

HIOS®

Brushless® Screwdriver

General catalog 11A

— The English version —

HIOS recommends switching to the new environmentally friendly brushless® screwdrivers.



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ISO9001取得:本社/大阪営業所/名古屋営業所/山形工場
ISO14001取得:本社/山形工場



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 that the specifications and appearance may change as improvements are made.
- Using copies or reproductions of this general catalog without permission is prohibited.
- The information presented in this catalog are current as of Feb 2011.
- Catalog number : EK-A002



HIOS Products

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	<p>AC drivers Does not require power controller</p>	
	<p>DC drivers (Pass/Fail Checking type) Connects to power controller</p>	
	<p>BLOP-STC3 For BL-OPC screwdriver VZOP-STC For VB-OPC screwdriver</p>	
	<p>BL-ESD Anti-electrostatic specifications BLQ-CR-ESD Clean room and anti-electrostatic specifications BLQ Suction BLQ-CR Suction and Clean room specifications BL-OPC Can be used with screw counter for BLOP-STC3 VB-OPC Can be used with screw counter for VZOP-STC VBH-OPC Can be used with screw counter for VZOP-STC SUCTION TYPE</p>	
	<p>Pistol attachment Angle attachment Vertical stand Spring balancer Cord</p>	
	<p>HP Series Measure the torque of torque drivers HDP Series Check the torque of tightened screws HM Series Measure the torque of drivers for automated equipment HIT Series Use for control of torque of impact drivers and torque wrenches</p>	
	<p>Manually operated HSF Series HS Series HS III Series For automatic line and vacuum pick up HS-RB Series HS III -RB Series</p>	

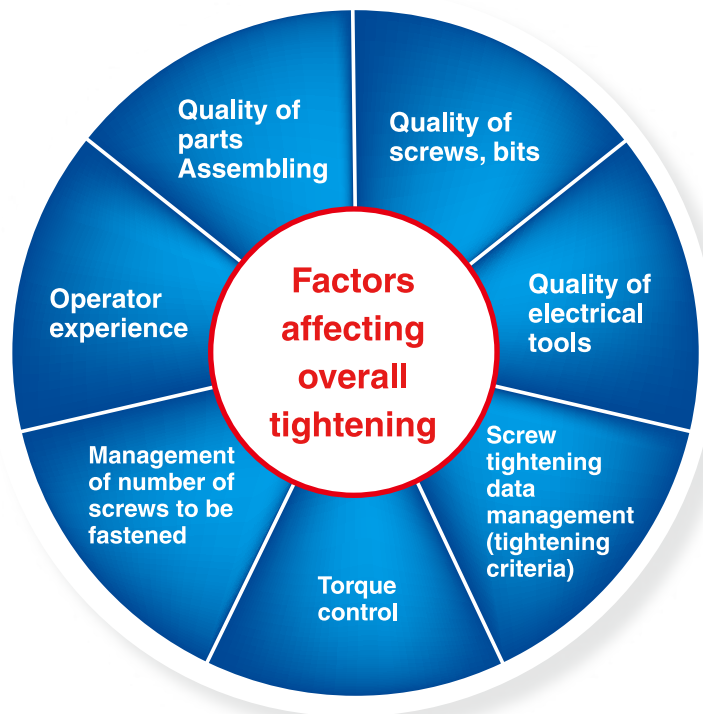
Brushless Screwdriver List

Model	Output Torque Range																				Unloaded Rotation Speed (r.p.m)	Screw Size (mm)		Used in assembling																										
																						(HI/LOW)	Small Size Screw		Tapping Screw																									
																					(HI/LOW)																													
																				(kgf • cm)																														
																				N • m																														
																				0	0.05	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2	3	4	5	8	9	10			
DC Type	BL-2000	[Torque bars from 0.1 to 1.0]																			990/650	1.0-2.3	1.0-2.0	Cell phones, clocks, glasses, digital cameras, LCD televisions, PDP televisions, optical pickups, computers HDDs, CDs, car navigation systems, car audio systems, air-conditioners, fans, heaters																										
	BL-3000	[Torque bars from 0.2 to 1.5]																			980/680	1.7-2.3	2.0-2.3																											
	BL-5000	[Torque bars from 0.3 to 2.5]																			900/590	2.0-3.0	2.0-3.0																											
	BL-5000-15	[Torque bars from 0.3 to 2.5]																			1,500/1,000	2.0-3.0	2.0-2.6																											
	BL-5000-20	[Torque bars from 0.3 to 2.5]																			2,200/1,500	2.0-3.0	2.0-2.6																											
	BL-5020	[Torque bars from 0.5 to 2.5]																			750/500	2.0-4.0	2.0-3.0																											
	BL-7000	[Torque bars from 0.7 to 3.0]																			960/630	2.6-5.0	2.6-4.0																											
	BL-7000HT	[Torque bars from 0.7 to 3.0]																			700/500	2.6-4.0	2.6-4.0																											
	BL-7000-20	[Torque bars from 0.5 to 2.5]																			2,200/1,500	2.6-4.0	2.6-4.0																											
AC Type	VB-1510	[Torque bars from 0.2 to 2.0]																			970	2.0-4.0	2.0-3.0	Residential lighting, lights, vacuum cleaners, gas equipment, microwave ovens, electronic parts, for automobiles, tail lamps, head lamps, TV game consoles, printers, communication, equipment, photocopiers, pneumatic equipment, electronic tool																										
	VB-1510PS	[Torque bars from 0.2 to 2.0]																																																
	VB-1510-18	[Torque bars from 0.2 to 2.0]																			1,800	2.0-4.0	2.0-3.0																											
	VB-1510PS-18	[Torque bars from 0.2 to 2.0]																																																
	VB-1820	[Torque bars from 0.4 to 3.0]																			2,000	2.6-4.0	2.6-3.0																											
	VB-1820PS	[Torque bars from 0.4 to 3.0]																																																
	VB-3012	[Torque bars from 0.5 to 4.0]																			1,200	3.0-5.0	3.0-4.0																											
	VB-3012PS	[Torque bars from 0.5 to 4.0]																																																
DC Type	VB-4504	[Torque bars from 1.0 to 4.0]																			400	3.0-5.0	3.0-4.0	Electronic parts, parts for automobiles, pneumatic equipment																										
	VB-4504PS	[Torque bars from 1.0 to 4.0]																																																
	VBH-1820PS	[Torque bars from 3.0 to 6.0]																			470	5.0-6.0																												
	VBH-3012PS	[Torque bars from 3.0 to 6.0]																			270	5.0-6.0																												
DC Type	PG-3000	[Torque bars from 0.2 to 2.0]																			980/680	1.7-2.3	2.0-2.3																											
	PG-5000	[Torque bars from 0.3 to 2.5]																			900/590	2.3-3.0	2.0-2.3																											
	PG-7000	[Torque bars from 0.5 to 3.0]																			960/630	2.6-5.0	2.6-4.0																											

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

Hios is continuously working hard to apply our vast experience and technical expertise to make constant modifications and improvements to our tightening tools and other parts renowned for their precision and accuracy.

HIOS New Fastening System is a highly efficient system that overcomes problems affecting variations in tightening, offering the operator exceptional reliability and quality control.



Improvements to the screw and screwdriver are the first step in reducing the number of defects.

Issues related to cam-out are all the more serious as equipment becomes more precise with the advancement of technology.

The shape of plus screws, regarded as the current global standard, often suffered from damaged heads and worn screw material from excess torque when accurate torque control was unavailable. A V-shaped design similar to the tip of a pencil forces the bit to rise out from the head (* cam-out) when excess torque is applied. However, developments in peripheral tools now allow extremely accurate torque control, such that the V-shaped design that forces the bit to rise can now result in damage to the head and screw material. This in turn affects the quality of the final product.

* The bit rises out from the groove in the head when tightening plus screws.

Comparison of screw cross sections



Totsupura screws PAT.

While retaining compatibility with plus screws, the V-shaped design has been changed to a U-shaped design that does not allow the bit to rise, preventing cam out and allowing extremely high reliability and precision. When products are recycled or sent in for maintenance, removal and reinsertion of screws can now be performed much more simply, resulting in the manufacture of more environmentally friendly products.

Ordinary screwdrivers that use brushes can stop occasionally

Wear on expendable parts (carbon brushes, commutators, switches and other contact points) and heat generated by the motor in brushed screwdrivers can shorten the operating life of the whole screwdriver. Wear of the expendable parts can affect performance, causing the screwdriver to stop operating. Regular replacement and maintenance of the expendable parts differs with operating time and environment, meaning management of replacement and maintenance can be difficult.

Time elapsed	Performance is sometimes unreliable			
Reliable operation	[Green bar]			
Unreliable operation (reduced quality)	[Grey bar]			
Worn parts	Bit	Carbon brush	Contact points	Commutator
Symptoms	Cam out	Faulty rotation	Faulty operation	Reduced torque
Cause	Screw lift	Insufficient torque	Screw lift	Reduced torque
Part replacement	Bit	Carbon brush	Switch	Rotor
	<p>Carbon brushes are first replaced after 6 months of tightening 5000 screws per day. Approximately 0.6g of worn carbon granules are scattered inside the screwdriver case and into the air after each replacement (based on our own studies).</p>			

Unreliable performance
Reliable performance

It may be time to replace expendable parts



Determining the replacement interval is up to the operator's skill level and feeling.

Problems with ordinary tools

- Phillips screws → Worn grooves
- Screwdrivers with carbon brushes → Occasionally stop operating (Carbon emissions)
- Torque control → Insufficient torque (Can be difficult to identify screws with insufficient torque)
- Management of number of screws to be tightened → Forgetting to tighten screws
- Screw tightening data management (tightening criteria) → Improper screw tightening (Can be difficult to identify screws that are not tightened properly)

Improvements introduced with the New Fastening System

- Totsupura screws, totsupura bits PAT. No more cam out issues! Exceptionally reliable tightening and constant quality control are now a reality. (For more information, refer to our homepage [HIOS PAT. SCREW])
- Environmentally friendly Brushless® screwdriver. The elimination of carbon brushes has eliminated carbon emissions! This results in completely clean work surroundings and reduces environmental pollution (BL Series/VB Series).
- Torque meter. Screwdriver torque control and screw torque checks allows total quality control of screw tightening. (HP Series/HDP Series).
- Screw counter. Counts the number of screws to be tightened for the particular job, so that the operator does not have to worry about missing any screws. (Screw counter Series).
- Pass/Fail Checking PG brushless screwdriver. A single unit that performs three tasks: tightening, determination and recording. Provides total quality control of screw tightening.

Brushless® screwdriver

Screwdrivers with brushless motors have an extremely long operating life with no need for regular replacement or maintenance of expendable parts (carbon brushes, rotor, switches and other contact points). Heat generated by the motor is reduced and screwdriver performance is always at the maximum level, resulting in reliable product quality.

No carbon powder emissions!

The brushless screwdriver design eliminates the need for expendable parts, providing reliable and environmentally friendly performance as well as a high level of product quality control.



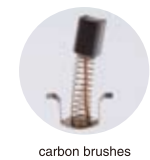
Completely safe Brushless screwdrivers

- Free from troublesome maintenance
- Better and Long performance with accurate torque
- Pollution-free environment
- Relax and no fatigues operation with low weight design

- Extended periods of highly precise torque control and superior durability lead to reliable product quality control.
- Expendable parts have been eliminated while the design allows a long operating life with a vastly reduced number of operating problems and malfunctions
- There are no external carbon powder emissions, resulting in clean electrical parts and operating environment.
- There is no heat generated by the motor, with no heat related problems with extended periods of use. The driver is also energy efficient.

Comparative data provided by HIOS

- Temperature rises (BL/VB Series) reduced approximately 30%
- Power consumption (VB Series) Energy consumption reduced approximately 50%
- Noise, RFI (BL Series) reduction in peak values 64% ~ 85%



carbon brushes

Ordinary

Brush screwdriver

Expendable carbon brushes wear out, sending carbon powder throughout the motor, in turn causing operating problems, faults and reducing overall screwdriver performance. Powder can cause various problems in the work place if released from the driver case.

NEW

Brushless screwdriver

With almost no expendable parts and a simple design, the brushless screwdrivers life cycle is extended and maintains a clean working environment. The screwdriver is also more environmentally friendly due to the reduction in expendable parts and provides consistently reliable performance.

Standard specifications

(See the icon on each page for standard driver specifications)

2WAY Lever and push type (both used for starting)

The starting procedure is simple and can be switched from the lever type to push type.

Antistatic body case* Surface resistance is less than $3 \times 10^{12} \Omega$

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

RoHS The screwdriver is RoHS compliant.

CE Products meet European safety

UL Meet UL standard.

* The grip section of the VB-1820 and VB-3012 are made of rubber and do not completely prevent static electricity.

Features of brushless screwdrivers

Low voltage DC type BL Series

Operates when connected to low voltage DC power (power hereinafter)



DC type

Transformer-less type VB Series

Operates directly from AC power outlet



AC type

Quick release cord (DC type)

The screwdriver cord features a quick release allowing maintenance to be performed easily (The cord on the VB Series is permanently connected and cannot be detached).

