

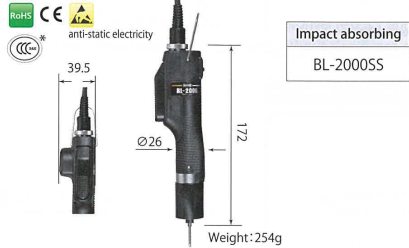


Thanks to ultra-powerful brushless motor, durability and stability have improved.

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

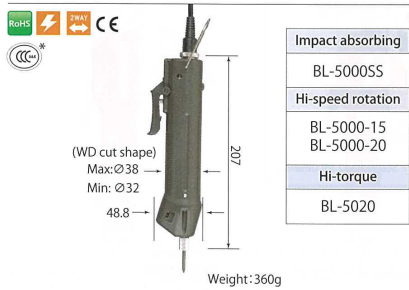
Two-way Start System

BL-2000 (Lever Start)



● Consumable parts are used for the switch.

BL-5000 Two-way(Push/Lever)



BL Series Specifications

Model Name		BL-2000 BL-2000SS	BL-3000 BL-3000SS*	BL-5000 BL-5000SS	BL-5000-15 ★BL-5000-20*	BL-5020	BL-7000	BL-7000-20 BL-7000HT*	
Output torque range	N·m	0.02 - 0.2	0.2 - 0.55 0.2-0.35*	0.2 - 1.2	0.2 - 1.2 0.2 - 1.0*	0.5 - 2.0	0.7 - 2.8	0.5 - 1.5 0.7 - 3.5*	
	lbf·in (kgf·cm)	0.17 - 1.7 (0.2 - 2)	1.7 - 4.8 1.7 - 4.8* (2 - 5.5) (2-3.5)*	1.7 - 10 (2 - 12)	1.7 - 10 1.7 - 8.7* (2 - 12) (2 - 10)*	4.3 - 17.4 (5 - 20)	6.1 - 24 (7 - 28)	4.3 - 13 6.1 - 30* (5 - 15) (7 - 35)*	
Torque switching		Stepless Adjustment	Stepless Adjustment	Stepless Adjustment	Stepless Adjustment	Stepless Adjustment	Stepless Adjustment	Stepless Adjustment	
Unloaded Rotation	HI	990	980	900	1,500 2,200*	750	960	2,200 700*	
	LOW	650	680	590	1,000 1,500*	500	630	1,500 500*	
Speed (r.p.m) ±10%	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 SHEx			
	HEX Shank	-	1/4HEX	H5 and SHEx or 1/4HEX		1/4HEX			
Power Supply	T-30BL	○	○	○	○	○	○	○	
	T-70BL	○	○	○	○	○	○	○	
Accessories	Bit (one each)	H4	+ #0(∅2.0×40mm) + #0(∅2.5×40mm)	+ #0(∅2.5×40mm) + #1(∅4.0×40mm)	+ #1(∅4.0×40mm) + #2(∅4.0×40mm)	+ #1(∅5.0×60mm) + #2(∅5.0×60mm)	+ #1(∅5.0×60mm) + #2(∅5.0×60mm)	+ #1(∅5.0×60mm) + #2(∅5.0×60mm)	
		H5	+ #1(∅5.0×60mm) + #2(∅5.0×60mm)	+ #1(∅5.0×60mm) + #2(∅5.0×60mm)	+ #1(∅5.0×60mm) + #2(∅5.0×60mm)	+ #1(∅5.0×60mm) + #2(∅5.0×60mm)	+ #1(∅5.0×60mm) + #2(∅5.0×60mm)	+ #1(∅5.0×60mm) + #2(∅5.0×60mm)	
	1/4 HEX	+ #1(5×50mm) + #2(5×50mm) - (5×50mm)	+ #1(5×50mm) + #2(5×50mm) - (5×50mm)	+ #1(5×50mm) + #2(5×50mm) - (5×50mm)	+ #1(5×50mm) + #2(5×50mm) - (5×50mm)	+ #1(5×50mm) + #2(5×50mm) - (5×50mm)	+ #1(5×50mm) + #2(5×50mm) - (5×50mm)	+ #1(5×50mm) + #2(5×50mm) - (5×50mm)	
	Spring	Yellow spring							
Cord length (m)		2m (SP) ESD design		1.5m (SP)		1.5m (SP)		2m (SP)	
L-shaped HEX wrench				Width across flats: 5mm, 1 pc		Width across flats: 5mm, 1 pc		Width across flats: 5mm, 1 pc	

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

Accessories and Variations

Suction(Vacuum) Attachment for BL Series

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

Order guide

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

* There are several options of sizes of (A) and (B) depending on the screw size. For more information on the size, please refer to P. 54.

