Panasonic

ASSEMBLY TOOLS

Accupulse

Precision Clutch

Mechanical Pulse

Assembly Qualifiers

Best Practices, Quick Guides, Warranty Instructions & Worksheets

Best Practices!

Panasonic
Assembly Tools

Guides, Instruction, Tool Certification Guide & Worksheets

Table of Contents

Panasonic Life Solutions Company of America Assembly Tools Division
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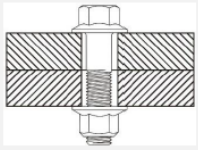
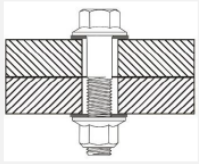
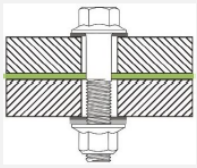
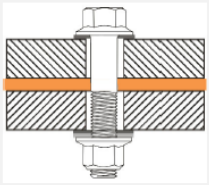
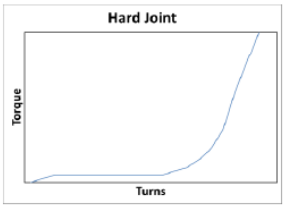
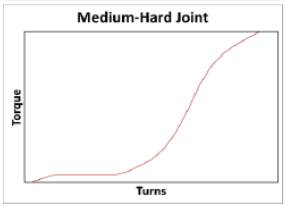
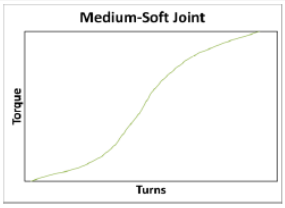
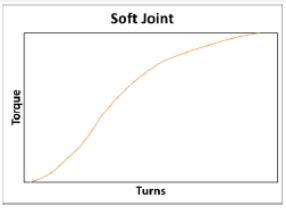
Best Practices!

Panasonic Assembly Tools

Identifying Joint Types

Types	Hard Joint Flush Point to Target Torque = <45°	Medium-Hard Joint Flush Point to Target Torque = >46° to <120°	Medium-Soft Joint Flush Point to Target Torque = >121° to <270°	Soft Joint Flush Point to Target Torque >270°
Example Joints	Examples: Metal to Metal Hard Slam	Examples: Hard Thin Gaskets Light Draw, P-Clamp, Multiple Washers, Electrical Connectors	Examples: Medium Thicker Gaskets Medium Draw, P-Clamp, Split Lock Washers	Examples: Soft Thicker Gaskets Long Draw, Hose Clamps, Rubber Washers, Dry Loctite
Description	Minimal resistance until the flush point then torque climbs at a steep rate.	Low resistance until the flush point then the torque climbs gradually.	Medium resistance with a gradual increase in torque.	High resistance throughout the fastening process.
Pictorial View				
Torque Curve Examples				
How The Joint Type Effects The Tool	Potentially higher torques than specified on the tool.	Specified torque range of the tool.	Lower torque capabilities than specified on the tool.	Potentially much lower torques than specified on the tool.

(Angle declared by rotating the fastener from flush (50%) to target torque (100%)

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Remote Control Setup

Programming the tool with the remote control

1**. Cycle Power** – Remove then re-install the battery on the tool.

2. **Enter Program Mode** – On the tool,
- press and **hold down** the **"Light Button**" while pulling and releasing the tool's **"Trigger/Switch"** you can then release both buttons.
- The display starts blinking, the tool is now in program mode.
- If the display is solid, return to step one.

3. **Edit Programmable Features** – While the display is flashing, use the remote control to change feature settings according to the charts on the next pages.

Two-Way communication capable Tool Models:
EYFLA7AR, EYFLA8PR/CR/AR, EYFLA9PR/CR and EYFMA2PR/CR
(Please refer to the Owner's Manual for further instruction beyond Best Practices)

These models can operate in both One-Way mode or Two-Way mode.
- One-Way communication mode –The Remote control is used to change tool settings.
- Two-Way communication mode – The Qualifier will change tool features and will override any settings made by the remote control.

Each press of the A,B,C or D buttons on the remote control will cycle through the sub-menus.
The + and – buttons change the sub menu feature values
The blue button is the Save button. Press this button after features are selected to save changes.

On the back is a quick reference for each of the buttons.

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Mechanical Pulse

EYFLA4 | EYFLA5 | EYFLA6 | EYFMA1
Quick Programming guide

Button	Number of Push	Setting Mode	Tool display	Description
A	0	Torque setting	1~30: Shut-off F: Non shut-off	Select stage with +/−button. Initial setting is 「F」
	1 time	Flush Detection Mode Setting	L1: Stage 1 L2: Stage 2	Select stage with +/−button. Initial setting is 「L1」 L1: For applications with no pulses before the flush point (fragile material) L2: For applications when the tool pulses before achieving flush point
B	1 times	Rehit Prevention	0〜30 = OFF 1〜3.0 = .1 tp 3.0 sec	Select stage with +/−button. Initial setting is 「0」
C	1 time	Restore Factory Defaults	F	All settings return to initial setting. On "F" press "Save" (Blue Button)
	2 times	Out Of Range/Anti-Theft	C0: OFF C1: ON	Select stage with +/−button. Initial setting is 「C0」 In the event that wireless communication cannot be completed between the tool and the qualifier, the tool will be disabled and cannot be operated.
D	1 time	Tool Model Number	Model Number	Will display model number

EYFNA1 | EYFPA1
Quick Programming guide

Button	Number of Push	Setting Mode	Tool display	Description
A	0	Torque setting	1~30: Shut-off F: Non shut-off	Select stage with +/−button. Initial setting is 「F」
	1 time	Flush (Snug torque) detection mode setting	L1: Stage 1 L2: Stage 2	Select stage with +/−button. Initial setting is 「L1」 L1: For applications with no pulses before the flush point (fragile material) L2: For applications when the tool pulses before achieving flush point
	2 times	Buzzer setting	b0: No buzzer b1: Buzzer with OK b2: Buzzer with NOK	Select stage with +/−button. Initial setting is 「b0」
B	1 Times	LED Light	d1: by LED button (for d2: by trigger switch	Select stage with +/- button. Initial setting is 「d1」
	2 times	Rundown error detecting	0〜30 = Off 1〜3.0 = .1 to 3.0 sec	Select stage with +/−button. Initial setting is 「0」 If the clutch is activated before the programmable minimum runtime, the tool alerts the operator to a NOK fastening. (0.1sec. per stage)
	3 times	Variable speed control	P0: Variable speed (ON) P1: Single speed (OFF)	Select stage with +/−button. Initial setting is 「P0」 Speed can be controlled by use of the trigger.
C	1 time	Restore Factory Default	F	All settings return to initial setting. On "F" press the "Save" (Blue Button)
	2 times	Maintenance interval alarm	0〜99 = Off 1-99 = 10,000-990,000 Run Downs	Select stage with +/−button. Initial setting is 「0」 When total fastening times are within 1 hour of preset maintenance interval, tool's display blinks notifying the operator. Once tool reaches the preset interval, the tool is looked out from further use.
	3 times	Out of range disable function	C0: OFF C1: ON	Select stage with +/−button. Initial setting is 「C0」 In the event that wireless communication cannot be completed between the tool and the qualifier, the tool will be disabled and cannot be operated.
D	1 time	Cross thread reduction	R0: OFF R1: 360°reverce (ON)	Select stage with +/−button. Initial setting is 「R0」 Tool first reverses 360 degree, aligning the threads, greatly reducing the possibility of cross threads.

