



**HIOS®**

Electric Screwdriver  
General Catalog **14A**

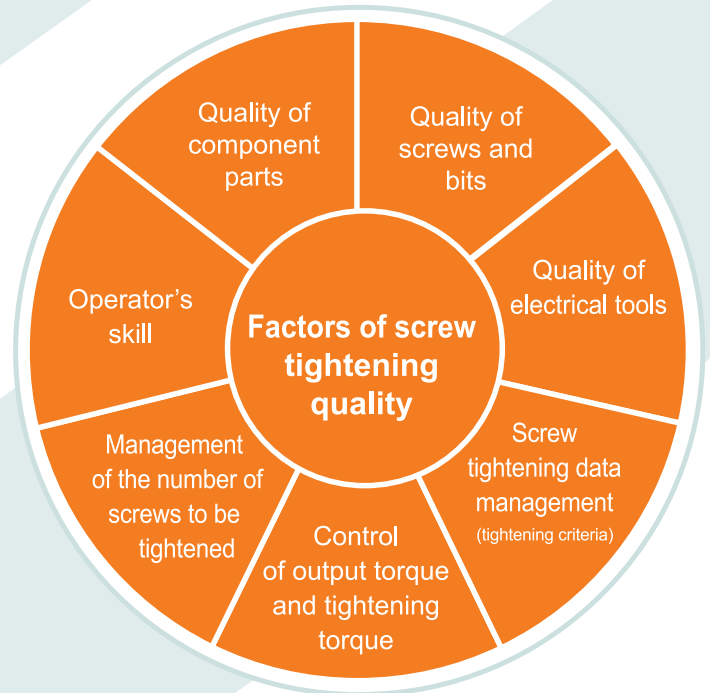
**The HIOS brand supports assembly lines throughout the world.**



## **There are many factors that affect the overall quality of screw tightening.**

HIOS aims to provide the highest quality and to create a comfortable working environment from the viewpoint of customers. We review the environment surrounding tightening operations from various aspects and try to improve it every day.

The HIOS New Fastening System is a comprehensive system that achieves highly reliable screw tightening and high quality control.





## Problems with conventional tools

### Cross recess



### Damaged recess



### Brushed screwdrivers



### Regular maintenance



### Torque control

3N·m



### Insufficient torque

1N·m



Difficult to visually identify



### Management of the number of screws to be tightened



### Skipping screw tightening



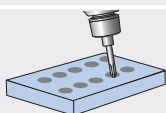
### Screw tightening data management (tightening criteria)



### Operator's judgment



### Manual tools



### Operator's skill



## Improvements introduced with the New Fastening System

### TOTSUPURA Screws (HIOS Pat. Screws)

prevents "Cam out" phenomenon and achieves highly reliable screw tightening and highly quality control.



### Brushless® screwdrivers

Consumables are no longer required, providing outstanding durability and stability. We recommend more use of brushless screwdrivers because they are environmentally friendly.



### Torque Meters

help to sustain screw tightening quality by checking torque of screwdrivers and already tightened screws.



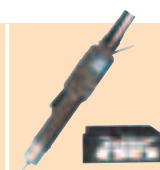
### Screw Counters

count the number of screws to be tightened, so operators do not have to worry about forgetting to tighten screws or insufficient tightening.



### PG Brushless® Screwdrivers with built-in counter

Pass/Fail judgment based on preset acceptance criteria is available for every screw tightening. All the work data can be stored in a PC.



For automatic and labor-saving equipment

**Auto-Screwdriver s/ Reciprocating Screwdrivers** improve productivity to reduce work hours and costs.

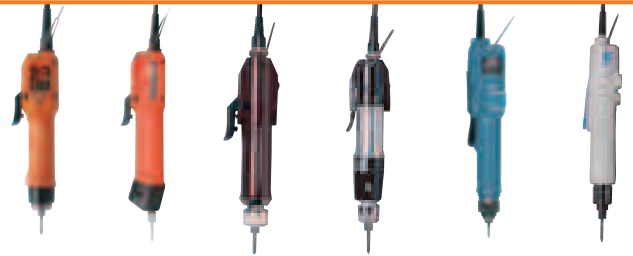


# HIOS Products

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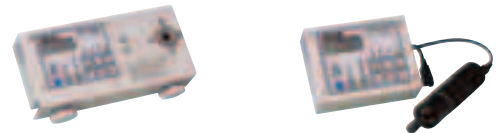
## Electric Screwdrivers



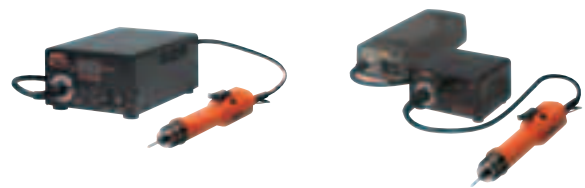
## Screwdrivers and Reciprocating Screwdrivers for Automated Machines



## Torque Meters



## Screw Counters



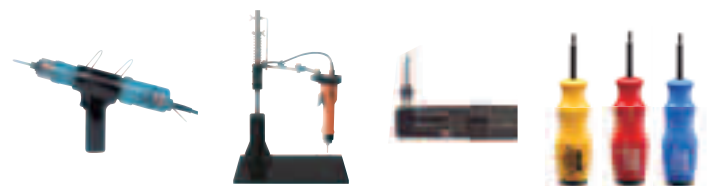
## Automatic Screw Feeders



## Electric Tappers



## Accessories



## Bits/ Suction Attachments (Vacuum Attachments)





# Features of Electric Screwdrivers

## Brushless Screwdrivers

DC  
type

Low voltage direct  
current system

With low voltage direct current power, it can be used with approx. 30V (HI) and approx. 20V (LOW).



AC  
type

Transformerless  
system

It can be used by connecting directly to the AC outlet.



DC type

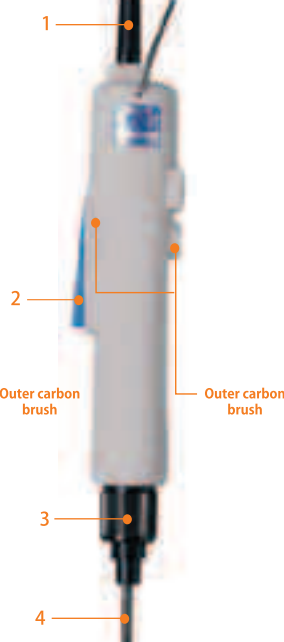
AC type



## Brushed Screwdrivers

DC type

AC type



### 1. Quick-release cord type (DC type)

The screwdriver cord features a quick release allowing easy maintenance. (The cord for the AC type cannot be detached.)



5P (pin)  
Standard screwdriver



6P (pin)  
Screwdriver compatible  
with the Screw Counter  
(BLG-BC1/OPC Type)

### 2. Start Type

- **Lever start:** trigger the lever gently to start.
- **Push-to-start:** push the screwdriver gently to start.
- **Push and Lever:** Switchable

### 3. Torque Adjustment Nut for fine tuning

The tightening torque can be steplessly adjusted across a wide range. Repeatable high precision provides reliable screw tightening.

### 4. Bits

The types of bits that can be connected to the screwdriver include the HIOS bit and hexagonal bit. Refer to the specification chart of each screwdriver for bit shape.

HIOS shank shape (bit socket) * Please purchase genuine HIOS bits.	H4(Φ 4)	
	H5(Φ 5)	
HEX shank shape (bit socket) * Please purchase standard sized HEX bits from commercial stores.	Width across flats: 6.35mm (1/4 HEX)	
	Width across flats: 5mm (5 HEX)	

### External carbon brush (Brushed Screwdriver)

The design for an external carbon brush makes your brush replacement easier. A carbon brush usually lasts for approximately one million tightening actions (depending on operational conditions).

## Icon guide

### 《Brushless Screwdrivers》



**Environmentally friendly brushless motor**  
Without emission of carbon powder, providing a clean environment for electronic parts as well as the workplace. There is also no risk of ground fault.



**Safe and risk-free low voltage DC30V**  
The low voltage design enables anyone to use it risk-free with easy maintenance.



**Lever and push start type (two-way)**  
The starting procedure is simple and can be switched from the lever type to push-to-start type.  
\* Depends on the model.



**Anti-electrostatic body case**  
(Surface resistance is less than  $3 \times 10^{12} \Omega$ )  
Anti-electrostatic resin is employed for the body case of the screwdriver to prevent the generation of static electricity. This makes the screwdriver suitable for assembly of precision equipment and electronic parts.



**Remarkable reduction in heat generation of the screwdriver**  
Because a brushless motor is employed, the heat generation of the screwdriver can be reduced remarkably and doesn't compromise performance.



**Easy maintenance**  
By unitizing internal parts, only a screwdriver is required for maintenance.



**Stable screw tightening quality**  
High-precision torque can be maintained for a long time, providing reliable tightening quality.



**Outstanding durability**  
By eliminating malfunctions and failures due to wear of consumable parts, the screwdriver's durability has been remarkably improved.

### 《Brushless Screwdrivers / Brushed Screwdrivers》



**RoHS compliant**  
The screwdriver is RoHS compliant.



**Anti-electrostatic**  
Conductive resin is used throughout the body case, switch lever and screwdriver cord.

### 《International Standard Certifications》



UL and cUL approved



CE declared



CCC certified

# Selection Chart of Electric Screwdrivers

Please use this chart to select screwdrivers that suit your purpose.

You can select models most appropriate to your production method.

For precision assembly

DC Screwdrivers

Screwdriver Classification		Model name	Output Torque Range																														Unloaded Rotation Speed (r.p.m) (HI/LOW)	Screw Size (mm)		Applications
			(kgf·cm)																															Machine Screw	Tapping Screw	
			N·m																																	
			0	0.05	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2	3	4	5	8	9	10						
DC type/Brushless	PG Series	Standard	PG-3000	0.2-0.55																											980 / 680	1.7-2.3	2.0-2.3	Electrical components, automobile parts, pneumatic devices, etc.		
			PG-5000	0.4-1.2																											900 / 590	2.3-3.0	2.0-2.3			
			PG-7000	0.7-2.8																											960 / 630	2.6-5.0	2.6-4.0			
	BLG-BC1 Series	Standard	BLG-4000BC1	0.1-0.55																											1,000 / 690	1.4-2.6	1.4-2.3	Cell phones, watches, cameras, TVs, glasses, optical pickups, PC, HDD, CD, car navigation systems, car audios, air conditioners, fan heaters, etc.		
			BLG-5000BC1	0.2-1.2																											1,000 / 690	2.0-3.0	2.0-3.0			
		Hi-speed rotation	BLG-5000BC1-15	0.3-1																											1,500 / 940	2.0-3.0	2.0-2.6			
		torque	BLG-5000BC1-20	0.3-0.8																											2,200 / 1,400	2.0-3.0	2.0-2.6			
		Hi-torque	BLG-5000BC1-HT	0.5-2																											730 / 490	2.0-4.0	2.0-3.0			
	BLG Series	Standard	BLG-4000	0.1-0.55																											1,000 / 690	1.4-2.6	1.4-2.3	Cell phones, watches, cameras, glasses, hard discs, CD players, optical pickups, car navigation systems, car audios, VCRs, small calculators, etc.		
			BLG-5000	0.2-1.2																											1,000 / 690	2.0-3.0	2.0-3.0			
		Hi-speed rotation	BLG-5000-15	0.3-1																											1,500 / 940	2.0-3.0	2.0-2.6			
			BLG-5000-20	0.3-0.8																											2,200 / 1,400	2.0-3.0	2.0-2.6			
		Hi-torque	BLG-5000-HT	0.5-2																											730 / 490	2.0-4.0	2.0-3.0			
	BL Series	Standard	BL-2000 BL-2000SS*	0.02-0.2																											990 / 650	1.0-2.3	1.0-2.0	Cell phones, watches, cameras, glasses, hard discs, CD players, optical pickups, car navigation systems, car audios, VCRs, small calculators, etc.		
			BL-3000 BL-3000SS*	0.2-0.55 0.2-0.35 (BL-3000SS)																											980 / 680	1.7-2.3	2.0-2.3			
			BL-5000 BL-5000SS*	0.2-1.2																											900 / 590	2.0-3.0	2.0-3.0			
		Hi-speed rotation	BL-5000-15	0.2-1.2																											1,500 / 1,000	2.0-3.0	2.0-2.6			
		torque	BL-5000-20	0.2-1																											2,200 / 1,500	2.0-3.0	2.0-2.6			
		Hi-torque	BL-5020	0.5-2.0																											750 / 500	2.0-4.0	2.0-3.0			
		Standard	BL-7000	0.7-2.8																											960 / 630	2.6-5.0	2.6-4.0			
		Hi-speed rotation	BL-7000-20	0.5-1.5																											2,200 / 1,500	2.6-4.0	2.6-4.0			
	DC type/Brushed	CL Series	Standard	CL-2000	0.02-0.2																											680/490	1.0-2.3	1.0-2.0	Automobile parts, PC, printers, TVs, air conditioners, fan heaters, video game players, fax machines, communication equipment, copy machines, scanners, satellite antennas, satellite vides, door mirrors, toys, electronic clinical thermometers	
				CL-3000	0.03-0.2																											1,000 / 670	1.0-2.0	1.0-1.7		
				CL-4000	0.1-0.55																											1,000 / 690	1.4-2.6	1.4-2.3		
				CL-6000	0.2-1																											800 / 500	2.0-3.0	2.0-2.6		
			CL-6500	0.3-1.6																											900 / 600	2.0-4.0	2.0-3.0			
			CL-7000	0.3-2.5																											750 / 500	2.0-5.0	2.0-4.0			
Hi-torque			CL-9000	1.2-5																											530	4.0-6.0	4.0-6.0			
SS Series		Impact absorbing	SS-2000	0.02-0.2																											680 / 490	1.0-2.3	1.0-2.0	Cameras, watches, glasses, cell phones, communication equipment, scanners, high-density printed circuit boards, hard discs, car navigation systems, CD, MD and DVD players		
			SS-3000	0.03-0.2																											1,000 / 670	1.0-2.0	1.0-1.7			
			SS-4000	0.1-0.45																											1,000 / 690	1.4-2.6	1.4-2.3			
			SS-6500	0.25-1.3																											900 / 600	2.0-3.0	2.0-3.0			
			SS-7000	0.3-2																											750 / 500	2.0-4.0	2.0-4.0			
α Series		Hi-speed rotation	α-4500	0.4-0.8																											1,700 / 1,200	2.0-3.0	2.0-2.6	TVs, communication equipment, copy machines, fax machines, PC, POS systems, automobile parts, car door mirrors, tail lamps, headlights, electric pianos, video game players, toys		
			α-5000	0.4-1.2																											1,000 / 700	2.0-3.0	2.0-3.0			
			α-6500	0.5-1.8																											1,700 / 1,200	3.0-4.0	2.6-3.0			
AC type/Brushless	VB Series	Standard	VB-1510 (100V or 120V or 220-240V)	0.25-1.5																											970	2.0-4.0	2.0-3.0	lighting equipment, washing machine, cleaner, gas equipment, microwave, door mirror, electric automotive component, rear lamp, headlight, video game players, copying machine,		
		Hi-speed rotation	VB-1510-18 (100V or 120V or 220-240V)	0.2-1																											1,800	2.0-4.0	2.0-3.0			
		Standard	VB-1820 (100V or 120V or 220-240V)	0.4-1.8																											2,000	2.6-4.0	2.6-3.0			
		Hi-torque	VB-2008 (100V)	0.4-2																											800	2.0-4.0	2.0-3.0			
		Standard	VB-3012 (100V or 120V or 220-240V)	0.5-3																											1,200	3.0-5.0	3.0-4.0			
		Hi-speed rotation	VB-3020 (100V)	1-3																											2,000	3.0-5.0	3.0-4.0			
		Standard	VB-4504 (100V or 120V or 220-240V)	1-4.5																											400	3.0-5.0	3.0-4.0			

\* BL-SS is an impact-absorbing model.

For tough duty work	For cell production	For automated assembly line	Screw shooting system
AC Screwdrivers	Portable Screwdrivers (battery powered)	Screwdrivers for automated machines	Reciprocating Screwdrivers

Screwdriver Classification		Model name	Output Torque Range																												Unloaded Rotation Speed (r.p.m) (HI/LOW)	Screw Size (mm)		Applications			
			(kgf•cm)																													Machine Screw	Tapping Screw				
			N•m	0	0.5	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	▶30	▶40	▶50	▶80	▶90					▶100		
			0	0.05	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2	▶3	▶4	▶5	▶8	▶9	▶10							
AC type/ Brushless	VBH Series	Super hi-torque	VBH-1820PS (100V or 120V or 220-240V)																									3-8			470	5.0-6.0	5.0-6.0	Automobile parts, car audios, LCD car navigation displays, air conditioners, home lighting equipment, car door mirrors, tail lamps, headlights, gas appliances, vacuum cleaners, washing machines, video game players, VTR, communication equipment, copy machines, laser beam printers, microwave ovens, TVs, power tools, etc.			
			VBH-3012PS (100V or 120V or 220-240V)																										4-10			270	5.0-6.0		5.0-6.0		
AC type/Brushed	VZ Series	Standard	VZ-1510 (100V)																												1,000	2.0-4.0	2.0-3.0				
			VZ-1820 (100V or 120V)																														2,000		2.6-4.0	2.6-3.0	
			VZ-3012 (100V or 120V)																														1,200		3.0-5.0	3.0-4.0	
			VZ-4506/4506PS (100V or 120V)/(100V)																														600		3.0-5.0	2.6-4.0	
			VZ-1812 (220V-240V)																														1,200		2.6-4.0	2.6-3.0	
			VZ-3007 (100V or 220V-240V)																														700		3.0-5.0	3.0-4.0	
	VZ-4504 (220V-240V)																													400	3.0-5.0	2.6-4.0					
	VZH Series	Super hi-torque	VZH-1820 (100V or 120V)																												470	5.0-6.0	5.0-6.0				
			VZH-3012 (100V or 120V)																													270	5.0-6.0	5.0-6.0			
DC type/Brushed		Portable	CD Series	CD-4000																												1,000	1.4-2.6	1.4-2.3	Copy machines, vending machines, large-size refrigerators, assembling of automobile interior parts, fax machines, fan heaters, TVs, air conditioners for industrial use, etc.		
				CD-5000																														1,000		2.0-3.0	2.0-3.0
				CD-6000																														1,300		2.6-4.0	2.6-4.0
				CD-7000																														900		2.6-4.0	2.6-4.0
DC type/Brushless		For automated machine	BLF Series	BLF-2000																												HI 690-975 LOW120-345	1.0-2.3	1.0-2.0	Automobile- and motorcycle-related components (car navigation systems, headlights, junction boxes, sensors, carburetor mounting, resin panel mounting)		
				BLF-5000																														HI 660-940 LOW110-320		2.0-3.0	2.0-3.0
				BLF-7000																														HI 510-740 LOW160-450		2.6-5.0	2.6-4.0
				BLF-7000X																														HI 510-740 LOW160-450		2.6-5.0	2.6-4.0
				BLF-7025X																														HI 600-400 LOW125-355		3.0-5.0	3.0-4.0
DC type/Brushed		For automated machine	CLF Series	CLF-3000																												1,000 / 560	1.0-2.0	1.0-1.7	Cameras, cell phones, copy machines, TVs, audio equipment, home lighting equipment, air conditioners, health-care devices, switches, pneumatic devices, power meters, etc.		
				CLF-4000																														1,000 / 560		1.4-2.6	1.4-2.3
				CLF-6000																														750 / 400		2.0-3.0	2.0-2.6
				CLF-6500																														850 / 440		2.0-3.0	2.0-3.0
				CLF-7000																														780 / 420		2.0-4.0	2.0-4.0
			αF Series	αF-4500																														1,700 / 940		2.0-3.0	2.0-2.6
				αF-5000																														1,100 / 600		2.0-3.0	2.0-3.0
				αF-6500																														1,700 / 950		3.0-4.0	2.6-3.0
			CL-A Series	CL-816A																														550 / 310		3.0-4.0	3.0-4.0
				CL-825A																														370 / 210		4.0-5.0	4.0-5.0
				CL-850A																														570 / 320	4.0-5.0	4.0-5.0	
																																				Automobile parts, window frame parts, gas meters, electro-magnetic valves, seat belts, etc.	
DC type/Brushed	AC type/Brushed	Reciprocating screwdriver	RD-4000																													1,000 / 690	1.4-2.6	1.4-2.3	Automobile parts, home lighting equipment, PC, video game players, TVs, power tools, wireless devices, gas equipment, VTR, medical devices, pneumatic devices, electronic parts, etc.		
			RD-4500																														1,700 / 1,200	2.0-3.0		2.0-2.6	
			RD-10																														1,500	2.0-4.0		2.0-3.0	
			RD-15																														1,000	2.0-4.0		2.0-3.0	
			RD-20																														1,600	3.0-5.0		3.0-4.0	
			RD-30																														1,000	3.0-5.0		3.0-4.0	

## Brushless® Screwdriver with built-in torque sensor

# PG

Pass-guard  
**PG Series**  
(DC type)



## Is that screw properly tightened? Pass Guard tightens, judges and records!

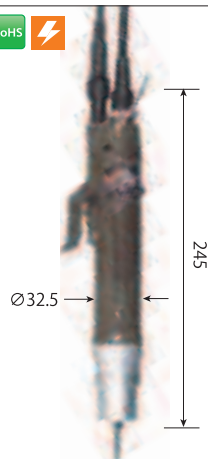
- The built-in torque sensor judges (OK/NG) for every screw tightening.
- The problems that are difficult to see such as insufficient torque, wrong thread joint and screws going askew are automatically detected.
- All the data are saved in an external device.

### Lever start type

### Lever start type

Unit : mm

#### PG-3000



Weight: 345g

#### PG-5000



Weight: 509g

#### PG-7000



Weight: 807g

#### Control Unit (optional)

##### Checker: PG-01

It reads the data from the torque sensor and judges OK/NG in real time.



### PG Series Specifications

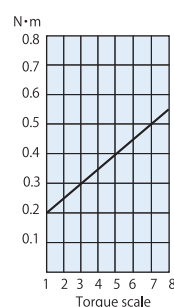
### Specifications

Model Name		PG-3000	PG-5000	PG-7000
Output Torque	N·m	0.2 - 0.55	0.4 - 1.2	0.7 - 2.8
	lbf·in	1.7 - 4.8	3.5 - 10	6.1 - 24
	(kgf·cm)	(2 - 5.5)	(4 - 12)	(7 - 28)
Torque Switching		Stepless adjustment	Stepless adjustment	Stepless adjustment
Unloaded Rotation	HI	980	900	960
	LOW	680	590	630
Screw Size	Machine Screw	1.7 - 2.3	2.3 - 3.0	2.6 - 5.0
	Tapping Screw	2.0 - 2.3	2.0 - 2.3	2.6 - 4.0
Bit	HIOS Shank	H4	H4	H5 and 5HEX
	HEX Shank	On request	On request	1/4HEX
Power Supply		T-70BL ○	○	○
Accessories	Bit (one each)	H4	+ #0(Ø2.5×40mm) + #1(Ø4.0×40mm) + #2(Ø4.0×40mm)	+ #0(Ø2.5×60mm) + #1(Ø5.0×60mm) + #2(Ø5.0×60mm)
		H5		
	Cord length(m)	2m(6P)	2m(6P)	2m(6P)
	Sensor cord(m)	1.7m(8P)	1.7m(8P)	1.7m(8P)
Accessories		Sampling software (Japanese version Windows XP Excel), RS232 cable 1 pc, USB cable 1 pc, AC adapter 1 pc (AC100V-240V compatible)		

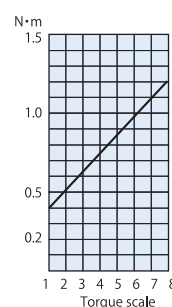
#### Output torque guide (HI input)

(Including PS type)

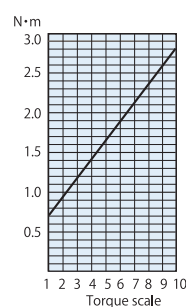
##### PG-3000



##### PG-5000

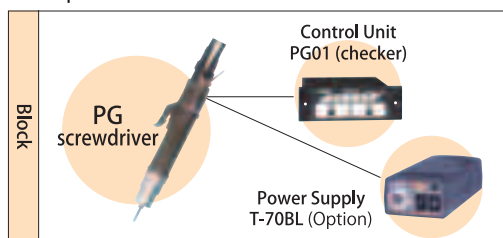


##### PG-7000

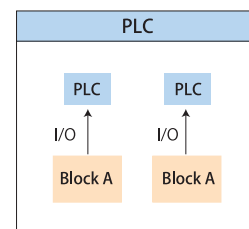
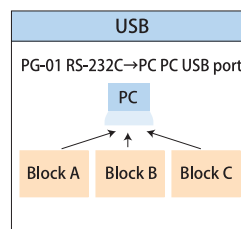
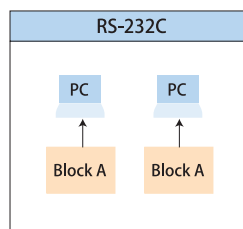


## 《Pass Guard System: Composition and Connection》

### ●Composition



Connection





## 《Workflow of Pass Guard System Use》

### 1 Setting the Pass/Fail values

#### ● Determine the acceptance criteria (Teaching)

The acceptance criteria are determined by conducting an actual tightening procedure. The torque value, minimum work time (Min), maximum work time (Max) are then saved.

#### ● Set the acceptable range (Percentage Setting)

The acceptance range for torque, minimum work time (Min) and maximum work time (Max) can be selected from 0, 2, 5, 10, 15, 20%.

### 2 Real operation

Every screw tightening can be judged on a real-time basis.

### 3 Judgment

OK/NG results are confirmed with the LED light and buzzer of PG-01.

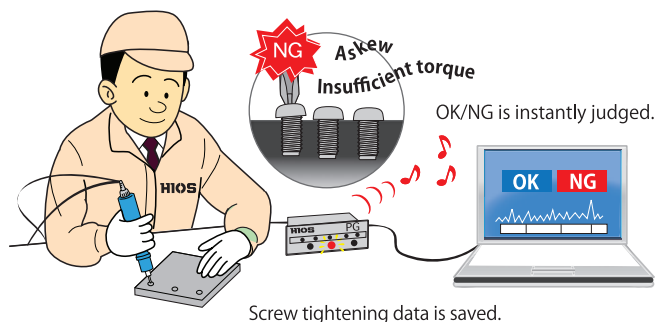
Pass range (OK) ..... buzzer sounds once (beep)

Fail range (NG) ..... buzzer sounds twice (beep, beep)

### 4 Record and save the data with a PC

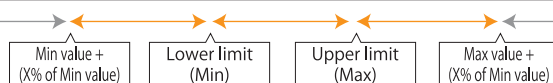
As a standard feature, the measured data can be displayed both numerically and in graphs with Excel. It is also possible to compose a customized program to meet customer's needs according to the current work environment.

Tighten while checking the tightening quality in real time.



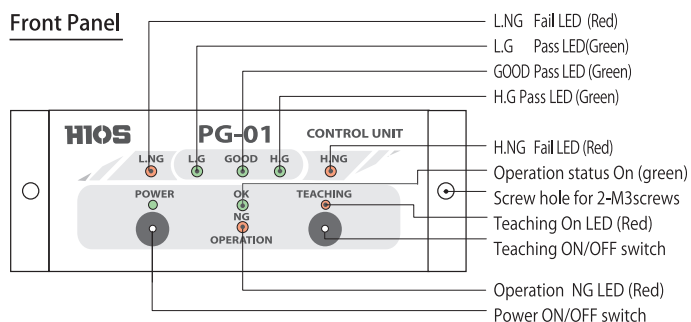
#### ● OK/NG Criteria

NG	OK			NG
	Pass tolerance range	Pass range	Pass tolerance range	
L.NG	L.G	GOOD	H.G	H.NG
Under the Low GOOD value	Within X% range of the Low Good value	Within the HI and GOOD values	Within X% range of the HI GOOD value	Over the HI GOOD value

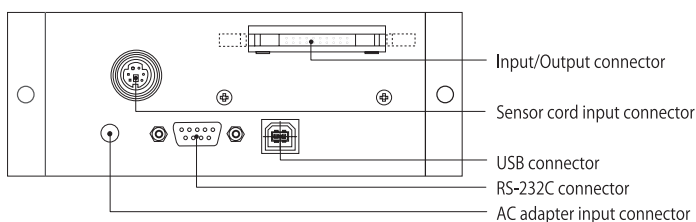


## 《PG-01 Components and Specifications》

### Front Panel



### Rear Pane



### ● Specifications

Model	PG-01						
RS-232C Communication	Communication speed	Start Bit	Stop Bit	Data	Data format	Parity	Standard
	4800BPS	1Bit	1Bit	8Bit	ASCII	None	RS-232C
External Dimensions (mm)	<p>* The above dimensions don't include protrusions.</p>						
Weight(g)	520g						
AC Adaptor	Input: AC100V-240V (50 / 60 Hz), Output: DC12V						

## 《External Connection Cables》

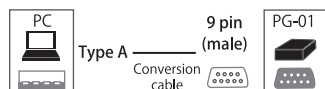
#### ● RS-232C cable (included)

Connector	D-SUB 9 pin
Cable	Straight cable (Cross cable: not supported)



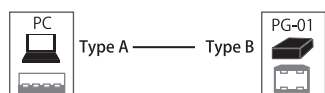
#### ● RS-232C conversion cable (included)

Connector	RS-232 side	9 pin (male)
	USB side	Type A



#### ● USB

Version	Support up to Version 2.0	
Connector	PG-01 side	Type B
	PC side	Type A
Cable	Straight	



## 《I/O Connector / Output: open connector》

I/O	Plus common/minus common shared, Output: sink type
Connector specifications	Male connector (P/N: Hirose HIF3BA-20PA-2.54DS) External connector (P/N: Hirose HIF3BA-20D-2.54R)
Type	Minus common (NPN supported)* Plus common PNP: not supported

\* An external connector is not included. Please purchase it at a commercial store.

Output	Pin No.	Output signal	Description
100mA max.	13	L.NG (Fail)	Torque is below the LOW GOOD value (L.G.)
	14	L.G (Pass)	Torque is within the allowed percentage range of the LOW GOOD value
	15	GOOD (Pass)	Within the HI and LOW values
	16	H.G (Pass)	Torque is within the allowed percentage range of the HI GOOD value
	17	H.NG (Fail)	Torque is above the HI GOOD value (H.G.)
DC0V	12	COM GND	—
Pins other than the above are not used.			—



## Brushless® Screwdriver with a Built-in Screw Counter

# BLG-BC1 Series (DC Type)



## No more overlooked tightening errors!

- It prevents human errors in operations! It supports accurate screw tightening and reduces the operator's fatigue.
- A conventional external screw counter is not required. This realizes low-cost introduction of new screwdrivers.
- The integration of the screwdriver and the counter is optimal for space-saving operations.

### Lever Start Type

### Lever Start Type

Unit : mm

#### BLG-4000BC1



Weight: 370g

### Two-way Start System

### Two-way Start System

Unit : mm

#### BLG-5000BC1



Weight: 425g

#### Hi-speed rotation

#### BLG-5000BC1-15



Weight: 425g

#### Hi-speed rotation

#### BLG-5000BC1-20



Weight: 425g

#### Hi-torque

#### BLG-5000 BC1-HT



Weight: 425g



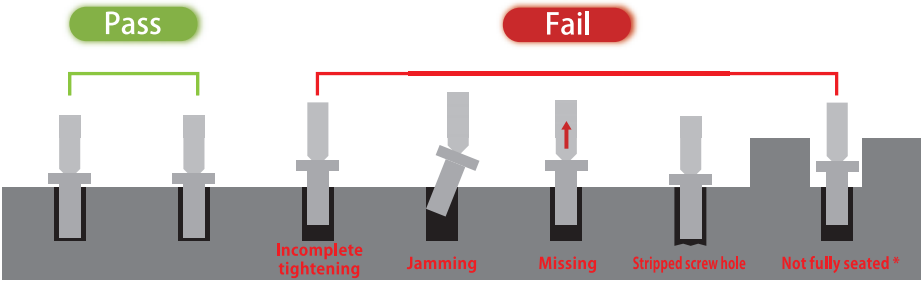
Note: CCC certified models have different specification and order codes from the standard models. Please contact HIOS distributors before ordering.

### BLG-BC1 Series Specifications

### Specifications

			BLG-4000BC1	BLG-5000BC1	BLG-5000BC1-15	BLG-5000BC1-20	BLG-5000BC1-HT	
Output torque range	N•m		0.1-0.55	0.2-1.2	0.3-1.0	0.3-0.8	0.5-2.0	
	lbf•in		0.9-4.8	1.7-10	2.6-10	2.6-7	4.3-17	
	(Kgf•cm)		(1-5.5)	(2-12)	(3-10)	(3-8)	(5-20)	
Torque switching			Stepless Adjustment	Stepless Adjustment	Stepless adjustment	Stepless Adjustment	Stepless Adjustment	
Unloaded Rotation		HI	1.000	1.000	1.500	2.000	730	
Speed (r.p.m) ±10%		LOW	690	690	940	1.400	490	
Screw Size (mm)	Machine Screw		1.4-2.6	2.0-3.0	2.3-3.0	2.3-3.0	2.0-4.0	
	Tapping Screw		1.4-2.3	2.0-3.0	2.0-2.6	2.0-2.6	2.0-3.0	
Bit Drive	HIOS Shank		H4	H4	H4	H4	H5 and 5HEX	
	HEX Shank		1/4HEX	H5 and 5HEX or 1/4HEX	H5 and 5HEX or 1/4HEX	H5 and 5HEX or 1/4HEX	1/4HEX	
Power Supply		T-30BL	○	—	—	—	—	
		T-70BL	○	○	○	○	○	
Accessories	Bit (one each)	H4	+ #0 (Φ2.5×40mm) + #1 (Φ4.0×40mm)	+ #1 (Φ4.0×40mm) + #2 (Φ4.0×40mm)	+ #1 (Φ4.0×40mm) + #2 (Φ4.0×40mm)	+ #1 (Φ4.0×40mm) + #2 (Φ4.0×40mm)	+ #1 (Φ5.0×60mm) + #2 (Φ5.0×60mm) + #1 (5.0×50mm) + #2 (5.0×50mm) — (5.0×50mm)	
		H5						
		1/4HEX	+ #1 (5.0×50mm) + #2 (5.0×50mm) — (5.0×50mm)	+ #1 (5.0×50mm) + #2 (5.0×50mm) — (5.0×50mm)	+ #1 (5.0×50mm) + #2 (5.0×50mm) — (5.0×50mm)	+ #1 (5.0×50mm) + #2 (5.0×50mm) — (5.0×50mm)		
	Spring							
	Cord length (m)		White 2m(6P)	2m(6P)	2m(6P)	2m(6P)	2m(6P)	
	L-shaped HEX wrench				Width across flats: 5mm , 1 pc	Width across flats: 5mm , 1 pc	Width across flats: 5mm , 1 pc	Width across flats: 5mm , 1 pc

From now on, the screwdriver itself detects and notifies you of screw tightening erros.



\*If a recess is deep, it is hard to visually notice a not fully seated screw from above.

Major features

- Counter ON/OFF** You can turn off the counter function and use the screwdriver as an ordinary one; then you can connect your own HIOS counter to it.
- Counter** You can set the number of screws for counting from 1 to 99. This way screw tightening skipping can be prevented.
- Buzzer and LED** The buzzer and LED notify you of a result of each screw tightening (Pass/fail).
- Prevention of miscount** It prevents miscount caused by a re-tightening or second tightening.
- Error detection** Screw tightening errors can be detected (e.g., incomplete tightening, jamming, cam-out, stripped screw hole, etc.).
- Accumulation counter** The total number of torque-up (completion of screw tightening) is counted.
- Count timer** The buzzer notifies you of completion of the work and then reset the number of screws shown on the display.

Accessories

BLG-BC1 Accessories

Accessories

Accessories

Suction(Vacuum) Attachment for BLG Series

By making use of negative pressure, the effort needed to pick up screws can be reduced. This suction device can even pick up non-ferrous screws such as stainless steel screws by vacuuming, and improve operation efficiency. It can also be used to remove powder dust generated from screw tightening.

Order guide

(A), (B) and (C) needed to be purchased separately if you would like to mount this suction device to your screwdriver.

\* There are several options of sizes of (A) and (B) depending on the screw size. For more information on the size, please refer to P. 58.

Model	(A) Mouthpiece model	(B) Bits total	(C) Suction attachment model
BLG-4000BC1	F3-Standard 18mm	H4 60mm	BLGQ4-SET
BLG-5000BC1		H4 40mm	BLQ5-SET/BLQ5-SET-ESD*
BLG-5000BC1-15		H4 60mm	BLQ5N-SET/BLQ5N-SET-ESD*
BLG-5000BC1-20		H4 60mm	BLQ5N-SET/BLQ5N-SET-ESD*

Note: The suction attachment cannot be used with 1/4HEX.

\* ESD is anti-electrostatic

Vertical Screwdriver Operating Stand

VMS-40/VMS-50

The stand keeps the screwdriver in a vertical position, allowing accurate screw tightening.



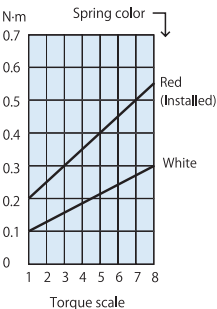
See P.40 for details.

Related Products

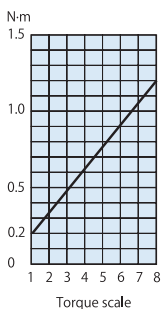
Related Products

Output torque guide (HI input)

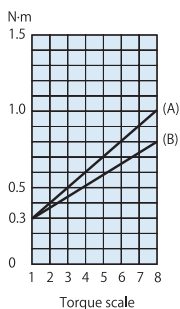
BLG-4000BC1



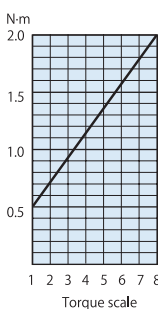
BLG-5000BC1



BLG-5000BC1-15(A)  
BLG-5000BC1-20(B)



BLG-5000BC1-HT

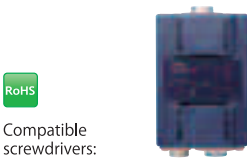


\*There are two types of spring for torque adjustment: for HI (originally fixed to the unit) and for Low (accessory). Use one of them depending on your operating conditions.

Complete Signal Relay Box

BLOP-AF

A complete signal from the screwdriver can be easily extracted and used by connecting this Relay box to an external device such as a PLC.



See P.26 for details.

## Brushless® Screwdriver

# BLG BLG Series (DC Type)



## The New Industry Benchmark in Electric Torque Drivers

- The BLG series has the performance, quality and durability equivalent to existing brushless screwdrivers (e.g., BL series), plus better maintenance efficiency.
- You can smoothly shift from a brushed screwdriver (e.g., CL and α series) to a brushless screwdriver (e.g., BLG series) without significant cost increase.

### Lever Start Type

### Lever Start Type

Unit : mm

#### BLG-4000



Weight: 370g



Note: CCC certified models have different specification and order codes from the standard models. Please contact HIOS distributors before ordering.

### Two-way (Push/Lever) Start Type

### Two-way Start System

Unit : mm

#### BLG-5000



Weight: 425g

#### Hi-speed rotation

#### BLG-5000-15



Weight: 425g

#### Hi-speed rotation

#### BLG-5000-20



Weight: 425g

#### Hi-torque

#### BLG-5000-HT



Weight: 425g

### BLG series Specifications

### Specifications

Model Name		BLG-4000	BLG-5000	BLG-5000-15	BLG-5000-20	BLG-5000-HT
Output Torque Range	N·m	0.1 - 0.55	0.2 - 1.2	0.3 - 1.0	0.3 - 0.8	0.5 - 2.0
	lbf·in	0.9 - 48	1.7 - 10	2.6 - 10	2.6 - 7	4.3 - 17
	(kgf·cm)	(1 - 5.5)	(2 - 12)	(3 - 10)	(3 - 8)	(5 - 20)
Torque Switching		Stepless Adjustment	Stepless Adjustment	Stepless Adjustment	Stepless Adjustment	Stepless Adjustment
Unloaded Rotation	HI	1,000	1,000	1,500	2,000	730
Speed (r.p.m.)	±10% LOW	690	690	940	1,400	490
Screw Size (mm)	Machine Screw	1.4 - 2.6	2.0 - 3.0	2.0 - 3.0	2.0 - 3.0	2.0 - 4.0
	Tapping Screw	1.4 - 2.3	2.0 - 3.0	2.0 - 2.6	2.0 - 2.6	2.0 - 3.0
Bit Drive	HIOS Shank	H4	H4	H4	H4	H5 & 5HEX
	HEX Shank	1/4HEX	H5 and 5HEX or 1/4HEX	H5 and 5HEX or 1/4HEX	H5 and 5HEX or 1/4HEX	1/4HEX
Power Supply	T-30BL	○	—	—	—	—
	T-70BL	○	○	○	○	○
Accessories	Bit (one each)	H4	+ #1 (Ø4.0×40mm) + #2 (Ø4.0×40mm)	+ #1 (Ø4.0×40mm) + #2 (Ø4.0×40mm)	+ #1 (Ø4.0×40mm) + #2 (Ø4.0×40mm)	
		H5	+ #1 (Ø5.0×60mm) + #2 (Ø5.0×60mm)	+ #1 (Ø5.0×60mm) + #2 (Ø5.0×60mm)	+ #1 (Ø5.0×60mm) + #2 (Ø5.0×60mm)	+ #1 (Ø5.0×60mm) + #2 (Ø5.0×60mm)
		1/4HEX	+ #1 (5.0×50mm) + #2 (5.0×50mm) — (5.0×50mm)	+ #1 (5.0×50mm) + #2 (5.0×50mm) — (5.0×50mm)	+ #1 (5.0×50mm) + #2 (5.0×50mm) — (5.0×50mm)	+ #1 (5.0×50mm) + #2 (5.0×50mm) — (5.0×50mm)
	Spring		White spring			
	Cord length (m)		1.5m(5P)	1.5m(5P)	1.5m(5P)	1.5m(5P)
	L-shaped HEX wrench			Width across flats: 5mm, 1pc	Width across flats: 5mm, 1pc	Width across flats: 5mm, 1pc

## Suction(vacuum) Attachments for BLG Series

By making use of negative pressure, the effort needed to pick up screws can be reduced. This suction attachment can even pick up non-ferrous screws such as stainless steel screws by vacuuming, and improve operation efficiency. It can also be used to remove powder dust generated from screw tightening.

### Order guide

(A), (B) and (C) needed to be purchased separately if you would like to mount this suction device to your BLG screwdriver.

\* There are several options of sizes of (A) and (B) depending on the screw size. For more information on the size, please refer to P. 58.

Model	(A) Mouthpiece model	(B) Bits total length	(C) Suction attachment model
BLG-4000	F3-Standard 18mm	H4 60mm	BLGQ4-SET
BLG-5000		H4 40mm	BLQ5-SET/BLQ5-SET-ESD*
BLG-5000-15 BLG-5000-20		H4 60mm	BLQ5N-SET/BLQ5N-SET-ESD*

Note: The suction attachment cannot be used with 1/4HEX.

\* ESD is anti-electrostatic

## Vertical Screwdriver Operating Stand

### VMS-40/VMS-50

The stand keeps the screwdriver in a vertical position, allowing accurate screw tightening.



