14	12	12/15/2014 08:00:00	OK	18.80	80	04	04				1
2	1/18	14	12	12/15/2014 08:01:10	OK	11.84	102	02	01				1
3	1/18	14	12	12/15/2014 08:01:15	OK	18.10	80	01	04				1
4	1/18	14	12	12/15/2014 08:01:15	OK	18.80	80	01	01				1
5	1/18	14	12	12/15/2014 08:01:11	OK	18.37	80	02	13				1
6	1/18	14	12	12/15/2014 08:01:08	OK	18.80	80	04	17				1
7	1/18	14	12	12/15/2014 08:01:00	OK	18.80	80	03	14				1
8	1/18	14	12	12/15/2014 08:00:58	OK	18.80	80	02	14				1
9	1/18	14	12	12/15/2014 08:00:50	OK	18.80	80	02	14				1
10	1/18	14	12	12/15/2014 08:00:50	OK	18.80	80	02	14				1
11													
12													
13													
14													
15													
16													
17													
18													
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28													

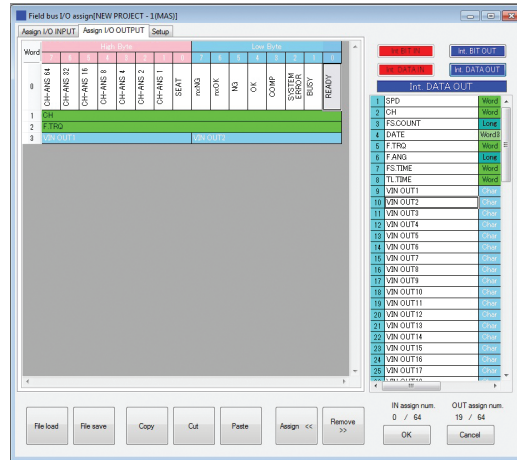
## Allocation Function

Allocation of virtual I/O items in PIO (IN), PIO (OUT), RELAY/EXTIN, allocation of items added to the fastening result, and allocation of data including the related data in Fieldbus I/O units are possible through the management software.

### Allocation of Fastening Result Items



### Fieldbus I/O Allocation



Three Types of Interface Connections are Available (RS-232C, USB and ETHERNET): A RS-232C and USB port are available for quick and easy connection with a single system. An ETHERNET port is available to connect to multiple systems locally or through a network.

**Verifying Function:** The verify function is available to compare a saved program file with the program file currently running in the system. This allows for added file control and change tracking.

**Maintenance Function:** The maintenance function allows I/O monitoring, output signal forcing, torque and angle monitoring as well as displaying various tool data.

**Access Limitation Function:** To prevent the unauthorized use with the access control using password.

# | EH2 Screwdrivers and Nutrunners

Transducerized DC Electric tools with both continuous and discontinuous pulse fastening technology.



ASG-EH2-R1020-A



ASG-EH2-R2035-S



ASG-EH2-R1016-S



ASG-EH2-R0005-SC  
ASG-EH2-R0010-SC



ASG-EH2-R0005-SL  
ASG-EH2-R0010-SL



ASG-EH2-R1016-P  
ASG-EH2-R1020-P



ASG-EH2-R0005-P  
ASG-EH2-R0010-P

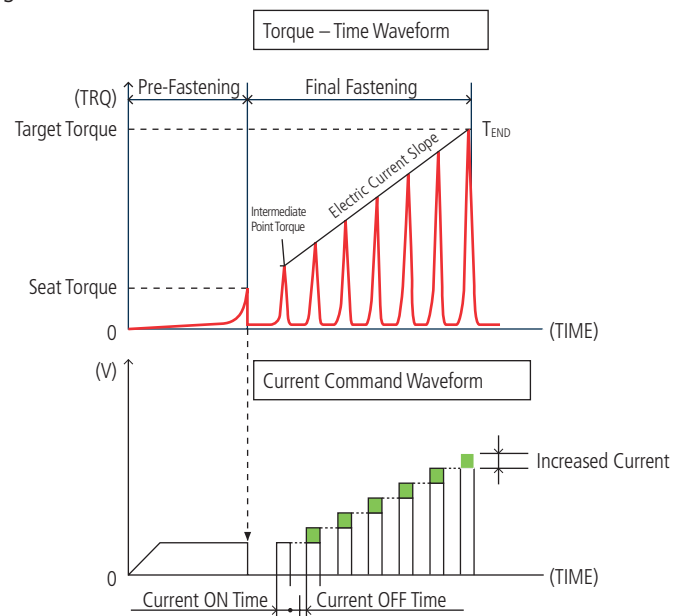
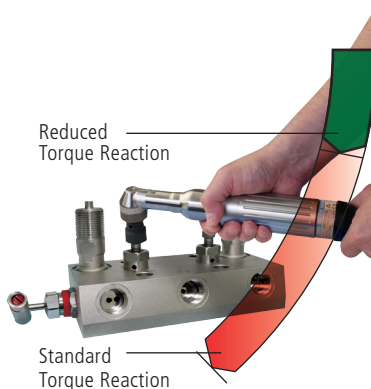
EH2 screwdrivers and nutrunners are premium quality transducerized DC electric tools featuring pulse fastening technology. Models are available with different grips, operation and drive sizes.

- Transducerized torque and angle control with lightweight brushless resolver motor for unparalleled clean, quiet and accurate operation
- Customizable 7-color high intensity LED indicator lights
- Sleek aluminum body with break resistant handle, inner shell cable connector and ergonomic grip for ultimate durability and operator comfort
- Easily accessible forward/reverse selection switch with reset function
- Nutrunners feature high tensile, lightweight titanium alloy angle head, reducing operator strain and providing excellent durability

## Pulse Fastening Technology

EH2 Series tools are equipped with pulse fastening technology, which vastly reduces the reaction typically associated with higher torque tools. It reduces operator fatigue during operation and helps protect against repetitive stress injury and is particularly useful with hard joint fastening.

Ergonomic superiority with pulse fastening technology.



