## 2024 <br> DRIVE SYSTEMS CATALOG



## COMPANY PROFILE

- Established in 1985, entered bicycle industry in 1992.
- Engaged in design, manufacturing and marketing of electric bicycle parts and components since 1997.
- "Star Union" established in 2010 as independent high-end business division with specialized teams for research, marketing and production
- Four manufacturing bases, three brands, over 1300 employees.
- Products include electric bicycles, mini e-scooters, GB e-bikes, and electric motorcycles.
- Over 300 patented inventions and CNAS laboratory


## E.E.



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| CC301 |  |  |  | (1) |
| :---: | :---: | :---: | :---: | :---: |
|  | ${ }^{\text {cmus03 }}$ |  |  |  |
| (a) |  |  | m |  |
| $\square$ |  |  |  |  |



| MC |  |  |  | CE FC En |
| :---: | :---: | :---: | :---: | :---: |
|  | CM2505 |  |  |  |
| $\bigcirc$ | Rated Voltage(DCV) | 36 V | Speed limit | $27 \mathrm{~km} / \mathrm{h}$ |
|  | Rated Power(W) | 250w | Waterproof | IPX6 |
|  | Max Torque( $\mathrm{N} . \mathrm{m}$ ) | $120 \mathrm{~N} . \mathrm{m}$ | Pedal Sensor | Speed and torque |
|  | Weight(kg) | $<3.2$ | Certifications | CE/ FCC / EN15194/ RoHS |
|  | SW102/2 |  |  |  |
|  | Weight | 319 | Display Type | 1.3" 0LED screen |
|  | Material | ABS/PA | Communication | UART/CAn |
|  | NominaL Voltage | DC $24 \mathrm{~V} / 36 \mathrm{~V} / 48 \mathrm{~V}$ | Waterproof | IPX5 |
|  | Current | $12 \mathrm{~mA} / 36 \mathrm{~V}$ | Data Port | Bluetooth intergrated |


| MC502 |  |  |  | (1) |
| :---: | :---: | :---: | :---: | :---: |
|  | ${ }_{\text {crson }}^{\text {com }}$ |  |  |  |
| (0) | mimemem |  | mem | cin |
| $\square$ |  |  |  |  |




BH501

| $\bigcirc$ | HM7503 |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Rated Voltage (DCV) | 48 V | Speed limit | 45km/h |
|  | Rated Power(W) | 750 W | Waterproof | IPX5 |
|  | Max Torque(N.m) | 80 Nm | no(Rpm) | 390/345 |
|  | Weightikg) | $<4.6$ | Certifications | $\mathrm{CE} / \mathrm{RoHS}$ |
|  | DZ40 |  |  |  |
|  | Weight | 289 | Display Type | Led |
|  | Material | PC/ABS/PA | Communication | UART |
| $\rightarrow$ | NominaL Voltage | DC 24V/36V/48V | Waterproof | IPX5 |
|  | Current | $18 \mathrm{~mA} \sim 25 \mathrm{~mA} / 36 \mathrm{~V}$ | Certifications | CE/RoHS |



| $\bigcirc$ | HM2502 |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Rated Voltage(DCV) | 36 V | Speed limit | $25 \mathrm{~km} / \mathrm{h}$ |
|  | Rated Power(W) | 250 W | Waterproof | IPX5 |
|  | Max Torque(N.m) | $38 \mathrm{~N} . \mathrm{m}$ | no(Rpm) | 290/250 |
|  | Weightkg) | <2.55 | Certifications | CE/RoHS |
|  | DS104 |  |  |  |
|  | Weight | 1089 | Display Type | 3.4"Segment \& Dot matrix |
|  | Material | PC+ABS | Communication | UART/CAN |
|  | NominaL Voltage | DC 24V/36V//48V | Waterprof | IPX5 |
|  | Current | $30 \mathrm{~mA} / 36 \mathrm{~V}$ for working current | Data Port | Bluetooth intergrated |