RoHS

Compatible screwdrivers:

BLG-4000BC1  
BLG-5000 Series

▶ See P.40 for details.

## Related Products

## Related Products

## Variations

## BLG Applicable Drivers

## For use with HIOS screw counters

### BLG-OPC

Models:

BLG-4000-OPC      BLG-5000-OPC-20  
BLG-5000-OPC      BLG-5000-OPC-HT  
BLG-5000-OPC-15

These screwdrivers prevent you from skipping screw tightening in combination with the screw counter.

- They have a function to output positive rotation, reverse rotation and torque-up (tightening complete) signals.

### Compatible counters

Power supply with HIOS screw counter  
**BLOP-STC3**



Separate counter  
**BLOP-SC1**



Compact separate counter  
**BLOP-SC3**



▶ See P. 41-44 for details.

## Complete Signal Relay Box

### BLOP-AF

A complete signal from the screwdriver can be easily extracted and used by connecting this Relay box to an external device such as a PLC.



RoHS

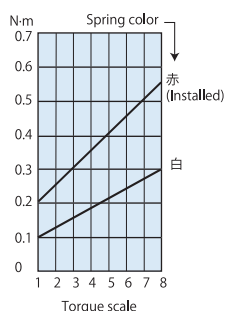
Compatible screwdrivers:

BLG-4000  
BLG-5000 Series

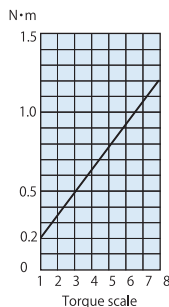
▶ See P.26 for details.

## Output torque guide (HI input)

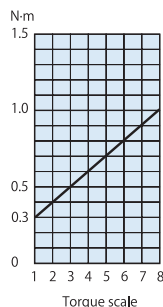
### BLG-4000



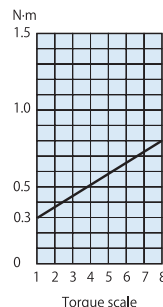
### BLG-5000



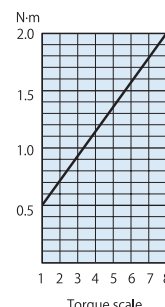
### Hi-speed rotation BLG-5000-15



### Hi-speed rotation BLG-5000-20



### Hi-torque BLG-5000-HT



\*There are two types of spring for torque adjustment: for HI (originally fixed to the unit) and for Low (accessory). Use one of them depending on your operation conditions.

## Brushless® Screwdriver

# BL Series

## (DC Type)



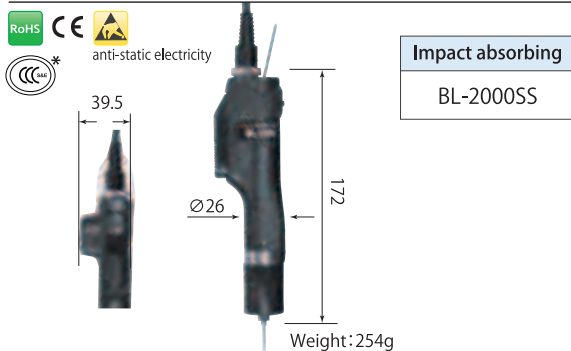
Thanks to ultra-powerful brushless motor, durability and stability have improved.

- There is no carbon powder emission and maintains a clean environment.
- Significant durability improvement considerably reduces maintenance cost.
- Reduces the temperature rise of the motor by about 30% and mitigates problems related to heating.
- Two types of start systems (push and lever) are available with one screwdriver (not applicable to BL-2000).
- High-speed rotation shortens the tightening time and improves work efficiency.

### Two-way Start System

### Two-way Start System

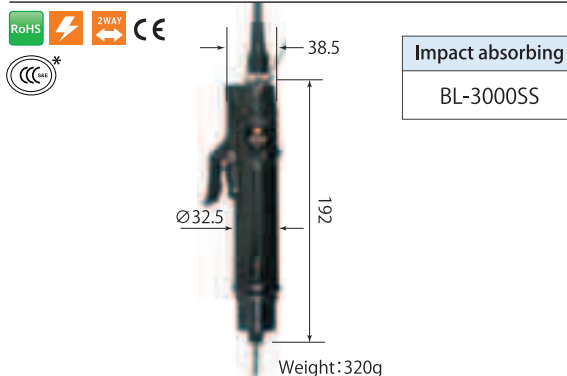
#### BL-2000 (Lever Start)



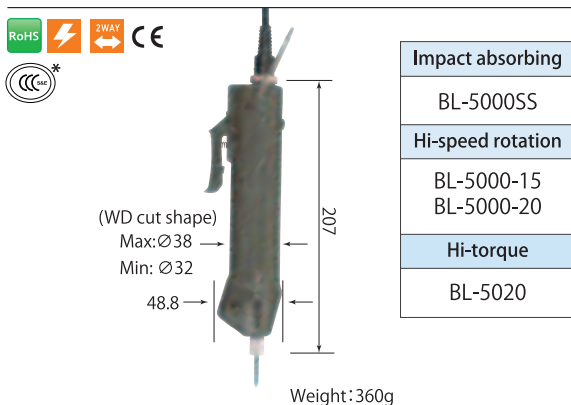
● Consumable parts are used for the switch.

#### BL-3000 Two-way(Push/Lever)

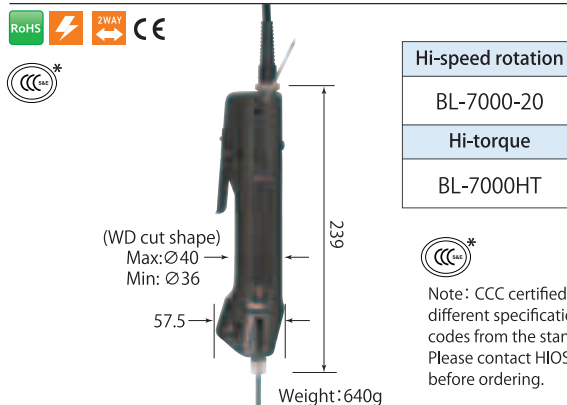
Unit : mm



#### BL-5000 Two-way(Push/Lever)



#### BL-7000 Two-way(Push/Lever)



Note: CCC certified models have different specification and order codes from the standard models. Please contact HIOS distributors before ordering.

### BL Series Specifications

### Specifications

Model Name		BL-2000 BL-2000SS	BL-3000 BL-3000SS *	BL-5000 BL-5000SS	BL-5000-15 BL-5000-20 ☆	BL-5020	BL-7000	BL-7000-20 BL-7000HT *
Output torque range	N·m	0.02 - 0.2	0.2 - 0.55   0.2-0.35*	0.2 - 1.2	0.2 - 1.2   0.2 - 1.0*	0.5 - 2.0	0.7 - 2.8	0.5 - 1.5   0.7 - 3.5 *
	lbf·in	0.17 - 1.7	1.7 - 4.8   1.7 - 4.8*	1.7 - 10	1.7 - 10   1.7 - 8.7*	4.3 - 17.4	6.1 - 24	4.3 - 13   6.1 - 30 *
	(kgf·cm)	(0.2 - 2)	(2 - 5.5)   (2-3.5)*	(2 - 12)	(2 - 12)   (2 - 10)*	(5 - 20)	(7 - 28)	(5 - 15)   (7 - 35) *
Torque switching		Stepless Adjustment	Stepless Adjustment	Stepless Adjustment	Stepless Adjustment	Stepless Adjustment	Stepless Adjustment	Stepless Adjustment
Unloaded Rotation	HI	990	980	900	1,500   2,200 *	750	960	2,200   700 *
	LOW	650	680	590	1,000   1,500 *	500	630	1,500   500 *
Screw Size (mm)	Machine Screw	1.0 - 2.3	1.7 - 2.3	2.0 - 3.0	2.0 - 3.0	2.0 - 4.0	2.6 - 5.0	2.6 - 4.0
	Tapping Screw	1.0 - 2.0	2.0 - 2.3	2.0 - 3.0	2.0 - 2.6	2.0 - 3.0	2.6 - 4.0	2.6 - 4.0
Bit Drive	HIOS Shank	H4	H4	H4		H5 and 5HEX		
	HEX Shank	—	1/4HEX	H5 and 5HEX or 1/4HEX		1/4HEX		
Power Supply	T-30BL	○	○	—	—	—	—	—
	T-70BL	○	○	○	○	○	○	○
Accessories	Bit (one each)	H4	+ #0 (Ø2.0×40mm) + #0 (Ø2.5×40mm)	+ #1 (Ø4.0×40mm) + #2 (Ø4.0×40mm)	+ #1 (Ø4.0×40mm) + #2 (Ø4.0×40mm)			
		H5		+ #1 (Ø5.0×60mm) + #2 (Ø5.0×60mm)	+ #1 (Ø5.0×60mm) + #2 (Ø5.0×60mm)			
		1/4 HEX		+ #1 (5.0×50mm) + #2 (5.0×50mm) — (5.0×50mm)	+ #1 (5.0×50mm) + #2 (5.0×50mm) — (5.0×50mm)	+ #1 (5.0×50mm) + #2 (5.0×50mm) — (5.0×50mm)	+ #1 (5.0×50mm) + #2 (5.0×50mm) — (5.0×50mm)	+ #1 (5.0×50mm) + #2 (5.0×50mm) — (5.0×50mm)
	Spring	Yellow spring						
	Cord length (m)	2m (5P) ESD design		1.5m (5P)		1.5m (5P)		2m (5P)
	L-shaped HEX wrench			Width across flats: 5mm, 1 pc		Width across flats: 5mm, 1 pc		Width across flats: 5mm, 1 pc

☆The output torque range and unloaded rotation speed of BL-5000-20 are different from those of BL-5000-15.



## Suction(Vacuum) Attachment for BL Series

By making use of negative pressure, the effort needed to pick up screws can be reduced. This suction device can even pick up non-ferrous screws such as stainless steel screws by vacuuming, and improve operation efficiency. It can also be used to remove powder dust generated from screw tightening.

### Order guide

(A), (B) and (C) needed to be purchased separately if you would like to mount this suction device to your screwdriver.

\* There are several options of sizes of (A) and (B) depending on the screw size. For more information on the size, please refer to P. 58.

Model	(A) Mouthpiece model	(B) Bits total length	(C) Suction attachment model
BL-2000	F3-Standard 18mm	H4 60mm	CLQ2-SET/CLQ2-SET-ESD*
BL-3000	F3-Standard 18mm	H4 60mm	BLQ3N-SET/BLQ3N-SET-ESD*
BL-5000	F3-Standard 18mm	H4 40mm	BLQ5-SET/BLQ5-SET-ESD*
		H4 60mm	BLQ5N-SET/BLQ5N-SET-ESD*
BL-7000	F6-Standard 31mm	H5 80mm	BLQ7-SET/BLQ7-SET-ESD*

Note: The suction attachment cannot be used with 1/4HEX.

\* ESD is anti-electrostatic

## Suction + Anti-electrostatic

### BLQ-ESD

Models:

BLQ-3000ESD  
BLQ-5000ESD  
BLQ-5000ESD-15

BLQ-5000ESD-20  
BLQ-7000ESD  
BLQ-7000ESD-20

## Clean Room

### BLQ-CR

Models:

BLQ-2000CR  
BLQ-3000CR  
BLQ-5000CR  
BLQ-5000CR-15

BLQ-5000CR-20  
BLQ-7000CR  
BLQ-7000CR-20

## Anti-electrostatic

### BL-ESD

Models:

BL-3000ESD  
BL-5000ESD  
BL-5000ESD-15  
BL-5000ESD-20

BL-5020ESD

BL-7000ESD

BL-7000ESD-20

BL-7000HT

The screwdriver body uses an anti-electrostatic material to prevent the generation of static electricity, which is suitable for the assembly of precision equipment and electronic parts.

[Surface resistance: max.  $10^4\Omega$ ]

## Clean Room + Anti-electrostatic

### BLQ-CR-ESD

Models:

BLQ-2000CR  
BLQ-3000CR-ESD  
BLQ-5000CR-ESD  
BLQ-5000CR-ESD-15  
BLQ-5000CR-ESD-20  
BLQ-7000CR-ESD  
BLQ-7000CR-ESD-20

In addition to anti-electrostatic, two vacuum units are installed in the body and the suction attachment in order to suck up powder dust generated from screw tightening.

[Class 100 equivalent]

[Surface resistance: max.  $10^4\Omega$ ]

## For use with HIOS Screw Counter

### BL-OPC

Models:

BL-2000-OPC  
BL-3000-OPC  
BL-5000-OPC

BL-5020-OPC

BL-7000-OPC

BL-7000HT-OPC

These screwdrivers prevent you from skipping screw tightening in combination with the screw counter.

● They have a function to output positive rotation, reverse rotation and torque-up (tightening complete) signals.

### Compatible counters

Power supply with HIOS screw counter

**BLOP-STC3**

Separate counter

**BLOP-SC1**

Compact separate counter

**BLOP-SC3**

▶ See P. 41-44 for details.

## Accessories

## Accessories

## Pistol Attachment

### PAB-70

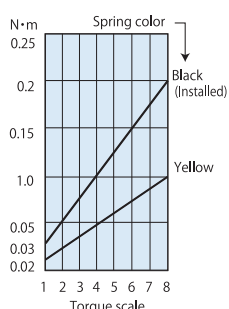
This attachment converts a standard screwdriver to a pistol-style screwdriver, most suitable for horizontal screw tightening.



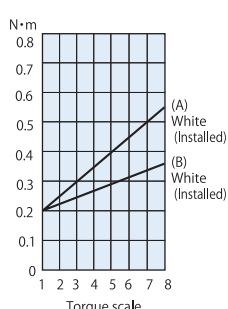
Compatible screwdrivers:  
BL-7000 Series

## Output torque guide (HI input)

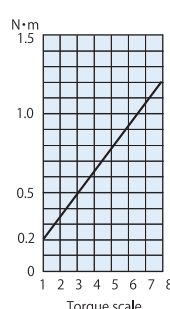
BL-2000  
BL-2000SS



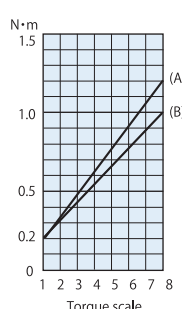
BL-3000 (A)  
BL-3000SS (B)



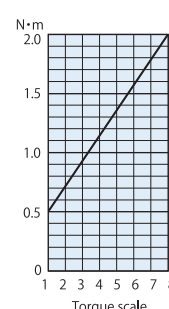
BL-5000  
BL-5000SS



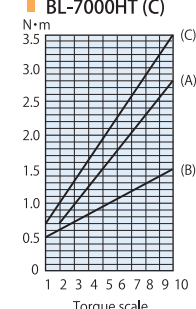
BL-5000-15 (A)  
BL-5000-20 (B)



BL-5020



BL-7000 (A) (Including PS type)  
BL-7000-20 (B)  
BL-7000HT (C)



\*There are two types of spring for torque adjustment: for HI (originally fixed to the unit) and for Low (accessory). Use one of them depending on your operating conditions.

## Brushed Screwdriver

**CL Series**  
(DC Type)

## Handle low-torque screw tightening with confidence!

- This screwdriver is especially designed to deliver low torque for accurate and stable tightening of screws in small sizes.
- Compact and light-weight design makes it easy for female operators to use.
- Model CL-2000 has a coreless motor with an especially long life.
- With safety design running on low voltage and direct current, these screwdrivers can be used safely.

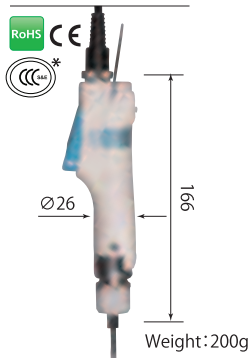
### Lever Start Type

### Lever Start Type

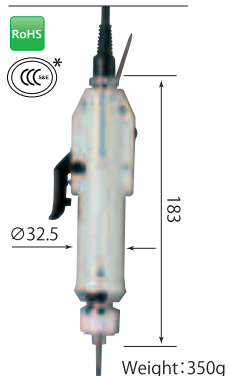
### Push-to-Start Type

### Push-to-Start Type

CL-2000



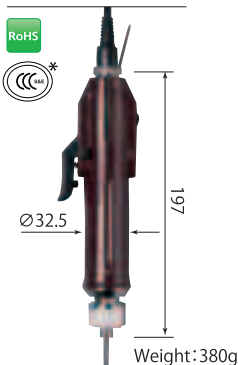
CL-3000



CL-4000PS



CL-4000



Note: CCC certified models have different specification and order codes from the standard models.  
Please contact HIOS distributors before ordering.

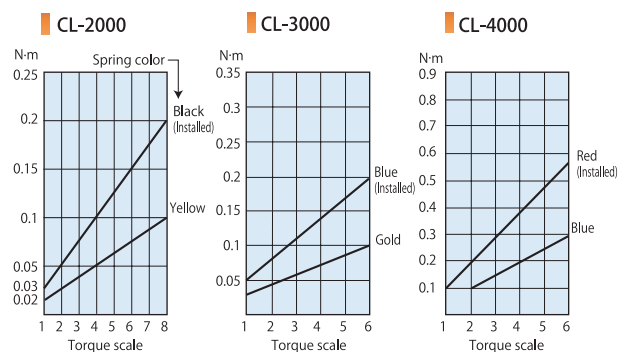
### CL Series Specifications

### Specifications

Lever Start-Type Model		CL-2000	CL-3000	CL-4000
Push-to-Start-Type Model				CL-4000PS
Output	N·m	0.02 - 0.2	0.03 - 0.2	0.1 - 0.55
	lbf·in	0.17 - 1.7	0.3 - 1.7	0.9 - 4.8
Torque Range		(0.2 - 2)	(0.3 - 2)	(1 - 5.5)
Torque Switching		Stepless adjustment	Stepless adjustment	Stepless adjustment
Speed (r.p.m) ±10%	HI	680	1,000	1,000
	LOW	490	670	690
Screw Size (mm)	Machine Screw	1.0 - 2.3	1.0 - 2.0	1.4 - 2.6
	Tapping Screw	1.0 - 2.0	1.0 - 1.7	1.4 - 2.3
Bit Drive	HIOS Shank	H4	H4	H4
	HEX Shank	—	—	1/4HEX or 5HEX
Power Supply	CLT-30	○	○	—
	CLT-60	○	○	○
	CLT-100	○	○	○
	MC-70L	○	○	○
Accessories	Bit (one each)	H4	+ #0 (Ø2.0×40 mm) + #0 (Ø2.5×40 mm)	+ #0 (Ø2.5×40 mm) + #1 (Ø4.0×40 mm)
		1/4HEX		+ #0 (5.0×50 mm) + #2 (5.0×50 mm) — (5.0×50 mm)
	Spring	Yellow	Gold	Blue
	Cord length (m)	1.5 m (5P)	1.5m (5P)	1.5m (5P)
Carbon brush (Order code)			1 pair (A45-0420)	1 pair (CL4-0420)

### Output torque guide (HI input)

(Including PS type)



#### Notes:

- The carbon brush for CL-2000 is an enclosed type and cannot be replaced by a user. Although the life of the carbon brush depends on use conditions, as a guide, if you tighten about 6,000 screws a day, you have to replace the carbon brush 3 to 4 years after you started using it. When a replacement is required, please contact HIOS distributors for the service.

## Brushed Screwdriver

**CL Series**  
(DC Type)

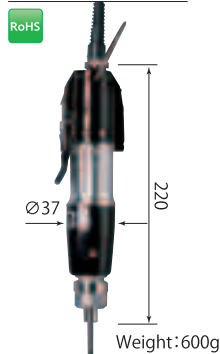
## Well suited for many kinds of operations requiring a wide range of torque values

- This screwdriver has been a long-selling product thanks to its operability, reliability and stability.
- With low DC voltage these screwdrivers can be used safely.
- The grip design helps operators to reduce fatigue caused by long hours operation.

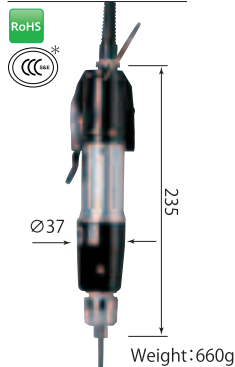
### Lever Start Type

### Lever Start Type

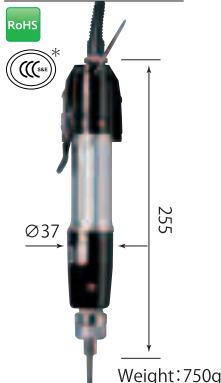
#### CL-6000



#### CL-6500



#### CL-7000

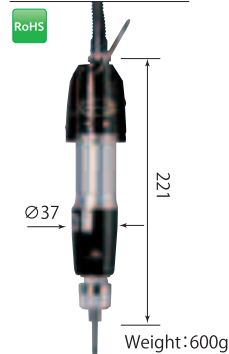


Unit : mm

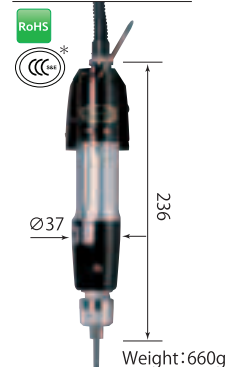
### Push-to-Start Type

### Push-to-Start Type

#### CL-6000PS

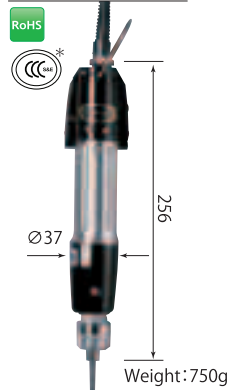


#### CL-6500PS



Unit : mm

#### CL-7000PS



Note: CCC certified models have different specification and order codes from the standard models.  
Please contact HIOS distributors before ordering.

Also, the body color of the CCC certified CL-6500/CL-6500PS/CL-7000/CL-7000PS is different from that of the standard models. The body color of the CCC certified models is available on the page "CCC certified models" on our website.

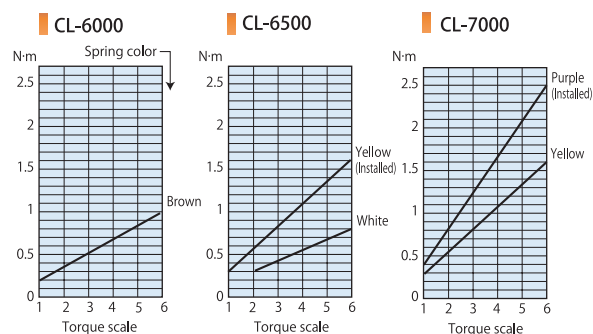
### CL Series Specifications

### Specifications

Lever Start-Type Model		CL-6000	CL-6500	CL-7000
Push-to-Start-Type Model		CL-6000PS	CL-6500PS	CL-7000PS
Output	N·m	0.2 - 1	0.3 - 1.6	0.3 - 2.5
	lbf·in	1.7 - 8.8	2.6 - 14	2.6 - 22
	(kgf·cm)	(2 - 10)	(3 - 16)	(3 - 25)
Torque Switching		Stepless adjustment	Stepless adjustment	Stepless adjustment
Unloaded Rotation		800	900	750
Speed (r.p.m.) ±10%		500	600	500
Screw Size	Machine Screw	2.0 - 3.0	2.0 - 4.0	2.0 - 5.0
	Tapping Screw	2.0 - 2.6	2.0 - 3.0	2.0 - 4.0
Bit	HIOS Shank	H5	H5	H5
	HEX Shank	1/4HEX or 5HEX	1/4HEX or 5HEX	1/4HEX or 5HEX
Power Supply	CLT-60	○	○	○
	CLT-100	○	○	—
	MC-70L	○	○	○
Accessories	Bit (one each)	H5	+ #1 (Ø5.0×60 mm) + #2 (Ø5.0×60 mm)	+ #1 (Ø5.0×60 mm) + #2 (Ø5.0×60 mm)
		1/4HEX	+ #1 (5.0×50 mm) + #2 (5.0×50 mm) — (5.0×50 mm)	+ #1 (5.0×50 mm) + #2 (5.0×50 mm) — (5.0×50 mm)
			White	Yellow
	Spring			
Cord length (m)		2 m (5P)	2 m (5P)	2 m (5P)
Carbon brush (Order code)		1 pair (CL65-0490)	1 pair (CL65-0490)	1 pair (CL65-0490)

### Output torque guide (HI input)

(Including PS type)



The unloaded rotation speed (r.p.m.) in the specifications is measured when the screwdriver is operated with the HIOS standard power supply. Therefore, if you use another power supply or when input voltage varies, the value displayed will also vary. Please refer to the value in the specifications only as a guide.

## High-torque Brushed Screwdriver

**CL Series**  
(DC Type)

## Powerful enough for high-torque screw tightening with 5N·m (50kgf·cm).

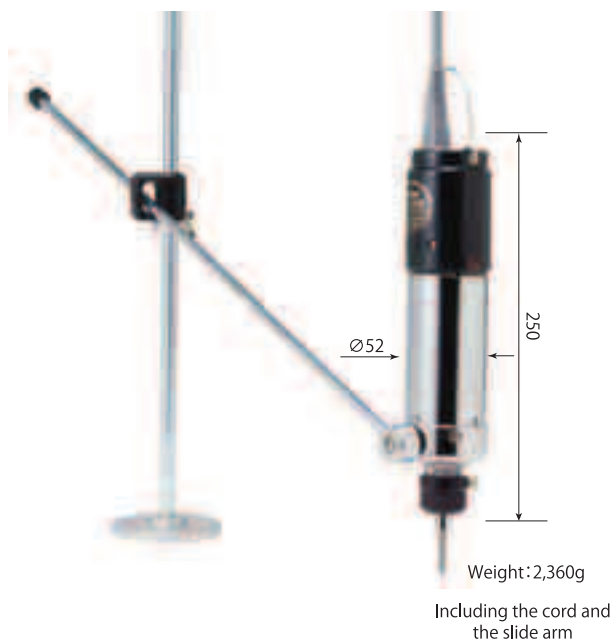
- These screwdrivers can handle high-torque screw tightening that used to be only done by pneumatic screwdrivers.
- can always tighten screws with stable torque.
- The shockless stand absorbs reaction force created by the clutch.

### Push-to-Start Type

### Push-to-Start Type

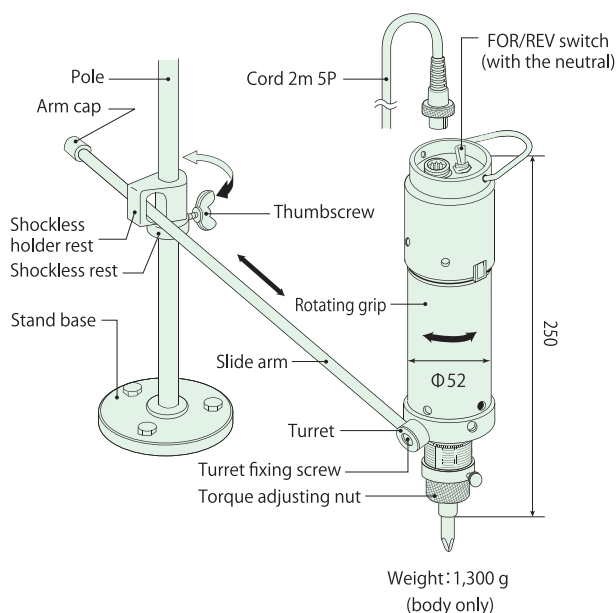
#### CL-9000 (with shockless stand)

Unit : mm



### Main Components of Shockless Stand

Unit : mm



### Specifications

Slide arm length	530
Effective sliding range	475
Support rod height	570
Height	8
Stand base	Diameter of fixing bolt hole
	Distance between fixing bolt holes
	(one side of the equilateral triangle)

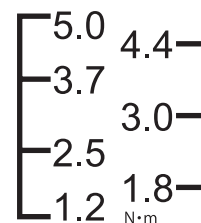
### CL Series Specifications

### Specifications

Push-to-Start Type Model		CL-9000
Controlled Torque Range	N·m	1.2 - 5
	lbf·in	10 - 43
	(kgf·cm)	(12 - 50)
Torque Switching		Stepless adjustment
Unloaded Rotation Speed (r.p.m) ± 5%		530
Screw Size (mm)		4.0 - 6.0
Bit Drive   HEX shank		1/4HEX
Power Supply		CLT-80
Accessories	HEX shank bit (width across flats: 6.35mm, one each)	+ #2 (7.0 × 100mm) + #3 (7.0 × 100mm)
	Stand ASSY	Pole, stand base, shockless rest, thumbscrew (1pc each)
	Arm ASSY	Shockless holder, slide arm with arm cap, turret, turret fixing screw (1pc each)
	Cord Length(m)	2m (5P)
	Carbon brush (Order code)	1 pair (CL9-0410)

### Scale of Output Torque

A seal that indicates output torque values is affixed to the body of CL-9000.



## Suction (Vacuum)

# CLQ

### Order guide

(A) and (B) needed to be purchased separately if you have a suction-type screwdriver.  
(A), (B) and (C) needed to be purchased separately if you want to convert your screwdriver to a suction type.

\* There are several options of sizes of (A) and (B) depending on the screw size. For more information on the size, please refer to P. 58.

Model	(A) Mouthpiece model	(B) Bit length	(C) Suction attachment model
CLQ-2000	F3-Standard 18mm	H4 60mm	CLQ2-SET/CLQ2-SET-ESD*
CLQ-3000	F3-Standard 18mm	H4 60mm	CLQ4-SET/CLQ4-SET-ESD*
CLQ-4000	F3-Standard 18mm	H4 60mm	CLQ4-SET/CLQ4-SET-ESD*
CLQ-6000	F6-Standard 31mm	H5 80mm	CLQ65-SET/CLQ65-SET-ESD*
CLQ-6500	F6-Standard 31mm	H5 80mm	CLQ65-SET/CLQ65-SET-ESD*
CLQ-7000	F6-Standard 31mm	H5 80mm	CLQ65-SET/CLQ65-SET-ESD*

(Including PS type)

\*ESD is anti-electrostatic

Note: The suction attachment cannot be used with 1/4HEX.



## Anti-electrostatic

# CL-ESD



The screwdriver body uses an anti-electrostatic material prevent the generation of static electricity, which is suitable for the assembly of precision equipment and electronic parts.

[Surface resistance: max.  $10^4 \Omega$ ]

Models:

CL-2000ESD CL-6000ESD  
CL-3000ESD CL-6500ESD  
CL-4000ESD CL-7000ESD

(Including PS Type)



## Clean Room + Anti-electrostatic

# CLQ-CR-ESD



In addition to anti-electrostatic measures, two vacuum units are installed in the body and the suction portion in order to suck up dust generated from screw tightening.

[Class 100 equivalent]

[Surface resistance: max.  $10^4 \Omega$ ]

Models:

CLQ-3000CR-ESD  
CLQ-4000CR-ESD  
CLQ-6000CR-ESD  
CLQ-6500CR-ESD  
CLQ-7000CR-ESD

(Including PS Type)

## Related Products

## Related Products

## Noiseless Screwdriver

# CL-NL



Electrical noise is more subdued than standard screwdrivers.

Models: CL-6000NL  
CL-3000NL CL-6500NL  
CL-4000NL CL-7000NL  
(Including PS Type)

## Power supply with HIOS screw counter

# CLT-70STC3

Power supply with HIOS screw counter helps to prevent skipping screw tightening.



Compatible screwdrivers:  
CL-2000 CL-3000 CL-4000 CL-6000  
CL-6500 CL-7000 (Including PS Type)

## Separate counter

# CLOP-SC1

External counter helps to prevent skipping screw tightening.



► See P. 41-43 for details.

## Accessories

## Accessories

## Pistol Attachment

# PA-65

This attachment converts a standard screwdriver to a pistol-style screwdriver, most suitable for horizontal tightening.



Compatible screwdrivers:  
CL-6000, CL-6500, CL-7000 (Including PS Type)

## Angle Attachment

# ANGL-Z (For HIOS H5 and 5HEX drive)

# ANGLX-Z (For 1/4 HEX drive)

This attachment is most suitable when the available space is very tight for screw tightening. This attachment can be fitted to the tip of the screwdriver.



\* Always set the output to 1.5N·m or lower when you use this attachment.



Compatible screwdrivers:  
CL-6000, CL-6500, CL-7000 (Lever Type only)

## Push-to-Start Grip Attachment

# PS-1

# PS-1-ESD

This attachment converts the screwdriver from lever start to push-to-start.



Compatible screwdrivers:  
CL-4000 (Image of fitting)



## Brushed Screwdriver



## For assembly of precision parts!

### A reaction force absorbing screwdriver

- Designed to minimize the effects of vibrations or impacts on the assembly parts.
- The optimal tool for assembly of hard disks, liquid crystal displays, high-density boards or other precision parts.
- SS-2000 has superb durability thanks to a coreless motor.
- SS Series is noiseless as a standard specification.

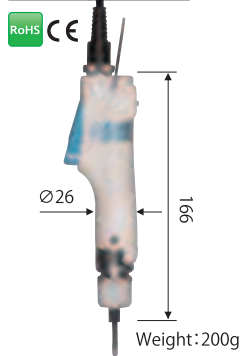
#### Lever Start Type

#### Lever Start Type

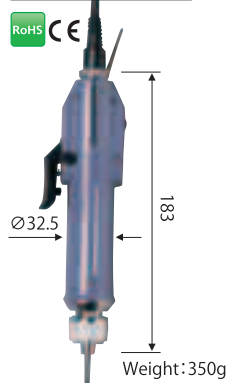
#### Push-to-Start Type

#### Push-to-Start Type

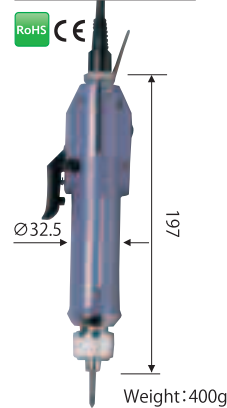
SS-2000



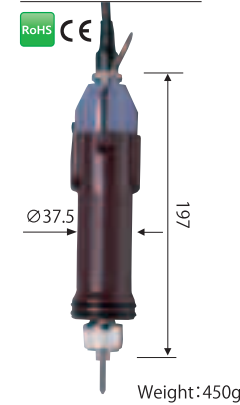
SS-3000



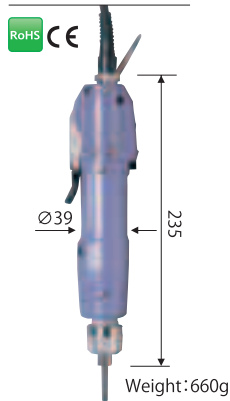
SS-4000



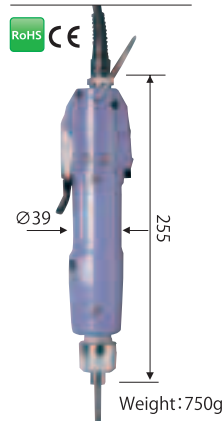
SS-4000PS



SS-6500

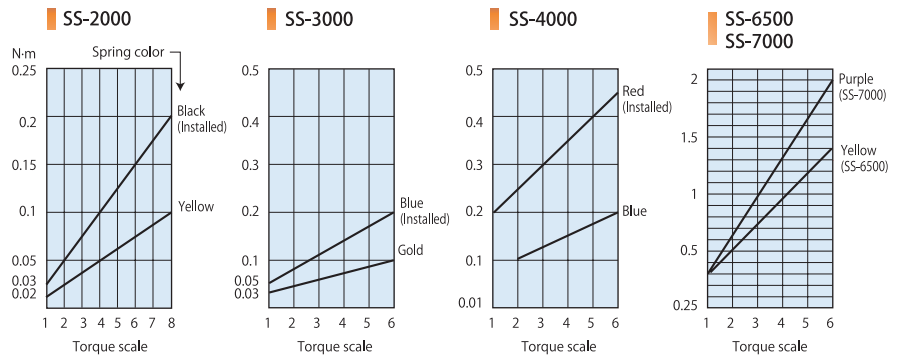


SS-7000



#### Output torque guide (HI input)

(Including PS type)



#### SS Series Specifications

#### Specifications

Lever Start-Type Model		SS-2000	SS-3000	SS-4000	SS-6500	SS-7000
Push-to-Start-Type Model				SS-4000PS		
Output Torque Rang	N·m	0.02 - 0.2	0.02 - 0.2	0.1 - 0.45	0.25 - 1.3	0.3 - 2
	lbf·in	0.17 - 1.7	0.3 - 1.7	0.9 - 3.9	2.2 - 11	2.6 - 17
	(kgf·cm)	(0.2 - 2)	(0.3 - 2)	(1 - 4.5)	(2.5 - 13)	(3 - 20)
Torque Switching		Stepless adjustment	Stepless adjustment	Stepless adjustment	Stepless adjustment	Stepless adjustment
Unloaded Rotation Speed (r.p.m) ±10%	HI	680	1,000	1,000	900	750
	LOW	490	670	690	600	500
Screw	Machine Screw	1.0 - 2.3	1.0 - 2.0	1.4 - 2.6	2.0 - 3.0	2.0 - 4.0
Size(mm)	Tapping Screw	1.0 - 2.0	1.0 - 1.7	1.4 - 2.3	2.0 - 3.0	2.0 - 4.0
Bit	HIOS Shank	H4	H4	H4	H5	H5
Drive	HEX Shank	—	—	1/4HEX or 5HEX	1/4HEX or 5HEX	1/4HEX or 5HEX
Power Supply	CLT-30	○	○	—	—	—
	CLT-60	○	○	○	○	○
	CLT-100	○	○	○	○	—
	MC-70L	○	○	○	○	○
Accessories	Bit (one each)	H4	+ #0 (Ø2.0×40 mm) + #0 (Ø2.5×40 mm)	+ #0 (Ø2.5×40 mm) + #1 (Ø4.0×40 mm)	+ #1 (Ø5.0×60 mm) + #2 (Ø5.0×60 mm) + #1 (5.0×50 mm) + #2 (5.0×50 mm) — (5.0×50 mm)	
		H5				
		1/4HEX				
	Spring	Yellow	Gold	Blue		
Cord length (m)		1.5 m (5P)	1.5m (5P)	1.5m (5P)	2m (5P)	2m (5P)
Carbon brush (order code)			1pair (A45-0420)	1pair (CL4-0420)	1pair (CL65-0490)	1pair (CL65-0490)

Note:  
The carbon brush of SS-2000 is an enclosed type and cannot be replaced by a user. Although the life of the carbon brush depends on use conditions, as a guide, if you tighten about 6,000 screws a day, you have to replace the carbon brush 3 to 4 years after you started using it. When a replacement is required, please contact us for the service.

The unloaded rotation speed (r.p.m.) in the specifications is measured when the screwdriver is operated with the HIOS standard power supply. Therefore, if you use another power supply or when input voltage varies, the value displayed will also vary. Please refer to the value in the specifications only as a guide.

## Suction (Vacuum)

# SSQ

By making use of negative pressure, the effort needed to pick up screws can be reduced. This suction device can even pick up non-ferrous screws such as stainless steel screws by vacuuming, and improves operation efficiency. It can also be used to remove powder dust generated from screw tightening.

### Order guide

(A) and (B) needed to be purchased separately if you have a suction-type screwdriver.  
(A), (B) and (C) needed to be purchased separately if you want to convert your screwdriver to a suction type.

\* There are several options of sizes of (A) and (B) depending on the screw size. For more information on the size, please refer to P. 58.

Model	(A) Mouthpiece model	(B) Bit length	(C) Suction attachment model
SSQ-2000	F3-Standard 18mm	H4 60mm	CLQ2-SET/CLQ2-SET-ESD*
SSQ-3000	F3-Standard 18mm	H4 60mm	CLQ4-SET/CLQ4-SET-ESD*
SSQ-4000	F3-Standard 18mm	H4 60mm	CLQ4-SET/CLQ4-SET-ESD*
SSQ-6500	F6-Standard 31mm	H5 80mm	CLQ65-SET/CLQ65-SET-ESD*
SSQ-7000	F6-Standard 31mm	H5 80mm	CLQ65-SET/CLQ65-SET-ESD*

(Including PS Type)

\*ESD is anti-electrostatic

Note: The suction attachment cannot be used with 1/4HEX.



## Anti-electrostatic

# SS-ESD



The screwdriver body uses an anti-electrostatic material prevent the generation of static electricity, which is suitable for the assembly of precision equipment and electronic parts.

[Surface resistance: max.  $10^4 \Omega$ ]

Models:

SS-2000ESD SS-6500ESD  
SS-3000ESD SS-7000ESD  
SS-4000ESD (Including PS Type)

## Clean Room + Anti-electrostatic

# SSQ-CR-ESD



In addition to anti-electrostatic measures, two vacuum units are installed in the body and the suction portion in order to suck up dust generated from screw tightening.

[Class 100 equivalent]

[Surface resistance: max.  $10^4 \Omega$ ]

Models:

SSQ-2000CR-ESD  
SSQ-3000CR-ESD  
SSQ-4000CR-ESD  
SSQ-6500CR-ESD  
SSQ-7000CR-ESD  
(Including PS Type)



## Related Products

## Related Products

## Accessories

## Accessories

### Power supply with HIOS screw counter

## CLT-70STC3

Power supply with HIOS screw counter helps to prevent skipping screw tightening.



Compatible screwdrivers:  
SS-2000 SS-3000 SS-4000  
SS-6500 SS-7000 (Including PS Type)

### Separate counter

## CLOP-SC1

External counter helps to prevent skipping screw tightening.



► See P. 41-43 for details.

### Pistol Attachment

## PA-65

This attachment converts a standard screwdriver to a pistol-style screwdriver, most suitable for horizontal tightening.



Compatible screwdrivers:  
SS-6500, SS-7000 (Including PS Type)

### Push-to-Start Grip Attachment

## PS-1

## PS-1-ESD



This attachment converts the screwdriver from lever start to push-to-start.



Compatible screwdrivers:  
SS-4000

(Image of fitting)

## Brushed Screwdriver



**α Series**  
(DC Type)

## Powerful, high speed motor improves productivity

- α-Series increases operating efficiency by reducing screw tightening time with high speed rotation (1,700 rpm).
- A low DC voltage power safety design.
- α-Series is noiseless as a standard specification.

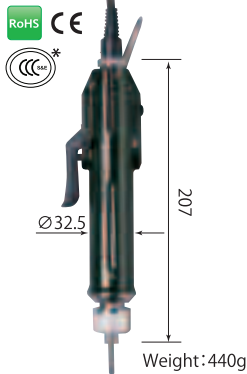
### Lever Start Type

### Lever Start Type

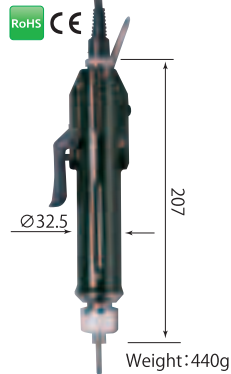
### Push-to-Start Type

### Push-to-Start Type

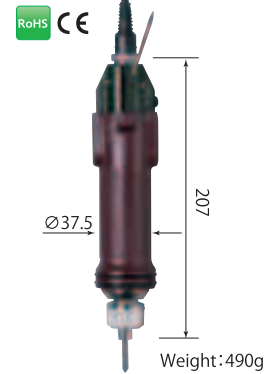
α-4500



α-5000



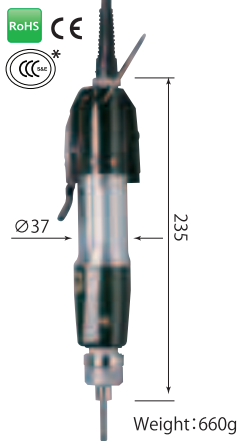
α-4500PS



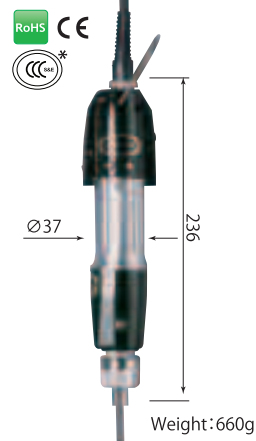
α-5000PS



α-6500



α-6500PS



Note: CCC certified models have different specification and order codes from the standard models. Please contact HIOS distributors before ordering.