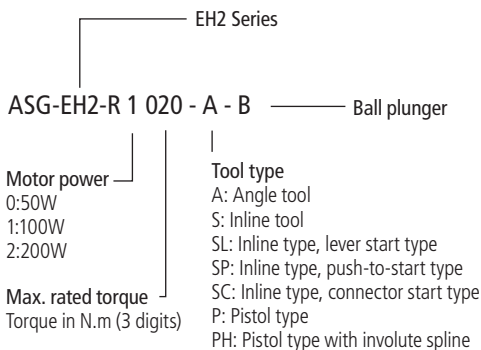
# | EH2 Tool Specifications

Model Number	Driver Type	Torque Range		Length		Weight		Max. RPM	Drive Size
		lbf.in	N.m	in.	mm	lb.	kg		
ASG-EH2-R0005-P		8.8 - 44.3	1 - 5	7.9	202	2.4	1.1	1694	3/8" Square
ASG-EH2-R0005-SL		8.8 - 44.3	1 - 5	11.7	296	2.6	1.2	1694	1/4" Hex
ASG-EH2-R0005-SP		8.8 - 44.3	1 - 5	11.7	296	2.6	1.2	1694	1/4" Hex
ASG-EH2-R0005-SC		8.8 - 44.3	1 - 5	9.0	228	2.4	1.1	1694	3/8" Square
ASG-EH2-R0010-P		17.7 - 88.5	2 - 10	7.9	202	2.4	1.1	942	3/8" Square
ASG-EH2-R0010-SL		17.7 - 88.5	2 - 10	11.7	296	2.6	1.2	942	1/4" Hex
ASG-EH2-R0010-SP		17.7 - 88.5	2 - 10	11.7	296	2.6	1.2	942	1/4" Hex
ASG-EH2-R0010-SC		17.7 - 88.5	2 - 10	9.0	228	2.4	1.1	942	3/8" Square
ASG-EH2-R1016-P		28.3 - 141.6	3.2 - 16	8.7	220	3.1	1.4	1247	3/8" Square
ASG-EH2-R1016-PH*		28.3 - 141.6	3.2 - 16	8.7	220	3.1	1.4	1247	3/8" Square
ASG-EH2-R1016-S*		28.3 - 141.6	3.2 - 16	13.5	344	2.9	1.3	1247	3/8" Square
ASG-EH2-R1020-A		35.4 - 177.0	4 - 20	15.2	386	3.1	1.4	1027	3/8" Square
ASG-EH2-R1020-P		35.4 - 177.0	4 - 20	8.7	220	3.1	1.4	1053	3/8" Square
ASG-EH2-R1020-PH*		35.4 - 177.0	4 - 20	8.7	220	3.1	1.4	1053	3/8" Square
ASG-EH2-R1020-S*		35.4 - 177.0	4 - 20	13.5	344	2.9	1.3	1053	3/8" Square
ASG-EH2-R1030-A		53.1 - 265.5	6 - 30	15.5	393	3.3	1.5	702	3/8" Square
ASG-EH2-R2035-S		61.9 - 309.8	7 - 35	16.0	406	4.4	2.0	1169	3/8" Square

Legend					
					* Built-in Spline for Use with Reaction Plates
Pistol Grip Trigger Start	Inline Lever Start	Inline Push to Start	Inline Remote Start Only	90° Angle Trigger Start	

All tools remote start capable

## How to Read the Model Numbers

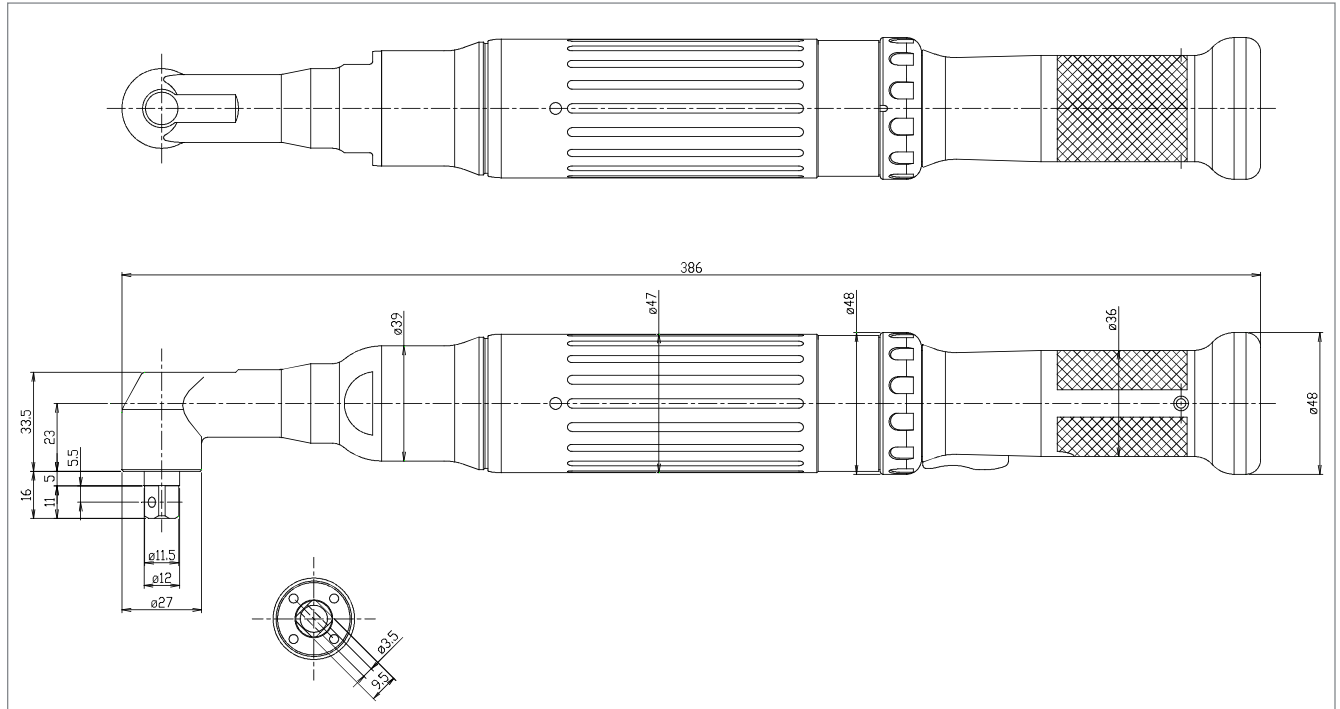


EH2 Screwdriver with Ball Plunger  
Special Order Item. Add -B to model part number.  
Ex: ASG-EH2-R1020-S-B

