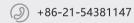
# BROGEN





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## SHANGHAI OE INDUSTRIAL CO., LTD.

Leading Provider of EV Powertrain Solutions



# **ABOUT US**

Shanghai OE Industrial Co., Ltd. (Brogen) stands as a leading provider of electric vehicle powertrain solutions, leveraging over 12 years of unparalleled industry expertise. With an illustrious track record of serving diverse businesses on a global scale, we have firmly established ourselves as a trusted and pioneering force within the electric vehicle market.

Our dedicated commitment revolves around empowering companies to thrive in the highly competitive EV industry. We offer a comprehensive suite of ePowertrain solutions and services, ranging from pre-sales solution consulting to online assistance and on-site support.

Our competitive edge is derived from the expansive scope of our product portfolio, which encompasses PMSM motors, MCUs, batteries, OBCs, DCDC converters, PDUs, e-axles, and other crucial EV automotive components. This broad selection enables us to deliver seamlessly integrated and customized powertrain solutions, meticulously tailored to meet the unique requirements of each valued client.

At the core of our ethos are unwavering principles of integrity, quality, and an enduring commitment to customer satisfaction. Each project we undertake is infused with a tireless pursuit of excellence, ensuring that our clients receive cutting-edge electric powertrain systems that establish new industry benchmarks.

Collaborate with us as we collectively forge the path towards cleaner, more efficient, and environmentally responsible mobility solutions. Together, we chart a course towards a sustainable future.



RMB and are still growing

steadily.

tomers and gained unani-

mous praise from our

customers.



Co., Ltd. has more than 12

years of industry-leading

experience.

# Globalization

# Globalization



#### Our Clients

United States, Canada, Mexico, Argentina, Brazil, Ecuador, Russia, Turkey, Iran, Germany, Poland, Spain, Portugal, Israel, Australia, New Zealand, Japan, South Korea, Indonesia, India, Thailand, Egypt, South Africa.

Our product line includes solutions designed to withstand diverse and challenging environments, including high temperatures, extreme cold, high humidity, high altitudes, wide temperature fluctuations, mountainous terrain, regions prone to heavy rainfall, and bustling megacities.

# **All Products**



# **Brogen Solutions**



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## Solution for 12-18T Trucks

#### Motor + Controller



| BG-HT106                | 52       |
|-------------------------|----------|
| Voltage (VDC)           | 540      |
| Rated/Peak Power (KW)   | 105/165  |
| Rated/Peak Torque (N·m) | 500/1000 |
| Max Speed (RPM)         | 4000     |
| Total Weight (KG)       | 170      |
| Peak Current (A)        | 420      |

#### Motor + Gearbox





| BG-HT1061 Motor Parameters |                   |
|----------------------------|-------------------|
| Model                      | TZ350XSK02        |
| Rated Voltage (VDC)        | 560               |
| Rated/Peak Power (KW)      | 120/185           |
| Rated/Peak Torque (N·m)    | 600/1000          |
| Max Speed (RPM)            | 3500 (adjustable) |

| PTO (Optional)          |      |  |
|-------------------------|------|--|
| Max Output Torque (N·m) | 500  |  |
| Ratio                   | 1.25 |  |

| Powertrain Parame          | eters |
|----------------------------|-------|
| System Output Torque (N·m) | 6706  |

| System Parameters      |       |       |       |      |
|------------------------|-------|-------|-------|------|
| Max Input Torque (N·m) |       |       | 1200  |      |
| Max Input Speed (RPM)  | 4000  |       |       |      |
| Gear                   | 1     | 2     | 3     | 4    |
| Ratio                  | 6.706 | 3.499 | 1.881 | 1.00 |

| Controller (Single or Multiple in 1)     |                                       |  |
|--|---------------------------------------|--|
| Option 1                                 | Single Controller: 600A Infineon IGBT |  |
| Option 2 Multiple in 1: DCDC, 2 DCAC, PD |                                       |  |

