

# **Assembly Tools**

Bringing Innovation to the Assembly Line





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# **Assembly Tools**

# **Product Lineup**

#### AccuPulse® HR Series







10.8V, 6-30Nm





10.8V, 6-30Nm









14.4V, 25-120Nm 14.4V, 25-120Nm

#### **Mechanical Pulse**



EYFLA4A/R 10.8V, 3-22Nm



EYFLA5A/R 10.8V, 6-30Nm



EYFLA5P/R 10.8V, 6-30Nm



EYFLA5Q/R 10.8V, 6-30Nm



EYFLA6J/R 10.8V, 16-53Nm



EYFLA6P/R 10.8V, 16-53Nm



EYFMA1J/R 14.4V, 25-100Nm



EYFMA1P/R 14.4V, 25-100Nm

#### **High Torque Mechanical Pulse**



EYFNA1C/R 18V, 70-200Nm



EYFNA1J/R 18V, 70-200Nm



EYFNA1P/R 18V, 70-200Nm



EYFPA1J/R 21.6V, 160-650Nm

# **Assembly Qualifiers**



EYFR02B Single Tool Qualifier



EYFR03 Multi-Tool Qualifier



EYFR04 Multi-Station Qualifier

#### **Basic Clutch**



EYFGB1N 14.4V, 2-5.5Nm



14.4V, 5-8Nm



14.4V, 5-10Nm



EYFGA1N 14.4V, 2-5.5Nm



EYFGA2N 14.4V, 5-8Nm



**EYFGA3N** 14.4V, 5-10Nm

#### Wireless Programmable Clutch



EYFGA1NR 14.4V, 2-5.5Nm



EYFGA2NR 14.4V, 5-8Nm



14.4V, 5-10Nm

**Low Torque Clutch** 

#### **Rotary Transducers**

**Programmable Clutch** 



1/4" Hex Drive





3/8" Square Drive 1/2" Square Drive

3/4" Square Drive

**EYFEA1N2S / EYFEA1N** 2.7-35.4 in. lbs.

## **Stationary Transducers**







# **Panasonic Cordless Assembly Tools**

**Bringing Innovation to the Assembly Line** 

#### **Benefits**

#### **Electronic Sensing System**













#### 1. Over-discharge Prevention Sensor

Prevents over-discharge to avoid cell damage or recharge problems

#### 2. Battery Overheat Protection Sensor

Cuts off power to the motor before the battery temperature rises



#### 3. Monitoring of Battery Cell Voltage

Each cell is monitored by a sensor to ensure optimal charge/discharge control

#### 4. Battery Sensor

Flashing lamp indicates overheating battery. Battery is automatically reactivated when temperature drops.



Special Ceramic Coating Laye

**5. Heat Resistance Layer Technology** 

In cases where separator is damaged and abnormal heat is created, HRL acts to contain this heat, just like a firewall

#### 6. Li-Ni Technology

Panasonic-developed Lithium Nickel Oxide chemistry offers the benefits of lower internal resistance, reduced electrical loss, lower temperatures in battery cells deliver longer battery life

#### **Safer Work Environment**

#### **Improved Ergonomics**

Lightweight and compact, no air hose to drag around

#### **Eliminate Trip Hazards**

Removes dangerous air hoses and provides a clear work area

#### **Improved Air Quality**

Eliminates airborne oily residue emitted from air tools

#### **Durable Long-life Components**

#### Long-life Clutch

All steel clutch for increased durability in EYFG tools

#### **Mechanical Pulse Unit**

Long lasting, low maintenance impulse mechanism in EYFL/M/P tools

#### **Brushless Motor**

Energy-efficient, maintenance-free, nearly doubles the life of the tool

#### **Hybrid Switch**

Carries <.5 amp, about doubles the life of the switch

#### **Manufacturing Costs**

#### **Energy Savings**

Cordless tools use 99% less energy than air tools

#### **Improved Quality**

Increases accuracy by eliminating air pressure fluctuations

#### Ease of Installation

Complete freedom in assembly area design

#### **Less Maintenance**

Eliminates the need for maintaining oilers

#### **Less Tool Downtime**

Recovers from power outages within seconds

# **Precision Clutch Tools**

#### Ergonomic, Accurate & Repeatable

#### **Standard Features**

- High accuracy ±10% at cmk≥1.67 ISO 5393\*
- Fast-acting, all-steel clutch for increased durability
- Photo interrupter sensor increases clutch life and tool accuracy
- Brushless motor and hybrid switch about doubles the life of the tool
- 60-stage adjustable clutch for precise adjustment
- Tamper-resistant clutch for increased quality
- Programmable version for increased versatility\*\*
- Wireless programmable version for error proofing and data collection\*\*\*



**Basic Clutch Tools** 



Programmable Clutch Tools\*\*



Wireless Programmable Clutch Tools\*\*\*

#### Programmable "Quick Set" Features

#### **Speed Control**

Adjustable speed in 10 rpm increments to exactly match the application.

#### **Cross Thread Reduction**

The tool first reverses 360 degrees, aligning the threads, greatly reducing the possibility of cross threads.

#### **Cross Thread / Rehit Detection**

If the clutch is activated before the programmable minimum runtime, the tool stops the fastening process and signals a NOK fastening.

#### **Auto Downshift**

After a programmable period of time, the rpm automatically downshifts to 300 rpms maximizing operator productivity.

#### Variable Speed Control

Enables variable speed or single speed trigger operation.

#### **Enable / Disable Capable**

Remotely enable/disable tools when needed with qualifier + radio tool combination.

#### Out of Range / Anti-Theft

When enabled, the tool is disabled if taken out of the qualifier's wireless range.

#### **Maintenance Interval Alarm**

Defined in 10,000 increment cycles to notify the operator of upcoming scheduled maintenance.



#### **LED Light**

Program LED to turn on with trigger switch or on/off switch to match operator preference.

#### Buzzer

The buzzer can be programmed for OK, NOK or Disabled.

\*In ≥3Nm Range



#### Complete Clutch Tool Line-up Covers a Wide Range of Applications





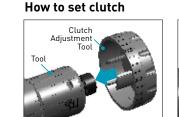


**Programmable Clutch Tools** 



Wireless Programmable Clutch Tools

#### **60 Stage Adjustable Clutch**



1) Insert clutch adjustment tool 2 Turn and set into nose of tool

Rotate clutch adjustment tool clockwise to increase torque and counter clockwise to decrease torque

# Quickly set the torque by adjusting the scale. Adjustment Clutch stage "1"

# **Advanced Fastening Features**

# Cross Thread Reduction

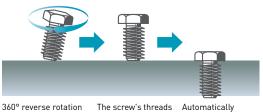


The tool first reverses 360°, aligning the threads, greatly reducing the possibility of cross threads.

#### **Reverse Rotation!**

**Auto Downshift Function** 

300 rpm



are aligned with

After a programmable

automatically down

shifts to 300 rpms

productivity.

#### Maintenance Interval Alarm

Finished with 3.0 sec.

Cross Thread / Rehit Detection

• Example with 3.0 sec. time setting

Retightening Cross thread

3.0 sec.

The maintenance interval alarm can be set ON or OFF and is defined in 10,000 increment cycles.

cross thread

Finished with 2.0 sec.

If clutch is activated before the programmable

0.5 sec.

NOK

Finished with 0.5 sec. rundown time due to

retightening

minimum runtime, tool stops the fastening

process and signals a NOK fastening.

When total fastenings are within 10,000 fastenings of the preset maintenance interval, the display blinks notifying operator. Once tool reaches the preset interval, tool is locked out from further use.

#### **Variable Speed Control Function**

Enables variable speed or single speed trigger operation.



#### **Auto Battery Shut Down**

Before the battery power becomes too low to maintain torque, it shuts down the tool and notifies the operator by blinking the LED indicator until a charged battery pack is attached. Standard on all Precision Clutch Tools.

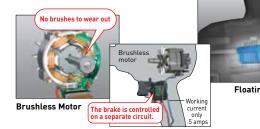
# **Durable Design**

Reducing the fastener's impact

#### **Photo Interrupter Sensor Increases Clutch Life** and Tool Accuracy



Sensing the clutch plate movement, the Photo Interrupter Sensor increases clutch life and tool accuracy, not relying on mechanical contacts that wear.



#### **Additional Features**



**Compact and Lightweight** A well balanced compact and lightweight design



**LED Light** Program LED to turn on with the trigger switch or ON/OFF switch to match

operator preference



Lightweight 2.0Ah Battery (EYFB41B) or Extended



Run Time 4.2Ah Battery (EYFB42B) Available



Each tool is color coded for easy identification



**Tool Hanger** 

# **Cordless Precision Clutch Tools**

	MODEL		EYFGB1N	EYFGB2N	EYFGB3N	EYFGA1N							
			1	1	1	1							
	Voltage		14.4V	14.4V	14.4V	14.4V							
	Series			Basic Clutch		Programmable Clutch							
	Accuracy		±10%• Cmk 1.67	(*Compliant with IS05393. Mea	sured with the Max RPM settin	g)(*In 3Nm range)							
	Drive			A = 1/4" Hex	Quick Change								
Clutch	Torque	Nm	2-5.5 Nm	5-8 Nm	5-10 Nm	2-5.5 Nm							
Otaten	Torque	in. lbs.	17.7 - 48.6 in.lbs	44.2 - 70.8 in.lbs	44.2 - 88.5 in.lbs	17.7 - 48.6 in.lbs							
Clu	tch Setting St	age		prox. 0.08 N·m per stage)									
	No Load Speed	t	0-800 rpm	0-750 rpm	0-450 rpm	0-800 rpm							
Wo	iaht	EYFB41B (2.0 Ah)	2.76 lbs.	2.76 lbs.	2.86 lbs.	2.76 lbs.							
We	Weight EYFB42E (4.2 Ah)		3.31 lbs.	3.31 lbs.	3.41 lbs.	2.31 lbs.							
Siza (I	.xHxW)	EYFB41B (2.0 Ah)	7-13/16" x 9-1/8" x 2-15/16"										
Size (L	жпхүү	EYFB42B (4.2 Ah)		7-13/16" x 9-6	5/8" x 2-15/16"								
	s Communica sembly Qualif		-	_	-	_							
LED Wor	k Light (On/O	ff Switch)	V	V	<i>'</i>	V							
OK/NOK Li	ght (Green: OK	/ Red: NOK)	<b>V</b>	V	<b>v</b>	<b>v</b>							
	evention (Poss sec. between (		-	_	_	V							
Batte	ery Indication I (3 stage)	_amp:	V	V	V	V							
Lo	w Power Disa	ble	V	V	~	~							
Prevent/Det	ect Cross Thre	eads & Rehits	_	_	_	<b>v</b>							
Mainte	nance Interva	l Alarm	_	_	_	~							
Variable	Speed On / O	ff Switch	-	_	_	V							
	<b>ED Light Setti</b> or On with pull		_	_	_	V							
	EYFB41B	Hard Joint 30°	1200 pcs/pack 1.1 sec./1pcs (M6: 5.5 N·m)	1050 pcs/pack 1.0 sec./1pcs (M6: 8 N·m)	1100 pcs/pack 1.0 sec./1pcs (M6: 10 N·m)	1200 pcs/pack 1.1 sec./1pcs (M6: 5.5 N·m)							
Work	EIF D41B	Soft Joint 720°	540 pcs/pack 1.3 sec./1pcs (M6: 5.5 N·m)	410 pcs/pack 1.3 sec./1pcs (M6: 8 N·m)	310 pcs/pack 1.4 sec./1pcs (M6: 10 N·m)	540 pcs/pack 1.3 sec./1pcs (M6: 5.5 N·m)							
Capacity*	EYFB42B	Hard Joint 30°	2700 pcs/pack 1.1 sec./1pcs (M6: 5.5 N·m)	2350 pcs/pack 1.0 sec./1pcs (M6: 8 N·m)	2500 pcs/pack 1.0 sec./1pcs (M6: 10 N·m)	2700 pcs/pack 1.1 sec./1pcs (M6: 5.5 N·m)							
	L11 0420	Soft Joint 720°	1250 pcs/pack 1.3 sec./1pcs (M6: 5.5 N·m)	1000 pcs/pack 1.3 sec./1pcs (M6: 8 N·m)	730 pcs/pack 1.4 sec./1pcs (M6: 10 N·m)	1250 pcs/pack 1.3 sec./1pcs (M6: 5.5 N·m)							
Chargin	g Time*	EYFB41B EYFB42B		-	n. / Full Charge: 40min								
		L11 5425		OSuble Onlinge. Stilling	, ratt ondrige. bollilli								

