



# HIOS®

Electric Screwdriver  
General Catalog **18A**

**HERMES**   
THE TOOL COMPANY

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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



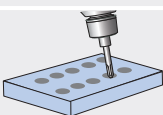
### Screw tightening data management (tightening criteria)



### 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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### ● Brushed screwdrivers

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### ● Brushless screwdrivers

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### ● Brushed screwdrivers

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### ● Brushed screwdrivers

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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

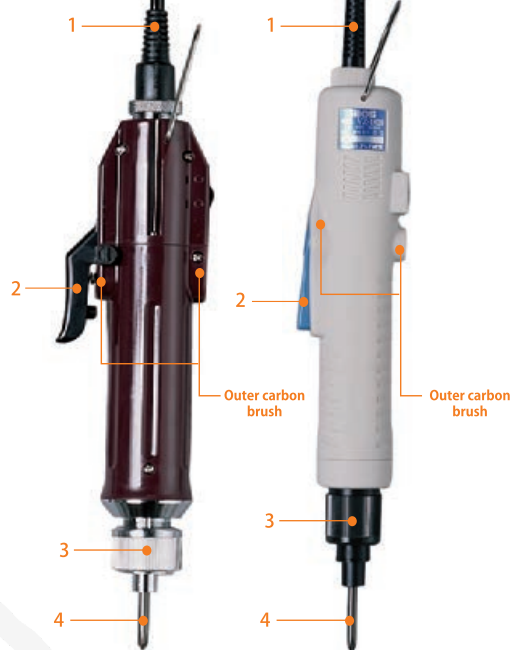
AC type



## 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 (BC2 / BC1 / ZERO1 / 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.

<b>HIOS shank shape</b> (bit socket) <small>* Please purchase genuine HIOS bits.</small>	H4 (Φ 4)	
	H5 (Φ 5)	
<b>HEX shank shape</b> (bit socket) <small>* Please purchase standard sized HEX bits from commercial stores.</small>	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.



**China 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

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

## For precision assembly

## DC Screwdrivers

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



For heavy-duty production	For cell production	For automated assembly line	Screw feeding system
AC Screwdrivers	Portable Screwdrivers (battery powered)	Screwdrivers for automation	Reciprocating Screwdrivers

Screwdriver Classification		Model name	Output Torque Range																								Unloaded Rotation Speed (r.p.m) (HI/LOW)	Screw Size (mm)		Applications										
																												Machine Screw	Tapping Screw											
			(kgf•cm)																																					
			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)																					3-7				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)					0.15-1.5																				1,000	2.0-4.0	2.0-3.0										
			VZ-1820 (100V or 120V)					0.4-1.8																				2,000	2.6-4.0	2.6-3.0										
			VZ-3012 (100V or 120V)											0.9-3																		1,200	3.0-5.0	3.0-4.0						
			VZ-4506/4506PS (100V or 120V)/(100V)													1-4.5																				600	3.0-5.0	2.6-4.0		
			VZ-1812 (220V-240V)					0.4-1.8																				1,200	2.6-4.0	2.6-3.0										
			VZ-3007 (100V or 220V-240V)											0.9-3																		700	3.0-5.0	3.0-4.0						
			VZ-4504 (220V-240V)													1-4.5																				400	3.0-5.0	2.6-4.0		
	VZH Series	Super hi-torque	VZH-1820 (100V or 120V)																					3-7				470	5.0-6.0	5.0-6.0										
			VZH-3012 (100V or 120V)																					4-10				270	5.0-6.0	5.0-6.0										
DC type/Brushless	For automated machine	PGF Series	PGF-3000					0.2-0.55																				HI 625-950 LOW 115-325	1.7-2.3	2.0-2.3	Electrical components, automobile parts, pneumatic devices, etc.									
			PGF-5000					0.4-1.2																				HI 690-985 LOW 115-320	2.3-3.0	2.0-2.3										
			PGF-7000													1.0-2.8																				HI 645-935 LOW 210-595	2.6-5.0	2.6-4.0		
		BLF Series	BLF-2000			0.03-0.35																						HI 690-975 LOW 120-345	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			0.3-1																				HI 660-940 LOW 115-320	2.0-3.0	2.0-3.0												
			BLF-7000											0.7-2																		HI 495-735 LOW 150-450	2.6-5.0	2.6-4.0						
			BLF-7000X													0.7-2																				HI 495-735 LOW 150-450	2.6-5.0	2.6-4.0		
			BLF-7025X															1.2-2.5																		HI 600-400 LOW 120-350	3.0-5.0	3.0-4.0		
DC type/Brushed	For automated machine	CLF Series	CLF-3000			0.03-0.15																				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			0.1-0.35																				1,000 / 560		1.4-2.6	1.4-2.3											
			CLF-6000					0.3-0.6																				750 / 400			2.0-3.0	2.0-2.6								
			CLF-6500					0.4-1																								850 / 440		2.0-3.0	2.0-3.0					
			CLF-7000							0.5-1.5																		780 / 420			2.0-4.0	2.0-4.0								
		αF Series	αF-4500					0.4-0.6																				1,700 / 940			2.0-3.0	2.0-2.6								
			αF-5000					0.4-0.75																								1,100 / 600		2.0-3.0	2.0-3.0					
			αF-6500							0.5-1.1																										1,700 / 950		3.0-4.0	2.6-3.0	
		CL-A Series	CL-816A																	1.5-2.5																550 / 310		3.0-4.0	3.0-4.0	
			CL-825A																					2-4				370 / 210			4.0-5.0	4.0-5.0	Automobile parts, window frame parts, gas meters, electro-magnetic valves, seat belts, etc.							
			CL-850A																					2.4-4.5				570 / 320			4.0-5.0	4.0-5.0								
DC type/Brushed	Reciprocating screwdriver	AC type/Brushed	RD-4000					0.1-0.55																				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							0.3-0.8																								1,700 / 1,200		2.0-3.0	2.0-2.6						
RD-10							0.2-1																								1,500		2.0-4.0	2.0-3.0						
RD-15							0.2-1.5																				1,000		2.0-4.0	2.0-3.0										
RD-20															1-2																				1,600		3.0-5.0	3.0-4.0		
RD-30																	1-3																		1,000		3.0-5.0	3.0-4.0		

## Brushless® Screwdriver with built-in torque sensor

# PG

Pass Guard System  
**PG Series**  
(DC type)



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

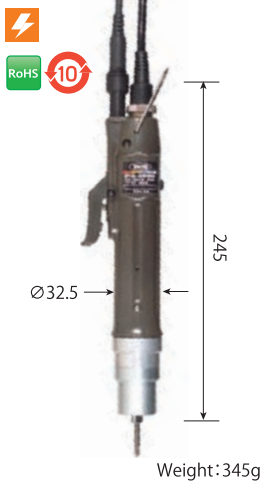
- The built-in torque sensor judges (OK/NG) for every screw fastening.
- Improperly fastened screws can be detected by automatically recognizing problems that are difficult to judge visually, such as insufficient torque, unseated screws, and cross threading.
- All the data are recorded and saved in an external device.

### Lever start type

### Lever start type

Unit : mm

#### PG-3000



#### PG-5000



#### PG-7000



#### Control Unit (optional)

PG-01

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



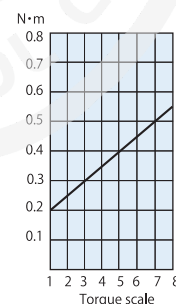
### PG Series Specifications

### Specifications

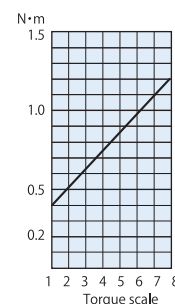
Model Name		PG-3000	PG-5000	PG-7000
Output Torque	N·m	0.2 - 0.55	0.4 - 1.2	1.0 - 2.8
	Range	lbf·in (kgf·cm)	3.5 - 10 (4 - 12)	6.1 - 24 (7 - 28)
Torque Switching		Stepless adjustment	Stepless adjustment	Stepless adjustment
Unloaded Rotation	HI	980	900	960
	LOW	680	590	630
Screw Size	Machine Screw	1.7 - 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
	Drive	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(Ø2.5×40mm) + #1(Ø4.0×40mm) + #2(Ø4.0×40mm)
		H5		+ #0(Ø2.5×60mm) + #1(Ø5.0×60mm) + #2(Ø5.0×60mm)
	Cord length(m)	2m(6P)	2m(6P)	2m(6P)
	Sensor cord(m)	1.7m(8P)	1.7m(8P)	1.7m(8P)
Others		Sampling software (Japanese version Windows XP Excel), RS232C cable 1 pc, USB cable 1 pc, AC adapter 1 pc (AC100V-240V compatible)		

#### Output torque guide (HI input)

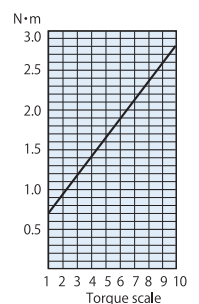
##### PG-3000



##### PG-5000

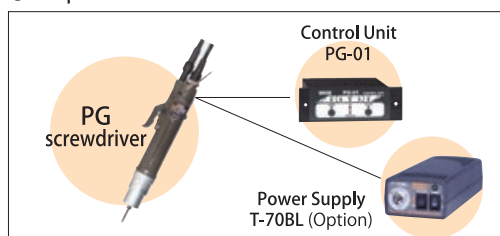


##### PG-7000

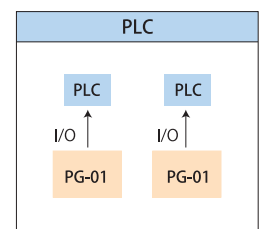
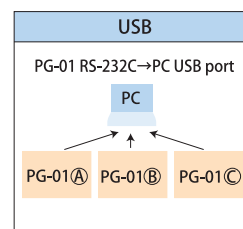
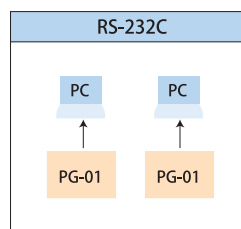


## 《Pass Guard System: Composition and Connection》

### Composition



Connection



## 《Workflow of Pass Guard System Use》

### 1 Setting the reference values for OK/NG criteria

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

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

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

The acceptable 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 fastening can be judged in real time.

### 3 Judgement

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

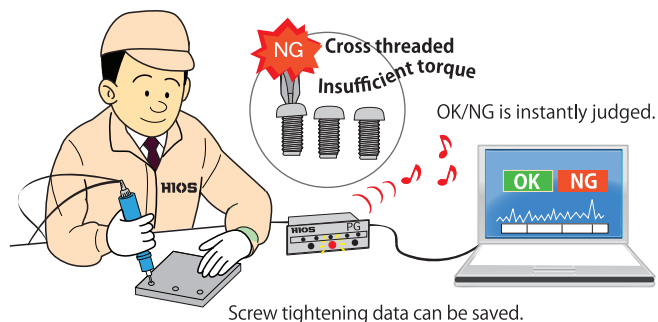
OK .....buzzer sounds once (beep)

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 graphically 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.

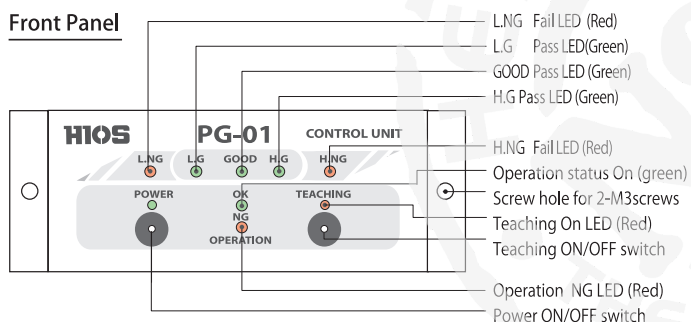


#### ● OK/NG Criteria

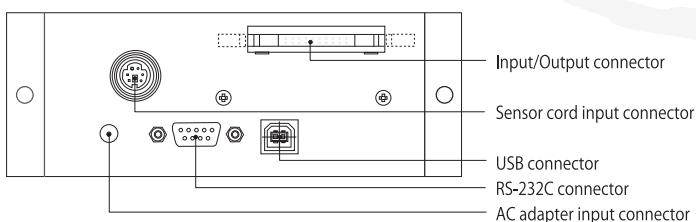
NG	L.G	GOOD	H.G	H.NG
Lower than the L.G Min. value	Minus Tolerance	OK Criterion	Plus Tolerance	Higher than the H.G Max. value
NG	OK			NG

## 《PG-01 Components and Specifications》

### Front Panel



### Rear Pane



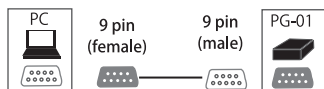
### ● Specifications

Model	PG-01						
RS-232C Communication	Communication speed	Start Bit	Stop Bit	Data	Data format	Parity	Interface
	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》

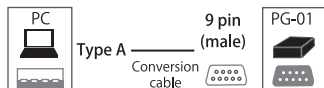
#### ● RS-232C cable (included)

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



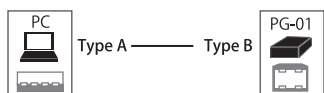
#### ● RS-232C conversion cable (included)

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 lower than the L.G Min. value.
	14	L.G (Pass)	Minus Tolerance
	15	GOOD (Pass)	OK Criterance
	16	H.G (Pass)	Plus Tolerance
	17	H.NG (Fail)	Torque is higher than the H.G Max.value.
DC0V	12	COM GND	—
Pins other than the above are not used.			—

## Brushless® Screwdriver

Built-in Pulse Counter

# BLG-BC2

## BLG-BC2 Series

(DC Type)



## No more rely operations experience and skill.

- Detect errors in screw fastening in real time with high accuracy by counting the pulse of the motor.
- Misplaced screws of different type or length, recessed screws or floating screws due to seized cables are now detected.
- Installed serial port (RS-232C) makes it possible to set the driver by remote control and record pulse values of each screw tightening for traceability.
- Direct teaching allows a simple setting .

### Lever Start Type

### Lever Start Type

### Two-way Start System

### Two-way Start System

Unit : mm

#### BLG-4000BC2



#### BLG-5000BC2



#### Hi-speed rotation

#### BLG-5000BC2-15



#### Hi-speed rotation

#### BLG-5000BC2-18



#### Hi-torque

#### BLG-5000BC2-HT



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

### BLG-BC2 Series Specifications

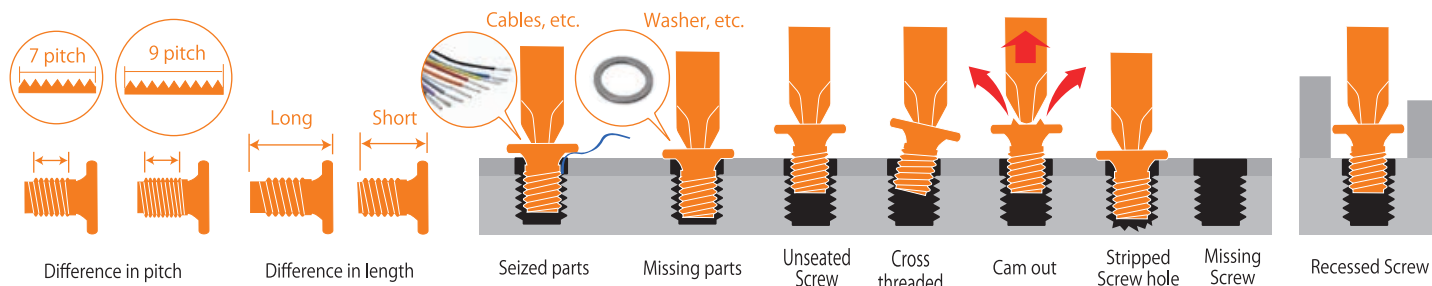
### Specifications

Model name		BLG-4000BC2	BLG-5000BC2	BLG-5000BC2-15	BLG-5000BC2-18	BLG-5000BC2-HT
Output torque range	N·m	0.1-0.55	0.2-1.2	0.3-1.0	0.5-1.5	0.5-2.0
	lbf·in	0.9-4.8	1.7-10	2.6-10	4.3-13	4.3-17
	(Kgf·cm)	(1-5.5)	(2-12)	(3-10)	(5-15)	(5-20)
Torque switching		Stepless Adjustment	Stepless Adjustment	Stepless adjustment	Stepless Adjustment	Stepless Adjustment
Unloaded Rotation Speed (r.p.m) ±10%	HI	1,000	1,000	1,500	1,800	730
	LOW	690	690	1,000	1,200	—
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	H5 and 5HEX	H5 and 5HEX
	HEX Shank	1/4HEX	H5 and 5HEX or 1/4HEX	H5 and 5HEX or 1/4HEX	1/4HEX	1/4HEX
Power Supply	T-45BL	○	○	○ ★	—	○ ★
	T-70BL	○	○	○ ★	○ ★	○ ★
Accessories	Bit (one each)	H4	+ #0 (Ø2.5×40mm) + #1 (Ø4.0×40mm)	+ #1 (Ø4.0×40mm) + #2 (Ø4.0×40mm)	+ #1 (Ø4.0×40mm) + #2 (Ø4.0×40mm)	+ #1 (Ø5.0×60mm) + #2 (Ø5.0×60mm)
		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 (Ø5.0×50mm) + #2 (Ø5.0×50mm) — (Ø5.0×50mm)	+ #1 (Ø5.0×50mm) + #2 (Ø5.0×50mm) — (Ø5.0×50mm)	+ #1 (Ø5.0×50mm) + #2 (Ø5.0×50mm) — (Ø5.0×50mm)	+ #1 (Ø5.0×50mm) + #2 (Ø5.0×50mm) — (Ø5.0×50mm)
	Spring	White				
	Cord length (m)	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

Use only 2(HI) power outlet with the ★models. These models may not perform properly on 1(LOW) power outlet.



# Detectable errors with BLG-BC2



## Accessories

## BLG-BC2 Accessories

## Accessories

## Accessories

### Suction(Vacuum) Attachment for BLG Series

By negative pressure, the effort needed to pick up screws is reduced. This attachment can even pick up non-ferrous screws such as stainless steel screws by vacuuming, and improve operation efficiency. It also removes powder dust generated in screw fastening.

#### Order guide

(A),(B) and (C) below needed to be purchased separately.

\* The size of (A) and (B) depends on the screw size. For more information, please refer to P. 63-64

Model	(A) Mouthpiece model	(B) Bit length	(C) Suction attachment model
BLG-4000BC2	F3-Standard 18mm	H4 60mm	BLGQ4-SET
BLG-5000BC2		H4 40mm	BLQ5-SET / BLQ5-SET-ESD*
BLG-5000BC2-15		H4 60mm	BLQ5N-SET / BLQ5N-SET-ESD*

Note: The Suction Attachment cannot be used with 1/4HEX.

\* ESD is anti-electrostatic

Please contact HIOS distributors for the attachment for the BLG-5000BC2-15

### External Input/output cable

#### BLG-BC2-3010

To use external I/O, the special cable with the sample application software is available as an option.



### Vertical Screwdriver Operating Stand

#### VMS-40 / VMS-50

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



Compatible screwdrivers:

BLG-4000BC2  
BLG-5000BC2 Series

▶ See P.46 for details.



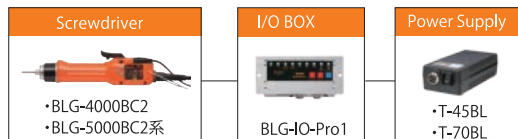
## Related Products

## Related Products

### External I/O Box BLG-IO-Pro1



#### Operation Image



※I/O cable "BLG-BC2-3010" needs to be purchased additionally.

Connection with JUKUREN BLG-BC2 provides simple control of fastening a screw!

- ① Detects screw fastening errors and can be interlocked with revolving lights.
- ② Operations can be coordinated with PC (the dedicated software).
- ③ No preparation of a program like PLC controls is required.
- ④ Driver operation control is possible depending on whether work is available or not.
- ⑤ The driver terminates operation automatically when screw fastening error occurs.

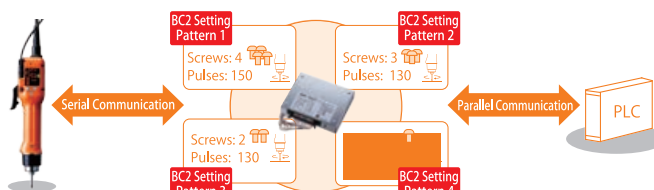
### Serial-to-parallel Conversion Box BLG-IF2



The BLG-IF2 is a conversion box to convert the signal transmission of the BLG-BC2 driver from serial interface to parallel interface.

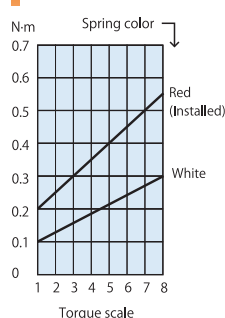
With the BLG-IF2 the driver can be interlocked with external devices such as a PLC by using input and output signals.

\* The BLG BC2 I/O Cable "BLG-BC2-3010" needs to be purchased additionally.

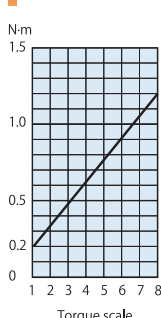


## Output torque guide (HI input)

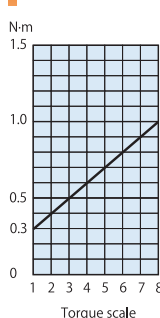
### BLG-4000BC2



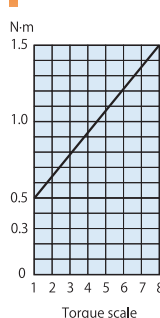
### BLG-5000BC2



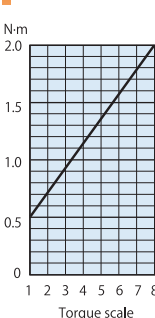
### BLG-5000BC2-15



### BLG-5000BC2-18



### BLG-5000BC-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.

## 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 fastening 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



### Two-way Start System

### Two-way Start System

Unit : mm

#### BLG-5000BC1



#### Hi-speed rotation BLG-5000BC1-15



#### Hi-speed rotation BLG-5000BC1-18



#### Hi-torque BLG-5000BC1-HT



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

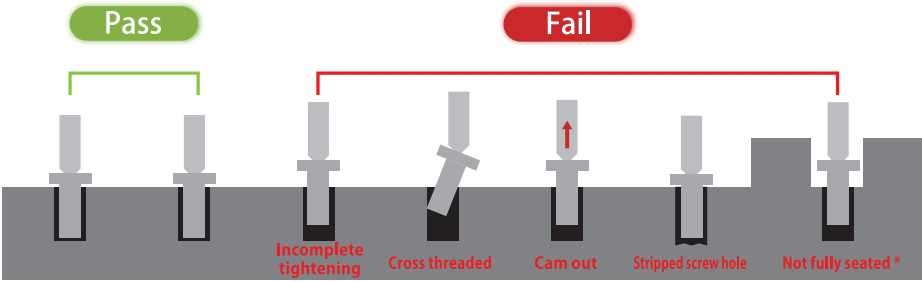
### BLG-BC1 Series Specifications

### Specifications

Model name			BLG-4000BC1	BLG-5000BC1	BLG-5000BC1-15	BLG-5000BC1-18	BLG-5000BC1-HT
Output torque range	N·m		0.1-0.55	0.2-1.2	0.3-1.0	0.5-1.5	0.5-2.0
	lbf·in		0.9-4.8	1.7-10	2.6-10	4.3-13	4.3-17
	(Kgf·cm)		(1-5.5)	(2-12)	(3-10)	(5-15)	(5-20)
Torque switching			Stepless Adjustment	Stepless Adjustment	Stepless adjustment	Stepless Adjustment	Stepless Adjustment
Unloaded Rotation		HI	1.000	1.000	1.500	1.800	730
Speed (r.p.m) ±10%		LOW	690	690	1.000	1.200	—
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	H5 and 5HEX	H5 and 5HEX
	HEX Shank		1/4HEX	H5 and 5HEX or 1/4HEX	H5 and 5HEX or 1/4HEX	1/4HEX	1/4HEX
Power Supply	T-45BL		○	○	○ ★	—	○ ★
	T-70BL		○	○	○ ★	○ ★	○ ★
Accessories	Bit (one each)	H4	+ #0 (Ø2.5×40mm)	+ #1 (Ø4.0×40mm)	+ #1 (Ø4.0×40mm)		
			+ #1 (Ø4.0×40mm)	+ #2 (Ø4.0×40mm)	+ #2 (Ø4.0×40mm)		
		H5		+ #1 (Ø5.0×60mm)	+ #1 (Ø5.0×60mm)	+ #1 (Ø5.0×60mm)	+ #1 (Ø5.0×60mm)
				+ #2 (Ø5.0×60mm)	+ #2 (Ø5.0×60mm)	+ #2 (Ø5.0×60mm)	+ #2 (Ø5.0×60mm)
	1/4HEX	+ #1 (Ø5.0×50mm)	+ #1 (Ø5.0×50mm)	+ #1 (Ø5.0×50mm)	+ #1 (Ø5.0×50mm)	+ #1 (Ø5.0×50mm)	
		+ #2 (Ø5.0×50mm)	+ #2 (Ø5.0×50mm)	+ #2 (Ø5.0×50mm)	+ #2 (Ø5.0×50mm)	+ #2 (Ø5.0×50mm)	
		— (Ø5.0×50mm)	— (Ø5.0×50mm)	— (Ø5.0×50mm)	— (Ø5.0×50mm)	— (Ø5.0×50mm)	
Spring		White					
Cord length (m)		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	

Use only 2(HI) power outlet with the ★models. These models may not perform properly on 1(LOW) power outlet.

From now on, the screwdriver itself detects and notifies you of screw fastening errors.



\*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.
- Error detection** Screw fastening errors can be detected (e.g., incomplete tightening, cross threaded, cam-out, stripped screw hole, etc.).
- Counter** You can set the number of fastener count from 1 to 99. Screw tightening skipping can be prevented.
- Cycle Totals** The total number of cycles resulting in a clutch activation.
- Buzzer and LED** The buzzer and LED notify you of a result of each screw fastening (Pass/fail).
- Count timer** The buzzer notifies you of completion of screw fastening and then reset the number of fastener count on the display.
- Prevention of miscount** It prevents miscount caused by a re-tightening or double fastening.