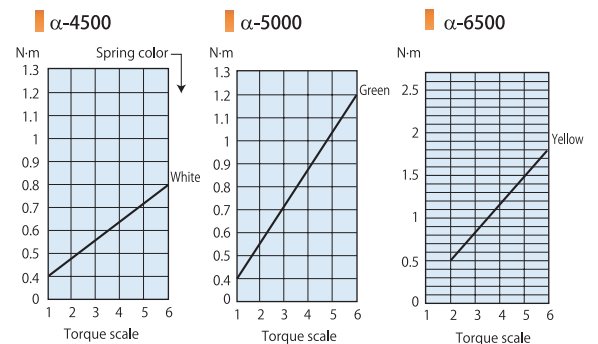
### α-Series Specifications

### Specifications

Lever Start Type Model		α-4500	α-5000	α-6500
Push-to-Start Type Model		α-4500PS	α-5000PS	α-6500PS
Output	N·m	0.4 - 0.8	0.4 - 1.2	0.5 - 1.8
Torque Range	lbf·in	3.5 - 7	3.5 - 10	4.3 - 16
	(kgf·cm)	(4 - 8)	(4 - 12)	(5 - 18)
Torque Switching		Stepless adjustment	Stepless adjustment	Stepless adjustment
Unloaded Rotation	HI	1,700	1,000	1,700
	LOW	1,200	700	1,200
Screw	Machine Screw	2.0 - 3.0	2.3 - 3.0	3.0 - 4.0
	Tapping Screw	2.0 - 2.6	2.3 - 3.0	2.6 - 3.0
Bit	HIOS Shank	H4	H4	H5
Drive	HEX Shank	1/4HEX or 5HEX	1/4HEX or 5HEX	1/4HEX or 5HEX
Power Supply	CLT-60	○	○	○
	CLT-100	○	○	—
	MC-70L	○	○	○
Accessories	Bit (one each)	H4	+ #1 (Ø4.0×40 mm) + #2 (Ø4.0×40 mm)	+ #1 (Ø5.0×60 mm) + #2 (Ø5.0×60 mm)
		H5		+ #1 (Ø5.0×60 mm) + #2 (Ø5.0×60 mm)
		1/4HEX	+ #1 (5.0×50 mm) + #2 (5.0×50 mm) — (5.0×50 mm)	+ #1 (5.0×50 mm) + #2 (5.0×50 mm) — (5.0×50 mm)
	Cord length (m)	1.5 m (5P)	1.5 m (5P)	2 m (5P)
Carbon brush (order code)		1pair (A45-0420)	1pair (A45-0420)	1pair (CL65-0490)

### Output torque guide ( HI input)

(Including PS type)



The unloaded rotation speed (r.p.m.) in the specifications is measured when the screwdriver is operated with the HIOS standard power supply. Therefore, if you use another power supply or when input voltage varies, the value displayed will also vary. Please refer to the value in the specifications only as a guide.

## Suction (Vacuum)

αQ

### Order guide

(A) and (B) needed to be purchased separately if you have a suction-type screwdriver.  
(A), (B) and (C) needed to be purchased separately if you want to convert your screwdriver to a suction type.

\* There are several options of sizes of (A) and (B) depending on the screw size. For more information on the size, please refer to P. 58.

Model	(A) Mouthpiece model	(B) Bit length	(C) Suction attachment model
αQ-4500	F3-Standard 18mm	H4 60mm	CLQ4-SET/CLQ4-SET-ESD*
αQ-5000	F3-Standard 18mm	H4 60mm	CLQ4-SET/CLQ4-SET-ESD*
αQ-6500	F6-Standard 31mm	H5 80mm	CLQ65-SET/CLQ65-SET-ESD*

(Including PS Type)

\*ESD is anti-electrostatic

Note: The suction attachment cannot be used with 1/4HEX.

## Anti-electrostatic

α-ESD



The screwdriver body uses an anti-electrostatic material prevent the generation of static electricity, which is suitable for the assembly of precision equipment and electronic parts.

[Surface resistance: max.  $10^4\Omega$ ]

Models:

α-4500ESD α-6500ESD  
α-5000ESD  
(Including PS Type)

## Clean Room + Anti-electrostatic

αQ-CR-ESD



In addition to anti-electrostatic measures, two vacuum units are installed in the body and the suction attachment in order to suck up dust generated from screw tightening.

[Class 100 equivalent]

[Surface resistance: max.  $10^4\Omega$ ]

Models:

αQ-4500CR-ESD  
αQ-5000CR-ESD  
αQ-6500CR-ESD  
(Including PS Type)

\* Push-to-start grip attachment PS-1-ESD (anti-electrostatics) is attached to αQ-4500CR-ESD and αQ5000CR-ESD.

## Related Products

## Related Products

### Power supply with HIOS screw counter

CLT-70STC3

Power supply with HIOS screw counter helps to prevent skipping screw tightening.



RoHS

Compatible screwdrivers:  
α-4500, α-5000, α-6500  
(Including PS Type)

### Separate counter

CLOP-SC1

External counter helps to prevent skipping screw tightening.



RoHS

CE

▶ See P. 41-43 for details.

## Accessories

## Accessories

### Pistol Attachment

PA-65

This attachment converts a standard screwdriver to a pistol-style screwdriver, most suitable for horizontal tightening.



RoHS

Compatible screwdrivers:  
α-6500 (Including PS Type)

### Angle Attachment

ANGL-Z (For HIOS H5 and 5HEX drive)

ANGLX-Z (For 1/4 HEX drive)

This attachment is most suitable when the available space is very tight for screw tightening. This attachment can be fitted to the tip of the screwdriver.



RoHS

Compatible screwdrivers:  
α-6500 (Lever Type only)

\* Always set the output to 1.5N·m or lower when you use this attachment.

### Push-to-Start Grip Attachment

PS-1

PS-1-ESD



This attachment converts the screwdriver from lever start to push-to-start.



RoHS

Compatible screwdrivers:  
α-4500, α-5000

(Image of fitting)

For DC screwdrivers

# Power Supply

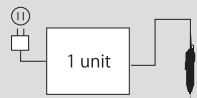


## Exclusive power supply is required for DC screwdrivers.






- Exclusive power supply converts the electric current from AC outlet (on the primary side) to low-voltage output (HI: DC30V) or (LOW: about DC20V) to supply it to the screwdriver.
- Safe and quiet rotation.
- Please always use HIOS screwdriver in combination with HIOS power supply for safe screw tightening.
- Stable power supply with multiple inputs (AC100V to 240V).






(Not applicable to CLT-100 and MC-70L)

## Power supply for brushless screwdrivers

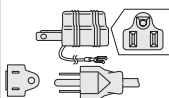
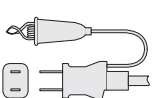
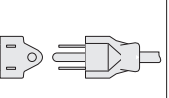
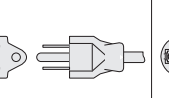
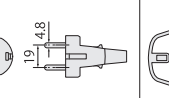
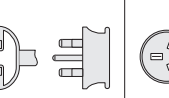
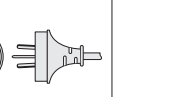
### ● Combination of power supply and screwdriver

Number of connectable screwdrivers			
Power supply		T-30BL	T-70BL
Screwdriver (Including OPC type)			
PG Series	PG-3000	—	●
	PG-5000	—	●
	PG-7000	—	●
BLG-BC1 Series	BLG-4000BC1	●	●
	BLG-5000BC1 Series	—	●
BLG Series	BLG-4000	●	●
	BLG-5000 Series	—	●
BL Series	BL-2000	●	●
	BL-3000	●	●
	BL-5000	—	●
	BL-7000	—	●

Model: <b>T-30BL</b> (for one screwdriver)		   
<b>Compatible screwdrivers</b> BLG-BC1 Series BLG Series BL Series (Including OPC type)		
Primary input power source	AC100-240V (47-63 Hz)	
Secondary output voltage	HI(2): DC30V, LOW(1): DC20V (2-step switchable)	
External dimensions (mm)	62(W) × 134(D) × 40 (H) mm	
Weight (g)	300 g	
Accessories	Power supply cord 1.8m (1pc), Flat 2P conversion plug (1pc) (only for 100V), Mounting hardware (2pcs), Mounting screws (4pcs)	
Plug type	A	A-2 A-3 / C / BF / S
Compatible screwdrivers	BLG-BC1 Series	BLG-4000BC1
	BLG Series	BLG-4000
	BL Series	BL-2000, BL-3000

Model: <b>T-70BL</b> (for one screwdriver)		   
<b>Compatible screwdrivers</b> PG Series BLG-BC1 Series BLG Series BL Series (Including OPC type)		
Primary input power source	AC100-240V (47-63 Hz)	
Secondary output voltage	HI(2): DC30V, LOW(1): DC20V (2-step switchable)	
External dimensions (mm)	88(W) × 210(D) × 52 (H) mm	
Weight (g)	685 g	
Accessories	Power supply cord 1.8m (1pc), Flat 2P conversion plug (1pc) (only for 100V), Mounting hardware (2pcs), Mounting screws (4pcs)	
Plug type	A	A-2 A-3 / C / BF / S
Compatible screwdrivers	PG Series	PG-3000, PG-5000, PG-7000
	BLG-BC1 Series	BLG-4000BC1, BLG-5000BC1 Series
	BLG Series	BLG-4000, BLG-5000 Series
	BL Series	BL-2000, BL-3000, BL-5000, BL-7000

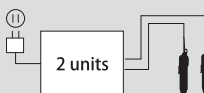
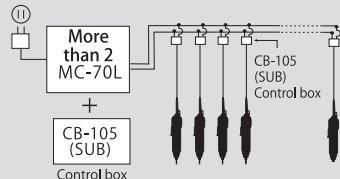




### ● Plug type


Voltage	100V		120V	220-240V			
	Type A	Type A-1	Type A-2	Type A-3	Type C	Type BF	Type S
Plug type							





# Power Supply for Brushed Screwdrivers


## Combination of power supply with screwdriver



Number of connectable screwdrivers								
Power supply		CLT-30	CLT-60	CLT-80	CLT-100	MC-70L		
Screwdriver								
CL Series	CL-2000	●	●	—	●	●	↑ (Max. 20 units)	
	CL-3000	●	●	—	●	●		
	CL-4000	—	●	—	●	●	↑ (Max. 10 units)	
	CL-6000	—	●	—	●	●		
	CL-6500	—	●	—	●	●	↑ (Max. 10 units)	
	CL-7000	—	●	—	—	●		
	CL-9000	—	—	●	—	—		
SS Series	SS-2000	●	●	—	●	●	↑ (Max. 20 units)	
	SS-3000	●	●	—	●	●		
	SS-4000	—	●	—	●	●	↑ (Max. 10 units)	
	SS-6500	—	●	—	●	●		
	SS-7000	—	●	—	—	●		
α Series	α-4500	—	●	—	●	●	↑ (Max. 5 units)	
	α-5000	—	●	—	●	●		
	α-6500	—	●	—	—	—		

Model: <b>CLT-30</b> (for one screwdriver)		RoHS		CE	UL	CCC
Compatible screwdrivers						
CL Series						
SS Series						
Primary input power source		AC100-240V (47-63 Hz)				
Secondary output voltage		HI(2): DC30V, LOW(1): DC20V (2-step switchable)				
External dimensions (mm)		62(W) × 134(D) × 40 (H) mm				
Weight (g)		300 g				
Accessories		Power supply cord 1.8m (1pc), Flat 2P conversion plug (1pc) (only for 100V), Mounting hardware (2pcs), Mounting screws (4pcs)				
Plug type		A	A-2	A-3 / C / BF / S		
Compatible screwdriver	CL Series	CL-2000, CL-3000				
	SS Series	SS-2000, SS-3000				

Model: <b>CLT-60</b> (for one screwdriver)		RoHS		CE	UL	CCC
<b>Compatible screwdrivers</b>						
CL Series SS Series α Series						
Primary input power source		AC100-240V (47-63 Hz)				
Secondary output voltage		HI(2): DC30V, LOW(1): DC20V (2-step switchable)				
External dimensions (mm)		88(W)×210(D)×52 (H) mm				
Weight (g)		715 g				
Accessories		Power supply cord 1.8m (1pc), Flat 2P conversion plug (1pc) (only for 100V), Mounting hardware (2pcs), Mounting screws (4pcs)				
Plug type		A	A-2	A-3/C/BF/S		
Compatible screwdriver	CL Series	CL-2000, CL-3000, CL-4000, CL-6000, CL-6500, CL-7000				
	SS Series	SS-2000, SS-3000, SS-4000, SS-6500, SS-7000				
	α Series	α-4500, α-5000, α-6500				

Model: <b>CLT-80</b> (for one screwdriver)		RoHS		CE	UL	CCC
Compatible screwdrivers						
CL-9000 only						
Primary input power source		AC100V-240V (47/63 Hz)				
Secondary output voltage		HI(2) : DC30V, LOW(1):DC20V (2-step switches)				
External dimensions (mm)		114(W)×215(D)×52(H)mm				
Weight (g)		1.6kg				
Accessories		Power supply cord 1.8m (1pc), Flat 2P conversion plug (1pc) (only for 100V), Mounting hardware (2pcs), Mounting screws (4pcs)				
Plug type		A	A-2	A-3/C/BF/S		
Compatible screwdriver	CL Series	CL-9000				

Model: CLT-100 (for two screwdrivers)		RoHS
Compatible screwdrivers		
CL Series SS Series α Series		
Primary input power source		AC100V (50/60Hz)    AC120V (50/60Hz)    AC220-240V (50/60Hz)
Secondary output voltage		HI(2): approx. DC30V, LOW(1): approx. DC20V (2-step switchable)
External dimensions (mm)		182(W)×145(D)×132(H)mm
Weight (g)		4kg
Accessories		Power supply cord 1.8m with ground wire (1pc)
Plug type		A-1    A-2    A-3/C/BF/S
Compatible screwdriver	CL Series	CL-2000, CL-3000, CL-4000, CL-6000, CL-6500
	SS Series	SS-2000, SS-3000, SS-4000, SS-6500
	α Series	α-4500, α-5000

Model: <b>MC-70L</b> (for multiple screwdrivers)			
<div>Compatible screwdrivers</div> <div>CL Series SS Series α Series</div>			
Primary input power source	AC100V (50/60Hz)	AC120V (50/60Hz)	AC220-240V (50/60Hz)
Secondary output voltage	HI(2): about DC30V, LOW(1): about DC20V (2-step switchable)		
External dimensions (mm)	320(W) × 220(D) × 153(H)mm		
Weight (kg)	12kg		
Accessories	Power supply cord 1.8m with ground wire (1pc), Trunk-line wire 20m (1 set, black & red), Branch wire 0.5m (10 sets, black & red), U-element (Scotch lock) #560B (20 pcs)		
Plug type	A-1	A-2	A-3 / C / BF / S
Supported models	Up to 20 units	CL-2000, CL-3000, CL-4000, SS-2000, SS-3000, SS-4000	
	Up to 10 units	CL-6000, CL-6500, CL-7000, SS-6500, SS-7000 α-4500, α-5000	
	Up to 5 units	α-6500	

## Control Box CB-105(SUB)

When you use MC-70L, you need to connect a control box (CB-105, optional) between a screwdriver and MC-70L. CB-105 is a compact control box to control the current in response to the clutch motion of a driver.



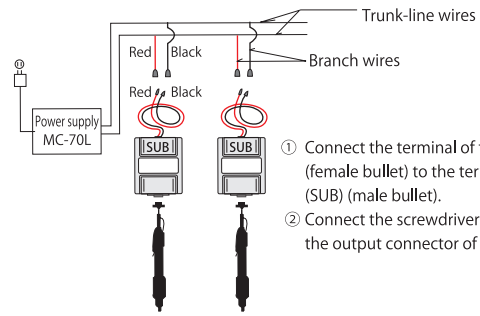
Primary input power source	DC20V/31V
Secondary output voltage	Same as the primary input power source
External dimensions (mm)	70(W) × 42(D) × 100 (H) mm
Weight (g)	240 g
Input cord length	2m with a bullet terminal (1pc, fixed to the body)
Accessories	Mounting hardware (2pcs)

### 《Accessories》 LEAD KIT for MC-70L Part No. MCCB-SCT

- U-element 20pieces ● Branch wire 10pieces (Black&Red)
- Trunk-line wire 20m 1pieces (Black&Red)

## How to connect CB-105 (SUB)

There should be an appropriate clearance between the trunk-line wires laid along the assembly line and branch wires.



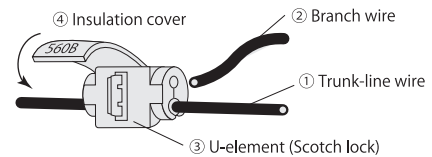
- ① Connect the terminal of the branch wire (female bullet) to the terminal of CB-105 (SUB) (male bullet).
- ② Connect the screwdriver's connector to the output connector of CB-105 (SUB).

(Note)

The trunk-line wire (included) of MC-70L should be used with the length within 20m. If you make it longer than 20m, there may be voltage reduction and cause failure of the screwdriver.

## How to use U-element (Scotch lock)

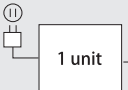
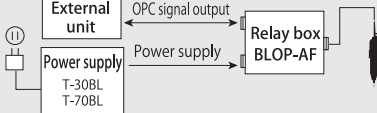



It is recommended to use U-element (included in this product) to attach a branch wire to the trunk-line wire.



- ① While push-opening the slot at the bottom of the U-element, push in the trunk-line wire into the groove.
- ② Insert the end of the branch wire through the upper hole from the right side and push it in all the way to the opposite end.
- ③ Insert the end of the branch wire through the upper hole from the right side and push it in all the way to the opposite end.
- ④ Snap on the insulation cover.


## Special Power Supply • Relay Box


### ● Combination of power supply and screwdriver


Classification		Brushed screwdriver		Brushless screwdriver
Number of connectable screwdrivers		 1 unit		
Specifications		Power supply with complete signal terminal		Relay box for complete signal
Power supply	Screwdrivers	CLT-50AF	CLT-75AF	BLOP-AF
				
CL Series	CL-2000	●	—	—
	CL-3000	●	—	—
	CL-4000	●	—	—
	CL-6000	●	—	—
	CL-6500	●	—	—
	CL-7000	—	—	—
	CL-9000	—	●	—
	SS-2000	●	—	—
	SS-3000	●	—	—
	SS-4000	●	—	—
	SS-6500	●	—	—
	SS-7000	—	—	—
	α-4500	●	—	—
	α-5000	●	—	—
SS Series	α-6500	—	—	—
	BLG-4000BC1	—	—	●
	BLG-5000BC1Series	—	—	●
BLG Series	BLG-OPC specification	—	—	●
BL Series	BL-OPC specification	—	—	●

## ●Power Supply with Complete Signal + Relay Box

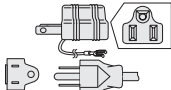
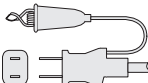
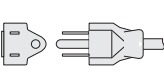
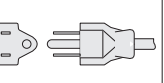
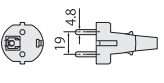
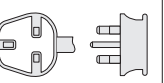
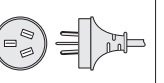
Use these products to prevent screw tightening skipping or manufacturing line control including a screw counter.

Model: <b>CLT-50AF</b> (for one screwdriver)		RoHS
Output signal ● AF(torque increase)		
<b>Compatible screwdrivers</b> CL Series SS Series α Series 		
Primary input power source	AC100V (50/60Hz)	
Secondary output voltage	HI (2): about DC30V, LOW (1): about DC20V, 2-step switchable	
External dimensions (mm)	105(W) × 185(D) × 91(H)mm	
Weight (kg)	About 2.7kg	
Accessories	Power supply cord: 1.8m with ground wire (1pc)	
Plug type	A-1	
Compatible screwdrivers	CL Series	CL-2000, CL-3000, CL-4000, CL-6000, CL-6500
	SS Series	SS-2000, SS-3000, SS-4000, SS-6500
	α Series	α-4500, α-5000

Model: <b>CLT-75AF</b> (for one screwdriver)		RoHS
Output signal ● AF(torque increase)		
<b>Compatible screwdrivers</b> Exclusive for CL-9000 		
Primary input power source	AC100V(50/60Hz)	
Secondary output voltage	HI (2): about DC30V	
External dimensions (mm)	182(W) × 220(D) × 133(H)mm	
Weight (kg)	6kg	
Accessories	Power supply cord: 1.8m with ground wire (1pc)	
Plug type	A-1	
Compatible screwdrivers	CL Series	CL-9000

Model: <b>BLOP-AF</b> (relay box of complete signal)		RoHS	CE
Output signals ● FOR (forward) ● REV (reverse) ● T-UP(torque increase)			
<b>Compatible screwdrivers</b> BLG-BC1 Series BLG Series (OPC type) BL Series (OPC type) 			
The signals (FOR, REV and T-UP) from the screwdrivers of OPC-type screwdriver with signal output function, can be extracted with this unit to connect to an external unit such as a sequencer.			
Primary input power source	DC30V		
Secondary output voltage	Same as the primary input		
External dimensions (mm)	70(W) × 42(D) × 100(H)mm		
Weight (g)	160g		
Accessories	Screwdriver cable 1.5m (1pc) Mounting hardware (2pcs)		
Compatible screwdrivers	BLG-BC1 Series	BLG-4000-BC, BLG-5000BC1Series	
	BLG Series	BLG-4000-OPC, BLG-5000-OPC	
	BL Series	BL-2000-OPC, BL-3000-OPC, BL-5000-OPC, BL-7000-OPC	

## ●Plug type

Voltage	100V		120V	220-240V			
	Type A	Type A-1	Type A-2	Type A-3	Type C	Type BF	Type S
Plug type							

## Brushless® Screwdriver

# VB Series

(AC Type)  
Transformerless



Energy saving and cost reduction can be achieved by reducing power consumption by about 50% (compared with conventional HIOS product).

- The temperature rise of the motor is reduced by about 30% and reduces errors caused by heating.
- Can be directly plugged into AC outlet.

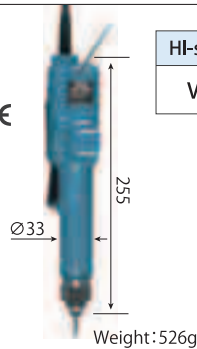
### Lever Start Type

### Lever start type

Unit:mm

#### VB-1510

(100V)  
(120V)  
(220-240V)



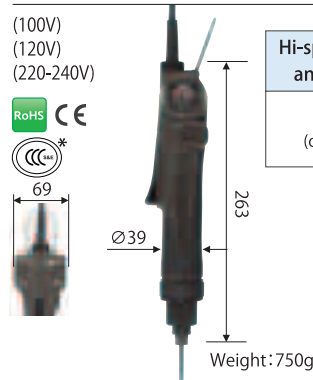
Hi-speed rotation

VB-1510-18

Weight: 526g

#### VB-1820/VB-3012

(100V)  
(120V)  
(220-240V)



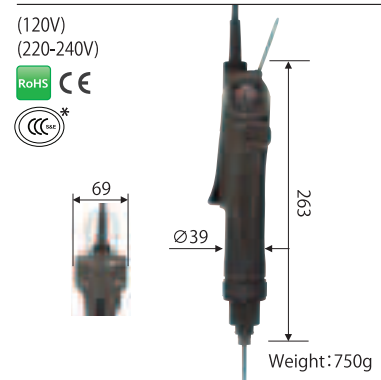
Hi-speed rotation  
and Hi-torque

VB-3020  
(only for 100V)

Weight: 750g

#### VB-4504

(120V)  
(220-240V)



Weight: 750g

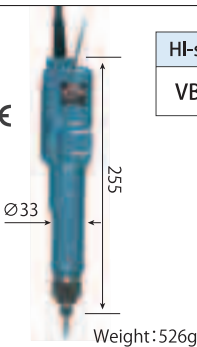
### Push-to-Start Type

### Push-to-start type

Unit:mm

#### VB-1510PS

(100V)  
(120V)  
(220-240V)



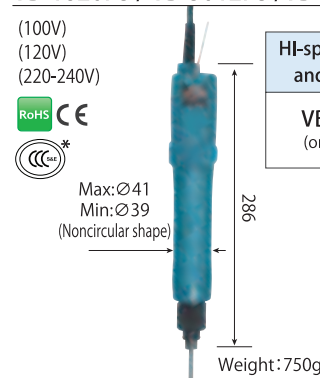
Hi-speed rotation

VB-1510-18PS

Weight: 526g

#### VB-1820PS / VB-3012PS / VB-4504PS

(100V)  
(120V)  
(220-240V)



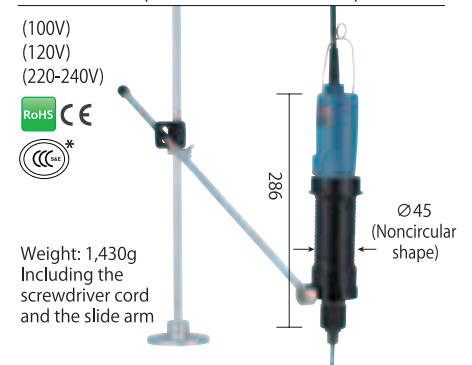
Hi-speed rotation  
and Hi-torque

VB-3020PS  
(only for 100V)

Weight: 750g

#### VB-4504PS (with shock-less stand)

(100V)  
(120V)  
(220-240V)



Weight: 1,430g  
Including the  
screwdriver cord  
and the slide arm

### VB Series Specifications

### Specifications

Lever Start Model			VB-1510			VB-1510-18			VB-1820			VB-3012			VB-3020			VB-4504		
Push-to-Start Model			VB-1510PS			VB-1510PS-18			VB-1820PS			VB-3012PS			VB-3020PS			VB-4504PS		
AC input power (±5%)			100V	120V	220-240V	100V	120V	220-240V	100V	120V	220-240V	100V	120V	220-240V	100V		100V	120V	220-240V	
Power consumption(W)*1			20W	20W	25W	20W	20W	25W	40W	40W	32W	40W	40W	32W	20W		40W	40W	32W	
Output Torque Range	N·m	0.25 - 1.5		0.2 - 1		0.4 - 1.8		0.5 - 3		1 - 3		1 - 4.5								
	lbf·in	2.2 - 13		2.2 - 8.7		3.5 - 16		4.3 - 26		8.7 - 26		8.7 - 39.1								
	(kgf·cm)	(2.5 - 15)		(2 - 10)		(4 - 18)		(5 - 30)		(10 - 30)		(10 - 45)								
Torque Switching			Stepless adjustment			Stepless adjustment			Stepless adjustment			Stepless adjustment			Stepless adjustment			Stepless adjustment		
Unloaded Rotation Speed (r.p.m) ±10%			970			1,800			2,000			1,200			2,000			400		
Screw Size (mm)	Machine Screw	2.0 - 4.0		2.0 - 4.0		2.6 - 4.0		3.0 - 5.0		3.0 - 5.0		3.0 - 5.0								
	Tapping Screw	2.0 - 3.0		2.0 - 3.0		2.6 - 3.0		3.0 - 4.0		3.0 - 4.0		3.0 - 4.0								
Bit Drive	HIOS Shank	H4		H4		H5 and SHEX (both can be used)		H5 and SHEX (both can be used)		H5 and SHEX (both can be used)		—								
	HEX Shank	H5 and SHEX or 1/4HEX		H5 and SHEX or 1/4HEX		1/4HEX		1/4HEX		1/4HEX		1/4HEX								
AC Screwdriver Cord length			3m			3m			3m			3m			3m			3m		
Accessories	Bit (one each)	H4	+ #1 (∅4.0×40mm) + #2 (∅4.0×40mm)		+ #1 (∅4.0×40mm) + #2 (∅4.0×40mm)															
		H5	+ #1 (∅5.0×60mm) + #2 (∅5.0×60mm)		+ #1 (∅5.0×60mm) + #2 (∅5.0×60mm)		+ #1 (∅5.0×60mm) + #2 (∅5.0×60mm)		+ #1 (∅5.0×60mm) + #2 (∅5.0×60mm)		+ #1 (∅5.0×60mm) + #2 (∅5.0×60mm)									
		1/4HEX	+ #1 (5.0×50mm) + #2 (5.0×50mm) — (5.0×50mm)		+ #1 (5.0×50mm) + #2 (5.0×50mm) — (5.0×50mm)		+ #1 (5.0×50mm) + #2 (5.0×50mm) — (5.0×50mm)		+ #1 (5.0×50mm) + #2 (5.0×50mm) — (5.0×50mm)		+ #1 (5.0×50mm) + #2 (5.0×50mm) — (5.0×50mm)		+ #1 (5.0×50mm) + #2 (5.0×50mm) — (5.0×50mm)							
	Torque adjustment spring		Silver																	
	Plus screw for adjustment						M2.6 (Pan head machine screw)		M2.6 (Pan head machine screw)		M2.6 (Pan head machine screw)		M2.6 (Pan head machine screw)							
	Flat 2P conversion plug (only for 100V)			1 pc (with around wire)		1 pc (with around wire)		1 pc (with around wire)		1 pc (with around wire)		1 pc (with around wire)		1 pc (with around wire)						

\*1 The value of power consumption is an approximate estimate.

## Suction(vacuum) Attachments for VB Series

By making use of negative pressure, the effort needed to pick up screws can be reduced. This suction attachment can even pick up non-ferrous screws such as stainless steel screws by vacuuming, and improve operation efficiency. It can also be used to remove powder dust generated from screw tightening.

### Order guide

(A), (B) and (C) needed to be purchased separately if you would like to mount this suction device to your VB screwdriver.

\* There are several options of sizes of (A) and (B) depending on the screw size. For more information on the size, please refer to P. 58.

Model		(A) Mouthpiece model	(B) Bits total length	(C) Suction attachment model
AC100V	VB-3020	F6-Standard 31mm	H5 100mm	VZQ18-SET
AC100V	VB-1820			
AC120V AC220V-240V	VB-3012			

Including PS type. Not applicable to VB-4504PS (100V).

## For use with HIOS screw counters

### VB-OPC

#### Models:

(100V, 120V) VB-1510-OPC  
(100V, 120V) VB-1510-18-OPC  
(100V, 120V) VB-1820-OPC  
(100V, 120V) VB-3012-OPC  
(100V) VB-3020-OPC (Including PS type)  
(100V, 120V) VB-4504PS-OPC

#### Compatible counters

HIOS screw counter

VZOP-STC



► See P. 41-42 for details.

These screwdrivers prevent you from skipping screw tightening in combination with the screw counter.

- They have a function to output positive rotation, reverse rotation and torque-up (tightening complete) signals.

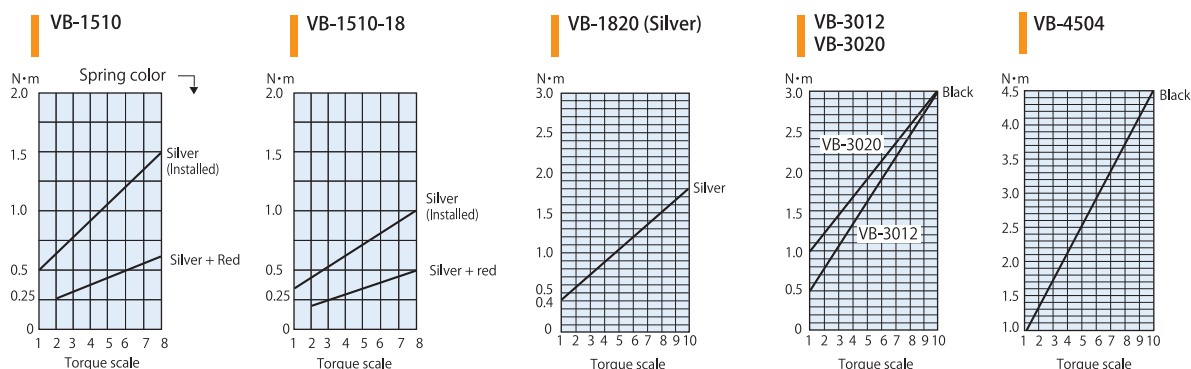
If you would like to purchase AC220V-240V type, please contact HIOS distributors.

### CCC certified models

(100V/220V) ...VB-1510, VB-1510PS (100V/220V) ...VB-3012, VB-3012PS  
(100V/220V) ...VB-1820, VB-1820PS (100V/220V) ...VB-4504, VB-4504PS

Note: CCC certified models have different specification and order codes from the standard models. Please contact HIOS distributors before ordering.

## Output torque guide



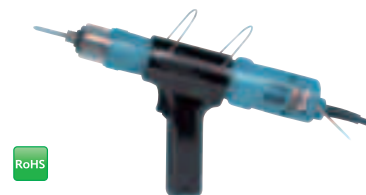
\*There are two types of spring for torque adjustment: for HI (originally fixed to the unit) and for Low (accessory). Use one of them depending on your operating conditions.

## Pistol Attachment

**PAB-18** (for Lever Start)

**PAB-18PS** (for Push-to-Start)

This attachment converts a standard screwdriver to a pistol-style screwdriver, most suitable for horizontal tightening.



Compatible screwdrivers:

**PAB-18**

VB-1820, VB-3012, VB-3020

**PAB-18PS**

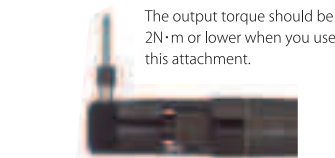
VB-1820PS, VB-3012PS, VB-3020PS

## Angle Attachment

**ANGLV-Z-CH1** (For HIOS H5 and 5HEX drive\*)

**ANGLV-Z-XX1** (For 1/4 HEX drive)

This attachment is most suitable when the available space is very small for screw tightening. This attachment can be fitted to the tip of the screwdriver.



The output torque should be 2N·m or lower when you use this attachment.

RoHS

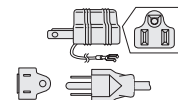
Compatible screwdrivers:

VB-1820, VB-3012, VB-3020 (Lever Type only)

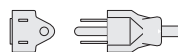
\*The bit drive for ANGLV-Z-CH1 is H5. Please contact HIOS distributors for ANGLV-Z-CH1 to use with 5HEX drive bits.

## Plug type

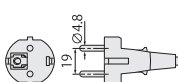
### Type A / 100V



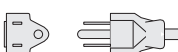
### Type A-2 / 120V



### Type C / 220V-240V



### Type A-3 / 220V-240V



### Type S / 220V-240V





## Brushed Screwdriver

**VZ Series**  
(AC Type)  
Transformerless

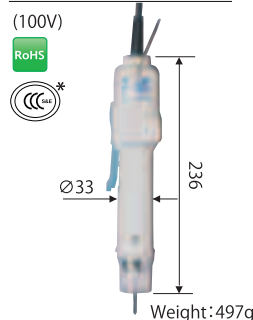
## Transformerless screwdrivers suitable for heavy work

- Transformerless type with built-in controller.
- Can be directly plugged into an AC outlet.
- Light and slim balanced body design that minimizes operator fatigue.
- HIOS H5 bit and hexagonal bit with width across flats 5mm (5HEX) can be used.  
(Not applicable to VZ-1510 and VZ-1501PS)

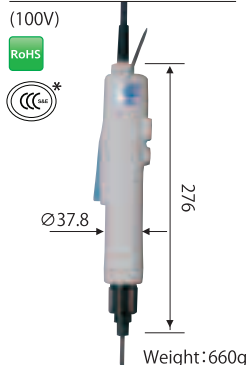
### Lever Start Type

### Lever start type

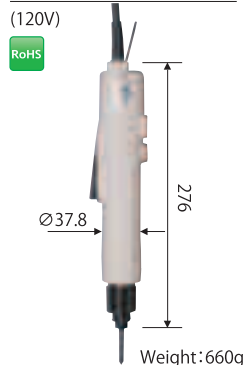
#### VZ-1510



#### VZ-1820 VZ-3012/VZ-3007



#### VZ-1820 VZ-3012/VZ-4506



#### VZ-1812 VZ-3007/VZ-4504

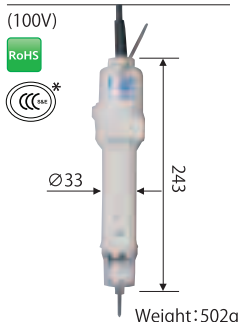


Unit: mm

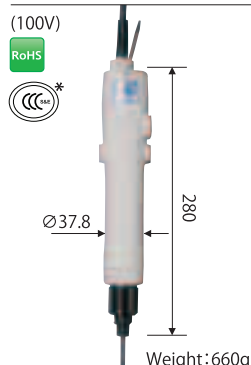
### Push-to-Start Type

### Push-to-start type

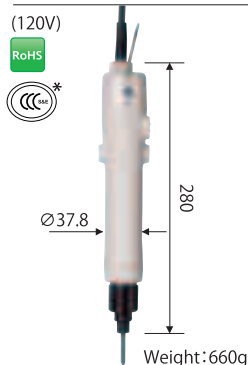
#### VZ-1510PS



#### VZ-1820PS VZ-3012PS/VZ-3007PS



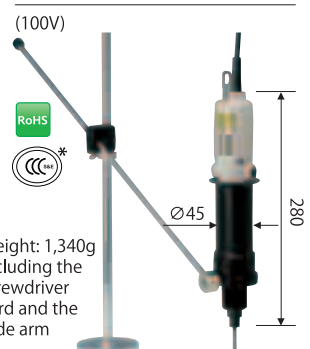
#### VZ-1820PS VZ-3012PS/VZ-4506PS



#### VZ-1812PS VZ-3007PS/VZ-4504PS



#### VZ-4506PS (with shock-less stand)



Unit: mm

### VZ Series Specifications

### Specifications

Lever Start Model		VZ-1510	VZ-1812	VZ-1820	VZ-3007	VZ-3012	VZ-4504	VZ-4506
Push-to-Start Model		VZ-1510PS	VZ-1812PS	VZ-1820PS	VZ-3007PS	VZ-3012PS	VZ-4504PS	VZ-4506PS
AC Input Power (±5%)		100V	220 - 240V	100V 120V	100V 220-240V	100V 120V	220 - 240V	100V 120V
Power Consumption (W)*1		26W	72W	40W 60W	40W 72W	40W 60W	72W	40W 60W
Output Torque Range	N·m	0.15 - 1.5	0.4 - 1.8	0.4 - 1.8	0.9 - 3	0.9 - 3	1 - 4.5	1 - 4.5
	lbf·in	1.3 - 13	3.5 - 16	3.5 - 16	7.8 - 26	7.8 - 26	8.8 - 39	8.8 - 39
	(kgf·cm)	(1.5 - 15)	(4 - 18)	(4 - 18)	(9 - 30)	(9 - 30)	(10 - 45)	(10 - 45)
Torque Switching		Stepless adjustment	Stepless adjustment	Stepless adjustment	Stepless adjustment	Stepless adjustment	Stepless adjustment	Stepless adjustment
Unloaded Rotation Speed (r.p.m) ±10%		1,000	1,200	2,000	700	1,200	400	600
Screw Size (mm)	Machine Screw	2.0 - 4.0	2.6 - 4.0	2.6 - 4.0	3.0 - 5.0	3.0 - 5.0	3.0 - 5.0	3.0 - 5.0
	Tapping Screw	2.0 - 3.0	2.6 - 3.0	2.6 - 3.0	3.0 - 4.0	3.0 - 4.0	2.6 - 4.0	3.0 - 4.0
Bit Drive	HIOS Shank	H4	H5 and 5HEX	H5 and 5HEX	H5 and 5HEX	H5 and 5HEX	—	—
	HEX Shank	5HEX or 1/4HEX	1/4HEX	1/4HEX	1/4HEX	1/4HEX	1/4HEX	1/4HEX
AC Screwdriver Cord Length		3m	3m	3m	3m	3m	3m	3m
Accessories	Bit (one each)	H4	+ #1 (Ø4×40mm) + #2 (Ø4×40mm)					
		H5	+ #1 (Ø5×60mm) + #2 (Ø5×60mm)	+ #1 (Ø5×60mm) + #2 (Ø5×60mm)	+ #1 (Ø5×60mm) + #2 (Ø5×60mm)	+ #1 (Ø5×60mm) + #2 (Ø5×60mm)		
		1/4HEX	+ #1 (5.0×50mm) + #2 (5.0×50mm) — (5.0×50mm)	+ #1 (5.0×50mm) + #2 (5.0×50mm) — (5.0×50mm)	+ #1 (5.0×50mm) + #2 (5.0×50mm) — (5.0×50mm)	+ #1 (5.0×50mm) + #2 (5.0×50mm) — (5.0×50mm)	+ #1 (5.0×50mm) + #2 (5.0×50mm) — (5.0×50mm)	+ #1 (5.0×50mm) + #2 (5.0×50mm) — (5.0×50mm)
	Torque adjustment spring		Red (Ø1.5)					
	Plus screw for adjustment			M2.6 (pan head machine screw)	M2.6 (pan head machine screw)	M2.6 (pan head machine screw)		
Carbon brush (Order code)		1 pair (ACL10-0490)	1 pair (VZ18-0480B)	1 pair (VZ18-0480)	1 pair (VZ18-0480B)	1 pair (VZ18-0480)	1 pair (VZ18-0480B)	1 pair (VZ18-0480)
Flat 2P conversion plug (only for 100V)		1pc (with ground wire)		1pc (with ground wire)	1pc (with ground wire)	1pc (with ground wire)	1pc (with ground wire)	1pc (with ground wire)

\*1 The value of power consumption is approximate estimate. \*2 If you select the hexagonal shank, no bit is included. Please purchase standard-sized hexagonal bits from commercial stores (refer to P. 53).



## Suction (Vacuum) VZQ

By making use of negative pressure, the effort needed to pick up screws can be reduced. This suction attachment can even pick up non-ferrous screws such as stainless steel screws by vacuuming, and improve operation efficiency. It can also be used to remove powder dust generated from screw tightening.

### Order guide

(A) and (B) needed to be purchased separately if you have a suction-type screwdriver.  
(A), (B) and (C) needed to be purchased separately if you want to convert your screwdriver to a suction type.

\* There are several options of sizes of (A) and (B) depending on the screw size. For more information on the size, please refer to P. 58.

	Model	(A) Mouthpiece model	(B) Bits total length	(C) Suction attachment model
AC100V	VZQ-1510	F3-standard 18mm	H4 60mm	VZQ10-SET
AC100V, AC120V, AC220V-240V	VZQ-1812, 1820、3007、 3012	F6-Standard 31mm	H5 100mm	VZQ18-SET



## For use with HIOS screw counters

## VZ-OPC

Models:

(100V) VZ-1510-OPC  
(100V, 120V) VZ-1820-OPC  
(100V) VZ-3007-OPC  
(100V, 120V) VZ-3012-OPC (including PS type)  
(100V) VZ-4506PS-OPC (with shockless stand)

### Compatible counter

HIOS Screw counter  
VZOP-STC



► See P. 41-42 for details.