5P (pin) standard screwdriver



6P (pin) screwdriver for use with screw counter



Employs an antistatic body case (standard specifications)

The brushless series uses an antistatic body case to prevent the accumulation of static electricity (excluding the VB-1820PS, VB-3012PS, VB-4504PS)

Trigger type

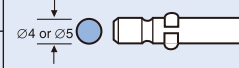

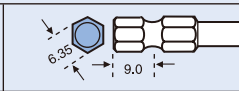
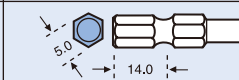
Lever start type screwdrivers are operated by pulling the lever with your finger. Push-to start type (PS) screwdrivers are operated by pushing the button. Certain models of the BL Series allow either start method to be selected (excluding the BL-2000).

Torque adjustment nut for fine tuning

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

Bit

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

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

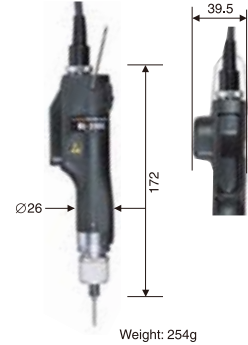
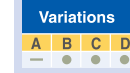
DC type BL Series

Low voltage DC type
Operates when connected to low voltage DC power

Lever start type

BL-2000

RoHS CE
anti-static electricity is standard.



Ultra slim body case with 254g lightweight.

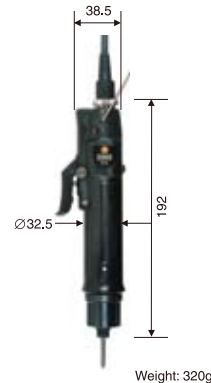
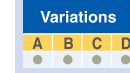
Anti-electrostatic specifications
Surface resistance is less than $10^4\Omega$
Conductive resin is used throughout the body case, switch lever and screwdriver cord.

*The switch uses expendable parts.

Two-way start type

BL-3000

RoHS CE

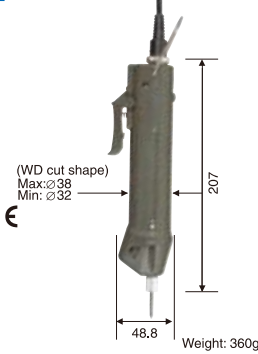
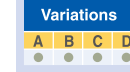


Unit: mm

Two-way start type

BL-5000

RoHS CE

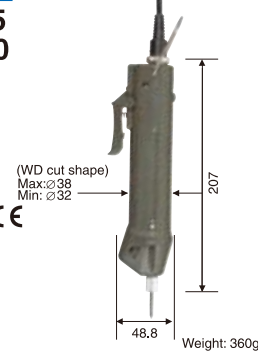
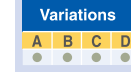


High speed type

Two-way start type

BL-5000-15
BL-5000-20

RoHS CE

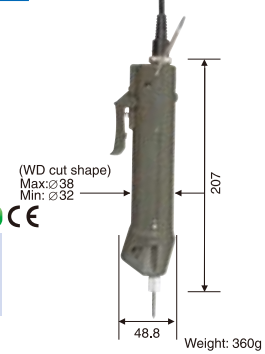


High torque type

Two-way start type

BL-5020

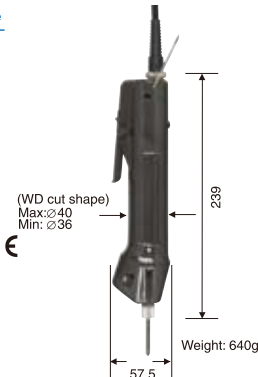
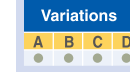
RoHS CE



Two-way start type

BL-7000

RoHS CE

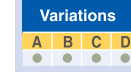


High torque type

Two-way start type

BL-7000HT

RoHS CE

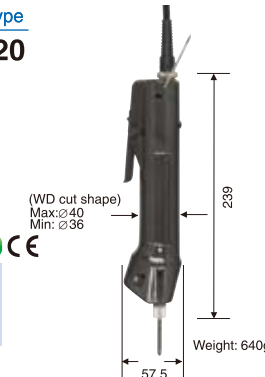
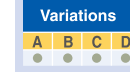


High speed type

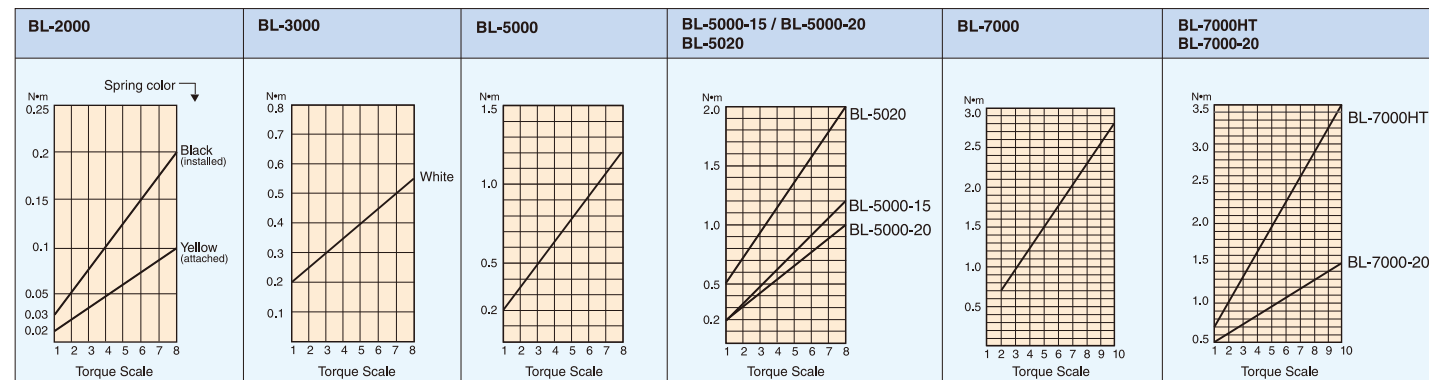
Two-way start type

BL-7000-20

RoHS CE



Output torque guide (during HI input)



Variation chart

A ESD Anti-static electricity features	B Q Suction	C Q-CR-ESD Clean room and anti-static electricity features	D OPC Screwdriver for screw counter
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* The suction attachment sold separately. * Refer to p.9 for screw counters

DXF File
External dimensions can be viewed in DXF file format from the Hios homepage.
*Special software is required to view DXF files.
[Go to Electric Driver](#) | [DC Driver](#) | [DXF File](#)
www.hios.com

Multi input type (AC 100V-240V)

Power supply for BL Series

Dedicated power supply ensures maximum performance from the screwdriver.

- Low voltage output (HI: approximately 30V, LOW: approximately 20V) means reliable yet quiet operating noise.
- Power capacity has been increased over the previous model, providing a reliable source of power.
- Two switchable stages HI/LOW are available for more accurate screw operations.

T-30BL

(Single power point)

Compatible models

BL-2000/BL-3000



RoHS CE U

T-70BL

(Single power point)

Compatible models

BL-2000/BL-3000
BL-5000/BL-5000-15
BL5000-20/BL-5020
BL-7000/BL-7000HT
BL-7000-20

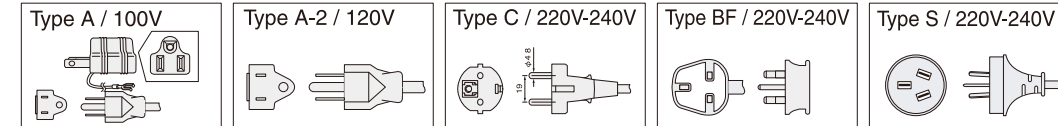


RoHS CE U

Specifications

Primary side	Input power	AC 100V-240V (47-63Hz)
	Power capacity	40W
Secondary side output	2(30V), 1(20V) 2 stage switchable	
External dimensions (mm)	62 x 134 x 40 (H) mm	
Weight (g)	300g	
Power cord length(m)	1.8m (inlet type)	
Accessories	2 mounting points, 4 mounting screws	

Plug



Specifications

Lever start type Model	BL-2000	BL-3000	BL-5000	BL-5000-15 BL-5000-20*	BL-5020	BL-7000	BL-7000HT BL-7000-20*	
Push-to start type Model	-							
Output Torque Range	N·m	0.02-0.2	0.2-0.55	0.2-1.2	0.2-1.2 / 0.2-1*	0.5-2	0.7-2.8	
	lbf·in	0.17-1.7	1.7-4.8	1.7-10	1.7-10 / 1.7-8.7*	4.3-17.4	6.1-24	
	(kgf·cm)	(0.2-2)	(2-5.5)	(2-12)	(2-12) / (2-10)*	(5-20)	(7-28)	
Torque Switching	Stepless Adjustment							
Unloaded Rotation Speed (r.p.m) ±10%	HI	990	980	900	1,500 / 2,200*	750	960	
	LOW	650	680	590	1,000 / 1,500*	500	630	
Screw Size (mm)	Small Size Screw	1.0-2.3	1.7-2.3	2.0-3.0	2.0-3.0 / 2.0-3.0	2.0-4.0	2.6-5.0	
	Tapping Screw	1.0-2.0	2.0-2.3	2.0-3.0	2.0-2.6 / 2.0-2.6	2.0-3.0	2.6-4.0	
Bit Type	Hios H4	Hios H4 or 1/4 HEX	Hios H4 or 5 HEX or 1/4 HEX	Hios H4 or 5 HEX or 1/4 HEX	Hios H5 or 5 HEX or 1/4 HEX	Hios H5 & 5 HEX or 1/4 HEX	Hios H5 & 5 HEX or 1/4 HEX ^{※1}	
Power Pack	T-30BL	✓	✓	✓	✓	✓	✓	
	T-70BL	✓	✓	✓	✓	✓	✓	
Accessories	Bit, 1 of each	Hios H4	+ #0(φ2×40mm) + #0(φ2.5×40mm)	+ #0(φ2.5×40mm) + #1(φ4×40mm)	+ #1(φ4×40mm) + #2(φ4×40mm)			
		Hios H5				+ #1(φ5×60mm) + #2(φ5×60mm)	+ #1(φ5×60mm) + #2(φ5×60mm)	
		1/4 HEX		+ #1(φ5×50mm) + #2(φ5×50mm) -(φ5×50mm)	+ #1(φ5×50mm) + #2(φ5×50mm) -(φ5×50mm)	+ #1(φ5×50mm) + #2(φ5×50mm) -(φ5×50mm)	+ #1(φ5×50mm) + #2(φ5×50mm) -(φ5×50mm)	
	Spring	yellow						
	Cord Length	2m (5P) ESD Design	1.5m (5P)	1.5m (5P)	1.5m (5P)	1.5m (5P)	2m (5P)	2m (5P)
Hexagonal L-shaped wrench		5mm, 1piece	5mm, 1piece	5mm, 1piece	5mm, 1piece	5mm, 1piece	5mm, 1piece	

※1 Only 1/4 HEX is available for BL-7000HT.

AC type Transformer-less AC type
Plugs directly into an AC power point
VB Series

CE CE certified models are also available for VB series. (220-240V)
Please inquire us for more details.

Unit: mm

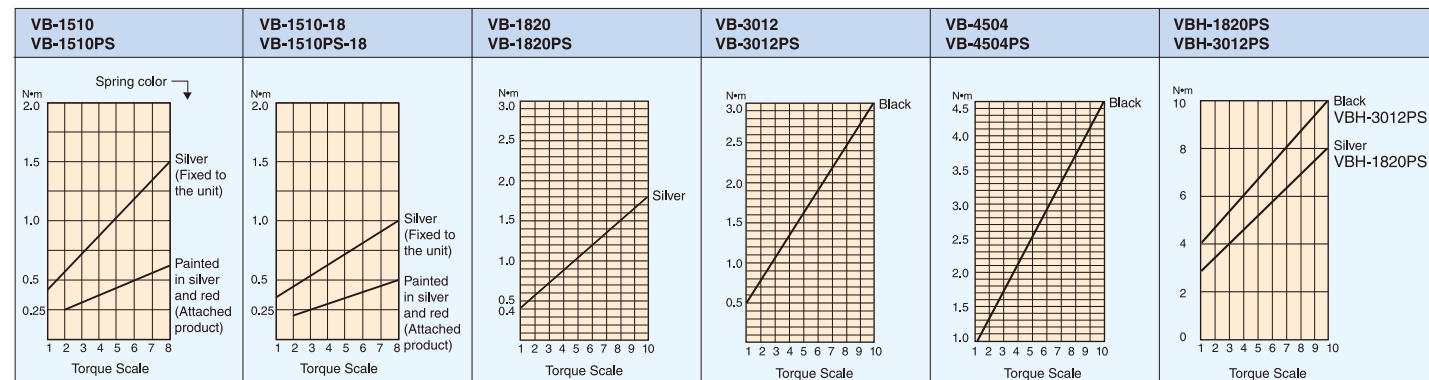
<p>Lever start type VB-1510</p> <p>Weight: 526g</p> <p>RoHS Variations A B</p>	<p>Push-to start type VB-1510PS</p> <p>Weight: 526g</p> <p>RoHS Variations A B</p>	<p>High speed type Lever start type VB-1510-18</p> <p>Weight: 526g</p> <p>RoHS Variations A B</p>	<p>High speed type Push-to start type VB-1510PS-18</p> <p>Weight: 526g</p> <p>RoHS Variations A B</p>	<p>Lever start type VB-1820 VB-3012</p> <p>Weight: 750g</p> <p>RoHS Variations A B</p>	<p>Push-to start type VB-1820PS VB-3012PS</p> <p>Weight: 750g</p> <p>RoHS Variations A B</p>
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<p>Lever start type VB-4504</p> <p>Weight: 750g</p> <p>RoHS Variations A B</p>	<p>Push-to start type VB-4504PS</p> <p>Weight: 750g</p> <p>RoHS Variations A B</p>	<p>Push-to start type (100V only) VB-4504PS (with shockless stand)</p> <p>Weight: 1450g (Includes the weight of the screwdriver cord and slide arm)</p> <p>RoHS Variations A B</p>
---	---	---

● Plug
Type A / 100V
Type A-2 / 120V
Type C / 220V-240V

●The VB-4504 can be used with 120V and 220-240V. ●See p.10 for specifications for the VB-4504PS (100V) shockless stand.

