

# ENGINEERED FASTENING SOLUTIONS

2019  
Selection &  
Configuration  
Guide



**STANLEY®**  
Engineered Fastening

 Assembly  
Technologies



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# About STANLEY Fastening

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## The Foundation of Tightening Excellence with STANLEY Assembly Technologies

STANLEY Assembly Technologies was founded in 1963 as a division of **The STANLEY Works**. Formerly STANLEY Air Tools, STANLEY Assembly Technologies has built a reputation as a leader in delivering high value assembly equipment solutions to customers in multiple industries across the globe.

Located in Cleveland, Ohio, the headquarters of STANLEY Assembly Technologies is proud to say that our precision threaded fastening products are "*Assembled in America with Global Components*". Our Cleveland facility houses all functional business areas, including, but not limited to, operations, purchasing, customer service, engineering, quality, training, product management, marketing and service and support.

Extending global support and coverage, there are training and application centers in our Cleveland, Ohio facility, our STANLEY Engineered Fastening Automotive North American facility in Troy, Michigan as well as our STANLEY Engineered Fastening Automotive European Headquarters in Germany.

In support of our global customer base, STANLEY Engineered Fastening has sales and service office locations across the globe in France, Germany, Spain, China, India, Japan, Brazil and more.



Today, our highly skilled sales and service team works directly with major customers and supports a network of select distributor partners in all global areas. These veteran sales and service engineers are fully qualified to analyze end-user applications and propose the ideal selection of assembly tooling.

**Our customers benefit from this experience in the following ways:**

- » *Tool and application assistance by factory-trained, experienced sales and service engineers*
- » *Field service by technicians located strategically throughout the world*
- » *Design consultation for your specific application needs to identify or develop the design of the tool and the output to optimize performance and the life of the tool to your application*
- » *Engineered Systems has extensive expertise in the design and build of custom turnkey fastening solutions including automation, semi-automation, multiple spindle nutrunners and Bolt Holding tools, as well as Torque Tube and Articulating Arm systems*

## **STANLEY's Commitment to Quality:**

- » **EXCEED**  
Our Customer Expectations
- » **IMPROVE**  
Our Company Continuously
- » **LEAD**  
Our Industry



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# About STANLEY Fastening

**ERGONOMIC MULTI-FINGER TRIGGERS, HANDLE SIZE AND HIGH POWER-TO-WEIGHT RATIOS MAKE OUR TOOLS USER FRIENDLY AND PREFERRED BY OPERATORS. OUR TOOLS ARE DESIGNED WITH THE OPERATOR IN MIND.**

## **ERGONOMIC BY DESIGN**

As a major supplier of power tools to industrial manufacturing facilities worldwide, STANLEY Assembly Technologies has been involved in ergonomics since our inception in 1963. Ergonomic multi-finger triggers, handle size and high power-to-weight ratios make our tools user friendly and preferred by operators. Our tools are designed with the operator in mind.

From patented clutch designs in our air tools to patented speed control algorithms for DC Electric tools, we are continuously finding new ways to reduce the torque reaction impulse felt by the operator of our direct-drive tools.

We also offer a complete line of articulating arms and balance devices to provide alternative solutions to torque reaction strain on operators.

Our pistol style tools have been designed with an under slung handle which changes the center of balance and puts the tool weight directly over the hand. This allows the operator to hold the tool level without having to pull, then hold the tool, to the level position required with other handle-in-the-rear tool designs.

The safe use of our products is paramount to our company which has lead to our working with national and international organizations to actively participate in the development of noise and vibration standards. Our tools have very low noise and vibration levels as a result of this participation.

While we must design tools for safe and convenient operation, the primary ergonomic concern is in the operator station design. The position of the operator, the position of the hand or arm, body attitude and reach while applying the tool are of critical importance. We can help mitigate ergonomic stresses by recommending the best tool geometry, reaction device and operator position to fit the application. You can rely on our expertise to recommend a safe working process while setting high integrity joints with ergonomically designed tools.

## **PREVENTIVE MAINTENANCE**

To ensure years of trouble free operation we recommend establishing a program of inspection, maintenance and calibration of our power tools at regularly scheduled intervals.

Preventive maintenance, making repairs and replacing worn parts periodically before they become so worn and cause extensive damage can lower maintenance costs considerably and prevent loss of production.

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## **REPAIR SERVICE**

STANLEY Assembly Technologies strives to build tools that will remain on-the-job for years, using the highest grade material available. Mechanical and electrical components do wear out despite this high engineering effort. That is why we maintain a stock of repair parts for all of our power tools. We certify repair centers around the world annually to provide the best technical service and fast turnaround with genuine STANLEY parts. STANLEY Certified Repair Centers are capable of the same level of repair and test as our factory.

## **RECALIBRATING TOOLS**

Instrumented power tools require periodic verification of their dynamic torque output by calibration of the torque sensing transducer. Our factory and our Certified Repair Centers maintain the capability to recalibrate any power tool using the latest electronic torque measuring equipment. A calibration certificate is supplied with each tool calibration performed.

## **TRAINING**

STANLEY provides training at our Cleveland, Ohio and Troy, Michigan facilities. On-site customer training can also be arranged upon request. Topics include: Torque Theory, Tool Design and Operation, Controller Features and Benefits, Programming and Setup, Plant Integration, Networking, Data Collection and Troubleshooting of Faulted Joints. We encourage attendance in at least one of these training sessions to become more familiar with fastening in general and STANLEY's products specifically.

## **TECHNICAL SUPPORT**

As a supplier to the assembly market, STANLEY has developed a global service network to support the manufacturing operations of our customers. STANLEY offers many levels of customer support from basic maintenance and operator training to full service repair facilities and maintenance service contracts.

## **PARTNERING**

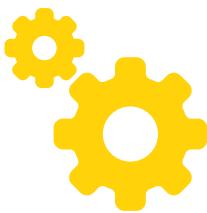
STANLEY Assembly Technologies has always believed that the relationship with our customers should be defined as a partnership. This partnership is based on:

- *Understanding customer fastening needs.*
- *Prompt and diligent resolution of issues.*
- *Our goal of being the first choice for your threaded fastening needs*

As a partner, we strive to provide improved fastening solutions that result in the ability to increase productivity while reducing warranty and total per unit fastening costs. STANLEY's superior solutions are designed to not only meet, but exceed customer expectations.

# Catalog Guide & How to Order

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## HOW TO ORDER

To configure a specific tool, check the options table that corresponds with the tool type, style and torque range listed. To receive the option requested installed and ready for service, add the option part number to the end of the tool model number — for example:

**EB33LA18-48 with Rubber Grip and 360° Swivel Bail options installed and ready to use:**

Qty: Order Number: Including:  
1      **EB33LA18-48**      **20H207910, 20K101400**

To order options separately to be installed later, list the option item numbers as separate lines — for example:

**EB33LA18-48 with Rubber Grip and 360° Swivel Bail options separate to be installed later:**

Qty: Order Number:  
1      **EB33LA18-48**  
1      **20H207910**  
1      **20K101400**

*Note: When ordering configurable options for a tool, the lead-time becomes that of the longest item added to the tool. Please contact a STANLEY Assembly Technologies sales professional for pricing, lead times and delivery.*



## TOOL SPEEDS

Tool speeds are indicated in revolutions per minute or "rpm" and indicates the free speed or the speed at which the tool runs at no load. Pneumatic tool speeds are rated at a working pressure of 6.3 bar, or 90 psi if not stated otherwise and can deviate up to +/- 10% from the stated value. Electric tool speeds are the rated (maximum) speed of the tool. Variable speeds lower than rated are available through the programming interface.



## TOOL WEIGHTS

Tool weights are published in both Kilograms (kg) and Pounds (lb). All tool weights are approximate and some slight variations from engineering changes are possible.

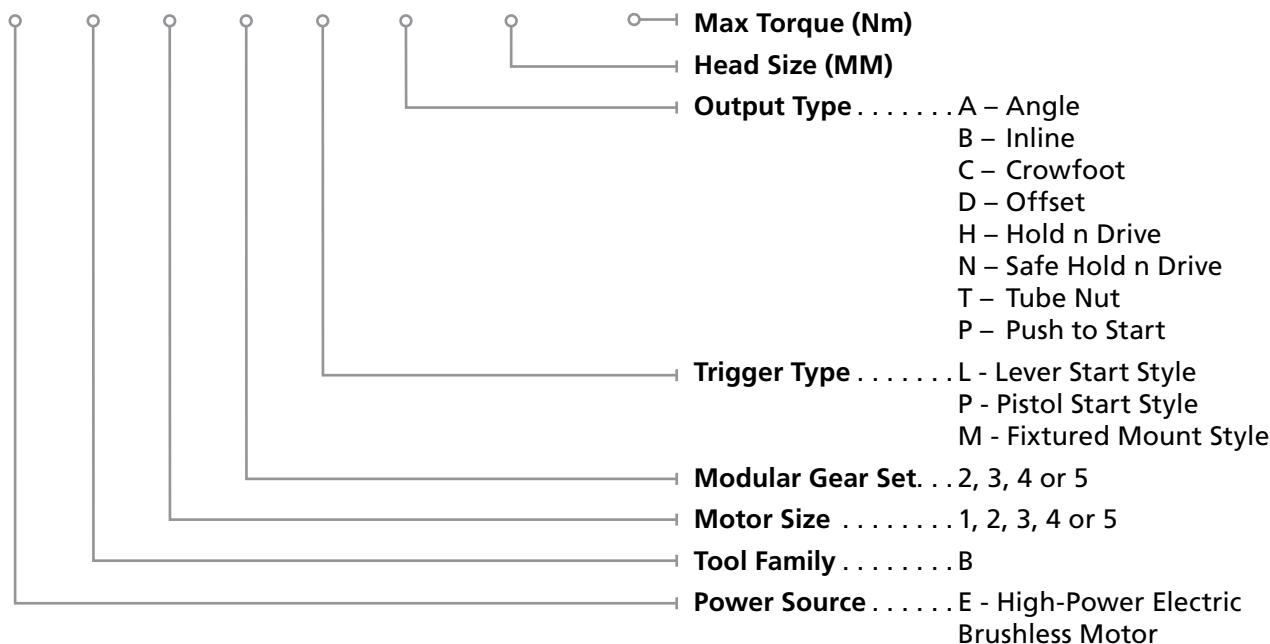
# Tool Labeling Key

All of the STANLEY Assembly Technologies' tools use a common lettering/numbering structure that will guide the user through the process of choosing the correct tool in the correct form for use. There are three separate lines of tools presented in the catalog and a clear method of naming and understanding has been implemented for ease of use.

The tool key below explains the significance of the letters/numbers forming the name of the tool model and part number.

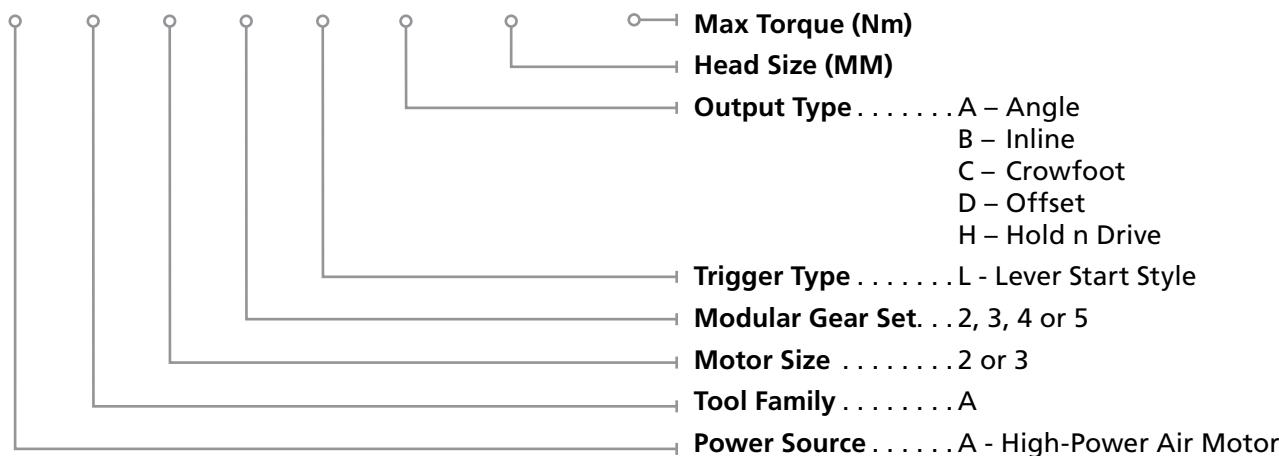
## DC Electric Tools

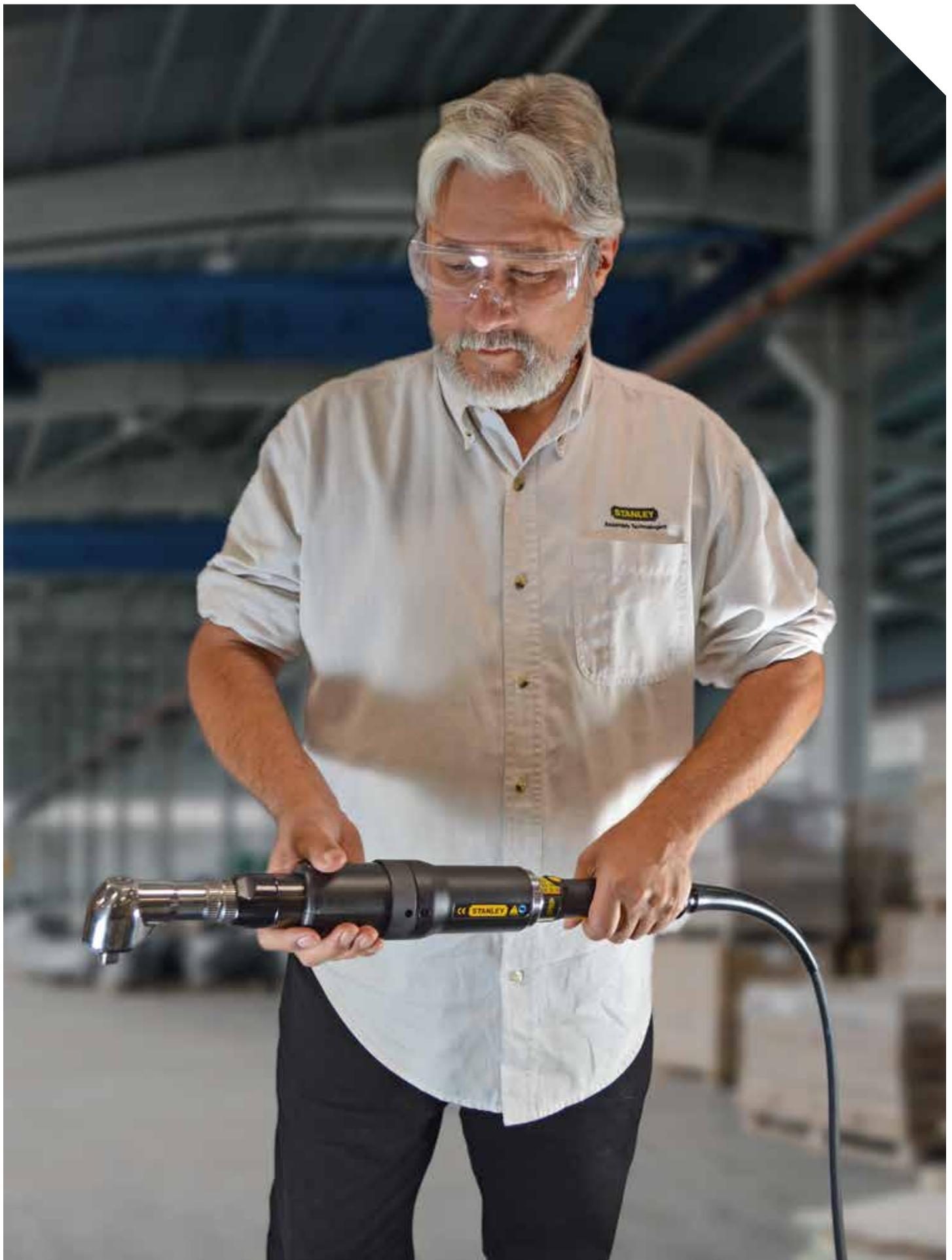
**E B 3 3 L A 18 46**



## Air Clutch Tools

**A A 3 3 L A 18 46**





# EB-Series: Reliability and Performance

The STANLEY Assembly Technologies EB-Series tools have been engineered to combine the latest technologies with STANLEY's best design features resulting in best-in-class tools.

## FEATURES AND BENEFITS:

- **Low Friction Gearing** — In both gearbox and angle head assemblies for reduced noise and vibration for improved ergonomics.
- **High Efficiency Motor** — For best-in-class Power-to-Weight ratio.
- **Modular Construction** — For low MTTR (*Mean Time To Repair*). Common components reduce complexity and cost:
  - » Handle/Lever assembly common to all handheld tools.
  - » Motor sizes
  - » Modular gear sets
  - » Angle heads
- **Field Repairable** —
  - » Matched replacement gear sets
  - » Grease fittings on all angle tubenut and crowfoot outputs for ease of preventive maintenance
- **Full Line of Tools** — 0.4 Nm to 2000 Nm with geometries to fit a wide range of applications



# EB-Series: Lever Style

THE STANLEY ADVANTAGE:

**Industry Leading  
Power-to-Weight Ratio**

**NEW! High Speed Motor**

*Smoother and Lighter*

**NEW! High Speed Gearing**

*Quieter and  
Cooler Running*

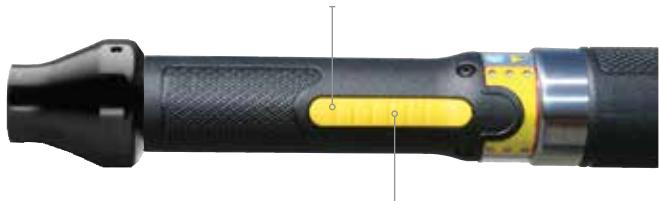
**NEW! Grease  
Fitting Location**

Durable  
Motor Cover



- *High/OK/Low Lights indicate fastening status with 360° viewing.*
- *Multifunction button can select from 2 job setups and other process functions.*

A non-contact optical switch under the start lever increases Mean Time Between Failure (MTBF) by eliminating mechanical or magnetic switches which wear out over time.



Optional accessories include  
Forward Facing Levers.



Increased lever length, recessed mounting, and “flush to handle” activation improves fit to the operator’s hand.

Clear cover protects multifunction panel and model number label.

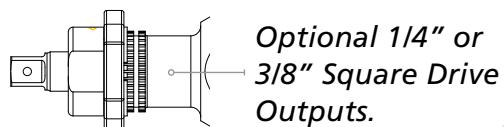


Recessed multifunction button requires minimal pressure with tactile feedback. A raised ring prevents accidental activation.

# EB-Series: Pistol Style

Faster Models to 470 Nm

Intelligently Positioned Status Lights



Push-To-Start  
*Optional*



Brilliant Headlights  
Illuminate Low Light  
Fastener Access Points

Programmable Buttons  
Improve Operator  
Effectiveness

Ergonomic  
Handle Design for  
Operator Comfort

Use Lite Cables for  
Better Ergonomics

## Fast Tools for Small Jobs

***Lighter, Faster, More Power***

- Torque Ranges up to 20 Nm
- All Models Under:
  - » 2 lbs (0.9 Kg) in weight
  - » 1 foot (305 mm) in length
- Push-To-Start Models Include Headlights
- Available with Crowfoot and Tubenut Outputs

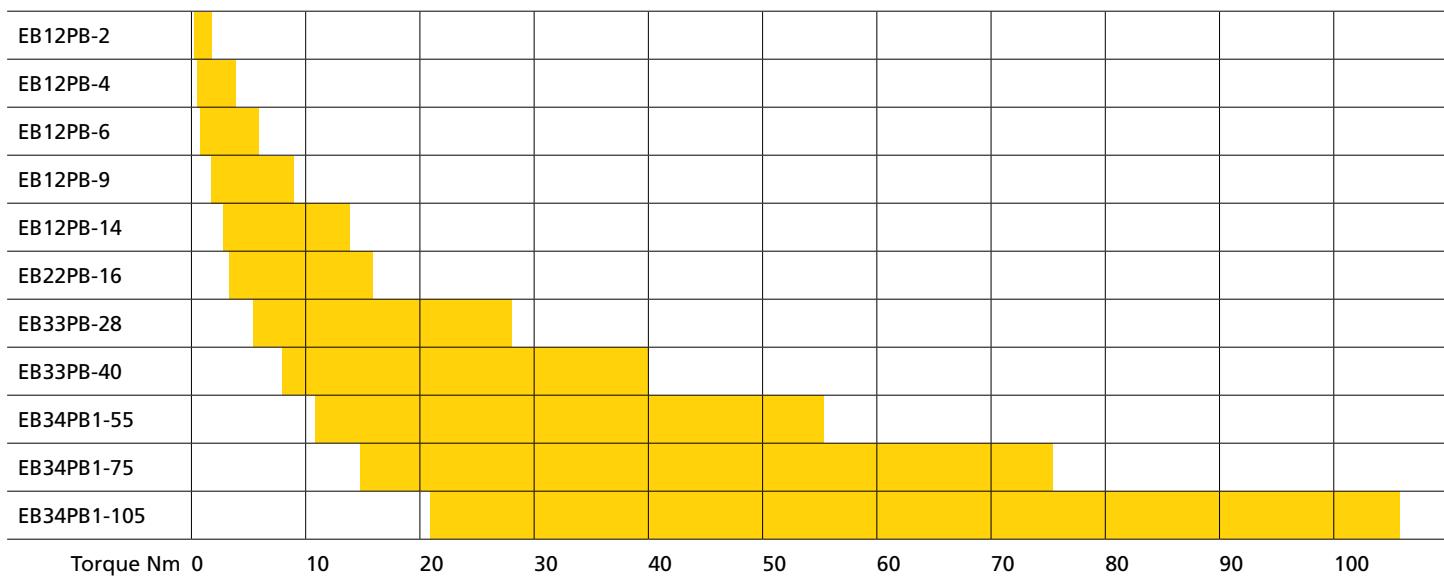


# EB-Series Torque Range: Pistol & Lever Style

The EB-Series Corded Tool Product Line offers hand-held and fixtured tools up to 2000 Nm.

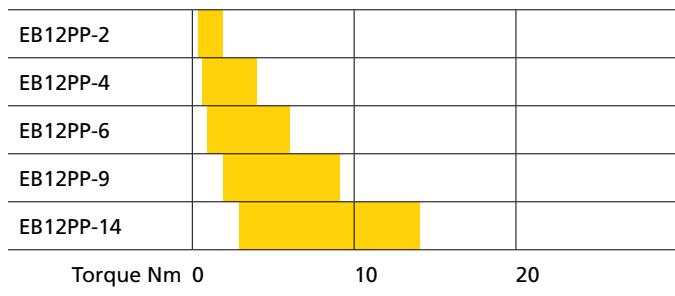
## Inline Pistol Grip

### MODELS:



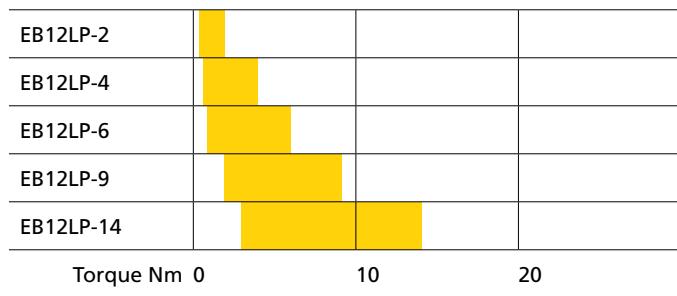
## Push-to-Start Pistol Grip

### MODELS:



## Push-to-Start Lever Style

### MODELS:



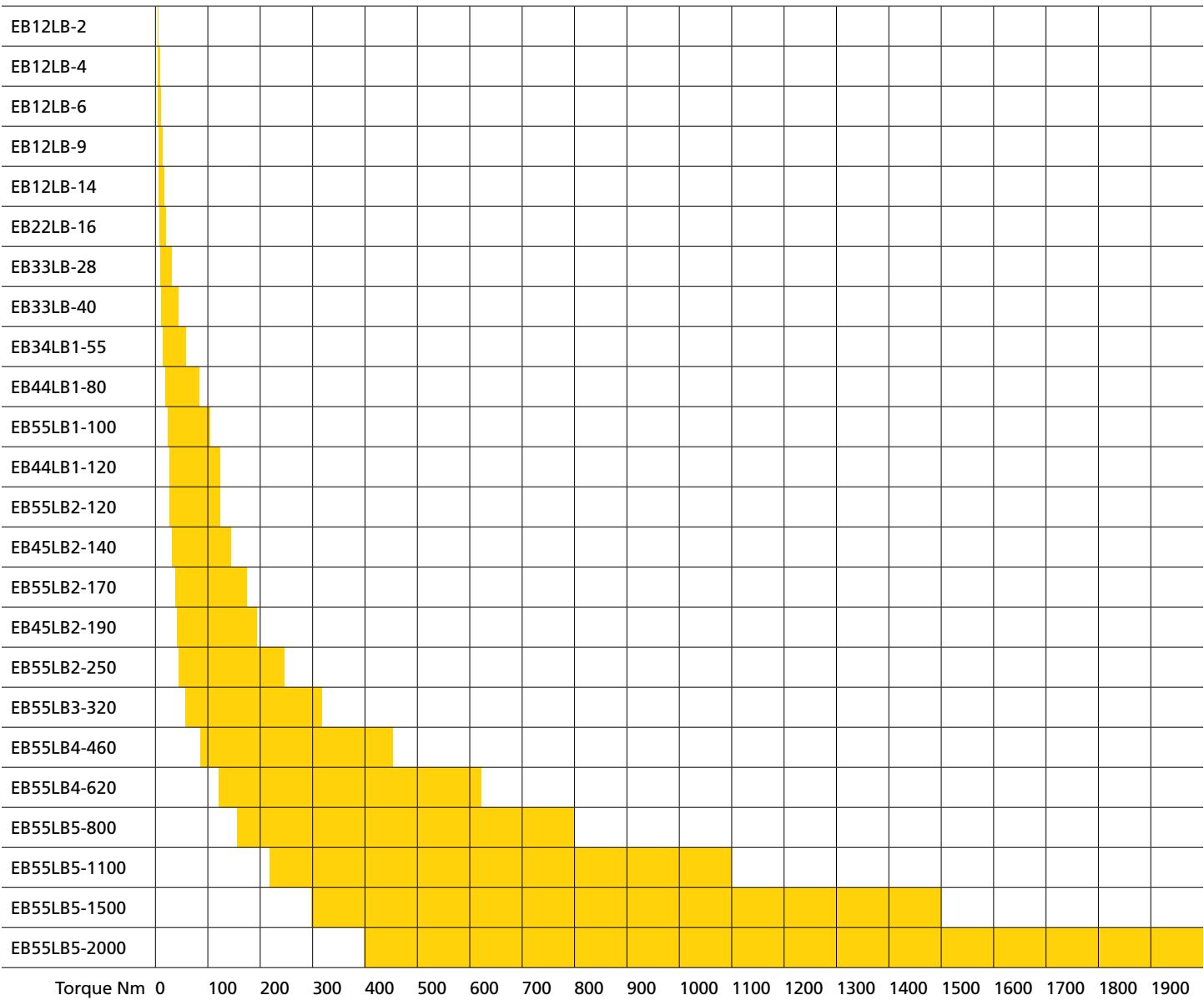
**Please Note:** These charts are a guide for the use of our tools. Programming of these tools can have a direct effect on the capability and performance.

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## Inline Lever Style

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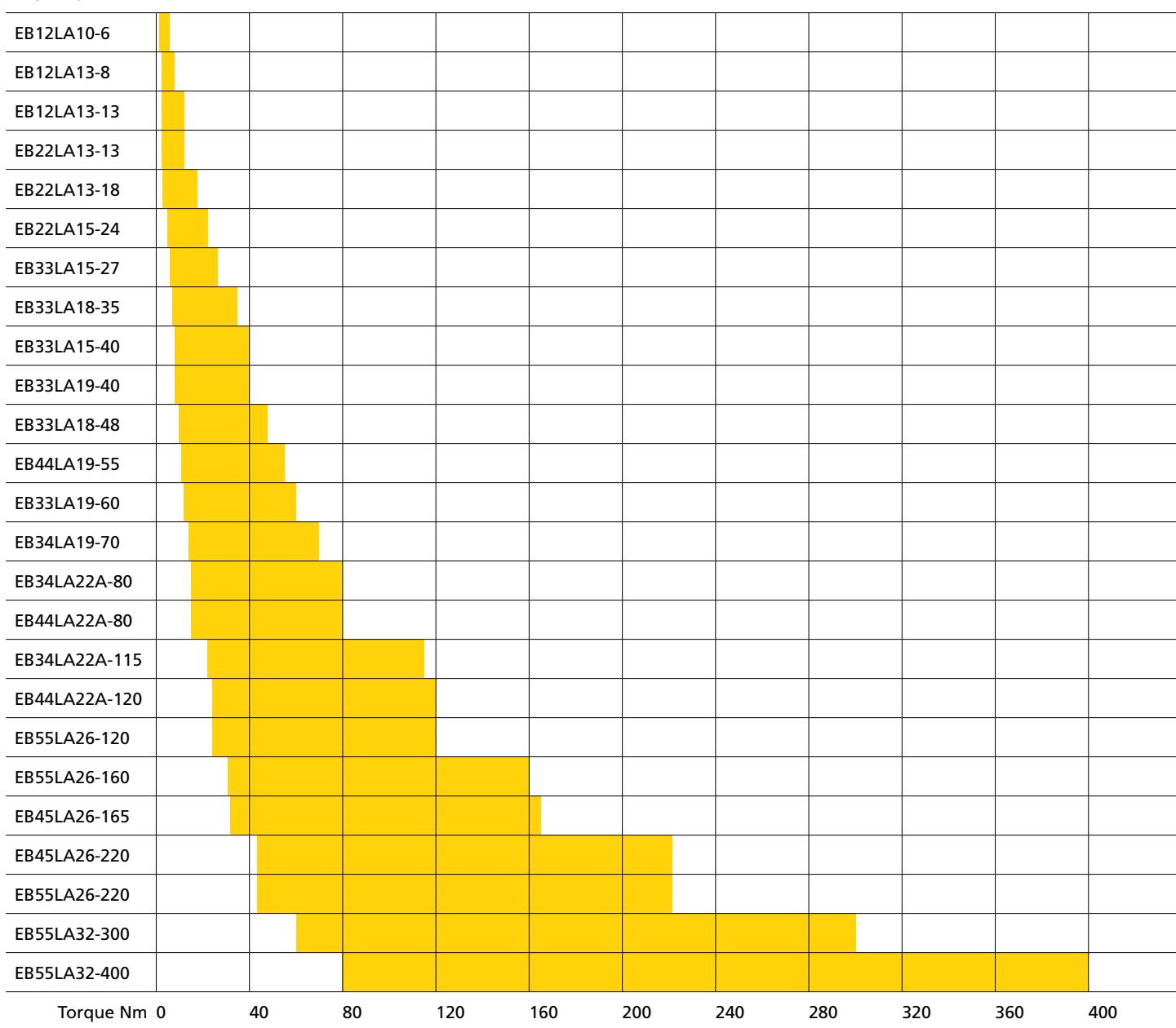
### MODELS:



**Please Note:** This chart is a guide for the use of our tools. Programming of these tools can have a direct effect on the capability and performance.

## Angle Lever Style

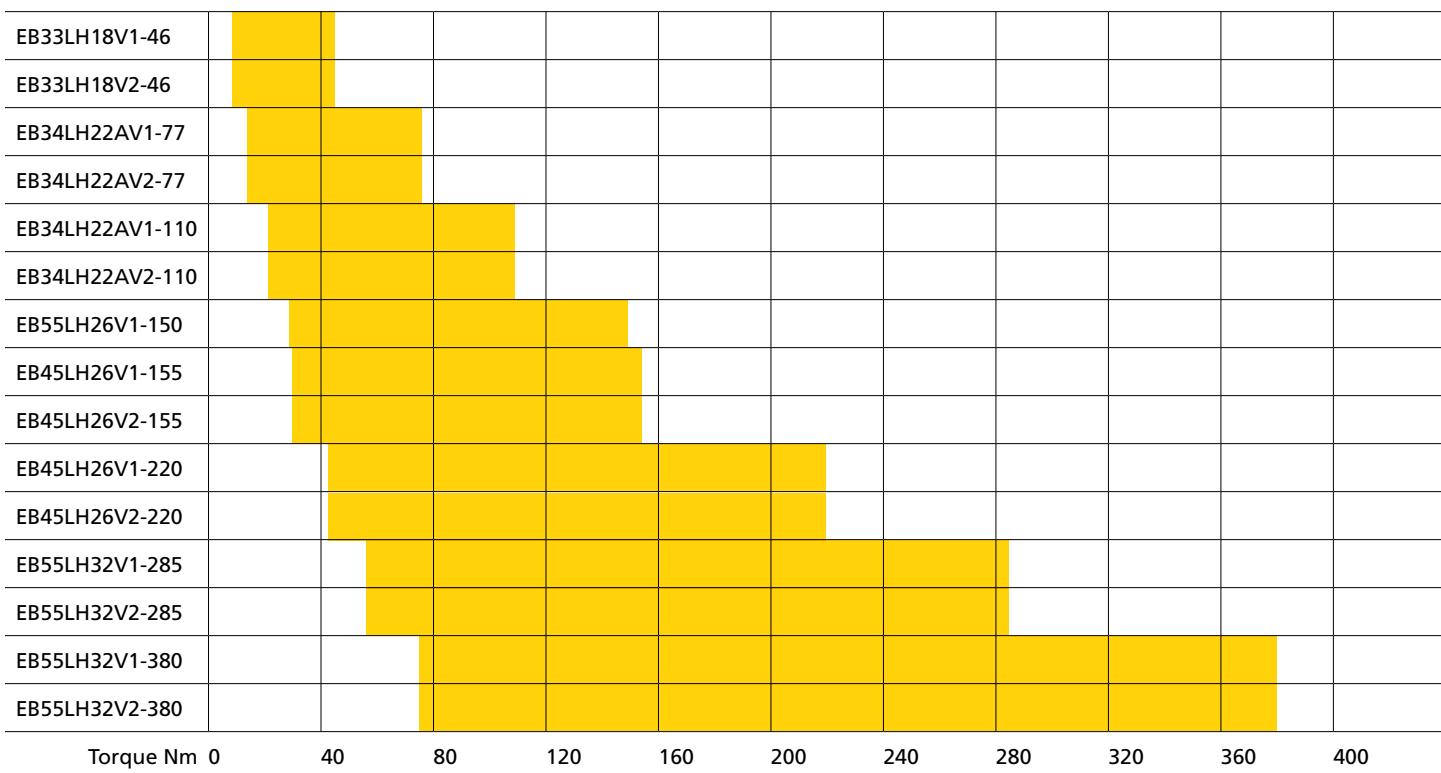
### MODELS:



**Please Note:** This chart is a guide for the use of our tools. Programming of these tools can have a direct effect on the capability and performance.

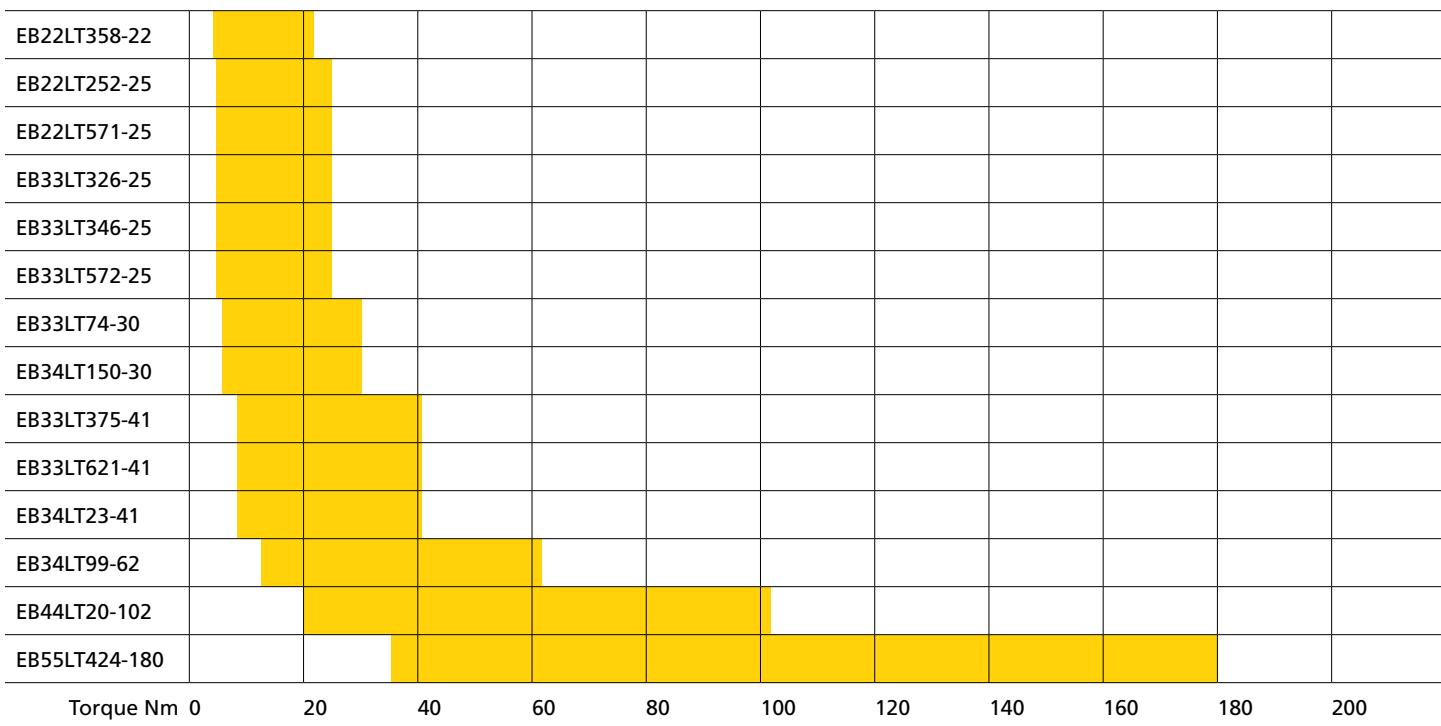
## Hold and Drive Lever Style

MODELS:



## Tubebut Lever Style

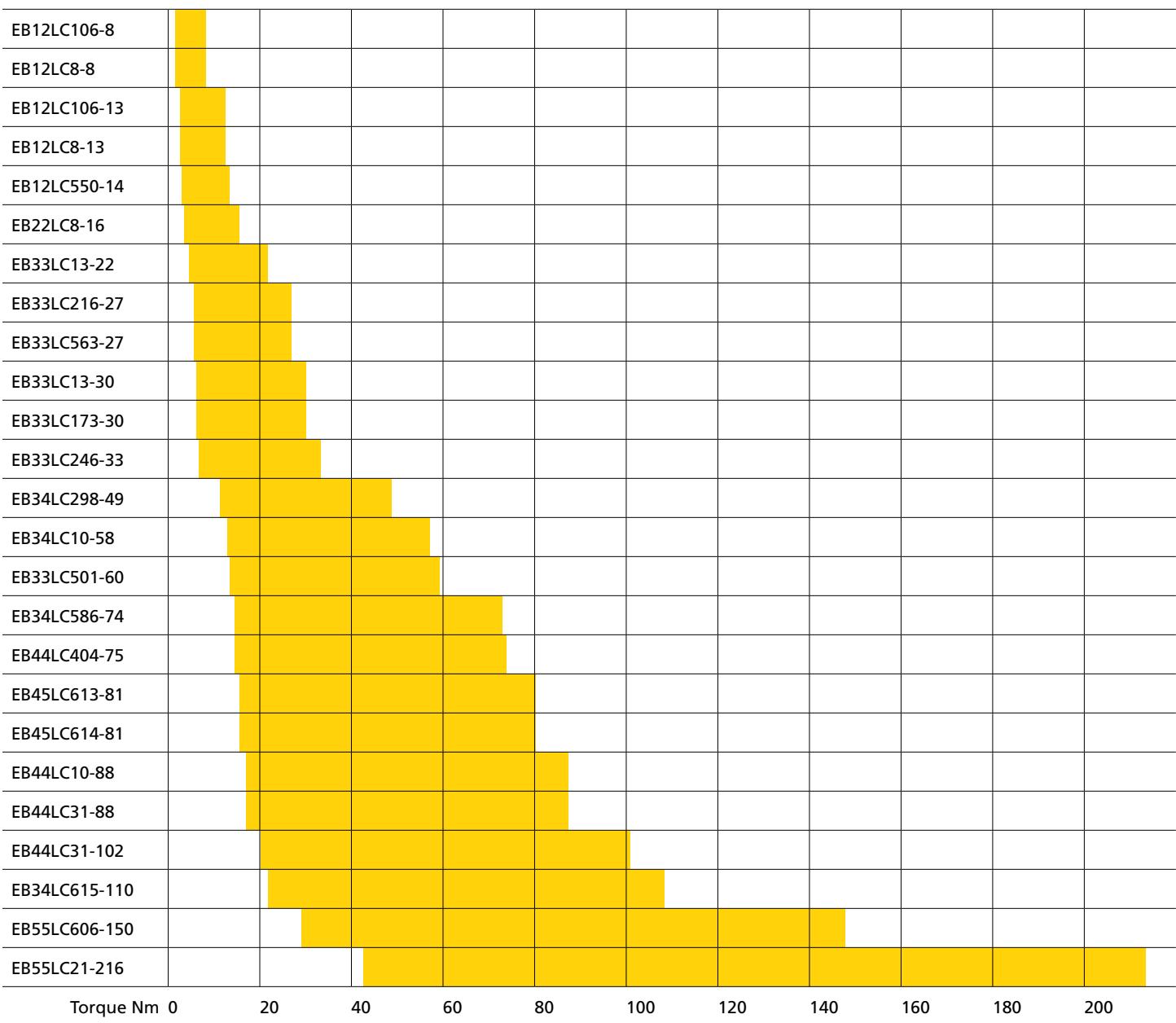
MODELS:



**Please Note:** These charts are a guide for the use of our tools. Programming of these tools can have a direct effect on the capability and performance.

## Crowfoot Lever Style

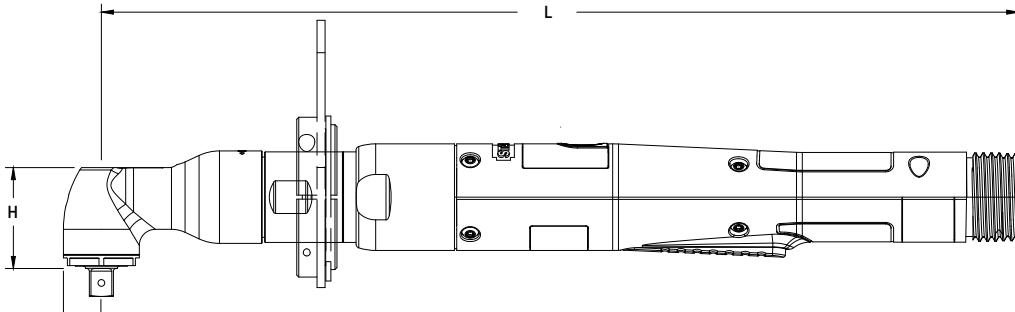
### MODELS:



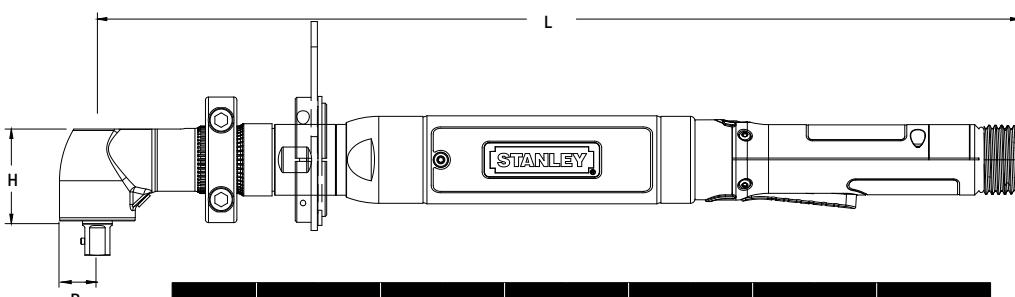
**Please Note:** This chart is a guide for the use of our tools. Programming of these tools can have a direct effect on the capability and performance.

# Angle Lever Tools

## 1.2 to 60 Nm

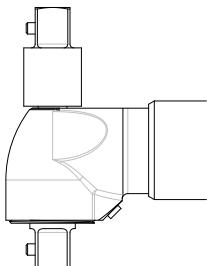


Model	Rated Speed	Max Torque		"R" Side to Center		"H" Head Height		"L" Length		Weight		Output
	RPM	Nm	lb ft	mm	in	mm	in	mm	in	kg	lb	
EB12LA10-6	2110	6	4.42	10	0.39	31.9	1.26	319.3	12.6	0.89	1.96	1/4" SD
EB12LA13-8	1400	8	5.90	13	0.51	32.7	1.29	321.6	12.7	0.93	2.05	3/8" SD
EB12LA13-13	970	13	9.58	13	0.51	32.7	1.29	321.6	12.7	0.93	2.05	3/8" SD
EB22LA13-13	1550	13	9.58	13	0.51	32.7	1.29	343.3	13.5	1.08	2.38	3/8" SD
EB22LA13-18	1075	18	13.3	13	0.51	32.7	1.29	343.3	13.5	1.08	2.38	3/8" SD

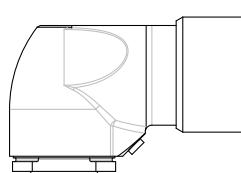


Model	Rated Speed	Max Torque		"R" Side to Center		"H" Head Height		"L" Length		Weight		Output
	RPM	Nm	lb ft	mm	in	mm	in	mm	in	kg	lb	
EB22LA15-24	825	24	17.7	15	0.59	36.5	1.44	366.5	14.4	1.21	2.66	3/8" SD
EB33LA15-27	1515	27	19.91	15	0.59	36.5	1.44	415.7	16.4	1.55	3.41	3/8" SD
EB33LA18-35	1165	35	25.81	18	0.71	39.3	1.55	444.7	17.5	1.66	3.65	3/8" SD
EB33LA15-40	1015	40	29.49	15	0.59	36.5	1.44	415.7	16.4	1.55	3.41	3/8" SD
EB33LA19-40	1025	40	29.49	19	0.75	48.7	1.92	458.4	18.0	1.87	4.11	1/2" SD
EB33LA18-48	880	48	35.39	18	0.71	39.3	1.55	455.4	17.9	1.66	3.65	3/8" SD
EB33LA19-60	680	60	44.24	19	0.75	48.7	1.92	458.4	18.0	2.04	4.50	1/2" SD

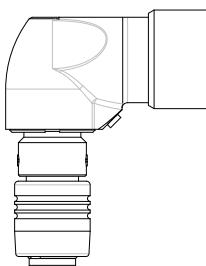
## EB Angle Tool Output Options



Double Ended



Flush



Quick Change

## EB Angle Tool Options

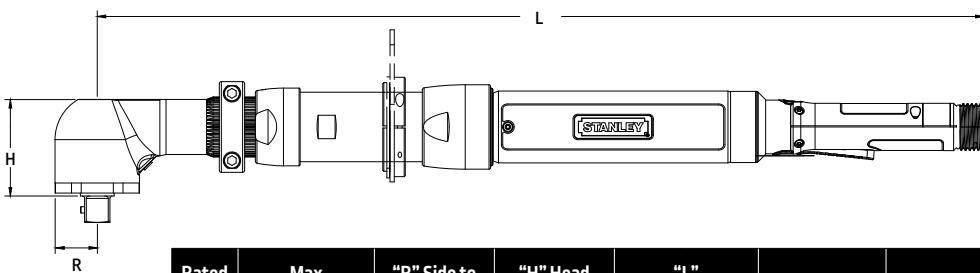
A10 Output	Part No.
3/8" Square Drive	20D122901
1/4" Quick Change	20D122902
A13 Output	Part No.
3/8" Double-Ended, LH Thread*	20D121912
Flush Socket 10mm Max	20D121914
1/4" Quick Change	20D121916
3/8" Double-Ended, RH Thread*	20D121917
Flush Socket 13mm Max	20D121918
1/4" Square Drive	20D121919
1/4" Magnetic Internal Hex	20D121920
A15 Threaded Output 20D137500	Part No.
3/8" Square Drive	20D138900
Flush Socket	20D138904
1/2" Square Drive	20D138901
A15 Output Splined 20D137504	Part No.
3/8" Square Drive	20D138900
Flush Socket	20D138902
1/2" Square Drive	20D138901
A18 Output	Part No.
3/8" Square Drive	20D136500
3/8" Double-Ended, RH Thread*	20D136502
Flush Socket	20D136503
A19 Threaded Output	Part No.
Flush Socket	20D100021
Reaction Bar [A15 Splined/A19]	Part No.
Reaction Bar Assembly (Default)	20K100000
Mounting Flange Assembly	20K100300
Base Mount Bracket Assembly	20K100500

\*RH-Thread is Right-Hand Thread. This is an option used if the end user uses the additional output for clockwise tightening or loosening. LH-Thread is Left-Hand Thread. This is an option used if the end user uses the additional output for counter-clockwise tightening or loosening.

Suspension Bails	Part No.
Wire Bail [EB_2/3/4 Tools]	A3061
Swivel [A10, A13 only]	20K101402
Swivel [A18 only]	20K101400
Swivel [A19, A22 only]	20K200000
Standard [A13, A15, A18 only]	B3432
Vinyl Covers	Part No.
A10 Output	20D250711
A13 Output	20D250711
A15 Output	20D250701
A18 Output	20D250702
A19 Output	20D250707
Socket Lock Pin 3/8" or 1/2" SD	Part No.
Standard	20D227800
Rounded (Ball Detent)	20D227801
Handle Options	Part No.
EB22 Forward Facing Lever	20H100108
EB3/4/5 Forward Facing Lever	20H100107

# Angle Lever Tools

## 11 to 400 Nm



Model	Rated Speed	Max Torque		"R" Side to Center		"H" Head Height		"L" Length		Weight		Output
		RPM	Nm	lb ft	mm	in	mm	in	mm	in	kg	lb
EB44LA19-55	1190	55	40.55	19	0.75	48.7	1.92	458.4	18.0	2.78	6.12	1/2" SD
EB34LA19-70	610	70	51.61	19	0.75	48.7	1.92	488.0	19.2	2.34	5.15	1/2" SD
EB34LA22A-80	510	80	58.98	22	0.87	50.0	2.0	530.0	20.9	2.66	5.85	1/2" SD
EB44LA22A-80	810	80	58.98	22	0.87	50.0	2.0	539	21.2	3.10	6.82	1/2" SD
EB34LA22A-115	340	115	84.79	22	0.87	50.0	2.0	530.0	20.9	2.66	5.85	1/2" SD
EB44LA22A-120	550	120	88.48	22	0.87	50.0	2.0	539	21.2	3.29	7.23	1/2" SD
EB55LA26-120	825	120	88.48	26	1.02	60	2.4	632	24.9	5.72	12.58	3/4" SD
EB55LA26-160	620	160	117.97	26	1.02	60	2.4	632	24.9	5.81	12.78	3/4" SD
EB45LA26-165	400	165	121.65	26	1.02	60	2.4	582	22.9	5.25	11.56	3/4" SD
EB45LA26-220	260	220	162.21	26	1.02	60	2.4	582	22.9	5.57	12.27	3/4" SD
EB55LA26-220	460	220	162.21	26	1.02	60	2.4	632	24.9	5.83	12.82	3/4" SD
EB55LA32-300	340	300	221.19	32	1.26	73	2.9	639	25.1	6.46	14.21	3/4" SD
EB55LA32-400	225	400	294.92	32	1.26	73	2.9	639	25.1	6.46	14.21	3/4" SD

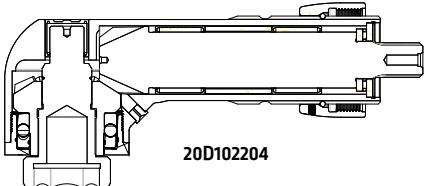
### Inserts for 20D102204 A32 Hex Insert Output

Description	Part No.
1-1/8" Hex Socket Insert	A5172
30mm Hex Flush Socket Insert	20D222100
30mm with 3/4" Extension Flush Socket Insert	20D228900

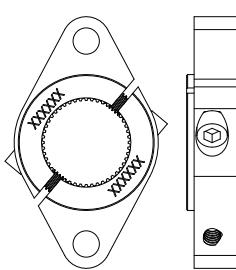
The maximum hex size for the A32 Flush Socket Output is 27 mm (1-1/16").

Use the Hex Insert Output with these Inserts for larger hex sizes.

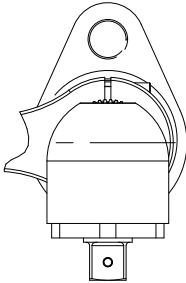
This will add 16.3 mm (0.64") to the "H" dimension of the tool.



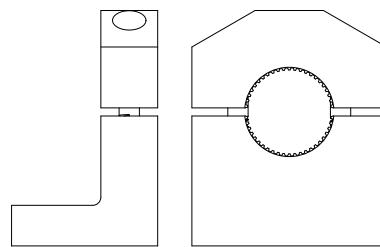
### Mounting / Reaction Options



Optional Flange Mount Bracket



Reaction Bar or Bail



Optional Base Mount Bracket

### EB Angle Tool Options

A19 Splined Output	Part No.
Anti-Vibration 1/2" SD	20D100101
Flush Socket	20D100106
1/2" Double-Ended, RH Thread*	20D100107
A22A Output	Part No.
1/2" Square Drive	20D100305
Flush Socket	20D100309
1/2" Double-Ended, RH Thread*	20D100326
Reaction Bar [A19 & A22 Outputs]	Part No.
Reaction Bar Assembly	20K100000
Mounting Flange EB34, EB44	20K100400
Base Mount Bracket Assembly	20K100500
A26 Output	Part No.
3/4" Square Drive	20D1004010
Flush Socket	20D100409
A32 Output	Part No.
3/4" Square Drive (Pin)	20D102200
3/4" Square Drive (Ball)	20D104300
Flush Socket	20D102201
Hex Insert	20D102204
Reaction Bar [A26 & A32 Outputs]	Part No.
Reaction Bar, Steel (<300 Nm)	20K100200
Reaction Bar, Steel (>300 Nm)	20K100202
Base Mount Bracket	20K100600
Mounting Flange-B	20K100700

\*RH-Thread is Right-Hand Thread. This is an option used if the end user uses the additional output for clockwise tightening or loosening.

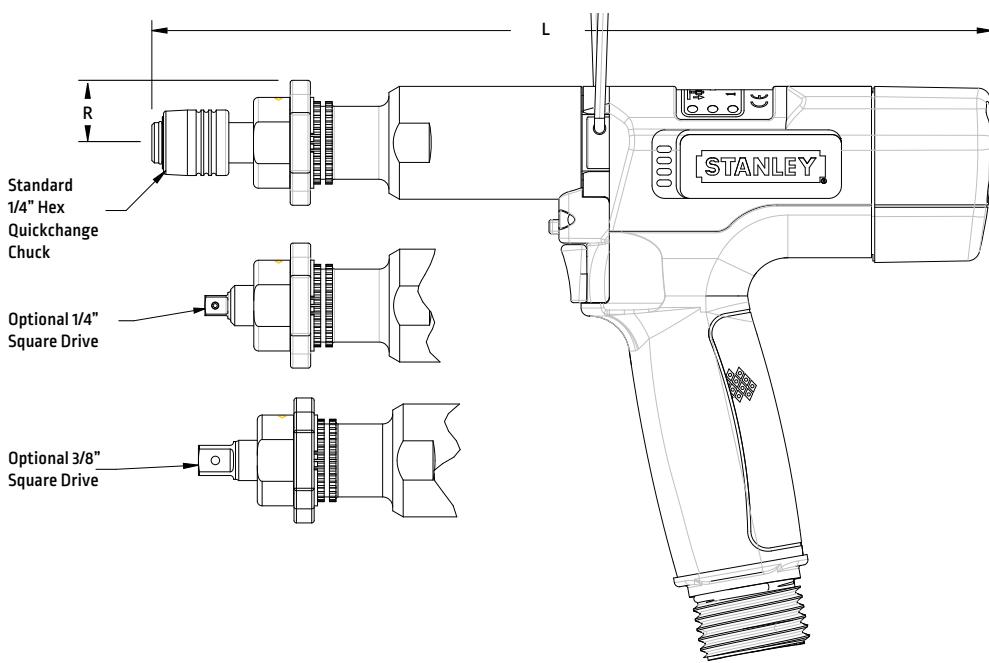
Suspension Bails	Part No.
Swivel (A19, A22A only)	20K200000
Swivel (A26, A32 only)	20K200100
Vinyl Covers	Part No.
A19 Output	20D250707
A22 Output	20D250708
A26 Output	20D250709
A32 Output	20D250710
SocketLock Pin 3/8" or 1/2" SD	Part No.
Standard	20D227800
Rounded (Ball Detent)	20D227801
SocketLock PinLock Pin 3/4" SD	Part No.
Standard	20D227800
Rounded (Ball Detent)	20D227802
Handle Options	Part No.
EB3/4/5 Forward Facing Lever	20H100107



Sockets and Accessories  
begin on page 156

# Inline Pistol Grip Tools

0.4 to 105 Nm



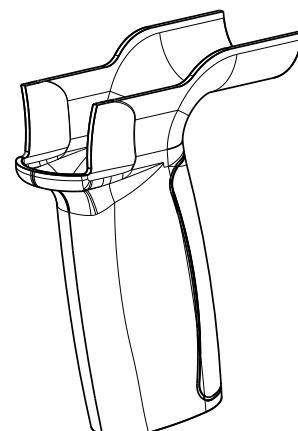
## EB Pistol Tool Options

Output Options	Part No.
3/8" SD	20D119301
1/4" SD	20D119302
<b>Socket Lock Pin 3/8" or 1/2" SD</b>	<b>Part No.</b>
Standard	20D227800
Rounded (Ball Detent)	20D227801
<b>Reaction Bar</b>	<b>Part No.</b>
Spacer (Default)	20D217000
Reaction Bar, Aluminum, 17"	20K100103
Reaction Bar, Steel, 17"	20K100104
<b>Suspension Bail</b>	<b>Part No.</b>
Wire Bail	A3061
<b>Handle Grip</b>	<b>Part No.</b>
Rubber Grip	20H207107

Model	Rated Speed	Max Torque		"R" Side to Center		"L" Length		Weight		Output
		RPM	Nm	lb ft	mm	in	mm	in	kg	lb
EB12PB-2	1760	2	1.5	20	0.8	222	8.7	0.78	1.7	1/4 QC
EB12PB-4	1115	4	2.9	20	0.8	222	8.7	0.78	1.7	1/4 QC
EB12PB-6	2300	6	4.4	20	0.8	264	10.4	0.78	1.7	1/4 QC
EB12PB-9	1595	9	6.6	20	0.8	264	10.4	0.78	1.7	1/4 QC
EB12PB-14	1020	14	10	20	0.8	264	10.4	0.78	1.7	1/4 QC
EB22PB-16	1225	16	11	20	0.8	290	11.4	1.16	2.5	1/4 QC
EB22PB-20	981	20	14.8	20	0.8	290	11.4	1.21	2.7	1/4 QC

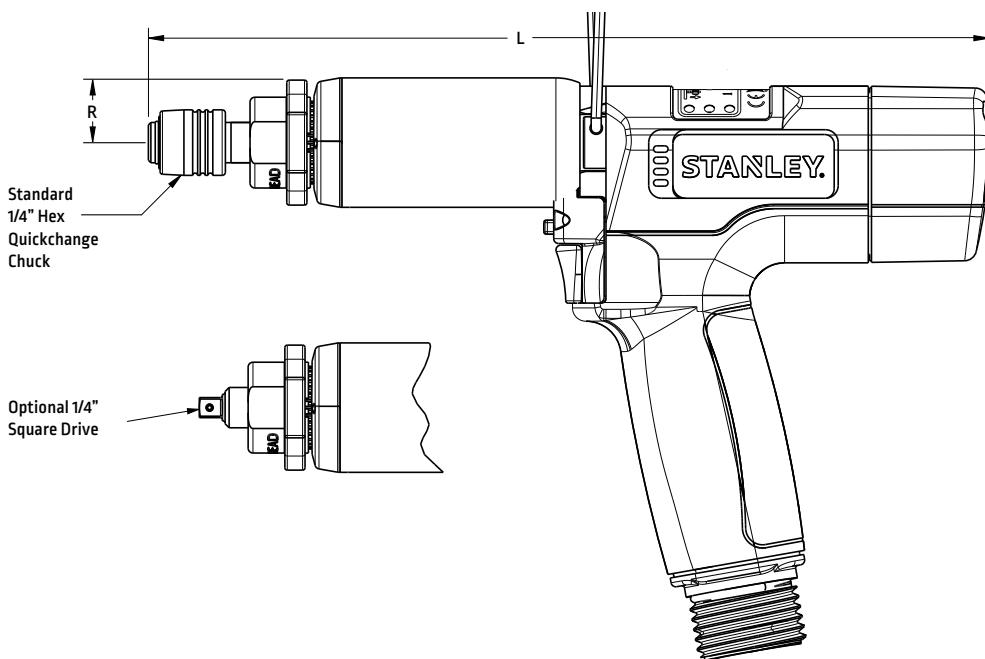
Model	Rated Speed	Max Torque		"R" Side to Center		"L" Length		Weight		Output
		RPM	Nm	lb ft	mm	in	mm	in	kg	lb
EB33PB-28	1590	28	20	26	1.04	288	11.3	1.49	3.2	3/8" SD
EB33PB-40	1120	40	29	26	1.04	288	11.3	1.55	3.4	3/8" SD
EB34PB1-55	830	55	40	32	1.25	324	12.8	2.31	5.10	1/2" SD
EB34PB1-75	545	75	55.3	32	1.25	324	12.8	2.55	5.6	1/2" SD
EB34PB1-105	410	105	77.5	32	1.25	324	12.8	2.55	5.6	1/2" SD

## Optional Rubber Grip



# Inline Push-to-Start Pistol Grip Tools

0.4 to 14 Nm

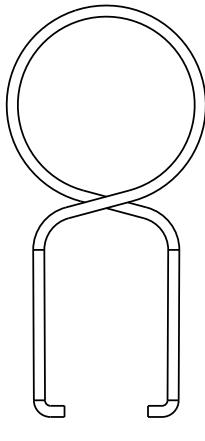


## EB Pistol Tool Options

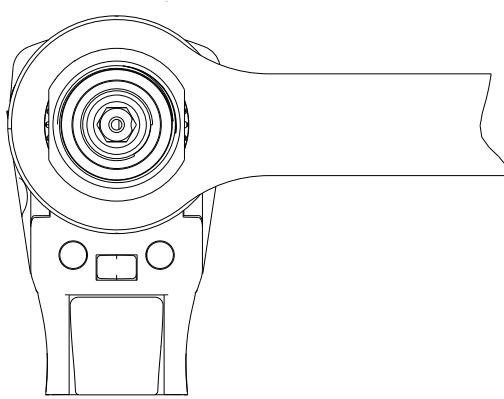
Output Options	Part No.
1/4" SD	20D119302
<b>Reaction Bar</b>	<b>Part No.</b>
Spacer	20D217000
Reaction Bar 17" Long	20K100103
Reaction Bar 12" Long	20K101601
<b>Suspension Bail</b>	<b>Part No.</b>
Wire Bail	A3061
<b>Handle Grip</b>	<b>Part No.</b>
Rubber Grip	20H207107

Model	Rated Speed RPM	Max Torque		"R" Side to Center		"L" Length		Weight		Output Standard
		Nm	lb ft	mm	in	mm	in	kg	lb	
EB12PP-2	1760	2	1.5	20	0.8	265	10.4	0.93	2	1/4 QC
EB12PP-4	1115	4	2.9	20	0.8	265	10.4	0.93	2	1/4 QC
EB12PP-6	2300	6	4.4	20	0.8	265	10.4	0.93	2	1/4 QC
EB12PP-9	1595	9	6.6	20	0.8	265	10.4	0.93	2	1/4 QC
EB12PP-14	1020	14	10.3	20	0.8	265	10.4	0.93	2	1/4 QC

## Mounting / Reaction Options

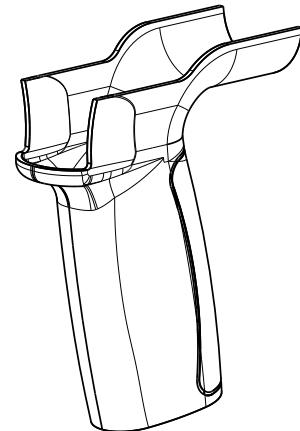


Wire Bail



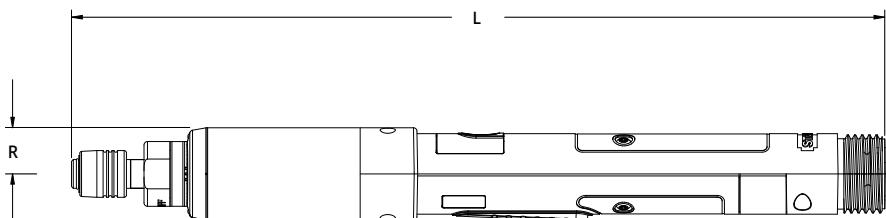
Reaction Bar

## Optional Rubber Grip



# Inline Push-to-Start Lever Tools

**0.4 to 14 Nm**



Model	Rated Speed	Max Torque		"R" Side to Center		"L" Length		Weight		Output
		RPM	Nm	lb ft	mm	in	mm	in	kg	lb
EB12LP-2	1760	2	1.5	20.4	0.8	359	14.1	0.85	1.87	1/4" QC
EB12LP-4	1115	4	2.9	20.4	0.8	359	14.1	0.85	1.87	1/4" QC
EB12LP-6	2300	6	4.4	20.4	0.8	359	14.1	0.85	1.87	1/4" QC
EB12LP-9	1595	9	6.6	20.4	0.8	359	14.1	0.85	1.87	1/4" QC
EB12LP-14	1020	14	10.3	20.4	0.8	359	14.1	0.85	1.87	1/4" QC

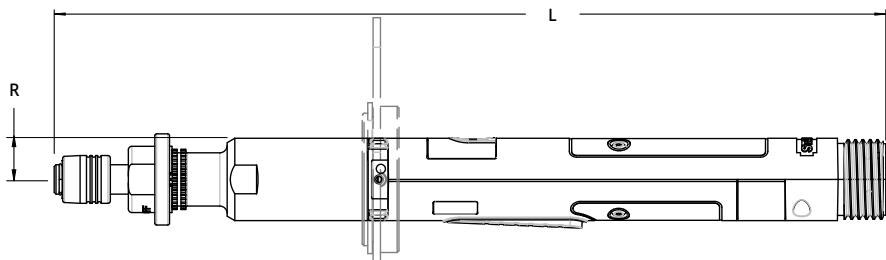
*EB PTS Tool Options*

EB12LP

Output Options	Part No.
1/4" Square Drive	20D119302
3/8" Square Drive (tools > 5 Nm)	20D119301
3/8" SD Socket Lock Pin	Part No.
Standard	20D227800
Rounded (Ball Detent)	20D227801
Reaction Bar	Part No.
Reaction Bar, Aluminum 17"	20K100103
Reaction Bar, Steel 17"	20K100104
PTS Spline Cover	20D217001

# Inline Lever Tools

**0.4 to 14 Nm**



Model	Rated Speed	Max Torque		"R" Side to Center		"L" Length		Weight		Output
		RPM	Nm	lb ft	mm	in	mm	in	kg	lb
EB12LB-2	1760	2	1.5	17.8	0.7	359	14.1	0.69	1.52	1/4" QC
EB12LB-4	1115	4	2.9	17.8	0.7	359	14.1	0.69	1.52	1/4" QC
EB12LB-6	2300	6	4.4	17.8	0.7	359	14.1	0.69	1.52	1/4" QC
EB12LB-9	1595	9	6.6	17.8	0.7	359	14.1	0.69	1.52	1/4" QC
EB12LB-14	1020	14	10.3	17.8	0.7	359	14.1	0.69	1.52	1/4" QC

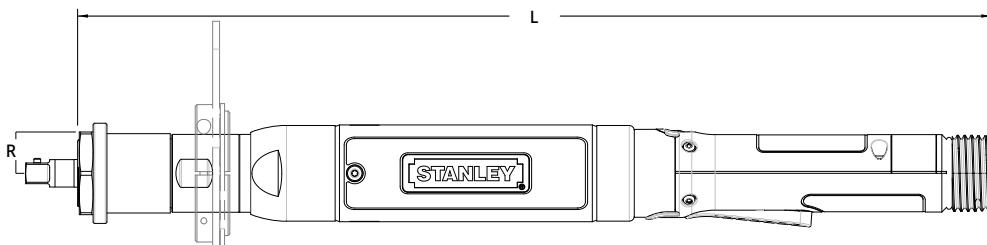
*EB Inline Tool Options*

EB12LB

Output Options	Part No.
3/8" Square Drive	20D119301
1/4" Square Drive	20D119302
3/8" SD Socket Lock Pin	Part No.
Standard	20D227800
Rounded (Ball Detent)	20D227801
Reaction Bar	Part No.
Reaction Bar, Aluminum	20K100103
Reaction Bar, Steel	20K100104
Suspension Bails	Part No.
Wire Bail	A3061
Swivel	20K101402

# Inline Lever Tools

## 3.2 to 2000 Nm



	Rated Speed	Max Torque		"R" Side to Center		"L" Length		Weight		Output
Model	RPM	Nm	lb ft	mm	in	mm	in	kg	lb	Standard
EB22LB-16	1340	16	11.8	23.7	0.93	352	13.8	1.06	2.33	3/8" SD
EB22LB-20	1071	20	14.8	23.7	0.93	365	14.4	1.10	2.40	3/8" SD
EB33LB-28	1590	28	20.7	24.7	0.97	416	16.4	1.40	3.08	3/8" SD
EB33LB-40	1120	40	29.5	24.7	0.97	416	16.4	1.40	3.08	3/8" SD

	Rated Speed	Max Torque		"R" Side to Center		"L" Length		Weight		Output
Model	RPM	Nm	lb ft	mm	in	mm	in	kg	lb	Standard
EB34LB1-55	830	55	40.6	26.7	1.05	463	18.2	2.04	4.49	1/2" SD
EB44LB1-80	895	80	59	26.7	1.05	479	18.9	2.50	5.50	1/2" SD
EB55LB1-100	853	100	73.8	32	1.25	479	18.9	5.17	11.38	1/2" SD
EB44LB1-120	560	120	88.5	26.7	1.05	479	18.9	2.85	6.27	1/2" SD
EB55LB2-120	850	120	88.5	32	1.25	564	22.2	5.17	11.40	3/4" SD
EB45LB2-140	465	140	103.3	29	1.15	533	21	3.42	7.52	3/4" SD
EB55LB2-170	640	170	125.4	32	1.25	560	22.1	4.62	10.18	3/4" SD
EB45LB2-190	355	190	140.2	29	1.15	533	21	4.3	9.46	3/4" SD
EB55LB2-250	400	250	184.4	32	1.25	560	22.1	4.93	10.85	3/4" SD
EB55LB3-320	310	320	236	32	1.25	573	22.5	5.01	11.03	3/4" SD
EB55LB4-460	220	460	339.3	44	1.7	621	24.4	7.60	16.73	1" SD
EB55LB4-620	165	620	457.3	44	1.7	621	24.4	7.60	16.73	1" SD
EB55LB5-800	125	800	590.1	48	1.9	651	25.6	10.05	22.12	1" SD
EB55LB5-1100	80	1100	811.4	48	1.9	651	25.6	10.05	22.12	1" SD
EB55LB5-1500	60	1500	1106.4	48	1.9	683	26.9	10.05	22.12	1" SD
EB55LB5-2000	50	2000	1475.2	48	1.9	683	26.9	10.57	23.25	1" SD

### EB Inline Tool Options

EB22, EB33

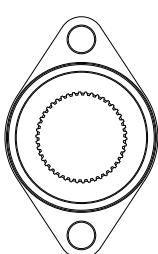
Output Options	Part No.
3/8" 24-Thread	20D281100
<b>Reaction Bar</b>	<b>Part No.</b>
Reaction Bar, Aluminum	F3698
Reaction Bar, Steel	20K100100
Base Mount Bracket	A8606
Mounting Flange-B	20K101000
<b>3/8" SD Socket Lock Pin</b>	<b>Part No.</b>
Standard	20D227800
Rounded [Ball Detent]	20D227801
<b>Suspension Bails</b>	<b>Part No.</b>
Wire Bail	A3061
Swivel	20K101400
Standard	B3432
<b>Handle Options</b>	<b>Part No.</b>
EB22 Forward Facing Lever	20H100108
EB3/4/5 Forward Facing Lever	20H100107

### EB Inline Tool Options

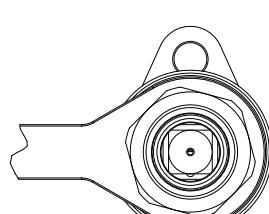
EB34, EB44, EB45, EB55

Reaction Bar	Part No.
Reaction Bar Assembly	20K100000
Mounting Flange EB34, EB44	20K100400
Mounting Flange EB45, EB55	20K100700
Base Mount Bracket Assembly	20K100500
<b>Suspension Bails</b>	<b>Part No.</b>
Wire Bail	A3061
Swivel	20K200000
<b>1/2" SD Socket Lock Pin</b>	<b>Part No.</b>
Standard	20D227800
Rounded [Ball Detent]	20D227801
<b>Handle Options</b>	<b>Part No.</b>
EB22 Forward Facing Lever	20H100108
EB3/4/5 Forward Facing Lever	20H100107

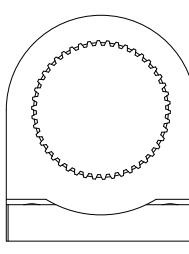
### Mounting / Reaction Options



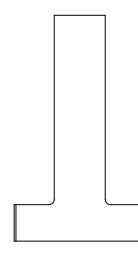
Optional Flange Mount Bracket



Reaction Bar or Bail



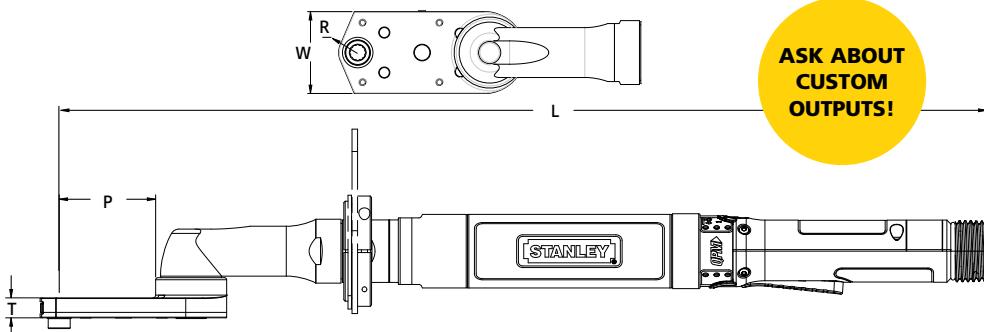
Optional Base Mount Bracket



Sockets and Accessories  
begin on page 156

# Crowfoot Lever Tools

**1.6 to 49 Nm**



*Crowfoot Tool Options*

13Nm - 49Nm

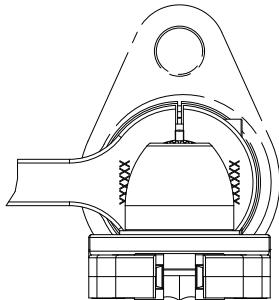
Suspension Bails	Part No.
Wire Bail	A3061
Swivel Bail	20K101400
Standard Wire Bail	B3432

ANGLE	Rated Speed	Max Torque		"R" Nose Radius		"T" Thickness		"W" Width		"P" Length		"L" Length		Weight		Maximum Hex Size	
Model	RPM	Nm	lb ft	mm	in	mm	in	mm	in	mm	in	mm	in	kg	lb	mm	in
EB12LC8-8	1065	8	5.9	13	0.52	16.2	0.64	25.4	1.00	44.6	1.76	382	15.0	1.1	2.4	13	1/2"
EB12LC106-8	1065	8	5.9	13	0.52	16.2	0.64	25.4	1.00	64.6	2.54	401	15.8	1.1	2.4		
EB12LC8-13	680	13	9.6	13	0.52	16.2	0.64	25.4	1.00	44.6	1.76	382	15.0	1.1	2.4		
EB12LC106-13	680	13	9.6	13	0.52	16.2	0.64	25.4	1.00	64.6	2.54	401	15.8	1.1	2.4		
EB12LC550-14	680	14	10.3	13	0.5	11.4	0.45	25.4	1.00	67.1	2.64	402	15.8	1.1	2.4		
EB22LC8-16	895	16	11.8	13	0.52	16.2	0.64	25.4	1.00	44.6	1.76	453	17.8	1.7	3.8		
EB33LC13-22	1310	22	16.3	13	0.52	20.6	0.81	31.8	1.25	47.3	1.86	530	20.8	2.5	5.5		
EB33LC216-27	990	27	19.9	13	0.5	15.0	0.59	31.8	1.25	47.3	1.86	530	20.8	2.5	5.5		
EB33LC563-27	990	27	19.9	13	0.52	15.9	0.63	31.8	1.25	47.3	1.86	530	20.8	2.5	5.5		
EB33LC13-30	840	30	22.1	13	0.52	20.6	0.81	31.8	1.25	47.3	1.86	530	20.8	2.5	5.5		
EB33LC173-30	990	30	22.1	13.5	0.53	15.9	0.63	31.8	1.25	93	3.66	590	23.2	2.5	5.5		
EB33LC246-33	880	33	24.3	16	0.63	20.6	0.81	31.8	1.25	48.3	1.90	531	20.9	2.9	6.4	14	9/16"
EB44LC508-35	1341	35	25.8	13	0.53	14	0.57	31.8	1.25	47	1.47	591	23.3	3.10	6.82	13	1/2"
EB33LC484-42	610	42	31	16	0.63	18.5	0.73	31.8	1.25	86.1	3.39	554	21.8	2.36	5.21	15	19/32"

VERTICAL	Rated Speed	Max Torque		"R" Nose Radius		"T" Thickness		"W" Width		"P" Length		"L" Length		Weight		Maximum Hex Size	
Model	RPM	Nm	lb ft	mm	in	mm	in	mm	in	mm	in	mm	in	kg	lb	mm	in
EB34LC298-49	595	49	36.2	13	0.52	20.9	0.82	38.1	1.50	97.1	3.82	559	22.0	3.61	7.95	13	1/2"

*NOTE: The models listed are the most common of the standard 278 Crowfoot outputs we produce. Contact STANLEY Assembly Technologies for the complete list or to discuss a custom output for your specific application.*

## Mounting / Reaction Options



Reaction Bar or Bail

## 2-Hand Anti-Tiedown Options

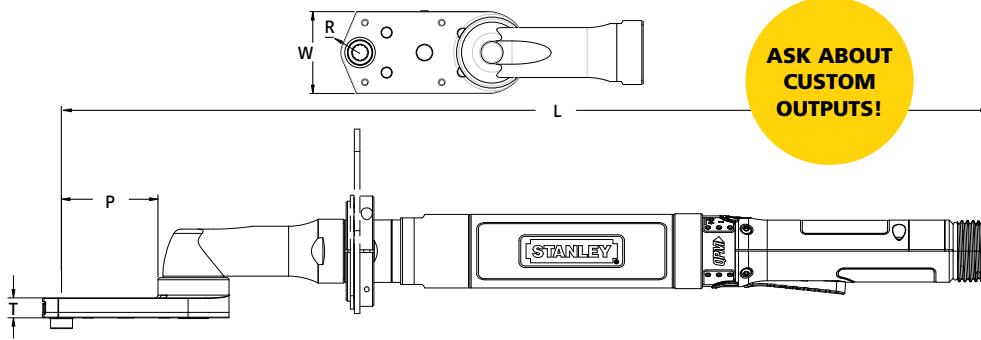
2-Hand Anti-Tiedown	Part No.
EB33 Tools	20H106400
EB34 Tools	20H106402
EB44 Tools	20H106403
EB45 Tools	20H106404
EB55 Tools	20H106401



*Sockets and Accessories begin on page 156*

# Crowfoot Lever Tools

11.6 to 216 Nm



## Crowfoot Tool Options

58Nm - 216Nm

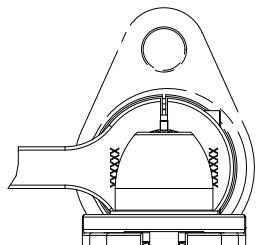
Suspension Bails	Part No.
Wire Bail	A3061
Swivel Bail	20K200000
Reaction Bar	Part No.
Reaction Bar Assembly (Default)	20K100000
Mounting Flange EB33	20K100300
Mounting Flange EB34, EB44	20K100400
Mounting Flange EB45, EB55	20K100700
Base Mount Bracket Assembly	20K100500

ANGLE	Rated Speed	Max Torque		“R” Nose Radius		“T” Thickness		“W” Width		“P” Length		“L” Length		Weight		Maximum Hex Size	
Model	RPM	Nm	lb ft	mm	in	mm	in	mm	in	mm	in	mm	in	kg	lb	mm	in
EB34LC10-58	510	58	42.8	21	0.81	27.94	1.10	38.1	1.50	70.7	2.78	616	24.2	3.52	7.74	19	3/4"
EB33LC501-60	499	60	44.3	16.8	0.66	17	0.67	38.1	1.50	123	4.85	616	24.2	3.52	7.74	15	5/8"
EB44LC404-75	508	75	55.3	16.8	0.66	26.16	1.03	38.1	1.50	68.4	2.70	626	24.7	4.2	9.3	16	5/8"
EB45LC365-80	438	80	59	13	0.53	28	1.12	38	1.5	97	3.82	735	28.9	5.25	11.56	13	1/2"
EB45LC613-81	581	81	59.8	13	0.52	28.0	1.10	38.1	1.50	33.6	1.32	642	25.3	4.6	10.2	13	1/2"
EB45LC614-81	581	81	59.8	13	0.52	28.9	1.14	38.1	1.50	123	4.85	750	29.5	5.1	11.2	13	1/2"
EB44LC10-88	520	88	64.9	21	0.81	27.94	1.10	38.1	1.50	70.7	2.78	628	24.7	4.6	10.2	19	3/4"
EB44LC31-88	520	88	64.9	21	0.81	27.94	1.10	38.1	1.50	38.9	1.53	596	23.4	4.6	10.2	19	3/4"
EB44LC31-102	455	102	75.2	21	0.81	27.94	1.10	38.1	1.50	38.9	1.53	596	23.4	4.6	10.2	19	3/4"
EB34LC615-110	267	110	81.1	16	0.63	38.9	1.53	31.8	1.25	76.1	3.0	619.6	24.4	4.6	10.2	16	5/8"
EB55LC606-150	459	150	110.6	20	0.8	32.9	1.30	38.9	1.53	38.9	1.53	636.4	25.1	5.4	11.8	19	3/4"
EB55LC21-216	290	216	159.3	29	1.16	30.86	1.21	58.7	2.31	57.8	2.27	724	28.5	5.4	11.8	27	1-1/8"
EB55LC626-250	262	250	184.4	25	0.98	37.29	1.47	95.3	3.75	113.9	4.49	795.2	31.3	10.5	23.24	24	15/16"

VERTICAL	Rated Speed	Max Torque		“R” Nose Radius		“T” Thickness		“W” Width		“P” Length		“L” Length		Weight		Maximum Hex Size	
Model	RPM	Nm	lb ft	mm	in	mm	in	mm	in	mm	in	mm	in	kg	lb	mm	in
EB34LC586-74	408	74	54.6	21	0.81	27.94	1.10	38.1	1.50	70.7	2.78	564	22.2	3.8	8.3	19	3/4"
EB55LC625-237	309	237	174.8	25	0.98	40.89	1.61	95.3	3.75	113.9	4.49	809.8	31.9	11.4	25.23	24	15/16"

NOTE: The models listed are the most common of the standard 278 Crowfoot outputs we produce. Contact STANLEY Assembly Technologies for the complete list or to discuss a custom output for your specific application.