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

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

* ESD is anti-electrostatic

BL Accessories & Applicable Drivers

Suction + Anti-electrostatic BLQ-ESD

Models:
BLQ-3000ESD
BLQ-5000ESD
BLQ-5000ESD-15

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

Clean Room BLQ-CR

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

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

Anti-electrostatic BL-ESD

Models:
BL-3000ESD
BL-5000ESD
BL-5000ESD-15
BL-5000ESD-20

BL-5020ESD
BL-7000ESD
BL-7000ESD-20
BL-7000HT

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

[Surface resistance: max. 10¹⁰Ω]

Clean Room + Anti-electrostatic BLQ-CR-ESD

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

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

[Class 100 equivalent]
[Surface resistance: max. 10¹⁰Ω]

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-7000-20-OPC

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

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

Compatible counters

Power supply with HIOS screw counter
BLOP-STC3

Separate counter
BLOP-SC1

Compact separate counter
BLOP-SC3

▶ See P. 39-42 for details.

Accessories

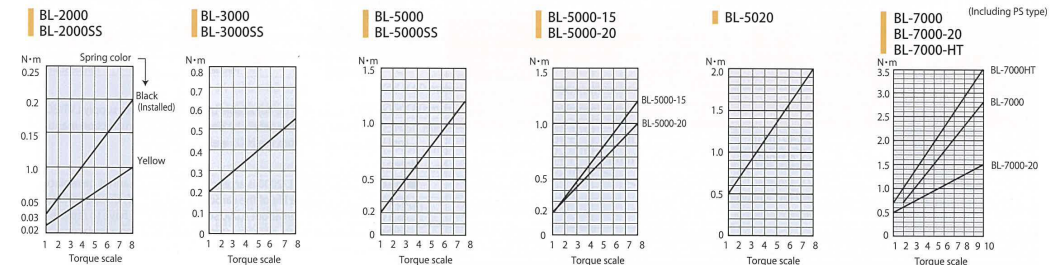
Accessories

Pistol Attachment PAB-70

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

Compatible screwdrivers:
BL-7000 Series

Output torque guide (HI input)



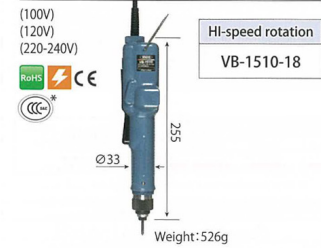
*There are two types of spring for torque adjustment: for HI (originally fixed to the unit) and for Low (accessory). Use one of them depending on your operating conditions.

Brushless®Screwdriver

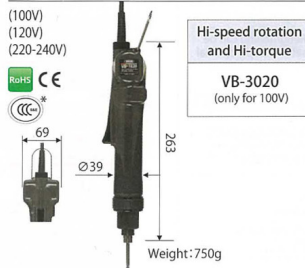
VB Series (AC Type) Transformerless

Lever Start Type

VB-1510



VB-1820/VB-3012

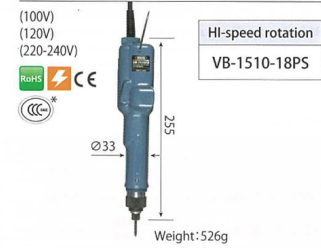


VB-4504

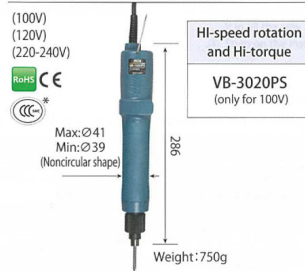


Push-to-Start Type

VB-1510PS



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



VB-4504PS (with shock-less stand)