●Output torque guide (during HI input)



Variation chart

A Suction	Q	B OPC	<p>Screwdriver for screw counter</p> <p>* Refer to p9 for screw counters * The suction attachment sold separately.</p>
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DXF File

External dimensions can be viewed in DXF file format from the Hios homepage.
*Special software is required to view DXF files.
[Go to Electric Driver](#) | [DC Driver](#) | [DXF File](#)
www.hios.com

Hammerhead shape/ultrahigh torque VBH Series (with shockless stand)

Push-to start type
VBH-1820PS
VBH-3012PS

Variations A B RoHS

Ideal for working with products requiring high torque levels.

- High torque screw applications that were previously only possible with air-powered screwdrivers can now be performed with a brushless screwdriver.
- Tightening to the same torque level can now be done reliably.
- Recoils when tightening the screws are absorbed by the shockless stand to reduce operator fatigue.
- Features a light action push trigger for improved usability.

■ Specifications

Model	VBH-1820PS	VBH-3012PS
Control torque range N·m (kgf·cm)	3.0~8.0 (30~80)	4.0~10.0 (40~100)
Unloaded Rotation speed (r.p.m) ±10%	470	270
Screw Size (mm)	5.0~6.0	5.0~6.0
Dimensions (mm)	Grip	Max Ø41, Min Ø39 (non-circular)
	Length	366
Weight (kg)	1.9kg (includes the screwdriver cord and slide arm)	
Bit Type	1/4 HEX	
AC Cord Length (m)	3m	
Accessories	3 Hollow set screws (M4 x 6mm) 1 hexagonal L-shaped wrench (width between flats 2mm)	

■ Shockless stand specifications

Length of slide arm	Usable slide range	Brace height	Stand		
			Stand height	Mounting bolt hole diameter	Mounting bolt hole spacing
530	475	570	8	6	52 (Equilateral triangle, length of 1 side)

●Please inquire about purchases of VBH Series products.

■ Specifications

Lever start type Model	VB-1510	VB-1510-18	VB-1820	VB-3012	VB-4504	
Push-to start type Model	VB-1510PS	VB-1510PS-18	VB-1820PS	VB-3012PS	VB-4504PS	
Power Input / Power consumptin (W)	AC 100V ±5%	AC 100V ±5%	AC 100V ±5%	AC 100V ±5%	AC 100V ±5%	
	Approx. 20W	Approx. 20W	Approx. 40W	Approx. 40W	Approx. 40W	
	AC 120V ±5%	AC 120V ±5%	AC 120V ±5%	AC 120V ±5%	AC 120V ±5%	
	Approx. 20W	Approx. 20W	Approx. 40W	Approx. 40W	Approx. 40W	
Output Torque Range	N·m	0.25-1.5	0.2-1.0	0.4-1.8	1-4.5	
	lbf·in	2.2-13	2.2-10	3.5-16	8.7-39	
	(kgf·cm)	(2.5-15)	(2-10)	(4-18)	(5-30)	
Torque Switching	Stepless Adjustment					
Unloaded Rotation Speed (r.p.m) ±10%	970	1,800	2,000	1,200	400	
Screw Size (mm)	Small Size Screw	2.0-4.0	2.0-4.0	2.6-4.0	3.0-5.0	
	Tapping Screw	2.0-3.0	2.0-3.0	2.6-3.0	3.0-4.0	
Bit Type	Hios 4 or 5 HEX or 1/4 HEX		Hios 5 & 5 HEX or 1/4 HEX	Hios 5 & 5 HEX or 1/4 HEX	1/4 HEX	
AC Cord Length (m)	3m		3m	3m	3m	
Accessories	Bit, ※1 of each	Hios H4	+ #1 (φ 4×40mm) + #2 (φ 4×40mm)	+ #1 (φ 5×60mm) + #2 (φ 5×60mm)	+ #1 (φ 5×60mm) + #2 (φ 5×60mm)	+ #1 (φ 5×50mm) + #2 (φ 5×50mm)
		Hios H5	+ #1 (φ 5×50mm) + #2 (φ 5×50mm) - (φ 5×50mm)	+ #1 (φ 5×50mm) + #2 (φ 5×50mm) - (φ 5×50mm)	+ #1 (φ 5×50mm) + #2 (φ 5×50mm) - (φ 5×50mm)	+ #1 (φ 5×50mm) + #2 (φ 5×50mm) - (φ 5×50mm)
	1/4 HEX	+ #1 (φ 5×50mm) + #2 (φ 5×50mm) - (φ 5×50mm)	+ #1 (φ 5×50mm) + #2 (φ 5×50mm) - (φ 5×50mm)	+ #1 (φ 5×50mm) + #2 (φ 5×50mm) - (φ 5×50mm)	+ #1 (φ 5×50mm) + #2 (φ 5×50mm) - (φ 5×50mm)	+ #1 (φ 5×50mm) + #2 (φ 5×50mm) - (φ 5×50mm)
	Screw for adjustment			M2.6 (panhead screw)	M2.6 (panhead screw)	
	3PIN to 2PIN power cable adaptor is attached	1 piece	1 piece	1 piece	1 piece	1 piece

Real-Time OK/Error Detecting Screwdriver

PG Brushless

All fastening operations are monitored and checked with the criteria which value is saved in the PG system. The problems in fastening operations such as insufficient torque, wrong thread joint and screw going askew are monitored and prevented from going through the production line. PG Brushless drivers which has data collecting function are a part of the "New Fastening System" that meets the demand of modern era where the zero defects control is required.



- Instantly determines if a screw passes or fails (OK/NG).
- All items can be checked at the same time as the operation is completed.
- Torque can be monitored for each tightening procedure.
- Can be connected to a PC for data recording.
- Job data can be checked at a glance.



Setting the Pass/Fail values

Screw tightening quality can be controlled by setting the checking criteria.

[Teaching]

The checking criteria (learned values) are set by conducting an actual screw tightening procedure, the torque value, minimum work time (Min), maximum work time (Max) are then remembered.

[Percentage Setting]

Range selection ± (2%, 5%, 10%, 20%)

The acceptable range of passing values for torque, work time minimum and work time maximum can be set individually.



All data is saved as Job is done

By managing data, it is possible to verify past work details.

[Data display]

Measurement data can be displayed in Excel's numerical display. Graphs are also generated automatically. We can also develop customized programs to meet the current needs and the current work environment of the customer. Additional extension features are possible if used with a PLC.

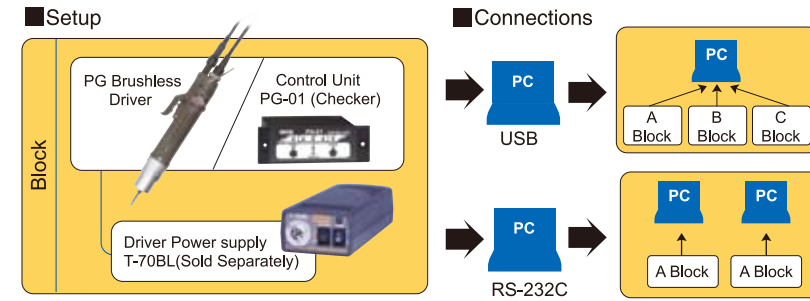
Indications during every tightening procedure

OK/NG results are confirmed with an LED and buzzer while work is being done.

OK/NG is displayed on the PC and measurement values are displayed in the datasheet.



Pass-guard System Setup and Connections

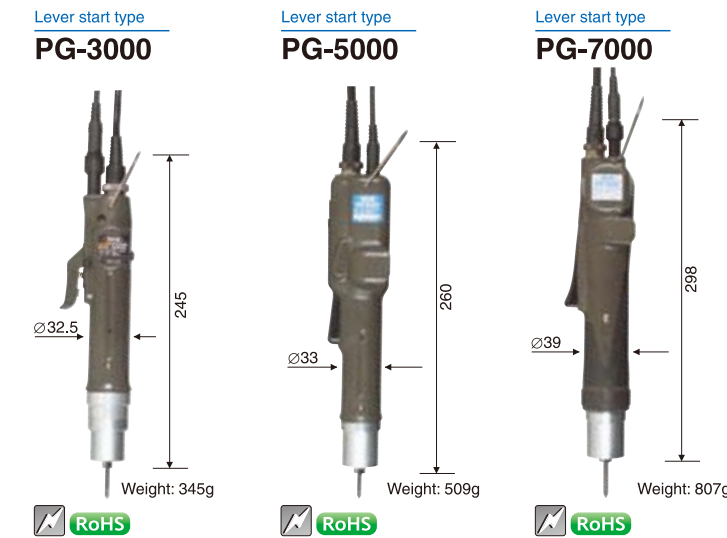


Driver Power Supply T-70BL (Sold separately)

Specifications

Primary side	Input power	AC 100V-240V (47-63Hz)
	Power capacity	70W
Secondary side output		2(30V), 1(20V) 2 stage switchable
External dimensions (mm)		88 x 210 x 52 (H) mm
Weight (g)		830g
Power cord length(m)		1.8m (inlet type)
Accessories		2 mounting points, 4 mounting screws

PG Brushless Drivers



Specifications

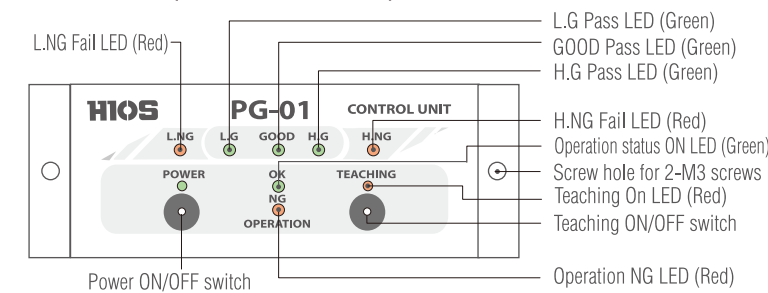
*PG Drivers are available only lever-start type

Model		PG-3000	PG-5000	PG-7000
Output Torque Range	N·m	0.2-0.55	0.4-1.2	0.7-2.8
	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		
Unloaded Rotation Speed(r.p.m)±10%	High	980	900	960
	Low	680	590	630
Screw Size (mm)	Small Size 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 Type		Hios H4	Hios H4	Hios H5 or 1/4HEX
Driver cord length / Sensor cord length(m)		2m(6P) / 1.7m	2m(6P) / 1.7m	2m(6P) / 1.7m
Included accessories		Hios bit, Sampling Demo software (Windows XP Excel), RS-232C cable, USB cable, AC adapter (AC100-240V compatible)		

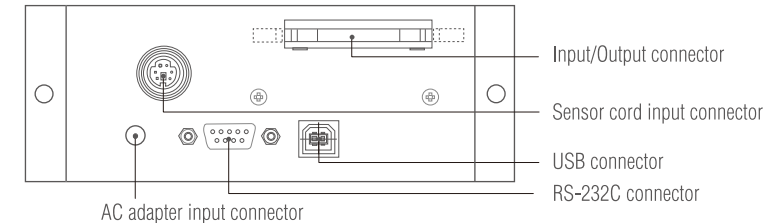
N.B: Windows XP and Excel is Trade mark of Microsoft.