### Mounting / Reaction Options



Reaction Bar or Bail

Sockets and Accessories begin on page 156

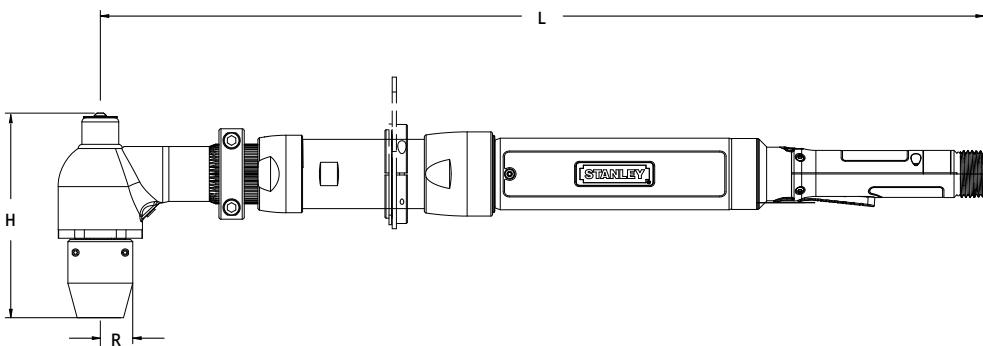
### 2-Hand Anti-Tiedown Options

2-Hand Anti-Tiedown	Part No.
EB33 Tools	20H106400
EB34 Tools	20H106402
EB44 Tools	20H106403
EB45 Tools	20H106404
EB55 Tools	20H106401



# Hold and Drive Lever Tools – 1" Output

9.2 to 380 Nm



Model	Rated Speed	Max Torque		"R" Side to Center		"H" Head Height		"L" Length		Weight		Travel
		RPM	Nm	Ibft	mm	in	mm	in	mm	in	kg	lb
EB33LH18V1-46	880	46	33.9	18	0.71	131.9	5.2	464	18.3	2.2	4.9	1"
EB34LH22AV1-77	510	77	56.8	22	0.87	143.8	5.7	521	20.5	3.4	7.5	
EB34LH22AV1-110	335	110	81.1	22	0.87	143.8	5.7	543	21.4	3.4	7.5	
EB45LH26V1-155	400	155	114.3	26	1.02	142.8	5.6	582	22.9	5.5	12.1	
EB45LH26V1-220	260	220	162.3	26	1.02	142.8	5.6	582	22.9	5.5	12.1	
EB55LH32V1-285	340	285	210.2	32	1.3	179.6	7.1	639	25.1	6.2	13.6	
EB55LH32V1-380	225	380	280.3	32	1.3	179.6	7.1	639	25.1	6.2	13.6	

A Tang holds the bolt while the nut is tightened

## Typical Tang Options



Female Torx



Female Hex



Rectangular

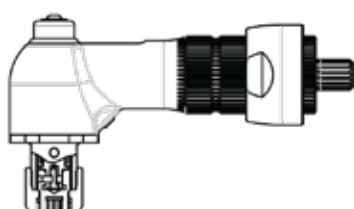


NOTE: The bolt can extend beyond the nut no more than the specified travel distance when tightened.

## 1" DC H&D Lever Tool Options

H32 Tang Holder	Part No.
Female Tang Holder Options	20D900601
H32 Bit Holder	Part No.
Bit Holder Options	20D900602
H32 Reaction Bar	Part No.
Reaction Bar Assembly	20K100200
Mounting Flange Assembly	20K100700
Base Mount Bracket Assembly	20K100600
Reaction Bar Assembly, HD	20K100202

See pages 170-181 for the Hold and Drive Configuration Guide



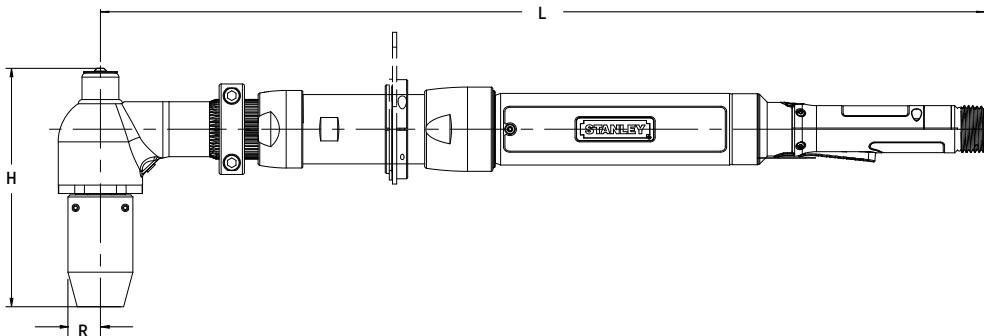
Sockets and Accessories begin on page 156

## 1" H&D Lever Tool Options

H18 Output	Part No.
Socket Options	20D905700
1" Travel Bit Holder Output	20D124600
1" Travel Tang Holder Output	20D124602
H18 Tang Holder	Part No.
6mm x 8mm Rectangle	20D261700
5mm x 7.5mm Rectangle	20D261701
6mm x 10mm Rectangle	20D261702
6mm Hex	20D261703
H18 Bit Holder	Part No.
1/4" Hex	20D254200
5/16" Hex	20D253400
H22 Output	Part No.
Socket Options	-N4617
1" Travel Tang Holder Output	20D103211
1" Travel Bit Holder Output	20D103212
H22 Tang Holder	Part No.
Female Tang Holder Options	-F4287
H22 Bit Holder	Part No.
Bit Holder Options	-F4288
H22 Reaction Bar	Part No.
Reaction Bar Assembly (Default)	20K100000
Mounting Flange Assembly	20K100300
Base Mount Bracket Assembly	20K100500
H26 Output	Part No.
Socket Options	-F4285
1" Travel Tang Holder Output	20D103601
1" Travel Bit Holder Output	20D103602
H26 Tang Holder	Part No.
Female Tang Holder Options	-H4948
H26 Bit Holder	Part No.
Bit Holder Options	-H4947
H26 Reaction Bar	Part No.
Reaction Bar Assembly	20K100200
Mounting Flange Assembly	20K100700
Base Mount Bracket Assembly	20K100600
Reaction Bar Assembly, HD	20K100202
H32 Output	Part No.
Socket Options	-A5302
1" Travel Tang Holder Output	20D103701
1" Travel Bit Holder Output	20D103702
Handle Options	Part No.
EB3/4/5 Forward Facing Lever	20H100107

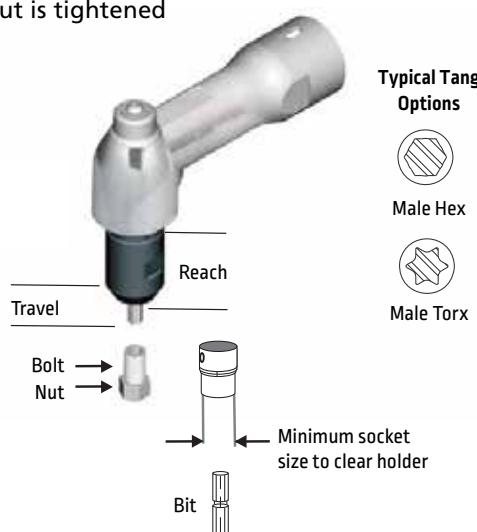
# Hold and Drive Lever Tools – 2" Output

9.2 to 380 Nm



Model	Rated Speed	Max Torque		"R" Side to Center		"H" Head Height		"L" Length		Weight		Travel
		RPM	Nm	lb ft	mm	in	mm	in	mm	in	kg	lb
EB33LH18V2-46	880	46	33.9	18	0.71	190.3	7.5	464	18.3	2.1	4.6	2"
EB34LH22AV2-77	510	77	56.8	22	0.87	199.0	7.8	521	20.5	3.1	6.8	
EB34LH22AV2-110	335	110	81.1	22	0.87	199.0	7.8	543	21.4	3.1	6.8	
EB45LH26V2-155	400	155	114.3	26	1.02	168.2	6.6	582	22.9	4.6	10.0	
EB45LH26V2-220	260	220	162.3	26	1.02	168.2	6.6	582	22.9	4.6	10.0	
EB55LH32V2-285	340	285	210.2	32	1.3	205	8.1	639	25.1	6.2	13.6	
EB55LH32V2-380	225	380	280.3	32	1.3	205	8.1	639	25.1	6.2	13.6	

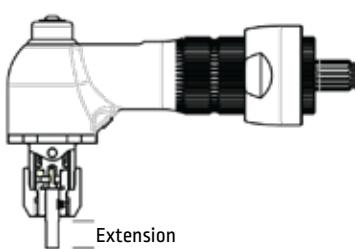
A Bit holds the bolt while the nut is tightened



## 2" DC H&D Lever Tool Options

H32 Tang Holder	Part No.
Female Tang Holder Options	20D900601
H32 Bit Holder	Part No.
Bit Holder Options	20D900602
H32 Reaction Bar	Part No.
Reaction Bar Assembly	20K100200
Mounting Flange Assembly	20K100700
Base Mount Bracket Assembly	20K100600
Reaction Bar Assembly, HD	20K100202

See pages 170-181 for the Hold and Drive Configuration Guide



Sockets and Accessories begin on page 156

## 2" H&D Lever Options

H18 Output	Part No.
Socket Options	20D905700
2" Travel Bit Holder Output	20D124601
2" Travel Tang Holder Output	20D124603
H18 Tang Holder	Part No.
6mm x 8mm Rectangle	20D261700
5mm x 7.5mm Rectangle	20D261701
6mm x 10mm Rectangle	20D261702
6mm Hex	20D261703
H18 Bit Holder	Part No.
1/4" Hex	20D254200
5/16" Hex	20D253400
H22 Output	Part No.
Socket Options	-N4617
2" Travel Tang Holder Output	20D103213
2" Travel Bit Holder Output	20D103214
H22 Tang Holder	Part No.
Female Tang Holder Options	-F4287
H22 Bit Holder	Part No.
Bit Holder Options	-F4288
H22 Reaction Bar	Part No.
Reaction Bar Assembly (Default)	20K100000
Mounting Flange Assembly	20K100300
Base Mount Bracket Assembly	20K100500
H26 Output	Part No.
Socket Options	-F4285
2" Travel Tang Holder Output	20D103603
2" Travel Bit Holder Output	20D103604
H26 Tang Holder	Part No.
Female Tang Holder Options	-H4948
H26 Bit Holder	Part No.
Bit Holder Options	-H4947
H26 Reaction Bar	Part No.
Reaction Bar Assembly	20K100200
Mounting Flange Assembly	20K100700
Base Mount Bracket Assembly	20K100600
Reaction Bar Assembly, HD	20K100202
H32 Output	Part No.
Socket Options	-A5302
2" Travel Tang Holder Output	20D103703
2" Travel Bit Holder Output	20D103704
Handle Options	Part No.
EB3/4/5 Forward Facing Lever	20H100107



# EB-Series Corded Fixtured Tools

High Speed, Redundant Transducer and Flexible Cable connections.

## FEATURES AND BENEFITS:

- Controllers Enable Multiple Spindle Operation Including Synchronization.
- Redundant Transducer Optional
- 360° Viewable High / OK / Low Lights Alert
- Operator to Fastening Status
- Fixtured Tool Cable Connector can be Rotated In 90° Increments.



## OUTPUT OPTIONS

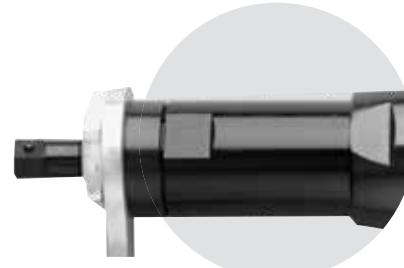
Angle



Retractable Angle



Straight



Retractable Straight



## REACTION MOUNTING COMPONENTS



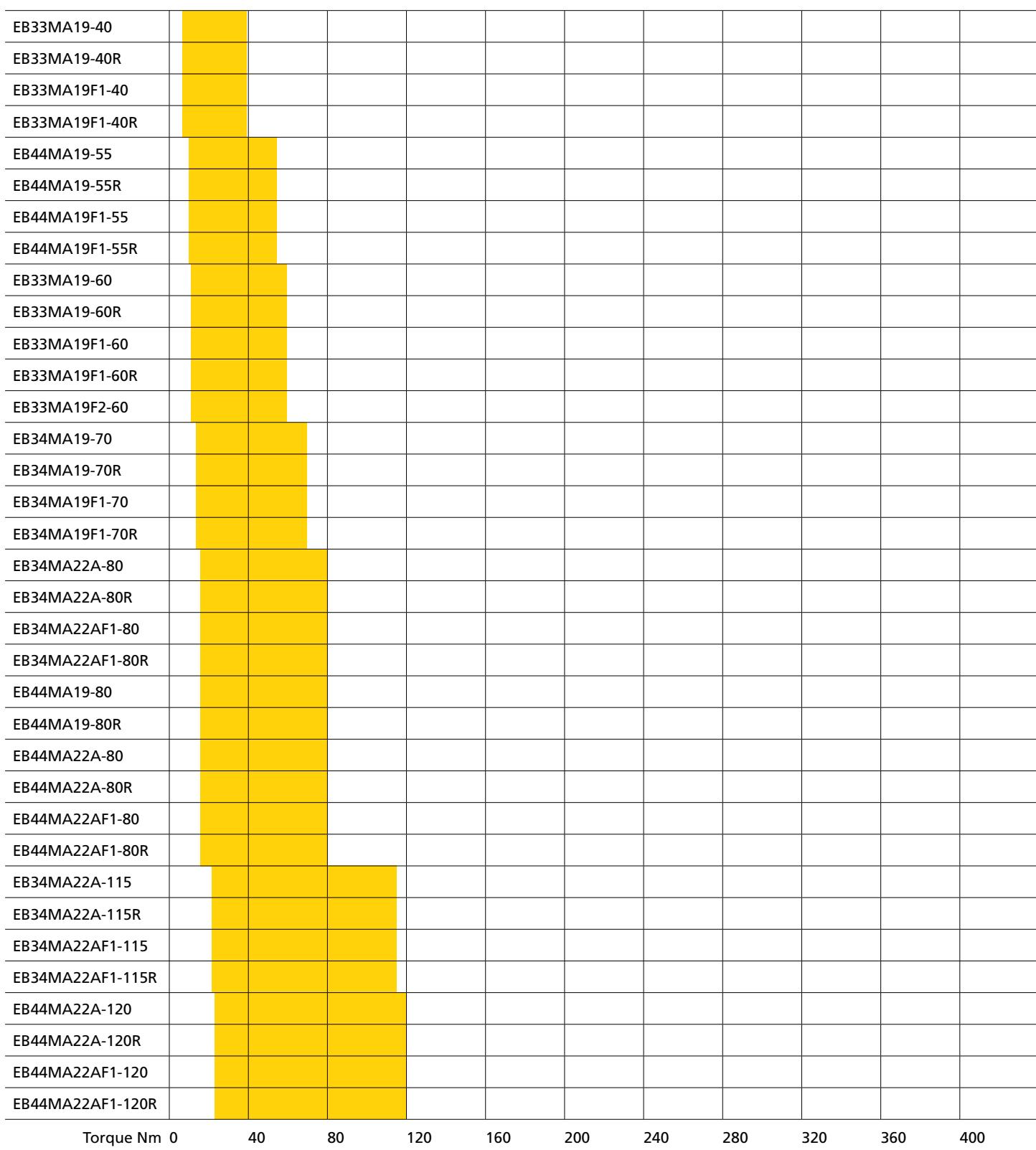
Retractable Offset



# EB-Series Torque Range: Fixtured Style

## Angle Fixtured Mount Style

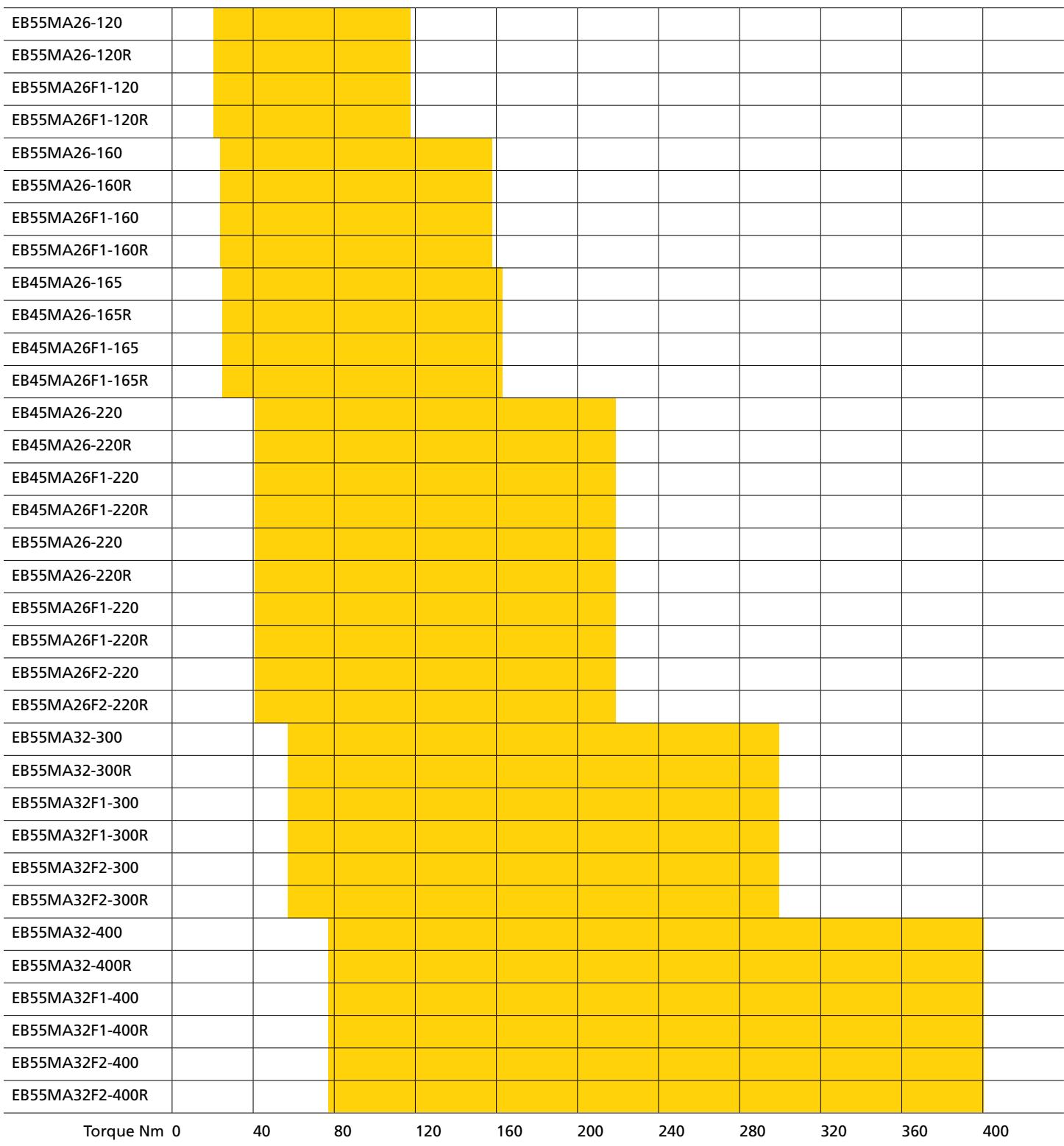
### MODELS:



**Please Note:** This chart is a guide for the use of our tools. Programming of these tools can have a direct effect on the capability and performance.

## Angle Fixtured Mount Style, *continued*

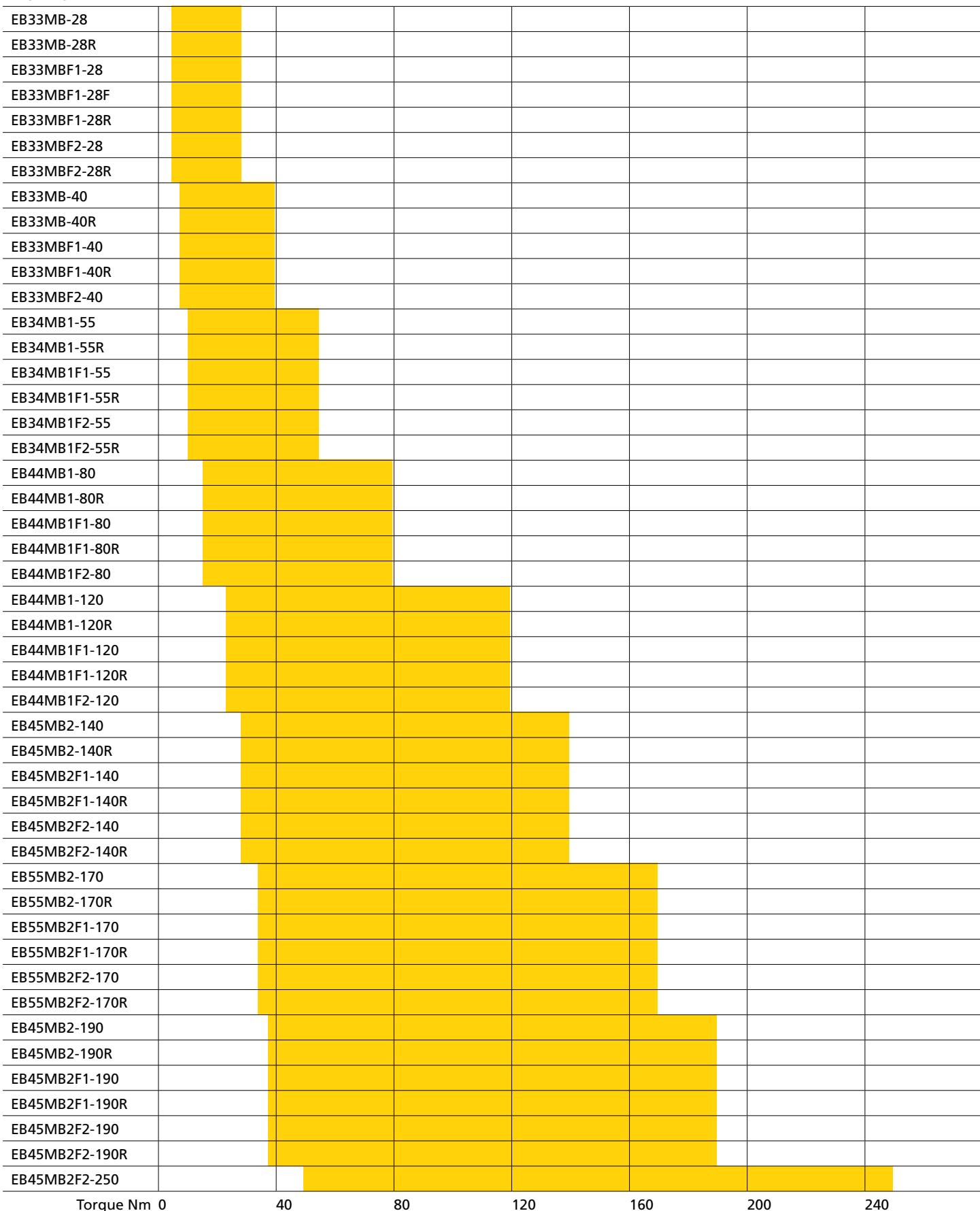
### MODELS:



**Please Note:** This chart is a guide for the use of our tools. Programming of these tools can have a direct effect on the capability and performance.

## Inline Fixtured Mount Style

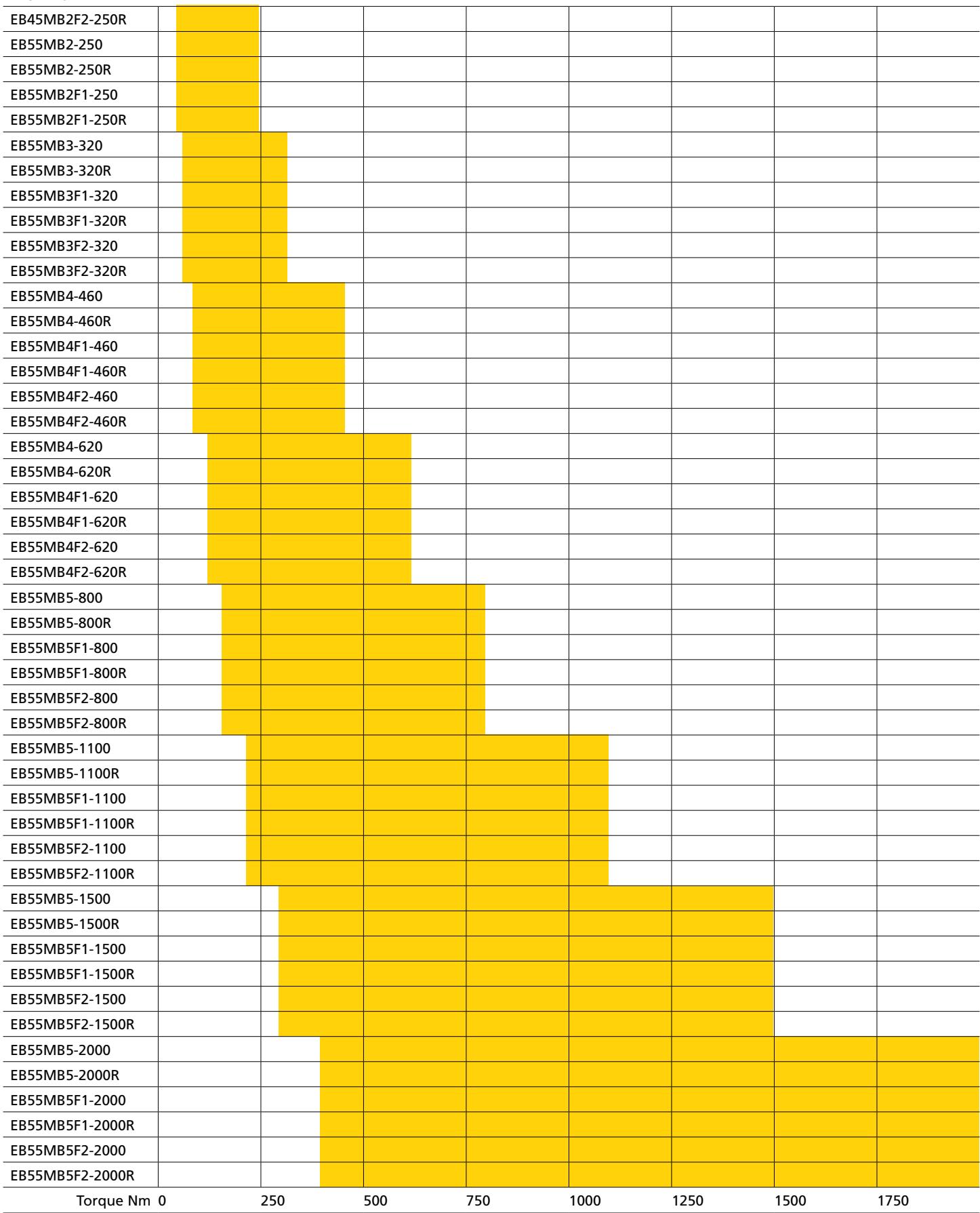
### MODELS:



**Please Note:** This chart is a guide for the use of our tools. Programming of these tools can have a direct effect on the capability and performance.

## Inline Fixtured Mount Style, *continued*

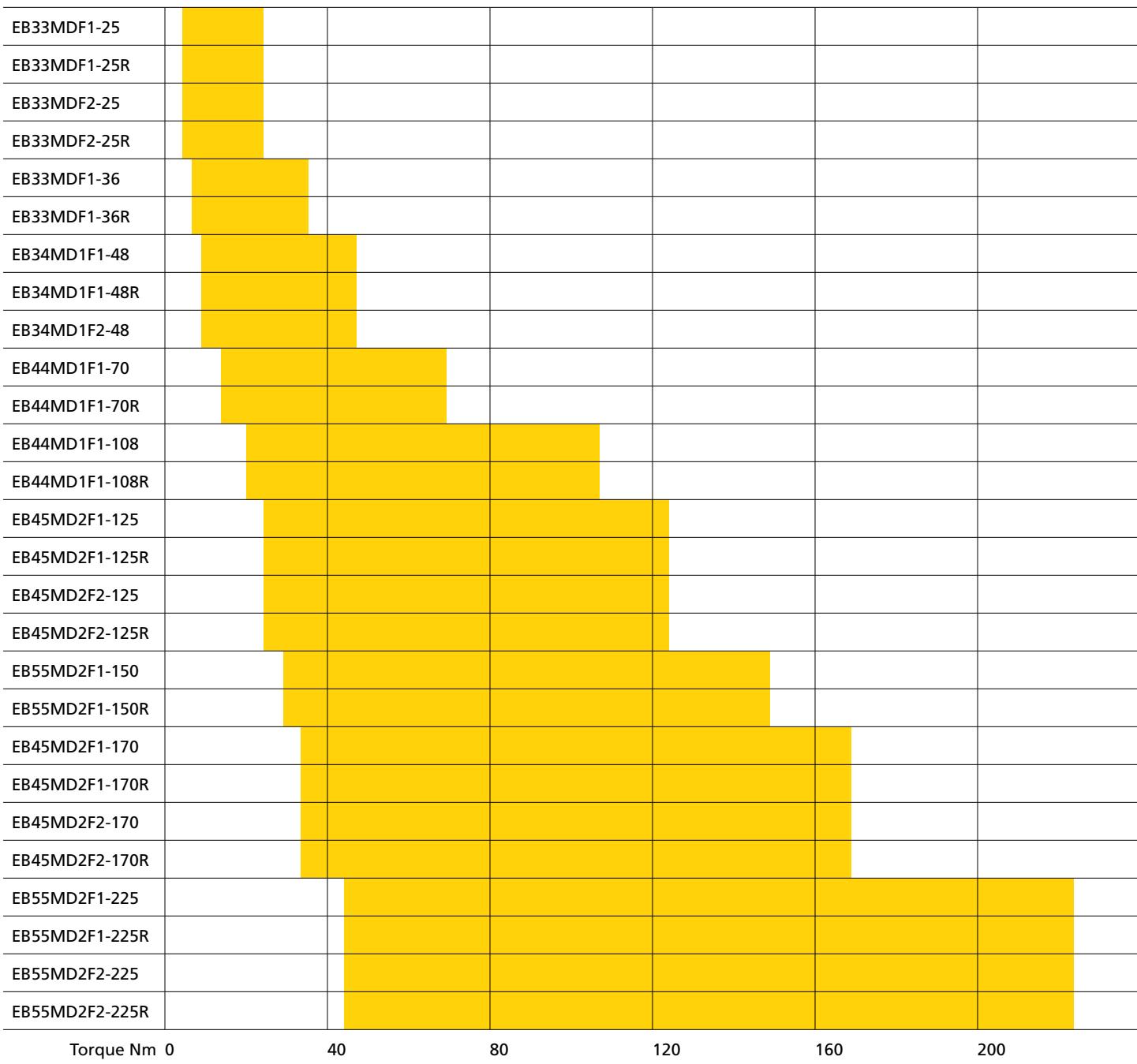
### MODELS:



**Please Note:** This chart is a guide for the use of our tools. Programming of these tools can have a direct effect on the capability and performance.

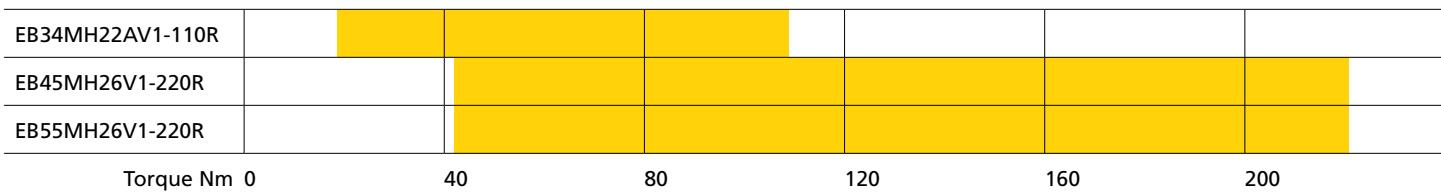
## Offset Fixtured Mount Style

MODELS:



## Hold and Drive Fixtured Mount Style

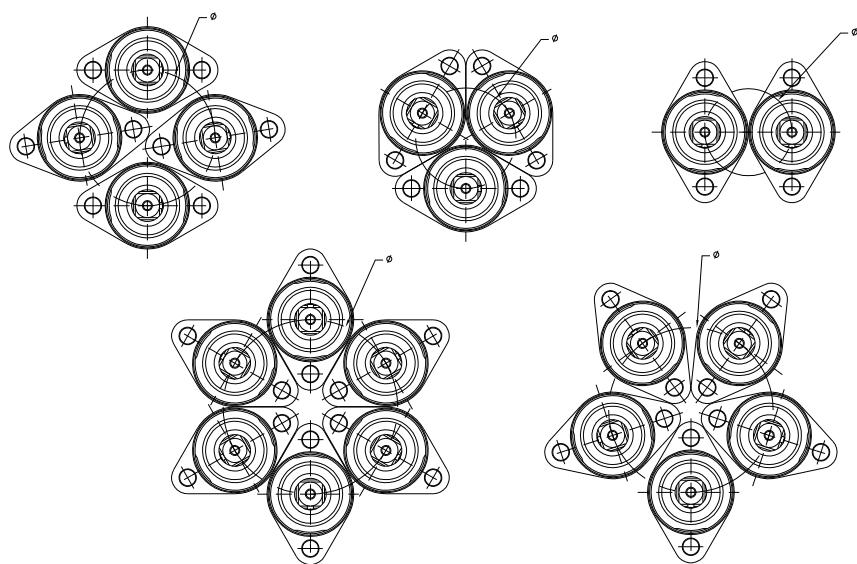
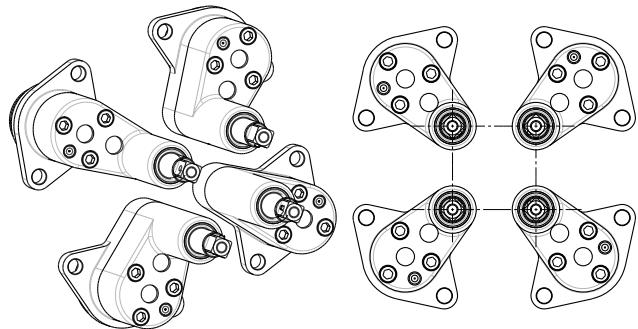
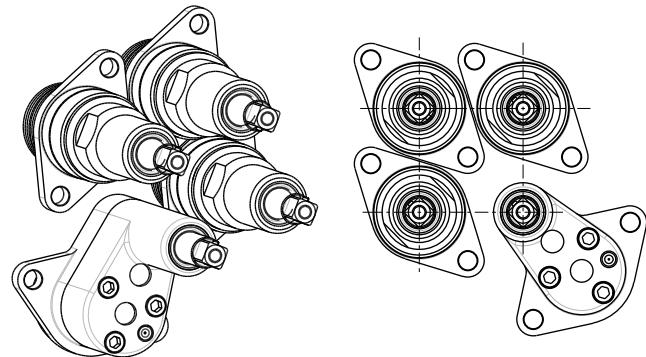
MODELS:



**Please Note:** These charts are a guide for the use of our tools. Programming of these tools can have a direct effect on the capability and performance.

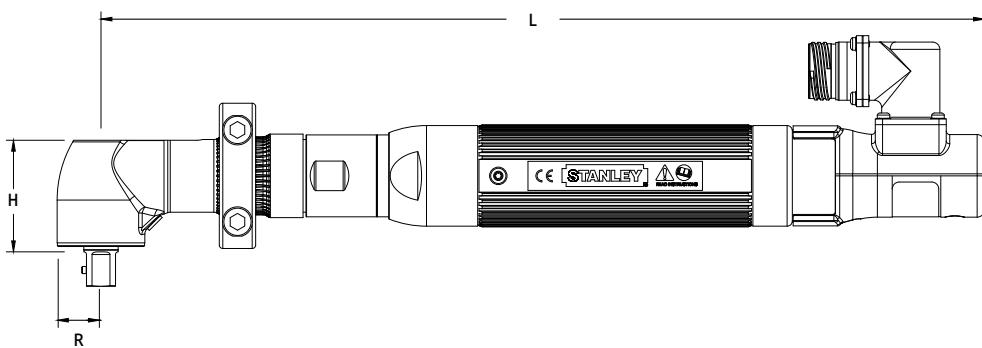
# Fixture Tools Pattern Mounting

Examples of how to create unique square or circular bolt patterns for Inline and Offset Retractable tools:



# Angle Fixtured Tools

**8 to 60 Nm**



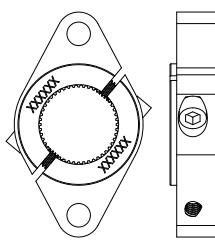
*Angle Fixtured Options*

EB33

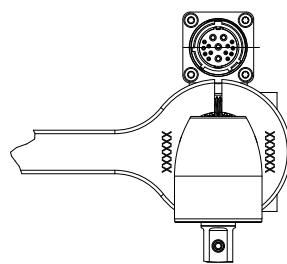
A19 Threaded Output	Part No.
Flush Socket	20D100021
Suspension Bails	Part No.
Wire Bail	A3061
Swivel	20K200000
Standard	B3432
Reaction Device	Part No.
Reaction Bar, Steel [Default]	20K100000
Base Mount Bracket	20K100500
Mounting Flange-B	20K100300

Model	Rated Speed	Max Torque		"R" Side to Center		"H" Head Height		"L" Length		Weight		Output
		RPM	Nm	lb ft	mm	in	mm	in	mm	in	kg	lb
EB33MA19-40	1025	40	29.5	19	0.75	48.7	1.92	385.8	15.2	1.9	4.11	1/2" SD
EB33MA18F0-48	881	48	35.4	17.5	0.69	39.3	1.55	382.8	15.1	2.41	5.31	3/8" SD
EB33MA19-60	680	60	44.2	19	0.75	48.7	1.92	385.8	15.2	2.31	5.10	1/2" SD

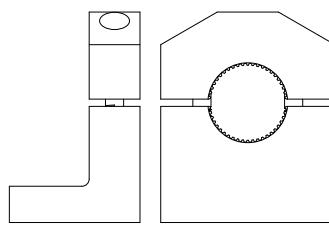
## Mounting / Reaction Options



Optional Flange Mount Bracket



Standard Reaction Bar



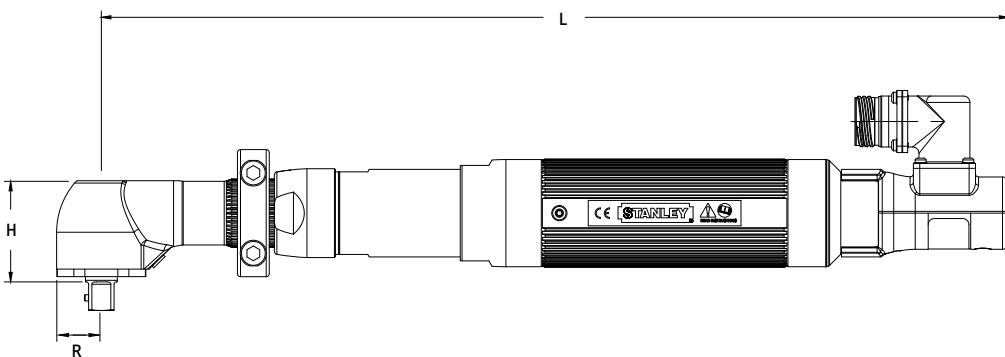
Optional Base Mount Bracket



*Sockets and Accessories  
begin on page 156*

# Angle Fixtured Tools

**24 to 400 Nm**



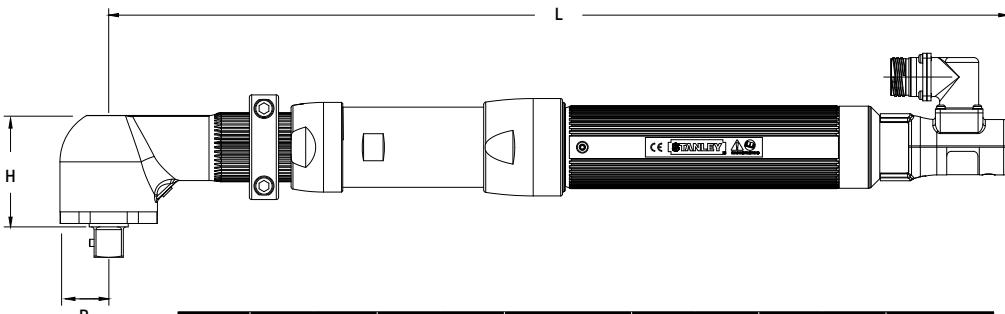
	Rated Speed	Max Torque		"R" Side to Center		"H" Head Height		"L" Length		Weight		Output
Model	RPM	Nm	lb ft	mm	in	mm	in	mm	in	kg	lb	Standard
EB44MA19-55	1190	55	40.6	19	0.75	48.7	1.92	445	7.5	3.2	6.97	1/2" SD
EB34MA19-70	610	70	51.6	19	0.75	48.7	1.92	433	17.0	3.2	6.97	
EB34MA22A-80	510	80	59.0	22	0.87	50.0	2.00	441	17.4	3.1	6.82	
EB44MA19-80	845	80	59.0	19	0.75	48.7	1.92	445	17.5	3.2	6.97	
EB44MA22A-80	810	80	59.0	22	0.87	50.0	2.00	453	17.8	3.1	6.82	
EB34MA22A-115	340	115	84.8	22	0.87	50.0	2.00	463	18.2	3.5	7.75	
EB44MA22A-120	550	120	88.5	22	0.87	50.0	2.00	453	17.8	3.53	7.8	

*Angle Fixtured Options*

EB34, EB44

A19 Splined Output	Part No.
Anti-Vibration 1/2" SD	20D100101
Flush Socket	20D100106
1/2" Double-Ended, RH Thread*	20D100107
A22A Output	Part No.
Flush Socket	20D100309
1/2" Double-Ended, RH Thread*	20D100326
Reaction Device	Part No.
Reaction Bar, Steel (Default)	20K100000
Base Mount Bracket	20K100500
Mounting Flange	20K100302
1/2" SD Socket Lock Pin	Part No.
Standard	20D227800
Rounded (Ball Detent)	20D227801

\*RH-Thread is Right-Hand Thread. This is an option used if the end user uses the additional output for clockwise tightening or loosening.



	Rated Speed	Max Torque		"R" Side to Center		"H" Head Height		"L" Length		Weight		Output
Model	RPM	Nm	lb ft	mm	in	mm	in	mm	in	kg	lb	Standard
EB55MA26-120	825	120	88.5	26	1.02	60	2.4	557	21.9	6.2	13.6	3/4" SD
EB55MA26-160	620	160	118	26	1.02	60	2.4	557	21.9	6.2	13.6	
EB45MA26-165	400	165	122	26	1.02	60	2.4	503	19.8	4.6	10.0	
EB45MA26-220	260	220	162	26	1.02	60	2.4	527	20.7	4.6	10.0	
EB55MA26-220	460	220	162	26	1.02	60	2.4	556	21.9	6.7	14.7	
EB55MA32-300	340	300	221	32	1.3	73	2.9	563	22.1	7.3	16.1	
EB55MA32-400	225	400	295	32	1.3	73	2.9	563	22.1	7.3	16.1	

*Angle Fixtured Options*

EB45, EB55

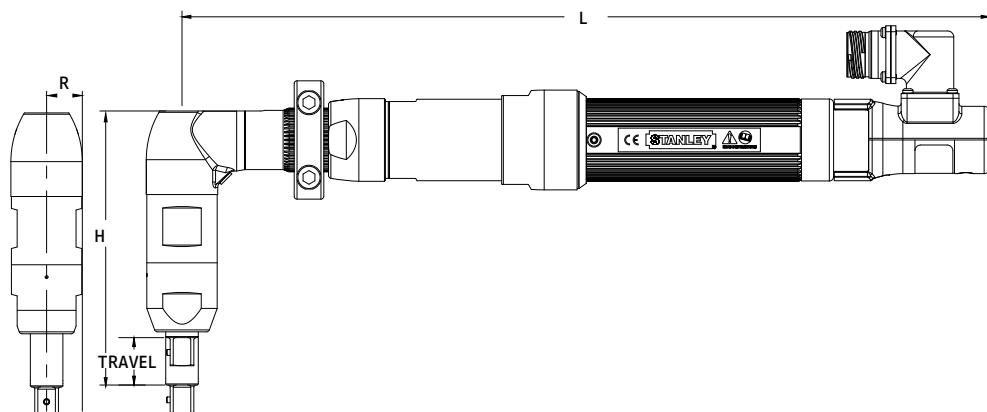
A26 Output	Part No.
Flush Socket	20D100409
5/8" Square Drive	20D100400
Reaction Device	Part No.
Reaction Bar, Steel (Default)	20K100200
Reaction Bar, Steel, Heavy Duty	20K100202
Base Mount Bracket	20K100600
Mounting Flange-B	20K100700
3/4" SD Socket Lock Pin	Part No.
Standard	20D125200
Rounded (Ball Detent)	20R202300



Sockets and Accessories  
begin on page 156

# Angle Retractable Fixtured Tools

**8 to 120 Nm**

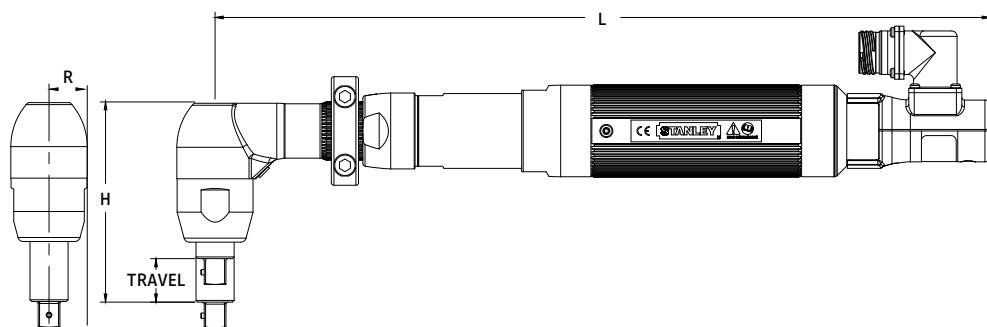


Model	Rated Speed	Max Torque		"R" Side to Center		"H" Head Height		"L" Length		Weight		Output	
	RPM	Nm	lbf ft	mm	in	mm	in	mm	in	kg	lb	Retraction	Standard
EB33MA19F1-40	1025	40	29.5	19	0.75	146.5	5.8	385	15.1	2.80	6.15	25 mm 1"	1/2" SD
EB33MA19F1-60	680	60	44.2	19	0.75	146.5	5.8	385	15.1	2.80	6.15		
EB44MA19F1-55	1190	55	40.6	19	0.75	146.5	5.8	445	17.5	3.18	7.02	25 mm 1"	1/2" SD
EB34MA19F1-70	610	70	51.6	19	0.75	146.5	5.8	433	17.0	2.74	6.05		

**Angle Retractable Fixtured Options**

EB33

Spring Options	Part No.
Standard	A5313
8 lb Compression	20R201407
Output Options	Part No.
2" Extended Output	20D115901
Reaction Device	Part No.
Reaction Bar, Steel [Default]	20K100000
Base Mount Bracket	20K100500
Mounting Flange-B	20K100300
Suspension Bails	Part No.
Wire Bail	A3061
Swivel	20K200000
Standard	B3432
1/2" SD Socket Lock Pin	Part No.
Standard	20D227800
Rounded (Ball Detent)	20D227801



Model	Rated Speed	Max Torque		"R" Side to Center		"H" Head Height		"L" Length		Weight		Output	
	RPM	Nm	lbf ft	mm	in	mm	in	mm	in	kg	lb	Retraction	Standard
EB34MA22AF1-80	510	80	59.0	22	0.87	114	4.5	441	17.4	3.1	6.75	25 mm 1"	1/2" SD
EB44MA22AF1-80	810	80	59.0	22	0.87	114	4.5	453	17.8	3.5	7.72		
EB34MA22AF1-115	340	115	84.8	22	0.87	114	4.5	463	18.2	3.1	6.75	25 mm 1"	1/2" SD
EB44MA22AF1-120	550	120	88.5	22	0.87	114	4.5	453	17.8	3.5	7.72		

**Angle Retractable Fixtured Options**

EB34, EB44

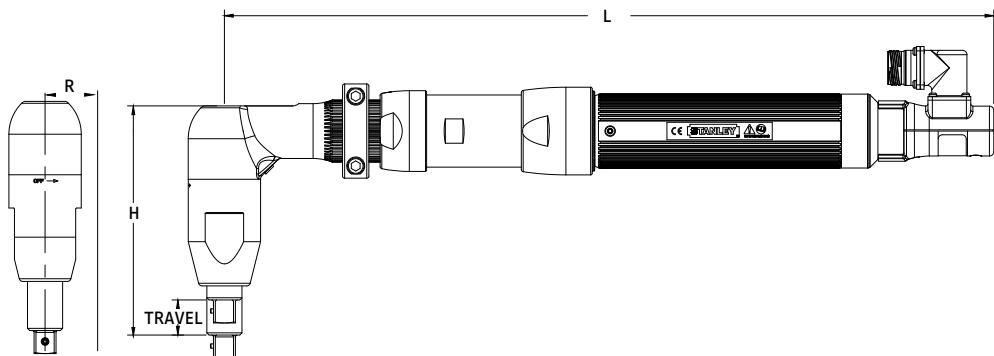
Spring Options	Part No.
Standard	M4283
5.8 lb Compression	H4003
8.6 lb Compression	M4800
Output Options	Part No.
2" Extended Output	M4306
2-5/8" Extended Output	20D117700
8" Extended Output	M4466
Reaction Device	Part No.
Reaction Bar, Steel [Default]	20K100100
Base Mount Bracket	20K100500
Mounting Flange	20K100302
1/2" SD Socket Lock Pin	Part No.
Standard	20D227800
Rounded (Ball Detent)	20D227801



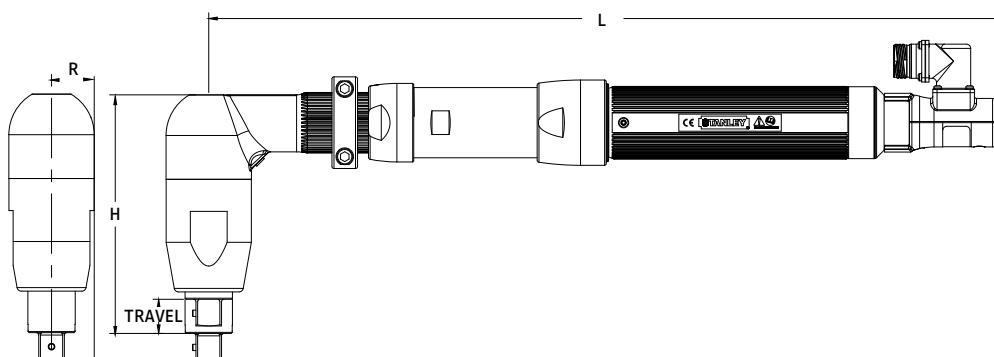
**Sockets and Accessories begin on page 156**

# Angle Retractable Fixtured Tools

24 to 400 Nm



Model	Rated Speed	Max Torque		"R" Side to Center		"H" Head Height		"L" Length		Weight		Output	
		RPM	Nm	lb ft	mm	in	mm	in	mm	in	kg	lb	Retraction
EB55MA26F1-120	825	120	88.5	26	1.02	166	6.5	557	21.9	5.2	11.4	25 mm 1"	3/4" SD
EB55MA26F1-160	620	160	118	26	1.02	166	6.5	557	21.9	5.2	11.4		
EB45MA26F1-165	400	165	122	26	1.02	166	6.5	503	19.8	4.6	10.0		
EB45MA26F1-220	260	220	162	26	1.02	166	6.5	527	20.7	4.6	10.0		
EB55MA26F1-220	460	220	162	26	1.02	166	6.5	557	21.9	7.5	16.6		



Model	Rated Speed	Max Torque		"R" Side to Center		"H" Head Height		"L" Length		Weight		Output	
		RPM	Nm	lb ft	mm	in	mm	in	mm	in	kg	lb	Retraction
EB55MA32F1-300	340	300	221	32	1.26	178	7.0	563	22.1	7.3	16.1	25 mm 1"	3/4" SD
EB55MA32F1-400	225	400	295	32	1.26	178	7.0	563	22.1	7.3	16.1		

Angle Retractable Fixtured Options

EB45, EB55

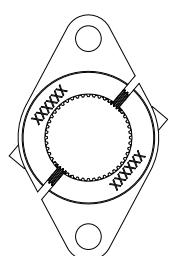
Spring Options	Part No.
Standard	20R201414
11 lb Compression	20R201417
Reaction Device	Part No.
Reaction Bar, Steel [Default]	20K100200
Reaction Bar, Steel	20K100202
Base Mount Bracket	20K100600
Mounting Flange-B	20K100700
3/4" SD Socket Lock Pin	Part No.
Standard	20D227800
Rounded (Ball Detent)	20D227802

Angle Retractable Fixtured Options

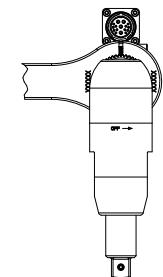
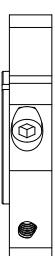
EB55

Spring Options	Part No.
Standard	M4606
7.6 lb Compression	M4331
Output Options	Part No.
2.5" Extended Output	20D114800
4" Extended Output	M4740
Reaction Device	Part No.
Reaction Bar, Steel [Default]	20K100200
Reaction Bar, Steel	20K100202
Base Mount Bracket	20K100600
Mounting Flange-B	20K100700
3/4" SD Socket Lock Pin	Part No.
Standard	20D227800
Rounded (Ball Detent)	20D227802

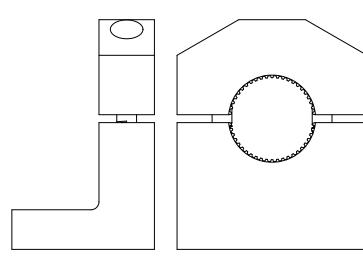
## Mounting / Reaction Options



Optional Flange Mount Bracket



Standard Reaction Bar



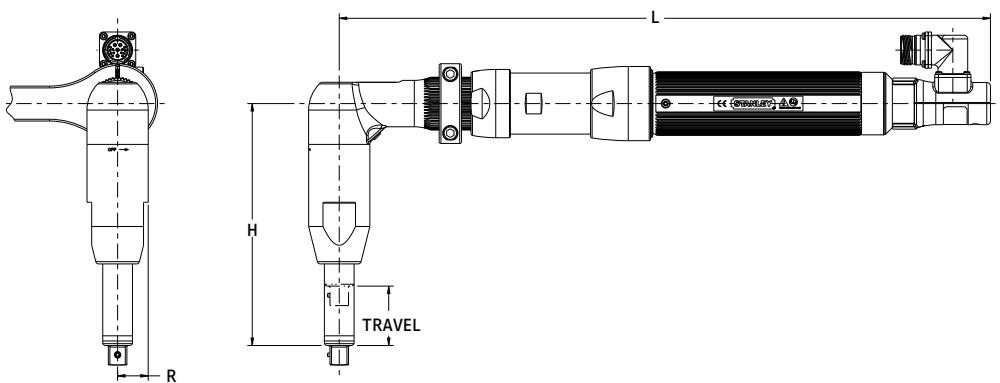
Optional Base Mount Bracket



Sockets and Accessories  
begin on page 156

# Angle Retractable Fixtured Tools

12 to 400 Nm



Model	Rated Speed	Max Torque		"R" Side to Center		"H" Head Height		"L" Length		Weight		Output	
		RPM	Nm	lb ft	mm	in	mm	in	mm	in	kg	lb	Retraction
EB33MA19F2-60	680	60	44.2	19	0.75	193	7.6	386	15.2	3.1	6.83	50.8 mm 2"	1/2" SD
EB55MA26F2-220	460	220	162	26	1.02	225	8.9	557	21.9	5.7	12.5		5/8" SD
EB55MA32F2-300	340	300	221	32	1.26	269	10.6	563	22.2	7.8	17.2		3/4" SD
EB55MA32F2-400	225	400	295	32	1.26	269	10.6	586	23	7.8	17.2		3/4" SD

Angle Retractable Fixtured Options

EB45, EB55

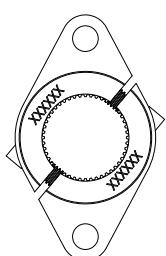
Spring Options	Part No.
Standard	20R201414
11 lb Compression	20R201417
Reaction Device	Part No.
Reaction Bar, Steel (Default)	20K100200
Reaction Bar, Steel	20K100202
Base Mount Bracket	20K100600
Mounting Flange-B	20K100700
3/4" SD Socket Lock Pin	Part No.
Standard	20D227800
Rounded (Ball Detent)	20D227802

Angle Retractable Fixtured Options

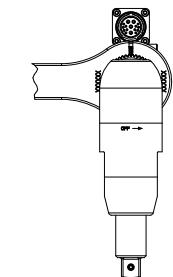
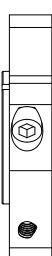
EB55

Spring Options	Part No.
Standard	M4606
7.6 lb Compression	M4331
Output Options	Part No.
2.5" Extended Output	20D114800
4" Extended Output	M4740
Reaction Device	Part No.
Reaction Bar, Steel (Default)	20K100200
Reaction Bar, Steel	20K100202
Base Mount Bracket	20K100600
Mounting Flange-B	20K100700
3/4" SD Socket Lock Pin	Part No.
Standard	20D227800
Rounded (Ball Detent)	20D227802

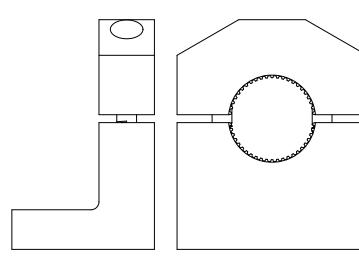
Mounting / Reaction Options



Optional Flange Mount Bracket



Standard Reaction Bar



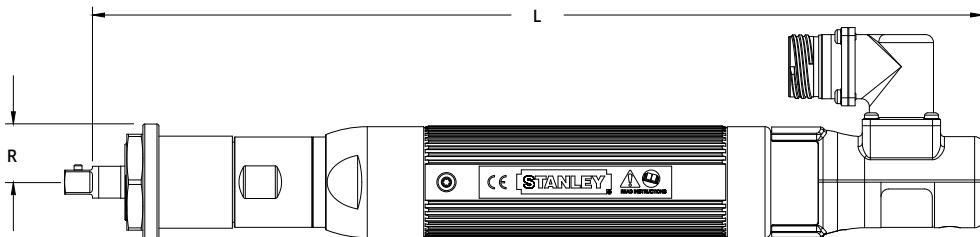
Optional Base Mount Bracket



Sockets and Accessories  
begin on page 156

# Inline Fixtured Tools

**5.6 to 120 Nm**

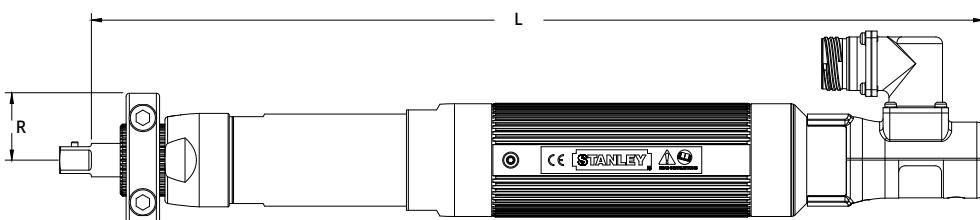


	Rated Speed	Max Torque		"R" Side to Center		"L" Length		Weight		Output
Model	RPM	Nm	lb ft	mm	in	mm	in	kg	lb	Standard
EB33MB-28	1590	28	20.6	24	0.93	359	14.1	1.89	4.15	3/8" SD
EB33MB-40	1120	40	29.5	24	0.93	385	15.1	1.89	4.15	

*Inline Fixtured Options*

EB33

Reaction Device	Part No.
Reaction Bar, Aluminum [Default]	F3698
Reaction Bar, Steel	20K100100
Base Mount Bracket	A8606
Mounting Flange-B	20K101000
Suspension Bails	Part No.
Wire Bail	A3061
Swivel	20K101400
Standard	B3432
3/8" SD Socket Lock Pin [EB33]	Part No.
Standard	20D227800
Rounded (Ball Detent)	20D227801



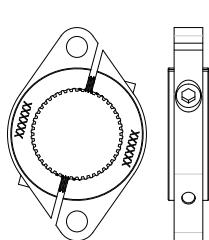
	Rated Speed	Max Torque		"R" Side to Center		"L" Length		Weight		Output
Model	RPM	Nm	lb ft	mm	in	mm	in	kg	lb	Standard
EB34MB1-55	830	55	40.5	32	1.03	421	16.6	2.2	4.84	1/2" SD
EB44MB1-80	895	80	59	32	1.03	421	16.6	2.7	5.94	
EB44MB1-120	557	120	88.5	32	1.03	421	16.6	2.7	5.94	

*Inline Fixtured Options*

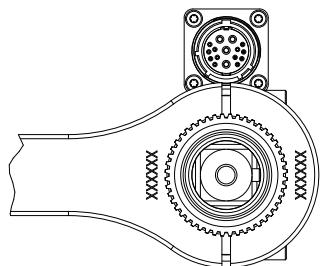
EB34, EB44

Reaction Device	Part No.
Reaction Bar, Steel [Default]	20K100100
Base Mount Bracket	20K100500
Mounting Flange-B	20K100300
1/2" SD Socket Lock Pin	Part No.
Standard	20D227800
Rounded (Ball Detent)	20D227801

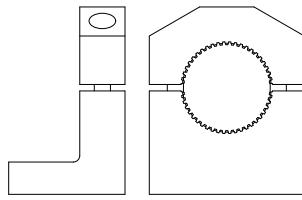
*Mounting / Reaction Options*



Optional Flange Mount Bracket



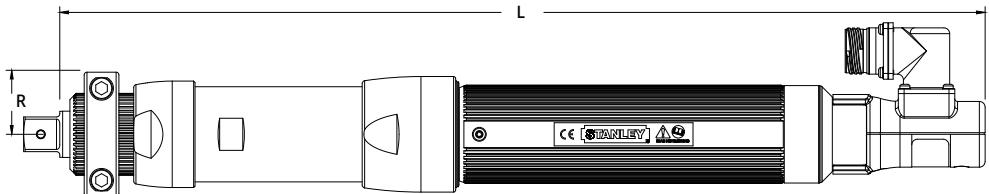
Standard Reaction Bar



Optional Base Mount Bracket

# Inline Fixtured Tools

28 to 2000 Nm

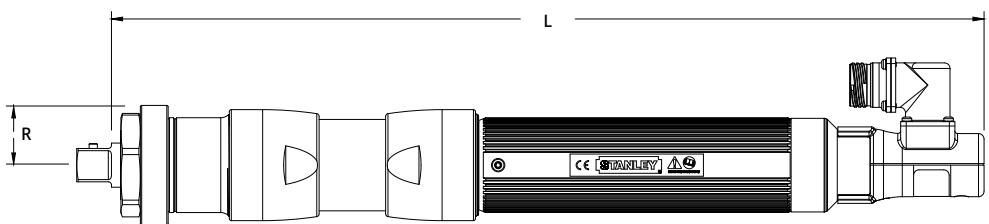


	Rated Speed	Max Torque		"R" Side to Center		"L" Length		Weight		Output
Model	RPM	Nm	lb ft	mm	in	mm	in	kg	lb	Standard
EB45MB2-140	465	140	103	34	1.34	475	18.7	3.6	7.92	3/4" SD
EB55MB2-170	640	170	125	34	1.34	475	18.7	4.3	9.46	3/4" SD
EB45MB2-190	355	190	140	34	1.34	475	18.7	4.3	9.46	3/4" SD
EB55MB2-250	400	250	184	34	1.34	475	18.7	5.3	11.7	3/4" SD

## Inline Fixtured Options

EB45, EB55 (MB2 Models)

Reaction Device	Part No.
Reaction Bar, Steel [Default]	20K100200
Base Mount Bracket	20K100600
Mounting Flange-B	20K100700
3/4" SD Socket Lock Pin	Part No.
Standard	20D227800
Rounded (Ball Detent)	20D227802

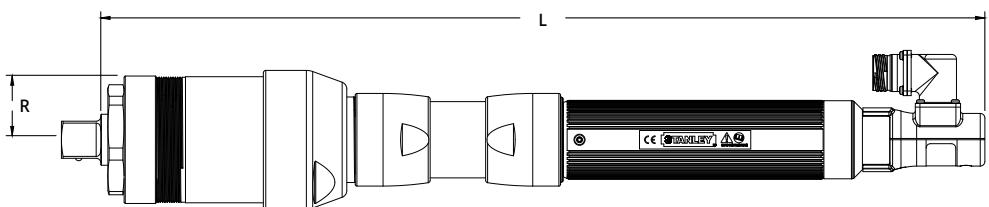


	Rated Speed	Max Torque		"R" Side to Center		"L" Length		Weight		Output
Model	RPM	Nm	lb ft	mm	in	mm	in	kg	lb	Standard
EB55MB3-320	310	320	236	35	1.38	517	20.4	5.5	12.1	3/4" SD

## Inline Fixtured Options

EB55MB3 Model

Reaction Device	Part No.
Reaction Bar, Steel [Default]	B4487
Base Mount Bracket	H1140
Mounting Flange-B	M4329
3/4" SD Socket Lock Pin	Part No.
Standard	20D227800
Rounded (Ball Detent)	20D227802



	Rated Speed	Max Torque		"R" Side to Center		"L" Length		Weight		Output
Model	RPM	Nm	lb ft	mm	in	mm	in	kg	lb	Standard
EB55MB4-460	220	460	339	44	1.7	564	22.2	7.5	16.8	1" SD
EB55MB4-620	165	620	457	44	1.7	564	22.2	7.5	16.8	1" SD
EB55MB5-800	125	800	590	48	1.9	575	22.6	9	19.8	1" SD
EB55MB5-1100	80	1100	811	48	1.9	598	23.6	10.1	22.3	1" SD
EB55MB5-1500	60	1500	1106	48	1.9	625	24.6	10.1	22.3	1" SD
EB55MB5-2000	50	2000	1475	48	1.9	625	24.6	10.1	22.3	1" SD

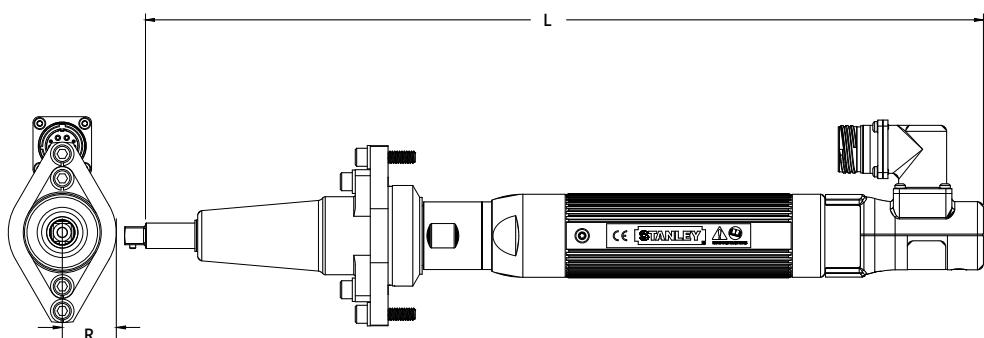
## Inline Fixtured Options

EB55MB4 & 5 Models

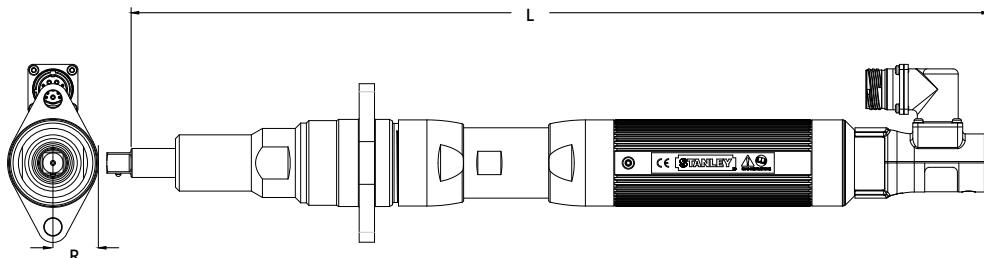
Reaction Device	Part No.
Reaction Bar, Steel [Default]	F4192
Base Mount Bracket	F4201
Mounting Flange-B	20K101100
1" SD Socket Lock Pin	Part No.
Standard	20D227800
Rounded (Ball Detent)	20D227802

# Inline Retractable Fixtured Tools

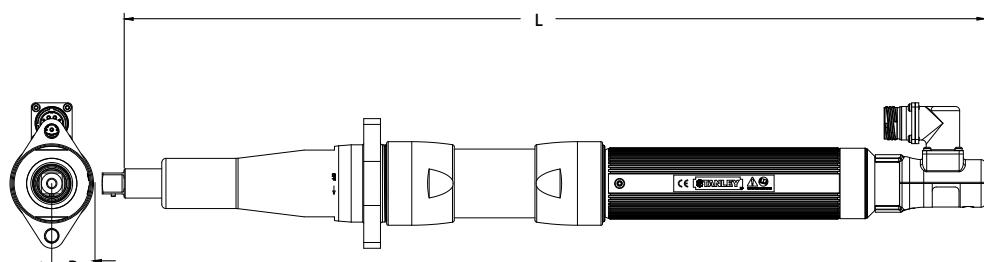
5.6 to 250 Nm



Model	Rated Speed	Max Torque		"R" Side to Center		"L" Length		Weight		Output	
		RPM	Nm	lb ft	mm	in	mm	in	kg	lb	Retraction
EB33MBF1-28	1590	28	20.6	28	1.13	443	17.4	2.56	5.63	25 mm 1"	9.5 mm 3/8" SD
EB33MBF1-40	1120	40	29.5	28	1.13	443	17.4	2.56	5.63		



Model	Rated Speed	Max Torque		"R" Side to Center		"L" Length		Weight		Output	
		RPM	Nm	lb ft	mm	in	mm	in	kg	lb	Retraction
EB34MB1F1-55	830	55	40.5	28	1.11	499	19.6	3.3	7.24	25 mm 1"	13 mm 1/2" SD
EB44MB1F1-80	895	80	59.0	28	1.11	511	20.1	3.8	8.34		
EB44MB1F1-120	560	120	88.5	28	1.11	533	21.0	3.8	8.34		



Model	Rated Speed	Max Torque		"R" Side to Center		"L" Length		Weight		Output	
		RPM	Nm	lb ft	mm	in	mm	in	kg	lb	Retraction
EB45MB2F1-140	465	140	103	32	1.25	600	23.6	3.6	7.92	25 mm 1"	16 mm 5/8" SD
EB55MB2F1-170	640	170	125	32	1.25	631	24.8	6.5	14.4		
EB45MB2F1-190	355	190	140	32	1.25	600	23.6	3.6	7.92		
EB55MB2F1-250	400	250	184	32	1.25	654	25.7	6.8	15.0		

## Inline Retractable Fixtured Options

3/8" Output

Output Options	Part No.
Standard	M3050
24 Threaded	M3118
24 Threaded, 3/4" Long	M3227
1-5/32" Extension	S3362
1.478" Extension	M3243
2" Extension	M3090
2-3/8" Extension	S3363
3" Extension	M3229
4" Extension	M3223
4-1/16" Extension	S3486
6" Extension	M3224
7-3/8" Extension	S3626
8" Extension	M3216
8" Extension Assembly	20S104600
Spring Options	Part No.
Standard	M4096
Heavy Duty Spring	M3184
Extra Heavy Duty Spring	20R201428

## Inline Retractable Fixtured Options

1/2" Output

Output Options	Part No.
Standard	20D101600
2" Extension	20D101610
3" Extension	20D101603
4" Extension	20D101608
5" Extension	20D101604
6" Extension	20D101606
7-5/16" Extension	20D101605
8" Extension	20D101609
11" Extension	20D101607
Spring Options	Part No.
Standard	B4093
Heavy Duty Spring	20R201401

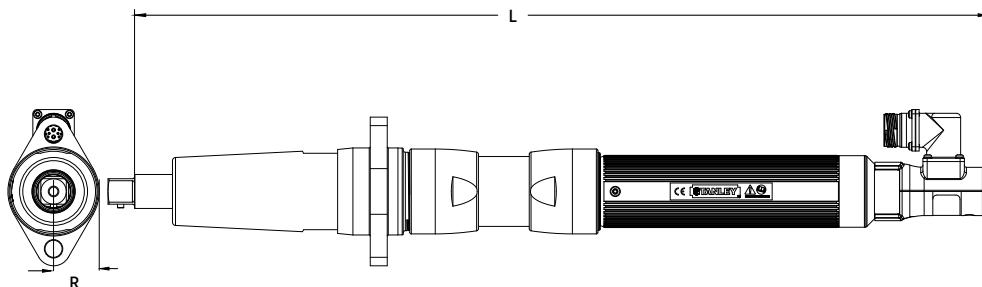
## Inline Retractable Fixtured Options

5/8" Output

Output Options	Part No.
Standard	20D102901
2" Extension	20D102912
6" Extension	20D102913
Spring Options	Part No.
Standard	20R201407
Heavy Duty Spring	20R201408

# Inline Retractable Fixtured Tools

**64 to 2000 Nm**

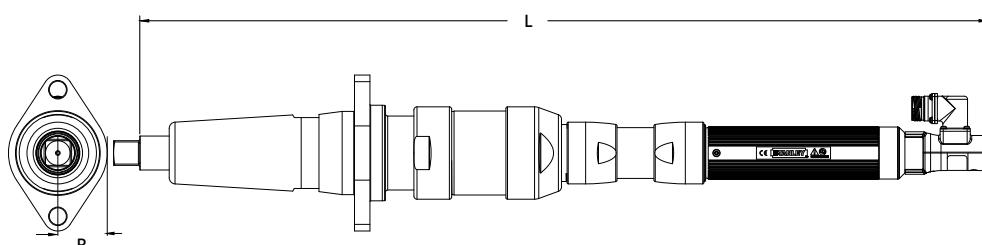


	Rated Speed	Max Torque		"R" Side to Center		"L" Length		Weight		Output	
Model	RPM	Nm	lb ft	mm	in	mm	in	kg	lb	Retraction	Standard
EB55MB3F1-320	310	320	236	34	1.34	636	25	6.7	14.74	25mm / 1"	19mm / 3/4" SD

*Inline Retractable Fixtured Options*

3/8" Output

Output Options	Part No.
Standard	20D102101
5" Extension	20D102106
Spring Options	Part No.
Standard	20R201403
Heavy Duty Spring	20R201404
Reaction Components	Part No.
Mounting Flange -MB3F	20D205600



	Rated Speed	Max Torque		"R" Side to Center		"L" Length		Weight		Output	
Model	RPM	Nm	lb ft	mm	in	mm	in	kg	lb	Retraction	Standard
EB55MB4F1-460	220	460	339	44	1.7	803	31.6	17.2	37.84	25mm 1"	25mm 1" SD
EB55MB4F1-620	165	620	457	44	1.7	803	31.6	17.2	37.84		
EB55MB5F1-800	125	800	590	50	2	840	33.0	18.3	40.26		
EB55MB5F1-1100	80	1100	811	50	2	863	34.0	18.3	40.26		
EB55MB5F1-1500	60	1500	1106	50	2	870	34.3	19.2	42.24		
EB55MB5F1-2000	50	2000	1475	50	2	870	34.3	19.2	42.24		

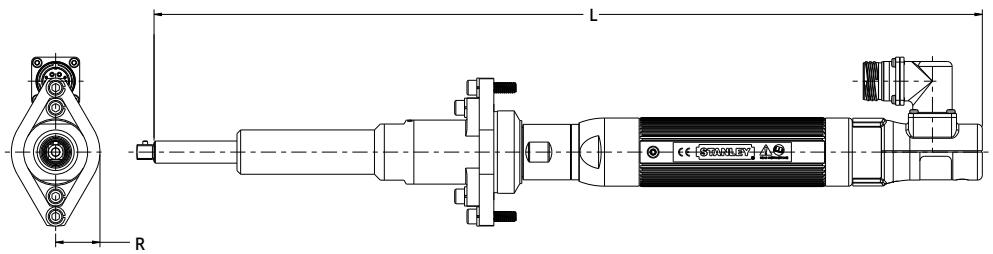
*Inline Retractable Fixtured Options*

1" Output

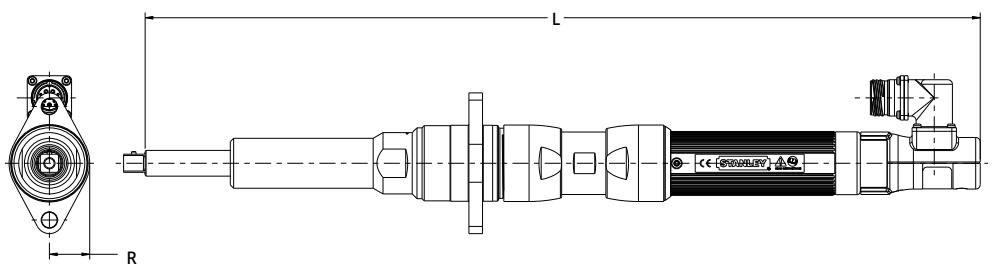
Output Options	Part No.
Standard	20D208800
2" Extension	20D208803
4" Extension	20D208802
3/4" SD [MB4F1 ONLY]	20D121100
Reaction Components	Part No.
Mounting Flange -MB4F	20D208500
Mounting Flange -MB5F	20D209500

# Inline Retractable Fixtured Tools

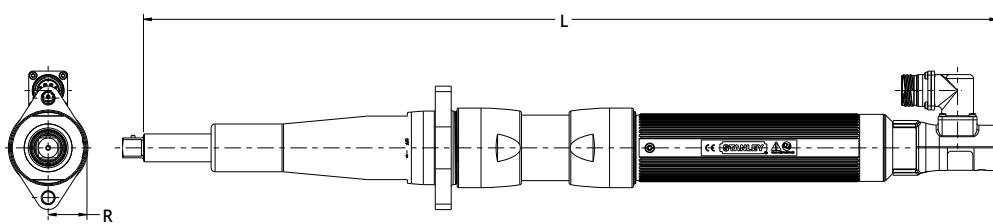
**5.6 to 190 Nm**



Model	Rated Speed RPM	Max Torque		"R" Side to Center		"L" Length		Weight		Output	
		Nm	lb ft	mm	in	mm	in	kg	lb	Retraction	Standard
EB33MBF2-28	1590	28	20.6	28	1.13	443	17.4	2.56	5.63	25mm	9.5mm
EB33MBF2-40	1120	40	29.5	28	1.13	443	17.4	2.56	5.63	1"	3/8" SD



Model	Rated Speed RPM	Max Torque		"R" Side to Center		"L" Length		Weight		Output	
		Nm	lb ft	mm	in	mm	in	kg	lb	Retraction	Standard
EB34MB1F2-55	830	55	40.5	28	1.11	499	19.6	3.3	7.24	25mm	13mm
EB44MB1F2-80	895	80	59.0	28	1.11	511	20.1	3.8	8.34	1"	1/2" SD
EB44MB1F2-120	560	120	88.5	28	1.11	533	21.0	3.8	8.34		



Model	Rated Speed RPM	Max Torque		"R" Side to Center		"L" Length		Weight		Output	
		Nm	lb ft	mm	in	mm	in	kg	lb	Retraction	Standard
EB45MB2F2-140	465	140	103	32	1.25	651	25.6	3.6	7.92	25mm	16mm
EB55MB2F2-170	640	170	125	32	1.25	681	26.8	6.5	14.4	1"	5/8" SD
EB45MB2F2-190	355	190	140	32	1.25	651	25.6	3.6	7.92		
EB45MB2F2-250	270	250	184	32	1.25	651	25.6	3.6	7.92		

## Inline Retractable Fixtured Options

**3/8" Output**

Output Options	Part No.
Standard	M3050
24 Threaded	M3118
24 Threaded, 3/4" Long	M3227
1-5/32" Extension	S3362
1.478" Extension	M3243
2" Extension	M3090
2-3/8" Extension	S3363
3" Extension	M3229
4" Extension	M3223
4-1/16" Extension	S3486
6" Extension	M3224
7-3/8" Extension	S3626
8" Extension	M3216
8" Extension Assembly	20S104600
Spring Options	Part No.
Standard	M4096
Heavy Duty Spring	M3184
Extra Heavy Duty Spring	20R201428

## Inline Retractable Fixtured Options

**1/2" Output**

Output Options	Part No.
Standard	20D101600
2" Extension	20D101610
3" Extension	20D101603
4" Extension	20D101608
5" Extension	20D101604
6" Extension	20D101606
7-5/16" Extension	20D101605
8" Extension	20D101609
11" Extension	20D101607
Spring Options	Part No.
Standard	B4093
Heavy Duty Spring	20R201401

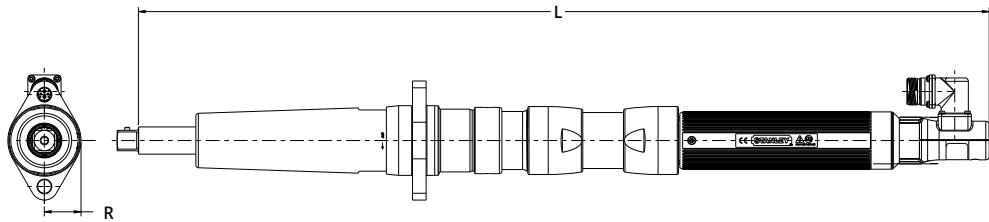
## Inline Retractable Fixtured Options

**5/8" Output**

Output Options	Part No.
Standard	20D102901
2" Extension	20D102912
6" Extension	20D102913
Spring Options	Part No.
Standard	20R201407
Heavy Duty Spring	20R201408