VB Series Specifications

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 120W 220-240V	100V 120V 220-240V	100V 120V 220-240V	100V 120V 220-240V	100V 220-240V	100V 120V 220-240V	
Power consumption(W)*1	20W 20W 25W	20W 20W 25W	40W 40W 32W	40W 40W 32W	20W	40W 40W 32W	
Output Torque Range	N·m	0.25 - 1.5	0.2 - 1	0.4 - 1.8	0.5 - 3	1 - 4.5	
	lbf·in (kgf·cm)	2.2 - 13 (2.5 - 15)	2.2 - 8.7 (2 - 10)	3.5 - 16 (4 - 18)	4.3 - 26 (5 - 30)	8.7 - 26 (10 - 30)	8.7 - 39.1 (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	
	Tapping Screw	2.0 - 3.0	2.0 - 3.0	2.6 - 3.0	3.0 - 4.0	3.0 - 4.0	
Bit Drive	HIOS Shank	H4	H4	H5 and SHEX (both can be used)	H5 and SHEX (both can be used)	H5 and SHEX (both can be used)	
	HEX Shank	H5 and SHEX or 1/4HEX	H5 and SHEX or 1/4HEX	1/4HEX	1/4HEX	1/4HEX	
AC Screwdriver Cord length	3m	3m	3m	3m	3m	3m	
Accessories	Bit (one each)	H4	+ #1 (Ø4×40mm) + #2 (Ø4×40mm)	+ #1 (Ø4×40mm) + #2 (Ø4×40mm)	+ #1 (Ø5×60mm) + #2 (Ø5×60mm)	+ #1 (Ø5×60mm) + #2 (Ø5×60mm)	+ #1 (Ø5×60mm) + #2 (Ø5×60mm)
		H5	+ #1 (Ø5×60mm) + #2 (Ø5×60mm)	+ #1 (Ø5×60mm) + #2 (Ø5×60mm)	+ #1 (Ø5×60mm) + #2 (Ø5×60mm)	+ #1 (Ø5×60mm) + #2 (Ø5×60mm)	+ #1 (Ø5×60mm) + #2 (Ø5×60mm)
	Torque adjustment spring	1/4HEX	+ #1 (5.0×50mm) + #2 (5.0×50mm)	+ #1 (5.0×50mm) + #2 (5.0×50mm)	+ #1 (5.0×50mm) + #2 (5.0×50mm)	+ #1 (5.0×50mm) + #2 (5.0×50mm)	+ #1 (5.0×50mm) + #2 (5.0×50mm)
		Plus screw for adjustment	— (5.0×50mm)	— (5.0×50mm)	— (5.0×50mm)	— (5.0×50mm)	— (5.0×50mm)
Flat 2P conversion plug (only for 100V)	1pc (with ground wire)	1pc (with ground wire)	M2.6 (Pan head machine screw) 1pc (with ground wire)	M2.6 (Pan head machine screw) 1pc (with ground wire)	M2.6 (Pan head machine screw) 1pc (with ground wire)	M2.6 (Pan head machine screw) 1pc (with ground wire)	

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

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.

Accessories & Applicable Screwdrivers

VB Accessories & Applicable Drivers

Accessories

Accessories

Suction(vacuum) Attachments for VB Series

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

Order guide

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

* There are several options of sizes of (A) and (B) depending on the screw size. For more information on the size, please refer to P. 54.

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

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

For use with HIOS screw counters

VB-OPC

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

Compatible counters

HIOS screw counter
VZOP-STC



▶ See P. 40 for details.

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

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

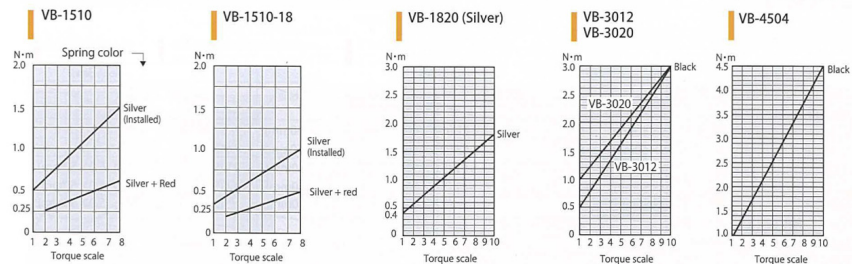
If you would like to purchase AC220V-240V type, please contact HIOS distributors.

CCC certified models

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

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

Output torque guide



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

Pistol Attachment

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

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



Compatible screwdrivers:
 PAB-18
 VB-1820, VB-3012, VB-3020

PAB-18PS
 VB-1820PS, VB-3012PS, VB-3020PS

Angle Attachment

ANGLV-Z-CH1 (with HIOS shank)
 ANGLV-Z-XX1 (with hexagonal shank)

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

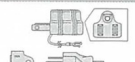


* The output torque should be 2N·m or lower when you use this attachment.

Compatible screwdrivers:
 VB-1820, VB-3012, VB-3020 (Lever Type only)

Plug type

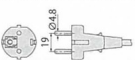
Type A / 100V



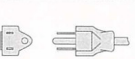
Type A-2 / 120V



Type C / 220V-240V



Type A-3 / 220V-240V



Type S / 220V-240V