Control Unit PG-01 (Checker)

Front Panel (Name and Functions)



Rear panel



Specifications

Model	PG-01				
RS-232C Communication	Communication speed	Start Bit	Stop Bit	Data	Data format
	4800BPS	1 Bit	1 Bit	8 Bit	ASCII
External Dimensions (mm)					
	*Dimensions do not include protrusions				
Weight(g)	520g				
AC Adaptor	Input:AC100V-240V (50 / 60 Hz), Output:DC12V				

I/O input / output connector

Pin No.	Output Signal	Description
13	L.NG (Fail)	Torque is below the LOW GOOD value (L.G)
14	L.G (Pass)	Torque is within the allowed percentage range of the LOW GOOD value
15	GOOD (Pass)	Within the HI and LOW values
16	H.G (Pass)	Torque is within the allowed percentage range of the HI GOOD value
17	H.NG (Fail)	Torque is above the HI GOOD value (H.G)
12	COM GND	-

Digital Torque Meter Series

- Measurement data can be transferred to a computer. (This requires an input tool.)
- Up to 100 data measurements can be stored in memory at a time. (HP series and HDP series)
- Can be checked maximum, minimum and average torque measurement. (HP series and HDP series)
- Measurement can be easily taken in either clockwise or counterclockwise direction.
- Data can be output either numerically or as waveforms.
- Light, compact and operating on a rechargeable battery, it is convenient for carrying around any job site.

HP

HP-10 HP-100

RoHS CE



Use for making torque settings on electric drivers, checking torque of torque wrenches or measuring torque of fasteners, etc.

Model		HP-10	HP-100
Peak measuring range	N · m lbf · in (kgf · cm)	0.015 - 1.000 0.15 - 9.00 (0.15 - 10.00)	0.15 - 10.00 1.5 - 90.0 (1.5 - 100.0)
Accuracy		Up to ± 0.5% (F.S.)	
Measuring modes		track, peak, first peak	
Dimensions (mm)		230 × 124 × 65.2 (H)	
Weight		1.8kg	
Battery pack (charging time)		1.2V NiMH cells 1,000mA (6 hours)	
Continuous running time on a full charge		8 hours	
Battery life		Approx. 300 charges	
Exclusive battery charger		AC 100V-240V input (50 or 60Hz) DC 7.3V-8V output 0.5 A	
Accessories		See p. 18	

HDP

HDP-5 HDP-50 HDP-100 (option)

RoHS CE



Use for measuring slack torque of fastened screws or torque increase.

Model		HDP-5	HDP-50	HDP-100
Peak measuring range	N · m lbf · in (kgf · cm)	0.015 - 0.500 0.15 - 4.40 (0.15 - 5.00)	0.15 - 5.00 1.5 - 44.0 (1.5 - 50.0)	0.15 - 10.00 1.5 - 90.0 (1.5 - 100.0)
Accuracy		Up to ± 0.5% (F.S.)		
Measuring modes		track, peak, first peak		
Dimensions (mm)	Display unit	125 × 95.6 × 42(H)		
Weight	Detector	104(L) × Ø21	160(L) × Ø34.5	
	Detector bit socket	Hios 4 or 1/4 Hex	Hios 5 or 1/4 Hex	1/4 Hex
Weight	Display unit	780g		
	Detector	68g		250g
Detector cord		1.7m (No.: DPC-0506)		
Battery pack (charging time)		1.2V NiMH cells 1,000mA (6 hours)		
Continuous running time on a full charge		8 hours		
Battery life		Approx. 300 charges		
Exclusive battery charger		AC 100V-240V input (50 or 60Hz) DC 7.3V-8V output 0.5A		
Accessories		See p. 18		

HM

HM-10 HM-100

RoHS CE



Use for control of torque of automatic drivers.

Model		HM-10	HM-100
Peak measuring range	N · m lbf · in (kgf · cm)	0.015 - 1.000 0.15 - 9.0 (0.15 - 10.0)	0.15 - 10.00 1.5 - 90.0 (1.5 - 100.0)
Accuracy		Up to ± 0.5% (F.S.)	
Measuring modes		track, peak	
Dimensions (mm)		165 × 95 × 55(H)	
Weight		1.0kg	
Detector cord		1.7m (No.: DPC-0506)	
Battery pack (charging time)		1.2V Nicd cell (8 hours)	
Continuous running time on a full charge		30 hours	
Battery life		Approx. 300 charges	
Exclusive battery charger		AC 100V, 120V or 220V-240V input DC 7.2V output 120mA	
Accessories		See p. 18	

HIT

HIT-200 HIT-500 HIT-2000

RoHS CE



Use for control of torque of impact drivers and torque wrenches.

Model		HIT-200	HIT-500	HIT-2000
Peak measuring range	N · m lbf · in (kgf · cm)	0.15 - 18.00 1.5 - 160.0 (1.5 - 180.0)	1.5 - 50.0 15 - 440 (15 - 500)	25.0 - 180.0 250 - 1600 (250 - 1800)
Accuracy		Up to ± 1% (F.S.)		
Measuring modes		peak, track, first peak		
Dimensions of display (mm)		165 × 95 × 55(H)		
Weight	Display unit	1.0kg		
	Detector	0.85kg	1.65kg	1.65kg
Socket dimensions		9.5sq mm	12.7sq mm	12.7sq mm
Detector cord		1.7m (No.: DPC-0506)		
Battery pack (charging time)		1.2V Nicd cell (8 hours)		
Continuous running time on a full charge		30 hours		
Battery life		Approx. 300 charges		
Exclusive battery charger		AC 100V, 120V or 220V-240V input DC 7.2V output 120mA		

HP Standard Accessories

Market Areas	Model	Fidaptor with Safety Guard	Driver Shaft*	Fidaptor Buffer Spring	Grease	Others
China Japan Korea Taiwan Hong Kong Singapore	HP-10	Hios shank Ø4 Measuring range: 0.15-0.6 N · m (Yellow Spring) 1 piece Part No. TF4G-Z				
	HP-100	Hios shank Ø5 Measuring range: 0.5-3 N · m (Black Spring) 1 piece Part No. TF5G-Z	Hex. shank (convertible shaft) 1 piece 5 mm subtense (upper) 6.35 mm subtense (Lower) Part No. TF6XG-0010 (A) Hios shank Ø4 1 piece Part No. TF5G-0010-4 (B)	Yellow Spring 1 piece Measuring range: 0.15-0.6 N · m Part No. CL65-0040		Battery Charger *See Battery Charger List
Europe U.S.A. Canada U.K. Australia	HP-10	Hex. shank (convertible shaft) Measuring range: 0.15-0.6 N · m (Yellow Spring) 1 piece 5 mm subtense (upper) 6.35 mm subtense (Lower) Part No. TF6SG-Z				Calibration Sheet
	HP-100	Hex. shank (convertible shaft) Measuring range: 0.5-3 N · m (Black Spring) 1 piece 5 mm subtense (upper) 6.35 mm subtense (Lower) Part No. TF6XG-Z		Yellow Spring 1 piece Measuring range: 0.15-0.6 N · m Part No. CL65-0040		Calibration Sheet

*Driver shaft This threaded shaft is provided for use when the Hios 5mm shank does not fit the bit of the driver to be measured.

Optional Fidaptors

For HP-10

Hios shank Ø4
Measuring range:
Less than
0.25 N · m
(Black Spring)
1 piece
Part No.
TF4S-Z

For HP-100

Hex. shank
Measuring range:
3-9 N · m
(Black Spring)
1 piece
Part No.
TF6U-Z

Hex. shank
Measuring range:
3-9 N · m
(Black Spring)
1 piece
Part No.
TF6UP-Z

HDP Standard Accessories

Market Areas	Model	Bit	Sensor Unit Cord	Support Arm	Others
China Japan Korea Taiwan Hong Kong Singapore	HDP-5	Hios shank Ø4 +Bit #0 × 40 mm #1 × 40 mm #2 × 40 mm	1.7m 1 piece Part No. DPC-0506	1 piece	Battery Charger *See Battery Charger List Calibration Sheet
	HDP-50	Hios shank Ø5 +Bit #0 × 60 mm #1 × 60 mm #2 × 60 mm			
	HDP-100 (Option)	6.35 mm hex shank +Bit #1 × 50 mm #2 × 50 mm			
Europe U.S.A. Canada U.K. Australia	HDP-5	6.35 mm hex shank +Bit #1 × 50 mm #2 × 50 mm	1.7m 1 piece Part No. DPC-0506	1 piece	Calibration Sheet
	HDP-50 (Option)	6.35 mm hex shank +Bit #1 × 50 mm #2 × 50 mm			

HM Series

Model	Fidaptor	Fidaptor Buffer Spring	Screws of Fidaptor	L-Type Wrench	Sensor Unit Cord	Others
HM-10	Phillips head #1 bit measuring range: 0.15-0.6 N · m one yellow spring Part No. TFM26-Z		5 pcs. of Phillips-head pan screw 2 pcs. of Hexagonal head screw	The Opposite side: 1.5mm 1Piece		Battery Charger *See Battery Charger List
HM-100	Phillips head #2 bit measuring range: 0.5-3 N · m one black spring Part No. TFM40-Z	Yellow Spring 1 piece Measuring range: 0.15-0.6 N · m Part No. CL65-0040	5 pcs. of Phillips-head pan screw 2 pcs. of Hexagonal head screw	The Opposite side: 1.5mm, 2mm 1Piece each	1.7m 1 piece Part No. DPC-0506	Calibration Sheet

Optional Fidaptors

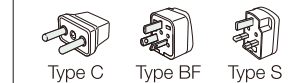
For HM-10

Phillips head #0 bit measuring range:
Less than 0.25 N · m (for measurement)
(Red spring)
Part No. **TFM20-Z**

Battery Charger List

Market Areas	Battery Charger
China* Japan Korea Taiwan Hong Kong* Singapore* U.S.A. Canada U.K.* Australia*	100V-240V Part No. TCH-MULTI (A plug)
Europe	100V-240V Part No. TCH-EU (C plug)

* Note : With 3 types Adaptor Plug



HM/HIT Series

Market Areas	Battery Charger
Japan	100V Part No. TCH-100N
Korea Taiwan U.S.A. Canada	120V Part No. TCH-120N
Hong Kong Europe China	220V-240V Part No. TCH-230G
Singapore U.K. Australia	220V-240V Part No. TCH-230B

Variations

Suction



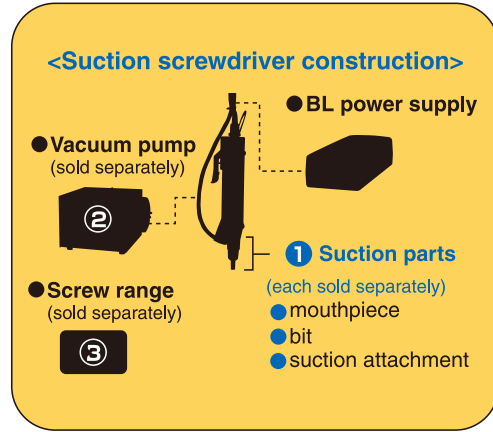
A suction attachment has been installed as standard on the screwdriver. The vacuum assists in picking screws up. Screws that cannot be picked up magnetically, as well as minus screws, can also be picked up with the suction device, while dust generated during screw tightening is also eliminated.

When using the BL Series with suction

① and ② are required when using the BL screwdriver and BL power supply (sold separately). Purchase ③ if required for the job.

When using the VB Series with suction

① and ② are required when using the VB screwdriver (sold separately). Purchase ③ if required for the job.

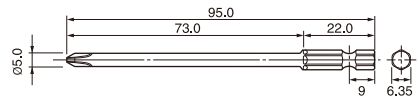


① Suction parts The mouthpiece, bit and suction attachment are all sold separately.



Model	Mouthpiece model (Dimensions chart)	Bit length (Dimensions chart)	Suction attachment model number
BL Series	BL-2000	H4 60mm (Total length)	CLQ2-SET-ESD
	BL-3000		BLQ3N-SET
	BL-5000	H4 40mm (Total length)	BLQ5-SET
	BL-7000	H5 80mm (Total length)	BLQ7-SET
VB Series	VB-1820 (100V)	H5 100mm (Total length)	VZQ18-SET
	VB-3012 (100V)		
	VB-1820 (120V, 220V-240V)	6.35mm hex bit (Described below.)	
	VB-3012 (120V, 220V-240V)		
	VB-4504 (120V, 220V-240V)		

*: Include PS type
Please enquire about the BL-5000 and BL-7000 before purchase.
Caution. A Hios shank is required in the bit socket for suction to operate.
The suction device cannot be attached to the hexagonal shank.

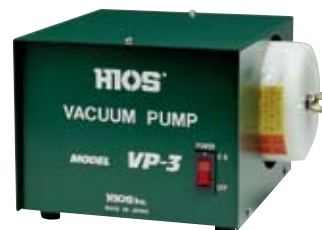


Vacuum pump (for suction screwdriver)

VP-3

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

RoHS CE



Model	VP-3
Primary power input	AC100V,120V or 220-240V ±5%
Max. power consumption	39W
Vacuum attained	-350mm Hg
Dimensions (mm)	200×188×142(H)mm
Weight (kg)	3.8kg

Peripherals and accessories

Pistol attachment

PAB-70/PAB-18/PAB-18PS

The regular attachment can be replaced with a pistol type for horizontal tightening.



Compatible models ———
<PAB-70> BL-7000
 RoHS

Compatible models ———
<PAB-18> VB-1820 (Lever start type)
VB-3012 (Lever start type)
<PAB-18PS> VB-1820PS (Push-to start type)
VB-3012PS (Push-to start type)
 RoHS

Angle attachment

ANGLV-Z-CH (For Hios Shank)

ANGLV-Z-XX (For HEX Shank)

The angle attachment can be installed to the end of the screwdriver for screws that are in hard to reach places.