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AccuPulse

EYFLA7 | EYFLA8 | EYFLA9 | EYFMA2
Quick Programming guide

Button	Number of Push	Setting Mode	Tool display	Description
A	0	Torque setting	1~40: Shut-off F: Non shut-off	Select stage with +/−button. Initial setting is「F」.
	1 time	Flush (Snug torque) detection mode setting	L1: Stage1 ～L7: Stage7	Select stage with +/−button. Initial setting is「L1」. L1: For applications with light load before snug point ～L7: For applications with heavy loads or varying joint rate before snug point
	2 times	Buzzer setting	b0: No buzzer b1: Buzzer with OK b2: Buzzer with NOK	Select stage with +/−button. Initial setting is「b0」.
	3 times	Flush (Snug torque) detection delay	J0: OFF 01～30: 0.1～3.0sec.	Select stage with +/−button. Initial setting is「J0」. The tool doesn't activate Snug Torque Detection mode and ignores load during rundown for a selected time period.
B	1 time	LED light	d1: by LED button (for 5min) d2: by trigger switch	Select stage with +/−button. Initial setting is「d1」.
	2 times	Rundown error detecting	0～30: 0～3.0sec.	Select stage with +/−button. Initial setting is「0」. If the clutch is activated before the programmable minimum runtime, the tool alerts the operator to a NOK fastening. (0.1sec. per stage)
	3 times	Variable speed control	P0: Variable speed (ON) P1: Single speed (OFF)	Select stage with +/−button. Initial setting is「P0」. Speed can be controlled by use of the trigger.
C	1 time	Reset settings	F	All settings return to initial setting.
	2 times	Maintenance interval alarm	0～99: 0-99 Rundowns	Select stage with +/−button. Initial setting is「0」 When total fastening times are within 1 hour of preset maintenance interval, tool's display blinks notifying the operator. Once tool reaches the preset interval, the tool is looked out from further use.
	3 times	Out of range disable function	C0: OFF C1: ON	Select stage with +/−button. Initial setting is「C0」 In the event that wireless communication cannot be completed between the tool and the qualifier, the tool will be disabled and cannot be operated.
	4 times	Communication Mode	90: 1-way 91: 2-way	Only available on models equipped with 2-way communication Toggle communication mode between 1-way & 2-way
D	1 time	Cross thread reduction	R0: OFF R1: 360° reverce (ON)	Select stage with +/−button. Initial setting is「R0」 Tool first reverses 360 degree, aligning the threads, greatly reducing the possibility of cross threads.
	2 times	Retightening prevention	U-U9: 0～3.0sec.	Select stage with +/−button. Initial setting is「U」 Tool prevented from operating during a selected time period after shut-off.
	3 times	Socket extension mode	h0: Normal h1: for 150mm socket h2: for 250mm socket	Select stage with +/−button. Initial setting is「h0」 RPM during impacts is adjusted depending on socket extension length to stabilize torque.

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Clutch Tools

EYFG1N | EYFG2N | EYFG3N
Quick Programming guide

Button	Number of Push	Setting Mode	Tool display	Description
A	0	Speed Setting	80 = Full speed 15~80: 10 rpm each	Select stage with +/−button. Initial setting is 「80」 Adjustable speed in 10 rpm increments
	1 times	Buzzer setting	b0: No buzzer b1: Buzzer with OK b2: Buzzer with NOK	Select stage with +/−button. Initial setting is 「b0」
B	1 Times	LED Light	L1: by LED button (5min) L2: by trigger switch	Select stage with +/- button. Initial setting is 「L1」
	2 times	Rundown error detecting	0～30 = Off 1～3.0sec = .1 to 3.0sec	Select stage with +/−button. Initial setting is 「0」
	3 times	Variable speed control	P0: Variable speed (ON) P1: Single speed (OFF)	Select stage with +/−button. Initial setting is 「P0」 Speed can be controlled by use of the trigger.
C	1 time	Restore Factory Defaults	F	All settings return to initial setting. On "F" press "Save" (Blue Button)
	2 times	Maintenance interval alarm	0～99 = Off 1-99 = 10,000-990,000 Run Downs	Select stage with +/−button. Initial setting is 「0」 When total fastening times are within 1 hour of preset maintenance interval, tool's display blinks notifying the operator. Once tool reaches the preset interval, the tool is locked out from further use.
	3 times	Out of range disable function	C0: OFF C1: ON	Select stage with +/−button. Initial setting is 「C0」 In the event that wireless communication cannot be completed between the tool and the qualifier, the tool will be disabled and cannot be operated.
D	1 time	Cross thread reduction	R0: OFF R1: 360°reverce (ON)	Select stage with +/−button. Initial setting is「R0」 Tool first reverses 360 degree, aligning the threads, greatly reducing the possibility of cross threads.
	2 times	Auto Down Shift	0～30 = Off 1～30 = .1 to 3.0sec	Select stage with +/−button. Initial setting is 「U」 High speed run down time starts on trigger pull then automatically downshifts to 300 rpm

* ***A clutch adjustment tool is required for torque settings.***

1. Rotate the clutch adjustment tool CW to open the tamper resistant door.
2. Flip the clutch adjustment tool over to adjust the clutch to the desired torque.
3. Rotating the clutch adjustment tool clockwise will increase torque and counter clockwise to decrease torque.
4. Once the desired torque is set, remember to close the tamper resistant door rotating the clutch adjustment tool CCW.

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Setup Worksheet

Production Floor Information

	Application	
Application		Hood Install
Location		H26
Torque Units (Nm, Ft. Lbs., In. Lbs., Etc.)		Nm
Target Torque		20
Torque Tolerance (+/- %)		15%
Torque Tolerance (+/-)		3
Date of Install		2014-01-01
	Tool Info	
Tool Model Number		EYFLA5A
Tool Serial Number		YLA5AR1212074
Flush Point (L1/L2)		L2
Tool Program Setting (1~30)		18
	Accessories	
Brand of Sockets / Extensions / Etc.		Apex
Sockets / Extensions / Etc.		13mm w/ 10" Ext
	Residual Audit	
Audit Wrench Make		Brand
Audit Wrench Model/Serial #		ABC/123
Audit Wrench Mode		Peak
Audit Wrench Settings		Torque/Angle/Threshold
Residual Audit Torque (Nm)		21
Calibration Date		2014-01-01

Calibration Lab Information

	Calibration Unit Settings	
Model #		EYFST22NM
Serial #		123456
Transducer Model #		EYFST22NM
Transducer Serial #		123456
Joint Simulator Model #		EYFJS22NM
Joint Type / Setting		Medium Hard
Mode		Pulse
Filter Frequency Setting (Hz)		500
Pulse Tool Compensation		1-800
Torque Units (Nm, Ft. Lbs., In. Lbs., Etc.)		Nm
Target Torque		20
Torque High Limit		23
Torque Low Limit		17
Flush Point (L1/L2)		L2
Tool Program Setting (1~30)		18
	Accessories	
Brand of Sockets / Extensions / Etc.		Apex
Sockets / Extensions / Etc.		13mm
	Audit	
Certification Results (Nm (+/- % or +/- Nm))		20 +/-20%

Single Tool Worksheet

Mechanical Pulse Tools

EYFLA4 | EYFLA5 | EYFLA6
EYFMA1 | EYFNA1 | EYFPA1

Best Practices!

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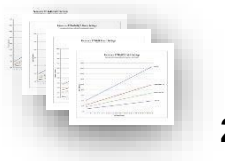
Assembly Tools

Verify Mechanical Pulse Tools On Applications

Following these guidelines, including the "Set Up Worksheet", will streamline the set up and verification process.



Torque Curves

2. Determine Tool For Application

3. Set Up Tool on Application

4. Verify Tool On Application

Static/Residual Torque Audit w/ Audit Wrench

5. Record To Worksheet

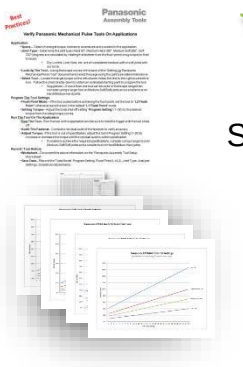
Set Up Worksheet

6. Verify Tool In Calibration Lab

7. Record To Worksheet

Set Up Worksheet

1. Obtain Application Specifications



Method For New Installations

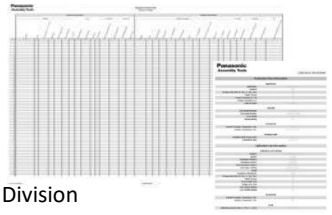
*In most cases, Residual (Audit Wrench) & Dynamic (Transducer) torques will be different due to differences in the joint!

Best Practices!