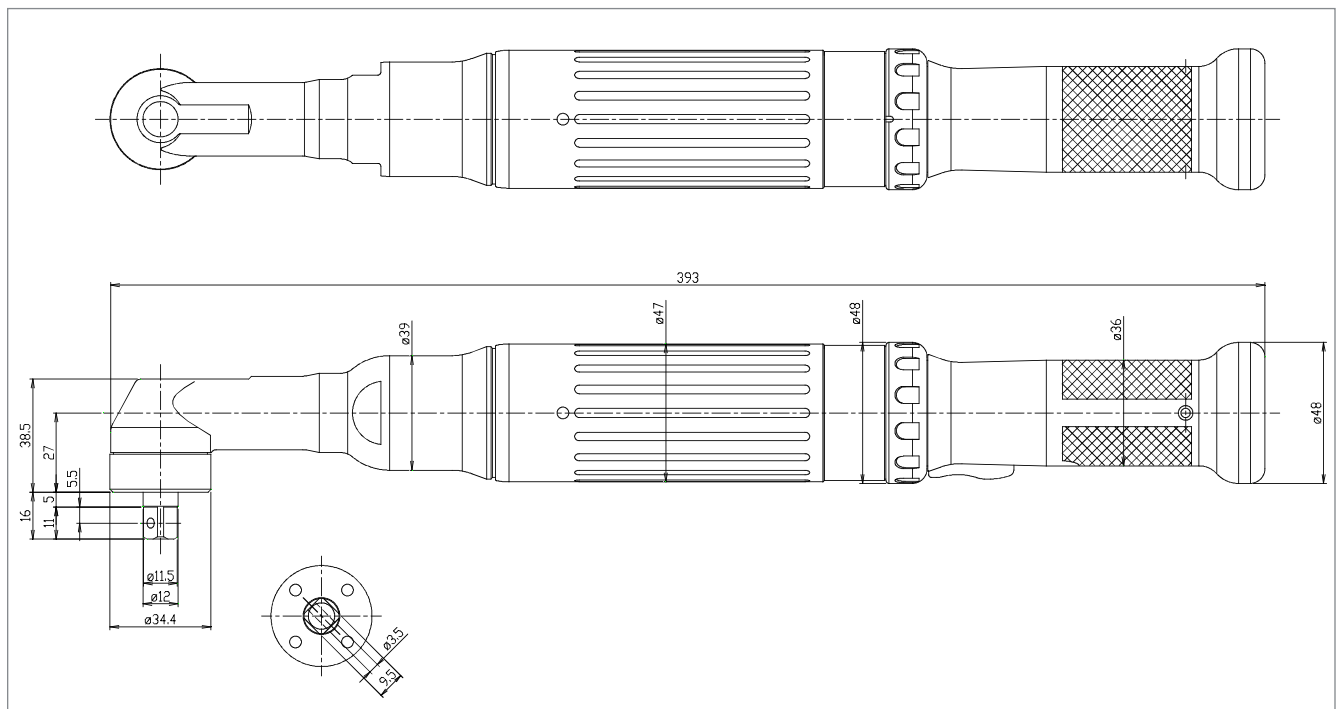


# | Right Angle Dimensions

## ASG-EH2-R1020-A



## ASG-EH2-R1030-A

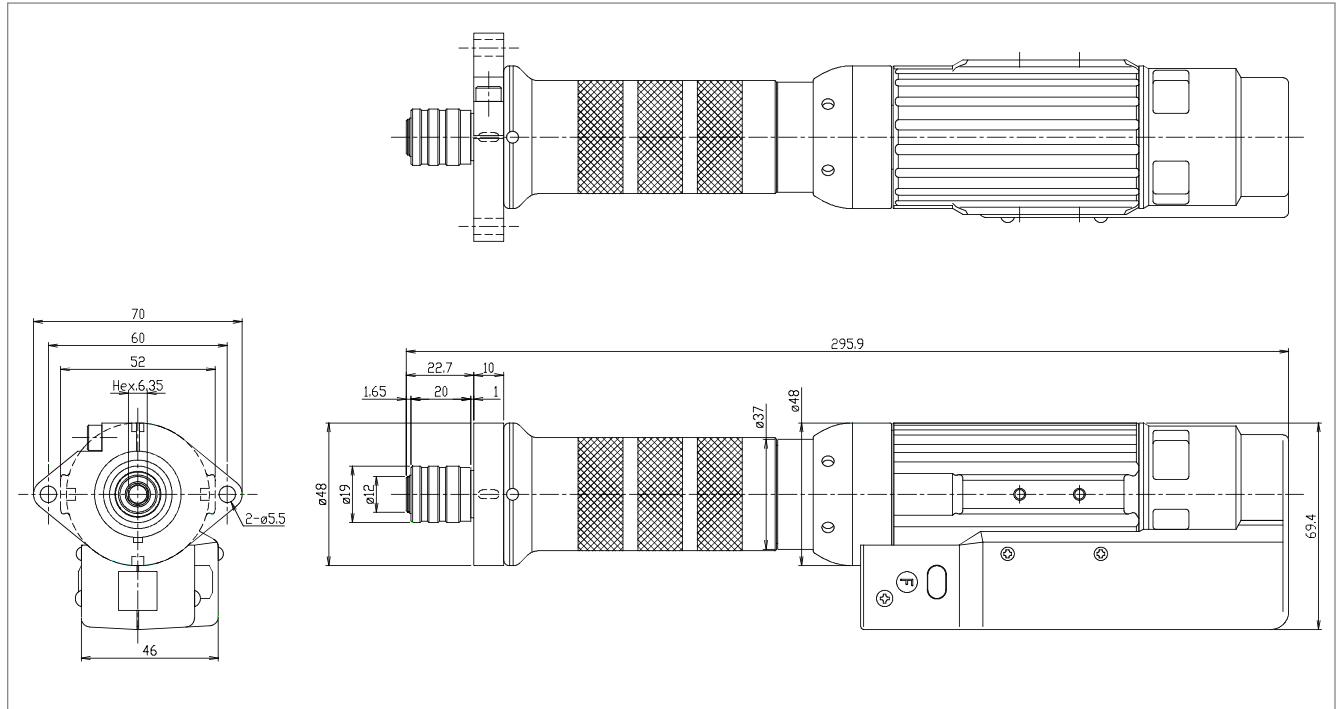


Dimensional drawings in mm

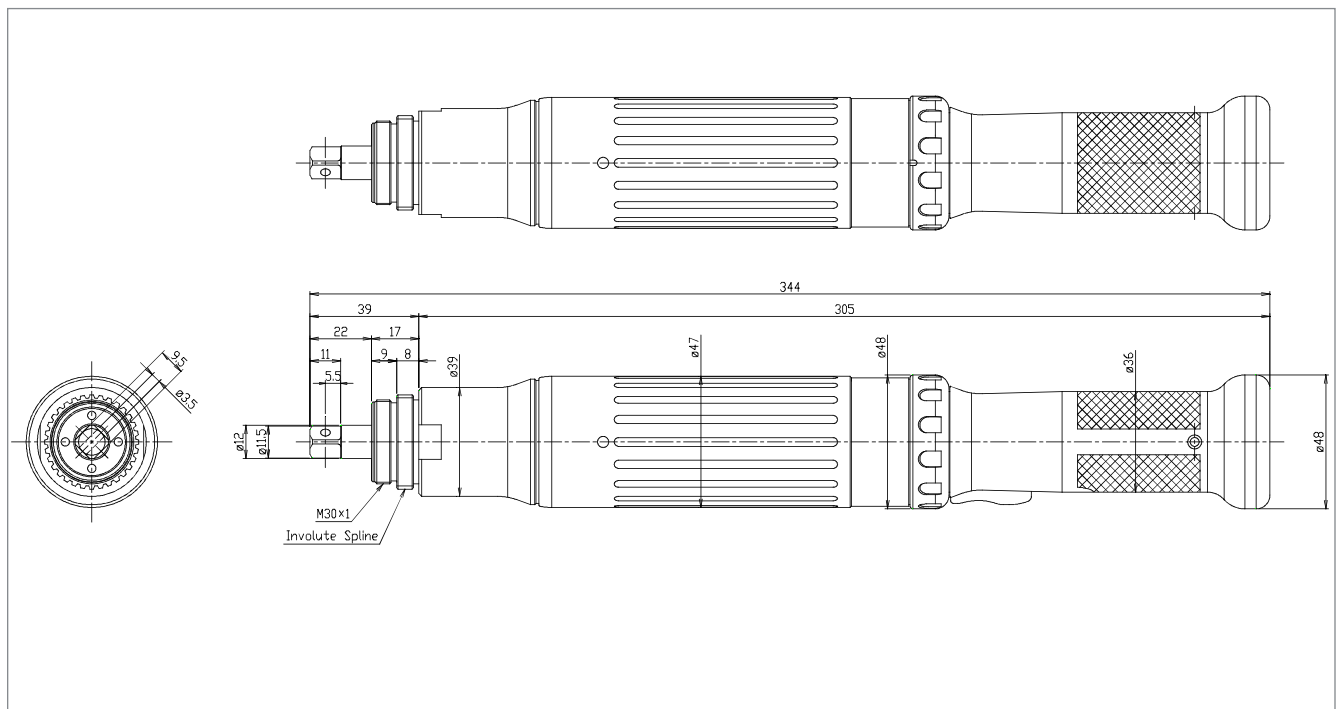


# Inline Dimensions

## ASG-EH2-R0005-SP and ASG-EH2-R0010-SP



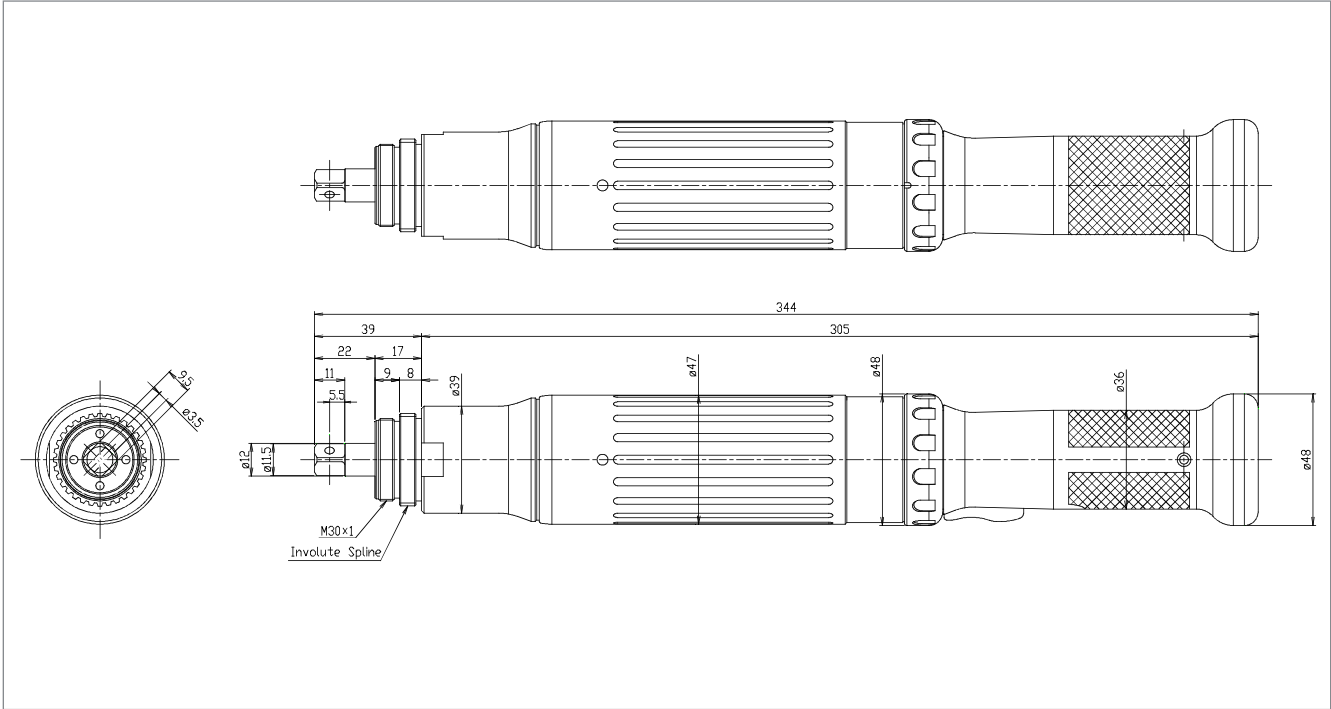
## ASG-EH2-R1016-S



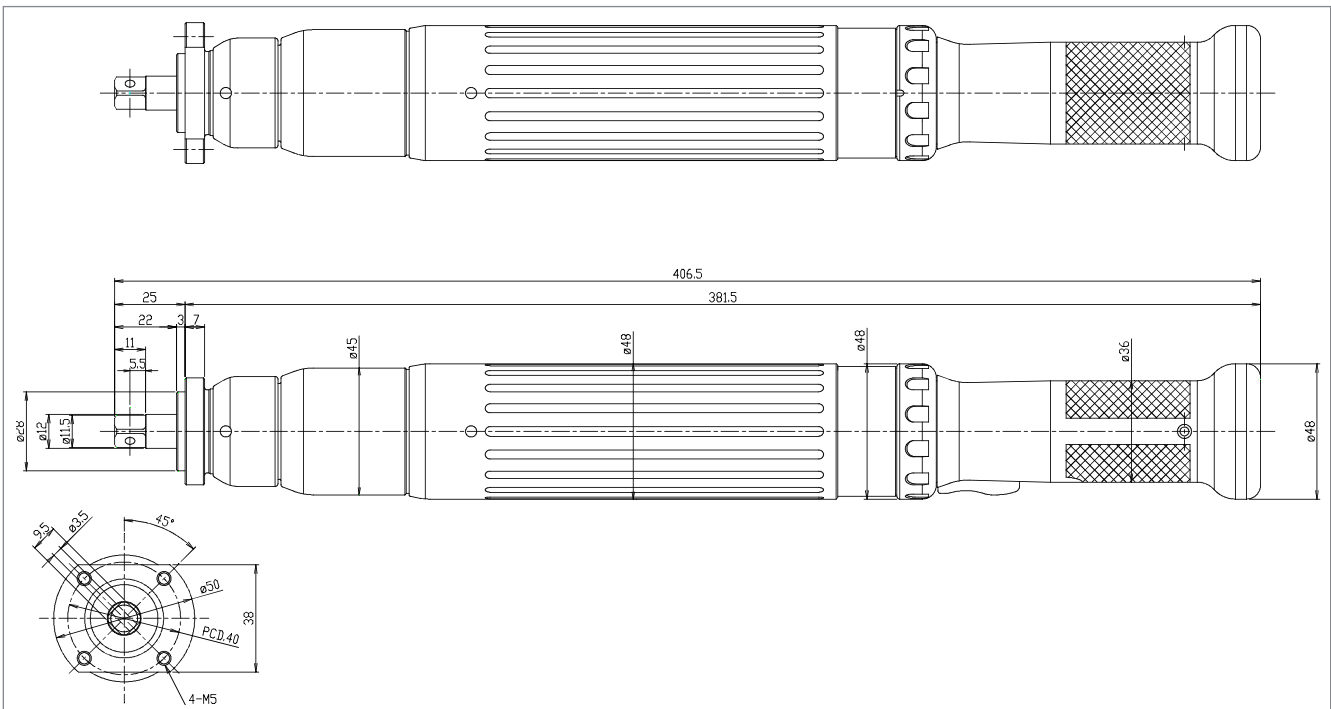
Dimensional drawings in mm

# Inline Dimensions

## ASG-EH2-R1020-S



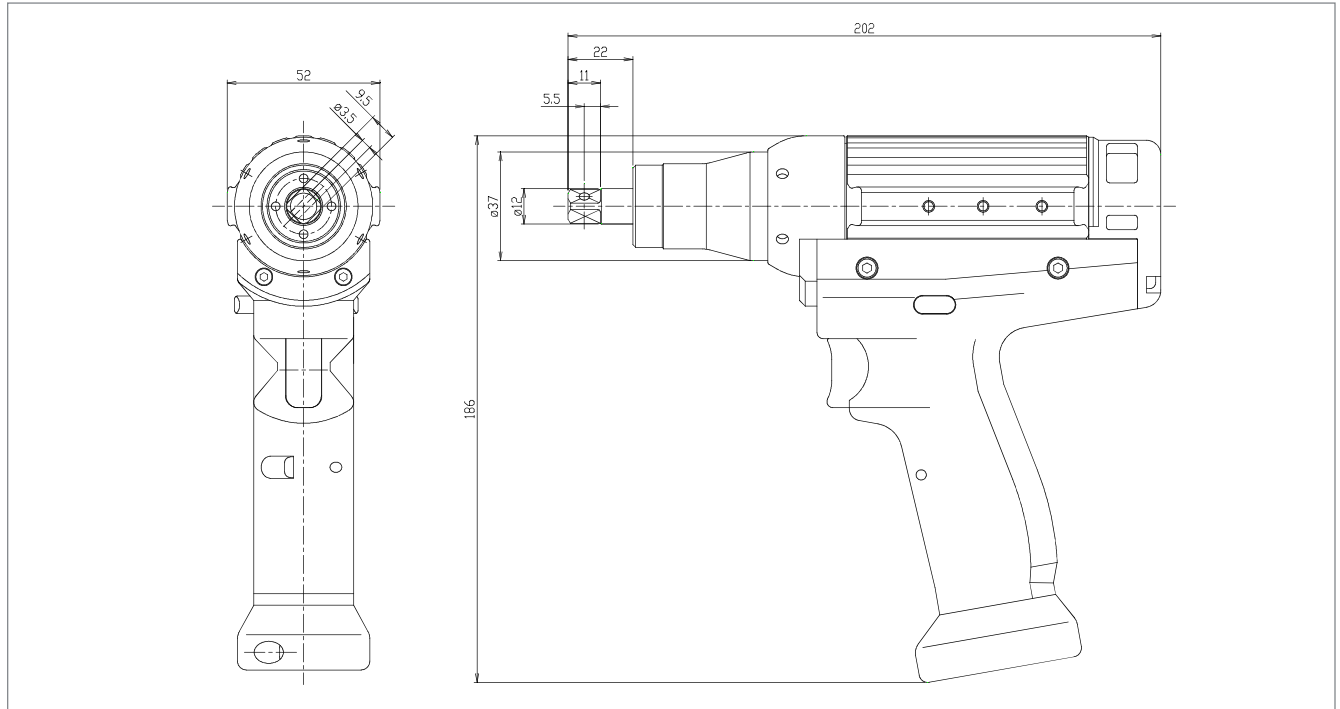
## ASG-EH2-R2035-S



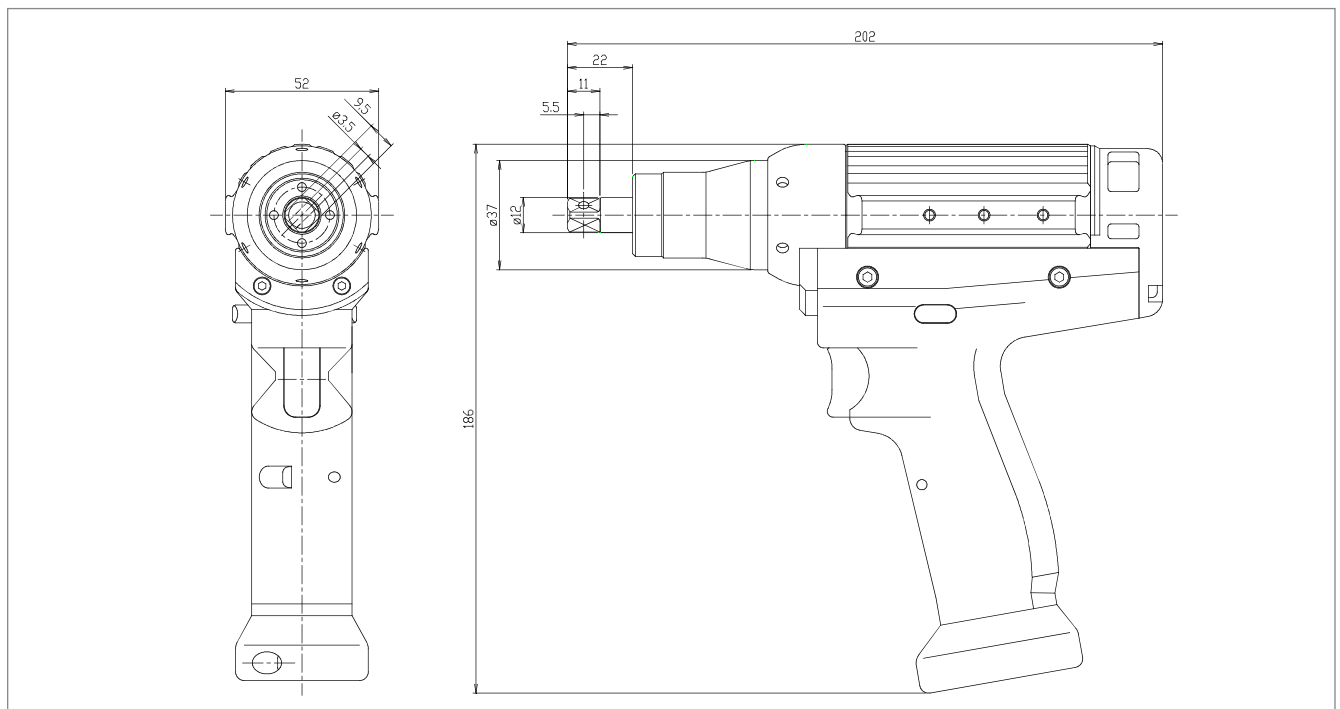
Dimensional drawings in mm

# | Pistol Grip Dimensions

## ASG-EH2-R0005-P



## ASG-EH2-R0010-P

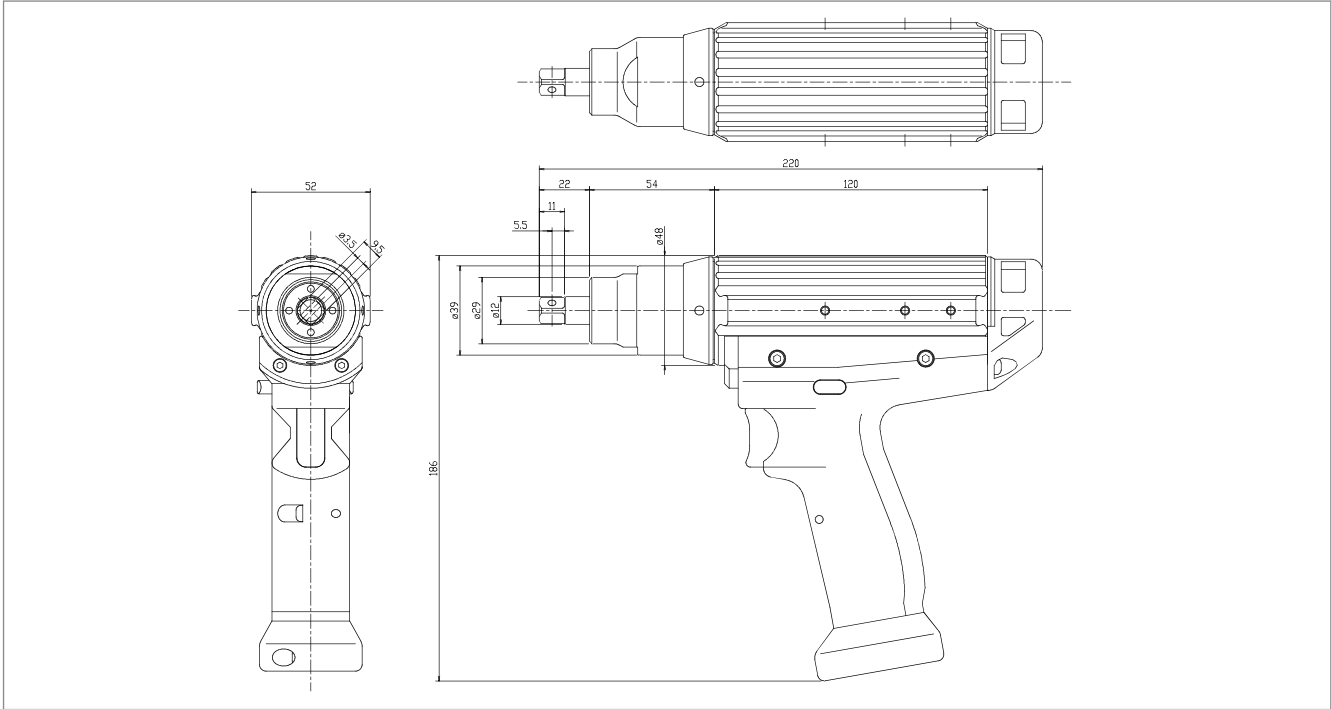