# Solution for 18-25T Trucks

#### Motor + Controller





| BG                      | G-HT1063  |
|-------------------------|-----------|
| Voltage(VDC)            | 520       |
| Rated/Peak Power (KW)   | 250/500   |
| Rated/Peak Torque (N·m) | 2400/4800 |
| Max Speed (RPM)         | 3000      |
| Highest Efficiency (%)  | >97       |
| Dimension (MM)          | Ф420      |

#### E-Axle



| BG-AX026 Motor |  |  |
|----------------|--|--|
| 125/250        |  |  |
| 350/800        |  |  |
| 9000           |  |  |
|                |  |  |

|       | Gearbox |       |
|-------|---------|-------|
| Gear  | 1       | 2     |
| Ratio | 13.203  | 4.367 |

| Sy                      | ystem                               |
|-------------------------|-------------------------------------|
| Wheel Side Ratio        | 3.947(3.478 only works for DeepWay) |
| Max Output Torque (N·m) | 41690                               |
| Max Output Speed (RPM)  | 522                                 |
| Total Weight (KG)       | 1020                                |
| Total Weight (KG)       | 13000                               |

## Solution for 18-25T Trucks

#### Motor





| BG-HT1064 Motor         |                   |  |
|-------------------------|-------------------|--|
| Model                   | TZ350XS250K01     |  |
| Rated Voltage (VDC)     | 560               |  |
| Rated/Peak Power(KW)    | 140/250           |  |
| Rated/Peak Torque (N·m) | 600/1200          |  |
| Max Speed (RPM)         | 3000 (Adjustable) |  |

| BG-HT1064 Gearbox      |                        |      |      |      |      |      |
|------------------------|------------------------|------|------|------|------|------|
| Max Input Torque (N⋅m) | nput Torque (N·m) 1500 |      |      |      |      |      |
| Max Input Speed (RPM)  | 3000                   |      |      |      |      |      |
| Gear                   | 1 2 3 4 5 6            |      |      |      | 6    |      |
| Ratio                  | 7.05                   | 4.13 | 2.52 | 1.59 | 1.00 | 0.78 |

| BG-HT1064 Controller  |             |
|-----------------------|-------------|
| Model No.             | KTZ65X55S01 |
| Voltage Range (VDC)   | 400~750     |
| Continuous Current(A) | 310         |
| Peak Current (A)      | 520         |

| BG-HT1                  | 064 PTO (Optional) |
|-------------------------|--------------------|
| Max Output Torque (N·m) | 300                |
| Ratio                   | 1.06               |

## Solution for 25-40T Trucks

#### Motor + Gearbox





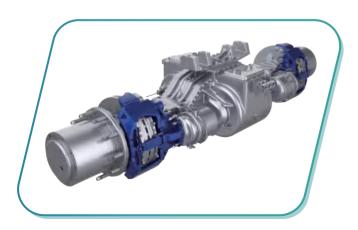
| BG-HT1065 Mot           | or        |
|-------------------------|-----------|
| Rated/Peak Power (KW)   | 250/380   |
| Rated/Peak Torque (N·m) | 1200/2400 |
| Max Speed (RPM)         | 3500      |

| BG-HT1065 System        |       |  |
|-------------------------|-------|--|
| Max Output Torque (N·m) | 20136 |  |
| Total Weight (KG)       | 420   |  |

| BG-HT1065 Gearbox |      |      |      |      |
|-------------------|------|------|------|------|
| Gear              | 1    | 2    | 3    | 4    |
| Ratio             | 8.39 | 3.54 | 1.74 | 1.00 |

|                         | PTO(Optional) |
|-------------------------|---------------|
| Max Output Torque (N⋅m) | 500/700       |

#### E-Axle Integrated with Double Motors



| BG-AX009          |             |  |
|-------------------|-------------|--|
| Power (KW)        | 2*180/2*80  |  |
| Voltage (VDC)     | 540         |  |
| Torque (N·m)      | 2*500/2*250 |  |
| Peak Speed (RPM)  | 9500        |  |
| Total Weight (KG) | 1100        |  |
| Rated Load (KG)   | 13000       |  |
| Ratio             | 49.4/15.3   |  |
|                   |             |  |