Verify Panasonic Mechanical Pulse Tools On Applications

1. **Application Specifications – Record to Worksheet**
   - **Specs** – Obtain the target torque, tolerance, extensions and sockets for the application.
   - **Joint Type** – Determine the joint type (Hard 30°, Medium-Hard 60°, Medium-Soft 180°, Soft 360° (degrees are calculated by rotating the fastener from the flush point (snug torque) to final torque))
     - Dry Loctite, Lock Nuts, etc. will possibly cause a medium-soft or soft joint.
2. **Determine The Tool – Record to Worksheet**
   - **Look Up The Tool** – Use the torque curve graphs to select the tool and be sure to use the joint type determined above.
   - **Select Tool** – Locate the target torque on the left column; follow the line to the right to select the tool. Follow the chart directly down to obtain an estimated starting point to program the tool.
     - Suggestion – If more than one tool can be used in the torque range then consider using a larger tool on Medium-Soft/Soft joints and a smaller tool on Hard/Medium Hard joints.
3. **Program The Tool Settings – Record to Worksheet**
   - **Flush Point Mode** – If the tool pulses before achieving the flush point, set the tool to "**L2 Flush Point**" otherwise leave the tool in the default "**L1 Flush Point**" mode.
   - **Setting Torque** – Adjust the tools shut-off setting "**Program Setting**" (1~30) to the desired torque from the set up torque curves.
4. **Run The Tool On The Application – Record to Worksheet**
   - **Run The Tool** - Run the tool on the application and be sure to hold the trigger until the tool shuts off.
   - **Audit The Fastener** - Conduct a static/residual audit of the fastener to verify accuracy.
   - **Adjust Torque** - If the torque is out of specification, adjust the tool's Program Setting (1-30) to increase or decrease the torque until the residual audit is within specification.
     - If unable to achieve the required specifications, consider using a larger tool on Medium-Soft/Soft joints and a smaller tool on Hard/Medium Hard joints.
5. **Record / Tool History**
   - **Worksheet** – Document the above information on the "Panasonic Assembly Tool Set Up Worksheet".
   - **Save Data** – Record the Tools Model, Program Setting, Flush Point (L1/L2), Joint Type, Analyzer Settings, Sockets and Extensions.
6. **Verify The Tool In The Calibration Lab – Record to Worksheet**
   - **Set Up Transducer** – Set up the Analyzer/Software per manufacturers suggested settings.
   - **Adjust Simulator** – Adjust the Joint Simulator per the transducer quick start guide.
   - **Transducer** – Warm up the Joint Simulator and Tool before testing. Run 10 cycles on the joint simulator to get the components warmed up and grease moving.
   - **Run The Tool** – Run the tool on the Transducer with the Joint Simulator.
     - Wait 5 seconds in between rundowns.
7. **Record / Tool History**
   - **Worksheet** – Document the above information on the "Panasonic Assembly Tool Set Up Worksheet".
   - **Save Data** – Record the Tools Model, Program Setting, Flush Point (L1/L2), Joint Type, Analyzer Settings, Sockets and Extensions.

Panasonic Assembly Tools Set Up Worksheet



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Reinstate Mechanical Pulse Tools On Applications

Following these guidelines, including the "Set Up Worksheet", will streamline the set up and verification process.

2. Set Up Tool

3. Verify Tool In Calibration Lab

Set Up Worksheet

1. Look Up Application Settings On Worksheet

Method For Reinstating Tools

4. Run Tool On Application

5. Verify Tool On Application

Static/Residual Torque Audit w/ Audit Wrench

6. Update Worksheet

Set Up Worksheet

*In most cases, Residual (Audit Wrench) & Dynamic (Transducer) torques will be different due to differences in the joint!

Best Practices!

Panasonic
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Reinstate Panasonic Mechanical Pulse Tools On Applications

1. Look Up Application Setting On Worksheet

- **Worksheet** – Look up the application information on the "Panasonic Assembly Tool Set Up Worksheet".

2. Set Up Tool

- **Obtain Tool & Attachments** – Obtain the tool, extensions and sockets for the application.
- **Program The Tool** – Referring to the worksheet, program the tool to the same settings as recorded previously confirming the Flush Point (L1/L2) & Program Setting (1-30)

3. Verify The Tool In The Calibration Lab – Update Worksheet

- **Set Up Transducer** – Set up the Analyzer/Software per the settings recorded in the worksheet.
- **Adjust Simulator** – Adjust the Joint Simulator per the recorded washer thickness in the worksheet.
- **Transducer** – Warm up the Joint Simulator and Tool before testing. Run 10 cycles on the joint simulator to get the components warmed up and grease moving.
- **Run The Tool** – Run the tool on the Transducer with the Joint Simulator.
  - Wait 10 seconds in between rundowns.

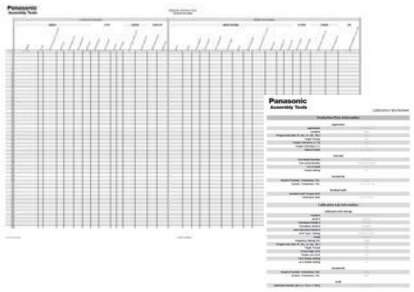
4. Run The Tool On The Application – Update Worksheet

- **Run The Tool** - Run the tool on the application and be sure to hold the trigger until the tool shuts off.
- **Audit The Fastener** - Conduct a static/residual audit of the fastener to verify accuracy.
- **Adjust Torque** - If the torque is out of specification, adjust the tool's Program Setting (1-30) to increase or decrease the torque until the residual audit is within specification.
  - If unable to achieve the required specifications, double check the tools set up (settings & attachments) for any inconsistences.

5. Record / Tool History

- **Worksheet** – Update the worksheet with the above information if any changes were made to the tool, settings or attachments.

Panasonic Assembly Tools Set Up Worksheet



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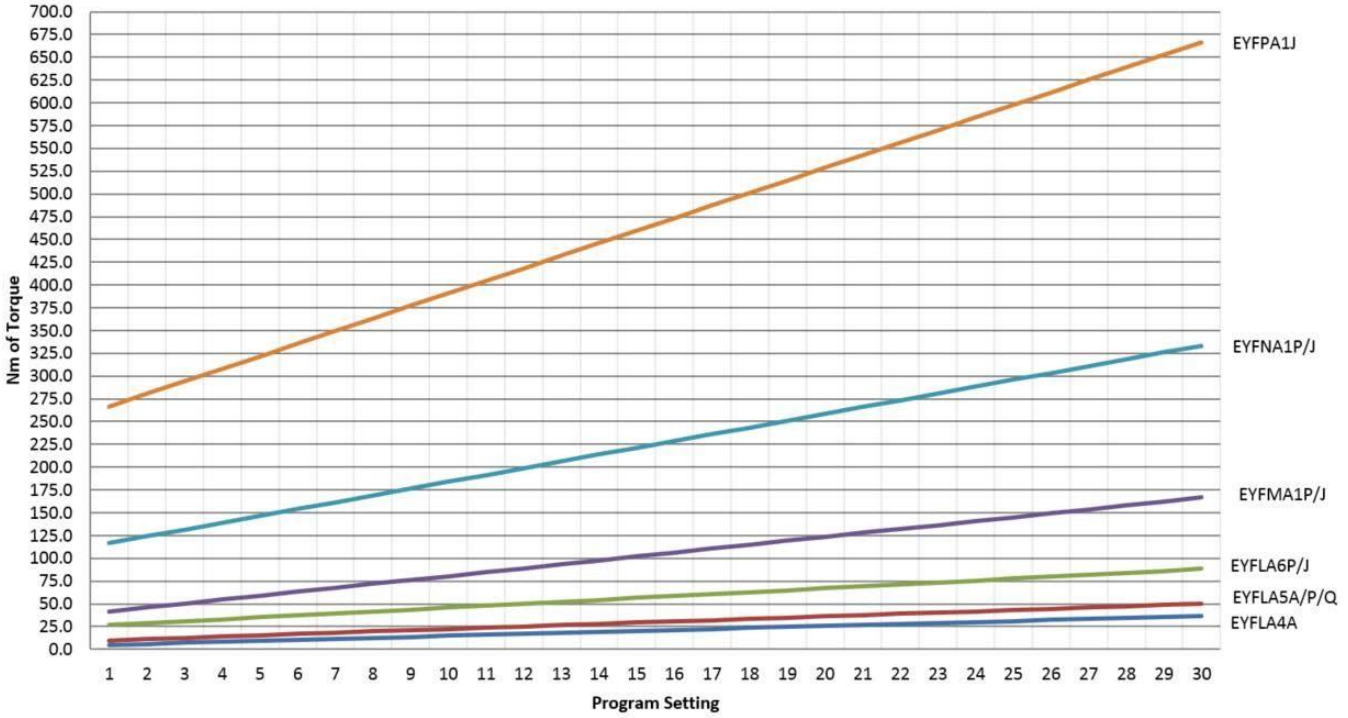
Hard Joint 30 Degrees