Accessories

BLG-BC1 Accessories

Accessories

Accessories

Suction(Vacuum) Attachment for BLG Series

By negative pressure, the effort needed to pick up screws is reduced. This attachment can even pick up non-ferrous screws such as stainless steel screws by vacuuming, and improve operation efficiency. It also removes powder dust generated in screw fastening.

Order guide

(A),(B) and (C) below needed to be purchased separately .

\* The size of (A) and (B) depends on the screw size. For more information, please refer to P.63-64.

Model	(A) Mouthpiece model	(B) Bit length	(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*

Note: The Suction Attachment cannot be used with 1/4HEX.

\* ESD is anti-electrostatic

Please contact HIOS distributors for the attachment for the BLG-5000BC1-18

Vertical Screwdriver Operating Stand

VMS-40/VMS-50

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

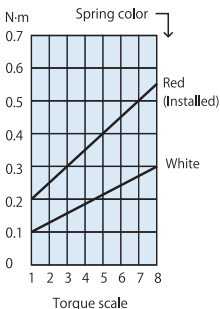


Compatible screwdrivers:  
BLG-4000BC1  
BLG-5000BC1 Series

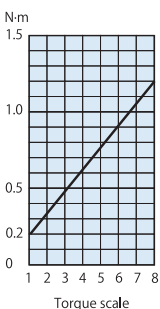
See P.46 for details.

Output torque guide (HI input)

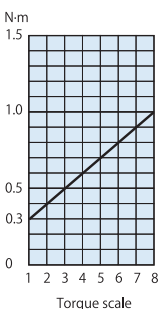
BLG-4000BC1



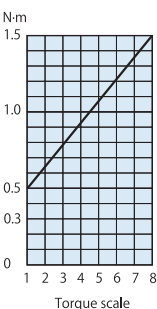
BLG-5000BC1



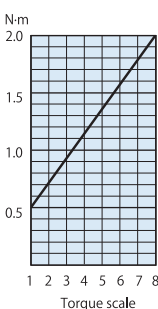
BLG-5000BC1-15



BLG-5000BC1-18



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.

## Brushless® Screwdriver

Screw Counter / Pulse Counter

# BLG-ZERO1

BLG-ZERO1 Series

(DC Type)



## Anyone can be a skilled craftsman in Just 30 Seconds.

- Direct teaching makes it easy to configure settings.
- The pulse of the motor is counted, enabling real time detection of screw fastening errors with a high degree of accuracy.
- Errors such as mixing of wrong types of screws, unseated screws, cam out, stripped screw holes, or parts caught in screws can be detected.
- It displays the remaining number of screws to fasten every time a screw is fastened.

### Lever Start Type

### Lever Start Type

Unit : mm

#### BLG-4000ZERO1



### Two-way Start System

### Two-way Start System

Unit : mm

#### BLG-5000ZERO1



#### Hi-speed rotation BLG-5000ZERO1-15



#### Hi-speed rotation BLG-5000ZERO1-18



#### Hi-torque BLG-5000ZERO1-HT



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

### BLG-ZERO1 Series Specifications

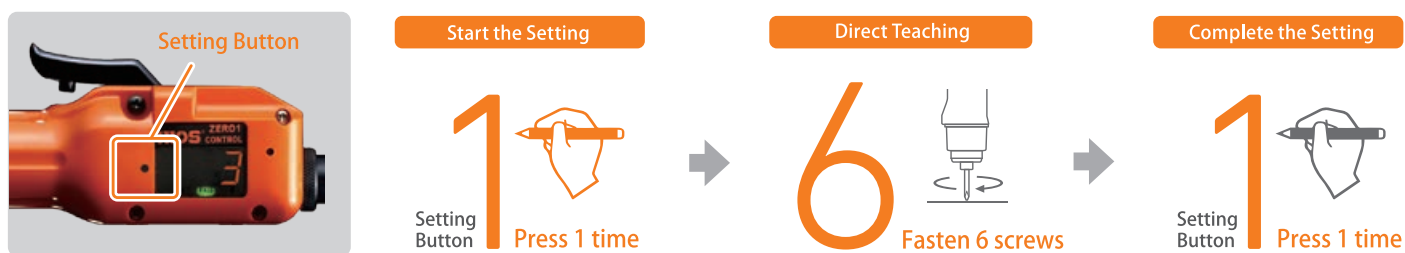
### Specifications

Model name			BLG-4000ZERO1	BLG-5000ZERO1	BLG-5000ZERO1-15	BLG-5000ZERO1-18	BLG-5000ZERO1-HT
Output torque range	N•m		0.1-0.55	0.2-1.2	0.3-1.0	0.5-1.5	0.5-2.0
	lbf•in		0.9-4.8	1.7-10	2.6-10	4.3-13	4.3-17
	(Kgf•cm)		(1-5.5)	(2-12)	(3-10)	(5-15)	(5-20)
Torque switching			Stepless Adjustment	Stepless Adjustment	Stepless adjustment	Stepless Adjustment	Stepless Adjustment
Unloaded Rotation		HI	1.000	1.000	1.500	1.800	730
Speed (r.p.m) ±10%		LOW	690	690	1.000	1.200	—
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	H5 and 5HEX	H5 and 5HEX
		HEX Shank	1/4HEX	H5 and 5HEX or 1/4HEX	H5 and 5HEX or 1/4HEX	1/4HEX	1/4HEX
Power Supply		T-45BL	○	○	○★	—	○★
		T-70BL	○	○	○★	○★	○★
Accessories	Bit (one each)	H4	+ #0 (Ø2.5×40mm)	+ #1 (Ø4.0×40mm)	+ #1 (Ø4.0×40mm)	/	/
			+ #1 (Ø4.0×40mm)	+ #2 (Ø4.0×40mm)	+ #2 (Ø4.0×40mm)		
		H5	/	+ # 1 (Ø5.0×60mm)	+ # 1 (Ø5.0×60mm)	+ #1 (Ø5.0×60mm)	+ #1 (Ø5.0×60mm)
			/	+ # 2 (Ø5.0×60mm)	+ # 2 (Ø5.0×60mm)	+ #2 (Ø5.0×60mm)	+ #2 (Ø5.0×60mm)
	1/4HEX	+ #1 (Ø5.0×50mm)	+ #1 (Ø5.0×50mm)	+ #1 (Ø5.0×50mm)	+ #1 (Ø5.0×50mm)	+ #1 (Ø5.0×50mm)	
		+ #2 (Ø5.0×50mm)	+ #2 (Ø5.0×50mm)	+ #2 (Ø5.0×50mm)	+ #2 (Ø5.0×50mm)	+ #2 (Ø5.0×50mm)	
		— (Ø5.0×50mm)	— (Ø5.0×50mm)	— (Ø5.0×50mm)	— (Ø5.0×50mm)	— (Ø5.0×50mm)	
Spring		White		/	/	/	
Cord length (m)		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	

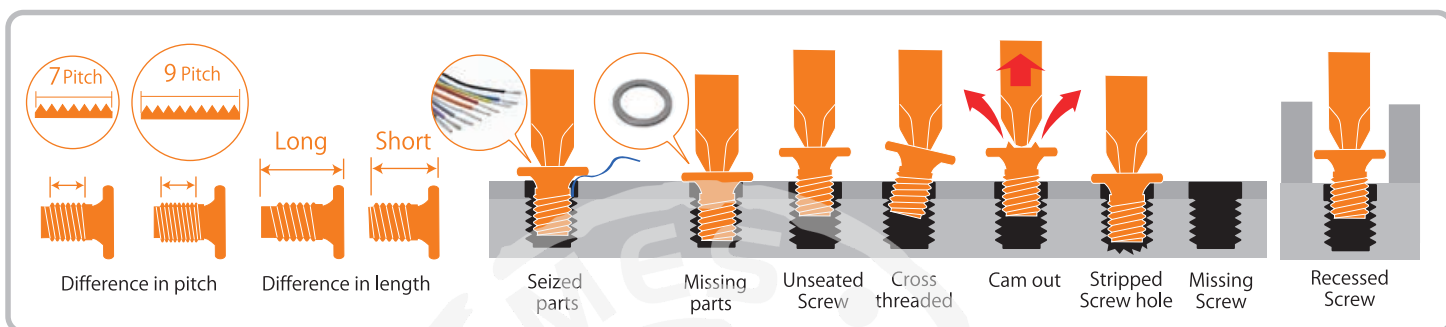
Use only 2(HI) power outlet with the ★models. These models may not perform properly on 1(LOW) power outlet.



The 3-step procedure of "1-6-1" makes it easy to configure settings so that the driver itself securely guards against improper screw fastening.



## Detectable errors



## Accessories

### BLG-BZERO1 Accessories

## Accessories

## Accessories

### Suction(Vacuum) Attachment for BLG Series

By negative pressure, the effort needed to pick up screws is reduced. This attachment can even pick up non-ferrous screws such as stainless steel screws by vacuuming, and improve operation efficiency. It also removes powder dust generated in screw fastening.

#### Order guide

(A),(B) and (C) below needed to be purchased separately.

\* The size of (A) and (B) depends on the screw size. For more information, please refer to P. 63-64.

Model	(A) Mouthpiece model	(B) Bit length	(C) Suction Attachment model
BLG-4000ZERO1		H4 60mm	BLGQ4-SET
BLG-5000ZERO1	F3-Standard 18mm	H4 40mm	BLQ5-SET/BLQ5-SET-ESD*
BLG-5000ZERO1-15		H4 60mm	BLQ5N-SET/BLQ5N-SET-ESD*

Note: The Suction Attachment cannot be used with 1/4HEX.

\* ESD is anti-electrostatic

Please contact HIOS distributors for the attachment for the BLG-5000ZERO1-18

### Vertical Screwdriver Operating Stand

#### VMS-40/VMS-50

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



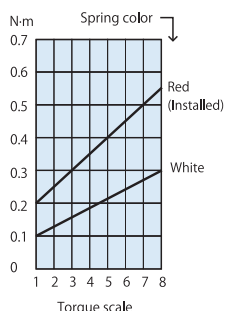
Compatible screwdrivers:

BLG-4000ZERO1  
BLG-5000ZERO1 Series

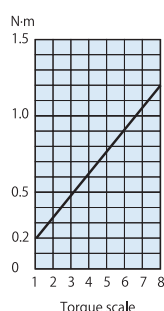
▶ See P.46 for details.

## Output torque guide (HI input)

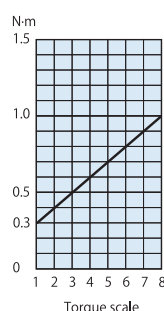
### BLG-4000ZERO1



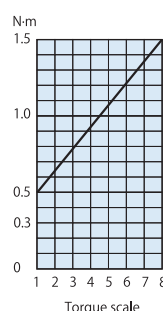
### BLG-5000ZERO1



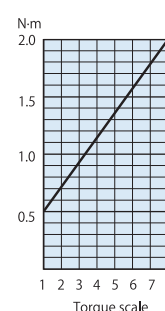
### BLG-5000ZERO1-15



### BLG-5000ZERO1-18



### BLG-5000ZERO1-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.

## 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 switch 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-5000-18



Weight: 425g

#### Hi-torque

#### BLG-5000-HT



Weight: 425g

### BLG series Specifications

### Specifications

Model Name		BLG-4000	BLG-5000	BLG-5000-15	BLG-5000-18	BLG-5000-HT
Output Torque Range	N·m	0.1 - 0.55	0.2 - 1.2	0.3 - 1.0	0.5 - 1.5	0.5 - 2.0
	lbf·in	0.9 - 48	1.7 - 10	2.6 - 10	4.3 - 13	4.3 - 17
	(kgf·cm)	(1 - 5.5)	(2 - 12)	(3 - 10)	(5 - 15)	(5 - 20)
Torque Switching		Stepless Adjustment	Stepless Adjustment	Stepless Adjustment	Stepless Adjustment	Stepless Adjustment
Unloaded Rotation	HI	1,000	1,000	1,500	1,800	730
	LOW	690	690	1,000	1,200	—
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	H5 & 5HEX	H5 & 5HEX
	HEX Shank	1/4HEX	H5 and 5HEX or 1/4HEX	H5 and 5HEX or 1/4HEX	1/4HEX	1/4HEX
Power Supply	T-45BL	○	○	○★	—	○★
	T-70BL	○	○	○★	○★	○★
Accessories	Bit (one each)	H4	+ #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)		
		1/4HEX	+ #1 (Ø5.0×50mm) + #2 (Ø5.0×50mm) — (Ø5.0×50mm)	+ #1 (Ø5.0×50mm) + #2 (Ø5.0×50mm) — (Ø5.0×50mm)	+ #1 (Ø5.0×60mm) + #2 (Ø5.0×60mm) + #1 (Ø5.0×50mm) + #2 (Ø5.0×50mm) — (Ø5.0×50mm)	+ #1 (Ø5.0×60mm) + #2 (Ø5.0×60mm) + #1 (Ø5.0×50mm) + #2 (Ø5.0×50mm) — (Ø5.0×50mm)
	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	Width across flats: 5mm, 1pc

Use only 2(HI) power outlet with the ★models. These models may not perform properly on 1(LOW) power outlet.

## Suction(Vacuum) Attachment for BLG Series

By negative pressure, the effort needed to pick up screws is reduced. This attachment can even pick up non-ferrous screws such as stainless steel screws by vacuuming, and improve operation efficiency. It also removes powder dust generated in screw fastening.

### Order guide

(A),(B) and (C) below needed to be purchased separately .

\* The size of (A) and (B) depends on the screw size. For more information, please refer to P.63-64.

Model	(A) Mouthpiece model	(B) Bit 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		H4 60mm	BLQ5N-SET/BLQ5N-SET-ESD*

Note: The Suction Attachment cannot be used with 1/4HEX .

\* ESD is anti-electrostatic

Please contact HIOS distributors for the attachment for the BLG-5000BC1-18

## Vertical Screwdriver Operating Stand

### VMS-40/VMS-50

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



Compatible screwdrivers:

BLG-4000BC1  
BLG-5000 Series



▶ See P.46 for details.

## Variations

### BLG Applicable Drivers

## For use with HIOS Screw Counters

### BLG-OPC



Models:

BLG-4000-OPC

BLG-5000-OPC

BLG-5000-OPC-15\*

BLG-5000-OPC-18\*

BLG-5000-OPC-HT\*

These models prevent skipping screw fastening in combination with the HIOS Screw Counter.

- They have a function to output positive rotation, reverse rotation and Torque-up (finish) signals.

#### Compatible counters

Power supply with HIOS Screw Counter  
**BLOP-STC3**

Separate Counter  
**BLOP-SC1**



\* not applicable

▶ See P.47-50 for details.

## I/O 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.



Compatible screwdrivers:

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



▶ See P.30 for details.

## BLG - OPC Series I/O Signal Relay Box for Automation BLOP-OST2

By connecting this box to a set of the BL-OPC or BLG-OPC and its power supply, the driver can start / stop by inputting D-ACT signals into the CN3 connector with external devices.



Compatible screwdrivers:

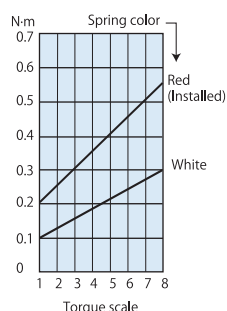
BLG-4000 (OPC)  
BLG-5000 Series (OPC)



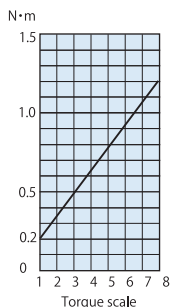
▶ See P.30 for details.

## Output torque guide (HI input)

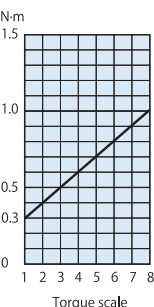
### BLG-4000



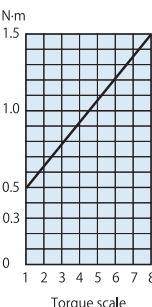
### BLG-5000



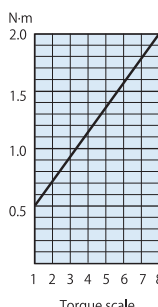
### Hi-speed rotation BLG-5000-15



### Hi-speed rotation BLG-5000-18



### 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

## BL Series

(DC Type)



## The first Brushless Electric Torque driver in the world!

- 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 (except BL-2000).
- High-speed rotation shortens screw fastening time and improves work efficiency.

### Two-way Start System

### Two-way Start System

#### BL-2000 (Lever Start)

anti-static electricity standard.



Consumable parts are used for the switch.



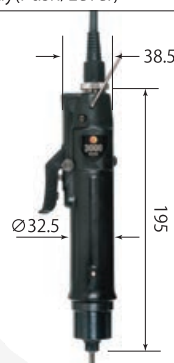
Weight: 254g

Impact absorbing

BL-2000SS

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

Unit : mm

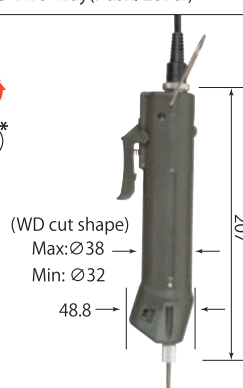


Weight: 320g

Impact absorbing

BL-3000SS

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



Weight: 360g

Impact absorbing

BL-5000SS

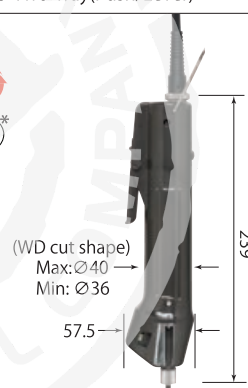
Hi-speed rotation

BL-5000-15

Hi-torque

BL-5020

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



Weight: 640g

Hi-torque

BL-7000HT



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

### BL Series Specifications

### Specifications

Model Name		BL-2000 BL-2000SS	BL-3000 BL-3000SS *	BL-5000 BL-5000SS	BL-5000-15	BL-5020	BL-7000	BL-7000HT
Output torque range	N·m	0.02 - 0.2	0.2 - 0.55	0.2-0.35*	0.2 - 1.2	0.3 - 1.2	0.5 - 2.0	0.7 - 2.8
	lbf·in	0.17 - 1.7	1.7 - 4.8	1.7 - 4.8*	1.7 - 10	2.6 - 10	4.3 - 17.4	6.1 - 30
	(kgf·cm)	(0.2 - 2)	(2 - 5.5)	(2-3.5)*	(2 - 12)	(3 - 12)	(5 - 20)	(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	750	960	700
	LOW	650	680	590	1,000	500	630	500
Screw Size	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-45BL	○	○	○	○★	○★	—	—
	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 (Ø5.0×50mm) + #2 (Ø5.0×50mm) — (Ø5.0×50mm)	+ #1 (Ø5.0×50mm) + #2 (Ø5.0×50mm) — (Ø5.0×50mm)	+ #1 (Ø5.0×50mm) + #2 (Ø5.0×50mm) — (Ø5.0×50mm)	+ #1 (Ø5.0×60mm) + #2 (Ø5.0×60mm) — (Ø5.0×50mm)	+ #1 (Ø5.0×60mm) + #2 (Ø5.0×60mm) — (Ø5.0×50mm)	+ #1 (Ø5.0×60mm) + #2 (Ø5.0×60mm) — (Ø5.0×50mm)
	Spring	Yellow spring						
	Cord length (m)	2m (5P) ESD design		1.5m (5P)	1.5m (5P)	1.5m (5P)	2m (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	Width across flats: 5mm, 1 pc

Use only 2(HI) power outlet with the ★models. These models may not perform properly on 1(LOW) power outlet.



## Suction(Vacuum) Attachment for BL Series

By negative pressure, the effort needed to pick up screws is reduced. This attachment can even pick up non-ferrous screws such as stainless steel screws by vacuuming, and improve operation efficiency. It also removes powder dust generated in screw fastening.

### Order guide

(A),(B) and (C) below needed to be purchased separately .

\* The size of (A) and (B) depends on the screw size. For more information, please refer to P. 63-64

Model	(A) Mouthpiece model	(B) Bit 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-7000ESD  
BLQ-3000ESD  
BLQ-5000ESD  
BLQ-5000ESD-15

## Clean Room

### BLQ-CR

Models: BLQ-7000CR  
BLQ-2000CR  
BLQ-3000CR  
BLQ-5000CR  
BLQ-5000CR-15

## Anti-electrostatic

### BL-ESD

Models: BL-7000ESD  
BL-3000ESD  
BL-5000ESD  
BL-5000ESD-15  
BL-5020ESD

The screwdriver body is made from 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-7000CR-ESD

In addition to anti-electrostatic, two vacuum units are installed in both the body and the Suction Attachment to remove powder dust generated in screw fastening.

[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 models prevent skipping screw fastening in combination with the HIOS Screw Counter.

- They have a function to output positive rotation, reverse rotation and Torque-up (finish) signals.

#### Compatible Counters

Power supply with HIOS Screw Counter

**BLOP-STC3**

Separate Counter

**BLOP-SC1**



\* BL-3000-OPC excluded.

▶ See P. 47-50 for details.

## Accessories & Applicable Screwdrivers

## BL Accessories & Applicable Drivers

## Pistol Attachment

### PAB-70

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



RoHS  $10^4\Omega$   
Compatible screwdrivers:  
BL-7000 Series

## I/O 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.



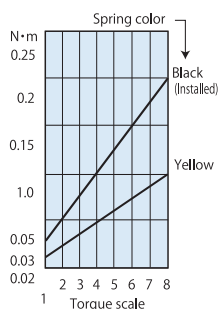
RoHS  $10^4\Omega$   
Compatible screwdrivers:  
BL-4000 (OPC)  
BL-5000 Series (OPC)

▶ See P.30 for details.

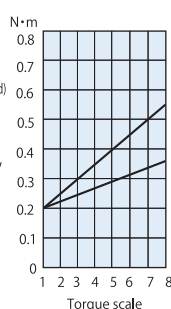
## Output torque guide (HI input)

(Including PS type)

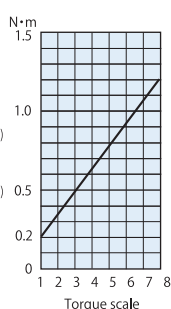
BL-2000  
BL-2000SS



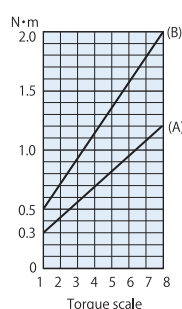
BL-3000 (A)  
BL-3000SS (B)



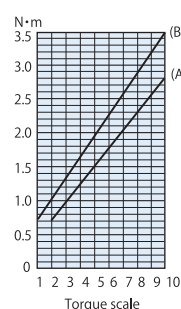
BL-5000  
BL-5000SS



BL-5000-15 (A)  
BL-5020 (B)



BL-7000 (A)  
BL-7000HT (B)



\*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.

## BLG - OPC Series I/O Signal Relay Box for Automation

### BLOP-OST2

By connecting this box to a set of the BL-OPC or BLG-OPC and its power supply, the driver can start / stop by inputting D-ACT signals into the CN3 connector with external devices.



RoHS  $10^4\Omega$   
Compatible screwdrivers:  
BL-4000 (OPC)  
BL-5000 Series (OPC)

▶ See P.30 for details.

## Brushed Screwdriver

**CL Series**  
(DC Type)

## Light torque, small screw applications .

- This screwdriver is specially designed to deliver accurate, low torque for fastening small sized screws.
- 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

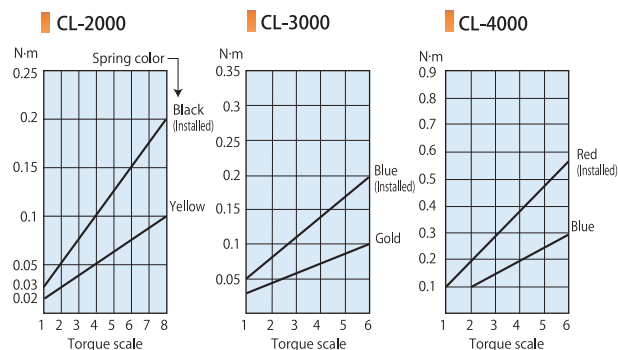
### Specifications

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		(kgf·cm)	(0.2 - 2)	(1 - 5.5)
Torque Switching		Stepless adjustment	Stepless adjustment	Stepless adjustment
Unloaded Rotation	HI	680	1,000	1,000
	LOW	490	670	690
Screw Size	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-45	○	○	○
	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 (Ø5.0×50 mm) + #2 (Ø5.0×50 mm) — (Ø5.0×50 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)

\*CLT-100 and MC-70L are AC100V Only.

### Output torque guide (HI input)

(Including PS type)



#### Notes:

- The carbon brush for CL-2000 is enclosed in the motor and cannot be replaced. Although the life of the carbon brush depends on use conditions, as a guide, if you tighten about 6,000 screws a day, you need to replace the carbon brush 3 to 4 years after you started using it. Please contact HIOS distributors for maintenance and repair.

## Brushed Screwdriver



## Standard to medium torque applications

- 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.

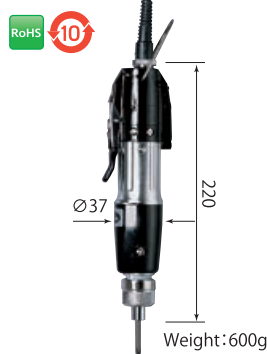
### Lever Start Type

### Lever Start Type

### Push-to-Start Type

### Push-to-Start Type

CL-6000



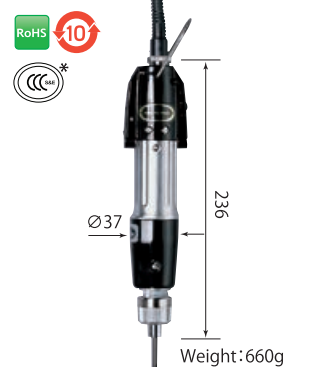
CL-6500



CL-6000PS



CL-6500PS



CL-7000



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

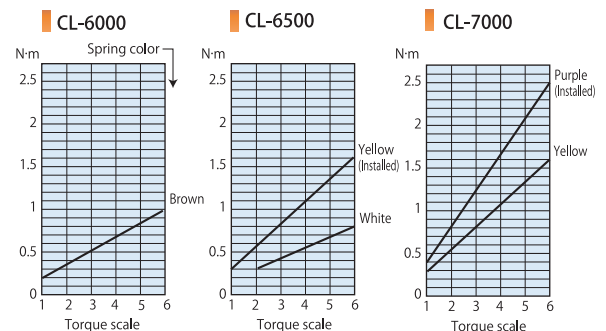
### Specifications

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	HI	800	900	750
	LOW	500	600	-
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 Drive	HIOS Shank	H5	H5	H5
	HEX Shank	1/4HEX or 5HEX	1/4HEX or 5HEX	1/4HEX or 5HEX
Power Supply	CLT-45	○	○	—
	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)
	Spring		White	Yellow
	Cord length (m)	2 m (5P)		2 m (5P)
Carbon brush (Order code)		1 pair (CL65-0490)	1 pair (CL65-0490)	1 pair (CL65-0490)

\*CLT-100 and MC-70L are AC100V Only.