# Solution for 40T Heavy Trucks

#### Motor + Controller





| BG-HT1064 Motor         |           |  |
|-------------------------|-----------|--|
| Voltage (VDC)           | 610       |  |
| Rated/Peak Power (KW)   | 330/450   |  |
| Rated/Peak Torque (N·m) | 1500/2800 |  |
| Max Speed (RPM)         | 3500      |  |
| Highest Efficiency (%)  | ≥97       |  |
| Dimension (MM)          | Ф440*630  |  |

#### E-Axle Integrated with Double Motors



| BG-AX009          |             |  |
|-------------------|-------------|--|
| Power (KW)        | 2*180/2*80  |  |
| Voltage (VDC)     | 540         |  |
| Torque (N·m)      | 2*500/2*250 |  |
| Peak Speed (RPM)  | 9500        |  |
| Total Weight (KG) | 1100        |  |
| Rated Load (KG)   | 13000       |  |
| Ratio             | 49.4/15.3   |  |

 $\mathsf{5}$ 

# Solution for 40T Heavy Trucks

#### Motor+Gearbox





| BG-HT1066 Motor         |          |          |  |  |
|-------------------------|----------|----------|--|--|
| Motor 1 Motor 2         |          |          |  |  |
| Rated/Peak Power (KW)   | 150/230  | 150/230  |  |  |
| Rated/Peak Torque (N·m) | 750/1500 | 750/1500 |  |  |
| Max Speed (RPM)         | 3500     | 3500     |  |  |

| BG-   | -HT1066 Geark | ох   |      |      |
|-------|---------------|------|------|------|
| Gear  | 1             | 2    | 3    | 4    |
| Ratio | 8.39          | 1.74 | 3.54 | 1.00 |

#### BG-HT1066 System

Max Output Torque (N·m)

20136 (1200 of each motor when both motors work)

Total Rated/Peak Torque (KW)

300/460

|                         | BG-HT1066 PTO (Optional) |     |
|-------------------------|--------------------------|-----|
| Max Output Torque (N·m) |                          | 500 |
| Max Output Power (KW)   |                          | 110 |



## Solution for 6-7M Bus

#### Motor+Controller



| BG-B                         | 3S1028   |
|------------------------------|----------|
| Voltage (VDC)                | 520      |
| Rated/Peak Power (KW)        | 80/160   |
| Rated/Peak Torque (N·m)      | 800/1600 |
| Max Speed (RPM)              | 3000     |
| Maximum Motor Efficiency (%) | ≥97      |
| Overall Dimensions(MM)       | Ф372*330 |

#### Parallel Axis Electric Drive Axle



|        | BG-AX027                    |         |
|--------|-----------------------------|---------|
|        | Voltage (VDC)               | 540     |
| Motor  | Rated/Peak Power (KW)       | 65/120  |
|        | Rated/Peak Torque (N·m)     | 170/355 |
|        | Maximum Output Torque (N·m) | 5780    |
| System | Rated Load (KG)             | 6000    |
|        | Weight (KG)                 | 329     |

# Solution for 8-9M Bus

#### Motor + Controller



| BG                      | i-BS1026   |
|-------------------------|------------|
| Rated/Peak Power (KW)   | 90/195     |
| Rated/Peak Torque (N·m) | 900/2100   |
| Max Speed (RPM)         | 3500       |
| Weight (KG)             | 195        |
| Overall Dimensions(MM)  | Ф415 Х 433 |

#### Parallel Axis Electric Drive Axle



|        | BG-AX028                    |         |
|--------|-----------------------------|---------|
|        | Voltage (VDC)               | 540     |
| Motor  | Rated/Peak Power (KW)       | 80/160  |
|        | Rated/Peak Torque (N·m)     | 200/450 |
|        | Maximum Output Torque (N⋅m) | 9213    |
| System | Rated Load (KG)             | 6000    |
|        | Weight (KG)                 | 415     |