# Inline Retractable Fixtured Tools

**64 to 2000 Nm**

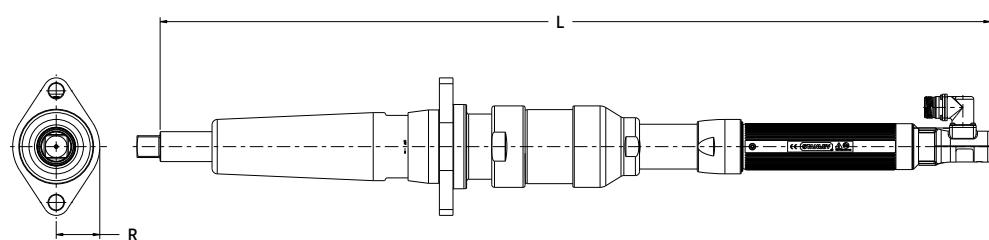


Model	Rated Speed	Max Torque		"R" Side to Center		"L" Length		Weight		Output	
		RPM	Nm	lb ft	mm	in	mm	in	kg	lb	Retraction
EB55MB3F2-320	310	320	236	34	1.34	636	25	6.7	14.74	25mm 1"	19mm 3/4" SD

*Inline Retractable Fixtured Options*

3/8" Output

Output Options	Part No.
Standard	20D102101
5" Extension	20D102106
Spring Options	Part No.
Standard	20R201403
Heavy Duty Spring	20R201404
Reaction Components	Part No.
Mounting Flange -MB3F	20D205600



Model	Rated Speed	Max Torque		"R" Side to Center		"L" Length		Weight		Output	
		RPM	Nm	lb ft	mm	in	mm	in	kg	lb	Retraction
EB55MB4F2-460	220	460	339	44	1.7	803	31.6	17.2	37.84	25mm 1"	25mm 1" SD
EB55MB4F2-620	165	620	457	44	1.7	803	31.6	17.2	37.84		
EB55MB5F2-800	125	800	590	50	2	840	33.0	18.3	40.26		
EB55MB5F2-1100	80	1100	811	50	2	863	34.0	18.3	40.26		
EB55MB5F2-1500	60	1500	1106	50	2	870	34.3	19.2	42.24		
EB55MB5F2-2000	50	2000	1475	50	2	870	34.3	19.2	42.24		

*Inline Retractable Fixtured Options*

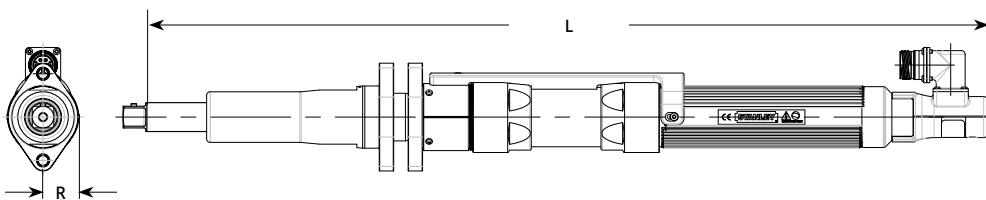
1" Output

Output Options	Part No.
Standard	20D208800
2" Extension	20D208803
4" Extension	20D208802
3/4" SD (MB4F1 ONLY)	20D121100
Reaction Components	Part No.
Mounting Flange -MB4F	20D208500
Mounting Flange -MB5F	20D209500

# Inline Retractable Fixtured Tools

**250 Nm**

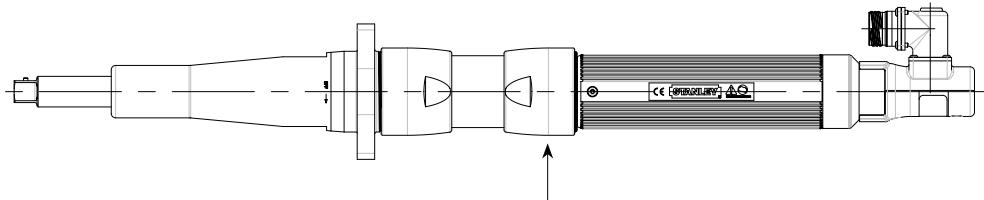
## Forward Mounted Transducer



Model	Rated Speed	Max Torque		"R" Side to Center		"L" Length		Weight		Output	
		RPM	Nm	lb ft	mm	in	mm	in	kg	lb	Retraction
EB55MB2F1X-250	400	250	184	32	1.25	689	27.13	5.7	12.5	25mm 1"	16mm 5/8" SD
EB55MB2F2X-250	400	250	184	32	1.25	740	29.1	6.8	15.0	51mm 2"	16mm 5/8" SD

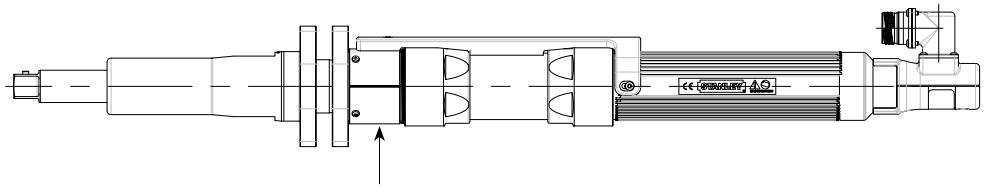
New Model Numbers Coming Soon

## Rear Mounted Single or Redundant Transducers



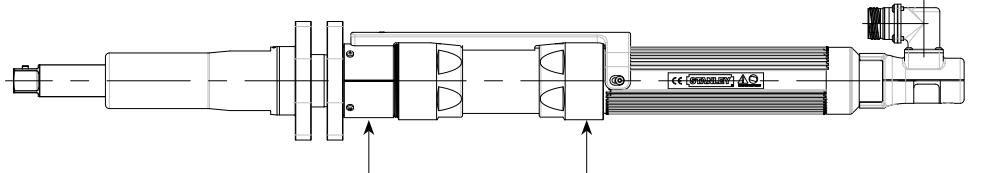
The transducer(s) is located between the motor and gearing on rear mounted single or redundant transducer tools.  
[Example:EB55MB2F2-170 starting on page 45]

## Forward Mounted Single Transducer



The transducer is located after the gearing on forward mounted single transducer tools. [Example:EB55MB2F2X-250 page 49]

## Forward & Rear Mounted Redundant Transducers



The transducers are located after the gearing and between the motor and gearing on forward and rear mounted redundant transducer tools. [Coming Soon]

## Inline Retractable Fixtured Options

### 3/8" Output

Output Options	Part No.
Standard	M3050
24 Threaded	M3118
24 Threaded, 3/4" Long	M3227
1-5/32" Extension	S3362
1.478" Extension	M3243
2" Extension	M3090
2-3/8" Extension	S3363
3" Extension	M3229
4" Extension	M3223
4-1/16" Extension	S3486
6" Extension	M3224
7-3/8" Extension	S3626
8" Extension	M3216
8" Extension Assembly	205104600
Spring Options	Part No.
Standard	M4096
Heavy Duty Spring	M3184
Extra Heavy Duty Spring	20R201428

### 1/2" Output

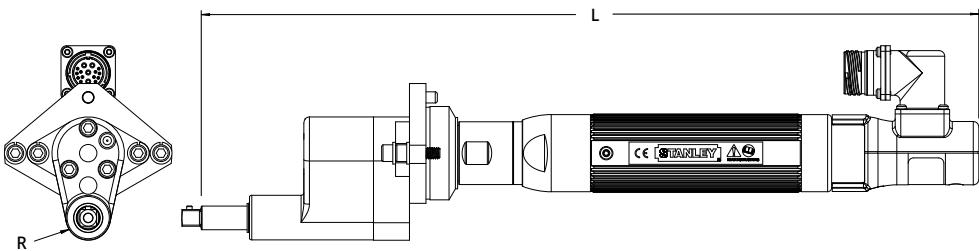
Output Options	Part No.
Standard	20D101600
2" Extension	20D101610
3" Extension	20D101603
4" Extension	20D101608
5" Extension	20D101604
6" Extension	20D101606
7-5/16" Extension	20D101605
8" Extension	20D101609
11" Extension	20D101607
Spring Options	Part No.
Standard	B4093
Heavy Duty Spring	20R201401

### 5/8" Output

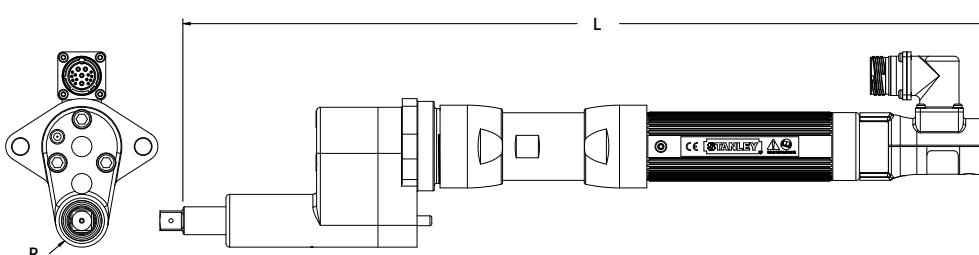
Output Options	Part No.
Standard	20D102901
2" Extension	20D102912
6" Extension	20D102913
Spring Options	Part No.
Standard	20R201407
Heavy Duty Spring	20R201408

# Offset Retractable Fixtured Tools (3/4", 1")

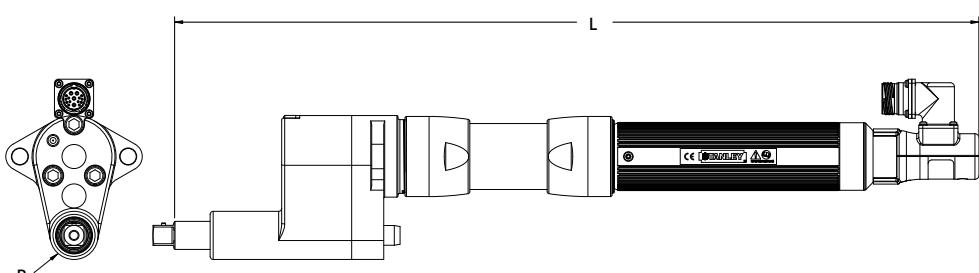
5 to 225 Nm



Model	Rated Speed	Torque		"R" Side to Center		"L" Length		Weight		Output		
		RPM	Nm	lb ft	mm	in	mm	in	kg	lb	Retraction	Standard
EB33MDF1-25	1590	25	18.4		13	0.51	443	17.5	3.1	6.78	19mm [3/4"]	3/8" SD
EB33MDF1-36	1120	36	26.6		13	0.51	443	17.5	3.1	6.82		



Model	Rated Speed	Torque		"R" Side to Center		"L" Length		Weight		Output		
		RPM	Nm	lb ft	mm	in	mm	in	kg	lb	Retraction	Standard
EB34MD1F1-48	830	48	35.4		17	0.67	499	19.7	4.4	9.68	25mm [1"]	1/2" SD
EB44MD1F1-70	895	70	51.6		17	0.67	511	20.2	4.8	10.56		
EB44MD1F1-108	560	108	79.7		17	0.67	533	21	4.8	10.56		



Model	Rated Speed	Torque		"R" Side to Center		"L" Length		Weight		Output		
		RPM	Nm	lb ft	mm	in	mm	in	kg	lb	Retraction	Standard
EB45MD2F1-125	465	125	92.2		19	0.75	584	23	10.5	23.2	25mm [1"]	5/8" SD
EB55MD2F1-150	640	150	110.7		19	0.75	614	24.2	10.5	23.2		
EB45MD2F1-170	355	170	125.4		19	0.75	584	23	10.5	23.2		
EB55MD2F1-225	400	225	166		19	0.75	637	25.1	10.5	23.2		

## Retractable Options

EB33

Spring Options	Part No.
Standard	M3062
Heavy Duty	M3183
Output Options	Part No.
3/4" Extended Output	M3227
1-5/32" Extended Output	S3362
1.478" Extended Output	M3243
2" Extended Output	M3090
2-3/8" Extended Output	S3363
3" Extended Output	M3239
4" Extended Output	M3223
4-1/16" Extended Output	S3486
6" Extended Output	M3224
7-3/8" Extended Output	S3626
8" Extended Output	M3216
8" Extended Output, Thin	20S104600
24 Threaded Output	M3118
1/2" Square Drive Lock Pin	Part No.
Standard	20D227800
Rounded (Ball Detent)	20D227801

## Retractable Options

EB34, EB44

Spring Options	Part No.
Standard	B4093
Heavy Duty	20R201401
Output Options	Part No.
2" Extended Output	20D101610
3" Extended Output	20D101603
4" Extended Output	20D101608
5" Extended Output	20D101604
6" Extended Output	20D101606
7-5/16" Extended Output	20D101605
8" Extended Output	20D101609
11" Extended Output	20D101607
1/2" SD Socket Lock Pin	Part No.
Standard	20D227800
Rounded (Ball Detent)	20D227801

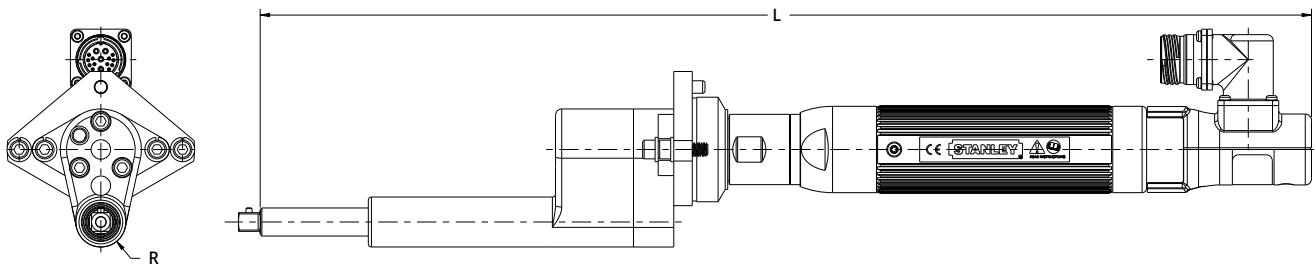
## Retractable Options

EB45, EB55

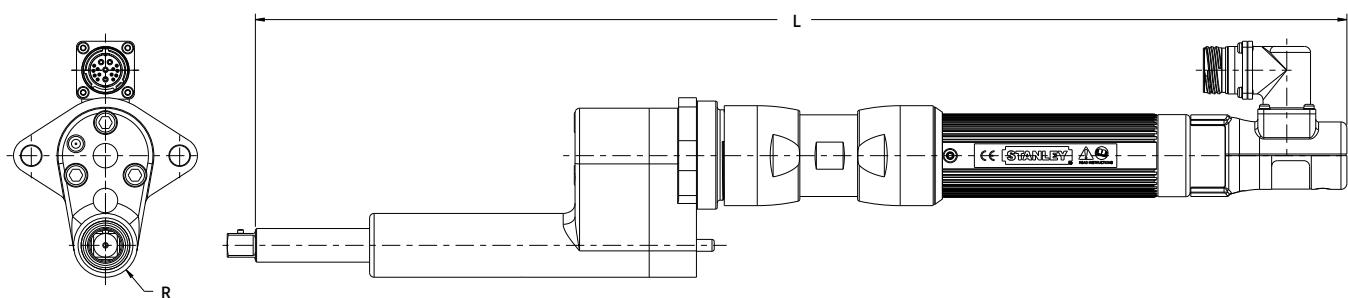
Retraction Spring	Part No.
Standard	20R201407
Heavy Duty	20R201408
Output Options	Part No.
2" Extended Output	20D102912
6" Extended Output	20D102913
3/4" SD Socket Lock Pin	Part No.
Standard	20D227800
Rounded (Ball Detent)	20D227802

# Offset Retractable Fixtured Tools (2")

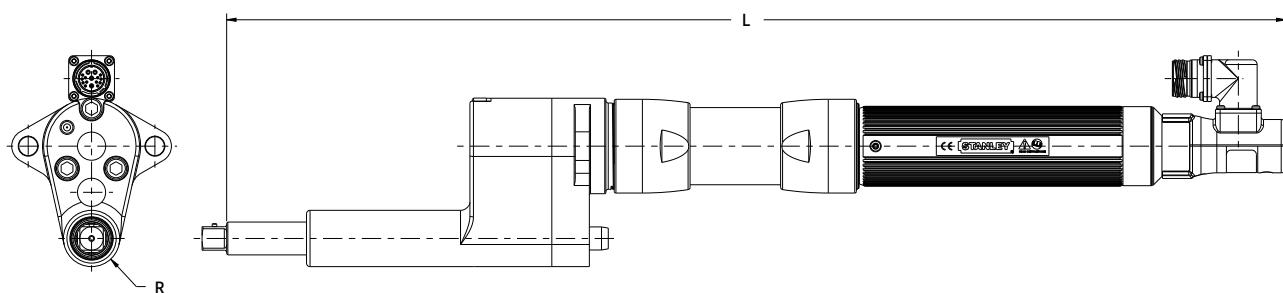
5 to 225 Nm



	Rated Speed	Torque		"R" Side to Center		"L" Length		Weight		Output	
Model	RPM	Nm	lb ft	mm	in	mm	in	kg	lb	Retraction	Standard
EB33MDF2-25	1590	25	18.4	13	0.51	535	21.1	3.2	7.1	51mm [2"]	3/8" SD



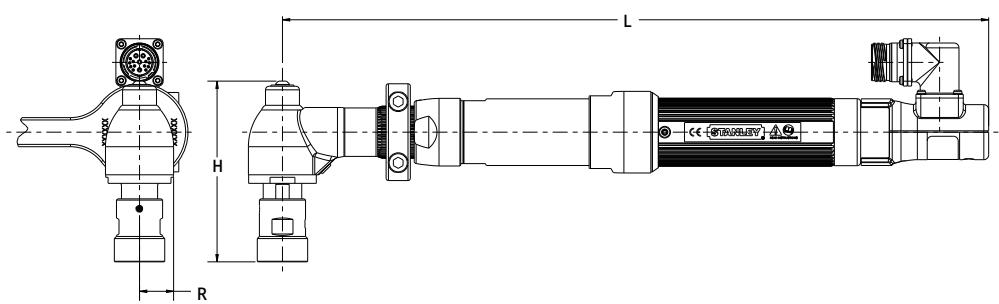
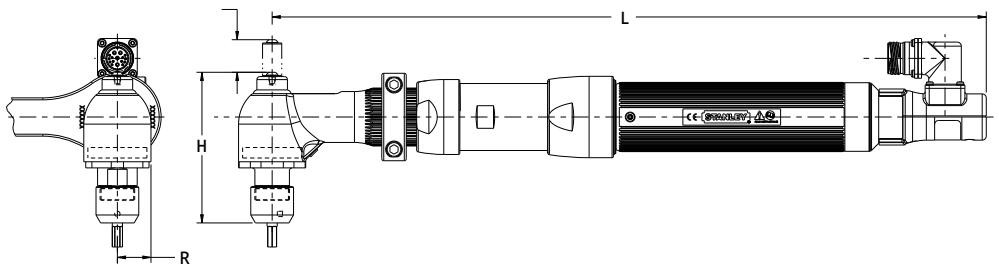
	Rated Speed	Torque		"R" Side to Center		"L" Length		Weight		Output	
Model	RPM	Nm	lb ft	mm	in	mm	in	kg	lb	Retraction	Standard
EB34MD1F2-48	830	48	35.4	17	0.67	599	23.6	4.8	10.56	51mm [2"]	1/2" SD



	Rated Speed	Torque		"R" Side to Center		"L" Length		Weight		Output	
Model	RPM	Nm	lb ft	mm	in	mm	in	kg	lb	Retraction	Standard
EB45MD2F2-125	465	125	92.2	19	0.75	663	26.1	10.9	24.0	51mm [2"]	5/8" SD
EB45MD2F2-170	355	170	125.4	19	0.75	663	26.1	10.9	24.0		
EB55MD2F2-225	400	225	166	19	0.75	717	28.2	10.9	24.0		

# Hold and Drive Fixtured Tools – 1" Output

22 to 220 Nm



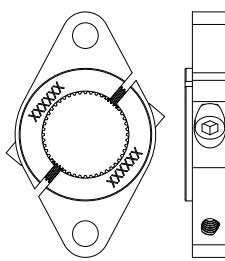
	Rated Speed	Torque		"R" Side to Center		"H" Head Height		"L" Length		Weight		Travel
Model	RPM	Nm	lb ft	mm	in	mm	in	mm	in	kg	lb	Standard
EB34MH22AV1-110	335	110	81.1	22	0.87	118.4	4.7	543	21.4	3.7	8.2	1"
EB45MH26V1-220	260	220	162.3	26	1.02	117.5	4.6	527	20.8	6.0	13.2	
EB55MH26V1-220	460	220	162.3	26	1.02	117.5	4.6	557	21.9	6.7	14.8	

See pages 170-181 for the Hold and Drive Configuration Guide

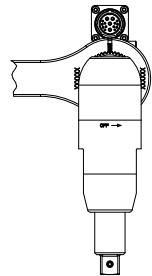
1" H&D Lever Tool Options

H22 Output	Part No.
Socket Options	-N4617
1" Travel Tang Holder Output	20D103211
1" Travel Bit Holder Output	20D103212
<b>H22 Tang Holder</b>	<b>Part No.</b>
Female Tang Holder Options	-F4287
<b>H22 Bit Holder</b>	<b>Part No.</b>
Bit Holder Options	-F4288
<b>H22 Reaction Bar</b>	<b>Part No.</b>
Reaction Bar Assembly [Default]	20K100000
Mounting Flange Assembly	20K100300
Base Mount Bracket Assembly	20K100500
<b>H26 Output</b>	<b>Part No.</b>
Socket Options	-F4285
1" Travel Tang Holder Output	20D103601
1" Travel Bit Holder Output	20D103602
<b>H26 Tang Holder</b>	<b>Part No.</b>
Female Tang Holder Options	-H4948
<b>H26 Bit Holder</b>	<b>Part No.</b>
Bit Holder Options	-H4947
<b>H26 Reaction Bar</b>	<b>Part No.</b>
Reaction Bar Assembly	20K100200
Mounting Flange Assembly	20K100700
Base Mount Bracket Assembly	20K100600
Reaction Bar Assembly, HD	20K100202
<b>Handle Options</b>	<b>Part No.</b>
EB3/4/5 Forward Facing Lever	20H100107

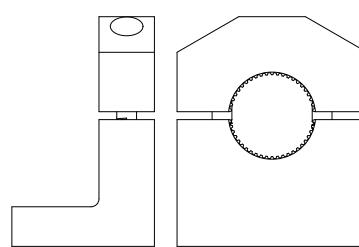
## Mounting / Reaction Options



Optional Flange Mount Bracket



Standard Reaction Bar



Optional Base Mount Bracket



Sockets and Accessories  
begin on page 156



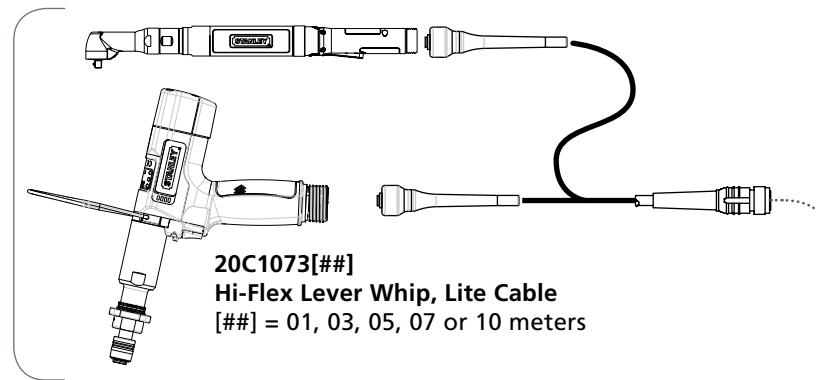
## EB-SERIES AND E-SERIES CABLE OPTIONS

# Tool Cable Options: EB-Series\*

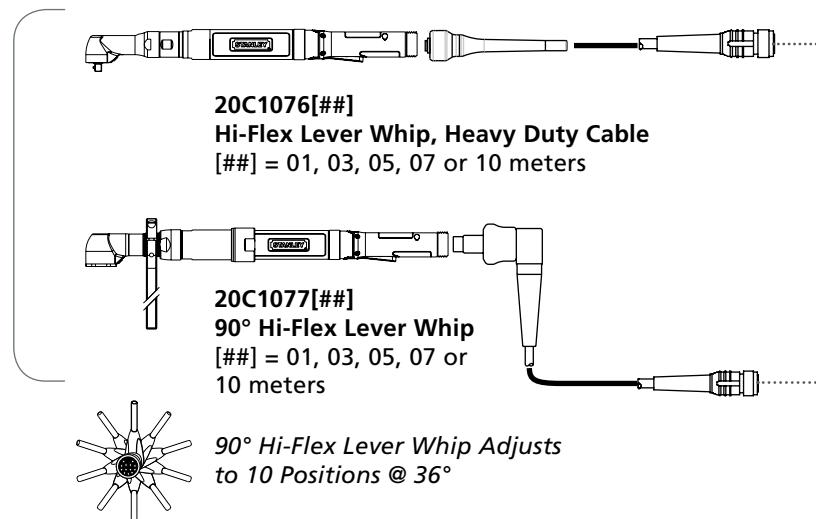
## STEP 1

Select a tool whip for the tool model

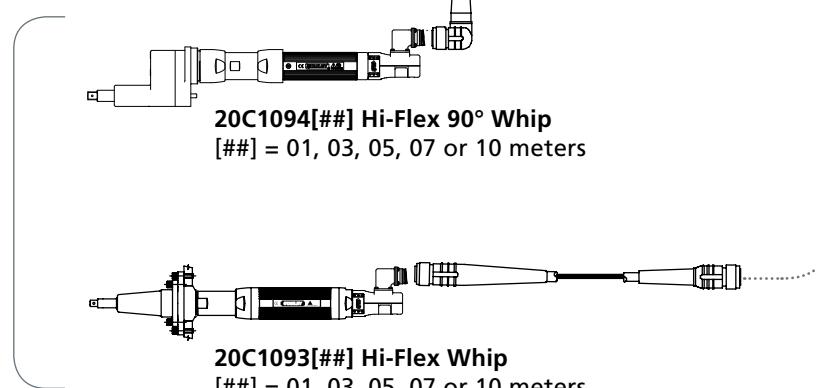
Fits EB12-EB33 non-fixed tools



Fits EB12-EB55 non-fixed tools



Fits EB332-EB55 all fixtured tools



\*Fits all EB-Series Lever Tools (and older EA and EC-Series Tools)

## STEP 2

Select an extension for the selected whip number



**NOTES:**

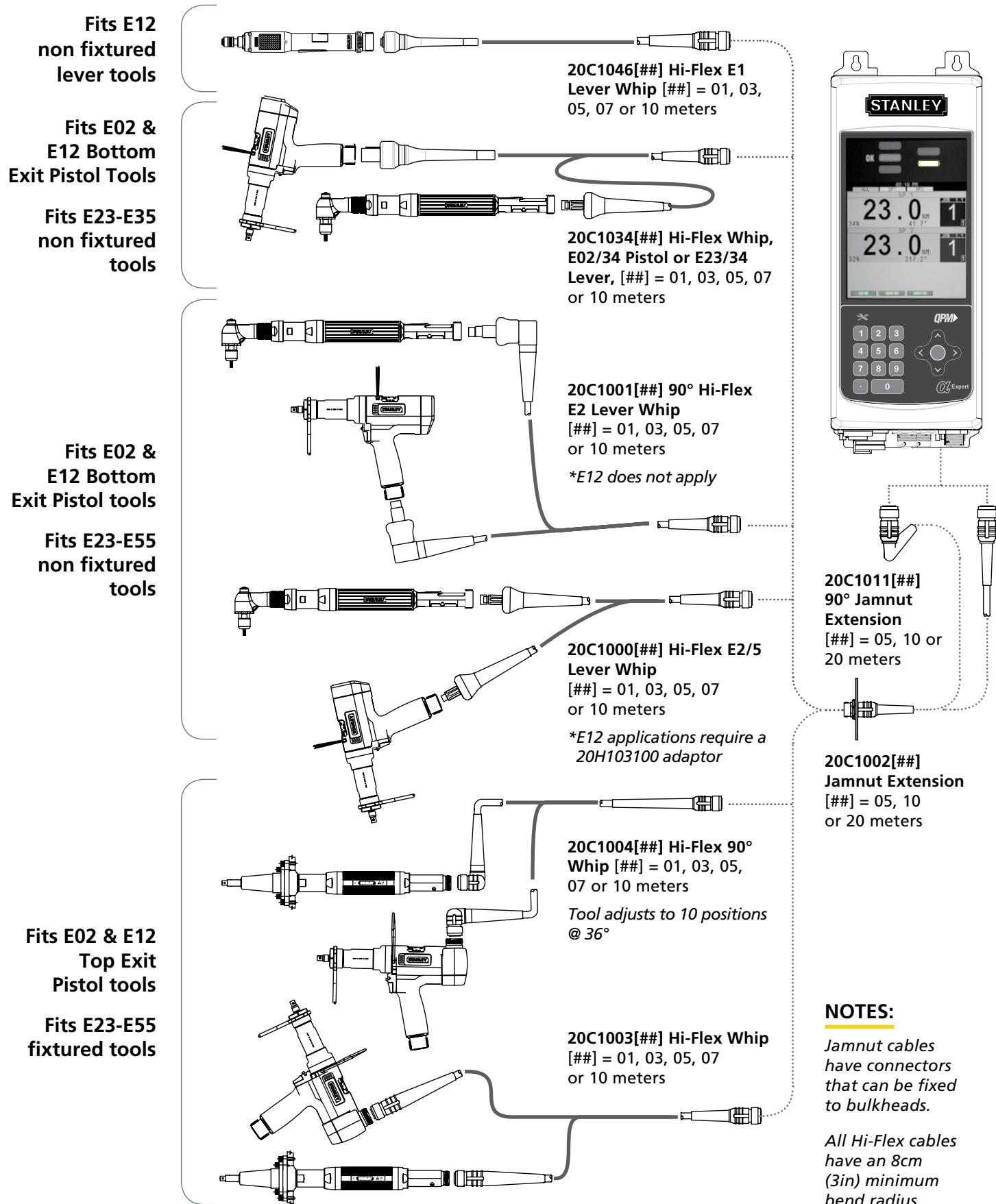
Jamnut cables have connectors that can be fixed to bulkheads.

All Hi-Flex cables have an 8cm (3in) minimum bend radius

# Corded Tools Cable Options

Cable End	Cable	Lite/ Heavy Duty	Base Part #	Cable Length					EB12-EB33	EB34-EB55	
Straight	Hi-Flex Whip	Lite	20C1073##	01	03	05	07	10	EB12-EB33 All non-Fixtured tools	X	
Straight	Hi-Flex Whip	Heavy Duty	20C1076##	01	03	05	07	10	EB12-EB33 All non-Fixtured tools	EB34-EB55 All non-Fixtured tools	
90 Degree	Hi-Flex Whip	Heavy Duty	20C1077##	01	03	05	07	10	EB12-EB33 All non-Fixtured tools	EB34-EB55 All non-Fixtured tools	
Straight	Hi-Flex Whip	Heavy Duty	20C1094##	01	03	05	07	10	EB33-EB55 All Fixtured Style tools		
90 Degree	Hi-Flex Whip	Heavy Duty	20C1093##	01	03	05	07	10	EB33-EB55 All Fixtured Style tools		

# Tool Cable Options: E-Series



Cable End	Cable	Lite / Heavy Duty	Base Part #	Cable Length					E02	E12	E23-E35	E43-E55
Straight	Hi-Flex Whip	Lite	20C1046##	01	03	05	07	10	X	E12 All Non-Fixtured Lever Tools	X	X
Straight	Hi-Flex Whip	Lite	20C1034##	01	03	05	07	10	E02 Bottom Exit Pistol Only	E12 Bottom Exit Pistol Only	E23-E35 All non-Fixtured tools	X
90 Degree	Hi-Flex Whip	Heavy Duty	20C1001##	01	03	05	07	10	E02 Bottom Exit Pistol Only	E12 Bottom Exit Pistol Only	E23-E35 All non-Fixtured tools	E43-E55 All non-Fixtured tools
Straight	Hi-Flex Whip	Heavy Duty	20C1000##	01	03	05	07	10	E02 Bottom Exit Pistol Only	E12 Bottom Exit Pistol Only	E23-E35 All non-Fixtured tools	E43-E55 All non-Fixtured tools
90 Degree	Hi-Flex Whip	Heavy Duty	20C1004##	01	03	05	07	10	E02 Top Exit Pistol Only	E12 Top Exit Pistol Only	E23-E35 All fixtured style tools	E43-E55 All fixtured style tools
Straight	Hi-Flex Whip	Heavy Duty	20C1003##	01	03	05	07	10	E02 Top Exit Pistol Only	E12 Top Exit Pistol Only	E23-E35 All fixtured style tools	E43-E55 All fixtured style tools



B33LA Right Angle Lever Style

# B-Series Cordless Tools

Cordless Torque Tools offering transducer-controlled battery powered tools that are ideal for threaded fastening assembly. STANLEY delivers improved productivity and quality with performance-driven torque tool solutions for the assembly floor.

## COMPLETE PRODUCT LINE:

- Pistol style
- Pistol push-to-start
- Angle head lever style
- Inline lever style

## FEATURES AND BENEFITS:

- Cordless Communication via IEEE 802.11 a/b/g/n
  - » 2.4 GHz to QBE Expert (QB4101), QBE Specialist (QB5100), or Network Node (QB0201)
  - » 5 GHz to customer supplied remote access points
- IEEE 802.15.4, 2.4 GHz wireless option communication to Network Node (QB0301) or QBE Specialist (QB5300)
- Accurate transducer control
- Precise, high efficiency, brushless DC motor
- Operator aided visual and audible feedback
- Controller INSIDE the tool
  - » Data storage of 500 fastening cycles and two traces
  - » 16 Jobs / 16 Tasks / 4 Steps
- Barcode Scanner option
- DEWALT Battery Platform powers STANLEY Assembly Technologies cordless tool platform



# B-Series Cordless Tools



**B12PB** ▶  
Pistol Style



**B12PP** ▶  
Push-to-Start Style



**B23LA** Right Angle  
Lever Style



Specialty  
Outputs



**B12LB** Inline  
Lever Style



**B12LA** Right  
Angle Lever Style



Same Gearing /  
Output as  
**STANLEY**  
Corded Tools



Multi-function  
Display Panel

Ergonomic Lever  
Start Trigger

Barcode Scanner  
or 802.15. GHz  
Wireless option  
module

Battery Pack  
Release Button

Battery Pack

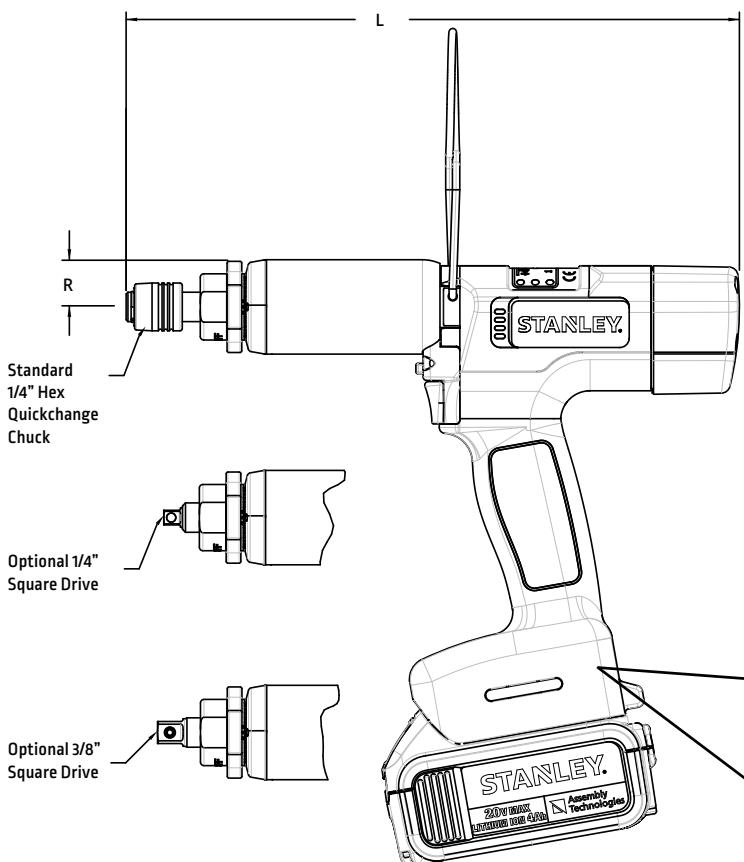


**THE STANLEY ADVANTAGE:**

**Only STANLEY**  
offers a 60 Volt  
Cordless Tool

# Pistol Grip Tools

1.2 to 14 Nm



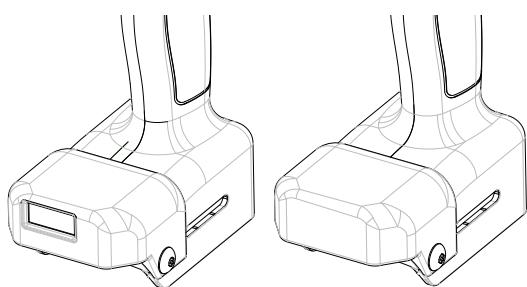
ASK ABOUT  
CUSTOM  
OUTPUTS!

Inline Style	Rated Speed	Torque		"R" Side to Center		"L" Length		Weight w/ Battery		Weight w/o Battery		Output	
Model	RPM	Nm	lb ft	mm	in	mm	in	kg	lb	kg	lb	Standard	Options
B12PB-5	1257	5	3.7	20	0.8	264	10.4	1.82	4.0	1.14	2.5	1/4" QC	1/4" or 3/8" SD
B12PB-8	873	8	5.9	20	0.8	264	10.4	1.82	4.0	1.14	2.5		
B12PB-11	602	11	8.1	20	0.8	264	10.4	1.82	4.0	1.14	2.5		
B12PB-15	375	15	11.0	20	0.8	264	10.4	1.82	4.0	1.14	2.5		

Push-to-Start

Model	RPM	Nm	lb ft	mm	in	mm	in	kg	lb	kg	lb	Standard	Options
B12PP-5	1257	5	3.7	20	0.8	264	10.4	1.82	4.0	1.14	2.5	1/4" QC	1/4" or 3/8" SD
B12PP-8	873	8	5.9	20	0.8	264	10.4	1.82	4.0	1.14	2.5		
B12PP-11	602	11	8.1	20	0.8	264	10.4	1.82	4.0	1.14	2.5		

Total vibration emission value: <2.5 m/sec<sup>2</sup> [ISO 28927-2:2009]; Sound pressure level at work station LpA [ref 20μPa] is <70dB(A) [ISO 15744-2002].



Barcode Scanner

Wireless Radio



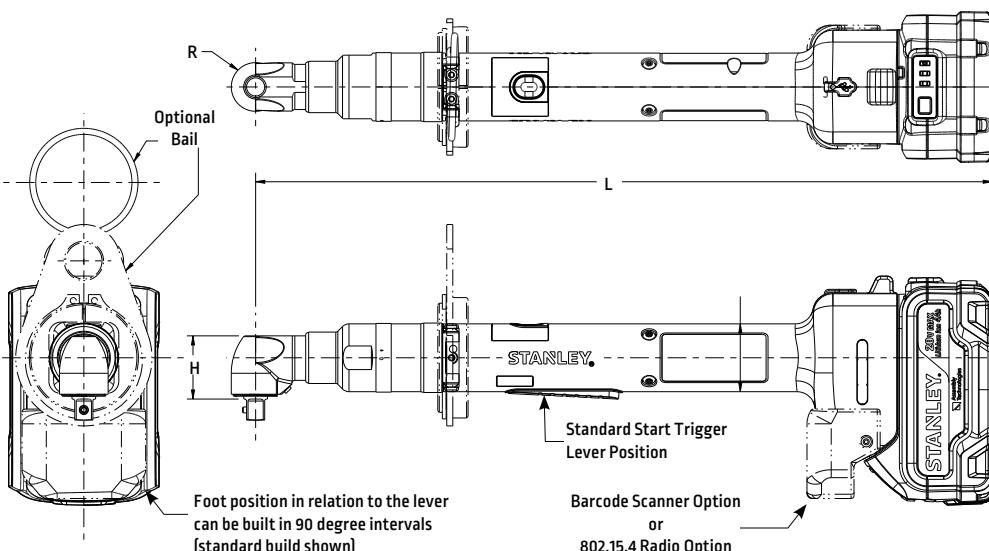
Programming Cable



Sockets and Accessories  
begin on page 156

# Angle Head Tools

## 1.6 to 16 Nm



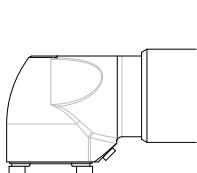
### Angle Tool Options

A13 Short Output (E12 Models)	Part No.
3/8" Double-Ended, LH Thread	20D121912
3/8" Double-Ended, RH Thread	20D121917
Flush Socket 12mm Max	20D121918

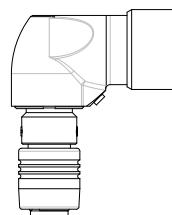
	Rated Speed	Torque		"R" Side to Center		"H" Head Height		"L" Length		Weight w/ Battery		Weight w/o Battery		Output	
Model	RPM	Nm	lb ft	mm	in	mm	in	mm	in	kg	lb	kg	lb	Standard	Options
B12LA13-8	838	8	5.9	13	0.5	33.2	1.3	386.1	15.2	1.65	3.65	1.04	2.3	3/8" SD	1/4"SD, 1/4"QC or Flush
B12LA13-11	582	11	8.1	13	0.5	33.2	1.3	386.1	15.2	1.65	3.65	1.04	2.3	3/8" SD	1/4"SD, 1/4"QC or Flush
B12LA13-16	401	16	11.8	13	0.5	33.2	1.3	386.1	15.2	1.65	3.65	1.04	2.3	3/8" SD	Flush

Total vibration emission value: <2.5 m/sec<sup>2</sup> [ISO 28927-2:2009]; Sound pressure level at work station LpA [ref 20μPa] is < 70dB[A] [ISO 15744-2002].

### Output Options



Flush



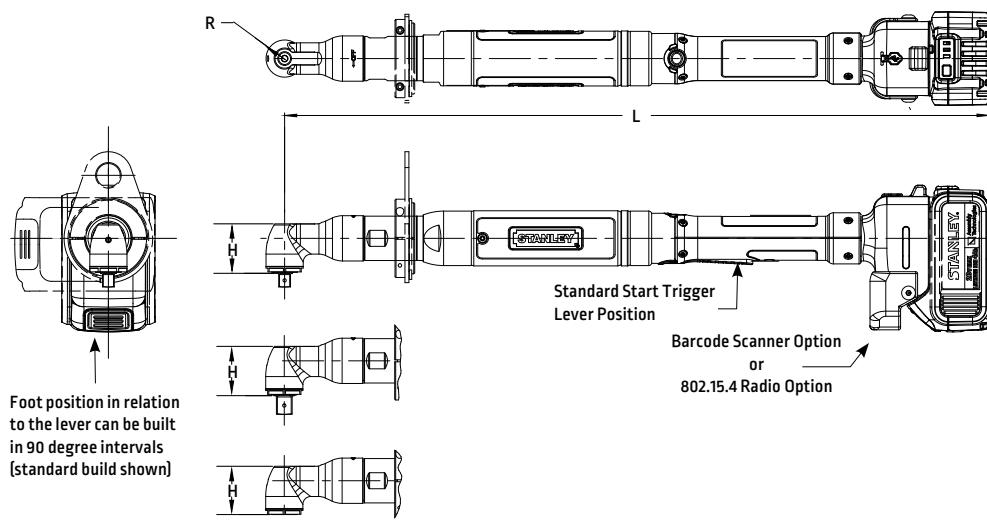
Quick Change



Sockets and Accessories  
begin on page 156

# Angle Head Tools

2.4 to 95 Nm



## Angle Tool Options

A15 Threaded Output 20D137503	Part No.
3/8" Square Drive	20D138908
A15 Flush Output 20D137501	Part No.
Flush Socket	20D283200
A15 Output Splined 20D137504	Part No.
3/8" Square Drive	20D138908
A15 Splined Flush 20D137505	Part No.
Flush Socket	20D283200
A18 Output	Part No.
3/8" Square Drive	20D136500
3/8" Double-Ended, RH Thread	20D136502
Flush Socket	20D136503
A19 Threaded Output	Part No.
Flush Socket	20D100021
A19 Splined Output	Part No.
Anti-Vibration 1/2" SD	20D100101
Flush Socket	20D100106
1/2" Double-Ended, RH Thread	20D100107
A22A Output	Part No.
1/2" Square Drive	20D100305
Flush Socket	20D100309
1/2" Double-Ended, RH Thread	20D100326

Model	Rated Speed	Max Torque		"R" Side to Center		"H" Head Height		"L" Length		Weight w/Battery		Weight w/o Battery		Output	
	RPM	Nm	lb ft	mm	in	mm	in	mm	in	kg	lb	kg	lb	Standard	Options
B23LA13-12	665	12	8.8	13	0.5	33.2	1.3	537	21.2	2.41	5.3	1.74	3.8	3/8" SD	1/4" QC
B23LA13-15	600	15	11	13	0.5	33.2	1.3	537	21.2	2.41	5.3	1.74	3.8	3/8" SD	1/4" QC
B23LA13-17	460	17	12.5	13	0.5	33.2	1.3	537	21.2	2.41	5.3	1.74	3.8	3/8" SD	1/4" QC
B23LA15-23	370	23	17	15	0.59	39.9	1.57	552	21.8	2.58	5.7	1.95	4.3	3/8" SD	1/2" SD
B23LA15-35	230	35	25.8	15	0.59	39.9	1.57	567	22.4	2.65	5.8	1.98	4.4	3/8" SD	1/2" SD
B23LA18-42	180	42	31	18	0.71	39.9	1.57	563	22.2	2.83	6.2	2.11	4.6	3/8" SD	1/2" SD
B23LA19-52	155	52	38.3	19	0.75	47.8	1.9	592	23.4	2.99	6.6	2.32	5.1	1/2" SD	
B23LA19-70	140	70	51.6	19	0.75	47.8	1.9	653	25.7	3.61	7.9	2.95	6.5	1/2" SD	
B23LA22-95	105	95	70	22	0.87	47.9	1.9	660	26.0	3.61	7.9	3.45	7.6	1/2" SD	

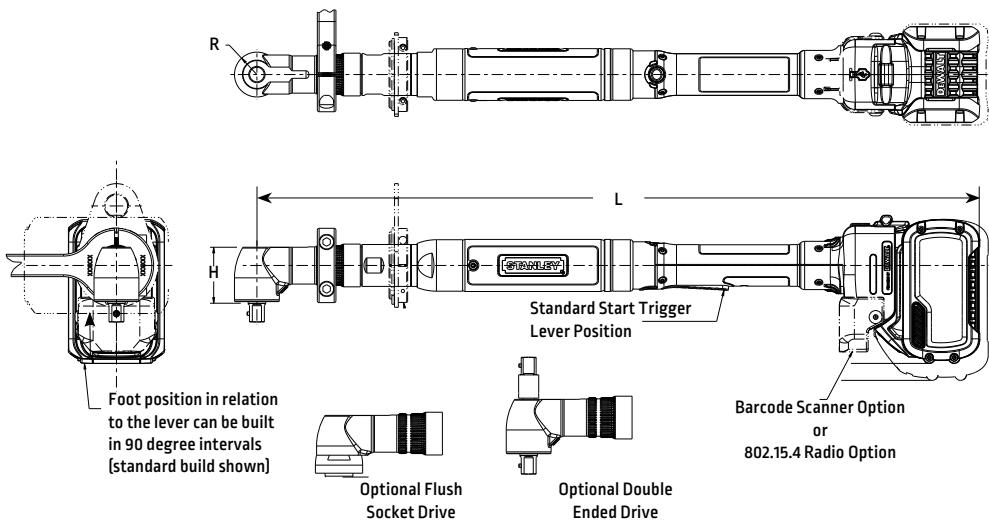
Total vibration emission value: <2.5 m/sec<sup>2</sup> [ISO 28927-2:2009]; Sound pressure level at work station LpA [ref 20μPa] is <70dB[A] [ISO 15744-2002].



Sockets and Accessories  
begin on page 156

# Angle Head Tools

**2.8 to 95 Nm**



Reaction Components	Part No.
Reaction Bar, Steel (<300 Nm)	20K100200
Reaction Bar, Steel (>300 Nm)	20K100202
Base Mount Bracket	20K100600
Mounting Flange	20K100700

B33/B44 Batteries	Part No.
60V MAX/2AH Battery	21R209203
60V MAX/3AH Battery	21R209204
60V MAX/20V MAX Fast Charger	21R209402

Suspension Bails	Part No.
Wire Bail	A3061
Swivel	20K101400

Model	Rated Speed	Max Torque		"R" Side to Center		"H" Head Height		"L" Length*		Weight w/Battery*		Weight w/o Battery		Output	
		RPM	Nm	lb ft	mm	in	mm	in	mm	in	kg	lb	kg	lb	Standard
B33LA13-14	1698	14	10.3	13	0.5	33.2	1.3	561.7	22.1	2.77	6.1	1.72	3.8	3/8" SD	1/4" SD or 1/4" QC
B33LA13-18	1372	18	13.3	13	0.5	33.2	1.3	561.7	22.1	2.77	6.1	1.72	3.8	3/8" SD	1/4" SD or 1/4" QC
B33LA15-25	959	25	18.5	15	0.59	39.9	1.57	576.8	22.7	2.99	6.6	1.95	4.3	3/8" SD	
B33LA15-40	525	40	29.5	15	0.59	39.9	1.57	592	23.3	3.04	6.7	2.0	4.4	3/8" SD	
B33LA18-48	455	48	35.4	18	0.71	39.9	1.57	587.5	23.1	3.13	6.9	2.09	4.6	3/8" SD	
B33LA19-55	439	55	40.6	19	0.75	47.8	1.9	617	24.3	3.36	7.4	2.31	5.1	1/2" SD	
B33LA19-70	356	70	51.6	19	0.75	47.8	1.9	677.5	26.7	3.99	8.8	2.95	6.5	1/2" SD	
B33LA22A-95	237	95	70	22	0.87	47.9	1.9	685.2	27.0	4.17	9.2	3.13	6.9	1/2" SD	

Total vibration emission value: <2.5 m/sec<sup>2</sup> [ISO 28927-2:2009]; Sound pressure level at work station LpA [ref 20μPa] is <70dB[A] [ISO 15744-2002].

\*Dimensions and weights are with the standard 60V Max/2AH Battery

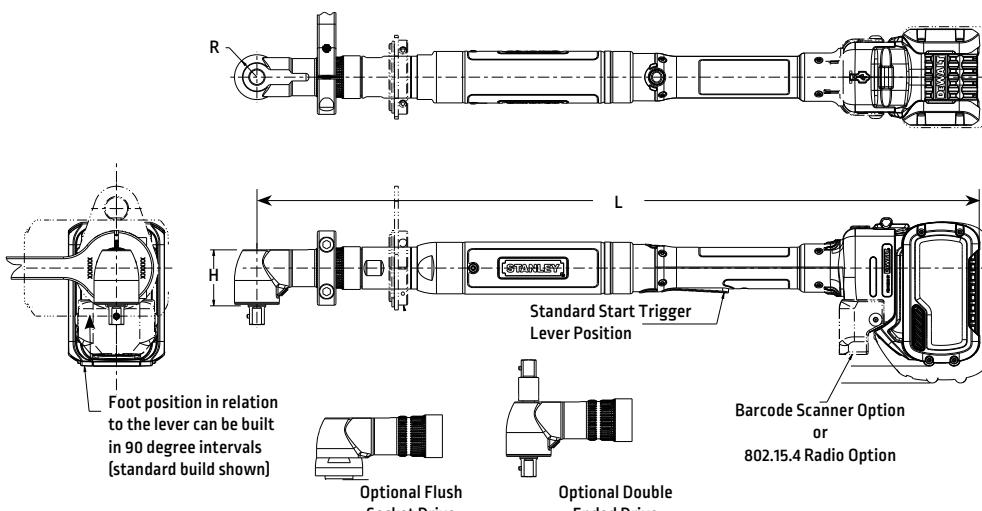
## Angle Tool Options

A13 Short Output	Part No.
3/8" Double-Ended, LH Thread	20D121912
3/8" Double-Ended, RH Thread	20D121917
Flush Socket 12mm Max	20D121918
1/4" Square Drive	20D121919
1/4" Quick Change	20D121916
1/4" Magnetic Internal Hex	20D121920

A15 Threaded Output 20D137503	Part No.
3/8" Square Drive	20D138908
A15 Flush Output 20D137501	Part No.
Flush Socket	20D283200
A15 Output Splined 20D137504	Part No.
3/8" Square Drive	20D138908
A15 Splined Flush 20D137505	Part No.
Flush Socket	20D283200
A18 Output	Part No.
3/8" Square Drive	20D136500
3/8" Double-Ended, RH Thread	20D136502
Flush Socket	20D136503
A19 Threaded Output	Part No.
Flush Socket	20D100021
A19 Splined Output	Part No.
Anti-Vibration 1/2" SD	20D100101
Flush Socket	20D100106
1/2" Double-Ended, RH Thread	20D100107
A22A Output	Part No.
1/2" Square Drive	20D100305
Flush Socket	20D100309
1/2" Double-Ended, RH Thread	20D100326

# Angle Head Tools

11 to 120 Nm



## Angle Tool Options

A19 Threaded Output	Part No.
Flush Socket	20D100021
A19 Splined Output	Part No.
Anti-Vibration 1/2" SD	20D100101
Flush Socket	20D100106
1/2" Double-Ended, RH Thread	20D100107
A22A Output	Part No.
1/2" Square Drive	20D100305
Flush Socket	20D100309
1/2" Double-Ended, RH Thread	20D100326

B33/B44 Batteries	Part No.
60V MAX/2AH Battery	21R209203
60V MAX/3AH Battery	21R209204
60V MAX/20V MAX Fast Charger	21R209402

Reaction Components	Part No.
Reaction Bar [Default]	20K100000
Mounting Flange	20K100300
Base Mount Bracket	20K100500

Suspension Bails	Part No.
Swivel [Horizontal]	20K200000
Standard [Vertical]	A3061

Model	Rated Speed	Max Torque		"R" Side to Center		"H" Head Height		"L" Length*		Weight w/ Battery*		Weight w/o Battery		Output	
		RPM	Nm	lb ft	mm	in	mm	in	mm	in	kg	lb	kg	lb	Standard
B44LA19-55	573	55	40.6	19	0.75	47.8	1.9	715.3	28.2	5.2	11.5	3.94	8.69	1/2" SD	
B44LA19-70	425	70	51.6	19	0.75	47.8	1.9	715.3	28.2	5.2	11.5	3.94	8.69	1/2" SD	
B44LA22A-95	328	95	70	22	0.87	47.9	1.9	723.0	28.5	5.4	11.9	4.11	9.06	1/2" SD	
B44LA22A-120	243	120	88.5	22	0.87	47.9	1.9	723.0	28.5	5.4	11.9	4.11	9.06	1/2" SD	

Total vibration emission value: <2.5 m/sec<sup>2</sup> [ISO 28927-2:2009]; Sound pressure level at work station LpA [ref 20μPa] is < 70dB[A] [ISO 15744-2002].

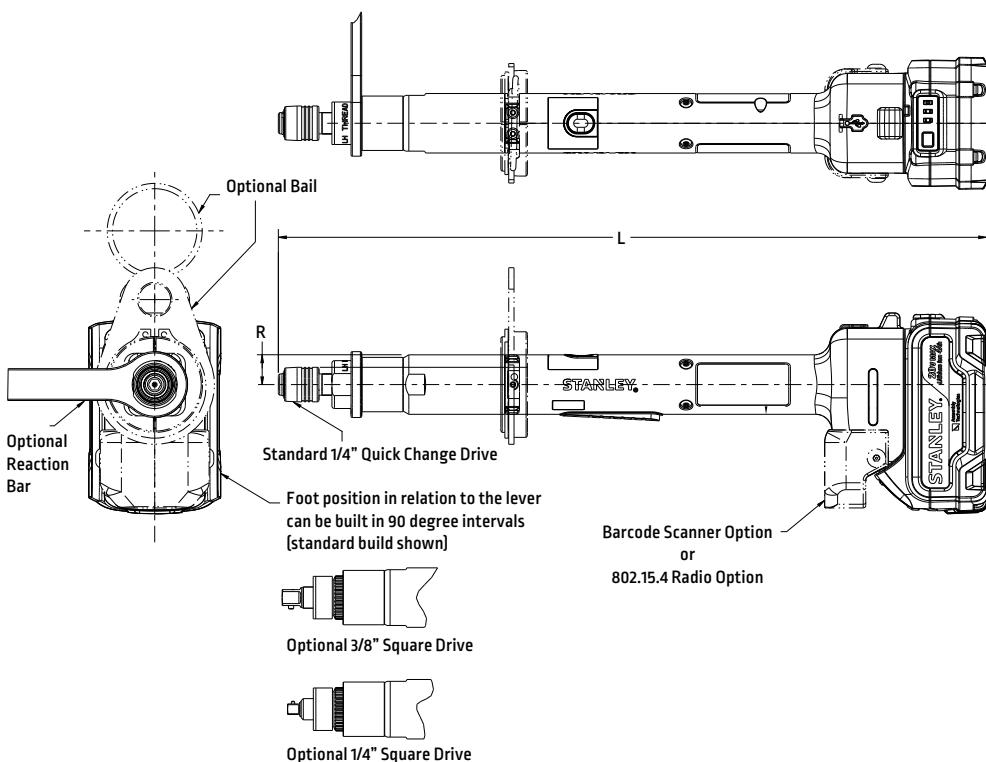
\*Dimensions and weights are with the standard 60V Max/2AH Battery



Sockets and Accessories  
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# Inline Tools

## 1 to 11 Nm



### Inline Tool Options

Output Options	Part No.
3/8" Square Drive	20D119301
1/4" Quick Change	20D119300
1/4" Square Drive	20D119302
3/8" SD Socket Lock Pin	Part No.
Standard	20D227800
Rounded (Ball Detent)	20D227801
Reaction Components	Part No.
Reaction Bar, Aluminum (Default)	20K100103
Reaction Bar, Steel	20K100104
Spacer	20D217000
Suspension Bails	Part No.
Wire Bail	A3061
Swivel	20K101402

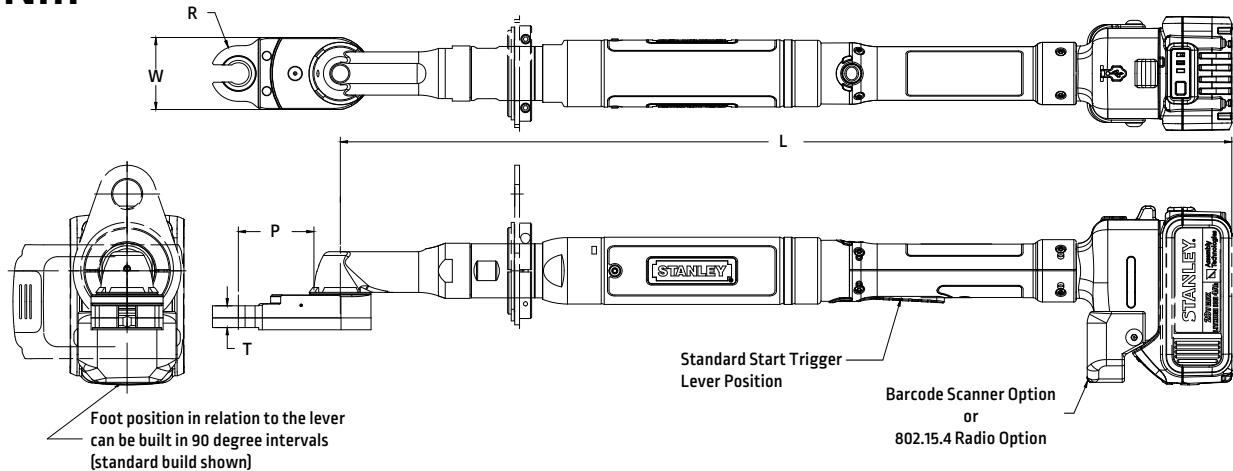
Model	Rated Speed RPM	Max Torque		"R" Side to Center		"L" Length		Weight w/ Battery		Weight w/o Battery		Output	
		Nm	lb ft	mm	in	mm	in	kg	lb	kg	lb	Standard	Options
B12LB-5	1257	5	3.7	17.8	0.7	423.5	16.7	1.45	3.21	0.82	1.81	1/4"QC	1/4"SD or 3/8" SD
B12LB-8	873	8	5.9	17.8	0.7	423.5	16.7	1.45	3.21	0.82	1.81	1/4"QC	1/4"SD or 3/8" SD
B12LB-11	602	11	8.1	17.8	0.7	423.5	16.7	1.45	3.21	0.82	1.81	1/4"QC	1/4"SD or 3/8" SD

Total vibration emission value: <2.5 m/sec<sup>2</sup> (ISO 28927-2:2009); Sound pressure level at work station LpA (ref 20μPa) is <70dB(A) (ISO 15744-2002).

# Tubenut / Crowfoot Tools

## 2.6 to 50 Nm

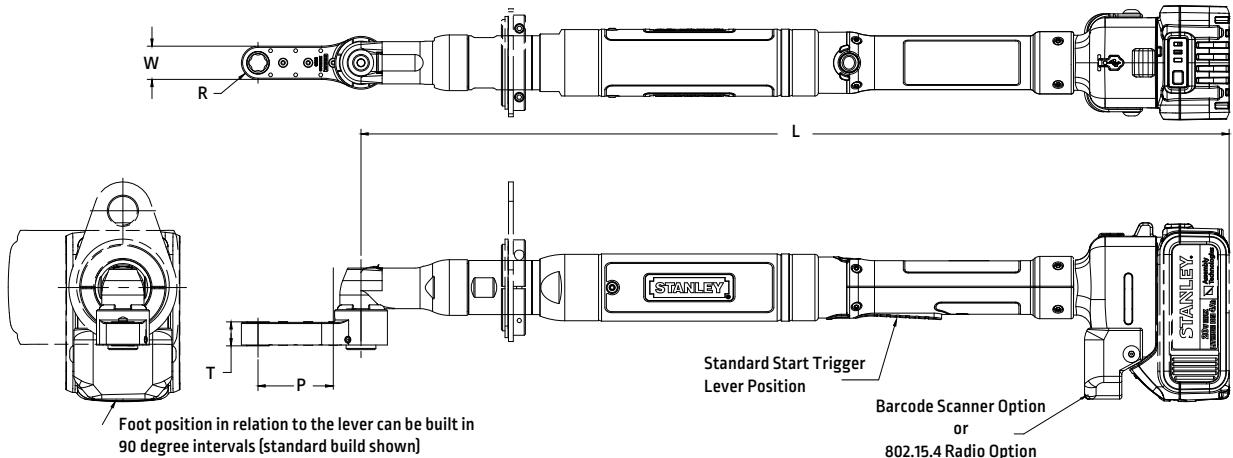
### Tubenut



Model	Rated Speed	Max Torque		"R" Nose Radius		"T" Thickness		"W" Width		"P" Length		"L" Length		Weight		Maximum Hex Size		Maximum Tube Size	
		RPM	Nm	lb ft	mm	in	mm	in	mm	in	mm	in	mm	in	kg	lb	mm	in	mm
B23LT252-21	260	21	15.5	13	0.52	14	0.54	42	1.66	56	2.20	525	20.7	2.5	5.6	13	1/2	9.3	0.37
B23LT346-23	250	23	16.9	13	0.52	14	0.56	42	1.66	34	1.34	644	25.4	2.4	5.3	13	0.5	9.4	0.37
B23LT74-30	305	30	22.1	18	0.73	14	0.56	48	1.88	44	1.72	657	25.9	2.5	5.6	18	11/16	11.6	0.46
B23LT473-31	195	31	22.9	18	0.73	14	0.56	48	1.88	39	1.53	593	23.3	2.4	5.3	18	11/16	11.6	0.46
B23LT264-38	150	38	28.0	21	0.84	18	0.70	54	2.13	77	3.03	665	26.2	2.5	5.6	24	15/16	18.2	0.72
B23LT264-50	100	50	36.9	21	0.84	18	0.70	54	2.13	77	3.03	648	25.5	2.5	5.6	24	15/16	18.2	0.72

Total vibration emission value: <2.5 m/sec<sup>2</sup> [ISO 28927-2:2009]; Sound pressure level at work station LpA [ref 20μPa] is <70dB[A] [ISO 15744-2002].

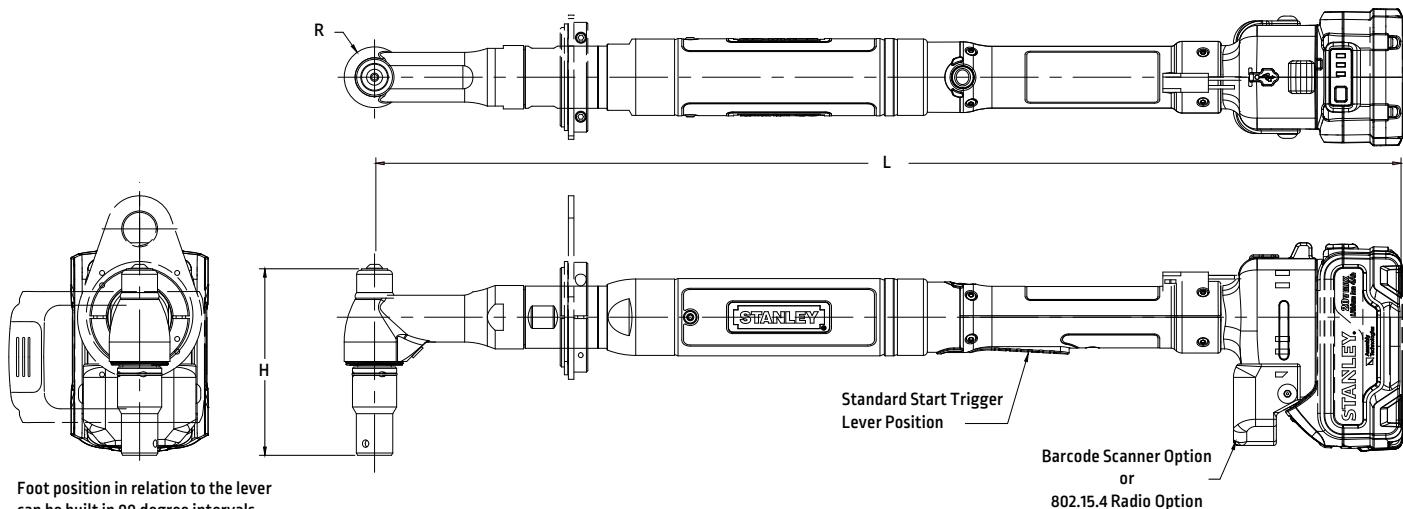
### Crowfoot



Model	Rated Speed	Max Torque		"R" Nose Radius		"T" Thickness		"W" Width		"P" Length		"L" Length		Weight		Maximum Hex Size	
		RPM	Nm	lb ft	mm	in	mm	in	mm	in	mm	in	mm	in	kg	lb	mm
B23LC550-13	460	13	9.6	13	0.5	9	0.37	25	1.00	77	3.05	629	24.8	2.5	5.6	13	0.5
B23LC390-15	335	15	11	11	0.43	16	0.63	22	0.87	51	1.99	642	25.3	2.4	5.3	13	0.5
B23LC216-26	225	26	19.1	13	0.5	14	0.56	30	1.19	47	1.86	660	26	2.4	5.3	13	0.5
B23LC521-30	180	30	22.1	13	0.5	16	0.63	32	1.25	45	1.76	611	24	2.5	5.6	13	0.5
B23LC29-37	160	37	27.3	21	0.81	14	0.56	38	1.50	43	1.70	590	23.2	2.5	5.6	19	0.75
B23LC566-38	155	38	28.0	21	0.81	21	0.81	38	1.50	43	1.70	593	23.3	2.4	5.3	19	0.75

# Hold and Drive Tools

## 8.4 to 42 Nm



	Rated Speed	Max Torque		"R" Side to Center		"H" Head Height		"L" Length		Weight		Travel
Model	RPM	Nm	lb ft	mm	in	mm	in	mm	in	kg	lb	Standard
B23LH18V1-42	200	42	31	18	0.69	109	4.28	590	23.2	2	4.5	1" Tang
B23LH18V2-42	200	42	31	18	0.69	109	4.28	590	23.2	2.2	4.9	2" Tang

Total vibration emission value: <2.5 m/sec<sup>2</sup> [ISO 28927-2:2009]; Sound pressure level at work station LpA [ref 20μPa] is < 70dB(A) [ISO 15744-2002].

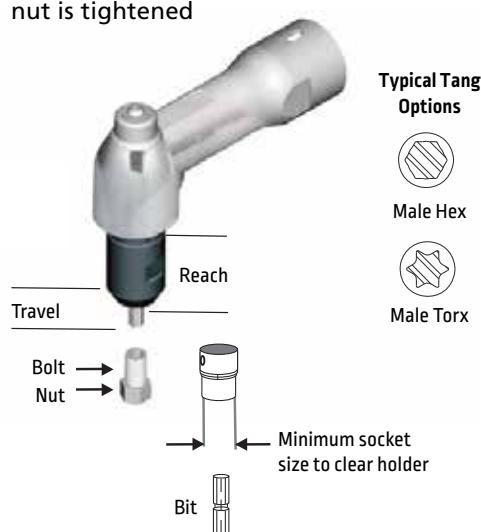
See pages 170-181 for the Hold and Drive Configuration Guide

### Hold and Drive Options

A Tang holds the bolt while the nut is tightened



A Bit holds the bolt while the nut is tightened



NOTE: The bolt can extend beyond the nut no more than the specified travel distance when tightened.

# Powered by DEWALT

## DEWALT Lithium Batteries and Chargers

### DEWALT 20V, 2 AH AND 5 AH (18 VOLT, 5AH EUROPEAN MODEL) PLATFORM

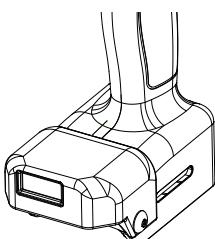
- » Estimated 2,200 fastening cycles per charge for 5 Ah\*
- » 3-LED Fuel Gauge indicator for immediate feedback on state of charge

### DEWALT 60V, 2 AH AND 3 AH (54 VOLT, 2 AH EUROPEAN MODEL) PLATFORM

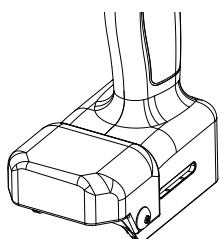
- » Estimated 3,300 fastening cycles per charge for 2 Ah\*
- » 3-LED Fuel Gauge indicator for immediate feedback on state of charge

STANLEY Assembly Technologies cordless tools ship with one battery pack and one charger (North America only). Additional battery packs and chargers may be ordered separately:

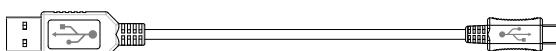
	ITEM	DESCRIPTION
N. AMERICA (NA)	21R209202	20V Battery Pack, 2 Ah
	21R209205	20V Battery Pack, 5 Ah
	21R209500	20V / 60V Battery Charger
	21R209203	60V, 2 Ah / 20V, 6 Ah Battery Pack
	21R209204	60V, 3 Ah / 20V, 9 Ah Battery Pack
EUROPE	N566441	Battery Pack, 18V 2 Ah
	E008 505	Battery Pack, 18V, 5 Ah
	N630880	Charger 18V/54V/SINGLE/DCB118-QW
	N630919	Battery 54, 2 Ah/18V, 6 Ah -108Wh-DCB546-XJ
	N630923	Battery 54, 3 Ah/18V, 9 Ah -162Wh-DCB547-XJ
	N630885	Charger, 18V/54V/SINGLE/DCB118-UK
	N630892	Charger, 18V/54V/DOUBLE/DCB132-Europe
	N630896	Charger, 18V/54V/DOUBLE/DCB132-UK



Barcode Scanner Option



802.15.4 Wireless Radio Option



Programming Cable

OPTIONS**		
Barcode Scanner		802.15.4 Radio
B12 Pistol Grip	20H106100	B12 Pistol Grip
B12 Push-to-Start Pistol	20H106101	B12 Push-to-Start Pistol
B12 Lever Style	20H106300	B12 Lever Style
B23 Lever Style	20H106200	B23 Lever Style
B33 Lever Style	20H106201	B33 Lever Style

ACCESSORIES		
Programming Cable	20C206600	

\*Dependent on application and joint rate

\*\*QPM Cordless tool can accommodate one option (e.g., a barcode scanner OR an IEEE 802.15.4 radio)



Shown: 21R209204 —  
DEWALT 60V, 3 Ah / 20V, 9Ah Battery Pack, NA



Shown: 21R209205 —  
DEWALT 20V, 5 Ah Battery Pack, NA



Shown: 21R209500 — DEWALT 20V /  
60V Battery Charger, NA

### PROTECTIVE BOOT COVERS



20R215400 for 20V /  
5 Ah battery pack



20R215401 for 20V /  
2 Ah battery pack



# E-Series Corded Lever Tools

The STANLEY Assembly Technologies E-Series handheld tools have delivered reliable and consistent performance in the field.

## FEATURES AND BENEFITS:

- **Full Line of Handheld Tools** — Lever, Pistols, and Push-to-Start styles
- **Full Line of Tools** — 0.6 Nm to 2005 Nm with geometries to fit a wide range of applications
- **Reliable Performance**
- **Modular Construction**
- Common components reduce complexity
- Handle / Lever assembly common to all handheld tools
- Entire tool line has 6 motor sizes
- 4 modular gear sets
- 7 angle heads that are field repairable have matched replacement gear sets
- Grease fittings on all angle, tubenut and crowfoot outputs for ease of preventive maintenance

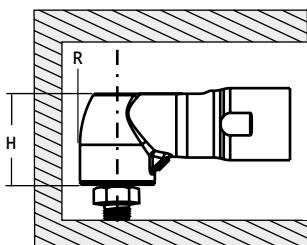


*Note: Angle tools can have gear case extensions to extend the reach of the tool. Add E# to the end of the tool model number to add the extended option to the tool when ordering. Where # is the length of the extension in 2-inch (50.8 mm) increments from 2 inches (50.8 mm) to 12 inches (304.8 mm).*

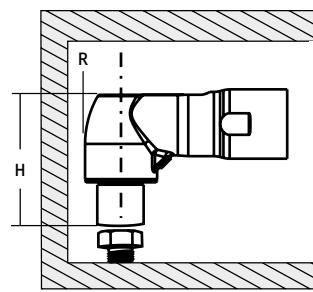
See page 183.

# Angle Lever Tools

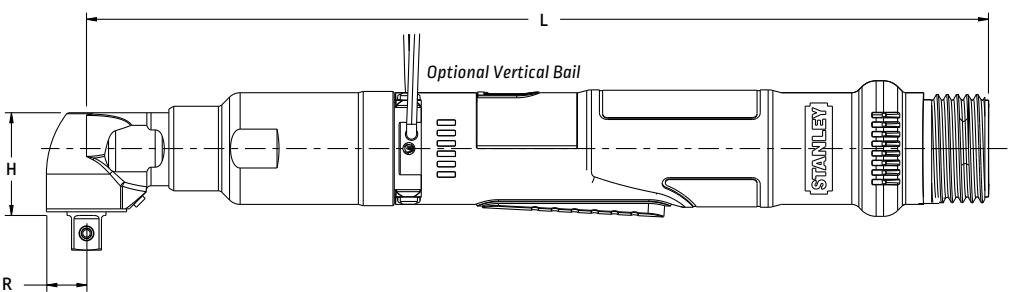
0.8 to 21 Nm



Workspace

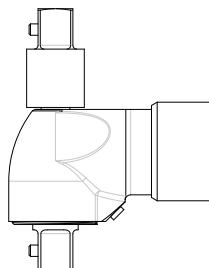


Flush Angle

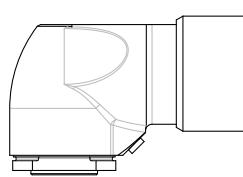


	Rated Speed	Torque		"R" Side to Center		"H" Head Height		"L" Length		Weight		Output
Model	RPM	Nm	lb ft	mm	in	mm	in	mm	in	kg	lb	Standard
E12LA10-4	2325	4	2.95	10	0.39	31.9	1.26	271	10.7	0.7	1.6	1/4" SD
E12LA10-6	1490	6	4.42	10	0.39	31.9	1.26	285	11.2	0.8	1.7	1/4" SD
E12LA13-6	1690	6	4.42	13	0.51	32.7	1.29	287	11.3	0.8	1.7	3/8" SD
E12LA13-10	1080	10	7.4	13	0.51	32.7	1.29	287	11.3	0.8	1.7	3/8" SD
E23LA13-11	1500	11	8	13	0.51	32.7	1.29	435	17.1	1.5	3.3	3/8" SD
E12LA13-14	850	14	10.3	13	0.51	32.7	1.29	287	11.3	0.8	1.7	3/8" SD
E12LA14-17	565	17	12.5	14	0.55	36.5	1.44	297	11.7	0.9	1.9	3/8" SD
E12LA13-18	590	18	13.3	13	0.51	32.7	1.29	287	11.3	0.8	1.7	3/8" SD
E12LA14-20	715	20	14.7	14	0.55	36.5	1.44	297	11.7	0.9	1.9	3/8" SD
E12LA14-21	600	21	15.5	14	0.55	36.5	1.44	297	11.7	0.9	1.9	3/8" SD

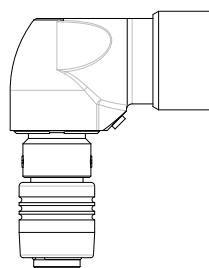
## Output Options



Double Ended



Flush



Quick Change

## Angle Tool Options

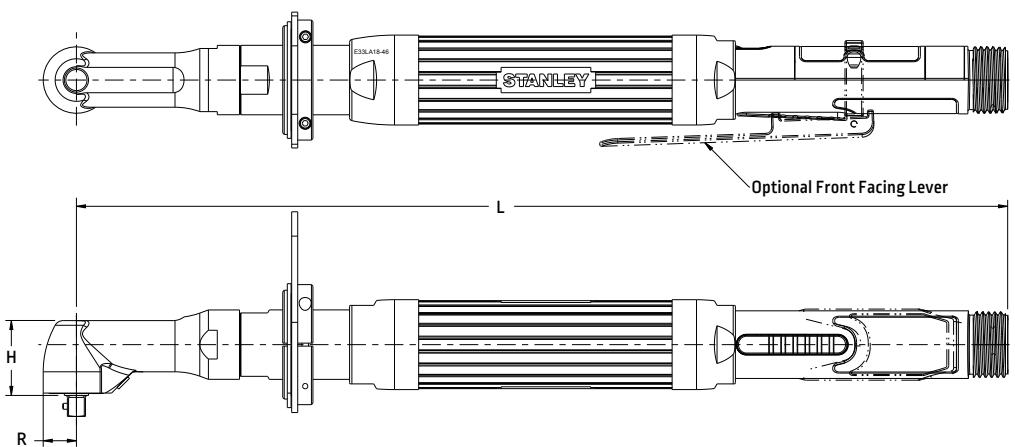
A10 Output	Part No.
1/4" Square Drive	20D122900
3/8" Square Drive	20D122901
1/4" Quick Change	20D122902
<b>A13 Short Output [E12 Models]</b>	<b>Part No.</b>
3/8" Double-Ended, LH Thread	20D121912
3/8" Double-Ended, RH Thread	20D121917
Flush Socket 12mm Max	20D121918
1/4" Square Drive	20D121919
1/4" Quick Change	20D121916
1/4" Magnetic Internal Hex	20D121920
<b>A13 Long Output [E23 Models]</b>	<b>Part No.</b>
3/8" Double-Ended, RH Thread	B3117
Rivnut Attachment	F3376
1/4" Square Drive	A3156
1/4" Magnetic Internal Hex	A3157
1/4" - 28 Threaded Female	A3351
3/8" - 24 Threaded Magnetic	A3158
5/16" - 24 Threaded Female	A3441
<b>A14 Output</b>	<b>Part No.</b>
1/4" Internal Hex	20D112110
Flush Socket	20D112113

Suspension Bails	Part No.
Standard Wire Bail	A3061
Swivel [E12 only]	20K101402
Swivel [E23/33 only]	20K101400
Vinyl Covers	Part No.
A10 Output	20D250711
A13 Output	20D250705
A14 Output	20D250701
2-Hand Anti-Tiedown	Part No.
E23 Tools	20G100104

Socket Lock Pin 3/8" or 1/2" SD	Part No.
Standard	20D227800
Rounded (Ball Detent)	20D227801
Handle Options	Part No.
E12 Rubber Grip	20H207910
E2/3/4/5 Rubber Grip	20H207207
E12 Extended Lever Assembly	20H102201
E2/3 Front Facing Lever	20H100005
E12 Heavy Duty Cable Adapter	20H103100
Other Options	Part No.
E12 LED Flexible Light Kit	20K101804
E12 LED Stationary Light Kit	205113202

# Angle Lever Tools

4 to 60 Nm



	Rated Speed	Torque		"R" Side to Center		"H" Head Height		"L" Length		Weight		Output
Model	RPM	Nm	lb ft	mm	in	mm	in	mm	in	kg	lb	Standard
E23LA15-23	685	23	16.9	15	0.59	39.9	1.57	442	17.4	1.6	3.6	3/8" SD
E33LA15-35	865	35	25.8	15	0.59	39.9	1.57	468	18.4	1.8	4.0	3/8" SD
E23LA15-35	415	35	25.8	15	0.59	39.9	1.57	442	17.4	1.62	3.57	3/8" SD
E33LA18-46	750	46	33.9	18	0.71	39.3	1.55	426	16.8	1.9	4.3	3/8" SD
E33LA19-48	730	48	35.4	19	0.75	49	1.9	492	19.4	2.2	4.8	3/8" SD
E43LA19-60	700	60	44.3	19	0.75	49	1.9	517	20.3	2.6	5.8	1/2" SD
E33LA19-60	570	60	44.3	19	0.75	49	1.9	492	19.4	1.9	4.1	1/2" SD

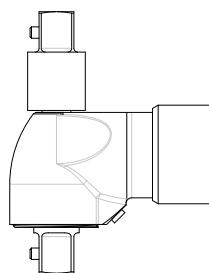
## Angle Tool Options

A15 Threaded Output 20D137503	Part No.
3/8" Square Drive	20D138908
A15 Flush Output 20D137501	Part No.
Flush Socket	20D283200
A15 Output Splined 20D137504	Part No.
3/8" Square Drive	20D138908
A15 Splined Flush 20D137505	Part No.
Flush Socket	20D283200
A18 Output	Part No.
3/8" Square Drive	F3825
3/8" Double-Ended, RH	A6466
3/8" Double-Ended, LH	F3828
1/2" Double-Ended, RH	A6473
1/2" Double-Ended, LH	F3830
Flush Socket 16mm Max	F3834
1/4" Magnetic Internal Hex	F3832
5/16" Magnetic Internal Hex	F3833
3/8" - 24 Thread Female	F3831
3/8" Square Drive Paint Marking	F3973
3/8" Square Drive Anti-Vibration	20D104600
A19 Output	Part No.
3/8" Square Drive [48 Nm Max]	20D100005
1/2" Square Drive	20D100000
1/2" Square Drive Anti-Vibration	20D100001
1/2" Double-Ended, RH	20D100003
Flush Socket 17mm Max	20D100007
2-Hand Anti-Tiedown	Part No.
E23 Tools	20G100015
E33 Tools [48 Nm Max]	20G100012
E33 Tools [60 Nm]	20G100013
E34 Tools	20G100414

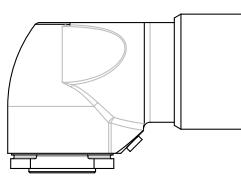


Sockets and Accessories  
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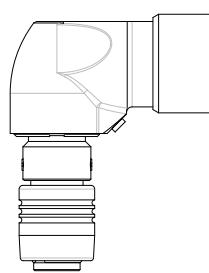
## Output Options



Double Ended



Flush

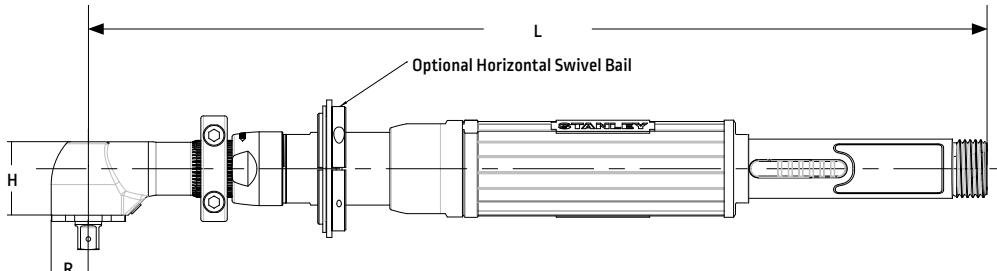


Quick Change

Suspension Bails	Part No.
Swivel (Horizontal)	20K101400
Standard (Vertical)	A3061
Vinyl Covers	Part No.
A15 Output	20D250701
A18 Output	20D250702
A19 Output	20D250707
Extended Packing Cap	Part No.
A15 Output	20D140103
A18 Output	20D140100
A19 Output	20D140101
Socket Lock Pin 3/8" or 1/2" SD	Part No.
Standard	20D227800
Rounded (Ball Detent)	20D227801
Handle Options	Part No.
E2/3/4/5 Rubber Grip	20H207207
E2/3 Front Facing Lever	20H100005

# Angle Lever Tools

14 to 125 Nm



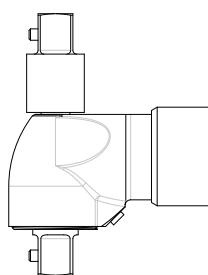
	Rated Speed	Max Torque		"R" Side to Center		"H" Head Height		"L" Length		Weight		Output
Model	RPM	Nm	lb ft	mm	in	mm	in	mm	in	kg	lb	Standard
E34LA19-50	655	50	36.9	19	0.75	49	1.9	522	20.6	2.9	6.3	1/2" SD
E44LA19-70	635	70	51.6	19	0.75	49	1.9	531	20.9	3.3	7.3	1/2" SD
E34LA19-70	435	70	51.6	19	0.75	49	1.9	522	20.6	2.9	6.3	1/2" SD
E44LA22-101	545	101	74.5	22	0.88	50	2	539	21.2	3.5	7.6	1/2" SD
E34LA22-101	335	101	74.5	22	0.88	50	2	530	20.9	3	6.6	1/2" SD
E34LA22-115	300	115	84.8	22	0.88	50	2	530	20.9	3	6.6	1/2" SD
E54LA22-120	470	120	88.5	22	0.88	50	2	742	29	4.75	10.5	1/2" SD
E44LA22-120	360	120	88.5	22	0.88	50	2	539	21.2	3.5	7.6	1/2" SD
E44LA22-125	405	125	92.2	22	0.88	50	2	539	21.2	3.5	7.6	1/2" SD

## Angle Tool Options

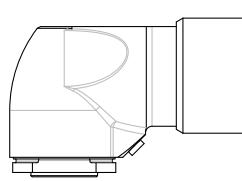
A19 Output	Part No.
1/2" Square Drive	20D100100
1/2" Square Drive Anti-Vibration	20D100101
1/2" Double-Ended, RH	20D100107
Flush Socket 17mm Max	20D100106
A22 Output	Part No.
1/2" Square Drive	20D100305
Flush Socket 18mm Max	20D100309
1/2" Double-Ended, RH	20D100326
2-Hand Anti-Tiedown Switch	Part No.
E34/44/54 Tools	20K400001

Suspension Bails	Part No.
Swivel (Horizontal)	20K200000
Standard (Vertical)	A3061
Reaction Components	Part No.
Reaction Bar (Default)	20K100000
Mounting Flange	20K100300
Base Mount Bracket	20K100500
Vinyl Covers	Part No.
A19 Output	20D250707
A22 Output	20D250708
Socket Lock Pin 3/8" or 1/2" SD	Part No.
Standard	20D227800
Rounded (Ball Detent)	20D227801
Handle Options	Part No.
E2/3/4/5 Rubber Grip	20H207207
E3 Front Facing Lever	20H100005
E4/5 Front Facing Lever	20H100105
Motor Options	Part No.
E3 Tool Cooling Fan Kit	20M102600

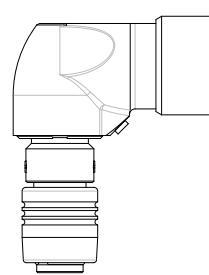
## Output Options



Double Ended



Flush



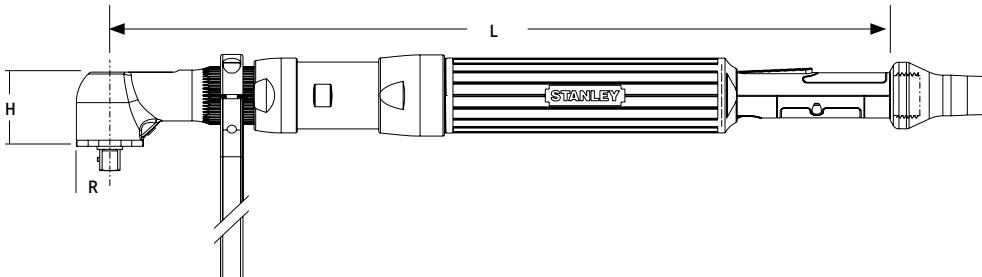
Quick Change



Sockets and Accessories  
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# Angle Lever Tools

## 20 to 401 Nm



	Rated Speed	Max Torque		"R" Side to Center		"H" Head Height		"L" Length		Weight		Output
Model	RPM	Nm	lb ft	mm	in	mm	in	mm	in	kg	lb	Standard
E55LA26-100	880	100	74	26	1.02	60	2.4	632	24.9	5.8	12.8	1/2" SD
E55LA26-140	610	140	103	26	1.02	60	2.4	632	24.9	5.8	12.8	3/4" SD
E45LA26-150	330	150	110	26	1.02	60	2.4	582	22.9	5.2	11.5	3/4" SD
E55LA26-167	510	167	123	26	1.02	60	2.4	632	24.9	5.8	12.8	3/4" SD
E45LA26-201	265	201	148	26	1.02	60	2.4	582	22.9	5.2	11.5	3/4" SD
E55LA26-221	385	221	163	26	1.02	60	2.4	632	24.9	5.8	12.8	3/4" SD
E55LA32-337	255	337	248	32	1.26	73	2.9	639	25.1	6.5	14.2	3/4" SD
E55LA32-401	205	401	295	32	1.26	73	2.9	639	25.1	5.85	12.87	3/4" SD

Steel Reaction Bars are the default reaction components provided with these tools.