EVECACN	EVECAON	EVECATND	EVECACNE	EVECACNE							
EYFGA2N	EYFGA3N	EYFGA1NR	EYFGA2NR	EYFGA3NR							
1	1	1		1							
14.4V	14.4V	14.4V	14.4V	14.4V							
Programm	able Clutch		Wireless Programmable Clutch								
	±10%• Cmk 1.67 (*Compliant wi	ISO5393. Measured with the Max RPM setting)(*In 3Nm range)									
	I	A = 1/4" Hex Quick Change									
5-8 Nm	5-10 Nm	2-5.5 Nm	5-8 Nm	5-10 Nm							
44.2 - 70.8 in.lbs	44.2 - 88.5 in.lbs	17.7 - 48.6 in.lbs	44.2 - 70.8 in.lbs	44.2 - 88.5 in.lbs							
0.750		tal 60 stages (Approx. 0.08 N·m p	-	2.450							
0-750 rpm	0-450 rpm	0-800 rpm	0-750 rpm	0-450 rpm							
2.76 lbs.	2.86 lbs.	2.76 lbs.	2.76 lbs.	2.86 lbs.							
2.31 lbs.	3.41 lbs.	2.31 lbs.	2.31 lbs.	3.41 lbs.							
		7-13/16" x 9-1/8" x 2-15/16"									
		7-13/16" x 9-6/8" x 2-15/16"									
-	_	OK Fasten=Green light NOK Fasten=Red light	OK Fasten=Green light NOK Fasten=Red light	OK Fasten=Green light NOK Fasten=Red light							
<b>✓</b>	<b>✓</b>	<b>v</b>	<b>✓</b>	<b>✓</b>							
<i>V</i>	<i>V</i>	V	V	<i>V</i>							
-	V	_	-	V							
V	~	~	V	~							
V	<i>V</i>	<i>V</i>	V	<i>V</i>							
<b>✓</b>	<b>✓</b>	V	<b>✓</b>	<b>✓</b>							
<i>V</i>	~	<i>V</i>	V	~							
<i>V</i>	<i>V</i>	V	V	V							
V	V	V	V	V							
1050 pcs/pack 1.0 sec./1pcs (M6: 8 N·m)	1100 pcs/pack 1.0 sec./1pcs (M6: 10 N·m)	1200 pcs/pack 1.1 sec./1pcs (M6: 5.5 N·m)	1050 pcs/pack 1.0 sec./1pcs (M6: 8 N·m)	1100 pcs/pack 1.0 sec./1pcs (M6: 10 N·m)							
410 pcs/pack 1.3 sec./1pcs (M6: 8 N·m)	310 pcs/pack 1.4 sec./1pcs (M6: 10 N·m)	540 pcs/pack 1.3 sec./1pcs (M6: 5.5 N·m)	410 pcs/pack 1.3 sec./1pcs (M6: 8 N·m)	310 pcs/pack 1.4 sec./1pcs (M6: 10 N·m)							
2350 pcs/pack 1.0 sec./1pcs (M6: 8 N·m)	2500 pcs/pack 1.0 sec./1pcs (M6: 10 N·m)	2700 pcs/pack 1.1 sec./1pcs (M6: 5.5 N·m)	2350 pcs/pack 1.0 sec./1pcs (M6: 8 N·m)	2500 pcs/pack 1.0 sec./1pcs (M6: 10 N·m)							
1000 pcs/pack 1.3 sec./1pcs (M6: 8 N·m)	730 pcs/pack 1.4 sec./1pcs (M6: 10 N·m)	1250 pcs/pack 1.3 sec./1pcs (M6: 5.5 N·m)	1000 pcs/pack 1.3 sec./1pcs (M6: 8 N·m)								
	Usab	le Charge: 35min. / Full Charge: 4	-Omin								
	Usab	le Charge: 50min. / Full Charge: 6	0min								

Note: \*Approximately

# **EYFEA1N / EYFEA1N2S**

# Cordless Low Torque Clutch Tool and Driver Kit

Voltage		7.2V					
Drive		1/4" Hex Quick Change					
	Nm	High: 2.0 Nm / Low: 6.0 Nm					
Torque Range	ft. lbs.	High: 1.47 ft. lbs / Low: 4.43 in. lbs					
	in. lbs.	High: 17.7 in. lbs / Low: 53.1 in. lbs					
No Load Spe (Torque Setting:		High: 0-900 rpm Low: 0-300 rpmv					
Clutch Torq (approx.)	ue	High: 0.3 N·m-2.0 N·m (stage 1-10, 0.19 N·m per stage) Low: 0.3 N·m-4.0 N·m (stage 1-21, 0.19 N·m per stage)					
Weight (incl. ba	attery)	1.38 lbs					
Size (L x W x	(H)	5-3/4" x 7-7/8" x 1-5/8"					
Max. Screws D	riving	High mode: M4 screw Low mode: M5 screw					
Features		Auto Shut-Off Function Auto Power-Stop Function LED Light Clutch & H/L switch lock cover Electronic brake  ESD approved (as per EN 55014-1 and -2)					
Working Capa (Fastening		Screws in Sheet Metal (M2.5 x 6mm) High: Approx.1900 pcs Screws in Sheet Metal (M4 x 10mm) High: Approx.1850 pcs Screws in Sheet Metal (M5 x 8mm) Low: Approx.1450 pcs					
Charging Ti	me	Usable: 35 minutes, Full: 60 minutes (Battery pack EY9L20, charger EY0L20)					



**7.2V** 

#### EYFEA1N:

Battery pack and battery charger not included.

#### TYPICAL APPLICATIONS

- Electricians
- Electronics assembly
- Rack/cabinet installers
- Production/assembly work
- Service engineers

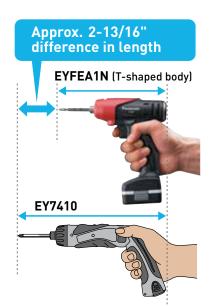


# **More Features**

#### **Compact & Lightweight**

User-friendly size and weight of EYFEA1N can reduce operator fatigue. Well balanced, T-shaped body and slim grip improves operator acceptance.

**WEIGHT** 1.39 lbs. **LENGTH** 5.7"



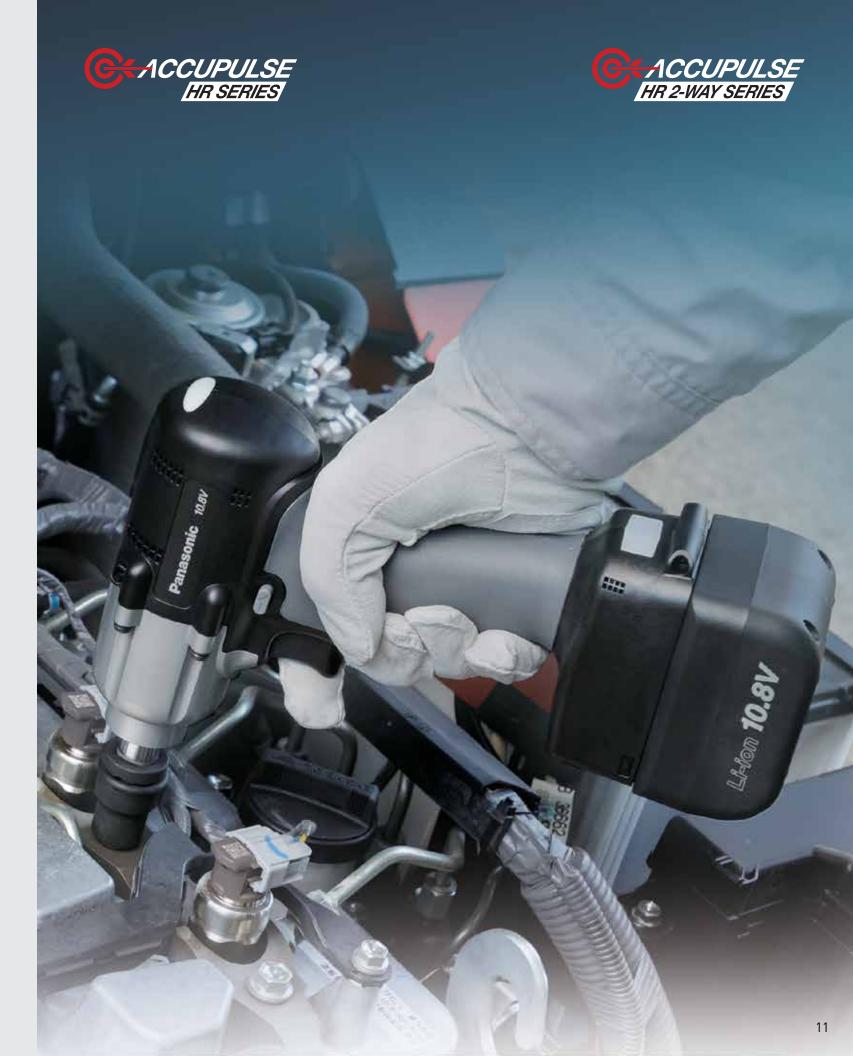


Clutch & High/Low Switch Lock Cover

Prevents operator from changing clutch setting or rpm setting by mistake.







#### **Advanced Features**

										МО	DEL									
		M	lech	ani	cal I	Puls	e		High Torque Mechanical Pulse				AccuPulse							
	EYFLA4A	EYFLA5A/P/Q	EYFLA6P/J	EYFMA1J/P	EYFLA4AR	EYFLA5AR/PR/QR	EYFLA6PR/JR	EYFMA1PR/JR	EYNA1P/J/C	EYFPA1J	EYNA1PR/JR/CR	EYFPA1JR	EYFLA7A	EYFLA8A/P/C	EYFLA9P/C	EYFMA2P/C	EYFLA7AR	EYFLA8AR/PR/CR	EYFLA9PR/CR	EYFMA2PR/CR
2-Way Radio Communication																	•	•	•	•
1-Way Radio Communication					•	•	•	•			•	•					•	•	•	•
Cross Thread Reduction									•	•	•	•	•	•	•	•	•	•	•	•
Cross Thread /Rehit Detection									•	•	•	•	•	•	•	•	•	•	•	•
Rehit Prevention	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Variable Speed Control Function	0	0	0	0	0	0	0	0	•	•	•	•	•	•	•	•	•	•	•	•
Maintenance Interval Alarm									•	•	•	•	•	•	•	•	•	•	•	•
Flush Detection Delay													•	•	•	•	•	•	•	•
Socket Extension Mode													•	•	•	•	•	•	•	•
Out-of-Range Disable Function					•	•	•	•			•	•					•	•	•	•

Some models limited to particular region.

Variable speed control function: Models with "O" don't have ON/OFF setting.

#### **Tightening Torque Chart (for Reference Use)** N·m 140 130 EYFMA2(M14) 120 110 100 90 80 EYFMA2(M12) 70 60 EYFLA9(M10) 50 40 EYFLA8(M8) EYFMA2(M10) 30 EYFLA9(M8) 20 EYFLA7(M8) FLA8(M6) EYFLA7(M6) 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40

#### TORQUE SETTING STAGE

The values illustrated on this chart were measured under Panasonic measuring condition and are provided for reference purposes. Actual tightening torque varies with ambient conditions (the particular bolt being tightened, hardware being used, method of holding the bolt in place, etc.).

# Advanced Programmable Features

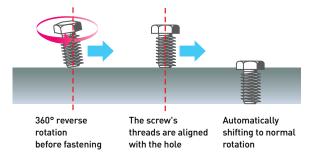


#### **Cross Thread Reduction**

Cross Thread Reduction
The tool first reverses 540 degrees, aligning the threads, greatly reducing the possibility of cross threads.



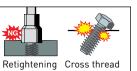
#### **Reverse Rotation!**



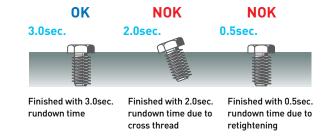


#### Cross Thread / **Rehit Detection**

If the shut-off is activated before the programmable minimum runtime, tool alerts the operator to a NOK fastening.



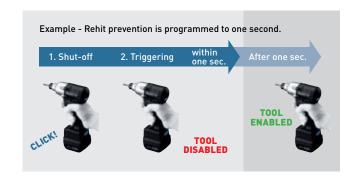
#### • Example with 3.0sec. normal time setting





#### **Retightening Prevention Function**

This function prevents the tool from operating within a selected time period after it automatically stops from the torque control function. The switch will not operate even if engaged during this time period.





#### **Maintenance Interval Alarm**

When the total fastening times are within 10,000 of the preset maintenance interval, the display blinks notifying the operator. Once tool reaches the preset interval, tool is locked out from further use. This function can be set to ON or OFF and is defined in 10,000 increment cycles.

(Number of settings: 0-990,000 pcs)



This feature delays Flush Torque Detection mode and ignores loads for a selected time period.

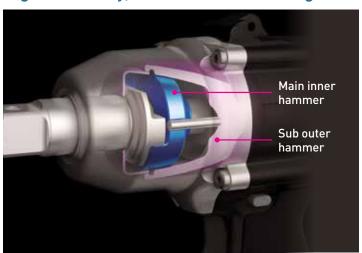


#### **Socket Extension Mode**

This feature adjusts tool's RPM during pulsing to improve accuracy when using an extension.

# AccuPulse HR Technology

#### High-Efficiency, Double Hammer Design\*



New high efficiency twin hammer design delivers high power while reducing tool size, noise, vibration for reduced operator fatigue



\*Double Hammer Design in EYFLA9/EYFMA2

#### **AccuPulse Advanced Technology**

1 High Resolution Encoder

Senses motor rotation angle precisely and detects flush point accurately.

2 7-Stage Snug Point Detection Mode

L1-L7 Flush Point Detection enables accurate fastening on a variety of joints.

**3** Consistent Pulse Control

The power of each pulse is kept consistent regardless of remaining battery capacity, minimizing variation

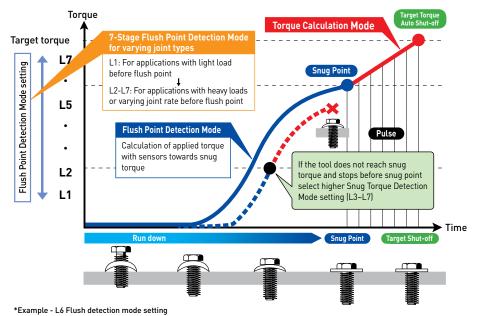






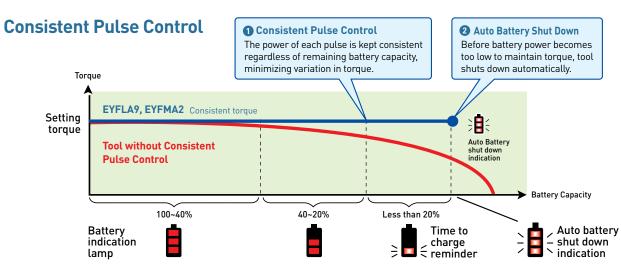
280 unique torque controlled algorithms - 40 stages in each mode L1 - L7.

# AccuPulse HR Technology

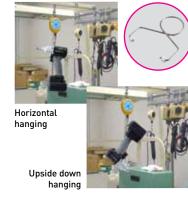


Flush Point: The point where the head of the fastener meets the material.

Snug Point: The point where materials are pulled together completely and torque calculation mode begins.



#### **More Features**



#### **Tool Hanger**

Tool can be hung on the balancer both right side up or upside down.



Tightening Confirmation Lamp Green light indicates tightening



Needle bearings on the output shaft reduce vibration and increase tool life.



LED Light For operation in



**Remote Control** Tool setting can be set only by remote









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**Color Plate for Differentiation** 

Each tool model is color coded for easy indentification.