| $\odot$ | HM5003 |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Rated Voltage(DCV) | 48 V | Speed limit | $32 \mathrm{~km} / \mathrm{h}$ |
|  | Rated Power(W) | 500 W | Waterproof | IPX5 |
|  | Max Torquel( .m) | $60 \mathrm{~N} . \mathrm{m}$ | no(Rpm) | 380 |
|  | Weight(kg) | $<3.7$ | Certifications | CE/RoHS |
|  | DZ41 |  |  |  |
|  | Weight | 569 | Display Type | $1.8{ }^{\text {" LED }}$ screen |
|  | Material | PC/ABS/PA | Communication | UART/CAN |
|  | NominaL Voltage | DC 24V/36V/48V | Waterproof | IPX5 |
|  | Current | $18 \mathrm{~mA} \sim 25 \mathrm{~mA} / 36 \mathrm{~V}$ | Data Port | Bluetooth intergrated |

HUB MOTOR


HUB MOTOR


HUB MOTOR


HUB MOTOR


HUB MOTOR


WL(mm)
no(Rpm)

Brake

HUB MOTOR


QM3505
QM3501

ecity
${ }^{\text {ecity }}$
Front Motor
efat
119.25
$\qquad$
${ }^{145}$-M12*1.25P-69


H(mm)


Core Data
Wheel Sizellinch)

## Construction

Rated Power(W)
TT(Rpm)
Max Torque(N.m)
Efficiency(\%)

Weight(kg)
Noise GradeldB)
perating Temperature
stallation Widths(mm/LLD
Max Housing Diameter(mm)
Ring Rout
Cable Length(mm),Connection Type
spoke Specification
Tests\&Certifications

HUB MOTOR


HUB MOTOR

 | Position | Fr |
| :--- | :--- |
| Usage* |  | Size

| Almm |
| :--- | :--- |
| Blmm |

${ }_{\mathrm{Cl}}^{\mathrm{Clmm}}$
D m
Elmm
68

| 158.5 |
| :--- |
| 145 |

G(mn
H(mm)
oLD(mm)
WR(mm)

## Core Data

## Construction

Rated VoltagelDCV)
no(Rpm)
Rated Power(W)
nT(Rpm)
Max Torquel. m .m
Efficiency(\%
Weight(kg)
Noise GradeldB)
Mounting Pa perature Brake
Installation Widths/mm/oLD
Max Housing Diameter(mm) Cabling Route
Cable Length(mm), Connection Type
Spoke Specification
Tests\&Certifications


QM7503
efAT 119 eFAT 113.5


Front Motor

efat | 113.5 |
| :--- |
| 67 |
| 158.5 | 145

$\qquad$
$\qquad$
$\qquad$
$\qquad$
Gear drive

$$
\begin{aligned}
& 52 \\
& \hline 600 \\
& \hline 1000 \\
& \hline 560 \\
& \hline 80 \\
& \hline \geqq 80 \\
& \hline \text { Black } \\
& \hline 4.55 \\
& \hline 660 \\
& \hline-20-45^{\circ} \mathrm{C} \\
& \hline \text { Disc-Brake } \\
& \hline 135 \\
& \hline 187 \\
& \hline \text { Shaft Side,Right } \\
& \hline 200 \\
& \hline 36 H^{* 12 G} \\
& \hline \hline 6 \\
& \hline
\end{aligned}
$$