### 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 rotation speed will also vary. Please refer to the value in the specifications only as a guide.

## High-torque Brushed Screwdriver

**CL Series**  
(DC Type)

## High torque applications up to 5N·m (50kgf·cm).

- This driver can tighten high-torque required screws which are tightend by pneumatic screwdrivers.
- can always fasten 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)

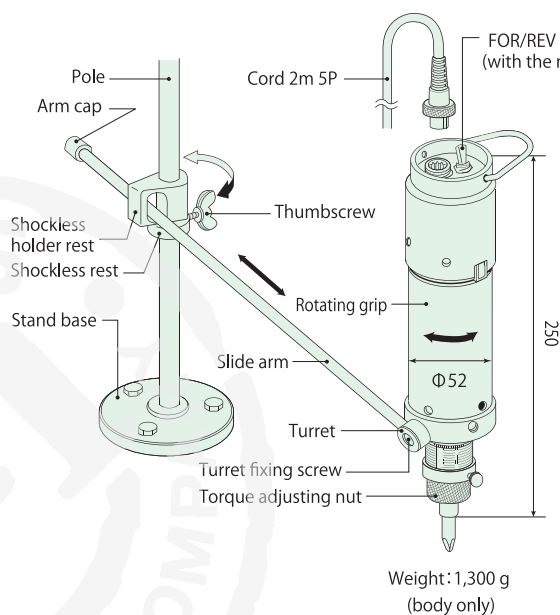
Unit : mm



Weight : 3,010g  
(Driver Cord, Slide Arm : 2,360g)  
(Pole, Stand Base : 650g)

#### Main Components of Shockless Stand

Unit : mm



#### Specifications

Slide arm length	530
Effective sliding range	475
Support rod height	570
Stand base	Height 8
	Diameter of fixing bolt hole Ø6
	Distance between fixing bolt holes 52 (one side of the equilateral triangle)

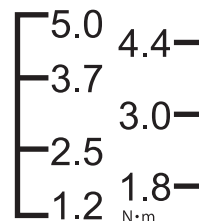
### CL Series Specifications

### Specifications

Push-to-Start Type Model		CL-9000
Out put 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)	Machine Screw	4.0 - 6.0
	Tapping Screw	4.0 - 6.0
Bit Drive	HEX shank	1/4HEX
Power Supply		CLT-80
Accessories	1/4HEX	+ #2 (Ø7.0 × 100mm) + #3 (Ø7.0 × 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 label that indicates output torque values is placed on the body of CL-9000.





## Suction(Vacuum)Attachment

### CLQ

By negative pressure, the effort needed to pick up screws is reduced. This attachment can even pick up non-ferrous screws such as stainless steel screws by vacuuming, and improve operation efficiency. It also removes powder dust generated in screw fastening.

#### Order guide

(A),(B) and (C) below needed to be purchased separately .

\* The size of (A) and (B) depends on the screw size. For more information, please refer to P. 63-64.

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 is made from 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.  $10^4 \Omega$ ]

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, both the body and the Suction Attachment are tubed to remove powder dust generated in the body and in screw fastening.

[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.

\*This product is not CE certified.

Models: CL-6500NL  
CL-3000NL \* CL-7000NL  
CL-4000NL CL-9000NL  
CL-6000NL \*

(Including PS Type)

### Power supply with HIOS Screw Counter

### CLT-70STC3

Power supply with HIOS Screw Counter helps to prevent skipping screw fastening.



CE

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



### Separate Counter

### CLOP-SC1

Separate Counter helps to prevent skipping screw fastening.



► See P. 47-50 for details.

## Accessories

## Accessories

### Pistol Attachment

### PA-65

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



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 small for screw fastening. The attachment can be fitted to the tip of the screwdriver.



\* Always set the output torque at 1.2N·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 a screwdriver from lever start to push-to-start.



Compatible screwdrivers:  
CL-4000 (Image of fitting)

## Brushed Screwdriver

**SS Series**  
(DC Type)

## For sensitive assemblies.

## Soft stop screwdrivers.

- Designed to minimize the effects of vibrations or impacts to the assembly parts.
- 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 standard.

### Lever Start Type

### Lever Start Type

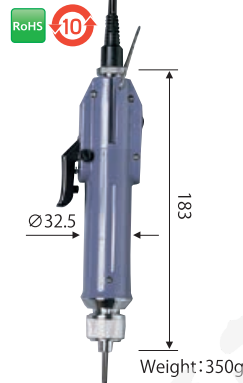
### Push-to-Start Type

### Push-to-Start Type

#### SS-2000



#### SS-3000



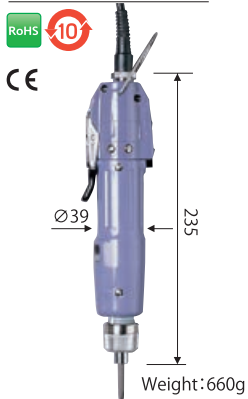
#### SS-4000



#### SS-4000PS



#### SS-6500

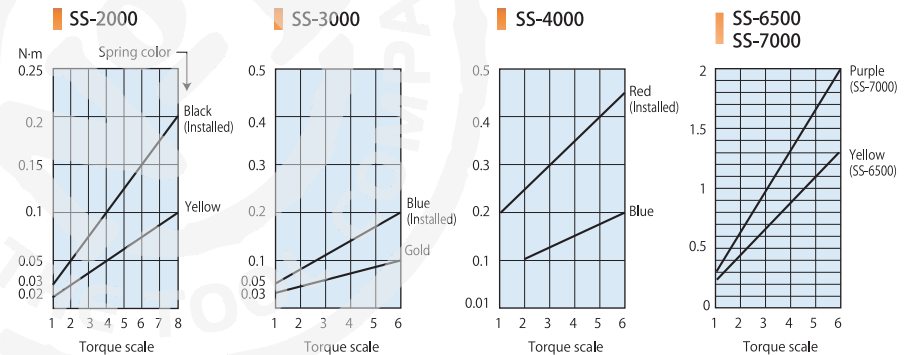


#### SS-7000



### 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	HI	680	1,000	1,000	900	750
	Speed (r.p.m) ±10% LOW	490	670	690	600	—
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-45	○	○	○	○	—
	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)		
		H5			+ #1 (Ø5.0×60 mm) + #2 (Ø5.0×60 mm)	+ #1 (Ø5.0×60 mm) + #2 (Ø5.0×60 mm)
		1/4HEX		+ #1 (Ø5.0×50 mm) + #2 (Ø5.0×50 mm) — (Ø5.0×50 mm)	+ #1 (Ø5.0×50 mm) + #2 (Ø5.0×50 mm) — (Ø5.0×50 mm)	+ #1 (Ø5.0×50 mm) + #2 (Ø5.0×50 mm) — (Ø5.0×50 mm)
	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 for SS-2000 is enclosed in the motor and cannot be replaced. Although the life of the carbon brush depends on use conditions, as a guide, if you tighten about 6,000 screws a day, you need to replace the carbon brush 3 to 4 years after you started using it. Please contact HIOS distributors for maintenance and repair.

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 rotation speed will also vary. Please refer to the value in the specifications only as a guide.

\*CLT-100 and MC-70L are AC100V Only.

## Suction(Vacuum)Attachment

### SSQ

By negative pressure, the effort needed to pick up screws is reduced. This attachment can even pick up non-ferrous screws such as stainless steel screws by vacuuming, and improve operation efficiency. It also removes powder dust generated in screw fastening.

#### Order guide

(A),(B) and (C) below needed to be purchased separately .

\* The size of (A) and (B) depends on the screw size. For more information, please refer to P. 63-64.

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 is made from 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.  $10^9\Omega$ ]

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, both the body and the Suction Attachment are tubed to remove powder dust generated in the body and in screw fastening.

[Class 100 equivalent]

[Surface resistance: max.  $10^9\Omega$ ]

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 fastening.



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

### Separate Counter CLOP-SC1

Separate Counter helps to prevent skipping screw fastening.



► See P. 47-50 for details.

### Pistol Attachment PA-65

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



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

### Push-to-Start Grip Attachment

### PS-1 PS-1-ESD

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



Compatible screwdrivers:  
SS-4000

(Image of fitting)

## Brushed Screwdriver



**α Series**  
(DC Type)

## High speed rotation

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

### Lever Start Type

### Lever Start Type

### Push-to-Start Type

### Push-to-Start Type

α-4500



Weight: 440g

α-5000



Weight: 440g

α-4500PS



Weight: 490g

α-5000PS



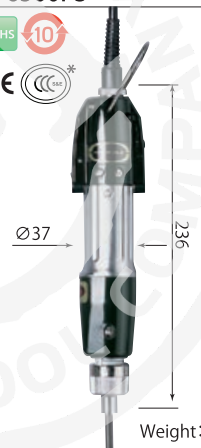
Weight: 490g

α-6500



Weight: 660g

α-6500PS



Weight: 660g



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

### α-Series Specifications

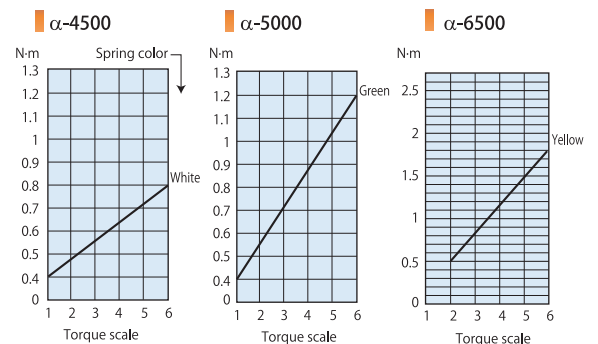
### Specifications

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	
Speed (r.p.m) ±10%	LOW	1,200	700	—	
Screw	Machine Screw	2.0 - 3.0	2.3 - 3.0	3.0 - 4.0	
Size(mm)	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-45	○	○	—	
	CLT-60	○	○	○	
	CLT-100*	○	○	—	
	MC-70L*	○	○	○	
Accessories	Bit (one each)	H4	+ #1 (∅4.0×40 mm) + #2 (∅4.0×40 mm)	+ #1 (∅4.0×40 mm) + #2 (∅4.0×40 mm)	
		H5			+ #1 (∅5.0×60 mm) + #2 (∅5.0×60 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)	+ #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)

\*CLT-100 and MC-70L are AC100V Only.

### 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 rotation speed will also vary. Please refer to the value in the specifications only as a guide.



## Suction(Vacuum)Attachment

αQ

By negative pressure, the effort needed to pick up screws is reduced. This attachment can even pick up non-ferrous screws such as stainless steel screws by vacuuming, and improve operation efficiency. It also removes powder dust generated in screw fastening.

### Order guide

(A),(B) and (C) below needed to be purchased separately .

\* The size of (A) and (B) depends on the screw size. For more information, please refer to P. 63-64.

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 is made from 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.  $10^4\Omega$ ]

Models:

α-4500ESD α-6500ESD  
α-5000ESD

(Including PS Type)



## Clean Room + Anti-electrostatic

αQ-CR-ESD



In addition to anti-electrostatic, both the body and the Suction Attachment are tubed to remove powder dust generated in the body and in screw fastening.

[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 fastening.



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

### Separate Counter

CLOP-SC1

Separate Counter helps to prevent skipping screw fastening.



RoHS   
CE

▶ See P. 47-50 for details.

## Accessories

## Accessories

### Pistol Attachment

PA-65

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



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 small for screw tightening. The attachment can be fitted to the tip of the screwdriver.



RoHS

Compatible screwdrivers:  
α-6500 (Lever Type only)

\* Always set the output torque at 1.2N·m or lower when you use this attachment.

### Push-to-Start Grip Attachment

PS-1

PS-1-ESD 

This attachment converts a 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 HIOS 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 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 HIOS Brushless screwdrivers

### ● Combination of power supply and screwdriver

Number of connectable screwdrivers		1 unit	
Power supply		T-45BL	T-70BL
Screwdriver (Including OPC type)			
PG Series	PG-3000	—	●
	PG-5000	—	●
	PG-7000	—	●
BLG-BC2 Series BLG-BC1 Series BLG-ZERO1 Series BLG Series	BLG-4000系	●	●
	BLG-5000系	●*	●
BL Series	BL-2000	●	●
	BL-3000	●	●
	BL-5000	●	●
	BL-7000	—	●

\*Not applicable to BLG-5000BC2-18, BLG-5000BC1-18, BLG-5000ZERO1-18 and BLG-5000-18

### ● Plug type

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

Model: T-45BL (for one screwdriver)

RoHS

10

CE

UL

CCC

Compatible screwdrivers

BLG-BC2 Series

BLG-BC1 Series

BLG-ZERO1 Series


BLG Series

BL Series

(Including OPC type)

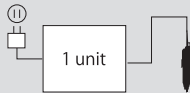
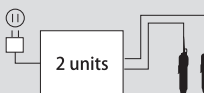
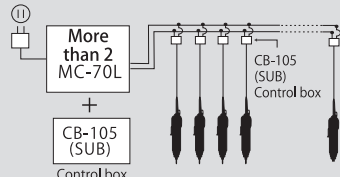





Primary input power source		AC100-240V (47-63 Hz)		
Secondary output voltage		HI(2): DC30V、LOW(1): DC20V (2-step switchable)		
External dimensions (mm)		71.5(W)×146(D)×42.6 (H) mm		
Weight (g)		320 g		
Accessories		over supply cord 1.8m (1pc), Flat 2P conversion plug (1pc) (only for 100V), Mounting hardware (2pcs), Mounting screws (4pcs)		
Plug type		A	A-2	A-3 / C / BF / S
Compatible screwdriver	BLG-BC2 Series	BLG-4000BC2、BLC-5000BC2、BLG-5000BC2-15★、BLG-5000BC2-HT★		
	BLG-BC1 Series	BLG-4000BC1、BLC-5000BC1、BLG-5000BC1-15★、BLG-5000BC1-HT★		
	BLG-ZERO1 Series	BLG-4000ZERO1、BLG-5000ZERO1、BLG-5000ZERO1-15★、BLG-5000ZERO1-HT★		
	BLG-BLG Series	BLG-4000、BLG-5000、BLG-5000-15★、BLG-5000-HT★		
	BL Series	BL-2000、BL-2000SS、BL-3000、BL-3000SS、BL-5000、BL-5000SS、BL-5000-15★、BL-5020★		

Use only 2(HI) power outlet with the ★models. These models may not perform properly on 1(LOW) power outlet.

Model: <b>T-70BL</b> (for one screwdriver)		<div><div>RoHS</div><div>10</div><div>CE</div><div>UL</div><div>CCC</div></div>					
<div>Compatible screwdrivers</div> <div>PG Series BLG-BC2 Series BLG-BC1 Series BLG-ZERO1 Series BLG Series BL Series (Including OPC type)</div>		<div></div>					
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 screwdriver	PG Series	PG-3000、PG-5000、PG-7000					
	BLG-BC2 Series	BLG-4000BC2、BLG-5000BC2、BLG-5000BC2-15★、BLG-5000BC2-18★、BLG-5000BC2-HT★					
	BLG-BC1 Series	BLG-4000BC1、BLG-5000BC1、BLG-5000BC1-15★、BLG-5000BC1-18★、BLG-5000BC1-HT★					
	BLG-ZERO1 Series	BLG-4000ZERO1、BLG-5000ZERO1、BLG-5000ZERO1-15★、BLG-5000ZERO1-18★、BLG-5000ZERO1-HT★					
	BLG-BLG Series	BLG-4000、BLG-5000、BLG-5000-15★、BLG-5000-18★、BLG-5000-HT★					
	BL Series	BL-2000、BL-2000SS、BL-3000、BL-3000SS、BL-5000、BL-5000SS、BL-5000-15★、BL-5020★、BL-7000					

## Power supply for Brushed screwdrivers

### Combination of power supply with HIOS Brushed screwdriver

Number of connectable screwdrivers								
Power supply		CLT-45	CLT-60	CLT-80	CLT-100	MC-70L		
Screwdriver								
CL Series	CL-2000	●	●	—	●	●	↑ (Max. 20 units) ↓	
	CL-3000	●	●	—	●	●		
	CL-4000	●	●	—	●	●		
	CL-6000	●	●	—	●	●		
	CL-6500	●	●	—	●	●		
	CL-7000	—	●	—	—	●		
	CL-9000	—	—	●	—	—		
SS Series	SS-2000	●	●	—	●	●	↑ (Max. 20 units) ↓	
	SS-3000	●	●	—	●	●		
	SS-4000	●	●	—	●	●		
	SS-6500	●	●	—	●	●		
	SS-7000	—	●	—	—	●		
α Series	α-4500	●	●	—	●	●	↑ (Max. 10 units) ↓	
	α-5000	●	●	—	●	●		
	α-6500	—	●	—	—	●		

Model:
CLT-45
(for one screwdriver)

RoHS

10

CE

UL

CCC

Compatible screwdrivers


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)		71.5(W)×146(D)×42.6 (H) mm		
Weight (g)		330 g		
Accessories		Power supply cord 1.8m (1pc), Flat 2P conversion plug (1pc) (only for 100V), Mounting hardware (1pcs), Mounting screws (1pcs)		
Plug type		A	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>CLT-60</b> (for one screwdriver)		RoHS				10	CE	UL	CCC
Compatible screwdrivers									
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							

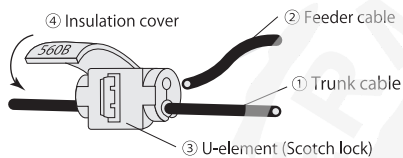
Model: <b>CLT-80</b> (for one screwdriver)		<div>RoHS</div> <div>10</div> <div>CE</div> <div>UL</div> <div>CCC</div>			
<div>Compatible screwdrivers</div> <div>CL-9000 only</div>		<div></div>			
Primary input power source		AC100V-240V (47/63 Hz)			
Secondary output voltage		HI(2) : DC30V, LOW(1):DC20V (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	10	CE	UL	CCC
Compatible screwdrivers						
CL Series						
SS Series						
α Series						
Primary input power source		AC100V (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				
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)		RoHS 
<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)	320(W) × 220(D) × 153(H)mm	
Weight (kg)	12kg	
Accessories	Power supply cord 1.8m with ground wire (1pc), Trunk cable 20m (1 set, black & red), Feeder cable 0.5m (10 sets, black & red), U-element (Scotch lock) #560B (20 pcs)	
Plug type	A-1	
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

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

It is recommended to use U-element (included in this product) to attach a feeder cable to the trunk cable.



- While push-opening the slot at the bottom of the U-element, push in the trunk cable into the groove.
- Insert the end of the feeder cables through the upper hole from the right side and push it in all the way to the opposite end.
- Insert the end of the feeder cable through the upper hole from the right side and push it in all the way to the opposite end.
- Snap on the insulation cover.

#### 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.



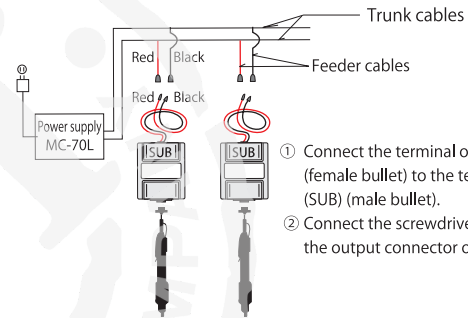
Primary input power source	DC20V/31V
Secondary output voltage	Same as the primary input power source
External dimensions (mm)	70(W) × 42(D) × 100 (H) mm
Weight (g)	240 g
Input cord length	2m with a bullet terminal (1pc, fixed to the body)
Accessories	Mounting hardware (2pcs)

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

- U-element 20pieces ● Feeder cables 10pieces (Black&Red)
- Trunk cables 20m 1piece each (Black&Red)

#### How to connect CB-105 (SUB)

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

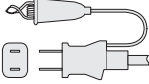


- Connect the terminal of the feeder cables (female bullet) to the terminal of CB-105 (SUB) (male bullet).
- Connect the screwdriver's connector to the output connector of CB-105 (SUB).

(Note)

The trunk cables (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.

#### ● Plug type

Voltage	100V
Plug type	Type A-1
	




## Special Power Supply • Relay Box

### ● Power supply with Complete Signal + I/O Signal Relay Box

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

**Model: BLOP-AF** (I/O Signal Relay Box)




**Output signals** ● FOR (forward) ● REV (reverse) ● T-UP (finish)

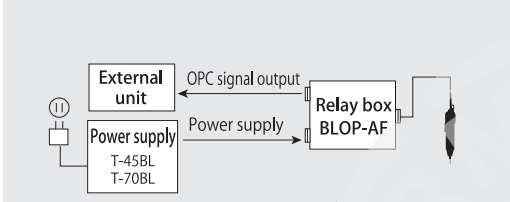
Compatible screwdrivers

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), Plug for I/O
Compatible screwdrivers	BLG Series	BLG-4000-OPC, BLG-5000-OPC
	BL Series	BL-2000-OPC, BL-3000-OPC, BL-5000-OPC, BL-5020-OPC

**Model: BLOP-OST2** (I/O Signal Relay Box for Automation)




**Input signals** ● D\_ACT(Start) **Output signals** ● FOR (forward) ● REV (reverse) ● T-UP (finish)

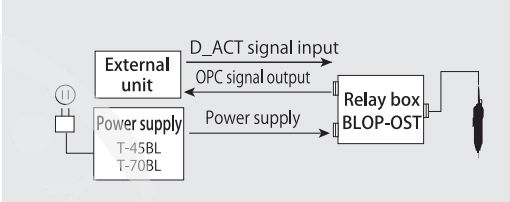
Compatible screwdrivers

BLG Series (OPC type)

BL Series (OPC type)



The signals (FOR, REV and T-UP) from the OPC-type screwdriver can be output with this box to connect to an external device such as a sequencer. Also power delivery to the screwdriver can be controlled.



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), Plug for I/O
Compatible screwdrivers	BLG Series	BLG-4000-OPC, BLG-5000-OPC
	BL Series	BL-2000-OPC, BL-3000-OPC, BL-5000-OPC, BL-5020-OPC

## 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)



Weight: 526g

Hi-speed rotation

VB-1510-18

#### VB-1820/VB-3012

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



Weight: 750g

Hi-speed rotation  
and Hi-torque

VB-3020  
(only for 100V)

#### VB-4504

(120V)  
(220-240V) CE



Weight: 750g

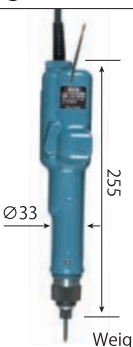
### Push-to-Start Type

### Push-to-start type

Unit:mm

#### VB-1510PS

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



Weight: 526g

Hi-speed rotation

VB-1510-18PS

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

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



Weight: 750g

Hi-speed rotation  
and Hi-torque

VB-3020PS  
(only for 100V)

#### VB-4504PS (with Shockless Stand)

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



Weight: 2,080g  
(Driver Cord, Slide Arm : 1,430g)  
(Pole, Stand Base : 650g)

### 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	40W	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 5HEX (both can be used)			H5 and 5HEX (both can be used)			H5 and 5HEX (both can be used)			—			
	HEX Shank	H5 and 5HEX or 1/4HEX			H5 and 5HEX 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 (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)														
		1/4HEX	+ #1 (Ø5.0×50mm) + #2 (Ø5.0×50mm) — (Ø5.0×50mm)			+ #1 (Ø5.0×50mm) + #2 (Ø5.0×50mm) — (Ø5.0×50mm)			+ #1 (Ø5.0×50mm) + #2 (Ø5.0×50mm) — (Ø5.0×50mm)			+ #1 (Ø5.0×50mm) + #2 (Ø5.0×50mm) — (Ø5.0×50mm)			+ #1 (Ø5.0×50mm) + #2 (Ø5.0×50mm) — (Ø5.0×50mm)					
			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)					
	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 an approximative estimate.



## Suction(Vacuum) Attachment for VB Series

By negative pressure, the effort needed to pick up screws is reduced. This attachment can even pick up non-ferrous screws such as stainless steel screws by vacuuming, and improve operation efficiency. It also removes powder dust generated in screw fastening.

### Order guide

(A),(B) and (C) below needed to be purchased separately .

\* The size of (A) and (B) depends on the screw size. For more information, please refer to P. 63-64.

Model		(A) Mouthpiece model	(B) Bit 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).

## Pistol Attachment

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

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

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



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 fastening. The attachment can be fitted to the tip of the screwdriver.



Always set the output torque at 1.8N·m or lower when you use this attachment.



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.

## For use with HIOS Screw Counter

**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  
(100V, 120V) VB-4504PS-OPC  
(Including PS type)

### Compatible counters

Power supply with HIOS Screw counter

**VZOP-STC**



► See P. 47-50 for details.

These models prevent skipping screw fastening in combination with the HIOS Screw Counter.

● They have a function to output positive rotation, reverse rotation and Torque-up (finish) signals.

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

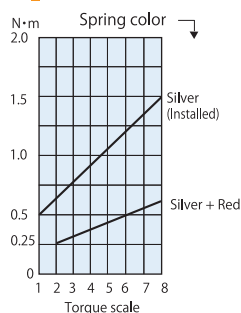
### CCC certified models

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

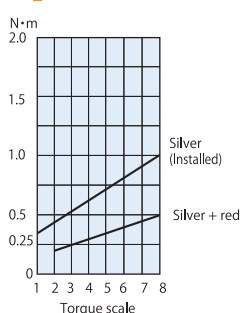
Note: CCC certified models have different specification and order codes from the standard models. Please contact HIOS distributors before ordering.

