

5".Hios" – bezkomutátorové skrutkovače

Hios (bezkomutátorové) BL 3000 / 3000PS / 5000 / 7000



Skrutkovač určený pre "čisté" prostredie.

Model		BL-3000 (PS)	BL-5000	BL-7000
Rozsah výstupného točivého momentu		0,03-0,2 N m	0.2 – 1.2 N.m	0,7-2,5 N m
Rýchlosť otáčania bez záťaže		1000 ot/min	1000 ot/min	1000 ot/min
Rozmer skrutkovača	Malý skrutkovač	1.4 – 2.3 mm	2.0 – 3.0 mm	2.6 – 3.0 mm
	Závitorezná skrutka	1.4 – 2.3 mm	2.0 – 3.0 mm	2.6 – 3.0 mm
Priemer tela		32,5	32	36
Dĺžka		187 mm	202 mm	239
Hmotnosť		320 g	360 g	640 g
Typ hrotu		Hios H4	Hios H4, 1/4 HEX	Hios H4, 1/4 HEX
Dĺžka napájací kábla		1.5 m	1.5 m	1.5 m

Náhradné diely pre typ BL-5000:

BL4-0170 Clutch Cover

BL4-0540 Body Case A & B

BL4-0370 Push Lever Change Over Switch .

5.1

Model		Output Torque Range																				Unloaded Rotation Speed (r.p.m) (Hi/LOW)	Screw Size (mm)		Used in assembling				
		(kgf•cm)																					Small Size Screw	Tapping Screw					
		0	0.5	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18					19	20	30	40
		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																					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																					980/680	1.7-2.3	2.0-2.3					
	BL-5000																					900/590	2.0-3.0	2.0-3.0					
	BL-5000-15																					1,500/1,000	2.0-3.0	2.0-2.6					
	BL-5000-20																					2,200/1,500	2.0-3.0	2.0-2.6					
	BL-5020																					750/500	2.0-4.0	2.0-3.0					
	BL-7000																					960/630	2.6-5.0	2.6-4.0					
	BL-7000HT																					700/500	2.6-4.0	2.6-4.0					
	BL-7000-20																					2,200/1,500	2.6-4.0	2.6-4.0					
AC Type	VB-1510 VB-1510PS																					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-1510-18 VB-1510PS-18																					1,800	2.0-4.0	2.0-3.0					
	VB-1820 VB-1820PS																					2,000	2.6-4.0	2.6-3.0					
	VB-3012 VB-3012PS																					1,200	3.0-5.0	3.0-4.0					
	VB-4504 VB-4504PS																					400	3.0-5.0	3.0-4.0					
	VBH-1820PS																					470	5.0-6.0						
	VBH-3012PS																					270	5.0-6.0						
DC Type	PG-3000																					980/680	1.7-2.3	2.0-2.3	Electronic parts, parts for automobiles, pneumatic equipment				
	PG-5000																					900/590	2.3-3.0	2.0-2.3					
	PG-7000																					960/630	2.6-5.0	2.6-4.0					



Low voltage DC type

Operates when connected to low voltage DC power

BL Series

Unit: mm

Lever start type

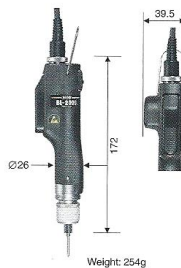
BL-2000



anti-static electricity is standard.



*The switch uses expendable parts.



Weight: 254g

Ultra slim body case with 254g lightweight.



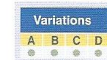
Anti-electrostatic specifications

Surface resistance is less than $10^4 \Omega$

Conductive resin is used throughout the body case, switch lever and screwdriver cord.

Two-way start type

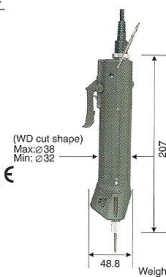
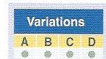
BL-3000



Weight: 320g

Two-way start type

BL-5000

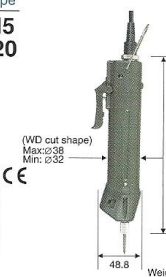
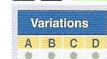


Weight: 360g

High speed type

Two-way start type

BL-5000-15
BL-5000-20

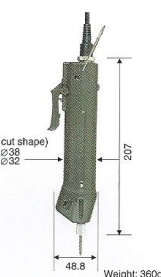
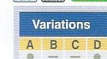


Weight: 390g

High torque type

Two-way start type

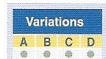
BL-5020



Weight: 360g

Two-way start type

BL-7000

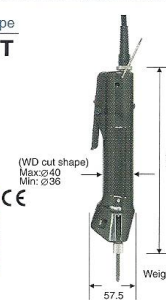
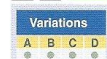