These screwdrivers prevent you from skipping screw tightening in combination with the screw counter.

- They have a function to output positive rotation, reverse rotation and torque-up (tightening complete) signals.

If you would like to purchase AC220V-240V type, please contact HIOS distributors.



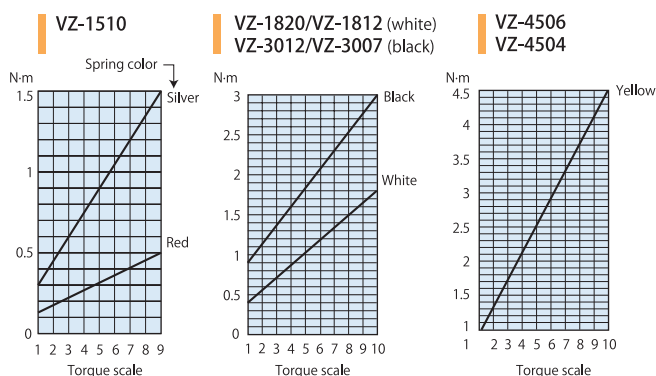
\* CCC certified models

(100V / 220V) ... VZ-1510、VZ-1510PS (100V / 220V) ... VZ-1820、VZ-1820PS  
(100V / 220V) ... VZ-3012、VZ-3012PS (100V / 220V) ... VZ-4504、VZ-4504PS

Note: CCC certified models have different specification and order codes from the standard models.  
Please contact HIOS distributors before ordering.

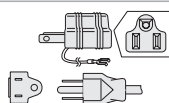
### Output torque guide

(Including PS type)

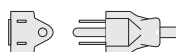


### ● Plug type

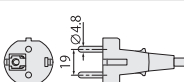
Type A / 100V



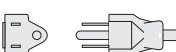
Type A-2 / 120V



Type C / 220V-240V



Type A-3 / 220V-240V



Type S / 220V-240V



### Pistol Attachment

PA-18 (for Lever Start\*)

PA-18PS (for Push-to-Start\*)

This attachment converts a standard screwdriver to a pistol-style screwdriver, most suitable for horizontal tightening.



RoHS

\* Not applicable to VZ-1510 and VZ-1510PS

### Angle Attachment

ANGLV-Z-CH1 (For HIOS H5 and 5HEX drive\*)

ANGLV-Z-XX1 (For 1/4 HEX drive)

This attachment is most suitable when the available space is very small for screw tightening. This attachment can be fitted to the tip of the screwdriver.



The output torque should be 1.8N·m or lower when you use this attachment.

RoHS

Compatible screwdrivers:

VZ-1820 VZ-3007 VZ-3012 (Lever Type only)

\*The bit drive for ANGLV-Z-CH1 is H5.  
Please contact HIOS distributors for ANGLV-Z-CH1 to use with 5HEX drive bits.

### PS Front Cover Ring

VZ18-0960

This helps you to easily apply load in the axial direction to reduce workload.



RoHS

### Protective Cover for Torque Adjustment Nut

VZ18-0970

This cover prevents deviation from set torque due to a shock or malfunction.

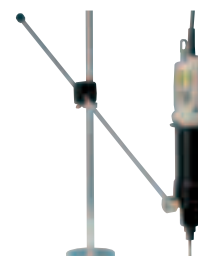


RoHS

### Shockless Stand

VZ18PS-SAS

The shockless stand absorbs reaction force created by the clutch. This stand can be used only with Push-to-Start-type screwdrivers.



RoHS

## Ultrahigh Torque Brushless® Screwdrivers

# VBH Series (AC Type) Transformerless



## Hammer-head screwdriver ideal for assembling products requiring high torque

- These screwdrivers can handle high-torque screw tightening that used to be only done by pneumatic screwdrivers.
- can always tighten screws with stable torque.
- The shockless stand absorbs reaction force created by the clutch.

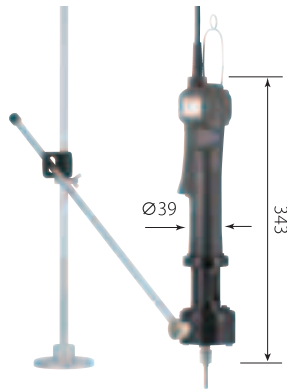
### Lever Start Type

### Lever Start Type

#### VBH-1820 / VBH-3012 (with shockless stand)

Unit:mm

(100V)   
(120V)  
(220-240V)



Weight: 1,900g  
Including the  
screwdriver cord and  
slide arm

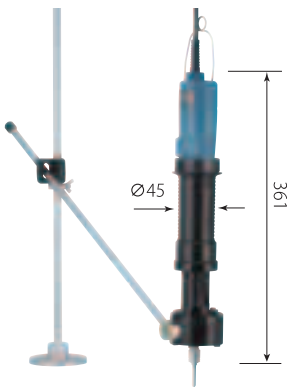
### Push-to-Start Type

### Push-to-Start Type

#### VBH-1820PS / VBH-3012PS (with shockless stand)

Unit:mm

(100V)   
(120V)  
(220-240V)



Weight: 1,900g  
Including the  
screwdriver cord and  
slide arm

### VBH Series Specifications

### Specifications

Lever Start Model		VBH-1820			VBH-3012		
Push-to-Start Model		VBH-1820PS			VBH-3012PS		
Input Power (±5%)		100V	120V	220-240V	100V	120V	220-240V
Power Consumption (W)		40W	40W	32W	40W	40W	32W
Controlled Torque Range	N·m	3 - 8			4 - 10		
	lbf·in	26 - 70			35 - 100		
	(kgf·cm)	(30 - 80)			(40 - 100)		
Unloaded Rotation Speed(r.p.m) ±10%		470			270		
Screw Size (mm)	Machine Screw	5.0 - 6.0			5.0 - 6.0		
	Tapping Screw	5.0 - 6.0			5.0 - 6.0		
Bit Drive	HEX Shank	1/4HEX					
Cord Length		3m					
Accessories		Hollow set screws (M4 x 6mm) 3pcs L-shaped HEX wrench (width between flats 2mm) 1pc					
		Stand Assy	Pole, stand base, shockless rest, thumbscrew (1pc each)				
		Arm Assy	Shockless holder, slide arm with arm cap, turret, turret fixing screw (1pc each)				

### Variations

### VBH Applicable Drivers

#### For use with HIOS screw counters

## VBH-OPC

Models:  
(100V,120V) VBH-1820-OPC  
(100V,120V) VBH-3012-OPC  
(Including PS type)

These screwdrivers prevent you from skipping screw tightening in combination with the screw counter.

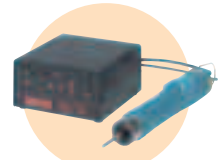
- They have a function to output positive rotation, reverse rotation and torque-up (tightening complete) signals.

#### Compatible counter

HIOS screw counter

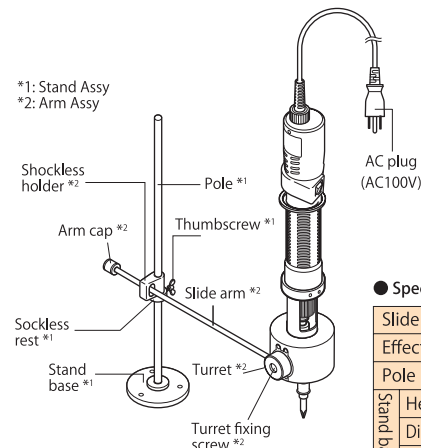
**VZOP-STC**

▶ See P. 41-42 for details.



If you would like to purchase AC220V-240V type, please contact HIOS distributors.

### Main Components of Shockless Stand



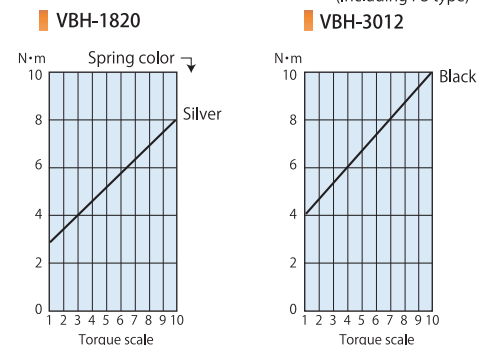
#### Specifications

Stand base	Slide arm length	530
	Effective sliding range	475
	Pole height	570
	Height	8
	Diameter of fixing bolt hole	Ø6
Stand base	Distance between fixing bolt holes	52 *

\* One side of the equilateral triangle Unit:mm

#### Output torque guide

(Including PS type)



To customers who consider purchasing  
VBH (Lever Type) or VBH-OPC (Lever Type)

Please contact HIOS  
distributors beforehand.

## Ultrahigh Torque Brushless Screwdrivers

# VZH Series (AC Type) Transformerless

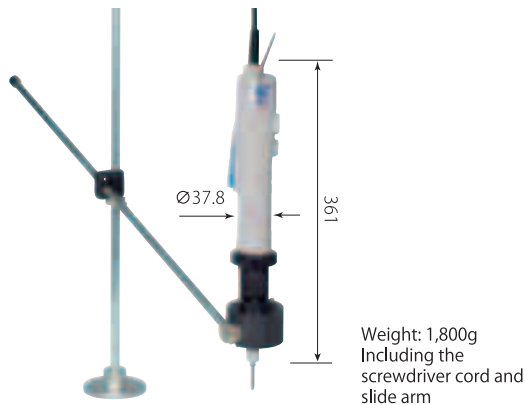
### Lever Start Type

### Lever Start Type

Unit : mm

#### VZH-1820/VZH-3012 (with shockless stand)

(100V)   
(120V)



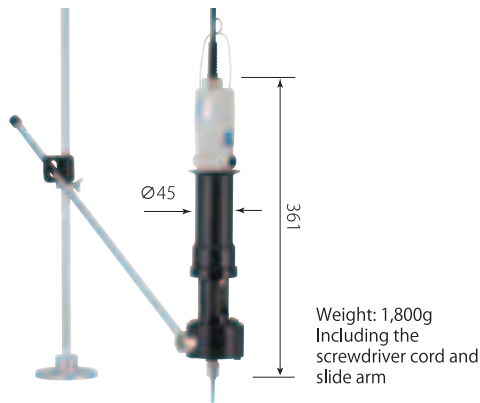
### Push-to-Start Type

### Push-to-Start Type

Unit : mm

#### VZH-1820PS/VZH-3012PS (with shockless stand)

(100V)   
(120V)



### VZH Series Specifications

### Specifications

Lever Start Model		VZH-1820		VZH-3012	
Push-to-Start Model		VZH-1820PS		VZH-3012PS	
Input Power (±5%)		100V	120V	100V	120V
Power Consumption (W)		40W	60W	40W	60W
Controlled Torque Range	N·m	3 - 8		4 - 10	
	lbf·in	26 - 70		35 - 100	
	(kgf·cm)	(30 - 80)		(40 - 100)	
Unloaded Rotation Speed(r.p.m) ±10%		470		270	
Screw Size (mm)	Machine Screw	5.0 - 6.0		5.0 - 6.0	
	Tapping Screw	5.0 - 6.0		5.0 - 6.0	
Bit Drive	HEX Shank	1/4HEX			
Cord Length		3m			
Accessories		Hollow set screws (M4 x 6mm) 3pcs L-shaped HEX wrench (width between flats 2mm) 1pc			
		Stand Assy	Pole, stand base, shockless rest, thumbscrew (1pc each)		
		Arm Assy	Shockless holder, slide arm with arm cap, turret, turret fixing screw (1pc each)		

### Variations

### VZH Applicable Drivers



#### For use with HIOS screw counters

## VZH-OPC

Models:  
(100V,120V) VZH-1820-OPC  
(100V,120V) VZH-3012-OPC  
(Including PS type)

These screwdrivers prevent you from skipping screw tightening in combination with the screw counter.

- They have a function to output positive rotation, reverse rotation and torque-up (tightening complete) signals.

#### Compatible counter

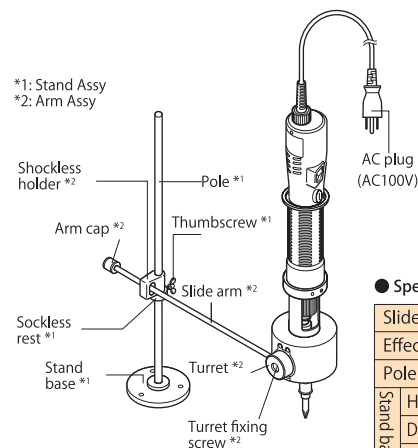
HIOS screw counter

**VZOP-STC**

▶ See P. 41-42 for details.



### ● Main Components of Shockless Stand



#### ● Specifications

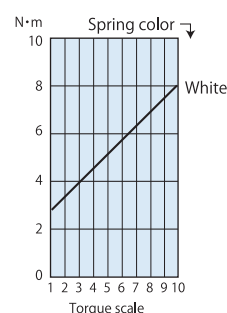
Slide arm	Slide arm length	530
	Effective sliding range	475
	Pole height	570
	Height	8
Stand base	Diameter of fixing bolt hole	Ø6
	Distance between fixing bolt holes	52*

\* One side of the equilateral triangle Unit:mm

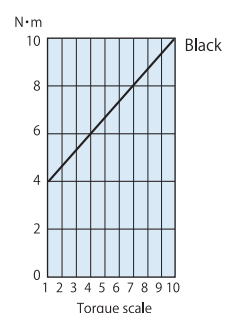
### Output torque guide

((Including PS type))

#### VZH-1820



#### VZH-3012



To customers who consider purchasing VZH (Lever Type) or VZH-OPC (Lever Type)

Please contact HIOS distributors beforehand.

## Brushless® Screwdrivers for Automatic Assembly Machines

# BLF

## BLF Series

(DC Type)



## Simple structure provides high durability and easy maintenance!

- Simplified controls and increased durability.
- Tools provide accurate torque for uniform fastening quality.
- The BLFQ and BLFR versions are available for vacuum pick up, the new BLFR versions are designed for fasteners located in deep recesses and support the bit to minimize run-out.
- The power supply can run the tool in reverse and switch between two speed settings.

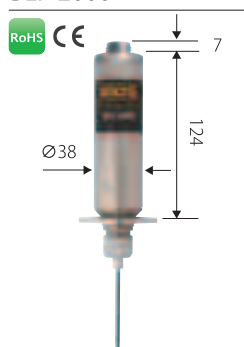


### BLF-Series

### BLF- Series

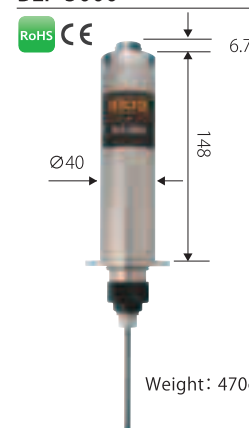
Unit : mm

#### BLF-2000



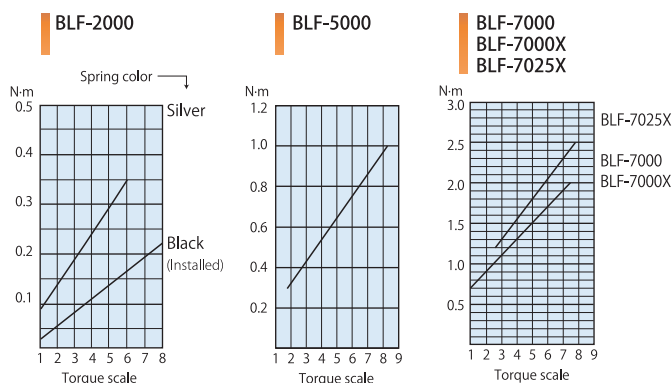
Weight: 315g

#### BLF-5000



Weight: 470g

### Output torque guide ( HI input)



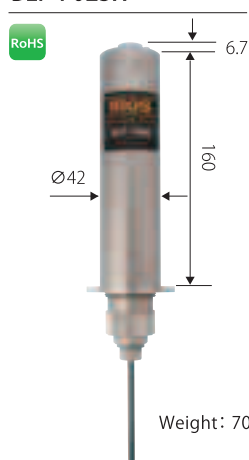
#### Notes:

\*For the torque adjustment spring for BLF-2000, two types are available. The silver spring for high torque (accessory), the black spring for low torque (installed in the main body). Please select a suitable one for your work.

•The torque lines in the guideline tables show values measured when the rotation speed is set to 30. Use them for guidance.

•Torque measurement is performed using a combination of a torque meter (HP) and fidaptor manufactured by HIOS.

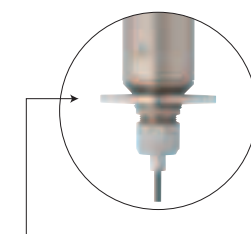
#### BLF-7000/BLF-7000X BLF-7025X



Weight: 700g

#### How to mount the flange

The flange is designed to be compatible with all the screwdriver models. This makes changing to another model smooth.



51-Ø5.5×2 t4  
(The dimensions are common to all the screwdriver models.)

## Specifications of Screwdrivers for Automatic Assembly Machines

## Specifications

Model	Standard		BLF-2000	BLF-5000	BLF-7000	BLF-7000X	BLF-7025X
	Suction	BLFQ BLFR	BLFQ-2000	BLFQ-5000 BLFR-5000	BLFQ-7000	BLFR-7000X	BLFR-7025X
Controlled Torque Range	N·m		0.03 - 0.35	0.3 - 1	0.7 - 2	0.7 - 2	1 - 2.5
	lbf·in		0.26 - 3.0	2.6 - 8.8	6 - 17	6 - 17	9 - 22
	(kgf·cm)		(0.3 - 3.5)	(3 - 10)	(7 - 20)	(7 - 20)	(10 - 25)
Torque Switching			Stepless adjustment	Stepless adjustment	Stepless adjustment	Stepless adjustment	Stepless adjustment
Unloaded Rotation Speed (r.p.m) ±10%	LOW (30V) 11 steps (05 to 15)		120 - 345	115 - 320	150 - 450	150 - 450	120 - 350
	HI (20V) 11 steps (20 to 30)		690 - 975	660 - 940	495 - 735	495 - 735	400 - 600
Screw Size (mm)	Machine Screw		1.0 - 2.3	2.0 - 3.0	3.0 - 4.0	3.0 - 4.0	3.0 - 4.0
	Tapping Screw		1.0 - 2.0	2.0 - 2.6	3.0 - 4.0	3.0 - 4.0	3.0 - 4.0
Bit Drive	Standard		HIOS Shank H4	HIOS H5 and shank 5HEX	HIOS Shank H5	HEX Shank 1/4HEX	HEX Shank 1/4HEX
	Suction	BLFQ BLFR				HEX Shank 1/4HEX	HEX Shank 1/4HEX
Accessories	Driver cord	Length (m)	3m(10P)	3m(10P)	3m(10P)	3m(10P)	3m(10P)
		Weight (g)	320g	320g	320g	320g	320g
		P/N	BLF7-0611	BLF7-0611	BLF7-0611	BLF7-0611	BLF7-0611
	Spring		Silver				





## Suction (Vacuum) BLFQ

By making use of negative pressure, the effort needed to pick up screws can be reduced. This suction attachment can even pick up non-ferrous screws such as stainless steel screws by vacuuming, and improve operation efficiency. It can also be used to remove powder dust generated from screw tightening.

### Order guide

(A) and (B) needed to be purchased separately if you have a suction-type screwdriver.  
(A), (B) and (C) needed to be purchased separately if you want to convert your screwdriver to a suction type.

\* There are several options of sizes of (A) and (B) depending on the screw size. For more information on the size, please refer to P. 58.

Model	(A) Mouthpiece model	(B) Bits total length	(C) Suction attachment model	Accessories:
BLFQ-2000	F3-Standard 18mm	H4 60mm	BLFQ2-SET	Tube 3.5m
BLFQ-5000	F6-Standard 31mm	H5 100mm	BLFQ5-SET	(I/D: Ø4 X O/D: Ø7)
BLFQ-7000			BLFQ7-SET	

Note: If the bit has the hexagonal shank with the width across flats of 6.35mm (1/4HEX), the suction attachment cannot be used.



## Deep Hole Fastening BLFR

(Special order)

The BLFR Attachment is ideal for fasteners in recesses locations. Torque adjustment is possible without removing the BLFR attachment, or removing the driver from the machine. The BLFR attachment uses threaded insert style bits which means replacement bits are less costly than long bits.

Models:

BLFR-5000 BLFR-7000X BLFR-7025X

If you order BLFR

See P. 59

## Power supplies for brushless drivers for automated machines

- 2WS(2 Speed) and REV(Reversing) capabilities formerly optional are now standard in the power supply.
- Can be connected to external controls, such as a PLC or sequencer to operate the tool in forward, reverse or shift to a lower speed.

### BLT-AY-61 (for one screwdriver)

Applicable screwdrivers:  
BLF-2000, BLF-5000



### BLT-AY-71 (for one screwdriver)

Applicable screwdrivers:  
BLF-7000, BLF-7000X, BLF-7025X



#### Specifications

Model	BLT-AY-61	BLT-AY-71
Primary input power source	AC100-240V, 47-63Hz	
Secondary output voltage	LOW: 5V-15V, HI: 20V-30V (LOW and HI: switchable in 11 steps each)	
External dimensions (mm)	202(W) × 143(D) × 87(H)mm	
Weight (Kg)	1.75kg	
Accessories	Power supply cord 1.8m with ground wire (1pc), Terminal block connector 1pc	
Plug Type	A-1 / A2 / A3 / C / BF / S	

\* If you want to tighten reverse screws, a special screwdriver for automatic assembly machine compatible with reverse screw is required. Please contact HIOS distributors.

\* The power supply should be compatible with your screwdriver. Please check the combination before purchase.

## Driver Cord BLF7-0611



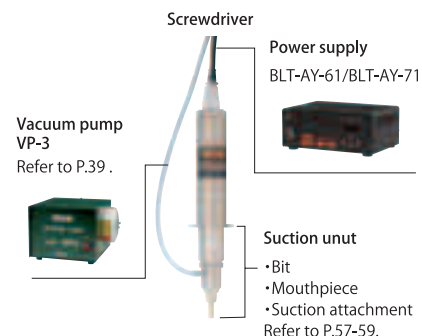
Compatible screwdrivers:  
BLF-2000, BLF-5000, BLF-7000  
BLF-7000X, BLF-7025X



#### Specifications

Cord length	3m (10P)
Weight	320g

## Construction of suction (Vacuum pick up) screwdrivers



## Relation between the number of rotation (r.p.m) of the screwdriver and torque (reference values)

### BLF-2000/BLF-5000

\* For the unloaded rotation speed, consider the value in the chart with the range of ±10%.

Model			BLF-2000		BLF-5000		
Rotation setting		r.p.m	Torque (N·m)		r.p.m	Torque (N·m)	
			Max.	Min.		Max.	Min.
LOW 11 steps	05	120	0.35	0.03	115	0.6	0.3
	06	150			135		
	07	165			150		
	08	187			180	0.8	
	09	210			195		
	10	232			210		
	11	270			240	1	
	12	285			255		
	13	300			285		
	14	315			300		
	15	345			320		
HIGH 11 steps	20	690	0.35	0.03	660	1	0.3
	21	720			690		
	22	750			720		
	23	780			750		
	24	810			780		
	25	825			810		
	26	870			840		
	27	975			940		
	28	975			940		
	29	975			940		
	30	975			940		

### BLF-7000/BLF-7000X/BLF-7025X

\* For the unloaded rotation speed, consider the value in the chart with the range of ±10%.

Model		BLF-7000 BLF-7000X			BLF-7025X		
Rotation setting		r.p.m	Torque (N•m)		r.p.m	Torque (N•m)	
			Max.	Min.		Max.	Min.
LOW 11 steps	05	150	1.1	0.7	120	1.4	1
	06	180			140		
	07	210			160		
	08	240			180		
	09	270			210		
	10	300	230		2		
	11	330	250				
	12	360	280				
	13	390	300				
	14	420	320				
	15	450	350				
HIGH 11 steps	20	495	2	0.7	400	2.5	1
	21	510			420		
	22	540			440		
	23	570			470		
	24	600			490		
	25	615			510		
	26	645			540		
	27	735			600		
	28	735			600		
	29	735			600		
	30	735			600		

Brushed Screwdriver for Automatic Assembly Machines

**CLF/αF**  
**CL-A** Series  
(DC Type)

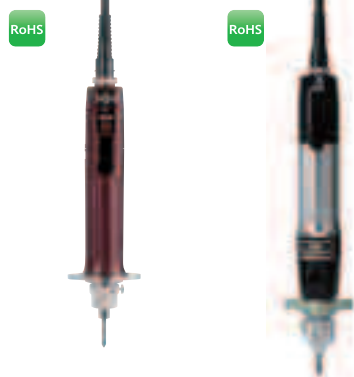
Most suitable for automation assembly Machines because it can be installed into the XY robot

- Stable torque accuracy helps uniform screw tightening for automation.
- Easy to install to the existing system .

### Low torque CLF Series

CLF-3000 (HH•HN)  
CLF-4000 (HH•XH / HN•XN)  
CLF-6000 (HH•XH / HN•XN)  
CLF-6500 (HH•XH / HN•XN)  
CLF-7000 (HH•XH / HN•XN)

CLF-3000  
CLF-4000  
CLF-6000  
CLF-6500  
CLF-7000



### High-speed αF Series

αF-4500 (HH•XH / HN•XN)  
αF-5000 (HH•XH / HN•XN)  
αF-6500 (HH•XH / HN•XN)

αF-4500  
αF-5000  
αF-6500



### High torque CL-A Series

CL-816A (XH / XN)  
CL-825A (XH / XN)  
CL-850A (XH / XN)

CL-816A  
CL-825A  
CL-850A



## How to read a model number of a screwdriver for automatic assembly machines

Classification of bit type  
Classification of compatible power supply

Classification of bit type

Ⓜ HIOS shank (H4 or H5)

Ⓧ HEX shank (1/4HEX)

Classification of compatible power supply

Ⓜ HIOS power supply

Ⓝ Nitto Seiko power supply

### ●List of symbol combinations

ⓂⓂ	HIOS shank + HIOS power supply
ⓂⓃ	HIOS shank + Nitto Seiko power supply
ⓍⓂ	HEX shank + HIOS power supply
ⓍⓃ	HEX shank + Nitto Seiko power supply

## Specifications of screwdrivers for automatic assembly machines

### Specifications

Model		CLF-3000	CLF-4000	CLF-6000	CLF-6500	CLF-7000	αF-4500	αF-5000	αF-6500	CL-816A	CL-825A	CL-850A
Controlled Torque Range	N • m	0.03 - 0.15	0.1 - 0.35	0.3 - 0.6	0.4 - 1	0.5 - 1.5	0.4 - 0.6	0.4 - 0.75	0.5 - 1.1	1.5 - 2.5	2 - 4	2.4 - 4.5
	lbf • in	0.3 - 1.3	0.9 - 3.1	3 - 5.3	3.5 - 9	4.3 - 13	3.5 - 5.3	3.5 - 6.6	4.3 - 9.7	13 - 22	17 - 35	21 - 39
	(kgf • cm)	0.3 - 1.5	1 - 3.5	3 - 6	4 - 10	5 - 15	4 - 6	4 - 7.5	5 - 11	15 - 25	20 - 40	24 - 45
Torque Switching		Stepless adjustment	Stepless adjustment	Stepless adjustment	Stepless adjustment	Stepless adjustment	Stepless adjustment	Stepless adjustment	Stepless adjustment	Stepless adjustment	Stepless adjustment	Stepless adjustment
Unloaded Rotation Speed(r.p.m) ±10%	HI (about 30V)	1,000	1,000	750	850	780	1,700	1,100	1,700	550	370	570
	LOW (about 20V)	560	560	400	440	420	940	600	950	310	210	320
Screw Size (mm)	Machine Screw	1.0 - 2.0	1.4 - 2.6	2.0 - 3.0	2.0 - 3.0	2.0 - 4.0	2.0 - 3.0	2.0 - 3.0	3.0 - 4.0	3.0 - 4.0	4.0 - 5.0	4.0 - 5.0
	Tapping Screw	1.0 - 1.7	1.4 - 2.3	2.0 - 2.6	2.0 - 3.0	2.0 - 4.0	2.0 - 2.6	2.0 - 3.0	2.6 - 3.0	3.0 - 4.0	4.0 - 5.0	4.0 - 5.0
Bit Drive	HIOS Shank	H4	H4	H5	H5	H5	H4	H4	H5	—	—	—
	HEX Shank	—	1/4HEX	1/4HEX	1/4HEX	1/4HEX	1/4HEX	1/4HEX	1/4HEX	1/4HEX	1/4HEX	1/4HEX
Total Length (mm)		182	197	234	234	266	207	207	248	251	251	261
Grip Diameter(Ø)		Ø32.5	Ø32.5	Ø37	Ø37	Ø37	Ø32.5	Ø32.5	Ø37	Ø50	Ø50	Ø62
Weight(g)		400g	430g	610g	670g	754g	430g	430g	670g	1,270g	1,270g	1,700g
Accessories	Spring	Gold	Blue	White	White	Yellow				White	Yellow	Yellow
	Cord length(m)	3m (5P)	3m (5P)	3m (5P)	3m (5P)	3m (5P)	3m (5P)	3m (5P)	3m (5P)	3m (4P5P)	3m (4P5P)	3m (4P4P)
	Carbon brush (Order code)	1 pair (A45-0420)	1 pair (CL4-0420)	1 pair (CL65-0490)	1 pair (CL65-0490)	1 pair (CL65-0490)	1 pair (A45-0420)	1 pair (A45-0420)	1 pair (CL65-0490)	1 pair (CL816-0421)	1 pair (CL816-0421)	1 pair (CL850-0381)

\* The rotation speed may slightly differ from the specifications depending on the input voltage. Please refer to the value in the specifications only as a guide.

## Suction (Vacuum)

CLFQ  
αFQ

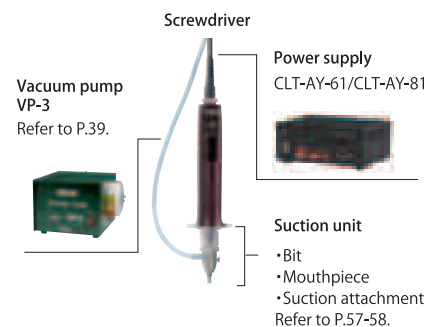
### Order guide

(A) and (B) needed to be purchased separately if you have a suction-type screwdriver.  
(A), (B) and (C) needed to be purchased separately if you want to convert your screwdriver to a suction type.

\* There are several options of sizes of (A) and (B) depending on the screw size. For more information on the size, please refer to P. 58.

Model	(A) Mouthpiece model	(B) Bits total length	(C) Suction attachment model
CLF-3000, CLF-4000 αF-4500, αF-5000	F3-Standard 18mm	H4 60mm	CLFQ4-SET
CLF-6000, CLF6500 CLF-7000, αF-6500	F6-Standard 36mm	H5 100mm	CLFQ65-SET

## Construction of suction (Vacuum pick up) screwdrivers



### About Automatic Assembly Machine

For details, please refer to the information guide or HIOS website.

[www.hios.com](http://www.hios.com)

**HIOS**  
Information Guide  
for Automatic  
Assembly  
Machines

## Left-hand screw R

The screwdrivers for left-hand screws (CCW rotation).

## Oil seal O

The screwdriver that has a mechanism to prevent gear grease penetration into the motor when the screwdriver is installed facing upward.

## One-way clutch OW

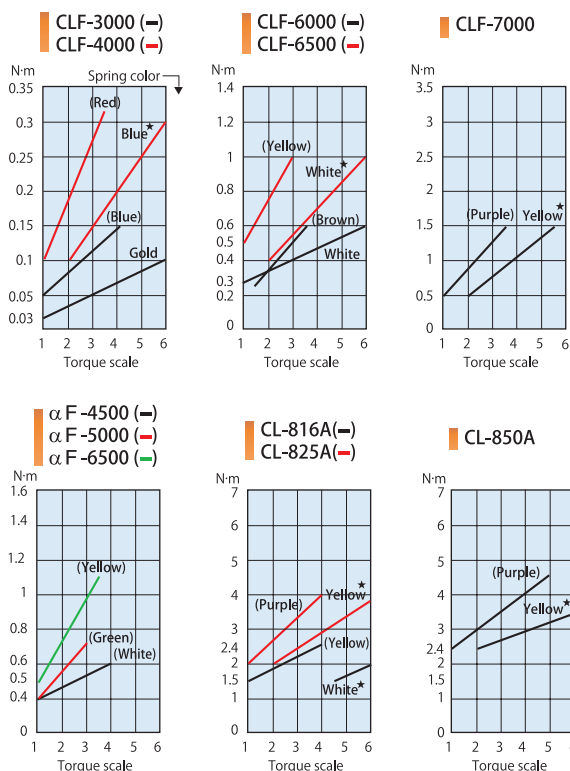
When both forward and reverse rotations are required, reverse rotation has larger torque than forward rotation.

## Other special specifications

We also supply screwdrivers with low speed rotation (gear ratio: 25:1) or noiseless. Please contact HIOS distributors.

\* If you order variations other than the suction type (e.g., R/OL/OW), please contact HIOS distributors.

## Output torque guide ( HI input )



Note: There are two types of spring for torque adjustment: for HI (originally fixed to the unit, marked in brackets) and for Low (accessory). Use one of them depending on your operating conditions.

Note 1: The number of included torque adjustment springs varies depending on the model.

Note 2: For the screwdrivers with Nitto Seiko specifications, the springs with star marks are not included.

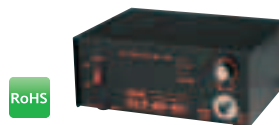
## Power Supply for Brushed Screwdrivers for Automatic Assembly Machines

Please use them with screwdrivers for automatic assembly machines.

100V only

### CLT-AY-61 (for one screwdriver)

Compatible screwdrivers:  
CLF-3000, CLF-4000, CLF-6000, CLF-6500  
CLF-7000, αF-4500, αF-5000, αF-6500



### CLT-AY-81 (for one screwdriver)

Compatible screwdrivers:  
CL-816A, CL-825A, CL-850A



### Specifications

Model	CLT-AY-61	CLT-AY-81
Primary input power source	AC100V, 120V, 220-240V ±5%, 50/60Hz	AC100V ±5%, 50/60Hz
Secondary output voltage	About DC17-30V (stepless adjustment)	
External dimensions (mm)	232(W) × 177(D) × 106(H)mm	320(W) × 220(D) × 154(H)mm
Weight(kg)	4.2kg	13.5kg
Accessories	Power supply cord 1.8m with ground wire (1pc), Spare fuse (1pc), Fork terminals (5pcs)	
Plug Type	A-1 A-2 C / BF / S	A-1

### Optional specifications for power supply

#### 2WV type

Low rotation (5 to 15V) can be externally controlled.  
Models: CLT-AY-61-2WV / CLT-AY-81-2WV

#### REV type

Reverse rotation can be externally controlled.  
Models: CLT-AY-61-REV / CLT-AY-81-REV

#### 2WV+REV type

Models: CLT-AY-61-REV-2WV / CLT-AY-81-REV-2WV

Note: These options cannot be added after purchase.

## Screw Feeder FF503 Equipped Brushed Screwdriver

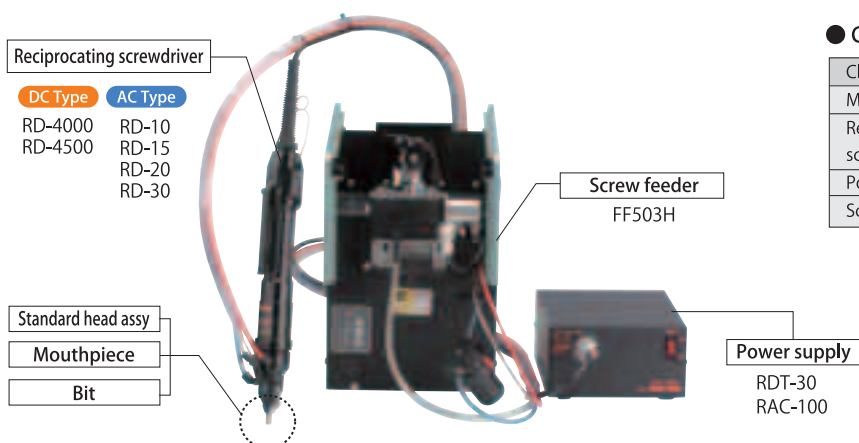
# RN53

Recipro Series  
(DC Type)  
(AC Type)

## Unique automatic feeding system allows wider variations of screw tightening.

- Ideal for fasteners in a small space or deep recess.
- Easy maintenance because the screwdriver, power supply and hose assy can be separated.

### Configuration of Recipro System



### ● Combination table

Classification	DC Type		AC Type	
Model	RN53-200	RN53-260	RN53-300	RN53-400
Recipro screwdriver	RD-4000	RD-4500	RD-10 RD-15	RD-20 RD-30
Power supply	RDT-30		RAC-100	
Screw feeder	FF503H		FF503H	

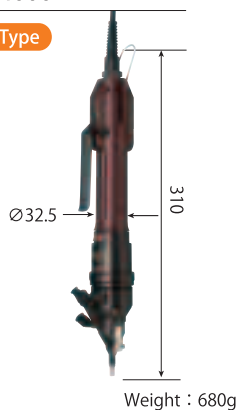
### ● Lever Start Type

### Lever start type

Unit:mm

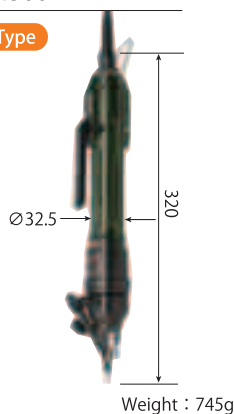
#### RD-4000

DC Type



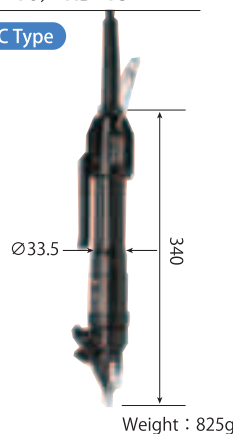
#### RD-4500

DC Type



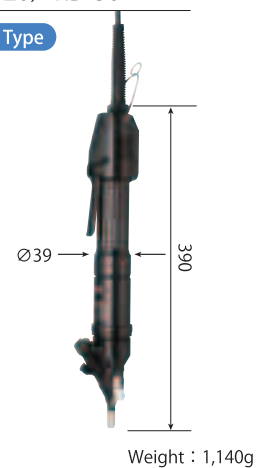
#### RD-10 / RD-15

AC Type



#### RD-20 / RD-30

AC Type



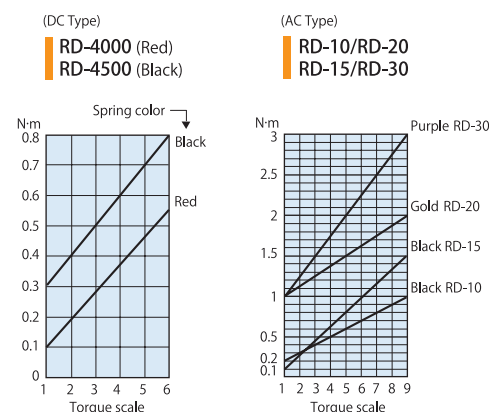
### ● Specifications

			DC Type		AC Type			
Model			RN53-200	RN53-260	RN53-300		RN53-400	
Recipro Screwdriver			RD-4000	RD-4500	RD-10	RD-15	RD-20	RD-30
Output Torque Range	N · m		0.1 - 0.55	0.3 - 0.8	0.2 - 1	0.2 - 1.5	1 - 2	1 - 3
	lbf · in		0.9 - 4.8	2.6 - 7	1.7 - 9	1.7 - 13	9 - 17.4	9 - 26
	(kgf · cm)		(1 - 5.5)	(3 - 8)	(2 - 10)	(2 - 15)	(10 - 20)	(10 - 30)
Unloaded Rotation Speed (r.p.m) ± 10%			(HI) 1,000 (LOW) 690	(HI) 1,700 (LOW) 1,200	1,500	1,000	1,600	1,000
Screw Size (mm)	Screw type		Machine screw & tapping screw					
	Nominal diameter		M2.0	M2.6	M3.0	M3.0	M4.0	M4.0
	Max length		14	14	14	14	14	14
	Min length	Pan	6.0	7.0	8.0	8.0	8.0	8.0
		Binding	6.0	7.0	8.0	8.0	8.0	8.0
		Flat head	8.0	9.0	9.0	9.0	12.0	12.0
Bit Drive (base diameter)			Ø3	Ø3*, Ø4*	Ø4	Ø4	Ø4	Ø4
Cord length (m)			2m (6P)	2m (6P)	2m (7P)	2m (7P)	2m (7P)	2m (7P)
Accessories			Mouthpiece, bit, hand-driver, L-shaped HEX wrench, hose & screwdriver cord (with mist regulator), power cable, O-ring (1pc each)					

\* The bit type (Ø3) (base diameter) of RN53-260 is for M2.6 (pan head) and the bit type (Ø4) is for M2.6 (binding head).

Note: You can select a suitable screwdriver according to the screw diameter when you use AC-type reciprocating screwdriver.

### Output torque guide



## Power Supply

### DC Type

#### RDT-30 (DC20V/30V)

Reciprocating screwdriver  
RD-4000 / RD-4500



### AC Type

#### RAC-100 (DC100V)

Reciprocating screwdriver  
RD-10 / RD-15 / RD-20 / RD-30



#### ● Specifications

Model	RDT-30	RAC-100
Input power source	AC100V 50/60Hz	AC100V 50/60Hz
Output voltage	DC20 / 30V	DC100V
Screwdriver rotation speed setting	2-way (HI/LOW)	
External dimensions (mm)	170(W)×240(D)×100(H)	170(W)×240(D)×100(H)
Weight (kg)	4.2kg	2.5kg
AC power cord (m)	1.8m with ground wire (3L2P)	

## Screw Feeder

### FF503H

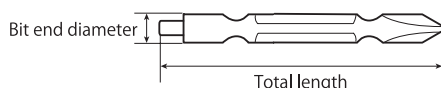
- Feeding is adjustable according to screw type and size.
- The air feed system automatically and instantly feeds a screw to the bit.
- The vibrational frequency and amplitude of the feeder is adjustable.



#### ● Specifications

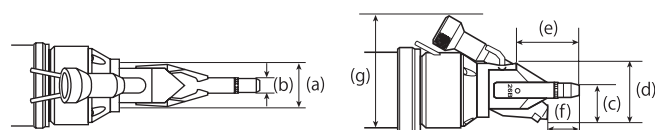
Model	FF503H	
Air pressure control unit	Air pressure (Mpa)	0.4
	Input power supply	AC100V 50/60Hz
	Screw feeding hose length (m)	2.5m
Hopper capacity (CC)	About 450CC	
External dimensions (mm)	220(W)×412(D)×334.6(H)	
Weight (kg)	18kg	

### Bit (for Recipro Screwdrivers)



Model	Nominal diameter	Bit details					
		Screw type	Bit end	+ size	Bit tip	Shaft shape	Total length (mm)
RN53-200	M2.0	Pan/binding	Ø3	# 1	Ø3	Straight	35
RN53-260	M2.6	Pan	Ø3	# 1	Ø3		35
		Binding	Ø4	# 1	Ø4		40
RN53-300	M3.0	Pan/binding	Ø4	# 2	Ø4		40
RN53-400	M4.0	Binding	Ø4	# 2	Ø4		40

### Head Assy Specifications



(a) to (g) in the table correspond to those in the figures above.