# Solution for 8-9M Bus

#### Motor + Gearbox





| В                       | G-HT1034 |
|-------------------------|----------|
| Rated/Peak Power (KW)   | 120/185  |
| Rated/Peak Torque (N·m) | 500/1300 |
| Max Speed (RPM)         | 3500     |

| Ge    | arbox Parameters |   |
|-------|------------------|---|
| Gear  | 1                | 2 |
| Ratio | 2.741            | 1 |

| System F                    | Parameters |
|-----------------------------|------------|
| Maximum Output Torque (N·m) | 3380       |
| Weight (KG)                 | 174        |
| Length * Width * Height(MM) | 636X56X549 |

| PTO Parameters (Flange Ty | ype or Spline Type Optional) |
|---------------------------|------------------------------|
|                           |                              |
| Total Gear Ratio          | 1.148                        |
|                           |                              |
| Rated/Peak Torque (N·m)   | 120/200                      |
|                           |                              |
| Rated/Peak Power (KW)     | 20/40                        |

# Solution for 10-13M Bus

#### Motor + Controller





| E                            | 3G-BS1027 |
|------------------------------|-----------|
| Voltage (VDC)                | 520       |
| Rated/Peak Power (KW)        | 120/240   |
| Rated/Peak Torque (N·m)      | 1200/2400 |
| Max Speed (RPM)              | 3000      |
| Maximum Motor Efficiency (%) | >97       |
| Overall Dimensions(MM)       | Ф372*430  |

#### E-Axle



| BG-AX002                |                |
|-------------------------|----------------|
| Rated/Peak Power (KW)   | 2* 80/2*160    |
| Voltage (VDC)           | 540            |
| Rated/Peak Torque (N·m) | 2* 220/2 * 580 |
| Motor Max Speed (RPM)   | 8000           |
| Bridge Axle (KG)        | 1127           |
| Rated Load (KG)         | 14000          |
| Gear Ratio              | 18.58          |

# Solution for 10-13M Bus

#### Motor + Gearbox





| BG                      | -HT1035  |
|-------------------------|----------|
| Rated/Peak Power (KW)   | 110/210  |
| Rated/Peak Torque (N·m) | 500/1100 |
| Max Speed (RPM)         | 4500     |

| Gearbox Parameters |       |   |
|--------------------|-------|---|
| Gear               | 1     | 2 |
| Ratio              | 2.741 | 1 |

| System Parameters                |               |
|----------------------------------|---------------|
| Maximum Output Torque (N·m) 3015 |               |
| Weight (KG)                      | 174           |
| Length * Width * Height (MM)     | 595X 516X 549 |

| PTO Parameters (Flange Type or Spline Type Optional) |         |
|--|---------|
| Total Gear Ratio 1.148                               |         |
| Rated/Peak Torque (N·m)                              | 120/200 |
| Rated/Peak Power (KW)                                | 20/40   |

# Solution for 14-18M Bus

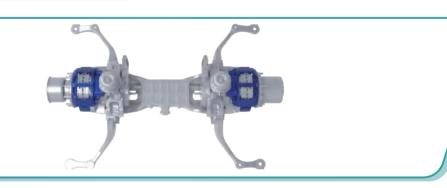
#### Motor + Controller





| BG-HT1063                    |           |  |
|------------------------------|-----------|--|
| Voltage (VDC)                | 520       |  |
| Rated/Peak Power (KW)        | 250/500   |  |
| Rated/Peak Torque (N·m)      | 2400/4800 |  |
| Max Speed (RPM)              | 3000      |  |
| Maximum Motor Efficiency (%) | ≥97       |  |
| Overall Dimensions(MM)       | Ф440*780  |  |

#### E-Axle



| BG-AX002                |                |  |
|-------------------------|----------------|--|
| Rated/Peak Power (KW)   | 2* 60/2*160    |  |
| Voltage (VDC)           | 540            |  |
| Rated/Peak Torque (N·m) | 2* 220/2 * 580 |  |
| Motor Max Speed (RPM)   | 8000           |  |
| Axle Weight (KG)        | 1127           |  |
| Rated Load (KG)         | 14000          |  |
| Gear Ratio              | 18.58          |  |

#### EPS

#### EV Battery Pack

420kWh, 350kWh and 280kWh (8 battery boxes + 1 high voltage box + 1 cooling unit) solutions or customized battery system.