Approximate torque settings for various joint types

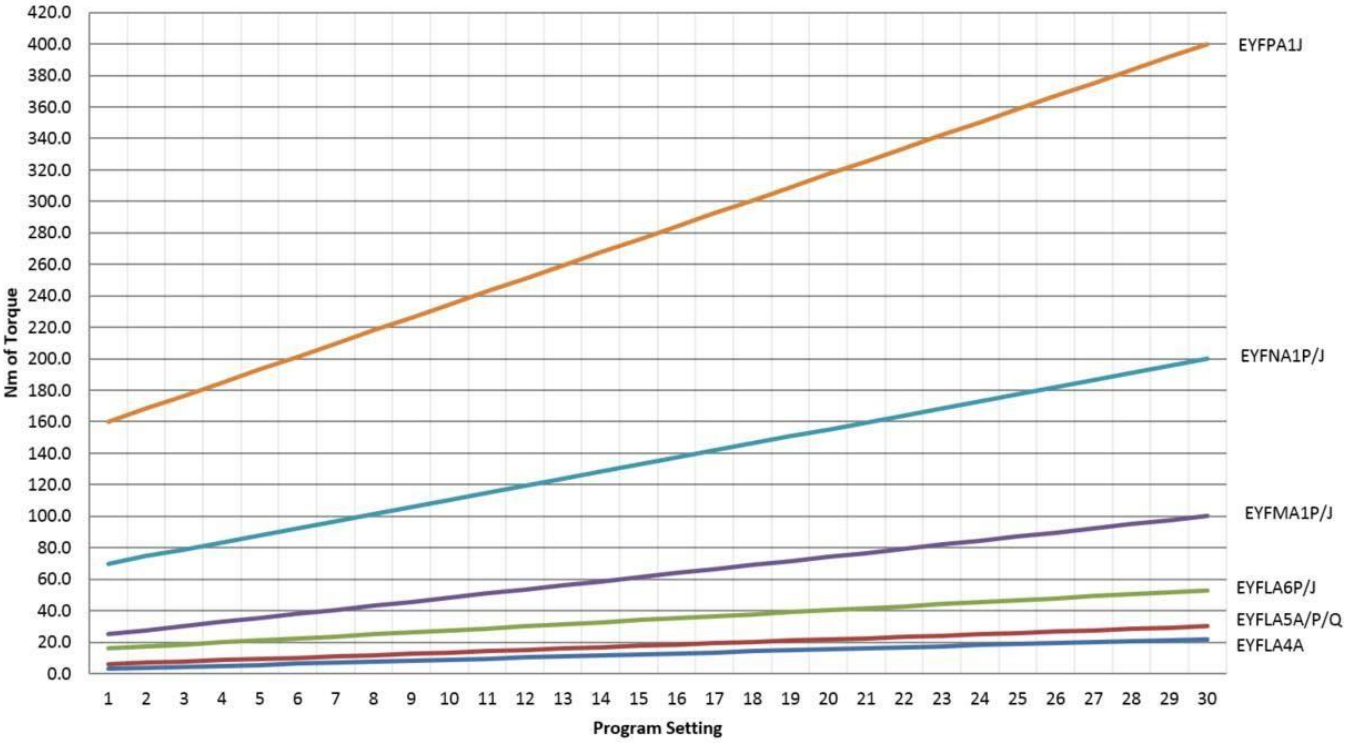
(Angle declared by rotating the fastener from flush (50%) to target torque (100%)



Medium-Hard Joint 60 Degrees

Approximate torque settings for various joint types.

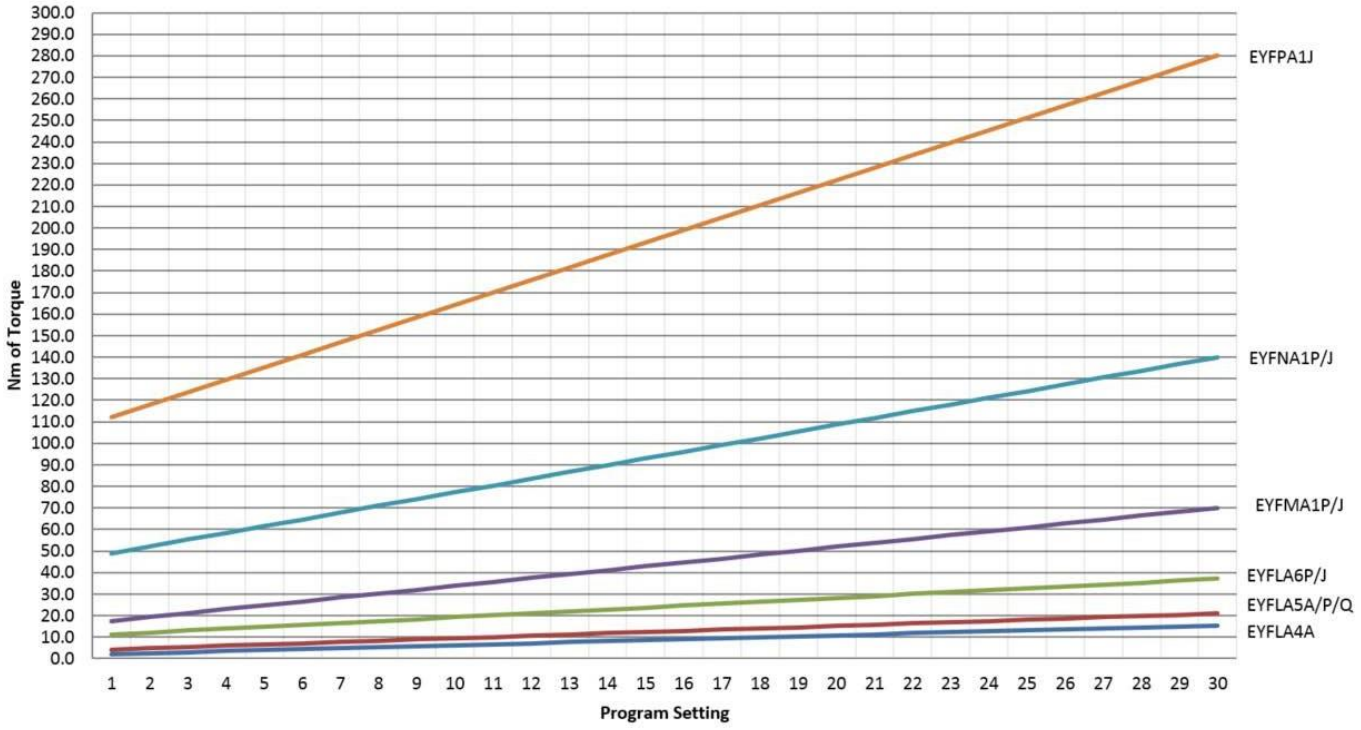
(Angle declared by rotating the fastener from flush (50%) to target torque (100%)