Unit : mm								
Model	Screw type	Detailed dimensions						
		(a)	(b)	(c)	(d)	(e)	(f)	(g)
RN53-200	Pan/binding	19.8	Ø7.0	11.8	25	43	23.5	60
RN53-260	Pan	19.8	Ø7.0	11.8	25	43	23.5	60
	Binding	23	Ø8.0	15.5	30.5	37	18	62
RN53-300	Pan/binding	23	Ø8.0	15.5	30.5	37	18	62
RN53-400	Pan/binding	27	Ø10	17.5	32.8	46	28.5	69

### Cylinder variations

Model	Screw type	Standard	Long	Super-long
RN53-200	Pan/binding			
RN53-260	Pan			
RN53-260	Binding			
RN53-300	Pan/binding			
RN53-400	Pan/Binding			

To customers who consider purchasing Recipro Series

Please feel free to contact HIOS distributors.



# Peripherals and Accessories

## Screwdriver Cord

**1.5m (5P)** Compatible models:  
BLG-4000, BLG-5000, BL-3000, BL-5000 Series,  
CL-2000, CL-3000, CL-4000, SS-2000,  
SS-3000, SS-4000, α-4500, α-5000

**2m (5P)** Compatible models:  
BL-7000 Series, CL-6000, CL-6500, CL-7000  
SS-6500, SS-7000, α-6500

**3m (5P)** Compatible models:  
Screwdrivers for automatic assembly machine  
CLF-6000, CLF-6500, CLF-7000, αF-6500



## Flexible Screwdriver Cord

Flexible cord that endures kinking and bending.

**2m (5P)** Compatible models:  
BLG, BL, CL, SS, α Series

**3m (6P)** Compatible models:  
BLG-BC1 Series  
BL- OPC Series  
BLG- OPC Series



## Curled Cord

Elastic and flexible cord

**Length at maximum extension**

**7.5m (5P)** Compatible models:  
BL, CL, SS, α Series



## Extension Cord

Use this cord as an extension cord when the standard screwdriver cord is not long enough.

**3m (5P)** Compatible models:  
BLG, BL, CL, SS, α Series

**5m (5P)** Compatible models:  
BLG, BL, CL, SS, α Series



For suction type screwdrivers

## Vacuum Pump

### VP-3

A vacuum is generated to pick up and hold the screw on the bit tip.

#### Specifications

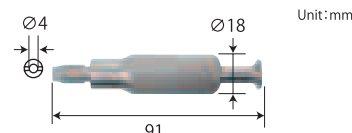
Model No.	VP-3
Primary input power	AC100V, 120V, 220-240V ± 5%
Maximum power consumption	39W ± 20%
Ultimate vacuum	-350mm Hg
Air capacity	25L/min
Dimensions(mm)	200 × 188 × 142(H)
Weight(kg)	3.8kg
Plug type	A-1 / A-2 / A-3 / C / BF / S



## Aluminum Handle Screwdriver

### WOOD-4AL

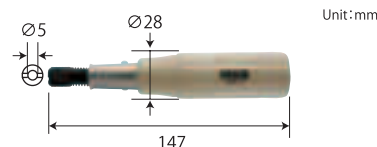
Applicable bit:  
HIOS H4(Ø4)



## Wooden Handle Screwdriver

### WOOD-5

Applicable bit:  
HIOS H5(Ø5)



Screwdriver can be securely gripped and doesn't slip!

## Grip Ring

- Reduce operation fatigue by preventing grip slip.
- Multiple color rings can be used for various distinctions.
- Protects the screwdriver from shock and scratches.
- Can be removed cleanly without damage.

Description	Color (order codes)
Single color	Red (GRIP-R10), Green (GRIP-G10)
(10 pcs in 1 pack)	Blue (GRIP-BL10), Yellow (GRIP-Y10)
	White (GRIP-W10)

#### Grip dimensions

Unit:mm



## Stripped Screw Remover

### HIOS Spike® Bit (for precision screws)

#### SPK Series

This is a specially designed tool to easily remove screws with damaged recesses. Ideal for unscrewing high-end products such as HDD.

Grip color: Yellow

Grip color: Blue

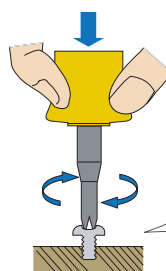
Grip color: Red



Applicable screw size:  
M1.2-M1.4

Applicable screw size:  
M1.4-M1.7

Applicable screw size:  
M1.7-M2.0



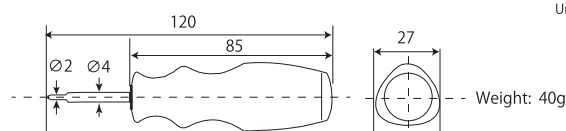
**It's easy to use !**

Push the bit vertically and turn it very slowly.

Description	Color (order codes)
Spike bit	Yellow, blue and red
3 pcs in 1 pack	(SPK-SET01)
Single color	Yellow (SPK-1214)
1 pc	Blue (SPK-1417)
	Red (SPK-1720)

#### External dimensions

Unit:mm



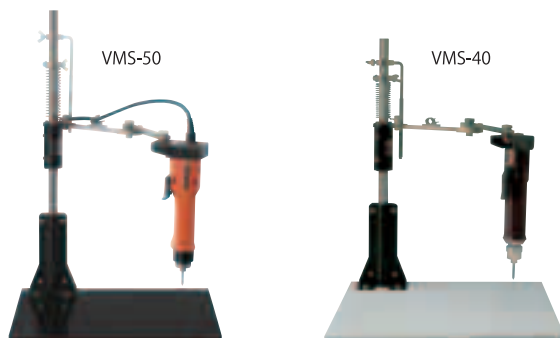
## Vertical Screwdriver Operating Stand RoHS

**VMS-40** : for BLG-BC1 / BLG / BL / CL / SS /  $\alpha$  / VZ-1510

**VMS-50** : for PG / BLG / BL / CL / SS /  $\alpha$  / VZ-1510

**VMS-50VZ** : for PG / VB / VZ (except VZ-1510)

The stand keeps the screwdriver in a vertical position, allowing accurate screw tightening.



### Specifications

Model	VMS-40	VMS-50	VMS-50VZ
Pole height (mm)	515	615	615
Weight (kg)	2.5	2.65	2.65
Applicable screwdrivers	BLG-4000BC1, BLG-5000BC1, BLG-4000, BLG-5000, BL-2000, BL-3000, BL-5000, BL-7000, CL-2000, CL-3000, CL-4000, CL-6000, CL-6500, CL-7000, SS-2000, SS-3000, SS-4000, SS-6500, SS-7000, $\alpha$ -4500, $\alpha$ -5000, $\alpha$ -6500, VZ-1510		For VB, VZ series (except VZ-1510)
	PG-3000, PG-5000, PG-7000		

Note: Please purchase optional screwdriver holder if using PG, BLG-BC1, BLG, BL-7000, VB and VZ-1510. (please refer order code below.)

### Accessories

Accessories	VMS-40	VMS-50	VMS-50VZ
Screwdriver holder* (1pc) originally Mounted (order code)	(VMS40-0180)	(VMS40-0180)	(VMS-0900-VZ18)
Pole (1pc)	○	○	○
Arm stopper (1pc)	○	○	○
Arm set (1pc)	○	○	○
Pole holder (1pc)	○	○	○
Base (1pc)	○	○	○
Mount ring (1pc) (for CL-2000)	○	○	○

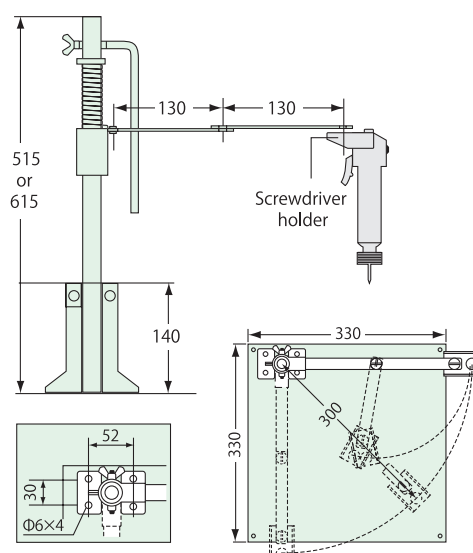
\* The holders for the PG, BLG, BL-7000, VB and VZ-1510 are optional. Please purchase them separately.

### Screwdriver Holder (Optional)

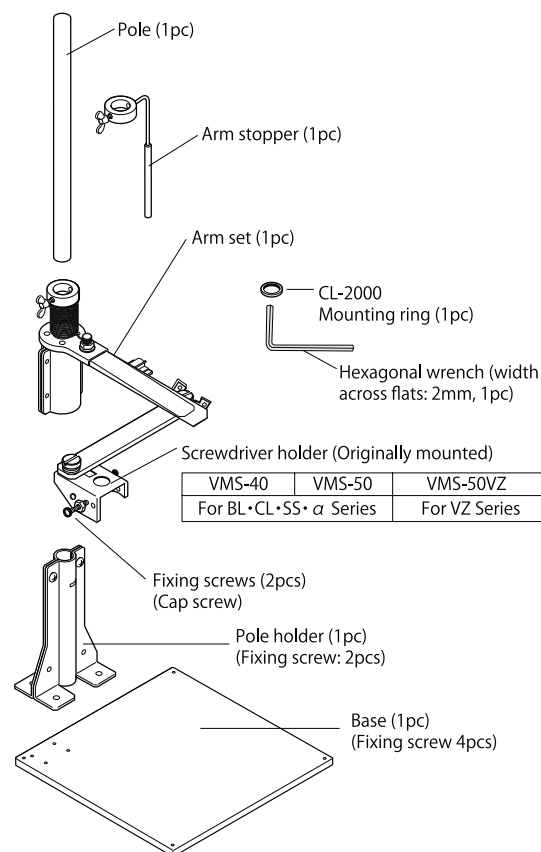
	Models	Holder Model No. (order code)
PG Series	PG-3000	VMS-0900-PG3
	PG-5000	VMS-3910-PG5 (with a spacer)
	PG-7000	VMS-0900-PG7
BLG-BC1 Series	BLG-4000BC1/BLG-5000BC1	VMS-0900-BLG
BLG Series	BLG-4000/BLG-5000	
BL Series	BL-7000	VMS-0900-BL7
VB Series	VB-1510	VMS-0910-PG5
	VB-1820/VB-3012	VMS-0900-PG7
	VB-1820PS/VB-3012PS	VMS-0900-VB18PS
VZ Series	VZ-1510/VZ-1510PS	VMS50-0190

### External dimensions

Unit: mm



### Components of screwdriver stand



## Carbon brush

The carbon brush should be replaced when abrasion reaches the groove on its side. Replace 2 carbon brushes at the same time.

### List of carbon brushes and compatible screwdrivers (1 pair = 2pcs)



Applicable models	CL / SS / $\alpha$ / SB Series (including PS type)				VZ Series (including PS type)		
	CL-3000, SS-3000 $\alpha$ -4500, $\alpha$ -5000	CL-4000, SS-4000 SB-400C	CL-6000, CL-6500 CL-7000, SS-6500 SS-7000, $\alpha$ -6500, SB-650C	CL-9000	(100V) VZ-1510	(100V/120V) VZ-1820, VZ-3012 VZ-4506	(220V-240V) VZ-1812, VZ-3007 VZ-4504
Order code	A45-0420	CL4-0420	CL65-0490	CL9-0410	ACL10-0490	VZ18-0480	VZ18-0480B

Note: The carbon brushes for CL-2000 and SS-2000 are enclosed types and cannot be replaced by a user. Although the life of the carbon brush depends on use conditions, as a guide, if you tighten about 6,000 screws a day, you have to replace the carbon brush 3 to 4 years after you started using it. When a replacement is required, please contact us for the service.





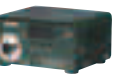

To prevent screw tightening skipping!  
Screw counter

# STC3 Series

The number of screws to be tightened can be set from 1 to 99, with the remaining number counted down after each screw is tightened.

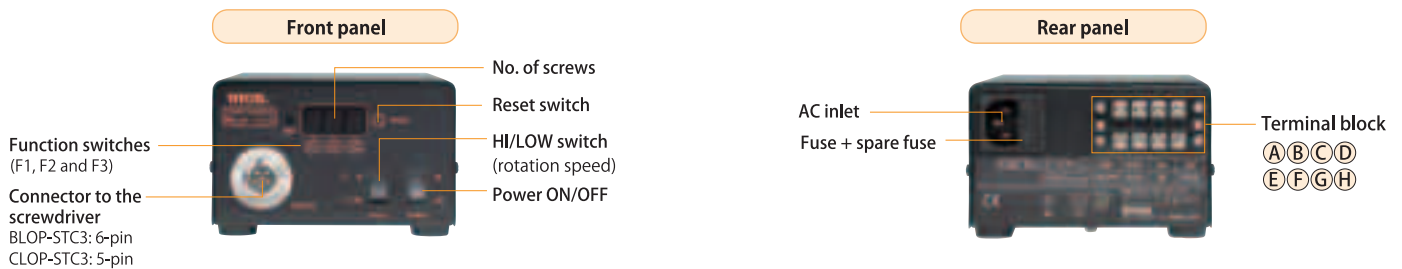
- A buzzer will sound when the final screw has been tightened to notify you of screw tightening completion.
- The countdown number is automatically reset after all screws have been tightened so that work can start on the next job immediately. The screwdriver will not be operable until the next "work set confirmation" SET signal is input (not applicable to SC3 Series).
- Prevents confirmation tightening, additional tightening and secondary tightening from being counted.
- Can be used as a normal power supply by disabling the count function.

(Applicable only to BLOP-STC3 and CLT-70STC3)

Model			Screw counter			Separate counter (external type)		
			STC3 Series		STC Series	SC1 Series		SC3 Series
			BLOP-STC3 《power supply type》 	CLT-70STC3 《power supply type》 	VZOP-STC 	BLOP-SC1 	CLOP-SC1 	Mini type BLOP-SC3 
Functions & compatible screwdrivers	Number of screws (1 to 99)		●	●	●	●	●	●
	Counting direction	Forward (count-down)	●	●	●	●	●	●
		Reverse (count-up*)	●	—	●	●	—	●
	Display	LED	●	●	●	●	●	●
		Count timer	●	●	●	●	●	●
	Build-in timer	Work set timer	●	●	●	●	●	—
		Work reset timer	●	●	●	●	●	●
		Reverse count timer	●	—	●	●	—	●
	External output	Power supply for external devices ⑤	●	●	●	●	●	—
		Control output ④, ⑥, ⑧	●	●	●	●	●	—
		Control input ③, ⑦	●	●	●	●	●	—
		Error output ⑨	●	●	●	●	●	—
Screwdrivers	DC type	Brushless	BLG-BC1 Series	—	—	●	—	—
			BLG Series (OPC)	—	—	●	—	●
			BL Series (OPC)	—	—	●	—	●
		Brushed	CL Series	—	—	—	●	—
			SS Series	—	—	—	●	—
			α Series	—	—	—	●	—
	AC type	Brushless	VB Series (OPC)	—	●	—	—	—
			VBH Series (OPC)	—	●	—	—	—
		Brushed	VZ Series (OPC)	—	●	—	—	—
				—	—	—	—	—

\* If you unscrew during operation, the count number will go back by one.

## ● Components and Functions of Screw Counter STC3



Function switches (F1, F2, F3)		
F1	Set number of screws: 1 to 99	→ Set the number of screws to be tightened
	Set count timer: 0.00 to 0.99 sec.	→ Prevents counting of secondary tightening operations
	Set work set timer: 0.0 to 3.9 sec.	→ Time until the screwdriver becomes operational
	Set work reset timer: 0.0 to 3.9 sec.	→ Time until the screwdriver becomes non-operational
F2	Set reverse count timer: 0.1 to 1.0 sec.	→ Time until the count start after reverse rotation
	Display the number of screws remaining. Control the sound of the buzzer. Setting of ON/OFF of the reverse count control	
F3	Control the motion of the counter at any time. Setting the ON/OFF of the torque-up buzzer sound control	

Terminal block		
A	COMP	"Work complete" signal output terminal, open collector output (maximum load rating: DC30V/80mA)
B	RESET	Resets the count timer, input terminal for the "work forced release" signal from external device
C	SET	Input terminal for the "work set confirmation" signal
D	GND (Terminal for grounding)	—
E	+DC24V	Power supply terminal for external device (maximum rating: DC24V/0.2A)
F	VALVE	Output terminal for external equipment, open collector output (maximum load rating: DC30V/80mA)
G	BZ (Buzzer)	Work complete output terminal, open collector output (maximum load rating: DC30V/80mA)
H	ER BZ (Error Buzzer)	Warning output open collector output if work is removed before operation is complete (maximum load rating: DC30V/80mA)

Notes:

- Display and functions of VZOP-STC are partially different from the above.
- The reverse count timer is not included with CLT-70STC3 and CLOP-STC3.

# DC Type / For BLG-BC1, BLG, BL, CL, SS, α Series

Model: **BLOP-STC3** (for one screwdriver)

RoHS

CE

Compatible screwdrivers

Brushless screwdrivers




● **BLG-BC1Series**  
BLG-4000BC1  
BLG-5000BC1

● **BLG Series (OPC)**  
BLG-4000-OPC  
BLG-5000-OPC

● **BL Series (OPC)**  
BL-2000-OPC, BL-3000-OPC,  
BL-5000-OPC, BL-5020-OPC,  
BL-7000-OPC

《With power supply》

Primary input power source	AC100-240V, 47-63Hz		
Secondary output voltage	HI (2): about DC31V, LOW (1): about DC20V, 2-step switchable		
External dimensions (mm)	127(W)×208(D)×76(H)mm		
Weight (kg)	1.8kg		
Accessories	Power supply cord: 1.8m with ground wire (1pc) Crimp-type terminals: 8pcs		
Plug Type	A-1	A-2	A-3/C/BF/S

Model: <b>CLT-70STC3</b> (for one screwdriver)		 	
<b>Compatible screwdrivers</b>		《With power supply》	
<b>Brushed screwdrivers</b>  ● <b>CL series</b> CL-2000, CL-3000, CL-4000, CL-6000, CL-6500, CL-7000  ● <b>SS series</b> SS-2000, SS-3000, SS-4000, SS-6500, SS-7000  ● <b>α series</b> α-4500, α-5000, α-6500			
Primary input power source			AC100-240V, 47-63Hz
Secondary output voltage			HI (2): about DC31V, LOW (1): about DC20V, 2-step switchable
External dimensions (mm)			127(W)×208(D)×76(H)mm
Weight (kg)			1.8kg
Accessories		Power supply cord: 1.8m with ground wire (1pc) Crimp-type terminals: 8pcs	
Plug Type	A-1	A-2	A-3/C/BF/S

# AC Type / For VB, VBH, VZ Series

Model: VZOP-STC (for one screwdriver)

RoHS

Compatible screwdrivers

Brushless screwdrivers

● VB Series (OPC)

(only 100 V /120V)

VB-1510-OPC, VB-1510-18-OPC

VB-1820-OPC, VB-3012-OPC

(including PS type)

VB-4504PS-OPC

● VBH Series (OPC)

(only 100 V /120V)

VBH-1820PS-OPC,

VBH-3012PS-OPC

Brushed screwdrivers

● VZ Series (OPC)

(only 100 V /120V)

VZ-1510-OPC, VZ-1820-OPC,

VZ-3012-OPC, VZ-4506-OPC

(including PS type)

VZ-4506PS-OPC

Primary input power source	AC100V (50/60HZ)	AC120V (50/60HZ)
External dimensions (mm)	160(W)×175(D)×84(H)mm	
Weight (kg)	1.5kg	
Accessories	Power supply cord: 1.8m with ground wire (1pc) Crimp-type terminals: 8pcs	
Plug Type	A-1	A-2

## Connection to PLC (programmable controller)

You can use the screwdriver with OPC specifications by cutting the cable for OPC at the tip to expose the lead and connect it to the PLC.

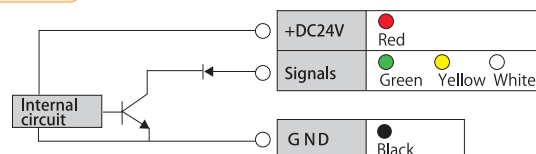
**Note:** The models connectable to the PLC are only AC type/VB, VBH, VZ screwdrivers (OPC).

## Screwdrivers with OPC

- These screwdrivers have the function to send out signals of forward and reverse rotations and torque-up.
- The signals are separated by the photo coupler for safety.
- The output is open collector output (Max. 24V/20mA) and can be directly connected to the PLC, etc.



## Internal circuit diagram



## Guide for output wire colors

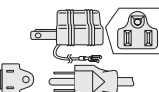
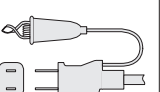
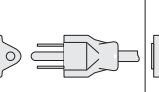
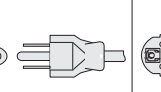
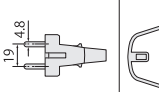
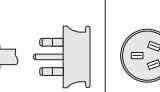



- Red: input of +DC24V
- Black: input of GND
- Green: signal output of forward rotation
- White: signal output of torque-increase
- Yellow: signal output of reverse rotation

## About PLC

For the time chart, please download the operation manuals of VB-OPC or VZ-OPC in PDF available on the HIOS website.

## ● Plug Type

Voltage	100V		120V	220-240V			
	Type A	Type A-1	Type A-2	Type A-3	Type C	Type BF	Type S
Plug Type							

- To prevent screw tightening skipping!  
Separate screw counter

The counter function can be added easily by connecting this to the existing HIOS power supply.

# SC1 Series

DC Type

For BLG-BC1, BLG, BL Series


Model: **BLOP-SC1** (for one screwdriver)

RoHS
CE

**Compatible screwdrivers**

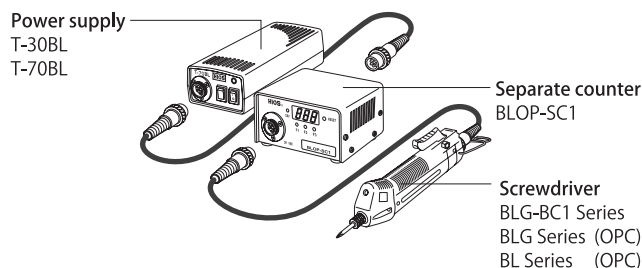
**Brushless screwdrivers**

- BLG-BC1 Series
- BLG Series (OPC)
- BL Series (OPC)



Primary input power source	DC20/31V
Secondary output voltage	Same as the secondary output voltage of the connected power supply.
External dimensions (mm)	110(W) × 100(D) × 55(H)mm
Weight (g)	600g
Accessories	Power supply cord: 1.5m (1pc) Crimp-type terminals: 8pcs

## Configuration of components



## Connectable power supplies and screwdrivers

Power supplies	Connectable screwdrivers (OPC)
T-30BL (for one screwdriver)	BLG-4000BC1, BLG-4000-OPC, BL-2000-OPC, BL-3000-OPC
T-70BL (for one screwdriver)	BLG-4000BC1, BLG-5000BC1, BLG-4000-OPC, BLG-5000-OPC, BL-2000-OPC, BL-3000-OPC, BL-5000-OPC, BL-5020-OPC, BL-7000-OPC

For CL, SS and α Series


Model: **CLOP-SC1** (for one screwdriver)

RoHS
CE

**Compatible screwdrivers**

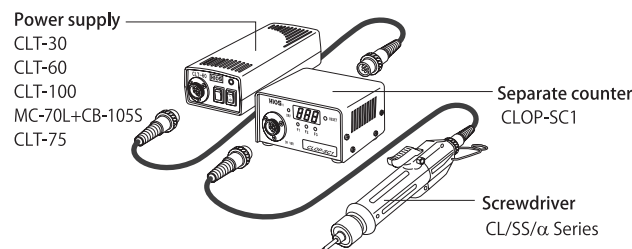
**Brushed screwdrivers**

- CL Series
- SS Series
- α Series



Primary input power source	DC20/31V
Secondary output voltage	Same as the secondary output voltage of the connected power supply.
External dimensions (mm)	110(W) × 100(D) × 55(H)mm
Weight (g)	600g
Accessories	Power supply cord: 1.5m (1pc) Crimp-type terminals: 8pcs

## Configuration of components

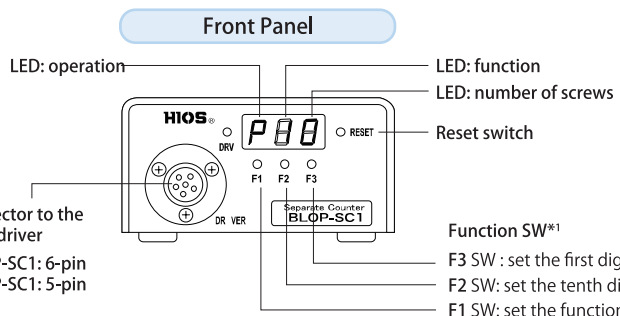


## Connectable power supplies and screwdrivers

Power supplies	Connectable screwdrivers
CLT-30 (for one screwdriver)	CL-2000, CL-3000, SS-2000, SS-3000
CLT-60 (for one screwdriver)	CL-2000, CL-3000, CL-4000, CL-6000, CL-6500, CL-7000
CLT-100 (for two screwdrivers)	SS-2000, SS-3000, SS-4000, SS-6500, SS-7000, α-4500, α-5000, α-6500*
MC-70L	Up to 20 screwdrivers
+CB-105S	Up to 10 screwdrivers
(multiple)	Up to 5 screwdrivers
CLT-80 (for one screwdriver)	CL-9000

\* α-6500 cannot be connected with CLT-100 (for two screwdrivers).

## Components of Separate Counter SC1

**Front Panel**


Connector to the screwdriver

- BLOP-SC1: 6-pin
- CLOP-SC1: 5-pin

LED: operation

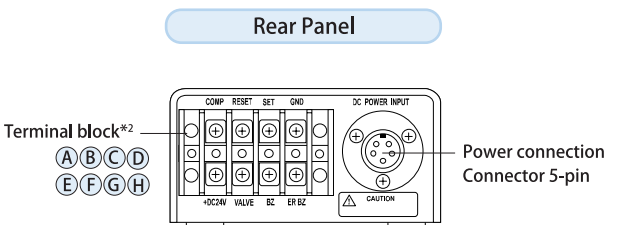
LED: function

LED: number of screws

Reset switch

Function SW\*1

- F3 SW: set the first digit
- F2 SW: set the tenth digit
- F1 SW: set the function

**Rear Panel**


Terminal block\*2

Power connection Connector 5-pin

\*1: For details of function switches, please refer to the description of STC3 function switches.

\*2: For details of the terminal block, please refer to the description of STC3 rear panel.



To prevent screw tightening skipping!  
**Compact** Separate screw counter

# SC3 Series

Only 120g!

This palm-sized compact counter can be directly connected to a screwdriver.

DC Type /  
 For BLG, BL Series


Model: BLOP-SC3 (for one screwdriver)

RoHS
CE

Compatible screwdrivers

Brushless screwdrivers

- BLG Series (OPC)
- BL Series (OPC)



Primary input power source	DC20 / 31V
Secondary output voltage	Same as the primary power voltage
External dimensions (mm)	67(W) × 25(D) × 25(H)mm
Weight (g)	120g
Accessories	Hanger for mounting: 1 set


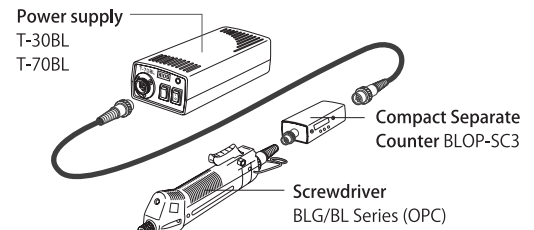


Image of fitting

## ● Connection of components



## ● Connectable power supplies and screwdrivers

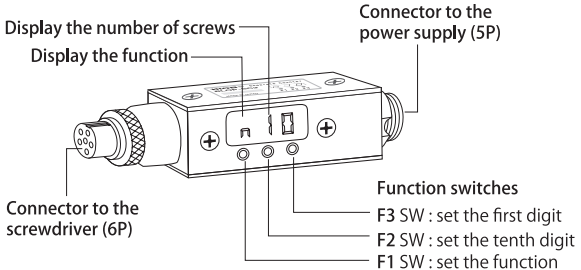
Power supplies	Screwdrivers (OPC)
T-30BL (for one screwdriver)	BLG-4000-OPC, BL-2000-OPC, BL-3000-OPC
T-70BL (for one screwdriver)	BLG-4000-OPC, BLG-5000-OPC, BL-2000-OPC, BL-3000-OPC, BL-5000-OPC, BL-5020-OPC, BL-7000-OPC

### Notes:

- Always use BLOP-SC3 by hanging it from the balancer.
- Do not use this device for horizontal screw tightening.

## ● Components and Functions of Compact Separate Counter SC3

Display Panel



Display the number of screws  
Display the function

Connector to the power supply (5P)  
Connector to the screwdriver (6P)

Function switches  
F3 SW : set the first digit  
F2 SW : set the tenth digit  
F1 SW : set the function

Function switches (F1, F2, F3)

	Set number of screws: 1 to 99	→ Set the number of screws to be tightened
	Set count timer: 0.00 to 0.99 sec.	→ Prevents counting of secondary tightening operations
	Set work reset timer: 0.1 to 3.9 sec.	→ Time until the screwdriver becomes non-operational
F1	Set reverse count timer: 0.1 to 1.0 sec.	→ Time until the count start after reverse rotation
	Set the system	→ Display the number of screws remaining. Control the sound of the buzzer. Setting ON/OFF of the reverse count control. Setting ON/OFF of the torque-up buzzer sound control
F2	Set the tenth digit	→ Increases by 1 each time you press it
F3	Set the first digit	→ Increases by 1 each time you press it

## Torque Meter

# HP/HDP HM/HIT Series

## HIOS Torque Meters are the industry benchmark.

- Measured data can be imported to a computer.
- Up to 100 data items can be stored in the memory and controlled (applicable to HP and HDP only).
- With one unit of Torque Meter, max, min and ave torque values can be measured (applicable to HP and HDP only).
- New product, HP-1 is ideal for measuring 10N·cm or smaller torque.
- Torque for both clockwise or counterclockwise can be measured.
- As a standard specification, data output and analogue output are available.
- We offer calibration and maintenance services.
- "Inspection Report" is attached to all the Torque Meters.

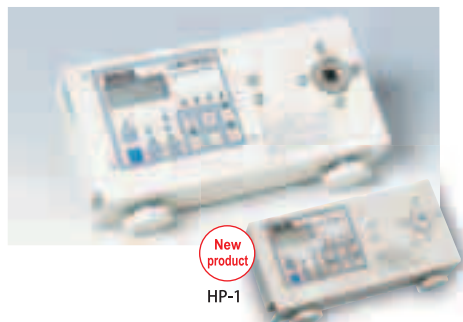
## HP

HP-1\*  
HP-10  
HP-100



\* Available on request.

Use for making torque settings on electric screwdrivers, checking torque of torque wrenches or measuring torque of various rotating units, etc.



New product  
HP-1

Model		HP-1	HP-10	HP-100
Peak measuring range	N·m		0.015 - 1.000	0.15 - 10.00
	N·mm	1.5 - 100.0		
	lbf·in	0.015 - 0.90	0.15 - 9.00	1.5 - 90.0
	(kgf·cm)		(0.15 - 10.00)	(1.5 - 100.0)
Accuracy		Within ±0.5% (F.S.)		
Measuring modes		TRACK, PEAK, FIRST PEAK		
External dimensions (mm)		230 × 124 × 65.2 (H)		
Weight (kg)		1.8kg		
Battery pack (charging time)		1.2V NiMH x 5 cells 1,000mA (within 6 hours)		
Continuous operating time on a full charge		8 hours		
Battery life		About 300 charges		
Exclusive battery charger		Input: AC 100-240V (50 / 60Hz) Output: DC 7.3-8V 0.5 A		

## HDP

HDP-5  
HDP-50  
HDP-100\*



\* Available on request.

Use for measuring loosened torque of tightened screws or additional tightening torque.



Model		HDP-5	HDP-50	HDP-100
Peak measuring range	N · m	0.015 - 0.500	0.15 - 5.00	0.15 - 10.00
	lbf · in	0.15 - 4.40	1.5 - 44.0	1.5 - 90.0
	(kgf · cm)	(0.15 - 5.00)	(1.5 - 50.0)	(1.5 - 100.0)
Accuracy		Within ±0.5% (F.S.)		
Measuring modes		TRACK, PEAK, FIRST PEAK		
External dimensions (mm)	Display unit	125 × 95.6 × 42 (H)		
Detector	Detector	104(L) × Ø21	160(L) × Ø34.5	
	Detector bit socket	H4 or 1/4HEX	H5 or 1/4HEX	1/4HEX
Weight (kg)	Torque display	0.78kg		
	Detector	0.068kg	0.25kg	
Detector cord		1.7m (P/N: DPC-0506)		
Battery pack (charging time)		1.2V NiMH x 5 cells 1,000mA (within 6 hours)		
Continuous operating time on a full charge		8 hours		
Battery life		About 300 charges		
Exclusive battery charger		Input: AC 100-240V (50 / 60Hz) Output: DC 7.3-8V 0.5 A		

## HM

HM-10  
HM-100



Use for torque control of screwdrivers for automatic assembly machines



Model		HM-10	HM-100
Peak measuring range	N·m	0.015 - 1.000	0.15 - 10.00
	lbf·in	0.15 - 9.0	1.5 - 90.0
	(kgf·cm)	(0.15 - 10.0)	(1.5 - 100.0)
Accuracy		Within ±0.5% (F.S.)	
Measuring modes		TRACK and PEAK	
External dimensions (mm)	Torque display	165 × 95 × 55 (H)	
	Detector	119 × 45 × 33 (H)	
Weight (kg)	Torque display	1kg	
	Detector	0.35kg	
Detector cord		1.7m (P/N: DPC-0506)	
Battery pack (charging time)		1.2V NiMH x 5 cells (within 8 hours)	
Continuous operating time on a full charge		30 hours	
Battery life		About 300 charges	
Exclusive battery charger		Input: AC 100V, 120V, 220-240V Output: DC 7.2V 120mA	

## HIT

HIT-200  
HIT-500  
HIT-2000












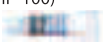

HIT Series is available on request.

Use for control of impact drivers and torque wrenches











Model		HIT-200	HIT-500	HIT-2000
Peak measuring range	N · m	0.15 - 18.00	1.5 - 50.0	25.0 - 180.0
	lbf · in	1.5 - 160.0	15 - 440	250 - 1600
	(kgf · cm)	(1.5 - 180.0)	(15 - 500)	(250 - 1800)
Accuracy		Within ±0.5% (F.S.)		
Measuring modes		TRACK, PEAK, FIRST PEAK		
External dimensions of torque display (mm)		165 × 95 × 55 (H)		
Weight (kg)	Torque display	1kg		
	Detector	0.85kg	1.65kg	
Socket mating diameter		9.5 square	12.7 square	
Detector cord		1.7m (P/N:DPC-0506)		
Battery pack (charging time)		1.2V NiMH x 5 cells (within 8 hours)		
Continuous operating time on a full charge		30 hours		
Battery life		About 300 charges		
Exclusive battery charger		Input: AC100V,120V,220-240V Output: DC 7.2V 120mA		

## ● HP Standard Accessories

Drive size	H4	H5	1/4HEX or 5HEX	1/4HEX or 5HEX
Model	HP-10	HP-100	HP-10	HP-100
Fidaptor with safety cover	P/N:TF4G-Z (Yellow) 1pc 	P/N:TF5G-Z (Black) 1pc 	P/N:TF6SG-Z (Yellow) 1pc 	P/N:TF6XG-Z (Black) 1pc 
Shaft with screw		HIOS shank (H4) P/N:TF5G-0010-4 1pc  HEX shank (2-step shaft) Upper:5HEX Lower:1/4HEX P/N:TF6XG-0010 1pc 		
Buffer spring		Measuring range: 0.15-0.6 N·m P/N:CL65-0040 (Yellow) 1pc 		Measuring range: 0.15-0.6 N·m P/N:CL65-0040 (Yellow) 1pc 
Others	<ul style="list-style-type: none"> <li>● Exclusive battery charger* 1pc P/N:TCH-MULTI </li> <li>● Grease (only for HP-100) P/N:TF-G3 1pc </li> <li>● Inspection report 1 copy </li> </ul> <p>* For a battery charger to be used in a country other than Japan, see the battery charger list on P.67, because the applicable battery charger varies depending on the country.</p>			




\* We do not sell the grease TF-G3 separately.

## ● Fidaptor List of HP Series (Fidaptor has started to have a limit line since April 2013 so that the output of electric screwdrivers can be measured under certain conditions.)







Model	HP-10				HP-100			
Classification	Standard accessories	Options			Standard accessories	Options		
P/N	TF4G-Z	TF6SG-Z	TF4SG-Z	TF4S-Z	TF5G-Z	TF6XG-Z	TF6U-Z	TF6UP-Z*
Measuring range (N·m)	0.15-0.6	0.15-0.6	0.25 or smaller	0.25 or smaller	0.5-3	0.5-3	3-9	3-9
Bit type	 (Yellow)	 (Yellow)	 (Red)	 (Red)	 (Black)	 (Black)	 (Black)	 (Black)
	HIOS shank H4	HEX shank (2-step shaft) Upper: 5HEX, Lower: 1/4HEX	HIOS shank H4	HIOS shank H4	HIOS shank H5	HEX shank (2-step shaft) Upper: 5HEX, Lower: 1/4HEX	HEX shank 1/4HEX	HEX shank 1/4HEX

\* The fidaptor for CL-9000 has to be TF6UP-Z.

## ● HDP Series Standard Accessories

Drive size	H4	H5	1/4HEX	1/4HEX	1/4HEX
Model	HDP-5	HDP-50	HDP-100	HDP-5	HDP-50
Bit type (1 bit each)	HIOS Shank (H4) + #0 × 40 mm + #1 × 40 mm + #2 × 40 mm	HIOS Shank (H5) + #0 × 60 mm + #1 × 60 mm + #2 × 60 mm	HEX Shank (1/4HEX) + #1 × 50 mm + #2 × 50 mm	HEX Shank (1/4HEX) + #1 × 50 mm + #2 × 50 mm	HEX Shank (1/4HEX) + #1 × 50 mm + #2 × 50 mm
Support arm				1pc	1pc
Others	<ul style="list-style-type: none"> <li>● Exclusive battery charger* 1pc P/N:TCH-MULTI </li> <li>● Detector cord: 1.7m 1pc P/N:DPC-0506 </li> <li>● Inspection report 1 copy </li> </ul> <p>* For a battery charger to be used in a country other than Japan, see the battery charger list on P.67.</p>				

## ● HM Series Standard Accessories

Model	Fidaptor with screw	Buffer spring	Screw	L- wrench	Others
HM-10	P/N:TFM26-Z 1pc (Yellow) 		Replacement screws on the top of fidaptor: 5pcs	1.5mm (1pc)	<ul style="list-style-type: none"> <li>● Exclusive battery charger* 1pc P/N:TCH-100N </li> <li>● Detector cord: 1.7m 1pc P/N:DPC-0506 </li> <li>● Inspection report 1 copy </li> </ul>
HM-100	P/N:TFM40-Z 1pc (Black) 	P/N:CL65-0040 Measuring range: 0.15 to 0.6 N·m 	HEX socket set screws for fixing: 2 pcs	1.5mm (1pc) & 2mm (1pc)	




\* For a battery charger to be used in a country other than Japan, see the battery charger list on P.67.

### To customers who use the old models of HP/HDP Series

The exclusive battery charger for the old models of HP/HDP Series (see the photos below) should be TCH-100N, TCH-120N, TCH-230G or TCH-230B. Check your Torque Meter. Please see the battery charger list on P.67.



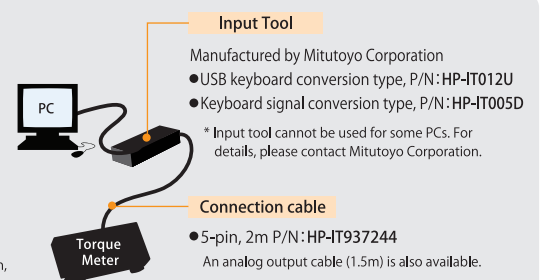
## ● Fidaptor List of HM Series

Model	HM-10		HM-100
Classification	Standard accessories	Options (to be purchased separately)	Standard accessories
P/N	TFM26-Z	TFM20-Z	TFM40-Z
Measuring range (N·m)	0.15-0.6	0.25 or below	0.5-3
Bit type	 (Yellow)	 (Red)	 (Black)
Applicable tip No.	+ #1	+ #0	+ #2
Screw head diameter	M2.6	M2.0	M4.0

### About data output

When you output the data, you have to connect the Torque Meter to the input tool to import the output data to a PC. Connect the input tool and the Torque Meter with a cable. You have to purchase the input tool and the cable separately.

\* If you have any inquiries about the connection, please contact HIOS distributors.



## Automatic Screw Feeder

# HS HS Series










(For manual operation)  
(For automatic assembly machines)

## Neji Taro aligns screws!

The work efficiency of a production line will be dramatically improved.

- A single unit can handle different screw diameters by changing rails.
- Easy rail replacement.
- Screws are stably aligned and quickly fed to a line.
- Feeding speed can be adjusted depending on operational conditions.
- Some models can handle special screws.

### Model selection chart

Model		Neji Taro V		Neji Taro II		Neji Taro III		HSF
		For manual operation HSV series	For automatic assembly machines HSV-RB series	For manual operation HS series	For automatic assembly machines HS-RB series	For manual operation HS III series	For automatic assembly machines HS III-RB series	For manual operation HSF series
								
Screw size (nominal)	M1.0	● HSV-10	● HSV-10RB	—	—	● HS III-10	—	● HSF-10
	M1.2	● HSV-12	● HSV-12RB	—	—	● HS III-12	—	● HSF-12
	M1.4	● HSV-14	● HSV-14RB	—	—	● HS III-14	● HS III-14RB	● HSF-14
	M1.7	● HSV-17	● HSV-17RB	—	—	● HS III-17	● HS III-17RB	● HSF-17
	M2.0	● HSV-20	● HSV-20RB	—	—	● HS III-20	● HS III-20RB	● HSF-20
	M2.3	● HSV-23	● HSV-23RB	—	—	● HS III-23	● HS III-23RB	—
	M2.6	● HSV-26	● HSV-26RB	—	—	● HS III-26	● HS III-26RB	● HSF-26
	M3.0	● HSV-30	● HSV-30RB	—	—	● HS III-30	● HS III-30RB	● HSF-30
	M3.5	—	—	● HS-35	● HS-35RB	—	—	—
	M4.0	—	—	● HS-40	● HS-40RB	—	—	—
M5.0	—	—	● HS-50	● HS-50RB	—	—	—	
Screw transport type		 Horizontal feeder Rotary escaper		 Horizontal feeder Slide escaper (applicable only to automatic assembly machines)				

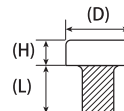
### Guide of specifications

The sizes (D), (H) and (L) of screws in the specifications refers to the following parts

(D) Head diameter  $\varnothing$

(H) Head thickness (mm)

(L) Shaft length (mm)






#### About dimensions of screw feeders

The dimensions in the left chart don't include projections and depressions. See the DXF files from HIOS website for more information. [www.hios.com](http://www.hios.com)

Go to DOWNLOAD -> DXF -> Automatic screw feeder

\* Special software is required to view DXF files.