## Output torque guide

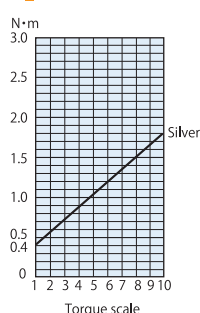
### VB-1510



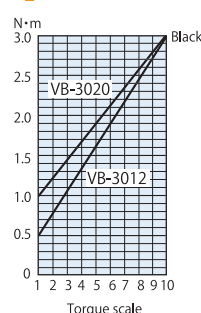
### VB-1510-18



### VB-1820 (Silver)

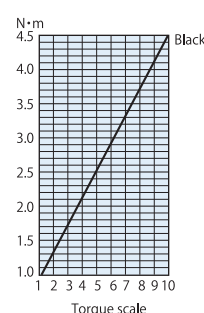


### VB-3012 VB-3020



(Including PS type)

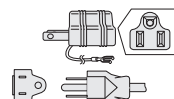
### VB-4504



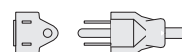
\*There are two types of spring for torque adjustment: for HI (originally fixed to the unit) and for Low (accessory). Use one of them depending on your operating conditions.

## ● Plug type

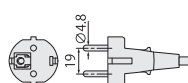
### Type A / 100V



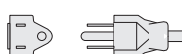
### Type A-2 / 120V



### Type C / 220V-240V



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



\*order code:  
Please ask HIOS distributors.

## Brushed Screwdriver

**VZ Series**  
(AC Type)  
Transformerless

## Transformerless screwdrivers suitable for heavy-duty Production.

- Can be directly plugged into an AC outlet.
- Light and slim balanced body design that minimizes operator fatigue.

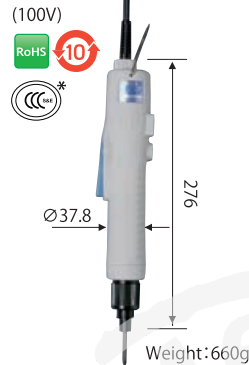
### Lever Start Type

### Lever start type

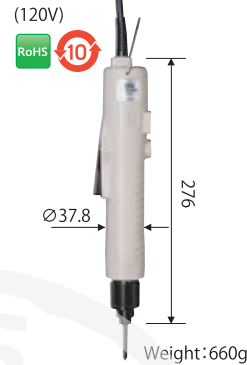
#### VZ-1510



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



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



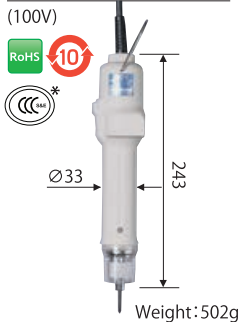
#### VZ-1812 VZ-3007/VZ-4504



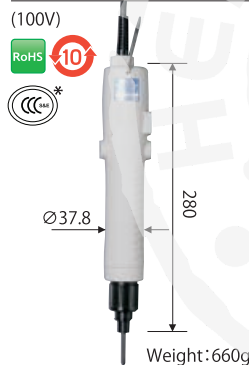
### Push-to-Start Type

### Push-to-start type

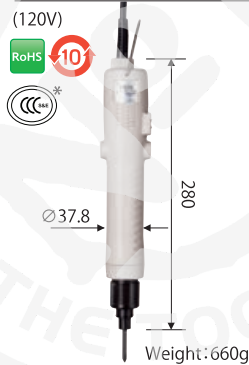
#### VZ-1510PS



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



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



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



#### VZ-4506PS (with Shockless Stand)



### 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)		
		1/4HEX		+ #1 (Ø5.0×50mm) + #2 (Ø5.0×50mm) — (Ø5.0×50mm)	+ #1 (Ø5.0×50mm) + #2 (Ø5.0×50mm) — (Ø5.0×50mm)	+ #1 (Ø5.0×50mm) + #2 (Ø5.0×50mm) — (Ø5.0×50mm)	+ #1 (Ø5.0×50mm) + #2 (Ø5.0×50mm) — (Ø5.0×50mm)	+ #1 (Ø5.0×50mm) + #2 (Ø5.0×50mm) — (Ø5.0×50mm)
	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 approximative estimate. \*2 If you select the HEX Shank, no bit is included. Please purchase standard-sized HEX Shank bits from commercial stores (refer to P. 53).



## Suction(Vacuum)Attachment

### VZQ

By negative pressure, the effort needed to pick up screws is reduced. This attachment can even pick up non-ferrous screws such as stainless steel screws by vacuuming, and improve operation efficiency. It also removes powder dust generated in screw fastening.

#### Order guide

(A),(B) and (C) below needed to be purchased separately.

\* The size of (A) and (B) depends on the screw size. For more information, please refer to P. 63-64.

	Model	(A) Mouthpiece model	(B) Bit 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  
(100V) VZ-4506PS-OPC (with Shockless Stand)  
(Including PS type)

#### Compatible counter

Power supply with HIOS Screw counter  
**VZOP-STC**



▶ See P. 47-50 for details.

These models prevent skipping screw fastening in combination with the HIOS Screw Counter.

- They have a function to output positive rotation, reverse rotation and Torque-up (finish) signals.

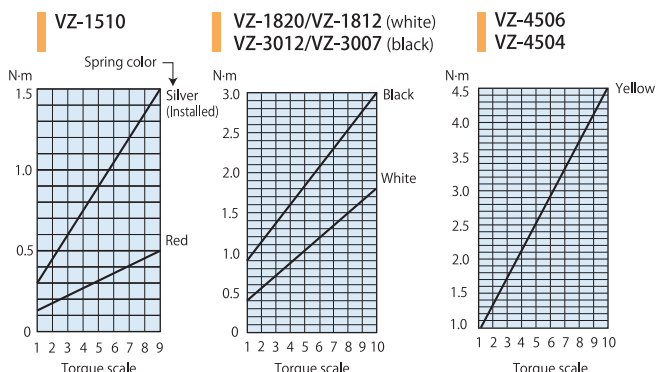


(100V / 220V) ... VZ-1510, VZ-1510PS (100V / 220V) ... VZ-1820, VZ-1820PS  
(100V / 220V) ... VZ-3012, VZ-3012PS (100V / 220V) ... VZ-4504, VZ-4504PS

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

#### Output torque guide

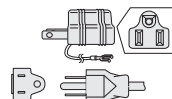
(Including PS type)



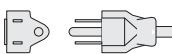
\*There are two types of spring for torque adjustment: for HI (originally fixed to the unit) and for Low (accessory). Use one of them depending on your operating conditions.

#### Plug type

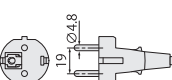
Type A / 100V



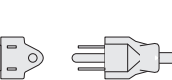
Type A-2 / 120V



Type C / 220V-240V



Type A-3 / 220V-240V



\*order code:  
Please ask HIOS distributors.

## Pistol Attachment

**PA-18** (for Lever Start\*)

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

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



\* 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 fastening. The attachment can be fitted to the tip of the screwdriver.



Always set the output torque at 1.8N·m or lower when you use this attachment.



Compatible screwdrivers:  
VZ-1812 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.



## Protective Cover for Torque Adjustment Nut

**VZ18-0970**

This cover prevents change in torque by operation during operation.



## Shockless Stand

**VZ18PS-SAS**

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



## Ultrahigh Torque Brushless® Screwdrivers

# VBH Series (AC Type) Transformerless



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

- These screwdrivers can apply high torque like 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

Unit:mm

#### VBH-1820 / VBH-3012 (with Shockless Stand)

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



Weight: 2,550g  
(Driver Cord, Slide Arm : 1,900g)  
(Pole, Stand Base : 650g)

### Push-to-Start Type

### Push-to-Start Type

Unit:mm

#### VBH-1820PS / VBH-3012PS (with Shockless Stand)

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



Weight: 2,550g  
(Driver Cord, Slide Arm : 1,900g)  
(Pole, Stand Base : 650g)

### 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 models prevent skipping screw fastening in combination with the HIOS Screw Counter.

- They have a function to output positive rotation, reverse rotation and Torque-up (finish) signals.

#### Compatible counter

HIOS Screw Counter

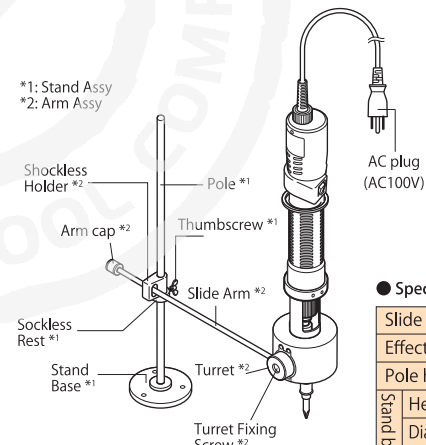
VZOP-STC

▶ See P. 47-50 for details.



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

### Main Components of Shockless Stand



#### Specifications

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

\* One side of the equilateral triangle Unit:mm

### VBH Series Specifications

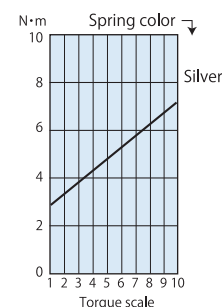
### Specifications

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 - 7			4 - 10		
	lbf·in	26 - 61			35 - 100		
	(kgf·cm)	(30 - 70)			(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 across 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)				

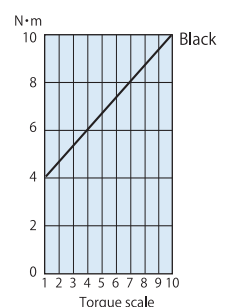
#### Output torque guide

(Including PS type)

#### VBH-1820



#### VBH-3012



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

Please contact HIOS distributors before orders.

## 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)



Weight: 2,450g  
(Driver Cord, Slide Arm : 1,800g)  
(Pole, Stand Base : 650g)

### 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 models prevent skipping screw fastening in combination with the HIOS Screw Counter.

- They have a function to output positive rotation, reverse rotation and Torque-up (finish) signals.

#### Compatible counter

HIOS Screw Counter

**VZOP-STC**

▶ See P. 47-50 for details.



### Push-to-Start Type

### Push-to-Start Type

Unit : mm

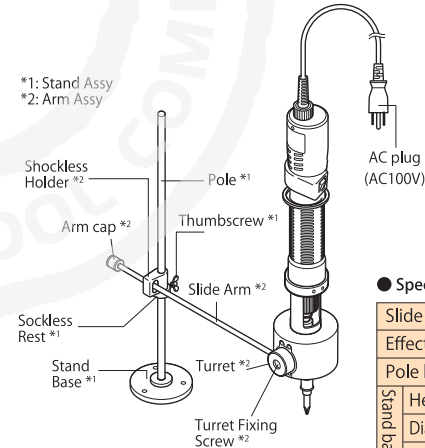
#### VZH-1820PS/VZH-3012PS (with Shockless Stand)

(100V)  
(120V)



Weight: 2,450g  
(Driver Cord, Slide Arm : 1,800g)  
(Pole, Stand Base : 650g)

#### Main Components of Shockless Stand



#### Specifications

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

\* One side of the equilateral triangle Unit: mm

### VZH Series Specifications

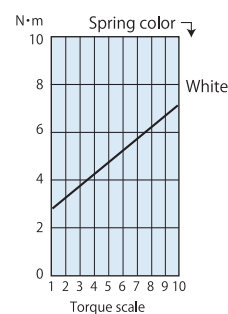
### Specifications

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 - 7		4 - 10	
	lbf·in	26 - 61		35 - 100	
	(kgf·cm)	(30 - 70)		(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 across 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)		

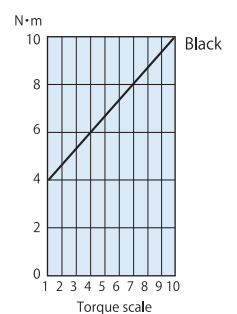
#### Output torque guide

((Including PS type))

#### VZH-1820



#### VZH-3012



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

Please contact HIOS distributors before order.

## Brushless® Screwdrivers for automated assembly machines

# PGF Series

(DC Type)



## Utilize the data of screw fastening operations.

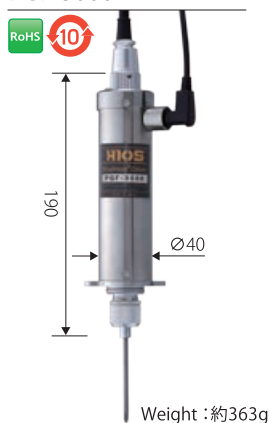
- The built-in torque sensor judges (OK/NG) for every screw fastening.
- The problems that are difficult to see such as insufficient torque, cross threaded and floating screw can be detected.
- Screw fastening operation data can be output to a PLC or computer.
- An external device can be used to control the direction and speed of driver rotation.

### PGF Series

### PGF - Series

単位: mm

#### PGF-3000



#### PGF-5000



#### PGF-7000



#### Control Unit (optional)

PG-01

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

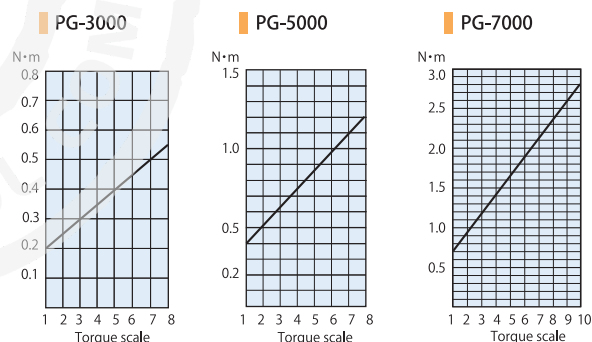


### PGF Series Specifications

#### Specifications

Model Name		PG-3000	PG-5000	PG-7000
Output Torque Range	N·m	0.2 - 0.55	0.4 - 1.2	1.0 - 2.8
	lbf·in (kgf·cm)	1.7 - 4.8 (2 - 5.5)	3.5 - 10 (4 - 12)	6.1 - 24 (7 - 28)
Torque Switching		Stepless adjustment	Stepless adjustment	Stepless adjustment
Unloaded Rotation Speed (r.p.m)	HI	980	900	960
	LOW	680	590	630
Screw Size (mm)	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
Drive	HEX Shank	On request	On request	1/4HEX
Power Supply		BLT-AY-61	BLT-AY-61	BLT-AY-71
Accessories		Driver cord (3m), Sensor cord (3m), CD-ROM×2, PGF-SUBBOX, Cord for PGF-SUBBOX (40cm), Start/torque-up cable (40cm), I/O flat cable (30cm), AC adapter (1.5m), RS-232C cable (2m), USB→RS-232C converter (35cm), Spare fixing inch screws×4		

#### Output torque guide (HI input)



Note:

- The torque line indicates the values that are measured when the rotation speed is set to 30. The values are approximate and are for reference only.
- These torque measurements were performed using an HIOS torque meter and Fidaptor.

## 《Workflow of Pass Guard System Use》

### 1 Setting the reference values for OK/NG criteria

- **Determine the acceptable criteria** (Teaching)  
The acceptance criteria are determined by conducting an actual fastening procedure. The torque value, minimum work time (Min), maximum work time (Max) are then saved.
- **Set the acceptable range** (Percentage Setting)  
The acceptable 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 fastening can be judged in real time.

### 3 Judgement

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

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



#### ●OK/NG Criteria

NG	L.G	GOOD	H.G	H.NG
Lower than the L.G Min. value	Minus Tolerance	OK Criterion	Plus Tolerance	Higher than the H.G Max. value
NG	OK			NG



## Suction(Vacuum)Attachment

### PGFQ

By negative pressure, the effort needed to pick up screws is reduced. This attachment can even pick up non-ferrous screws such as stainless steel screws by vacuuming, and improve operation efficiency. It also removes powder dust generated in screw fastening.

Models: PGFQ-3000 PGFQ-5000 PGFQ-7000

#### Order guide

(A),(B) and (C) below needed to be purchased separately.

\* The size of (A) and (B) depends on the screw size. For more information, please refer to P. 63-64.

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

Note: If the bit has the HEX Shank with the width across flats of 6.35mm (1/4HEX), the Suction Attachment cannot be used.

#### For deeply recessed screws

### PGFR

(Special order)

The PGFR Attachment is ideal for deeply recessed screws.

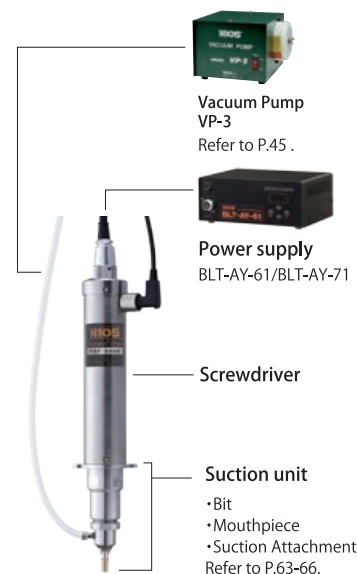
Torque adjustment is possible without removing the attachment, or removing the driver from the machine. The attachment uses threaded bits which means replacement bits is less costly than long bits.

Models: PGFR-7000

If you order PGFR

→ See P. 65-66.

## Construction of Suction (Vacuum pick up) screwdrivers



## Power supply for Brushless drivers for automated machines

• 2WS(2 Speed) and REV(Reversing) capabilities formerly optional are in these power supply as standard.

• Can be connected to external devices, such as a PLC to control the direction and speed of driver rotation.

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

Applicable screwdrivers:  
PGF-3000、PGF-5000



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

Applicable screwdrivers:  
PGF-7000



#### ● 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	

\* For left hand screws, please contact HIOS distributors.

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

## Driver Cord BLF7-0612-VI

Compatible screwdrivers:  
PGF Series、BLF Series



#### ● Specifications

Model	BLF7-0612-VI
Cord length	3m (10P)
Weight	320g

## BLF Damper Unit

### BLF-DP

This unit absorbs the impact against the workpiece while the Z-axis is descending and reduces the load on



#### ● Thrust Load Specifications

Model	BLF-DP
Initial load 0mm	Approx. 0.12N · m (1.2kgf · cm or 1.0 lbf · n)
Stroke 7mm	Approx. 0.6N · m (1.2kgf · cm or 5.3 lbf · n)

## Brushless® Screwdrivers for automated assembly machines



### BLF Series (DC Type)

## Simple structure provides high durability and easy maintenance!

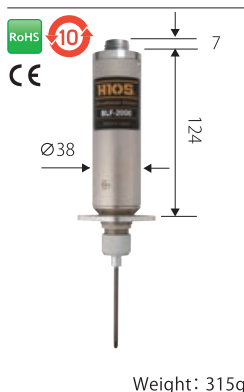
- Simplified controls and increased durability.
- Tools offer accurate torque to uniform fastening quality.
- The BLFQ and BLFR versions are available for vacuum pick up. The new BLFR versions are designed for recessed screws and it minimizes runout of bits.
- The power supply can run the tool in reverse and switch between two speed settings.

#### BLF-Series

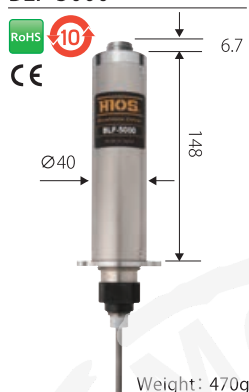
#### BLF- Series

Unit : mm

##### BLF-2000



##### BLF-5000



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



#### How to mount the flange

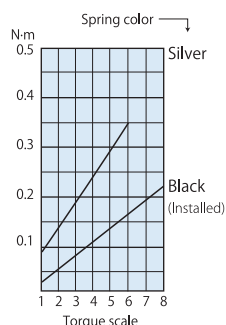
Thanks to the common dimensions of the flange, it is easy to switch your screwdriver to another among HIOS screwdrivers for automation.



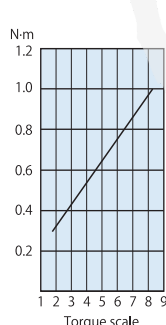
51-Ø5.5×2 t4  
(The dimensions of the holes in all the flanges are the same.)

#### Output torque guide ( HI input)

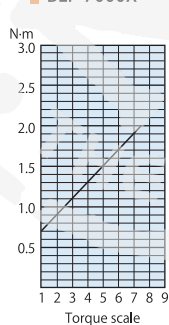
##### BLF-2000



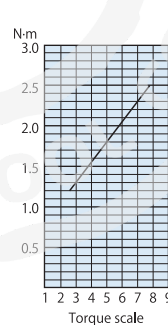
##### BLF-5000



##### BLF-7000 BLF-7000X



##### BLF-7025X



#### 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.

#### 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 11 Steps (05 to 15)		120 - 345	115 - 320	150 - 450	150 - 450	120 - 350
	HI 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)Attachment

## BLFQ

By negative pressure, the effort needed to pick up screws is reduced. This attachment can even pick up non-ferrous screws such as stainless steel screws by vacuuming, and improve operation efficiency. It also removes powder dust generated in screw fastening.

## Order guide

(A),(B) and (C) below needed to be purchased separately .

\* The size of (A) and (B) depends on the screw size. For more information, please refer to P. 63-64.

Model	(A) Mouthpiece model	(B) Bits total length	(C) Suction Attachment model
BLFQ-2000	F3-Standard 18mm	H4 60mm	BLFQ2-SET
BLFQ-5000	F6-Standard 31mm	H5 100mm	BLFQ5-SET
BLFQ-7000			BLFQ7-SET

Accessories: Tube  
3.5m  
(I/D:Ø4 X O/D:Ø7)

Note: If the bit has the HEX Shank with the width across flats of 6.35mm (1/4HEX), the Suction Attachment cannot be used.

For deeply  
recessed screws

## BLFR

(Special order)

The BLFR Attachment is ideal for deeply recessed screws.

Torque adjustment is possible without removing the attachment, or removing the driver from the machine. The attachment uses threaded bits which means replacement bits is less costly than long bits.

Models:

BLFR-5000 BLFR-7000X BLFR-7025X

If you order BLFR

→ See P. 65-66.

## Power supply for Brushless drivers for automated machines

- 2WS(2 Speed) and REV(Reversing) capabilities formerly optional are in these power supply as standard.
- Can be connected to external devices, such as a PLC to control the direction and speed of driver rotation.

## 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	

\* For left hand screws, please contact HIOS distributors.

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

## Driver Cord

## BLF7-0612-VI



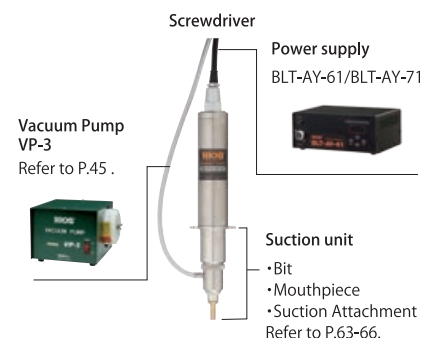
Compatible screwdrivers:  
BLF-2000, BLF-5000, BLF-7000  
BLF-7000X, BLF-7025X



## ● Specifications

Cord length	3m (10P)
Weight	320g

## Construction of Suction (Vacuum pick up) screwdrivers



## ■ Rotation speed of driver and its possible output torque.

## BLF-2000/BLF-5000

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

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  $\pm 10\%$ .

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	1.2
	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	1.2
	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 Screwdrivers for automated assembly machines

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

## Suitable for automated assembly machines

- Stable torque accuracy helps to uniform screw fastening for automation.
- Easy to install to the existing assembly system thanks to the compact body.
- Many variations

### 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



\* Not applicable to CLF-3000, CLF-6000.

### 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

CLF-3000 HH

Bit Drive

- (H) HIOS Shank (H4 or H5)
- (X) HEX Shank (1/4HEX)

Power Supply

- (H) HIOS power supply
- (N) Nitto Seiko power supply

### List of symbol combinations

HH	HIOS Shank + HIOS power supply
HN	HIOS Shank + Nitto Seiko power supply
XH	HEX Shank + HIOS power supply
XN	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
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	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 (CL9-0410)	1 pair (CL9-0410)	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)Attachment

### CLFQ / αFQ

By negative pressure, the effort needed to pick up screws is reduced. This attachment can even pick up non-ferrous screws such as stainless steel screws by vacuuming, and improve operation efficiency. It also removes powder dust generated in screw tightening.

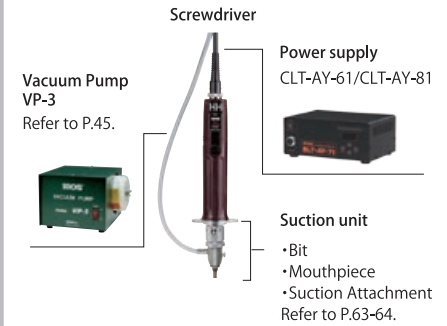
#### Order guide

(A),(B) and (C) below needed to be purchased separately.

\* The size of (A) and (B) depends on the screw size. For more information, please refer to P.63-64.

Model	(A) Mouthpiece model	(B) Bit 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 Automated 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

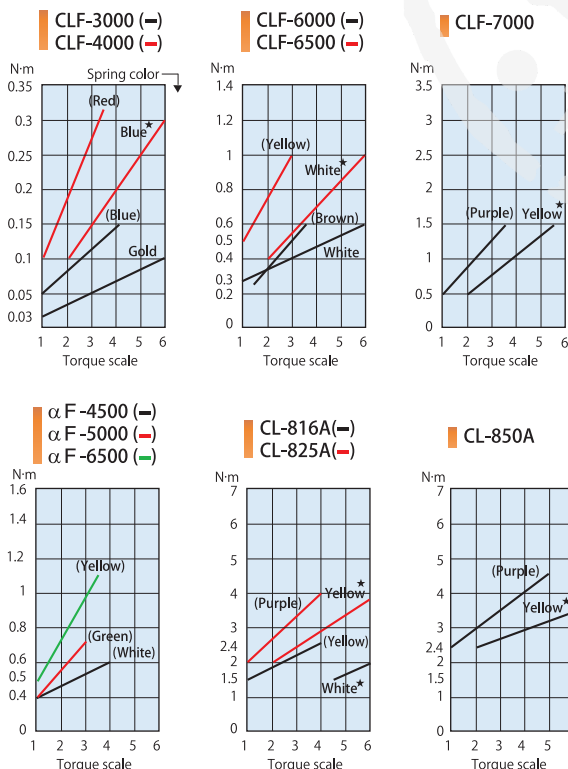
When both forward and reverse rotations are required, reverse rotation has larger torque than forward rotation.