**Tool set to L1*

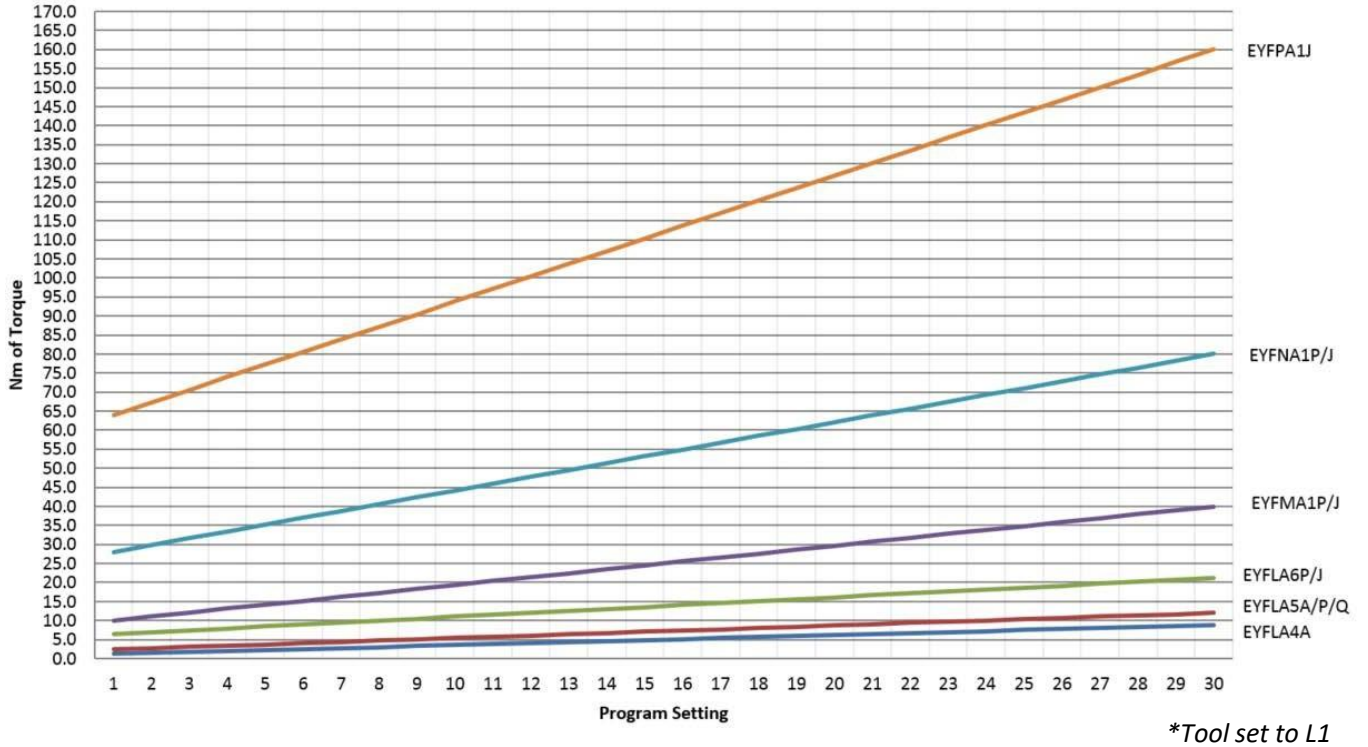
Medium-Soft Joint 180 Degrees

Approximate torque settings for various joint types.
(Angle declared by rotating the fastener from flush (50%) to target torque (100%)



Soft Joint >360 Degrees

Approximate torque settings for various joint types.
(Angle declared by rotating the fastener from flush (50%) to target torque (100%)



**Tool set to L1*

AccuPulse

EYFLA7 | EYFLA8 | EYFLA9 | EYFMA2

AccuPulse HR Setup Instructions

Step 1 Select Tool & Initial Torque Setting

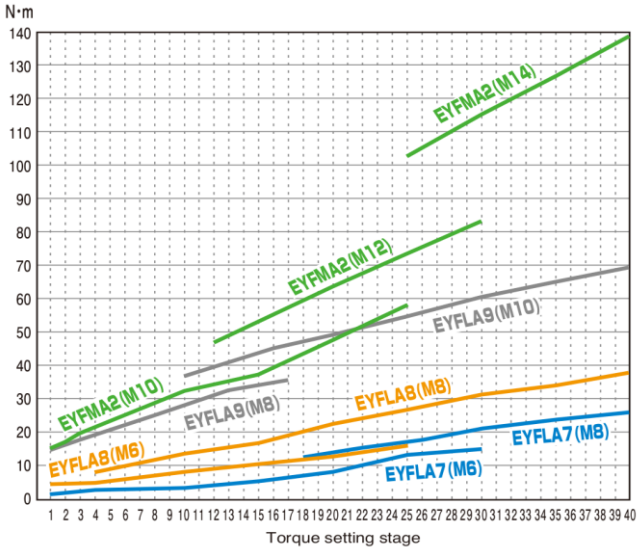
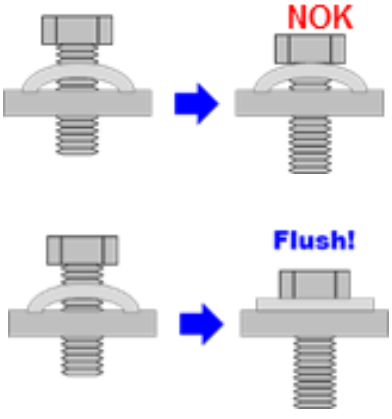


*Chart based on medium/hard joint type

1. Choose correct tool & fastener size from chart
2. Set tool torque stage according to the chart & put tool in L1 mode.
3. Rundown fastener & audit with torque wrench
4. Adjust torque stage up or down to achieve target torque
5. If unable to achieve target torque proceed to step 2

Step 2 Flush Detection Level Adjustment

1. Reset Torque Stage to initial setting from Step 1 #2
2. Adjust L mode from L1 to L2
3. Rundown Fastener & confirm Bolt head is Flush by VISUAL Check
4. If NOK increase L mode until Flush by Visual Check



5. If OK proceed to step 3

Step 3 Set Final Torque Stage

1. Perform static audit on fastener with rotary transducer or torque wrench

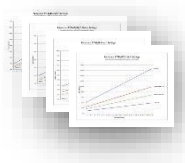
2. Adjust target torque value until target torque is achieved

Best Practices!

Panasonic
Assembly Tools

EYFLA7 | EYFLA8 | EYFLA9 | EYFMA2
Verify AccuPulse Tools On Applications

Following these guidelines, including the "Set Up Worksheet", will streamline the set up and verification process.



Torque Curves

2. Determine Tool For Application

3. Set Up Tool on Application

4. Verify Tool On Application

Static/Residual Torque Audit w/ Audit Wrench

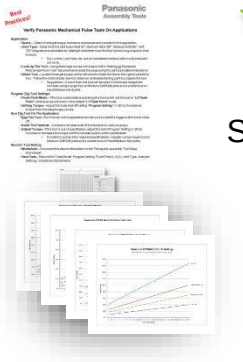
5. Record To Worksheet

Set Up Worksheet

6. Verify Tool In Calibration Lab

7. Record To Worksheet

Set Up Worksheet



1. Obtain Application Specifications

Method For New Installations

*In most cases, Residual (Audit Wrench) & Dynamic (Transducer) torques will be different due to differences in the joint!

Best Practices!

Verify AccuPulse Tools On Applications

1. **Application Specifications – Record to Worksheet**
    - **Specs** – Obtain the target torque, tolerance, extensions and sockets for the application.
    - **Joint Type** – Determine the joint type (Hard 30°, Medium-Hard 60°, Medium-Soft 180°, Soft 360° (degrees are calculated by rotating the fastener from the flush point (snug torque) to final torque))
        - Dry Loctite, Lock Nuts, etc. will possibly cause a medium-soft or soft joint.
2. **Determine The Tool – Record to Worksheet**
    - **Look Up The Tool** – Use the torque curve graphs to select the tool and be sure to use the joint type determined above.
    - **Select Tool** – Locate the target torque on the left column; follow the line to the right to select the tool. Follow the chart directly down to obtain an estimated starting point to program the tool.
        - Suggestion – If more than one tool can be used in the torque range then consider using a larger tool on Medium-Soft/Soft joints and a smaller tool on Hard/Medium Hard joints.
3. **Program The Tool Settings – Record to Worksheet**
    - **Flush Point Mode** – L1: For applications with light load before snug point
      L2～L7: For applications with heavy loads or varying joint rate before snug point.
      If the parts don't come together before target torque, increase the flush point.
    - **Setting Torque** – Adjust the tools shut-off setting "**Program Setting**" (1~40) to the desired torque from the set up torque curves.
4. **Run The Tool On The Application – Record to Worksheet**
    - **Run The Tool** - Run the tool on the application and be sure to hold the trigger until the tool shuts off.
    - **Audit The Fastener** - Conduct a static/residual audit of the fastener to verify accuracy.
    - **Adjust Torque** - If the torque is out of specification, adjust the tool's Program Setting (1-40) to increase or decrease the torque until the residual audit is within specification.
        - If unable to achieve the required specifications, consider using a larger tool on Medium-Soft/Soft joints and a smaller tool on Hard/Medium Hard joints.
5. **Record / Tool History**
    - **Worksheet** – Document the above information on the "Panasonic Assembly Tool Set Up Worksheet".
    - **Save Data** – Record the Tools Model, Program Setting, Flush Point (L1 –L7), Joint Type, Analyzer Settings, Sockets and Extensions.
6. **Verify The Tool In The Calibration Lab – Record to Worksheet**
    - **Set Up Transducer** – Set up the Analyzer/Software per manufacturers suggested settings.
    - **Adjust Simulator** – Adjust the Joint Simulator per the transducer quick start guide.
    - **Transducer** – Warm up the Joint Simulator and Tool before testing. Run 10 cycles on the joint simulator to get the components warmed up and grease moving.
    - **Run The Tool** – Run the tool on the Transducer with the Joint Simulator.
        - Wait 5 seconds in between rundowns.
7. **Record / Tool History**
    - **Worksheet** – Document the above information on the "Panasonic Assembly Tool Set Up Worksheet".
    - **Save Data** – Record the Tools Model, Program Setting, Flush Point (L1-L7), Joint Type, Analyzer Settings, Sockets and Extensions.