HMI


| HMI | DS103 | DS104 | DZ47 |
| :---: | :---: | :---: | :---: |
| SPECIIICATIONS |  |  |  |
| Dimensions/Size | L78mm W96mm H 53mm | L78mm W96mm H53mm | L87mm W60mm H65mm |
| Weight (g) | 100 g | 1089 | ${ }^{80 g}$ |
| Material | ABS/PA | ABS/PA | ABS/PA |
| Operating Temperature | $-20^{\circ} \mathrm{C}-60^{\circ} \mathrm{C}$ | $-20^{\circ} \mathrm{C}-60^{\circ} \mathrm{C}$ | $-20^{\circ} \mathrm{C}-60^{\circ} \mathrm{C}$ |
| Core Data |  |  |  |
| Display Type | 3.5"TFT | 3.4"Segment \& Dot matrix | 2.2" ${ }^{\text {segment }}$ LCD |
| NominaL Voltage | DC 24V/36V/48V | 24V/36V/48V | 24V/36V/48V |
| Current | $30 \mathrm{~mA} / 36 \mathrm{~V}$ | $30 \mathrm{~mA} / 36 \mathrm{~V}$ | $20 \mathrm{~mA} / 36 \mathrm{~V}$ |
| Mounting Parameters |  |  |  |
| Communication | UART/CAN | UART/CAN | UART/CAN |
| Handebar for Holding | ø 22.2/25.4/31.8 | ¢ 22.2/25.4/31.8 | ø22.2/25.4/31.8 |
| Display Information |  |  |  |
| Current Speed (km/h) | $\bullet$ | $\bullet$ | $\bullet$ |
| Maximum Speed (km/h) | $\bullet$ | $\bullet$ | $\bullet$ |
| Average Speed (km/h) | - | - | - |
| Duration Single Trip | $\bullet$ | $\bullet$ | - |
| Distance Single Trip | - | - | - |
| Total Distance | $\bullet$ | - | $\bullet$ |
| Reset Distance S.T. | $\bullet$ | $\bullet$ | - |
| Battery Level | - | - | - |
| Error Code Display | - | $\bullet$ | - |
| Walk Boost | $\bullet$ | $\bullet$ | $\bullet$ |
| USB Charging Port | $\times$ | $\times$ | $\times$ |
| Clock | $\bullet$ | $\bullet$ | $\times$ |
| Light Sensor | $\times$ | $\times$ | $\bullet$ |
| Further Specifications |  |  |  |
| Data Port | Bluetooth(0ptional) | Bluetooth(Optional) | Bluetooth(0ptional) |
| Tests \& Certifications |  |  |  |
| Waterproof | IPX5 | IPX5 | IPX5 |
| Certifications | RoHS/CE | RoHS/CE | RoHS/CE |



## SWITCHES FOR HMI




SWITCHES

|  | DK16 | DK104 | DK216 |
| :---: | :---: | :---: | :---: |
| Approval | RoHS | RoHs | RoHS |
| Size | L65mm W28mm H39mm | L28mm W44.7mm H56.5mm | L66mm W42mm H39mm |
| Waterproof | IPX4 | IPX3 | IPX4 |
| Material | PC/ABS | ABS | PC/ABS |
| Wiring | 2/3 Pins | 2 Pins | 4 Pins |
| Current | $3 \mathrm{~A} / 12 \mathrm{VDC}$ | $3 \mathrm{~A} / 12 \mathrm{~V}$ DC | $3 \mathrm{~A} / 12 \mathrm{~V}$ DC |
| Operating Temperature | $-20^{\circ} \sim \sim 60^{\circ} \mathrm{C}$ | $-20^{\circ} \mathrm{C} \sim 60^{\circ} \mathrm{C}$ | $-20^{\circ} \mathrm{C} \sim 60^{\circ} \mathrm{C}$ |
| Wire Tension | $\geqslant 130 \mathrm{~N}$ | $\geqslant 130 \mathrm{~N}$ | $\geqslant 130 \mathrm{~N}$ |
| Durability | 50,000 mating cycle | 50,000 mating cycle | 50,000 mating cycle |

DK104
RoHS
$\begin{array}{ll}\text { L28mm W44.7mm } & \text { DK } \\ & \text { RoHS }\end{array}$ ABS
2 Pins
$3 \mathrm{~A} / 12 \mathrm{VDC}$
$-20^{\circ} \mathrm{C} \sim 60^{\circ} \mathrm{C}$
$\geqslant 130 \mathrm{~N}$
50,000 mating cycle