# AccuPulse® HR Series





MODELS		EYFLA7A	EYFLA8A / EYFLA8C / EYFLA8P	EYFLA9C / EYFLA9P					
Voltage		10.8V	10.8V	10.8V					
Series			AccuPulse - HR Series						
Drive		A = 1/4" Hex Quick Change	A = 1/4" Hex Quick Change C = 3/8" Sq. C-Ring w/ through Hole P = 3/8" Sq. Pin Detent	C = 1/2" Sq. C-Ring w/ through Hole P = 1/2" Sq. Pin Detent					
	Nm	3-22Nm	6-30Nm	20-60Nm					
Torque Range	ft. lbs.	2.2-16.2 ft. lbs.	4.4-22 ft. lbs.	14.75-44.25 ft. lbs					
	in. lbs.	26.55-194.72 in. lbs	53.1-265.52 in. lbs.	177.01-531.04 in. lbs					
Max Torque* (F mode, tight	tening 3 sec.)	35Nm M10 Bolt	80m M14 Bolt	120Nm M14 Bolt					
Flush Detection Mo	odes	L1 - L7	L1 - L7	L1 - L7					
No Load Speed (Torque Se	etting: RPM)	1: 0 - 950 2: 0 - 1250 3: 0 - 1450 4 - 8: 0 - 1550 9 - 40 & F: 0 - 2300	1-40 & F: 0-2300						
PPM (Pulses Per I	Min)	1: 0 - 1900 2: 0 - 2500 3: 0 - 2800 4-8: 0 - 3000 9-30 & F: 0 - 4000	1: 0-2500 2: 0-2800 3: 0-3000 4-30 & F: 0-3600	1-40 & F: 0-2800					
Weight		2.53 lbs. (incl. 2.0Ah (EYFB32B)) 2.86 lbs. (incl. 3.0Ah (EYFB30B))	2.53 lbs. (incl. 2.0Ah (EYFB32B)) 2.86 lbs. (incl. 3.0Ah (EYFB30B))	2.53 lbs. (incl. 2.0Ah (EYFB32B)) 2.86 lbs. (incl. 3.0Ah (EYFB30B))					
Size (L x W x H	)	6-1/32 x 9-51/64 x 2-61/64 H=9-51/64(EYFB30B) 9-3/32 (EYFB32B)	8A: 6-1/32 x 9-51/64 x 2-61/64 8C: 6-3/8 x 9-51/64 x 2-61/64 H=9-51/64(EYFB30B) 9-3/32 (EYFB32B)	6-49/64 x 9-27/64 x 2-61/64 H=9-27/64(EYFB42B), 9-9/64 (EYFB41B)					
Wireless Communio with Assembly Qua		_	_	_					
LED Work Light: (ON/OF	F Switch)	V	V	<i>V</i>					
OK/NOK Light: (Green: OK	/ Red: NOK)	V	V	V					
Rehit Prevention (Possible to set per 0.1 sec. bet		V	V	V					
Battery Indication Lamp	: (3 stage)	V	V	V					
Low Power Disab	ole	V	V	V					
Prevent / Detect Cross Three	eads & Rehits	V	V	V					
Maintenance Interval	Alarm	V	V	V					
Variable Speed On / Of	ff Switch	V	V	V					
Variable Speed On / Of	ff Switch	V	V	V					
Buzzer: On / Of		V	V	V					
Flush Point Detection Delay set between 0-3 sec 0.1 se	ec. per stage)	V	V	V					
Socket Extension N (h1:150mm socket, h2: for 2		V	V	V					
Work Capacity / Fastening Speed*		<m6: 10="" 22="" n·m,="" stage:=""> (EYFB30B) 1200 pcs/pack 0.7 sec/1pcs (EYFB32B) 800 pcs/pack 0.7 sec/1pcs</m6:>	<m8: 22="" 23="" n·m,="" stage:=""> (EYFB30B) 800pcs/pack 0.8sec/1pcs (EYFB32B) 540 pcs/pack 0.8 sec/1pcs</m8:>	<m10: 23="" 43="" n·m,="" stage:=""> (EYFB30B) 400 pcs/pack, 0.8 sec/1pcs (EYFB32B) 260 pcs/pack, 0.8 sec/1pcs</m10:>					
Charging Time	*	(Battery pack EYFB30B, Charger EY0L82B) Usable charge: 35 min., Full charge: 45 min (Battery Pack EYFB32B, Charger EY0L82B) Usable Charge: 35 min., Full Charge: 40 min							

EYFMA2C / EYFMA2P	EYFLA7AR	EYFLA8AR / EYFLA8CR / EYFLA8PR	EYFLA9CR / EYFLA9PR	EYFMA2CR / EYFMA2PR			
14.4V	10.8V	10.8V	10.8V	14.4V			
AccuPulse - HR Series		AccuPulse - HR Series wi	th 2-Way Communication				
C = 1/2" Sq. C-Ring w/ through Hole P = 1/2" Sq. Pin Detent	A = 1/4" Hex Quick Change	A = 1/4" Hex Quick Change C = 3/8" Sq. C-Ring w/ through Hole P = 3/8" Sq. Pin Detent	C = 1/2" Sq. C-Ring w/ through Hole P = 1/2" Sq. Pin Detent	C = 1/2" Sq. C-Ring w/ through Hole P = 1/2" Sq. Pin Detent			
25-120Nm	3-22Nm	6-30Nm	20-60Nm	25-120Nm			
18.44-92.2 ft. lbs	2.2-16.2 ft. lbs.	4.4-22 ft. lbs.	14.75-44.25 ft. lbs	18.44-92.2 ft. lbs			
221.27-1,106.34 in. lbs.	26.55-194.72 in. lbs	53.1-265.52 in. lbs.	177.01-531.04 in. lbs	221.27-1,106.34 in. lbs.			
185Nm M16 Bolt	35Nm M10 Bolt	80m M14 Bolt	120Nm M14 Bolt	185Nm M14 Bolt			
L1 - L7	L1 - L7	L1 - L7	L1 - L7	L1 - L7			
1-40 & F: 0-2300	1: 0 - 950 2: 0 - 1250 3: 0 - 1450 4 - 8: 0 - 1550 9 - 40 & F: 0 - 2300	1: 0 - 1300 2: 0 - 1450 3: 0 - 1550 4 - 40 & F: 0 - 2300	2: 0 – 1450 3: 0 – 1550 1-40 & F: 0-2300				
1-40 & F: 0-2900	1: 0 - 1900 2: 0 - 2500 3: 0 - 2800 4-8: 0 - 3000 9-30 & F: 0 - 4000	1: 0-2500 2: 0-2800 3: 0-3000 4-30 & F: 0-3600	1-40 & F: 0-2800	1-40 & F: 0-2900			
3.08 lbs. (incl. 2.0Ah (EYFB41B)) 3.52 lbs. (incl. 4.2Ah (aEYFB42B))	2.53 lbs. (incl. 2.0Ah (EYFB32B)) 2.86 lbs. (incl. 3.0Ah (EYFB30B))	2.53 lbs. (incl. 2.0Ah (EYFB32B)) 2.86 lbs. (incl. 3.0Ah (EYFB30B))	2.53 lbs. (incl. 2.0Ah (EYFB32B)) 2.86 lbs. (incl. 3.0Ah (EYFB30B))	3.08 lbs. (incl. 2.0Ah (EYFB41B)) 3.52 lbs. (incl. 4.2Ah (aEYFB42B))			
6-49/64 x 9-27/64 x 2-61/64 H=9-27/64(EYFB42B), 9-9/64 (EYFB41B)	6-1/32 x 9-51/64 x 2-61/64 H=9-51/64(EYFB30B) 9-3/32 (EYFB32B)	8A: 6-1/32 x 9-51/64 x 2-61/64 8C: 6-3/8 x 9-51/64 x 2-61/64 H=9-51/64(EYFB30B) 9-3/32 (EYFB32B)	6-49/64 x 9-27/64 x 2-61/64 H=9-27/64(EYFB42B), 9-9/64 (EYFB41B)	6-49/64 x 9-27/64 x 2-61/64 H=9-27/64(EYFB42B), 9-9/64 (EYFB41B)			
_	✓ (EYFR03A/B only)	✓ (EYFR03A/B only)	✓ (EYFR03A/B only)	✓ (EYFR03A/B only)			
<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>	<b>✓</b>			
<b>v</b>	V	V	V	<b>v</b>			
V	V	V	V	V			
V	V	V	V	V			
V	V	<b>V</b>	V	V			
<b>✓</b>	V	<b>V</b>	V	<b>V</b>			
<b>✓</b>	V	<b>V</b>	V	V			
<b>✓</b>	V	<b>V</b>	V	<b>V</b>			
<b>✓</b>	<i>V</i>	<b>V</b>	<i>V</i>	<b>V</b>			
<b>✓</b>	<b>v</b>	<b>V</b>	<b>v</b>	<b>v</b>			
~	V	V	V	~			
V	V	V	V	V			
<m12: 22="" 71="" n·m,="" stage:=""> [EYFB42B] 600 pcs/pack, 0.8 sec/1pcs [EYFB41B] 270 pcs/pack, 0.8 sec/1pcs</m12:>	<m6: 10="" 22="" n·m,="" stage:=""> (EYFB30B) 1200 pcs/pack 0.7 sec/1pcs (EYFB32B) 800 pcs/pack 0.7 sec/1pcs</m6:>	<m8: 22="" 23="" n·m,="" stage:=""> [EYFB30B] 800pcs/pack 0.8sec/1pcs [EYFB32B] 540 pcs/pack 0.8 sec/1pcs</m8:>	<m10: 23="" 43="" n·m,="" stage:=""> (EYFB30B) 400 pcs/pack, 0.8 sec/1pcs (EYFB32B) 260 pcs/pack, 0.8 sec/1pcs</m10:>	<m12: 22="" 71="" n·m,="" stage:=""> (EYFB42B) 600 pcs/pack, 0.8 sec/1pcs (EYFB41B) 270 pcs/pack, 0.8 sec/1pcs</m12:>			
[Battery Pack EYFB41, Charger EY0L82B] Usable Charge: 35min., Full Charge: 40min [Battery Pack EYFB42, Charger EY0L82B] Usable Charge: 50min., Full Charge: 60min	(Battery pack EYFB30B, C (Battery Pack EYFB32B, Cl	harger EY0L82B) Usable charge: 35 narger EY0L82B) Usable Charge: 35	5 min., Full charge: 45 min 5 min., Full Charge: 40 min	(Battery Pack EYFB41, Charger EY0L82B) Usable Charge: 35min., Full Charge: 40min (Battery Pack EYFB42, Charger EY0L82B) Usable Charge: 50min., Full Charge: 60min			



#### Remote Control Quick-Set Features

#### **Program Setting**

60 unique torque controlled algorithms – 30 stages in L1 mode and 30 stages in L2 mode + F mode (non shut-off mode)

#### Flush Point Detection (L1/L2)

Determines when the CPU declares the flush point of the fastening process.

L1 – Applications with no pulses before the flush point or when fastening fragile materials like plastic.

L2 – Applications where tool pulses before achieving the flush point encountered in many prevailing torque and varying joint rate applications.

#### **Rehit Prevention**

Disables tool for a period of time (up to 3 sec. in 1/10 sec. intervals) after a good fastening shutoff, preventing operator from double hitting the fastener.

#### Out of Range / Anti-Theft

When enabled, tool is disabled if taken out of qualifier's wireless range. Available on models equipped with radio transmitters only.

#### **Enable / Disable Capable**

Remotely enable/disable tools when needed with qualifier + radio tool combination.

#### EYFNA1 and EYFPA1 Series Only

#### **Prevent and Detect Cross Threads and Rehits**

The tool first reverses 360 degrees, aligning the threads, greatly reducing the possibility of cross threads.

#### **Maintenance Interval Alarm**

Defined in 10,000 increment cycles to notify the operator of upcoming scheduled maintenance.

#### **Speed Control Setting**

Enables variable speed or single speed trigger operation.

#### **LED Light**

Program LED to turn on with trigger switch or on/off switch to match operator preference.

#### Buzzer

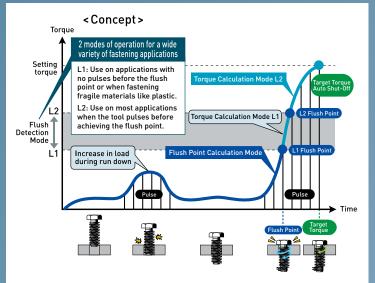
The buzzer can be programmed for OK, NOK, or disabled.

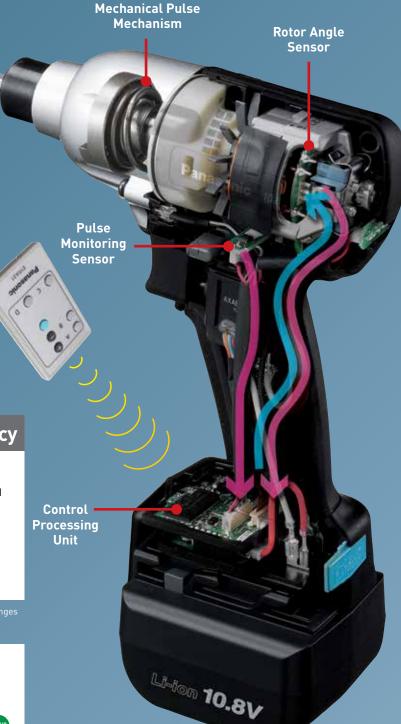


#### **Torque Control Mechanism**

- 1. The onboard CPU monitors two sensors (rotor angle sensor and pulse monitoring sensor) detecting the change in motor speed and rpm between pulses, determining the flush point.
- 2. The CPU then switches to a torque calculation mode using a Panasonic patented algorithm to achieve an accurate and repeatable final torque.\*

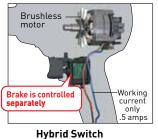
 $\mbox{*}\mbox{Final}$  results may have higher torque ranges with hard joints and lower torque ranges with soft joints





# Long-life Parts Provide Lower Running Costs

#### **Durable Hybrid Switch and Brushless Motor**





**Brushless motor** 

HIGH CAPACITY

#### Choice of compact 2.0Ah or high capacity 3.0/4.2/5.0Ah batteries



#### Additional charging is acceptable

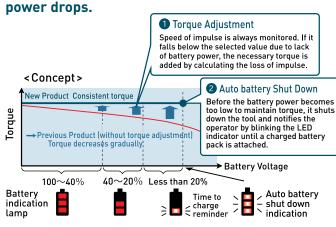
Panasonic Li-ion batteries won't deteriorate if charged during break or for a short period of time then put back into operation.