Compatible models ———
VB-1820 (Lever start type)
VB-3012 (Lever start type)

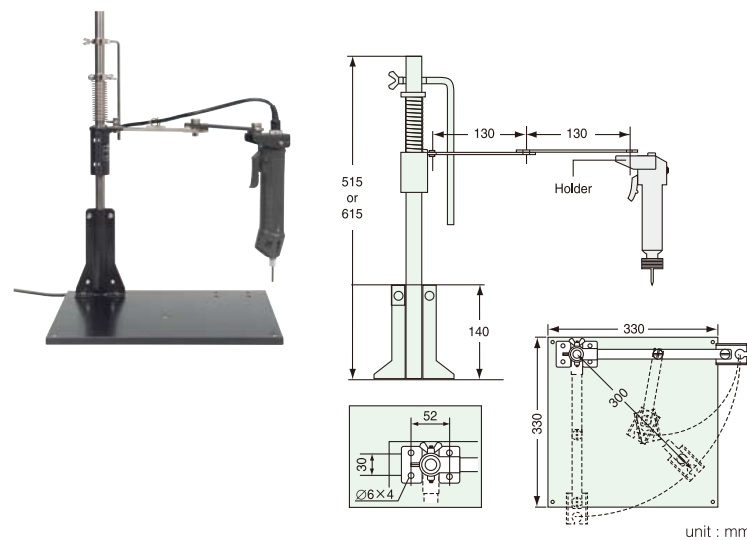


* The screwdriver output with the attachment installed should be kept below 2 N·m.

Vertical screwdriver operating stand

The stand constantly keeps the screwdriver in a vertical position, allowing accurate screw tightening and preventing any faulty screw adjustments.

VMS-40
VMS-50
 RoHS



Model	VMS-40	VMS-50
Stand Length	515mm	615mm
Weight	1.5kg	2.65kg
Driver model	BL driver, VB driver	

* If the BL-7000 and VB screwdriver series are used with the VMS-40 and VMS-50 the holder is sold separately. Please make an enquiry before your purchase.

Flexible screwdriver cord 2m/3m

Flexible cord that is resistant to kinking or bending for heavy duty.

Compatible models ———
<2m> BL Series (5P)
<3m> BL-OPC Series (6P)
 RoHS



Screwdriver extension cord 3m/5m

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

Compatible models ———
<3m, 5m> BL Series (5P)
 RoHS



* The extension cord is connected between the screwdriver and screwdriver cord, or between the power supply and screwdriver cord.
 * Using the extension cord will lower the voltage due to the internal resistance of the cord. Screwdriver specifications may change when the extension cord is used.

Power supply with screw counter

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

Buzzer to indicate screw tightening complete

A buzzer will sound when the final screw has been tightened to allow a check of complete screw tightening.

Auto reset function

The count down number is automatically reset after all screws have been tightened so that work can start on the next job immediately. The screwdriver will not be operable until the "next work set" confirmation SET signal is input.

Count timer function

Prevents confirmation tightening, supplemental tightening and secondary tightening from being counted.

Normal power mode

In normal power mode the count function is disabled.

Multi input (AC100V to 240V)

BLOP-STC3 (BL-OPC screwdriver single power point)



Model		BLOP-STC3
Primary side	Power input	AC 100V-240V
	Fuse rating	3A / 250V(with spare fuses)
Power consumption (W)		75W output with DC31V input
Secondary side	Output voltage	HI: DC31V±5% LOW: DC20V±5% (with overload protection)
External dimensions (mm)		127×208×76(H)mm
Weight (kg)		1.8kg
Power cord length		1.8m
Accessories		8 crimp terminals

AC100V to 120V

VZOP-STC (VB-OPC screwdriver or VBH screwdriver single power point)



Model		VZOP-STC
Primary side	Power input	AC (100V-200V) ±5% (50/60 Hz)
	Fuse rating	6A / 250V(with spare fuses)
Power consumption (W)		2W / load free
External dimensions (mm)		160×175×84(H) mm
Weight (kg)		1.5kg
Power cord length		1.8m
Accessories		8 crimp terminals, 1 minus screwdriver

Part names and functions BLOP-STC3

Front panel



Function (F1, F2, F3) operation mode, operation time, buzzer settings etc

	Set number of screws to be tightened (01 to 99) COUNT NUMBER	Set the number of screws to be tightened
	Set count timer (.00 to 0.99 seconds) COUNT TIMER (CN-T)	Setting to prevent counting of secondary tightening operations
F1	Set work set timer (0.0 to 3.9 seconds) WORK SET TIMER (WS-T)	Time until the screwdriver is operational
	Set work reset timer (0.0 to 3.9 seconds) WORK RESET TIMER (WR-T)	Time until the screwdriver becomes not operational
	Set reverse count timer (0.1 to 1.0 seconds) REVERSE COUNT TIMER (RCN-T)	Time until the count starts after reverse operation
F2	Display the rest of the screw. Control the sound of the buzzer. Setting the ON/OFF of the reverse count.	
F3	Control the motion of the counter at any time. Setting the ON/OFF of the torque-up sound of the buzzer.	
Metal connector	Connects to the BL-OPC screwdriver	

* The control panel display and some functions of the VZOP-STC differ slightly.

Rear panel



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 fixed released" signal from external equipment
C	SET	Input terminal for the "work set confirmation" signal
D	GND	—
E	+DC24V	Power supply terminal for external equipment, maximum rating DC24V/0.2A
F	VALVE	Output terminal for external equipment control, open collector output (maximum load rating DC30V/80mA)
G	BZ	Work complete output terminal, open collector output (maximum load rating DC30V/80mA)
H	ER BZ	Warning output open collector output if work is removed before operation is complete (maximum load rating DC30V/80mA)

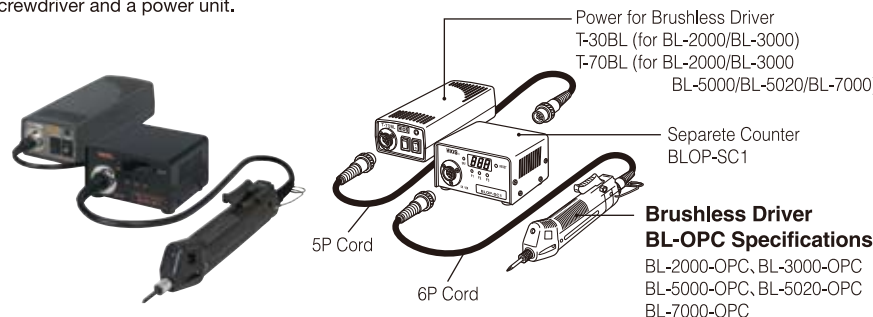
Separate Counter

Compact external screw counter. Connected in-between a screwdriver and a power unit.

BLOP-SC1 (For one drivers)

Compatible model:BL-OPC Series

Model		BLOP-SC1
Primary side	Power input	DC 20V-31V
	Power consumption (W)	5W output with DC31V input
Secondary side	Output voltage	Depends on the HIOS Power Unit (Same as primary power voltage)
External dimensions (mm)		110×100×55(H) (casing only)
Weight (kg)		0.6
Power cord length		1.5 (5P)



Variations

Anti-static electricity features

BL-ESD

Anti-electrostatic material used in manufacture of the body case, switches, lever and power cord to protect against electrostatic charge accumulations. ●Surface resistance: 10⁴Ω

Lever & Push start type

BL-3000ESD
BL-5000ESD
BL-5000ESD-15
BL-5000ESD-20
BL-5020ESD
BL-7000ESD
BL-7000ESD-20



Suction, anti-static electricity features

BLQ

Lever start type

BLQ-2000

Two-way start type

BLQ-3000
BLQ-5000
BLQ-5000-15
BLQ-5000-20
BLQ-7000
BLQ-7000-20



Clean room, anti-static electricity features

BLQ-CR-ESD

The screwdrivers is equipped with a Vacuum pipes as well as a suction head to insure complete remover of fine particles generated by the screw tightening process in clean rooms.

●Surface resistance: 10⁴Ω ●Cleanliness class 100

Lever start type

BLQ-2000CR

Two-way start type

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



Clean room

BLQ-CR

Lever start type

BLQ-2000CR

Two-way start type

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



Screwdriver for screw counter

OPC

Operates with the screw counter BLOP-STC3 to ensure that all screws are tightened. The screwdriver can be operated in ordinary and reverse directions as well as providing torque increase signals (after screw tightening is complete).

Compatible with BLOP-STC3

BL-OPC

Lever start type

BL-2000-OPC



BL-OPC

Two-way start type

BL-3000-OPC
BL-5000-OPC
BL-5020-OPC
BL-7000-OPC

Compatible with VZOP-STC

CE certified models are also available for VB series. (220-240V)
Please inquire us for more details. (VB-OPC Series)

VB-OPC

Lever start type

VB-1510-OPC
VB-1510-18-OPC
VB-1820-OPC
VB-3012-OPC



Push-to start type

VB-1510PS-OPC
VB-1510PS-18-OPC
VB-1820PS-OPC
VB-3012PS-OPC
VB-4504PS-OPC



VBH-OPC

Push-to start type

VBH-1820PS-OPC
VBH-3012PS-OPC

Variations

Suction



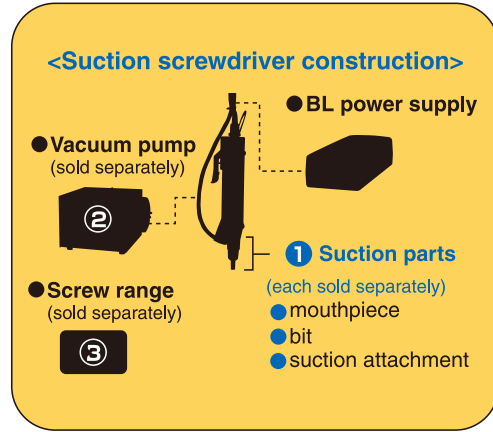
A suction attachment has been installed as standard on the screwdriver. The vacuum assists in picking screws up. Screws that cannot be picked up magnetically, as well as minus screws, can also be picked up with the suction device, while dust generated during screw tightening is also eliminated.

When using the BL Series with suction

① and ② are required when using the BL screwdriver and BL power supply (sold separately). Purchase ③ if required for the job.

When using the VB Series with suction

① and ② are required when using the VB screwdriver (sold separately). Purchase ③ if required for the job.

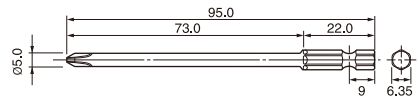


① Suction parts The mouthpiece, bit and suction attachment are all sold separately.



Model	Mouthpiece model (Dimensions chart)	Bit length (Dimensions chart)	Suction attachment model number
BL Series	BL-2000	H4 60mm (Total length)	CLQ2-SET-ESD
	BL-3000		BLQ3N-SET
	BL-5000	H4 40mm (Total length)	BLQ5-SET
	BL-7000	H5 80mm (Total length)	BLQ7-SET
VB Series	VB-1820 (100V)	H5 100mm (Total length)	VZQ18-SET
	VB-3012 (100V)		
	VB-1820 (120V, 220V-240V)	6.35mm hex bit (Described below.)	
	VB-3012 (120V, 220V-240V)		
	VB-4504 (120V, 220V-240V)		

*: Include PS type
Please enquire about the BL-5000 and BL-7000 before purchase.
Caution. A Hios shank is required in the bit socket for suction to operate.
The suction device cannot be attached to the hexagonal shank.

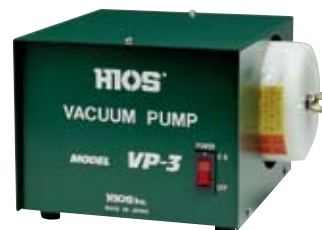


Vacuum pump (for suction screwdriver)

VP-3

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

RoHS CE



Model	VP-3
Primary power input	AC100V,120V or 220-240V ±5%
Max. power consumption	39W
Vacuum attained	-350mm Hg
Dimensions (mm)	200×188×142(H)mm
Weight (kg)	3.8kg

Peripherals and accessories

Pistol attachment

PAB-70/PAB-18/PAB-18PS

The regular attachment can be replaced with a pistol type for horizontal tightening.



Compatible models ———
<PAB-70> BL-7000
 RoHS

Compatible models ———
<PAB-18> VB-1820 (Lever start type)
 VB-3012 (Lever start type)
<PAB-18PS> VB-1820PS (Push-to start type)
 VB-3012PS (Push-to start type)
 RoHS

Angle attachment

ANGLV-Z-CH (For Hios Shank)

ANGLV-Z-XX (For HEX Shank)

The angle attachment can be installed to the end of the screwdriver for screws that are in hard to reach places.