Best Practices!

Panasonic Assembly Tools

Reinstate AccuPulse Tools On Applications

Following these guidelines, including the "Set Up Worksheet", will streamline the set up and verification process.

Method For Reinstating Tools

2. Set Up Tool

3. Verify Tool In Calibration Lab

4. Run Tool On Application

5. Verify Tool On Application

Static/Residual Torque Audit w/ Audit Wrench

6. Update Worksheet

Set Up Worksheet

1. Look Up Application Settings On Worksheet

Set Up Worksheet

*In most cases, Residual (Audit Wrench) & Dynamic (Transducer) torques will be different due to differences in the joint!

Best Practices!

Panasonic
Assembly Tools

Reinstate Panasonic AccuPulse Tools On Applications

1. Look Up Application Setting On Worksheet

- **Worksheet** – Look up the application information on the "Panasonic Assembly Tool Set Up Worksheet".

2. Set Up Tool

- **Obtain Tool & Attachments** – Obtain the tool, extensions and sockets for the application.
- **Program The Tool** – Referring to the worksheet, program the tool to the same settings as recorded previously confirming the Flush Point (L1-L7) & Program Setting (1-40)

3. Verify The Tool In The Calibration Lab – Update Worksheet

- **Set Up Transducer** – Set up the Analyzer/Software per the settings recorded in the worksheet.
- **Adjust Simulator** – Adjust the Joint Simulator per the recorded washer thickness in the worksheet.
- **Transducer** – Warm up the Joint Simulator and Tool before testing. Run 10 cycles on the joint simulator to get the components warmed up and grease moving.
- **Run The Tool** – Run the tool on the Transducer with the Joint Simulator.
  - Wait 10 seconds in between rundowns.

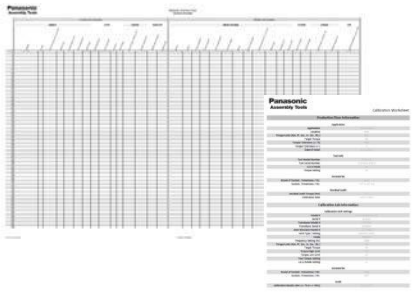
4. Run The Tool On The Application – Update Worksheet

- **Run The Tool** - Run the tool on the application and be sure to hold the trigger until the tool shuts off.
- **Audit The Fastener** - Conduct a static/residual audit of the fastener to verify accuracy.
- **Adjust Torque** - If the torque is out of specification, adjust the tool's Program Setting (1-40) to increase or decrease the torque until the residual audit is within specification.
  - If unable to achieve the required specifications, double check the tools set up (settings & attachments) for any inconsistences.

5. Record / Tool History

- **Worksheet** – Update the worksheet with the above information if any changes were made to the tool, settings or attachments.

Panasonic Assembly Tools Set Up Worksheet



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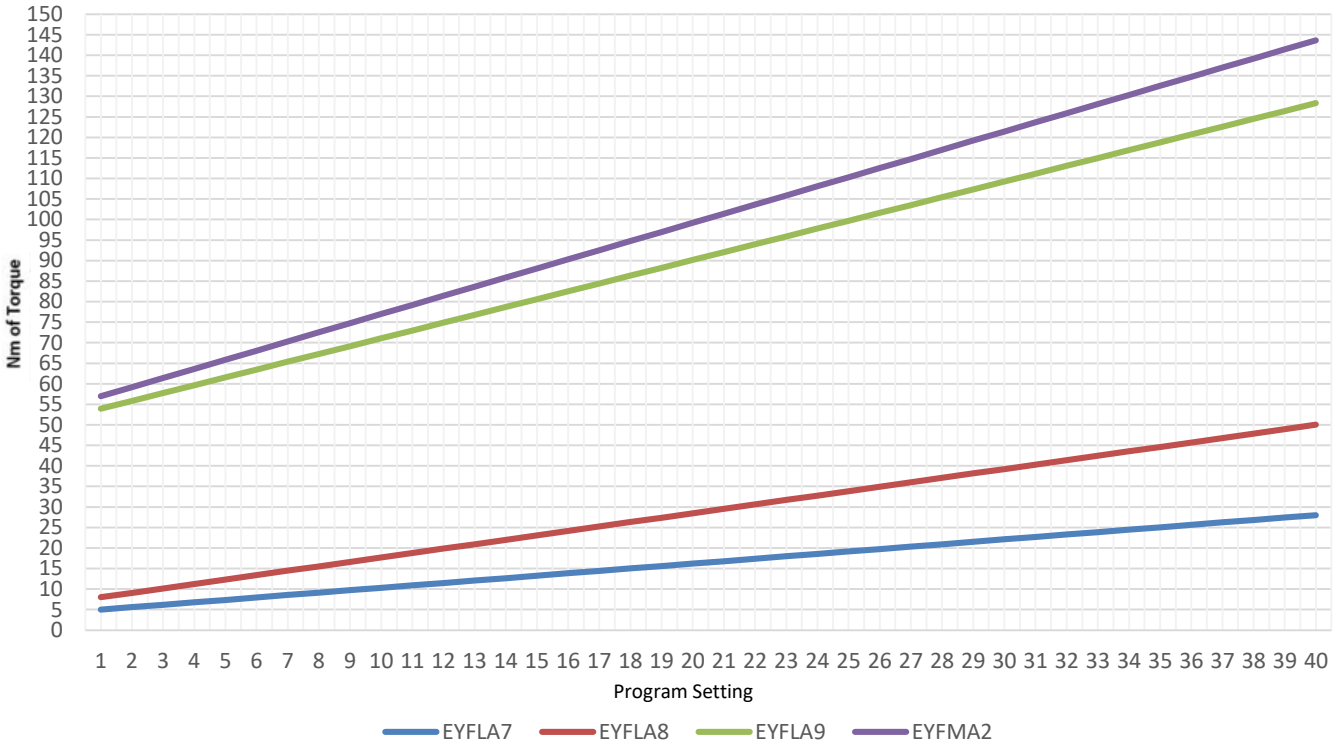
2 Riverfront Plaza 5th Floor Newark, NJ 07102
www.panasonic.com/assemblytools

Hard Joint 30 Degrees

Approximate torque settings for various joint types

Angle declared by rotating the fastener from flush (50%) to target torque (100%)

Tool set to L1

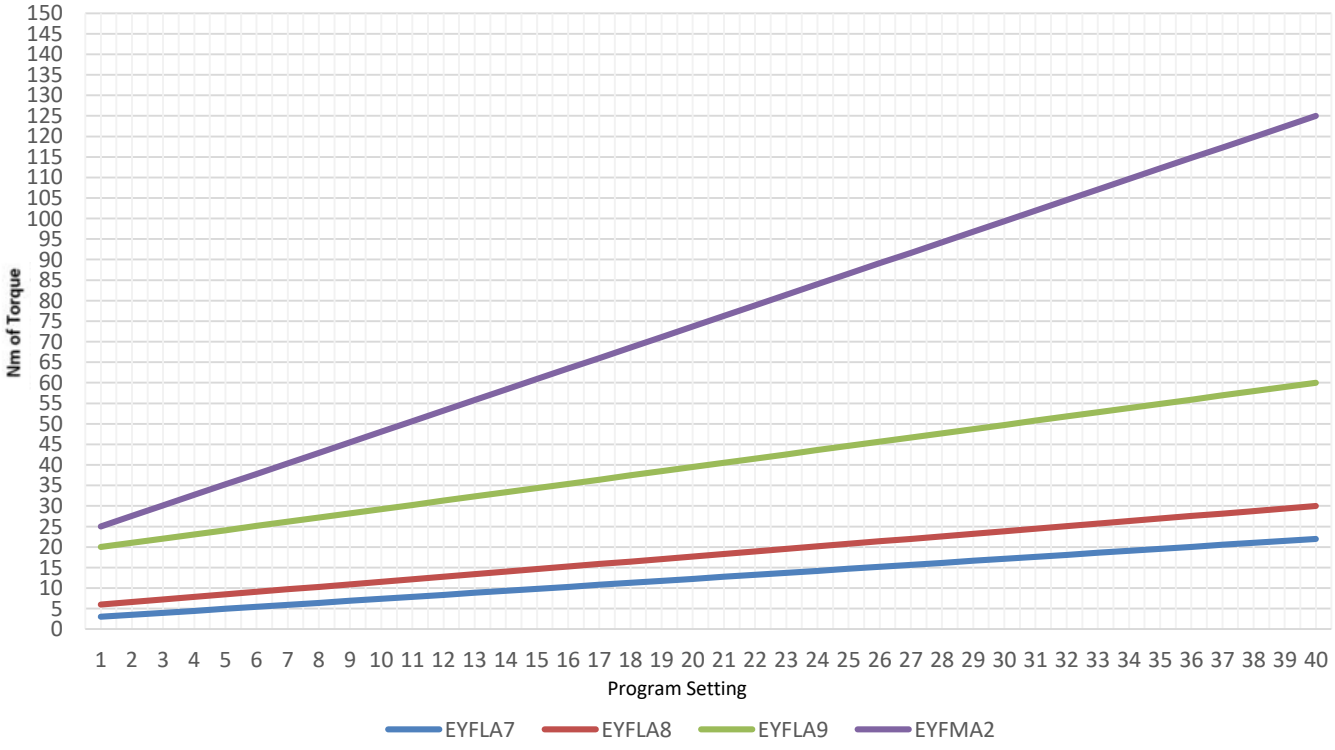


Medium Hard Joint 60 Degrees

Approximate torque settings for various joint types

Angle declared by rotating the fastener from flush (50%) to target torque (100%)

