

Brushed Screwdriver

CL Series
(DC Type)

Handle low-torque screw tightening with confidence!

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

Brushed Screwdriver

CL Series
(DC Type)

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

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

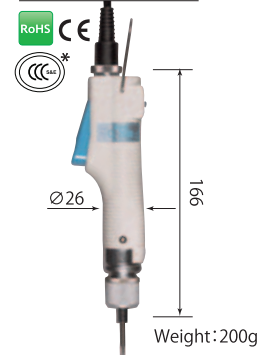
Lever Start Type

Lever Start Type

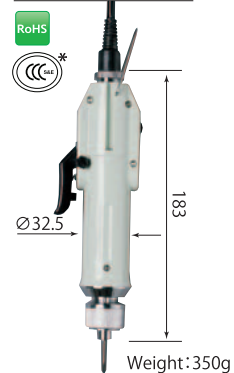
Push-to-Start Type

Push-to-Start Type

CL-2000



CL-3000



CL-4000PS



CL-4000



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

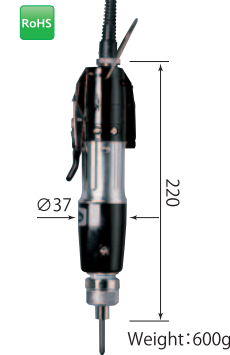
Lever Start Type

Lever Start Type

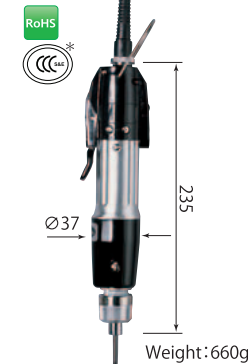
Push-to-Start Type

Push-to-Start Type

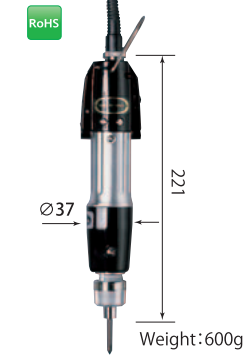
CL-6000



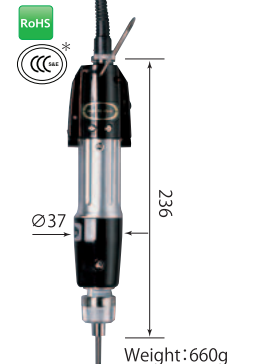
CL-6500



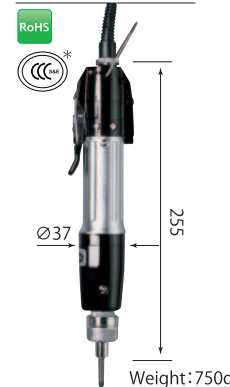
CL-6000PS



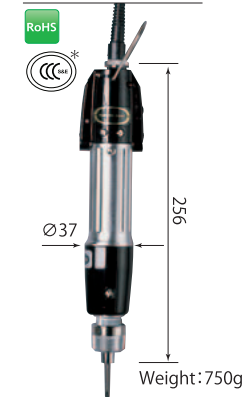
CL-6500PS



CL-7000



CL-7000PS



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

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

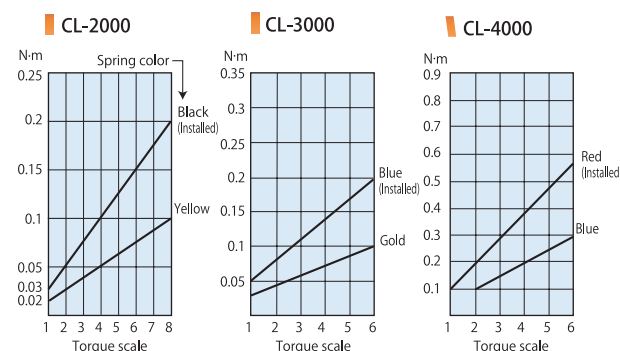
CL Series Specifications

Specifications

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

Output torque guide (HI input)

(Including PS type)



* The rotation speed can be adjustable by using the power supply LVT-30 or LHT-30. Please review the details by downloading the instruction manuals for LVT-30 or LHT-30 from the HIOS website.