Dimensional drawings in mm

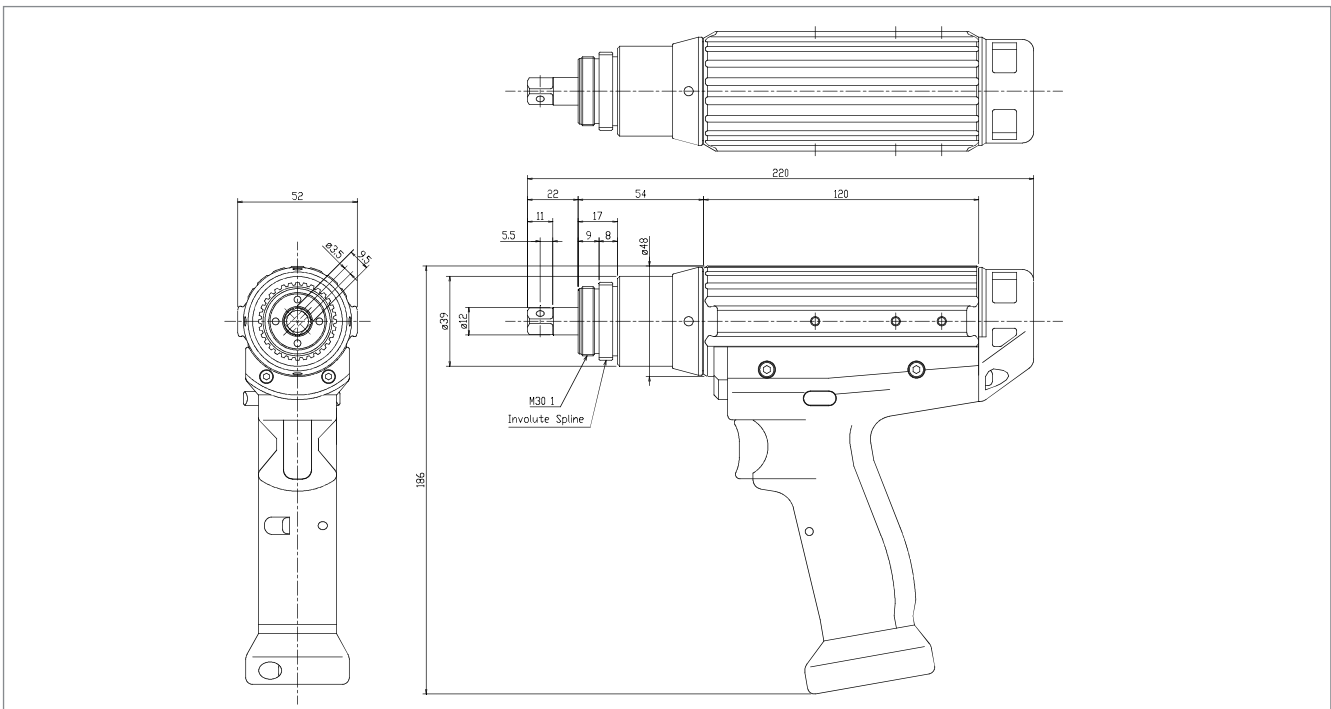


# | Pistol Grip Dimensions

## ASG-EH2-R1016-P and ASG-EH2-R1020-P



## ASG-EH2-R1016-PH and ASG-EH2-R1020-PH



Dimensional drawings in mm

# | EH2 Tool Cables and Accessories



Double Shell Construction  
Molded Connector

## Tool Cables

Sturdy, double-shell construction, straight tool cables are available in different lengths from 5 - 30 m (16.4 - 98.4 ft.) for connecting between the X-PAQ™ controller and EH2 Series tools. Retracting tool cable in 3 m (9.8 ft.) length and extension cables are also available.



ASG-EH2-CVC  
Coiled



ASG-EH2-CVS  
Straight



ASG-EH2-CVE  
Extension