#### Air Brake Compressor

| Rated Power (KW)      | 3   | 4   |
|-----------------------|-----|-----|
| Rated Exhaust (L/min) | 250 | 400 |



#### EHPS

| Rated Power (KW)   | 3    | 4    |
|--------------------|------|------|
| Rated Torque (N·m) | 19.1 | 34.2 |



#### 3-in-1 Controller for Auxiliary

DC/AC for power steering pump; DC/AC for air brake compressor; DC/DC 3-in-1 controller with connectors (5.5KW, 380VAC, 24VDC, 3KW DCDC)





Maximum output rack force: 18KN



#### Air Conditioner System

Norminal Cooling Capacity: 23KW/20KW/18KW/16KW; Bus Length:

10.5-12.0M; 9.5-10.4M; 8.9-9.4M.

#### Air Conditioner Compressor



| Displacement (cc/rev)       | 80        | 34        |
|-----------------------------|-----------|-----------|
| Rotated Speed Range (RPM)   | 3000-6000 | 1500-6000 |
| Refrigerating Capacity (KW) | 19.2      | 5.8       |

#### Battery Thermal Management System



Cooling Capacity: 5KW/7KW/8KW Refrigerant Type: R134a/R410a/R134a

# BROGEN Discover our cutting-edge electric powertrain solutions designed for light-duty trucks that optimize vehicle layout, reduce size and weight, and increase load capacity. Providing superior performance and efficiency to meet the demands of modern transportation. **Light Trucks Powertrain Solutions**

## Solution for 1.5-2.5T Trucks

#### Motor+Controller





| Motor Parameters       |               |  |
|------------------------|---------------|--|
| Model                  | T2230xS-25-03 |  |
| Rated/Max Power (KW)   | 25/60         |  |
| Rated/Max Torque (N·m) | 133/350       |  |
| Rated/Max Speed (RPM)  | 1800/4500     |  |
|                        |               |  |
| Controll               | er Parameters |  |
| Rated Voltage (VDC)    | 340           |  |
| Voltage Range (V)      | 200-450       |  |
| Current Module (A)     | 255           |  |
| Rated Current (A)      | 93            |  |

#### Integrated Electric Drive Axle



| C220C                   |                           |  |
|-------------------------|---------------------------|--|
| Axle Load (KG)          | 2000                      |  |
| Max Output Torque (N·m) | 1800                      |  |
| Max Output Power (KW)   | 60                        |  |
| Wheel Speed (RPM)       | 1000                      |  |
| Speed Ratio             | 9                         |  |
| Axle Weight (KG)        | 105                       |  |
| Protection Class        | IP67                      |  |
| Coolant                 | 50% glycol +<br>50% water |  |
| Motor Type              | PMSM motor                |  |
| Rated Voltage (VDC)     | 336                       |  |
|                         |                           |  |

# Solution for 1.5-2.5T Trucks

#### 3 in 1 Powertrain



| Moto                   | r Parameters |
|------------------------|--------------|
| Model                  | C29A         |
| Rated/Max Power (KW)   | 60/100       |
| Rated/Max Torque (N·m) | 120/280      |
| Max Speed (RPM)        | 12000        |

| Reducer     | Parameters |
|-------------|------------|
| Speed Ratio | 3.04       |
|             |            |

| System P          | arameters |
|-------------------|-----------|
| Peak Torque (N·m) | 851.2     |
| Peak Speed (RPM)  | 3947      |
| Weight (KG)       | 81        |

| Controller Parameters |         |  |
|-----------------------|---------|--|
| Voltage Range (V)     | 280-420 |  |
| Current Module (A)    | 420     |  |
| Weight (KG)           | 8       |  |