60 unique torque controlled algorithms - 30 stages in L1 mode and 30 stages in L2 mode + F mode (non shut-off mode)

#### Maintains selected torque level as the battery power drops.



#### **Needle Bearings**

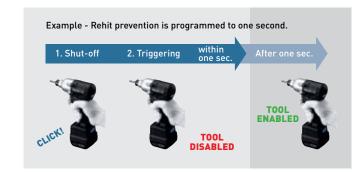


Needle bearings on output shaft reduce vibration and increase tool life.

# **Retightening Prevention Function**

#### Maintain strict quality control

This function prevents the tool from operating within a selected time period after it automatically stops from the torque control function. The switch will not operate even if engaged during this time period.



#### **More Features**







Remote Control Tool setting can be set only by remote control.



**LED Light** For operations in dimly lit

#### **Color Plate for Differentiation** Each tool model is color coded for easy identification.



# High Torque 18V & 21.6V Cordless Mechanical Pulse Tools

**Virtually No Torque Reaction** 

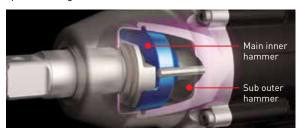
• M16 Bolt up to 400Nm



#### Advanced Technologies Delivering a Compact, Lightweight Tool with High Torque

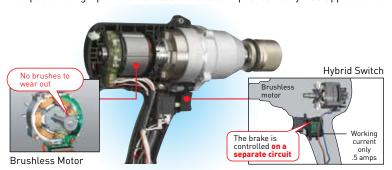
#### **High Efficiency Twin Hammer**

New high efficiency twin hammer design delivers high power while reducing tool size, noise, vibration for reduced operator fatique



#### Compact, High-Powered Brushless Motor

Compact and high-power brushless motor accomplishes heavy load applications.



\*Final results may have higher torque ranges with hard joints and lower torque ranges with soft joints.

#### **Advanced Fastening Features**



#### **Cross Thread Reduction**

Cross Thread Reduction
The tool first reverses 360 degrees, aligning the threads, greatly reducing the possibility of cross threads.



#### **Reverse Rotation!**



before fastening aligned with hole to normal rotation



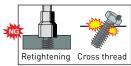
#### Maintenance Interval Alarm

When the fastenings are within 10,000 fastenings of the preset maintenance interval, the display blinks notifying the operator. Once tool reaches the preset interval, the tool is locked out from further use. This function can be set ON or OFF and is defined in 10,000 increment cycles. (Number of setting: 0-990,000 pcs)



#### **Cross Thread / Rehit Detection**

If shut-off is activated before the programmable minimum runtime, the tool alerts the operator to a NOK fastening. (Time setting: 0.1–3.0sec, 0.1sec per stage)



•Example with 3.0sec. normal time setting



Finished with 3.0sec.

Finished with 0.5sec. rundown



#### **Auto Battery Shut Down**

Auto Battery Shut Down

Before battery power becomes too low to maintain torque, tool automatically shuts down. Blinking LED notifies operator until a charged battery is attached.



#### **Speed Control Function**

Speed can be controlled from trigger. Speed control function ON and OFF can be selected by remote.

#### **Additional Features**

Ergonomic, computer-aided design for optimal balance and operator comfort



# **LED Light**

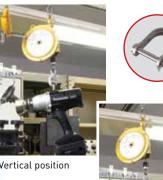
Program LED to turn on with trigger switch or ON/OFF switch to match operator preference





# Tool Hanger (Optional)

Suspend tool vertically or horizontally from a balancer





#### **Tightening** Confirmation Lamp

OK/NOK both visual and audible indicators. Buzzer ON/OFF can be selected.



Horizontal position

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# Mechanical Pulse Tools

MODELS	S	EYFLA4A	EYFLA4AR	EYFLA5A/EYFLA5P	EYFLA5AR/EYFLA5PR	EYFLA6P/EYFLA6J	EYFLA6PR/EYFLA6JR				
		1			1		1				
Voltage		10.8V	10.8V	10.8V	10.8V	10.8V	10.8V				
Shut-off me	thod			Mechanical Pu	lse - SR Series						
Drive		A = 1/4" Hex Quick Change	A = 1/4" Hex Quick Change	A = 1/4" Hex Quick Change P = 3/8" Sq. Pin Detent	A = 1/4" Hex Quick Change P = 3/8" Sq. Pin Detent	J = 1/2" Sq. Through Hole P = 1/2" Sq. Pin Detent	J = 1/2" Sq. Through Hole P = 1/2" Sq. Pin Detent				
	Nm	3-22Nm	3-22Nm	6-30Nm	6-30Nm	16-53Nm	16-53Nm				
Torque Range	ft. lbs.	2.2-16.2 ft. lbs.	2.2-16.2 ft. lbs.	4.4-22 ft. lbs.	4.4-22 ft. lbs.	11.8-39 ft. lbs.	11.8-39 ft. lbs.				
	in. lbs.	26.55-194.72 in. lbs	26.55-194.72 in. lbs	53.1-265.52 in. lbs.	53.1-265.52 in. lbs.	141.61-469.09 in. lbs.	141.61-469.09 in. lbs.				
Max Torque (F mode, tightening 3 sec.)		Approx. 40Nm M10 Bolt	Approx. 40Nm M10 Bolt	Approx. 90Nm M14 Bolt	Approx. 90Nm M14 Bolt	Approx. 120Nm M14 Bolt	Approx. 120Nm M14 Bolt				
Flush Detection	Modes	L1-L2	L1-L2	L1-L2	L1-L2	L1-L2	L1-L2				
No Load Sp (Torque Setting		1: 0-950 2: 0-1300 3: 0-1450 4-8: 0-1550 9-30 & F: 0-2300	1: 0-950 2: 0-1300 3: 0-1450 4-8: 0-1550 9-30 & F: 0-2300	1: 0-1300 2: 0-1450 3: 0-1550 4-30 & F: 0-2300	1: 0-1300 2: 0-1450 3: 0-1550 4-30 & F: 0-2300	1-30 & F: 0-2300	1-30 & F: 0-2300				
PPM (Pulses Per Min)		1: 0-1900 2: 0-2500 3: 0-2800 4-8: 0-3000 9-30 & F: 0-4000	1: 0-1900 2: 0-2500 3: 0-2800 4-8: 0-3000 9-30 & F: 0-4000	1: 0-2500 2: 0-2800 3: 0-3000 4-30 & F: 0-3600	1: 0-2500 2: 0-2800 3: 0-3000 4-30 & F: 0-3600	1-30 & F: 0-3000	1-30 & F: 0-3000				
Weight		2.8 lbs. (incl. 3.0Ah (EYFB30B)) 2.48 lbs. (incl. 2.0Ah (EYFB32B))	2.8 lbs. (incl. 3.0Ah (EYFB30B)) 2.48 lbs. (incl. 2.0Ah (EYFB32B))	2.8 lbs. (incl. 3.0Ah (EYFB30B)) 2.53 lbs. (incl. 2.0Ah (EYFB32B))	2.8 lbs. (incl. 3.0Ah (EYFB30B)) 2.53 lbs. (incl. 2.0Ah (EYFB32B))	3.1 lbs. (incl. 3.0Ah (EYFB30B)) 2.68 lbs. (incl. 2.0Ah (EYFB32B))	3.1 lbs. (incl. 3.0Ah (EYFB30B)) 2.68 lbs. (incl. 2.0Ah (EYFB32B))				
Size (L x W	x H)	6-7/32" x 9-25/32" x 2-61/64"	6-7/32" x 9-25/32" x 2-61/64"	5A: 6-7/32" x 9-25/32" x 2-61/64" 5P/50: 6-7/16" x 9-25/32" x 2-61/64"	5A: 6-7/32" x 9-25/32" x 2-61/64" 5P/5Q: 6-7/16" x 9-25/32" x 2-61/64"	6-25/32" x 9-25/32" x 2-61/64"	6-25/32" x 9-25/32" x 2-61/64"				
Wireless Commu with assembly q		_	OK Fasten=Green light, NOK Fasten=Red light	_	OK Fasten=Green light, NOK Fasten=Red light	-	OK Fasten=Green light, NOK Fasten=Red light				
LED Work Li (ON/OFF Sw		V	V	V	•	V	V				
OK/NOK Lig (Green: OK / Re		V	V	V	~	V	~				
Rehit Prevention: (Poper 0.1 sec. between		V	V	V	~	V	~				
Battery Indication (3 stage)		V	V	V	~	V	~				
Low Power Di	isable	<b>✓</b>	<b>✓</b>	<b>v</b>	~	<b>✓</b>	~				
Prevent / Detec Threads & R		_	_	_	_	_	_				
Maintenance Inter	val Alarm	_	_	_	_	_	_				
Variable speed On/	Off Switch	_	_	_	_	_	_				
LED Light Setting or On with pull o		_	<u> </u>	_	_	_	_				
Buzzer: On ,		_	_	_	_	_	_				
Snug torque detect (Possible to set b 0-3 sec. 0.1 sec. p	etween		_	_	_	_	_				
Long socket mode (h1: socket, h2: for 250m	for 150mm m socket)	_	_	_	_	_	_				
Work Capacity/Fa Speed	astening	<m6: 10="" n·m<br="">(EYFB30B) approx. 1200 pcs (EYFB32B) approx. 800 pcs</m6:>	n, Stage: 19> s/pack, approx. 0.7 sec/1pcs /pack, approx. 0.7 sec/1pcs	<m8: 23="" n·m<br="">(EYFB30B) approx. 800 pcs (EYFB32B) approx. 540 pcs</m8:>	n, Stage: 22> /pack, approx. 0.8 sec/1pcs /pack, approx. 0.8 sec/1pcs	(EYFB30B) approx. 500 pcs	N·m, Stage: 23> ocs/pack, approx. 0.9 sec/1pcs ocs/pack, approx. 0.9 sec/1pcs				
Charging Time		(Battery pack EYFB30B, Charger EY0L82B) Usable charge: approx. 35 min., Full charge: approx. 45 min (Battery Pack EYFB32B, Charger EY0L82B) Usable Charge: approx. 35 min., Full Charge: approx. 40 min									

EYFMA1P	EYFMA1PR	EYFNA1C/EYFNA1P	EYFNA1CR/EYFNA1PR	EYFPA1	EYFPA1R			
	1	3	3		1			
14.4V	14.4V	18V	18V	21.6V	21.6V			
P = 1/2" Sq. Pin Detent	P = 1/2" Sq. Pin Detent	C = 1/2" Square Drive with Ring Retainer and Through Hole P = 1/2" Square Drive Pin Detent	C = 1/2" Square Drive with Ring Retainer and Through Hole P = 1/2" Square Drive Pin Detent	J = 3/4" Sq. Through Hole	J = 3/4" Sq. Through Hole			
25-100Nm	25-100Nm	70-200Nm	70-200Nm	160-650Nm	160-650Nm			
18.4-73.8 ft. lbs.	18.4-73.8 ft. lbs.	51.6-147.5 ft. lbs.	51.6-147.5 ft. lbs.	118-479.4 ft. lbs.	118-479.4 ft. lbs.			
221.27-885.07 in. lbs.	221.27-885.07 in. lbs.	619.55-1770.15 in. lbs.	619.55-1770.15 in. lbs.	1416.12-5752.98 in. lbs.	1416.12-5752.98 in. lbs.			
Approx. 185Nm M14 Bolt	Approx. 185Nm M14 Bolt	Approx. 470Nm M24 Bolt	Approx. 470Nm M24 Bolt	Approx. 700Nm M24 Bolt	Approx. 700Nm M24 Bol			
L1-L2	L1-L2	L1-L2	L1-L2	L1-L2	L1-L2			
1-30 & F: 0-2300	1-30 & F: 0-2300	1-30 & F: 0-2300	1-30 & F: 0-2300	1-30 & F: 0-2300	1-30 & F: 0-2300			
1-30 & F: 0-3200	1-30 & F: 0-3200	1-30 & F: 0-2200	1-30 & F: 0-2200	1-30 & F: 0-2200	1-30 & F: 0-2200			
3.3 lbs. (incl. 4.2Ah (EYFB42B)) 2.83 lbs. (incl. 2.0Ah (EYFB41B))	3.3 lbs. (incl. 4.2Ah (EYFB42B)) 2.83 lbs. (incl. 2.0Ah (EYFB41B))	6.6 lbs. (incl. 5.0Ah (EYFB50B))	6.6 lbs. (incl. 5.0Ah (EYFB50B))	7.7 lbs. (incl. 4.2Ah (EYFB60B))	7.7 lbs. (incl. 4.2Ah (EYFB6			
6-25/32" x 9-25/32" x 2-61/64"	6-25/32" x 9-25/32" x 2-61/64"	9-11/64" x 11-1/4" x 3-1/32"	9-11/64" x 11-1/4" x 3-1/32"	9-27/32" x 11-5/8" x 2-61/64"	9-27/32" x 11-5/8" x 2-61/64"			
_	OK Fasten=Green light, NOK Fasten=Red light	_	OK Fasten=Green light, NOK Fasten=Red light	_	OK Fasten=Green light, N Fasten=Red light			
V	~	~	V	V	~			
V	~	V	V	V	V			
<b>v</b>	~	~	~	~	~			
<b>✓</b>	<b>✓</b>	<b>✓</b>	·	V	V			
V	~	~	~	~	V			
_	_	~	~	·	V			
_	_	~	V	V	~			
_	_	V	V	V	V			
_	_	~	V	V	~			
_	_	V	V	V	~			
_	_	_	_	_	_			
_	_	_	_	_	_			
<m12: 71="" n·n<br="">(EYFB42B) approx. 780 pcs, (EYFB41B) approx. 350 pcs,</m12:>	/pack, approx. 0.9 sec/1pcs	<m12: 100="" 1<="" n·m,="" stage:="" td=""><td>3&gt; approx.500pcs/pack</td><td colspan="5"><m16: 180="" 6="" n·m,="" stage:=""> approx.450pcs/pack</m16:></td></m12:>	3> approx.500pcs/pack	<m16: 180="" 6="" n·m,="" stage:=""> approx.450pcs/pack</m16:>				
(Battery pack EYFB4; Usable Charge: approx. 50 mi (Battery Pack EYFB4 Usable Charge: approx. 35 mi	2B, Charger EY0L82B) n., Full Charge: approx. 60 min 1B, Charger EY0L82B) n., Full Charge: approx. 40 min	Usable Charge:	DB, Charger EY0L82B) approx. 65 min. approx. 80 min	(Battery pack EYFB60B, Charger EY0L82B) Usable Charge: approx. 65 min. Full Charge: approx. 85 min				