Tool set to L1

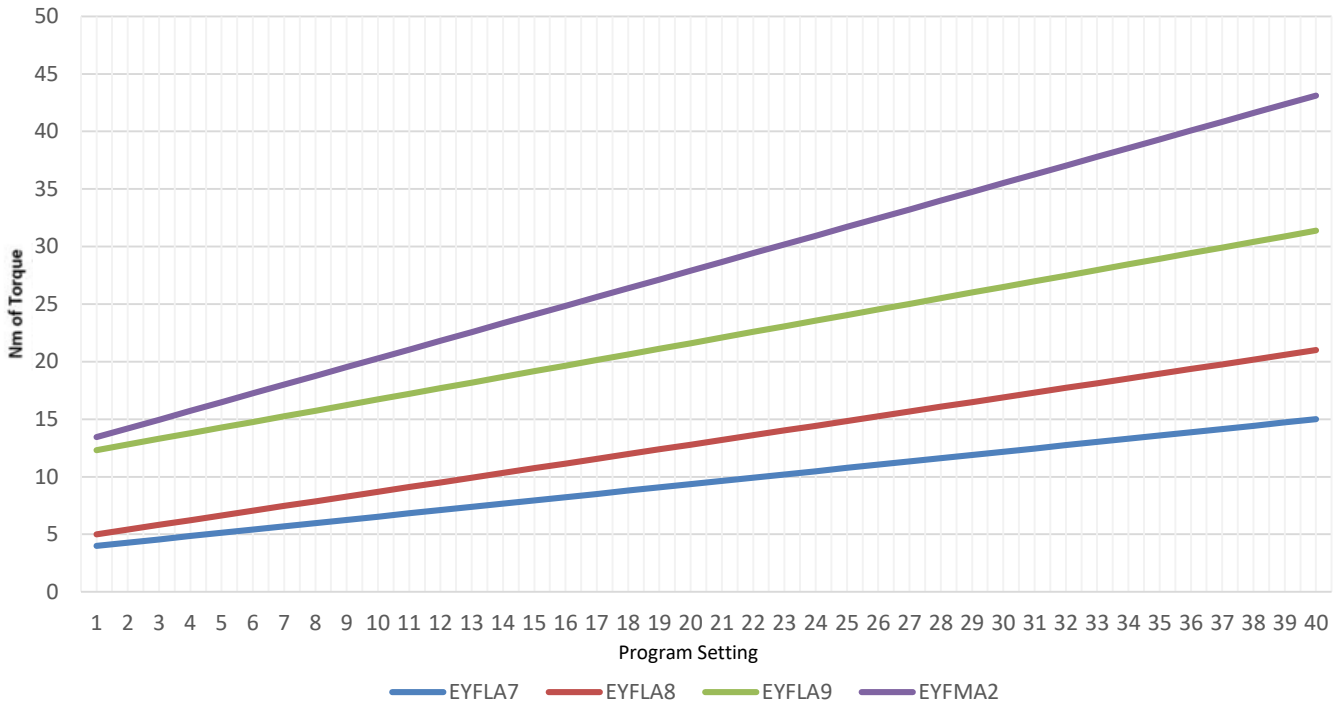


Medium Soft Joint 180 Degrees

Approximate torque settings for various joint types

Angle declared by rotating the fastener from flush (50%) to target torque (100%)

Tool set to L1

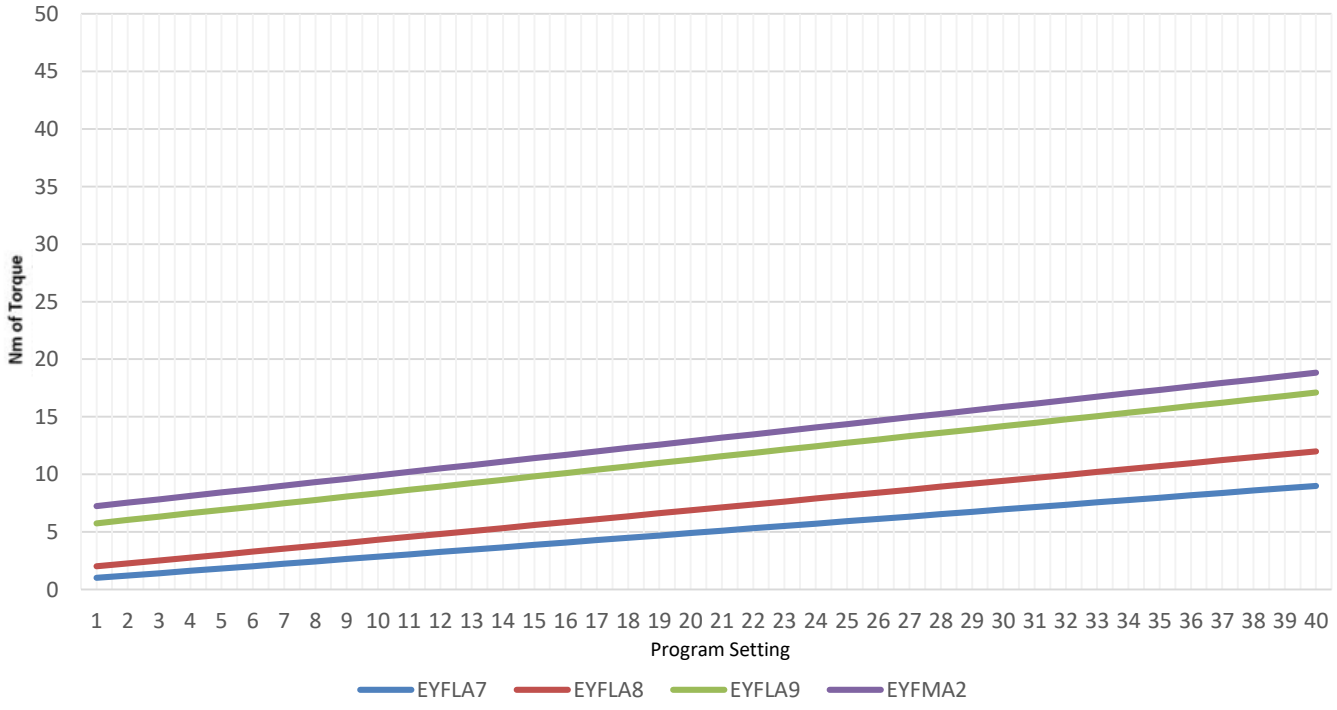


Soft Joint > 360 Degrees

Approximate torque settings for various joint types

Angle declared by rotating the fastener from flush (50%) to target torque (100%)

Tool set to L1



Clutch Tools

EYFGA1 | EYFGA2 | EYFGA3
EYFGB1 | EYFGB2 | EYFGB3

Best Practices!

Panasonic
Assembly Tools

EYFGA1 | EYFGA2 | EYFGA3
EYFGB1 | EYFGB2 | EYFGB3
Verify Panasonic Clutch Tools On Applications

Following these guidelines, including the "Set Up Worksheet", will streamline the set up and verification process.

2. Set Up Tool

3. Verify Tool In Calibration Lab

4. Run Tool On Application

5. Verify Tool On Application

Residual Torque Audit w/ Audit Wrench

6. Update Worksheet

Set Up Worksheet

1. Obtain Application Specifications

Method For New Tool Installations

*In most cases, Residual (Audit Wrench) & Dynamic (Transducer) torques will be different due to differences in the joint!