DK216
L6mm W 42 mm H 39 mm |PX4 PC/ABS 4 Pins $3 A / 12 \mathrm{~V} D \mathrm{C}$ $-20^{\circ} \mathrm{C} \sim 60^{\circ}$ $\geqslant 130 \mathrm{~N}$ 50,000 mating cycle

| Approval | RoHS |
| :--- | :--- |
| Size | L22 2 mm W50mm H42mm |
| Waterproof | IPX4 |
| Material | PA $6+206 \mathrm{FTPR}$ |
| Wiring | $3 / 4$ Pins |
| Current | $3 \mathrm{~A} / 12 \mathrm{~V}$ DC |
| Operating Temperature | $-20^{\circ} \mathrm{C} \sim 60^{\circ} \mathrm{C}$ |
| Wire Tension | $\geqslant 130 \mathrm{~N}$ |
| Durability | 50,000 mating cycle |



DK226/2

50,000 mating cycle


DK256
 IPX4 ABS
5 Pins $3 A / 12 V D C$ $20^{\circ} \mathrm{C} \sim 60^{\circ} \mathrm{C}$ $\geqslant 130 \mathrm{~N}$ 50,000 mating cycle


HEAD LIGHTS


QD526
$\square$
Size
connector typ
Waterproof
Voltage
Power

Position light: 0.4W ; Low beam: 4W ; Horn: 2.4W
$\square$ LED $85 \pm 5 \mathrm{~dB}$


## TAIL LIGHTS



|  | WD312 | WD216 | WD220 |
| :---: | :---: | :---: | :---: |
| Approval | REAR LIGHT: StVZO/CE/GB REFLECTOR: E1A/Z | REAR LIGHT: StVZO/CE/GB REFLECTOR: E1A/Z | REAR LIGHT: CE/GB REFLECTOR: E1A |
| Size | L100mm W47mm H34mm | L90mm W40mm H16mm | L95mm W45mm H19mm |
| Weight | 429 | 469 | 469 |
| Material | PMMA+ABS | PMMA+ABS | PMMA+ABS |
| Assemble Dimension | 50/80mm | 50 mm | 50 mm |
| Waterproof | IPX4 | IPX4 | IPX4 |
| Voltage | DC 6-60V | DC6-48V | DC 6-60V |
| Power | 0.6W | 0.5w | 0.6W |
| Light Source | LED | LED | LED |

## TAIL LIGHTS

WD128/2
WD332
${ }^{68}$ ${ }^{1059}$ PMMA+ABS IPX4 $50 \mathrm{~mm} / 80 \mathrm{~mm}$ Opioiona DC $38 \mathrm{VV} / 4 \mathrm{VV}$ 2.5W LED


WD400

| Approval |
| :--- |
| Size |
| Weight |
| Material |
| Assemble Dimension |
| Waterproof |
| Voltage |
| Power |
| Light Source |

ELECTRIC BRAKE LEVERS


|  | 108PDD.A | 240PDD.A | 170PHD+LD06 |
| :---: | :---: | :---: | :---: |
| Approval | RoHS | RoHS | RoHS |
| Size | L156mm W105mm H34mm | L157mm W118mm H31mm | L150mm W100mm H60mm |
| Weight | 120 g | 1319 | ${ }^{130 \mathrm{~g}}$ |
| Waterproof | 1PX6 | 1PX7 | IPX5 |
| Material | Aluminum alloy | Aluminum alloy | Aluminum alloy |
| Wiring | 2 Pins | 2 Pins | 3 Pins |
| Current | 12V/3A | 12V/3A | Working voltage C C5V Output voltage $0.8-4.2 \mathrm{~V}$ |
| Operating Temperature | $-20^{\circ} \mathrm{C} \sim 60^{\circ} \mathrm{C}$ | $-20^{\circ} \mathrm{C} \sim 60^{\circ} \mathrm{C}$ | $-20^{\circ} \mathrm{C} \sim 60^{\circ} \mathrm{C}$ |
| Stretching Resistance | 3450 N | 3450 N | $\geq 450 \mathrm{~N}$ |
| Durability | 100,000 mating cycle | 100,000 mating cycle | 100,000 mating cycle |