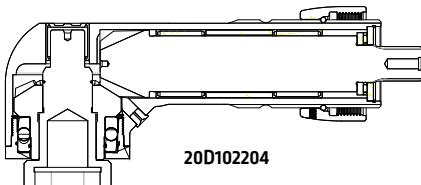
### Inserts for 20D102204 A32 Hex Insert Output

Description	Part No.
1-1/8" Hex Socket Insert	A5172
30mm Hex Flush Socket Insert	20D222100
30mm with 3/4" Extension Flush Socket Insert	20D228900

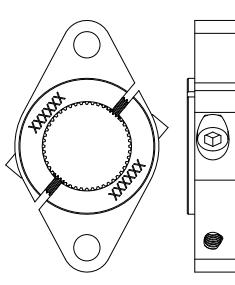
The maximum hex size for the A32 Flush Socket Output is 27 mm (1-1/16").

Use the Hex Insert Output with these Inserts for larger hex sizes.

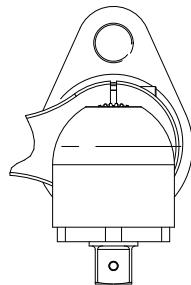
This will add 16.3 mm (0.64") to the "H" dimension of the tool.



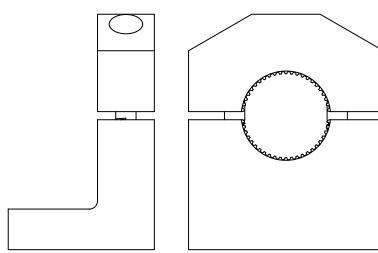
### Mounting / Reaction Options



Optional Flange Mount Bracket



Reaction Bar or Bail



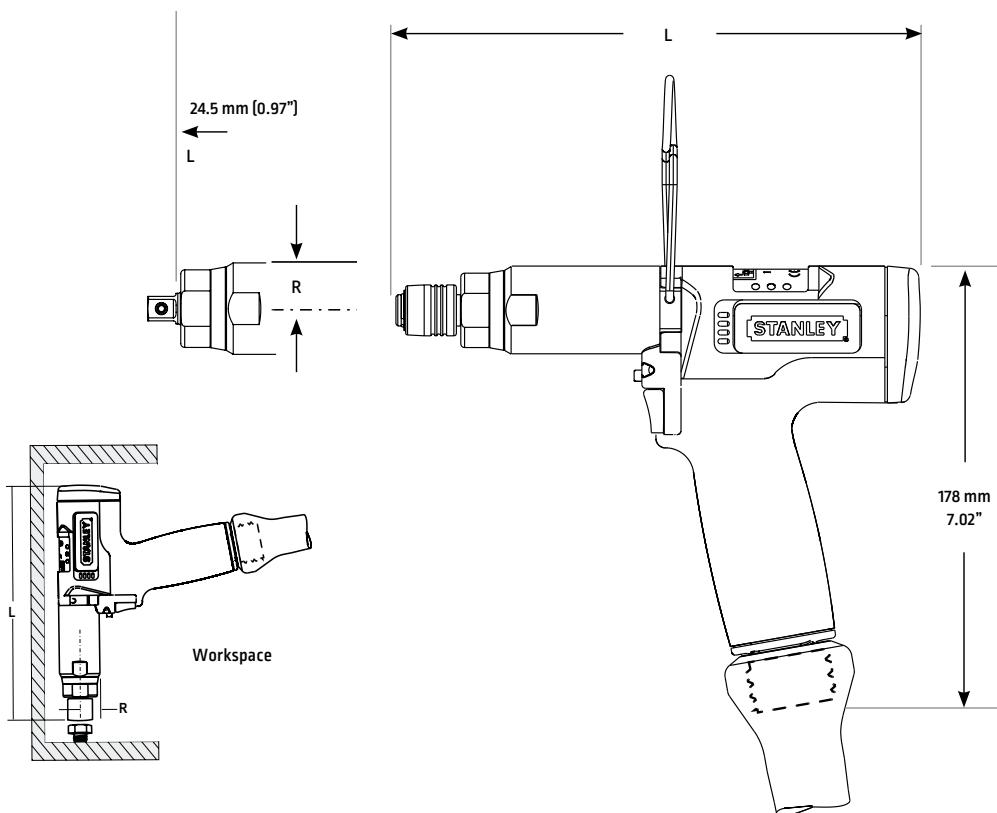
Optional Base Mount Bracket



Sockets and Accessories  
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# Pistol Grip Tools

0.3 to 100 Nm



	Rated Speed	Max Torque		'R" Side to Center		'L" Length		Weight		Output
Model	RPM	Nm	lb ft	mm	in	mm	in	kg	lb	Standard
E02PB-1.5	2040	1.5	1.1	18	0.7	211	8.3	0.74	1.6	1/4 QC
E02PB-3	1620	3	2.2	18	0.7	211	8.3	0.74	1.6	1/4 QC
E12PB-4	2535	4	2.9	20	0.8	222	8.7	0.8	1.8	1/4 QC
E02PB-5	880	5	3.7	18	0.7	211	8.3	0.74	1.6	1/4 QC
E12PB-10	1280	10	7.4	20	0.8	236	9.3	0.9	1.9	1/4 QC
E12PB-13	880	13	9.5	20	0.8	212	8.3	0.9	1.9	1/4 QC
E12PB-17	610	17	12.5	20	0.8	212	8.3	0.9	1.9	1/4 QC

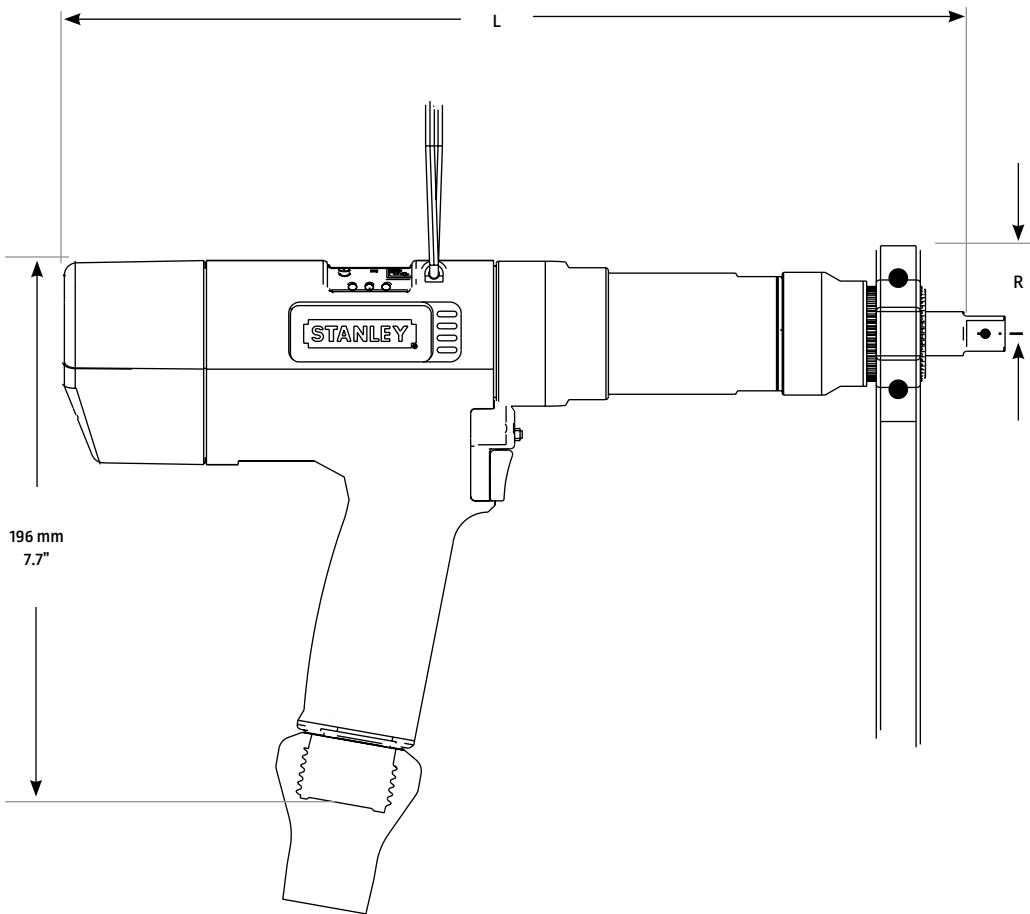
	Rated Speed	Max Torque		'R" Side to Center		'L" Length		Weight		Output
Model	RPM	Nm	lb ft	mm	in	mm	in	kg	lb	Standard
E33PB-32	1125	32	23.6	26	1.04	288	11.3	1.6	3.5	3/8" SD
E33PB-40	890	40	29.5	26	1.04	288	11.3	1.6	3.5	3/8" SD
E34PB1-60	605	60	44.3	32	1.25	324	12.8	2.4	5.2	1/2" SD
E34PB1-74	490	74	54.6	32	1.25	324	12.8	2.4	5.2	1/2" SD
E34PB1-100	365	100	73.8	32	1.25	324	12.8	2.4	5.2	1/2" SD

## Pistol Tool Options

E0/E1 Output Options	Part No.
1/4" Square Drive	20D109007
1/4" Quick Change	20D109006
3/8" Square Drive	20D109008
E33 Output Options	Part No.
3/8" Square Drive Pin	20D100700
3/8" -24 Thread	20D100701
3/8" Square Drive Ball	20D100703
E34 Output Options	Part No.
1/2" Square Drive Pin	20D101001
1/2" Square Drive Ball	20D101004
1/2" Square Drive 6 Inch Extension	20D101003
Socket Lock Pin 3/8" or 1/2" SD	Part No.
Standard	20D227800
Rounded (Ball Detent)	20D227801
E0/E1 Reaction Components	Part No.
Spacer (Default)	20D217000
Reaction Bar, Aluminum 17"	20K100103
Reaction Bar, Steel 17"	20K100104
E33 Reaction Components	Part No.
Reaction Bar, Steel (Default)	20K100100
Base Mount Bracket	A8606
Mounting Flange	20K101000
E34 Reaction Components	Part No.
Reaction Bar, Steel (Default)	20K100000
Base Mount Bracket	20K100500
Mounting Flange	20K100300
Suspension Bail	Part No.
Wire Bail	A3061
Swivel E33 Tools	20K101400
Swivel E34 Tools	20K200000
Vertical Bail Kit E3 Pistol	20K200007
Cable Exit	Part No.
Bottom E0 Tools	20H206320
Bottom E1 Tools	20H206321
Bottom E3 Tools	20H207110
Top E0/E1 Tools	20H206319
Top E3 Tools	20H207114
Fan Parts	Part No.
E0/E1 Bottom Exit	20H206326
E3 Bottom Exit	20H207111
Handle Options	Part No.
Pistol Rubber Grip	20H207107
Motor Options	Part No.
E3 Tool Cooling Fan Kit	20M102600

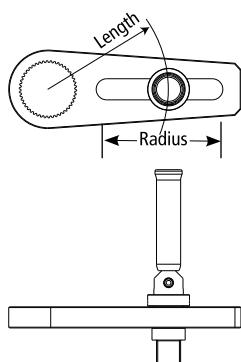
# Pistol Grip Tools

31 to 670 Nm

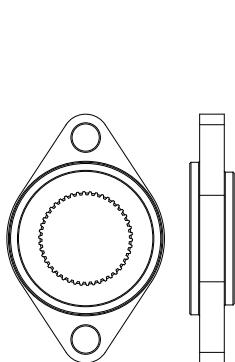


	Rated Speed	Max Torque		"R" Side to Center		"L" Length		Weight		Output
Model	RPM	Nm	lb ft	mm	in	mm	in	kg	lb	Standard
E35PB2-155	225	155	114	34	1.34	393	15.5	3.6	8	3/4" SD
E35PB4-271	100	271	200	44	1.72	431	17	6.8	15	1" SD
E35PB4-340	100	340	250	44	1.72	431	17	6.8	15	1" SD
E35PB4-670	40	670	494	44	1.72	431	17	6.8	15	1" SD

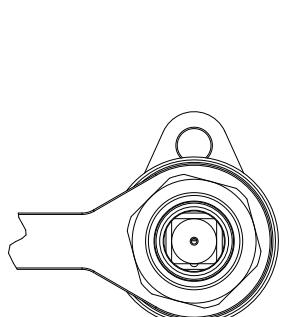
## Mounting / Reaction Options



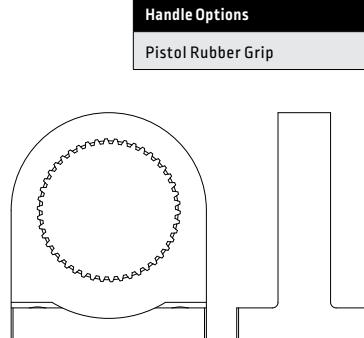
Adjustable Reaction Bar



Optional Mounting Flange



Reaction Bar or Bail



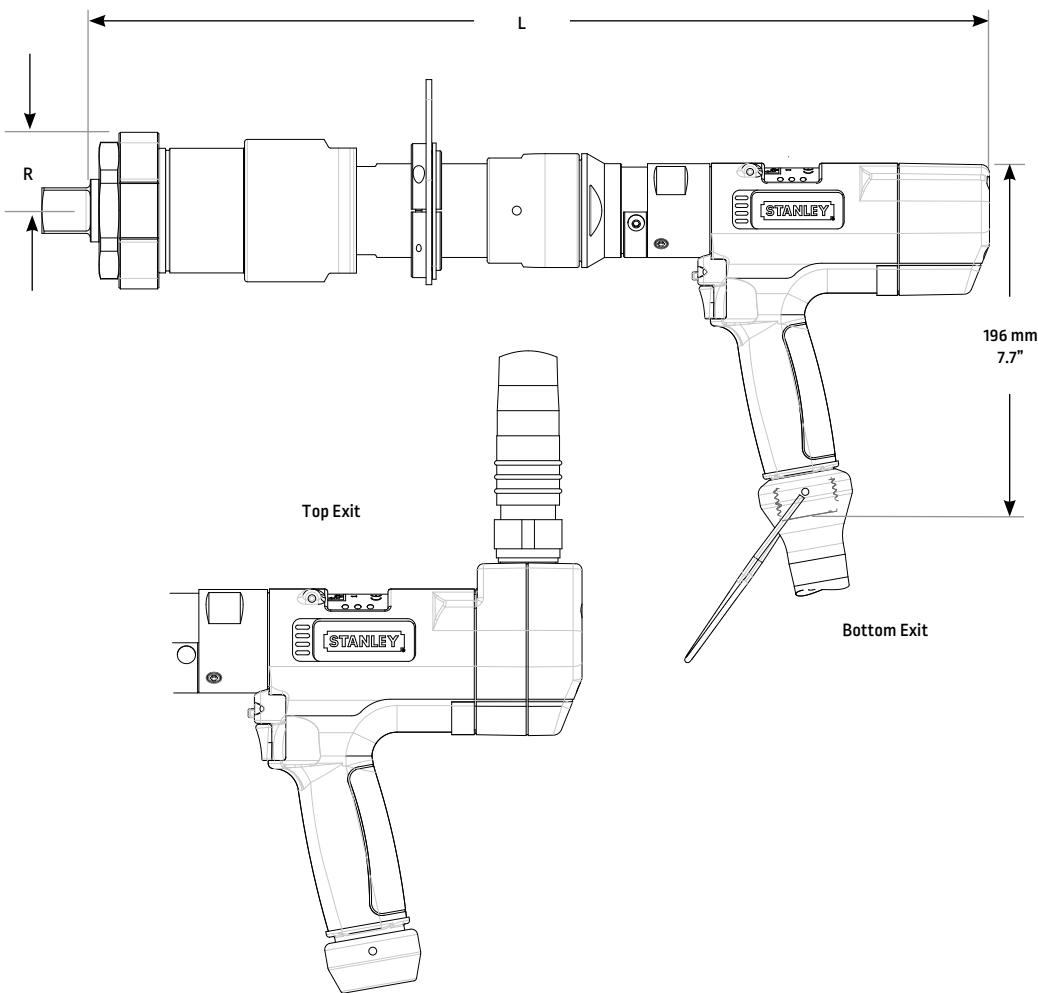
Optional Base Mount Bracket

## Pistol Tool Options

B4 Output Options	Part No.
1" Square Drive Pin	20D208300
1" Square Drive Ball	20D208301
1" Square Drive x 1-1/2" Extension	20D208302
B2 Reaction Components	Part No.
Reaction Bar, Steel (Default)	20K100200
Reaction Bar, Steel Heavy Duty	20K100202
Base Mount Bracket	20K100600
Mounting Flange	20K100700
B4 Reaction Components	Part No.
Reaction Bar, Steel 10" Long (Default)	F4192
Reaction Bar, Steel 40" Long	N4500
Base Mount Bracket	F4201
Mounting Flange	20K101100
Reaction Bar with Adjustable 1" Square Drive Slave 4-1/2" ± 2-3/16" Radius	F4485
Reaction Bar with Adjustable 1" Square Drive Slave with Handle 4-1/2" ± 2-3/16" Radius	F4857
Reaction Bar with Adjustable 1" Square Drive Slave with Handle 17-3/4" ± 1-1/2" Radius	N4335
Reaction Bar with Adjustable 1" Square Drive Slave with Handle 18-3/4" ± 1-13/16" Radius	N4585
Reaction Bar with Adjustable 1" Square Drive Slave with Handle 7-1/2" ± 1-1/2" Radius	A6263
Suspension Bail	Part No.
Wire Bail	A3061
Swivel	20K200000
Vertical Bail Kit	20K200007
Cable Exit	Part No.
Bottom	20H207110
Top	20H207114
Fan Parts	Part No.
Bottom Exit	20H207111
Handle Options	Part No.
Pistol Rubber Grip	20H207107

# Swing Bar Pistol Grip Tools

9 to 1200 Nm



## Pistol Tool Options

E33PB Output Options	Part No.
3/8" Square Drive Pin	20D100700
3/8" -24 Thread	20D100701
3/8" Square Drive Ball	20D100703
<b>E34B1 Output Options &lt;1200 Nm</b>	<b>Part No.</b>
1/2" Square Drive Pin	20D101001
1/2" Square Drive Ball	20D101004
1/2" Square Drive 6 Inch Extension	20D101003
<b>Socket Lock Pin 3/8" or 1/2" SD</b>	<b>Part No.</b>
Standard	20D227800
Rounded (Ball Detent)	20D227801
<b>E33 Reaction Components</b>	<b>Part No.</b>
Reaction Bar, Steel (Default)	20K100100
Base Mount Bracket	A8606
Mounting Flange	20K101000
<b>B1 Reaction Components &lt;1200 Nm</b>	<b>Part No.</b>
Reaction Bar, Steel	20K100000
<b>B4 Reaction Components</b>	<b>Part No.</b>
Reaction Bar, Steel 10" Long	F4192
<b>Suspension Bail</b>	<b>Part No.</b>
Wire Bail	A3061
Swivel E33 Tools	20K101400
Swivel E34 Tools	20K200000
Swivel E35 Tools	20K200001
Vertical Bail Kit	20K200007
<b>Cable Exit</b>	<b>Part No.</b>
Bottom	20H207110
Top	20H207114
<b>Fan Parts</b>	<b>Part No.</b>
Bottom Exit	20H207111
<b>Handle Options</b>	<b>Part No.</b>
Pistol Rubber Grip	20H207107

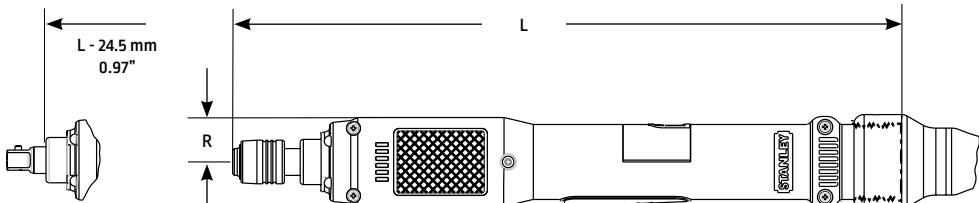
	Rated Speed	Max Torque		"R" Side to Center		"L" Length		Weight		Output
Model	RPM	Nm	lb ft	mm	in	mm	in	kg	lb	Standard
E34PB1SB-74	490	74	55	31.8	1.25	387	15.2	2.7	6	1/2" SD
E35PB4SB-340	100	340	250	43.6	1.72	478	18.8	6.8	15	1" SD
E35PB4SB-670	40	670	494	43.6	1.72	501	19.7	6.8	15	1" SD
E34PB1SB-1200	6	1200	885	41.3	1.63	474	18.6	5.4	11.8	1" SD



Sockets and Accessories  
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# Inline Push-to-Start (PTS) Lever Tools

**0.8 to 17 Nm**



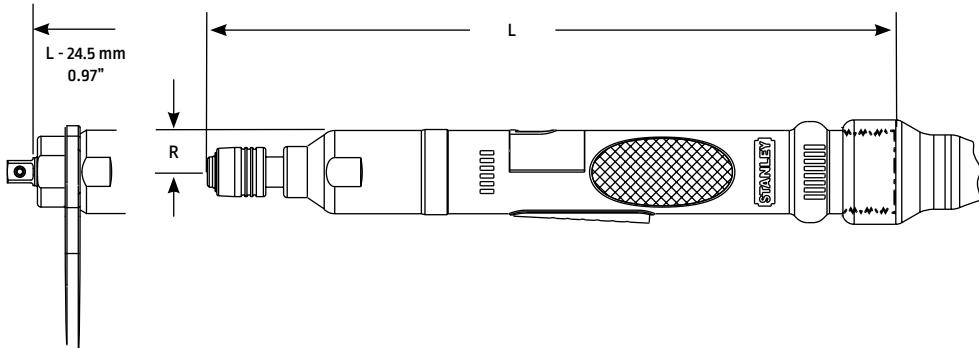
Model	Rated Speed	Max Torque		"R" Side to Center		"L" Length		Weight		Output
		RPM	Nm	lb ft	mm	in	mm	in	kg	lb
E12LP-4	2535	4	3	21	0.8	314	12.3	0.74	1.63	1/4" QC
E12LP-6	1620	6	4.4	21	0.8	314	12.3	0.74	1.63	1/4" QC
E12LP-10	1280	10	7.4	21	0.8	314	12.3	0.74	1.63	1/4" QC
E12LP-13	880	13	9.5	21	0.8	314	12.3	0.74	1.63	1/4" QC
E12LP-17	610	17	12.5	21	0.8	314	12.3	0.74	1.63	1/4" QC

*PTS Tool Options*

Output Options	Part No.
1/4" Square Drive	20D119305
3/8" Square Drive	20D109003
1/4" Quick Change	20D109004
3/8" SD Socket Lock Pin	Part No.
Standard	20D227800
Rounded (Ball Detent)	20D227801
Reaction Components	Part No.
Mounting Collar Kit	20K101700
Suspension Bail	Part No.
Wire Bail	A3061
Handle Options	Part No.
Rubber Grip	20H207915
Heavy Duty Cable Adapter	20H103100

# Inline Lever Tools

**0.8 to 17 Nm**



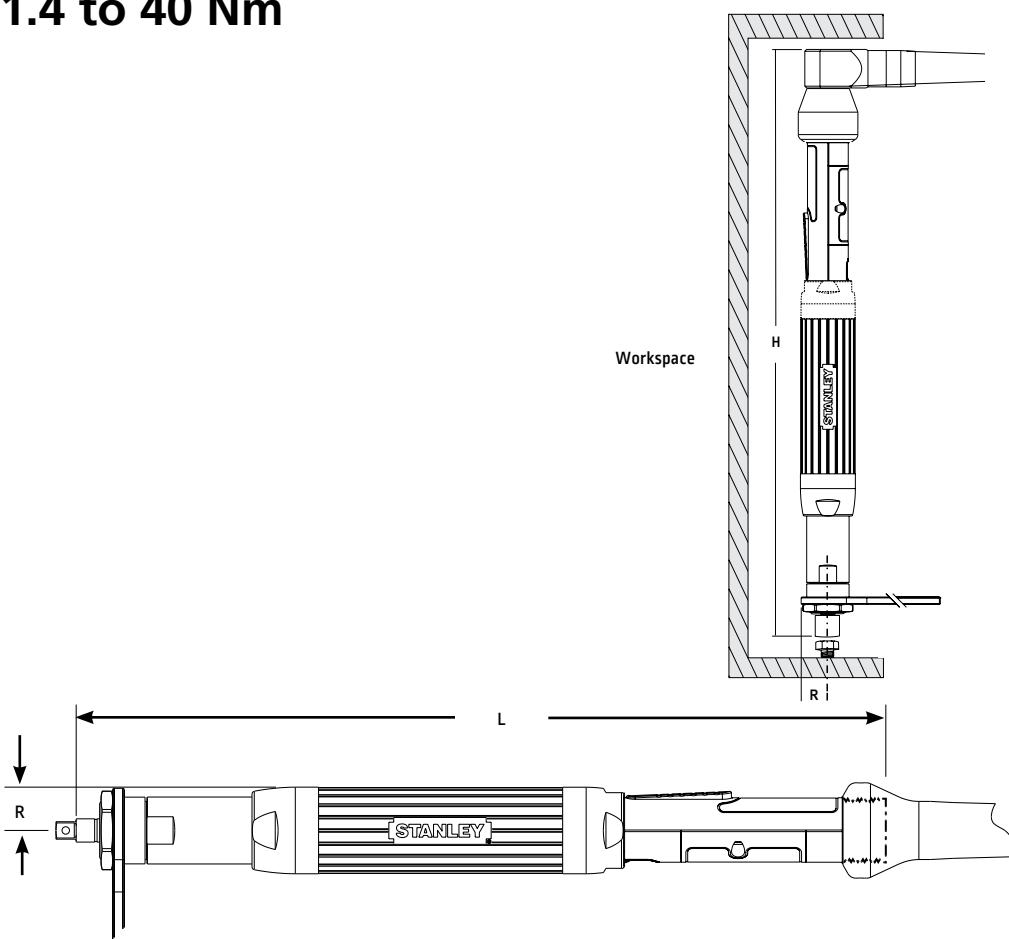
Model	Rated Speed	Max Torque		"R" Side to Center		"L" Length		Weight		Output
		RPM	Nm	lb ft	mm	in	mm	in	kg	lb
E12LB-4	2535	4	3	18	0.7	282	11.1	0.7	1.54	1/4" QC
E12LB-6	1620	6	4.4	18	0.7	282	11.1	0.7	1.54	1/4" QC
E12LB-10	1280	10	7.4	18	0.7	282	11.1	0.7	1.54	1/4" QC
E12LB-13	880	13	9.5	18	0.7	282	11.1	0.7	1.54	1/4" QC
E12LB-17	610	17	12.5	18	0.7	282	11.1	0.7	1.54	1/4" QC

*Inline Tool Options*

Output Options	Part No.
3/8" Square Drive	20D109008
1/4" Quick Change	20D109006
1/4" Square Drive	20D109007
3/8" SD Socket Lock Pin	Part No.
Standard	20D227800
Rounded (Ball Detent)	20D227801
Reaction Components	Part No.
Reaction Bar, Aluminum [Default]	20K100103
Reaction Bar, Steel	20K100104
Spacer	20D217000
Suspension Bails	Part No.
Wire Bail	A3061
Swivel	20K101402
Handle Options	Part No.
Rubber Grip	20H207910
Extended Lever	20H102201
Heavy Duty Cable Adapter	20H103100
Light Option	Part No.
E12 LED Flexible Light Kit	20K101804
E12 LED Stationary Light Kit	20S113202

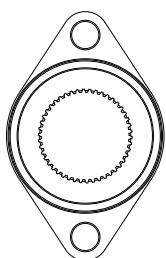
# Inline Lever Tools

1.4 to 40 Nm



	Rated Speed	Max Torque		"R" Side to Center		"L" Length		Weight		Output
Model	RPM	Nm	lb ft	mm	in	mm	in	kg	lb	Standard
E23LB-8	2245	8	5.9	24	0.9	402	15.8	1.4	3.1	3/8" SD
E23LB-16	1000	16	11.8	24	0.9	402	15.8	1.4	3.1	3/8" SD
E23LB-21	785	21	15.5	24	0.9	417	16.4	1.6	3.5	3/8" SD
E23LB-31	540	31	22.9	24	0.9	417	16.4	1.6	3.5	3/8" SD
E33LB-32	1125	32	23.6	24	0.9	442	17.4	1.7	3.8	3/8" SD
E33LB-40	890	40	29.5	24	0.9	442	17.4	1.7	3.8	3/8" SD

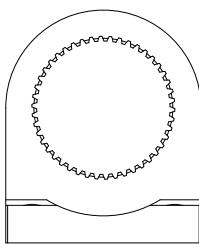
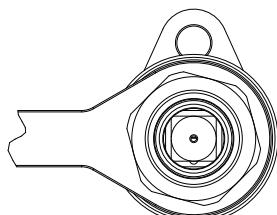
## Mounting / Reaction Options



Optional Mounting Flange



Reaction Bar or Bail



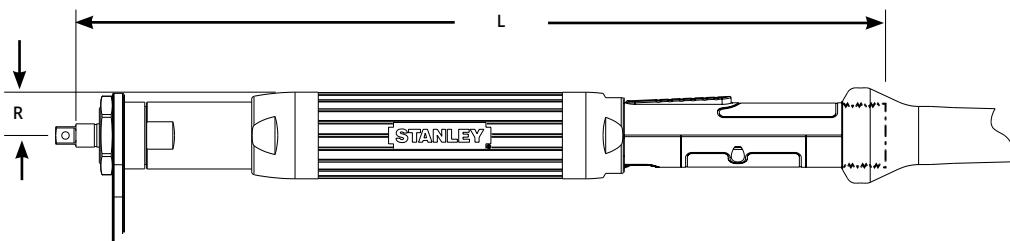
Optional Base Mount Bracket



Sockets and Accessories  
begin on page 156

# Inline Lever Tools

12 to 100 Nm



Model	Rated Speed	Max Torque		"R" Side to Center		"L" Length		Weight		Output
		RPM	Nm	lb ft	mm	in	mm	in	kg	lb
E34LB1-60	605	60	44	32	1.25	478	18.8	2.4	5.2	1/2" SD
E44LB1-66	885	66	49	32	1.25	487	19.2	2.9	6.4	
E34LB1-74	490	74	55	32	1.25	478	18.8	2.4	5.2	
E44LB1-100	590	100	74	32	1.25	487	19.2	2.9	6.4	
E34LB1-100	365	100	74	32	1.25	478	18.8	2.4	5.2	

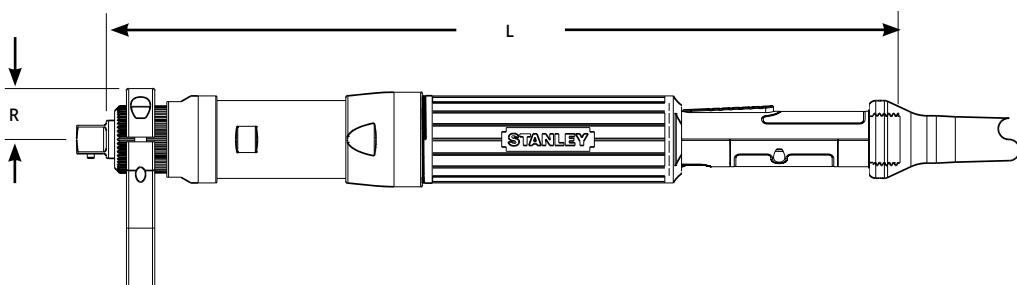
Inline Tool Options

LB1

Output Options	Part No.
1/2" Square Drive x 6" Extension	20D101003
1/2" SD Socket Lock Pin	Part No.
Standard	K4024
Rounded (Ball Detent)	K4050
2-Hand Anti-Tiedown Switch	Part No.
E34/44/54 Tools	20K400001
Reaction Components	Part No.
Reaction Bar (Default)	20K100000
Mounting Flange	20K100300
Base Mount Bracket	20K100500
Suspension Bail	Part No.
Wire Bail	A3061
Swivel Bail	20K200000
Handle Options	Part No.
E Tool Rubber Grip	20H207207
E Tool Front Facing Lever	20H100005

# Inline Lever Tools

32 to 250 Nm



Model	Rated Speed	Max Torque		"R" Side to Center		"L" Length		Weight		Output
		RPM	Nm	lb ft	mm	in	mm	in	kg	lb
E55LB2-127	720	127	94	34	1.35	560	22.1	4.7	10.3	3/4" SD
E45LB2-160	345	160	118	34	1.35	533	21	4.4	9.6	
E55LB2-200	475	200	147	34	1.35	560	22.1	4.7	10.3	
E55LB2-250	380	250	184	34	1.35	560	22.1	4.7	10.3	
E45LB2-250	220	250	184	34	1.35	533	21	4.4	9.6	

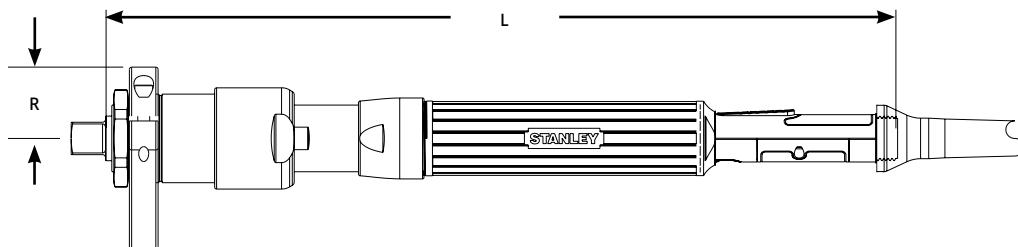
Inline Tool Options

LB2

Output Options	Part No.
5/8" Square Drive	20D102502
3/4" Square Drive x 8" Extension	20D102603
3/4" Square Drive x 12" Extension	20D102604
Socket Lock Pin	Part No.
Standard 3/4"	A5075
Standard 5/8"	A4026
Rounded (Ball Detent)	20R202300
2-Hand Anti-Tiedown Switch	Part No.
E55 Tools	20K400008
Reaction Components	Part No.
Reaction Bar (Default)	20K100200
Reaction Bar - Heavy Duty	20K100202
Mounting Flange	20K100700
Base Mount Bracket	20K100600
Suspension Bail	Part No.
Wire Bail	A3061
Swivel Bail	20K200100
Handle Options	Part No.
Rubber Grip	20H207207
Front Facing Lever	20H100105

# Inline Lever Tools

64 to 2005 Nm



Model	Rated Speed	Max Torque		"R" Side to Center		"L" Length		Weight		Output	
		RPM	Nm	lb ft	mm	in	mm	in	kg	lb	
E55LB3-322	230	322	237	32	1.25		573	22.5	5.3	11.5	3/4" SD
E55LB4-471	185	471	347	44	1.7		621	24.4	7.4	16.3	1" SD
E55LB4-623	140	623	459	44	1.7		621	24.4	7.4	16.3	
E55LB5-1023	75	1023	754	48	1.9		651	25.6	9.6	21.1	
E55LB5-1637	45	1637	1207	48	1.9		683	26.9	12	26.4	
E55LB5-2005	35	2005	1479	48	1.9		683	26.9	12	26.4	

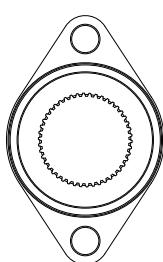
Steel Reaction Bars are the default reaction components provided with these tools.

## Inline Tool Options

LB3/4/5

Output Options	Part No.
B3 3/4" SD with Ball Retainer	20D104502
B4 1" SD with 11/2" Extension	20D208302
<b>Lock Nut Options</b>	
Lock Nut - B3	B4484
<b>2-Hand Anti-Tiedown Switch</b>	
E55 Tools	20K400008
<b>Reaction Components</b>	
Reaction Bar - B3	B4487
Reaction Bar - B4, B5 <1500 Nm	F4192
Reaction Bar - B5 >1500 Nm	J4228
Base Mount Bracket - B3	H1140
Mounting Flange - B3	M4329
Mounting Flange - B4	20K101100
Mounting Flange - B5	20K100900
<b>Socket Lock Pin</b>	
Standard - B3	A5075
Rounded (Ball Detent) - 3/4", 1" SD	20R202300
<b>Suspension Bails</b>	
Wire Bail	A3061
Swivel	20K200100
<b>Handle Options</b>	
E Tool Rubber Grip	20H207207
E Tool Front Facing Lever	20H100105

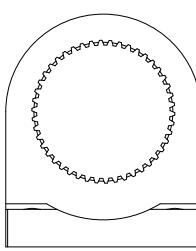
## Mounting / Reaction Options



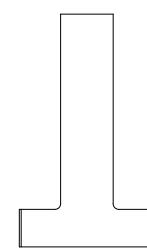
Optional Mounting Flange



Reaction Bar or Bail



Optional Base Mount Bracket

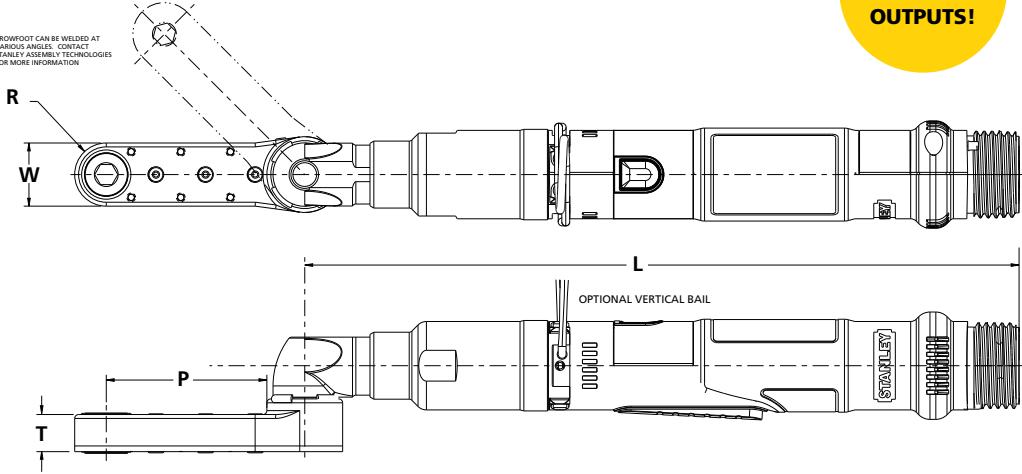


Sockets and Accessories  
begin on page 156

# Angle Crowfoot Lever Tools

1.2 to 18 Nm

CROWFOOT CAN BE WELDED AT  
VARIOUS ANGLES. CONTACT  
STANLEY ASSEMBLY TECHNOLOGIES  
FOR MORE INFORMATION



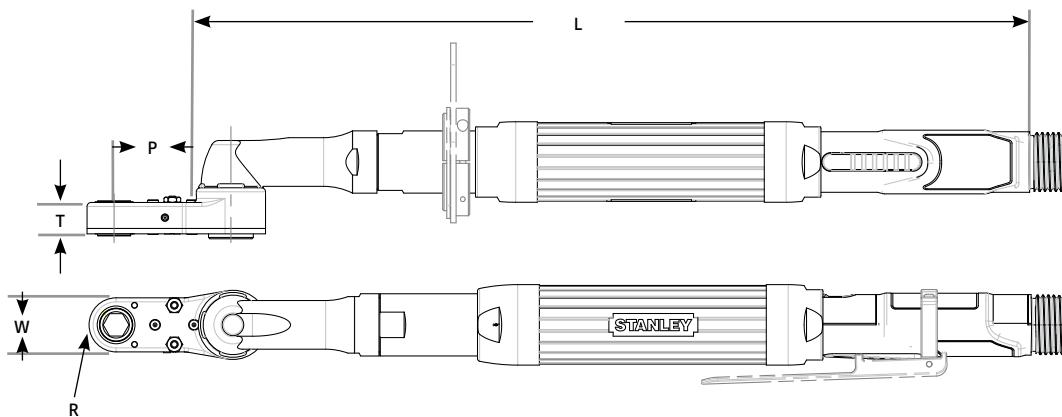
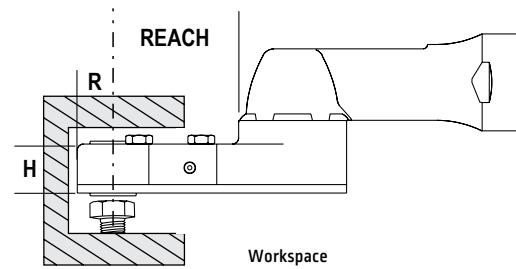
## Tool Options

Suspension Bails	Part No.
Optional Wire Bail	A3061
Swivel Bail	20K101400
Standard Wire Bail	B3432
2-Hand Anti-Tiedown	Part No.
E23 Tools	20G100104
Handle Options	Part No.
E12 Rubber Grip	20H207910
E2/3/4/5 Rubber Grip	20H207207
E12 Extended Lever Assembly	20H102201
E2/3 Front Facing Lever	20H100005
E12 Heavy Duty Cable Adapter	20H103100
Other Options	Part No.
E12 LED Flexible Light Kit	20K101804
E12 LED Stationary Light Kit	20S113202

Model	Rated Speed	Max Torque		"R" Nose Radius		"T" Thickness		"W" Width		"P" Length		"L" Length		Weight		Maximum Hex Size	
		RPM	Nm	lb ft	mm	in	mm	in	mm	in	mm	in	mm	in	kg	lb	mm
E12LC44-6	1140	6	4.4	6	0.25	9	0.35	24	0.96	19	0.74	347	13.7	1.0	2.2	6	1/4"
E23LC8-8	1495	8	5.9	13	0.52	16.2	0.64	25.4	1	44.6	1.76	495	19.5	1.0	2.2	13	1/2"
E23LC64-8	790	8	5.9	10	0.39	9	0.35	24	0.96	55	2.16	447	17.6	1.0	2.2	13	1/2"
E12LC294-8	760	8	5.9	9	0.36	9	0.35	24	0.96	119	4.67	421	16.6	1.0	2.2	11	3/8"
E12LC8-13	585	13	9.6	13	0.52	16.2	0.64	25.4	1	44.6	1.76	347	13.7	1.0	2.2	13	1/2"
E12LC247-13	730	13	9.6	10	0.38	16	0.63	25	1	42	1.64	355	14.0	1.0	2.2	11	7/16"
E12LC445-13	585	13	9.6	13	0.52	16	0.63	25	1	45	1.76	347	13.7	1.0	2.2	13	1/2"
E12LC504-13	730	13	9.6	11	0.41	16	0.63	25	1	42	1.64	355	14.0	1.0	2.2	11	7/16"
E12LC106-14	585	14	10	13	0.52	16.2	0.64	25.4	1	64.6	2.54	367	14.5	1.1	2.3	13	1/2"
E23LC160-14	660	14	10	13	0.52	9	0.37	25	1	45	1.76	523	20.6	1.1	2.4	13	1/2"
E12LC420-14	585	14	10	13	0.52	16	0.63	25	1	65	2.54	367	14.5	1.1	2.4	13	1/2"
E23LC69-15	745	15	11	13.5	0.53	16.2	0.64	32	1.25	47	1.86	532	20.9	2.3	5	13	1/2"
E23LC8-16	660	16	11.8	13	0.52	16.2	0.64	25.4	1	44.6	1.76	510	20.0	1.7	3.8	13	1/2"
E12LC8-16	430	16	11.8	13	0.52	16.2	0.64	25.4	1	44.6	1.76	453	17.8	1.21	2.66	13	1/2"
E23LC35-16	660	16	11.8	21	0.81	14	0.55	38	1.5	75	2.95	559	22	2.7	6	19	3/4"
E12LC69-16	485	16	11.8	13.5	0.53	16.2	0.64	32	1.25	47	1.86	449	17.7	2.7	6	13	1/2"
E23LC106-16	660	16	11.8	13	0.52	16.2	0.64	25	1	65	2.54	530	20.8	1.8	4	13	1/2"
E23LC246-16	660	16	11.8	16	0.63	21	0.81	32	1.25	48	1.9	535	21.1	1.8	4	14	9/16"
E23LC247-16	610	16	11.8	10	0.38	16	0.63	25	1	42	1.64	514	20.2	1.8	4	11	7/16"
E23LC13-18	590	18	13.3	13.5	0.53	20.5	0.81	32	1.25	47	1.86	533	21	2.4	5.2	13	1/2"
E23LC390-18	590	18	13.3	11	0.43	16	0.63	22	0.87	51	1.99	585	23.0	2.4	5.2	13	1/2"

# Angle Crowfoot Lever Tools

5.4 to 42 Nm



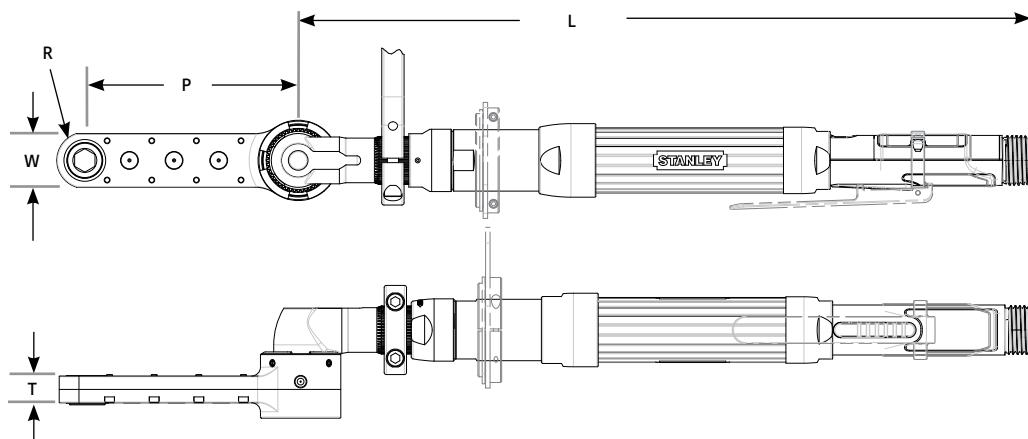
## Tool Options

2-Hand Anti-Tiedown	Part No.
E23 Tools	20G100015
E33 Tools (48 Nm Max)	20G100012
E33 Tools (60 Nm)	20G100013
E34 Tools	20G100414
Suspension Bails	Part No.
Optional Wire Bail	A3061
Swivel Bail	20K101400
Handle Options	Part No.
E2/3/4/5 Rubber Grip	20H207207
E2/3 Front Facing Lever	20H100005

Model	Rated Speed	Max Torque		“R” Nose Radius		“T” Thickness		“W” Width		“P” Length		“L” Length		Weight		Maximum Hex Size	
	RPM	Nm	lb ft	mm	in	mm	in	mm	in	mm	in	mm	in	kg	lb	mm	in
E33LC173-27	845	27	19.9	13	0.53	16	0.63	32	1.25	93	3.66	603	23.7	2.4	5.2	13	1/2"
E33LC69-27	845	27	19.9	13	0.53	16	0.63	32	1.25	47	1.86	557	21.9	2.4	5.3	13	1/2"
E33LC216-27	845	27	19.9	13	0.50	14	0.56	30	1.19	47	1.86	557	21.9	2.4	5.3	13	1/2"
E33LC13-30	760	30	22	13	0.53	21	0.81	32	1.25	47	1.86	557	21.9	2.5	5.5	13	1/2"
E33LC279-30	760	30	22	12	0.47	16	0.63	32	1.25	47	1.86	557	21.9	2.5	5.5	13	1/2"
E33LC308-30	760	30	22	13	0.53	21	0.81	32	1.25	70	2.76	580	22.8	2.5	5.5	13	1/2"
E33LC327-30	810	30	22	12	0.47	16	0.63	32	1.25	46	1.83	557	21.9	2.5	5.5	13	1/2"
E33LC333-30	760	30	22	13	0.53	21	0.81	32	1.25	93	3.66	603	23.7	2.5	5.5	13	1/2"
E33LC385-30	810	30	22	12	0.47	16	0.63	32	1.25	69	2.73	579	22.8	2.5	5.5	13	1/2"
E33LC35-31	750	31	22.9	21	0.81	14	0.55	38	1.50	75	2.95	585	23.0	2.9	6.3	19	3/4"
E33LC496-31	570	31	22.9	21	0.81	14	0.55	38	1.50	170	6.70	682	26.9	2.9	6.3	19	3/4"
E33LC16-35	750	35	25.8	21	0.81	21	0.81	38	1.50	75	2.95	585	23.0	2.6	5.7	19	3/4"
E33LC121-35	650	35	25.8	21	0.81	14	0.55	38	1.50	138	5.45	652	25.7	2.9	6.3	19	3/4"
E33LC29-35	675	35	25.8	21	0.81	14	0.55	38	1.50	43	1.70	548	21.6	2.9	6.3	19	3/4"
E33LC246-38	675	38	28	16	0.63	21	0.81	32	1.25	48	1.90	574	22.6	2.9	6.3	14	9/16"
E33LC297-38	590	38	28	16	0.63	21	0.81	32	1.25	71	2.80	581	22.8	2.9	6.3	14	9/16"
E33LC39-42	590	42	30.9	21	0.81	21	0.84	38	1.50	43	1.70	556	21.9	2.9	6.3	19	3/4"

# Angle Crowfoot Lever Tools

8 to 132 Nm



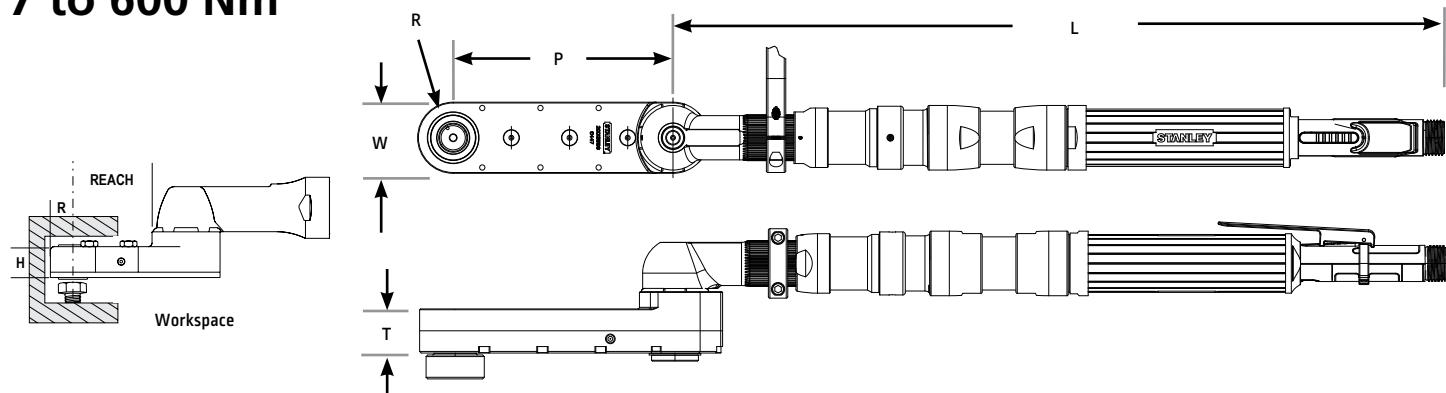
## Tool Options

Part No.	
E34/44/54 Tools	20K400001
Suspension Bails	Part No.
Swivel (Horizontal)	20K200000
Standard (Vertical)	A3061
Reaction Components	Part No.
Reaction Bar (Default)	20K100000
Mounting Flange	20K100300
Base Mount Bracket	20K100500
Handle Options	Part No.
E2/3/4/5 Rubber Grip	20H02707
E3 Front Facing Lever	20H100005

Model	Rated Speed	Max Torque		"R" Nose Radius		"T" Thickness		"W" Width		"P" Length		"L" Length		Weight		Maximum Hex Size	
		RPM	Nm	lb ft	mm	in	mm	in	mm	in	mm	in	mm	in	kg	lb	mm
E34LC402-40	435	40	29.5	16	0.63	19	0.74	32	1.25	53	2.08	596	23.4	3.36	7.4	14	9/16"
E34LC29-45	435	45	33.2	21	0.81	14	0.55	38	1.50	43	1.70	586	23.1	3.36	7.4	19	3/4"
E34LC7-47	435	47	34.7	21	0.81	21	0.84	38	1.50	43	1.70	584	23.0	3.68	8.1	19	3/4"
E34LC10-49	385	49	36.1	21	0.81	28	1.10	38	1.50	71	2.78	625	24.6	3.68	8.1	19	3/4"
E34LC355-55	415	55	40.6	16	0.63	26	1.01	32	1.25	29	1.15	599	23.6	3.63	8.0	16	5/8"
E34LC66-55	435	55	40.6	16	0.63	21	0.84	32	1.25	28	1.12	548	21.6	3.63	8.0	14	9/16"
E34LC162-56	385	56	41.3	13	0.52	21	0.82	38	1.50	97	3.82	652	25.7	3.63	8.0	13	1/2"
E34LC226-59	410	59	43.5	17	0.66	17	0.66	38	1.50	68	2.69	619	24.4	3.63	8.0	16	5/8"
E34LC187-60	335	60	44.3	21	0.81	15	0.58	38	1.50	102	4.03	657	25.9	3.91	8.6	19	3/4"
E34LC272-60	370	60	44.3	16	0.63	26	1.01	32	1.25	131	5.15	685	27.0	3.91	8.6	16	5/8"
E34LC321-60	385	60	44.3	13	0.52	21	0.82	38	1.50	34	1.32	588	23.2	3.41	7.5	13	1/2"
E34LC515-60	310	60	44.3	12	0.48	25	0.99	38	1.50	125	4.94	585	23.0	3.50	7.72	12	7/16"
E34LC162-61	385	61	45	13	0.52	21	0.82	38	1.50	97	3.82	652	25.7	3.77	8.3	13	1/2"
E34LC316-61	375	61	45	17	0.66	21	0.82	38	1.50	100	3.94	655	25.8	3.77	8.3	16	5/8"
E34LC481-61	325	61	45	13	0.52	21	0.82	38	1.50	65	2.57	620	24.4	3.77	8.3	13	1/2"
E34LC523-61	385	61	45	17	0.66	21	0.82	38	1.50	97	3.82	652	25.7	3.77	8.3	13	1/2"
E34LC100-62	385	62	45.7	13	0.52	28	1.12	38	1.50	97	3.82	652	25.7	3.77	8.3	13	1/2"
E34LC200-70	325	70	51.6	21	0.81	20	0.78	38	1.50	134	5.28	689	27.1	3.77	8.3	19	3/4"
E34LC316-70	375	70	51.6	17	0.66	21	0.82	38	1.50	100	3.94	655	25.8	3.77	8.3	16	5/8"
E34LC324-70	325	70	51.6	21	0.81	20	0.78	38	1.50	71	2.78	625	24.6	3.77	8.3	19	3/4"
E34LC203-73	295	73	53.8	21	0.81	17	0.66	38	1.50	71	2.78	625	24.6	3.55	7.8	19	3/4"
E34LC396-95	205	95	70	20	0.79	20	0.78	38	1.48	123	4.85	673	26.5	3.63	8.0	19	3/4"
E34LC464-95	230	95	70	17	0.66	20	0.78	38	1.48	121	4.76	673	26.5	3.63	8.0	16	5/8"
E34LC256-132	180	132	97.3	27	1.08	19	0.75	55	2.16	56	2.22	610	24.0	3.63	8.0	24	15/16"

# Angle Crowfoot Lever Tools

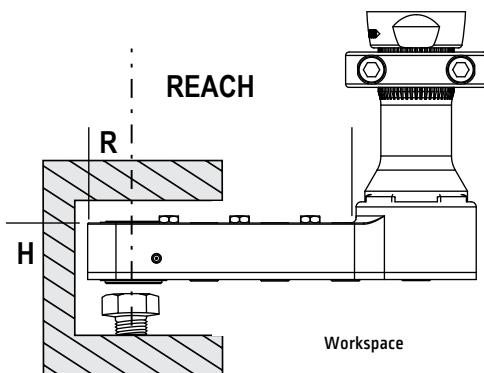
7 to 600 Nm



	Rated Speed	Max Torque		"R" Nose Radius		"T" Thickness		"W" Width		"P" Length		"L" Length		Weight		Maximum Hex Size	
Model	RPM	Nm	lb ft	mm	in	mm	in	mm	in	mm	in	mm	in	kg	lb	mm	in
E44LC508-35	715	35	25.8	13	0.53	14	0.57	32	1.25	47	1.86	596	23.5	4.9	10.9	13	1/2"
E44LC536-35	890	35	25.8	13	0.53	14	0.57	32	1.25	76	3.00	639	25.2	4.9	10.9	13	1/2"
E44LC226-54	595	54	39.8	17	0.66	17	0.66	38	1.50	68	2.69	635	25.0	4.9	10.9	16	5/8"
E44LC491-54	525	54	39.8	13	0.52	17	0.66	38	1.50	68	2.69	627	24.7	4.9	10.9	13	1/2"
E44LC100-62	530	62	45.7	13	0.52	28	1.12	38	1.50	97	3.82	661	26.0	4.9	10.9	13	1/2"
E44LC316-71	405	71	52.4	17	0.66	21	0.82	38	1.50	100	3.94	663	26.1	4.9	10.9	16	5/8"
E44LC404-75	355	75	55.3	17	0.66	26	1.03	38	1.50	68	2.69	633	24.9	4.9	10.9	16	5/8"
E45LC365-80	445	80	59	13	0.52	28	1.12	38	1.50	97	3.82	713	28.1	4.9	10.9	13	1/2"
E44LC172-80	360	80	59	21	0.81	28	1.12	38	1.50	166	6.54	730	28.7	4.9	10.9	19	3/4"
E44LC10-88	355	88	64.9	21	0.81	28	1.12	38	1.50	71	2.78	633	24.9	3.8	8.4	19	3/4"
E44LC31-88	355	88	64.9	21	0.81	28	1.10	38	1.50	39	1.53	602	23.7	3.6	8.0	19	3/4"
E44LC201-90	415	90	66.4	21	0.81	25	0.99	49	1.94	86	3.40	650	25.6	4.9	10.9	19	3/4"
E44LC329-90	415	90	66.4	21	0.81	23	0.91	49	1.94	86	3.40	650	25.6	4.9	10.9	19	3/4"
E44LC10-102	355	102	75.2	21	0.81	28	1.12	38	1.50	71	2.78	631	24.9	4.9	10.9	19	3/4"
E44LC31-102	355	102	75.2	21	0.81	28	1.10	38	1.50	39	1.53	602	23.7	3.6	8.0	19	3/4"
E44LC260-110	360	110	81.1	17	0.69	15	0.60	73	2.89	18	0.71	582	22.9	4.9	10.9	18	11/16"
E45LC284-125	280	125	92.2	29	1.16	31	1.22	59	2.31	147	5.79	758	29.8	4.9	10.9	27	1-1/8"
E45LC21-125	280	125	92.2	29	1.16	31	1.22	59	2.31	58	2.27	669	26.3	4.9	10.9	27	1-1/8"
E45LC85-131	285	131	96.6	29	1.13	22	0.87	59	2.31	58	2.27	698	27.5	4.9	10.9	27	1-1/8"
E45LC238-140	265	140	103	25	1.00	31	1.22	59	2.31	54	2.13	666	26.2	4.9	10.9	21	13/16"
E55LC364-145	385	145	107	20	0.80	35	1.37	39	1.53	46	1.81	708	27.9	4.9	10.9	19	3/4"
E55LC98-147	325	147	108	29	1.16	31	1.22	59	2.31	103	4.06	765	30.1	4.9	10.9	27	1-1/8"
E55LC323-150	385	150	111	25	1.00	22	0.87	59	2.31	99	3.92	761	30.0	4.9	10.9	24	15/16"
E45LC323-150	185	150	111	25	1.00	22	0.87	59	2.31	99	3.92	733	28.9	4.9	10.9	24	15/16"
E55LC98-184	215	184	136	29	1.16	31	1.22	59	2.31	103	4.06	794	31.3	4.9	10.9	27	1-1/8"
E45LC238-196	185	196	145	25	1.00	31	1.22	59	2.31	54	2.13	688	27.1	4.9	10.9	21	13/16"
E45LC21-216	155	216	159	29	1.16	31	1.22	59	2.31	58	2.27	692	27.2	4.5	10	27	1-1/8"
E55LC409-350	90	350	258	44	1.74	47	1.85	95	3.75	89	3.51	766	30.2	4.9	10.9	44	1-3/4"
E55LC446-350	230	350	258	29	1.16	49	1.92	59	2.31	101	3.96	893	35.2	4.9	10.9	27	1-1/8"
E55LC451-350	155	350	258	25	0.99	47	1.87	95	3.75	147	5.78	824	32.4	4.9	10.9	24	15/16"
E55LC458-350	90	350	258	44	1.74	38	1.50	95	3.75	89	3.51	766	30.2	4.9	10.9	44	1-3/4"
E55LC293-540	110	540	398	44	1.74	47	1.87	95	3.75	238	9.36	915	36.0	4.9	10.9	44	1-3/4"
E55LC447-550	70	550	406	35	1.38	42	1.67	70	2.76	152	6.00	974	38.3	4.9	10.9	41	1-5/8"
E55LC293-600	85	600	443	44	1.74	47	1.85	95	3.75	238	9.36	915	36.0	4.9	10.9	44	1-3/4"
E55LC447-600	70	600	443	35	1.38	42	1.67	70	2.76	152	6.00	974	38.3	4.9	10.9	41	1-5/8"

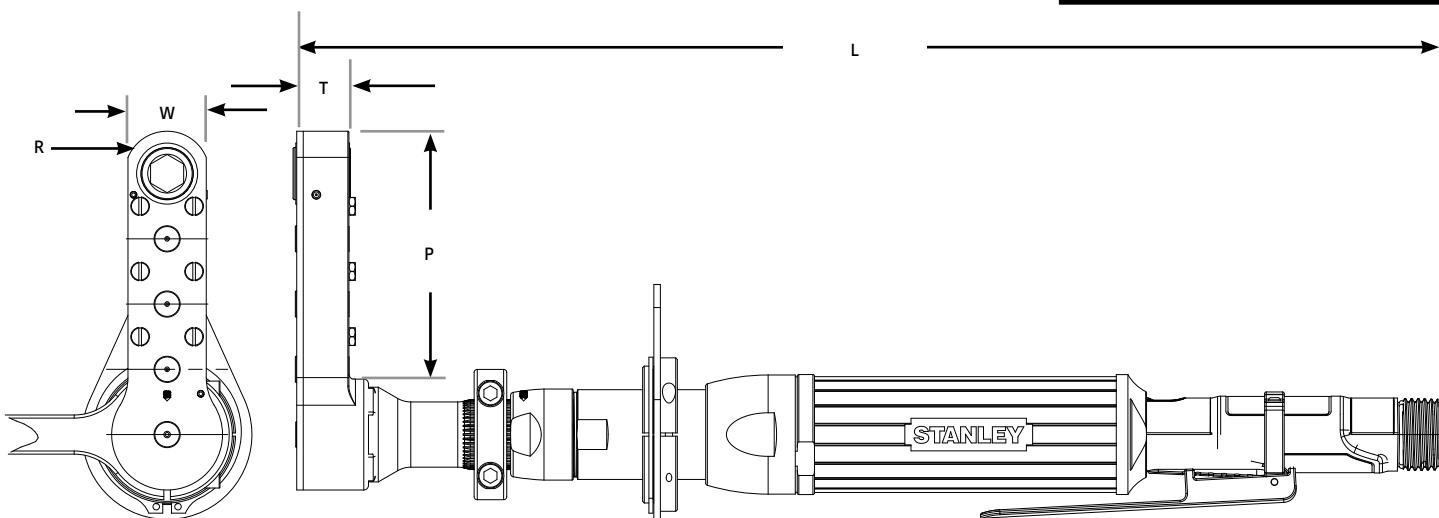
# Vertical Crowfoot Lever Tools

3 to 690 Nm



## Tool Options

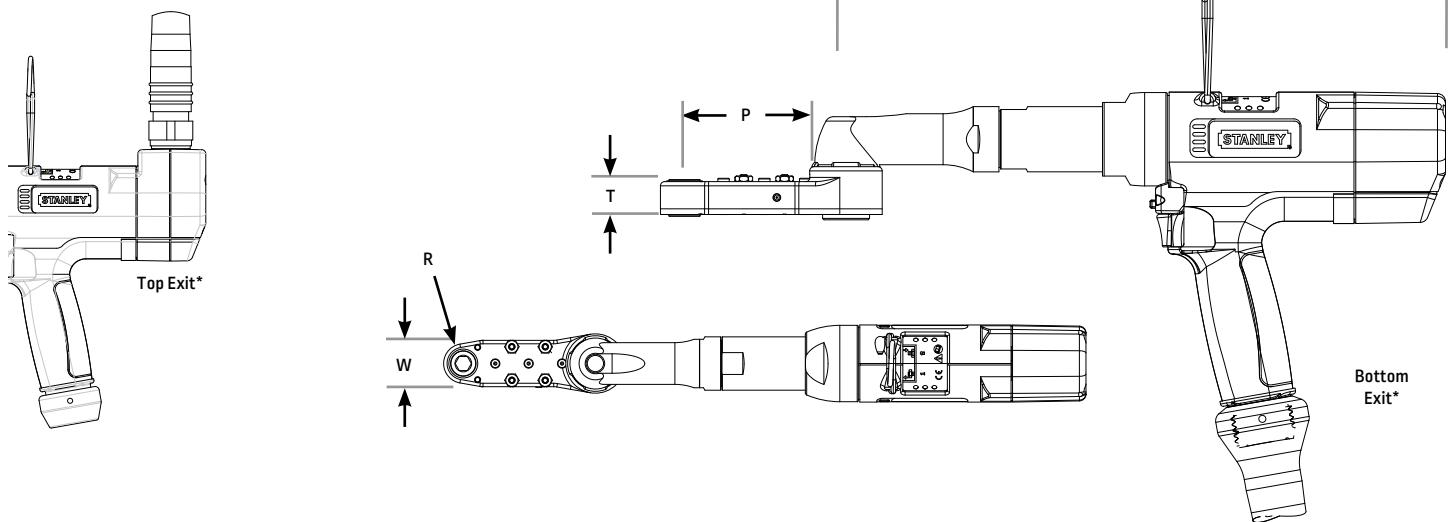
Suspension Bails	Part No.
Swivel Bail	20K101400
Standard Wire Bail	B3432
2-Hand Anti-Tiedown	Part No.
E23 Tools	20G100104
Handle Options	Part No.
E2/3/4/5 Rubber Grip	20H207207
E2/3 Front Facing Lever	20H100005
Reaction Devices	Part No.
Reaction Bar	20K100000
Mounting Flange	20K100300
Base Mount Bracket	20K100500
Other Options	Part No.



Model	Rated Speed RPM	Max Torque		“R” Nose Radius		“T” Thickness		“W” Width		“P” Length		“L” Length		Weight		Maximum Hex Size	
		Nm	lb ft	mm	in	mm	in	mm	in	mm	in	mm	in	kg	lb	mm	in
E23LC278-15	785	15	11	21	0.81	14	0.55	38	1.50	170	6.70	533	21.0	4.9	10.9	19	3/4"
E33LC82-24	995	24	17.7	13	0.53	14	0.57	32	1.25	47	1.86	454	17.9	4.9	10.9	13	1/2"
E33LC152-28	890	28	20.7	21	0.81	14	0.55	38	1.50	75	2.95	489	19.3	4.9	10.9	19	3/4"
E34LC299-42	605	42	31.0	21	0.81	21	0.84	38	1.50	64	2.51	531	20.9	4.9	10.9	19	3/4"
E34LC552-42	605	42	31.0	21	0.81	21	0.84	38	1.50	64	2.51	685	27.0	4.35	9.58	19	3/4"
E34LC298-48	530	48	35.4	13	0.52	21	0.82	38	1.50	97	3.82	543	21.4	4.9	10.9	13	1/2"
E34LC353-50	490	50	36.9	21	0.81	21	0.84	38	1.50	43	1.70	535	21.1	4.9	10.9	19	3/4"
E45LC298-62	500	62	45.7	13	0.52	21	0.82	38	1.50	97	3.82	596	23.5	4.9	10.9	13	1/2"
E44LC83-70	585	70	51.6	21	0.81	28	1.10	38	1.50	102	4.03	558	22.0	4.9	10.9	19	3/4"
E45LC416-210	180	210	155	29	1.16	31	1.22	59	2.31	102	4.03	593	23.3	4.9	10.9	27	1-1/8"
E55LC468-350	140	350	258	25	0.98	47	1.87	95	3.75	147	5.78	911	35.9	4.9	10.9	24	15/16"
E55LC345-615	90	615	454	41	1.63	42	1.67	78	3.06	88	3.45	909	35.8	4.9	10.9	41	1-5/8"
E55LC428-690	50	690	509	41	1.63	42	1.67	78	3.06	152	6.00	909	35.8	4.9	10.9	41	1-5/8"

# Pistol Crowfoot Tools

6 to 30 Nm

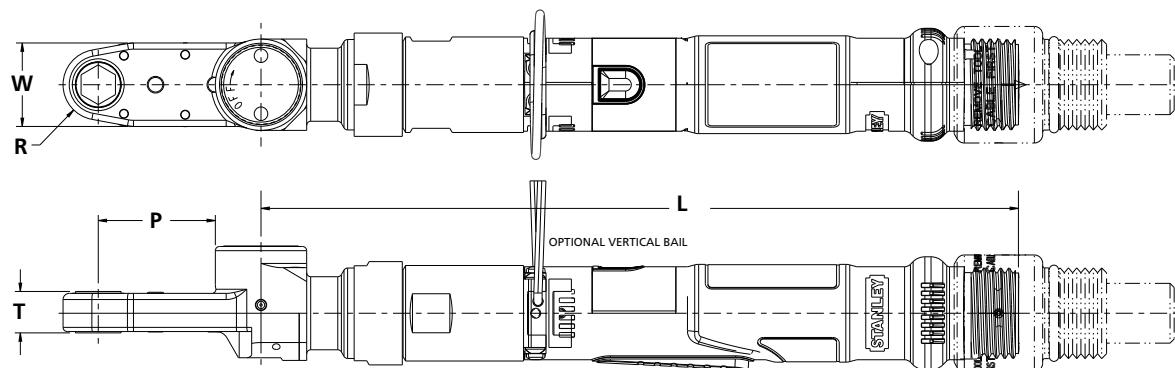


	Rated Speed	Max Torque		"R" Nose Radius		"T" Thickness		"W" Width		"P" Length		"L" Length		Weight		Maximum Hex Size	
Model	RPM	Nm	lb ft	mm	in	mm	in	mm	in	mm	in	mm	in	kg	lb	mm	in
E33PC13-30	760	30	22.1	13	0.53	21	0.81	32	1.25	47	1.86	357	14	2.1	4.6	13	1/2"
E33PC308-30	760	30	22.1	13	0.53	21	0.81	32	1.25	70	2.76	430	16.9	2.1	4.6	13	1/2"
E33PC313-30	420	30	22.1	13	0.53	16	0.63	32	1.25	73	2.87	350	13.8	2.1	4.6	13	1/2"
E33PC359-30	570	30	22.1	13	0.53	25	1.00	32	1.25	45	1.76	351	13.8	2.1	4.6	13	1/2"
E33PC379-30	420	30	22.1	13	0.53	16	0.63	32	1.25	45	1.76	352	13.8	2.1	4.6	13	1/2"

\* Top Exit requires the use of a Fixtured tool whip cable while the Bottom Exit requires the use of a Handheld tool whip cable.

# Inline Crowfoot Lever Tools

6 to 30 Nm

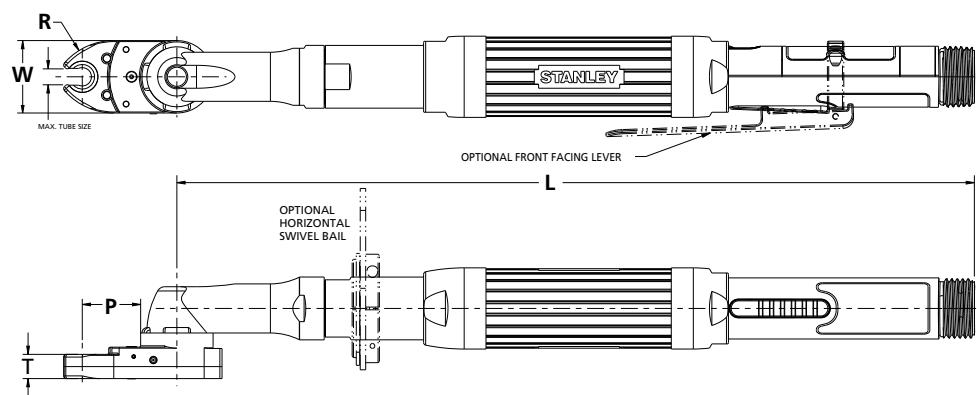
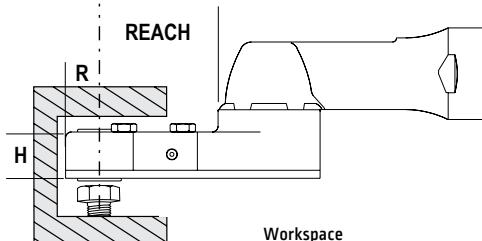


	Rated Speed	Max Torque		"R" Nose Radius		"T" Thickness		"W" Width		"P" Length		"L" Length		Weight		Maximum Hex Size	
Model	RPM	Nm	lb ft	mm	in	mm	in	mm	in	mm	in	mm	in	kg	lb	mm	in
E12LC359-30	240	30	22.1	13	0.53	25	1.00	32	1.25	45	1.76	352	13.9	2.1	4.6	13	1/2"
E12LC379-30	240	30	22.1	13	0.53	16	0.63	32	1.25	45	1.76	352	13.9	2.1	4.6	13	1/2"

# Angle Tubenut Lever Tools

2.8 to 22 Nm

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## Angle Tubenut Options

Suspension Bails	Part No.
E12 Wire Bail	A3061
E12 Swivel Bail Assembly	20K101402
E23 Swivel Bail	20K101400
E23 Standard Wire Bail	B3432
2-Hand Anti-Tiedown	Part No.
E23 Tools	20G100104
Handle Options	Part No.
E12 Rubber Grip	20H207910
E12 Extended Lever Assembly	20H102201
E12 Heavy Duty Cable Adapter	20H103100
E2/3/4/5 Rubber Grip	20H207207
E2/3 Front Facing Lever	20H100005
Other Options	Part No.
E12 LED Flexible Light Kit	20K101804
E12 LED Stationary Light Kit	20S113202

Model	Rated Speed		Max Torque		"R" Nose Radius		"T" Thickness		"W" Width		"P" Length		"L" Length		Weight		Maximum Hex Size		Maximum Tube Size	
	RPM	Nm	lb ft	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	kg	lb	mm	in	mm
E23LT74-14	750	14	10.3	18	0.73	14	0.56	48	1.88	44	1.72	532	20.9	2.5	5.4	18	11/16"	11.6	0.455	
E12LT224-15	595	15	11	13	0.51	13	0.52	32	1.26	50	1.97	364	14.3	2.5	5.4	11	7/16"	7.4	0.29	
E23LT280-15	500	15	11	13	0.51	13	0.52	32	1.26	50	1.97	560	22.0	2.5	5.4	11	7/16"	7.4	0.29	
E23LT224-20	500	20	14.8	13	0.51	13	0.52	32	1.26	50	1.97	517	20.3	2.5	5.4	11	7/16"	7.4	0.29	
E23LT282-20*	500	20	14.8	13	0.51	13	0.52	32	1.26	50	1.97	516	20.3	2.5	5.4	11	7/16"	7.4	0.29	
E23LT346-21	490	21	15.5	13	0.52	14	0.54	42	1.66	34	1.34	520	20.5	2.5	5.4	13	1/2"	9.3	0.365	
E23LT74-22	410	22	16.2	18	0.73	14	0.56	48	1.88	44	1.72	532	20.9	2.5	5.4	18	11/16"	11.6	0.455	

\* Reverse Rotation

# Socket on Top

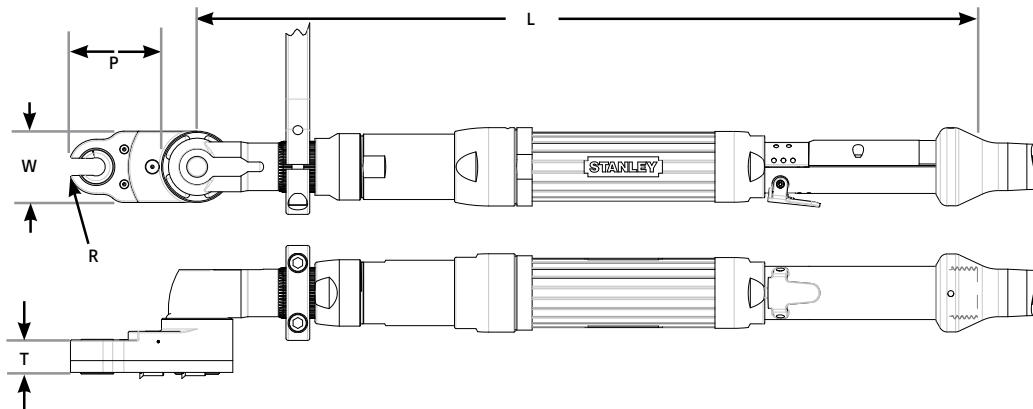
Check the symbols to ensure the correct tool is chosen for the application. Tubenuts are designed to be used with the socket on the bottom (base plate side) or on the top (angle head side) and in Clockwise or Counter-clockwise (Reverse) rotation. Tools without symbols have the socket on the bottom and run clockwise.