#### Configuration of Screw Feeder

Main unit		Main unit only
Model		Main unit + applicable rail (1pc)
Replacement rail		Specify the rail's model number for ordering a rail.

## Neji Taro V

## HSV Series

Multiple input type  
AC100V-240V RoHS CE

- A single unit can handle eight screw sizes by simply replacing the rail.
- The rotary escaper has been adopted to take out screws.
  - It has realized stable catching of screws by eliminating tangling of screws.
- Quickly catches unstable screws.
  - For examples, countersunk screws, screws with washer and thinner head screws can be handled
- Compatible with suction types (for automatic assembly machines)

For manual operation

For automatic assembly machines

### HSV Series



Models:

HSV-10 (M1.0) HSV-20 (M2.0)  
HSV-12 (M1.2) HSV-23 (M2.3)  
HSV-14 (M1.4) HSV-26 (M2.6)  
HSV-17 (M1.7) HSV-30 (M3.0)

### HSV-RB Series



Models:

HSV-10RB (M1.0) HSV-20RB (M2.0)  
HSV-12RB (M1.2) HSV-23RB (M2.3)  
HSV-14RB (M1.4) HSV-26RB (M2.6)  
HSV-17RB (M1.7) HSV-30RB (M3.0)

### Specifications

Classification		HSV Series	HSV-RB Series
Power Supply (AC adapter)	Input	AC100-240V (50/60Hz)	
	Output	DC15V 1A	
Dimensions (mm)		123(W) × 181(D) × 145(H)	
Weight (kg)		About 3kg (including the rail)	
Screw capacity		80cc	
Overload protection circuit		Reverse rotation when overloaded, Forward rotation when restored	
Included Accessories: 1 installed standard rail, 2 guide plates (1 installed), 1 hexagonal wrench (width across flats 2mm), 1 screwdriver (for timer adjustment), 2 escaper guides for robot (1 installed), 1 AC adapter			

\* AC adapter is included for overseas use.

### Range of screws that can be supplied

Main unit	Model	Nominal screw diameter	(D) Head diameter (mm)	(H) Head thickness (mm)	(L) Shaft length (mm)	Replacement rail model number
HSV	HSV-10	M1.0	1.2-9	0.35 or more	1.6-10	HSV-BI-10
	HSV-12	M1.2	1.4-9	0.35 or more	1.8-10	HSV-BI-12
	HSV-14	M1.4	1.6-9	0.35 or more	2.0-10	HSV-BI-14
	HSV-17	M1.7	1.9-9	0.35 or more	2.3-10	HSV-BI-17
	HSV-20	M2.0	2.2-9	0.35 or more	2.6-20	HSV-BI-20
	HSV-23	M2.3	2.5-9	0.35 or more	2.9-20	HSV-BI-23
	HSV-26	M2.6	2.8-9	0.35 or more	3.2-20	HSV-BI-26
	HSV-30	M3.0	3.2-9	0.35 or more	3.6-20	HSV-BI-30
HSV-RB	HSV-10RB	M1.0	1.2-9	0.35 or more	1.6-10	HSV-RI-10
	HSV-12RB	M1.2	1.4-9	0.35 or more	1.8-10	HSV-RI-12
	HSV-14RB	M1.4	1.6-9	0.35 or more	2.0-10	HSV-RI-14
	HSV-17RB	M1.7	1.9-9	0.35 or more	2.3-10	HSV-RI-17
	HSV-20RB	M2.0	2.2-9	0.35 or more	2.6-20	HSV-RI-20
	HSV-23RB	M2.3	2.5-9	0.35 or more	2.9-20	HSV-RI-23
	HSV-26RB	M2.6	2.8-9	0.35 or more	3.2-20	HSV-RI-26
	HSV-30RB	M3.0	3.2-9	0.35 or more	3.6-20	HSV-RI-30



- A single unit can handle two screw diameters by changing rails.
- It has a large screw capacity of 150cc.
- Compatible with the suction type (for automatic assembly machines)

For manual operation

For automatic assembly machines

## HS Series



Models:

HS-35 (M3.5) HS-40 (M4.0)  
HS-50 (M5.0)

## HS-RB Series



Models:

HS-35RB (M3.5) HS-40RB (M4.0)  
HS-50RB (M5.0)

## ● Specifications

Classification	HS Series	HS-RB Series
DC Input	DC12V 500mA	
Dimensions (mm)	130(W)×215(D)×136(H)	134(W)×275(D)×136(H)
Weight (kg)	About 3.2kg (including the rail)	About 4.2kg (including the rail)
Screw capacity	150cc	
Overload protection circuit	Reverse rotation when overloaded, Forward rotation when restored	
Included Accessories:	1 installed standard rail, 1 guide plate, 1 hexagonal wrench (width across flats 2mm)	

\* If you purchase it, please refer to p.68 ordercode.

## ● Range of screws that can be supplied

Main unit	Model	Nominal screw diameter	(D)Head diameter(φ)	(H) Head thickness(mm)	(L)Shaft length(mm)	Replacement rail model number
HS-450	HS-35	M3.5	3.8-10.7	0.5 or more	5-18	HS-R35
	HS-40	M4.0	4.3-10.7	1.0 or more	5-18	HS-R40
	HS-50	M5.0	5.3-10.7	1.0 or more	6-18	HS-R50
HS-450RB	HS-35RB	M3.5	3.8-10.7	0.5 or more	5-18	HS-R35RB
	HS-40RB	M4.0	4.3-10.7	1.0 or more	5-18	HS-R40RB
	HS-50RB	M5.0	5.3-10.7	1.0 or more	6-18	HS-R50RB

- A single unit can handle different screw diameters by changing rails.
  - 8 screw diameters for the manual operation type, 6 screw diameters for the automatic assembly machines
- It feeds screws quickly; 120 screws per minute at average / M3 x 8 (for automatic assembly machines)
- Compatible with the suction type (for automatic assembly machines)

For manual operation

For automatic assembly machines

## HS III Series



Models:

HS III-10 (M1.0) HS III-20 (M2.0)  
HS III-12 (M1.2) HS III-23 (M2.3)  
HS III-14 (M1.4) HS III-26 (M2.6)  
HS III-17 (M1.7) HS III-30 (M3.0)

## HS III-RB Series



Models:

HS III-14RB (M1.4) HS III-23RB (M2.3)  
HS III-17RB (M1.7) HS III-26RB (M2.6)  
HS III-20RB (M2.0) HS III-30RB (M3.0)

## ● Specifications

Classification	HS III Series	HS III -RB Series
DC Input	DC12V 500mA	
Dimensions (mm)	123(W)×181(D)×145(H)	123(W)×181(D)×144(H)
Weight (kg)	About 3kg (including the rail)	
Screw capacity	80cc	
Overload protection circuit	Reverse rotation when overloaded, Forward rotation when restored	
Included Accessories:	1 installed standard rail, 1 guide plate, 1 hexagonal wrench (width across flats 2mm), 1 gauge plate (0.35mm)	

\* If you purchase it, please refer to p.68 ordercode.

## ● Range of screws that can be supplied

Main unit	Model	Nominal screw diameter	(D)Head diameter(φ)	(H) Head thickness(mm)	(L)Shaft length(mm)	Replacement rail model number
HS III-300	HS III-10	M1.0	1.2-9	0.35 or more	1.6-10	HS-SR10
	HS III-12	M1.2	1.4-9	0.35 or more	1.8-10	HS-SR12
	HS III-14	M1.4	1.6-9	0.35 or more	2.0-10	HS-SR14
	HS III-17	M1.7	1.9-9	0.35 or more	2.3-10	HS-SR17
	HS III-20	M2.0	2.2-9	0.35 or more	2.6-20	HS-SR20
	HS III-23	M2.3	2.5-9	0.35 or more	2.9-20	HS-SR23
	HS III-26	M2.6	2.8-9	0.35 or more	3.2-20	HS-SR26
	HS III-30	M3.0	3.2-9	0.35 or more	3.6-20	HS-SR30
HS III-300 RB	HS III-14RB	M1.4	1.6-9	0.35 or more	2.0-10	HS-SR14RB
	HS III-17RB	M1.7	1.9-9	0.35 or more	2.3-10	HS-SR17RB
	HS III-20RB	M2.0	2.2-9	0.35 or more	2.6-20	HS-SR20RB
	HS III-23RB	M2.3	2.5-9	0.35 or more	2.9-20	HS-SR23RB
	HS III-26RB	M2.6	2.8-9	0.35 or more	3.2-20	HS-SR26RB
	HS III-30RB	M3.0	3.2-9	0.35 or more	3.6-20	HS-SR30RB

## HSF Series

Multiple input type  
AC100V-240V

- A single unit can handle different screw diameters by changing rails.
  - HSF-01 handles 4 screw diameters, and HSF-02 handles 3 screw diameters.
- Low-profile design most suitable for cell production with the width of 55mm
- It can handle screws with thin heads by adjusting the sensor.

For manual operation

## HSF Series



Models:

HSF-10 (M1.0) HSF-20 (M2.0)  
HSF-12 (M1.2) HSF-26 (M2.6)  
HSF-14 (M1.4) HSF-30 (M3.0)  
HSF-17 (M1.7)

## ● Specifications

Classification	HSF Series
Power supply Input	AC100-240V (50/60Hz)
Power supply Output	DC15V 1A
Dimensions (mm)	55(W)×205(D)×14.25(H)
Weight (kg)	About 2.4kg (including the rail)
Screw capacity	40cc
Overload protection circuit	Reverse rotation when overloaded, Forward rotation when restored
Included Accessories:	1 installed standard rail, 1 hexagonal wrench (width across flats 2mm)

\* AC adapter is included for overseas use.

## ● Range of screws that can be supplied

Main unit	Model	Nominal screw diameter	(D)Head diameter(φ)	(H)Head thickness(mm)	(L)Shaft length(mm)	Replacement rail model number
HSF-01	HSF-10	M1.0	1.2-2.2	0.35 or more	1.6-16	HS-WR10
	HSF-12	M1.2	1.4-2.5	0.35 or more	1.8-16	HS-WR12
	HSF-14	M1.4	1.6-2.8	0.35 or more	2.0-16	HS-WR14
	HSF-17	M1.7	1.9-3.4	0.35 or more	2.3-16	HS-WR17
	HSF-20	M2.0	2.2-4.2	0.35 or more	2.6-16	HS-WR20
HSF-02	HSF-26	M2.6	2.8-5.0	0.35 or more	3.2-16	HS-WR26
	HSF-30	M3.0	3.2-5.8	0.35 or more	3.6-16	HS-WR30



## Electric Tool / Brushed Screwdriver

**CD** Serusute 12  
**CD Series**  
(Battery powered)

Portable model: CDS-12  
Bench-mount model: CDB-12

## Supports cell production to cut down on equipment investment and waste

- No need for an AC power supply or pneumatic equipment. Can be used in any kind of assembly or for disassembly of components for recycling.
- Easily adapt to any operational environment and flexibly movable. Reduces operating time and boosts productivity.
- Serusute drivers are light in weight and reduce operator fatigue.
- Can tighten up to 4,000 screws (M3.0) with a single charge. Screw tightening operation can be well controlled to the very last screw.



Image of wearing (portable model CDS-12)

### Screwdriver cord

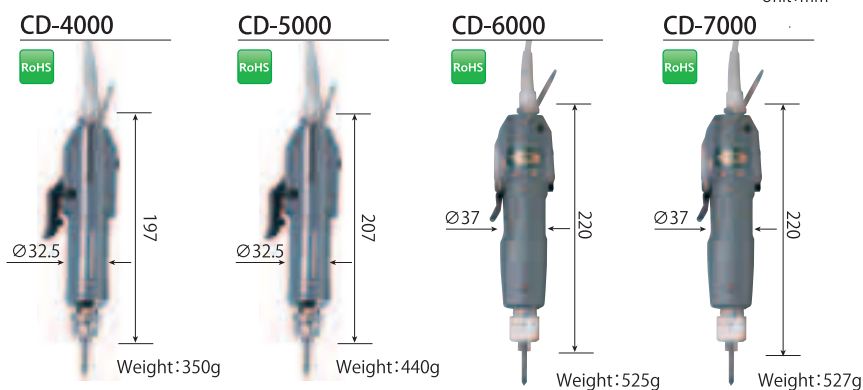
Curled cord (6P) is used for all the CD screwdrivers.



### Lever Start Type

### Lever Start Type

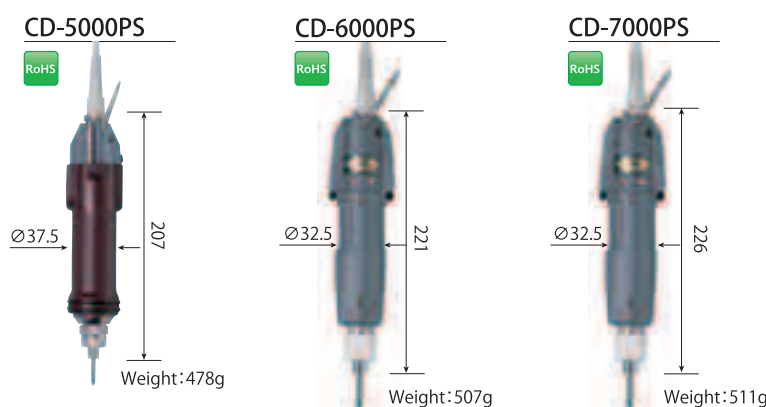
Unit:mm



### Push-to-Start Type

### Push to start type

Unit:mm

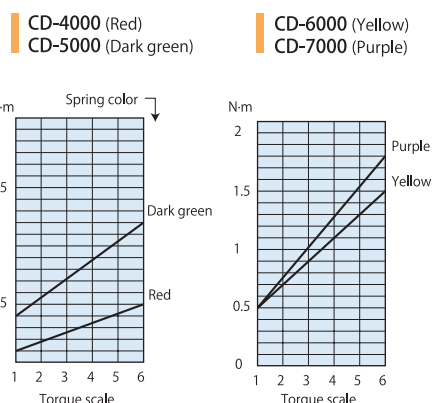


### Specifications

Lever Start Model		CD-4000	CD-5000	CD-6000	CD-7000
Push-to-Start Model			CD-5000PS	CD-6000PS	CD-7000PS
Rated input Voltage		12VDC	12VDC	12VDC	12VDC
Output	N·m	0.1 - 0.5	0.4 - 1.2	0.5 - 1.5	0.5 - 1.8
	lbf·in	0.9 - 4.3	3.5 - 10	4.3 - 13	4.3 - 16
Torque Range		(1 - 5)	(4 - 12)	(5 - 15)	(5 - 18)
Torque Switching		Stepless adjustment	Stepless adjustment	Stepless adjustment	Stepless adjustment
Unloaded Rotation Speed (r.p.m)±10%		1,000	1,000	1,300	900
Screw Size	Machine Screw	1.4 - 2.6	2.0 - 3.0	2.6 - 4.0	2.6 - 4.0
	Tapping Screw	1.4 - 2.3	2.0 - 3.0	2.6 - 4.0	2.6 - 4.0
Bit Drive	HIOS Shank	H4	H4	H5	H5
	HEX Shank	1/4HEX or 5HEX	1/4HEX or 5HEX	1/4HEX or 5HEX	1/4HEX or 5HEX
Accessories	Cord length (m)	2m (6P)	2m (6P)	2m (6P)	2m (6P)
	HIOS shank bit (one each)	H4 + #0 (Ø2.5×40 mm) H4 + #1 (Ø4.0×40 mm)	H4 + #1 (Ø4.0×40 mm) H4 + #2 (Ø4.0×40 mm)	H5 + #1 (Ø5×60 mm) H5 + #2 (Ø5×60 mm)	H5 + #1 (Ø5×60 mm) H5 + #2 (Ø5×60 mm)
	Carbon brush (Order code)	1 pair (AB45-0420)		1 pair (AB65-0490)	

### Output torque guide (during 12V output)

(Including PS type)



## Portable model CDS-12

This tool has high maneuverability and supports cell production, conveyor cart production, etc.



(A) CDS-12 (B) Battery charger CDC-12M (for one screwdriver)

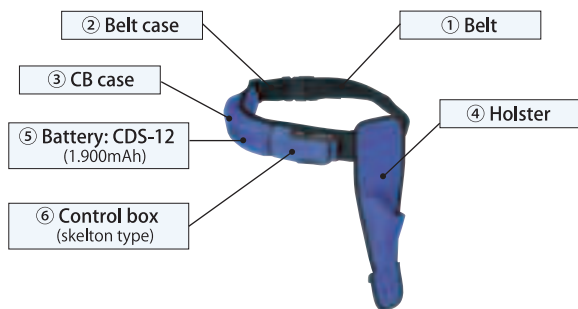
## Bench mount model CDB-12

For attaching to a cart or automatic conveyor used in an assembly line.



(A) CDB-12 (B) Battery charger CDC-12M (for one screwdriver)

### CDS-12 Components



#### ● Component names and part numbers

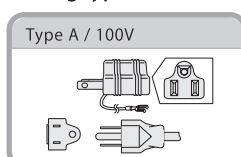
Part name	Part number
CDS-12 (set of ① to ⑥)	CDS-12
Holder case (set of ① to ④)	CDS12-HD
① Belt	CDS12-HD 01
② Belt case	CDS12-HD 02
③ CB case (controller & battery case)	CDS12-HD 03
④ Holster	CDS12-HD 04
⑤ Battery CDS12 (1,900mAh)	CDS12-BT-19
⑥ Control box (skelton type)	CDS-12-CB

#### ● Specifications

Model	CDS-12
Rated Input Voltage	12VDC
Battery Capacity	1,900mAh
Belt Length (cm)	70 ~ 110
Weight(g)	1,010*
Continuous operating time on a full charge	CD-5000: able to tighten about 4,000 screws with torque of 1N·m (10kgf·cm)
Connector	6P
Functions	Power ON/OFF SW, Breaker restoration

\* The weight includes the holster case, the battery (1,900mAh) and the control box.

#### ● Plug type



### CDB-12 Battery & Controller



#### ● Specifications

Model	Portable CDB-12
Rated Input Voltage	12VDC
Battery Capacity	1,900mAh
External Dimensions (mm)	152×100×50 (H)
Weight (g)	930
Continuous operating time on a full charge	CD-5000: able to tighten about 4,000 screws with torque of 1N·m (10kgf·cm)
Connector	6P
Functions	Power ON/OFF SW, Breaker restoration

## CDC-12M battery charger (for one battery)

Charger for batteries for both portable and bench mount models.



#### ● Specifications

Model	CDC-12M (for one battery)
Primary input power voltage	AC100V±5% (50/60Hz)
Secondary output	DC15V 1,900mAh
Charging time	60 to 90 minutes
Dimensions (mm)	180×97×78(H)
Weight (g)	1,500g
Connector	6P
Plug type	A

## Electric Tappers

**SB** Brushless®  
**BL-SB Series**  
(DC Type)



Featuring an automatic reversal mechanism, this tool detects overloading and prevents tap breakage

- Tapping tools for components with pilot holes.
- Automatically detects excessive load on the tap and the pilot hole, and returns the tap to prevent hole damage. For through or blind holes, operational efficiency increases because the tap automatically stops and returns when the specified depth is achieved.
- With this tool tap cleaning can be done easily to prevent screw tightening errors caused by paint or adhesive remaining in the hole.

### Two-way Start System (Lever Start and Push-to-Start)

### Two-way Start System

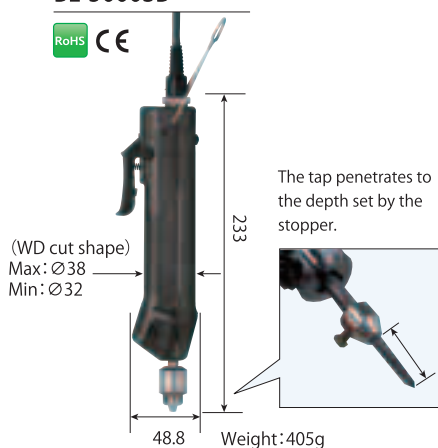
Unit: mm

## BL-5000SB



Electric tapper: BL-5000SB / Power supply: T-70BL

### BL-5000SB



### ● Specifications

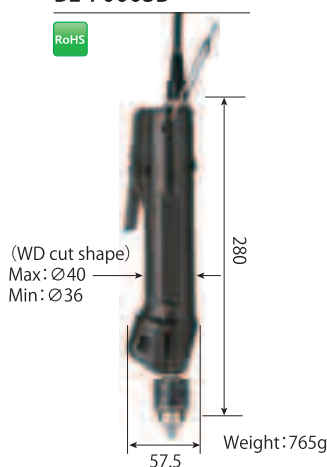
Model		BL-5000SB
Tapping capacity (mm)		0.9 - 2.6
Chuck diameter (mm)		Max. 4mm
Safe load torque adjustable range	N·m	0.2 - 1.2
	lbf·in (kgf·cm)	1.7 - 10 (2 - 12)
Unloaded rotation speed (r.p.m) ± 10%	HI	900
	LOW	590
Accessories	Stopper (one each)	<div> <div> <div>Ø2.0mm</div> <div>Ø2.3mm</div> <div>Ø2.6mm</div> </div> </div>
	Chuck key	
	Cord length (m)	1.5m (5P)
	L-shaped HEX wrench	Width across flat: 5mm (1pc)

## BL-7000SB



Electric tapper: BL-7000SB / Power supply: T-70BL

### BL-7000SB



### ● Specifications

Model		BL-7000SB
Tapping capacity (mm)		2.0 - 4.0
Chuck diameter (mm)		Max. 6.5mm
Safe load torque adjustable range	N·m	0.7 - 2.8
	lbf·in (kgf·cm)	6.1-24 (7 - 28)
Unloaded rotation speed (r.p.m) ± 10%	HI	1,500
	LOW	1,000
Accessories	Stopper (one each)	<div> <div> <div>Ø2.6mm</div> <div>Ø3.0mm</div> <div>Ø4.0mm</div> </div> </div>
	Chuck key	
	Cord length (m)	2m (5P)
	L-shaped HEX wrench	Width across flat: 5mm (1pc)

## Power supply for BL-SB series

Model: <b>T-70BL</b> (for one tapper)		RoHS	CE	UL	CCC
Primary input power source	AC100-240V (47-63 Hz)				
Secondary output voltage	HI(2): DC30V, LOW(1): DC20V (2-step switchable)				
External dimensions (mm)	88(W) × 210(D) × 52 (H) mm				
Weight (g)	685 g				
Accessories	Power supply cord 1.8m (1pc), Flat 2P conversion plug (1pc) (only for 100V), Mounting hardware (2pcs), Mounting screws (4pcs)				
Plug type	A	A-2	A-3 / C / BF / S		

### ● Plug type

Type A 100V		Type C 220V	
Type A-1 100V		Type BF 220V-240V	
Type A-2 120V		Type S 220V-240V	
Type A-3 220V-240V			

## Electric Tappers

**SB** Brushed  
SB Series  
(DC Type)



### Lever Start Type

### Lever Start Type

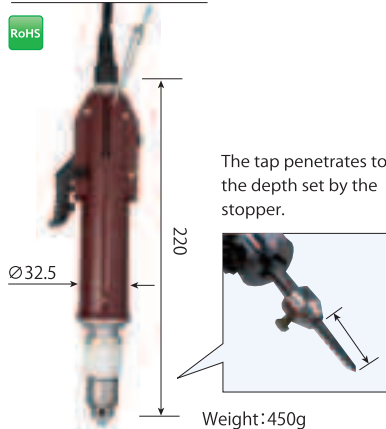
Unit:mm

## SB-400C



Electric tapper: SB-400C / Power supply: SBT-50

### SB-400C



#### Specifications

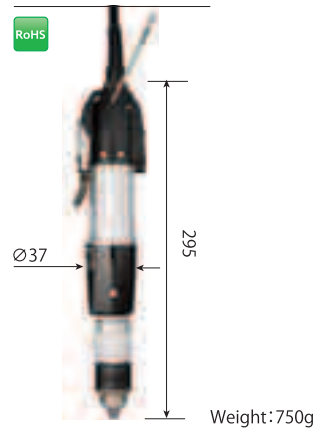
Model		SB-400C
Tapping capacity (mm)		0.9 - 2.6
Chuck diameter (mm)		Max.4mm
Safe load torque adjustable range	N·m	0.1 - 0.55
	lbf·in	7.8 - 23
	(kgf·cm)	(1 - 5.5)
Unloaded rotation speed (r.p.m)±10%	HI	1,000
	LOW	670
Accessories	Stopper (one each)	<div> <div>Ø2.0mm</div> <div>Ø2.3mm</div> <div>Ø2.6mm</div> </div>
	Chuck key	
	Cord length (m)	1.5m (5P)
	Carbon brush(order code)	1pair (CL4-0420)

## SB-650C



Electric tapper: SB-650C / Power supply: SBT-50

### SB-650C



#### Specifications

Model		SB-650
Tapping capacity (mm)		2.0 - 4.0
Chuck diameter (mm)		Max.6.5mm
Safe load torque adjustable range	N·m	0.3 - 1.6
	lbf·in	17 - 35
	(kgf·cm)	(3 - 16)
Unloaded rotation speed (r.p.m)±10%	HI	900
	LOW	600
Accessories	Stopper (one each)	<div> <div>Ø2.0mm</div> <div>Ø3.0mm</div> <div>Ø4.0mm</div> </div>
	Chuck key	
	Cord length (m)	2m (5P)
	Carbon brush(order code)	1pair (CL4-0420)

## Power supply for SB series

Model: SBT-50 (for one tapper)		RoHS
Primary input power source	AC100V±5% (50/60Hz)	AC120V±5% (50/60Hz)
Secondary output voltage	2: (HI), 1: (LOW) 2-step switchable	
Power capacity	48W	
External dimensions (mm)	105(W)×185(D)×91(H)	
Weight (g)	About 2.7kg	
Cord length (m)	1.8m (inlet type with ground wire)	
Plug type	A-1	A-2 C/BF/S

### Variations

### SB Applicable Drivers

## Noiseless Screwdriver

**SB-NL**

Models:  
SB-400NL  
SB-650NL

Electrical noise is more subdued than standard screwdrivers.

# Screwdriver Bits for Exchange

**HIOS Shank Type : H4(Ø4) / H5(Ø5)**

There are three drive types: HIOS shank, two-way shank and Hex shank. Check which bit is compatible with your screwdriver before purchasing replacement bits.

## 《Screwdriver Bit》

HIOS shank type (H4 / H5)		Two-way shank type (H5 / 5HEX)		Hex shank type (1/4HEX / 5HEX)	
Please use HIOS standard bit.		Either of HIOS bit or hex bit can be used.		Please purchase hex bit with the specified size from commercial stores.	
<b>H4</b>		<b>H5</b>		<b>1/4HEX</b> WAF: 6.35mm	
<b>H5</b>		<b>5HEX</b> WAF: 5mm		<b>5HEX</b> WAF: 5mm	

WAF: width across flats

WAF: width across flats

## 《List of compatible bit per model》

### DC Type

Classification		Model	Bit Drive				
			HIOS shank		2-way shank	Hex shank	
			H4	H5	H5 & 5HEX	1/4 HEX	5 HEX
Brushless	PG Series	PG-3000	●	—	—	—	—
		PG-5000	●	—	—	—	—
		PG-7000	—	—	●	●	—
	BLG-BC1 Series	BLG-4000BC1	—	—	—	●	—
		BLG-5000BC1	●	—	—	●	—
		BLG-5000BC1-15	●	—	●	●	—
		BLG-5000BC1-20	●	—	●	●	—
		BLG-5000BC1-HT	—	—	●	●	—
	BLG Series	BLG-4000	●	—	—	●	—
		BLG-5000	●	—	—	●	—
		BLG-5000-15	●	—	●	●	—
		BLG-5000-20	●	—	●	●	—
		BLG-5000-HT	—	—	●	●	—
	BL Series	BL-2000	●	—	—	—	—
		BL-3000	●	—	—	●	—
		BL-5000	●	—	●	●	—
		BL-5000-15	●	—	●	●	—
		BL-5000-20	●	—	●	●	—
		BL-5020	—	—	●	●	—
Brushed	CL Series	CL-2000	●	—	—	—	—
		CL-3000	●	—	—	—	—
		CL-4000	●	—	—	●	●
		CL-6000	—	●	—	●	●
		CL-6500	—	●	—	●	●
		CL-7000	—	●	—	●	●
	SS Series	SS-2000	●	—	—	—	—
		SS-3000	●	—	—	—	—
		SS-4000	●	—	—	●	●
		SS-6500	—	●	—	●	●
		SS-7000	—	●	—	●	●
		SS-7000	—	●	—	●	●

(Models include PS type.)

### DC Type

Classification		Model	Bit Drive				
			HIOS shank		2-way shank	Hex shank	
			H4	H5	H5 & 5HEX	1/4 HEX	5 HEX
Brushed	α Series	α-4500	●	—	—	●	●
		α-5000	●	—	—	●	●
		α-6500	—	●	—	●	●
	CD Series (Serusute 12)	CD-4000	●	—	—	●	●
		CD-5000	●	—	—	●	●
		CD-6000	—	●	—	●	●
		CD-7000	—	●	—	●	●

(Models include PS type.)

### AC Type

Classification		Input type	Model	Bit Drive				
				HIOS shank		2-way shank	Hex shank	
				H4	H5	H5 & 5HEX	1/4 HEX	5 HEX
Brushless	VB Series	AC100V, 120V, 220-240V	VB-1510	●	—	●	●	—
			VB-1510-18	●	—	●	●	—
			VB-1820	—	—	●	●	—
			VB-3012	—	—	●	●	—
			VB-4504	—	—	—	●	—
	VBH Series	AC100V, 120V, 220-240V	VBH-1820	—	—	—	●	—
			VBH-3012	—	—	—	●	—
	VZ Series	AC100V	VZ-1510	●	—	—	●	●
			VZ-1812	—	—	●	●	—
		AC220-240V	VZ-1820	—	—	●	●	—
			VZ-3012	—	—	●	●	—
		AC100V, 120V	VZ-3007	—	—	●	●	—
			VZ-4504	—	—	—	●	—
Brushed	VZH Series	AC100V, AC120V	VZ-4506	—	—	—	●	—
			VZH-1820	—	—	—	●	—
			VZH-3012	—	—	—	●	—

(Models include PS type.)

## 《Order guide》

Bit types	Details of bit specifications
BP: bit for ⊕ screw	BP - (Bit type: H4 or H5) - (Tip size No.) - (Shaft dia.) - (Total length in mm)
BS: bit for ⊖ screw	BS - (Bit type: H4 or H5) - (Blade width) - (Blade thickness) - (Total length in mm)
BH: bit for Hex socket head	BH - (Bit type: H4 or H5) - (Hex. WAF) - (Total length in mm)
BN: Nut box (for Hex nut)	BN - (Bit type: H4 or H5) - (Nut WAF) - (Total length in mm)
BC: Nut catcher (for catching nuts)	BC - (Bit type: H4 or H5) - (Nut WAF) - (Total length in mm)

\*MOQ is 10 pieces.

WAF: width across flats

### — Order examples —

**Example 1: To order BP bits for + screw, the details should be**

(Bit type H4), (tip size No. #1), (shaft diameter 3mm), (total length 40mm)



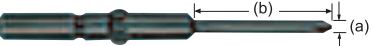

→ **BP-H4-#1-3.0-40mm**

**Example 2: To order BP bits for slotted screw, the details should be**

(Bit type H5), (blade width 3.0mm), (blade thickness), (total length 80mm)

→ **BS-H5-3.0-0.4-8-80mm**




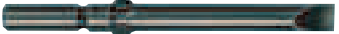


BP	Bit for ⊕ screws	Bit Drive	Specifications			Total length (mm) standard type
			⊕ size No.	Shaft dia. (∅)	Shaft shape	
 (Shaft shape) Straight (A)  Stepped (B)  Stepped (C) 		H4(∅4)	#00 (HIOS standard)	1.5	B	40, 60, 80
			#0 (M1.4-M2.6)	1.2	B	40
				1.5, 1.7	B	40, 60, 80
				1.8	B	60
				2.0, 2.5	B	40, 60, 80, 100, 120
				3.0	B	40, 60, 80, 100, 120
		H5(∅5)	#1 (M2.0-M2.6)	4.0	A	40, 60, 80, 100, 120, 150, 180, 200
			#2 (M3.0-M5.0)	4.0	A	40, 60, 80, 100, 120, 150
			#0 (M1.4-M2.6)	2.0	B	60
				2.5	B	60, 80, 100, 120
				3.0	B	40, 60, 80, 100, 120
				5.0	A	40, 60, 80, 100, 120, 150, 180, 200, 250, 300
			#2 (M3.0-M5.0)	5.0	A	40, 60, 80, 100, 120, 150, 180, 200, 250, 300, 400
			#3 (M6.0-M8.0)	7.0	C	60, 80, 100, 120

**Dimensions of the stepped bit (B)**

Bit Drive	H4	H5
(a) Tip diameter ∅	Refer to the list on the left.	2.0 2.5 3.0
(b) Length mm	20	20 25 30*

\* Only the stepped part of "H5 + #1 [3.0 x 4.0mm]" is 15mm in length.



\* For different specifications, please contact HIOS distributors.

BS	Bit for ⊖ screws	Bit Drive	Specifications			Total length (mm) standard type
			Blade width(mm)	Blade thickness	Shaft shape	
 (Shaft shape) Straight (A)  Stepped (B)  Stepped (C) 		H4(∅4)	1.1	0.28	B	60, 80
			1.3	0.28	B	60, 80
			1.5	0.3	B	40, 60, 80
			1.7	0.3	B	40, 60, 80
			1.8	0.4	B	60, 80
			2.0	0.4	B	40, 60, 80
			2.3	0.4	B	60, 80
			2.5	0.4	B	40, 60, 80
			2.8	0.4	B	60, 80
			3.0	0.4	B	40, 60, 80
		H5(∅5)	4.0	0.6	A	40, 60, 80, 100
			2.0	0.4	B	60
			2.5	0.4	B	60
			3.0	0.4	B	60, 80
			4.0	0.6	B	60
			5.0	0.7	A	60, 80, 100, 120, 150, 180
			7.0	1.0	C	60



**Dimensions of the stepped bit (B)**

Bit Drive	H4	H5
(a) Blade width (mm)	Refer to the list on the left.	2.0 2.5 4.0
(b) Blade length (mm)	20	20 25 30



\* For different specifications, please contact HIOS distributors.

BH	Bit for Hex socket head screws	Bit Drive	Specifications	Total length (mm) standard type
			Nut width across flat (mm)	
  A bit with the hexagonal WAF being 1.5mm or smaller has the shape in the picture (lower one). (Hexagonal wrench press fitted)		H4(∅4)	0.89, 1.5, 2.0, 3.0	60
			1.27	60, 100
			2.5	60, 100, 120
		H5(∅5)	1.27	70
			1.5, 3.0, 4.0, 6.0	70, 100
			2.0, 2.5, 5.0	70, 100, 120

\* For different specifications, please contact HIOS distributors.

BN	Nut box (bit for Hex nut)	Bit Drive	Specifications	Total length (mm) standard type
			Hex width across flat (mm)	
 		H4(∅4)	2.3, 2.5, 3.0	40
			4.0, 4.5, 5.0, 5.5, 6.0, 7.0, 8.0, 9.0	60
			10.0	60
		H5(∅5)	4.0, 4.5, 5.0, 5.5, 6.0, 6.35	60
			7.0, 8.0	80
			9.0, 10.0, 11.0, 12.0, 13.0, 14.0, 17.0	80

\* For different specifications, please contact HIOS distributors.

BC	Nut catcher (bit for catching Hex nut)	Bit Drive	Specifications	Total length (mm) standard type
			Nut width across flat (mm)	
 		H4(∅4)	4.0, 4.5, 5.0, 5.5, 6.0, 7.0	60
			8.0	65
		H5(∅5)	4.0, 4.5, 5.0, 5.5, 6.0, 7.0	60
			8.0	65

\* For different specifications, please contact HIOS distributors.

# Hexalobular Screwdriver Bits

**HIOS Shank Type : H4(Ø4) / H5(Ø5)**

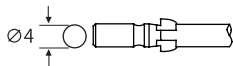
There are three drive types: HIOS shank, two-way shank and Hex shank. Check which bit is compatible with your screwdriver before purchasing replacement bits.

## 《Screwdriver Bit》

### HIOS shank type (H4 / H5)

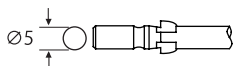
Please use HIOS standard bit.

**H4**



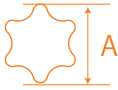
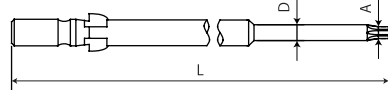
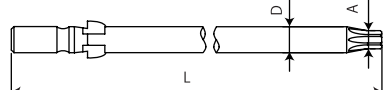

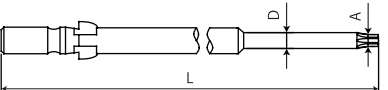
RoHS

**H5**



RoHS

- Hexalobular bits will be discontinued as soon as the present stock has run out.
- For different specifications, please contact HIOS distributors.

HEXALOBULAR BIT	For Hexalobular Screw	Type	Name	Part No.	Dimensions (mm)		
					A	D	L
		<b>H4</b>	H4-HW-T3×1.7×60	TX403060	1.1	1.7	60
			H4-HW-T4×1.8×60	TX404060	1.3	1.8	60
			H4-HW-T5×2.0×60	TX405060	1.4	2.0	60
			H4-HW-T6×2.5×60	TX406060	1.7	2.5	60
			H4-HW-T8×3.0×60	TX408060	2.3	3.0	60
		<b>H4</b>	H4-HW-T10×4.0×60	TX410060	2.7	4.0	60
			H5-HW-T8×3.0×80	TX508080	2.3	3.0	80
			H5-HW-T10×5.0×80	TX510080	2.7	5.0	80
			H5-HW-T20×5.0×80	TX520080	3.8	5.0	80
			H4-HW-T8H×3.0×60	TX408060H	2.3	3.0	60
		<b>H4</b>	H4-HW-T10H×4.0×60	TX410060H	2.7	4.0	60
			H5-HW-T8H×3.0×80	TX508080H	2.3	3.0	80
			H5-HW-T10H×5.0×80	TX510080H	2.7	5.0	80
			H5-HW-T20H×5.0×80	TX520080H	3.8	5.0	80

# TORX® & TORX PLUS® Screwdriver Bits

**HIOS Shank Type : H4(Ø4) / H5(Ø5)**

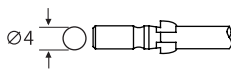
There are three drive types: HIOS shank, two-way shank and Hex shank. Check which bit is compatible with your screwdriver before purchasing replacement bits.

## 《Screwdriver Bit》

### HIOS shank type (H4 / H5)

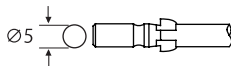
Please use HIOS standard bit.

**H4**



RoHS

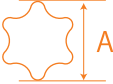
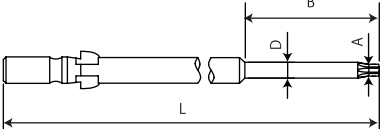

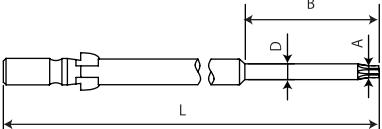
**H5**



RoHS

**TORX®, TORX PLUS® are registered trademarks of Acument Intellectual Properties, LLC**

- TORX®, TORX PLUS® Screwdriver bits are available on request.
- For different specifications, please contact HIOS distributors.

TORX®	For TORX® Screw	Type	Drive	Name	Part No.	Dimensions (mm)			
						A	D (Φ)	B	L
		<b>H4</b>	T3	TORX-H4-T3-X-( )	TORX403( )	1.12	1.7	20	40,60,80, 100,120
			T4	TORX-H4-T4-X-( )	TORX404( )	1.30	1.8	20	
			T5	TORX-H4-T5-X-( )	TORX405( )	1.37	2.0	20	
			T6	TORX-H4-T6-X-( )	TORX406( )	1.65	2.5	20	
			T8	TORX-H4-T8-X-( )	TORX408( )	2.30	3.0	20	
			T10	TORX-H4-T10-X-( )	TORX410( )	2.72	3.0	20	
		<b>H5</b>	T8	TORX-H5-T8-X-( )	TORX508( )	2.30	3.0	20	40,60,80, 100,120
			T10	TORX-H5-T10-X-( )	TORX510( )	2.72	3.0	20	
			T15	TORX-H5-T15-X-( )	TORX515( )	3.26	3.5	20	
			T20	TORX-H5-T20-X-( )	TORX520( )	3.84	4.0	20	
			T25*	TORX-H5-T25-X-( )	TORX525( )	4.40	5.0	—	
		<b>H4</b>	4IP	TORX PLUS H4-4IP-X-( )	TORX404IP( )	1.28	1.8	20	40,60,80, 100,120
			5IP	TORX PLUS H4-5IP-X-( )	TORX405IP( )	1.40	2.0	20	
			6IP	TORX PLUS H4-6IP-X-( )	TORX406IP( )	1.68	2.5	20	
			8IP	TORX PLUS H4-8IP-X-( )	TORX408IP( )	2.29	3.0	20	
			10IP	TORX PLUS H4-10IP-X-( )	TORX4010IP( )	2.71	3.0	20	
		<b>H5</b>	8IP	TORX PLUS H5-8IP-X-( )	TORX508IP( )	2.29	3.0	20	40,60,80, 100,120
			10IP	TORX PLUS H5-10IP-X-( )	TORX510IP( )	2.71	3.0	20	
			15IP	TORX PLUS H5-15IP-X-( )	TORX515IP( )	3.25	3.5	20	
			20IP	TORX PLUS H5-20IP-X-( )	TORX520IP( )	3.83	4.0	20	
			25IP*	TORX PLUS H5-25IP-X-( )	TORX525IP( )	4.39	5.0	—	

\*The ( ) in the Part No. will be 3 digits.  
FX. TORX-H4-T3X60 → TORX403060  
TORX-H4-T3X100→TORX403100

\*The ( ) in the Name means total length (L) of bit.

## Accessories for suction(Vacuum) screwdrivers

(Suction attachment/mouthpiece/bit)

Standard  
accessories

**DC Type:** BLG-BC1, BLG, BL, CL, SS,  $\alpha$  Series, BLF for automatic assembly machines, CLF,  $\alpha$ F Series

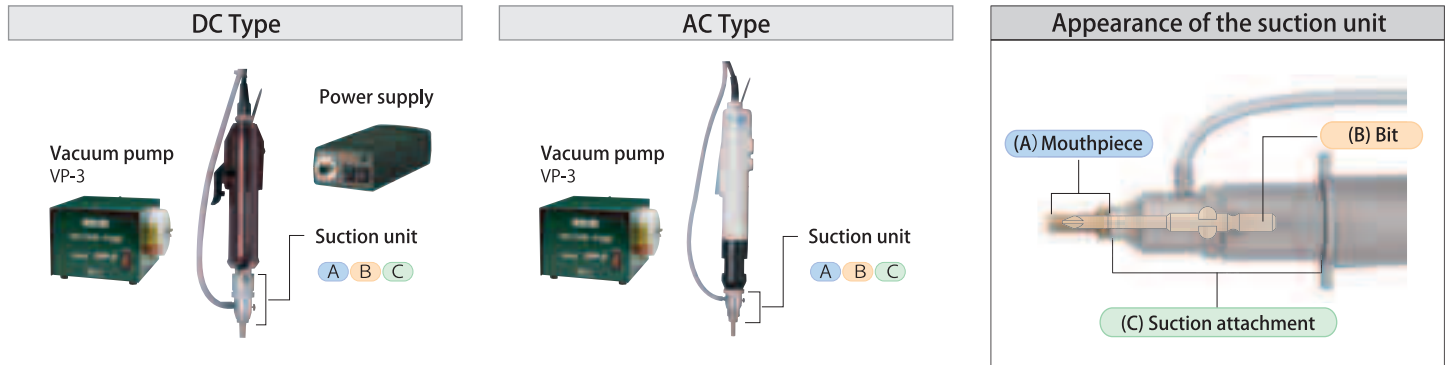
**AC Type:** VB, VZ Series

Various sizes of accessories for suction screwdrivers

(suction attachment, bit and mouthpiece) are available.