# Solution for 3.5-4.5T Trucks

#### Motor + Controller



| Motor Parameters       |               |
|------------------------|---------------|
| Model                  | TZ260XS 60-01 |
| Rated/Max Power (KW)   | 60/110        |
| Rated/Max Torque (N·m) | 358/950       |
| Rated/Max Speed (RPM)  | 1600/4500     |
| Weight (KG)            | 101           |

| Controller Parameters |         |  |
|-----------------------|---------|--|
| Voltage Range (V)     | 450-750 |  |
| Current Module (A)    | 340     |  |
| Rated Current (A)     | 125     |  |

#### E-Axle



| Model                      | C400E                 | C500E | C635E |
|----------------------------|-----------------------|-------|-------|
| Axle Load (KG)             | 3500                  | 3500  | 3500  |
| Max Output Torque (N·m)    | 4054                  | 5068  | 6335  |
| Max Output Power (KW)      | 110                   | 130   | 160   |
| Max Wheel Speed (RPM)      | 828                   | 828   | 789   |
| Speed Ratio                |                       | 12.67 |       |
| Braking Type               | Hydraulic / Pneumatic |       |       |
| Brake                      |                       | Drum  |       |
| Installation Distance (MM) | 860-940               |       |       |
| Track (MM)                 | 1370-1580             |       |       |
|                            |                       |       |       |

## Solution for 3.5-4.5T Trucks

| Model             | C400E                  | C500E | C635E |
|-------------------|------------------------|-------|-------|
| Axle Weight (KG)  | 260                    | 264   | 272   |
| Protection Class  |                        | IP67  |       |
| Coolant           | 50% Glycol + 50% Water |       |       |
| Rated Voltage (V) |                        | 540   |       |

#### 3 in 1 Powertrain



| Motor Parameters       |               |  |
|------------------------|---------------|--|
| Assembly Model         | CE1T10004     |  |
| Rated Voltage (V)      | 380           |  |
| Rated/Max Power (KW)   | 60/100        |  |
| Rated/Max Torque (N·m) | 120/280       |  |
| Rated/Max Speed (RPM)  | 4500/12000    |  |
| Cooling Method         | Water Cooling |  |
| Protection Level       | IP67          |  |

| Reducer Parameter     |      |
|-----------------------|------|
| Speed Ratio           | 3.04 |
|                       |      |
| Controller Parameters |      |

| Controller Parameters          |         |
|--------------------------------|---------|
| Rated Voltage (V)              | 250-450 |
| Current Module (A)             | 420     |
| Continuous Working Current (A) | 190     |

| System Pa         | arameters |
|-------------------|-----------|
| Peak Torque (N·m) | 851.2     |
| Peak Speed (RPM)  | 3947      |
| Weight (KG)       | 81        |

## Solution for **5.5-6T Trucks**

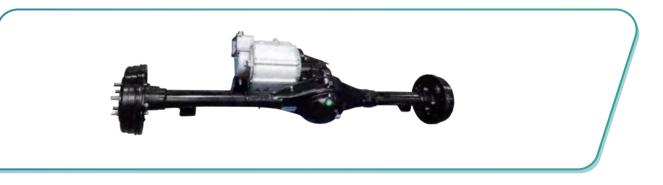
#### Motor + Controller



| Motor Parameters       |          |  |
|------------------------|----------|--|
| Model                  | DMS120   |  |
| Rated/Max Power (KW)   | 60/120   |  |
| Rated/Max Torque (N·m) | 635/1200 |  |
| Rated/Max Speed (RPM)  | 900/3800 |  |
| Weight (KG)            | 142      |  |

| Controller Parameters |         |
|-----------------------|---------|
| Voltage Range (V)     | 450-750 |
| Current Module (A)    | 600     |
| Integration           | MCU     |