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# **Assembly Tool Accessories**

#### **Batteries & Chargers**



EY9L20B 7.2V 1.5Ah Li-ion Battery Pack



**EYFB32B** 10.8V 2.0Ah Li-ion Battery Pack



EYFB30B 10.8V 3.0Ah Li-ion Battery Pack



EYFB41B 14.4V 2.0Ah Li-ion Battery Pack



EYFB42B 14.4V 4.2Ah Li-ion Battery Pack



EYFB50B 18V 5.0Ah Li-ion Battery Pack



EYFB60B 21.6V 4.2Ah Li-ion Battery Pack



**EYOL20B** 7.2V Charger



EYOL82B 10.8V - 28.8V Charger

#### **Protector Covers**



EYFA02-H Battery Protector for EYFB30B



EYFA03-H Battery Protector for EYFB32B



EYFA04-H Battery Protector for EYFB40B/EYFB42B



EYFA06-H Battery Protector for EYFB41B



EYFA10-H Battery Protector for EYFB50B



EYFA08-H Battery Protector for EYFB60B



EYFA05
EYFG Tool Protectors
-A (blue) -Y (yellow)
-H (gray)



EYFAU1

EYFLA4/5/6, EYFMA1 Tool Protectors
-A (blue) -Y (yellow)
-H (gray) -G (green)



EYFNA Tool Protectors
-A (blue) -Y (yellow)
-H (gray) -G (green)



EYFA07 EYFP Tool Protectors -A (blue) -Y (yellow) -H (gray) -G (green)



EYFA13
EYFLA7/8/9, EYFMA2 Tool Protectors
-A (blue), -Y (yellow)
-H (gray), -D (orange) -G (green)

#### **Accessories**



**EYFA32B**Clutch Adjustment Tool for EYFG Series Tools



EYFA40B EYFG Tool Hanger



EYFLM-H EYFL/EYFM Tool Hanger



EYFA41B EYFN/EYFP Tool Hanger

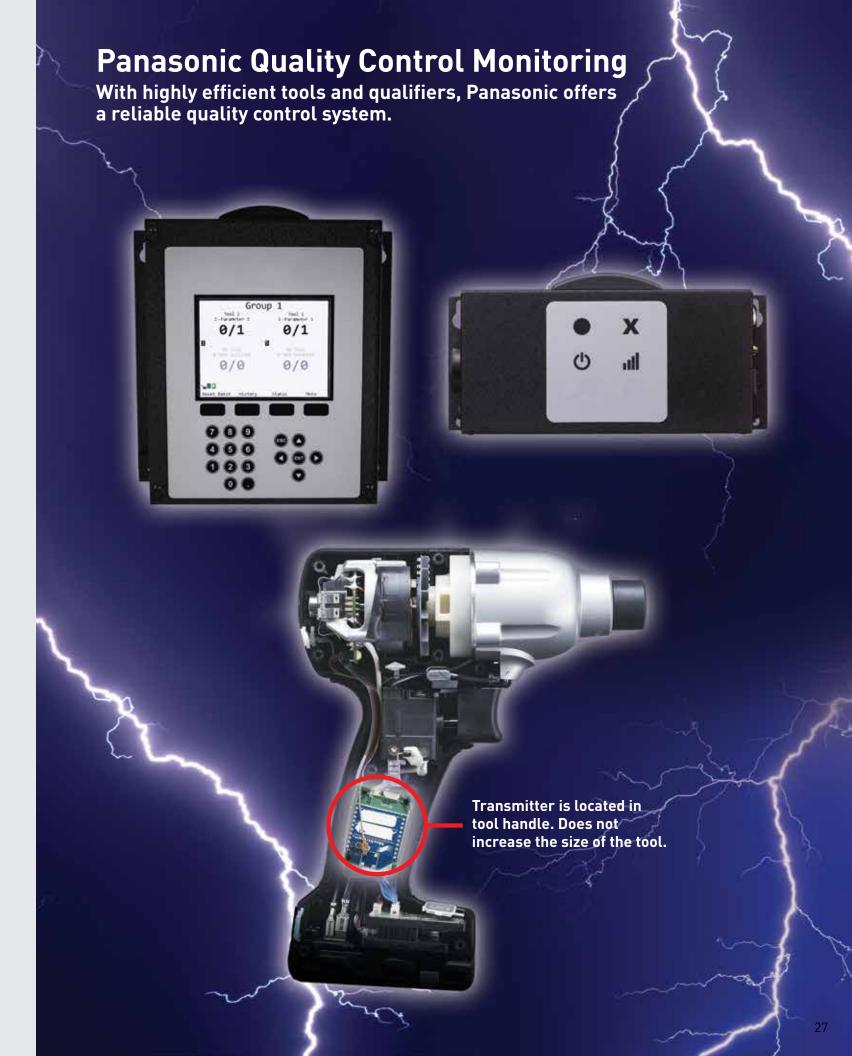


WEYFEA1N3137 Clutch Lock Out Cover for EYFEA1N



EYFA31B

Remote Control for all EYFG/EYFL/
EYFM/EYFN/EYFP Tools



# **Comparison of Assembly Qualifiers**

MODEL	EYFR02B	EYFR03A	EYFR03B	EYFR04A
	* ×	6/1 6/1 6/7 6/1 6/7 6/7 6/8 6/8 6/8 6/8	#12 . #12 #12 . #12 #13 . #14	
Graphics Display	-	V	V	~
Multiple Stations	-	-	_	~
Number of Tools Connectivity	1	16	16	16
Number of Tools Simultaneously	1	16	16	4
1-Way Radio Communication	<b>✓</b>	V	~	~
NEW! 2-Way Radio Communication		V	~	
Discrete Inputs/Outputs	1/2	8/12	_	8/12
USB Ports	-	1	1	1
Ethernet Ports	-	2	2	2
Serial Port	1	1	1	1
Remote Inputs/Outputs Connection	-	V	•	~
PLC Integration	V	V	*With Remote I/O Box	~
Ethernet IP/Open Protocol & ToolsNet	ı	V	•	•
Data Collection			ws onboard or nernet	5,000 rundows per station onboard or via Ethernet
Batch Counting	*With PLC	V	·	·
Tool Sequencing	-	V	~	~
Bar Code Scan Capability	ı	<b>v</b>	<b>~</b>	~
Remote Tool Disable	<b>~</b>	<b>~</b>	~	~
Out of Range Disable / Anti-Theft	V	V	V	~
Recommended Range		33. (	10M)	
Rated Supply Voltage		AC 100-240	V, 50/60 Hz	
I/O Voltage	5A @ 30VDC		2A @ 24VDC	
Dimensions (L x H x W)	9-1/16" x 14-1/8" x 3-1/2"		10-1/4" x 10-3/4" x 4-1/4"	
Operating Temperature Range		14-140°F (I	(-10)-60°C)	
Compatible Tools	EYFGA1NR, EYFGA2NR, EYFGA3N EYFNA1JR, EYFNA1PR, EYI	R, EYFLA4AR, EYFLA5AR, EYFLA5PR, FPA1JR, EYFLA7AR, EYFLA8AR, EYFL	EYFLA5QR, EYFLA6JR, EYFLA6PR, E A8CR, EYFLA8PR, EYFLA9CR, EYFLA9	YFMA1JR, EYFMA1PR, EYFNA1CR, PR, EYFMA2CR, EYFMA2PR

Communication range varies with operating environment. The presence of metal walls, people or other objects may result in decreased range. Software available for download for EYFR02B and EYFR03 models.

# EYFR03A/B





# Multi-Tool Assembly Qualifier



2-Way Compatible Tools - Accupulse HR 2Way Series Only

1-Way Compatible Tools - AccuPulse HR 2Way Series and Mechanical Radio Version

#### 2-way Communication Settings

- Create fastening strategies by automatically changing tool settings.
- Tools settings can be controlled both via remote or qualifier.
- Compatible with parameter, group and job modes.
- Tools OK/NOK blinks to notify user of active tools in sequence



#### Features that can be set/sent from Qualifier or sent by the Tool

improves quality and productivity

- OK/NOK
- Torque setting stage (1-40)
- Flush detection setting (L1-L7)
- Buzzer setting
- Flush detection delay
- LED light setting
- Rundown error detecting
- Variable speed control
- Reset settings
- Maintenance interval alarm
- Out of range disable function
- Cross thread reduction
- Retightening prevention
- Long socket mode
- Enable/Disable

#### EYFR04A

#### **Multi-Station Assembly Qualifier Wireless Communication** Discrete I/O to PLC 000 OK/NOK light on tool flashes green/red to indicate completion of each fastener. Stores up to 5,000 fastenings per station ✓ Ethernet/IP 4 Interfaces **Programming Modes** ✓ Open Protocol Multi-Station feature allows ✓ ToolsNet Parameters - Run one tool at a time use of 1 qualifier over 4 stations Jobs - Allows parameters to run in a to configure 16 tools in any specified order. **Process Control** combination. Utilizing I/O or fieldbus capabilities improves quality and productivity

1-Way Compatible Tools - AccuPulse HR 2Way Series and Mechanical Radio Version

#### EYFR02B



#### **Qualifier Features**

#### **Tool Distance**

A highly reliable data signal can be transmitted if tool is within 10m (33 feet) of the assembly qualifier and if there are no barriers between tool and qualifier.



#### **Out-of-Range Anti-Theft Function**

In the event that wireless communication cannot be completed between tool and qualifier, tool will be disabled and cannot be operated. Operation of this function is set on tool body with remote control.

#### **Enable/Disable Tools**

Tools can be locked out to prevent use after batch is completed and/or when not in use. Tools can be enabled again when needed.





#### EYFEXP16

#### I/O Expansion Module



- Expansion module for EYFR03 & EYFR04 provides discrete I/O functions
- 16 user-assignable inputs and outputs with a single common reference point
- Up to four EYFEXP16 modules may be chained from a single EYFR03 & EYFR04 if additional inputs or outputs are needed
- Display shows status of inputs and outputs for the module or an error code if module has detected a communications error
- Compact size (L x H x W): 9" x 5 1/2" x 2 1/2"
- Weight: 2.5 lbs

#### EYFRZ02CA

I/O Cable for EYFR02B Assembly Qualifiers - 25 ft.



#### EYFR03CA

I/O Cable for EYFR03 Assembly Qualifiers (Discrete I/O) - 25 ft.



# Standard / Optional Accessory Chart

						CLUT	СН Т	00L9	<u> </u>			
		7.	.2V					14.4\				
● STANDARD					~							
O OPTIONAL		EYFEA1N	EYFEA1N2S	EYF6A1N	EYFGA1NR	EYFGA2N	EYFGA2NR	EYFGA3N	EYFGA3NR	EYFGB1N	EYFGB2N	EYFGB3N
DATTED VIDA OVE		Ā		EY	Ē	E	Ē	Ē	E	E	E	EY
BATTERY PACKS	EVOL 20D											
7.2V 1.5Ah Li-ion Battery Pack	EY9L20B	0										
10.8V 2.0Ah Li-ion Battery Pack	EYFB32B											
10.8V 3.0Ah Li-ion Battery Pack	EYFB30B			_								
14.4V 2.0Ah Li-ion Battery Pack	EYFB41B			0 (	0	0	0	0	0	0	0	0
14.4V 4.2Ah Li-ion Battery Pack	EYFB42B			0	0	0	0	0	0	0	0	0
18V 3.0Ah Li-ion Battery Pack	EYFB51B	-										
18V 5.0Ah Li-ion Battery Pack	EYFB50B											
21.6V 4.2Ah Li-ion Battery Pack	EYFB60B											
CHARGERS												
Charger for Panasonic Li-ion Battery 7.2V (EY9L20B)	EY0L20B	0										_
Charger for Panasonic Li-ion Batteries 10.8V - 28.8V	EY0L82B			0	0	0	0	0	0	0	0	0
QUALIFIERS		1										
Single Tool Qualifier	EYFR02B				0		0		0			
Multi-Tool Qualifier With Networking	EYFR03A				0		0		0			
Multi-Tool Qualifier With Networking	EYFR03B				0		0		0			
Multi-Station Qualifier with Networking	EYFR04A				0		0		0			
TOOL COVERS			,							,		
Protector for EYFB30B Battery - Gray	EYFA02-H											
Protector for EYFB32B Battery - Gray	EYFA03-H											
Protector for EYFB40B/EYFB42B Battery - Gray	EYFA04-H			0	0	0	0	0	0	0	0	0
Protector for EYFB41B Battery - Gray	EYFA06-H			0	0	0	0	0	0	0	0	0
Protector for EYFB50B Battery - Gray	EYFA10-H											
Protector for EYFB51B Battery - Gray	EYFA11-H											
Protector for EYFB60B Battery - Gray	EYFA08-H											
Protector for EYFG - Blue	EYFA05-A			0	0	0	0	0	0	0	0	0
Protector for EYFG - Gray	EYFA05-H			0	0	0	0	0	0	0	0	0
Protector for EYFG - Yellow	EYFA05-Y			0	0	0	0	0	0	0	0	0
Protector for EYFL/EYFM 10.8V & 14.4V - Blue	EYFA01-A											
Protector for EYFL/EYFM 10.8V & 14.4V - Green	EYFA01-G											
Protector for EYFL/EYFM 10.8V & 14.4V - Gray	EYFA01-H											
Protector for EYFL/EYFM 10.8V & 14.4V - Yellow	EYFA01-Y											
Protector for EYFN 18V - Blue	EYFA09-A											
Protector for EYFN 18V - Green	EYFA09-G											
Protector for EYFN 18V - Gray	EYFA09-H											
Protector for EYFN 18V - Yellow	EYFA09-Y											
Protector for EYFP 21.6V - Blue	EYFA07-A											
Protector for EYFP 21.6V - Green	EYFA07-G											
Protector for EYFP 21.6V - Gray	EYFA07-H											
Protector for EYFP 21.6V - Yellow	EYFA07-Y											
ACCESSORIES												
Clutch Adjustment Tool for EYFG Clutch Tools	EYFA32B			•	•	•	•	•	•	•	•	•
Clutch Lock Out Cover EYFEA1N	WEYFEA1N3137	•	•									
Remote Control for all EYFL, EYFM, EYFN, EYFP, EYFGA Series Tools	EYFA31B			0	0	0	0	0	0			
Tool Hanger for EYFG Clutch Tools	EYFA40B			0	Ō	ō	ō	ō	Ō	0	0	0
Tool Hanger for EYFL 10.8V & 14.4V Mechanical Pulse Tools	EYFLM-H					Ť	Ť	Ť		Ĺ	_	
Tool Hanger for EYFN/EYFP 18V & 21.6V Mechanical Pulse Tools	EYFA41B											
	1211/1410										ш	