## Other special specifications

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

\* Please contact HIOS distributors before ordering these variations.

### 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 enclosed 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 automated 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

#### Variations 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 functions cannot be added after purchase.

## Reciprocating Brushed Screwdriver

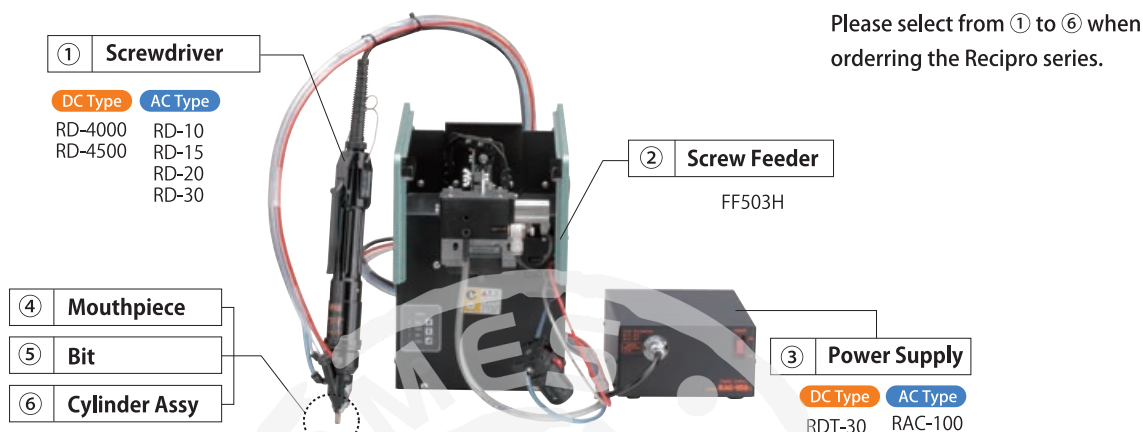
# RN53

Recipro Series  
(DC Type)  
(AC Type)

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

- Ideal for deeply recessed screws.
- Easy maintenance because the screwdriver, screw feeder, power supply and hose assy can be separated.

### Configuration of Recipro System

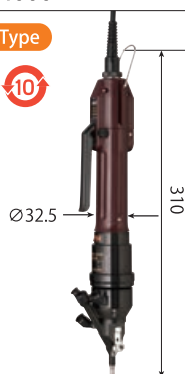


### ① Screwdriver

only Lever start type available

#### RD-4000

DC Type



Weight : 680g

#### RD-4500

DC Type



Weight : 745g

#### RD-10 / RD-15

AC Type



Weight : 825g

#### RD-20 / RD-30

AC Type



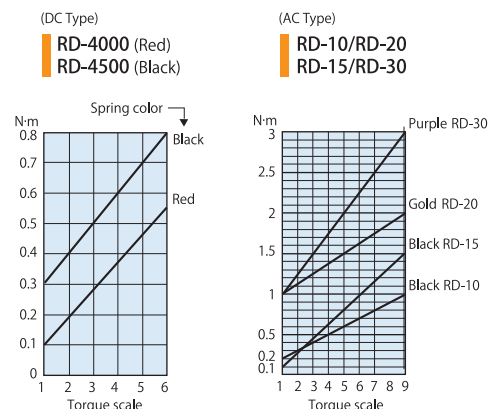
Weight : 1,140g

### ● 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)	Machine screw & tapping screw						
	Screw type						
	Nominal diameter		M2.0	M2.6	M3.0	M3.0	M4.0
	Max length		14	14	14	14	14
	Min length		Pan	6.0	7.0	8.0	8.0
			Binding	6.0	7.0	8.0	8.0
			Flat head	8.0	9.0	9.0	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).  
The model of the AC type Reciprocating screwdriver depends on the screw size.

### Output torque guide



## ② Screw Feeder

### FF503H

- Feeding speed 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

## ③ 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



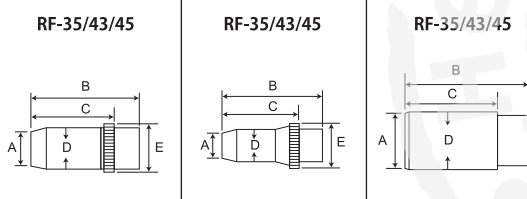
#### ● Specifications

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)	1.8m with ground wire (3L2P)

## ④ Mouthpiece

Screw size (mm)	Head type	Mouthpiece	Dimensions					
			A	B	C	D	E	
M2.0	Pan head	RF-35	3.5	15.5	11.5	5.5	7	
	Bind head	RF-43	4.3	15.5	11.5	5.5	7	
	Truss head	RF-45	4.5	15.5	11.5	5.5	7	
M2.6	Pan head	RF-45	4.5	15.5	11.5	5.5	7	
	Bind head	RF-55	5.5	17	13	7.4	8	
M3.0	Pan head	RF-55	5.5	17	13	7.4	8	
	Bind head	RF-63	6.3	17	13	7.4	8	
M3.5	Flat head	RF-70	7	25	20	10		
M4.0	Pan head	RF-70	7	25	20	10		
	Bind head	RF-83	8.3	25	20	10		

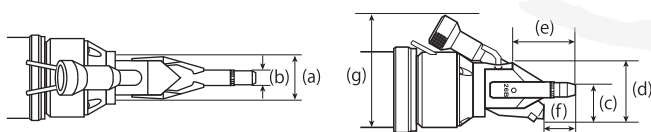
#### External Appearance



## ⑤ Bit

Recess type	Driver Bit Code	Bit Size	Recipro Model	Shape
Cross-recessed screw	RBP3130	H type #1 Ø3.0X35	RN53-200P / RN53-200B RN53-200PL / RN53-200BL	
	RBP4140	H type #1 Ø4.0X40	RN53-260B / RN53-260BSL RN53-260BL	
	RBP4240	H type #2 Ø4.0X40	RN53-300P / RN53-300B RN53-300PL / RN53-300BL RN53-300PSL / RN53-300BSL	
Slotted screw	RBS330	0.4	RN53-200P / RN53-200B RN53-200PL / RN53-200BL	
	RBS440	0.6	RN53-300P / RN53-300B RN53-300PL / RN53-300BL RN53-300PSL / RN53-300BSL	
TORX screw	RBX306	T6 Ø3.0X35	RN53-200P / RN53-200B RN53-200PL / RN53-200BL	
	RBX308X	T8H Ø3.0X35		
	RBX408H	T8H Ø4.0X40	RN53-300P / RN53-300B RN53-300PL / RN53-300BL	
	RBX410H	T10H Ø4.0X40	RN53-300PSL / RN53-300BSL	
	RBX420H	T20H Ø4.0X40		

## ⑥ Cylinder Assy Specifications



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

Unit : mm								
Screw Size	Screw type	Detailed dimensions						
		(a)	(b)	(c)	(d)	(e)	(f)	(g)
M2.0	Pan/Binding	19.8	Ø7.0	11.8	25	43	23.5	60
M2.6	Pan	19.8	Ø7.0	11.8	25	43	23.5	60
	Binding	23	Ø8.0	15.5	30.5	37	18	62
M3.0	Pan/binding	23	Ø8.0	15.5	30.5	37	18	62
M4.0	Pan/binding	27	Ø10	17.5	32.8	46	28.5	69

### Cylinder Assy variations

Unit : mm

Screw Size	Head	Code	Standard	Code	Long	Code	Super Long
M2.0	Pan	RPS-200P		RPS-200PL			
	Binding	RPS-200B		RPS-200BL			
M2.6	Pan	RPS-260P		RPS-260PL			
M2.6	Binding	RPS-260B		RPS-260BL		RPS-260BSL	
M3.0	Pan	RPS-300P		RPS-300PL		RPS-300PSL	
	Binding	RPS-300B		RPS-300BL		RPS-300BSL	
M4.0	Pan	RPS-400P				RPS-400PSL	
	Binding	RPS-400B				RPS-400BSL	

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

**2m (6P)** Compatible models: PG, BLG-BC2, BLG-BC1, BLG-ZERO1, BLG-OPC, BL-OPC Series

**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, C.L, SS, α Series

**3m (6P)** Compatible models: BLG-BC2, BLG-BC1, BLG-BC1, BLG-ZERO1, BL-OPC, BLG-OPC Series

## Curled Cord

Elastic and flexible cord

Length at maximum extension

**7.5m (5P)** Compatible models: BL, C.L, 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, C.L, SS, α Series

**5m (5P)** Compatible models: BLG, BL, C.L, 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

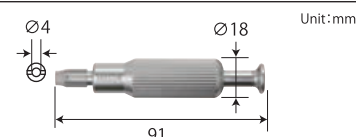
Specifications	VP-3
Primary input power	AC100V,120V,220-240V±5%
Maximum power consumption	39W±20%
Ultimate vacuum	-350mm Hg
Air capacity	25L/min
Dimensions(mm)	200×188×142(H)
Weight(kg)	3.8kg
Plug type	A-1/A-2/A-3/C/BF/S



## Aluminum Handle Screwdriver

### WOOD-4AL

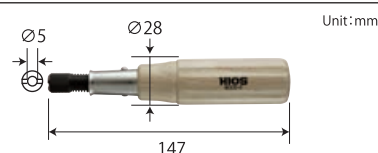
Applicable bit: HIOS H4(Ø4)



## Wooden Handle Screwdriver

### WOOD-5

Applicable bit: HIOS H5(Ø5)



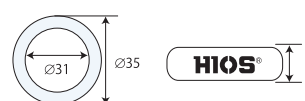
Screwdriver can be securely gripped and doesn't slip!

## Grip Ring

- Reduce operation fatigue by preventing grip slip.
- Multiple color rings help identification of drivers.
- Protects the screwdriver from shock and scratches.
- Can be removed cleanly without damage.

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

■ Grip dimensions  
Unit:mm



■ Compatible models: All models (except BL-2000/CL-2000/SS-2000)



## 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



Applicable screw size:  
M1.2-M1.4

Grip color: Blue

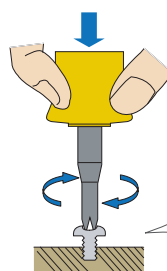


Applicable screw size:  
M1.4-M1.7

Grip color: Red



Applicable screw size:  
M1.7-M2.0

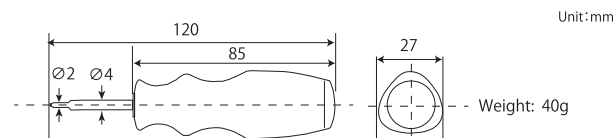


It's easy to use !

Push the bit vertically and turn it **very** slowly.

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

#### External dimensions





# Vertical Screwdriver Operating Stand



**VMS-40** : for BLG-BC2 / BLG-BC1 / BLG / BL / CL / SS /  $\alpha$  / VZ-1510

**VMS-50** : for PG / BLG-BC2/BLG-BC1/ BLG / BL / CL / SS /  $\alpha$  / VZ-1510

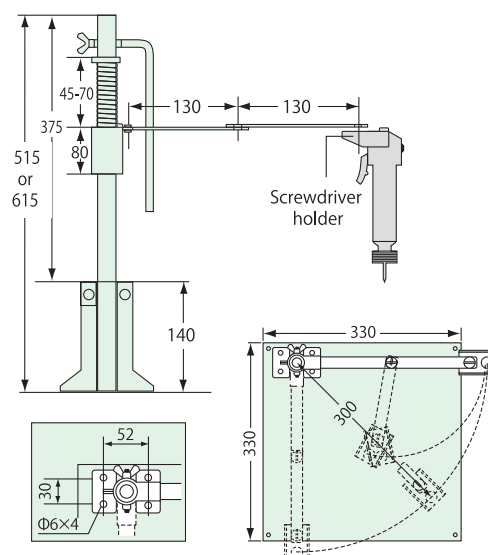
**VMS-50VZ** : for PG / VB / VZ (except VZ-1510)

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

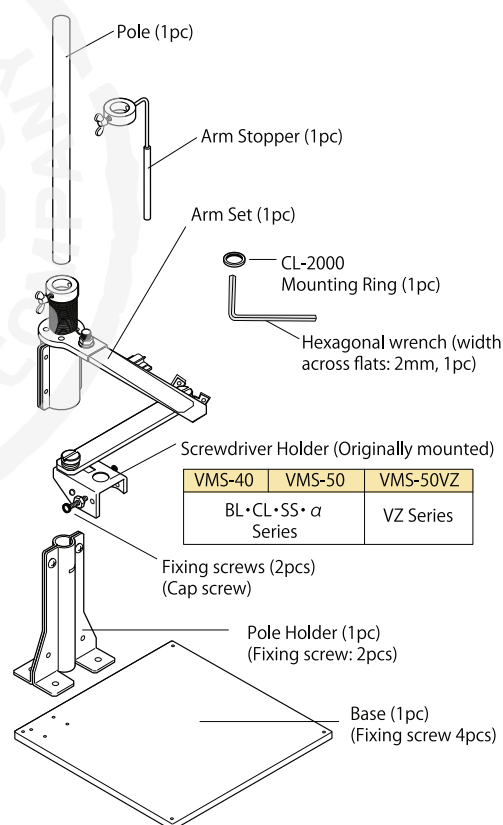


## External dimensions

Unit:mm



## Components of screwdriver stand



Model	VMS-40	VMS-50	VMS-50VZ	Screwdriver Holderorder (Order code)	
Pole height (mm)	515	615	615		
Weight (kg)	2.5	2.65	2.65		
BL Series	BL-2000/BL-3000/BL-5000			VMS40-0180	(Included as standard)
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				
$\alpha$ Series	$\alpha$ -4500 / $\alpha$ -5000 / $\alpha$ -6500				
VZ Series			All models (except VZ-1510)	VMS-0900-VZ180	
PG Series		PG-3000		VMS-0900-PG3	
		PG-5000		VMS-3910-PG5 (with a spacer)	
		PG-7000		VMS-0900-PG7	
BLG-BC2	BLG-4000BC2			VMS-0900-BLG	(Optional)
	BLG-5000BC2 ⚠ (without BC2 I/O Cable)			VMS-0900-BLG5BC2	
	BLG-5000BC2			VMS-0900-BLG	
BLG-BC1 Series	BLG-4000BC1 / BLG-5000BC1		VMS-0900-BLG		
BLG-ZERO1 Series	BLG-4000ZERO1/BLG-5000ZERO1		VMS-0900-BLG		
BLG Series	BLG-4000 / BLG-5000		VMS-0900-BLG		
BL Series	BL-7000		VMS-0900-BL7		
VB Series		VB-1510/VB-1510PS	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	
Accessories	Pole (1pc) / Arm Stopper (1pc) / Arm Set (1pc) / Pole Holder (1pc) / Base (1pc) / Mount Ring (1pc) (for CL-2000) / Hexagonal wrench *				

\* A hexagonal wrench is not included with the VMS-50VZ.



### For BLG-BC2

The Holder Model No. depends on whether to use with or without the BC2 I/O cable.



BC2 I/O Cable  
Order code: BLG-BC2-3010



Note that the holder for the BLG-4000BC2 can be used only when the BC2 I/O cable is not attached.

## 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)

Compatible 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-3007 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 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.

## Screw Counter

# STC3 Series

The number of the fastener count can be set from 1 to 99.

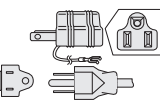
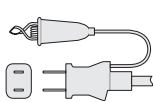
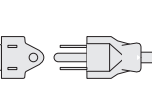
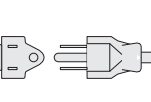
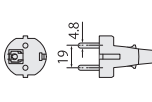
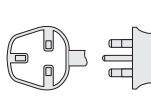
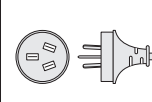
- A buzzer will sound when the final screw has been fastened to notify you of screw fastening completion.
- The fastener count number is automatically reset after all screws have been fastened. The screwdriver will be disabled until the next "work set confirmation" SET signal is input (not applicable to SC3 Series).
- Prevents counting double-fastening.
- 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	
			BLOP-STC3 《power supply type》 	CLT-70STC3 《power supply type》 	VZOP-STC 	BLOP-SC1 	CLOP-SC1 
Functions & compatible screwdrivers							
Counting	Fastener count (1 to 99)		●	●	●	●	●
	Counting direction	Forward (count-down)	●	●	●	●	●
		Reverse (count-up*)	●	—	●	●	—
	Display		●	●	●	●	●
	Build-in timer	Count Timer	●	●	●	●	●
		Work Set Timer	●	●	●	●	●
		Work Reset Timer	●	●	●	●	●
		Reverse Count Timer	●	—	●	●	—
Terminal block	Power supply for external devices (E)		●	●	●	●	●
	Control output (A, F, G)		●	●	●	●	●
	Control input (B, C)		●	●	●	●	●
	Error output (H)		●	●	●	●	●
Screwdrivers	DC type	Brushless	BLG-BC2 Series	—	—	●*2	—
			BLG-BC1 Series	—	—	●*2	—
			BLG-ZERO1 Series	—	—	●*2	—
			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)	—	●	—	—

\*1 If you unscrew during operation, the count number will go back by one.

\*2 These Screw Counter do not interlock with the counter function of the BLG-BC1/ BC2. Please turn off the counter function when you use with the Screw Counter.

## ● 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
							

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

**Compatible screwdrivers** 《With power supply》


**Brushless screwdrivers**

- **BL Series (OPC)**  
BL-2000-OPC, BL-3000-OPC, BL-5000-OPC, BL-7000-OPC
- **BLG Series (OPC)**  
BLG-4000-OPC, BLG-5000-OPC
- **BLG-ZERO1 Series \***  
BLG-4000-OPC, BLG-5000-OPC
- **BLG-BC1 Series \***  
BLG-4000BC1, BLG-5000BC1
- **BLG-BC2 Series \***  
BLG-4000BC2, BLG-5000BC2



Primary input power source	AC100-240V, 47-63Hz
Secondary output voltage	HI (2): about DC30V, 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


\* These Screw Counter do not interlock with the counter function of the BLG-BC1/BC2.  
Please turn off the counter function when you use with the Screw Counter.

**Model: CLT-70STC3 (for one screwdriver)** 

**Compatible screwdrivers** 《With power supply》

**Brushed screwdrivers**


- **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



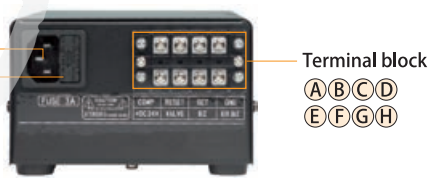
Primary input power source	AC100-240V, 47-63Hz
Secondary output voltage	HI (2): about DC30V, LOW (1): about DC20V, 2-step switchable
External dimensions (mm)	127(W) × 208(D) × 76(H)mm
Weight (kg)	1.8kg
Accessories	Power supply cord: 1.8m with ground wire (1pc) Crimp-type terminals: 8pcs
Plug Type	A-1      A-2      A-3/C/BF/S

## ● Components and Functions of Screw Counter STC3

**Front panel**



**Rear panel**



**Function switches (F1, F2, F3)**

F1	Set fastener Count: 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.
- CLT-70STC3 and CLOP-STC3 do not have the Reverse Count timer.

Model: VZOP-STC (for one screwdriver)

RoHS

10

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

(including PS type)

Brushed screwdrivers

VZ Series (OPC)

(100 V)

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

VZ-3012-OPC, VZ-4506-OPC

(including PS type)

VZ-4506PS-OPC

(120 V)

VZ-1820-OPC, VZ-3012-OPC

(including PS type)

VZH Series (OPC)

(only 100 V / 120V)

VZH-1820-OPC, VZH-3012-OPC

(including PS type)



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 Specification

- These screwdrivers have the function to out put signals of forward , reverse rotation and finish.
- The signals are separated by the photo coupler for safety.
- The output form is open collector output (Max. 24V/20mA) and the driver 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: output of forward rotation signal
- White: output of finish signal
- Yellow: output of reverse rotation signal

**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							

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- To prevent screw tightening skipping!  
Separate screw counter

# SC1 Series

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


## DC Type / For BL, BLG, BLG-ZERO1, BLG-BC1, BLG-BC2 Series

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

**Compatible screwdrivers**

**Brushless screwdrivers**

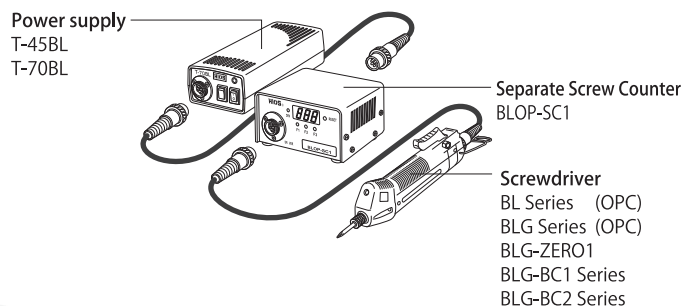
- BL Series (OPC)
- BLG Series (OPC)
- BLG-ZERO1 Series \*
- BLG-BC1 Series \*
- BLG-BC2 Series \*



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

\* These Screw Counter do not interlock with the counter function of the BLG-BC1 / BC2.  
Please turn off the counter function when you use with the Screw Counter.

### ● Configuration of components



### ● Connectable power supplies and screwdrivers

Power supplies	Connectable screwdrivers (OPC)
T-45BL (for one screwdriver)	BL-2000-OPC, BL-3000-OPC, BL-5000-OPC, BLG-4000-OPC, BLG-5000-OPC, BLG-4000ZERO1, BLG-5000ZERO1, BLG-4000BC1, BLG-5000BC1, BLG-4000BC2, BLG-5000BC2
T-70BL (for one screwdriver)	BL-2000-OPC, BL-3000-OPC, BL-5000-OPC, BL-5020-OPC, BL-7000-OPC, BLG-4000-OPC, BLG-5000-OPC, BLG-4000ZERO1, BLG-5000ZERO1, BLG-4000BC1, BLG-5000BC1, BLG-4000BC2, BLG-5000BC2

## For CL, SS and α Series

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

**Compatible screwdrivers**

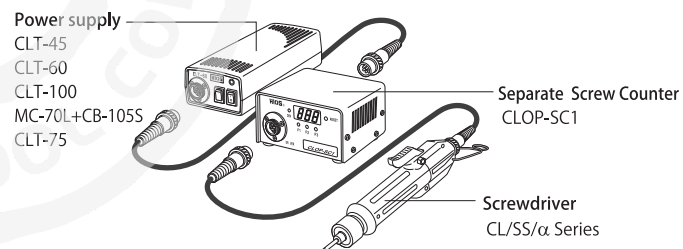
**Brushed screwdrivers**

- 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

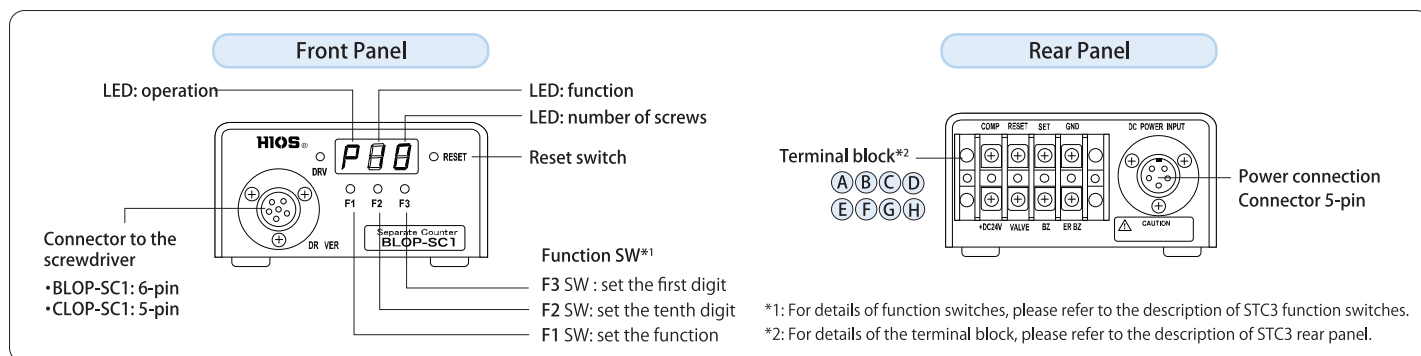


### ● Connectable power supplies and screwdrivers

Power supplies	Connectable screwdrivers
CLT-45 (for one screwdriver)	CL-2000, CL-3000, CL-4000, CL-6000, CL-6500 SS-2000, SS-3000, SS-4000, SS-6500, α-4500, α-5000
CLT-60 (for one screwdriver)	CL-2000, CL-3000, CL-4000, CL-6000, CL-6500, CL-7000 SS-2000, SS-3000, SS-4000, SS-6500, SS-7000, α-4500, α-5000, α-6500*
CLT-100 (for two screwdrivers)	CL-2000, CL-3000, CL-4000, SS-2000, SS-3000, SS-4000
MC-70L + CB-105 (multiple)	CL-6000, CL-6500, CL-7000, SS-6500, SS-7000, α-4500, α-5000
CLT-80 (for one screwdriver)	α-6500
	CL-9000

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

### ● Components of Separate Counter SC1



## 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.



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 $\pm 0.5\%$ (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	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 $\pm 0.5\%$ (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)		6V NiMH (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 ± 1 % (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)		6V NiMH (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

RoHS  ..... All fidaptor is RoHS compliant

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	● Exclusive battery charger* 1pc P/N:TCH-MULTI   ● Grease (only for HP-100) P/N:TF-G3 1pc   ● Inspection report 1 copy   * For a battery charger to be used in a country other than Japan, see the battery charger list on P.74, because the applicable battery charger varies depending on the country.			




\* 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	Options					Options			
P/N	TF4G-Z	TF6SG-Z	TF4SG-Z	TF4S-Z	TF5G-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	0.5-1	0.5-3	0.5-3	3-9	3-9
									
Bit drive	HIOS Shank H4	HEX Shank (2-step shaft) Upper: 5HEX, Lower: 1/4HEX	HIOS Shank H4	HIOS Shank H4	HIOS Shank H5	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	● Exclusive battery charger* 1pc P/N:TCH-MULTI  ● Detector cord: 1.7m 1pc P/N:DPC-0506  ● Inspection report 1 copy  * For a battery charger to be used in a country other than Japan, see the battery charger list on P.74.				