Weight: 640g

High torque type

Two-way start type

BL-7000HT

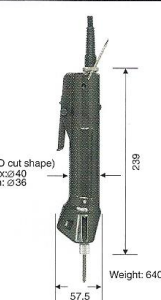
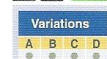


Weight: 640g

High speed type

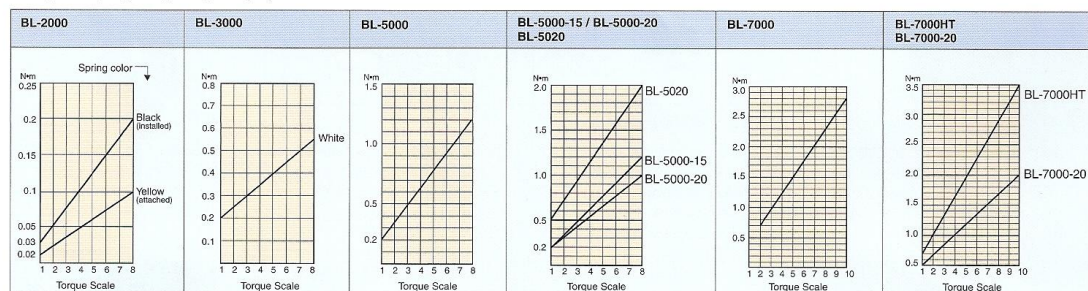
Two-way start type

BL-7000-20



Weight: 640g

Output torque guide (during HI input)



Electric Screwdrivers List

Model		Output Torque Range																														Unloaded Rotation Speed (r.p.m.) (HI / LOW)	Screw Size (mm)		Used in assembling
																																	Small Size Screw	Tapping screw	
		(kgf • cm) 0 0.5 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 30 40 50 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																																	
DC Type	CL-2000																															680 / 490	1.0 - 2.3	1.0 - 2.0	Cameras, watches, eyeglasses, cell phones, digital cameras, hard disks, CD drives, optical pickups, car audios, car navigation monitors, mini video recorders, small calculators
	CL-3000																															1000 / 670	1.0 - 2.0	1.0 - 1.7	
	CL-4000																															1000 / 690	1.4 - 2.6	1.4 - 2.3	
	CL-6000																															800 / 500	2.0 - 3.0	2.0 - 2.6	Automobile parts, computers, printers, TVs, air conditioners, fan heaters, TV games, fax machines, communications equipment, copiers, scanners, laptop computers, jet printers, laser printers, satellite TV antennas, video recorder, car door mirrors, toys, electronic clinical thermometers
	CL-6500																															900 / 600	2.0 - 4.0	2.0 - 3.0	
	CL-7000																															750 / 500	2.0 - 5.0	2.0 - 4.0	
	CL-9000																															530 (H only)	4.0 - 6.0	4.0 - 6.0	Electrical components, computer parts, automobile compressors, pressurization equipment
	SS-2000																															680 / 490	1.0-2.3	1.0-2.0	High density boards, hard disks, car navigation monitor, CD, MD and DVD players, digital cameras, cell phones, watches
	SS-3000																															1000 / 670	1.0 - 2.0	1.0 - 1.7	
	SS-4000																															1000 / 690	1.4 - 2.6	1.4 - 2.3	
	SS-6500																															900 / 600	2.0 - 3.0	2.0 - 3.0	
	SS-7000																															750 / 500	2.0 - 4.0	2.0 - 4.0	
	α-4500																															1700/1200	2.0 - 3.0	2.0 - 2.6	TVs, communications equipment, copiers, fax machines, computers, POS systems, automobile parts, car door mirrors, taillights, headlights, electronic pianos, TV games, toys
	α-5000																															1000 / 700	2.0 - 3.0	2.0 - 3.0	
	α-6500																															1700 / 1200	3.0 - 4.0	2.6 - 3.0	
AC Type	VZ-1510 (100V)																															1000	2.0 - 4.0	2.0 - 3.0	Home lighting equipment, pressurization equipment, washing machines
	VZ-1820 (120V)																															2000	2.6 - 4.0	2.6 - 3.0	Automobile parts, car audios, car navigation monitors, air conditioners, office lighting equipment, car door mirrors, taillights, headlights, gas fixtures, vacuum cleaners, TV games, video recorders, communications equipment, copiers, laser printers, microwave ovens, TVs, power tools
	VZ-3012 (120V)																															1200	3.0 - 5.0	3.0 - 4.0	
	VZ-4506 (120V)																															600	3.0 - 5.0	2.6 - 4.0	
	VZ-1812 (220V-240V)																															1200	2.6 - 4.0	2.6 - 3.0	
	VZ-3007 (220V-240V)																															700	3.0 - 5.0	3.0 - 4.0	
	VZ-4504 (220V-240V)																															400	3.0 - 5.0	2.6 - 4.0	



Handle low-torque tightening jobs with confidence!