STANLEY Assembly Technologies has designed Tubenut and Crowfoot outputs for over 50 years. Contact STANLEY Assembly Technologies if you would like one designed for your specific application.

The maximum tube size depends on the chosen HEX size.

# Angle Tubenut Lever Tools

5 to 102 Nm



## Angle Tubenut Options

2-Hand Anti-Tiedown Switch		Part No.
E34/44/54 Tools		20K400001
Suspension Bails		Part No.
Swivel (Horizontal)		20K200000
Standard (Vertical)		A3061
Reaction Devices		Part No.
Reaction Bar		20K100000
Mounting Flange		20K100300
Base Mount Bracket		20K100500
Handle Options		Part No.
E2/3/4/5 Rubber Grip		20H027207
E3 Front Facing Lever		20H100005
E4/5 Front Facing Lever		20H100105
Motor Options		Part No.
E3 Tool Cooling Fan Kit		20M102600

Model	Rated Speed	Max Torque		"R" Nose Radius		"T" Thickness		"W" Width		"P" Length		"L" Length		Weight		Maximum Hex Size		Maximum Tube Size	
		RPM	Nm	lb ft	mm	in	mm	in	mm	in	mm	in	mm	in	kg	lb	mm	in	mm
E33LT346-25	1050	25	18.4	13	0.52	14	0.54	42	1.66	34	1.34	545	21.5	2.3	5.1	13	1/2"	9.3	0.365
E33LT349-25	1050	25	18.4	13	0.52	14	0.54	42	1.66	56	2.19	565	22.3	4.8	10.6	13	1/2"	9.3	0.365
E33LT358-25*#	1050	25	18.4	13	0.52	14	0.54	42	1.66	34	1.34	545	21.5	2.3	5.1	13	1/2"	9.3	0.365
E33LT513-25	1050	25	18.4	13	0.52	14	0.54	42	1.66	56	2.19	565	22.3	4.8	10.6	13	1/2"	9.3	0.365
E33LT74-30	765	30	22.1	18	0.73	14	0.56	48	1.88	44	1.72	557	21.9	2.6	5.7	18	11/16"	11.6	0.455
E33LT164-30*	765	30	22.1	18	0.73	14	0.56	48	1.88	47	1.86	557	21.9	4.8	10.6	18	11/16"	11.6	0.455
E33LT527-30	750	30	22.1	18	0.73	16	0.63	48	1.88	16	0.64	528	21.1	4.8	10.6	19	3/4"	11.6	0.455
E33LT368-41#	365	41	30.2	13	0.52	21	0.85	44	1.72	59	2.33	574	22.6	4.8	10.6	13	1/2"	9.3	0.365
E33LT375-41	365	41	30.2	13	0.52	21	0.85	44	1.72	59	2.33	573	22.5	4.8	10.6	13	1/2"	9.3	0.365
E33LT549-41X	365	41	30.2	13	0.52	21	0.85	44	1.72	59	2.33	574	22.6	4.8	10.6	13	1/2"	9.3	0.365
E34LT23-41	495	41	30.2	18	0.73	23	0.91	48	1.88	44	1.72	590	23.3	3.6	7.9	18	11/16"	11.6	0.455
E34LT253-46*	515	46	33.9	26	1.04	16	0.64	75	2.94	65	2.55	598	23.6	4.8	10.6	27	1-1/16"	19.4	0.765
E34LT99-46	430	46	33.9	26	1.04	19	0.77	75	2.94	65	2.55	598	23.6	3.9	8.6	27	1-1/16"	19.4	0.765
E34LT99-62	385	62	45.7	26	1.04	19	0.77	75	2.94	65	2.55	620	24.4	3.9	8.6	27	1-1/16"	19.4	0.765
E34LT116-62*#	385	62	45.7	26	1.04	19	0.77	75	2.94	65	2.55	598	23.6	4.8	10.6	27	1-1/16"	19.4	0.765
E34LT99-67	285	67	49.4	26	1.04	19	0.77	75	2.94	65	2.55	620	24.4	4.8	10.6	27	1-1/16"	19.4	0.765
E44LT20-102	375	102	75.2	26	1.04	32	1.25	75	2.94	65	2.55	604	24.8	4.8	10.6	27	1-1/16"	19.4	0.765

\* Reverse Rotation    # Socket on Top    X Indexable Foot

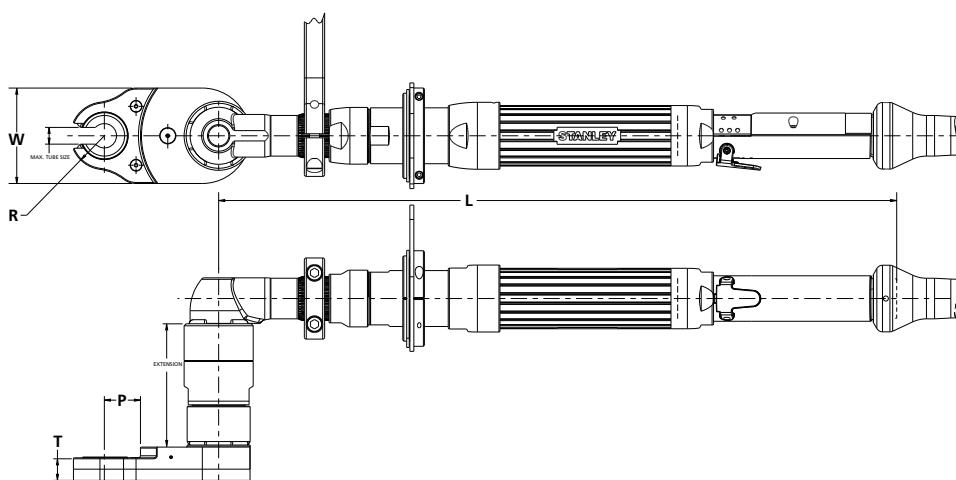
Check the symbols to ensure the correct tool is chosen for the application. Tubenuts are designed to be used with the socket on the bottom (base plate side) or on the top (angle head side) and in Clockwise or Counter-clockwise (Reverse) rotation. Tools without symbols have the socket on the bottom and run clockwise.

STANLEY Assembly Technologies has designed Tubenut and Crowfoot outputs for over 50 years. Contact STANLEY Assembly Technologies if you would like one designed for your specific application.

The maximum tube size depends on the chosen HEX size.

# Angle Extended Tubenut Lever Tools

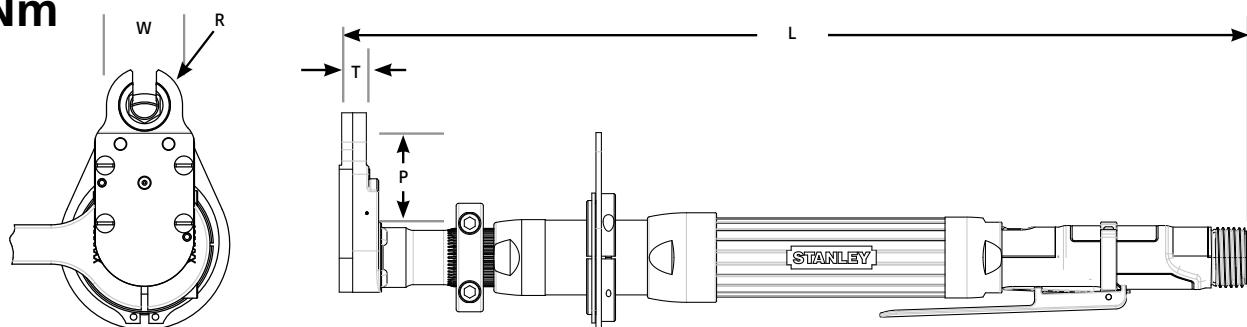
5 to 62 Nm



	Rated Speed	Max Torque		"R"		Thickness		"W"		"P"		Length		"L"		Weight		Maximum Hex Size		Maximum Tube Size	
Model	RPM	Nm	lb ft	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	kg	lb	mm	in	mm	in
E33LT288-25	670	25	18.4	13	0.52	9	0.34	42	1.66	16	0.63	508	20	2.5	5.4	13	1/2"	9.3	0.365		
E33LT387-25	1050	25	18.4	13	0.52	14	0.54	42	1.66	34	1.34	490	19.3	2.5	5.4	13	1/2"	9.3	0.365		
E33LT312-30	765	30	22.1	18	0.73	14	0.56	48	1.88	47	1.86	539	21.2	2.5	5.4	18	11/16"	11.6	0.455		
E34LT283-62	385	62	45.7	26	1.04	19	0.77	75	2.94	65	2.55	557	21.9	2.5	5.4	27	1-1/16"	19.4	0.765		
E34LT296-62	385	62	45.7	26	1.04	19	0.77	75	2.94	65	2.55	620	24.4	2.5	5.4	27	1-1/16"	19.4	0.765		

# Vertical Tubenut Lever Tools

5 to 25 Nm



	Rated Speed	Max Torque		"R"		Thickness		"W"		"P"		Length		"L"		Weight		Maximum Hex Size		Maximum Tube Size	
Model	RPM	Nm	lb ft	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	kg	lb	mm	in	mm	in
E33LT540-25*‡	1010	25	18.4	18	0.73	14	0.56	48	1.88	76	3.01	456	18	2.5	5.4	18	11/16	11.6	0.455		

\* Reverse Rotation    ‡ Socket on Top

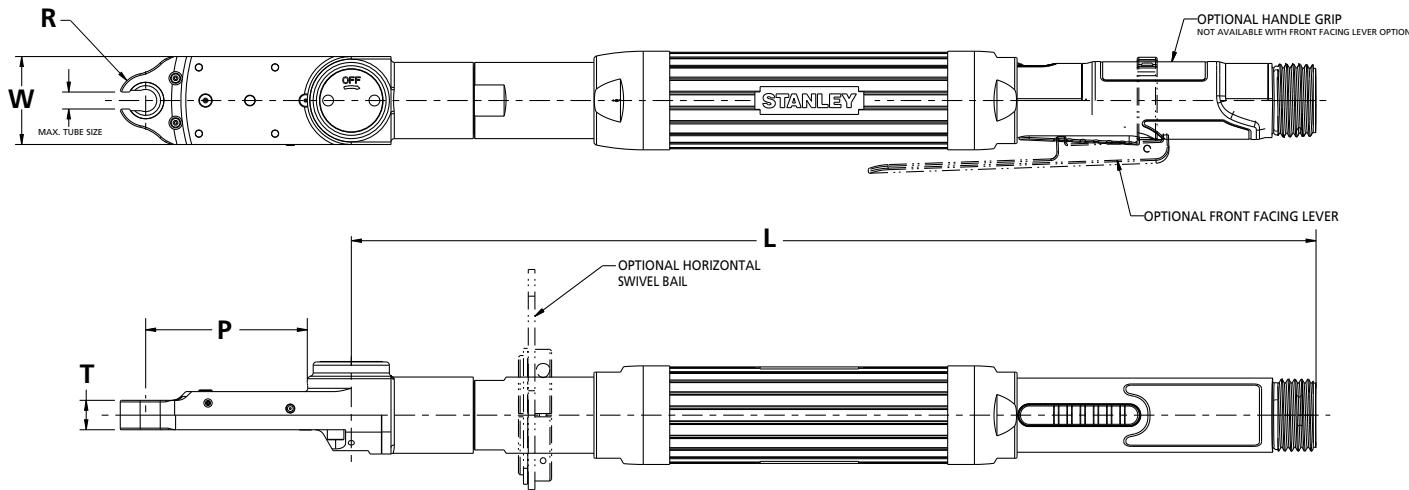
Check the symbols to ensure the correct tool is chosen for the application. Tubenuts are designed to be used with the socket on the bottom (base plate side) or on the top (angle head side) and in Clockwise or Counter-clockwise (Reverse) rotation. Tools without symbols have the socket on the bottom and run clockwise.

STANLEY Assembly Technologies has designed Tubenut and Crowfoot outputs for over 50 years. Contact STANLEY Assembly Technologies if you would like one designed for your specific application.

The maximum tube size depends on the chosen HEX size.

# Inline Tubenut Lever Tools

**4.4 to 45 Nm**



	Rated Speed	Max Torque		"R" Nose Radius		"T" Thickness		"W" Width		"P" Length		"L" Length		Weight		Maximum Hex Size		Maximum Tube Size	
Model	RPM	Nm	lb ft	mm	in	mm	in	mm	in	mm	in	mm	in	kg	lb	mm	in	mm	in
E23LT264-22	480	22	16.2	21	0.84	18	0.70	54	2.13	77	3.03	502	19.8	2.0	4.4	24	15/16	18.2	0.718
E33LT252-22	955	22	16.2	13	0.52	14	0.54	42	1.66	56	2.20	525	20.7	2.3	5.0	13	1/2	9.3	0.365
E12LT252-25	245	25	18.4	13	0.52	14	0.54	42	1.66	56	2.20	431	17.0	1.7	3.7	13	1/2	9.3	0.365
E33LT252-25	955	25	18.4	13	0.52	14	0.54	42	1.66	56	2.20	525	20.7	2.4	5.3	13	1/2	9.3	0.365
E33LT326-25	420	25	18.4	13	0.52	14	0.56	42	1.66	77	3.05	561	22.1	2.4	5.3	13	1/2	8.1	0.32
E33LT264-44	545	44	32.5	21	0.84	18	0.70	54	2.13	77	3.03	548	21.6	2.1	4.7	24	15/16	18.2	0.718
E23LT304-45*	215	45	33.2	21	0.84	18	0.70	54	2.13	77	3.03	538	21.2	2.4	5.3	24	15/16	18.2	0.718

\* Reverse Rotation    ‡ Socket on Top

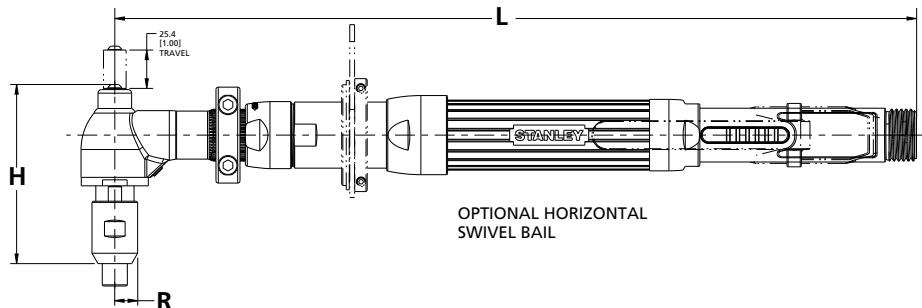
Check the symbols to ensure the correct tool is chosen for the application. Tubenuts are designed to be used with the socket on the bottom [base plate side] or on the top [angle head side] and in Clockwise or Counter-clockwise [Reverse] rotation. Tools without symbols have the socket on the bottom and run clockwise.

STANLEY Assembly Technologies has designed Tubenut and Crowfoot outputs for over 50 years. Contact STANLEY Assembly Technologies if you would like one designed for your specific application.

The maximum tube size depends on the chosen HEX size.

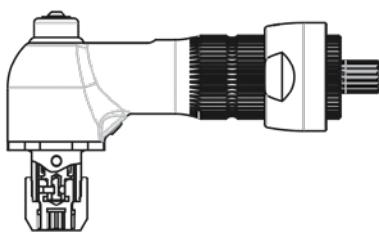
# Hold and Drive Lever Tools – 1" Travel

7 to 380 Nm



Model	Rated Speed	Max Torque		"R" Side to Center		"H" Head Height		"L" Length		Weight		Standard
	RPM	Nm	lb ft	mm	in	mm	in	mm	in	kg	lb	
E23LH18V1-35	345	35	26	18	0.69	109.7	4.32	464	18.3	2	4.5	1" Tang
E33LH18V1-46	750	46	34	18	0.69	109.7	4.32	464	18.3	2.2	4.9	
E34LH22V1-66	535	66	49	22	0.88	118.4	4.66	530	20.9	3.4	7.5	
E34LN22V1-66	535	66	49	22	0.88	98.6	3.88	530	20.9	3.4	7.5	
E44LH22V1-66	535	66	49	22	0.88	118.4	4.66	539	21.2	3.8	8.4	
E55LH26V1-95	880	95	70	26	1.02	117.3	4.62	632	24.9	5.4	11.9	
E55LN26V1-95	880	95	70	26	1.02	96.5	3.8	632	24.9	5.4	11.9	
E34LH22V1-110	300	110	81	22	0.88	118.4	4.66	361	14.2	3.4	7.5	
E34LN22V1-110	300	110	81	22	0.88	98.6	3.88	361	14.2	3.47	7.64	
E44LH22V1-110	480	110	81	22	0.88	118.4	4.66	539	21.2	3.8	8.4	
E44LN22V1-110	480	110	81	22	0.88	98.6	3.88	539	21.2	3.8	8.4	
E45LH26V1-143	330	143	105	26	1.02	117.3	4.62	582	22.9	4.8	10.6	
E45LN26V1-143	330	143	105	26	1.02	96.5	3.8	582	22.9	4.8	10.6	
E45LH26V1-191	265	191	141	26	1.02	117.3	4.62	582	22.9	4.8	10.6	
E45LN26V1-191	265	191	141	26	1.02	96.5	3.8	582	22.9	4.8	10.6	
E55LH26V1-210	385	210	155	26	1.02	117.3	4.62	632	24.9	5.4	11.9	
E55LN26V1-210	385	210	155	26	1.02	96.5	3.8	632	24.9	5.4	11.9	
E55LH32V1-320	250	320	236	32	1.25	154.2	6.07	639	25.1	6.2	13.6	
E55LH32V1-380	200	380	280	32	1.25	154.2	6.07	639	25.1	6.2	13.6	

A Tang holds the bolt while the nut is tightened



Sockets and Accessories begin on page 156

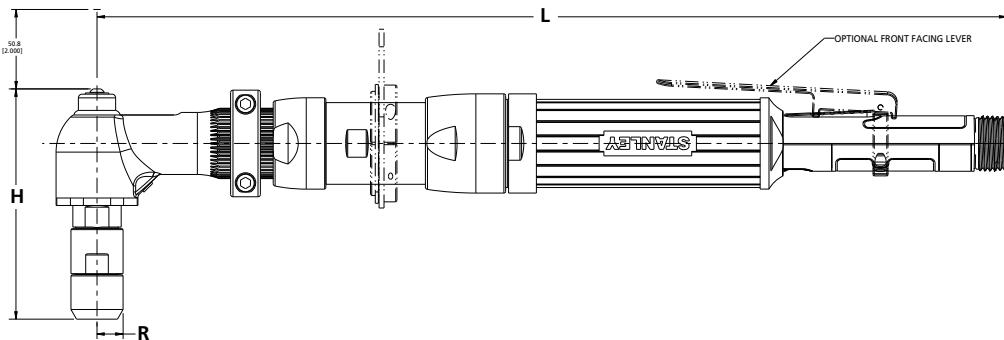
## Tool Options

H18 Output	Part No.
Socket Options	20D905700
1" Travel Bit Holder Output	20D124600
1" Travel Tang Holder Output	20D124602
2" Travel Bit Holder Output	20D124601
2" Travel Tang Holder Output	20D124603
H18 Tang Holder	Part No.
6mm x 8mm Rectangle	20D261700
5mm x 7.5mm Rectangle	20D261701
6mm x 10mm Rectangle	20D261702
6mm Hex	20D261703
H18 Bit Holder	Part No.
1/4" Hex	20D254200
5/16" Hex	20D253400
H22 Output	Part No.
Socket Options	20D911000
1" Travel Tang Holder Output	20D103211
1" Travel Bit Holder Output	20D103212
2" Travel Tang Holder Output	20D103213
2" Travel Bit Holder Output	20D103214
H22 Tang Holder	Part No.
Female Tang Holder Options	-F4287
H22 Bit Holder	Part No.
Bit Holder Options	20D911100
H22 Reaction Components	Part No.
Reaction Bar Assembly (Default)	20K100000
Mounting Flange Assembly	20K100300
Base Mount Bracket Assembly	20K100500
H26 Output	Part No.
Socket Options	-F4285
1" Travel Tang Holder Output	20D103601
1" Travel Bit Holder Output	20D103602
2" Travel Tang Holder Output	20D103603
2" Travel Bit Holder Output	20D103604
H26 Tang Holder	Part No.
Female Tang Holder Options	-H4948
H26 Bit Holder	Part No.
Bit Holder Options	-H4947
H26 Reaction Bar	Part No.
Reaction Bar Assembly	20K100200
Mounting Flange Assembly	20K100700
Base Mount Bracket Assembly	20K100600
Reaction Bar Assembly, HD	20K100202

See pages 170-181 for the Hold and Drive Configuration Guide

# Hold and Drive Lever Tools – 2" Travel

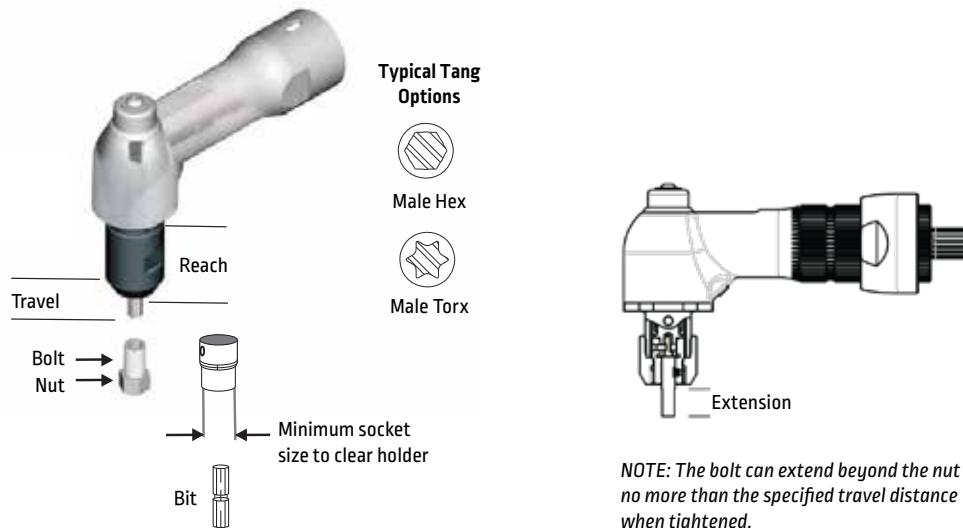
**7 to 380 Nm**



Model	Rated Speed	Max Torque		"R" Side to Center		"H" Head Height		"L" Length		Weight		Travel
		RPM	Nm	lb ft	mm	in	mm	in	mm	in	kg	lb
E23LH18V2-35	345	35	26	18	0.69	139.4	5.49	464	18.3	2	4.5	2" Tang
E33LH18V2-46	750	46	34	18	0.69	139.4	5.49	464	18.3	2.2	4.9	
E34LH22V2-66	535	66	49	22	0.88	148.1	5.83	530	20.9	3.4	7.5	
E44LH22V2-66	535	66	49	22	0.88	148.1	5.83	539	21.2	3.8	8.4	
E55LH26V2-95	880	95	70	26	1.02	148.3	5.84	632	24.9	5.4	11.9	
E34LH22AV2-110	300	110	81	22	0.88	148.1	5.83	361	14.2	3.4	7.5	
E44LH22AV2-110	480	110	81	22	0.88	148.1	5.83	539	21.2	3.8	8.4	
E45LH26V2-143	330	143	105	26	1.02	148.3	5.84	582	22.9	4.8	10.6	
E45LH26V2-191	265	191	141	26	1.02	148.3	5.84	582	22.9	4.8	10.6	
E55LH26V2-210	385	210	155	26	1.02	148.3	5.84	632	24.9	5.4	11.9	
E55LN26V2-210	385	210	155	26	1.02	137.2	5.4	632	24.9	5.4	11.9	
E55LH32V2-320	250	320	236	32	1.25	179.6	7.07	639	25.1	6.2	13.6	
E55LH32V2-380	200	380	280	32	1.25	179.6	7.07	639	25.1	6.2	13.6	

## Hold and Drive Options

A Bit holds the bolt while the nut is tightened



*H&D Lever Tool Options continued*

H32 Output	Part No.
Socket Options	-A5302
1" Travel Tang Holder Output	20D103701
1" Travel Bit Holder Output	20D103702
2" Travel Tang Holder Output	20D103703
2" Travel Bit Holder Output	20D103704
H32 Tang Holder	Part No.
Female Tang Holder Options	20D900601

H32 Bit Holder	Part No.
Bit Holder Options	20D900602
H32 Reaction Components	Part No.
Reaction Bar Assembly [Default]	20K100200
Mounting Flange Assembly	20K100700
Base Mount Bracket Assembly	20K100600
Reaction Bar Assembly, HD	20K100202

*See pages 170-181 for the Hold and Drive Configuration Guide*



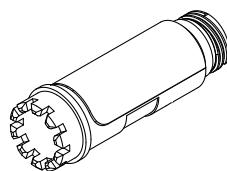
# E-Series Corded Fixtured Tools

The STANLEY Assembly Technologies E-Series fixtured tools have delivered reliable and consistent performance in the field.

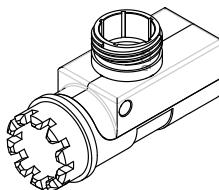
Built on the E-Series design, the fixtured tool handle has been designed to include an optional cable connection that is perpendicular to the tool instead of at the end of the tool handle. This allows the tool to fit into tighter spaces. The handle itself can be rotated every 36°. With straight or 90° cables, this adjustable fixtured tool handle offers optimal cable placement in the system.

## HANDLE OPTIONS AVAILABLE ARE:

*Standard Top*



*90° Top*



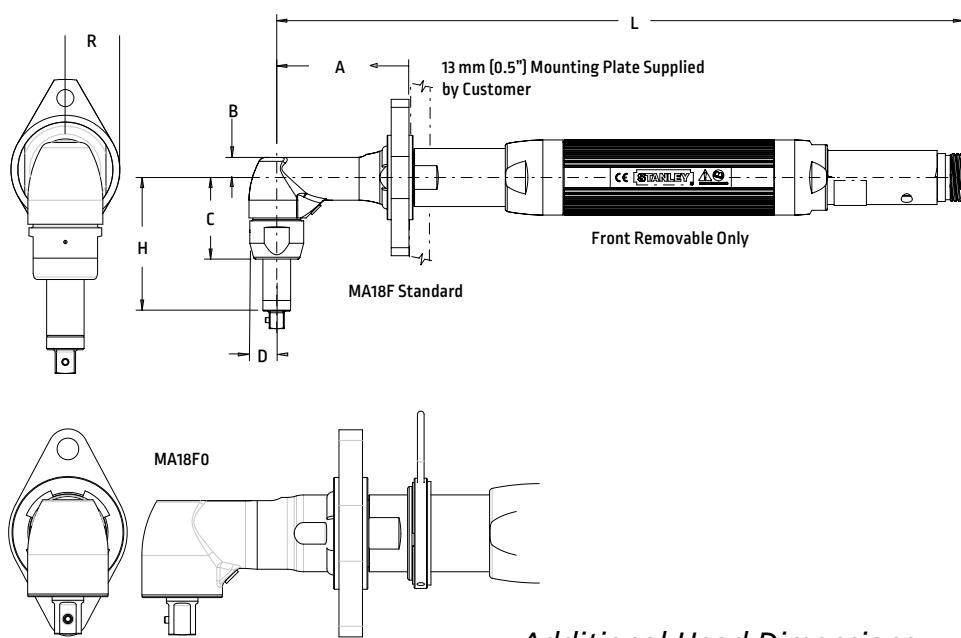
All fixtured tools require a reaction device, which can also be used as the mount to connect the tool to an arm or fixture.

## CHOOSE ONE OF THE THREE OPTION TYPES SHOWN BELOW WHEN ORDERING THE TOOL:

- Flange Mount Bracket
- Reaction Bar
  - » Steel reaction bars can be heated and bent or cut and welded to create a unique reaction device to fit specific applications
  - » Special sliding drive reaction bars can utilize a second fastener as the reaction absorber rather than the side of the product or a fixture or arm. This provides easy access to a reaction point without requiring a fixture or arm to absorb the reaction.
- Base mount bracket

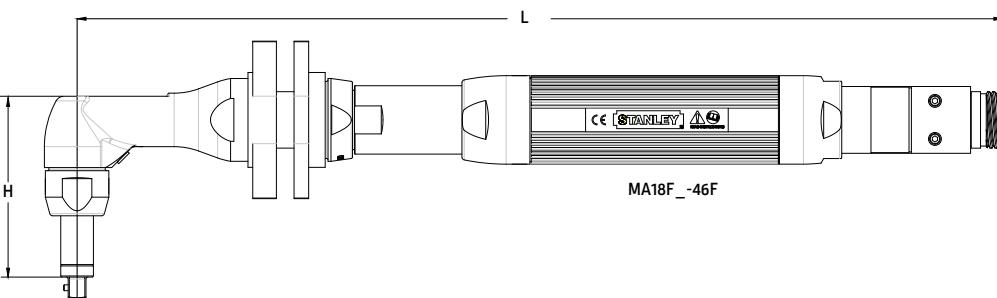
# Angle Retractable Fixtured Tools

## 4.6 to 46 Nm



*Additional Head Dimensions*

Head	Units	A	B	C	D
E33MA18	mm	83	13	51	18
	in	3.3	0.5	2	0.7
E33MA19	mm	86	16	103	19
	in	3.4	0.6	4	0.8
E34MA19	mm	74	16	103	19
E44MA19	in	2.9	0.6	4	0.8
E3MA22	in	82	16	130	22
E44MA22	mm	3.2	0.6	5.1	0.9



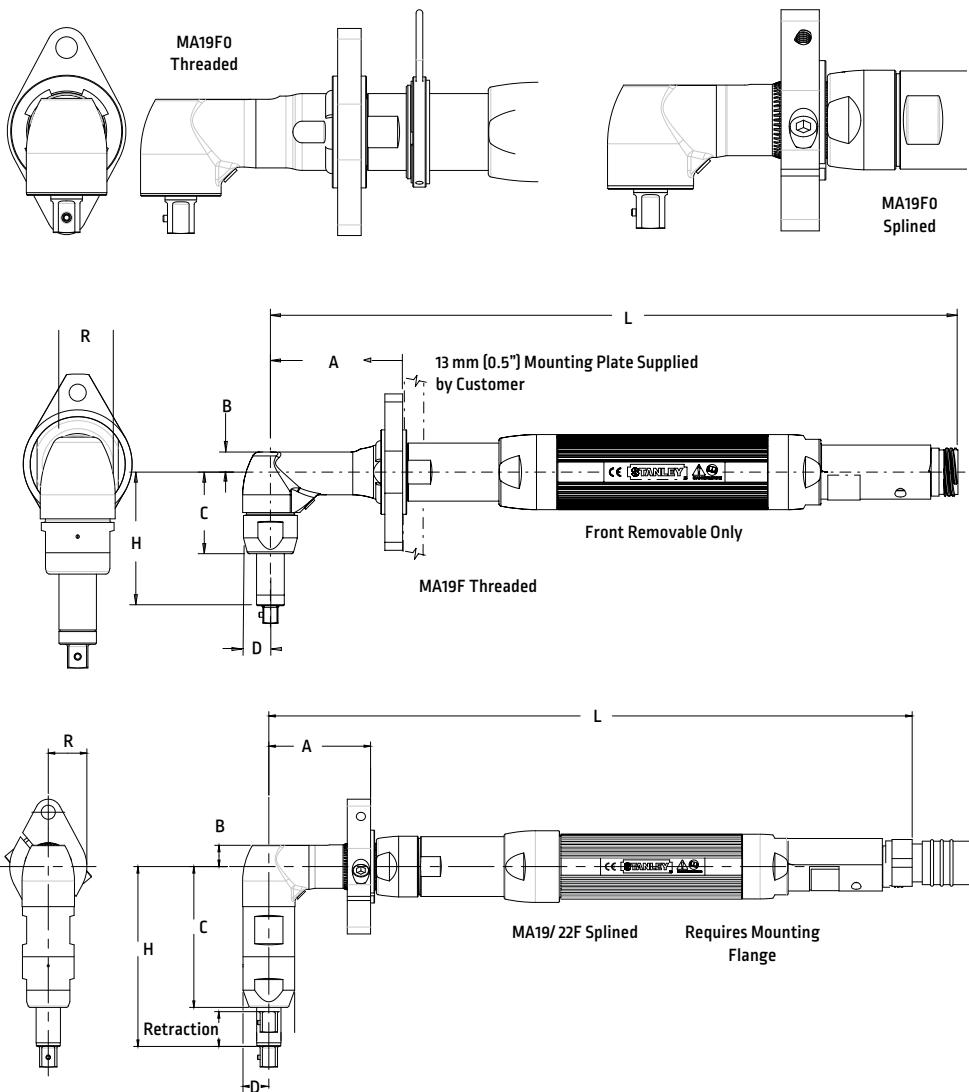
Model	Rated Speed	Max Torque		"R" Side to Center		"H" Head Height		"L" Length		Weight	Standard Output		
		RPM	Nm	lb ft	mm	in	mm	in	mm	in	Retraction	SD	
E23MA18FO-23	660	23	17	28	1.1	39	1.6	408	16	2.2	4.9	N/A	3/8" SD
E33MA18FO-46	750	46	40	28	1.1	39	1.6	429	16.9	2.1	4.7		
E23MA18F1-23	660	23	17	28	1.1	97	3.8	408	16	2.6	5.7	16mm [5/8"]	3/8" SD
E33MA18F1-46	750	46	40	28	1.1	97	3.8	433	17	2.5	5.6		
E33MA18F2-46	750	46	40	28	1.1	138	5.4	433	17	2.6	5.7	50mm [2"]	3/8" SD
E33MA18F1-46F	750	46	40	28	1.1	97	3.8	495	19.5	2.8	6.1	25mm [1"]	3/8" SD
E33MA18F2-46F	750	46	40	28	1.1	138	5.4	495	19.5	2.9	6.2	50mm [2"]	3/8" SD

## Tool Options

MA18FO Output	Part No.
3/8" Square Drive (SD)	20D104601
Flush Socket 16mm Max	20D104608
3/8" - 24 Thread Female	20D104607
3/8" SD Flange 90° Rotated	20D104618
MA18F1 Output Standard	Part No.
3/8" Square Drive (SD)	20D104602*
3/8" SD Flange 90° Rotated	20D104611*
1/2" Square Drive (SD)	20D104604†
*Pick one of these options for 20D104602, 20D104611	
3/8" Square Drive (SD)	M4265
3/8" SD X 1" Extension	20D118500
3/8" SD X 2" Extension	M4266
3/8" SD X 3" Extension	20D118501
3/8" SD X 4" Extension	20D118503
3/8" SD X 6" Extension	20D118502
3/8" SD X 7" Extension	20D118504
†Pick one of these options for 20D104604	
1/2" Square Drive (SD)	M4289
1/2" SD X 2" Extension	M4290
MA18F1 Output Supported	Part No.
3/8" SD X 2" Extension	20D104603
1/2" SD X 2" Extension	20D104605
MA18F2 Output	Part No.
3/8" Square Drive (SD)	20D104609†
3/8" SD Flange 90° Rotated	20D104622†
†Pick one of these options for 20D104609, 20D104622	
3/8" Square Drive (SD)	20D111000
3/8" SD X 1/2" Extension	20D111002
3/8" SD X 55 mm Extension	20D111006
3/8" SD X 1" Extension	20D111003
3/8" SD X 2" Extension	20D111005
3/8" SD X 3 1/2" Extension	20S114200
3/8" SD X 4" Extension	20D111008
3/8" SD X 130 mm Extension	20D111010
3/8" SD X 6" Extension	20D111004
3/8" SD X 7" Extension	20D111001
MA18F2 Spring	Part No.
Standard (5.3 lbs)	M4270
Medium Duty (7.1 lbs)	M4886
Heavy Duty (12.3 lbs)	20R201429
MA18F2 Spring	Part No.
Standard (7.4 lbs)	20R201420
Medium Duty (10.2 lbs)	20R201421
Heavy Duty (36.7 lbs)	20R201430
E2 Motor	Part No.
Standard	20M200000
Without Wave Washer	20MS200000
Fixture Handle	Part No.
Standard Top	20H202300
90° Top	20S105100
Socket Lock Pin 3/8" or 1/2" SD	Part No.
Standard	20D227800
Rounded (Ball Detent)	20D227801

# Angle Retractable Fixtured Tools

12 to 120 Nm



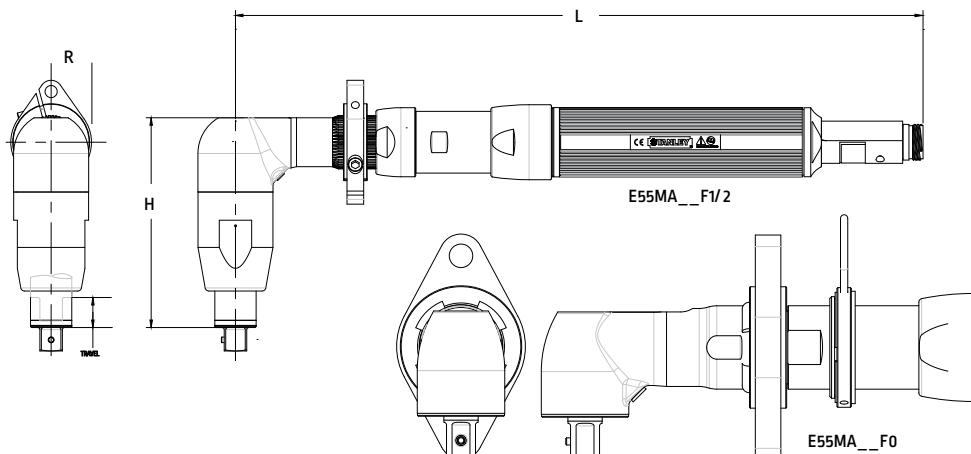
	Rated Speed	Max Torque		"R" Side to Center		"H" Head Height		"L" Length		Weight		Standard Output	
Model	RPM	Nm	lb ft	mm	in	mm	in	mm	in	kg	lb	Retraction	SD
E33MA19F0-60	570	60	44.3	28	1.1	48	1.9	435	17.1	2.4	5.2	N/A	1/2" SD
E34MA19F0-70	435	70	51.6	28	1.1	48	1.9	465	18.3	3	6.6		1/2" SD
E33MA19F1-60	570	60	44.3	28	1.1	147	5.8	440	17.3	2.7	6	25mm [1"]	1/2" SD
E44MA19F1-70	635	70	51.6	28	1.1	147	5.8	479	18.9	3.8	8		1/2" SD
E34MA19F1-70	435	70	51.6	28	1.1	147	5.8	470	18.5	3.4	7.6	50mm [2"]	1/2" SD
E44MA22F1-115	475	115	84.8	28	1.1	114	4.5	482	19	4.1	9		1/2" SD
E34MA22F1-115	295	115	84.8	28	1.1	114	4.5	473	18.6	3.7	8.2	50mm [2"]	1/2" SD
E44MA22F1-120	475	120	88.5	31	1.2	114	4.5	482	19	4.1	9		1/2" SD
E33MA19F2-60	570	60	44.3	28	1.1	194	7.6	440	17.3	2.8	6.1	50mm [2"]	1/2" SD
E44MA19F2-70	635	70	51.6	28	1.1	194	7.6	479	18.9	4.2	9.2		1/2" SD
E34MA19F2-70	435	70	51.6	28	1.1	194	7.6	470	18.5	3.5	7.8	50mm [2"]	1/2" SD
E34MA22F2-115	295	115	84.8	28	1.1	146	5.8	473	18.6	4.2	9.2		1/2" SD
E44MA22F2-120	475	120	88.5	31	1.2	146	5.8	482	19	4.2	9.3	50mm [2"]	1/2" SD

## Tool Options

<b>MA19F0 Threaded Output</b>	<b>Part No.</b>
1/2" Square Drive (SD)	20D100002†
<i>*Pick one of these options for 20D100002</i>	
1/2" SD Lock Pin	20D227800
1/2" SD Ball Detent	20D227801
<b>MA19F0 Splined Output</b>	<b>Part No.</b>
1/2" Square Drive	20D100100*
<i>*Pick one of these options for 20D100100</i>	
1/2" SD Lock Pin	20D227800
1/2" SD Ball Detent	20D227801
1/2" Square Drive Anti-Vibration	20D100101
1/2" Double-Ended, Right Hand	20D100107
Flush Socket 17mm Max	20D100106
<b>MA19F1 Output</b>	<b>Part No.</b>
1/2" Square Drive	20D115901
1/2" SD X 2" Extension	20D115901
<b>MA19F2 Output</b>	<b>Part No.</b>
1/2" Square Drive	20D112300
1/2" SD X 2" Extension	20D112301
<b>MA22F1 Output</b>	<b>Part No.</b>
1/2" SD	M4282
1/2" X 2" Extension	M4306
1/2" X 2-5/8" Extension	20D117700
1/2" X 8" Extension	M4466
<b>MA19F1 Spring</b>	<b>Part No.</b>
Standard (7.4 lbs)	A5313
Medium Duty (8.7 lbs)	20R201407
<b>MA19F2 Spring</b>	<b>Part No.</b>
Standard (7.4 lbs)	20R201420
Medium Duty (10.2 lbs)	20R201421
Heavy Duty (36.7 lbs)	20R201430
<b>MA22F1 Spring</b>	<b>Part No.</b>
Standard (3.1 lbs)	M4282
Medium Duty (5.8 lbs)	M4003
Heavy Duty (8.6 lbs)	M4800
<b>MA22F2 Spring</b>	<b>Part No.</b>
Standard (7.4 lbs)	20R201420
Medium Duty (10.2 lbs)	20R201421
Heavy Duty (36.7 lbs)	20R201430
<b>Mounting Flange</b>	<b>Part No.</b>
E34M	20K100300
E44M	20K100400
<b>Fixture Handle</b>	<b>Part No.</b>
Standard Top	20H202300
90° Top	20S105100

# Angle Retractable Fixtured Tools

20 to 401 Nm



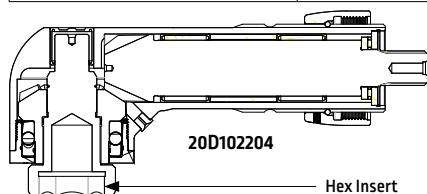
## Inserts for 20D102204 A32 Hex Insert Output

Description	Part No.
1-1/8" Hex Socket Insert	A5172
30mm Hex Flush Socket Insert	20D222100
30mm with 3/4" Extension Flush Socket Insert	20D228900
1-1/16" Hex Socket Insert	20DS203600

The maximum hex size for the A32 Flush Socket Output is 27 mm (1-1/16").

Use the Hex Insert Output with these Inserts for larger hex sizes.

This will add 16.3 mm (0.64") to the "H" dimension of the tool.

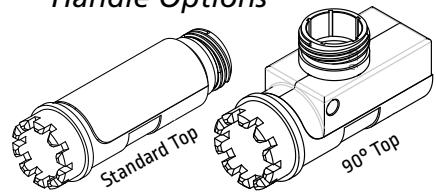


Model	Rated Speed	Max Torque		"R" Side to Center		"H" Head Height		"L" Length		Weight		Standard Output		
		RPM	Nm	lb ft	mm	in	mm	in	mm	in	kg	lb	Retraction	SD
E55MA26F0-221	385	221	163	34	1.34		61	2.38	576	22.7	5.9	13	N/A	3/4" SD
E55MA32F0-337	255	337	248	34	1.34		72.5	2.85	582	22.9	7.5	16.3		
E55MA32F0-401	205	401	295	34	1.34		72.5	2.85	582	22.9	7.5	16.3		
E55MA26F1-100	880	100	74	34	1.34		166	6.5	576	22.7	6.3	13.8	25mm [1"]	1/2" SD
E45MA26F1-150	330	150	110	34	1.34		166	6.5	525	20.7	5.7	12.5		
E55MA26F1-167	510	167	123	34	1.34		166	6.5	576	22.7	6.3	13.8		
E45MA26F1-201	265	201	148	34	1.34		166	6.5	525	20.7	5.7	12.5		
E55MA26F1-221	385	221	163	34	1.34		166	6.5	576	22.7	6.3	13.8		
E55MA32F1-337	255	337	248	34	1.34		178	7	582	22.9	7.7	16.8		
E55MA32F1-401	205	401	295	34	1.34		178	7	582	22.9	7.7	16.8	50mm [2"]	3/4" SD
E55MA26F2-100	880	100	74	34	1.34		166	6.5	576	22.7	6.4	14.1		
E45MA26F2-150	330	150	110	34	1.34		146	5.8	525	20.7	5.8	12.8		
E45MA26F2-201	265	201	148	34	1.34		146	5.8	576	22.7	6.4	14.1		
E55MA26F2-221	385	221	163	34	1.34		166	6.6	576	22.7	6.4	14.1	90° Top	1/2" SD
E55MA32F2-337	255	337	248	34	1.34		268	10.6	582	22.9	7.8	17.1		

## Tool Options

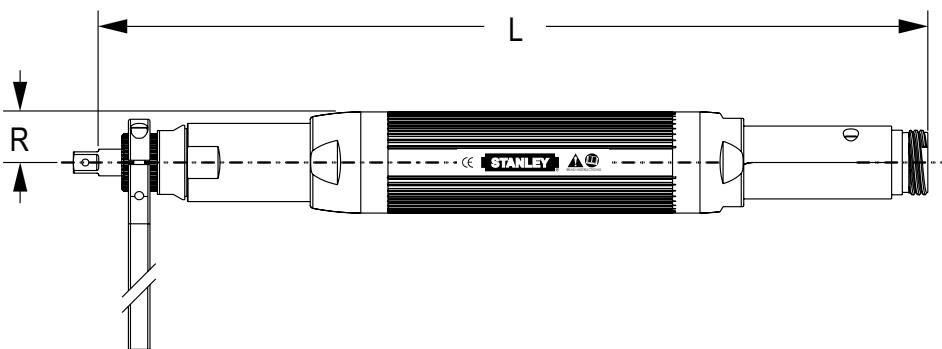
MA26F0 Output >100 Nm	Part No.
5/8" Square Drive (SD)	20D100400
3/4" SD	20D100410
Flush Socket	20D100409
MA32F0 Output	Part No.
3/4" SD	20D102200
3/4" SD Ball Detent	20D104300
Hex Insert #	20D102204
Flush Socket 23mm Min	20D102201
MA26F1 Output	Part No.
5/8" SD	20D100402
1/2" SD 100 [NM Max]	20D100413
3/4" SD	20D100407
MA32F1 Output	Part No.
5/8" SD	M4600
5/8" X 4" Extension	M4610
3/4" SD	M4677
3/4" X 2-1/2" Extension	20D114800
3/4" X 4" Extension	M4740
MA26F2 Output	Part No.
5/8" SD	20D100405
1/2" SD 100 [NM Max]	20D100406
3/4" SD	20D100408
MA26F1 Spring	Part No.
Standard (5 lbs)	20R201414
Heavy Duty (11.5 lbs)	20R201417
MA26F2 Spring	Part No.
Standard (6.2 lbs)	20R201415
Heavy Duty (7.9 lbs)	20R201416
MA32F1 Spring	Part No.
Standard (9.7 lbs)	M4606
Heavy Duty (15 lbs)	M4331
MA32F2 Spring	Part No.
Standard (17.2 lbs)	20R201434
Heavy Duty (27 lbs)	20R201435
Mounting Flange	Part No.
MA26F / MA32F	20K100700
Fixture Handle	Part No.
Standard Top	20H202300
90° Top	20S105100

## Handle Options



# Inline Fixtured Tools

## 1.6 to 40 Nm

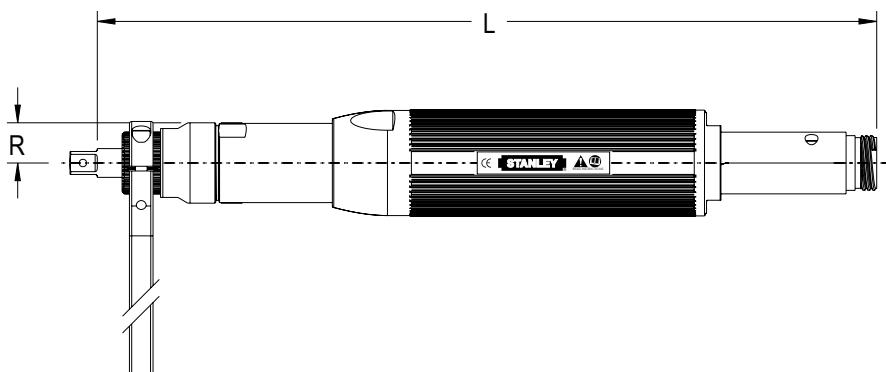


	Rated Speed	Max Torque		"R" Side to Center		"L" Length		Weight		Output	
Model	RPM	Nm	lb ft	mm	in	mm	in	kg	lb	Standard	Options
E23MB-8	2245	8	6	24	0.93	344	13.6	1.4	3.1	3/8"	1/4" QC
E23MB-16	992	16	11.8	24	0.93	344	13.6	1.4	3.1		
E23MB-21	785	21	15.5	24	0.93	359	14.1	1.6	3.5		N/A
E23MB-31	540	31	23	24	0.93	359	14.1	1.6	3.5		
E33MB-32	1125	32	24	24	0.93	385	15.1	1.7	3.8	3/8"	N/A
E33MB-40	890	40	30	24	0.93	385	15.1	1.7	3.8		

## Tool Options - B

Output Options	Part No.
3/8" 24-Thread	20D100701
3/8" Square Drive	20D100600
3/8" Square Drive x 8" Extension	20D100702
1/4" Quick Change [17 Nm max]	20D101100
Lock Nut Options	Part No.
Lock Nut	F3697
Pinch Point	20D243501
Extension Support	20D243502
Reaction Bar	Part No.
Reaction Bar, Aluminum [E23 only]	F3698
Reaction Bar, Steel	20K100100
Base Mount Bracket	A8606
Mounting Flange-B	20K101000
3/8" SD Socket Lock Pin	Part No.
Standard	20D227800
Rounded (Ball Detent)	20D227801
Suspension Bails	Part No.
Wire Bail	A3061
Swivel	20K101400
Standard	B3432

## 12 to 1005 Nm

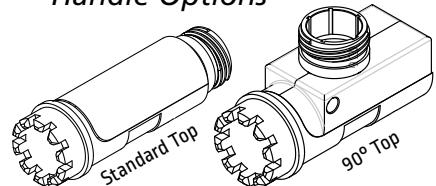


	Rated Speed	Max Torque		"R" Side to Center		"L" Length		Weight		Output	
Model	RPM	Nm	lb ft	mm	in	mm	in	kg	lb	Standard	
E34MB1-60	605	60	44	32	1.25	421	16.6	2.6	5.7	1/2" SD	1/2" SD
E44MB1-66	885	66	49	32	1.25	430	16.9	2.9	6.4		
E34MB1-74	490	74	55	32	1.25	421	16.6	2.6	5.7		
E44MB1-100	590	100	74	32	1.25	430	16.9	2.9	6.4		
E34MB1-100	365	100	74	32	1.25	421	16.6	2.6	5.7		

## Tool Options - B1

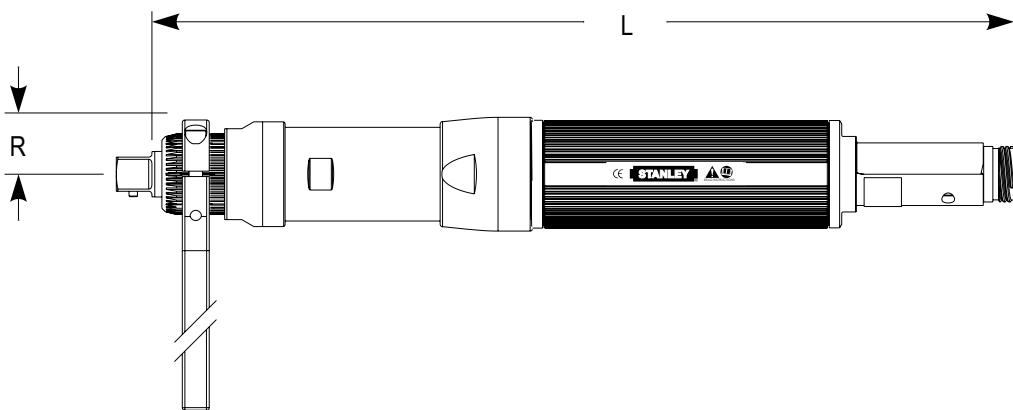
Output Options	Part No.
1/2" Square Drive x 6" Extension	20D101003
1/2" SD Socket Lock Pin	Part No.
Standard	K4024
Rounded (Ball Detent)	K4050
Reaction Components	Part No.
Reaction Bar	20K100000
Mounting Flange	20K100300
Base Mount Bracket	20K100500
Suspension Bail	Part No.
Wire Bail	A3061
Swivel Bail	20K200000

## Handle Options



# Inline Fixtured Tools

## 25 to 250 Nm



Model	Rated Speed	Max Torque		"R" Side to Center		"L" Length		Weight		Output
		RPM	Nm	lb ft	mm	in	mm	in	kg	lb
E55MB2-127	720	127	94	34	1.35	503	19.8	4.7	10.3	3/4" SD
E45MB2-160	345	160	118	34	1.35	475	18.7	4.4	9.6	
E55MB2-200	475	200	147	34	1.35	503	19.8	4.7	10.3	
E55MB2-250	380	250	184	34	1.35	503	19.8	4.7	10.3	
E45MB2-250	220	250	184	34	1.35	475	18.7	4.4	9.6	

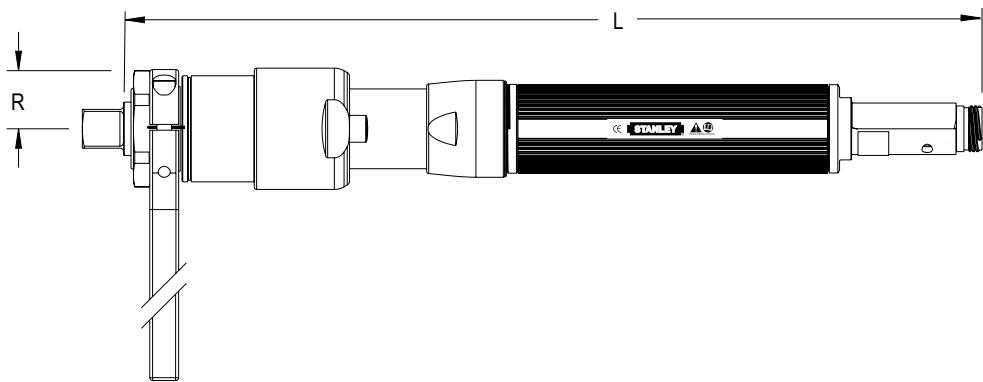
## Tool Options - B2

Output Options	Part No.
5/8" Square Drive	20D102502
3/4" Square Drive x 8" Extension	20D102603
3/4" Square Drive x 12" Extension	20D102604
Socket Lock Pin	Part No.
Standard 3/4"	A5075
Standard 5/8"	A4026
Rounded (Ball Detent)	20R202300
Reaction Components	Part No.
Reaction Bar	20K100200
Reaction Bar - Heavy Duty	20K100202
Mounting Flange	20K100700
Base Mount Bracket	20K100600
Suspension Bail	Part No.
Wire Bail	A3061
Swivel Bail	20K200100



*Sockets and Accessories  
begin on page 156*

## 64 to 2005 Nm



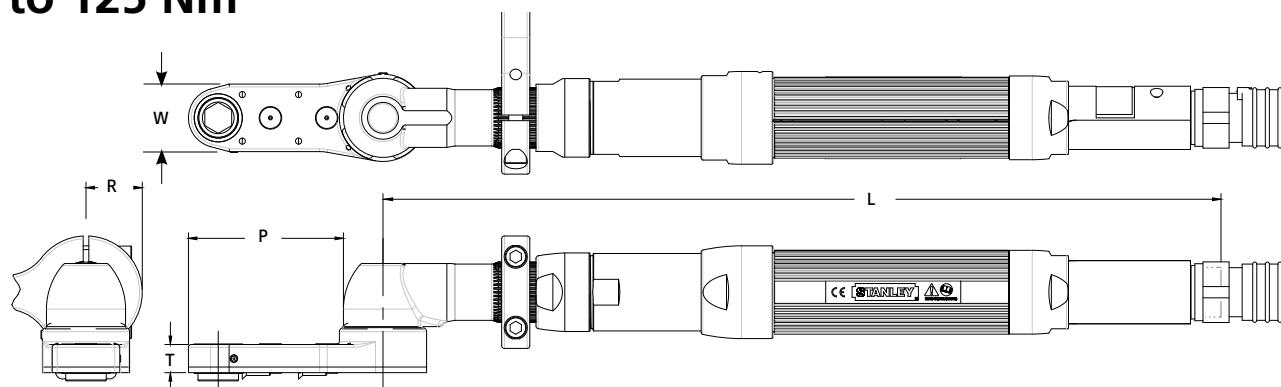
Model	Rated Speed	Max Torque		"R" Side to Center		"L" Length		Weight		Output
		RPM	Nm	lb ft	mm	in	mm	in	kg	lb
E55MB3-322	230	322	237	32	1.25	573	22.5	5.3	11.5	3/4" SD
E55MB4-471	185	471	347	44	1.7	621	24.4	7.4	16.3	
E55MB4-623	140	623	459	44	1.7	621	24.4	7.4	16.3	
E55MB5-1023	75	1023	754	48	1.9	651	25.6	9.6	21.1	
E55MB5-1637	45	1637	1207	48	1.9	683	26.9	12	26.4	
E55MB5-2005	35	2005	1479	48	1.9	683	26.9	12	26.4	1" SD

## Tool Options – B3 / 4 / 5

Output Options	Part No.
B3 3/4" SD with Ball Retainer	20D104502
B4 1" SD with 1 1/2" Extension	20D208302
Lock Nut Options	Part No.
Lock Nut - B3	B4484
Reaction Components	Part No.
Reaction Bar - B3	B4487
Reaction Bar - B4, B5 < 1500 Nm	F4192
Reaction Bar - B5 > 1500 Nm	J4228
Base Mount Bracket - B3	H1140
Mounting Flange - B3	M4329
Mounting Flange - B4	20K101100
Mounting Flange - B5	20K100900
Socket Lock Pin	Part No.
Standard - B3	A5075
Rounded (Ball Detent) - 3/4", 1" SD	20R202300
Suspension Bails	Part No.
Wire Bail	A3061
Swivel	20K200100

# Angle Crowfoot Fixtured Tools

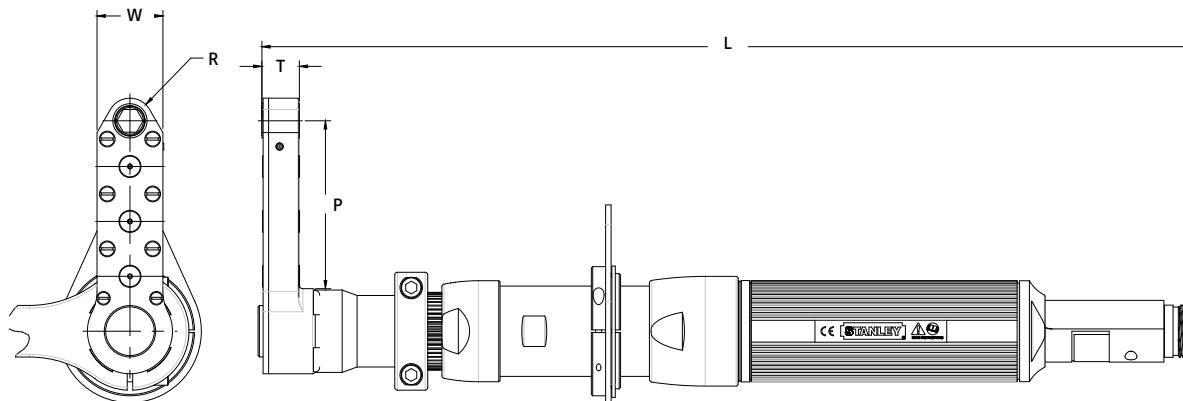
3.2 to 125 Nm



	Rated Speed	Max Torque		"R" Nose Radius		"T" Thickness		"W" Width		"P" Length		"L" Length		Weight		Maximum Hex Size	
Model	RPM	Nm	lb ft	mm	in	mm	in	mm	in	mm	in	mm	in	kg	lb	mm	in
E23MC8-16	660	16	11.8	13	0.50	16	0.64	25	1	45	1.76	393	15.5	2.4	5.3	13	1/2"
E34MC29-45	435	45	33.2	21	0.81	14	0.55	38	1.5	43	1.70	465	18.3	4.8	10.6	19	3/4"
E34MC203-49	490	49	36.1	21	0.81	17	0.66	38	1.5	71	2.78	573	22.6	4.8	10.6	19	3/4"
E34MC515-60	310	60	44.3	12	0.48	25	0.99	38	1.5	125	4.94	573	22.6	4.8	10.6	12	7/16"
E34MC226-73	330	73	53.8	17	0.66	17	0.66	38	1.5	68	2.69	473	18.6	4.8	10.6	16	5/8"
E45MC360-80	445	80	59	13	0.52	28	1.12	49	1.94	34	1.32	531	20.9	4.8	10.6	13	1/2"
E45MC365-80	445	80	59	13	0.52	28	1.12	38	1.5	97	3.82	531	20.9	4.8	10.6	13	1/2"
E44MC31-102	355	102	75.2	21	0.81	28	1.10	38	1.5	39	1.53	482	19	4.8	10.6	19	3/4"
E45MC573-125	265	125	92.2	20	0.81	20	0.80	73	2.89	18	0.71	611	24	4.8	10.6	18	11/16"

# Vertical Crowfoot Fixtured Tools

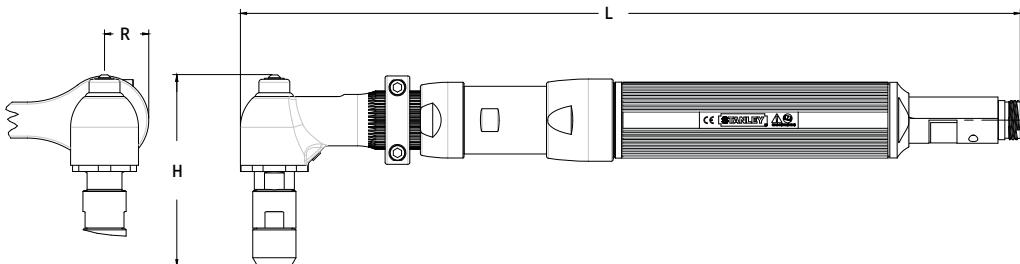
12.4 to 77 Nm



	Rated Speed	Max Torque		"R" Nose Radius		"T" Thickness		"W" Width		"P" Length		"L" Length		Weight		Maximum Hex Size	
Model	RPM	Nm	lb ft	mm	in	mm	in	mm	in	mm	in	mm	in	kg	lb	mm	in
E45MC298-62	500	62	45.7	13	0.52	21	0.82	38	1.5	97	3.82	539	21.2	5.4	11.9	13	1/2"
E45MC225-77	515	77	56.8	29	1.16	31	1.22	59	2.31	58	2.27	534	21	5.4	11.9	27	1-1/8"

# Hold and Drive Fixtured Tools

22 to 380 Nm



	Rated Speed	Max Torque		"R" Side to Center		"H" Head Height		"L" Length		Weight		Travel
Model	RPM	Nm	lb ft	mm	in	mm	in	mm	in	kg	lb	Standard
E44MH22V1-110	300	110	81	22	0.88	118.4	4.66	361	14.2	3.4	7.5	1"
E45MH26V2-143	330	143	105	26	1.02	148.3	5.84	582	22.9	4.8	10.6	
E55MH26V2-210	385	210	155	26	1.02	148.3	5.84	632	24.9	5.4	11.9	
E55MH32V2-320	250	320	236	32	1.25	179.6	7.07	639	25.1	6.2	13.6	
E55MH32V2-380	200	380	280	32	1.25	179.6	7.07	639	25.1	6.2	13.6	

See pages 170-181 for the Hold and Drive Configuration Guide

## Hold & Drive Options

A Tang holds the bolt while the nut is tightened

### Typical Tang Options



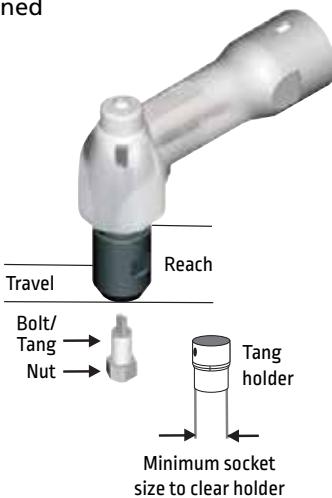
Female Torx



Female Hex



Rectangular



NOTE: The bolt can extend beyond the nut no more than the specified travel distance when tightened.

A Bit holds the bolt while the nut is tightened

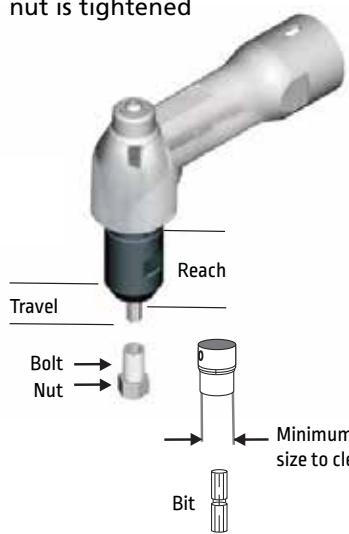
### Typical Tang Options



Male Hex



Male Torx



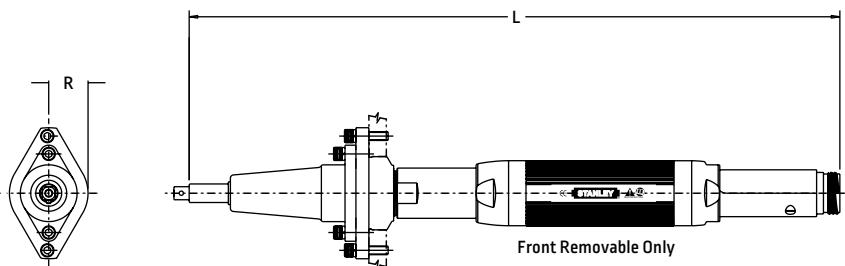
### Typical Bit Options

## Tool Options

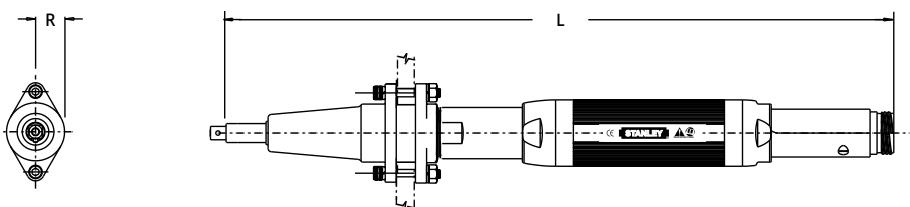
H22 Output	Part No.
Socket Options	20D911000
1" Travel Tang Holder Output	20D103211
1" Travel Bit Holder Output	20D103212
2" Travel Tang Holder Output	20D103213
2" Travel Bit Holder Output	20D103214
H22 Tang Holder	Part No.
Female Tang Holder Options	-F4287
H22 Bit Holder	Part No.
Bit Holder Options	20D911100
H22 Reaction Bar	Part No.
Reaction Bar Assembly (Default)	20K100000
Mounting Flange Assembly	20K100300
Base Mount Bracket Assembly	20K100500
H26 Output	Part No.
Socket Options	-F4285
1" Travel Tang Holder Output	20D103601
1" Travel Bit Holder Output	20D103602
2" Travel Tang Holder Output	20D103603
2" Travel Bit Holder Output	20D103604
H26 Tang Holder	Part No.
Female Tang Holder Options	-H4948
H26 Bit Holder	Part No.
Bit Holder Options	-H4947
H26 Reaction Bar	Part No.
Reaction Bar Assembly	20K100200
Mounting Flange Assembly	20K100700
Base Mount Bracket Assembly	20K100600
Reaction Bar Assembly, HD	20K100202
H32 Output	Part No.
Socket Options	-A5302
2" Travel Tang Holder Output	20D103703
2" Travel Bit Holder Output	20D103704
H32 Tang Holder	Part No.
Female Tang Holder Options	20D900601
H32 Bit Holder	Part No.
Bit Holder Options	20D900602
H32 Reaction Bar	Part No.
Reaction Bar Assembly	20K100200
Mounting Flange Assembly	20K100700
Base Mount Bracket Assembly	20K100600
Reaction Bar Assembly, HD	20K100202

# Inline Retractable Fixtured Tools

1.6 to 40 Nm



Model	Rated Speed	Max Torque		"R" Side to Center		"L" Length		Weight		Standard Output		
		RPM	Nm	lb ft	mm	in	mm	in	kg	lb	Retraction	SD
E23MBF1-8	2245	8	6	29	1.13		457	18	2.1	4.6	19 mm [3/4"]	3/8"
E23MBF1-16	990	16	11.8	29	1.13		470	18.5	2.3	5		
E23MBF1-21	785	21	15.5	29	1.13		470	18.5	2.3	5		
E23MBF1-31	540	31	23	29	1.13		470	18.5	2.3	5		
E33MBF1-32	1125	32	24	29	1.13		495	19.5	2.4	5.3		
E33MBF1-40	890	40	30	29	1.13		495	19.5	2.4	5.3		
E23MBF2-8	2245	8	6	29	1.13		547	21.5	2.2	4.8	50 mm [2"]	3/8"
E23MBF2-21	785	21	15.5	29	1.13		561	22.1	2.4	5.3		
E23MBF2-31	540	31	23	29	1.13		561	22.1	2.4	5.3		
E33MBF2-32	1125	32	24	29	1.13		587	23.1	2.5	5.6		
E33MBF2-40	890	40	30	29	1.13		587	23.1	2.5	5.6		

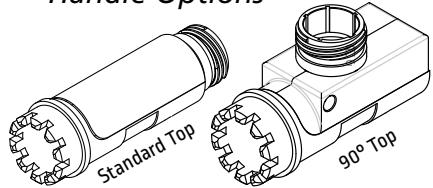


Model	Rated Speed	Max Torque		"R" Side to Center		"L" Length		Weight		Standard Output		
		RPM	Nm	lb ft	mm	in	mm	in	kg	lb	Retraction	SD
E23MBF1-8F	2245	8	6	23.6	0.93		457	18	2.1	4.6	19 mm [3/4"]	3/8"
E23MBF1-16F	990	16	11.8	23.6	0.93		470	18.5	2.3	5		
E23MBF1-21F	785	21	15.5	23.6	0.93		470	18.5	2.3	5		
E23MBF1-31F	540	31	23	23.6	0.93		470	18.5	2.3	5		
E33MBF1-32F	1125	32	24	23.6	0.93		495	19.5	2.4	5.3		
E33MBF1-40F	890	40	30	23.6	0.93		495	19.5	2.4	5.3		
E23MBF2-8F	2245	8	6	23.6	0.93		547	21.5	2.2	4.8	50 mm [2"]	3/8"
E23MBF2-21F	785	21	15.5	23.6	0.93		561	22.1	2.4	5.3		
E23MBF2-31F	540	31	23	23.6	0.93		561	22.1	2.4	5.3		
E33MBF2-32F	1125	32	24	23.6	0.93		587	23.1	2.5	5.6		
E33MBF2-40F	890	40	30	23.6	0.93		587	23.1	2.5	5.6		

## Tool Options

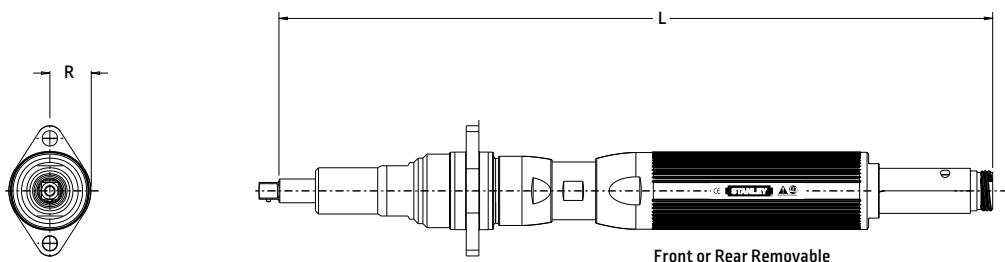
MBF1Output	Part No.
3/8" Square Drive (SD)	M3050
3/8" SD X15/32" Extension	S3326
3/8" SD X 1.478" Extension	M3243
3/8" SD X 2" Extension	M3090
3/8" SD X 2 3/8" Extension	S3363
3/8" SD X 3" Extension	M3239
3/8" SD X 4" Extension	M3223
3/8" SD X 4 1/16" Extension	S3486
3/8" SD X 6" Extension	M3224
3/8" SD X 7 3/8" Extension	S3626
3/8" SD X 8" Extension	M3216
3/8" SD X 8" Extension, Thin	20S104600
3/8" - 24 Threaded	M3118
3/8" - 24 Threaded X 3/4" Long	M3227
MBF2 Output	Part No.
3/8" SD	M3282
3/8" SD X 1" Extension	20D209805
3/8" SD X 2" Extension	20D209807
3/8" SD X 3" Extension	20D209801
3/8" SD X 6" Extension	M3283
MBF1Spring	Part No.
Standard	M4096
Medium Duty	M4126
Heavy Duty	M3184
Extra Heavy Duty	20R201428
MBF2 Spring	Part No.
Standard	M3289
Heavy Duty	M3306
Extra Heavy Duty	20D126900
Fixtured Handle	Part No.
Standard Top	20H202300
90° Top	20S105100
E2 Motor	Part No.
Standard	20M200000
Without Wave Washer	20MS200000
G3 Gear Case	Part No.
2-Handed Anti-Tiedown	20G100012
3/8" Socket Retainer	Part No.
Lock Pin	A4040
Ball Pin	A4232
Lock Pin Plug	A4041

## Handle Options



# Inline Retractable Fixtured Tools

12 to 100 Nm

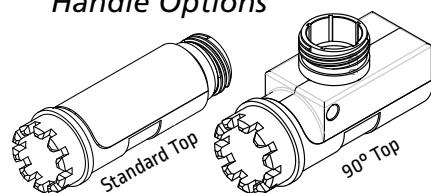


Model	Rated Speed	Max Torque		"R" Side to Center		"L" Length		Weight		Standard Output	
		RPM	Nm	lb ft	mm	in	mm	in	kg	lb	Retraction
E34MB1F1-60	605	60	44	28	1.1	531	20.9	3.5	7.7	25 mm [1"]	1/2"
E44MB1F1-66	885	66	49	31	1.2	540	21.3	4	8.9		
E34MB1F1-74	490	74	55	28	1.1	531	20.9	3.5	7.7		
E34MB1F1-100	365	100	74	28	1.1	531	20.9	3.5	7.7		
E44MB1F1-100	590	100	74	31	1.2	540	21.3	4	8.9		
E34MB1F2-60	605	60	44	28	1.1	616	24.3	3.5	7.7	50 mm [2"]	1/2"
E44MB1F2-66	885	66	49	31	1.2	625	24.6	4	8.9		
E34MB1F2-74	490	74	55	28	1.1	616	24.3	3.5	7.7		
E34MB1F2-100	365	100	74	28	1.1	616	24.3	3.5	7.7		
E44MB1F2-100	590	100	74	31	1.2	625	24.6	4	8.9		

## Tool Options

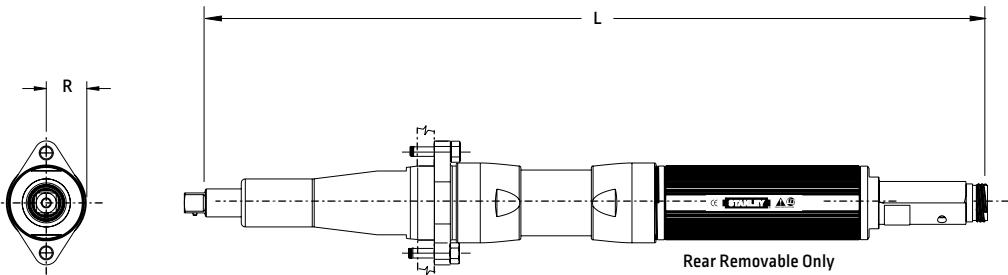
MB1F1 Output	Part No.
1/2" Square Drive (SD)	20D101600
1/2" SD with Ball Retainer	20D101602
1/2" SD X 2" Extension	20D101610
1/2" SD X 3" Extension	20D101603
1/2" SD X 4" Extension	20D101608
1/2" SD X 5" Extension	20D101604
1/2" SD X 6" Extension	20D101606
1/2" SD X 7.5/16" Extension	20D101605
1/2" SD X 8" Extension	20D101609
1/2" SD X 11" Extension	20D101607
MB1F2 Output	Part No.
3/8" SD	M6128
3/8" SD X 1" Extension	20DS102100
3/8" SD X 3" Extension	A6125
1/2" SD	M4815
1/2" SD X 2" Extension	20D122000
1/2" SD X 3" Extension	M6011
1/2" SD X 5" Extension	M4888
MB1F1 Spring	Part No.
Standard	B4093
Heavy Duty	20R201401
MB1F2 Spring	Part No.
Standard	M4821
Heavy Duty	20R201402
Extra Heavy Duty	20D126700
Fixtured Handle	Part No.
Standard Top	20H202300
90° Top	20S105100
3/8" Socket Retainer	Part No.
Lock Pin	A4040
Ball Pin	A4232
Lock Pin Plug	A4041
1/2" Socket Retainer	Part No.
Lock Pin	K4024
Ball Pin	K4050
Lock Pin Plug	K4025

## Handle Options



# Inline Retractable Fixtured Tools

25.4 to 200 Nm

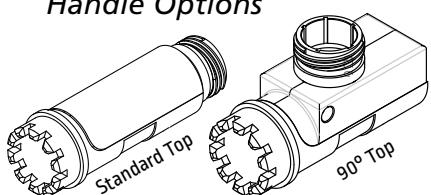


Model	Rated Speed	Max Torque		"R" Side to Center		"L" Length		Weight		Standard Output	
		RPM	Nm	lb ft	mm	in	mm	in	kg	lb	Retraction
E55MB2F1-127	715	127	94	32	1.25	649	25.6	6.2	13.7	25mm [1"]	5/8"
E45MB2F1-160	345	160	118	32	1.25	621	24.5	5.6	12.4		
E55MB2F1-200	475	200	147	32	1.25	649	25.6	6.2	13.7	50mm [2"]	5/8"
E55MB2F2-127	715	127	94	32	1.25	680	27.6	6.2	13.7		
E45MB2F2-160	345	160	118	32	1.25	672	26.5	5.6	12.4	50mm [2"]	5/8"
E55MB2F2-200	475	200	147	32	1.25	680	27.6	6.2	13.7		

## Tool Options

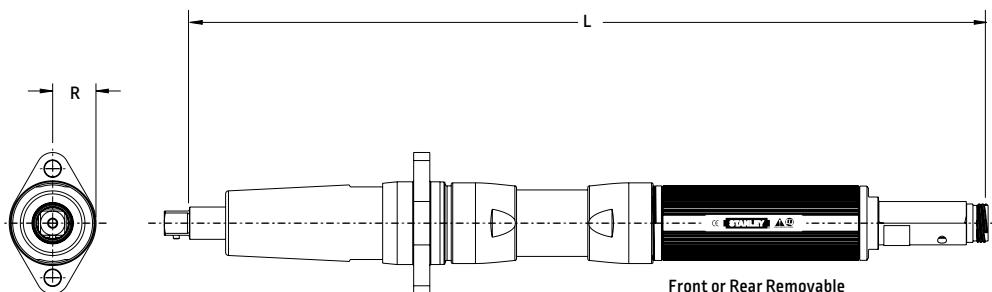
MB2F1Output	Part No.
5/8" Square Drive [SD]	20D102901
5/8" SD X 2" Extension	20D102912
5/8" SD X 6" Extension	20D102913
MB2F2 Output	Part No.
5/8" Square Drive [SD]	20D102902
5/8" SD with Ball Retainer	20D102904
5/8" SD X 11/8" Extension	20D102906
5/8" SD X 11/8" Extension w/ Ball	20D102907
5/8" SD X 4" Extension	20D102903
5/8" SD X 4" Extension w/ Ball	20D102905
5/8" SD X 13 1/8" Extension	20D102908
5/8" SD X 13 1/8" Extension w/ Ball	20D102909
MB2F1Spring	Part No.
Standard	20R201407
Heavy Duty	20D201408
MB2F2 Spring	Part No.
Light Duty	20R201423
Standard	20R201409
Heavy Duty	20R201410
Fixtured Handle	Part No.
Standard Top	20H202300
90° Top	20S105100
5/8" Socket Retainer	Part No.
Lock Pin	K4026
Ball Pin	20D227801
Lock Pin Plug	K4025
Compression Spring	20R201413
Pin Stop	L3401