HALL SENSOR THROTTLES


300X
RoHS
L68mm W20mm H55mm
IPX5

## Pat

3 Pins
Working voltage 5y Outpur
oltage 5 V Output voltage $0.8-4.2 \mathrm{~V}$
$-20^{\circ} \sim 60^{\circ} \quad-20^{\circ} \mathrm{C} \sim 6$
$360 \mathrm{~N} \quad \geqslant 130 \mathrm{~N}$
$0^{\circ} \sim 50^{\circ} \quad 0^{\circ} \sim 70^{\circ}$

100,000 mating cycle

192X + HT375
130 mm W55mm H47m IPX4 PC/ABS, PVC 3 Pins Working voltage 5v Output voltage $0.8-4.2 \mathrm{~V}$ $20^{\circ} \mathrm{C} \sim 60^{\circ} \mathrm{C}$ 1090,000 mating cy

## GRIPS

CONTROLLERS


## CONTROLLERS



CONNECTOR
EB-BUS CABLE


CONNECTOR
EB-BUS CABLE


MOTOR EXTENSION CABLE

## SENSOR



## ACCESSORIES

CRAINCASE BRACKET


| MODEL No. | XY-A01-135 |
| :--- | :--- |
| Core Date | Ф63 |
| Inside Diameter | 14 |
| Width | CM2502 / CM2505 / CM5001 |
| Suitability |  |

ACCESSORIES
CHAINWHEEL

| MODEL No. | CP-A01-xx | CP-B01-Xx |
| :---: | :---: | :---: |
| Suitability | См2502 / См2505/ СМ5001 | CM2502 / CM2505 / СM5001 |
| Teeth Number (XX) | 34T; 38T; 44T | 38T; 40T; 42T; 44T |
| Chain Line | 47.5; 49; 51 | 47.5; 4; 51 |
| Thickness(1/XX") | Narrow Wide System | Narrow Wide System |
| Chain Wheel Material | spcc | 55400 |
| Spider Material | 6061 | 6061 |
| Guard Material | 6061 | 6061 |
| Spider Style | $4(9104)$ | $4(9104)$ |

ACCESSORIES
CRANK

| MODEL No. | CP-B02-XX | CP-D01-XX |
| :--- | :--- | :--- |
| Suitability | CM5001 | CM2503 |
| Teeth Number(XX) | 44T; 48T; 52T | 44T;46T;52T |
| Chain Line | 60 | 47 |
| Thickness(XXX') | Narrow Wide System | Narrow Wide System |
| Chain Wheel Material | SS400 | PB4B |
| Spider Material | 6061 | SP20A |
| Guard Material | 6061 | $316 A 0$ |
| Spider Style | $41 \Phi 104)$ | $4(\Phi 104)$ |

## ACCESSORIES

MOTOR COVER

|  |  |
| :--- | :--- |
|  |  |

ACCESSORIES
FIXATION PARTS



- Laboratory accredited by CNAS (registration number: CNAS L13401)

GNAS

- Complies with CaC, RoHS, CCC, CE, ECE R113/R50/R3, German road traffic permit
regulations, and GB/ 31887
- Ability to carry out testing services and independent products in accordance with
accreditation criteria and capabilities
- Products include Hall handles, grips, electric controllers, brake levers, meters,
headlights, taillights, and motors
- Some national standard headlights, taillights, and motors have obtained 3C certification
- Mid-mounted motor, Topology display instruments, headlights, and taillights have

RoHS C obtained CE certification



Follow us

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