## ● 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)	● Exclusive battery charger* 1pc P/N:TCH-100N  ● Detector cord: 1.7m 1pc P/N:DPC-0506  ● Inspection report 1 copy 
HM-100	P/N:TFM40-Z 1pc (Black) 		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.74.

### Those 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.70.



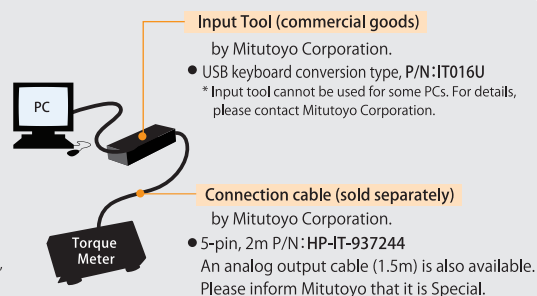
## ● Fidaptor List of HM Series

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
			
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 sizes 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	● HSF-23
	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)				

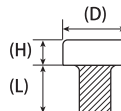
### Guide of specifications

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) Thread 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



- 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
- Can be used with the vacuum pick up driver (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) Thread length (mm)	Replacement rail model number
HSV	HSV-10	M1.0	1.2-4.5	0.35-1.0	1.6-10	HSV-BI-10
	HSV-12	M1.2	1.4-4.5	0.35-1.0	1.8-10	HSV-BI-12
	HSV-14	M1.4	1.7-4.5	0.35-1.0	2.0-10	HSV-BI-14
	HSV-17	M1.7	2.0-4.5	0.35-1.0	2.3-10	HSV-BI-17
	HSV-20	M2.0	2.4-6	0.35-4.5	2.6-20	HSV-BI-20
	HSV-23	M2.3	2.7-6	0.35-4.5	2.9-20	HSV-BI-23
	HSV-26	M2.6	3.0-6	0.35-4.5	3.2-20	HSV-BI-26
	HSV-30	M3.0	3.5-6	0.35-4.5	3.6-20	HSV-BI-30
HSV-RB	HSV-10RB	M1.0	1.2-4.5	0.35-1.0	1.6-10	HSV-RI-10
	HSV-12RB	M1.2	1.4-4.5	0.35-1.0	1.8-10	HSV-RI-12
	HSV-14RB	M1.4	1.7-4.5	0.35-1.0	2.0-10	HSV-RI-14
	HSV-17RB	M1.7	2.0-4.5	0.35-4.5	2.3-10	HSV-RI-17
	HSV-20RB	M2.0	2.4-6	0.35-4.5	2.6-20	HSV-RI-20
	HSV-23RB	M2.3	2.7-6	0.35-4.5	2.9-20	HSV-RI-23
	HSV-26RB	M2.6	3.0-6	0.35-4.5	3.2-20	HSV-RI-26
	HSV-30RB	M3.0	3.5-6	0.35-4.5	3.6-20	HSV-RI-30



- A single unit can handle three screw sizes by changing rails.
- A large screw capacity of 150cc.
- Can be used with the vacuum pick up driver (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 out put	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), 1 screwdriver (for timer adjustment)	

\*AC adapter is excluded for overseas use. it should be selected and purchased locally according to the voltage.

## ● Range of screws that can be supplied

Main unit	Model	Nominal screw diameter	(D)Head diameter(φ)	(H) Head thickness(mm)	(L)Thread length(mm)	Replacement rail model number
HS-450	HS-35	M3.5	4.8-10.7	0.5-8.0	4.1-18	HS-R35
	HS-40	M4.0	5.4-10.7	0.5-8.0	4.6-18	HS-R40
	HS-50	M5.0	6.2-10.7	0.5-8.0	5.6-18	HS-R50
HS-450RB	HS-35RB	M3.5	4.8-10.7	0.5-8.0	4.1-18	HS-R35RB
	HS-40RB	M4.0	5.4-10.7	0.5-8.0	4.6-18	HS-R40RB
	HS-50RB	M5.0	6.2-10.7	0.5-8.0	5.6-18	HS-R50RB

- A single unit can handle different screw diameters by changing rails.
  - 8 screw sizes for the manual operation type, 6 screw sizes for the automatic assembly machines
- 120 pcs per minute at average / M3 x 8 (for automatic assembly machines)
- Can be used with the vacuum pick up driver (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 out put	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 screwdriver (for timer adjustment), 1 gauge plate 0.35mm (HS III only)	

\*AC adapter is excluded for overseas use. it should be selected and purchased locally according to the voltage.

## ● Range of screws that can be supplied

Main unit	Model	Nominal screw diameter	(D)Head diameter(φ)	(H) Head thickness(mm)	(L)Thread length(mm)	Replacement rail model number
HS III-300	HS III-10	M1.0	1.2-4.5	0.35-1.0	1.6-10	HS-SR10
	HS III-12	M1.2	1.4-4.5	0.35-1.0	1.8-10	HS-SR12
	HS III-14	M1.4	1.7-4.5	0.35-1.0	2.0-10	HS-SR14
	HS III-17	M1.7	2.0-4.5	0.35-1.0	2.3-10	HS-SR17
	HS III-20	M2.0	2.4-6	0.35-4.5	2.6-20	HS-SR20
	HS III-23	M2.3	2.7-6	0.35-4.5	2.9-20	HS-SR23
	HS III-26	M2.6	3.0-6	0.35-4.5	3.2-20	HS-SR26
	HS III-30	M3.0	3.5-6	0.35-4.5	3.6-20	HS-SR30
HS III-300 RB	HS III-14RB	M1.4	1.7-4.5	0.35-1.0	2.0-10	HS-SR14RB
	HS III-17RB	M1.7	2.0-4.5	0.35-1.0	2.3-10	HS-SR17RB
	HS III-20RB	M2.0	2.4-6	0.35-4.5	2.6-20	HS-SR20RB
	HS III-23RB	M2.3	2.7-6	0.35-4.5	2.9-20	HS-SR23RB
	HS III-26RB	M2.6	3.0-6	0.35-4.5	3.2-20	HS-SR26RB
	HS III-30RB	M3.0	3.5-6	0.35-4.5	3.6-20	HS-SR30RB

## HSF Series

Multiple input type  
AC100V-240V RoHS 10

- A single unit can handle different screw diameters by changing rails.
  - HSF-01 handles 5 screw sizes, and HSF-02 handles 3 screw sizes.
- 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-23 (M2.3)  
HSF-14 (M1.4) HSF-26 (M2.6)  
HSF-17 (M1.7) HSF-30 (M3.0)

## ● Specifications

HSF Series		
Power supply	Input	AC100-240V (50/60Hz)
Power supply	Output	DC15V 1A
Dimensions (mm)	55(W)×205(D)×142.5(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), 1 screwdriver (for timer adjustment)	

\* 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)Thread length(mm)	Replacement rail model number
HSF-01	HSF-10	M1.0	0.9-0.95	0.35 - 1.0	1.6 - 01	HS-WR10
	HSF-12	M1.2	1.1-1.15	0.35 - 1.0	1.8 - 10	HS-WR12
	HSF-14	M1.4	1.3-1.4	0.35 - 1.0	2.0 - 10	HS-WR14
	HSF-17	M1.7	1.6-1.7	0.35 - 1.0	2.3 - 10	HS-WR17
	HSF-20	M2.0	1.9-2.1	0.35 - 1.3	2.6 - 16	HS-WR20
	HSF-23	M2.3	2.2-2.4	0.35 - 1.5	2.9 - 16	HS-WR23
HSF-02	HSF-26	M2.6	2.5-2.7	0.35 - 1.7	3.2 - 16	HS-WR26
	HSF-30	M3.0	2.9-3.2	0.35 - 2.0	3.6 - 16	HS-WR30

Battery powered / Brushed Screwdriver

**CD** Serusute 12  
**CD Series**

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 improve 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 fastening operation can be well controlled to the very last screw.



Image of wearing (portable model CDS-12)

### Screwdriver cord

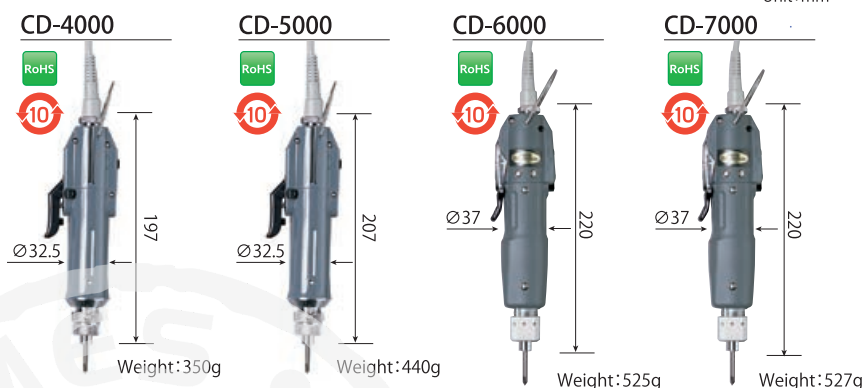
Curled cord (6P) is used for all the CD screwdrivers.



### Lever Start Type

### Lever Start Type

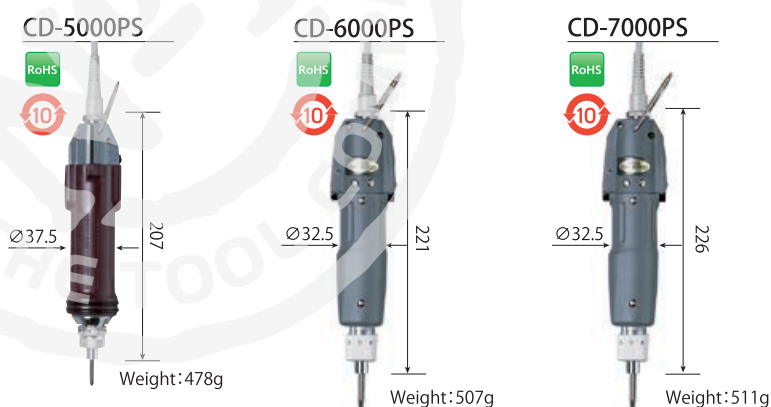
Unit:mm



### Push-to-Start Type

### Push to start type

Unit:mm

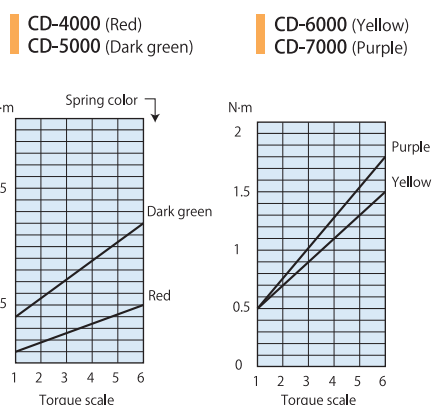


### Specifications

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 Torque Range	N·m	0.1 - 0.5	0.4 - 1.2	0.5 - 1.5	0.5 - 1.8
	lbf·in (kgf·cm)	0.9 - 4.3 (1 - 5)	3.5 - 10 (4 - 12)	4.3 - 13 (5 - 15)	4.3 - 16 (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 (mm)	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-12SW (for one screwdriver)

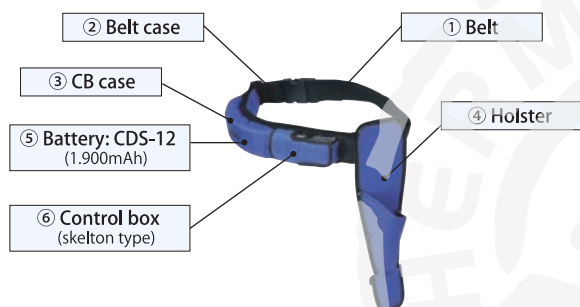
## Bench mount model CDB-12

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



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

### CDS-12 Components



#### ● Component names and part numbers

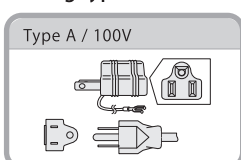
Component name	Part number
CDS-12 (set of ① to ⑥)	CDS-12
Holder case (set of ① to ④)	CDS12-HD
① Belt	CDS12-HD 01
② Belt case	CDS12-HD 02
③ CB case (controller & battery case)	CDS12-HD 03
④ Holster	CDS12-HD 04
⑤ Battery CDS12 (1,900mAh)	CDS12-BT-19
⑥ Control box (skelton type)	CDS-12-CB

#### ● 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-12SW battery charger (for one battery)

Charger for the batteries for both portable and bench mount models.



#### ● Specifications

Model	CDC-12SW (for one battery)
Primary input power voltage	AC100V±5% (50/60Hz)
Secondary output	DC15V 1,900mAh
Charging time	About 100 minutes
Dimensions (mm)	66×124×46(H)
Weight (g)	340g
Connector	6P
Plug type	A

## Electric Tapper

# SB

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



**With 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.

### Lever Start Type

### Two-way Start System

Unit: mm

## BL-5000SB



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

### BL-5000SB



#### ● Specifications

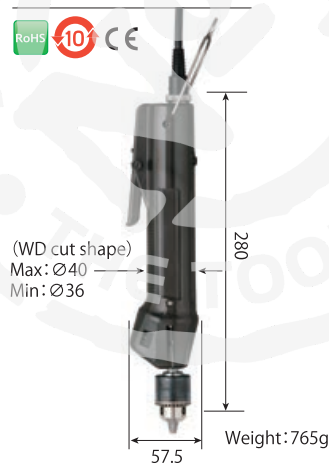
Model		BL-5000SB
Tapping capacity (mm)		0.9 - 2.6
Chuck diameter (mm)		Max. 4mm
Safe load torque adjustable range	N·m	0.2 - 1.2
	lbf·in (kgf·cm)	1.7 - 10 (2 - 12)
Unloaded rotation speed (r.p.m) ± 10%	HI	900
	LOW	590
Accessories	Stopper (one each)	<div> <div> <div>Ø2.0mm</div> <div>Ø2.3mm</div> <div>Ø2.6mm</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)		    	
			
Primary input power source	AC100-240V (47-63Hz)		
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-240V	
Type A-1 100V		Type BF 220V-240V	
Type A-2 120V		Type S 220V-240V	
Type A-3 220V-240V			



## Electric Tapper



Brushed  
**SB Series**  
(DC Type)

### Lever Start Type

### Lever Start Type

### Variations

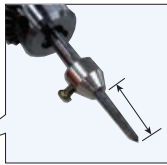
### SB Applicable Drivers

#### SB-400C

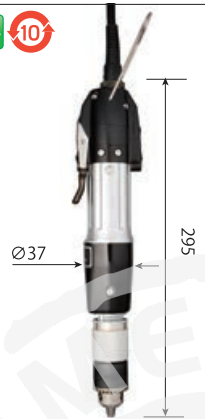


Weight: 450g

The tap penetrates to the depth set by the stopper.



#### SB-650C



Weight: 750g

Unit: mm

### Noiseless Screwdriver

**SB-NL**

Models:  
SB-400NL  
SB-650NL

Electrical noise is more subdued than standard screwdrivers.

### Related Products

### Related Products

### Specifications

Model		SB-400C	SB-650
Tapping capacity (mm)		0.9 - 2.6	2.0 - 4.0
Chuck diameter (mm)		Max.4mm	Max.6.5mm
Safe load torque adjustable range	N·m	0.1 - 0.55	0.3 - 1.6
	lbf·in	7.8 - 23	17 - 35
	(kgf·cm)	(1 - 5.5)	(3 - 16)
Unloaded rotation speed (r.p.m) ± 10%	HI	1,000	900
	LOW	670	600
Accessories	Stopper (one each)	<div> <div>Ø2.0mm</div> <div>Ø2.3mm</div> <div>Ø2.6mm</div> </div>	<div> <div>Ø2.0mm</div> <div>Ø2.3mm</div> <div>Ø2.6mm</div> </div>
	Chuck key		
	Cord length (m)	1.5m (5P)	2m (5P)
	Carbon brush(order code)	1pair (CL4-0420)	1pair (CL4-0420)

### SB Series Controller

Reverse operation is performed when tapping is complete or when overloading is detected, thereby preventing tap breakage.

#### SBC-1



### Specifications

Model	SBC-1
External dimensions (mm)	70×100×42 (H)
Weight (g)	153.5 g
Compatible tappers	SB-400C、SB-650C
Power Supply	T-45BL、T-70BL
Accessories	Brackets×2, Double-sided tape×2

## Power supply for SB series

Model: **T-45BL** (for one tapper)



Primary input power source	AC100-240V (47-63 Hz)
Secondary output voltage	HI(2): DC30V, LOW(1): DC20V (2-step switchable)
External dimensions (mm)	71.5(W)×146(D)×42.6 (H) mm
Weight (g)	320 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

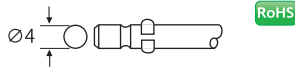
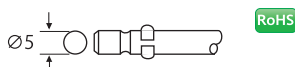


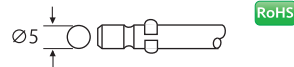
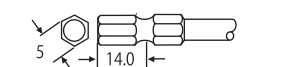
# Screwdriver Bits for Exchange

**HIOS Shank Type : H4(Ø4) / H5(Ø5)**

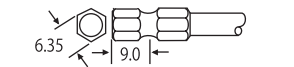
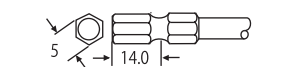
There are three drive types: HIOS shank, two-way shank and Hex shank. Check which bit is compatible with your screwdriver before purchasing replacement bits.

## 《Screwdriver Bit》

HIOS Shank type (H4 / H5)	
Please use HIOS standard bit.	
<b>H4</b>	
<b>H5</b>	

Two-way Shank type (H5 / 5HEX)	
Either of HIOS bit or hex bit can be used.	
<b>H5</b>	
<b>5HEX</b> WAF: 5mm	

WAF: width across flats

Hex Shank type (1/4HEX / 5HEX)	
Please purchase hex bit with the specified size from commercial stores.	
<b>1/4HEX</b> WAF: 6.35mm	
<b>5HEX</b> WAF: 5mm	

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-BC2 Series BLG-BC1 Series BLG-ZERO1 Series BLG Series	BLG-4000系	●	—	—	●	—
		BLG-5000系	●	—	●	●	—
		BLG-5000-15系	●	—	●	●	—
		BLG-5000-18系	—	—	●	●	—
		BLG-5000-HT系	—	—	●	●	—
	BL Series	BL-2000	●	—	—	—	—
		BL-3000	●	—	—	●	—
		BL-5000	●	—	●	●	—
		BL-5000-15	●	—	●	●	—
		BL-5020	●	—	●	●	—
		BL-7000	—	—	●	●	—
Brushed	CL Series	CL-2000	●	—	—	—	—
		CL-3000	●	—	—	—	—
		CL-4000	●	—	—	●	●
		CL-6000	—	●	—	●	●
		CL-6500	—	●	—	●	●
		CL-7000	—	●	—	●	●
		CL-9000	—	—	—	●	—

(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	SS Series	SS-2000	●	—	—	—	—
		SS-3000	●	—	—	—	—
		SS-4000	●	—	—	●	●
		SS-6500	—	●	—	●	●
		SS-7000	—	●	—	●	●
	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	—	—	●	●	—
		AC100V	VB-4504	—	—	—	●	—
			VB-2008	—	—	●	●	—
			VB-3020	—	—	●	●	—
			VBH-1820	—	—	—	●	—
	VBH Series	AC100V, 120V, 220-240V	VBH-3012	—	—	—	●	—
Brushed	VZ Series	AC100V	VZ-1510	●	—	—	●	●
			VZ-1812	—	—	—	●	—
			VZ-1820	—	—	●	●	—
			VZ-3012	—	—	●	●	—
		AC100V, 220-240V	VZ-3007	—	—	●	●	—
			VZ-4504	—	—	—	●	—
			VZ-4506	—	—	—	—	●
			VZH-1820	—	—	—	●	—
	VZH Series	AC100V, 120V	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**



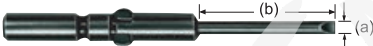

BP	Bit for ⊕ screws	Bit Drive	Specifications			Total length (mm) standard type
			⊕ size No.	Tip dia. (Ø)	Shaft shape	
 (Shaft shape) Straight (A)  Stepped (B)  Stepped (C) 		H4(Ø4)	#00 (HIOS standard)	1.5	B	40, 60, 80
			#0 (M1.4-M2.6)	1.2	B	40
				1.5, 1.7	B	40, 60, 80
				1.8	B	60
				2.0, 2.5	B	40, 60, 80, 100, 120
			#1 (M2.0-M2.6)	3.0	B	40, 60, 80, 100, 120
		H5(Ø5)	#2 (M3.0-M5.0)	4.0	A	40, 60, 80, 100, 120, 150, 180, 200
			#0 (M1.4-M2.6)	4.0	A	40, 60, 80, 100, 120, 150
				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 Ø	Refer to the list on the right.	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(Ø4)	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(Ø5)	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 right.	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)  Hexagonal wrench press fitted		H4(Ø4)	0.89, 1.5, 2.0, 3.0	60
			1.27	60, 100
			2.5	60, 100, 120
		H5(Ø5)	1.27	70
			1.5, 3.0, 4.0, 6.0	70, 100
			2.0, 2.5, 5.0	70, 100, 120

HEX 0.89mm and 1.27mm are A-type only. / HEX1.5mm is applicable to both types. (How to order) Example : BH-H4 or H5-1.5(A) × 60mm.

\* 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(Ø4)	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(Ø5)	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(Ø4)	4.0, 4.5, 5.0, 5.5, 6.0, 7.0	60
			8.0	65
		H5(Ø5)	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)**

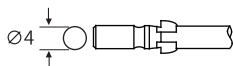
There are three drive types: HIOS Shank, two-way Shank and Hex Shank. Check which bit is compatible with your screwdriver before purchasing.

## 《Screwdriver Bit》

### HIOS Shank type (H4 / H5)

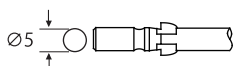
Please use HIOS standard bit.

**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
		H4	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
		Type	Name	Part No.	Dimensions (mm)		
		H4	H4-HW-T10×4.0×60	TX410060	2.7	4.0	60
		Type	Name	Part No.	Dimensions (mm)		
		H5	H5-HW-T8×3.0×80	TX508080	2.3	3.0	80
		H5	H5-HW-T10×5.0×80	TX510080	2.7	5.0	80
		H5	H5-HW-T20×5.0×80	TX520080	3.8	5.0	80
TAMPER PROOF	W/Hole	Type	Name	Part No.	Dimensions (mm)		
					A	D	L
		H4	H4-HW-T8H×3.0×60	TX408060H	2.3	3.0	60
		Type	Name	Part No.	Dimensions (mm)		
		H4	H4-HW-T10H×4.0×60	TX410060H	2.7	4.0	60
		Type	Name	Part No.	Dimensions (mm)		
		H5	H5-HW-T8H×3.0×80	TX508080H	2.3	3.0	80
		Type	Name	Part No.	Dimensions (mm)		
		H5	H5-HW-T10H×5.0×80	TX510080H	2.7	5.0	80
		H5	H5-HW-T20H×5.0×80	TX520080H	3.8	5.0	80

# TORX® & TORX PLUS® Screwdriver Bits

**HIOS Shank Type : H4(Ø4) / H5(Ø5)**

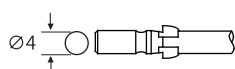
There are three drive types: HIOS Shank, two-way Shank and Hex Shank. Check which bit is compatible with your screwdriver before purchasing.

## 《Screwdriver Bit》

### HIOS shank type (H4 / H5)

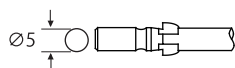
Please use HIOS standard bit.