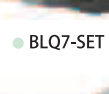

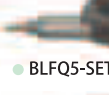







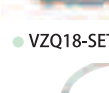
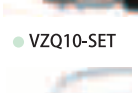




Please refer to the compatible accessory chart to find out appropriate parts for your screwdrivers.

## 《Construction of suction (Vacuum pick up) screwdrivers》



1. (A) and (B) needed to be purchased separately if you have a suction-type screwdriver.
2. (A), (B) and (C) needed to be purchased separately if you want to convert your screwdriver to a suction type.

## 《Compatible accessory chart》

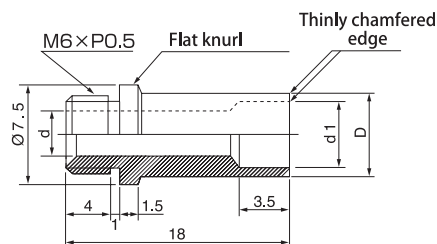
Classification			Model name	(A)	(B)	(C)					
				Mouthpiece	Applicable bit	Suction attachment					
					Standard	ESD	Appearance				
DC Type	Brushless	BLG-BC1 Series	BLG-4000BC1	F3 Standard 18mm	H4 60mm	BLGQ4-SET	—				
			BLG-5000BC1	F3 Standard 18mm	H4 40mm	BLQ5-SET	BLQ5-SET-ESD				
			BLG-5000BC1-15		H4 60mm	BLQ5N-SET	BLQ5N-SET-ESD				
			BLG-5000BC1-20								
		BLG Series	BLG-4000	F3 Standard 8mm	H4 60mm	BLGQ4-SET	—				
			BLG-5000	F3 Standard 18mm	H4 40mm	BLQ5-SET	BLQ5-SET-ESD				
			BLG-5000-15		H4 60mm	BLQ5N-SET	BLQ5N-SET-ESD				
			BLG-5000-20								
		BL Series	BL-2000	F3 Standard 18mm	H4 60mm	CLQ2-SET	CLQ2-SET-ESD				
			BL-3000			BLQ3N-SET	BLQ3N-SET-ESD				
			BL-5000	F3 Standard 18mm	H4 40mm	BLQ5-SET	BLQ5-SET-ESD				
				F3 Standard 18mm	H4 60mm	BLQ5N-SET	BLQ5N-SET-ESD				
	BL-7000		F6 Standard 31mm	H5 80mm	BLQ7-SET	BLQ7-SET-ESD					
	BLF Series for automatic assembly machines	BLFQ	BLFQ-2000	F3 Standard 18mm	H4 60mm	BLFQ2-SET	—				
			BLFQ-5000	F6 Standard 31mm	H5 100mm	BLFQ5-SET	—				
			BLFQ-7000			BLFQ7-SET	—				
			BLFR (special order item)	BLFR-5000 / 7000X / 7025X	Refer to P.59	Refer to P.59	Refer to P.59			Refer to P.59	
	Brushed	CL Series	CLQ-2000	F3 Standard 18mm	H4 60mm	CLQ2-SET	CLQ2-SET-ESD				
			CLQ-3000 / 4000	F6 Standard 31mm	H5 80mm	CLQ4-SET	CLQ4-SET-ESD				
			CLQ-6000 / CLQ-6500 / 7000			CLQ65-SET	CLQ65-SET-ESD				
		SS Series	SSQ-2000	F3 Standard 18mm	H4 60mm	CLQ2-SET	CLQ2-SET-ESD				
			SSQ-3000 / 4000			CLQ4-SET	CLQ4-SET-ESD				
			SSQ-6500 / 7000			F6 Standard 31mm	H5 80mm			CLQ65-SET	CLQ65-SET-ESD
		$\alpha$ Series	$\alpha$ Q-4500 / 5000	F3 Standard 18mm	H4 60mm	CLQ4-SET	CLQ4-SET-ESD				
			$\alpha$ Q-6500	F6 Standard 31mm	H5 80mm	CLQ65-SET	CLQ65-SET-ESD				
		For automatic assembly machines	CLF Series	CLFQ-3000 / 4000 / $\alpha$ FQ-4500 / 5000	F3 Standard 18mm	H4 60mm	CLFQ4-SET	—			
CLFQ-6000 / 6500 / 7000 / $\alpha$ FQ-6500				F6 Standard 36mm	H5 100mm	CLFQ65-SET	—				
AC Type	Brushless	VB Series	AC100V VB-3020	F6 Standard 31mm	H5 100mm	VZQ18-SET	—				
			AC100V AC120V, AC220-240V VB-1820 / 3012								
	Brushed	VZ Series	AC100V VZQ-1510	F3 Standard 18mm	H4 60mm	VZQ10-SET					
			AC100V AC120V, AC220-240V VZQ-1812 / 1820 / 3007 / 3012	F6 Standard 31mm	H5 100mm	VZQ18-SET					

\* If you use 1/4HEX bits for BL-5000X, BL-5020, VZ and VB Series, please contact HIOS distributors.

## (A) Mouthpieces

### F3 Standard 18mm (total length)

Cross-sectional view of a mouthpiece



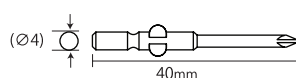
The material of the mouthpieces is BS (brass) only.  
For different materials, please contact HIOS distributors.

Order code	Mouthpiece dimensions (mm)			Screw head shape and screw size		
	D	d	d1	JIS⊕screw (machine screw)	JIS⊕screw	JIS ⊖ screw (machine screw)
F3-00	7.5	Blank		User-finished part	User-finished part	User-finished part
F3-01	3.3	2.1	2.1		Class 1 M1.4	
F3-02	3.6	2.6	2.6		Class 1 M1.7 / Class 3 M1.4	
F3-03	4.1	3.1	3.1		Class 1 M2.0 / Class 3 M1.7	
F3-04	4.6	3.6	3.6	Pan, round M2.0	Class 1 M2.3 / Class 3 M2.0	Pan, round, flat M2.0 / countersunk, round countersunk M1.7
F3-05	5.1	4.1	4.1	Pan, round M2.3 / Countersunk, round countersunk M2.0	Class 1 M2.6 / Class 3 M2.3	Countersunk, round countersunk M2.0
F3-06	5.8	4.3	4.5	Pan, round M2.6	Class 3 M2.6	Binding M2.0
F3-07	7.0	4.3	5.5	Pan, round M3.0 / binding M2.6		Pan, round, flat M3.0 / binding M2.6
F3-10	5.5	4.3	4.3	Binding M2.0		Pan, round, flat M2.3
F3-11	6.0	4.0	4.9	Binding M2.3		Binding M2.3
F3-15	3.8	2.8	2.8			Pan, round, flat M1.4
F3-16	3.5	2.5	2.5			Countersunk, round countersunk, M1.2
F3-17	4.3	3.3	3.3			Pan, round, flat M1.7

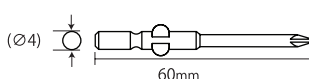
- For different specifications, please contact HIOS distributors.
- Mouthpieces are supplied with 3 pieces in one pack.

## (B) Compatible bits

### H4(Ø4) Total length : 40mm



### H4(Ø4) Total length : 60mm



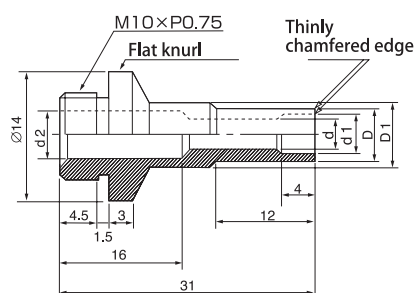
Screw recess	Screw size	Bit	Order code
JIS⊕screw	M2.0-M2.6	BP-H4- # 1-3.0-40(60)	BP4130040(60)
	M3.0	BP-H4- # 2-4.0-40(60)	BP4240040(60)
JIS⊕screw	M1.4 Class, Class 1	BP-H4- # 0-1.8-40(S)	BP4018040(S)
	M1.4-M1.7	BP-H4- # 0-2.0-40(60)	BP4020040(60)
JIS⊖screw	M2.0-M2.6	BP-H4- # 0-2.5-40(60)	BP4025040(60)
	M1.2	BS-H4-2.0-40(60)	BS420040(60)
	M1.4	BS-H4-2.5-40(60)	BS425040(60)
	M1.7-M2.0	BS-H4-3.0-40(60)	BS430040(60)
	M2.3-M3.0	BS-H4-4.0-40 (60)	BS440040(60)

- The ( ) in the list means total length of bit.
- For special order item 1.8 x 40, please contact us.

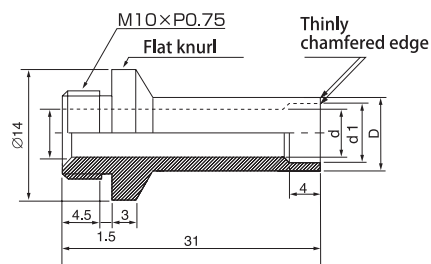
## (A) Mouthpieces

### F6 Standard 31mm (total length)

Cross-sectional view of mouthpiece A



Cross-sectional view of mouthpiece B



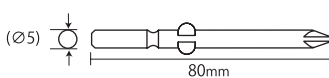
The material of the mouthpieces is BS (brass) only.  
For different materials, please contact HIOS distributors.

Drawing	Order code	Reference mouthpiece dimensions (mm)					Screw head shape and screw size	
		D	D1	d	d1	d2	JIS⊕screw (machine screw)	JIS⊖screw (machine screw)
B	F6-00	8.0					User-finished part	User-finished part
A	F6-01	4.6	7.0	3.5	3.6	5.5	Pan, round M2.0	Pan, round M2.0
	F6-02	5.1	7.0	3.5	4.1	5.5	Pan, round M2.3 / Countersunk, round countersunk M2.0	Pan, round M2.3
	F6-03	5.8	7.0	3.5	4.5	5.5	Pan, round M2.6 / binding, truss M2.0	Binding, truss M2.0
B	F6-04	7.0		5.5	5.5		Pan, round M3.0 / binding M2.6	Pan, round M3.0 / binding M2.6
	F6-05	7.5		5.5	6.0		Countersunk, round countersunk M3.0	Truss M2.6
	F6-06	8.5		5.5	7.0		Pan, round M4.0 / truss M3.0	Pan, round M4.0 / truss M3.0
A	F6-09	6.5	7.0	3.5	5.2	5.5	Countersunk, round countersunk M2.6	Truss M2.3
B	F6-10	14.0					User-finished part	User-finished part
	F6-11	7.7		5.5	6.3		Binding M3.0	Binding M3.0
	F6-13	9.7		5.5	8.3		Binding M4.0	
	F6-16*	9.4		5.5	8.0		Countersunk, round countersunk M4.0	
	F6-22*	9.7		7.5	8.3			Binding M4.0

- \* Special order item
- For different specifications, please contact HIOS distributors.
- Mouthpieces are supplied with 3 pieces in one pack.

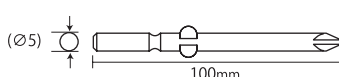
## (B) Compatible bits

### H5(Ø5) Total length : 80mm



Screw recess	Screw size	Bit	Order code
JIS⊕screw	M2.0-M2.6	BP-H5- # 1-3.0×80	BP5130080
	M3.0-M5.0	BP-H5- # 2-5.0×80	BP5250080
JIS⊖screw	M2.0-M2.3	BS-H5-3.0×80	BS530080
	M3.0-M4.0	BS-H5-5.0×80	BS550080

### H5(Ø5) Total length : 100mm



Screw recess	Screw size	Bit	Order code
JIS⊕screw	M2.0-M2.6	BP-H5- # 1-3.0-100	BP5130100
	M3.0-M5.0	BP-H5- # 2-5.0-100	BP5250100
JIS⊖screw	M3.0-M4.0	BS-H5-5.0-100	BS550100

- Truss: Use "+ #1" for M3.0.



## Accessories for suction(Vacuum) screwdrivers

(Suction attachment/mouthpiece/bit)

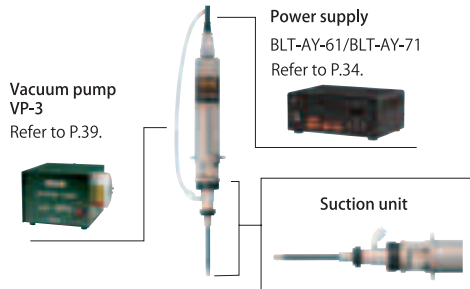
Standard  
accessories

**DC Type:** BLF Series for automatic assembly machines  
(BLFR-5000/BLFR-7000X/BLFR-7025X)

BLFR specifications (special order items) attachments are most suitable to be mounted on to the robot. Torque can be externally set without removing the attachment when replacing the bit. The bit can be easily replaced because of the screw-on design.

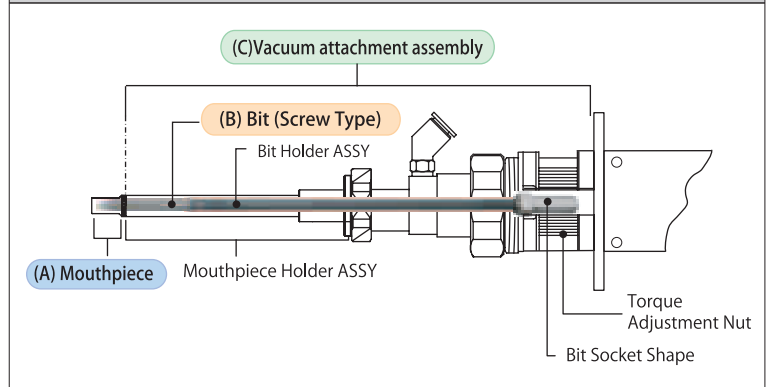
## 《Construction of suction (Vacuum pick up) screwdrivers》

### DC Type



1. (A) and (B) needed to be purchased separately if you have a suction-type screwdriver.
2. (A), (B) and (C) needed to be purchased separately if you want to convert your screwdriver to a suction type.
3. The suction hose is needed to be purchased separately.

### Appearance of the suction unit

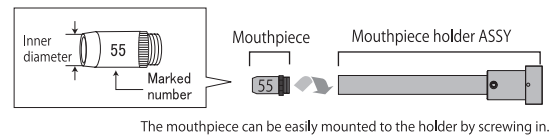


## (A) Mouthpieces

### ■ Mouthpiece specifications

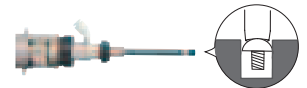
Model	Screw type	Screw Nominal Diameter	Part No. (marked No.)
BLFR-5000	Pan	M2.6	
		M3.0	RF-55 (55)
	Binding	M2.6	RF-55 (55)
		M3.0	RF-63 (63)
BLFR-7000X BLFR-7025X	Pan	M2.6	
		M3.0	RF-55 (55)
	Binding	M2.6	RF-55 (55)
		M3.0	RF-63 (63)

### Configuration of Mouthpiece/ Mouthpiece Holder ASSY



### Optional Mouthpiece with spring

Ideal for fasteners located in deep recesses since the mouthpiece diameter can be smaller than the head diameter of the fastener.

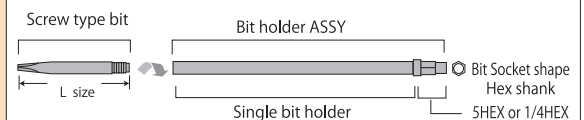


## (B) Compatible Bits

### ■ Specifications of screw-on type bit and bit holder assy

Model	Screw-on type bit			Bit holder assy		
	⊕size	Length (L dimension)	Diameter	Model No.	Length	Drive size
BLFR-5000	#1, #2	40mm	Ø4	BLFR5-3060	122.8mm	Hex shank 5HEX
BLFR-7000X BLFR-7025X	#1, #2	40mm	Ø4	BLFR7-3060	122.8mm	Hex shank 1/4HEX

### Construction of Screw Type Bit/Bit Holder ASSY



## (C) Suction(Vacuum) attachment assembly

Model	BLFR-5000	BLFR-7000X BLFR-7025X	Remarks
Suction(Vacuum) attachmentASSY Part No.	BLFR5-SA 	BLFR7-SA 	Hose (optional) Inner diameter : Φ4 External diameter : Φ6 Length 3.5 m

## Order Codes

### ● Guidance about the notation of the code table

- 1) 「H5 & 5HEX」 in the order codes table below means that the models can be used with screwdriver bits either with H5 or 5HEX bit end.
- 2) The suction (Vacuum) attachment for H5 can be used with the driver models with drive H5 & 5HEX.

#### P.7 Pass-guard PG series

PG	HIOS	Model	Order Code	Bit Drive
		PG-3000	PG-3000	H4
		PG-5000	PG-5000	
	PG-7000	PG-7000	H5 & 5HEX	
	HEX	PG-5000		PG-5000X5
		PG-7000	PG-5000X	1/4HEX
PG-7000	PG-7000			

Product name	Order Code	Model
Control Unit	PG-01	PG-01

#### P.9 BLG-BC1 Standard type

BLG-BC1	HIOS	Model	Order Code	Bit Drive
		BLG-4000BC1	BLG-4000BC1	H4
		BLG-5000BC1	BLG-5000BC1	
		BLG-5000H5BC1	BLG-5000H5BC1	H5 & 5HEX
		BLG-5000BC1-15	BLG-5000BC1-15	H4
		BLG-5000H5BC115	BLG-5000H5BC115	H5 & 5HEX
		BLG-5000BC1-20	BLG-5000BC1-20	H4
		BLG-5000H5BC120	BLG-5000H5BC120	H5 & 5HEX
		BLG-5000BC1-HT	BLG-5000BC1-HT	H5 & 5HEX
	HEX	BLG-4000XBC1	BLG-4000XBC1	1/4HEX
		BLG-5000XBC1	BLG-5000XBC1	H5 & 5HEX
		BLG-5000XBC1	BLG-5000XBC1	1/4HEX
		BLG-5000X5BC115	BLG-5000X5BC115	H5 & 5HEX
		BLG-5000XBC1-15	BLG-5000XBC1-15	1/4HEX
		BLG-5000X5BC120	BLG-5000X5BC120	H5 & 5HEX
		BLG-5000XBC1-20	BLG-5000XBC1-20	1/4HEX
		BLG-5000X5BC1HT	BLG-5000X5BC1HT	H5 & 5HEX
		BLG-5000XBC1-HT	BLG-5000XBC1-HT	1/4HEX

#### P.11 BLG Standard type

BLG	HIOS	Model	Order Code	Bit Drive
		BLG-4000	BLG-4000	H4
		BLG-5000	BLG-5000	
		BLG-5000H5	BLG-5000H5	H5 & 5HEX
		BLG-5000-15	BLG-5000-15	H4
		BLG-5000H5-15	BLG-5000H5-15	H5 & 5HEX
		BLG-5000-20	BLG-5000-20	H4
		BLG-5000H5-20	BLG-5000H5-20	H5 & 5HEX
		BLG-5000-HT	BLG-5000-HT	H5 & 5HEX
	HEX	BLG-4000	BLG-4000X	
		BLG-5000	BLG-5000X5	H5 & 5HEX
		BLG-5000	BLG-5000X	1/4HEX
		BLG-5000-15	BLG-5000X5-15	H5 & 5HEX
		BLG-5000-15	BLG-5000X-15	1/4HEX
		BLG-5000-20	BLG-5000X5-20	H5 & 5HEX
		BLG-5000-20	BLG-5000X-20	1/4HEX
		BLG-5000-HT	BLG-5000X5-HT	H5 & 5HEX
		BLG-5000-HT	BLG-5000X-HT	1/4HEX

#### P.12 BLG Variations

OPC	HIOS	Model	Order Code	Bit Drive
		BLG-4000-OPC	BLG-4000-OPC	H4
		BLG-5000-OPC	BLG-5000-OPC	
		BLG-5000H5-OPC	BLG-5000H5-OPC	H5 & 5HEX
		BLG-5000-OPC-15	BLG-5000-OPC-15	H4
		BLG-5000H5OPC15	BLG-5000H5OPC15	H5 & 5HEX
		BLG-5000-OPC-20	BLG-5000-OPC-20	H4
		BLG-5000H5OPC20	BLG-5000H5OPC20	H5 & 5HEX
		BLG-5000-OPC-HT	BLG-5000-OPC-HT	H5 & 5HEX
	HEX	BLG-4000-OPC	BLG-4000X-OPC	1/4HEX
		BLG-5000-OPC	BLG-5000X5-OPC	H5 & 5HEX
		BLG-5000X-OPC	BLG-5000X-OPC	1/4HEX
		BLG-5000-OPC-15	BLG-5000X5OPC-15	H5 & 5HEX
		BLG-5000XOPC-15	BLG-5000XOPC-15	1/4HEX
		BLG-5000-OPC-20	BLG-5000X5OPC-20	H5 & 5HEX
		BLG-5000XOPC-20	BLG-5000XOPC-20	1/4HEX
		BLG-5000-OPC-HT	BLG-5000XOPC-HT	H5 & 5HEX
		BLG-5000XOPC-HT	BLG-5000XOPC-HT	1/4HEX

#### P.13 BL Standard type

BL	HIOS	Model	Order Code	Bit Drive
		BL-2000	BL-2000	H4
		BL-3000	BL-3000	
		BL-5000	BL-5000	H5 & 5HEX
		BL-5000H5	BL-5000H5	
		BL-5000-15	BL-5000-15	H4
		BL-5000H5-15	BL-5000H5-15	H5 & 5HEX
		BL-5000-20	BL-5000-20	H4
		BL-5000H5-20	BL-5000H5-20	H5 & 5HEX
		BL-5020	BL-5020H5	
		BL-7000	BL-7000	H5 & 5HEX
		BL-7000-20	BL-7000-20	
		BL-7000HT	BL-7000HT	H4
		BL-2000SS	BL-2000SS	
		BL-3000SS	BL-3000SS	H5 & 5HEX
		BL-5000SS	BL-5000SS	
	HEX	BL-5000SSH5	BL-5000SSH5	H5 & 5HEX
		BL-3000	BL-3000X	1/4HEX
		BL-5000	BL-5000X5	5HEX
		BL-5000	BL-5000X	1/4HEX
		BL-5000-15	BL-5000X5-15	5HEX
		BL-5000-15	BL-5000X-15	1/4HEX
		BL-5000-20	BL-5000X5-20	5HEX
		BL-5000-20	BL-5000X-20	1/4HEX
		BL-5020	BL-5020X5	5HEX
		BL-5020	BL-5020X	1/4HEX
		BL-7000	BL-7000X	
		BL-7000-20	BL-7000X-20	1/4HEX
		BL-7000HT	BL-7000X-HT	
		BL-3000SS	BL-3000SSX	5HEX
		BL-3000SSX5	BL-3000SSX5	
		BL-5000SS	BL-5000SSX	1/4HEX

#### P.14 BL Variations

Anti-electrostatic	HIOS	Model	Order Code	Bit Drive
		BL-3000ESD	BL-3000ESD	H4
		BL-5000ESD	BL-5000ESD	
		BL-5000H5-ESD	BL-5000H5-ESD	H5 & 5HEX
		BL-5000ESD-15	BL-5000ESD-15	H4
		BL-5000H5ESD-15	BL-5000H5ESD-15	H5 & 5HEX
		BL-5000ESD-20	BL-5000ESD-20	H4
		BL-5000H5ESD-20	BL-5000H5ESD-20	H5 & 5HEX
		BL-5020ESD	BL-5020-ESD	H5
		BL-7000ESD	BL-7000ESD	H5 & 5HEX
		BL-7000ESD-20	BL-7000ESD-20	
		BL-7000ESD-HT	BL-7000ESD-HT	1/4HEX
	HEX	BL-3000ESD	BL-3000X-ESD	
		BL-5000ESD	BL-5000X5-ESD	5HEX
		BL-5000X-ESD	BL-5000X-ESD	1/4HEX
		BL-5000ESD-15	BL-5000X5-ESD-15	5HEX
		BL-5000X-ESD-15	BL-5000X-ESD-15	1/4HEX
		BL-5000ESD-20	BL-5000X5-ESD-20	5HEX
		BL-5000X-ESD-20	BL-5000X-ESD-20	1/4HEX
		BL-5020ESD	BL-5020X-ESD	
		BL-7000ESD	BL-7000X-ESD	1/4HEX
		BL-7000ESD-20	BL-7000X-ESD-20	
		BL-7000ESD-HT	BL-7000X-ESD-HT	1/4HEX
		BLQ-2000CR	BLQ-2000CR	
	Clean room, Anti-static	BLQ-3000CR-ESD	BLQ-3000CR-ESD	H4
		BLQ-5000CR-ESD	BLQ-5000CR-ESD	
		BLQ-5000H5-CR-ESD	BLQ-5000H5-CR-ESD	H5 & 5HEX
		BLQ-5000CR-ESD-15	BLQ-5000CR-ESD-15	H4
		BLQ-5000H5-CR-ESD-15	BLQ-5000H5-CR-ESD-15	H5 & 5HEX
		BLQ-5000CR-ESD-20	BLQ-5000CR-ESD-20	H4
		BLQ-5000H5-CR-ESD-20	BLQ-5000H5-CR-ESD-20	H5 & 5HEX
		BLQ-7000CR-ESD	BLQ-7000CR-ESD	
		BLQ-7000CR-ESD-20	BLQ-7000CR-ESD-20	H4
		BLQ-3000ESD	BLQ-3000ESD	
		BLQ-5000ESD	BLQ-5000H5-ESD	H5 & 5HEX
		BLQ-5000ESD-15	BLQ-5000H5-ESD-15	H5 & 5HEX
	Suction, Anti-static	BLQ-5000ESD-20	BLQ-5000H5-ESD-20	H4
		BLQ-5000ESD-20	BLQ-5000H5-ESD-20	H5 & 5HEX
		BLQ-7000ESD	BLQ-7000ESD	
		BLQ-7000ESD-20	BLQ-7000ESD-20	H5 & 5HEX
		BLQ-7000ESD-20	BLQ-7000ESD-20	

Clean room	HIOS	Model	Order Code	Bit Drive
		BLQ-2000CR	BLQ-2000CR	H4
		BLQ-3000CR	BLQ-3000CR	
		BLQ-5000CR	BLQ-5000CR	
		BLQ-5000H5-CR	BLQ-5000H5-CR	H5 & 5HEX
		BLQ-5000CR-15	BLQ-5000CR-15	H4
		BLQ-5000H5-CR-15	BLQ-5000H5-CR-15	H5 & 5HEX
		BLQ-5000CR-20	BLQ-5000CR-20	H4
		BLQ-5000H5-CR-20	BLQ-5000H5-CR-20	H5 & 5HEX
		BLQ-7000CR	BLQ-7000CR	
OPC	HIOS	BLQ-7000CR-20	BLQ-7000CR-20	H4
		BL-2000-OPC	BL-2000-OPC	
		BL-3000-OPC	BL-3000-OPC	H5 & 5HEX
		BL-5000-OPC	BL-5000-OPC	
		BL-5000H5-OPC	BL-5000H5-OPC	
		BL-5020-OPC	BL-5020-OPC	H5 & 5HEX
		BL-7000-OPC	BL-7000-OPC	
		BL-7000-20-OPC	BL-7000-20-OPC	
		BL-7000HT-OPC	BL-7000HT-OPC	1/4HEX
		BL-3000-OPC	BL-3000X-OPC	
	HEX	BL-5000-OPC	BL-5000X5-OPC	5HEX
		BL-5000-OPC	BL-5000X-OPC	1/4HEX
		BL-5020-OPC	BL-5020X-OPC	
		BL-7000-OPC	BL-7000X-OPC	
		BL-7000-20-OPC	BL-7000X-20-OPC	
		BL-7000HT-OPC	BL-7000X-HT-OPC	

#### P.14 BL Accessories

Product name	Order Code	Driver Model
Pistol Attachment	PAB-70	BL-7000 Series

#### P.15-17 CL Standard type

CL	Lever type	Model	Order Code	Bit Drive
		CL-2000	CL-2000E	H4
		CL-3000	CL-3000E	
		CL-4000	CL-4000E	5HEX
			CL-4000X5	
		CL-6000	CL-4000X	1/4HEX
			CL-6000E	H5
			CL-6000X5	5HEX
		CL-6500	CL-6000X	1/4HEX
			CL-6500E	H5
			CL-6500X5	5HEX
		CL-7000	CL-6500X	1/4HEX
			CL-7000E	H5
			CL-7000X5	5HEX
	Push type	CL-4000PS	CL-7000X	1/4HEX
			CL-4000PS	H4
			CL-4000PSX5	5HEX
		CL-6000PS	CL-4000PSX	1/4HEX
			CL-6000PS	H5
			CL-6000PSX5	5HEX
		CL-6500PS	CL-6000PSX	1/4HEX
			CL-6500PS	H5
			CL-6500PSX5	5HEX
		CL-7000PS	CL-6500PSX	1/4HEX
			CL-7000PS	H5
			CL-7000PSX5	5HEX
		CL-9000	CL-7000PSX	1/4HEX
			CL-9000	

#### P.18 CL Variations

Suction	Lever type	Model	Order Code	Bit Drive
		CLQ-2000	CLQ-2000	H4
		CLQ-3000	CLQ-3000	
		CLQ-4000	CLQ-4000	
		CLQ-6000	CLQ-6000	H5
		CLQ-6500	CLQ-6500	
		CLQ-7000	CLQ-7000	
		CLQ-4000PS	CLQ-4000PS	H4
	Push type	CLQ-6000PS	CLQ-6000PS	H5
		CLQ-6500PS	CLQ-6500PS	
		CLQ-7000PS	CLQ-7000PS	
		CL-2000ESD	CL-2000ESD	H4
Anti-electrostatic	Lever type	CL-3000ESD	CL-3000ESD	
		CL-4000ESD	CL-4000ESD	
			CL-4000X5-ESD	5HEX
			CL-4000X-ESD	1/4HEX
		CL-6000ESD	CL-6000ESD	H5
			CL-6000X5-ESD	5HEX
			CL-6000X-ESD	1/4HEX
		CL-6500ESD	CL-6500ESD	H5
			CL-6500X5-ESD	5HEX
			CL-6500X-ESD	1/4HEX
	Push type	CL-7000ESD	CL-6500X-ESD	1/4HEX
			CL-7000ESD	H5
			CL-7000X5-ESD	5HEX
			CL-7000X-ESD	1/4HEX
		CL-4000PSESD	CL-7000PS-ESD	H5
			CL-4000PS-ESD	H4
			CL-4000PSX5-ESD	5HEX
		CL-6000PSESD	CL-4000PSX-ESD	1/4HEX
			CL-6000PS-ESD	H5
			CL-6000PSX5-ESD	5HEX
Clean room, Anti-static	Lever type	CLQ-3000CR-ESD	CL-6000PSX-ESD	1/4HEX
			CL-6500PS-ESD	H5
			CL-6500PSX5-ESD	5HEX
		CLQ-4000CR-ESD	CL-6500PSX-ESD	1/4HEX
			CL-7000PS-ESD	H5
			CL-7000PSX5-ESD	5HEX
		CLQ-6000CR-ESD	CL-7000PSX-ESD	1/4HEX
			CLQ-3000CR-ESD	H4
			CLQ-4000CR-ESD	
	Push type	CLQ-6500CR-ESD	CLQ-6000CR-ESD	H5
			CLQ-6500CR-ESD	
			CLQ-7000CR-ESD	
		CLQ-7000CR-ESD	CLQ-6000PSCR-ESD	H5
			CLQ-6500PSCR-ESD	
			CLQ-7000PSCR-ESD	
Noiseless	Lever type	CL-3000NL	CLQ-6500PSCR-ESD	H5
			CLQ-7000PSCR-ESD	
			CL-4000NL	H4
		CL-6000NL	CL-4000NL	
		CL-6500NL	CL-6000NL	H5
		CL-7000NL	CL-6500NL	
	Push type	CL-4000PSNL	CL-7000NL	H5
			CL-4000PSNL	
			CL-6000PSNL	H4
		CL-6500PSNL	CL-6500PSNL	
			CL-7000PSNL	H5

#### P.18 CL Accessories

Product name	Order Code	Driver Model
Pistol Attachment	PA-65	CL-6000, CL-6500 CL-7000 (Including PS type)
Angle Attachment	ANGL-Z	For HIOS Shank*1 CL-6000, CL-6500 CL-7000
	ANGLX-Z	For HEX Shank*2 CL-6000X, CL-6500X CL-7000X
Push-to grip attachment	PS-1	For CL-4000
	PS-1-ESD*3	

\*1 For HIOS Shank H5, Lever type.

\*2 For 1/4HEX Shank, Lever type.

\*3 Anti-electrostatic

#### P.19 SS Standard type

SS	Lever type	Model	Order Code	Bit Drive
		SS-2000	SS-2000E	H4
		SS-3000	SS-3000E	
		SS-4000	SS-4000E	5HEX
			SS-4000X5	
		SS-6500	SS-4000X	1/4HEX
			SS-6500E	H5
			SS-6500X5	5HEX
		SS-7000	SS-6500X	1/4HEX
			SS-7000E	H5
			SS-7000X5	5HEX
	Push type	SS-4000PS	SS-7000X	1/4HEX
			SS-4000PS	H4
			SS-4000PSX5	5HEX
			SS-4000PSX	1/4HEX

#### P.20 SS Variations

Suction	Lever type	Model	Order Code	Bit Drive
		SSQ-2000	SSQ-2000	H4
		SSQ-3000	SSQ-3000	
		SSQ-4000	SSQ-4000	H5
		SSQ-6500	SSQ-6500	
		SSQ-7000	SSQ-7000	
	Push type	SSQ-4000PS	SSQ-4000PS	H4
		SSQ-6500PS	SSQ-4000PSX	1/4HEX
			SSQ-6500PS	H5
		SSQ-7000PS	SSQ-7000PS	
Anti-electrostatic	Lever type	SS-2000ESD	SS-2000ESD	H4
		SS-3000ESD	SS-3000ESD	
		SS-4000ESD	SS-4000ESD	5HEX
			SS-4000X5-ESD	
		SS-6500ESD	SS-4000X-ESD	1/4HEX
			SS-6500ESD	H5
			SS-6500X5-ESD	5HEX
		SS-7000ESD	SS-6500X-ESD	1/4HEX
			SS-7000ESD	H5
			SS-7000X5-ESD	5HEX
Push type	Push type	SS-4000PSESD	SS-7000X-ESD	1/4HEX
			SS-4000PS-ESD	H4
			SS-4000PSX5-ESD	5HEX
			SS-4000PSX-ESD	1/4HEX

Clean room, Anti-static	Lever type	Model	Order Code	Bit Drive
		SSQ-2000CR-ESD	SSQ-2000CR-ESD	H4
		SSQ-3000CR-ESD	SSQ-3000CR-ESD	
		SSQ-4000CR-ESD	SSQ-4000CR-ESD	
		SSQ-6500CR-ESD	SSQ-6500CR-ESD	H5
		SSQ-7000CR-ESD	SSQ-7000CR-ESD	
	Push type	SSQ-4000PSCR-ESD	SSQ-4000PSCR-ESD	H4

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SS Accessories

Product name	Order Code	Driver Model
Pistol Attachment	PA-65	SS-6500, SS-7000 (Including PS type)
Push-to grip attachment	PS-1	SS-4000
	PS-1-ESD*	

\* Anti-electrostatic

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α Standard type

α	Lever type	Model	Order Code	Bit Drive
		α -4500	A-4500E	H4
			A-4500X5	5HEX
			A-4500X	1/4HEX
		α -5000	A-5000E	H4
			A-5000X5	5HEX
			A-5000X	1/4HEX
		α -6500	A-6500E	H5
			A-6500X5	5HEX
			A-6500X	1/4HEX
	Push type	α -4500PS	A-4500PS	H4
			A-4500PSX5	5HEX
			A-4500PSX	1/4HEX
		α -5000PS	A-5000PS	H4
			A-5000PSX5	5HEX
			A-5000PSX	1/4HEX
		α -6500PS	A-6500PS	H5
			A-6500PSX5	5HEX
			A-6500PSX	1/4HEX

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α Variations

Suction	Lever type	Model	Order Code	Bit Drive
		α Q-4500	AQ-4500	H4
		α Q-5000	AQ-5000	
		α Q-6500	AQ-6500	H5
	Push type	α Q-4500PS	AQ-4500PS	H4
		α Q-5000PS	AQ-5000PS	
		α Q-6500PS	AQ-6500PS	H5
	Anti-electrostatic	α -4500ESD	A-4500ESD	H4
			A-4500X5-ESD	5HEX
			A-4500X-ESD	1/4HEX
		α -5000ESD	A-5000ESD	H4
			A-5000X5-ESD	5HEX
			A-5000X-ESD	1/4HEX
		α -6500ESD	A-6500ESD	H5
			A-6500X5-ESD	5HEX
			A-6500X-ESD	1/4HEX
		α -4500PSESD	A-4500PS-ESD	H4
			A-4500PSX5-ESD	5HEX
			A-4500PSX-ESD	1/4HEX

Anti-electrostatic	Push type	Model	Order Code	Bit Drive
		α -5000PSESD	A-5000PS-ESD	H4
			A-5000PSX5-ESD	5HEX
			A-5000PSX-ESD	1/4HEX
		α -6500PSESD	A-6500PS-ESD	H5
			A-6500PSX5-ESD	5HEX
			A-6500PSX-ESD	1/4HEX
Clean room, Anti-static	Lever type	α Q-4500CR-ESD	AQ-4500CR-ESD	H4
		α Q-5000CR-ESD	AQ-5000CR-ESD	
		α Q-6500CR-ESD	AQ-6500CR-ESD	H5
		α Q-6500PSCR-ESD	AQ-6500PSCR-ESD	

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α Accessories

Product name	Order Code	Driver Model
Pistol Attachment	PA-65	α -6500, α -6500PS
Angle Attachment	ANGL-Z	For HIOS Shank*1 α -6500
	ANGLX-Z	For HEX Shank*2 α -6500X
Push-to grip attachment	PS-1	α -4500, α -5000
	PS-1-ESD*3	

\*1 For HIOS Shank H5, Lever type.

\*2 For 1/4HEX Shank, Lever type.

\*3 Anti-electrostatic

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Power Supply for DC drivers

Power Supply	Lever type	Model	Order Code	Plug Type
		T-30BL*	T-30BL	A
			T-30BL-UL	A-2
			T-30BL-TH	A-3
			T-30BL-EU-HK	C
			T-30BL-UK-SP	BF
			T-30BL-CN	S
		T-70BL*	T-70BL	A
			T-70BL-UL	A-2
			T-70BL-TH	A-3
			T-70BL-EU-HK	C
			T-70BL-UK-SP	BF
			T-70BL-CN	S
	CLT-30*	CLT-30	CLT-30	A
			CLT-30-UL	A-2
			CLT-30-TH	A-3
			CLT-30-EU-HK	C
			CLT-30-UK-SP	BF
			CLT-30-CN	S
	CLT-60*	CLT-60	CLT-60	A
			CLT-60-UL	A-2
			CLT-60-TH	A-3
			CLT-60-EU-HK	C
			CLT-60-UK-SP	BF
			CLT-60-CN	S
	CLT-80*	CLT-80	CLT-80-UL	A-2
			CLT-80-TH	TH
			CLT-80-EU-HK	C
			CLT-80-UK-SP	BF
			CLT-80-CN	S

Power Supply	Lever type	Model	Order Code	Plug Type
		CLT-100	CLT-100	A-1
			CLT-100-120USA	A-2
			CLT-100-220VDE	C
			CLT-100-220VDER*	C
			CLT-100-230SP	BF
			CLT-100-240UK*	BF
			CLT-100-220RCH	S
		MC-70L	MC-70L	A-1
			MC-70L-120USA	A-2
			MC-70L-220VDE	C
			MC-70L-220VDER*	C
			MC-70L-230SP	BF
			MC-70L-240UK*	BF
			MC-70L-220RCH	S
	Push type	CB-105	CB-105S	
		CLT-50AF	CLT-50AF	
For brushless screwdrivers		BLOP-AF	BLOP-AF	Relay box

The product with \* is CE mark complaint.