Beginning Model Number	Add Type Code	Add Length Code (m)						Popular Model Number
ASG-EH2-	CVC	03						ASG-EH2-CVC03-SS
	CVS	05	10	15	20	25	30	ASG-EH2-CVS25-SS
	CVE	05	10	15				ASG-EH2-CVE10-SS

## Tool and Controller Accessories

### Tool Cable Adapters



ASG-EH2-CVA-CVAD-L  
90°



ASG-EH2-CVAD-U  
180°

### Tool Lever Switches



ASG-EH2-LS01



ASG-EH2-LS02

### Support Handles and Levers and Spindle



ASG-ENRH-SH01



ASG-ENRH-SH02  
With Selector Switch and Trigger



Installed  
Handles



Sample  
Multi Spindle

### Socket Tray



ASG-EH2-SC04-P (4 position)  
ASG-EH2-SC08-P (8 position)

### Tool Reaction Plates and Locking Nut



ASG-ENRH-RP20W  
Double Flange Spline



ASG-ENRH-RP20S  
Single Flange Spline



ASG-ENRH-LNM30  
Lock Nut  
(Required for Spline Reaction Plates)



ASG-ENRH-RP35W  
Double Flange

# | EH2 Tool Cables and Accessories

## Tool Hanging Fixtures



ASG-EH2-SB01  
16/20 Inline / 20/30 N.m Angle

ASG-EH2-SB02  
35 N.m Inline

ASG-EH2-SH01  
Inline/Angle

ASG-EH2-PH01  
Pistol

ASG-EH2-PH02  
Pistol/Inline

ASG-EH2-PH03  
Pistol

## Serial Communication Cables



Available in 3 lengths  
ASG-ENRZ-CVSR-015 (1.5m)  
ASG-ENRZ-CVSR-050 (5.0m)  
ASG-ENRZ-CVSR-100 (10m)

## NET Cables and Termination Resistor



Available in 3 lengths  
ASG-EH2-CVNK-005 (0.5m)  
ASG-EH2-CVNK-010 (1m)  
ASG-EH2-CVNK-030 (3m)

Termination Resistor  
ASG-EH2-CNST

## Controller Base



ASG-EH2-CF02

## I/O Connectors



ASG-EH2-FCN13-RL  
(13 wire)



ASG-EH2-FCN05-DC  
(5 wire)



ASG-ENRZ-CN36-EX  
(Optional I/O)

## Protective Covers

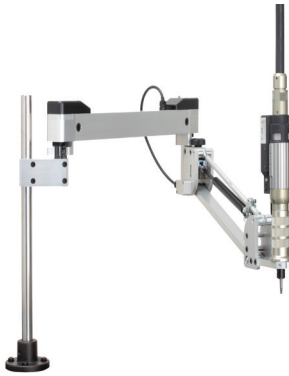


ASG-EH2-PP02 16-20 N.m Pistol  
ASG-EH2-PP03 05-10 N.m Pistol



ASG-EH2-RP01 20 N.m Angle  
ASG-EH2-RP02 30 N.m Angle

# | EH2 Tracer Arm for Error Proofing



The Tracer Arm for the EH2 vastly improves operating efficiency and ensures error-proof assemblies. It is equipped to detect the position of the EH2 tool and compare it to preprogrammed position data. The operator must perform the fastening sequence properly or the tool is disabled. Fastening data is stored and can be exported for qualification and analysis.