					10	.8V			М	IECHA	NICAL	PULS		.s .4V				18	BV.			21.	6V
EYFLA4A	EYFLA4AR	EYFLA5A	EYFLA5AR	EYFLA5Q	EYFLA5QR	EYFLA5P	EYFLA5PR	EYFLA6J	EYFLA6JR	EYFLA6P	EYFLA6PR	EYFMA1J	EYFMA1JR	EYFMA1P	EYFMA1PR	EYFNA1C	EYFNA1CR	EYFNA1J	EYFNA1JR	EYFNA1P	EYFNA1PR	EYFPA1J	EYFPA1JR
0	0 0	0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0	0	0	0	0 0	0 0	0	0	0 0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0 0 0		0 0 0		0 0 0		0 0 0		0 0 0		0 0 0		0 0 0		0 0 0		0 0 0		0 0 0		0 0 0		0 0 0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0 0	0	0	0
0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

# Standard / Optional Accessory Chart

#### STANDARD

OPTIONAL

BATTERY PACKS	
10.8V 2.0Ah Li-ion Battery Pack	EYFB32B
10.8V 3.0Ah Li-ion Battery Pack	EYFB30B
14.4V 2.0Ah Li-ion Battery Pack	EYFB41B
14.4V 4.2Ah Li-ion Battery Pack	EYFB42B
CHARGERS	
Charger for Panasonic Li-ion Batteries 10.8V - 28.8V	EY0L82B
QUALIFIERS	
Single Tool Qualifier	EYFR02B
Multi-Tool Qualifier	EYFR03A
Multi-Tool Qualifier	EYFR03B
Multi-Station Qualifier	EYFR04A
TOOL COVERS	
Protector for EYFB30B Battery - Gray	EYFA02-H
Protector for EYFB32B Battery - Gray	EYFA03-H
Protector for EYFB40B/EYFB42B Battery - Gray	EYFA04-H
Protector for EYFB41B Battery - Gray	EYFA06-H
AccuPulse HR Tool Protector - Blue	EYFA13-A
AccuPulse HR Tool Protector - Yellow	EYFA13-Y
AccuPulse HR Tool Protector - Grey	EYFA13-H
AccuPulse HR Tool Protector - Orange	EYFA13-D
AccuPulse HR Tool Protector - Green	EYFA13-G
ACCESSORIES	
I/O Cable for EYFR02 Single Tool Qualifier	EYFRZ02CA
I/O Cable for EYFR03 Multi-Tool Qualifier	EYFR03CA
Remote Control for all EYFL, EYFM, EYFN, EYFP, EYFGA Series Tools	EYFA31B
Tool Hanger for EYFL 10.8V & 14.4V Mechanical Pulse Tools	EYFLM-H
IO Expansion Module	EYFEXP16

AccuPulse HR					A	ccuPu	lse HF	R 2Way	/ Serie	<b>!</b> S			Qual	ifiers					
		10.	.8V			14.	.4V			10.	8V			14.	.4V				
EYFLA7A	EYFLA8A	EYFLA8C	EYFLA8P	EYFLA9C	EYFLA9P	EYFMA2C	EYFMA2P	EYFLA7AR	EYFLA8AR	EYFLA8CR	EYFLA8PR	EYFLA9CR	EYFLA9PR	EYFMA2CR	EYFMA2PR	EYFR02B	EYFR03A	EYFR03B	EYFR04A
0	0	0	0	0	0			0	0	0	0	0	0						
0	0	0	0	0	0			0	0	0	0	0	0						
						0	0							0	0				
						0	0							0	0				
	ı	1	ı	ı	ı														
0	0	0	0	0	0	0	0	0	0	0	0	0	0						
										1-Wa	ay Com	munica	ation						
										2-Wa	ay Com	munica	ation						
										2-Wa	ay Com	munica	ation						
										1-Wa	ay Com	munica	ation						
0	0	0	0	0	0			0	0	0	0	0	0						
0	0	0	0	0	0			0	0	0	0	0	0						
						0	0							0	0				
						0	0							0	0				
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
																0		_	
																	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
																	0	0	0

#### **Battery Pack/Battery Charger – Compatibility Chart**

VOLTAGE	MODEL	BATTERY	CHARGING TIMES USABLE: FULL CHARGE	CHARGER
21.6V	EYFPA1J/1JR	EYFB60B (4.2Ah)	65 min : 85 min	
18V	EYFNA1C/EYFNA1CR, EYFNA1J/EYFNA1JR EYFNA1P/EYFNA1PR	EYFB50B (5.0Ah)	65 min : 80 min	
104		EYFB51B (3.0Ah)	65 min : 80 min	
14.4V	EYFGA1N/1NR, EYFGA2N/2NR, EYFGA3N/3NR EYFGB1N, EYFGB2N, EYFGB3N, EYFMA1J/1JR, EYFMA1P/1PR, EYFMA2P/PR	EYFB41B (2.0Ah)	35 min : 40 min	EY0L82B
14.44		EYFB42B (4.2Ah)	50 min : 60 min	
10.8V	EYFLA4A/4AR, EYFLA5A/5AR, EYFLA5P/5PR, EYFLA5Q/5QR EYFLA6J/6JR, EYFLA6P/6PR, EYFLA7A/7AR, EYFLA8A/C/P/ AR/CR/PR, EYFLA9C/P/CR/PR	EYFB30B (3.0Ah)	35 min : 45 min	
10.87		EYFB32B (2.0Ah)	35 min : 40 min	
7.2V	EYFEA1N, EYFEA1N2S	EY9L20B	35 min : 60 min	EY0L20B

#### Mechanical Pulse Tool Working Capacities\*

	MODELS	EYFLA4A EYFLA4AR	EYFLA5A/5P/5Q EYFLA5AR/5PR/5QR	EYFLA6J/6P EYFLA6JR/6PR	EYFMA1J/1P EYFMA1JR/1PR	EYFNA1C/1J/1P EYFNA1CR/1JR/1PR	EYFPA1J EYFPA1JR
	Settings	M6: 10Nm Stage: 19	M8: 23Nm Stage: 22	M10: 43Nm Stage: 23	M12: 71Nm Stage: 22	M14: 100Nm Stage: 13	M16: 180Nm Stage: 6
	EYFB30B 3.0Ah Battery	1200 pcs/pack 0.7 sec/1 pcs	800 pcs/pack 0.8 sec/1 pcs	500 pcs/pack 0.9 sec/1 pcs	-	-	_
Application Capacity/ Working Speed	EYFB42B 4.2Ah Battery	ı	ı	ı	785 pcs/pack 0.9 sec/1 pcs	-	_
	EYFB50B 5.0Ah Battery	ı	ı	ı	1	500 pcs/pack 1.0 sec/1 pcs	_
	EYFB60B 4.2Ah Battery	_	_	_	_	-	450 pcs/pack 0.7 sec/1 pcs

#### AccuPulse Working Capacities\*

	MODELS	EYFLA7A/EYFLA7AR	EYFLA8A/AR/C/CR/P/PR	EYFLA9C/CR/P/PR	EYFMA2C/CR/P/PR
	Settings	M6: 10Nm, Stage: 22	M8: 23Nm, Stage: 22	M10: 43Nm, Stage: 23	M12: 71Nm, Stage: 22
	EYFB30B 3.0Ah Battery	1200 pcs/pack 0.7 sec/1pcs	800 pcs/pack 0.8 sec/1pcs	400 pcs/pack 0.8 sec/1pcs	-
Application	EYFB32B 2.0Ah Battery	800 pcs/pack 0.7 sec/1pcs	540 pcs/pack 0.8 sec/1pcs	260 pcs/pack 0.8 sec/1pcs	_
Capacity/ Working Speed	EYFB42B 4.2Ah Battery	_	_	_	600 pcs/pack 0.8 sec/1pcs
	EYFB41B 2.0Ah Battery	-	_	_	270 pcs/pack 0.8 sec/1pcs

#### **Precision Clutch Tool Working Capacities\***

	MODELS	JOINT	EYFGA1N/1NR EYFGB1N	EYFGA2N/2NR EYFGB2N	EYFGA3N/3NR EYFGB3N
	Settings		M6 - 5.5Nm	M6 - 8Nm	M6 - 10Nm
Application Capacity/ Working Speed	EYFB41B 2.0Ah Battery	Hard Joint 30°	1200 pcs/pack 1.1 sec/1 pcs	1050 pcs/pack 1.0 sec/1 pcs	1100 pcs/pack 1.0 sec/1 pcs
		Soft Joint 720°	540 pcs/pack 1.3 sec/1 pcs	410 pcs/pack 1.3 sec/1 pcs	310 pcs/pack 1.4 sec/1 pcs
	EYFB42B 4.2Ah Battery	Hard Joint 30°	2700 pcs/pack 1.1 sec/1 pcs	2350 pcs/pack 1.0 sec/1 pcs	2500 pcs/pack 1.0 sec/1 pcs
		Soft Joint 720°	1250 pcs/pack 1.3 sec/1 pcs	1000 pcs/pack 1.3 sec/1 pcs	730 pcs/pack 1.4 sec/1 pcs

#### Low Torque Clutch Tool and Driver Working Capacities\*

	MODEL	FASTENING	EYFEA1N
Application Capacity/ Working Speed		Screws in Sheet Metal (M2.5 x 1/4")	High: 1900 pcs
	EY9L20B 1.5Ah Battery	Screws in Sheet Metal (M4 x 3/8")	High: 1850 pcs
		Screws in Sheet Metal (M5 x 5/16")	Low: 1450 pcs

# **Transducers / Joint Simulators**

# **Stationary Transducers**

MODEL NUMBER	TORQUE RANGE [Nm]	DRIVE
EYFST22NM	2.2 – 22	3/8" Square
EYFST100NM	10 – 100	1/2" Square
EYFST750NM	75 - 750	3/4" Square

- USB Plug 'n Play Technology automatic transducer recognition
- Accuracy class: 0.1 % of F.S.R.
- Smart memory transducer retains settings
- Full bridge strain gauge based torque measurement
- 24 bit analog-to-digital converter (ADC) on rotor
- 126 Kbps data transfer via photocoupler
- Powerful 32-bit-cpu
- Robust, built to last utilizing an aluminum housing and double ball bearings
- User selectable bi-directional measurement
- Simple PC based software
- Ultra-compact size
- Economy software & USB sable included



# **Joint Simulators**

MODEL NUMBER	TORQUE RANGE [Nm]	BOLT SIZE	DRIVE
EYFJS22NM	22	М8	3/8" Square
EYFJS100NM	100	M12	1/2" Square
EYFJS200NM	200	M16	3/4" Square
EYFJS400NM	400	M24	3/4" Square

- Multiple cup washer sizes provide a more accurate simulation of clamp load
- Geared structure resolves frictional issues inherent in conventional joint simulators
- Limited components better represents real world applications
- Cup washers are laser engraved for differentiating between sizes
- Lightweight joint simulator reduces issues with inertia and increases torque accuracy
- Heat treated stainless steel components ensure long life even in harsh environments
- Standard off the shelf bolts can easily be replaced
- Cup washers are sized for specific working torque ranges
- Accurately certify any type of shut-off tool or hand wrench
- Minimal points of lubrication significantly reduces frictional changes during the rundown
- Grease included



37

Note: "Approximately

36

# Rotary Transducers

MODEL NUMBER	TORQUE RANGE [Nm]	OVERLOAD PROTECTED	DRIVE
EYFRT50CNM	.0550	Yes	1/4" Hex
EYFRT100CNM	.1 – 1	Yes	1/4" Hex
EYFRT200CNM	.2 – 2	Yes	1/4" Hex
EYFRT5NM	.5 – 5	_	1/4" Hex
EYFRT10NM	1 – 10	_	1/4" Hex
EYFRT20NM	1 – 20	_	1/4" Hex
EYFRT50NM	1 – 50	_	3/8" Square
EYFRT100NM	1 – 100	_	1/2" Square
EYFRT200NM	1 – 200	_	1/2" Square
EYFRT500NM	1 – 500	_	3/4" Square

#### Lean System

- Ultra compact size. Extremely convenient for tight spaces
- Integrated electronics eliminate the need for a separate analyzer
- Basic software version included, compatible with Windows based PC or tablets
- Mini USB cable included