Compatible models ———
VB-1820 (Lever start type)
VB-3012 (Lever start type)

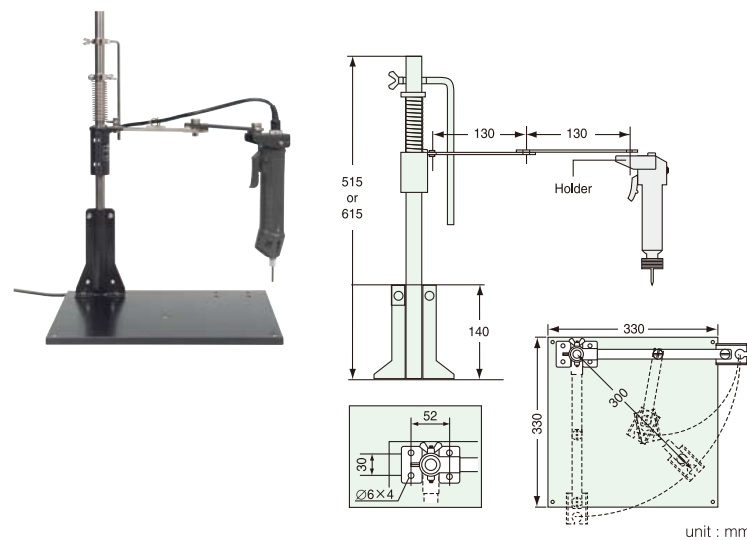


* The screwdriver output with the attachment installed should be kept below 2 N·m.

Vertical screwdriver operating stand

The stand constantly keeps the screwdriver in a vertical position, allowing accurate screw tightening and preventing any faulty screw adjustments.

VMS-40
VMS-50
 RoHS



Model	VMS-40	VMS-50
Stand Length	515mm	615mm
Weight	1.5kg	2.65kg
Driver model	BL driver, VB driver	

* If the BL-7000 and VB screwdriver series are used with the VMS-40 and VMS-50 the holder is sold separately. Please make an enquiry before your purchase.

Flexible screwdriver cord 2m/3m

Flexible cord that is resistant to kinking or bending for heavy duty.

Compatible models ———
<2m> BL Series (5P)
<3m> BL-OPC Series (6P)
 RoHS



Screwdriver extension cord 3m/5m

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

Compatible models ———
<3m, 5m> BL Series (5P)
 RoHS



* The extension cord is connected between the screwdriver and screwdriver cord, or between the power supply and screwdriver cord.
 * Using the extension cord will lower the voltage due to the internal resistance of the cord. Screwdriver specifications may change when the extension cord is used.

Digital Torque Meter Series

- Measurement data can be transferred to a computer. (This requires an input tool.)
- Up to 100 data measurements can be stored in memory at a time. (HP series and HDP series)
- Can be checked maximum, minimum and average torque measurement. (HP series and HDP series)
- Measurement can be easily taken in either clockwise or counterclockwise direction.
- Data can be output either numerically or as waveforms.
- Light, compact and operating on a rechargeable battery, it is convenient for carrying around any job site.

HP

HP-10 HP-100

RoHS CE



Use for making torque settings on electric drivers, checking torque of torque wrenches or measuring torque of fasteners, etc.

Model		HP-10	HP-100
Peak measuring range	N · m lbf · in (kgf · cm)	0.015 - 1.000 0.15 - 9.00 (0.15 - 10.00)	0.15 - 10.00 1.5 - 90.0 (1.5 - 100.0)
Accuracy		Up to ± 0.5% (F.S.)	
Measuring modes		track, peak, first peak	
Dimensions (mm)		230 × 124 × 65.2 (H)	
Weight		1.8kg	
Battery pack (charging time)		1.2V NiMH cells 1,000mA (6 hours)	
Continuous running time on a full charge		8 hours	
Battery life		Approx. 300 charges	
Exclusive battery charger		AC 100V-240V input (50 or 60Hz) DC 7.3V-8V output 0.5 A	
Accessories		See p. 18	

HDP

HDP-5 HDP-50 HDP-100 (option)

RoHS CE



Use for measuring slack torque of fastened screws or torque increase.

Model		HDP-5	HDP-50	HDP-100
Peak measuring range	N · m lbf · in (kgf · cm)	0.015 - 0.500 0.15 - 4.40 (0.15 - 5.00)	0.15 - 5.00 1.5 - 44.0 (1.5 - 50.0)	0.15 - 10.00 1.5 - 90.0 (1.5 - 100.0)
Accuracy		Up to ± 0.5% (F.S.)		
Measuring modes		track, peak, first peak		
Dimensions (mm)	Display unit	125 × 95.6 × 42(H)		
Weight	Detector	104(L) × Ø21	160(L) × Ø34.5	
	Detector bit socket	Hios 4 or 1/4 Hex	Hios 5 or 1/4 Hex	1/4 Hex
Weight	Display unit	780g		
	Detector	68g		250g
Detector cord		1.7m (No.: DPC-0506)		
Battery pack (charging time)		1.2V NiMH cells 1,000mA (6 hours)		
Continuous running time on a full charge		8 hours		
Battery life		Approx. 300 charges		
Exclusive battery charger		AC 100V-240V input (50 or 60Hz) DC 7.3V-8V output 0.5A		
Accessories		See p. 18		

HM

HM-10 HM-100

RoHS CE



Use for control of torque of automatic drivers.

Model		HM-10	HM-100
Peak measuring range	N · m lbf · in (kgf · cm)	0.015 - 1.000 0.15 - 9.0 (0.15 - 10.0)	0.15 - 10.00 1.5 - 90.0 (1.5 - 100.0)
Accuracy		Up to ± 0.5% (F.S.)	
Measuring modes		track, peak	
Dimensions (mm)		165 × 95 × 55(H)	
Weight		1.0kg	
Detector cord		1.7m (No.: DPC-0506)	
Battery pack (charging time)		1.2V Nicd cell (8 hours)	
Continuous running time on a full charge		30 hours	
Battery life		Approx. 300 charges	
Exclusive battery charger		AC 100V, 120V or 220V-240V input DC 7.2V output 120mA	
Accessories		See p. 18	

HIT

HIT-200 HIT-500 HIT-2000

RoHS CE



Use for control of torque of impact drivers and torque wrenches.

Model		HIT-200	HIT-500	HIT-2000
Peak measuring range	N · m lbf · in (kgf · cm)	0.15 - 18.00 1.5 - 160.0 (1.5 - 180.0)	1.5 - 50.0 15 - 440 (15 - 500)	25.0 - 180.0 250 - 1600 (250 - 1800)
Accuracy		Up to ± 1% (F.S.)		
Measuring modes		peak, track, first peak		
Dimensions of display (mm)		165 × 95 × 55(H)		
Weight	Display unit	1.0kg		
	Detector	0.85kg	1.65kg	1.65kg
Socket dimensions		9.5sq mm	12.7sq mm	12.7sq mm
Detector cord		1.7m (No.: DPC-0506)		
Battery pack (charging time)		1.2V Nicd cell (8 hours)		
Continuous running time on a full charge		30 hours		
Battery life		Approx. 300 charges		
Exclusive battery charger		AC 100V, 120V or 220V-240V input DC 7.2V output 120mA		

HP Standard Accessories

Standard Accessories

Market Areas	Model	Fidaptor with Safety Guard	Driver Shaft*	Fidaptor Buffer Spring	Grease	Others
China Japan Korea Taiwan Hong Kong Singapore	HP-10	Hios shank Ø4 Measuring range: 0.15-0.6 N · m (Yellow Spring) 1 piece Part No. TF4G-Z				
	HP-100	Hios shank Ø5 Measuring range: 0.5-3 N · m (Black Spring) 1 piece Part No. TF5G-Z	Hex. shank (convertible shaft) 1 piece 5 mm subtense (upper) 6.35 mm subtense (Lower) Part No. TF6XG-0010 (A) Hios shank Ø4 1 piece Part No. TF5G-0010-4 (B)	Yellow Spring 1 piece Measuring range: 0.15-0.6 N · m Part No. CL65-0040	1 piece Part No. TF-G3	Battery Charger *See Battery Charger List
Europe U.S.A. Canada U.K. Australia	HP-10	Hex. shank (convertible shaft) Measuring range: 0.15-0.6 N · m (Yellow Spring) 1 piece 5 mm subtense (upper) 6.35 mm subtense (Lower) Part No. TF6SG-Z				Calibration Sheet
	HP-100	Hex. shank (convertible shaft) Measuring range: 0.5-3 N · m (Black Spring) 1 piece 5 mm subtense (upper) 6.35 mm subtense (Lower) Part No. TF6XG-Z		Yellow Spring 1 piece Measuring range: 0.15-0.6 N · m Part No. CL65-0040		Calibration Sheet

*Driver shaft This threaded shaft is provided for use when the Hios 5mm shank does not fit the bit of the driver to be measured.

Optional Fidaptors

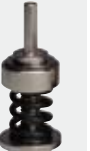
For HP-10

Hios shank Ø4
Measuring range:
Less than
0.25 N · m
(Black Spring)
1 piece
Part No.
TF4S-Z

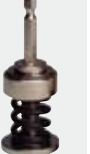


For HP-100

Hex. shank
Measuring range:
3-9 N · m
(Black Spring)
1 piece
Part No.
TF6U-Z



Hex. shank
Measuring range:
3-9 N · m
(Black Spring)
1 piece
Part No.
TF6UP-Z



HDP Standard Accessories

Standard Accessories

Market Areas	Model	Bit	Sensor Unit Cord	Support Arm	Others
China Japan Korea Taiwan Hong Kong Singapore	HDP-5	Hios shank Ø4 +Bit #0 × 40 mm #1 × 40 mm #2 × 40 mm	1.7m 1 piece Part No. DPC-0506	1 piece	Battery Charger *See Battery Charger List
	HDP-50	Hios shank Ø5 +Bit #0 × 60 mm #1 × 60 mm #2 × 60 mm			
	HDP-100 (Option)	6.35 mm hex shank +Bit #1 × 50 mm #2 × 50 mm			
Europe U.S.A. Canada U.K. Australia	HDP-5	6.35 mm hex shank +Bit #1 × 50 mm #2 × 50 mm	1.7m 1 piece Part No. DPC-0506	1 piece	Calibration Sheet
	HDP-50 (Option)	6.35 mm hex shank +Bit #1 × 50 mm #2 × 50 mm			

HM Series

Standard Accessories

Model	Fidaptor	Fidaptor Buffer Spring	Screws of Fidaptor	L-Type Wrench	Sensor Unit Cord	Others
HM-10	Phillips head #1 bit measuring range: 0.15-0.6 N · m one yellow spring Part No. TFM26-Z		5 pcs. of Phillips-head pan screw 2 pcs. of Hexagonal head screw	The Opposite side: 1.5mm 1Piece	1.7m 1 piece Part No. DPC-0506	Battery Charger *See Battery Charger List
HM-100	Phillips head #2 bit measuring range: 0.5-3 N · m one black spring Part No. TFM40-Z	Yellow Spring 1 piece Measuring range: 0.15-0.6 N · m Part No. CL65-0040	5 pcs. of Phillips-head pan screw 2 pcs. of Hexagonal head screw	The Opposite side: 1.5mm, 2mm 1Piece each	1.7m 1 piece Part No. DPC-0506	Calibration Sheet

Optional Fidaptors

For HM-10



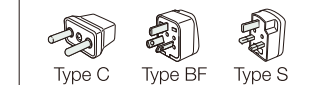
Phillips head #0 bit measuring range:
Less than 0.25 N · m (for measurement)
(Red spring)
Part No. **TFM20-Z**

Battery Charger List

HP/HDP Series

Market Areas	Battery Charger
China* Japan Korea Taiwan Hong Kong* Singapore* U.S.A. Canada U.K.* Australia*	100V-240V Part No. TCH-MULTI (A plug)
Europe	100V-240V Part No. TCH-EU (C plug)

* Note : With 3 types Adaptor Plug



HM/HIT Series






Market Areas	Battery Charger
Japan	100V Part No. TCH-100N
Korea Taiwan U.S.A. Canada	120V Part No. TCH-120N
Hong Kong Europe China	220V-240V Part No. TCH-230G
Singapore U.K. Australia	220V-240V Part No. TCH-230B

Free from picking up the screws!

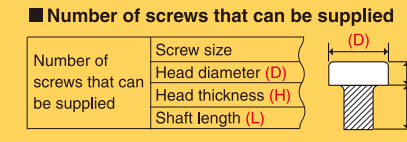
Peripheral equipment

Automatic screw feeder

Model selection chart

Automatic screw feeder models (with replaceable rail)	Screw size										Screw transport type	Model features
	M1.0	M1.2	M1.4	M1.7	M2.0	M2.3	M2.6	M3.0	M4.0	M5.0		
HSF Series 	HSF-10	HSF-12	HSF-14	HSF-17	HSF-20		HSF-26	HSF-30			Horizontal transport type	<ul style="list-style-type: none"> ● Slim and compact body ● Can be used with a range of screw sizes
Neji Taro II HS Series 									HS-40	HS-50	Horizontal transport type	<ul style="list-style-type: none"> ● Can be used with two screw sizes
Neji Taro III HS III Series 	HS III-10C	HS III-12C	HS III-14C	HS III-17C	HS III-20	HS III-23	HS III-26	HS III-30			Horizontal transport type	<ul style="list-style-type: none"> ● Can be used with eight screw sizes
Automatic Neji Taro II HS-RB Series 									HS-40RB	HS-50RB	Horizontal transport type	<ul style="list-style-type: none"> ● Can be used with suction tip
Automatic Neji Taro III HS III-RB Series 			HS III-14 CRB	HS III-17 CRB	HS III-20 RB	HS III-23 RB	HS III-26 RB	HS III-30 RB			Horizontal transport type	<ul style="list-style-type: none"> ● Can be used with suction tip

The sizes (D), (H) and (L) of screws that can be supplied in the specification chart refers to the following parts.