## Tracer Arm

<b>Model Number</b>	ASG-EH2-TA0505-R-AT1	ASG-EH2-TA0505-R-AT2	ASG-EH2-TA0505-R-AT3
<b>Compatible Tool Models</b>	ASG-EH2-R0005-SL/SP/SC ASG-EH2-R0010-SL/SP/SC	ASG-EH2-R1016-S ASG-EH2-R1020-S	ASG-EH2-R2035-S
<b>Applied Torque</b>	1.0 - 35.0 N.m (8.8-309.8 lbf.in)		
<b>Arm Length</b>	500mm x 500mm (19.7in x 19.7 in)		
<b>Arm Body Weight</b>	5.5kg (12.1 lb)		
<b>Repetitive Position Accuracy</b>	±1mm (0.04 in.)		
<b>Recommended Work Area (WxDxH)</b>	1000mm x 700mm x 330mm (39.3in x 27.5in x12.9in)		

## NET Cable

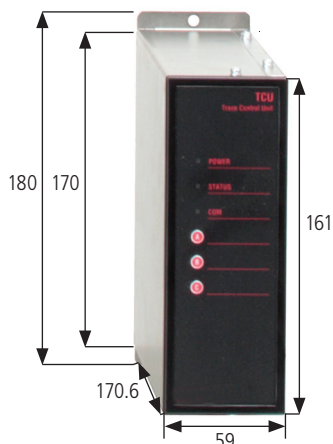
<b>Model Number</b>	ASG-EH2-CVNK-005	ASG-EH2-CVNK-010	ASG-EH2-CVNK-030
<b>Cable Length</b>	0.5m (1.6 ft)	1m (3.3 ft)	3m (9.8ft)
<b>Termination Resistor (2 Required)</b>	ASG-EH2-CNST		

## Resolver Cable

<b>Model Number</b>	ASG-EH2-CVR3-010	ASG-EH2-CVR3-050
<b>Cable Length</b>	1m (3.3 ft)	5m (16.4 ft)

## Arm Mounting Bracket

<b>Model Number</b>	ASG-EH2-SAFM500	ASG-EH2-SAWM500
<b>Function</b>	Install on floor/ceiling	Install on a wall



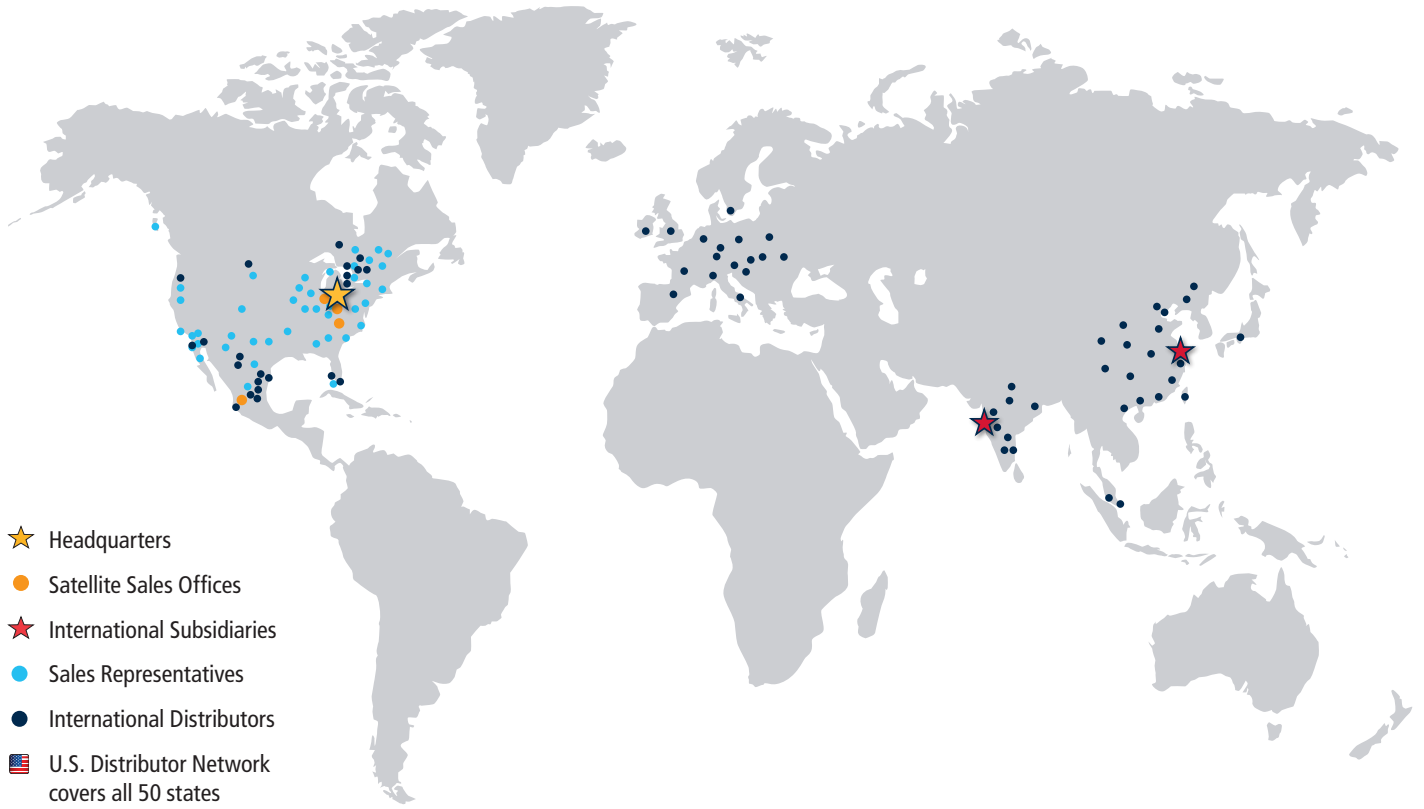
Tracer Control Unit  
Dimensions in mm

## Tracer Control Unit

<b>Model Number</b>	ASG-EH2-TCU-N
<b>Power Supply</b>	DC24V±10%
<b>Assignable Work Pieces</b>	99 Types
<b>Assignable Fastener Positions</b>	63 Positions Per Type

## Optional Accessories

<b>ASG-EH2-TCU-BRKT</b>	TCU Mounting Bracket
<b>ASG-NS100-A00-1</b>	Rotating switch grip for 5/10 N.m Inline tools
<b>ASG-NS100-B00-1</b>	Rotating switch grip for 16/20 N.m Inline tools
<b>ASG-NS100-C00-1</b>	Rotating switch grip for 35 N.m Inline tool
<b>ASG-NA923-A01</b>	Rotating switch grip mount for reaction spline
<b>ASG-EH2-SCAN</b>	2-D Barcode Scanner



**Our footprint covers the globe!**

## Global Support

ASG employs a team of technical experts to provide support, repair, calibration and preventative maintenance services. We welcome the opportunity to provide assistance by telephone or online chat Monday through Friday, 8 a.m. to 5 p.m. (U.S. Eastern Time) excluding holidays.

ASG maintains subsidiaries in Shanghai, China and Mumbai, India, and a sales office in Guadalajara, Mexico to provide direct support to our international customers. We work together with our global Field Sales Representative and Distributor Network to help customers standardize their assembly equipment and processes around the world.

Distributor:



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