#### **Multiple Interface Options**

- RS-485
- Ethernet
- USB

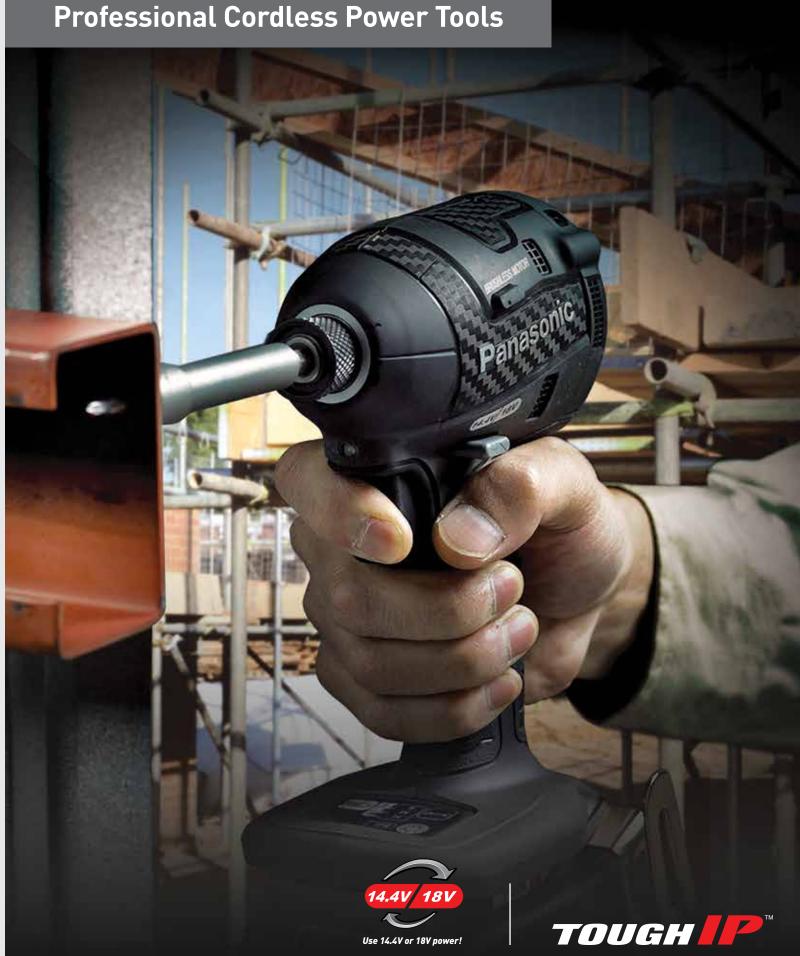
#### High Resolution Incremental Encoder (0.1 degrees)

- High precision strain gauge based torque sensors
- Brushless energy and signal transmission system
- Immediate conversion from analog to digital at the point of reading from the rotor. Other systems convert analog readings outside of the transducers and requires separate analyzer hardware
- Converts analog to digital at 24 bits
- Contactless, photocoupler transmission bitrate of 176 kb per second

#### Durable

- Double bearings
- Mechanical overload protection clutch in sensors up to 200 cNm range





# **Professional Power Tool Lineup**

# Ni-MH EY6220N/

**EY6220NQ** 

Cordless Drill & Driver Kit

# 3.6V EY7411LA2S Drill & Driver EY7410LA1C/ EY7410LA2S Drill & Driver







# EY3640LS1S Sealing Gun Sealing Gun EY7552X/ EY7552LS2S Impact Wrench



# **Dual-Voltage and Battery Technology**

# Versatility, high performance and long runtimes





14.4V

14.4V batteries offer lightweight comfort in a compact size.



Using 18V batteries maximizes runtime.

## Panasonic battery packs offer protection, durability and long life

#### Monitoring of Individual Battery Cells

Each 3.6V segment is monitored by a sensor to ensure optimal discharge control, preventing over-charging and over-discharging.

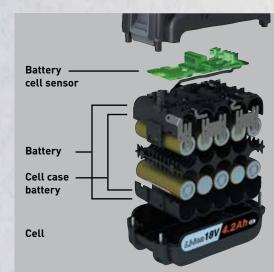
#### **Over-discharge Prevention Sensor**

A sensor works to prevent overdischarging (discharge of the battery until voltage falls below a minimum threshold).

#### **Battery Overheat Protection Sensor**

A temperature sensor cuts off power to the motor before the battery temperature rises to a harmful level and flashes a warning lamp on the tool's control panel to notify the user.





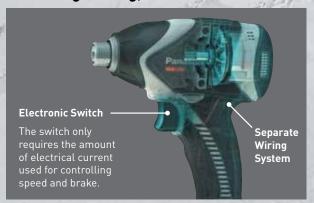
# **Cordless Tools with Advanced Features**

Tough. Durable. Innovative.

Panasonic has developed intelligent power tools to increase task efficiency as well as operate in tough conditions of various jobsites. Panasonic continues to evolve its technology and provide tools that meet any type of job requirements.

Featuring dust and water resistant technologies, our tools comply with International Protection standards.

#### Long-lasting, Brushless Motor





#### **Switch**

An additional rubber cap seals the switch and protects it against dust and water.



#### **Electronic Circuit**

Electronic circuits and battery pack are protected to withstand water and dust.



#### **Battery**

Battery cells are designed to protect against moisture and keep performing at their best.



TEST RESULTS

#### **Results**

Panasonic cordless tools are protected with a dust-tight, water-tight design and are IP56 certified per IEC standards. Every day we demonstrate our ongoing commitment to heavy industry by providing workers with superior tools for the harshest job conditions.

International Protection Code classifies the degree of protection provided against intrusion of solid foreign objects and liquids in electrical machinery and fixtures as defined by IEC standards.

Dust Resistance Level indicates the degree of protection provided against the intrusion of solid foreign objects using a scale of six levels.

Level	Brief description
1	Protected against solid foreign objects of 50mm Ø and greater
2	Protected against solid foreign objects of 12.5mm Ø and greater
3	Protected against solid foreign objects of 2.5mm Ø and greater
4	Protected against solid foreign objects of 1.0mm Ø and greater
5	Dust protected
6	Dust-tight



Water Resistance Level Indicates the degree of protection provided against the intrusion of water associated with harmful effects using a scale of eight levels.

	Level	Brief description			
	Protected against vertically falling water drops				
2 Protected against vertically falling water drops when enclosu up to 15°					
	3	Protected against spraying water			
	4	Protected against splashing water			
	5	Protected against water jets			
	6	Protected against powerful water jets			
	7	7 Protected against the effects of temporary immersion in water			
	8	Protected against the effects of continuous immersion in water			

# **Professional Grade Cordless Tools**

Extremely Compact with High Power















The shorter brushless motor helped create an ultra-compact, high-powered impact driver with optimum ergonomics.

#### 2. MULTIPLE MODES FOR ALL APPLICATIONS



**Hard:** For heavy duty applications.



**Medium:**For general fastening applications.



**Soft:** For delicate applications, like drywall.



**Self-drilling screw mode**For self-drilling screws
into metal.



#### **SELF DRILLING SCREW MODE**

**Self-Drilling Screw mode** starts at highest speed to drill through the metal and then switches to H mode (High impact) to powerfully cut initial thread. After that, load is reduced so it automatically switches to slower S mode (Soft impact) to limit potential of stripping threads on fastener or material. (Less than  $\emptyset 4 \times 15$ mm).



#### **BRUSHLESS MOTOR**

The ultra-compact brushless motor improves efficiency, performance and incorporates rare earth magnets for faster working speeds and high power density, about doubling motor life.\*



#### **DURABLE SWITCH**

The hybrid switch allows the brake to be controlled on a separate circuit and uses rigid metal parts to increase durability, about doubling switch life.\*\*



#### **ROBUST ANVIL**

Anvil materials with innovative design have increased durability of impact parts giving longer service life and better overall performance.



#### **HOUSING DURABILITY**

Metal tabs have been added to the housing where the battery locks onto the tool. This helps prevent wear and damage caused by abrasion and vibration during heavy use.

#### **DESIGN FEATURES**



"Tire tread"
pattern design
prevents slipping
and increases
operator comfort.



Tapered bit holder for easy bit change.



LED light improves visibility in work area.

\*Compared with Panasonic conventional brushed motor

\*\*Compared with our previous mechanical switch

# **Drill & Driver / Impact Drivers**

# EY74A2LS2G / EY74A2X

# 1/2" Drill & Driver



**EY74A2X:**Battery pack and battery charger not included.

- Compact size (L x H x W):
   7" x 9-27/32" x 2-11/16"
- Brushless motor and hybrid switch
- Speed control function
- Clutch torque (Approx.): 4.4-38.9 in. lbs. 2.0 in. lbs. per stage, total 18 stage
- 1/2" Heavy duty keyless chuck

#### **Dual Voltage Technology**

- Electric brake
- Low battery indicator, belt hook & LED work light
- Max. drill diameter: in Wood: dia. 1-1/2" in Metal: dia. 1/2"
- Max. screw driving: wood screw: dia. 5/16"
   Self-drilling screw: dia. 1/4"

Rotation Speed	Low	Application Example	High	
Н	300 rpm	Normal steel : dia. 15-25 / Stainless steel: dia. 10-15	1000 rpm	
M	200 rpm	Normal steel : dia. 25 / Stainless steel: dia. 15-25	670 rpm	Precise
L	150 rpm	Normal steel : dia. 30 / Stainless steel: dia. 20	500 rpm	

\*Charging times are approximate and may be slightly longer depending on conditions.

#### EY75A4LS2G / EY75A4X

# 1/4" Hex Impact Driver



EY75A4X:
Battery pack and battery charger not included.

- High power: Impact Mode: 1,370 in. lbs. (114 ft. lbs.)
- Brushless motor and hybrid switch
- Electric brake

Tool Specs		
Max. Torque	1,370 in. lbs.*	
Speed at No Load 0 - 2,500 rpm		
Impact/min.	0 - 3,000 ipm	

\*M14 High tensile bolt tightening for 3 sec.

#### **Dual Voltage Technology**

- 1/4" hex quick connect collet
- Low battery indicator, belt hook and LED work light
- Compact size (L x H x W): 5-5/8" x 9-17/32" x 2-13/16"
- Light weight (incl. EY9L51B 4.2Ah battery): 3.53 lbs.

#### **EY75A7LS2G / EY75A7X**

# 1/4" Hex Impact Driver

Dual Voltage Technology



The Library D.

Battery pack and battery

charger not included.

- High power: Impact Mode: 1,416 in. lbs. (118 ft. lbs.)
- Brushless motor and hybrid switch
- Self-drilling Screw mode
- Electric brake

- 1/4" hex quick connect collet
- · Low battery indicator, belt hook and LED work light
- Compact size (L x H x W): 4-21/32" x 9-17/32" x 2-19/32"
- Light weight (incl. EYFB50B 5.0Ah Battery): 3.75 lbs
- Tool Specs High/Hard Mode Medium Mode Low/Soft Mode Self-drilling Screw Mode Max. Torque 1,416 in. lbs.\*\* 1,150 in. lbs.\*\* 230 in. lbs.\*\*\* 1.150 in. lbs.\*\* 0 - 2,500 rpm 0 - 1,450 rpm 0 - 950 rpm 0 - 2,500 rpm Speed at no load 0 - 3,100 ipm 0 - 2,900 ipm 0 - 1,900 ipm 0 - 1,200 ipm Impact/min.
- \*\*M14 High tensile bolt tightening for 3 sec.
- \*\*\*M10 High tensile bolt tightening for 3 sec.

# **Impact Wrenches**

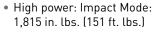


**Dual Voltage Technology** 

#### **EY75A5LS2G / EY75A5X**

#### 1/2" Impact Wrench

BRUSHLESS MOTOR



- Brushless motor and hybrid switch
- Variable speed trigger/reversible
- 1/2" square drive with 1/4" quick change adapter (EY9HX111E)



• Electric brake

- Eteeti ie brake
- Low battery indicator, belt hook and LED work light
- Compact size (L x H x W):
   6-1/8" x 9-17/32" x 2-13/32"
- Light weight (incl. battery): 3.75 lbs.

Tool Specs	
Max. Torque	1,815 in. lbs.*
Speed at No Load	0 - 2,300 rpm
Impact/min.	0 - 3,500 ipm

<sup>\*</sup>M16 high tensile bolt tightening for 3 seconds

#### **EY75A8LS2G / EY75A8X**

#### 1/2" Impact Wrench



Battery pack and battery

charger not included.

EY75A8X:

Battery pack and battery charger not included.

Battery pack and battery

- Newly designed hammer mechanism for high power & durability in a compact form
- High power max torque: 280Nm/206 ft. lbs (18V)
- Brushless motor and hybrid switch
- Variable speed trigger/reversible
- Electric brake

		HIGH	MEDIUM	LOW
RPM	14.4V	0 - 2,300	0 – 1,500	0 – 1,000
KPM	18V	0 - 2,500	0 – 1,500	0 – 1,000

• 1/2" square drive with ball detent

**Dual Voltage Technology** 

- Low battery indicator, belt hook and LED work light
- Ultra compact size (L x H x W): 5-5/8" x 9-13/16" x 2-7/8"
- Light weight (incl. EY9L51B 4.2Ah battery): 3.96 lbs

		HIGH (M20)	MEDIUM (M16)	LOW (M12)	
17.77	Nm	260	140	120	
TODOLLE	14.4V 18V	Ft lbs.	192	103	88
IUKUUE		Nm	280	140	120
		Ft lbs.	206	103	88

<sup>\*</sup>Charging times are approximate and may be slightly longer depending on conditions.

# EY7552LS2G / EY7552X

# **High Torque Impact Wrench**

High torque output 470Nm (346 ft. lbs.)
Twin hammer design for durability, speed & size
1/2" square drive with friction ring and through hole design

• Low vibration and noise level

Tool Specs		
Max. Torque	470Nm (346 ft. lbs.)	
Speed at no load	0 - 1,550 rpm	
Impact/min.	0 - 2,400 ipm	

- Electric brake
- Battery level indicator
- Compact size (L x H x W): 8-7/16" x 9-15/16" x 3-1/16"
- Light weight (incl. battery): 5.7 lbs.

	charger not included.
*Charging times are approximate and may be slightly longer depending on conditions.	

\*Charging times are approximate and may be slightly longer depending on conditions.

**18V** 

<sup>\*</sup>Charging times are approximate and may be slightly longer depending on conditions.

 $<sup>\</sup>hbox{$^*$Charging times are approximate and may be slightly longer depending on conditions.}$ 

# **Screwdrivers**

#### EY6220NQ / EY6220N

# Cordless Drill & Driver Kit

**2.4V** 



1 battery pack included. Charger not included.

- Max. Torque: Low: 26 in. lbs. High: 13 in. lbs.
- Speed at no load: Low: 200 rpm High: 400 rpm
- Clutch Torque (approx.): 3.5, 6.3, 9.1, 11.9, 14.7, 17.5 in. lbs. (multi-stage) (Max. Torque at 6 position)
- Easily converts from straight to pistol form
- 2-speed gear box
- Multi-stage clutch plus drill, 1/4" hex drive
- Gear lock mechanism for manual tightening
- EY6220NQ Kit includes 1 EY6220, 1 (EY9221B) 2.8Ah 2.4V Ni-MH battery, and 1 - (EY0L11B) charger.