- This screwdriver is especially designed to deliver low torque for accurate and stable fastening of precision screws.
- Model CL-2000 has a coreless motor with an especially long life.
- These mini type screwdrivers are suitable for those who prefer a light, compact tool.
- Running on low voltage, direct current, this tool is designed for safety.

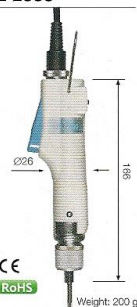
Variation chart

A	Q	B	ESD	C	Q-CR-ESD	D	NL*
Suction		Anti-static electricity features		Clean room and anti-static electricity features		Electrical noise is more subdued than in standard tools	

* CE NL Type is CE mark compliant

Lever Start Type

CL-2000



CE

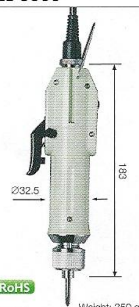
RoHS

Variations

A	B	C	D
●	●	●	●

CL-2000 is CE mark compliant

CL-3000

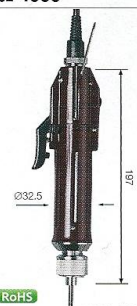


RoHS

Variations

A	B	C	D
●	●	●	●

CL-4000



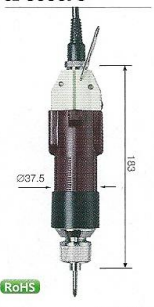
RoHS

Variations

A	B	C	D
●	●	●	●

Push-to-Start Type

CL-3000PS

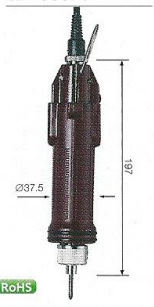


RoHS

Variations

A	B	C	D
●	●	●	●

CL-4000PS



RoHS

Variations

A	B	C	D
●	●	●	●

Accessories for better operation

Push-start grip attachment

PS-1 · PS-2

Converts the starting system of a mini size driver from lever-start to push-start.



RoHS

Compatible model:

PS-1: CL-4000 PS-2: CL-3000

Specifications

Lever Start type Model		CL-2000	CL-3000	CL-4000
Push-to-Start type Model			CL-3000PS	CL-4000PS
Output Torque Range	N·m	0.02 - 0.2	0.03 - 0.2	0.1 - 0.55
	lbf·in	0.17 - 1.7	0.3 - 1.7	0.9 - 4.8
	(kgf·cm)	(0.2 - 2)	(0.3 - 2)	(1 - 5.5)
Torque Switching		Stepless Adjustment	Stepless Adjustment	Stepless Adjustment
Unloaded Rotation Speed (r.p.m)	HI	680	1000	1000
	LOW	490	670	690
Screw Size (mm)	Small Size Screw	1.0 - 2.3	1.0 - 2.0	1.4 - 2.6
	Tapping Screw	1.0 - 2.0	1.0 - 1.7	1.4 - 2.3
Bit Type		Hios H4	Hios H4	Hios H4 or 1/4HEX
Power Pack	LHT-30	○	○	—
	LVT-30	○	○	—
	CLT-30	○	○	—
	CLT-60	○	○	○
	CLT-100	○	○	○
	MC-70L	○	○	○
Accessories	Bit	(H4)	+ #0 (Ø2.0 x 40 mm) 1 piece + #0 (Ø2.5 x 40 mm) 1 piece	+ #0 (Ø2.0 x 40 mm) 1 piece + #1 (Ø4.0 x 40 mm) 1 piece
		(1/4 HEX)		+ #1 (Ø5 x 50 mm) 1 piece + #2 (Ø5 x 50 mm) 1 piece - (Ø5 x 50 mm) 1 piece
	Spring	Yellow	Gold	Blue
	Carbon brush (Order code)		1 pair (A45-0420)	1 pair (CL4-0420)
Cord Length (m)		1.5 m (5P)	1.5m (5P)	1.5m (5P)

Ordercode

→P19

Model CL-2000's carbon brushes are located in a sealed case that cannot be opened for replacement by the user. In our test, they will last for 3-4 years when 6,000 operations are conducted daily (depends on the conditions of use).