## Handle Options



# Inline Retractable Fixtured Tools

40 to 322 Nm

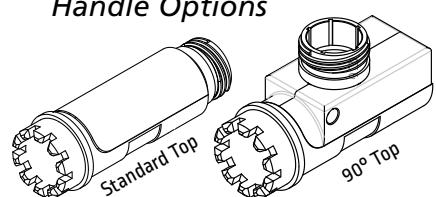


Model	Rated Speed	Max Torque		"R" Side to Center		"L" Length		Weight		Standard Output	
		RPM	Nm	lb ft	mm	in	mm	in	kg	lb	Retraction
E55MB3F1-200	475	200	147	34	1.34	656	25.8	7.7	17	25 mm [1"]	3/4"
E55MB3F1-250	380	250	184	34	1.34	656	25.8	7.7	17		
E45MB3F1-250	220	250	184	34	1.34	628	24.7	7.1	15.6		
E55MB3F1-322	230	322	237	34	1.34	734	28.9	11	24.4		
E55MB3F2-200	380	200	147	34	1.34	735	29	7.9	17.5	50 mm [2"]	3/4"
E55MB3F2-250	380	250	184	34	1.34	735	29	7.9	17.5		
E45MB3F2-250	220	250	184	34	1.34	707	27.9	7.3	16		
E55MB3F2-322	230	322	237	34	1.34	813	32	11.3	25		
E55MB3F3-322	230	322	237	34	1.34	889	35	11.8	26	75 mm [3"]	3/4"

## Tool Options

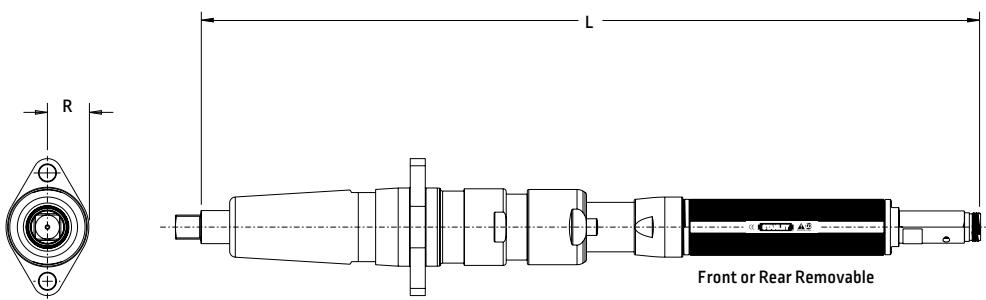
MB3F1 Output	Part No.
3/4" Square Drive [SD]	20D102101
3/4" SD with Ball Retainer	20D102306
1/2" SD X 1.5" Extension	20D102106
MB3F2 Output	Part No.
3/4" Square Drive [SD]	20D102102
1/2" SD X 6" Extension	20D102105
MB3F1 Spring	Part No.
Standard	20R201403
Heavy Duty	20R201404
MB3F2 Spring	Part No.
Standard	20R201405
Heavy Duty	20R201406
Fixtured Handle	Part No.
Standard Top	20H202300
90° Top	20S105100
3/4" Socket Retainer	Part No.
Lock Pin	A5075
Ball Pin	20R202300
Lock Pin Plug	K4025
Reaction Components	Part No.
Mounting Flange - MB3F	20D205600

## Handle Options



# Inline Retractable Fixtured Tools

94 to 2005 Nm

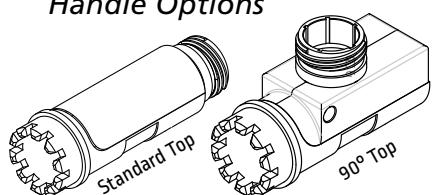


	Rated Speed	Max Torque		"R" Side to Center		"L" Length		Weight		Standard Output	
Model	RPM	Nm	lb ft	mm	in	mm	in	kg	lb	Retraction	SD
E55MB4F1-471	185	471	347	44	1.7	814	32	17.2	38	25mm [1"]	1" SD
E55MB4F1-623	140	623	459	44	1.7	814	32	17.2	38		
E55MB5F1-800	90	800	590	48	1.9	859	33.8	18.3	40.2		
E55MB5F1-1023	75	1023	754	48	1.9	859	33.8	18.3	40.2		
E55MB5F1-1637	45	1637	1207	48	1.9	891	35	19.2	42.2		
E55MB5F1-2005	35	2005	1479	48	1.9	891	35	19.2	42.2		
E55MB4F2-471	185	471	347	44	1.7	928	36.5	17.5	38.5	50mm [2"]	1" SD
E55MB4F2-623	140	623	459	44	1.7	928	36.5	17.5	38.5		
E55MB5F2-1023	75	1023	754	48	1.9	964	37.9	18.6	41		
E55MB5F2-1637	45	1637	1207	48	1.9	996	39.1	19.5	43		

## Tool Options

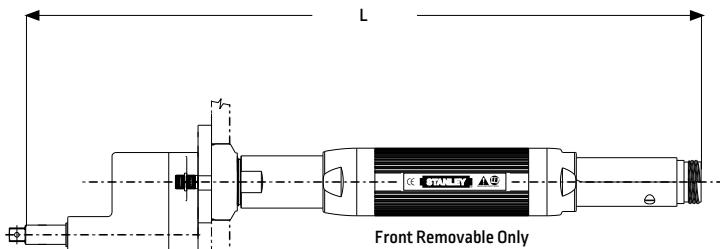
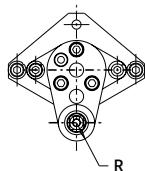
MB4F1 Output	Part No.
3/4" Square Drive [SD]	20D121100
1" Square Drive with Ball Retainer	20D103503
MB4/5F1 Output	Part No.
1" Square Drive [SD]	20D208800
1" SD X 2" Extension	20D208803
1" SD X 4" Extension	20D208802
MB4/5F2 Output	Part No.
1" Square Drive [SD]	M5379
1" SD X 350 mm Extension	20D212500
1" SD X 2" Extension	20D212501
MB4/5F1 Spring	Part No.
Standard	20R201411
MB4/5F2 Spring	Part No.
Standard	M5382
Heavy Duty	20R206300
Fixtured Handle	Part No.
Standard Top	20H202300
90° Top	20S105100
1" Socket Retainer	Part No.
Ball Pin	20D202300
Reaction Components	Part No.
Mounting Flange - MB4F	20D208500
Mounting Flange - MB5F	20D209500

## Handle Options

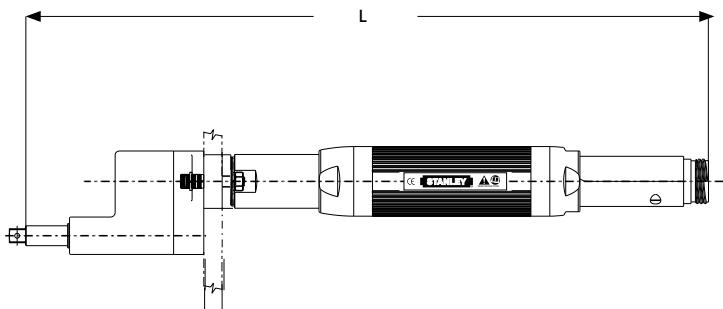
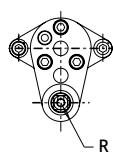


# Offset Retractable Fixtured Tools

1.4 to 36 Nm



	Rated Speed	Max Torque		"R" Side to Center		"L" Length		Weight		Standard Output	
Model	RPM	Nm	lb ft	mm	in	mm	in	kg	lb	Retraction	SD
E23MDF1-7	2245	7	5	13	0.5	457	18	2.4	5.2	19 mm [3/4"]	3/8"
E23MDF1-19	785	19	14	13	0.5	470	18.5	2.5	5.6		
E23MDF1-27	540	27	20	13	0.5	470	18.5	2.5	5.6		
E33MDF1-29	1125	29	21	13	0.5	496	19.5	2.7	5.9		
E33MDF1-36	890	36	27	13	0.5	496	19.5	2.7	5.9		
E23MDF2-7	2245	7	5	13	0.5	534	21	2.5	5.5	50 mm [2"]	3/8"
E23MDF2-19	785	19	14	13	0.5	549	21.6	2.6	5.9		
E23MDF2-27	540	27	20	13	0.5	549	21.6	2.6	5.9		
E33MDF2-29	1125	29	21	13	0.5	574	22.6	2.8	6.2		
E33MDF2-36	890	36	27	13	0.5	574	22.6	2.8	6.2		

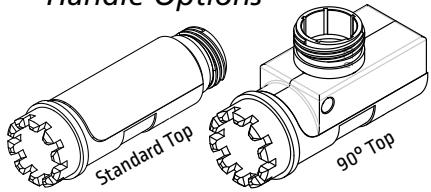


	Rated Speed	Max Torque		"R" Side to Center		"L" Length		Weight		Standard Output	
Model	RPM	Nm	lb ft	mm	in	mm	in	kg	lb	Retraction	SD
E23MDF1-7F	2245	7	5	13	0.5	457	18	2.4	5.2	19 mm [3/4"]	3/8"
E23MDF1-19F	785	19	14	13	0.5	470	18.5	2.5	5.6		
E23MDF1-27F	540	27	20	13	0.5	470	18.5	2.5	5.6		
E33MDF1-29F	1125	29	21	13	0.5	496	19.5	2.7	5.9		
E33MDF1-36F	890	36	27	13	0.5	496	19.5	2.7	5.9		
E23MDF2-7F	2245	7	5	13	0.5	534	21	2.5	5.5	50 mm [2"]	3/8"
E23MDF2-19F	785	19	14	13	0.5	549	21.6	2.6	5.9		
E23MDF2-27F	540	27	20	13	0.5	549	21.6	2.6	5.9		
E33MDF2-29F	1125	29	21	13	0.5	574	22.6	2.8	6.2		
E33MDF2-36F	890	36	27	13	0.5	574	22.6	2.8	6.2		

## Tool Options

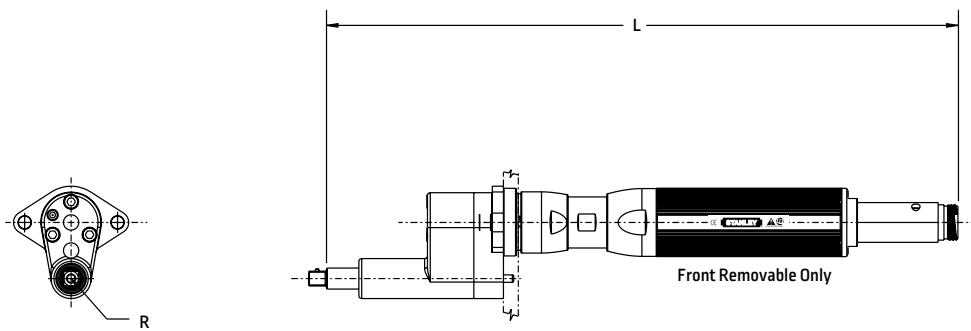
MDF1Output	Part No.
3/8" Square Drive [SD]	M3050
3/8" SD X 15/32" Extension	S3362
3/8" SD X 1.478" Extension	M3243
3/8" SD X 2" Extension	M3090
3/8" SD X 23/8" Extension	S3363
3/8" SD X 3" Extension	M3239
3/8" SD X 4" Extension	M3223
3/8" SD X 41/16" Extension	S3486
3/8" SD X 6" Extension	M3224
3/8" SD X 73/8" Extension	S3626
3/8" SD X 8" Extension	M3216
3/8" SD X 8" Extension, Thin	20S104600
3/8" - 24 Thread	M3118
3/8" - 24 Thread X 3/8" Extension	M3227
MDF2 Output	Part No.
3/8" Square Drive [SD]	M3282
3/8" SD X 1" Extension	20D209805
3/8" SD X 2" Extension	20D209807
3/8" SD X 3" Extension	20D209801
3/8" SD X 6" Extension	M3283
MDF1 Spring	Part No.
Standard	M3062
Heavy Duty	M3183
MDF2 Spring	Part No.
Standard	M3289
Heavy Duty	M3306
Extra Heavy Duty	20D1126900
Fixture Handle	Part No.
Standard Top	20H202300
90° Top	20S105100
E2 Motor	Part No.
Standard	20M200000
Without Wave Washer	20MS200000
3/8" Socket Retainer	Part No.
Lock Pin	A4040
Ball Pin	A4232
Lock Pin Plug	A4041

## Handle Options



# Offset Retractable Fixtured Tools

10.8 to 90 Nm

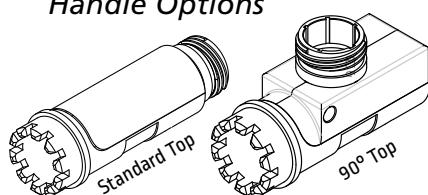


Model	Rated Speed	Max Torque		"R" Side to Center		"L" Length		Weight		Standard Output	
		RPM	Nm	lb ft	mm	in	mm	in	kg	lb	Retraction
E34MD1F1-54	605	54	40	17	0.67	531	20.9	4.4	9.7	25mm [1"]	1/2"
E44MD1F1-59	885	59	44	17	0.67	540	21.3	4.7	10.4		
E34MD1F1-67	490	67	49	17	0.67	531	20.9	4.4	9.7		
E44MD1F1-90	590	90	66	17	0.67	540	21.3	4.7	10.4		
E34MD1F1-90	365	90	66	17	0.67	531	20.9	4.4	9.7		
E34MD1F2-54	605	54	40	17	0.67	616	24.3	4.4	9.7	50mm [2"]	1/2"
E44MD1F2-59	885	59	44	17	0.67	628	24.7	4.7	10.4		
E34MD1F2-67	490	67	49	17	0.67	616	24.3	4.4	9.7		
E44MD1F2-90	590	90	66	17	0.67	628	24.7	4.7	10.4		
E34MD1F2-90	365	90	66	17	0.67	616	24.3	4.4	9.7		

## Tool Options

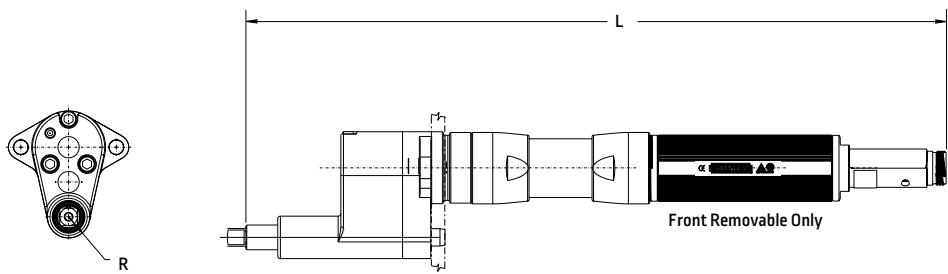
MD1F1 Output	Part No.
1/2" Square Drive [SD]	20D101600
1/2" SD with Ball Retainer	20D101602
1/2" SD X 2" Extension	20D101610
1/2" SD X 3" Extension	20D101603
1/2" SD X 4" Extension	20D101608
1/2" SD X 5" Extension	20D101604
1/2" SD X 6" Extension	20D101606
1/2" SD X 7 5/16" Extension	20D101605
1/2" SD X 8" Extension	20D101609
1/2" SD X 11" Extension	20D101607
MD1F2 Output	Part No.
1/2" Square Drive with Lock Pin	20D101601
1/2" Square Drive with Ball Pin	20D101602
MD1F1 Spring	Part No.
Standard	B4093
Heavy Duty	20R201401
MD1F2 Spring	Part No.
Standard	M4821
Heavy Duty	20R201402
Extra Heavy Duty	20D126700
Fixtured Handle	Part No.
Standard Top	20H202300
90° Top	205105100
MD1F1 1/2" Socket Retainer	Part No.
Lock Pin	K4024
Ball Pin	K4050
Lock Pin Plug	K4025
MD1F2 1/2" Socket Retainer	Part No.
Lock Pin	20D227800
Ball Pin	20D227801
Spring	20R201413
Pin Stop	L3401

## Handle Options

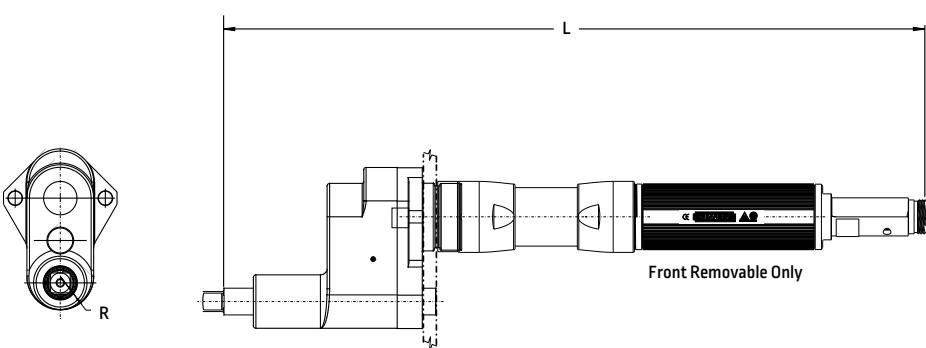


# Offset Retractable Fixtured Tools

22.8 to 290 Nm



Model	Rated Speed	Max Torque		"R" Side to Center		"L" Length		Weight		Standard Output	
		RPM	Nm	lb ft	mm	in	mm	in	kg	lb	Retraction
E55MD2F1-114	715	114	84	19	0.75	633	24.9	8.3	18.2	25 mm [1"]	5/8"
E45MD2F1-144	345	144	106	19	0.75	605	23.8	8	17.5		
E55MD2F1-180	475	180	133	19	0.75	633	24.9	8.3	18.2	50 mm [2"]	5/8"
E55MD2F1-225	380	225	166	19	0.75	630	24.8	8.3	18.2		
E55MD2F2-114	715	114	84	19	0.75	712	28	8.5	18.7	50 mm [2"]	5/8"
E45MD2F2-144	345	144	106	19	0.75	694	27.2	8.2	18		
E55MD2F2-180	475	180	133	19	0.75	712	28	8.5	18.7	25 mm [1"]	5/8"

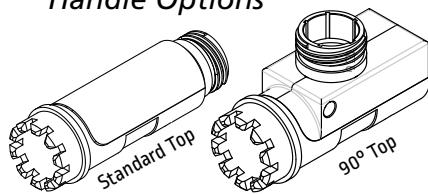


Model	Rated Speed	Max Torque		"R" Side to Center		"L" Length		Weight		Standard Output	
		RPM	Nm	lb ft	mm	in	mm	in	kg	lb	Retraction
E55MD3F1-114	345	114	84	32	1.25	628	24.7	10.2	22.5	25 mm [1"]	3/4"
E45MD3F1-144	345	144	106	32	1.25	628	24.7	10.2	22.5		
E55MD3F1-180	475	180	133	32	1.25	656	25.8	10.5	23.2	50 mm [2"]	3/4"
E55MD3F1-225	380	225	166	32	1.25	656	25.8	10.5	23.2		
E45MD3F1-225	220	225	166	32	1.25	628	24.7	10.2	22.5	25 mm [1"]	3/4"
E55MD3F1-290	380	290	214	32	1.25	710	28	11.4	25.1		
E55MD3F2-225	380	225	166	32	1.25	735	29	10.8	23.8	50 mm [2"]	3/4"
E55MD3F2-290	380	290	214	32	1.25	790	31.1	11.6	25.5		

## Tool Options

MD2F1 Output	Part No.
5/8" Square Drive (SD)	20D102901
5/8" SD X 2" Extension	20D102912
5/8" SD X 6" Extension	20D102913
MD2F2 Output	Part No.
5/8" Square Drive (SD)	20D102902
5/8" SD with Ball Retainer	20D102904
MD2F1 Spring	Part No.
Standard	20R201407
Heavy Duty	20D201408
MD2F2 Spring	Part No.
Light Duty	20R201423
Standard	20R201409
Heavy Duty	20R201410
Fixtured Handle	Part No.
Standard Top	20H202300
90° Top	20S105100
5/8" Socket Retainer	Part No.
Lock Pin	K4026
Ball Pin	20D227801
Lock Pin Plug	K4025
Compression Spring	20R201413
Pin Stop	L3401
MD3F1 Output	Part No.
3/4" Square Drive (SD)	20D102101
1/2" SD X 1.5" Extension	20D102106
MD3F2 Output	Part No.
3/4" Square Drive (SD)	20D102102
1/2" SD X 6" Extension	20D102105
MD3F1 Spring	Part No.
Standard	20R201403
Heavy Duty	20R201404
MD3F2 Spring	Part No.
Standard	20R201405
Heavy Duty	20R201406
3/4" Socket Retainer	Part No.
Lock Pin	A5075
Ball Pin	20R202300
Lock Pin Plug	K4025

## Handle Options





# 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 125)
- **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	21C102104
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

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

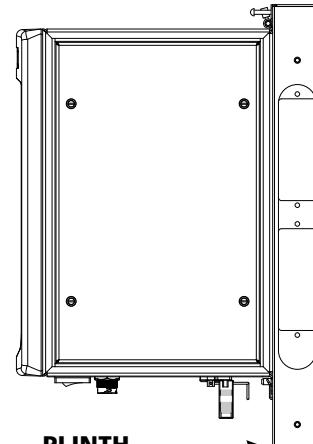
**STEP 4:** Select I/O Cable options, if required.

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.

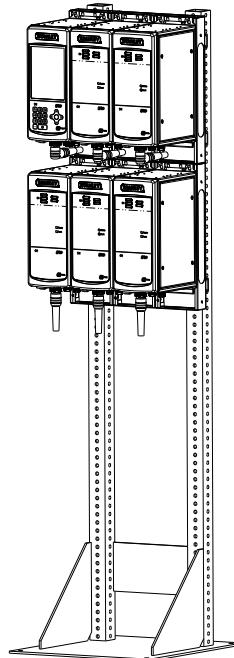
**Please Note:** If UL or CSA certification are required, please contact the STANLEY team to have this quoted to you.



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

## FLOOR STAND

- Top row of controllers require a 90° Extension.
- See pages 53-57 for Cable Options



# QBE Expert Controller



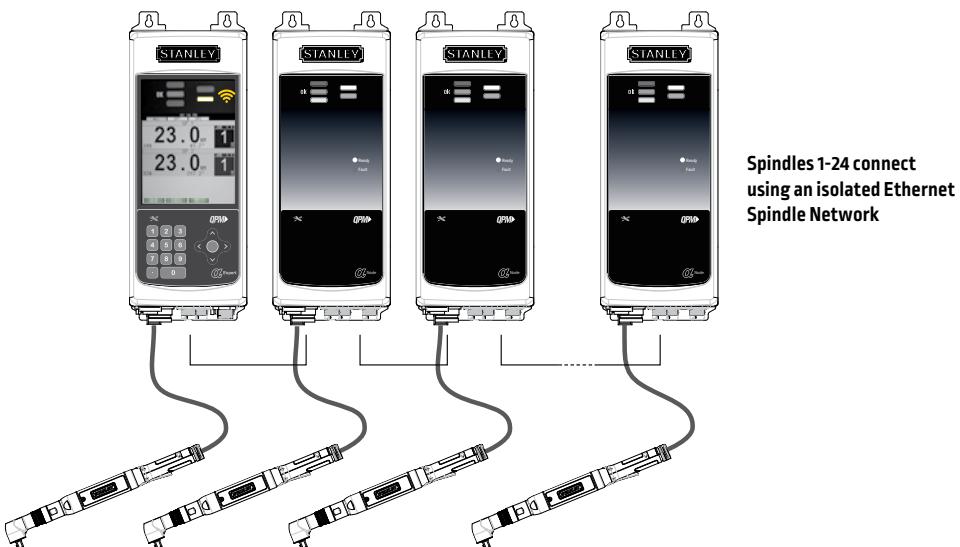
QBE Expert Controller is the premier Multi-Spindle Controller

## 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





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	✓	✓	✓	✓	✓	✓

Alpha Model Number for Optional Features	DeviceNet	PROFIBUS	EtherNet/IP	PROFNET	GMPorts	Lead	DeviceNet Available
QB4101-XXV						✓	-MXV
QB4101-XDV	✓						
QB4101-XPV		✓					
QB4101-XEV			✓				
QB4101-XNV				✓			
QB4101-XGV					✓	✓	-MGV



# QBE Specialist Controller



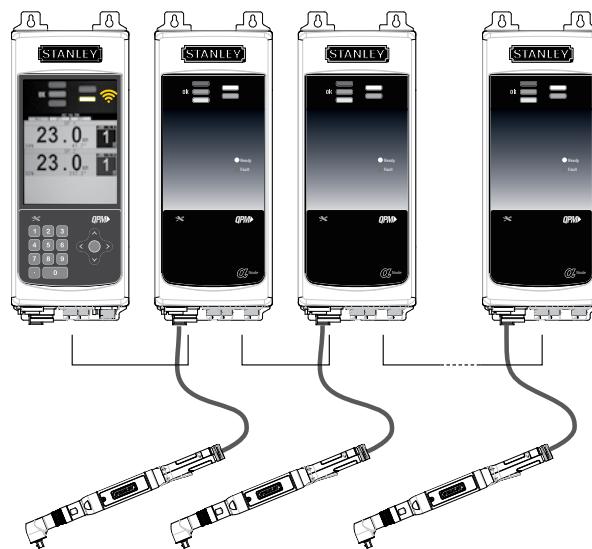
QBE Specialist Controller is a Multi-Spindle and Cordless Tool Controller

## BENEFITS:

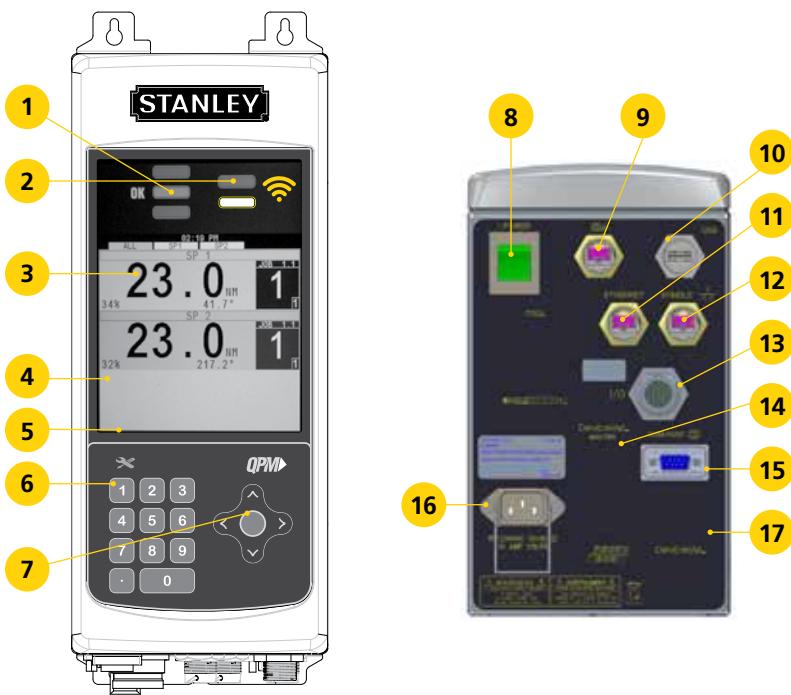
- Large Touchscreen, Color Display and Keypad
- Quick Set-up from the Controller Keypad, or with a PC, tablet, or smart phone
- Alpha Toolbox, STANLEY's web-based software for programming, collecting data and performing diagnostics
- Less training, less inventory and spare parts: STANLEY offers the same 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
- Stores Trace Data for 30,000 Fastening Cycles for Corded Tools
- 255 jobs, 99 tasks, 12 steps including smart steps and all advanced strategies for Corded Tools
- 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	24V DC I/O	Modbus/TCP	Alpha Toolbox
All Models	✓	✓	✓	✓	✓	✓

Alpha Model Number for Optional Features	DeviceNet	PROFIBUS	EtherNet/IP	PROFNET	GMPorts	Lead Devicenet Available
QB5100-XXV					✓	-MXV
QB5100-XDV	✓					
QB5100-XPV		✓				
QB5100-XEV			✓			
QB5100-XNV				✓		
QB5100-XGV					✓	-MGV



# QBE Advanced Controller



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

## BENEFITS:

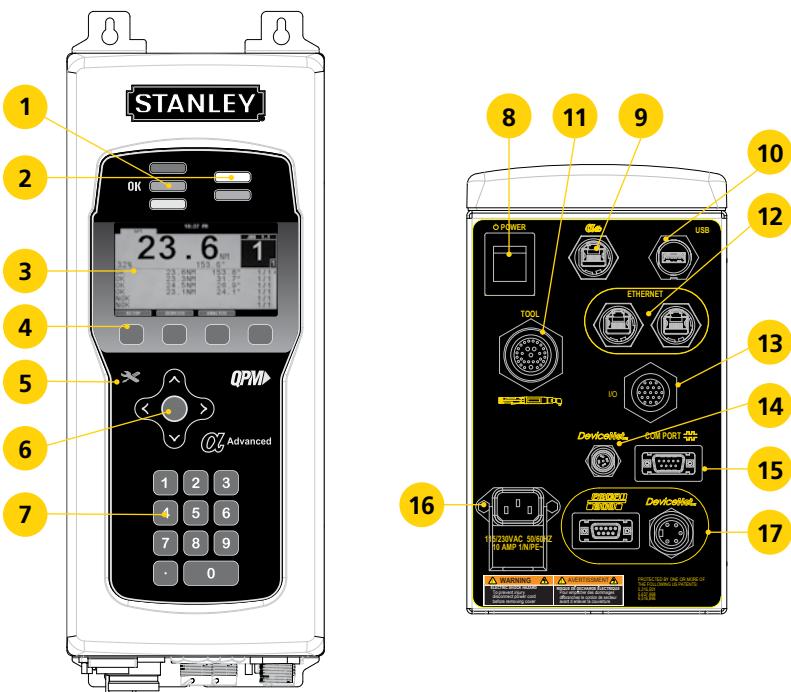
- Color Display with Keypad
- Quick Set-up from the Controller Keypad, or with a PC through Ethernet
- Alpha Toolbox, STANLEY's web-based software for programming, collecting data and performing diagnostics
- Less training, less inventory and spare parts: STANLEY offers the same Controller platform for 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
- 99 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	24V DC I/O	Modbus/TCP	Alpha Toolbox
All Models	✓	✓	✓	✓	✓	✓

Alpha Model Number for Optional Features	DeviceNet	PROFIBUS	EtherNet/IP	PROFNET	GMPorts	Lead Devicenet Available
QB3101-XXV					✓	-MXV
QB3101-XDV	✓					
QB3101-XPV		✓				
QB3101-XEV			✓			
QB3101-XNV				✓		
QB3101-XGV					✓	-MGV



# QBE Standard Plus Controller



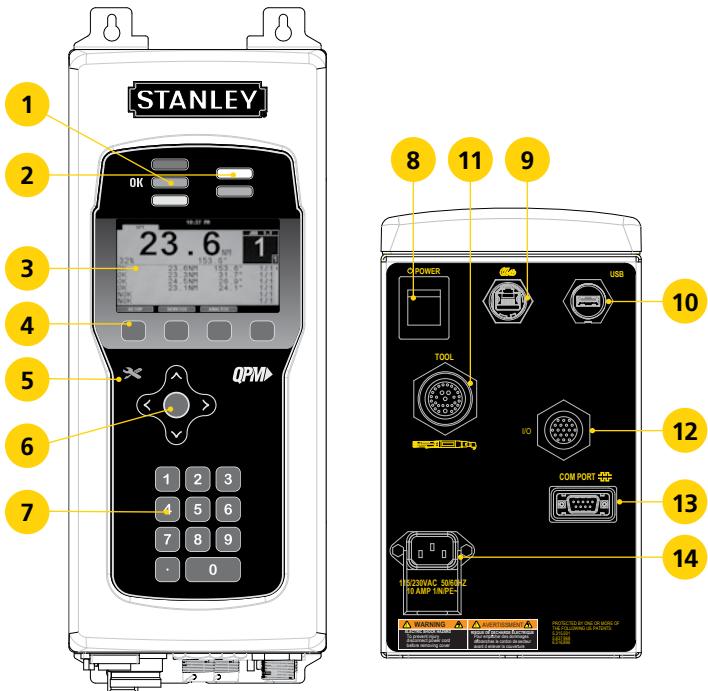
QBE Standard Plus Controller is a Single Spindle Controller

## 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
- 99 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	24VDC 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



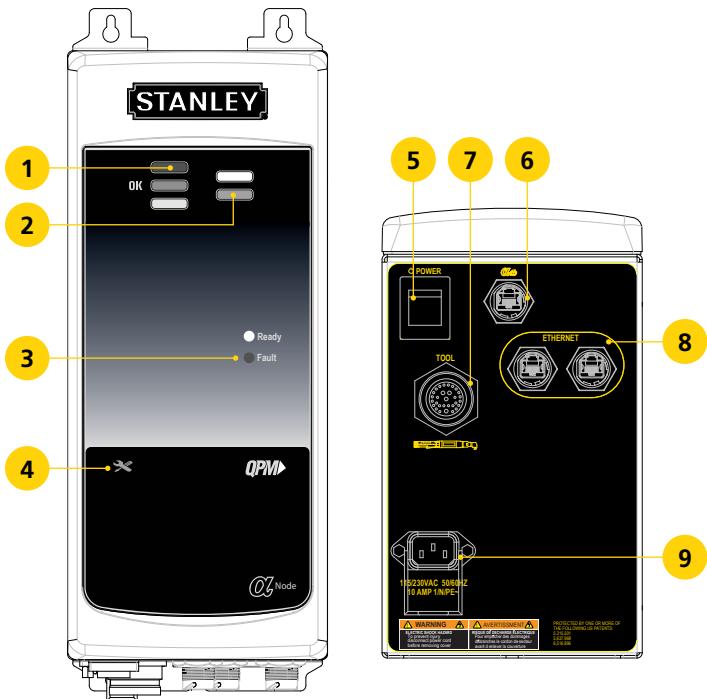
QBE Node Controller is a Single Spindle Controller used for trailing spindles in Multiple Tool (Fixture) Applications

## 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 Corded Handheld and Fixture 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 (fixture) 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	24VDC 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



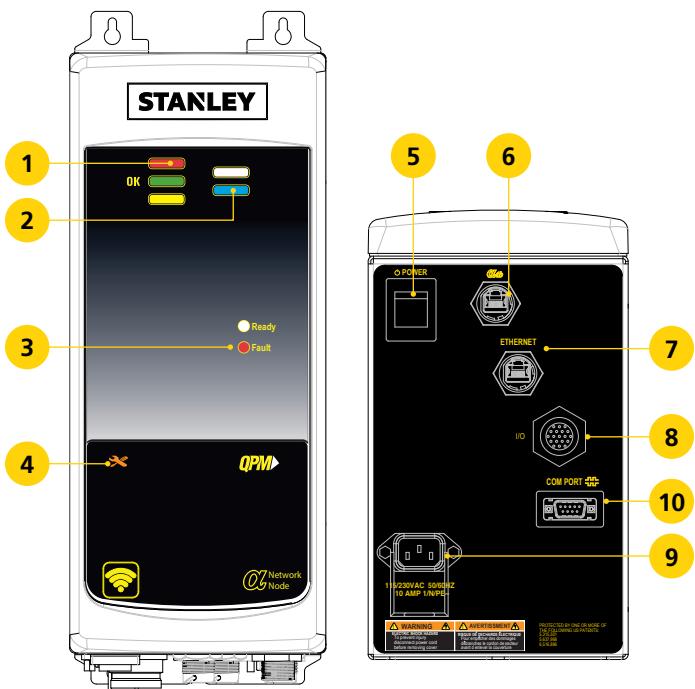
QBE Network Node Controller is a Cordless Tool Controller for up to 6 B-Series Cordless Tools

## 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:

- 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	IEEE 802.11 b/g/n
QB0201	✓	✓		✓	✓	✓	
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

# Alpha Toolbox Software

## STANLEY Assembly Technologies – Alpha Toolbox Software for QBE Controllers

**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. This powerful software utility enables:

- Tool configuration
- Tool diagnostics
- Data collection and maintenance intervals
- Advanced user integration

### BENEFITS:

- No set-up is required
- Intuitive and Easy to Use
- Flexible Connectivity

QBE Controllers include a dedicated Alpha Toolbox port. This browser based software is executed from a serial connection to the controller or wirelessly on a tablet, PC or phone. Simply connect a computer to the port, type “ATB.QPM” into a web browser and the software is available for use. The Wizard provided by STANLEY, offers an easy method to control programming directly from the keypad on the controller or with Alpha Toolbox. Users can also take advantage of advanced programming using Alpha Toolbox or Alpha Gateway software with a computer. For advanced, multiple tool systems, Alpha Toolbox includes a PLC Editor for easy integration.





# AA-Series Tools

**THE NEW AA SERIES PNEUMATIC NUTRUNNERS FROM STANLEY OFFERS AN INDUSTRY LEADING RANGE OF CLUTCH SHUT OFF TOOLS PROVIDING TOOL CHOICES THAT IMPROVE ASSEMBLY QUALITY, PRODUCTIVITY AND ERGONOMICS TO ENHANCE ASSEMBLY PROCESSES.**

The adjustable clutch on the AA series nutrunners provides a high level of torque control for most general use applications. The tool's output torque is controlled by adjusting a mechanical spring that provides axial force on steel balls rolling between indented plates. By providing smooth disengagement at a preset torque while minimizing vibration to the operator, these tools are a great choice for fastening applications requiring torque values from 4.5 to 118 Nm.

The same trusted quality outputs as the STANLEY QPM DC tools are used on these AA clutch tools reducing costly complexity and end user spare parts needs. Gearless reverse selection method also reduces parts and complexity for improved Mean Time To Repair (MTTR) and Mean Time Between Failure (MTBF).

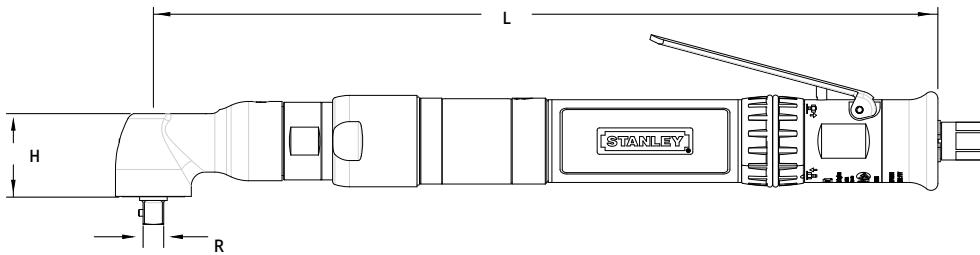
AA clutch tools have a free speed air consumption rate of 14.2 liters/second (30 cfm) at 90 PSI (6 Bar).



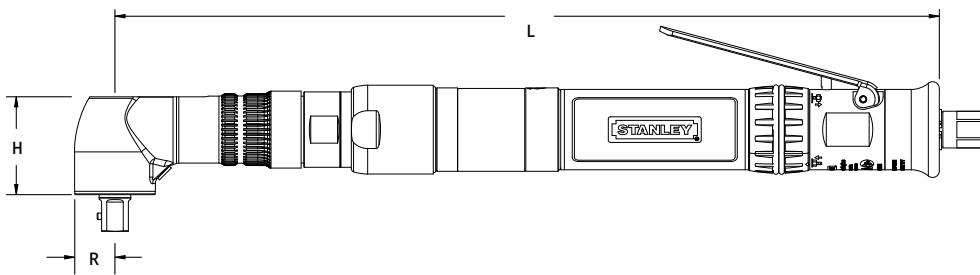
AA Series Pneumatic Tools conform to ISO standards 28927-2 and 15744 for noise and vibration. Actual vibration of AA23 and AA33 series tools is <2.5 m/sec . AA23 series tools' noise was measured at 79 dBA sound pressure levels. AA33 series tools' noise was measured at 85 dBA sound pressure levels. AA33 series tools' noise was measured at 96 dBA sound power level.

# AA Angle Tools

## 4.5 to 118 Nm



Model	Rated Speed	Max Torque		"R" Side to Center		"H" Head Height		"L" Length		Weight		Output
	RPM	Nm	lb ft	mm	in	mm	in	mm	in	kg	lb	Standard
AA23LA14-9	1550	9	6.6	14	0.55	36	1.4	312.6	12.3	1.4	3.1	3/8" SD
AA23LA13-14	1000	14	10.3	13	0.51	33	1.3	304.6	12.0	1.4	3.1	
AA23LA14-18	840	18	13.3	14	0.55	36	1.4	312.6	12.3	1.4	3.1	
AA33LA14-18	1110	18	13.3	14	0.55	36	1.4	352.2	13.9	1.6	3.6	
AA23LA14-22	665	22	16.2	14	0.55	36	1.4	312.6	12.3	1.6	3.5	
AA33LA14-25	790	25	18.4	14	0.55	36	1.4	352.2	13.9	1.6	3.6	
AA33LA14-28	500	28	20.7	14	0.55	36	1.4	352.2	13.9	1.6	3.6	
AA23LA18S-30	485	30	22.1	18	0.71	39	1.5	315.0	12.4	1.6	3.5	
AA33LA18S-40	500	40	29.5	18	0.71	39	1.5	354.8	14.0	1.7	3.9	
AA33LA18S-45	440	45	33.2	18	0.71	39	1.5	354.8	14.0	1.7	3.9	
AA33LA18S-50	390	50	36.9	18	0.71	39	1.5	354.8	14.0	1.7	3.9	



Model	Rated Speed	Max Torque		"R" Side to Center		"H" Head Height		"L" Length		Weight		Output
	RPM	Nm	lb ft	mm	in	mm	in	mm	in	kg	lb	Standard
AA33LA19-59	335	59	43.5	19	0.75	46.4	1.8	390.8	15.4	2.1	4.6	1/2" SD
AA33LA19-70	250	70	51.6	19	0.75	46.4	1.8	390.8	15.4	3.6	7.9	
AA33LA22A-106	180	106	78.2	22	0.87	47.9	1.9	474.8	18.7	2.9	6.5	
AA33LA22A-118	160	118	87	22	0.87	47.9	1.9	458.7	18.1	2.9	6.5	

## AA Angle Tool Options

A13 Output	Part No.
3/8" Double-Ended	20D121912
Flush Socket	20D121914
1/4" Quick Change	20D121916
1/4" SD	20D121919
1/4" Magnetic Internal Hex	20D121920
A14 Output	Part No.
1/4" Internal Hex	20D112110
Flush Socket	20D112113
Flush Socket Rubber Cover	20S210000
A18S Output	Part No.
3/8" Double-Ended	20D136502
Flush Socket	20D136503
A19 Output	Part No.
Threaded Flush Socket	20D100021
A22 Output	Part No.
Flush Socket	20D100309
1/2" Double-Ended	20D100326
With Extension Support	20D100321
AA23 Handle	Part No.
NPT Air Inlet	20H103700
ISO Air Inlet	20H103701
AA33 Handle	Part No.
NPT Air Inlet	20H103800
ISO Air Inlet	20H103801
Socket Lock Pin	Part No.
Standard	20D227800
Rounded (Ball Detent)	20D227801
A19 / A22 Reaction Components	Part No.
Reaction Bar Assembly	20K100000
Mounting Flange	20K100300
Base Mount Bracket Assembly	20K100500
AA Tool Adjustment Screwdriver	20K401900

## Suspension Bails

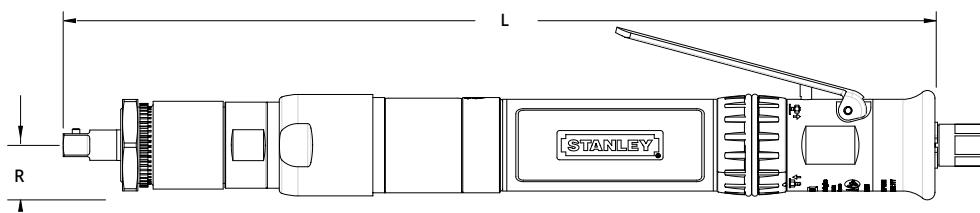
Output	Part No.
A13	20K101400
A14	20K101400
A18S	20K101400
A19	20K101400
A22	20K200000



Sockets and Accessories  
begin on page 156

# AA Inline Tools

## 5.5 to 54 Nm



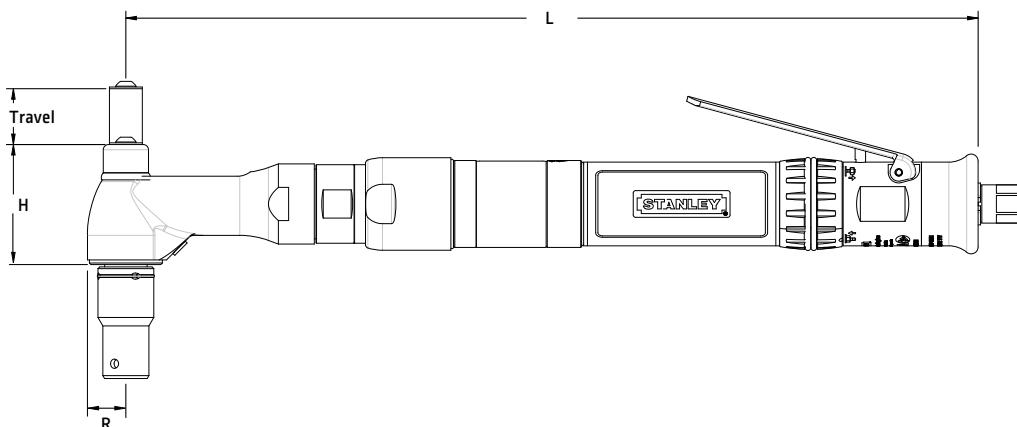
	Rated Speed	Max Torque		"R" Side to Center		"L" Length		Weight		Output	
Model	RPM	Nm	lb ft	mm	in	mm	in	kg	lb	Standard	Options
AA23LB-11	1280	11	8.1	22.7	0.89	328.4	12.9	1.5	3.2	3/8" SD	1/4" QC
AA23LB-15	990	15	11.1	22.7	0.89	322.4	12.7	1.5	3.2	3/8" SD	1/4" QC
AA23LB-21	680	21	15.5	22.7	0.89	322.4	12.7	1.5	3.2	3/8" SD	N/A
AA33LB-32	630	32	23.6	22.7	0.89	350.9	13.8	1.6	3.6	3/8" SD	
AA33LB-40	500	40	29.5	22.7	0.89	350.9	13.8	1.6	3.6	3/8" SD	
AA33LB-54	370	54	39.8	22.7	0.89	350.9	13.8	1.6	3.6	3/8" SD	

## AA Inline Tool Options

Reaction Bar	Part No.
Reaction Bar, Aluminum	F3698
Reaction Bar, Steel	20K100100
Base Mount Bracket	A8606
Mounting Flange-B	20K101000
AA23 Handle	Part No.
NPT Air Inlet	20H103700
ISO Air Inlet	20H103701
AA33 Handle	Part No.
NPT Air Inlet	20H103800
ISO Air Inlet	20H103801
Socket Lock Pin	Part No.
Standard	20D227800
Rounded [Ball Detent]	20D227801
AA23 Handle	Part No.
NPT Air Inlet	20H103700
ISO Air Inlet	20H103701
AA Tool Adjustment Screwdriver	20K401900

# AA Hold & Drive Tools

## 14 to 110 Nm



Model	Rated Speed	Max Torque		"R" Side to Center		"H" Head Height		"L" Length		Weight		Travel
		RPM	Nm	lb ft	mm	in	mm	in	mm	in	kg	lb
AA23LH18V1-28	485	28	20.7	18	0.71	131.9	5.2	341.7	13.5	1.8	4.0	25mm [1"]
AA33LH18V1-46	343	46	33.9	18	0.71	131.9	5.2	387.8	15.3	1.9	4.18	
AA33LH22AV1-99	175	99	73	22	0.87	143.8	5.7	468.3	18.4	3.3	7.26	
AA33LH22AV1-110	141	110	81	22	0.87	143.8	5.7	468.3	18.4	3.3	7.26	
AA23LH18V2-28	485	28	20.7	18	0.71	190.3	7.5	341.7	13.5	1.8	4.0	50mm [2"]
AA33LH18V2-46	343	46	33.9	18	0.71	190.3	7.5	387.8	15.3	1.9	4.18	
AA33LH22AV2-99	175	99	73	22	0.87	199.0	7.8	468.3	18.4	3.3	7.26	
AA33LH22AV2-110	141	110	81	22	0.87	199.0	7.8	468.3	18.4	3.3	7.26	

See pages 170-181 for the Hold and Drive Configuration Guide

### Hold & Drive Options

A Tang holds the bolt while the nut is tightened

#### Typical Tang Options



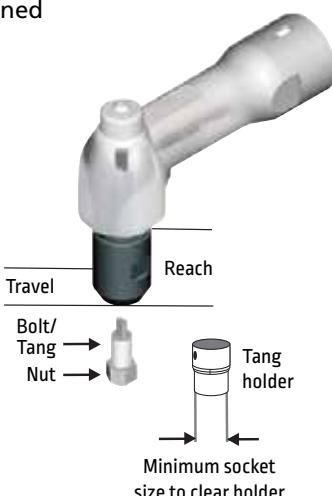
Female Torx



Female Hex



Rectangular



A Bit holds the bolt while the nut is tightened

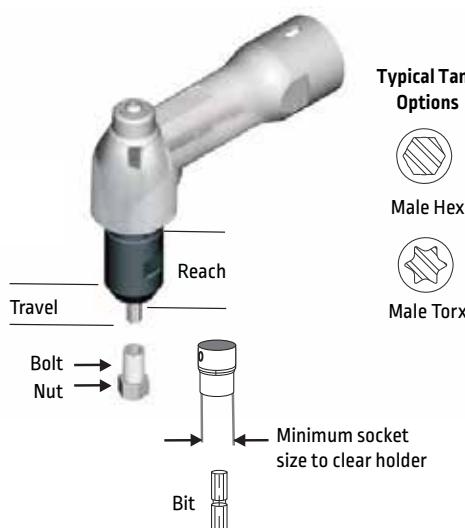
#### Typical Tang Options



Male Hex



Male Torx



NOTE: The bolt can extend beyond the nut no more than the specified travel distance when tightened.

### AA Hold & Drive Options

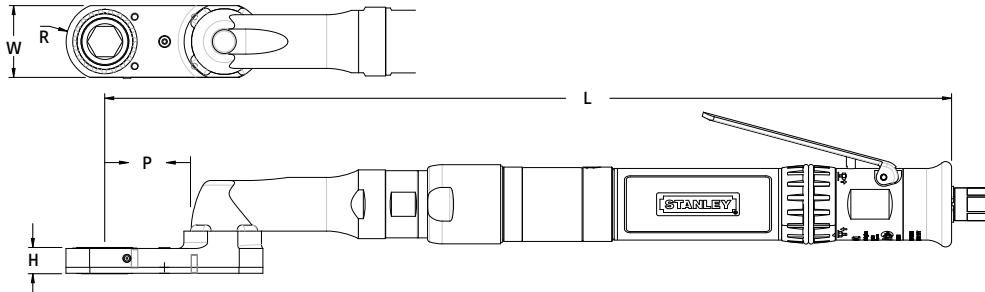
H18 Output	Part No.
Socket Options	20D905700
1" Travel Bit Holder Output	20D124600
2" Travel Bit Holder Output	20D124601
1" Travel Tang Holder Output	20D124602
2" Travel Tang Holder Output	20D124603
H18 Tang Holder	Part No.
Tang Holder Options	-20D905601
H18 Bit Holder	Part No.
Bit Holder Options	-20D905600
Suspension Bails	Part No.
Wire Bail	A3061
Swivel	20K101400
Standard	B3432
Mounting Flange-B	20K101000

H22 Output	Part No.
Socket Options	20D911000
1" Travel Tang Holder Output	20D103211
1" Travel Bit Holder Output	20D103212
2" Travel Tang Holder Output	20D103213
2" Travel Bit Holder Output	20D103214
H22 Tang Holder	Part No.
Tang Holder Options	-F4287
H22 Bit Holder	Part No.
Bit Holder Options	20D911100

AA23 Handle	Part No.
NPT Air Inlet	20H103700
ISO Air Inlet	20H103701
AA33 Handle	Part No.
NPT Air Inlet	20H103800
ISO Air Inlet	20H103801
Reaction Bar	Part No.
Reaction Bar Assembly	20K100000
Mounting Flange Assembly	20K100300
Base Mount Bracket Assembly	20K100500
Swivel Suspension Bails	Part No.
Non-Splined	20K101400
Splined	20K200000
AA Tool Adjustment Screwdriver	20K401900

# AA Crowfoot Tools

**6.5 to 70 Nm**



## AA Crowfoot Tool Options

AA23 Handle	Part No.
NPT Air Inlet	20H103700
ISO Air Inlet	20H103701
AA33 Handle	Part No.
NPT Air Inlet	20H103800
ISO Air Inlet	20H103801
Reaction Bar	Part No.
Reaction Bar Assembly	20K100000
Mounting Flange Assembly	20K100300
Base Mount Bracket Assembly	20K100500
Swivel Suspension Bails	Part No.
Non-Splined Output	20K101400
Splined Output	20K200000
AA Tool Adjustment Screwdriver	20K401900

Model	Rated Speed	Max Torque		"R" Nose Radius		"T" Thickness		"W" Width		"P" Length		"L" Length		Weight		Maximum Hex Size	
		RPM	Nm	lb ft	mm	in	mm	in	mm	in	mm	in	mm	in	kg	lb	mm
AA23LC106-13	745	13	9.6	12.7	0.50	16.2	0.64	25.4	1.00	64.6	2.50	370	14.6	1.6	3.5	13	0.50
AA23LC385-17	540	17	12.5	11.9	0.47	15.9	0.63	31.8	1.25	69.2	2.70	374	14.7	1.6	3.5	13	0.50
AA23LC308-19	505	19	14	13.5	0.53	20.6	0.81	31.8	1.25	70.2	2.80	376	14.8	2.7	5.95	13	0.50
AA23LC297-21	450	21	15.5	16.0	0.63	20.6	0.81	31.8	1.25	71.0	2.80	376	14.8	2.85	6.28	14	0.56
AA23LC66-21	450	21	15.5	16.0	0.63	21.3	0.84	31.8	1.25	28.5	1.10	333	13.1	2.81	6.2	14	0.56
AA23LC362-25	370	25	18.4	12.7	0.50	15.9	0.63	25.9	1.02	65.8	2.60	370	14.6	2.57	5.67	13	0.50
AA33LC516-30	420	30	22.1	13.0	0.51	16.0	0.63	32.0	1.25	70.0	2.76	478	18.8	2.68	5.91	13	0.50
AA23LC521-30	285	30	22.1	13.0	0.51	16.0	0.63	32.0	1.25	45.0	1.76	376	14.8	2.57	5.67	13	0.50
AA33LC29-31	390	31	22.9	21.0	0.81	14.0	0.55	38.1	1.50	43.0	1.70	348	13.7	2.4	5.3	19	0.75
AA33LC308-31	420	31	22.9	13.5	0.53	20.6	0.81	31.8	1.25	70.2	2.80	415	16.3	2.98	6.58	13	0.50
AA33LC297-35	370	35	25.8	16.0	0.63	20.6	0.81	31.8	1.25	71.0	2.80	376	14.8	3.13	6.91	14	0.56
AA33LC66-40	325	40	29.5	16.0	0.63	21.3	0.84	31.8	1.25	28.5	1.10	354	13.9	3.1	6.83	14	0.56
AA33LC97-47	235	47	34.7	21.6	0.81	21.3	0.84	38.0	1.48	107	4.20	518	20.4	3.99	8.8	19	0.75
AA33LC506-50	235	50	36.9	33.0	1.30	17.0	0.68	66.0	2.60	52.0	2.03	407	16.0	3.59	7.92	38	1.50
AA33LC298-53	250	53	39.1	13.2	0.52	20.9	0.82	38.1	1.50	96.5	3.80	452	17.8	3.91	8.62	13	0.50
AA33LC162-55	225	55	40.6	13.2	0.52	20.9	0.82	38.1	1.50	97.0	3.82	596	23.5	3.91	8.62	13	0.50
AA33LC499-58	210	58	42.8	13.2	0.52	16.5	0.65	38.0	1.48	155.0	6.10	510	20.1	3.99	8.8	13	0.50
AA33LC31-70	170	70	51.6	20.6	0.81	27.9	1.10	38.1	1.50	38.9	1.50	514	20.2	3.8	8.4	19	0.75



*Sockets and Accessories  
begin on page 156*

# AA Repair Accessories

## AA Tool Motor Service Kits

Descriptions	Part Number
AA23 Motor Housing Service Kit	20M103400
AA33 Motor Housing Service Kit	20M103401
AA23 Motor Service Parts <i>(Certified repair center only)</i>	20M103450
AA33 Motor Service Parts <i>(Certified repair center only)</i>	20M103451
AA22/33 Handle Rebuild Kit	20H104800
AA22/33 Clutch Service Kit	20G110400
AA22/33 Clutch Shut-Off Overhaul Kit	20G110600
AA22/33 Clutch Adjuster Overhaul Kit	20G110500

Each of these tools is required to repair the AA motor. It is recommended to buy the complete kit once then any one of the components as needed when they wear out.

## AA Motor Repair Tools

Descriptions	Part Number
AA Motor Assembly / Disassembly Tool Kit <i>(contains 1-each of the parts below)</i>	20V102400
Motor Assembly Block	20V202001
Rear Bearing Press Tool	20V102300
Motor Bearing Removal Tool	20V202600
Motor Front Bearing Removal Tube	20V203200
Rear Bearing Removal Press Tool	20V201900
Motor Rear Bearing Removal Tube	20V203300

## 20V102400 AA Motor Repair Tool Kit Parts

Descriptions	Part Number
Throttle Seat Install Tool	20V102000
Throttle Lever Install Tool	20V102100
Rear Bearing Press Tool, AA2/3	20V102300
A13-19 Assembly Tool	20V200700
Clutch Cam Assembly Install Tool	20V201400
Rear Brg Removal Press Tool, AA2/3	20V201900
Motor Assembly Block, AA2/3	20V202001
Motor Bearing Removal Tool, AA2/3	20V202600
Throttle Seat Install Plug AA2/3	20V202800
Motor Front Bearing Removal Tube	20V203200
Motor Rear Bearing Removal Tube	20V203300
QPM #3 Gear Case To Angle Head Socket	20V204000

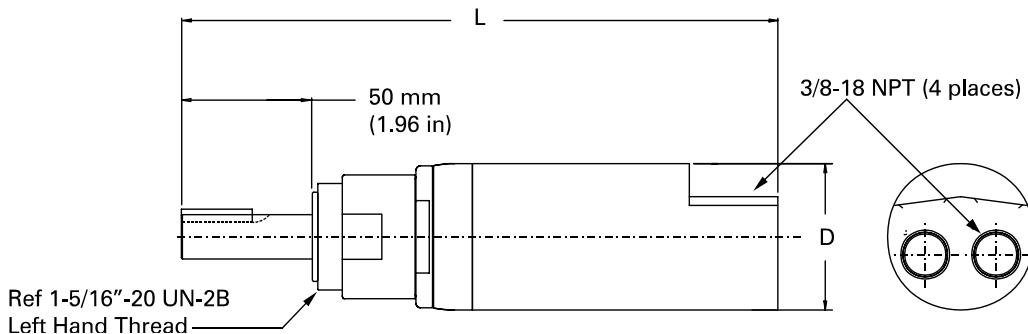
See AA Tool Manual for Use.

# Prime Movers

## M30 & M40 PRIME MOVER MOTORS

FIXTURED-PNEUMATIC - NO MOUNT

9 – 87 Nm (6.5 – 64 lb ft)



### Simple Design And Sturdy Construction Provide Long Life And Low Maintenance Costs

- Regulating of the air pressure adjusts speed and power
- High power per pound ratio minimizes required space
- Air motor may be stalled repeatedly with no damage to the motor
- No spark hazard allows air motor use in explosive atmospheres or near flammable material
- Air motors are not susceptible to thermal breakdown in high temperature areas
- Continuous duty operation maximizes production use

**M30/40 Prime Mover Motors** give reliable and economical power for production operations.

#### **STANDARD CONFIGURATION:**

**M30 Output Shaft:** 13mm (1/2") diameter x 25mm (1") long with 3 x 3 x 16 mm (1/8" x 1/8" x 5/8") long keyway

**M40 Output Shaft:** 16mm (5/8") diameter x 44mm (1.75") long with 5 x 5 x 25 mm (3/16" x 3/16" x 1") long keyway

Min Hose: M30: 5/16" ID, Air Inlet 1/4" NPT (1/4" ISO Inlet Option); 10 l/s (20 ft<sup>3</sup>/m) M40: 1/2" ID, Air Inlet 3/8" NPT (3/8" ISO Inlet Option); 20 l/s (40 ft<sup>3</sup>/m)

MODEL	FREE SPEED RPM	STALL TORQUE		RATED HP	MAX RPM	TORQUE @MAX HP	"L" LENGTH		"D" DIAMETER		WEIGHT	
		Nm	lb ft				mm	in	mm	in	kg	lb
<b>NON-REVERSIBLE M30</b>												
M30-16	1650	9	6.5	0.5	845	4	3	157	6.8	41	1.62	1.2
<b>NON-REVERSIBLE M40</b>												
M40-16	1600	21	16	1.2	820	11	8	191	7.5	52	2	4.3
M40-5	500	65	48		265	33	24	216	8.5		2.06	2.2
M40-4	375	87	64		200	43	32					4.7
<b>REVERSIBLE M40R</b>												
M40R-3	300	80	59	0.9	165	40	29	216	8.5	52	2.06	2.2

### ADDITIONAL COST OPTIONS:

Reverse Rotation (Add 'RR' MODEL eg: M40RR-5)

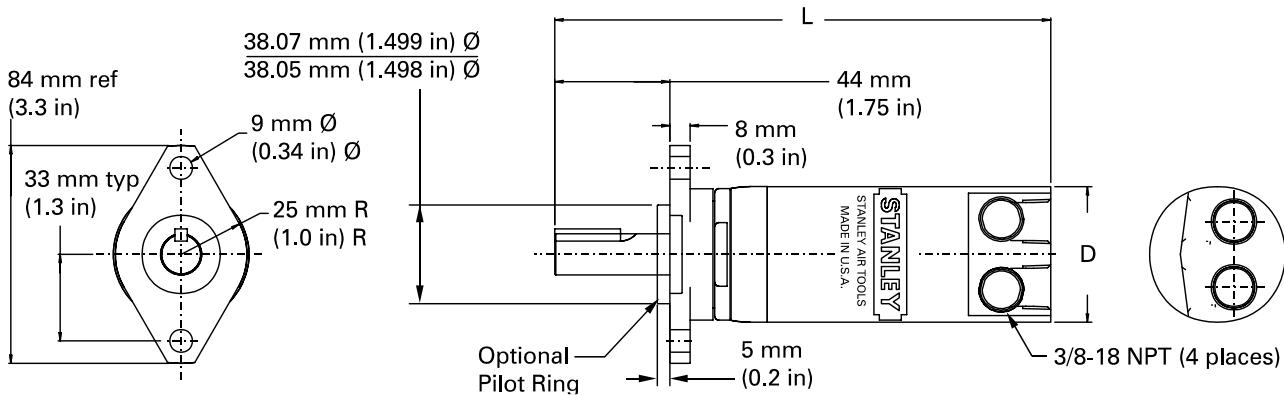
Special Gearing

# Prime Movers

## M40 PRIME MOVER MOTORS-FLANGE MOUNTED

FIXTURED-PNEUMATIC -FLANGE MOUNTED

5.5 – 32 Nm (4 – 24 lb ft)



### Simple Design And Sturdy Construction Provide Long Life And Low Maintenance Costs

- Regulating of the air pressure adjusts speed and power
- High power per pound ratio minimizes required space
- Air motor may be stalled repeatedly with no damage to the motor
- No spark hazard allows air motor use in explosive atmospheres or near flammable material
- Air motors are not susceptible to thermal breakdown in high temperature areas
- Continuous duty operation maximizes production use

**M40F Prime Mover Motors** give reliable and economical power for flange mounted motor geometry.

#### **STANDARD CONFIGURATION:**

**M40 Output Shaft:** 16mm (5/8") diameter x 44mm (1.75") long with 5 x 5 x 25 mm (3/16" x 3/16" x 1") long keyway

Min Hose: M30: 5/16" ID, Air Inlet 1/4" NPT (1/4" ISO Inlet Option); 10 l/s (20 ft<sup>3</sup>/m) M40: 1/2" ID, Air Inlet 3/8" NPT (3/8" ISO Inlet Option); 20 l/s (40 ft<sup>3</sup>/m)

MODEL	FREE SPEED RPM	STALL TORQUE		RATED HP	MAX RPM	TORQUE @MAX HP		"L" LENGTH		"D" DIAMETER		WEIGHT	
		Nm	lb ft			Nm	lb ft	mm	in	mm	in	kg	lb
<b>NON-REVERSIBLE M40F</b>													
M40F-37	3700	8.5	6	1.2	1875	4.5	3.4	191	7.5	52	2.06	2	4.3
M40F-26	2600	12.5	9		1325	6.5	5						
<b>REVERSIBLE M40FR</b>													
M40FR-13	1300	19.5	14	0.9	670	10	7	191	7.5	52	2.06	2	4.3
M40FR-7	750	32	24		395	16.5	12	216	8.5			2.1	4.7

### **ADDITIONAL COST OPTIONS:**

M4005 Pilot Ring for M40F

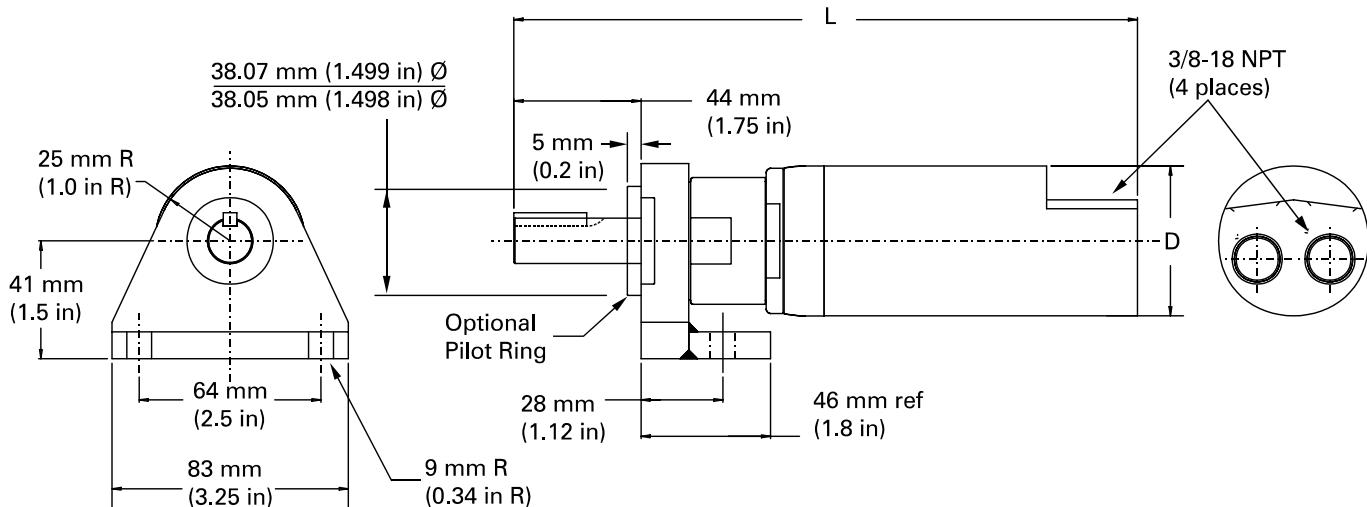
Reverse Rotation

Special Gearing

## M40 PRIME MOVER MOTORS-BASE MOUNTED

FIXTURED-PNEUMATIC – BASE MOUNTED

14 – 59 Nm (19 – 80 lb ft)



### Simple Design And Sturdy Construction Provide Long Life And Low Maintenance Costs

- Regulating of the air pressure adjusts speed and power
- High power per pound ratio minimizes required space
- Air motor may be stalled repeatedly with no damage to the motor
- No spark hazard allows air motor use in explosive atmospheres or near flammable material
- Air motors are not susceptible to thermal breakdown in high temperature areas
- Continuous duty operation maximizes production use

**M40B Prime Mover Motors** give reliable and economical power for base mounted motor geometry.

#### **STANDARD CONFIGURATION:**

Output Shaft: 16mm (5/8") diameter x 44mm (1.75") long with 5 x 5 x 25 mm (3/16" x 3/16" x 1") long keyway

Min Hose: M30: 5/16" ID, Air Inlet 1/4" NPT (1/4" ISO Inlet Option); 10 l/s (20 ft<sup>3</sup>/m) M40: 1/2" ID, Air Inlet 3/8" NPT (3/8" ISO Inlet Option); 20 l/s (40 ft<sup>3</sup>/m)

MODEL	FREE SPEED RPM	STALL TORQUE		RATED HP	MAX RPM	TORQUE @MAX HP		"L" LENGTH		"D" DIAMETER		WEIGHT	
		Nm	lb ft			Nm	lb ft	mm	in	mm	in	kg	lb
<b>REVERSIBLE M40BR</b>													
M40BR-13	1300	19	14		670	10	7	191	7.5			2	4.3
M40BR-7	750	32	24	0.92	395	16.5	12	216	8.5	52	2.06	2.2	4.7
M40BR-3	300	80	59		165	40	29						

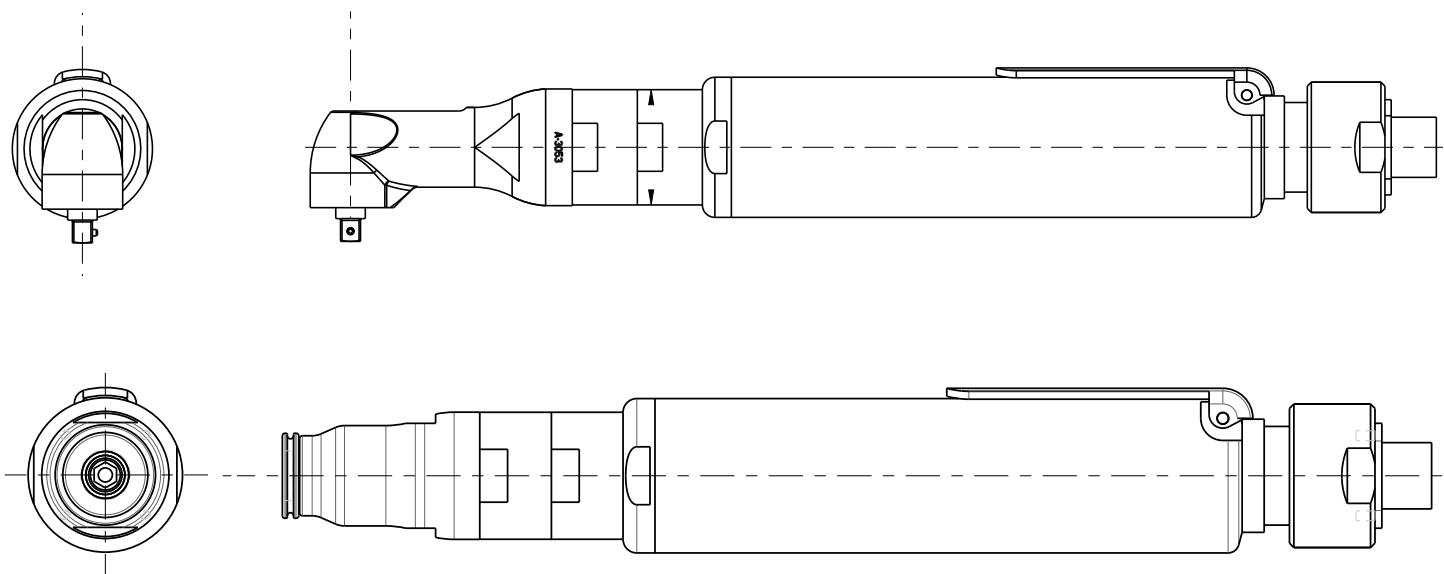
### **ADDITIONAL COST OPTIONS:**

M4005 Pilot Ring for M40BR

Reverse Rotation

Special Gearing

# DC Electric Headlight Aim Tools



**STANLEY offers durable tools for production headlight aiming systems with models that fit most alignment systems.** In production, the operator typically positions one tool each on the horizontal and vertical adjusting screws. The headlight aiming system controls the direction and rotation of the tools to adjust the headlight.

Torque capacity, not critical to the application, ranges from 3 to 11 Nm (24 to 94 lb-in).

Each tool includes the specified connector either on the tool end or specified system interface cable.

## TOOL DURABILITY MINIMIZES PRODUCTION DOWN TIME

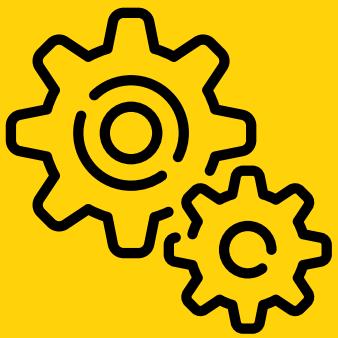
One-piece high strength T7075 aluminum housing as rugged as steel. Tool weighs 1.8 Kg (4 lb) excluding crowfoots.

## A RANGE OF MODELS TO FIT YOUR SYSTEM

Connectors and pin-outs that fit different alignment systems. Straight, Right Angle and Crowfoot heads.

	Rated Speed	Cable Length		Connector	Drive	Output
Model	RPM	M	ft			Standard
S30-372	149	3	10	AMP 97-3106A-14S-6P	1/4" SD	Right Angle
S30-388	149	0	0	AMP 97-3102A-14S-6P[115]	1/4" SD	Right Angle
S30-390	224	0	0	AMP 97-3102A-14S-P[115]	1/4" Hex	Inline
S30-351	149	3.6	12	AMP 97-3106A-14S-5P	1/4" SD	Right Angle
S30-405	224	3	10	SINE A510-3Y-A300	1/4" Hex	Inline

*Crowfoot outputs are available upon request.*



# **COMPLETE ENGINEERED SYSTEMS SOLUTIONS**

# Complete Engineered Systems Solutions

SINGLE AND MULTI-SPINDLE SYSTEMS INCLUDE THE COMPLETE LINE OF STANLEY DC ELECTRIC ASSEMBLY TOOLS. AVAILABLE FEATURES INCLUDE SPINDLE SYNCHRONIZATION, CYCLE COMPLETE OPERATION, ABSORPTION OF REACTION TORQUE AND OPERATOR FEEDBACK WITH ERROR-PROOFING OPTIONS. A COMPLETE LINE OF TORQUE TUBES AND ARTICULATING ARM SYSTEMS CAN BALANCE LOADS TO 500 POUNDS AND MAINTAIN TORQUE REACTION TO 5,000 NM.

Custom solutions are matched to unique assembly needs using extensive engineering experience, a complete line of assembly spindles, process controllers and tightening strategies. Some examples are flywheel indexing, wheel bearing end play, articulated jibs and high torque crowfoot tools. STANLEY also builds full and semi-automated systems, as well as offline subassembly stations.

Engineered Systems capabilities include custom design and build services, joint analysis, total project management, installation, start-up services and technical support. Our engineers are experts in evaluating your needs and converting them into solutions that improve the productivity, ergonomics and quality of your manufacturing operations. Armed with the skills to anticipate and prevent potential problems, STANLEY designs systems on which you can rely to deliver the performance and reliability you demand.

## World-Class Technical Support

As a supplier to the assembly market, STANLEY has developed a global sales and service network to support the manufacturing operations of our customers. STANLEY offers many levels of customer support, from basic maintenance and operator training to full service repair facilities and maintenance service contracts.



## ACCOUNTABILITY — From Turnkey Systems to Components & Support

STANLEY can design custom tailored solutions that meet the specific requirements of your application, your site, and your company's design standards and specifications.

## PRODUCTIVITY — System Optimization Reduces Cycle Times

- » *Synchronous tightening strategies enable simultaneous assembly using multiple spindle configurations*
- » *Automated and semi-automated tool handling reduces labor*
- » *Faster tools reduce rundown time*
- » *System design optimizes operator motion*



## QUALITY — Increase and Verify Assembly Quality

- » *Error proofing ensures complete assembly*
- » *Data collection and interface with plant control systems*
- » *Multi-step and sequenced rundowns use specialized fastening control strategies*
- » *Bar coding enables traceability*



## ERGONOMICS — Torque Reaction Design Expertise

- » *Ergonomic solutions improve worker productivity at reduced strain levels*
- » *High-torque applications (up to 5,000 Nm)*
- » *Return on Investment — Lower Total Cost of Ownership*
- » *Lowered costs on materials and labor*
- » *Reduced times for setup, fastening, rework and maintenance*
- » *Increased quality, productivity, ergonomics and flexibility*



## STANLEY Components and Support Services

STANLEY supports internal project managers with the capability needed for their installations, including tools and controllers, floor-mounted subassembly systems, tool and product handling components, cable management, low cost fixtured kits and other accessories. Support Services include installation supervision, startup support, refurbishment, on and off site calibration, as well as training and field service / repair.

# TURNKEY SYSTEM DESIGN & CONTROL STRATEGIES

## Comprehensive Project Management from Proposal to Customer Approval

### STANLEY OFFERS THESE IMPORTANT ADVANTAGES:

- A menu of standard and customized solutions apply to a wide range of applications
- Integrated supplier (all tools, controllers, accessories, etc., plus design and installation / support services from a single source) for assured, seamless system integration
- Full project management accountability with single point contact

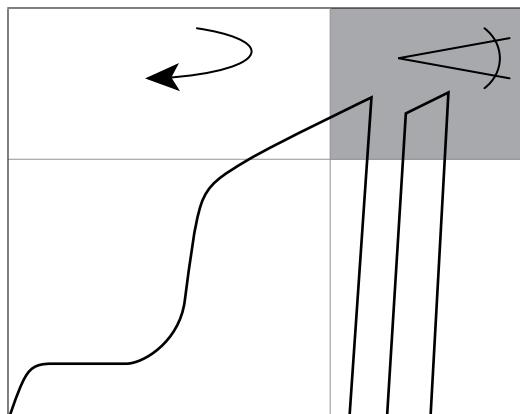
### TYPICAL PROJECT MILESTONES:



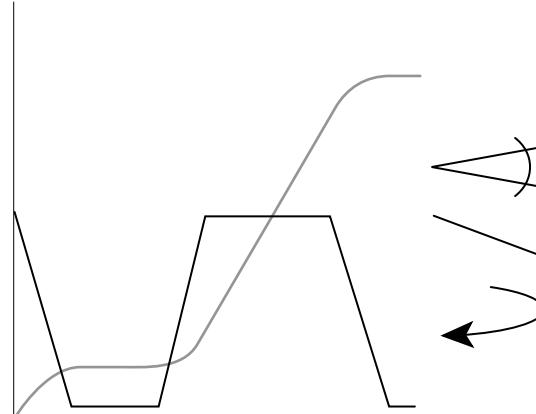
## Control Strategies Tailored To Your Applications

Whether your tightening applications require a single strategy for assembly to a target torque level or a series of strategies that can monitor material properties and/ or component position, STANLEY gives you the control you need. Each strategy consists of a complete set of parameters to control and / or audit torque, angle, time, speed and power. Multiple strategies advance in sequence, invisible to the operator, or pause the tool briefly to manage direction changes, multiple spindle synchronization or relaxation and crosstalk effects.

### EXAMPLE CONTROL STRATEGIES



Torque Recovery overcomes crosstalk on multiple spindles.



Yield Control strategies sense change in torque versus angle rate.

### STANLEY Turnkey Solutions:

- Application engineering
- Comprehensive system design capabilities including estimates, specification, manufacturing and flexible component sourcing
- Project scheduling
- System integration
- Installation / Startup
- PLC Software, custom ladder
- Documentation
- Training

# STANLEY SOLUTIONS IN ACTION

## Multi-Spindle Fixtured Tools

### SEMI-AUTOMATION

Off road final drive assembly machine



### TRUNNION MOUNT STYLE

Secures fasteners in randomly oriented bolt circle



### BOLT-HOLDING

Holds bolt stationary while securing nut



## Custom Configurations

### HIGH-TORQUE CROWFOOT TOOLS



### FLYWHEEL INDEXER

Secures torque converter to flywheel



### ARTICULATED ARMS AND JIBS



### WHEEL BEARING END-PLAY

Multi-step strategy achieves end play spec



# ENGINEERED SYSTEMS COMPONENTS

WITH TORQUE  
CAPACITY RANGING  
FROM 40 TO 2000  
NM, STANLEY QPM  
THREADED FASTENING  
SOLUTIONS COME IN  
MULTIPLE GEOMETRIES  
AND FIT THE MOST  
CRITICAL ASSEMBLY  
REQUIREMENTS. REAL  
TIME MONITORING,  
ANALYSIS, DIAGNOSTICS  
AND CONFIGURATIONS  
ARE AVAILABLE PLANT  
WIDE, WITH NETWORKED  
CONTROLS.



Cable routing / festooning kits

## STANLEY SYSTEM COMPONENTS INCLUDE

- Tools
- Controllers
- Power Modules
- Floor Mounted Subassembly Systems
- Tool / Product Handling Components
  - » *Torque Tubes*
  - » *Arms*
  - » *Balancers*
  - » *Rails*
- Cable Management / Festooning Kits
- Low-cost fixtured kits for basic assembly needs
- Accessories

## 480V AC POWER MODULES FOR QPM SYSTEMS

- 3.4, 7.5, 12 and 24kVA transformers deliver consistent 220V AC output to each receptacle
  - » *One receptacle is always "live"*
  - » *Alpha receptacles controlled by E-Stop circuit*
  - » *All receptacles protected with 10A circuit breakers*
- Extended I/O Capability
  - » *Allen-Bradley compact block I/O available (uses DeviceNet for communication)*
  - » *Built-in 24VDC power supply, rated @ 2A for discreet I/O*
  - » *72-PIN Harting connector for discreet I/O*
- Lockable, knife-edge disconnect with emergency stop button to disable all modules
- Available floor stand with mounting plate for easy installation of all modules
- Cabinet is NEMA-12 rated
- UL / CSA Approved option

## NETWORKING & ERROR PROOFING SOLUTIONS

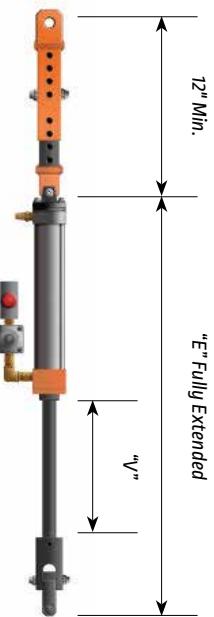
- Manage as many as 24 assembly tools
- Internal soft PLC for custom process control
- Ethernet, Fieldbus or serial communication

## SVB VERTICAL BALANCERS — CLEVIS INTERFACE

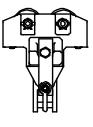
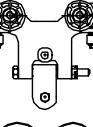
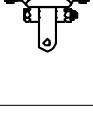
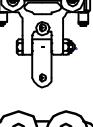
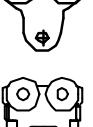
### Max Balancing Capacity @ 65 psi: 34 kg (75 lb) to 277 kg (610 lb)

Vertical Balancers maintain vertical position with horizontal movement for tools without torque reaction impulse such as multiple spindle nutrunners or material handling end effectors. Standard configurations range in vertical travel from 15 to 91cm (6 to 36 in) and balancing capacity from 34 to 277 kg (75 to 610 lb). Custom travel distances and balancing capacities are available. Specify vertical travel "V" from 15 to 91cm (6 in to 36 in).