**H4**



RoHS

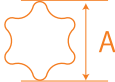
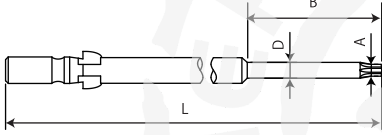

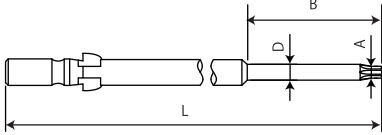
**H5**



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
		H4	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	
		H5	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	—	
		H4	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-( )	TORX410IP( )	2.71	3.0	20	
		H5	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

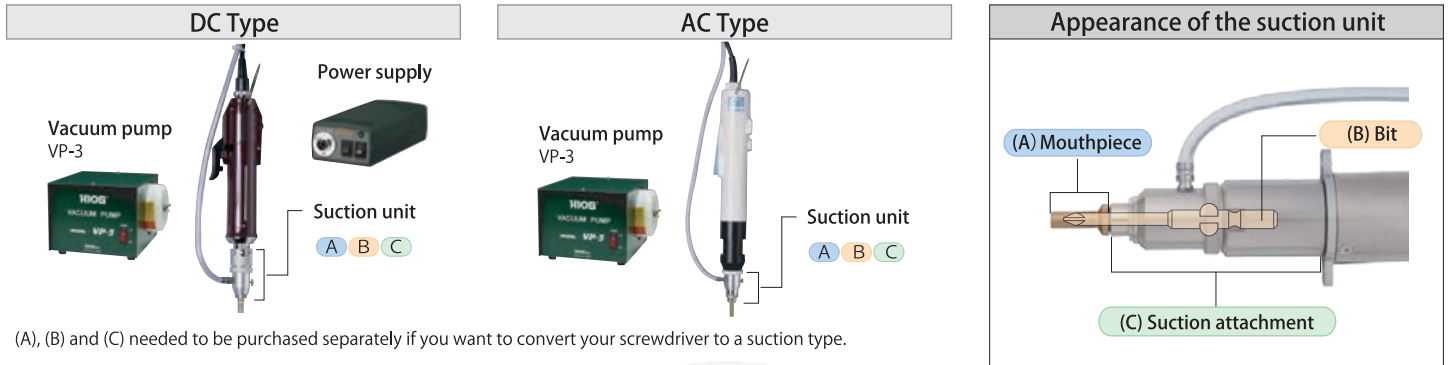
**DC Type:** BLG-BC2, BLG-BC1, BLG-ZERO1, BLG, BL, CL, SS, α Series, BLF, CLF, αF Series

**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》



## 《Compatible accessory chart》

Classification			Model name	(A)	(B)	(C)									
				Mouthpiece	Applicable bit	Suction attachment									
					Standard	ESD	Appearance								
DC Type	Brushless	BLG-BC2 Series BLG-BC1 Series BLG-ZERO1 Series BLG Series		BLG-4000 Series	F3 Standard 18mm	H4 60mm	BLGQ4-SET	—							
				BLG-5000 Series	F3 Standard 18mm	H4 40mm	BLQ5-SET	BLQ5-SET-ESD							
				BLG-5000-15 Series		H4 60mm	BLQ5N-SET	BLQ5N-SET-ESD							
				BLG-5000-18 Series	Please contact HIOS distributors.										
		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							
							H4 60mm	BLQ5N-SET			BLQ5N-SET-ESD				
		BL-7000		F6 Standard 31mm	H5 80mm	BLQ7-SET	BLQ7-SET-ESD								
				PGF Series		PGFQ	PGFQ-3000			F3 Standard 18mm	H4 80mm	PGFQ3-SET	—		
							PGFQ-5000					PGFQ5-SET	—		
		PGFQ-7000	F6 Standard 31mm			H5 100mm	PGFQ7-SET	—							
		BLF Series		BLFQ	BLFQ-2000	F3 Standard 18mm	H4 60mm	BLFQ2-SET	—						
					BLFQ-5000	F6 Standard 31mm	H5 100mm	BLFQ5-SET	—						
				BLFQ-7000	BLFQ7-SET			—							
				BLFR-5000 / 7000X 7025X		Refer to P.65-66	Refer to P.65-66	Refer to P.65-66	Refer to P.65-66						
		CL Series				CLQ-2000	F3 Standard 18mm	H4 60mm	CLQ2-SET	CLQ2-SET-ESD					
						CLQ-3000 / 4000			CLQ4-SET	CLQ4-SET-ESD					
				CLQ-6000 / CLQ-6500 / 7000	F6 Standard 31mm	H5 80mm	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							
		α Series		α Q-4500 / 5000	F3 Standard 18mm	H4 60mm	CLQ4-SET	CLQ4-SET-ESD							
α Q-6500	F6 Standard 31mm			H5 80mm	CLQ65-SET	CLQ65-SET-ESD									
CL F Series α F Series				CLFQ-3000 / 4000 α FQ-4500 / 5000	F3 Standard 18mm	H4 60mm	CLFQ4-SET	—							
				CLFQ-6000 / 6500 / 7000 / α FQ-6500	F6 Standard 36mm	H5 100mm	CLFQ65-SET	—							
		VB Series		AC100V	VB-3020	F6 Standard 31mm	H5 100mm	VZQ18-SET							
				AC100V AC120V, AC220-240V	VB-1820 / 3012										
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) Mouthpiece

F3 Standard 18mm (total length)

Cross-sectional view of a mouthpiece

Order code	Mouthpiece dimensions (mm)			Screw head shape and screw size		
	D	d	d1	JIS⊕screw (machine screw)	JCIS⊕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 is 3-pack.

(B) Compatible bits

H4(Ø4) Total length : 40mm

H4(Ø4) Total length : 60mm

H4(Ø4) Total length : 80mm

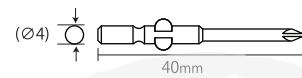
The material of the mouthpiece is BS (brass) only.  
For different materials. please contact HIOS distributors.

Screw recess	Screw size	Bit	Order code
JIS⊕screw	M2.0-M2.6	BP-H4- # 1-3.0-40(60)(80)	BP4130040(60)(80)
	M3.0	BP-H4- # 2-4.0-40(60)(80)	BP4240040(60)(80)
	M1.4 Class, Class 1	BP-H4- # 0-1.8-40(S)(60)(80)	BP4018040(S)(60)(80)
	M1.4-M1.7	BP-H4- # 0-2.0-40(60)(80)	BP4020040(60)(80)
JCIS⊕screw	M2.0-M2.6	BP-H4- # 0-2.5-40(60)(80)	BP4025040(60)(80)
	M1.2	BS-H4-2.0-40(60)(80)	BS420040(60)(80)
JIS⊖screw	M1.4	BS-H4-2.5-40(60)(80)	BS425040(60)(80)
	M1.7-M2.0	BS-H4-3.0-40(60)(80)	BS430040(60)(80)
	M2.3-M3.0	BS-H4-4.0-40(60)(80)	BS440040(60)(80)

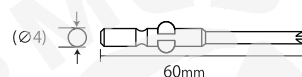
- The ( ) in the list means total length of bit.
- For special order item 1.8 x 40, please contact HIOS distributors.

## (B) Compatible bits

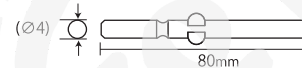
### H4(Ø4) Total length : 40mm



### H4(Ø4) Total length : 60mm



### H4(Ø4) Total length : 80mm



Screw recess	Screw size	Bit	Order code
JIS⊕screw	M2.0-M2.6	BP-H4- # 1-3.0-40(60)(80)	BP4130040(60)(80)
	M3.0	BP-H4- # 2-4.0-40(60)(80)	BP4240040(60)(80)
	M1.4 Class, Class 1	BP-H4- # 0-1.8-40(S)(60)(80)	BP4018040(S)(60)(80)
JCIS⊕screw	M1.4-M1.7	BP-H4- # 0-2.0-40(60)(80)	BP4020040(60)(80)
	M2.0-M2.6	BP-H4- # 0-2.5-40(60)(80)	BP4025040(60)(80)
JIS⊖screw	M1.2	BS-H4-2.0-40(60)(80)	BS420040(60)(80)
	M1.4	BS-H4-2.5-40(60)(80)	BS425040(60)(80)
	M1.7-M2.0	BS-H4-3.0-40(60)(80)	BS430040(60)(80)
	M2.3-M3.0	BS-H4-4.0-40(60)(80)	BS440040(60)(80)

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

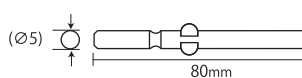
(A) Mouthpiece

F6 Standard 31mm (total length)

Cross-sectional view of mouthpiece A

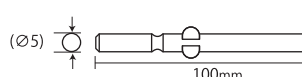
## (B) Compatible bits

### 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

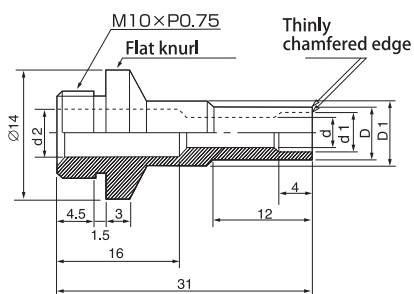
### H5(Ø5) Total length : 100mm



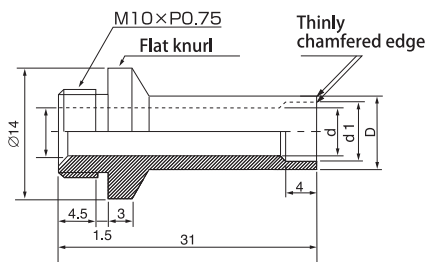
Screw recess	Screw size	Bit	Order code
JIS⊕screw	M2.0-M2.6	BP-H5- # 1-3.0-100	BP5130100
	M3.0-M5.0	BP-H5- # 2-5.0-100	BP5250100
JIS⊖screw	M3.0-M4.0	BS-H5-5.0-100	BS550100

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

Cross-sectional view of mouthpiece A



Cross-sectional view of mouthpiece B



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

## Accessories for suction(Vacuum) screwdrivers

(Suction attachment/mouthpiece/bit)

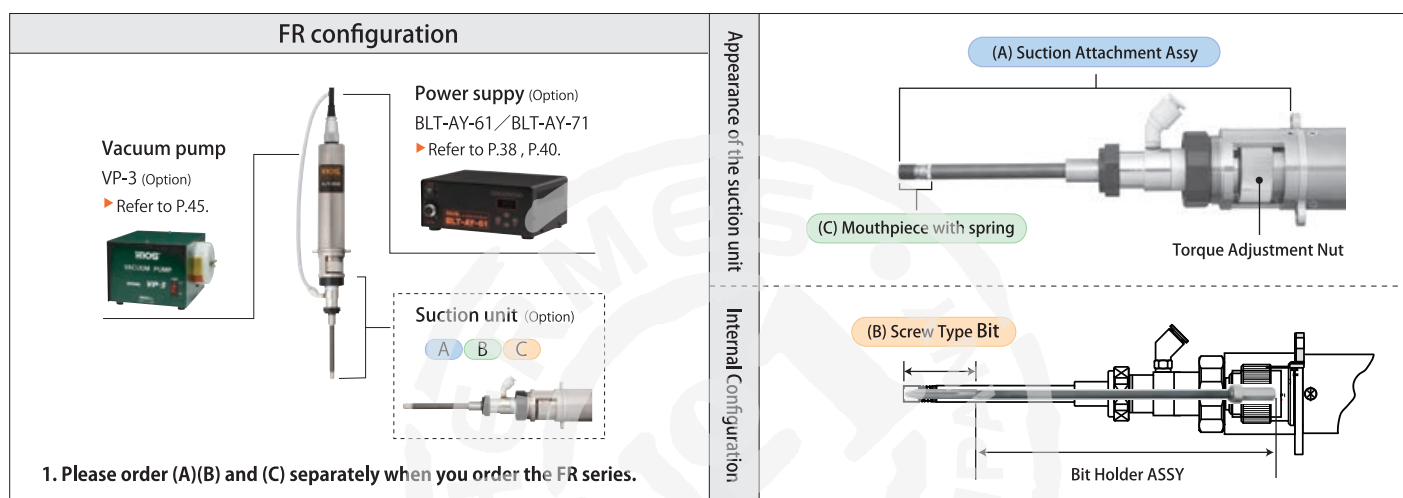
Standard  
accessories

DC Type: PGF Series , BLF Series

FR 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.

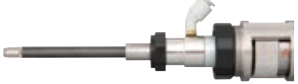
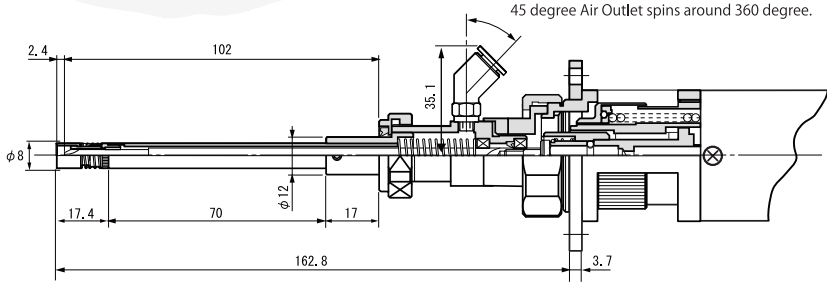

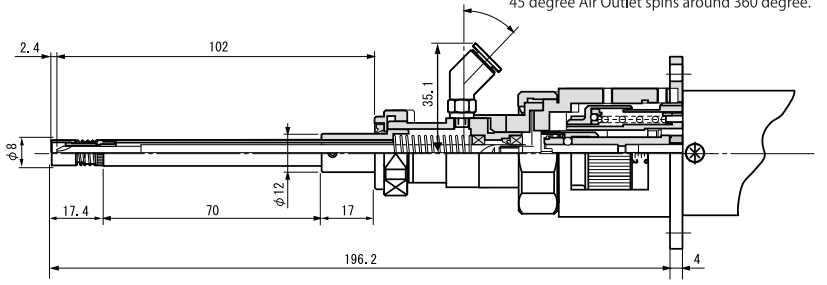
## 《 FR Specifications / Construction of suction (Vacuum pick up) screwdrivers 》

- The FR Mouthpiece is double mouthpiece structure with a spring. There are 2 types of those. One is a self-adjustable inner mouthpiece type. The other one is a self-adjustable outer mouthpiece type.  
There is another special mouthpiece that does not touch work piece which prevents work piece from damaging.
- Compared with the existing HIOS Mouthpiece, the ultimate vacuum of the FR Mouthpiece is higher which helps to reduce vacuum screw errors.
- The edge of the FR Mouthpiece touches parallel to the screw head which improves uprightness of the screw.
- The long Bit Holder prevents cross threaded screws.



### (A) Suction Attachment Assy

#### ● Specifications

Model	Order code and Appearance	External dimension
PGFR-5000 BLFR-5000	<p>Order Code: <b>PGFR5-SA</b></p> <p>Order Code: <b>BLFR5-SA</b></p>  <p>※Vacuuming Vinyl Tube is optional. Order Code: <b>RM-0850</b> (Order by the 1m) 【Specifications】 inner diameter <math>\phi 4</math> X outer diameter <math>\phi 6</math></p>	 <p>45 degree Air Outlet spins around 360 degree.</p> <p>Dimensions: 2.4, 102, 35.1, 17.4, 70, 17, 162.8, 3.7, <math>\phi 8</math>, <math>\phi 12</math></p>
PGFR-7000X BLFR-7000X BLFR-7025X	<p>Order Code: <b>PGFR7-SA</b></p> <p>Order Code: <b>BLFR7-SA</b></p>  <p>※Vacuuming Vinyl Tube is optional. Order Code: <b>RM-0850</b> (Order by the 1m) 【Specifications】 inner diameter <math>\phi 4</math> X outer diameter <math>\phi 6</math></p>	 <p>45 degree Air Outlet spins around 360 degree.</p> <p>Dimensions: 2.4, 102, 35.1, 17.4, 70, 17, 196.2, 4, <math>\phi 8</math>, <math>\phi 12</math></p>

**(B) Screw-on type bit**

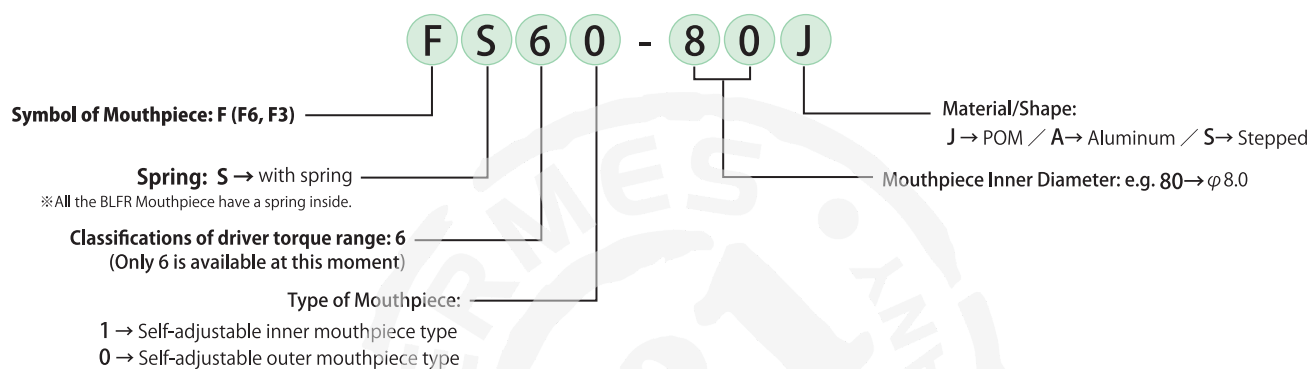


## ● Specifications

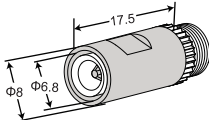

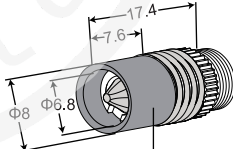

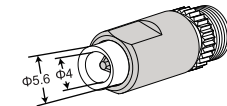

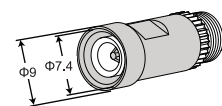

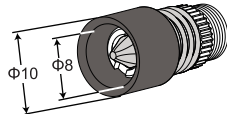

Model	Tip shape	Order Code	Length	Diameter
PGFR-5000 PGFR-7000	+ #1	RBP4140S	40mm	φ 4
BLFR-5000 BLFR-7000X BLFR-7025X	+ #2	RBP4240S	40mm	φ 4

**(C) Mouthpiece with spring**

### ● Identification of the BLFR Mouthpiece Order Code



## ● Specifications

Self-adjustable inner mouthpiece type		Self-adjustable outer mouthpiece type	
Order Code		Order Code	
FS61-68	 as vacuuming a screw 	FS60-68J / FS60-68A	 as vacuuming a screw  POM:FS60-68 Stepped:FS60-68A
FS61-68S	 as vacuuming a screw 		
FS61-74	 as vacuuming a screw 	FS60-80J	 as vacuuming a screw 

- Adaptive screw size indications

Screw Size		M2.6			M3.0			M4.0		
Screw Type		Pan	Binding	Truss	Pan	Binding	Truss	Pan	Binding	Truss
Model	BLFR-5000	FS61-68 FS61-68S			FS61-68 FS61-68S		FS61-68S FS61-74	FS61-74		
	FS60-68J / FS60-68A					FS60-80J M4.0 or larger				
	FS60-68J / FS60-68A					FS60-80J M4.0 or larger				
	BLFR-7000X									
	BLFR-7025X									

## Order Codes

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

- 「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.
- 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	
	HEX	PG-5000	PG-5000X5	H5 & 5HEX
			PG-5000X	
		PG-7000	PG-7000	1/4HEX

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

#### P.9 BLG-BC2 Standard type

BLG-BC2	HIOS	Model	Order Code	Bit Drive
		BLG-4000BC2	BLG-4000BC2	H4
		BLG-5000BC2	BLG-5000BC2	
			BLG-5000H5BC2	H5 & 5HEX
		BLG-5000BC2-15	BLG-5000BC2-15	H4
			BLG-5000H5BC2-15	H5 & 5HEX
		BLG-5000BC2-18	BLG-5000BC2-18	H5 & 5HEX
		BLG-5000BC2-HT	BLG-5000BC2-HT	H5 & 5HEX
	HEX	BLG-4000BC2	BLG-4000XBC2	1/4HEX
		BLG-5000BC2	BLG-5000X5BC2	H5 & 5HEX
			BLG-5000XBC2	1/4HEX
		BLG-5000BC2-15	BLG-5000X5BC2-15	H5 & 5HEX
			BLG-5000XBC2-15	1/4HEX
		BLG-5000BC2-18	BLG-5000X5BC2-18	H5 & 5HEX
			BLG-5000XBC2-18	1/4HEX
		BLG-5000BC2-HT	BLG-5000X5BC2-HT	H5 & 5HEX
			BLG-5000XBC2-HT	1/4HEX

Product name	Order Code	Model
External Input / output cable	BLG-BC2-3010	BLG-BC2-3010

Product name	Order Code	Model
External I/O Box	BLG-IO-Pro1	BLG-IO-Pro1

Product name	Order Code	Model
Serial-to-parallel Conversion Box	BLG-IF2	BLG-IF2

#### P.11 BLG-BC1 Standard type

BLG-BC1	HIOS	Model	Order Code	Bit Drive
		BLG-4000BC1	BLG-4000BC1	H4
		BLG-5000BC1	BLG-5000BC1	H5 & 5HEX
			BLG-5000H5BC1	
		BLG-5000BC1-15	BLG-5000BC1-15	H4
			BLG-5000H5BC1-15	H5 & 5HEX
		BLG-5000BC1-18	BLG-5000BC1-18	H5 & 5HEX
		BLG-5000BC1-HT	BLG-5000BC1-HT	H5 & 5HEX

#### P.11 BLG-BC1 Standard type

BLG-BC1	HEX	Model	Order Code	Bit Drive
		BLG-4000BC1	BLG-4000XBC1	1/4HEX
		BLG-5000BC1	BLG-5000X5BC1	H5 & 5HEX
			BLG-5000XBC1	1/4HEX
		BLG-5000BC1-15	BLG-5000X5BC1-15	H5 & 5HEX
			BLG-5000XBC1-15	1/4HEX
		BLG-5000BC1-18	BLG-5000XBC1-18	H5 & 5HEX
			BLG-5000XBC1-18	1/4HEX
		BLG-5000BC1-HT	BLG-5000X5BC1-HT	H5 & 5HEX
			BLG-5000XBC1-HT	1/4HEX

#### P.13 BLG-ZERO1 Series

BLG-ZERO1	HIOS	Model	Order Code	Bit Drive
		BLG-4000ZERO1	BLG-4000ZERO1	H4
		BLG-5000ZERO1	BLG-5000ZERO1	H5 & 5HEX
			BLG-5000H5ZERO1	
			BLG-5000ZERO1-15	H4
			BLG-5000H5ZERO1-15	H5 & 5HEX
		BLG-5000ZERO1-18	BLG-5000ZERO1-18	H5 & 5HEX
		BLG-5000ZERO1-HT	BLG-5000ZERO1-HT	H5 & 5HEX
	HEX	BLG-4000ZERO1	BLG-4000XZERO1	1/4HEX
		BLG-5000ZERO1	BLG-5000X5ZERO1	H5 & 5HEX
			BLG-5000XZERO1	1/4HEX
		BLG-5000ZERO1-15	BLG-5000X5ZERO1-15	H5 & 5HEX
			BLG-5000XZERO1-15	1/4HEX
		BLG-5000ZERO1-18	BLG-5000XZERO1-18	H5 & 5HEX
			BLG-5000XZERO1-18	1/4HEX
		BLG-5000ZERO1-HT	BLG-5000XZERO1-HT	H5 & 5HEX
			BLG-5000XZERO1-HT	1/4HEX

#### P.15 BLG Standard type

BLG	HIOS	Model	Order Code	Bit Drive
		BLG-4000	BLG-4000	H4
		BLG-5000	BLG-5000	
			BLG-5000H5	H5 & 5HEX
		BLG-5000-15	BLG-5000-15	H4
			BLG-5000H5-15	H5 & 5HEX
		BLG-5000-18	BLG-5000-18	H5 & 5HEX
		BLG-5000-HT	BLG-5000-HT	H5 & 5HEX
	HEX	BLG-4000	BLG-4000X	1/4HEX
		BLG-5000	BLG-5000X5	H5 & 5HEX
			BLG-5000X	1/4HEX
		BLG-5000-15	BLG-5000X5-15	H5 & 5HEX
			BLG-5000X-15	1/4HEX
		BLG-5000-18	BLG-5000X5-18	H5 & 5HEX
			BLG-5000X-18	1/4HEX
		BLG-5000-HT	BLG-5000X5-HT	H5 & 5HEX
			BLG-5000X-HT	1/4HEX

#### P.16 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	H5 & 5HEX
		BLG-5000-OPC-15	BLG-5000-OPC-15	H4
			BLG-5000H5OPC-15	H5 & 5HEX
		BLG-5000-OPC-18	BLG-5000-OPC-18	H5 & 5HEX
		BLG-5000-OPC-HT	BLG-5000-OPCHT	H5 & 5HEX

#### P.16 BLG Variations

OPC	HEX	Model	Order Code	Bit Drive
		BLG-4000-OPC	BLG-4000X-OPC	1/4HEX
		BLG-5000-OPC	BLG-5000X5-OPC	H5 & 5HEX
			BLG-5000X-OPC	1/4HEX
		BLG-5000-OPC-15	BLG-5000X5OPC-15	H5 & 5HEX
			BLG-5000XOPC-15	1/4HEX
		BLG-5000-OPC-18	BLG-5000X5OPC18	H5 & 5HEX
			BLG-5000XOPC-18	1/4HEX
		BLG-5000-OPC-HT	BLG-5000X5OPCHT	H5 & 5HEX
			BLG-5000X-OPCHT	1/4HEX

#### P.17 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-5000-15	BL-5000-15	H4
			BL-5000H5-15	H5 & 5HEX
		BL-5020	BL-5020	H5 & 5HEX
		BL-7000	BL-7000	
		BL-7000HT	BL-7000HT	H4
		BL-2000SS	BL-2000SS	
		BL-3000SS	BL-3000SS	H5 & 5HEX
		BL-5000SS	BL-5000SS	
			BL-5000SSH5	H5 & 5HEX
	HEX	BL-3000	BL-3000X	1/4HEX
		BL-5000	BL-5000X5	5HEX
			BL-5000X	1/4HEX
		BL-5000-15	BL-5000X5-15	5HEX
			BL-5000X-15	1/4HEX
		BL-5020	BL-5020	5HEX
			BL-5020X	1/4HEX
		BL-7000	BL-7000X	
		BL-7000HT	BL-7000X-HT	5HEX
		BL-3000SS	BL-3000SSX	
			BL-3000SSX5	5HEX
		BL-5000SS	BL-5000SSX	1/4HEX

#### P.18 BL Variations

Anti-electrostatic	HIOS	Model	Order Code	Bit Drive
		BL-3000ESD	BL-3000ESD	H4
		BL-5000ESD	BL-5000ESD	
			BL-5000H5-ESD	H5 & 5HEX
		BL-5000ESD-15	BL-5000ESD-15	H4
			BL-5000H5ESD-15	H5 & 5HEX
		BL-5020ESD	BL-5020-ESD	H5 & 5HEX
	HEX	BL-7000ESD	BL-7000ESD	H5 & 5HEX
		BL-7000ESD-HT	BL-7000ESD-HT	
		BL-3000ESD	BL-3000X-ESD	1/4HEX
		BL-5000ESD	BL-5000X5-ESD	5HEX
			BL-5000XESD	1/4HEX
		BL-5000ESD-15	BL-5000X5-ESD-15	5HEX
			BL-5000X-ESD-15	1/4HEX
		BL-5020ESD	BL-5020X-ESD	1/4HEX
		BL-7000ESD	BL-7000X-ESD	
		BL-7000ESD-HT	BL-7000X-ESD-HT	

**P.18 BL Variations**

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

**P.18 BL Accessories**

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

**P.19-21 CL Standard type**

Clean room, Anti-static	CL	Model	Order Code	Bit Drive
		CL-2000	CL-2000E	H4
		CL-3000	CL-3000E	
		CL-4000	CL-4000E	
Suction, Anti-static	CL	CL-4000X5	CL-4000X5	5HEX
		CL-4000X	CL-4000X	1/4HEX
Clean room	CL	CL-6000	CL-6000E	H5
		CL-6000X5	CL-6000X5	5HEX
Anti-electrostatic	CL	CL-6000X	CL-6000X	1/4HEX
		CL-6500	CL-6500E	H5
Clean room	CL	CL-6500X5	CL-6500X5	5HEX
		CL-6500X	CL-6500X	1/4HEX
Anti-electrostatic	CL	CL-7000	CL-7000E	H5
		CL-7000X5	CL-7000X5	5HEX
Clean room	CL	CL-7000X	CL-7000X	1/4HEX