Dimensions provided in specification charts

Automatic screw feeder dimensions do not include surface irregularities. See the DXF file for more information.

DXF File
External dimensions can be viewed in DXF file format from the Hios homepage.
*Special software is required to view DXF files.
[Go to Peripheral Units](#) | [Screw Feeders](#) | [DXF File](#)
www.hios.com

HSF

Ultra-slim 55mm design that is ideal for use in cell production.

- A single unit can handle a range of screw sizes by simply replacing the rail.
- The ultra-slim and compact design is ideal for working in confined areas.
- Can be adapted to line changes.
- The transport speed can be adjusted to suit the screws being used.
- A range of inputs (AC 100V to 240V).



HSF Series

RoHS CE

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

Specifications

Power (AC Adapter)	Power input	AC:100V~240V 50/60Hz
	Power output	DC:12V 1A
Dimensions (mm)/weight (kg)		55(W)×205(D)×14.25(H)/approximately 2.4kg (including the rail)
Screw capacity		40cc

● Included items/1 installed standard rail, 1 hexagonal L-shaped wrench 2mm wide.

Number of screws that can be supplied

Model		HSF-01					HSF-02	
Model number		HSF-10	HSF-12	HSF-14	HSF-17	HSF-20	HSF-26	HSF-30
Number of screws that can be supplied	Screw size	M1.0	M1.2	M1.4	M1.7	M2.0	M2.6	M3.0
	Head diameter (D)	1.2~2.2	1.4~2.5	1.6~2.8	1.9~3.4	2.2~4.2	2.8~5.0	3.2~5.8
	Head thickness (H)	More than 0.35	More than 0.35	More than 0.35	More than 0.35	More than 0.35	More than 0.35	More than 0.35
	Shaft length (L)	1.6~16	1.8~16	2.0~16	2.3~16	2.6~16	3.2~16	3.6~16

Replacement rail model number

Model		HSF-01					HSF-02	
Rail model number		WR-10	WR-12	WR-14	WR-17	WR-20	WR-26	WR-30
Screw size		M1.0	M1.2	M1.4	M1.7	M2.0	M2.6	M3.0

Neji Taro

Speeding up your assembly lines

- A single unit can handle two screw sizes by simply replacing the rail (M4.0 and M5.0).
- The horizontal transport type can handle special screws.
- A single unit can handle eight screw sizes by simply replacing the rail (M1.0 to M3.0).
- The horizontal transport type can handle special screws.



Neji Taro II

HS Series

RoHS CE

- HS-40 [M4.0]
- HS-50 [M5.0]

Specifications

Power (AC Adapter)	Power input	AC:100V±5% 50/60Hz
	Power output	DC:12V 500mA
Dimensions (mm)/weight (kg)		130(W)×215(D)×136(H)/approximately 3.2kg (including the rail)
Screw capacity		150cc
Protection circuits		Motor overload stop function

● Included items/1 installed standard rail, 1 transport plate, 1 hexagonal L-shaped wrench 2mm wide.

Number of screws that can be supplied

Model		Neji Taro II HS-450		Neji Taro III HS III-300							
Model number		HS-40	HS-50	HS III-10C	HS III-12C	HS III-14C	HS III-17C	HS III-20	HS III-23	HS III-26	HS III-30
Number of screws that can be supplied	Screw size	M4.0	M5.0	M1.0	M1.2	M1.4	M1.7	M2.0	M2.3	M2.6	M3.0
	Head diameter (D)	4.3~10.7	5.3~10.7	1.2~9	1.4~9	1.6~9	1.9~9	2.2~9	2.5~9	2.8~9	3.2~9
	Head thickness (H)	More than 0.5	More than 0.5	More than 0.35	More than 0.35	More than 0.35	More than 0.35	More than 0.35	More than 0.35	More than 0.35	More than 0.35
	Shaft length (L)	5~18	6~18	1.6~20	1.8~20	2.0~20	2.3~20	2.6~20	2.9~20	3.2~20	3.6~20

Replacement rail model number

Model		Neji Taro II HS-450		Neji Taro III HS III-300							
Rail model number		R-40	R-50	SR-10	SR-12	SR-14	SR-17	SR-20	SR-23	SR-26	SR-30
Screw size		M4.0	M5.0	M1.0	M1.2	M1.4	M1.7	M2.0	M2.3	M2.6	M3.0

Neji Taro (for automatic line and vacuum pick up)

Speeding up your automated lines

- A single unit can handle two screw sizes by simply replacing the rail (M4.0 and M5.0).
- A fast supply speed is more than capable of supplying screws to the automated tact (M3×8, 120 screws/minute).
- Compatible with suction tips.
- A single unit can handle six screw sizes by simply replacing the rail (M1.4 to M3.0).
- A fast supply speed is more than capable of supplying screws to the automated tact (M3×8, 120 screws/minute).
- Compatible with suction tips.



Neji Taro II

HS-RB Series

RoHS CE

- HS-40RB [M4.0]
- HS-50RB [M5.0]

Specifications

Power (AC Adapter)	Power input	AC:100V±5% 50/60Hz
	Power output	DC:12V 500mA
Dimensions (mm)/weight (kg)		134(W)×275(D)×136(H)/approximately 4.2kg (including the rail)
Screw capacity		150cc
Protection circuits		Motor overload stop function

● Included items/1 installed standard rail, 1 transport plate, 1 hexagonal L-shaped wrench 2mm wide, 1 escaping plate.

Number of screws that can be supplied

Model		Neji Taro II HS-450RB		Neji Taro III HS III-300RB							
Model number		HS-40RB	HS-50RB	HS III-14CRB	HS III-17CRB	HS III-20RB	HS III-23RB	HS III-26RB	HS III-30RB		
Number of screws that can be supplied	Screw size	M4.0	M5.0	M1.4	M1.7	M2.0	M2.3	M2.6	M3.0		
	Head diameter (D)	4.3~10.7	5.3~10.7	1.6~9	1.9~9	2.2~9	2.5~9	2.8~9	3.2~9		
	Head thickness (H)	More than 0.5	More than 0.5	More than 0.35	More than 0.35	More than 0.35	More than 0.35	More than 0.35	More than 0.35		
	Shaft length (L)	5~18	6~18	2.0~20	2.3~20	2.6~20	2.9~20	3.2~20	3.6~20		

Replacement rail model number

Model		Neji Taro II HS-450RB		Neji Taro III HS III-300RB							
Rail model number		R-40RB	R-50RB	SR-14RB	SR-17RB	SR-20RB	SR-23RB	SR-26RB	SR-30RB		
Screw size		M4.0	M5.0	M1.4	M1.7	M2.0	M2.3	M2.6	M3.0		

Mouthpieces

●Table of Mouthpieces and Fasteners (Mini Type) Standard parts are of BS only.

F3 Mouthpiece 18mm

(Driver model) BL-2000, BL-3000, BL-5000

Order No. (Standard)	Standard Mouthpiece Dimensions (mm)			Type of screw head configuration		
	D	d	d1	JIS Phillips head	JCIS Phillips head	JIS Slotted head
F3-00	7.5	Blank		User-finished part	User-finished part	User-finished part
F3-01	3.3	2.1	2.1		type 1 M1.4	
F3-02	3.6	2.6	2.6		type 1 M1.7/type 3 M1.4	
F3-03	4.1	3.1	3.1		type 1 M2.0/type 3 M1.7	
F3-04	4.6	3.6	3.6	Pan, Round M2.0	type 1 M2.3/type 3 M2.0	Pan, Round, Flat M2.0/Countersunk, Oval countersunk M1.7
F3-05	5.1	4.1	4.1	Pan, Round M2.3/Countersunk, Oval countersunk M2.0	type 1 M2.6/type 3 M2.3	Countersunk, Oval countersunk M2.0
F3-06	5.8	4.3	4.5	Pan, Round M2.6	type 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 M2.3a		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, Oval countersunk M1.2
F3-17	4.3	3.3	3.3			Pan, Round, Flat M1.7

●Mouthpieces are supplied in packs of three.

Diagram of Mouthpiece

Bit

- H4 40mm (Overall length)
 - (Driver model)** BL-5000
- H4 60mm (Overall length)
 - (Driver model)** BL-2000, BL-3000

●Table of Bits and Fasteners

Head recess	Screw size	Adaptive screwdriver bit	Order code
JIS +	M2.0-M2.6	BP-H4-#1-3.0X40 (or 60mm)	BP4130040(60)
	M3.0	BP-H4-#2-4.0X40 (or 60mm)	BP4240040(60)
JCIS +	M1.4 type 1	BP-H4-#0-1.8X40 (S)	BP4018040(S)
	M1.4-M1.7	BP-H4-#0-2.0X40 (or 60mm)	BP4020040(60)
JCIS -	M2.0-M2.6	BS-H4-#0-2.5X40 (or 60mm)	BS4025040(60)
	M1.2	BS-H4-2.0X40 (or 60mm)	BS420040(60)
	M1.4	BS-H4-2.5X40 (or 60mm)	BS425040(60)
	M1.7-M2.0	BS-H4-3.0X40 (or 60mm)	BS430040(60)
	M2.3-M3.0	BS-H4-4.0X40 (or 60mm)	BS440040(60)

• (60) on the list means 60mm. Final number (40 or 60) of order code depends on entire length of driver bit.
• Please contact us for the special order item (S) 1.8X4.0.

●Table of Mouthpieces and Fasteners (Standard Type) Standard parts are of BS only.

F6 Standard Type Mouthpiece

(Driver model) BL-7000, VB-1820, VB-1820PS, VB-3012, VB-3012PS

Diagram	Order No. (Standard)	Standard Mouthpiece Dimensions (mm)					Type of screw head configuration		
		D	D1	d	d1	d2	JIS Phillips head	JIS Slotted head	
B	F6-00	8.0					Blank	User-finished part	User-finished part
	F6-01	4.6	7.0	3.5	3.6	5.5	Pan, Round M2.0	Pan, Round M2.0	
	F6-02	5.1	7.0	3.5	4.1	5.5	Pan, Round M2.3/Countersunk, Oval countersunk M2.0	Pan, Round M2.3	
	F6-03	5.8	7.0	3.5	4.5	5.5	Pan, Round M2.6/Binding, Truss M2.0	Binding, Truss M2.0	
	F6-04	7.0		5.5	5.5		Pan, Round M3.0/Binding M2.6	Pan, Round M3.0/Binding M2.6	
A	F6-05	7.5		5.5	6.0		Countersunk, Oval countersunk M3.0	Truss M2.6	
	F6-06	8.5		5.5	7.0		Pan, Round M4.0/Truss M3.0	Pan, Round M4.0/Truss M3.0	
	F6-09	6.5	7.0	3.5	5.2	5.5	Countersunk, Oval countersunk M2.6	Truss M2.3	
B	F6-10	14.0					Blank	User-finished part	User-finished part
	F6-11	7.7		5.5	6.3		Binding M3.0	Binding M3.0	
	F6-13	9.7		5.5	8.3		Binding M4.0	Binding M4.0	
	F6-16	9.4		5.5	8.0		Countersunk, Oval countersunk M4.0		
	F6-22	9.7		7.5	8.3			Binding M4.0	

●Mouthpieces are supplied in packs of three.

Diagram A

Diagram B

Bit

- H5 80mm (Overall length)
 - (Driver model)** BL-7000
- H5 100mm (Overall length)
 - (Driver model)** VB-1820, VB-1820PS, VB-3012, VB-3012PS

●Table of Bits and Fasteners

Head recess	Screw size	Adaptive screwdriver bit	Order code
JIS +	M2.0-M2.6	BP-H5 #1-3.0X80	BP5130080
	M3.0-M5.0	BP-H5 #2-5.0X80	BP5250080
(Use #1 for Truss M3.0)			
JIS -	M2.0-M2.3	BS-H5-3.0X80	BS530080
	M2.6-M4.0	BS-H5-5.0X80	BS550080
(Use H5 7.0 x 80 mm for Binding M4.0)			
JIS +	M2.0-M2.6	BP-H5 #1-3.0X100	BP5130100
	M3.0-M5.0	BP-H5 #2-5.0X100	BP5250100
JIS -	M3.0-M5.0	BP-H5 5.0X100	BS550100

Please contact Hios concerning model BLQ-7000.

●Blank Mouthpiece Order Code No.