Best Practices!

Panasonic
Assembly Tools

Verify Panasonic Clutch Tools On Applications

1. Application Specifications – Record to Worksheet

- **Specs** – Obtain the target torque, tolerance, extensions and socket/bit for the application.

2. Set Up Tool – Update Worksheet

- **Adjust The Torque** – Use the clutch adjustment tool to increase (cw) or decrease (ccw) the output torque.
- **Program The Tool** – Program the tools speed to meet the application and enable additional quick features if necessary.

3. Verify The Tool In The Calibration Lab – Update Worksheet

- **Set Up Transducer** – Set up the Analyzer/Software per the settings recorded in the worksheet.
- **Adjust Simulator** – Adjust the Joint Simulator to the joint type recorded in the worksheet.
- **Transducer** – Warm up the Joint Simulator and Tool before testing. Run 10 cycles on the joint simulator to get the components warmed up and grease moving.
- **Run The Tool** – Run the tool on the Transducer with the Joint Simulator.

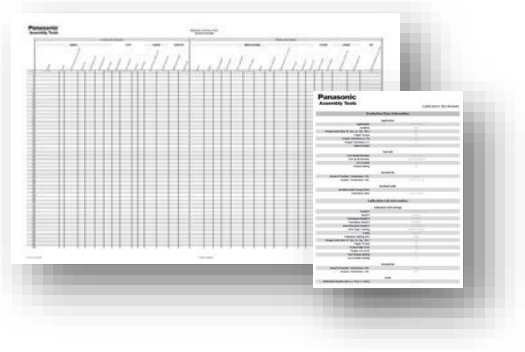
4. & 5. Run The Tool On The Application – Update Worksheet

- **Run The Tool** - Run the tool on the application and be sure to hold the trigger until the tool shuts off.
- **Audit The Fastener** - Conduct a residual audit of the fastener to verify accuracy.
- **Adjust Torque** - If the torque is out of specification, adjust the tools clutch to increase or decrease the torque until the residual audit is within specification.

6. Record / Tool History

- **Worksheet** – Update the worksheet with the above information if any changes were made to the tool, settings or attachments.

Panasonic Assembly Tools Set Up Worksheet



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Quick Guide To Programming
Low Torque Clutch Tool EY7411

Panasonic
Assembly Tools

Adjusting The Clutch

No tools are required.

1. Rotate the clutch handle to adjust the clutch to the desired torque.
2. Rotating the clutch adjustment tool clockwise will increase torque and counter clockwise to decrease torque.

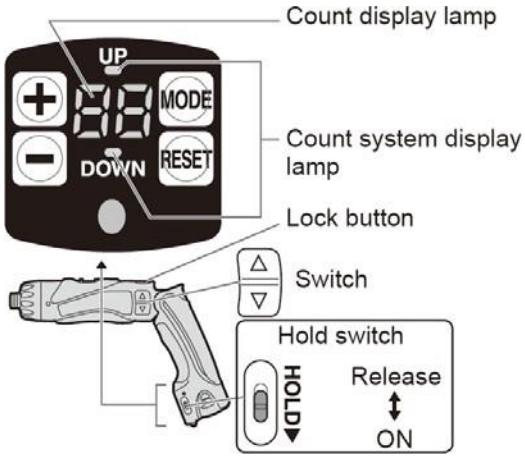
Programming a EY7411 Clutch Tool

Panasonic remote control is not required.

1. **Enable Programming Mode** – Slide the "**Hold Switch**" up to enable program mode and press the forward/reverse switch to illuminate the control panel. The count display lamp and "Up" or "Down" are illuminated.
2. **Edit Count Function** – Press "**Mode**" while the control panel is illuminated.
   a. **Screw Count Setting** – Set the number of screws with "**+**" or "**-**". The range can be set within 0-99, 0 is not counted.
   b. **Count System Up or Down** – Press the "**Mode**" button to change the direction of counting screws. "**+**" (Up) or "**-**" (Down).
3. **Edit Buzzer Function** – Press "**Mode**" for 2 or more seconds while the control panel is illuminated. Count "**F1**" should be displayed. Press the "**+**" or "**-**" to change the buzzer sounds.
   (b0=No Sound (Off) / b1=Low Pitched Sound / b2=Medium Pitched Sound / b3=High Pitched Sound)
4. **Edit Rehit Function** – Press "**Mode**" for 2 or more seconds while the control panel is illuminated. Count "**F1**" should be displayed. Press the "**Mode**" button again to illuminate "**F2**". Press the "**+**" or "**-**" to change the time.
   (0=Off / 1=0.1 Seconds / 30=3 Seconds)
5. **Save & Exit** – Slide the **"Hold Switch"** down to exit programming mode.

Reference for Adjusting Torque

Setting	Torque	Use
1	Approx: 0.29 N·m (3.0 kgf-cm or 2.6 in-lbs)	For driving screws
5	Approx: 0.82 N·m (8.4 kgf-cm or 7.3 in-lbs)	
9	Approx: 1.35 N·m (13.8 kgf-cm or 12.0 in-lbs)	
13	Approx: 1.88 N·m (19.2 kgf-cm or 16.6 in-lbs)	
17	Approx: 2.41 N·m (24.6 kgf-cm or 21.3 in-lbs)	
21	Approx: 2.94 N·m (30.0 kgf-cm or 26.0 in-lbs)	
	Approx: 4.4 N·m (45.0 kgf-cm or 39.0 in-lbs)	For powerful driving screws and drilling



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Panasonic
Assembly Tools

Panasonic Factory Service Center
4900 George McVay Drive Suite B
McAllen, Texas 78503

February 16, 2018

Dear Panasonic Assembly Tool Client:

As part of our continuing effort to provide the best service in the industry, you can now send your Panasonic Assembly Tools to our repair facility in McAllen, Texas.

When you send your tool in for service, it will be repaired by factory trained technicians with original Panasonic parts. Your assembly tool will be cleaned, lubricated, and returned to original factory specifications. This program covers the following models:

Warranty terms are 1-year from DOP on parts and labor. Repaired items are covered for 90 days.

To take advantage of this service offering, please fill out the form and send your tool to:

Panasonic Factory Service Center
Attn: Assembly Tool Repair
4900 George McVay Drive
Suite B
McAllen, TX 78503
Tel: 866-907-9111 or Direct: 956-683-2930
Email: panacare@us.panasonic.com

To provide prompt service, please include a copy of the original Proof-of-Purchase or invoice noting the date of purchase of your Panasonic Assembly Tool. To assist our technicians in troubleshooting, please include a brief description of the problem or issue your power tool is experiencing.

For Out-of-Warranty service, the rate is: $49.65 + the cost of parts + return shipping.

We look forward to providing your Panasonic Assembly Tool service needs.

Sincerely,

Panasonic Assembly Tool Team

Panasonic Assembly Tools
4900 George McVay
Suite B
McAllen, TX 78503

Repair Equipment Worksheet

Point of Conact
- ☐ Panasonic
- ☐ Distributor / Rep
- ☐ Customer

Todays Date _____
Date Rec'd _____
Rec'd By _____

Distibutor / Rep Information

Dist / Rep Name _____

Company Name / Address _____

Email Address _____
Phone # _____

Return To Dist/ Rep ☐

☐ **Do Not Require Signature For Return Shipment**

Customer Information

Customer Name _____

Company Name / Address _____

Email Address _____
Phone # _____

Return To Customer ☐

Tool Information

Please check mark the box below if included in shipment and

please keep your Charger, Remote and Controller Power Cable (Unless Needing Repaired)

Tool Model # _____
Tool Serial # _____
Battery Serial # _____

Controller Model # _____
Controller Serial # _____

Other _____

Order Information

Warranty only - please include a copy of the PO with the date of purchase.

Panasonic Invoice # _____
Distibutor / Customer PO # _____

Shipping / Warranty

Urgency of Repair ☐ Exception (UPS RED) ☐ High (No Backups) ☐ Normal

Warranty ☐ Yes ☐ No

Estimate To Be Given ☐ Yes ☐ No
Estimate Approved By _____
Estimate Approval Date _____

Issue or Problem _____

Comments _____

Returning Product Information

Date Returned _____
Shipped Via _____

* In efforts to help reduce costs and speed up turn around time for repairs, we require a $100.00 pre-approval.
In addition, any tools not repaired will have a $25.00 diagnostic fee and the choice to return the tool or dispose the tool at Panasonic.