- Zero-gravity tool balancing reduces operator fatigue
- All critical fasteners are either safety wired or pinned to ensure reliable operation
- Rugged and simple construction
- Single trolley interfaces with common overhead rails



*Includes Suspension Trolley*

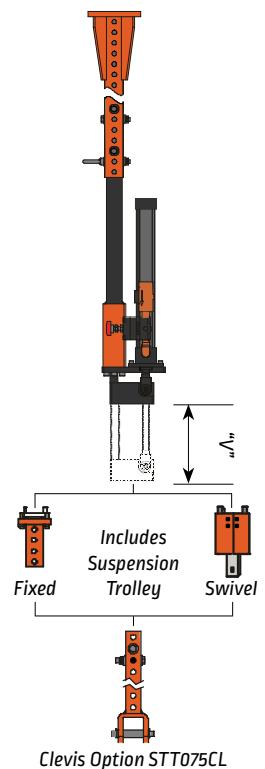
Model Number Build																											
SVB	###			X	##																						
Cylinder Size		"E" + 2"V"						"V" Vertical Travel																			
kg	lbs	cm	in					cm	in																		
34	75	150		27.6	10.9			6	15																		
55	120	200						12	30																		
97	215	250		29	11.4			18	46																		
176	390	325		32	12.6			24	60																		
277	610	400						30	76																		
								36	91																		
Trolley Suspension																											
<table border="1"> <tr><td>4" I-Beam Trolley</td><td>A</td></tr> <tr><td>6" I-Beam Trolley</td><td>B</td></tr> <tr><td>3.25" or 3.33" Flat Track Trolley</td><td>C</td></tr> <tr><td>Unified ETA-4 Trolley</td><td>D</td></tr> <tr><td>Unified ETA-8 Trolley</td><td>E</td></tr> <tr><td>Demag KBKI Trolley</td><td>F</td></tr> <tr><td>Demag KBKII-L Trolley</td><td>G</td></tr> <tr><td>IR/Zimmerman Trolley ZRA1</td><td>H</td></tr> <tr><td>IR/Zimmerman Trolley ZRA2</td><td>I</td></tr> </table>										4" I-Beam Trolley	A	6" I-Beam Trolley	B	3.25" or 3.33" Flat Track Trolley	C	Unified ETA-4 Trolley	D	Unified ETA-8 Trolley	E	Demag KBKI Trolley	F	Demag KBKII-L Trolley	G	IR/Zimmerman Trolley ZRA1	H	IR/Zimmerman Trolley ZRA2	I
4" I-Beam Trolley	A																										
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<i>Options:</i> <ul style="list-style-type: none"> <li>• Special Tool Holders and Interfaces</li> <li>• Dual and Triple Balance Air Logic</li> <li>• Dual Trolleys</li> </ul>																											

# STT075 LIGHT DUTY TORQUE TUBES

## Max Torque: 135 Nm (100 ftlb); Max Balancing Capacity @ 65 psi: 24 kg (55 lb)

STT075 Light Duty Torque Tubes offer zero-gravity balancing and absorb the torque reaction for nutrunner applications to 135 Nm (100 ftlb). A rugged design has balancing capacity for single or multiple spindle nutrunners to 34 kg (75 lb). The torque tube protects the operator from nutrunner torque reaction impulse. Fixtured tool orientation increases fastening accuracy and consistency. Specify vertical travel "V" from 15 to 60 cm (6 to 24 in). Custom travel distances and balancing capacities are available.

- Zero-gravity tool balancing and elimination of torque reaction exposure reduces operator fatigue
- Either swivel or fixed tool interface, clevis interface optional
- Single or dual trolley suspension with common overhead rails
- Options: Special Tool Holders and Interfaces, Dual and Triple Balance Air Logic, Dual Bridges, Other Trolleys including Anti-kickup, Clevis STT075CL



Model Number Build							
STT	075	XX	150	X or XX	##	"V" Vertical Travel	
Tool Interface						cm	in
	Fixed	FX				6	15
	Swivel	SW				12	30
				Single Trolley	Trolley Suspension	Dual Trolley	
				A	4" I-Beam Trolley	AA	
				B	6" I-Beam Trolley	BB	
				C	3.25" or 3.33" Flat Track Trolley	CC	
				D	Unified ETA-4 Trolley	DD	
				E	Unified ETA-8 Trolley	EE	
				F	Demag KBKI Trolley	FF	
				G	Demag KBKII-L Trolley	GG	
				H	IR/Zimmerman Trolley ZRA1	HH	
				I	IR/Zimmerman Trolley ZRA2	II	

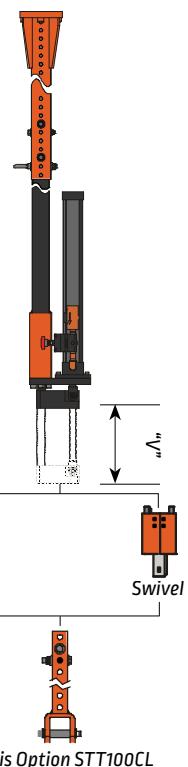
*Note: Single Trolleys not recommended for torque reaction applications.*

# STT100 MEDIUM DUTY TORQUE TUBES

## Max Torque: 270 Nm (200 ftlb); Max Balancing Capacity @ 65 psi: 56 kg (125 lb) or 90 kg (200 lb)

STT100 Medium Duty Torque Tubes offer zero-gravity balancing and absorb the torque reaction for nutrunner applications to 270 Nm (200 ftlb). A rugged design, suitable for line tracking, has balancing capacity for single or multiple spindle nutrunners to 56 kg (125 lb) or 90 kg (200 lbs). The torque tube protects the operator from nutrunner torque reaction impulse. Fixtured tool orientation increases fastening accuracy and consistency. Specify vertical travel "V" from 15 to 60 cm (6 to 24 in). Custom travel distances and balancing capacities are available.

- Zero-gravity tool balancing and elimination of torque reaction exposure reduces operator fatigue
- Either swivel or fixed tool interface, clevis interface optional
- Single or dual trolley suspension with common overhead rails
- *Options: Special Tool Holders and Interfaces, Dual and Triple Balance Air Logic, Dual Bridges, Other Trolleys including Anti-kickup, Clevis STT100CL*



Model Number Build									
STT	100	XX	150	###	X or XX	##	"V" Vertical Travel		
Tool Interface			Cylinder Size			"V" Vertical Travel			
	Fixed	FX		kg	lb	6	cm	in	
	Swivel	SW	200	56	125	12	30	12	
			250	90	200	18	46	18	
	A	4" I-Beam Trolley	AA						
	B	6" I-Beam Trolley	BB						
	C	3.25" or 3.33" Flat Track Trolley	CC						
	D	Unified ETA-4 Trolley	DD						
	E	Unified ETA-8 Trolley	EE						
	F	Demag KBKI Trolley	FF						
	G	Demag KBKII-L Trolley	GG						
	H	IR/Zimmerman Trolley ZRA1	HH						
	I	IR/Zimmerman Trolley ZRA2	II						

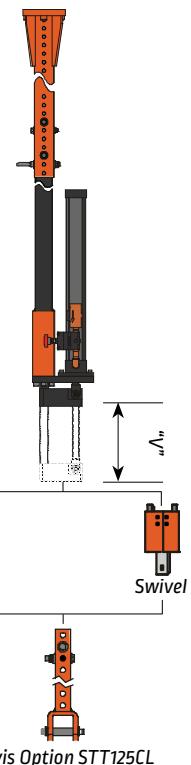
*Note: Single Trolleys not recommended for torque reaction applications.*

# STT125 HEAVY DUTY TORQUE TUBES

**Max Torque: 677 Nm (500 ftlb); Max Balancing Capacity @ 65 psi: 75 kg (175 lb) or 150 kg (350 lb)**

STT125 Heavy Duty Torque Tubes offer zero-gravity balancing and absorb the torque reaction for nutrunner applications to 677 Nm (500 ftlb). A rugged design, suitable for line tracking, has balancing capacity for single or multiple spindle nutrunners to 75 kg (175 lb) or 150 kg (350 lbs). The torque tube protects the operator from nutrunner torque reaction impulse. Fixtured tool orientation increases fastening accuracy and consistency. Specify vertical travel "V" from 15 to 90 cm (6 to 36 in). Custom travel distances and balancing capacities are available.

- Zero-gravity tool balancing and elimination of torque reaction exposure reduces operator fatigue
- Either swivel or fixed tool interface, clevis interface optional
- Single or dual trolley suspension with common overhead rails
- *Options: Special Tool Holders and Interfaces, Dual and Triple Balance Air Logic, Dual Bridges, Other Trolleys including Anti-kickup, Clevis STT125CL*



Model Number Build									
STT	125	XX	150	###	X or XX	##	"V" Vertical Travel		
Tool Interface				Cylinder Size				cm	in
	Fixed	<b>FX</b>		250	kg 75	lb 175		6	15 6
	Swivel	<b>SW</b>		325	kg 150	lb 350		12	30 12
								18	46 18
								24	60 24
								36	90 36
Single Trolley		Trolley Suspension			Dual Trolley				
	A	4" I-Beam Trolley			AA				
	B	6" I-Beam Trolley			BB				
	C	3.25" or 3.33" Flat Track Trolley			CC				
	D	Unified ETA-4 Trolley			DD				
	E	Unified ETA-8 Trolley			EE				
	F	Demag KBKI Trolley			FF				
	G	Demag KBKII-L Trolley			GG				
	H	IR/Zimmerman Trolley ZRA1			HH				
	I	IR/Zimmerman Trolley ZRA2			II				

# ARTICULATING ARMS

## Arm Selection

1. Select an arm model with the required balancing capacity for the job.  
For single nutrunners, verify the torque capacity.
2. Check that the "Vertical Travel", "Reach", "D" and "F" dimensions meet the requirements of the job. Use the overhead diagram for the noted models and variables such as offset arms or mounting type.
3. Select any required options.

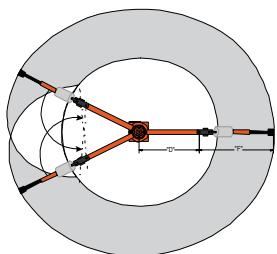
### Articulating Arms

Duty Level	Arm Model	Max Torque		Balancing Capacity		Vertical Travel		Mount Type	Reach @ Torque Zero / Max				Reach "D" "F"			
		ft lb	Nm	lb	Kg	in	cm		in	cm	in	cm	in	cm	in	cm
Light	TLA-30	50	68	25	12	7	17	Clevis	36	91.6	29	73.6	12	30.5	15	38
	THA-48	150	205	40	17	16	406		51	129.5	41	104			10-13.5	25-34
	LAC	200	275	155 - 35	71-16	12 - 30	31-76		36 - 96	91 - 243	29 - 77	73 - 195	12-36	30-91	24-60	6-152
Medium	MAC	500	675	190 - 30	87-13	14 - 36	36-91	Swivel	36 - 132	91 - 335	29 - 106	73 - 269	12-72	30-182		
	MAS								36 - 152	91 - 386	29 - 125	73 - 317	12-96	30-243		
Heavy	HAS	1000	1356	345 - 30	157-13											

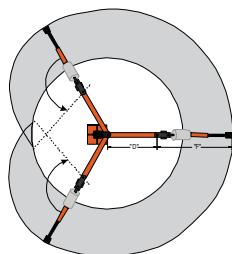
### Additional Cost Options

Duty Level	Arm Model	Offset Arm	End of Arm Swivel	Swivel w/Brake	Tool Holders
Light	TLA-30	N/A	Yes	N/A	Yes
	THA-48	N/A			
	LAC				
Medium	MAC	Yes	Yes	Yes	
	MAS				
Heavy	HAS				

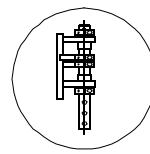
### Standard Arm Coverage Symmetric about the outside radius



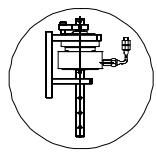
**Clevis Mount**  
Enables 220° rotation of the articulating arm assembly. Models: TLA, THA, LAC, MAC



**Swivel Mount**  
Enables 360° rotation of the articulating arm assembly. Models: MAS, HAS

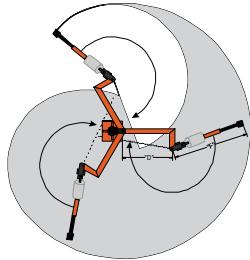


End of Arm Swivel

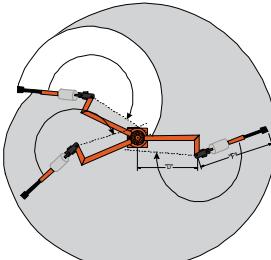


End of Arm Swivel with Brake

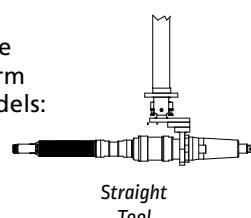
### Offset Arm Coverage Enables coverage of the interior area by folding inward



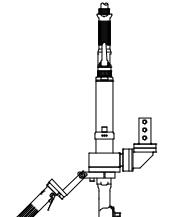
**Clevis Mount**  
Enables 220° rotation of the articulating arm assembly. Models: LAC, MAC



**Swivel Mount**  
Enables 360° rotation of the articulating arm assembly. Models: MAS, HAS



Straight Tool

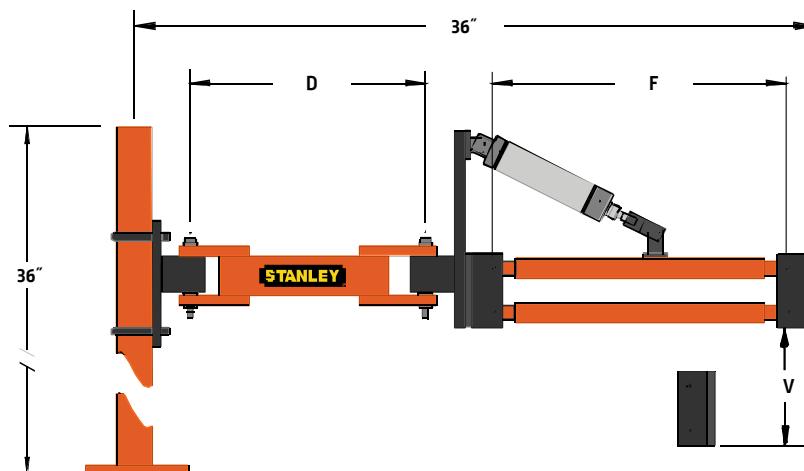


Angle Tool with Remote Start Handle

# LIGHT DUTY ARTICULATING ARMS

## TLA-30 Light Duty Table Mounted Articulating Arm

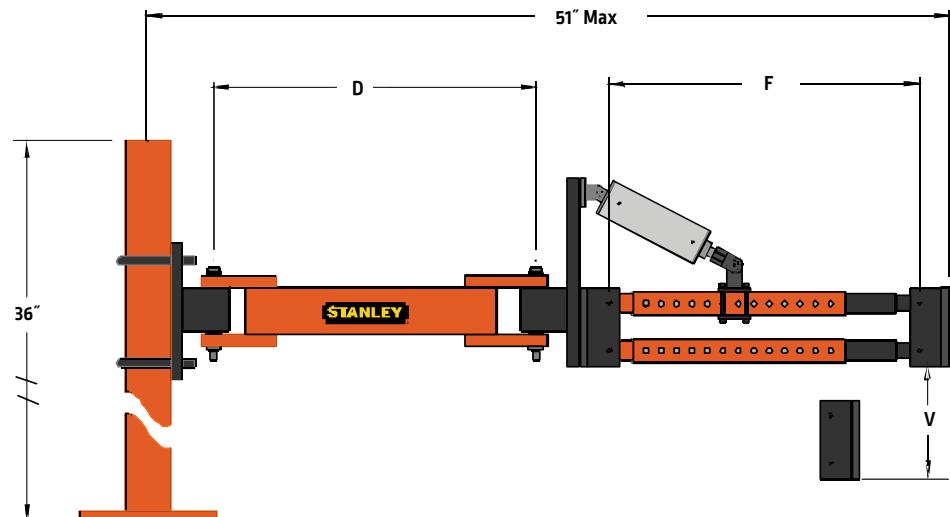
MAX TORQUE: 68 NM (50 FTLB);  
MAX BALANCING CAPACITY @ 65 PSI: 12 KG (25 LB)



## THA-48 Heavy Duty Table Mounted Articulating Arm

MAX TORQUE: 205 NM (150 FTLB); MAX BALANCING CAPACITY @ 65 PSI: 17 KG (40 LB)

- Ergonomics Improve Operator Interface
- Zero-gravity tool balancing and elimination of torque reaction exposure reduces operator fatigue
- Increases Fastening Accuracy and Consistency
- Eliminates operator effects on results by absorbing the torque reaction impulse



### OPTIONS:

- End of Arm Swivel
- End of Arm Swivel with Brake (THA-48 only)
- Special Tool holders and Interfaces
- Floor Mounted Pedestals
- Overhead Bridge

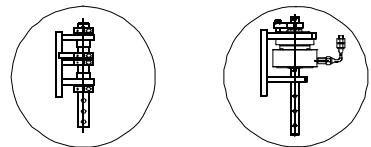
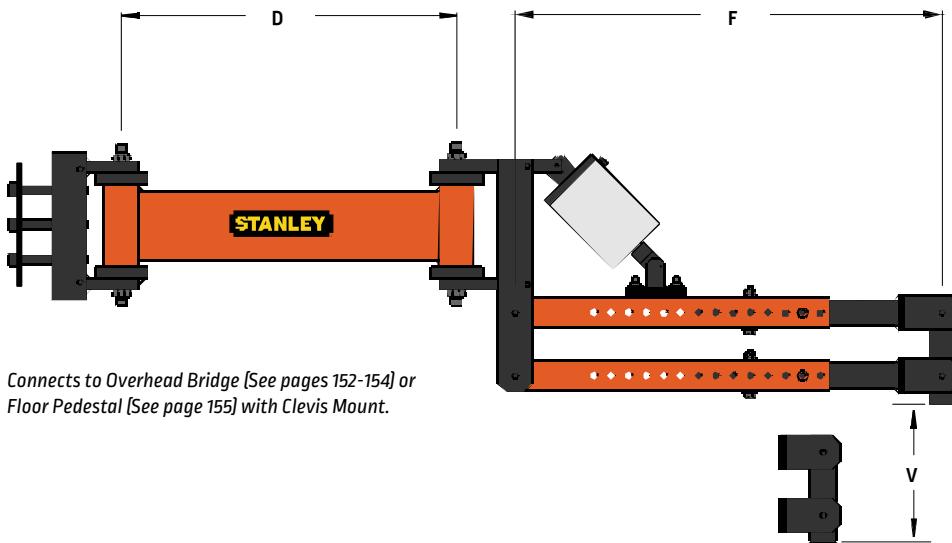
Model	"D" Length		"F" Length		"V" Travel		Max Torque		Balancing Capacity	
	mm	in	mm	in	mm	in	Nm	ftlb	kg	lb
TLA-30	305	12	381	15	177	7	68	50	12	25
THA-48	305	12	229 - 342	9 - 13.5	406	16	205	150	17	40

# LAC Light Duty Articulating Arm — Clevis Mount

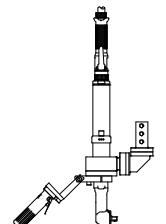
**MAX TORQUE: 275 NM (200 FTLB); MAX BALANCING CAPACITY @ 65 PSI:  
41 KG (90 LB) OR 71 KG (155 LB)**

**LAC Light Duty Articulating Arm offers interfaces for overhead bridge, floor pedestal or special mounting.**

- Ergonomics Improve Operator Interface
  - Zero-gravity tool balancing and elimination of torque reaction exposure reduces operator fatigue
  - Increases Fastening Accuracy and Consistency
  - Eliminates operator effects on results by absorbing the torque reaction impulse
  - Features Ensure Reliable Operation
  - All critical fasteners are either safety wired or pinned
- OPTIONS:**
- *Special Toolholders and Interfaces*
  - *End of Arm Swivel or Swivel with Brake*
  - *Offset Arm*
  - *Inverted Forearm and Cylinder*
  - *Dual and Triple Balance Air Logic*



*End of Arm Swivel*      *End of Arm Swivel with Brake*



*Angle Tool with Remote Start Handle*

Model Number Build									
LAC			#		B or C			#	
"F" Forearm Length		"V" Vertical Travel							
cm	in	cm	in						
61	24	31	12	24					
76	30	38	15	30					
91	36	46	18	36					
107	42	53	21	42					
122	48	61	24	48					
137	54	69	27	54					
152	60	76	30	60					

B[2.5"]				C[3"]				"D" Dumbbell Length	
Cylinder Size Max Balancing Capacity								cm	in
kg	lb	kg	lb						
41	90	71	155					30	12
33	70	57	125					46	18
27	60	47	105					60	24
23	50	40	90					76	30
20	45	35	75					91	36
18	40	31	70						
16	35	22	50						

*Note: Capacity @ 65 psi*

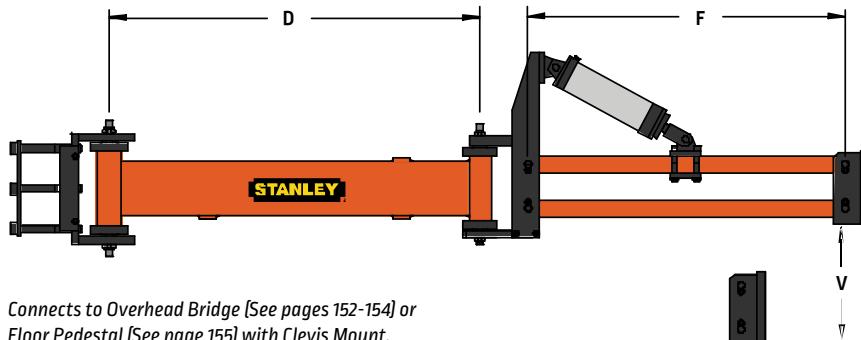
# MEDIUM DUTY ARTICULATING ARM

## Clevis Mount (MAC)

**MAX TORQUE: 675 NM (500 FTLB); MAX BALANCING CAPACITY @ 65 PSI:  
42 KG (70 LB) OR 87 KG (190 LB)**

**MA Medium Duty Articulating Arm offers interfaces for overhead bridge, floor pedestal or special mounting.**

- Ergonomics Improve Operator Interface
- Zero-gravity tool balancing and elimination of torque reaction exposure reduces operator fatigue
- Increases Fastening Accuracy and Consistency
- Eliminates operator effects on results by absorbing the torque reaction impulse
- Features Ensure Reliable Operation
- All critical fasteners are either safety wired or pinned
- Safety check valves maintain load position if a sudden loss of supply air pressure occurs



Model Number Build										
MA	C or S		##		A, B or C			##		
Mounting Type								"D"	Dumbell Length	
Clevis		C						cm	in	
Swivel		S						12	31	12
					A [2"]	B [2.5"]	C [3"]	18	46	18
					Cylinder Size			24	61	24
					Max Balancing Capacity			30	76	30
					kg	lb	kg	lb	kg	lb
					32	70	53	115	87	190
					26	55	43	95	70	155
					22	45	35	75	55	120
					19	40	30	65	49	110
					16	35	26	55	43	95
					14	30	23	50	38	95
					13	30	21	45	35	75
<i>Note: Capacity @ 65 psi</i>										

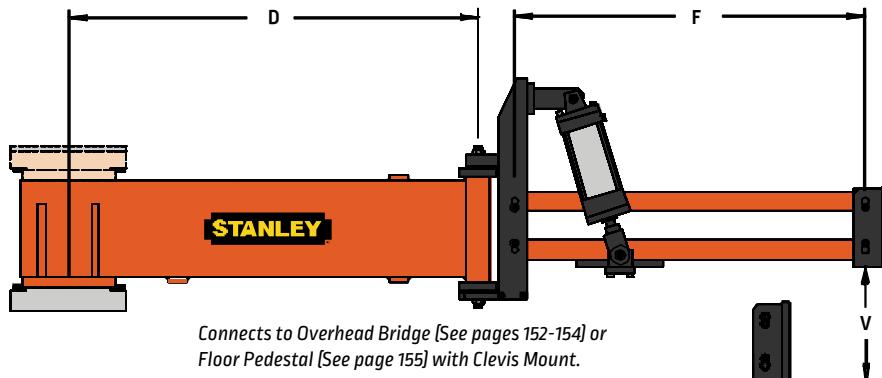
# HEAVY DUTY ARTICULATING ARM

## Swivel Mount

**MAX TORQUE: 1356 NM (1000 FTLB); MAX BALANCING CAPACITY @ 65 PSI:  
49 KG (110 LB), 88 KG (195 LB), OR 157 KG (345 LB)**

**HAS Heavy Duty Articulating Arm offers interfaces for overhead bridge, floor pedestal or special mounting.**

- Ergonomics Improve Operator Interface
- Zero-gravity tool balancing and elimination of torque reaction exposure reduces operator fatigue
- Increases Fastening Accuracy and Consistency
- Eliminates operator effects on results by absorbing the torque reaction impulse
- Features Ensure Reliable Operation
- All critical fasteners are either safety wired or pinned
- Safety check valves maintain load position if a sudden loss of supply air pressure occurs



Model Number Build									
HAS		#		A, B, or C				#	
"F" Forearm Length		"V" Vertical Travel							
cm	in	cm	in	A [2"]	B [2.5"]	C [3"]		"D" Dumbell Length	
61	24	31	12	24				cm	in
76	30	38	15	30				12	31
91	36	46	18	36				18	46
107	42	53	21	42				24	61
122	48	61	24	48				30	76
137	54	69	27	54				36	91
152	60	76	30	60				42	107
Cylinder Size Max Balancing Capacity									
kg	lb	kg	lb	kg	lb				
49	110	88	195	157	345				
39	85	73	160	129	285				
30	65	59	130	106	235				
24	50	49	105	90	195				
19	40	41	90	76	170				
15	35	35	75	67	145				
13	30	30	65	59	130				
Note: Capacity @ 65 psi									

# LIGHT DUTY OVERHEAD BRIDGES

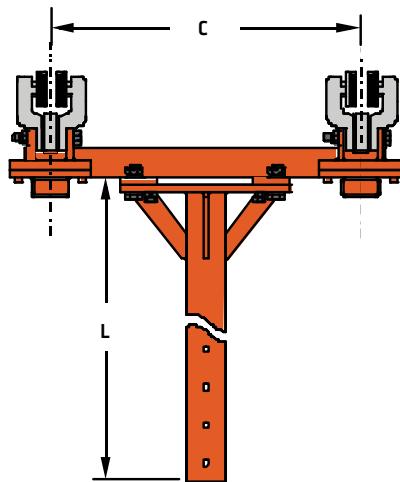
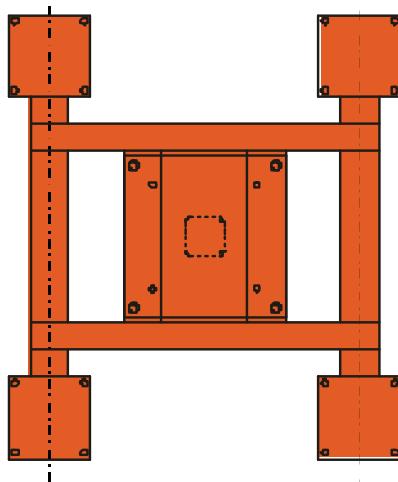
## Clevis Arm Mount

MAX LENGTH: 244 CM (96 IN)

**LBC Light Duty Overhead Bridges interface STANLEY Articulating Arms to all common overhead rails. Bridge mast includes leveling jacks.**

- All critical fasteners are either safety wired or pinned to ensure reliable operation
- Rugged and simple construction

**NOTE:** "Duty" level of Overhead Bridge must match "Duty" level of Articulating Arm. (i.e.: Medium Duty Bridge for Medium Duty Arm.)



Model Number Build				
LBC	##	X	##	
"C" Runway Rail Center Distance				
cm	in			
30.5	12	12		
45.7	18	18		
61	24	24		
76.2	30	30		
91.4	36	36		
121.9	48	48		
152.4	60	60		
		Trolley Suspension		
		4" I-Beam Trolley	A	
		6" I-Beam Trolley	B	
		3.25" or 3.33" Flat Track Trolley	C	
		Unified ETA-4 Trolley	D	
		Unified ETA-8 Trolley	E	
		Demag KBK I Trolley	F	
		Demag KBK II-L Trolley	G	
		IR/Zimmerman Trolley ZRA1	H	
		IR/Zimmerman Trolley ZRA2	I	
Other trolleys including anti-kick up available				
"L" Down Mast Length				
		cm	in	
		24	61	24
		30	76.2	30
		36	91.4	36
		42	106.7	42
		48	121.9	48
		60	152.4	60
		72	182.9	72
		84	213.4	84
		96	243.8	96

# MEDIUM DUTY OVERHEAD BRIDGES

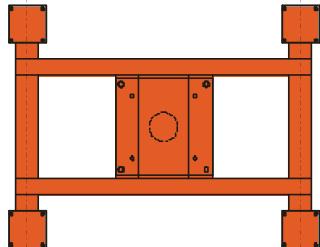
## Swivel or Clevis Arm Mount

MAX LENGTH: 244 CM (96 IN)

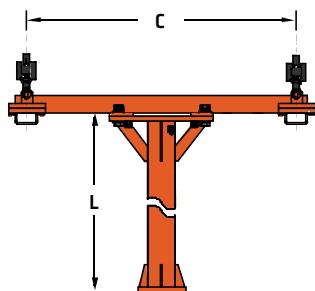
**MB Medium Duty Overhead Bridges** interface STANLEY Articulating Arms to all common overhead rails. Bridge mast includes leveling jacks.

- All critical fasteners are either safety wired or pinned to ensure reliable operation
- Rugged and simple construction

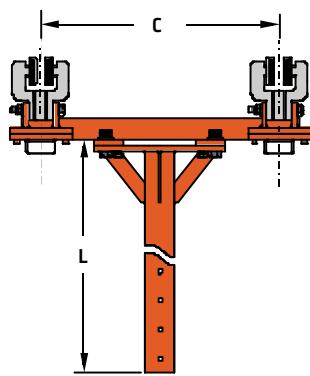
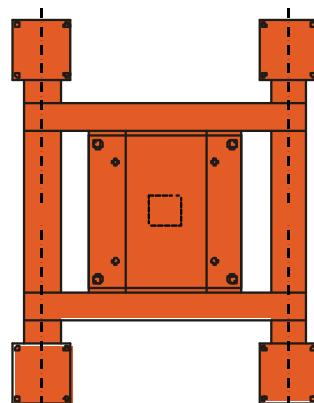
*NOTE: "Duty" level of Overhead Bridge must match "Duty" level of Articulating Arm. (i.e.,: Medium Duty Bridge for Medium Duty Arm.)*



MBC Medium Duty Overhead Bridge with Clevis Mount



MBS Medium Duty Overhead Bridge with Swivel Mount



Model Number Build										
MB	C or S	##	X	##						
Mounting Type					Trolley Suspension					"L" Down Mast Length
Clevis	C				4" I-Beam Trolley	A				cm      in
Swivel	S				6" I-Beam Trolley	B				24      61      24
<b>"C" Runway Rail Center Distance</b>					3.25" or 3.33" Flat Track Trolley	C				30      76.2      30
cm	in				Unified ETA-4 Trolley	D				36      91.4      36
30.5	12	12			Unified ETA-8 Trolley	E				42      106.7      42
45.7	18	18			Demag KBKI Trolley	F				48      121.9      48
61	24	24			Demag KBKII-L Trolley	G				60      152.4      60
76.2	30	30			IR/Zimmerman Trolley ZRA1	H				72      182.9      72
91.4	36	36			IR/Zimmerman Trolley ZRA2	I				84      213.4      84
121.9	48	48								96      243.8      96
152.4	60	60								

# HEAVY DUTY OVERHEAD BRIDGES

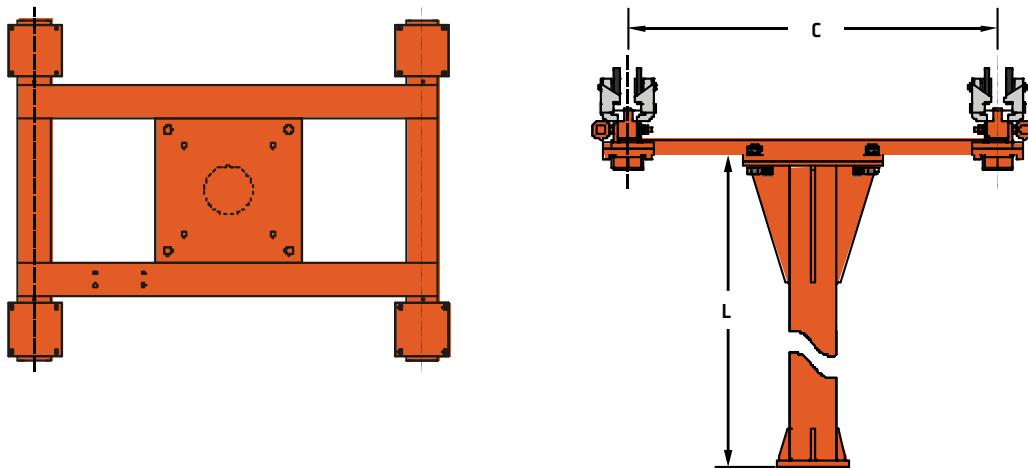
## Swivel Arm Mount

MAX LENGTH: 244 CM (96 IN)

HBS Heavy Duty Overhead Bridges interface STANLEY Articulating Arms to all common overhead rails. Bridge mast includes leveling jacks.

- All critical fasteners are either safety wired or pinned to ensure reliable operation
- Rugged and simple construction

**NOTE:** "Duty" level of Overhead Bridge must match "Duty" level of Articulating Arm. (i.e.,: Medium Duty Bridge for Medium Duty Arm.)



Model Number Build				
HBS	##	X	##	
<b>"C"</b> Runway Rail Center Distance				<b>"L"</b> Down Mast Length
cm	in			cm
45.7	18	<b>18</b>		30.5
61	24	<b>24</b>		45.7
76.2	30	<b>30</b>		61
91.4	36	<b>36</b>		76.2
121.9	48	<b>42</b>		91.4
152.4	60	<b>60</b>		106.7
				121.9
				152.4
				182.9
				213.4
				243.8
				96

**Trolley Suspension**

4" I-Beam Trolley	A
6" I-Beam Trolley	B
3.25" or 3.33" Flat Track Trolley	C
Unified ETA-8 Trolley	E
Demag KBKII-L Trolley	G
IR/Zimmerman Trolley ZRA1	H
IR/Zimmerman Trolley ZRA2	I

*Other trolleys including anti-kick up available*

# PEDESTALS

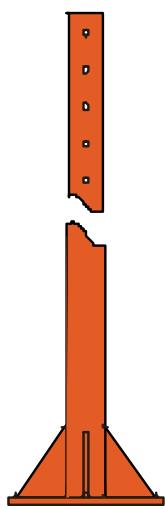
## Clevis or Swivel Arm Mount

MAX LENGTH: 244 CM (96 IN)

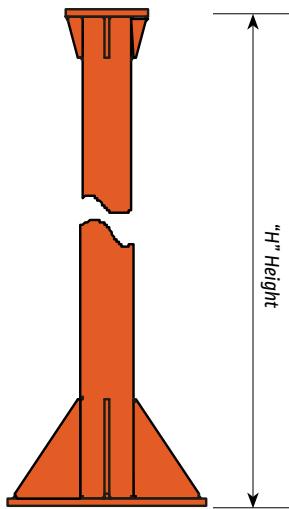
**HP/MP/LP Pedestals offer floor mounting for STANLEY Articulating Arms.**

- Includes leveling jacks
- All critical fasteners are either safety wired or pinned to ensure reliable operation
- Rugged and simple construction

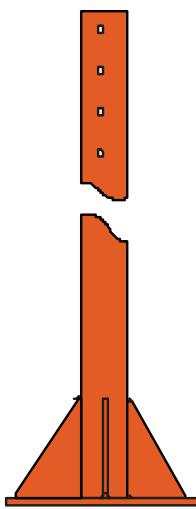
**NOTE:** "Duty" level of Overhead Bridge must match "Duty" level of Articulating Arm. (i.e.,: Medium Duty Bridge for Medium Duty Arm.)



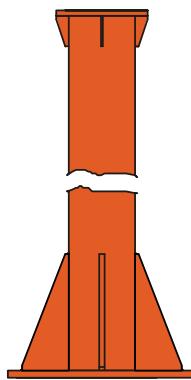
Clevis Mount  
Light Duty



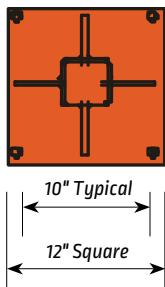
Swivel Mount  
Medium Duty



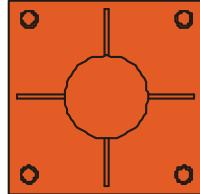
Clevis Mount  
Medium Duty



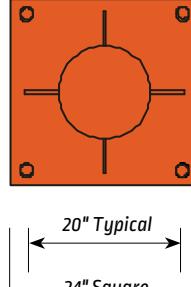
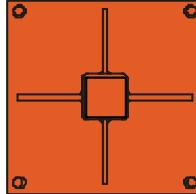
Swivel Mount  
Heavy Duty



10" Typical  
12" Square



10" Typical  
12" Square



20" Typical  
24" Square

Model Number Build						
XX		C or S		##		
Duty Level		Mounting Type		"H" Mast Height		
LP	Light	Clevis*	C	cm	in	
MP	Medium	Swivel**	S	60	152.4	60
HP	Heavy			72	182.9	72
				84	213.4	84
				96	243.8	96
				108	247.3	108

\*Not available on HP [Heavy Duty] models

\*\*Not available on LP [Light Duty] models

# Crowfoot/Tubebut Standard Sockets

A new part number system for standard crowfoot and tubebut sockets enables customers to describe and price standard sockets for each application. The part number includes information on head number of the tool, socket type, socket size and extension length. For special sockets or dimensions not included on this page, check the following pages or contact your local STANLEY sales representative.

## CHOOSE YOUR SOCKET

STEP 1: Select the Base Code from the Head Number table

STEP 2: Add Type, Size & Extension separated by forward slashes

Note: Specify socket size no larger than Max Hex Size.

Crowfoot or Tubebut Head Number	Max Hex Size		Base Code
	(mm)	(in)	
5, 10, 19, 31, 83, 126, 172, 406, 565, 586	19	3/4	L3217
7, 16, 39, 97, 299, 353, 552	19	3/4	L3258
8, 106, 178, 311, 420, 445	13	1/2	L3224
13, 230, 308, 333, 394, 443	13	1/2	L3213
20	27	1 1/16	L3255
21, 98, 225, 284, 416	27	1 1/16	L3240
23, 84, 95, 135, 309, 568	18	11/16	L3209
29, 35, 121, 152, 175, 221, 234, 278, 287, 496	19	3/4	L3218
32, 75, 91, 92, 132, 136, 137, 138, 147, 182, 184, 190, 202, 208, 209, 211, 212, 213, 266, 267, 270, 288, 300, 302, 303, 305	13	1/2	20D280700
32, 75, 91, 92, 132, 136, 137, 138, 147, 182, 184, 190, 202, 208, 209, 211, 212, 213, 266, 267, 270, 288, 300, 302, 303, 305	13	1/2	L3392 Thru Hex
47, 170, 294	11	7/16	L3222
69, 173, 279, 301, 307, 313, 317, 327, 362, 379, 381, 385, 448, 455, 477, 487, 516, 521	13	1/2	L3201
74, 164, 261, 265, 269, 271, 273, 274, 286, 291, 312, 540	18	11/16	L3211
79, 82, 103, 167, 508,	13	1/2	L3202
99, 116, 283, 285, 296	27	1 1/16	L3267
160, 550	13	1/2	L3228
200, 324, 396	19	3/4	L3220
203, 456	19	3/4	L3221
216	13	1/2	L3225
246, 297, 315,	13	9/16	L3256
252, 346, 349, 387, 358, 408, 513	13	1/2	20D280700
264, 304	24	15/16	L3259
264, 304	24	15/16	L3260 Thru Hex

### Base

### Type

### Size

### Extension

Type
SH Single Hex
DH Double Hex
SD Surface Drive
FL Fast Lead

Size (mm)	Size Code
4	M4
5	M5
6	M6
7	M7
8	M8
9	M9
10	M10
11	M11
12	M12
13	M13
14	M14
15	M15
16	M16
17	M17
18	M18
19	M19
20	M20
21	M21
22	M22
23	M23
24	M24
25	M25
26	M26
27	M27

Size (in)	Size Code
1/8	2
3/16	3
1/4	4
5/16	5
3/8	6
7/16	7
1/2	8
9/16	9
5/8	10
11/16	11
3/4	12
13/16	13
7/8	14
15/16	15
1	16
1 1/16	17

Length		Extension Code
(mm)	(in)	
Standard	Standard	0
3	1/8	3
6	1/4	6
9	3/8	9
12	1/2	12
15	5/8	15
18	3/4	18
21	7/8	21
24	1	24
27	1 1/16	27
30	1 1/8	30
33	1 1/4	33
36	1 3/8	36
39	1 1/2	39
42	1 5/8	42
45	1 3/4	45
48	1 7/8	48
51	2	51

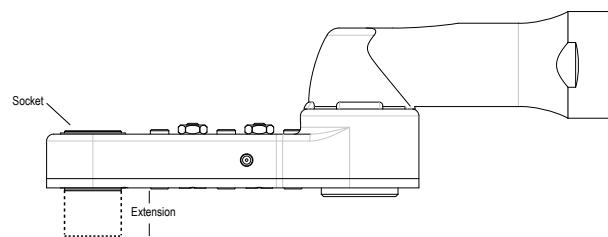
## EXAMPLE ORDERS

**Example 1:** A #8 crowfoot head requires a 3/8 inch surface drive socket with a 1 inch extension. Select the BASE (L3224), TYPE (SD), SIZE (6) and EXTENSION (24).

Base	Type	Size	Ext.
L3224	/SD	/6	/24

**Example 2:** A #147 tubebut head requires a 10mm hex socket with a standard extension. Select the BASE (L3282), TYPE (SH), SIZE (M10) and EXTENSION (0).

Base	Type	Size	Ext.
L3282	/SH	/M10	/0



# Crowfoot/Tubebut Special Sockets

## CROWFOOT HEAD NUMBER(S) 8, 61, 106, 174, 178, 311, 420, 445

*Use[s] Special Socket Option ~A3729. Use the L3224 Base Socket, in the Standard Socket Configurator on page 156, to configure a standard socket.*

### Hex Socket

Size	Part No.	Feature
4mm	B3434	
4mm	F3129	Blind Socket
11/32"	A3682	
7/16"	F3116	both sides have Hex
7/16"	F3674	No Chamfer
7/16"	J3724	with Lead Chamfer
1/2"	F3172	Blind Socket
13mm	J3477	Double Hex with Groove

### Extended Hex Socket

Size	Extension	Part No.	Feature
7/32"[5.5mm]	3mm	20D216402	Surface Drive
7/16"	1"	J3060	Surface Drive
3/8"	3/8"	A3749	
3/8"	1/2"	A3766	
9mm	3/4"	B3515	
10mm	3mm	J3197	
10mm	4mm	J3195	
10mm	5mm	J3196	
10mm	7mm	F3802	
10mm	10mm	B3569	with Retaining Ring
10mm	19mm	B3606	
1/2"	3mm	J3229	
1/2"	1/4"	B3164	both sides have Hex
1/2"	1/2"	J3169	
13mm	1/2"	A3976	
13mm	27mm	20D216404	

### Hex Magnetic Socket

Size	Part No.	Feature
7mm	J3482	
10mm	B3172	
10mm	B3543	thru-hole
3/8"	B3895	Plugged
5/16"	A3690	Plugged
5/16"	A3951	Shallow, plugged
7/16"	A3696	Plugged
7/16"	F3863	thru-hole
11mm	F3181	Shallow, plugged
1/2"	A3705	
13mm	A3923	thru-hole

### Extended Hex Magnetic Socket

Size	Extension	Part No.	Feature
1/4"	7.5mm	B3344	plugged
8mm	1/4"	20D243901	
8mm	1/4"	20D216401	shallow
8mm	15mm	B3508	plugged
8mm	3/8"	F3637	
8mm	3/8"	F3652	turned down diameter
7/16"	1/2"	A3928	
7/16"	1-1/4"	20D243900	
9mm	1/4"	20D216400	
3/8"	1/4"	B3866	
10mm	2mm	A6316	
10mm	1/4"	B3850	plugged
10mm	1/2"	F3664	Fast Lead
10mm	12mm	B3181	
11mm	12mm	B3222	
11mm	1/8"	B3167	plugged
13mm	1/4"	B3776	thru-hole
13mm	1/2"	J3360	

### Male Square Drive

Size	Part No.	Feature
1/4"	B3823	
5/16"	J3261	with Retaining Ring
3/8"	F3242	
1/2"	20D216403	

### Torx Socket

Size	Extension	Part No.
E5		L3191
E8	6mm	F3493

### Extended Hex Magnetic Socket

Size	Extension	Part No.	Feature
1/4"		F3545	Use Customer's Bit
1/4"	1/4"	20D216405	Choose bit below

-F4296 - See Bits on page 172 [Step 6A]

# Crowfoot/Tubebut Special Sockets

## CROWFOOT HEAD NUMBER(S) 5, 10, 19, 31, 70, 83, 126, 406

Use(s) Special Socket Option ~A4882. Use the L3217 Base Socket, in the Standard Socket Configurator on page 156, to configure a standard socket.

### Hex Socket

Size	Part No.	Feature
8mm	L4655	
1/2"	B4257	
15mm	20D270202	Special C'Bore
18mm	L4003	thru broached with stop ring
19mm	B4511	Grooved
18mm	L4672	Part broached

### Extended Hex Socket

Size	Extension	Part No.	Feature
15mm	3/8"	A4933	
5/8"	1/4"	B4069	Double Hex
11/16"	1/4"	B4133	1/2" Extension on opposite side
9/16"	1/4"	B4865	
19mm	2"	F4158	
5/8"(16mm)	35mm	F4379	
3/4"	1"	F4661	Extension on both sides
15mm	1/2"	F4933	
19mm	1-1/4"	J4383	with compression ring
15mm	1/4"	L4177	Fast Leat with Retaining Ring
17mm	1/4"	L4421	Extension on both sides
15mm	3/4"	20D270201	Surface Drive

### Extended Hex Magnetic Socket

Size	Extension	Part No.
15mm	1/4"	B4039
19mm	1/2"	L4788

### Male Square Drive

Size	Part No.	Feature
1/2"	S7542	
5/8"	20D116800	
1/2"	A6174	Wobble Square Drive

### Torx Socket

Size	Part No.
E12	L4880
E18	A6172
E20	A6405

### Internal Threaded Socket

Size	Pitch	Part No.
1/2"	20	F4519
3/4"	16	20D270200

### 20D116801 Insert Hex Socket

Size	Part No.
21mm	20D136000

## TUBEBUT HEAD NUMBER 20

Use(s) Special Socket Option ~B4000. Use the L3255 Base Socket, in the Standard Socket Configurator on page 156, to configure a standard socket.

### Hex Socket

Size	Part No.	Feature
7/8"	L4828	Broached
11/16"	B4301	
18mm	J4153	Broached
19mm	20D281800	19mm Slot
3/4"	B4771	Broached
21mm	A6214	
22mm	20D281801	19mm Slot
15/16"	B4269	Broached
1"	F4536	Broached
11/16"	B4270	Broached
11/16"	B4505	

### Extended Hex Socket

Size	Extension	Part No.	Feature
3/4"	3/4"	J4557	
3/4"	3/4"	H4601	Broached
3/4"	3"	F4945	
22mm	15mm	N4264	
24mm	15mm	J4471	Broached
1"	1"	B4502	
42mm	5.3mm	L4136	

### Dual Size Hex Socket

Size1	Size2	Part No.	Feature
19mm	26mm	L4836	
22mm	19mm	20DS200005	

### J4572 Special Wire Twist Socket

## CROWFOOT HEAD NUMBER(S) 13, 228, 230, 308, 333, 394, 443

*Use[s] Special Socket Option ~A4737. Use the L3213 Base Socket, in the Standard Socket Configurator on page 156, to configure a standard socket.*

### Extended Hex Socket

Size	Extension	Part No.	Feature
10mm	13mm	L3344	
13mm	5mm	B4616	
13mm	1/4"	B4148	
13mm	1/4"	F4486	3/8" Broach
13mm	10mm	B4577	
13mm	1/2"	B4196	
13mm	15mm	20D124102	
13mm	3/4"	J4903	
13mm	55mm	N4499	Surface Drive
1/2"	1/4"	B4383	
1/2"	3/8"	B4463	

### Hex Socket

Size	Part No.	Feature
7mm	L3404	Triple Square
5/16"	J4561	With Groove
7/16"	20D124103	Without Ring Groove
7/16"	F4277	With Ball
1/2"	L4125	
1/2"	F4140	With Groove
13mm	J3477	Double Hex with Groove

## CROWFOOT HEAD NUMBER(S) 21, 98, 225, 284, 416

*Use[s] Special Socket Option ~A4949. Use the L3240 Base Socket, in the Standard Socket Configurator on page 156 to configure a standard socket.*

### Hex Socket

Size	Part No.	Feature
12mm	N4984	
15mm	N4761	
21mm	H4478	
21mm	N4227	Broached
30mm	L4889	
11/4"	L4302	Broached

### Male Square Drive

Size	Part No.	Feature
1/2"	N4629	
5/8"	S9143	Wobble

### Extended Hex Magnetic Socket

Size	Extension	Part No.
10mm	1/2"	L4636
10mm	15mm	20D124100
13mm	Standard	F4354
13mm	1/4"	L4805

### Hex Magnetic Socket

Size	Part No.	Feature
10mm	20D124101	
13mm	N4941	
13mm	N4939	Double Hex

### Male Square Drive

Size	Part No.	Feature
3/8"	J4312	
3/8"	L4612	Paint Marker Socket

### Torx Socket

Size	Part No.
E10	20D241400
E12	H4896

### Internal Threaded Socket

Size	Pitch	Part No.
1/2"	20	F4363

### Extended Hex Socket

Size	Extension	Part No.	Feature
19mm	3/8"	J4823	Surface Drive
19mm	11/4"	A6308	
22mm	54mm	B4923	
22mm	57mm	A6477	
22mm	2 1/8"	S7502	
23mm	1"	B4455	Extension is on both sides
24mm	3/4"	F4937	Fast Lead
1"	3/4"	B4963	
11/8"	2"	J4856	1/2" Below Through

### Torx Socket

Size	Extension	Part No.
E18	15mm	20D245800
E20		H4818

# Crowfoot/Tubebut Special Sockets

## TUBEBUT HEAD NUMBER(S) 23, 84, 95, 135, 309

*Use[s] Special Socket Option ~A4929. Use the L3209 Base Socket, in the Standard Socket Configurator on page 156 to configure a standard socket.*

### Hex Socket

Size	Part No.	Feature
5/16"	J4721	Broached
9/16"	H4160	
1/2"	H4256	
15mm	N4962	
17mm	F4325	Broached
18mm	N4376	Broached

### Extended Hex Socket

Size	Extension	Part No.	Feature
5/8"	3/4"	J4645	
15mm	1/2"	F3303	Broached
15mm	13/4"	L4263	
16mm	1/2"	B4569	Broached
17mm	37mm	N4297	
18mm	1/2"	B4570	Broached

### Male Square Drive

Size	Part No.	Feature
20mm	B3372	Both sides have male hex drive
20mm	B3726	

## CROWFOOT HEAD NUMBER(S) 29, 35, 121, 152, 175, 221, 234, 278, 287, 496

*Use[s] Special Socket Option ~B4105. Use the L3218 Base Socket, in the Standard Socket Configurator on page 156 to configure a standard socket.*

### Hex Socket

Size	Part No.	Feature
1/4"	J4073	With Retaining Ring
5/16"	20D122602	With Retaining Ring
1/2"	F4863	
1/2"	F4408	With Ring Groove
1/2"	J4423	Double Hex
16mm	F4333	With Ring Groove
17mm	B4994	

### Hex Magnetic Socket

Size	Part No.	Feature
10mm	20D122600	
13mm	A6100	
13mm	N4846	
13mm	H4167	
15mm	A6232	With Groove

### Extended Hex Magnetic Socket

Size	Extension	Part No.	Feature
10mm	1/4"	H4878	
12mm	8mm	J4430	
12mm	8mm	H4735	
13mm	8mm	H4254	
13mm	1/4"	H4599	
13mm	15mm	A6442	
13mm	20mm	20D122603	11mm Bore
14mm	20mm	20D122601	
15mm	3/8"	J4274	
15mm	1/2"	H4211	

### Male Square Drive

Size	Part No.	Feature
1/2"	A6088	

### Internal Threaded Socket

Size	Part No.	Feature
1/2"	20	A6304

## CROWFOOT HEAD NUMBER(S) 47, 170, 294

Use this list of special sockets only if the Standard Socket Configurator doesn't have the socket you need. Use(s) Special Socket Option ~B3150. Use the L3222 Base Socket, in the Standard Socket Configurator on page 156 to configure a standard socket.

### Hex Magnetic Socket

Size	Part No.	Feature
10mm	20D118100	
10mm	F3280	Double Hex
1/4"	F3521	Bit Holder

### Extended Hex Magnetic Socket

Size	Extension	Part No.	Feature
10mm	10mm	F3458	Double Hex
10mm	3/16"	F3459	
10mm	11mm	J3111	Extension is on both sides
10mm	19mm	F3658	
10mm	21/2"	B3528	Extension is on both sides

## CROWFOOT HEAD NUMBER(S) 69, 173, 279, 301, 307, 313, 317, 327, 362, 379, 381, 385, 448, 455, 477, 487, 516, 521

Use(s) Special Socket Option ~B4750. Use the L3201 Base Socket, in the Standard Socket Configurator on page 156, to configure a standard socket.

### Hex Socket

Size	Part No.	Feature
1/4"	A6401	With Retaining Ring
5/16"	20D242401	Double Square Socket

### Hex Magnetic Socket

Size	Part No.	Feature
12mm	20D117601	Surface Drive
13mm	F4268	
13mm	20D117606	

### Extended Hex Socket

Size	Extension	Part No.	Feature
5/16"	1/4"	20D117603	
10mm	10mm	20D242400	
10mm	15mm	20D117609	Surface Drive
13mm	1/8"	A6022	Oversize

### Extended Hex Magnetic Socket

Size	Extension	Part No.	Feature
10mm	6mm	20D117604	
12mm	6mm	20D117605	
13mm	6mm	20D117600	
13mm	9mm	20D117602	Surface Drive
13mm	15mm	20D107900	
13mm	20mm	20D117607	Surface Drive

### Male Square Drive

Size	Part No.
3/8"	H4212

### Miscellaneous

Part No.	Feature
20D117608	12mm Hex Insert
20D135800	16mm Magnetic Socket with 12mm Hex Drive

### Torx Socket

Size	Extension	Part No.
E12		20D242404
E12	15mm	A6431

# Crowfoot/Tubebut Special Sockets

## TUBEBUT HEAD NUMBER(S) 74, 164, 261, 265, 269, 271, 273, 274, 286, 291, 312

*Use[s] Special Socket Option ~B3251. Use the L3211 Base Socket, in the Standard Socket Configurator on page 156 to configure a standard socket.*

### Hex Socket

Size	Part No.	Feature
12mm	20D243700	Broached Through
12mm	20D232900	
13mm	L3428	Surface Drive
13mm	F3277	Broached Flush
1/2"	F3092	Broached
14mm	20D243701	Broached Through
15mm	20D243704	Broached Through
16mm	A6376	Surface Drive
16mm	20D222500	Surface Drive
17mm	B3521	Broached Through
18mm	B3711	Broached Through

### Extended Hex Socket

Size	Extension	Part No.	Feature
12mm	1/4"	20D230600	Extension on both sides
12mm	13mm	20D230300	Double Hex
13mm	1/4"	20D239100	
13mm	12mm	20D229200	
13mm	3/4"	20D238500	
5/8"	Standard	A6264	
9/16"	1/2"	A6265	
14mm	27mm	20D243702	Broached Through
16mm	5mm	A6271	
17mm	3mm	20D243705	6.5 Deep

## CROWFOOT HEAD NUMBER(S) 79, 82, 103, 167, 508

*Use[s] Special Socket Option ~B4953. Use the L3202 Base Socket, in the Standard Socket Configurator on page 156 to configure a standard socket.*

### Hex Socket

Size	Part No.	Feature
13mm	B4984	Double Hex

### Extended Hex Magnetic Socket

Size	Extension	Part No.	Feature
13mm	6mm	20D139100	Magnetic

### Internal Threaded Socket

Size	Pitch	Feature
1/2"	20	20D238100

## TUBEBUT HEAD NUMBER(S) 99, 116, 283, 285, 296

*Use[s] Special Socket Option ~F4591. Use the L3267 Base Socket, in the Standard Socket Configurator on page 156 to configure a standard socket.*

### Hex Socket

Size	Part No.	Feature
19mm	L3099	8mm Deep
3/4"	F4621	Broached through
3/4"	L4680	Special Slot
13/16"	F4622	Broached through
21mm	20D267200	19mm Slot, 6mm Deep
22mm	H4925	Broached through
22mm	20D267204	19mm Slot
22mm	20D267202	Special Slot
7/8"	F4623	Broached through
15/16"	F4624	Broached through
24mm	J4567	22.5mm Slot
24mm	H4178	7mm Deep
1"	F4625	Broached through
11/16"	F4626	Broached through

### Extended Hex Socket

Size	Extension	Part No.	Feature
19mm	10mm	20D246600	
20mm	3/8"	20D232800	
20mm	3/8"	20D216700	
21mm	40mm	N4702	Broached through
22mm	105mm	20D237900	
7/8"	1/4"	N4497	Double Hex
7/8"	1/2"	J4733	
7/8"	1"	N4381	
7/8"	13/8"	N4363	Fast Lead
7/8"	2 5/8"	H4102	
24mm	20mm	J3896	36mm Diameter
30mm	45mm	J3895	

### J4455 Special Socket For Turnbuckle

## TUBENUT HEAD NUMBER(S) 147, 32, 75, 91, 92, 132, 136, 137, 138, 182, 184, 190, 202, 208, 209, 211, 212, 213, 266, 267, 270, 288, 300, 302, 303, 305

*Use[s] Special Socket Option ~F3577. Use the L3281, L3282, L3283, or L3392 Base Socket, in the Standard Socket Configurator on page 156 to configure a standard socket.*

### Hex Socket

Size	Part No.	Feature
8mm	J3297	
9mm	J3296	
3/8"	A6027	
10mm	F3861	
10.4mm	20D255000	
11mm	J3018	
11mm	J3362	Double Hex
7/16"	H4219	
12mm	J3486	
13mm	F3577	
13mm	A6213	Double Hex
13mm	F3689	Double Hex
13mm	F3946	Surface Drive
1/2"	H4701	

### Extended Hex Socket

Size	Extension	Part No.	Feature
8mm	5mm	J3784	
3/8"	1/4"	H4718	
10mm	1/4"	J3674	
10mm	10mm	H4496	
10mm	12mm	L3312	Surface Drive
11mm	5mm	J3456	
11mm	8mm	H4530	
11mm	10mm	J3019	
11mm	10mm	L3378	Double Hex
11mm	15mm	J3361	
11mm	15mm	J3680	
7/16"	3/8"	H4440	
7/16"	15mm	H4788	
12mm	3mm	L3143	
12mm	5mm	L3109	
12mm	5mm	J3501	Double Hex
12mm	10mm	L3110	
12mm	15mm	L3111	
13mm	6mm	L3422	
13mm	6mm	L3423	Surface Drive
13mm	7mm	L3359	
13mm	3/8"	L3374	
13mm	10mm	L3411	Double Hex

## CROWFOOT HEAD NUMBER 160

*Use[s] Special Socket Option ~F3812. Use the L3228 Base Socket, in the Standard Socket Configurator on page 156 to configure a standard socket.*

### Extended Hex Magnetic Socket

Size	Extension	Part No.	Feature
10mm	3/4"	J3265	

### Torx Socket

Size	Extension	Part No.
E10		20D215600
E10	5mm	20D215601

## CROWFOOT HEAD NUMBER(S) 200, 324, 396

*Use[s] Special Socket Option ~N4774. Use the L3220 Base Socket, in the Standard Socket Configurator on page 156 to configure a standard socket.*

## CROWFOOT HEAD NUMBER 216

*Use[s] Special Socket Option ~H4086. Use the L3225 Base Socket, in the Standard Socket Configurator on page 156 to configure a standard socket.*

### Hex Socket

Size	Part No.
15mm	N4774

### Male Hex Drive

Size	Part No.	Feature
1/2"	20D248400	

# Crowfoot/Tubebut Special Sockets

## CROWFOOT HEAD NUMBER(S) 203, 456

Use(s) Special Socket Option ~N4864. Use the L3221 Base Socket, in the Standard Socket Configurator on page 156, to configure a standard socket.

### Extended Hex Socket

Size	Extension	Part No.	Feature
13mm	Standard	20D213302	.312 Deep

### Torx Magnetic Socket

Size	Part No.	Feature
T-50	20mm	20S111300

## Extended Hex Magnetic Socket

Size	Extension	Part No.	Feature
10mm	Standard	20D213303	
13mm	Standard	20D213301	

## CROWFOOT HEAD NUMBER(S) 246, 297, 315

Use(s) Special Socket Option ~H4648. Use the L3256 Base Socket, in the Standard Socket Configurator on page 156, to configure a standard socket.

### Hex Magnetic Socket

Size	Part No.	Feature
13mm	20D114700	
13mm	20D114704	5.3mm Deep

### Extended Hex Socket

Size	Extension	Part No.	Feature
8mm	6mm	20D230004	Double Hex, Special O.D.
10mm	36mm	20D230001	45mm Extension on other side
12mm	6mm	20D114706	Magnetic
13mm	1/4"	20D114705	Magnetic
13mm	1/4"	H4763	Magnetic
13mm	1/4"	A6078	Magnetic
9/16"	3/8"	A6314	Double Hex

## TUBEBUT HEAD NUMBER(S) 252, 346, 349, 387, 358, 408, 513

Use(s) Special Socket Option ~L3130. Use the 20D280700, L3233 Base Socket, in the Standard Socket Configurator on page 156, to configure a standard socket.

### Hex Socket

Size	Part No.	Feature
11mm	20D245408	5.3mm Deep
13mm	20D245405	Surface Drive
13mm	20D245406	1/4" Deep, Surface Drive, Thick Wall
13mm	20D245407	1/4" Deep, Thick Wall
13mm	20S211100	1/4" Deep, Surface Drive
13mm	20S211101	1/4" Deep

### Extended Hex Socket

Size	Extension	Part No.	Feature
12mm	9mm	20S213500	.312 Deep
14mm	2mm	20D245400	

## TUBEBUT HEAD NUMBER(S) 264, 304

Use(s) Special Socket Option ~F3388. Use the L3259, L3260 Base Socket, in the Standard Socket Configurator on page 156, to configure a standard socket.

### Hex Socket

Size	Part No.	Feature
15mm	L3405	
18mm	20D281200	5/16" Deep
24mm	L3347	1/2" Deep

### Extended Hex Socket

Size	Extension	Part No.	Feature
13mm	Standard	L3412	
3/4"	3/4"	L3005	
13/16"	1"	F3461	
7/8"	1"	H4012	

## CROWFOOT HEAD NUMBER(S) 7, 16, 299, 306, 353

*Use this list of special sockets only if the Standard Socket Configurator on page 156 doesn't have the socket you need.*

*Use[s] Special Socket Option ~A4690. Use the L3258 Base Socket, in the Standard Socket Configurator on page 156, to configure a standard socket.*

### Hex Socket

Size	Extension	Part No.	Feature
13mm		20D111300	
5/16"		A6395	
14mm		20D118801	Drive Insert
17mm		L4049	
17mm	62mm	B4047	

### Torx Bit

Size	Extension	Part No.
T30		A6341
T30	20mm	20D240609
T40		A6373
T45		20D240600
T45	20mm	20D240610
T50		A6403

### Hex Bit

Size	Extension	Part No.	Feature
3/16"		A6179	
1/4"		A5668	
3/8"		A5666	
5mm		F4380	
6mm		F4399	
6mm		A6206	Square Bit
6mm	5mm	A6207	
7mm		F4296	
8mm		F4513	
10mm		L4259	
14mm		A5724	

### Special Bit

Size	Extension	Part No.
XNZ		H4533
Slotted		20D246700

### 5/16" Bit Holder 20D118800 with Bit Retainer Clip

# Flush Angle Standard Sockets

A new part number system for standard flush angle head sockets enables customers to describe and price standard sockets for each application. The part number includes information on head number of the tool, socket type, socket size and extension length. For special sockets or dimensions not included on this page, check the following pages or contact your local STANLEY sales representative.

## CHOOSE YOUR SOCKET

STEP 1: Select the Base Code from the Head Number table

STEP 2: Add Type, Size & Extension separated by forward slashes

Flush Angle Head Number DTU	Max Hex Size		Base Code	Base	Type	Size	Extension
	[mm]	[in]					
A15 [as in EB33LA15-27]	13	1/2	20D283200				
A18	16	5/8	20D213505				
A19	17	5/8	20D222300				
A22	19	3/4	L3270				
A26	22	7/8	L3435				

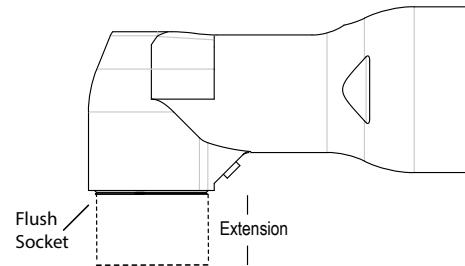
Note: Specify socket size no larger than Max Hex Size.

Type	Size [mm]	Size Code	Size [in]	Size Code	Length [mm]	Length [in]	Extension Code
SH Single Hex	4	M4	1/8	2	Standard	Standard	0
DH Double Hex	5	M5	3/16	3			
SD Surface Drive	6	M6	1/4	4			
	7	M7	5/16	5			
	8	M8	3/8	6			
	9	M9	7/16	7			
	10	M10	1/2	8			
	11	M11	9/16	9			
	12	M12	5/8	10			
	13	M13	11/16	11			
	14	M14	3/4	12			
	15	M15	13/16	13			
	16	M16	7/8	14			
	17	M17	15/16	15			
	18	M18	1	16			
	19	M19	1 1/16	17			
	20	M20					
	21	M21					
	22	M22					
	23	M23					
	24	M24					
	25	M25					
	26	M26					
	27	M27					

## EXAMPLE ORDER

Example: An A19 flush angle head requires a 3/8 in surface drive socket with a 1 in extension. Select the BASE (20D222300), TYPE (SD), SIZE (6) and EXTENSION (24).

Base	Type	Size	Ext.
20D222300	/SD	/6	/24



# Flush Angle Special Socket Selection

## ~B3686 SOCKET OPTIONS FOR A13 FLUSH OUTPUT 20D121914

*Maximum Hex size for this output is 12mm. \*B3686 is the default socket unless another is specified on Purchase Order. Use this list of special sockets only if the Standard Socket Configurator on page 166 doesn't have the socket you need.*

### Hex Socket

Size	Part No.	Feature
4mm	B3834	
7mm	B3686*	
1/4"	B3751	
5/16" [8mm]	B3752	
5/16" [8mm]	20D126500	With Retaining Ring
3/8"	B3753	
10mm	B3754	

### Extended Hex Socket

Size	Extension	Part No.
8mm	1/4"	J3041
5/16" [8mm]	1/16"	J3706
10mm	5mm	20D253204
10mm	10mm	20D253200
10mm	3/4"	20D238300
10mm	1/2"	J3100

### Hex Magnetic Socket

Size	Part No.
5/16" [8mm]	J3823
10mm	L3393

### Extended Hex Magnetic Socket

Size	Extension	Part No.
5/16" [8mm]	1/2"	20D126501
10mm	1/4"	L3073

### Double Hex Socket

Size	Part No.
8mm	L3154
10mm	20D253205

### Double Hex Magnetic Socket

Size	Part No.
10mm	20D126503

### Torx Socket

Size	Part No.
E10	20D253202

## ~20D905800 SOCKET OPTIONS FOR A14 FLUSH OUTPUT 20D112113

*Maximum Hex size for this output is 13mm. \*20D255500 is the default socket unless another is specified on Purchase Order.*

### Surface Drive Socket

Size	Part No.
10mm	20D255505
12mm	20D255500*
13mm	20D255501

### Surface Drive Magnetic Socket

Size	Part No.
10mm	20D126402
12mm	20D126400
13mm	20D126401

### Extended Surface Drive Socket

Size	Extension	Part No.
10mm	10mm	20D255503
12mm	1/4"	20D255506
13mm	1/4"	20D255508
13mm	9mm	20D255507

### Extended Surface Drive Magnetic Socket

Size	Extension	Part No.
10mm	10mm	20D126405
13mm	9mm	20D126404

### Extended Surface Drive Thin Wall Socket

Size	Extension	Part No.
13mm	1/4"	20D126406

*Includes 20D236604 Compression Ring to prevent cracking*

# Flush Angle Special Socket Selection

## ~20D901200 SOCKET OPTIONS FOR A18 FLUSH OUTPUT 20D136503

\* F4747 is the default socket unless another is specified on Purchase Order.

### Hex Socket

Size	Part No.	Feature
6mm	20D213504	
5/16" [8mm]	L4653	with Retaining Ring
3/8"	20D213501	
10mm	F4897	
7/16"	F4896	
11mm	F4898	
12mm	L4006	
1/2"	F4895	
13mm	F4899	
13mm	L4543	1/2" clearance hole
9/16"	F4747*	
14mm	20D213500	
15mm	F4900	
15mm	N4769	with Retaining Ring
5/8" [16mm]	F4894	

### Extended Hex Socket

Size	Extension	Part No.	Feature
10mm	3mm	N4638	
10mm	7mm	N4251	
10mm	8mm	20D213503	
10mm	1"	J4979	
12mm	1/4"	L4839	
13mm	1/8"	N4086	
13mm	1/4"	N4918	
13mm	12mm	H4494	
13mm	1/2"	L4435	
13mm	1"	J4444	
9/16"	1/4"	J4413	
14mm	1/4"	N4268	
14mm	16mm	J4311	
15mm	1/4"	L4378	
15mm	1/4"	N4686	with Retaining Ring
15mm	3/8"	H4459	
15mm	1/2"	J4684	
15mm	1/2"	20D213502	Surface Drive
16mm	1/4"	N4312	
16mm	150mm	N4343	
17mm	5mm	H4301	
17mm	20mm	A6192	

### Surface Drive Socket

Size	Part No.
13mm	L4022

### Extended Surface Drive Socket

Size	Extension	Part No.
3/8"	10mm	H4236
13mm	5mm	L4935
13mm	10mm	L4934
14mm	30mm	H4371
16mm	1/4"	N4581

### Hex Magnetic Socket

Size	Part No.
13mm	L4834

### Extended Hex Magnetic Socket

Size	Extension	Part No.
10mm]	8mm	20D118202
11mm	5/8"	L4509
12mm	3mm	A6309
13mm	1/2"	H4921
13mm	23mm	20D118200
15mm	3/8"	A6115

### Torx Socket

Size	Part No.
E8	H4367

### Torx Socket

Size	Part No.
5mm	X4048
6mm	X4047
8mm	X4091
10mm	X4093
T30	X4198
T40	X4248
T50	X4249

## **~20D903900 SOCKET OPTIONS FOR A19 (THREADED) FLUSH OUTPUT 20D100021 AND A19 (SPLINED) FLUSH OUTPUT 20D100106**

Use this list of special sockets only if the Standard Socket Configurator doesn't have the socket you need. Use the 20D222300 Base Socket, in the Standard Socket Configurator on page 166 to configure a standard socket.

### **Hex Socket**

Size	Part No.
9/16"	20D222305
18mm	20D222308

### **Extended Hex Socket**

Size	Extension	Part No.
17mm	6mm	20D118003
18mm)	12mm	20D118001

### **Extended Hex Magnetic Socket**

Size	Extension	Part No.
18mm)	12mm	20D118002

### **Torx Bit**

Size	Extension	Part No.
T30		A6341
T30	20mm	20D240609
T40		A6373
T45		20D240600
T45	20mm	20D240610
T50		A6403

## **~20D902700 SOCKET OPTIONS FOR A22 FLUSH OUTPUT 20D100309**

Use the 20D115100 Base Socket, in the Standard Socket Configurator on page 166 to configure a standard socket.

### **TORX SOCKET**

Size	Part No.
E18	20D268400

## **~A5107 SOCKET OPTIONS FOR A32 FLUSH OUTPUT 20D102201**

Size	Part No.
17mm	20D267300
18mm	A5651
19mm	A5248
3/4" Square	A5479
21mm	A5175
22mm	A5112
22mm Fast Lead	A5183

Size	Part No.
23mm	20D267303
24mm	A5107
24mm Fast Lead	A5380
24mm Surface Drive	A5438
1"	A5113
1" Fast Lead	A5473
27mm	A5114

## **~20D904000 Bit Options for 5/16" Bit Holder 20D118000 with Bit Retainer Clip**

Choose Bit

Size	Extension	Part No.	Feature
3/16"		A6179	
1/4"		A5668	
3/8"		A5666	
5mm		F4380	
6mm		F4399	
6mm		A6206	Square Bit
6mm	5mm	A6207	
7mm		F4296	
8mm		F4513	
10mm		L4259	
14mm		A5724	

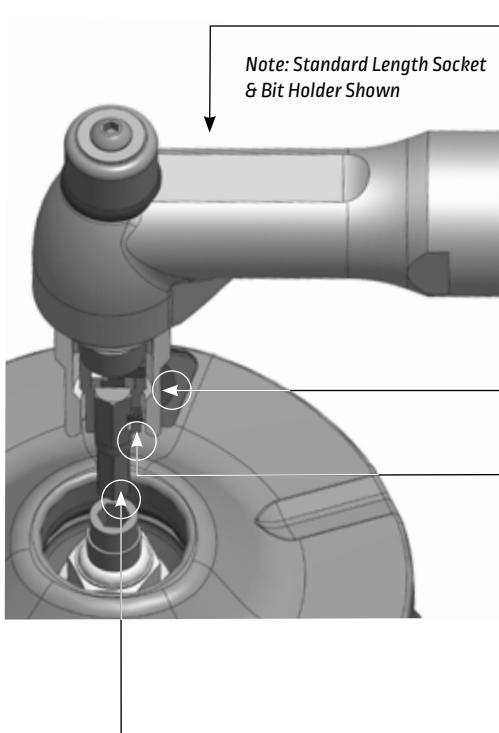
### **Miscellaneous Bits**

Size	Extension	Part No.
XNZ		H4533
Slotted		20D246700

## **~20D903700 SOCKET OPTIONS FOR A26 FLUSH OUTPUT 20D100409**

Use the 20D116600 Base Socket, in the Standard Socket Configurator on page 166 to configure a standard socket.

# H18, 22, 26 & 32 Bit Holder Configuration Guide



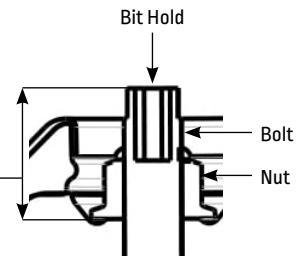
► **STEP 1:** Choose Type of Hold & Drive (See page 171 for Tang Holder)

► **STEP 2:** Choose Hold & Drive travel length

» Option 1: LH18V1= 1 inch of travel

» Option 2: LH18V2= 2 inch of travel

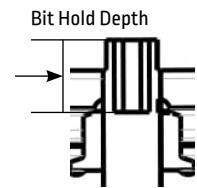
Requires LH18V1 for <= 26mm  
Requires LH18V2 for >= 26mm & <= 52mm



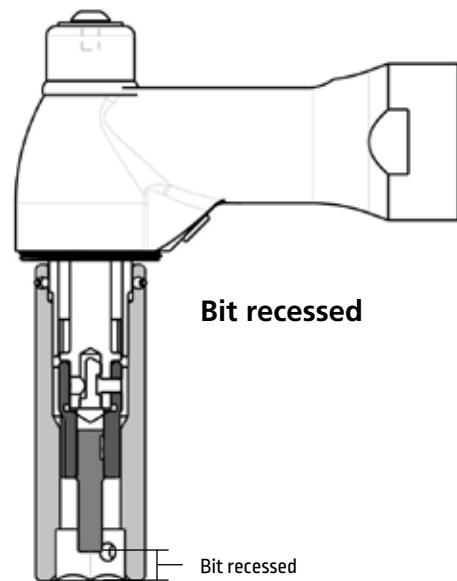
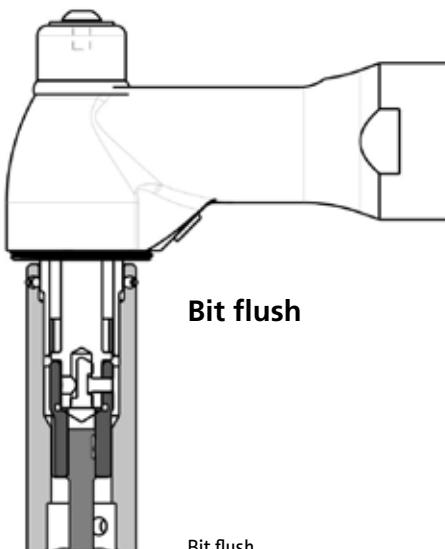
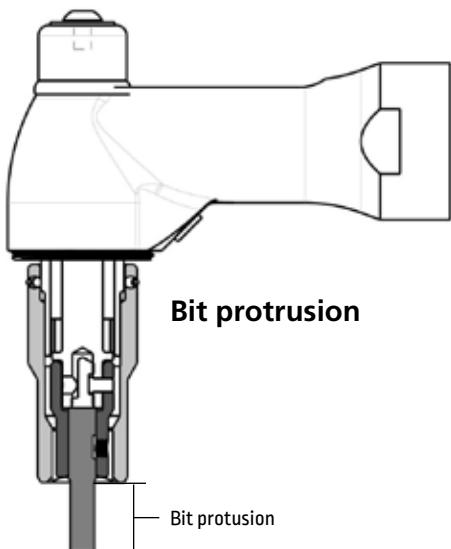
► **STEP 3:** Choose Socket (Step 3 on pages 172, 173, 176 or 178)

► **STEP 4:** Choose Bit Holder (Step 4A on pages 172, 173, 177 or 178)

► **STEP 5:** Determine extension length required (*Use images below to determine the required socket and/or bit holder extension length*) Add socket extension up to, but not over, the bolt threads — the socket should not extend over the threads.



► **STEP 6:** Choose Bit (Step 6A on page 172, 175, 177 or 179)



Socket	Bit Holder	Bit
20D253602	20D254200	N4991

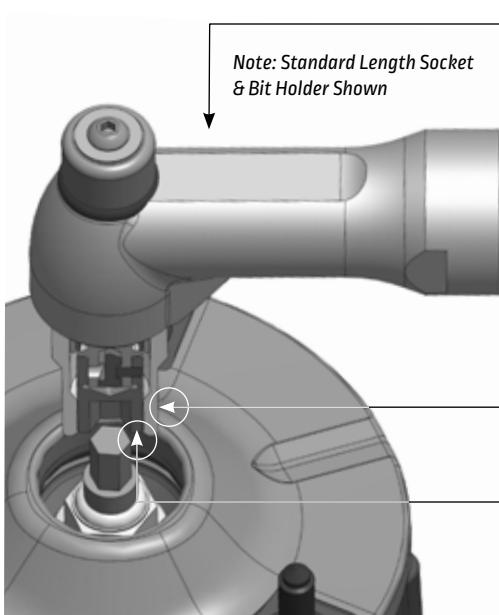
**Example:** An H18 hold and drive requires a 14 mm hex socket extended 5 mm with a 1/4" bit holder (standard extension) and an 8 mm Hex bit.

Bit Protrusion (mm) = 18mm + Bit Holder Extension (mm) – Socket Extension (mm)

If you choose a 20D253602 socket, 20D254200 bit holder and a N4991 bit, the bit will protrude 13 mm from the bottom of the socket. The bit will protrude 13 mm because a standard length bit holder was chosen with a 5mm extended socket.

13mm Bit Protrusion = 18mm + 0mm Bit Holder Extension – 5mm Socket Extension

# H18, 22, 26 & 32 Tang Holder Configuration Guide

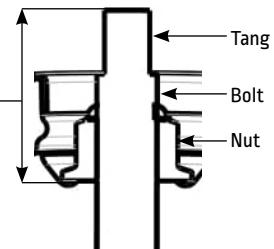


► **STEP 1:** Choose Type of Hold & Drive (See page 170 for Bit Holder)

► **STEP 2:** Choose Hold & Drive travel length

- » Option 1: LH18V1= 1 inch of travel
- » Option 2: LH18V2= 2 inch of travel

Requires LH18V1 for <= 26mm  
Requires LH18V2 for >= 26mm & <= 52mm



► **STEP 3:** Choose Socket

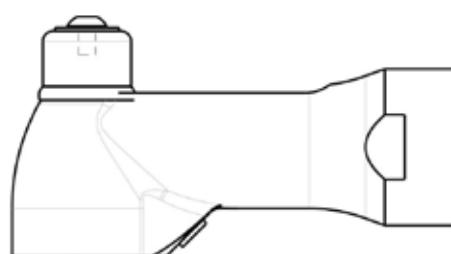
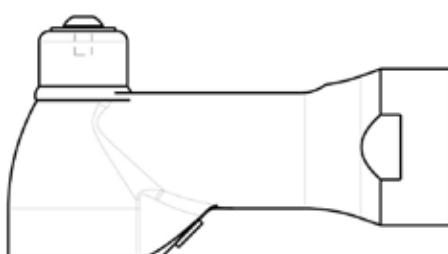
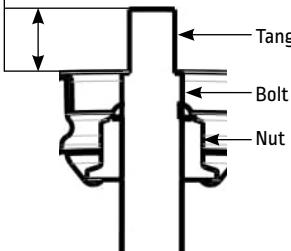
(Step 3 on pages 172, 173, 176 or 178)

► **STEP 4:** Choose Tang Holder

(Step 4B on pages 172, 174, 175, 177 or 178)

► **STEP 5:** Determine extension length required (Use images below to determine the required socket and/or tang holder extension length)

Add socket extension if tang is longer than 11.5mm, but never extend the socket past the bottom of the tang.



Tang Holder Depth = 11.5 mm

**Tang Flush for:**  
Bit Holder Length = Std  
Socket Extension = Std

**Tang Recessed for:**  
Bit Holder Length = Std  
Socket Extension > Std

Socket	Tang Holder
20D253602	20D261703

**Example:** An H18 hold and drive requires a 14 mm hex socket extended 5 mm, with a 6 mm hex tang holder standard extension.

Tang Recessed (mm) = Socket Extension (mm) – Tang Holder Extension (mm)

If you choose a 20D253602 socket and a 20D261703 tang holder, the tang holder will be recessed 5 mm. The tang will be recessed because a standard length tang holder was chosen with a 5mm extended socket.

5mm Tang Recessed = 5 mm Socket Extension – 0 mm Tang Holder Extension

# H18 Output Options

## ► STEP 1: Choose type of hold & drive:

**Option A: Bit Holder** See page 160 for config. guide

**Option B: Tang Holder** See page 161 for config. guide

## ► STEP 2: Choose Hold & Drive travel length: Reference E and EB tool sections for available model number: EB non-fixtured tools: pg. 11, EB fixtured tools: pg. 31, E non-fixtured tools: pg. 69, E fixtured tools: pg. 93.