Notes:

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

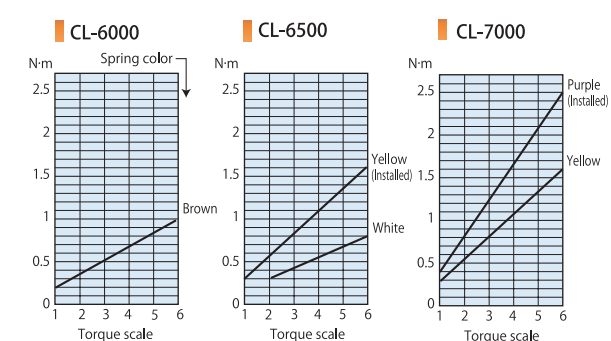
CL Series Specifications

Specifications

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

Output torque guide (HI input)

(Including PS type)



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

High-torque Brushed Screwdriver

CL

CL Series
(DC Type)

Push-to-Start Type

Push-to-Start Type

CL-9000 (with shockless stand)

Unit : mm

RoHS
CE



Weight: 2,360g

Including the cord and the slide arm

CL Series Specifications

Specifications

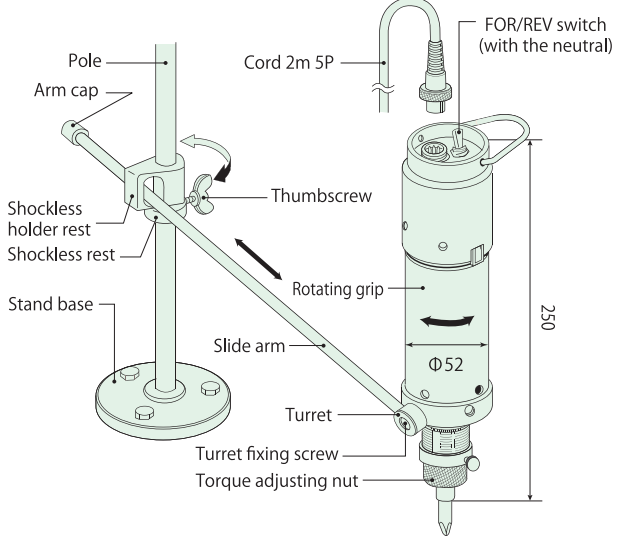
Push-to-Start Type Model		CL-9000
Controlled Torque Range	N·m	1.2 - 5
	lbf·in (kgf·cm)	10 - 43 (12 - 50)
Torque Switching		Stepless adjustment
Unloaded Rotation Speed (r.p.m) 5%		530
Screw Size (mm)		4.0 - 6.0
Bit Drive HEX shank		1/4HEX
Power Supply		CLT-80
Accessories	HEX shank bit (width across flats: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

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

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

Main Components of Shockless Stand

Unit : mm



Weight: 1,300 g

(body only)

●Specifications

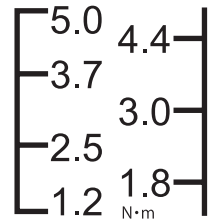
Slide arm length	530
Effective sliding range	475
Support rod height	570
Height	8
Diameter of fixing bolt hole	Ø6
Distance between fixing bolt holes	52 (one side of the equilateral triangle)

●Specifications

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

Scale of Output Torque


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



Variations

CL Applicable Drivers

Suction (Vacuum)
CLQ



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

Order guide


(A) and (B) needed to be purchased separately if you have a suction-type screwdriver.
(A), (B) and (C) needed to be purchased separately if you want to convert your screwdriver to a suction type.
* There are several options of sizes of (A) and (B) depending on the screw size. For more information on the size, please refer to P. 54.

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

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

*ESD is anti-electrostatic

Anti-electrostatic
CL-ESD



Models:

CL-2000ESD
CL-3000ESD
CL-4000ESD


CL-6000ESD
CL-6500ESD
CL-7000ESD

(Including PS Type)

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

[Surface resistance: max. 10⁹Ω]

Clean Room + Anti-electrostatic
CLQ-CR-ESD



Models:


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

(Including PS Type)

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

[Class 100 equivalent]
[Surface resistance: max. 10⁹Ω]

Noiseless Screwdriver
CL-NL



Models:

CL-6000NL
CL-3000NL
CL-4000NL

CL-6500NL
CL-7000NL


(Including PS Type)

Electrical noise is more subdued than standard screwdrivers.

Related Products

Related Products


Power supply with HIOS screw counter
CLT-70STC3



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

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

Separate counter
CLOP-SC1




External counter helps to prevent skipping screw tightening.

See P. 39-41 for details.

Accessories

Accessories

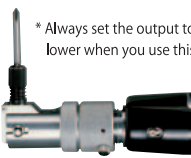
Pistol Attachment
PA-65



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

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

Angle Attachment
ANGL-Z (with HIOS shank)
ANGLX-Z (with hexagonal shank)




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

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

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

Push-to-Start Grip Attachment
PS-1
PS-1-ESD



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

Compatible screwdrivers:
CL-4000

- 15 -

<http://www.fnengineering.co.th>

- 16 -

<http://www.fnengineering.co.th>