Model	Order Code	Size (mm)	Package
Blank Mouthpiece	F3-00	Ø8X18	3 pieces/1 PACK
	F6-00	Ø8X31	3 pieces/1 PACK
	F6-10	Ø14.0X31	3 pieces/1 PACK

Bit Series

(Driver model)

H4(Ø4) [BL-2000, BL-3000, BL-5000
BL-5000-15, BL-5000-20
VB-1510, VB-1510PS, VB-1510-18
VB-1510-18PS]

H5(Ø5) [BL-5020, BL-7000, BL-7000-20
VB-1820, VB-1820PS, VB-3012
VB-3012PS]

* Please address inquiries to your Hios dealer for hexagonal bit.

Bit for Cross-Slotted Screws BP

Type (Dia. at base mm)	Specifications			Overall Length (mm) (standard type)	Shape	
	Point size No.	Shaft dia. (mm)	Shape of shaft type			
H4 (A 4)	#00	1.5	B	40, 60, 80	◆	
		1.2	B	40		
		1.5, 1.7	B	40, 60, 80		
	#0	1.8	B	60		
		2.0, 2.5	B	40, 60, 80, 100, 120		
		3.0	B	40, 60, 80, 100, 120		
#1	4.0	A	40, 60, 80, 100, 120, 150, 180, 200	◇		
	4.0	A	40, 60, 80, 100, 120, 150			
	2.0	B	60			
H5 (A 5)	#0	2.5	B	60, 80, 100, 120	◆	
		3.0	B	40, 60, 80, 100, 120		
	#1	5.0	A	40, 60, 80, 100, 120, 150, 180, 200, 250, 300		◇
		5.0	A	40, 60, 80, 100, 120, 150, 180, 200, 250, 300, 400		
	#2	7.0	C	60, 80, 100, 120		◇

Dimension of stepped part

	H4	H5		
(a) Shaft dia.	Refer to the left list.	2.0	2.5	3.0
(b) Length	20	20	25	30

*Only the stepped part of H5 + #1 3.0X4.0 is 15mm in length.

*Relationship between point size No. and shape of shaft size
#00→M0.8-M1.0 #0→M1.4-M2.6 #1→M2.0-M2.6 #2→M3.0-M5.0 #3→M6.0-M8.0

Bit for Slotted Screws BS

Type (Dia. at base mm)	Specifications			Overall Length (mm) (standard type)	Shape
	Blade width (mm)	Blade thickness (mm)	Shape of shaft type		
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	◇	

Dimension of stepped part

	H4	H5		
(a) Blade Width	Refer to the left list.	2.0	2.5	3.0
(b) Length	20	20	25	30

*Only the stepped part of H5 + #1 3.0X4.0 is 15mm in length.

Bit for Hexagonal Socket Head Screws BH #1

Type (Dia. at base mm)	Specifications		Overall Length (mm) (standard type)
	Hex. across flat (mm)		
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

#1 Used for tightening hollow set screws, cap screws, etc.

Bit for Hexagonal Head Bolts BN #2

Type (Dia. at base mm)	Specifications		Overall Length (mm) (standard type)
	Nut 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
	4.0, 4.5, 5.0, 5.5, 6.0, 6.35		60
	7.0, 8.0		80
H5 (Ø5)	9.0, 10.0, 11.0, 12.0, 13.0, 14.0, 17.0		80

#2 Used for bolt nuts.

Bit for Hexagonal Nuts BC #2

Type (Dia. at base mm)	Specifications		Overall Length (mm) (standard type)
	Nut across flat (mm)		
H4 (A 4)	4.0, 4.5, 5.0, 5.5, 6.0, 7.0		60
	8.0		65
H5 (A 5)	4.0, 4.5, 5.0, 5.5, 6.0, 7.0		60
	8.0		65

#2 Used for bolt nuts.

●Bit order codes explained Example 1: To order a Phillips head bit for a mini driver with a #1 point size, 3 mm in shaft diameter and 40 mm long, write the following: BP-H4-#1-3.0-40mm
Example 2: To order a slotted bit for a standard driver with a 3.0 mm Blade width, and 80 mm long, write the following: BS-H5-3.0-0.4-80mm

Bit classification	Bit specs
BP	(H4 or H5)-(Point size No.)-(Shaft dia.)-(Overall length in mm)
BS	(H4 or H5)-(Blade width)-(Blade thickness)-(Overall length in mm)
BH	(H4 or H5)-(Hex. across flat)-(Overall length in mm)
BN	(H4 or H5)-(Nut across flat)-(Overall length in mm)
BC	(H4 or H5)-(Nut across flat)-(Overall length in mm)

When placing an order

- One order for standard bits should not be less than one pack (10 pieces).
- One order for special bits should be: For BT, BP, BS and BH types, not less than one lot (100 pieces). For BN type, not less than one lot (50 pieces). For BC type, not less than one lot (10 pieces).

Order codes

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Digital Torque Meter series

HP series

■HP-10 AC 100V

Model	Order Code	Measuring	Shank
HP-10	HPN-10-A1	N•m/N•cm	HIOS
	HPN-10X-A1		HEX

■HP-10 AC 120V

Model	Order Code	Measuring	Shank
HP-10	HPN-10-A2	N•m/lbf•in	HIOS
	HPN-10X-A2		HEX
	HPN-10-A3	N•m/kgf•cm	HIOS
	HPN-10X-A3		HEX

■HP-10 AC 220V-240V

Model	Order Code	Measuring	Shank
HP-10	HPN-10-C1	N•m/N•cm	HIOS
	HPN-10X-C1		HEX
	HPN-10-C2	N•m/lbf•in	HIOS
	HPN-10X-C2		HEX
	HPN-10-C3	N•m/kgf•cm	HIOS
	HPN-10X-C3		HEX
	HPN-10-D	kgf•cm/lbf•in	HIOS
	HPN-10X-D		HEX

■HP-100 AC 100V

Model	Order Code	Measuring	Shank
HP-100	HPN-100-A1	N•m/N•cm	HIOS
	HPN-100X-A1		HEX

■HP-100 AC 120V

Model	Order Code	Measuring	Shank
HP-100	HPN-100-A2	N•m/lbf•in	HIOS
	HPN-100X-A2		HEX
	HPN-100-A3	N•m/kgf•cm	HIOS
	HPN-100X-A3		HEX

■HP-100 AC 220V-240V

Model	Order Code	Measuring	Shank
HP-100	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 series

■HDP-5 AC 100V

Model	Order Code	Measuring	Shank
HDP-5	HDPN-5-A1	N•m/N•cm	HIOS
	HDPN-5X-A1		HEX

■HDP-5 AC 120V

Model	Order Code	Measuring	Shank
HDP-5	HDPN-5-A2	N•m/lbf•in	HIOS
	HDPN-5X-A2		HEX
	HDPN-5-A3	N•m/kgf•cm	HIOS
	HDPN-5X-A3		HEX

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Digital Torque Meter series

HDP series

■HDP-50 AC 100V

Model	Order Code	Measuring	Shank
HDP-50	HDPN-50-A1	N•m/N•cm	HIOS
	HDPN-50X-A1		HEX

■HDP-50 AC 120V

Model	Order Code	Measuring	Shank
HDP-50	HDPN-50-A2	N•m/lbf•in	HIOS
	HDPN-50X-A2		HEX
	HDPN-50-A3	N•m/kgf•cm	HIOS
	HDPN-50X-A3		HEX

■HDP-50 AC 220V-240V

Model	Order Code	Measuring	Shank
HDP-50	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 (Option) AC 100V

Model	Order Code	Measuring	Shank
HDP-100	HDPN-100-A1	N•m/N•cm	HIOS
	HDPN-100X-A1		HEX

■HDP-100 (Option) AC 120V

Model	Order Code	Measuring	Shank
HDP-100	HDPN-100-A2	N•m/lbf•in	HIOS
	HDPN-100X-A2		HEX
	HDPN-100-A3	N•m/kgf•cm	HIOS
	HDPN-100X-A3		HEX

■HDP-100 (Option) AC 220V-240V

Model	Order Code	Measuring	Shank
HDP-100	HDPN-100-C1	N•m/N•cm	HIOS
	HDPN-100X-C1		HEX
	HDPN-100-C2	N•m/lbf•in	HIOS
	HDPN-100X-C2		HEX
	HDPN-100-C3	N•m/kgf•cm	HIOS
	HDPN-100X-C3		HEX
	HDPN-100-D	kgf•cm/lbf•in	HIOS
	HDPN-100X-D		HEX

Standard Accessories

■Battery Charger For HP Series and HDP Series

Model	Order Code	Plug
TCH-MULTI	TCH-MULTI	A Plug
TCH-EU	TCH-EU	C Plug

■Detector cord

Model	Order Code	
DPC-0506	DPC-0506	Detector cord for HDP-5, HDP-50, HDP-100

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Digital Torque Meter series

HM series

■HM-10

Model	Order Code	Voltage
HM-10	HM-10	100V
	HM-10-120	110V-120V
	HM-10-220	220V-240V

■HM-100

Model	Order Code	Voltage
HM-100	HM-100	100V
	HM-100-120	110V-120V
	HM-100-220	220V-240V

HIT series

■HIT-200

Model	Order Code	Voltage
HIT-200	HIT-200	100V
	HIT-200-120	110V-120V
	HIT-200-220	220V-240V

■HIT-500

Model	Order Code	Voltage
HIT-500	HIT-500	100V
	HIT-500-120	110V-120V
	HIT-500-220	220V-240V

■HIT-2000

Model	Order Code	Voltage
HIT-2000	HIT-2000	100V
	HIT-2000-120	110V-120V
	HIT-2000-220	220V-240V

Standard Accessories

Battery Charger

■HM Series, HIT Series

Model	Order Code	Voltage
TCH-100N	TCH-100N	100V, (JAPAN)
TCH-120N	TCH-120N	110V-120V (Korea, Taiwan, U.S.A, Canada)
TCH-230G	TCH-230G	220V-240V (Hong Kong, Europe, China)
TCH-230B	TCH-230B	220V-240V (Singapore, U.K., Australia)

■Power Units and countries where they can be used

HP and HDP series		HM and HIT series			
					
TCH-MULTI (A plug)	TCH-EU (C plug)	TCH-100N 100V Japan	TCH-120N 120V Korea, Taiwan U.S.A., Canada	TCH-230G 220V-240V Hong Kong Europe, China	TCH-230B 220V-240V Singapore U.K., Australia

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Automatic Screw Feeder

■HSF series

Model	Order Code	Nominal dia.	Order Code	Nominal dia.
HSF-10	HSF-10	M1.0	HS-WR-10	M1.0
HSF-12	HSF-12	M1.2	HS-WR-12	M1.2
HSF-14	HSF-14	M1.4	HS-WR-14	M1.4
HSF-17	HSF-17	M1.7	HS-WR-17	M1.7
HSF-20	HSF-20	M2.0	HS-WR-20	M2.0
HSF-26	HSF-26	M2.6	HS-WR-26	M2.6
HSF-30	HSF-30	M3.0	HS-WR-30	M3.0

●Rails

■HS series

Model	Order Code	Nominal dia.	Order Code	Nominal dia.
HS-40	HS-40-EC	M4.0	HS-R-40	M4.0
HS-50	HS-50-EC	M5.0	HS-R-50	M5.0

●Rails

■HS III series

Model	Order Code	Nominal dia.	Order Code	Nominal dia.
HS III -10C	HS-10-3-EC	M1.0	HS-SR-10	M1.0
HS III -12C	HS-12-3-EC	M1.2	HS-SR-12	M1.2
HS III -14C	HS-14-3-EC	M1.4	HS-SR-14	M1.4
HS III -17C	HS-17-3-EC	M1.7	HS-SR-17	M1.7
HS III -20	HS-20-3-EC	M2.0	HS-SR-20	M2.0
HS III -23	HS-23-3-EC	M2.3	HS-SR-23	M2.3
HS III -26	HS-26-3-EC	M2.6	HS-SR-26	M2.6
HS III -30	HS-30-3-EC	M3.0	HS-SR-30	M3.0

●Rails

■HS-RB series

Model	Order Code	Nominal dia.	Order Code	Nominal dia.
HS-40RB	HS-40RB-EC	M4.0	HS-R-40RB	M4.0
HS-50RB	HS-50RB-EC	M5.0	HS-R-50RB	M5.0

●Rails

■HS III-RB series

Model	Order Code	Nominal dia.	Order Code	Nominal dia.
HS III-14CRB	HS-14-3RB-EC	M1.4	HS-SR-14RB	M1.4
HS III-17CRB	HS-17-3RB-EC	M1.7	HS-SR-17RB	M1.7
HS III-20RB	HS-20-3RB-EC	M2.0	HS-SR-20RB	M2.0
HS III-23RB	HS-23-3RB-EC	M2.3	HS-SR-23RB	M2.3
HS III-26RB	HS-26-3RB-EC	M2.6	HS-SR-26RB	M2.6
HS III-30RB	HS-30-3RB-EC	M3.0	HS-SR-30RB	M3.0

●Rails

Standard Accessories

■AC Adaptor

Model	Order Code	Screw Feeder model
100V-240V	HSF-AD	HSF
100V	HSF-AD	HS, HS III, HS-RB,
220V-240V	HSF-AD220	HS III-RB