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VB Standard type

● Plug: A Type (AC100V)

VB	Lever type	Model	Order Code	Bit Drive
		VB-1510	VB-1510	H4
			VB-1510H5	H5 & 5HEX
			VB-1510X5	5HEX
			VB-1510X	1/4HEX
		VB-1510-18	VB-1510-18	H4
			VB-1510H5-18	H5 & 5HEX
			VB-1510X5-18	5HEX
			VB-1510X-18	1/4HEX
		VB-1820	VB-1820	H5 & 5HEX
			VB-1820X	1/4HEX
		VB-3012	VB-3012	H5 & 5HEX
			VB-3012X	1/4HEX
	Push type	VB-3020	VB-3020	H5 & 5HEX
			VB-3020X	1/4HEX
		VB-1510PS	VB-1510PS	H4
			VB-1510PSH5	H5 & 5HEX
			VB-1510PSX5	
			VB-1510PSX	1/4HEX
		VB-1510PS-18	VB1510PS-18	H4
			VB-1510PSH5-18	H5 & 5HEX
			VB-1510PSX5-18	
			VB-1510PSX-18	1/4HEX
		VB-1820PS	VB-1820PS	H5 & 5HEX
			VB-1820PSX	1/4HEX
		VB-3012PS	VB-3012PS	H5 & 5HEX
			VB-3012PSX	1/4HEX
		VB-3020PS	VB-3020PS	H5 & 5HEX
			VB-3020PSX	1/4HEX
		VB-4504PS	VB-4504PSX-S	

● Plug: A -2 Type (AC120V)

VB	Lever type	Model	Order Code	Bit Drive
		VB-1510	VB-1510-120	H4
			VB-1510X5-120	H5 & 5HEX
			VB-1510X-120	1/4HEX



VB	Lever type	Model	Order Code	Bit Drive
		VB-1510-18	VB-1510-18-120	H4
			VB1510X5-18-120	H5 & 5HEX
			VB-1510X-18-120	1/4HEX
		VB-1820	VB-1820-120	H5 & 5HEX
			VB-1820X-120	1/4HEX
		VB-3012	VB-3012-120	H5 & 5HEX
			VB-3012X-120	1/4HEX
		VB-4504	VB-4504X-120	
	Push type	VB-1510PS	VB-1510PS-120	H4
			VB-1510PSX5-120	H5 & 5HEX
			VB-1510PSX-120	1/4HEX
		VB-1510PS-18	VB1510PS-18-120	H4
			VB1510PSX18-120	1/4HEX
		VB-1820PS	VB-1820PS-120	H5 & 5HEX
			VB-1820PSX-120	1/4HEX
		VB-3012PS	VB-3012PS-120	H5 & 5HEX
			VB-3012PSX-120	1/4HEX
		VB-4504PS	VB-4504PSX1-20	

● Plug: C Type (AC220-240V)

VB	Lever type	Model	Order Code	Bit Drive
		VB-1510	VB-1510-B	H4
			VB-1510X5-B	H5 & 5HEX
			VB-1510X-B	1/4HEX
			VB-1510XB-CE	
		VB-1510-18	VB-1510-18-B	H4
			VB-1510X5-18-B	5HEX
			VB-1510X-18-B	1/4HEX
			VB-1510X-18B-CE	
		VB-1820	VB-1820-B	H5 & 5HEX
			VB-1820X-B	1/4HEX
			VB-1820XB-CE	
		VB-3012	VB-3012-B	H5 & 5HEX
			VB-3012X-B	1/4HEX
			VB-3012X-B-CE	
		VB-4504	VB-4504X-B	
			VB-4504XB-CE	
	Push type	VB-1510PS	VB-1510PS-B	H4
			VB-1510PSX5-B	5HEX
			VB-1510PSX-B	1/4HEX
			VB-1510PSX-B-CE	
		VB-1510PS-18	VB-1510PS-18-B	H4
			VB-1510PSX5-18B	5HEX
			VB-1510PSX-18-B	1/4HEX
			VB-1510PSX18BCE	
		VB-1820PS	VB-1820PS-B	H5 & 5HEX
			VB-1820PSX-B	1/4HEX
			VB-1820PSX-B-CE	
		VB-3012PS	VB-3012-B	H5 & 5HEX
			VB-3012X-B	1/4HEX
			VB-3012X-B-CE	
		VB-4504PS	VB-4504PSX-B	
			VB-4504PSXB-CE	
			VB-4504PSX-B-S	1/4HEX*
			VB-4504PSXBC-CE-S	

\* Shockless Stand Attached

NOTE: In case of using other plug type at 220-240V, please contact to HIOS distributors. (Ex. Argentina, Thailand)

## P.28 VB Variations

● Plug: A Type (AC100V)

OPC	Lever type	Model	Order Code	Bit Drive
		VB-1510-OPC	VB-1510-OPC	H4
			VB-1510H5-OPC	H5 & 5HEX
			VB-1510X5-OPC	5HEX
			VB-1510X-OPC	1/4HEX
		VB-1510-18-OPC	VB-1510-18-OPC	H4
			VB-1510H5-18-OPC	H5 & 5HEX
			VB-1510X5-18-OPC	5HEX
			VB-1510X-18-OPC	1/4HEX
		VB-1820-OPC	VB-1820-OPC	H5 & 5HEX
			VB-1820X-OPC	1/4HEX
		VB-3012-OPC	VB-3012-OPC	H5 & 5HEX
			VB-3012X-OPC	1/4HEX
	Push type	VB-3020-OPC	VB-3020-OPC	H5 & 5HEX
			VB-3020X-OPC	1/4HEX
			VB-1510PS-OPC	H4
			VB-1510PSH5-OPC	H5 & 5HEX
		VB-1510PS-OPC	VB-1510PSX5-OPC	5HEX
			VB-1510PSX-OPC	1/4HEX
			VB-1510PSX-OPC	1/4HEX
		VB-1820PS-OPC	VB-1820PS-OPC	H5 & 5HEX
			VB-1820PSX-OPC	1/4HEX
		VB-3012PS-OPC	VB-3012PS-OPC	H5 & 5HEX
			VB-3012PSX-OPC	1/4HEX
		VB-3020PS-OPC	VB-3020PS-OPC	H5 & 5HEX
			VB-3020PSX-OPC	1/4HEX
		VB-4504PS-OPC	VB-4504PSXOPC-S	1/4HEX

● Plug: A-2 Type (AC120V)

OPC	Lever type	Model	Order Code	Bit Drive
		VB-1510-OPC	VB-1510-120OPC	H4
			VB1510X5-120OPC	H5 & 5HEX
			VB-1510X-120OPC	1/4HEX
		VB-1820-OPC	VB-1820-120OPC	H5 & 5HEX
			VB-1820X-120OPC	1/4HEX
		VB-3012-OPC	VB-3012-120OPC	H5 & 5HEX
			VB-3012X-120OPC	1/4HEX
	Push type	VB-4504-OPC	VB-4504X-120OPC	
		VB-1510PS-OPC	VB1510PS-120OPC	H4
			VB1510PSX120OPC	1/4HEX
		VB-1820PS-OPC	VB1820PS-120OPC	H5 & 5HEX
			VB1820PSX120OPC	1/4HEX
		VB-3012PS-OPC	VB3012PS-120OPC	H5 & 5HEX
			VB3012PSX120OPC	1/4HEX
		VB-4504PS-OPC	VB4504PSX120OPC	

NOTE: In case of using other plug type at 220-240V, please contact to HIOS distributors. (Ex. Argentina, Thailand)

## P.28 VB Accessories

Product name	Order Code	Driver Model
Pistol Attachment	PAB-18	VB-1820, VB-3012 VB-3020
	PAB-18PS	VB-1820PS, VB-3012PS VB-3020PS
Angle Attachment	ANGLV-Z-CH1	For HIOS Shank*1 VB-1820, VB-3012 VB-3020

Product name	Order Code	Driver Model
Angle Attachment	ANGLV-Z-XX1	For HEX Shank*2 VB-1820X, VB-3012X VB-3020X

\*1 For HIOS Shank H5 & 5HEX, Lever type.

\*2 For 1/4HEX Shank, Lever type.

## P.29 VZ Standard type

● Plug: A Type (AC100V)

VZ	Lever type	Model	Order Code	Bit Drive
		VZ-1510	VZ-1510	H4
			VZ-1510X5	5HEX
			VZ-1510X	1/4HEX
		VZ-1820	VZ-1820	H5 & 5HEX
			VZ-1820X	1/4HEX
		VZ-3007	VZ-3007	H5 & 5HEX
			VZ-3007X	1/4HEX
		VZ-3012	VZ-3012	H5 & 5HEX
			VZ-3012X	1/4HEX
			VZ-1510PS	H4
	Push type	VZ-1510PS	VZ-1510PSX5	5HEX
			VZ-1510PSX	1/4HEX
			VZ-1820PS	H5 & 5HEX
		VZ-1820PS	VZ-1820PSX	1/4HEX
			VZ-3007PS	H5 & 5HEX
		VZ-3007PS	VZ-3007PSX	1/4HEX
			VZ-3012PS	H5 & 5HEX
		VZ-3012PS	VZ-3012PSX	1/4HEX
			VZ-4506PS	VZ-4506PSX-S

● Plug: A-2 Type (AC120V)

VZ	Lever type	Model	Order Code	Bit Drive
		VZ-1820	VZ-1820-120	H5 & 5HEX
			VZ-1820X-120	1/4HEX
		VZ-3012	VZ-3012-120	H5 & 5HEX
			VZ-3012X-120	1/4HEX
		VZ-4506	VZ-4506X-120	
	Push type	VZ-1820PS	VZ-1820PS-120	H5 & 5HEX
			VZ-1820PSX-120	1/4HEX
		VZ-3012PS	VZ-3012PS-120	H5 & 5HEX
			VZ-3012PSX-120	1/4HEX
		VZ-4506PS	VZ-4506PSX-120	

● Plug: C Type (AC220-240V)

VZ	Lever type	Model	Order Code	Bit Drive
		VZ-1812	VZ-1812-B	H5 & 5HEX
			VZ-1812X-B	1/4HEX
		VZ-3007	VZ-3007-B	H5 & 5HEX
			VZ-3007X-B	1/4HEX
		VZ-4504	VZ-4504X-B	
	Push type	VZ-1812PS	VZ-1812PS-B	H5 & 5HEX
			VZ-1812PSX-B	1/4HEX
		VZ-3007PS	VZ-3007PS-B	H5 & 5HEX
			VZ-3007PSX-B	1/4HEX
		VZ-4504PS	VZ-4504PSX-B	

NOTE: In case of using other plug type at 220-240V, please contact to HIOS distributors. (Ex. Argentina, Thailand)



## P.30 VZ Variations

### ● Plug: A Type (AC100V)

Suction	Lever type	Model	Order Code	Bit Drive
		VZQ-1510	VZQ-1510	H4
		VZQ-1820	VZQ-1820	H5 & 5HEX
		VZQ-3007	VZQ-3007	
	Push type	VZQ-3012	VZQ-3012	H5 & 5HEX
		VZQ-1510PS	VZQ-1510PS	
		VZQ-1820PS	VZQ-1820PS	
		VZQ-3007PS	VZQ-3007PS	
		VZQ-3012PS	VZQ-3012PS	

### ● Plug: A-2 Type (AC120V)

Suction	Lever type	Model	Order Code	Bit Drive
		VZQ-1820	VZQ-1820-120	H5 & 5HEX
		VZQ-3012	VZQ-3012-120	
	Push type	VZQ-1820PS	VZQ-1820PS-120	
		VZQ-3012PS	VZQ-3012PS-120	

### ● Plug: C Type (AC220-240V)

Suction	Lever type	Model	Order Code	Bit Drive
		VZQ-1812	VZQ-1812-B	H5 & 5HEX
		VZQ-3007	VZQ-3007-B	
	Push type	VZQ-1812PS	VZQ-1812PS-B	
		VZQ-3007PS	VZQ-3007PS-B	

### ● Plug: A Type (AC100V)

OPC	Lever type	Model	Order Code	Bit Drive
		VZ-1510-OPC	VZ-1510-OPC	H4
		VZ-1820-OPC	VZ-1820-OPC	H5 & 5HEX
		VZ-3007-OPC	VZ-3007-OPC	
		VZ-3012-OPC	VZ-3012-OPC	
	Push type	VZ-1510PS-OPC	VZ-1510PS-OPC	H4
		VZ-1820PS-OPC	VZ-1820PS-OPC	H5 & 5HEX
		VZ-3007PS-OPC	VZ-3007PS-OPC	
		VZ-3012PS-OPC	VZ-3012PS-OPC	
		VZ-4506PS-OPC	VZ-4506PSXOPC-S	1/4HEX

### ● Plug: A-2 Type (AC120V)

OPC	Lever type	Model	Order Code	Bit Drive
		VZ-1820-OPC	VZ-1820-120OPC	H5 & 5HEX
			VZ-1820X-120OPC	1/4HEX
		VZ-3012-OPC	VZ-3012-120OPC	H5 & 5HEX
			VZ-3012X-120OPC	1/4HEX
	Push type	VZ-1820PS-OPC	VZ1820PS-120OPC	H5 & 5HEX
			VZ1820PSX120OPC	1/4HEX
		VZ-3012PS-OPC	VZ3012PS-120OPC	H5 & 5HEX
			VZ3012PSX120OPC	1/4HEX

## P.30 VZ Accessories

Product name	Order Code	Driver Model
Pistol Attachment	PA-18	Lever type*1
	PA-18PS	Push type*1
Angle Attachment	ANGLV-Z-CH 1	Lever type*2
	ANGLV-Z-XX1	Lever type*3
PS Front Cover Ring	VZ18-0906	Push type*1
Protective Cover for Toque Adjustment Nut	VZ18-0970	Except VZ-1510
Shockless Stand	VZ18PS-SAS	Push type*1

\*1 Except VZ-1510

\*2 For HIOS Shank H5 & 5HEX, Lever type.

\*3 For 1/4HEX Shank, Lever type.

## P.31 VBH Series

### ● Plug: A Type (AC100V)

VBH	Lever type	Model	Order Code	Bit Drive
		VBH-1820	VBH-1820X	1/4HEX
	Push type	VBH-3012	VBH-3012X	
		VBH-1820PS	VBH-1820PSX	
		VBH-3012PS	VBH-3012PSX	

### ● Plug: A-2 Type (AC120V)

VBH	Lever type	Model	Order Code	Bit Drive
		VBH-1820	VBH-1820X-120	1/4HEX
		VBH-3012	VBH-3012X-120	
	Push type	VBH-1820PS	VBH-1820PSX-120	
		VBH-3012PS	VBH-3012PSX-120	

### ● Plug: C Type (AC220-240V)

VBH	Lever type	Model	Order Code	Bit Drive
		VBH-1820	VBH-1820X-B	1/4HEX
		VBH-3012	VBH-3012X-B	
	Push type	VBH-1820PS	VBH-1820PSX-B	
		VBH-3012PS	VBH-3012PSX-B	

## P.31 VBH Variations

### ● Plug: A Type (AC100V)

OPC	Lever type	Model	Order Code	Bit Drive
		VBH-1820-OPC	VBH-1820X-OPC	1/4HEX
	Push type	VBH-3012-OPC	VBH-3012X-OPC	
		VBH-1820PS-OPC	VBH-1820PSX-OPC	
		VBH-3012PS-OPC	VBH-3012PSX-OPC	

NOTE: Another voltage for VBH Variations : Please contact HIOS distributors.

## P.32 VZH Series

### ● Plug: A Type (AC100V)

VZH	Lever type	Model	Order Code	Bit Drive
		VZH-1820	VZH-1820X	1/4HEX
	Push type	VZH-3012	VZH-3012X	
		VZH-1820PS	VZH-1820PSX	
		VZH-3012PS	VZH-3012PSX	

### ● Plug: A-2 Type (AC120V)

VZH	Lever type	Model	Order Code	Bit Drive
		VZH-1820	VZH-1820X-120	1/4HEX
	Push type	VZH-3012	VZH-3012X-120	
		VZH-1820PS	VZH-1820PSX-120	
		VZH-3012PS	VZH-3012PSX-120	

## P.32 VZH Variations

### ● Plug: A Type (AC100V)

OPC	Lever type	Model	Order Code	Bit Drive
		VZH-1820-OPC	VZH-1820X-OPC	1/4HEX
	Push type	VZH-3012-OPC	VZH-3012X-OPC	
		VZH-1820PS-OPC	VZH-1820PSX-OPC	
		VZH-3012PS-OPC	VZH-3012PSX-OPC	

NOTE: Another voltage for VZH Variations : Please contact HIOS distributors.

## P.33 BLF Series

BLF	Model	Order Code	Bit Drive
	BLF-2000	BLF-2000	H4
	BLF-5000	BLF-5000	H5 & 5HEX
	BLF-7000	BLF-7000	H5
	BLF-7000X	BLF-7000X	1/4HEX
	BLF-7025X	BLF-7025X	

## P.34 BLF Variations

Suction	BLFQ	Model	Order Code	Bit Drive
		BLFQ-2000	BLFQ-2000	H4
		BLFQ-5000	BLFQ-5000	5HEX
		BLFQ-7000	BLFQ-7000	
	BLFR	BLFR-5000	BLFR-5000	1/4HEX
		BLFR-7000X	BLFR-7000X	
		BLFR-7025X	BLFR-7025X	

NOTE: Please contact to HIOS distributors before purchasing BLFR type.

## P.34 Power Supply for BLF

Model	Oder Code	Plug Type
BLT-AY-61	BLT-AY61E	A-1
	BLT-AY61E-USA	A-2
	BLT-AY61E-TH	A-3
	BLT-AY61E-EUHK	C
	BLT-AY61E-UKSP	BF
	BLT-AY61E-CN	S

Model	Oder Code	Plug Type
BLT-AY-71	BLT-AY71E	A-1
	BLT-AY71E-USA	A-2
	BLT-AY71E-TH	A-3
	BLT-AY71E-EUHK	C
	BLT-AY71E-UKSP	BF
	BLT-AY71E-CN	S

NOTE: In case of using other plug type at 220-240V, please contact to HIOS distributors. (Ex. Argentina, Thailand)

### P.35 CLF, α F, CL-A series

\* The meaning of the codes in Alphabet  
HH: HIOS driver, HIOS power supply  
XH: HEX driver, HIOS power supply

	Model	Order Code	Bit Drive
Automatic Assembly Machines Driver Series	CLF-3000	CLF-3000HH	H4
	CLF-4000	CLF-4000HH	
	CLF-4000	CLF-4000XH	1/4HEX
	CLF-6000	CLF-6000HH	H5
		CLF-6000XH	1/4HEX
	CLF-6500	CLF-6500HH	H5
		CLF-6500XH	1/4HEX
	CLF-7000	CLF-7000HH	H5
		CLF-7000XH	1/4HEX
	α F-4500	α F-4500HH	H4
		α F-4500XH	1/4HEX
	α F-5000	α F-5000HH	H4
		α F-5000XH	1/4HEX
	α F-6500	α F-6500HH	H5
		α F-6500XH	1/4HEX
	CL-816A	CL-816AXH	
		CL-816AXN	
	CL-825A	CL-825AXH	
		CL-825AXN	
	CL-850A	CL-850AXH	
		CL-850AXN	

\* Please contact HIOS distributors to place an order HN (Combination of HIOS drive and NITTO power supply) or XN (Combination of HEX drive and NITTO power supply).

### P.36 CLF, α F Variations

	Model	Order Code	Bit Drive
Suction	CLFQ-3000	CLFQ-3000HH	H4
	CLFQ-4000	CLFQ-4000HH	
	CLFQ-6000	CLFQ-6000HH	
	CLFQ-6500	CLFQ-6500HH	H5
	CLFQ-7000	CLFQ-7000HH	H4
	α FQ-4500	α FQ-4500HH	
	α FQ-5000	α FQ-5000HH	
	α FQ-6500	α FQ-6500HH	H5

### P.36 Power Supply for CLF, α F, CL-A series

	Order Code	Plug Type
CLT-AY-61	CLT-AY61	A-1*
	CLT-AY61-120	A-2
	CLT-AY61-230VDE	C
	CLT-AY61-230SP	BF
	CLT-AY61-220RCH	S
Options	2WV type	A-1*
	REV	
	2WV+REV type	
CLT-AY-81		A-1*
Options	2WV type	
	REV	
	2WV+REV type	

\* In case of using voltage other than 100V, please contact to HIOS distributors for options.

### P.36 CLF, α F, CL-A Accessories

Product name	Model	Order Code	Bit Drive
Carbon brush	CLF-3000	A45-0420	
	CLF-4000	CL4-0420	
	α F-4500	A45-0420	
	α F-5000		
	CLF-6000	CL65-0490	
	CLF-6500		
	CLF-7000		
	α F-6500		
	CL-816A	CL9-0410	*
	CL-825A		*
	CL-850A	CL850-0381	

\* Carbon brush for the previous model of CL-816A and CL-825A cannot be replaced due to the design of the motor.

### P.37 Recipro Series

Model	Order Code	Driver model	Plug type
RN53-200	RN53-200	RD-4000	A
RN53-260	RN53-260	RD-4500	
RN53-300	RN53-300*	RD-10 or RD-15	
RN53-400	RN53-400*	RD-20 or RD-30	

\* Select the screwdriver model first to place an order on the RN53-300 or RN53-400.

### P.38 Power Supply for Recipro

Model	Order Code	Remarks
RDT-30	RDT-30	DC type
RAC-100	RAC-100	AC100V

### P.38 Recipro Accessories

Product name	Model	Order Code
Carbon brush	DC type	RD-4000
		RD-4500
	AC type	RD-10
		RD-15
		RD-20
		RD-30
		ACL10-0490
		ACL20-0490

### P.39 Peripherals and Accessories

Product name	Model	Order Code	Plug Type
Vacuum pump	VP-3	VP-3	A-1
		VP-3-120USA	A-2
		VP-3-220RCH	S
		VP-3-220TH	A-3
		VP-3-230HK	C
		VP-3-230SP	BF

Product name	Order Code	Driver Model
Screwdriver Cord	1.5m(5P)	CL4-0611
	2m(5P)	CL65-0660
	3m(5P)	CLF65-0620
Flexible Screwdriver Cord	2m(5P)	CL4-0611H-5P-2
	3m(6P)	BLG • BL • CL • SS • α
		BLG-BC1 • BLG-OPC • BL-OPC

Product name	Order Code	Driver Model
Curled Cord	7.5m(5P)	CL65-0660-7.5
Extension Cord	3m(5P)	EXTCD-5P3M
	5m(5P)	EXTCD-5P5M

\*1 Compatible screwdriver: BLG-4000, BLG-5000, BL-3000, BL-5000 series, CL-2000, CL-3000, CL-4000, SS-2000, SS-3000, SS-4000, α -4500, α -5000  
\*2 Compatible screwdriver: BL-7000 series, CL-6000, CL-6500, CL-7000, CL-6500, SS-7000, α -6500  
\*3 can be used with HH and XH of the CLF & α F series (except CL-A series).

Product name	Model	Order Code	Bit Drive
Aluminum Handle Screwdriver	WOOD-4AL	WOOD-4AL	HIOS H4
Wooden Handle Screwdriver	WOOD-5	WOOD-5	HIOS H5

Product name	Model	Order Code	Remarks
Grip Ring Red	GRIP-R10	GRIP-R10	Each color (10 pcs in 1 pack)
Grip Ring Green	GRIP-G10	GRIP-G10	
Grip Ring White	GRIP-W10	GRIP-W10	
Grip Ring Blue	GRIP-BL10	GRIP-BL10	
Grip Ring Yellow	GRIP-Y10	GRIP-Y10	

Product name	Model	Order Code	Screw size
HIOS SPIKE Bit 3pcs set (Yellow, Blue, Red)	SPK-SET01	SPK-SET01	M1.2 – 2.0 (⊕ #0)
HIOS SPIKE Bit Yellow	SPK-1214	SPK-1214	⊕ M1.2 ~ M1.4
HIOS SPIKE Bit Blue	SPK-1417	SPK-1417	⊕ M1.4 ~ M1.7
HIOS SPIKE Bit Red	SPK-1720	SPK-1720	⊕ M1.7 ~ M2.0

Product name	Model	Order Code	Driver Model
VMS Stand	VMS-40	VMS-40	For PG/BLG/BL/CL/SS/α/VZ*
	VMS-50	VMS-50	
	VMS-50VZ	VMS-50VZ	For PG/VZ (except VZ-1510)

\* Screwdriver holder for BL-7000 and VB-1510 is optional.

### P.40 Peripherals and Accessories

● VMS Screwdriver holders(Optional)

Product name	Order Code	Holder order cord
PG Series	PG-3000	VMS-0900-PG3
	PG-5000	VMS-3910-PG5*1
	PG-7000	VMS-0900-PG7
BLG-BC1 Series	BLG-4000BC1	VMS-0900-BLG
	BLG-5000BC1	
BLG Series	BLG-4000	VMS-0900-BLG
	BLG-5000	
BL Series	BL-7000	VMS0900-BL7
VB Series	VB-1510	VMS-0910-PG5
	VB-1820	VMS-0900-PG7
	VB-3012	
	VB-1820PS	
	VB-3012PS	VMS-0900-VB18PS

Product name		Holders order cord
VZ Series	VZ-1510	VMS50-0190
	VZ-1510PS	
VMS-40/VMS-50 Standard holder		VMS40-0180*2
VMS-50VZ Standard holder		VMS-0900-VZ18*2

\*1 with a spacer

\*2 Mountable screwdriver models are available on P.40

## P.42 Power Supply with Screw Counter (DC) STC3

	Model	Order Code	Plug Type
Screw Counter (DC)	BLOP-STC3	BLOP-STC3	A-1
		BLOP-STC-3USA	A-2
		BLOP-STC-3TH	A-3
		BLOP-STC-3EUHK	C
		BLOP-STC-3UKSP	BF
		BLOP-STC-3-CN	S
	CLT-70STC3	CLT-70STC3	A-1
		CLT-70STC3 - USA	A-2
		CLT-70STC3-TH	A-3
		CLT-70STC3-EUHK	C
		CLT-70STC3-UKSP	BF
		CLT-70STC3-CN	S
Screw Counter (AC)	VZOP-STC	VZOP-STC	A-1
		VZOP-STC-120 1	A-2

## P.43 Separate Screw Counter SC1

	Model	Order Code	Driver Model
Separate Screw Counter SC1	BLOP-SC1	BLOP-SC1	For BLG-BC1/BLG-OPC/BL-OPC
	CLOP-SC1	CLOP-SC1	For CL/SS/ $\alpha$

## P.44 Separate Screw Counter SC3

	Model	Order Code	Driver Model
Compact type Separate Screw Counter SC3	BLOP-SC3	BLOP-SC3	For BLG-OPC/BL-OPC
	CLOP-SC3	CLOP-SC3	For CL/SS/ $\alpha$

## P.45 Torque Meter Series

### ● HP-1\*

\* Available on request. Please contact to HIOS distributors.

### ● HP-10 Series

Voltage	Order Code	Measuring	Bit Drive
AC100V	HPN-10-A1	N • m / N • cm	HIOS
	HPN-10X-A1		HEX
AC120V	HPN-10-A2	N • m / lbf • in	HIOS
	HPN-10X-A2		HEX
	HPN-10-A3	N • m / kgf • cm	HIOS
	HPN-10X-A3		HEX
AC220-240V	HPN-10-C1	N • m / N • cm	HIOS
	HPN-10X-C1		HEX
	HPN-10-C2	N • m / lbf • in	HIOS
	HPN-10X-C2		HEX
	HPN-10-C3	N • m / kgf • cm	HIOS
	HPN-10X-C3		HEX
	HPN-10-D	kgf • cm / lbf • in	HIOS
	HPN-10X-D		HEX

### ● HP-100 Series

Voltage	Order Code	Measuring	Bit Drive
AC100V	HPN-100-A1	N • m / N • cm	HIOS
	HPN-100X-A1		HEX
AC120V	HPN-100-A2	N • m / lbf • in	HIOS
	HPN-100X-A2		HEX
	HPN-100-A3	N • m / kgf • cm	HIOS
	HPN-100X-A3		HEX
AC220-240V	HPN-100-C1	N • m / N • cm	HIOS
	HPN-100X-C1		HEX
	HPN-100-C2	N • m / lbf • in	HIOS
	HPN-100X-C2		HEX
	HPN-100-C3	N • m / kgf • cm	HIOS
	HPN-100X-C3		HEX
	HPN-100-D	kgf • cm / lbf • in	HIOS
	HPN-100X-D		HEX

### ● HDP-5 Series

Voltage	Order Code	Measuring	Bit Drive
AC100V	HDPN-5-A1	N • m / N • cm	HIOS
	HDPN-5X-A1		HEX
AC120V	HDPN-5-A2	N • m / lbf • in	HIOS
	HDPN-5X-A2		HEX
	HDPN-5-A3	N • m / kgf • cm	HIOS
	HDPN-5X-A3		HEX
AC220-240V	HDPN-5-C1	N • m / N • cm	HIOS
	HDPN-5X-C1		HEX
	HDPN-5-C2	N • m / lbf • in	HIOS
	HDPN-5X-C2		HEX
	HDPN-5-C3	N • m / kgf • cm	HIOS
	HDPN-5X-C3		HEX
	HDPN-5-D	kgf • cm / lbf • in	HIOS
	HDPN-5X-D		HEX

### ● HDP-50 Series

Voltage	Order Code	Measuring	Bit Drive
AC100V	HDPN-50-A1	N • m / N • cm	HIOS
	HDPN-50X-A1		HEX
AC120V	HDPN-50-A2	N • m / lbf • in	HIOS
	HDPN-50X-A2		HEX
	HDPN-50-A3	N • m / kgf • cm	HIOS
	HDPN-50X-A3		HEX
AC220-240V	HDPN-50-C1	N • m / N • cm	HIOS
	HDPN-50X-C1		HEX
	HDPN-50-C2	N • m / lbf • in	HIOS
	HDPN-50X-C2		HEX
	HDPN-50-C3	N • m / kgf • cm	HIOS
	HDPN-50X-C3		HEX
	HDPN-50-D	kgf • cm / lbf • in	HIOS
	HDPN-50X-D		HEX

### ● HDP-100 Series

Voltage	Order Code	Measuring	Bit Drive
AC100V	HDPN-100X-A1	N • m / N • cm	HEX
AC120V	HDPN-100X-A2	N • m / lbf • in	
	HDPN-100X-A3	N • m / kgf • cm	
AC220-240V	HDPN-100X-C1	N • m / N • cm	
	HDPN-100X-C2	N • m / lbf • in	
	HDPN-100X-C3	N • m / kgf • cm	
	HDPN-100X-D	kgf • cm / lbf • in	

### ● HM-10 Series

Model	Order Code	Voltage
HM-10	HM-10	AC100V
	HM-10-120	AC110-120V
	HM-10-230B	AC220-240V (Plug:BF)
	HM-10-230G	AC220-240V (Plug:C)
HM-100	HM-100	AC100V
	HM-100-120	AC110-120V
	HM-100-230B	AC220-240V (Plug:BF)
	HM-100-230G	AC220-240V (Plug:C)

### ● HIT Series

Model	Order Code	Voltage
HIT-200	HIT-200	AC100V
	HIT-200-120	AC110-120V
	HIT-200-220	AC220-240V
HIT-500	HIT-500	AC100V
	HIT-500-120	AC110-120V
	HIT-500-220	AC220-240V
HIT-2000	HIT-2000	AC100V
	HIT-2000-120	AC110-120V
	HIT-2000-220	AC220-240V

### ● Detector cord for HDP/HM/HIT Series

Model	Order Code
Detector cord	DPC-0506

## P.46 Torque Meters Accessories

### ● HP Series

Product name	Order Code	Measuring range N · m	Bit Drive
Fidaptor for HP-10	TF4G-Z	0.15 - 0.6	H4
	TF6SG-Z*2	0.15 - 0.6	H4
	TF4SG-Z	0.25 or less	
	TF4S-Z*1	0.25 or less	
Fidaptor for HP-100	TF5G-Z	0.5 - 3	H5
	TF6XG-Z*2	0.5 - 3	1/4HEX
	TF6UP-Z*1	3 - 9	
	TF6U-Z*1	3 - 9	
Driver Shaft HP-100	TF6XG-0010*2		
	TF5G-0010-4		H4
Fidaptor Buffer Spring	CL65-0040	0.15 - 0.6	
Grease	TF-G3		

\*1 Without Safety Guard

\*2 HEX shank (Convertible Shaft) 5mm (Upper) and 6.35mm (Low)

### ● HDP Series

Product name	Order Code	Measuring range N • m	Bit Drive
Detector cord	DPC-0506		

### ● HM Series

Product name	Order Code	Measuring range N • m	Bit Drive
Fidaptor for HM-10	TFM26-Z	0.15 - 0.6	+Bit #1
	TFM20-Z	0.25 or less	+Bit #0







Product name	Order Code	Measuring range N • m	Bit Drive
Fidaptor for HM-100	TFM40-Z	0.5 - 3	+Bit #2
Fidaptor Buffer Spring	CL65-0040	0.15 - 0.6	

● HIT Series





Product name	Order Code	Measuring range N • m	Bit Drive
Detector cord	DPC-0506		

● Battery Charger for HP & HDP

Order Code	Voltage	Plug Type
TCH-MULTI	100-240V	A
TCH-MULTI-CN	100-240V	A (CN)
TCH-EU	100-240V	C

Plug : A	Plug : A	Plug : C
P/N : TCH-MULTI UL, cUL, CE	P/N : TCH-MULTI-CN CCC, CE	P/N : TCH-EU CE
		
Japan, US, Canada, Latin America, Taiwan	China, UK, Ireland, HK, Australia, other countries in Asia	Europe
<p>• The battery charger comes with 3 different types of conversion plugs for the following countries. Latin America, China, UK, Ireland, HK, Australia, other countries in Asia</p>		
		
Type C	Type BF	Type S

● Battery Charger for HM & HIT

Plug : A	Plug : A	Plug : C	Plug : BF
P/N : TCH-100N	P/N : TCH-120N	P/N : TCH-230G	P/N : TCH-230B
			
Japan	Korea, Taiwan, US, Canada	HK, Europe, China	Singapore, UK, Australia

**P.47-48 Automatic Screw Feeder**

● For manual operation

Product name	Model	Order Code	Screw Size
HS Series	HS-35	HS-35-EC	M3.5
	HS-40	HS-40-EC	M4.0
	HS-50	HS-50-EC	M5.0
HS III Series	HS III -10	HS-10-3-EC	M1.0
	HS III -12	HS-12-3-EC	M1.2
	HS III -14	HS-14-3-EC	M1.4
	HS III -17	HS-17-3-EC	M1.7
	HS III -20	HS-20-3-EC	M2.0
	HS III -23	HS-23-3-EC	M2.3
	HS III -26	HS-26-3-EC	M2.6
	HS III -30	HS-30-3-EC	M3.0
HSF Series	HSF-10	HSF-10	M1.0
	HSF-12	HSF-12	M1.2
	HSF-14	HSF-14	M1.4
	HSF-17	HSF-17	M1.7
	HSF-20	HSF-20	M2.0
	HSF-26	HSF-26	M2.6
HSV Series	HSF-30	HSF-30	M3.0
	HSV-10	HSV-10	M1.0
	HSV-12	HSV-12	M1.2
	HSV-14	HSV-14	M1.4
	HSV-17	HSV-17	M1.7
	HSV-20	HSV-20	M2.0
	HSV-23	HSV-23	M2.3
	HSV-26	HSV-26	M2.6
	HSV-30	HSV-30	M3.0

● For Automatic Assembly machines

Product name	Model	Order Code	Screw Size
HS-RB Series	HS-35RB	HS-35RB-EC	M3.5
	HS-40RB	HS-40RB-EC	M4.0
	HS-50RB	HS-50RB-EC	M5.0
HS III -RB Series	HS III -14RB	HS-14-3RB-EC	M1.4
	HS III -17RB	HS-17-3RB-EC	M1.7
	HS III -20RB	HS-20-3RB-EC	M2.0
	HS III -23RB	HS-23-3RB-EC	M2.3
	HS III -26RB	HS-26-3RB-EC	M2.6
	HS III -30RB	HS-30-3RB-EC	M3.0
HSV-RB Series	HSV-10RB	HSV-10RB	M1.0
	HSV-12RB	HSV-12RB	M1.2
	HSV-14RB	HSV-14RB	M1.4
	HSV-17RB	HSV-17RB	M1.7
	HSV-20RB	HSV-20RB	M2.0
	HSV-23RB	HSV-23RB	M2.3
	HSV-26RB	HSV-26RB	M2.6
	HSV-30RB	HSV-30RB	M3.0

**P.47-48 Automatic Screw Feeder Accessories**

● Rail for hand-manual type

Product name	Order Code	Screw Size
HS Series	HS-R35	M3.5
	HS-R40	M4.0
	HS-R50	M5.0

Product name	Order Code	Screw Size
HS III Series	HS-SR10	M1.0
	HS-SR12	M1.2
	HS-SR14	M1.4
	HS-SR17	M1.7
	HS-SR20	M2.0
	HS-SR23	M2.3
	HS-SR26	M2.6
HSF Series	HS-SR30	M3.0
	HS-WR10	M1.0
	HS-WR12	M1.2
	HS-WR14	M1.4
	HS-WR17	M1.7
	HS-WR20	M2.0
	HS-WR26	M2.6
HSV Series	HS-WR30	M3.0
	HSV-BI-10	M1.0
	HSV-BI-12	M1.2
	HSV-BI-14	M1.4
	HSV-BI-17	M1.7
	HSV-BI-20	M2.0
	HSV-BI-23	M2.3
	HSV-BI-26	M2.6
	HSV-BI-30	M3.0

● Rail for RB type

Product name	Order Code	Screw Size
HS-RB Series	HS-R35RB	M3.5
	HS-R40RB	M4.0
	HS-R50RB	M5.0
HS III -RB Series	HS-SR14RB	M1.4
	HS-SR17RB	M1.7
	HS-SR20RB	M2.0
	HS-SR23RB	M2.3
	HS-SR26RB	M2.6
HSV-RB Series	HS-SR30RB	M3.0
	HSV-RI-10	M1.0
	HSV-RI-12	M1.2
	HSV-RI-14	M1.4
	HSV-RI-17	M1.7
	HSV-RI-20	M2.0
	HSV-RI-23	M2.3
	HSV-RI-26	M2.6
	HSV-RI-30	M3.0

● AC Adaptor

Product name	Order Code	Voltage	Plug Type
HS II • HS III • HS-RB • HS III -RB	HS-AD	AC100V	A
	HS-AD220	AC220-240V	C
HSF Series	HSF-AD	AC100-240V	A
HSV Series	HSV-AD-PSE	AC100-240V	A
	HSV-AD-CN	AC100-240V	A (CCC)
	HSV-AD-EUHK	AC220-230V	C



## Plug Type

Plug : A	Plug : A(CCC)	Plug : C
AC100-120V	AC220V	AC220-230V
PSE	CN	EUHK

Product name	Model	Order Code	Plug Type
Power Supply	T-70BL	T-70BL	A
		T-70BL-UL	A-2
		T-70BL-TH	A-3
		T-70BL-EU-HK	C
		T-70BL-UK-SP	BF
		T-70BL-CN	S

## P.49 CD Series

Product name	Model	Order Code	Bit Drive
Lever type	CD-4000	CD-4000	H4
		CD-4000X5	5HEX
		CD-4000X	1/4HEX
	CD-5000	CD-5000	H4
		CD-5000X5	5HEX
		CD-5000X	1/4HEX
	CD-6000	CD-6000	H5
		CD-6000X5	5HEX
		CD-6000X	1/4HEX
	CD-7000	CD-7000	H5
		CD-7000X5	5HEX
		CD-7000X	1/4HEX
Push type	CD-5000PS	CD-5000PS	H4
		CD-5000X5	5HEX
		CD-5000PSX	1/4HEX
	CD-6000PS	CD-6000PS	H5
		CD-6000X5	5HEX
		CD-6000PSX	1/4HEX
	CD-7000PS	CD-7000PS	H5
		CD-7000X5	5HEX
		CD-7000PSX	1/4HEX

## P.52 Electric Tapper, SB Series (For Brushed)

Product name	Model	Order Code	Plug Type
SB Series	SB-400C	SB-400C	
		SB-400CNL	Noiseless Type
	SB-650C	SB-650C	
		SB-650CNL	Noiseless Type
Power Supply	SBT-50	SBT-50	A-1
		SBT-50-120USA	A-2
		SBT-50-220VDE	C
		SBT-50-230SP	BF
		SBT-50-220RCH	S
		SBT-50-240UK	BF

## P.52 SB Accessories

Product name	Model	Order Code	Plug Type
Carbon brush	SB-400C	CL4-0420	
	SB-650C	CL65-0490	

## P.50 CD Accessories

Product name	Model	Order Code	Remarks
Battery	CDB-12	CDB-12	
	CDS-12	CDS-12	*
Charger	CDC-12M	CDC-12M	Battery & Charger for CDB-12 and CDS-12

\* CDS-12 includes all the 6 components available on P.48.

Product name	Model	Order Code	Remarks
Carbon brush	CD-4000	AB45-0420	Including PS type
	CD-5000		
	CD-6000	AB65-0490	Including PS type
	CD-7000		

## P.51 Electric Tapper, BL-SB Series (for Brushless)

Product name	Model	Order Code	Plug Type
BL-SB Series	BL-5000SB	BL-5000SB	
	BL-7000SB	BL-7000SB	

Product name	Model	Order Code	Bit Drive
Brushless Screwdrivers (DC)	BLG-500	BLQ5N-SET	H4
		BLQ5N-SET-ESD*	60mm
	BLG-5000-15	BLQ5-SET	H4
		BLQ5-SET-ESD*	40mm
		BLQ5N-SET	H4
		BLQ5N-SET-ESD*	60mm
	BLG-5000-20	BLQ5-SET	H4
		BLQ5-SET-ESD*	40mm
		BLQ5N-SET	H4
		BLQ5N-SET-ESD*	60mm
	BL-2000	CLQ2-SET	H4
		CLQ2-SET-ESD*	
	BL-3000	BLQ3N-SET	H4
		BLQ3N-SET-ESD*	
	BL-5000	BLQ5-SET	H4
		BLQ5-SET-ESD*	40mm
		BLQ5N-SET	H4
		BLQ5N-SET-ESD*	60mm
	BL-5000-20	BLQ5-SET	H4
		BLQ5-SET-ESD*	H4
	BL-7000	BLQ7-SET	H5
		BLQ7-SETESD*	
Brushed Screwdrivers (DC)	CLQ-2000	CLQ2-SET	H4
		CLQ2-SET-ESD*	
	CLQ-3000	CLQ4-SET	H4
		CLQ4-SET-ESD*	
	CLQ-4000	CLQ4-SET	H4
		CLQ4-SET-ESD*	
	CLQ-6000	CLQ65-SET	H5
		CLQ65-SET-ESD*	
	CLQ-6500	CLQ65-SET	H5
		CLQ65-SET-ESD*	
	CLQ-7000	CLQ65-SET	H5
		CLQ65-SET-ESD*	
	SSQ-2000	CLQ2-SET	H4
		CLQ2-SET-ESD*	
	SSQ-3000	CLQ4-SET	H4
		CLQ4-SET-ESD*	
	SSQ-4000	CLQ4-SET	H4
		CLQ4-SET-ESD*	
	SSQ-6500	CLQ65-SET	H5
		CLQ65-SET-ESD*	
	SSQ-7000	CLQ65-SET	H5
		CLQ65-SET-ESD*	
	α Q-4500	CLQ4-SET	H4
		CLQ4-SET-ESD*	
	α Q-5000	CLQ4-SET	H4
		CLQ4-SET-ESD*	
	α Q-6500	CLQ65-SET	H5
		CLQ65-SET-ESD*	
Brushless Screwdrivers (AC)	VB-1820	VZQ18-SET	H5
	VB-3012		
	VB-3020		
Brushed Screwdrivers (AC)	VZQ-1510	VZQ10-SET	H4
	VZQ-1820	VZQ18-SET	H5
	VZQ-3007		
	VZQ-3012		

\* Anti-electrostatic



● Automatic Assembly Machines Screwdrivers

Product name	Model	Order Code	Bit Drive
Brushless Screwdrivers (DC)	BLF-2000	BLFQ2-SET	H4
	BLF-5000	BLFQ5-SET	H5
	BLF-7000	BLFQ7-SET	
Brushed Screwdrivers (DC)	CLFQ-3000	CLFQ4-SET	H4
	CLFQ-4000		
	CLFQ-6000	CLFQ65-SET	H5
	CLFQ-6500		
	CLFQ-7000	CLFQ4-SET	H4
	α FQ-4500		
	α FQ-5000	CLFQ65-SET	H5
	α FQ-6500		

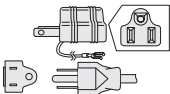
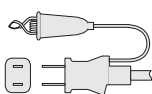
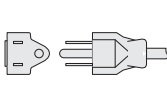
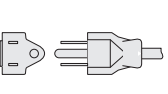
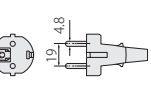
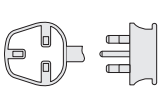
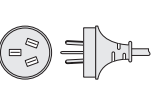
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Accessories for BLFR Series

● Suction (Vacuum) Attachment

Model	Order Code	Bit Drive
BLFR-5000	BLFR5-SA	5HEX
BLFR-7000X	BLFR7-SA	1/4HEX
BLFR-7025X		

● Plug Type

Voltage	100V		120V	220-240V			
Plug Type	Type A	Type A-1	Type A-2	Type A-3	Type C	Type BF	Type S
							



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### Cautions for safety

Cautions for safety. Read the instruction manual carefully before use and operate the screwdriver for its intended purpose. Always use the specified current and voltage.

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