## ► STEP 3: Choose standard socket size of one of the below types:

### ~20D905700 SOCKET OPTIONS

#### Hex

Size	Part No.
13mm	20D201001
14mm	20D253600
15mm	20D253604
16mm	20D253601

Size	Part No.
17mm	20D253603
18mm	20D253606
19mm	20D253610
24mm	20D253611

#### Hex Surface Drive

Size	Part No.
17mm	20D253612

#### Extended Hex

Size	Extension	Part No.
14mm	5mm	20D253602
14mm	6mm	20D253605
16mm	17mm	20D253607

## ► STEP 4A: Choose standard bit holder size:

### ~20D905600 BIT HOLDER OPTIONS

Size	Part No.
1/4"	20D254200
5/16"	20D253400

## ► STEP 4B: Choose tang holder size:

### ~20D905601 TANG OPTIONS

Size	Part No.
5mm x 10.3mm	20D261701
5mm x 9.5mm	20DS201000
5.5mm	20D261706

Size	Part No.
6mm	20D261703
6mm x 10mm	20D261700

Size	Part No.
6mm x 11mm	20D261702
10mm	20D261705

## ► STEP 5A: Determine socket and/or bit holder extension length required. Calculate the bit protrusion using the following equation: Bit Protrusion (mm) = 18 mm + Bit Holder Extension (mm) – Socket Extension (mm)

## ► STEP 5B: Determine socket and/or tang holder extension length required. Calculate the tang recession using the following equation: Tang Recessed (mm) = Socket Extension (mm) – Tang Holder Extension (mm)

## ► STEP 6A: Choose bit:

### ~F4296 BIT SELECTION

Description	Part No.
7MM HEX BIT [FOR 5/16 HOLDER]	F4296
5MM HEX BIT [FOR 5/16 HOLDER]	F4380
6MM HEX BIT [FOR 5/16 HOLDER]	F4399
8MM HEX BIT [FOR 5/16 HOLDER]	F4513
5MM HEX BIT [FOR 1/4 HOLDER]	F4361
10MM MALE HEX BIT	L4259
5/16" HEX BIT [USE W/ F4360]	N4451
8MM HEX BIT [FOR 1/4" HOLDER]	N4991
T15 TORX BIT [FOR 1/4" HOLDER]	H4280
HEX INSERT BIT -SLOTTED [FOR	H4436
BIT FOR "XNZ" SCREW [FOR 5/16"	H4533

Description	Part No.
1/4" MALE HEX BIT [USE W/	A5668
3/8" MALE HEX BIT [USE W/	A5666
T27 TORX BIT 1/4" SHANK	A6134
7MM HEX BIT [FOR 1/4" HOLDER]	H4909
HEX BIT 14MM	A5724
6MM SQUARE BIT	A6206
6MM X 5MM BIT	A6207
HEX BIT-1/4 HEX 5/32 HEX	A6178
HEX BIT-1/4 HEX 3/16 HEX	A6179
T30 HEX BIT	A6341
HEX BIT - T40, MADE FROM X4248	A6373

Description	Part No.
HEX BIT-T50	A6403
HEX BIT -1/4 HEX	A6453
HEX BIT, T-45	20D240600
SLOTTED HEX BIT - 5/16" HEX	20D246700
HEX BIT, T30 [1/4" HOLDER]	20D240601
9MM HEX BIT, 1/4" HOLDER	20D240605
5/16" HEX BIT, 7/16" DRIVE	20D240606
T-30 BIT,SPCL LENGTH,5/16 HLDR	20D240609
T-45 BIT,SPCL LENGTH,5/16 HLDR	20D240610
6MM HEX BIT, 1/4" DRIVE, MACH	20D240611

# H22 Output Options

► **STEP 1:** Choose type of hold & drive:

## Option A: Bit Holder

See page 160 for configuration guide

## Option B: Tang Holder

See page 161 for configuration guide

► **STEP 2:** Choose Hold & Drive travel length: Reference E and EB tool sections for available model number: EB non-fixture tools: page 11, EB fixture tools: page 31, E non-fixture tools: page 69, E fixture tools: page 93.

► **STEP 3:** Choose standard socket size of one of the below types:

## 20D911000 SOCKET OPTIONS

Use the 20D288400 Base Socket, in the Standard Socket Configurator, on page 162, to configure a standard socket.

### Hex

Size	Part No.
7/16"	A6184
7/8"	A6186
13mm (1/2")	A6185
14mm	H4747
9/16	N4884
15mm	N4665
16mm (5/8")	N4617
1"	20S202000
27mm	20D232607

### Extended Hex

Size	Extension	Part No.
14mm	1-5/8"	A6451
14mm	2-5/8"	20D215100
14mm	4-5/8"	20D215101
14mm	7-3/8"	20D215102
15mm	1/2"	H4597
15mm	1"	A6282
15mm	6"	A6002
16mm	3/8"	20D245502
16mm	17mm	20D245503
16mm	30mm	N4620
16mm	60mm	20D245500
16mm	200mm	20D245501
19mm	11mm	20D215106
21mm	67.6mm	20D222006
21mm	110mm	20D132204
21mm	6"	20D222600
24mm	1/2"	20D222903

### Deep Extended Hex

Size	Extension	Part No.
18mm	18mm	H4038
21mm	18mm	H4037

### Surface Drive Extended Hex

Size	Extension	Part No.
18mm	46mm	H4500
18mm	12-1/2"	20D132203
21mm	40mm	20D222001
21mm	80mm	20D222000

### Extension Tube Options with Hex Sockets

Size	Extension	Part No.
18mm	8"	20D132201
18mm	12"	20D132200
19mm	4"	20D132202

### Hex Surface Drive

Size	Part No.
13mm	H4435
15mm	A6200

► **STEP 4A:** Choose standard bit holder size:

## 20D911100 SPECIAL BIT HOLDER OPTIONS

Size	Extension	Part No.
5/16"		S7750 (Special Diameter)
5/16"	100mm	20DS200009
5/16"	110mm	20D132306
5/16"	4"	20D132302
5/16"	150mm	20D215208
5/16"	155mm	20D215207
5/16"	175mm	20D247200
5/16"	6 5/8"	20D215202
7/16"		20D215201

► **STEP 4B:** See next page to choose tang holder size

# H22 Output Options continued

► **STEP 4B:** Choose tang holder size:

## ~F4287 TANG OPTIONS

Description	Part No.
7.7MM X 9.8MM FEMALE SHANK	F4287
1/4" HEX HOLDER	F4360
10MM FEM. HEX TANG HOLDER	F4406
7.7 X 9.8 X 16MM EXT TANG HOLD	F4542
5MM X 8MM TANG HOLDER	F4544
5.7MM X 8MM TANG HOLDER	F4572
8MM [5/16] INT. HEX TANG	F4573
5.9MM X 8.1MM TANG HOLDER	F4596
10MM X 13MM TANG HOLDER	F4600
8.5 HEX FEMALE TANG HOLDER	F4636
.390" X .529" TANG HOLDER	F4673
8MM X 6.35MM TANG HOLDER	F4718
6.7MM X 7MM TANG HOLDER	F4870
7.2MM X 10.2MM TANG HOLDER	F4975
10MM TANG HOLD LEFT HAND	J4043
1/4 X 5/16 TANG HOLDER	J4178
8MM X 6.35 X 1/2 TANG HOLDER	J4214
8.5 X 10.5 X 16MM TANG HOLDER	J4296
8.5 X 10.5MM TANG HOLDER	J4302
9.75 X 12MM TANG HOLDER	J4314
7.7 X 9.8 X 80MM TANG HOLDER	J4315
7.7 X 9.8 X 157MM TANG HOLDER	J4317
8MM HEX TANG HOLDER 10MM EXT	J4382
8MM HEX TANG HOLDER	J4456
7MM FEMALE HEX TANG HOLDER	J4586
6.3 X 9MM TANG HOLDER	J4707
8MM X 11MM TANG HOLDER	J4785
8MM X 5.7MM X 1" EXT TANG	J4830
6.3 X 7.5MM TANG HOLDER	J4877
8.90 X 11.20MM X 80MM TANG	J4990
9MM FEMALE HEX TANG HOLDER	L4005
10MM X 6MM TANG HOLDER	L4017
5MM X 8MM TANG HOLDER	L4019
11/32 HEX FEMALE TANG	L4106
8.2MM X 9.8MM TANG HOLDER	L4117
3/8 FEMALE HEX TANG HOLDER	L4373
9.2 X 12.5MM TANG HOLDER	L4523
8MM X 5.77MM TANG HOLDER	L4524
6MM X 7.72MM TANG HOLDER	L4544
6 X 8MM TANG HOLDER	L4644
TANG HOLDER 9MM SURF DR	L4694
TANG HOLDER 12.5 X 9.2 MM	L4738

Description	Part No.
TANG HOLDER 12.5 X 9.2 X 300MM	L4732
TANG HOLDER 8MM HEX 80 MM EXT	L4784
11MM HEX TANG HOLDER	L4803
8MM HEX TANG HOLDER X 19 MM	L4848
TANG HOLDER 8.2 X 9.8 MM	L4869
4MM MALE HEX TANG HOLDER	L4898
6.3 X 9.8MM TANG HOLDER	L4978
TANG HOLDER 12.5 X 9MM X 70MM	N4029
TANG HOLDER 12.5 X 9MM X 145MM	N4030
TANG HOLDER 12.5 X 9	N4031
TANG HOLDER 10 X 7.6MM X 75MM	N4033
TANG HOLDER 12.5 X 9MM X 75MM	N4032
10MM X 7.6MM TANG HOLDER	N4133
12.5MM X 9MM TANG HOLDER	N4130
12.5MM X 9MM TANG HOLDER 27MM	N4131
12.5MM X 9MM X 102MM TANG HOLDER	N4132
9.2 X 12.5MM TANG HOLDER 157MM	N4151
12.5 X 9MM TANG HOLDER 62MM	N4187
TANG HOLDER 10MM HEX X 1.531	N4189
TANG HOLDER 6MM HEX	N4192
12.5MM X 9MM TANG HOLDER	N4384
8 X 5.7 TANG HOLDER 87MM EXT	N4400
6.3 X 8.0 X 32MM EXT TANG	N4413
9.2 X 12.5MM TANG HOLDER 8.5MM	N4467
9.2MM X 12.5MM X 26.5MM EXT.	N4469
10MM HEX T HOLDER 1/4" EXT	N4575
8MM X 12MM TANG HOLDER	N4483
6MM X 13MM TANG HOLDER	N4484
7.2MM X 9.2MM TANG HOLDER 80MM	N4587
TORX SOCKET 3/8" SQ X E14	R7927
7.7MM X 9.8MM X 30MM	N4621
7.2MM X 9.2MM TANG HOLDER	N4658
10 X 7.6MM TANG HOLDER 182MM	N4697
10 X 7.6MM TANG HOLDER 102MM	N4699
8MM X 6MM TANG HOLDER	N4666
10MM X 3-1/8 EXT TANG HOLDER	N4712
6MM HEX TANG HOLDER 80MM EXT	N4716
TANG HOLDER 9 X 12.6MM X 157MM	N4748
TANG HOLDER 8 X 10MM X 80MM	N4749
TANG HOLDER 8 X 10MM X 157MM	N4752
5MM HEX TANG HOLDER	N4758

Description	Part No.
1/4" X 7/16" TANG HOLDER	N4826
6.3MM X 9.8MM TANG HOLDER 37MM	N4834
10MM X 7MM TANG HOLDER	N4921
11/32" HEX TANG HOLDER	N4927
10MM X 7.6MM TANG HOLDER	N4994
10MM X 7.3MM TANG HOLDER 152MM	N4995
6.3MM X 9.3MM TANG HOLDER	H4115
7MM HEX TANG HOLDER 1" EXT	H4161
8MM SQ FEMALE TANG HOLDER	H4191
8MM X 11MM TANG HOLDER W/ LEAD	H4176
6 X 10MM TANG HOLDER .600 OD	H4209
.340 HEX TANG HOLDER	H4210
8MM HEX TANG HOLDER 1" EXT	H4372
TORX SOCKET TX3114	H4373
9.2 X 12.5MM TANG HOLDER	H4448
9.2 X 12.5MM TANG HOLDER 182MM	H4483
9.22 X 12.5MM TANG HOLD	H4484
9.2 X 12.5MM TANG HOLDER	H4485
8 X 10MM TANG HOLDER 10MM EXT	H4488
6.3 X 8.7MM TANG HOLDER 80MM	H4489
4MM X 6MM TANG HOLDER	H4475
9MM HEX TANG HOLDER 46MM EXT	H4499
6 X 8MM TANG HOLDER 43MM EXT	H4577
9 X 11MM TANG HOLDER	H4578
6 X 8MM TANG HOLDER 47MM EXT	H4593
5.7 X 8MM TANG HOLDER 5MM EXT	H4606
5.6 X 9.8MM TANG HOLDER	H4607
5.9 X 6.8MM TANG HOLDER	H4676
6.8 X 8.25MM TANG HOLDER	H4725
2 STEP TANG HOLD 6 & 7.08 X 8	H4748
7MM X 11MM TANG HOLDER	H4761
7.3MM X 9.4MM TANG HOLDER	H4829
5.7MM X 8MM TANG HOLDER	H4840
6.35 X 8.12MM TANG HOLDER	H4858
5 X 7.5MM TANG HOLDER	H4857
12MM FEMALE HEX TANG HOLDER	H4874
10MM FAST LEAD TANG HOLDER	H4877
8MM HEX TANGHOLDER 8" EXT	H4888
TANG HOLDER 9.4 X 11.3MM STD	H4889
TANG HOLDER 9.2MM X 12.5MM X 45MM	H4819
8.0 X 10.5MM TANG HOLDER, 8"	H4904
8.7 X 11MM TANG OLDER, STD.	H4905
10.2 X 11.5MM TANG HOLDER, STD	H4906

# H22 Output Options continued

## ~F4287 TANG OPTIONS

Description	Part No.
TANG HOLDER 8MM X 10MM 1-1/8"	H4958
10MM HEX TANG HOLD 32MM EXT	H4960
7MM FEMALE TANG HOLDER 6" EXT	A6003
4.4 X 8MM TANG HOLDER	A6005
E12 TORX SOCKET	R8461
6.24 X 7.5MM TANG HOLDER	A6136
10MM HEX X 75MM EXT TANG	A6233
8MM SQ TANG HOLDER 47MM EXT	A6226
6MM X 8MM TANG HOLDER	A6089
TANG/EXTENSION KIT,8MMHX,12"LG	20D132300
TANG HOLDER 11MM SURF. DR X	20D214300
TANG HOLDER 8MM SURF. DR. X	20D214301
TANG HOLDER 6.4MM X 8.4M X	20D215400
10MM FEMALE HEX x 6.00"	20D222700

Description	Part No.
A3H TANG HOLDER, 8.8MM X 9.8MM	20D226100
TANG HOLDER SP. 11.28 DOUBLE	20S200602
E8 TORX TANG HOLDER	20D226200
15MM X 17MM TANG HOLDER	20S201900
TANG HOLDER 5.0 X 6.3MM	20D242700
TANG HOLDER - 7MM SURF DR	20D246900
5.5 X 7.3, 6MM EXT,TANG HOLDER	20D242701
6.0MM X 5.0 MM, TANG HOLDER	20D242702
TANG HOLDER, E12 TORX	20D226201
E8 TORXX 6" EXT HEX BIT	20D226202
6.5MM X 8MM, TAPERED LEAD, TANG HOLDER	20D226101
10.22mm FEMALE HEX TANG HOLDER	20D222702
TANG HOLDER 5.4mm X 7.7mm	20D242703

Description	Part No.
8MM X 8" EXT H22 TANG ASM	20D132301
8MM X 12-1/2" EXT, SURF DR H22	20D132305
10MM X 32MM EXT, SURF DR TANG	20D245103
6MM HEX 6MM DEEP, TANG H22	20D214303
13MM HEX TANG HOLDER	20D214304
7.2MM X 10MM, 11MM EXT TANG	20D214305
10MM X 37MM, SURF DR, TANG HLDR	20D245105
10MM X 37MM EXT., TANG HOLDER	20D245106
10MM X 67.6MM EXT, HEX,TANG	20D245109
10MM X 55MM OAL TANG H22/H26	20D245112
10mm HEX, 64mm O'ALL LENGTH	20D245111

► **STEP 5A:** Determine socket and/or bit holder extension length required. Calculate the bit protrusion using the following equation: Bit Protrusion (mm) = 18 mm + Bit Holder Extension (mm) – Socket Extension (mm)

► **STEP 5B:** Determine socket and/or tang holder extension length required. Calculate the tang recession using the following equation: Tang Recessed (mm) = Socket Extension (mm) – Tang Holder Extension (mm)

## ► STEP 6A: Choose bit:

### ~F4296 BIT SELECTION

Description	Part No.
7MM HEX BIT [FOR 5/16 HOLDER]	F4296
5MM HEX BIT [FOR 5/16 HOLDER]	F4380
6MM HEX BIT [FOR 5/16 HOLDER]	F4399
8MM HEX BIT [FOR 5/16 HOLDER]	F4513
5MM HEX BIT [FOR 1/4 HOLDER]	F4361
10MM MALE HEX BIT	L4259
5/16" HEX BIT [USE W/ F4360]	N4451
8MM HEX BIT [FOR 1/4" HOLDER]	N4991
T15 TORX BIT [FOR 1/4" HOLDER]	H4280
HEX INSERT BIT -SLOTTED [FOR	H4436
BIT FOR "XNZ" SCREW [FOR 5/16"	H4533

Description	Part No.
1/4" MALE HEX BIT [USE W/	A5668
3/8" MALE HEX BIT [USE W/	A5666
T27 TORX BIT 1/4" SHANK	A6134
7MM HEX BIT [FOR 1/4" HOLDER]	H4909
HEX BIT 14MM	A5724
6MM SQUARE BIT	A6206
6MM X 5MM BIT	A6207
HEX BIT-1/4 HEX 5/32 HEX	A6178
HEX BIT-1/4 HEX 3/16 HEX	A6179
T30 HEX BIT	A6341
HEX BIT - T40, MADE FROM X4248	A6373

Description	Part No.
HEX BIT-T50	A6403
HEX BIT -1/4 HEX	A6453
HEX BIT, T-45	20D240600
SLOTTED HEX BIT - 5/16" HEX	20D246700
HEX BIT, T30 [1/4" HOLDER]	20D240601
9MM HEX BIT, 1/4" HOLDER	20D240605
5/16" HEX BIT, 7/16" DRIVE	20D240606
T-30 BIT,SPCL LENGTH,5/16 HLDR	20D240609
T-45 BIT,SPCL LENGTH,5/16 HLDR	20D240610
6MM HEX BIT, 1/4" DRIVE, MACH	20D240611

# H26 Output Options

► **STEP 1:** Choose type of hold & drive:

## Option A: Bit Holder

See page 160 for configuration guide

## Option B: Tang Holder

See page 161 for configuration guide

► **STEP 2:** Choose Hold & Drive travel length: Reference E and EB tool sections for available model number: EB non-fixture tools: page 11, EB fixture tools: page 31, E non-fixture tools: page 69, E fixture tools: page 93.

► **STEP 3:** Choose standard socket size of one of the below types:

## ~N4285 SOCKET OPTIONS

Description	Part No.
10MM SURFACE DR SOCKET	A6137
17MM HEX SOCKET	F4285
19MM HEX SOCKET	F4294
14MM SOCKET	F4359
21MM SOCKET	F4401
22MM HEX SOCKET	F4487
24MM [15/16"] HEX SOCKET	F4512
19MM X 16MM EXT SOCKET	F4541
9/16" HEX SOCKET	F4571
18MM HEX SOCKET	F4635
19MM X 10MM HEX SOCKET	F4653
15MM HEX SOCKET	F4717
1-1/16HEX [27MM] SOCKET	F4867
19MM X 7MM SURFACE DRIVE SOCKET	F4869
21MM FAST LEAD SOCKET	J4044
16MM [5/8"] HEX SOCKET	J4090
15MM X 1/2 EXT SOCKET LA3H	J4213
17MM HEX SOCKET (SPEC. O.D.)	J4304
19MM X 80MM EXT SOCKET	J4316
19MM X 157MM EXT SOCKET	J4318
19MM X 18MM EXT SURFACE DR	J4381
17MM HEX SOCKET SURFACE DR	J4398
14MM FAST LEAD SOCKET	J4457
17MM X 19MM EXT SOCKET	J4467
22MM FAST LEAD SOCKET LA3H	J4607
17MM FAST LEAD SOCKET LA3H	J4608
9/16 X 1/2 EXT REACTION SOCKET	J4708
15MM X 1" EXT HEX SOCKET	J4829
TANG DRIVE SOCKET	S7749
22MM X 80MM EXT SOCKET LA3H	J4989
18MM X 80MM EXT SURFACE DR	L4067
21MM X 80MM EXT SURFACE DR	L4068
18MM X 157MM EXT SURF DR	L4073
11/16 HEX SOCKET	L4116
18MM 1/4" EXT (SPECIAL OD)	L4118
19MM HEX SOCKET LA3H	L4119
22MM X .52MM EXT HEX SOCKET	L4372

Description	Part No.
18MM X 80MM SURF DR SKT SPEC	L4426
19MM SURFACE DR SOCKET LA3H	L4474
11/16 SOCKET 36MM EXT	L4525
15MM SURFACE DR. SOCKET	J4662
16MM X 10MM EXT SOCKET	L4535
18MM SOCKET 11 1/2" EXT	L4556
22MM SURF DR SOCKET 10MM EXT	L4557
30MM HEX SOCKET LA4H	L4622
18MM X 19MM EXT HEX SOCKET	L4646
24 MM SOCKET 10 MM EXT	L4663
HEX SOCKET 21MM X 300MM	L4733
19 MM FAST LEAD SOCKET	L4868
19 MM SOCKET X 3/8" EXT	L4886
12MM HEX SOCKET (LA3H)	L4897
21MM SURF DR SOCKET 75 MM EXT	N4034
21MM SURF DR SOCKET 150 EXT	N4035
21MM SURF DR SOCKET	N4036
18MM X 37MM EXT SURF DR SOCKET	N4134
21MM X 37MM EXT SURF DR SOCKET	N4135
21MM X 32MM EXT SURF DR SOCKET	N4136
21MM X 107MM EXT SURF DR	N4137
21MM X 80MM EXT SURF DR SOCKET	N4149
21MM X 157MM EXT SURF DR	N4150
20MM HEX SOCKET	N4177
21MM SURF DR SOCKET 67MM EXT	N4186
21MM HEX SOCKET X 1.531 EXT	N4188
21MM HEX SOCKET 8MM EXT	N4337
21MM HEX SOCKET 57MM EXTENDED	N4382
17MM X 87MM EXT SOCKET	N4398
15MM SURF DR SOCKET 37MM EXT	N4412
24MM SURF DR SOCKET	N4439
22MM SURF DR SOCKET	N4440
18MM HEX SOCKET 1/4" EXT	N4457
21MM X 8.5MM EXT. HEX SOCKET	N4466
18MM X 26.5MM EXT. HEX SOCKET	N4468
18MM HEX SOCKET 187MM EXT	N4696
18MM HEX SOCKET 107MM EXT	N4698

Description	Part No.
15MM X 80MM EXT. SURFACE DR.	N4582
18MM X 3-1/8" EXT HEX SOCKET	N4711
18MM HEX SURF DR SOCKET 80MM	N4715
15MM DBLE. HEX SOCKET	N4782
15MM HEX SOCKET (USE W/ N4826	N4825
18MM HEX SOC 1-1/2" EXT FAST	N4925
18MM HEX SOCKET FAST LEAD	N4926
17MM HEX SOCKET 10MM EXT	N4975
21MM SURF DR SOC 15MM DEEP	H4039
18MM SURF DR OVER SIZE	H4612
18MM HEX SOCKET 32MM EXT	H4628
21MM HEX SOCKET 52MM EXT	H4629
17MM HEX SOCKET 36MM EXT	H4781
18MM HEX SOCKET 8" EXT	H4886
SOCKET 24MM X 45MM EXT.	H4820
17MM X 1-1/8" EXT SOCKET	H4959
14MM DBL HEX SOCKET	A6231
18MM HEX SURF DR X 1-1/2"	A6215
22MM HEX - A3H SPECIAL O.D.	A6216
22M SURFACE DRIVE - 1/4 EXT	A6228
15/16" X 60MM HEX SKT, 40A3H	A6270
21 MM SURF DR. X 2" SKT	A6467
19MM HEX SURF. DR. X 46MM EXT.	A6474
SOCKET 24MM X 8" EXT SURFACE	20D213700
21MM X 8.5MM EXT SURF DR - A3H	20D226300
SPECIAL 21MM X 80MM EXT.	20D232600
23MM HEX SOCKET, A40LA3H	20D232601
21MM X 8" EXT, HEX SKT ASM-H26	20D135900
27MM X 77MM EXT, H26 SKT	20D232606
7/8 HEX SOCKET	J4850
HEX SOCKET 11/8" SINGLE HEX	20D232609
HEX SOCKET, 21MM X 67.6MM EXT.	20D232610
HEX SOCKET 21MM X 28MM EXT	20D232611
HEX SOCKET 34MM, H26	20D232612
18MM SURF DR SOC 12MM DEEP	H4040
18MM SURF DR SOCKET	H4177
21MM SURF DR SOCKET 182MM EXT	H4366

# H26 Output Options continued

## ► STEP 3: continued

Description	Part No.
17MM HEX SURF DR SOCKET 37MM	H4409
21MM SURF DR SOC 155MM EXT	H4447

Description	Part No.
21MM SURF DR SOCKET 10MM EXT	H4486
18MM SURF DR SOCKET 10MM EXT	H4487

Description	Part No.
17MM SURF DR SOCKET 1.5" EXT	H4576
17MM SURF DR SOCKET 1-5/8" EXT	H4594

## ► STEP 4A: Choose standard bit holder size:

### ~H4947 H26 BIT HOLDER OPTIONS

Description	Part No.
HEX BIT HOLDER 5/16" HEX	H4947
BIT HOLDER 80MM EXT [FOR	N4670
BIT HOLDER 1/4" HEX X STD EXT	A6273
5/16" HEX BIT HOLDER 31MM EXT	N4631
HEX BIT HOLDER 5/16" X 1/4"	20D241300
HEX BIT HOLDER 5/16 HEX,	H4897
5/16" X 77MM EXT, BIT HOLDER	20D241301

## ► STEP 4B: Choose tang holder size:

### ~H4948 TANG HOLDER OPTIONS

Description	Part No.
10MM HEX TANG HOLDER	H4948
8MM HEX TANG HOLDER	H4949
8MM HEX TANG HOLDER 8" EXT	H4982
10MM HEX TANG HOLDER 3.125"	H4983
12MM HEX TANG HOLDER	H4946
10MM HEX TANG HOLD 32MM EXT	H4960
10 X 12MM TANG HOLDER	A6004
10MM HEX FAST LEAD TANG HOLDER	A6030
TWO STEP TANG HOLDER	A6043
8MM TANG HOLDER 32MM EXT	A6053
7.1 X 8.25 MM TANG HOLDER	A6032
6MM X 8MM TANG HOLDER	A6089
5MM HEX TANG HOLDER	A6123
8MM HEX TANG HOLDER	A6132
8.7 X 11MM X 157MM EXT. TANG	A6203
8.0mm X 80mm EXT. A3H TANG	A6296
6.4MM X 8.4MM TANG HOLDER	A6288
10MM HEX X 2" EXT TANG	A6468
TANG HOLDER 12MM HEXX 8" EXT	20D213800
TANG HOLDER 11MM HEXX STD'D	20D215300

Description	Part No.
TANG HOLDER, 11MM SURFACE	20D216300
8MM HEX X 1.500 EXT TANG	20D216600
7MM X 1" EXT TANG HOLDER	20D223900
9MM FEMALE HEX TANG HOLDER	20D222701
TANG HOLDER 10MM SURF DR	20D245100
TANG HOLDER, .343 HEX	20D223901
7.7mm x 9.8mm RECT TANG HLDR	20D223902
10MM X 8" EXT, HEX TANG ASM	20D132303
10MM X 1-1/2" EXT, SURF DR TANG	20D245102
10MM X 7.5" EXT, SURF DR TANG	20D132304
E8 TORX TANG HOLDER,	20D226200
10MM X 32MM EXT, SURF DR TANG	20D245103
6MM HEX 6MM DEEP, TANG H26	20D245104
10MM X 67.6MM EXT, SURF DR, TANG	20D245108
10MM X 67.6MM EXT, HEX, TANG	20D245109
8.9MM X 11.2MM RECT TANG HOLDE	20D245110
10mm HEX, 64mm O'ALL LENGTH	20D245111
10MM X 55MM OAL TANG H22/H26	20D245112
TANG HOLDER, E12 TORX	20D226901

## ► STEP 5A: Determine socket and/or bit holder extension length required. Calculate the bit protrusion using the following equation: Bit Protrusion (mm) = 19 mm + Bit Holder Extension (mm) – Socket Extension (mm)

## ► STEP 6A: Choose bit: ~F4296 BIT SELECTION

Description	Part No.
7MM HEX BIT [FOR 5/16 HOLDER]	F4296
5MM HEX BIT [FOR 5/16 HOLDER]	F4380
6MM HEX BIT [FOR 5/16 HOLDER]	F4399
8MM HEX BIT [FOR 5/16 HOLDER]	F4513
5MM HEX BIT [FOR 1/4 HOLDER]	F4361
10MM MALE HEX BIT	L4259
5/16" HEX BIT [USE W/ F4360]	N4451
8MM HEX BIT [FOR 1/4" HOLDER]	N4991
T15 TORX BIT [FOR 1/4" HOLDER]	H4280
HEX INSERT BIT -SLOTTED [FOR	H4436
BIT FOR "XNZ" SCREW [FOR 5/16"	H4533

Description	Part No.
1/4" MALE HEX BIT [USE W/	A5668
3/8" MALE HEX BIT [USE W/	A5666
T27 TORX BIT 1/4" SHANK	A6134
7MM HEX BIT [FOR 1/4" HOLDER]	H4909
HEX BIT 14MM	A5724
6MM SQUARE BIT	A6206
6MM X 5MM BIT	A6207
HEX BIT-1/4 HEX 5/32 HEX	A6178
HEX BIT-1/4 HEX 3/16 HEX	A6179
T30 HEX BIT	A6341
HEX BIT - T40, MADE FROM X4248	A6373

Description	Part No.
HEX BIT-T50	A6403
HEX BIT -1/4 HEX	A6453
HEX BIT, T-45	20D240600
SLOTTED HEX BIT - 5/16" HEX	20D246700
HEX BIT, T30 [1/4" HOLDER]	20D240601
9MM HEX BIT, 1/4" HOLDER	20D240605
5/16" HEX BIT, 7/16" DRIVE	20D240606
T-30 BIT,SPCL LENGTH,5/16 HLDR	20D240609
T-45 BIT,SPCL LENGTH,5/16 HLDR	20D240610
6MM HEX BIT, 1/4" DRIVE, MACH	20D240611

# H32 Output Options

## ► STEP 1: Choose type of hold & drive:

### Option A: Bit Holder

See page 160 for configuration guide

### Option B: Tang Holder

See page 161 for configuration guide

► STEP 2: Choose Hold & Drive travel length: Reference E and EB tool sections for available model number: EB non-fixture tools: page 11, EB fixture tools: page 31, E non-fixture tools: page 69, E fixture tools: page 93.

## ► STEP 3: Choose standard socket size of one of the below types:

### ~A5302 1" TRAVEL SOCKET OPTIONS

Description	Part No.
21MM HEX SOCKET	A5302
13/16" [30MM] HEX SOCKET	A5306
1-1/8" HEX SOCKET	A5667
41MM HEX SOCKET	A5722
36MM HEX SOCKET	A5726
24MM HEX SOCKET	20D212101
27MM HEX SOCKET	20D212102
23MM HEX SOCKET	20D212103
22MM SURF DR SKT	20D212104

### ~A5303 2" TRAVEL SOCKET OPTIONS

Description	Part No.
21MM HEX SOCKET	A5303
13/16" [30MM] HEX SOCKET	A5316
31MM HEX SOCKET	A5339
22MM HEX SOCKET	A5383
24MM HEX SOCKET	A5393
46MM HEX SOCKET	A5718
36MM HEX SOCKET	20D226700
24MM SURFACE DRIVE SOCKET	20D230100
34MM HEX SOCKET	20D235000
21MM X16MM EXTENSION HEX SOCKET	20D249400
18MM HEX SOCKET	20D230101
24MM X16MM EXTENSION HEX SOCKET	20D249401
30MM HEX SOCKET	20D5201800

## ► STEP 4A: Choose standard bit holder size:

### ~20D900602 BIT HOLDER OPTIONS

Description	Part No.
5/16" Hex	A5307
7/16" Hex	A5723
8 MM Special Outside Diameter	20D250100

## ► STEP 4B: Choose tang holder size:

### ~20D900601 TANG OPTIONS

#### Hex

Size	Extension	Part #	Feature
5/16" [8mm]		A5559	
8mm		20D212204	Special O.D.
10mm		A5301	
10mm	1/4"	A5452	
11mm		A5394	
12mm		20D212201	

#### Surface Drive

Size	Part #
10mm	A5581
11mm	A5549
12mm	20D212203
13mm	20D212202
15mm	20D212206

#### Fast Lead

Size	Extension	Part #
10mm		A5399
11mm		A5400
11mm	1/4"	A5453

#### Rectangle

Size	Extension	Part #
10.32 X 13.1mm		A5585
9 x 12.55mm	80mm	A5384

#### Torx

Size	Part #
T-18	A5340

# H32 Output Options continued

► **STEP 5A:** Determine socket and/or bit holder extension length required. Calculate the bit protrusion using the following equation: Bit Protrusion (mm) = 17 mm + Bit Holder Extension (mm) – Socket Extension (mm)

► **STEP 5B:** Determine socket and/or tang holder extension length required. Calculate the tang recession using the following equation: Tang Recessed (mm) = Socket Extension (mm) – Tang Holder Extension (mm)

► **STEP 6A:** Choose bit:

## ~F4296 BIT SELECTION

Description	Part No.
7MM HEX BIT [FOR 5/16 HOLDER]	F4296
5MM HEX BIT [FOR 5/16 HOLDER]	F4380
6MM HEX BIT [FOR 5/16 HOLDER]	F4399
8MM HEX BIT [FOR 5/16 HOLDER]	F4513
5MM HEX BIT [FOR 1/4 HOLDER]	F4361
10MM MALE HEX BIT	L4259
5/16" HEX BIT [USE W/ F4360]	N4451
8MM HEX BIT [FOR 1/4" HOLDER]	N4991
T15 TORX BIT [FOR 1/4" HOLDER]	H4280
HEX INSERT BIT -SLOTTED (FOR	H4436
BIT FOR "XNZ" SCREW (FOR 5/16"	H4533

Description	Part No.
1/4" MALE HEX BIT (USE W/	A5668
3/8" MALE HEX BIT (USE W/	A5666
T27 TORX BIT 1/4" SHANK	A6134
7MM HEX BIT [FOR 1/4" HOLDER]	H4909
HEX BIT 14MM	A5724
6MM SQUARE BIT	A6206
6MM X 5MM BIT	A6207
HEX BIT-1/4 HEX 5/32 HEX	A6178
HEX BIT-1/4 HEX 3/16 HEX	A6179
T30 HEX BIT	A6341
HEX BIT - T40, MADE FROM X4248	A6373

Description	Part No.
HEX BIT-T50	A6403
HEX BIT -1/4 HEX	A6453
HEX BIT, T-45	20D240600
SLOTTED HEX BIT - 5/16" HEX	20D246700
HEX BIT, T30 [1/4" HOLDER]	20D240601
9MM HEX BIT, 1/4" HOLDER	20D240605
5/16" HEX BIT, 7/16" DRIVE	20D240606
T-30 BIT, SPCL LENGTH, 5/16 HLDR	20D240609
T-45 BIT, SPCL LENGTH, 5/16 HLDR	20D240610
6MM HEX BIT, 1/4" DRIVE, MACH	20D240611

# Hold & Drive Standard Sockets

A new part number system for H22 standard hold and drive sockets enables customers to describe and price standard sockets for each application. The part number includes information on head number of the tool, socket type, socket size and extension length. For special sockets or dimensions not included on this page, check the following pages or contact your local STANLEY sales representative.

## CHOOSE YOUR SOCKET

STEP 1: Select the Base Code from the Head Number table

STEP 2: Add Type, Size & Extension separated by forward slashes

*Note: Specify socket size no smaller than Min. Hex Size.*

Hold and Drive Head Number DTU	Min. Hex Size		Base Code
	[mm]	[in]	
H22	17	11/16	20D288400

Base

Type

Size

Extension

Type
SH Single Hex

DH Double Hex

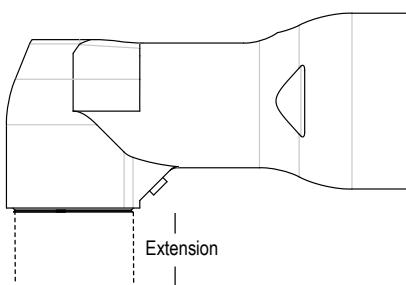
SD Surface Drive


Choose mm or in

Size [mm]	Size Code
17	M17
18	M18
19	M19
20	M20
21	M21
22	M22
23	M23
24	M24

Size [in]	Size Code
11/16	11
3/4	12
13/16	13
7/8	14
15/16	15

Length		Extension Code
[mm]	[in]	
Standard	Standard	0
3	1/8	3
6	1/4	6
9	3/8	9
12	1/2	12
15	5/8	15
18	3/4	18
21	7/8	21
24	1	24
27	1 1/16	27
30	1 1/8	30
33	1 1/4	33
36	1 3/8	36
39	1 1/2	39
42	1 5/8	42
45	1 3/4	45
48	1 7/8	48
51	2	51
54	2 1/8	54
57	2 1/4	57
60	2 3/8	60
63	2 1/2	63
66	2 5/8	66
69	2 3/4	69
72	2 7/8	72
75	3	75
78	3 1/8	78
81	3 1/4	81
84	3 3/8	84
87	3 1/2	87
90	3 5/8	90



## EXAMPLE ORDER

**Example:** An H22 hold and drive head requires a 17 mm surface drive socket with a 1 in extension. Select the BASE (20D288400), TYPE (SD), SIZE (17) and EXTENSION (24).

Base	Type	Size	Ext.
20D288400	/SD	/17	/24

# Hold & Drive Bit Holders

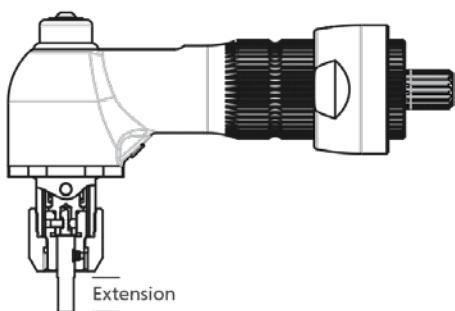
A new part number system for H22 standard bit holder enables customers to describe and price standard sockets for each application. The part number includes information on the base bit holder number, drive size and extension length. For special bit holders or dimensions not included on this page, check the following pages or contact your local STANLEY sales representative.

## CHOOSE YOUR BIT HOLDER

**STEP 1:** Select the Base Code based on the bit holder length table

**STEP 2:** Add Type, Size & Extension separated by forward slashes

Base	Type	Size	Extension
<b>Bit Holder Length</b>			<b>Base Code</b>
Standard Length	20D288500		
Extended Length < 79 mm [3 1/16"]	20D288501		
Extended Length > 79 mm [3 1/16"]	20D288502		



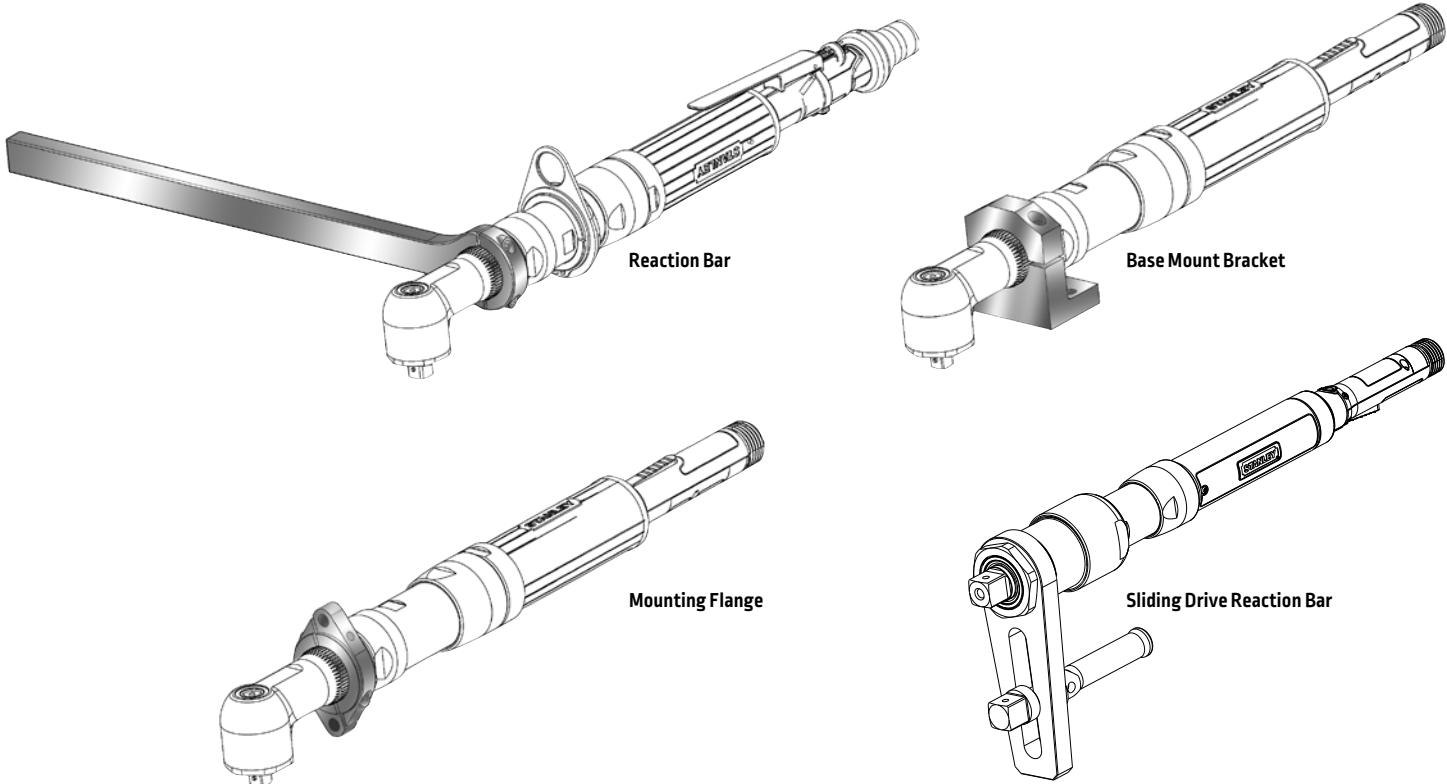
## EXAMPLE ORDER

**Example:** An H22 hold and drive head requires a 1/4" bit holder with a 1 in extension. Select the BASE (20D288500), TYPE (SH), SIZE (4) and EXTENSION (24).

Base	Type	Size	Ext.
20D288500	/SH	/4	/24

# Reaction Bars and Mounts

## Mounting Options



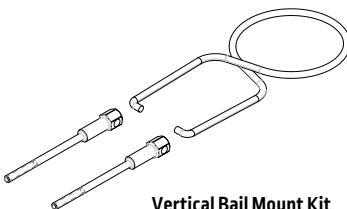
Reaction Devices Listed by Tool Models	E_02LB	EB22LB	E_33LA19 E_34LA19 E_34LA22A/H22A E_34LC/EB34LT E_44LA19 E_44LA22A/H22A E_44LC/EB44LT E_34LB1 E_34MB1	E_45LA26/H26 E_45LA32/H32 E_55LA26/H26 E_55LA32/H32	E_55LB3 E_55MB2	E_55LB4 E_55MB4	E_55LB5 E_55MB5
	E_12LB	E_33LB	E_44LB1 E_44MB1				
	E_12PB	E_33MB	E_34PB1				
	EB22PB	E_33PB	E_44PB1				
Base Mount Bracket		A8606	20K100500	20K100600	H1140	F4201	
Mounting Flange		20K101000	20K100300	20K100700	M4329	20K101100	20K100900
Reaction Bar - Steel	20K100104	20K100100	20K100000	20K100200	B4487	F4192	
Reaction Bar - Heavy Duty				20K100202			
Reaction Bar 17" - Aluminum	20K100103	F3698					
Reaction Bar 12" - Aluminum	20K101601						
Sliding Drive Reaction Bar						F4857	

# Wire Bails and Gear Case Extensions

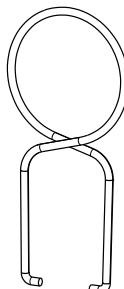
## Tool Bails

Wire Bails allow a tool to be hung on a hook for storage until needed.

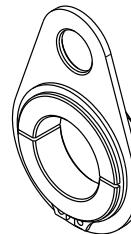
Swivel Bails allows for a balancer to hold the weight of the tool while the operator uses the tool in the correct position as the tool is free to rotate inside the bail.



Vertical Bail Mount Kit



Wire Bail



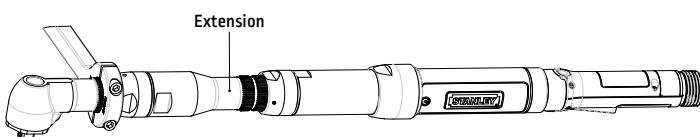
Swivel Bail

Bail Devices Listed by Tool Models	E_02LA E_02LB E_12LA E_12LB	EB22P	E_33P	EB22L E_33L	E_34P E_44P	E_34L E_44L	E_45L E_55L
Swivel Bail	20K101402		20K101400	20K101400	20K200000	20K200000	20K200100
Vertical Wire Bail	A3061	A3061	A3061	A3061	A3061	A3061	
Vertical Bail Mount Kit			20K200007		20K200007		

## Gear Case Extensions for Angle Tools

Gear Case Extensions fit between the gearing and an angle output to extend the reach of the tool.

Use these Part Numbers to extend an existing tool. When ordering a new tool simply use E# after the tool model number to have the extension installed on the new tool. Where # is the length in inches for the extension required.



Tool Type	Gearing Size	Output	Extension	Part Number
E12/EB_2/AA	G2	A10/ A13	2"	20K300026
E12/EB_2/AA	G2	A10/ A13	6"	20K300027

Tool Type	Gearing Size	Output	Extension	Part Number
EB/AA	G3	A15/ A18/ A19 Threaded	4"	20K300028
EB/AA	G3	A15/ A18/ A19 Threaded	6"	20K300029
EB/AA	G3	A15/ A18/ A19 Threaded	8"	20K300030
EB/AA	G3	A15/ A18/ A19 Threaded	10"	20K300031
EB/AA	G3	A15/ A18/ A19 Threaded	12"	20K300032

Tool Type	Gearing Size	Output	Extension	Part Number
E/EB/AA	G3	A15/ A18/ A19 Threaded	4"	20K300019
E/EB/AA	G3	A15/ A18/ A19 Threaded	6"	20K300025
E/EB/AA	G3	A15/ A18/ A19 Threaded	10"	20K300020

Tool Type	Gearing Size	Output	Extension	Part Number
E/EB/AA	G4	A19 Splined/ A22A	4"	20K300014
E/EB/AA	G4	A19 Splined/ A22A	6"	20K300013
E/EB/AA	G4	A19 Splined/ A22A	8"	20K300015
E/EB/AA	G4	A19 Splined/ A22A	10"	20K300016
E/EB/AA	G4	A19 Splined/ A22A	12"	20K300018

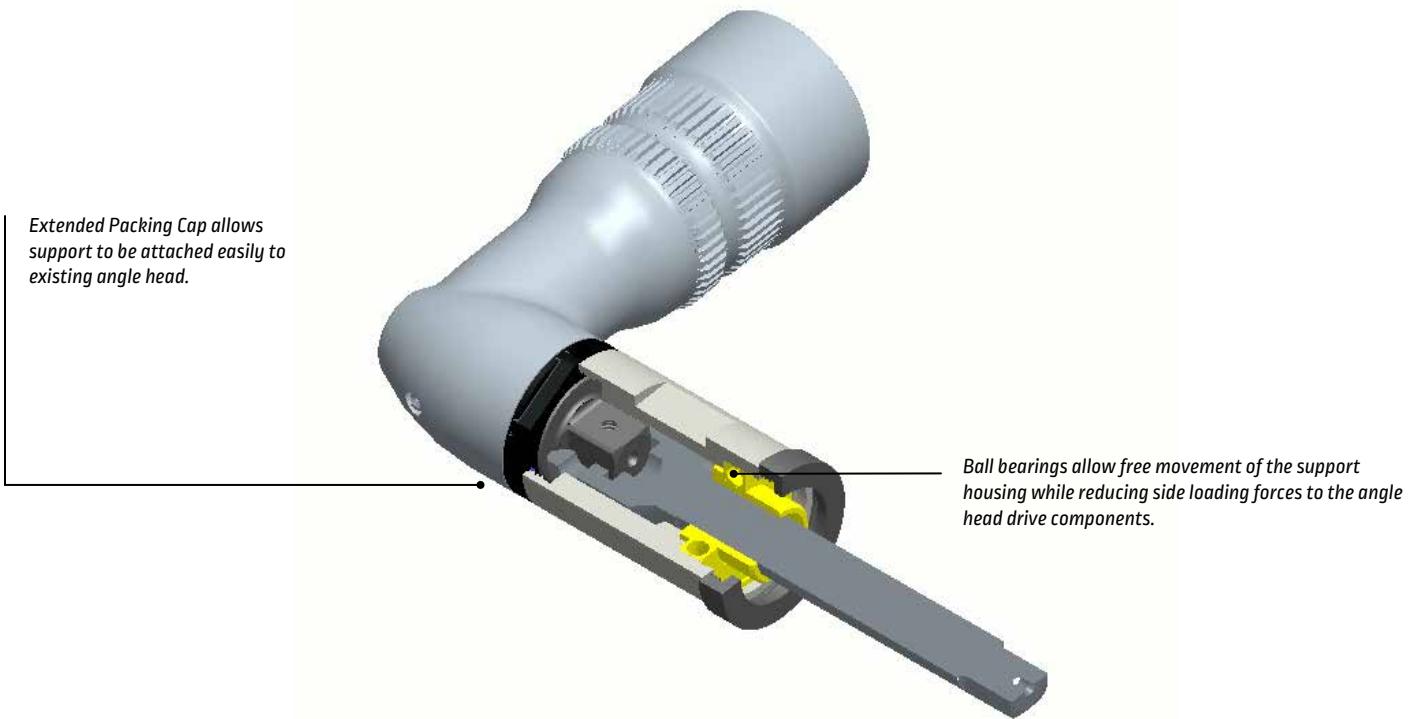
Tool Type	Gearing Size	Output	Extension	Part Number
E/EB	G5	A26/ A32	6"	20K300006
E/EB	G5	A26/ A32	9"	20K300009
E/EB	G5	A26/ A32	12"	20K300012

# Extended Spindle Support

## Extended Spindle Support Accessories

Extended Spindle Supports minimize tool vibration from sockets and extensions. Extended Spindle Support Accessories can help to improve:

- **Safety** — Minimize the pinch hazard between the tool and the extension
- **Product Quality** — Reduce the potential for product damage by helping to prevent tool contact with finished surfaces and cross-threading caused by improper fastener installation
- **Tooling Reliability** — Extended Spindle Support Accessories incorporate a heavy duty bearing that minimizes wobble and reduces side loading to reduce premature tool wear and improve tool reliability
- **Attachment Lifecycle** — Extends socket and extension life



Each Extension Support requires an Extended Packing Cap from the table on the right.

### Extension Support Assemblies\*

Output	Square Drive (in)	4" Extended Spindle	6" Extended Spindle	8" Extended Spindle	12" Extended Spindle
A14	3/8"	20K102504		20K102505	
A15	3/8"	20K102506	20K102508	20K102507	
A18	3/8"	20K102500	20K102509	20K102501	20K102511
A19	1/2"	20K102502		20K102503	
A22	1/2"	20K102514		20K102515	

### Extended Packing Caps

Output	Part Number
A14	20D140102
A15	20D140103
A18	20D140100
A19	20D140101
A22	20D286504

\*Includes support and extension

# Protectors and Head Covers



PVC Cover

## Angle Head Covers

Angle Output	PVC Cover	Vinyl Cover
A13	X2300	20D250705
A14/A15	X2322	20D250701
A18S	X2323	20D250702
A19	n/a	20D250707
A22	X2305	20D250708
A26	X2306	20D250709
A32	n/a	20D250710



Angle Head Vinyl Cover



Crowfoot Vinyl Cover

## Crowfoot Vinyl Head Covers

Crowfoot Output	Angle Head Cover	Foot Cover
C7	20D250707	20D250722
C8	20D250705	20D250723
C10	20D250708	20D250712
C13	20D250703	20D250714
C16	20D250707	20D250715
C29	20D250702	20D250718
C31	20D250708	20D250719
C35	20D250702	20D250720
C69	20D250702	20D250721
C106	20D250702	20D250713
C246	20D250702	20D250717

## Tubenut Vinyl Head Covers

Tubenut Output	Angle Head Cover	Foot Cover
T20	20D250708	20D250725
T23	20D250707	20D250727
T74	20D250702	20D250729
T99	20D250707	20D250730
T147	20D250702	20D250724
T211	20D250702	20D250726
T264	20D250702	20D250728



Tubenut Vinyl Cover

# Tool Lever and Headlights

## Lever Handle Options

### Rubber Grip for Handle

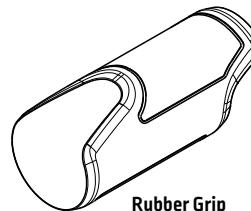
Handle Type	Tool	Part Number
Pistol	E_02P	20H207107
	E_12P	
	E_2_P	
	E_3_P	
Lever	E_02L	20H207910
	E_12L	
	E_2_L	20H207207
	E_3_L	
	E_4_L	
Push-to-Start	E_5_L	20H207915
	E_02LP	
	E_12LP	

### Forward Facing Lever

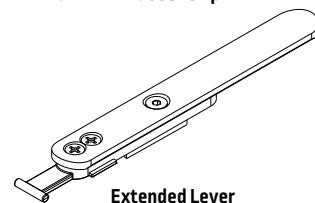
Handle Type	Tool	Part Number
Lever	E2/3_L	20H100005
	EA2/3_L	20H100008
	E4/5_L	20H100105
	EB3/5_L, B1/2_L	20H100107
	EB22L	20H100108



Forward Lever



Rubber Grip



Extended Lever

### Extended Lever

Handle Type	Tool	Part Number
Lever	E_0/12_L	20H102201
	E_2/3/4/5_L	20H100007

## Headlights

### Tool LED Headlight

Tool	Light Type	Headlight No.
EB33	Stationary	20H106500
EB34		20H106501



# Socket Trays

## Socket Trays

STANLEY's 4 and 8 position Socket Trays, available in 24V DC or DeviceNet models, allow a single tool to reliably assemble joints at different target torque levels, batch counts or fastening strategies maximizing quality, productivity, efficiency and floor space. Features include:

- I/O repeater provides access to controller 24V DC I/O not consumed by the Socket Tray (*Optional*)
- Compact design for maximum space saving
- Ready for Alpha using Binary +1 selection
- 8-Position socket tray dimensions:  
216d x292w x163h mm (8.5 x 11.5 x 6.4 in)



Socket Tray Model Number	# Socket Positions	Connection	Repeater Port	Cable	Max Socket Diameter
SA-1980	4	24V DC I/O	No	24V DC I/O cable Required, See Below	54 mm 2-1/8"
SA-1981	8		No		
SA-1982	4		Yes		
SA-1983	8		Yes		
SA-1978	4	DeviceNet	No	DeviceNet Cable and Tee Required, See Below.	
SA-1979	8		No		

When using multiple sockets and programs please ensure that the torques programmed are within the working specifications of the tool and controller used.

Cable Number	Connection	Controller	Length
20C109007	24V DC I/O	Advanced/ Expert	7 meters
20C109010			10 meters
20C109107		Basic	7 meters
20C109207		PSI-C	7 meters
21C1021.2	DeviceNet	DeviceNet Master	0.2 meters
21C102101			1 meters
21C102105			5 meters
21C102110			10 meters
21C102120			20 meters

Kit Number	Description
21C101401	DeviceNet Cable Tee/Terminator Kit
21C101403	DeviceNet Cable Kit - 0.2 meter Extension
21C101404	DeviceNet Cable Kit - 1 meter Extension

*DeviceNet Micro Tee - 21R202204  
DeviceNet Micro Terminator Male - 21R202202  
DeviceNet Micro Terminator Female - 21R202203*

# Test Fixtures

## Training Joint Simulator

Part Number 20V101000 Has three 1/2" – 13 Bolts with Hard Medium and Soft Joints. Can be mounted to table tops or other significant structures for learning different strategies on different joint characteristics.

20V101000



## Calibration Joint Simulator

Model	Joint Type	Max Input Torque		Torque Rate		Bolt Size
		Nm	ftlb	Nm/ $\theta$	ftlb/ $\theta$	in
T00915/S3	Soft	60	45	14	10.3	3/4 - 16
T00915/S4		88	65	22.6	16.7	
T00915/S5		135	100	34	25	
T00915/S6		200	148	50	37	
T00915/H1	Hard	20	15	125	92.4	5/8 - 11
T00915/H2		40	30	285	210	
T00915/H3		54	40	405	300	
T00915/H4		75	55	610	450	3/4 - 16
T00915/H5		135	100	950	700	
T00915/H6		200	148	1700	1257	

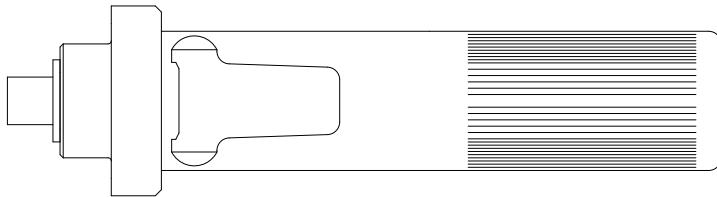
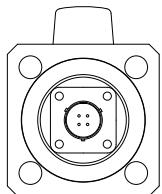
Calibration Joint Simulator



# Test Fixtures and Handles

## DC Start Handle

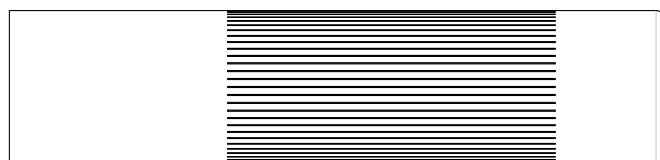
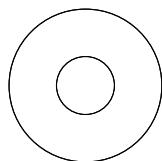
Use Part Number M4504 as a second handle for positioning tools that are fixtured and then starting their operation. Use one of the X5380/x cables listed with this handle.



Part No.	Length
X5380/1	1 meter
X5380/3	3 meters
X5380/10	10 meters
X5380/30	30 meters
X5380/60	60 meters

## Auxiliary Handle

Use Part Number S3544 as an Auxiliary Handle for positioning tools that are fixtured.

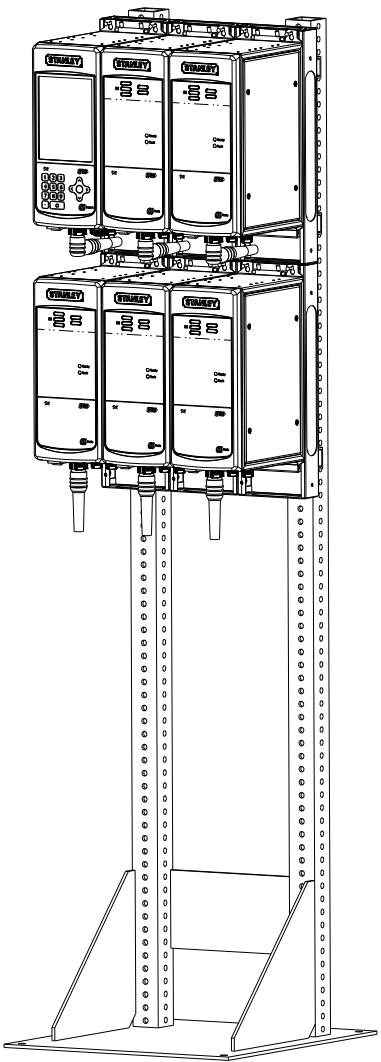


# Floor Stands

## Floor Stands

Floor Stands provide a place for mounting groups of controllers typically found in fixtured tool applications. However, handheld tools could also be grouped for convenience.

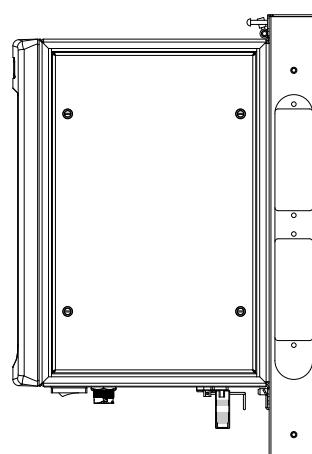
Model	Max Number of Spindles	Description
21F100405	2	For controllers and a Power Module
21F100406		For controllers only
21F100403	6	For controllers and a Power Module
21F100404		For controllers only
21F100401	12	For controllers and a Power Module
21F100402		For controllers only



## Plinth Brackets & Options

A plinth bracket provides a mounting option for controllers on walls or floor stands. Additional mounting brackets are available for I/O or Ethernet switch mounting options.

Part No.	Description
21E204300	Plinth modular mount bracket
21E204320	Plinth bracket – I/O option
21E204340	4 spindle ethernet switch mounting bracket
21E204341	4 spindle ethernet switch mounting bracket
21E204351	Plinth GFI bracket



# Maintenance Tools

## Assembly/Disassembly Maintenance Tools

### SPANNER OR CROWFOOT WRENCH

Description	Part No.
3/4" x 3/8" SD	X4174
1" x 3/8" SD	X4175
1-1/16" x 1/2" SD	X4176 / X4212
1-1/8" x 1/2" SD	X4177 / X4213
1-1/4" x 1/2" SD	X4179 / X4214
1-3/8" x 1/2" SD	X4181
1-7/8" x 1/2" SD	X4186 / X4218
2" x 1/2" SD	X4187 / X4220
2-5/16" x 1/2" SD	X4189 / X4209
2-1/4" x 1/2" SD	X4190 / X4208
1-3/8" x 1/2" SD	X4192

Description	Part No.
1-1/2" x 1/2" SD	X4193
1-5/8" x 1/2" SD	X4194 / X4183
1-3/4" x 1/2" SD	X4195
1-3/16" x 1/2" SD	X4196 / X4188
1-13/16" x 1/2" SD	X4197
1-11/16" x 1/2" SD	X4200 / X4217
1-7/16" X 1/2" SD	X4204
1-9/16" x 1/2" SD	X4205
1" X 1/2" SD	X4211
1-5/16" x 1/2" SD	X4215
1-7/16" x 1/2" SD	X4216

Description	Part No.
2-1/2" x 1/2" SD	X4210 / X4222 / 20V200001
2-15/16" x 1/2" SD	20V200002
2-3/4" x 1/2" SD	20V200003
2-7/8" x 1/2" SD	20V200004
3-3/8" x 1/2" SD	20V200005
2-1/8" x 1/2" SD	X4206 / X4221 / 20V200006
3" x 1/2" SD	20V200007
3-1/4" x 1/2" SD	20V200008
3-1/4" x 1/2" SD	20V200008

These spanners are used to assemble or disassemble the lock nuts and outputs of QPM tools. See the specific tool's Assembly Sheet for which spanner to use on the tool.

### OUTPUT ASSEMBLY/ DISASSEMBLY TOOLS

Description	Part No.
A13 PACKING CAP ASSEMBLY TOOL	T00576
A14 PACKING CAP ASSEMBLY TOOL	20V200400
A18 PACKING CAP ASSEMBLY TOOL	T00698
A19 PACKING CAP ASSEMBLY TOOL	20V100201
A19 BEARING PRESS AID	20V100202
A19 BEARING PRESS AID	20V100209
A22 BEARING PRESS AID	20V100203
A26 BEARING PRESS AID	20V100206
A32 BEARING PRESS AID	20V100207
A14 PINION PULLER	T05108
A19 / A22 PINION PULLER	20V100400
A26 / A32 PINION PULLER	20V100401

These tools are used to Assemble/ Disassemble the outputs of the QPM DC tools. See the specific tool's Assembly Sheet for which spanner to use on the tool.

### MOTOR CONNECTOR REPAIR KIT

Description	Part No.
E TOOL CONNECTOR REPAIR KIT	20M202900
EA, EB, EC TOOL CONNECTOR REPAIR KIT	20M202901

### MISCELLANEOUS TOOLS

Description	Part No.
A30 / A40 / A18 Drive Spindle Pusher	T01849
SPANNER WRENCH	T05389
T30 BIT [USE W/ 5/16" HOLDER]	X4198
E3 MOTOR CLAMP	20V100001
E3 THREADED ADAPTER SPANNER	20V100002
E4 / E5 MOTOR CLAMP	20V100101
E4 / E5 THREADED ADAPTER SPANNER	20V100102
E12 HD KIT INSTALL SPANNER	20V100210
QPM CONNECTOR REPAIR TOOL KIT	20V100300
MOTOR TESTER, 115V AC	20V100600
MOTOR TESTER, 230V AC	20V101100

These tools are used to repair or test QPM DC tools. Attend Tool Repair Training to learn how to use these tools.

# Assembly Tool Definitions

**ASSEMBLY TOOL SELECTION CONSIDERS THE POWER SOURCE, CONTROL METHOD, TOOL GEOMETRY AND TORQUE LEVEL. STANLEY ASSEMBLY TECHNOLOGIES CAN TAILOR THESE PARAMETERS TO FIT EACH THREADED FASTENING APPLICATION.**

## Power Sources: Electric vs. Pneumatic

### ELECTRIC:

STANLEY brushless DC electric motors offer the highest level of control, working cleaner, quieter and more efficient than pneumatic tools. STANLEY brushless DC electric motors use rare earth magnets and resolver based commutation for high efficiency and reliability. Microprocessor control adjusts torque, speed, and acceleration independently in either forward or reverse directions. DC electric control offers useful fastening strategies that incorporate patented speed control algorithms that sense the torque rate of the joint and, when necessary, automatically reduce the motor speed to minimize torque overshoot. DC electric

tools require the least amount of maintenance of any type of power tool which reduces the total cost over the life of the tool.

### PNEUMATIC:

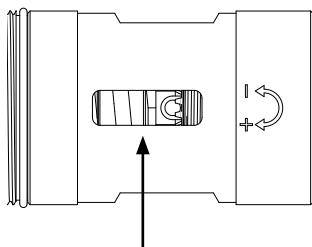
Pneumatic tools use the compressed air systems available in most assembly plants. They offer excellent power to weight ratios and are usually the most economical choice for many fastening applications. STANLEY's pneumatic motors have a low inertia, locked rotor design that uses low friction materials which provides for a more efficient design with higher speeds. Pneumatic motors are easily maintained to give many years of reliable performance.

## Control Methods

The control method should match the joint specifications and the quality assurance required. For the most critical applications, microprocessor based controllers can perform 100% inspection of the dynamic applied torque and collect statistical process control data. Such methods can eliminate the need for secondary inspection processes. When control requirements are less demanding STANLEY also offers more economical ways to control torque to the required specifications.

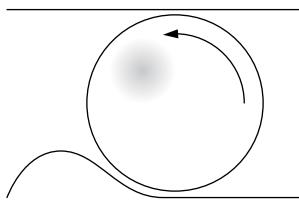
### Electronically Controlled Shut Off:

Available for electric tools, electronic control uses a torque transducer in the tool connected to a microprocessor based controller. The controller monitors the dynamic fastening torque and shuts off the tool when the torque reaches the preset value. This closed loop control method precisely controls dynamic torque.



### Torque Adjuster

*Convenient clutch adjuster is always accessible*



### Unique Clutch Rolling Action

*Durable rolling element reduces the need for torque adjustment*

**Electronic Monitoring:** Tools without electronic shut off capability may be monitored by monitoring the dynamically applied torque process. A microprocessor based monitor observes the compressed air signature for each fastener for 100% inspection. Similar to electronic shut off tools, electronically monitored tools typically include indicator lights to alert the operator to Pass / Fail status.

**Clutch Actuated Shut Off:** Clutch actuated shut off tools use a fast acting torque sensing clutch to disengage the motor from the drive spindle at a preset torque level. The system also shuts off the power to the motor. This fast shut off reduces the effect of operator

technique on the applied torque value and the torque reaction impulse felt by the operator. Clutch actuated shut off tools reduce torque variability as compared to standard pneumatic tools. The low torque reaction impulse makes clutch actuated shut off tools ideal for hand held applications. Torque is adjusted at the tool and is not affected by variations in the supply air pressure.

STANLEY's exclusive rolling element clutch eliminates the frictional elements commonly found in competitive tools. This allows extremely close torque control without the need for repeated torque adjustment with clutch wear.

## Tool Geometry

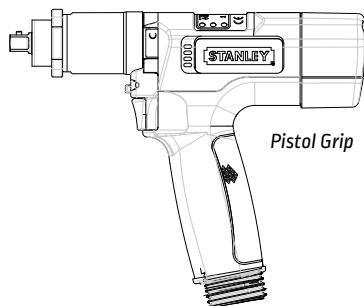
STANLEY offers a wide choice of pneumatic and electric tool configurations to allow the process engineer to select a tool that best suits the application. There are two primary tool classes into which tool configurations fit:

**Hand Held:** Applications which require an operator to maneuver the tool to the fastener and manipulate it throughout the assembly process require hand held tools. Hand held tools are available configured as any of the tools listed in the configuration section that follows. The proper selection of these tools involves

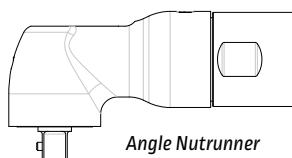
a thorough understanding of the required task and a working knowledge of the resulting torque reaction and the human factors involved in the performance of the task. Every effort has been taken in the design of these tools to make them as user friendly as possible considering the work they must perform. The most critical step is in the selection process as operator safety should always be given the highest priority.

**Fixture:** Fixtured nutrunners typically mount to semi automatic equipment for manipulation during single or

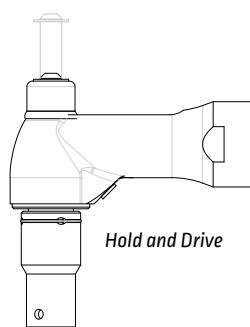
# Assembly Tool Definitions



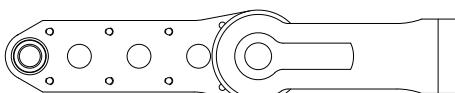
Pistol Grip



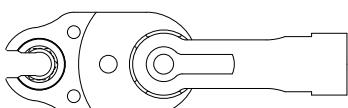
Angle Nutrunner



Hold and Drive



Crowfoot Nutrunner



Tubenut Nutrunner

multi-tool assembly operations. Multiple spindle fixtured tools allow the simultaneous assembly of multiple fasteners. Output configurations are Right Angle, Inline, and Offset. Offset spindle heads allow for simultaneous fastening on closer center distance. All these configurations are available with retractable spindle outputs. Nutrunners

with reaction bars can mount on articulating arms or torque reaction balancers. These devices absorb torque reaction forces and help the operator to position the tool. Many hand held tools use mounting hardware for fixtured applications. Other assembly motors have mounting flanges for fixturing.

## Tool Geometry — Configurations

### Pistol Grip (1 to 670 Nm Capacity

**– ¼" to ½" Drive Size:** Pistol grip tools are commonly used for hand held, low torque screw driving applications as well as higher torque fixtured or hand held applications where a reaction device can be used to absorb the torque reaction forces. Care should be taken to assure that the operator's wrist is not strained during the use of these tools. Special tools can go up to 1200 Nm.

### Angle Nutrunners (1 to 400 Nm Capacity – ¼" to ¾" Drive Size):

Angle nutrunners are well suited for many assembly applications. The minimal dimensions of our angle heads allow them to reach into restricted places, while their longer effective length reduces the torque reaction forces on the handle. For higher torque applications, these tools can be fitted with torque reaction devices. STANLEY offers a broad line of air and electric angle nutrunners with a variety of control methods.

### Hold and Drive (15 to 380 Nm Capacity):

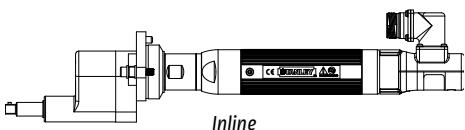
Hold and drive tools simultaneously hold the bolt while the nut is tightened. A formed end on the bolt interfaces with a mating tang or bit, to prevent bolt rotation while the associated nut is tightened.

### Crowfoot Nutrunners (Standard Tools – 1 to 216 Nm Capacity.

**Special Tools to 1500 Nm– 4 to 40mm Hex Socket):** Crowfoot nutrunners use special tool geometries to access hard to reach applications where more conventional tools won't fit. Gear driven heads provide high levels of torque control. Special head designs can solve most demanding assembly problems.

### Tubenut Nutrunners (1 to 100 Nm Capacity – 8 to 32mm Hex Socket):

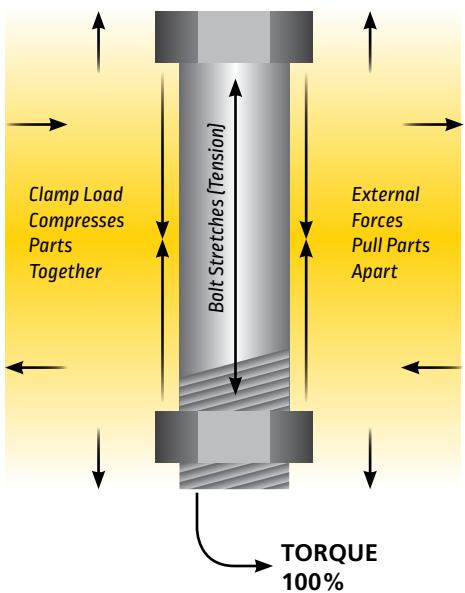
Tubenut nutrunners typically fasten the compression fittings on fluid lines. They can also fasten cable assemblies and tie rod adjustment applications. After tightening the tool returns the socket to the home open position for removal of the tool.



**Inline (1 to 2000 Nm Capacity –  $\frac{1}{4}$ " to 1" Drive Size):** Straight tools are suitable for screw driving applications where the applied torque is relatively low. They are also useful in higher torque applications when the tool is fixtured to absorb the torque reaction or equipped with a torque reaction bar. The reaction bar is placed against a solid support to absorb the torque reaction impulse.

## Torque Level

### What Holds a Joint Together?



Once the power source, the control method and the tool configuration have been considered, the torque level must also be considered before selecting the exact tool model. STANLEY offers a wide selection of torque ranges for each specific type of tool listed. The rated torque values shown represent the highest torque level that can be expected from that model. Torque can always be adjusted down, but never above the rated value. A general rule of thumb is that most electric tools can be reasonably adjusted to 50% of their rated torque. If the application requires the torque to be adjusted significantly below the rated value, it is often better to choose the next lower rated tool as generally this will provide a faster tool.

### Torque Defined — THE ANATOMY OF A THREADED JOINT

When we assemble a threaded joint, we rotate the fastener by applying Torque (in this example we hold the bolt and rotate the nut). The thread pitch causes this rotation to advance the nut and stretch the bolt.

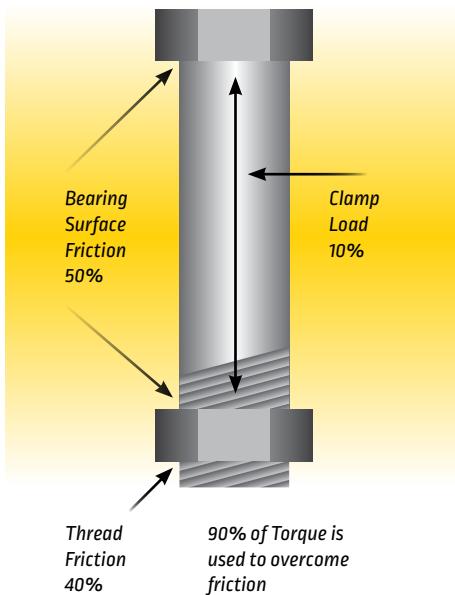
This produces tension within the bolt just as if it were a large spring. This Tension in the bolt produces the Clamp Load that holds the assembled parts together. And this clamp load must be sufficient enough to resist all the external forces that can be applied to this assembly throughout its service life.

The bolt acts like a very stiff spring. The more Clamp Force the bolt applies, the more service loads the joint can resist without coming apart. Of course, the bolt must be selected to have sufficient strength to resist the expected external loads. The bolt must also be assembled so that it holds the parts together when the external loads attempt to pull it apart.

The process of tightening a fastener is sometimes called "pre-loading" the fastener. This creates tensile load in the bolt, which "pre-loads" the joint to counteract the expected service loads.

# Assembly Tool Definitions

## The 50-40-10 Rule



## WHERE DOES IT ALL GO?

When we apply a certain amount of torque to a fastener, fifty percent of that torque is used to overcome the friction of the bearing surface (under the nut, or under the bolt head, depending on which is being rotated). Forty percent of the applied torque is used to overcome the friction in the threads. With only ten percent of the applied torque actually used to stretch the fastener.

As we saw earlier, it is the stretch of the fastener that produces the clamping force that actually holds the assembled parts together. This is called the "50-40-10 Rule" and it demonstrates how much influence friction can have on the results. To ensure the best possible joint you should be as diligent as possible in maintaining consistent friction characteristics of the joint.

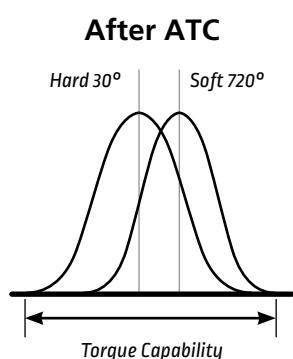
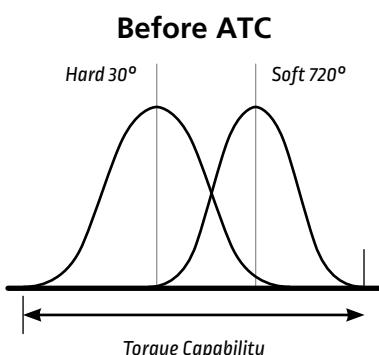
## Tightening Accuracy

The primary driver for delivering even clamp load to an application over many joints of the same design is consistent friction and consistent applied torque. Inconsistent application of torque from one joint type to another can affect the applied clamp load.

There are usually two types of joints; hard and soft. A hard joint is defined as reaching full torque via a tightening angle of roughly 30° after the bolt, or nut, has reached snug level. Snug is usually defined as 10% of the final torque value. In a soft joint, the bolt or nut sometimes has to be tightened more than two complete turns, or over 720° before the full torque is reached.

Assembly tools often give different torque values on hard and soft joints when set to the same torque target. Inertial effects and the ability of the tool to stop movement and applying torque quickly cause this difference. The difference in torque values is generally known as mean shift. Lowering the effect of mean shift increases the possibility of consistent clamp load and is achieved through precision design and patented ATC software available on all electric tooling from STANLEY. **For more information on mean shift and accuracy, see ISO-5393 or contact your local STANLEY sales professional.**

**Adaptive Tightening Control (ATC)** gives each tool the flexibility to adjust for different joint designs and variable part tolerances. Two fasteners may have the same size and torque specifications, but different joint characteristics (e.g. hard versus soft joints, which require different tightening methodologies. Without ATC, either torque overshoot or long cycle times result. ATC improves torque capability and reduces cycle time by automatically adjusting to joint variations, therefore minimizing the number of tools and set-ups.



# Limited Warranty Statement

STANLEY Assembly Technologies products are warranted against defects in material or workmanship by STANLEY Black & Decker, Inc. ("STANLEY") for the useful life of the product. This limited lifetime warranty does not apply to (i) the PSI-intelligent air tool product line; (ii) software; or (iii) electrical components, which are warranted for a period of eighteen months from date of shipment by STANLEY to the initial purchaser.

STANLEY will repair or replace, at its option, any STANLEY Assembly Technologies product which, upon inspection of the product by STANLEY, is determined to be defective within the warranty period. STANLEY may from time to time elect to repair or replace a product at no charge even though STANLEY has determined that the product was not defective. The decision to repair or replace a product at no charge shall not be deemed an admission that the product is defective.

Warranty Repairs performed by STANLEY or a STANLEY Certified Repair Center and replacement products are warranted for a period of 90 days from the date the repaired or replacement product is delivered or the remainder of the original warranty period, whichever is longer.

The foregoing warranties shall not apply to standard wear parts, such as bevel gears, to defects or damage arising after the warranty period expires, or due to:

1. Failure to maintain and use the product in accordance with the instructions provided;
2. Use of non-genuine STANLEY replacement parts;
3. Accidents, tampering, modification, misuse, abuse, or abnormal wear and tear;
4. Repair services not performed by or at the direction of STANLEY; or
5. Continued use after partial failure.

## OEM Products

Some STANLEY Assembly Technologies custom engineered systems include components manufactured by others. The limited warranties of each individual manufacturer shall apply to these components and STANLEY makes no representation or warranty of any kind, expressed or implied, with respect to such components.

## General Terms

THE ABOVE WARRANTIES ARE EXCLUSIVE AND ARE IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. STANLEY's sole responsibility shall be to repair or replace products under warranty as set forth herein; STANLEY shall not be responsible for incidental or consequential damages or the inability to use its products for any purpose whatsoever. STANLEY's maximum liability shall not in any case exceed the contract price for the products claimed to be defective. Some states and countries do not allow limitations on implied warranties or the exclusion or limitation of incidental or consequential damages so one or more of the above limitations may not apply to you. You may also have other rights which vary by state or country.

## Warranty Claims

To obtain warranty service, please take the product to your STANLEY Certified Repair Center OR:

- a) Contact the STANLEY Assembly Technologies customer service department to obtain a "Return Authorization Number" and "Warranty Claim Report Form."
- b) Package the product including proof of purchase and the completed warranty claim form.
- c) Note the Return Authorization Number on the exterior of the package and return freight to:

STANLEY Assembly Technologies  
Central Repair Facility  
5335 Avion Park Drive  
Cleveland, Ohio 44143-2328

# Certification and Compliance

## ISO CERTIFICATION

STANLEY Assembly Technologies has successfully met the requirements of the ISO 9001 – Quality Systems International Standards for Quality Management and Quality Assurance. The requirements included a review of our quality management system covering the design of our products and our processes for procurement, production, delivery and quality assurance for our Cleveland, Ohio facility.



## CE COMPLIANCE

All STANLEY Assembly Technologies' products shipped to the European Union conform to the appropriate CE directives and EC Machine Directives. All products bear the CE marking and are shipped with the operator's instructions and declaration of conformity. We maintain the required technical files and all products are tested in accordance with the EN test code standards.



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