# **EY7410LA2S / EY7410LA1C**

# **Cordless Screwdriver Kit**

3.6V



**EY7410LA1C:**1 battery pack included.
Charger not included.

- Compact size (L x H x W): 10-7/8" x 5-9/32" x 1-13/16" in straight format
- Powerful: Low: 39.0 in. lbs. High: 13.3 in. lbs.
- 2-speed reversible: Low: 200 rpm High: 600 rpm
- Clutch torque (Approx.): 2.7-25.7 in. lbs. (0.9 in. lbs. per stage, total 21 stage)
- 21-stage clutch with auto shut off
- 1/4" hex quick change chuck
- LED work light, low battery indicator
- EY7410LA2S Kit includes 1 EY7410, 2 (EY9L10B) 1.5Ah 3.6V Li-ion batteries, 1 (EY0L11B) charger, and case.



\*Charging times are approximate and may be slightly longer depending on conditions.

#### **EY7411LA1S**

# **Cordless Screwdriver Kit with Batch Counting**

3.6V



**EY7411:**1 battery pack, clutch cover and charger included.

- Batch count function up to 99 fasteners
- 21-stage clutch with auto shut off (Approx.): 2.7-25.7 in. lbs.
- Rehit prevention function, 3 programmable tones for batch complete
- 2-speed/reversible: Low: 200 rpm High: 600 rpm
- LED work light, low battery indicator
- Long lasting 1.5Ah Li-ion battery
- 1/4" hex quick change chuck
- Powerful: Low: 39.0 in. lbs. High: 13.3 in. lbs.
- Compact size (L x H x W): 10-7/8" x 5-9/32" x 1-13/16" in straight format
- Kit includes 1 EY7411LA1S, 1 (EY9L10B) 1.5Ah 3.6V Li-ion battery, 1 (EY0L11B) charger, 1 (EY9X007E) clutch cover





#### EY7420LA2J

#### **Screwdriver Kit**

**7.2**V

49



- 21-stage clutch with auto shut off (Approx.): Low: 2.7-35.4 in. lbs. High: 2.7-17.7 in. lbs.
- 2-speed/reversible: Low: 300 rpm High: 900 rpm
- No low battery disable\*
- 1/4" hex quick change chuck
- Powerful: High: 17.7 in. lbs. Low: 53.1 in. lbs.
- Compact size (L x H x W): 5-3/4" x 7-7/8" x 1-5/8"
- Max. screw driving: High: M4 screw Low: M5 screw
- Kit includes 1 (EY7420) Tool, 2 (EY9L20B) 1.5Ah 7.2V Li-ion battery,
   1 (EY0L20B) charger, 1 (WEYFEA1N3137) clutch lock cover

#### Screwdriver Working Capacity\*

	MODEL	FASTENING	EYFEA1N
	Screws in sheet metal (M2.5 x 1/4")	High: 1900 pcs	
Application Capacity	EY9L20B 1.5Ah battery	Screws in sheet metal (M4 x 3/8")	High: 1850 pcs
		Screws in sheet metal (M5 x 5/16")	Low: 1450 pcs

Note: \*Approximately

\*Tool will not maintain torque level at low battery condition.

# Sealing Guns & Angle Grinder



# **Battery Chargers**

#### EY3640LS1S

# 14.4V Cordless Sealing Gun - Cartridge Only

14.4V



- 5-stage electric speed control dial for adjusting pressure
- Fully automatic decompression
- Push Force 4,410N (450 kgf., 992 lbs.)
- 60 minute charge time
- Accepts 10.3 oz. cartridge
- Dimensions 16-11/16"×9-5/8"×5-1/2"
- Weight 6.06 lbs.

#### EY3641LS1S

#### 14.4V Cordless Sealing Gun - Cartridge & Sausage

14.4V



- 5-stage electric speed control dial for adjusting pressure
- Fully automatic decompression
- Push Force 4,410N (450 kgf., 992 lbs.)
- 60 minute charge time
- Accepts 10.3 oz. cartridge and 20 oz. sausage pack
- Dimensions 22-1/16"×9-5/8"×5-1/2"
- Weight 6.28 lbs.

#### EY46A2X

# **Cordless Angle Grinder**

Dual Voltage Technology



EY46A2X:

Battery pack and battery charger not included

- High capacity Li-ion battery (optional)
- Compact size (L x H x W): 13-9/16" x 4-1/8" x 5-9/16"
- Speed at no load: 10,000 rpm
- Wheel diameter: 5"
- Indicator lamp for on lock start prevention function
- Low battery indicator
- Spindle size: M14
- Accepts 7/8" arbor grinding wheel

#### \*Charging times are approximate and may be slightly longer depending on conditions.

#### EY0L10B

# Charger for Li-ion & Ni-CD Batteries

• Accepts Panasonic 2.4V-3.6V battery packs (see below for details)

	BATTERY TYPE			
	Li-ion Ni-Cd			
	LA TYPE	C TYPE	D TYPE	
3.6V	EY9L10B	EY9025B		
2.4V			EY9021B	
Charging time	15 min.* • 30 min.	15 min.	15 min.	



#### EY0L11B

# Charger for Li-ion & Ni-MH Batteries

• Accepts Panasonic 2.4V-3.6V battery packs (see below for details)

	BATTERY TYPE		
	Li-ion Ni-MH		
	LA TYPE	N TYPE	
3.6V	EY9L10B		
2.4V		EY9221B	
Charging time	15 min.* • 30 min.	45 min.	



#### EY0L20B / EY0L82B

# **Charger for Li-ion Batteries**

#### EY0L20B

• Accepts Panasonic 7.2V battery packs (see below for details)

	Li-ion
	LA TYPE
7.2V	EY9L20B
Charging time	60 min.* 35min.



- Accepts Panasonic 10.8V-28.8V battery packs (see below for details)
- Equipped with a lamp system that indicates the status of the 6 charging functions at a glance

	BATTERY TYPE			
	Li-ion			
	LS TYPE LR TYPE LZ TYPE			
28.8V			EY9L82B	
21.6V			EY9L62B	
18V	EY9L51B	EY9L50B		
14.4V	EY9L45B	EY9L44B		
Charging time	EY9L51B: 55 min.* 70 min EY9L45B: 55 min.* 70 min.	40 min.* 55 min.	EY9L82B: 60 min.* 80 min. EY9L62B: 60 min.* 85 min.	



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# Battery Pack / Battery Charger Compatibility Chart

▲ Usable Charge (80%) ■ Full Charge (100%)

■ Usable C	Charge (80%)	Full Char	ge (100%)													
Voltage		Model		Battery						rging T						Charger
					15	30	35	40	50	55	60	65	70	75	80	
28.8V		EY7880									•				•	
		Т	T	EY9L82B												
													•			
18V			EY7552	EY9L51B						_						
104		14.4V/18V	E17332	EY9L50B				•		•						
		EY45A1 EY46A2		2172003												EY0L82B
	EY37C1B	EY74A1 EY74A2 EY75A4 EY75A5	EY3640						•		•					
		EY75A7 EY75A8	EY3641 EY4542 EY4640	EY9L45B												
14.4V			EY7441 EY7549 EY7940													
			L17740													
				EY9L44B		•	•									
3.6V		EY7410 EY7411		100	•	•										EY0L11B
		L17411		EY9L10B												
7.2V		EY7420					•				•					EY0L20B
7.24		E17420		EY9L20B			_									ETULZUB
		EY6432						_								
15.6V		EY3530		EY9230B				•								
				2172000												EY0110B
12V		EY6409		EY9200B				•								
2.4V		EY6220		EY9221B				•								EY0L11B

# Li-ion Capacity Table

#### Impact Drivers

Voltage			18V	14.4V
Model No.			EY75A4	EY75A7
Battery Type			EY9L51B (LS)	EY9L45B (LS)
Fastening	Wood Screws in Yellow Pine	dia. 3/16" x 2-15/16"	610 pcs	490 pcs
rastening	Self-Drilling Screws in SPC	dia. 5/32" x 1/2" t=1/16"	990 pcs 750 pcs	750 pcs
	Standard Tensil Bolt	M16 x 1" t=3/8"	1,150 pcs	1,050 pcs
Bolting	Standard Tensil Bolt	M12 x 1" t=3/8"	2,700 pcs	2,300 pcs
	High Tensil Bolt	M12 x 1" t=3/8"	340 pcs	300 pcs

#### Impact Wrenches

Voltage			18	3V
Model No.			EY75A5	EY75A8
Battery Type			EY9L45B (LS)	EY9L51B (LS)
	Wood Screws in Yellow Pine	dia. 3/16" x 2-15/16"	550 pcs	
Battery Type Fastening	Wood Screws in Yellow Pine	dia. 3/16" x 4-3/4"	120 pcs	
	Self-Drilling Screws in SPC	dia. 5/32" x 1/2" t=1/16"	950 pcs	
	Standard Tensil Bolt	M16 x 1" t=3/8"	1,000 pcs	
Bolting	Standard Tensil Bolt	M14 x 1" t=3/8"	1,090 pcs	
	High Tensil Bolt	M12 x 1" t=3/8"	350 pcs	

# High Torque Impact Wrench

Voltage		18V				
Model No.	No. EY7552					
Battery Type			EY9L51B (LS)			
Fastening	SPAX screws in yellow pine	dia. 8mm x 80mm	210 pcs			
	Standard Tensil Bolt	M16 x 25mm, t=10mm 2 sec.	300 pcs			
	Standard Tensil Bolt	M16 x 25mm, t=10mm 2 sec. *with extension	180 pcs			
Bolting	Standard Tensil Bolt	M12 x 25mm, t=10mm 1 sec.	640 pcs			
Бошінд	High Tensil Bolt	M24 x 25mm, t=10mm 3 sec.	220 pcs			
	Standard Tensil Bolt	M20 x 25mm, t=10mm 2.5 sec.	250 pcs			
	Standard Tensil Bolt	300 pcs				

#### **Drill & Driver**

Voltage			18V / 14.4V
Model No.			EY74A2
Battery Type			EY9L51B (LS) / EY9L45B (LJ)
	Wood Screws in Yellow Pine [High Mode]	dia. 5/32" x 1"	1,300 pcs
Fastening	Wood Screws in Yellow Pine [Low Mode]	dia. 5/16" x 3-5/32"	340 pcs
	Self-drilling Screws in SPC [High Mode]	dia. 5/32" x 1/2" t=1/16"	1,050 pcs
	Holes in Plasterboard + Plywood (Wooding Core) [High Mode]	Plasterboard 1/2" + Plywood 15/32" dia. 2-11/16" t=15/16"	80 pcs
	Holes in SPC [High Mode]	dia. 1/2" t=1/16"	-
Drilling	Holes in SPC (Hole saw) [High Mode]	dia. 13/16" x t=1/16"	40 pcs
	Holes in SPC (Hole saw) [Low Mode]	dia. 1-5/16" t=1/16"	60 pcs
	Holes in Yellow Pine [High Mode]	dia. 11/16" x t=4-3/4"	120 pcs
	Holes in Yellow Pine [Low Mode]	dia. 1-3/16" t=1-9/16"	220 pcs

#### **Sealing Guns**

Voltage	14.	.4V
Model No.	EY3640	EY3641
Battery Type	EY9L45B (LS)	EY9L45B (LS)
Silicon	380 pcs	380 pcs
Acrylic	410 pcs	410 pcs
Polyurethane	190 pcs	190 pcs

# Angle Grinders

Voltage		18V
Model No.		EY46A2X
Battery Type		EY9L51B (LS)
Reinforcing Bar	dia. 3/8"	85 pcs/charge

#### Screwdrivers

Voltage		2.4V	3.6V	3.6V
Model No.		EY6220NQ	EY7410LA2S	EY7411LA1S
Battery Type		EY9L10B (LA)	EY9L10B (LA)	EY9L10B (LA)
Wood Screws	dia. 1/8" x 1/2"	280 pcs	600 pcs	600 pcs
Screws in	M5 x 5/16"		1,000 pcs	1,000 pcs
Holes in SPC	dia. 1/16", *t=1/16"		85 pcs	85 pcs

# Standard / Optional Accessory Chart

#### STANDARD

Voltage				14.4	V/18V		
Model No.		EY74A2X	EY74A2LS2G	EY75A4LS2G	EY75A4X	EY75A5X	EY75A5LS2G
18V Battery Pack (4.2Ah Li-ion Battery Type S)	EY9L51B	0	•	•	0	0	•
14.4V Battery Pack (4.2Ah Li-ion Battery Type S)	EY9L45B	0	0	0	0	0	0
7.2V Battery Pack (1.5Ah Li-ion Battery Type LA)	EY9L20B						
3.6V Battery Pack (1.2Ah Li-ion Battery Type L)	EY9L10B						
2.4V Battery Pack (2.8Ah Ni-MH Battery Type N)	EY9221B						
Power Supply Kit	EYC941B	0		0	0	0	0
Power Supply Kit	EYC950B	0		0	0	0	0
Charger for Li-ion	EY0L82B	0		•	0	0	•
Charger for Li-ion, Ni-MH battery	EY0L11B						
Attachable 1/2" to 1/4" Quick Change Adapter	EY9HX111E					•	
Attachable 1/2" Keyless Drill Chuck for EY7549	EY9X003E						•
1/2" Keyless Chuck for 18V and 21.6V Drills	EY9HX410E						
1/2" Keyless Chuck for EY74A2	EY9HX413E	•					
Carbide-Tipped Blade for Metal	EY9PM13E						
Carbide-Tipped Blade for Wood	EY9PW13C						
Clutch Lock Cover	EY9X007E						

		14.4V/18V			18	BV	14	.4V		3.6V		7.2V	2.	4V
EY75A7LS2G	EY75A7X	EY75A8LS2G	EY75A8X	EY46A2X	EY7552LS2G	EY7552X	EY3640LS1S	EY3641LS1S	EY7411LA1S	EY7410LA2S	EY7410LA1C	EY7420LA2J	EY6220NQ	EY6220N
•	0	•	0	0		0	•	•						
0	0	0	0	0										
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Panasonic Eco Solutions North America Assembly Tools Division 2 Riverfront Plaza, 5th Floor Newark, NJ 07102

For more information, visit our website at na.panasonic.com/us/assemblytools or call 1-800-338-0552

Design and specifications subject to change without notice.