**P.19-21 CL Standard type**

Clean room, Anti-static	CL	Model	Order Code	Bit Drive
		CL-4000PS	CL-4000PS	H4
Suction, Anti-static	CL	CL-4000PSX5	CL-4000PSX5	5HEX
		CL-4000PSX	CL-4000PSX	1/4HEX
Clean room	CL	CL-6000PS	CL-6000PS	H5
		CL-6000PSX5	CL-6000PSX5	5HEX
Anti-electrostatic	CL	CL-6000PSX	CL-6000PSX	1/4HEX
		CL-6500PS	CL-6500PS	H5
Clean room	CL	CL-6500PSX5	CL-6500PSX5	5HEX
		CL-6500PSX	CL-6500PSX	1/4HEX
Suction, Anti-static	CL	CL-7000PS	CL-7000PS	H5
		CL-7000PSX5	CL-7000PSX5	5HEX
Clean room	CL	CL-7000PSX	CL-7000PSX	1/4HEX
		CL-9000	CL-9000	1/4HEX

**P.22 CL Variations**

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

**P.22 CL Variations**

Clean room, Anti-static	CL	Model	Order Code	Bit Drive
		CLQ-3000CR-ESD	CLQ-3000CR-ESD	H4
		CLQ-4000CR-ESD	CLQ-4000CR-ESD	
		CLQ-6000CR-ESD	CLQ-6000CR-ESD	
Suction, Anti-static	CL	CLQ-6500CR-ESD	CLQ-6500CR-ESD	H5
		CLQ-7000CR-ESD	CLQ-7000CR-ESD	
		CLQ-6000PSCR-ESD	CLQ-6000PSCR-ESD	
Clean room	CL	CLQ-6500PSCR-ESD	CLQ-6500PSCR-ESD	H5
		CLQ-7000PSCR-ESD	CLQ-7000PSCR-ESD	
		CL-3000NL	CL-3000NL	H4
Anti-electrostatic	CL	CL-4000NL	CL-4000NL	H5
		CL-6000NL	CL-6000NL	
		CL-6500NL	CL-6500NL	
Clean room	CL	CL-7000NL	CL-7000NL	H5
		CL-4000PSNL	CL-4000PSNL	
		CL-6000PSNL	CL-6000PSNL	
Suction, Anti-static	CL	CL-6500PSNL	CL-6500PSNL	H5
		CL-7000PSNL	CL-7000PSNL	
		CL-9000NL	CL-9000NL	1/4HEX

**P.22 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.23 SS Standard type**

Clean room, Anti-static	SS	Model	Order Code	Bit Drive
		SS-2000	SS-2000E	H4
		SS-3000	SS-3000E	
		SS-4000	SS-4000E	
Suction, Anti-static	SS	SS-4000X5	SS-4000X5	5HEX
		SS-4000X	SS-4000X	1/4HEX
Clean room	SS	SS-6500	SS-6500E	H5
		SS-6500X5	SS-6500X5	5HEX
Anti-electrostatic	SS	SS-6500X	SS-6500X	1/4HEX
		SS-7000	SS-7000E	H5
Clean room	SS	SS-7000X5	SS-7000X5	5HEX
		SS-7000X	SS-7000X	1/4HEX
Suction, Anti-static	SS	SS-4000PS	SS-4000PS	H4
		SS-4000PSX5	SS-4000PSX5	5HEX
Clean room	SS	SS-4000PSX	SS-4000PSX	1/4HEX



**P.24 SS Variations**

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

**P.24 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

**P.25 α Standard type**

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

**P.26 α Variations**

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

**P.26 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

**P.27-30 Power Supply for DC drivers**

Power Supply	Model	Order Code	Plug Type
	T-45BL*	T-45BL	A
		T-45BL-UL	A-2
		T-45BL-TH	A-3
		T-45BL-EU-HK	C
		T-45BL-UK-SP	BF
		T-45BL-CN	S

The product with \* is CE mark complaint.

**P.27-30 Power Supply for DC drivers**

Power Supply	Model	Order Code	Plug Type
		T-70BL	A
	T-70BL*	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-45*	CLT-45	A
		CLT-45-UL	A-2
		CLT-45-TH	A-3
		CLT-45-EU-HK	C
		CLT-45-UK-SP	BF
		CLT-45-CN	S
	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-UL	A-2
		CLT-80-TH	TH
		CLT-80-EU-HK	C
		CLT-80-UK-SP	BF
		CLT-80-CN	S
	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
	MC-70L	CLT-100-220RCH	S
		MC-70L	A-1
		MC-70L-120USA	A-2
		MC-70L-220VDE	C
		MC-70L-220VDER	C
		MC-70L-230SP	BF
	CB-105	MC-70L-240UK	BF
		MC-70L-220RCH	S
		CB-105	CB-105S
For brushless screwdrivers	BLOP-AF	BLOP-AF	Relay box
	BLOP-OST2	BLOP-OST2	Relay box

The product with \* is CE mark complaint.

**P.31 VB Standard type**

● Plug: A Type (AC100V)

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

● Plug: A -2 Type (AC120V)

VB	Lever type	Model	Order Code	Bit Drive
		VB-1510	VB-1510-120	H4
		VB-1510X5	VB-1510X5-120	H5 & 5HEX
		VB-1510X-120	VB-1510X-120	1/4HEX
		VB-1510-18	VB-1510-18-120	H4
		VB-1510X5-18	VB-1510X5-18-120	H5 & 5HEX
		VB-1510X-18	VB-1510X-18-120	1/4HEX
		VB-1820	VB-1820-120	H5 & 5HEX
		VB-1820X-120	VB-1820X-120	1/4HEX
		VB-3012	VB-3012-120	H5 & 5HEX
		VB-3012X-120	VB-3012X-120	1/4HEX
		VB-4504	VB-4504X-120	1/4HEX
	Push type	VB-1510PS	VB-1510PS-120	H4
		VB-1510PSX5-120	VB-1510PSX5-120	H5 & 5HEX
		VB-1510PSX-120	VB-1510PSX-120	1/4HEX
		VB-1510PS-18	VB-1510PS-18-120	H4
		VB-1510PSX5-18	VB-1510PSX5-18-120	H5 & 5HEX
		VB-1510PSX-18	VB-1510PSX-18-120	1/4HEX
		VB-1820PS	VB-1820PS-120	H5 & 5HEX
		VB-1820PSX-120	VB-1820PSX-120	1/4HEX
		VB-3012PS	VB-3012PS-120	H5 & 5HEX
		VB-3012PSX-120	VB-3012PSX-120	1/4HEX
		VB-4504PS	VB-4504PSX-120	1/4HEX

**P.31 VB Standard type**

● Plug: C Type (AC220-240V)

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

\* Shockless Stand Attached

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

**P.32 VB Variations**

● Plug: A Type (AC100V)

OPC	Lever type	Model	Order Code	Bit Drive
		VB-1510-OPC	VB-1510-OPC	H4
		VB-1510H5-OPC	VB-1510H5-OPC	H5 & 5HEX
		VB-1510X5-OPC	VB-1510X5-OPC	5HEX
		VB-1510X-OPC	VB-1510X-OPC	1/4HEX
		VB-1510-18-OPC	VB-1510-18-OPC	H4
		VB-1510H5-18-OPC	VB-1510H5-18-OPC	H5 & 5HEX
		VB-1510X5-18-OPC	VB-1510X5-18-OPC	5HEX
		VB-1510X-18-OPC	VB-1510X-18-OPC	1/4HEX
		VB-1820-OPC	VB-1820-OPC	H5 & 5HEX
		VB-1820X-OPC	VB-1820X-OPC	1/4HEX
		VB-3012-OPC	VB-3012-OPC	H5 & 5HEX
		VB-3012X-OPC	VB-3012X-OPC	1/4HEX
		VB-3020-OPC	VB-3020-OPC	H5 & 5HEX
		VB-3020X-OPC	VB-3020X-OPC	1/4HEX

**P.32 VB Variations**

● Plug: A Type (AC100V)

OPC	Push type	Model	Order Code	Bit Drive
		VB-1510PS-OPC	VB-1510PS-OPC	H4
		VB-1510PSH5-OPC	VB-1510PSH5-OPC	H5 & 5HEX
		VB-1510PSX5-OPC	VB-1510PSX5-OPC	5HEX
		VB-1510PSX-OPC	VB-1510PSX-OPC	1/4HEX
		VB-1820PS-OPC	VB-1820PS-OPC	H5 & 5HEX
		VB-1820PSX-OPC	VB-1820PSX-OPC	1/4HEX
		VB-3012PS-OPC	VB-3012PS-OPC	H5 & 5HEX
		VB-3012PSX-OPC	VB-3012PSX-OPC	1/4HEX
		VB-3020PS-OPC	VB-3020PS-OPC	H5 & 5HEX
		VB-3020PSX-OPC	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
		VB-1510X5-120OPC	VB-1510X5-120OPC	H5 & 5HEX
		VB-1510X-120OPC	VB-1510X-120OPC	1/4HEX
		VB-1820-OPC	VB-1820-120OPC	H5 & 5HEX
		VB-1820X-120OPC	VB-1820X-120OPC	1/4HEX
		VB-3012-OPC	VB-3012-120OPC	H5 & 5HEX
		VB-3012X-120OPC	VB-3012X-120OPC	1/4HEX
		VB-4504-OPC	VB-4504X-120OPC	1/4HEX
	Push type	VB-1510PS-OPC	VB-1510PS-120OPC	H4
		VB-1510PSX120OPC	VB-1510PSX120OPC	1/4HEX
		VB-1820PS-OPC	VB-1820PS-120OPC	H5 & 5HEX
		VB-1820PSX120OPC	VB-1820PSX120OPC	1/4HEX
		VB-3012PS-OPC	VB-3012PS-120OPC	H5 & 5HEX
		VB-3012PSX120OPC	VB-3012PSX120OPC	1/4HEX
		VB-4504PS-OPC	VB-4504PSX120OPC	1/4HEX

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

**P.32 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
	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.33 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
	Push type	VZ-3007	VZ-3007	H5 & 5HEX
			VZ-3007X	1/4HEX
		VZ-3012	VZ-3012	H5 & 5HEX
			VZ-3012X	1/4HEX
		VZ-1510PS	VZ-1510PS	H4
			VZ-1510PSX5	5HEX
			VZ-1510PSX	1/4HEX
		VZ-1820PS	VZ-1820PS	H5 & 5HEX
			VZ-1820PSX	1/4HEX
		VZ-3007PS	VZ-3007PS	H5 & 5HEX
			VZ-3007PSX	1/4HEX
		VZ-3012PS	VZ-3012PS	H5 & 5HEX
			VZ-3012PSX	1/4HEX
		VZ-4506PS	VZ-4506PSX-S	1/4HEX

### ● 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
	Push type	VZ-4506	VZ-4506X-120	1/4HEX
		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	1/4HEX

### ● 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
	Push type	VZ-4504	VZ-4504X-B	1/4HEX
		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	1/4HEX

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

## P.34 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	

## P.34 VZ Variations

### ● 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	
		VZQ-3012	VZQ-3012-120	
	Push type	VZQ-1820PS	VZQ-1820PS-120	H5 & 5HEX
		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	
		VZQ-3007	VZQ-3007-B	
	Push type	VZQ-1812PS	VZQ-1812PS-B	H5 & 5HEX
		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	H5 & 5HEX
		VZ-1510PS-OPC	VZ-1510PS-OPC	
	Push type	VZ-1820PS-OPC	VZ-1820PS-OPC	H5 & 5HEX
		VZ-3007PS-OPC	VZ-3007PS-OPC	
		VZ-3012PS-OPC	VZ-3012PS-OPC	H5 & 5HEX
		VZ-4506PS-OPC	VZ-4506PS-OPC	
		VZ-4506PS-OPC	VZ-4506PS-OPC	1/4HEX
		VZ-4506PS-OPC	VZ-4506PS-OPC	

### ● 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
			VZ1820PSX-120OPC	1/4HEX
		VZ-3012PS-OPC	VZ3012PS-120OPC	H5 & 5HEX
			VZ3012PSX-120OPC	1/4HEX
		VZ-4506PS-OPC	VZ4506PS-120OPC	H5 & 5HEX
			VZ4506PSX-120OPC	1/4HEX

## P.34 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.35 VBH Series

### ● Plug: A Type (AC100V)

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

## P.35 VBH Variations

### ● Plug: A Type (AC100V)

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

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

## P.36 VZH Series

### ● Plug: A Type (AC100V)

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

### ● Plug: A-2 Type (AC120V)

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

## P.36 VZH Variations

### ● Plug: A Type (AC100V)

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

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

## P.37 PGF Series

PGF	Lever type	Model	Order Code	Bit Drive
		PGF-3000	PGF-3000	H4
		PGF-5000	PGF-5000	
		PGF-7000	PGF-7000	H5 & 5HEX
		PGF-7000	PGF-7000X	
	Push type	PGF-SUBBOX	PGF-SUBBOX	1/4HEX

Model		Order Code
Screwdriver cord		3m(10P) BLF7-0612-VI

### P.38 PGF Series

Suction	PGFQ	Model	Order Code	Bit Drive
		PGFQ-3000	PGFQ-3000	H4
PGFR	PGFR	PGFQ-5000	PGFQ-5000	H5
		PGFQ-7000	PGFQ-7000	
		PGFR-5000	PGFR-5000	1/4HEX
		PGFR-7000	PGFR-7000X	

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

### P.39 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.39 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	5HEX
		BLFR-7000X	BLFR-7000X	1/4HEX
		BLFR-7025X	BLFR-7025X	

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

### P.40 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)

### P.37 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

Automatic Assembly Machines Driver Series	Model	Order Code	Bit Drive
	CLF-3000	CLF-3000HH	H4
	CLF-4000	CLF-4000HH	
	CLF-4000	CLF-4000XH	1/4HEX
		CLF-6000HH	H5
	CLF-6000	CLF-6000XH	1/4HEX
		CLF-6500HH	H5
	CLF-6500	CLF-6500XH	1/4HEX
		CLF-7000HH	H5
	CLF-7000	CLF-7000XH	1/4HEX

### P.41 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

Automatic Assembly Machines Driver Series	Model	Order Code	Bit Drive
	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	1/4HEX
		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.41 CLF, α F Variations

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

### P.42 Power Supply for CLF, α F, CL-A series

CLT-AY-61	Order Code		Plug Type
	CLT-AY61		A-1*
	CLT-AY61-120		A-2
	CLT-AY61-230VDE		C
	CLT-AY61-230SP		BF
	CLT-AY61-220RCH		S
Options	2WV type	CLT-AY61-2WV	A-1*
	REV	CLT-AY61REV	
	2WV+REV tpye	CLT-AY61-2WVREV	
Options	CLT-AY-81	CLT-AY81	A-1*
	2WV type	CLT-AY81-2WV	
	REV	CLT-AY81REV	
	2WV+REV tpye	CLT-AY81-2WVREV	

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

### P.42 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	CL9-0410	*
	CL-816A		*
	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.43 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.44 Power Supply for Recipro

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

### P.44 Recipro Accessories

Product name	Model	Order Code	
		DC type	
Carbon brush	DC type	RD-4000	CL4-0420
		RD-4500	A45-0420
	AC type	RD-10	ACL10-0490
		RD-15	
		RD-20	ACL20-0490
		RD-30	

### P.45 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-TH	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
	2m(6P)	RP50-CL
	3m(5P)	CLF65-0620
Flexible Screwdriver Cord	2m(5P)	CL4-0611H-5P-2
	3m(6P)	CL4-0610H-6P-3

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 Compatible screwdriver: PG series, BLG-BC2 series, BLG-BC1 series, BLG-ZERO1 Series, BL-OPC series, BL-OPC series
- \*4 can be used with HH and XH of the CLF & α F series (except CL-A series).



## P.45 Peripherals and Accessories

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-5000BC2/BLG-BC1/BLG/BL CL/SS/a/VZ-1510
	VMS-50	VMS-50	
	VMS-50VZ	VMS-50VZ	For PG/VZ (except VZ-1510)

\* Screwdriver holder for PG, BLG-5000BC2, BLG-BC1, BLG, BL-7000 and VB-1510 is optional.

## P.46 Peripherals and Accessories

### ● VMS Screwdriver holders(Optional)

Product name	Model	Holders order cord
PG Series	PG-3000	VMS-0900-PG3
	PG-5000	VMS-3910-PG5*1
	PG-7000	VMS-0900-PG7
BLG-BC2 Series	BLG-4000BC2	VMS-0900-BLG *2(A)
	BLG-5000BC2	VMS-0900-BLG5BC2*2(B)
	BLG-5000BC2	VMS-0900-BLG *2(A)
BLG-BC1 Series	BLG-4000BC1	VMS-0900-BLG
	BLG-5000BC1	
BLG Series	BLG-4000	
	BLG-5000	
BL Series	BL-7000	VMS0900-BL7
VB Series	VB-1510	VMS-0910-PG5
	VB-1820	VMS-0900-PG7
	VB-3012	
	VB-1820PS	
VZ Series	VB-3012PS	VMS-0900-VB18PS
	VZ-1510	VMS50-0190
	VZ-1510PS	
VMS-40/VMS-50 Standard holder		VMS40-0180*3
VMS-50VZ Standard holder		VMS-0900-VZ18*3

\*1 with a spacer

\*2 (A) Without BC2 I/O Cabel

\*2 (B) With BC2 I/O Cabel

\*3 Mountable screwdriver models are available on P.46

## P.44 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-3CN	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	A-2

## P.50 Separate Screw Counter SC1

	Model	Order Code	Driver Model
Separate Screw Counter SC1	BLOP-SC1	BLOP-SC1	For BLG-BC2/BLG-BC1/BLG-OPC/BL-OPC
	CLOP-SC1	CLOP-SC1	For CL/SS/ a

## P.51 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
	HPN-10-C1	N • m / N • cm	HIOS
	HPN-10X-C1		HEX
AC220-240V	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

## P.51 Torque Meter Series

### ● HP-100 Series

Voltage	Order Code	Measuring	Bit Drive
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	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	

## P.51 Torque Meter Series

### ● 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.52 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










## P.52 Torque Meters Accessories

### ● HIT Series

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	

### ● Battery Charger for HP & HDP






Order Code	Voltage	Plug Type
TCH-MULTI	100-240V	A
TCH-MULTI-CN	100-240V	A (CCC)
TCH-MULTI-CE	100-240V	C
TCH-EU	220-240V	C

A Plug	<p>P/N: TCH-MULTI</p> <p>Certificated:   </p> <p>Japan, US, Canada, Taiwan, Southeast Asia① (Thailand, Philippines)</p>
A Plug	<p>P/N: TCH-MULTI-CN</p> <p>Certificated:  </p> <p>China</p>
C Plug	<p>P/N: TCH-MULTI-CE</p> <p>Certificated:  </p> <p>Southeast Asia② (Vietnam, Indonesia, India, Singapore, Malaysia Korea)</p>
C Plug	<p>P/N: TCH-EU</p> <p>Certificated:  </p> <p>Europe ( U.K., Ireland )</p>

\* ) Please ask your distributor if you want to know the plug type for the country not described in above list.

## P.52 Torque Meters Accessories

### ● Battery Charger for HM & HIT

A Plug	<p>P/N : TCH-100N</p> <p>Certificated:  Japan</p>
A Plug	<p>P/N : TCH-120N</p> <p>Certificated:  Korea, Taiwan, US, Canada</p>
C Plug	<p>P/N : TCH-230G</p> <p>Certificated:   Europe, China , Korea</p>
BF Plug	<p>P/N : TCH-230B</p> <p>Certificated:  Singapore, UK, Ireland</p>

## P.53-54 Automatic Screw Feeder

### ● For manual operation

Product name	Model	Order Code	Screw Size
HSV Series	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
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-23	HSF-23	M2.3
	HSF-26	HSF-26	M2.6
	HSF-30	HSF-30	M3.0

**P.53-54 Automatic Screw Feeder**

● For Automatic Assembly machines

Product name	Model	Order Code	Screw Size
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
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

**P.53-54 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
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
	HS-SR30	M3.0
HSF Series	HS-WR10	M1.0
	HS-WR12	M1.2
	HS-WR14	M1.4
	HS-WR17	M1.7
	HS-WR20	M2.0
	HS-WR23	M2.3
	HS-WR26	M2.6
	HS-WR30	M3.0
HSV Series	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

**P.53-54 Automatic Screw Feeder Accessories**

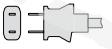
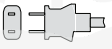
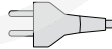
● Rail for RB type

Product name	Order Code	Screw Size
HSV-RB Series	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
HS-RB Series	HS-R35RB	M3.5
	HS-R40RB	M4.0
	HS-R50RB	M5.0
HS III -RB Series	HS-SSR14	M1.4
	HS-SSR17	M1.7
	HS-SSR20	M2.0
	HS-SSR23	M2.3
	HS-SSR26	M2.6
	HS-SSR30	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	AC220-240V	C

Plug Type

Plug : A	Plug : A(CCC)	Plug : C
AC100-120V	AC220V	AC220-240V
		
PSE	CN	EUHK

**P.55 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

**P.55 CD Series**

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.56 CD Accessories**

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

\* CDS-12 includes all the 6 components available on P.56.

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.58 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	Plug Type
Power Supply	T-7BL	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.58 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	T-45BL	T-45BL	A
		T-45BL-UL	A-2
		T-45BL-TH	A-3
		T-45BL-EU-HK	C
		T-45BL-UK-SP	BF
		T-45BL-CN	S

## P.58 SB Accessories

Product name	Model	Order Code	Plug Type
Carbon brush	SB-400C	CL4-0420	
	SB-650C	CL65-0490	
SB Series controller	SBC-1	SBC-1	

## P.63 Accessories for Suction (Vacuum pick up) Screwdrivers

### Manual screwdrivers

Product name	Model	Order Code	Bit Drive
Brushless Screwdrivers (DC)	BLG-4000BC2 BLG-4000BC1 BLG-4000ZERO1 BLG-4000	BLGQ4-SET	H4
	BLG-5000BC2 BLG-5000BC1 BLG-5000ZERO1 BLG-5000	BLQ5-SET	H4 40mm
		BLQ5-SET-ESD*	
		BLQ5N-SET	H4 60mm
		BLQ5N-SET-ESD*	
	BLG-5000BC2-15 BLG-5000BC1-15 BLG-5000ZERO1-15 BLG-5000-15	BLQ5-SET	H4 40mm
		BLQ5-SET-ESD*	
		BLQ5N-SET	H4 60mm
		BLQ5N-SET-ESD*	
	BL-2000	CLQ2-SET	H4 60mm
		CLQ2-SET-ESD*	
	BL-3000	BLQ3N-SET	H4 60mm
		BLQ3N-SET-ESD*	
	BL-5000	BLQ5-SET	H4 40mm
		BLQ5-SET-ESD*	
		BLQ5N-SET	H4 60mm
		BLQ5N-SET-ESD*	
	BL-5000-20	BLQ5-SET	H4
		BLQ5-SET-ESD*	
	BL-7000	BLQ7-SET	H5
		BLQ7-SET-ESD*	

\* Anti-electrostatic

## P.63 Accessories for Suction (Vacuum pick up) Screwdrivers

### Manual screwdrivers

Brushed Screwdrivers (DC)	CLQ-2000	CLQ2-SET	H4
		CLQ2-SET-ESD*	
	CLQ-3000	CLQ4-SET	
		CLQ4-SET-ESD*	
	CLQ-4000	CLQ4-SET	
		CLQ4-SET-ESD*	
	CLQ-6000	CLQ65-SET	H5
		CLQ65-SET-ESD*	
	CLQ-6500	CLQ65-SET	
		CLQ65-SET-ESD*	
	CLQ-7000	CLQ65-SET	
		CLQ65-SET-ESD*	
	SSQ-2000	CLQ2-SET	H4
		CLQ2-SET-ESD*	
	SSQ-3000	CLQ4-SET	
		CLQ4-SET-ESD*	
	SSQ-4000	CLQ4-SET	
		CLQ4-SET-ESD*	
	SSQ-6500	CLQ65-SET	H5
		CLQ65-SET-ESD*	
	SSQ-7000	CLQ65-SET	
		CLQ65-SET-ESD*	
α Q-4500	CLQ4-SET	H4	
	CLQ4-SET-ESD*		
α Q-5000	CLQ4-SET		
	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		

### Automatic Assembly Machines Screwdrivers

Product name	Model	Order Code	Bit Drive
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		

\* Anti-electrostatic

### Automatic Assembly Machines Screwdrivers

Product name	Model	Order Code	Bit Drive
Brushless Screwdrivers (DC)	PGFQ-3000	PGFQ3-SET	H4
	PGFQ-5000	PGFQ5-SET	
	PGFQ-7000	PGFQ7-SET	H5
	BLF-2000	BLFQ2-SET	H4
	BLF-5000	BLFQ5-SET	H5
	BLF-7000	BLFQ7-SET	

\* Anti-electrostatic

## P.65-66 Accessories for PGF,BLFR Series

### PGF Suction (Vacuum) Attachment

Model	Order Code	Bit Drive
PGFR-5000	PGFR5-SA	5HEX
PGFR-7000X	PGFR7-SA	1/4HEX

### BLF Suction (Vacuum) Attachment

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

### Vacuuming Vinyl Tube

Model	Order Code
PGFR-5000 PGFR-7000X PGFR-7025X BLFR-5000 BLFR-7000X BLFR-7025X	RM-0850 (order by the 1m)

### Screw-on type bit

Model	Tip shape	Order Code	shape
PGFR-5000 PGFR-7000 BLFR-5000 BLFR-7000X BLFR-7025X	+#1 or +#2	RBP4140S	+#1
		RBP4240S	+#2

### Mouthpiece with spring

Model	Tip shape	Type
Self-adjustable inner mouthpiece type	FS61-68	
	FS61-68S	Stepped
	FS61-74	
Self-adjustable outer mouthpiece type	FS60-68J	POM
	FS60-68A	Aluminum
	FS60-80J	POM

# Memo







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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.

- Please note the specifications and appearance may change as improvements are made.
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- The information presented in this catalog are current as of Oug. 2018.
- Catalog number :EK-A001



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