5.4

Model	CL-6000	CL-6500	CL-7000	
pe Model	CL-6000PS	CL-6500PS	CL-7000PS	CL-9000
N·m	0.2 - 1	0.3 - 1.6	0.3 - 2.5	1.2 - 5
lbf·in	1.7 - 8.8	2.6 - 14	2.6 - 22	10 - 43
(kgf·cm)	(2 - 10)	(3 - 16)	(3 - 25)	(12 - 50)
	Stepless Adjustment	Stepless Adjustment	Stepless Adjustment	Stepless Adjustment
HI	800	900	750	530
LOW	500	600	500	
Small Size Screw	2.0 - 3.0	2.0 - 4.0	2.0 - 5.0	4.0 - 6.0
Tapping Screw	2.0 - 2.6	2.0 - 3.0	2.0 - 4.0	
	Hios H5 or 1/4HEX	Hios H5 or 1/4HEX	Hios H5 or 1/4HEX	1/4 HEX
CLT-60	○	○	○	—
CLT-100	○	○	○	—
MC-70L	○	○	○	—
CLT-75	—	—	—	○
(H5)	+ #1(Ø5 x 60 mm) 1 piece + #2(Ø5 x 60 mm) 1 piece	+ #1(Ø5 x 60 mm) 1 piece + #2(Ø5 x 60 mm) 1 piece	+ #1(Ø5 x 60 mm) 1 piece + #2(Ø5 x 60 mm) 1 piece	
(1/4 HEX)	+ #1(Ø5 x 50 mm) 1 piece + #2(Ø5 x 50 mm) 1 piece - (Ø5 x 50 mm) 1 piece	+ #1(Ø5 x 50 mm) 1 piece + #2(Ø5 x 50 mm) 1 piece - (Ø5 x 50 mm) 1 piece	+ #1(Ø5 x 50 mm) 1 piece + #2(Ø5 x 50 mm) 1 piece - (Ø5 x 50 mm) 1 piece	+ #2(Ø7 x 100 mm) 1 piece + #3(Ø7 x 100 mm) 1 piece
		White	Yellow	
brush ode)	1 pair (CL65-0490)	1 pair (CL65-0490)	1 pair (CL65-0490)	
ngth (m)	2 m (5P)	2 m (5P)	2 m (5P)	2 m (5P)

HIOS shank

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	
(Shape of shaft)					Point size No	Shaft dia. (mm)	Shape of shaft type			
◇ Straight (A)				H4 (Ø4)	#00	1.5	B	40, 60, 80	◆	
						1.2	B	40		
						1.5, 1.7	B	40, 60, 80		
						1.8	B	60		
						2.0, 2.5	B	40, 60, 80, 100, 120		
◆ Stepped (B)				H4 (Ø4)	#1	3.0	B	40, 60, 80, 100, 120	◇	
						4.0	A	40, 60, 80, 100, 120, 150, 180, 200		
						#2	4.0	A		40, 60, 80, 100, 120, 150
◇ Stepped (C)				H5 (Ø5)	#0	2.0	B	60	◆	
						2.5	B	60, 80, 100, 120		
						#1	3.0	B		40, 60, 80, 100, 120
							5.0	A		40, 60, 80, 100, 120, 150, 180, 200, 250, 300
						#2	5.0	A		40, 60, 80, 100, 120, 150, 180, 200, 250, 300, 400
							#3	7.0		C
						Dimension of stepped part				H4
(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 3.0×4.0 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
(Shape of shaft)					Blade width (mm)	Blade thickness (mm)	Shape of shaft type		
◇ Straight (A)		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			
◆ Stepped (B)		H4 (Ø4)	2.3	0.4	B	60, 80	◇		
			2.5	0.4	B	40, 60, 80			
◇ Stepped (C)		H5 (Ø5)	2.8	0.4	B	60, 80	◆		
			3.0	0.4	B	40, 60, 80			
			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			
		Dimension of stepped part		H4	H5				◇
		(a) Blade Width		Refer to the left list.	2.0	2.5	3.0	4.0	
		(b) Length		20	20	25	30	30	
		*Only the stepped part of H5 + #1 3.0×4.0 is 15mm in length.							

Bit for Hexagonal Socket Head Screws BH※1		Type (Dia. at base mm)	Specifications Hex. across flat (mm)	Overall Length (mm) (standard type)	
	 (A) type, across flats of less than 1.5mm	H4 (Ø4)	0.89, 1.5, 2.0, 3.0	60	
			1.27	60, 100	
			2.5	60, 100, 120	
			1.27	70	
(A) type, across flats of less than 1.5mm		H5 (Ø5)	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
		H5 (Ø5)	7.0, 8.0	80
			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 (Ø4)	4.0, 4.5, 5.0, 5.5, 6.0, 7.0	60
			8.0	65
		H5 (Ø5)	4.0, 4.5, 5.0, 5.5, 6.0, 7.0	60
			8.0	65

*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).