#### E-Axle



| Controller Parameters   |       |
|-------------------------|-------|
| Model                   | C635F |
| Axle Load (KG)          | 5500  |
| Max Output Torque (N·m) | 3665  |

21 — Weight (Ko) 21

## Solution for **5.5-6T Trucks**

| Controller Parameters      |                        |
|----------------------------|------------------------|
| Max Output Power (KW)      | 160                    |
| Max Wheel Speed (RPM)      | 789                    |
| Speed Ratio                | 12.67                  |
| Braking Type               | Hydraulic              |
| Brake                      | Drum / Disc            |
| Installation Distance (MM) | 880-950                |
| Track (MM)                 | 1510-1630              |
| Axle Weight (KG)           | 350                    |
| Protection Class           | IP67                   |
| Coolant                    | 50% Glycol + 50% Water |
| Rated Voltage (VDC)        | 540                    |

#### Motor + Gearbox



| Motor Parameters       |                |
|------------------------|----------------|
| Model                  | TED1360        |
| Rated/Max Power (KW)   | 60/120         |
| Rated/Max Torque (N·m) | 300/500        |
| Max Speed (RPM)        | 5000           |
| Cooling Method         | Liquid Cooling |
| Protection Level       | IP67           |

| Gearbox Parameters |           |
|--------------------|-----------|
| Gear               | 1/2       |
| Speed Ratio        | 2.73/1.00 |

| System Parameters |             |
|-------------------|-------------|
| Peak Torque (N·m) | 1365        |
| Peak Speed (RPM)  | 1832        |
| Weight (KG)       | 135         |
| Size (MM)         | 640x374x437 |

# Solution for **7-10T Trucks**

#### Motor + Controller



| Motor Parameters       |                             |
|------------------------|-----------------------------|
| Model                  | 2SDK290XS105A(2 in 1 motor) |
| Rated/Max Power (KW)   | 105/165                     |
| Rated/Max Torque (N·m) | 500/1000                    |
| Rated/Max Speed (RPM)  | 2005/4000                   |
| Weight (KG)            | 170                         |

| Controller Parameters |         |
|-----------------------|---------|
| Voltage Range (V)     | 450-750 |
| Current Module (A)    | 420     |
| Rated Voltage (V)     | 540     |

#### Motor + Gearbox



| Motor Parameters       |          |
|------------------------|----------|
| Model                  | TED2330S |
| Rated/Max Power (KW)   | 75/120   |
| Rated/Max Torque (N·m) | 350/850  |

# Solution for **7-10T Trucks**

| Motor Parameters |      |
|------------------|------|
| Max Speed (RPM)  | 5000 |
|                  |      |

| Gearbox Parameters |           |
|--------------------|-----------|
| Gear               | 1/2       |
| Speed Ratio        | 2.73/1.00 |

| System Parameters             |         |
|-------------------------------|---------|
| Peak Torque (N·m)             | 2330    |
| Weight (KG)                   | 147     |
| Overall Speed Ratio           | 1.148   |
| Rated/Max Output Torque (N·m) | 120/200 |
| Rated/Max Output Power (KW)   | 20/40   |



Step into the future of mobility with our state-of-the-art electric powertrain solutions for passenger cars. Refine vehicle layout, cut BOM costs and increase energy efficiency.

Passenger Vehicles Powertrain Solutions

# Multi-in-1 Powertrain

#### 6-in-1 Powertrain



| Configuration | Main Parameters                          | 70KW 6-in-1 | 120KW 6-in-1 | 150KW 6-in-1 |
|---------------|--|-------------|--------------|--------------|
|               | Operating Voltage Range (V)              | 309         | 220~460      | 220~460      |
|               | Full Power Voltage (V)                   | 270~420     | 320~450      | 320~450      |
|               | Max Power (KW)                           | 70          | 120          | 150          |
| Motor         | Continuous Power (KW)                    | 35          | 50           | 60           |
|               | Max Torque (N·m)                         | 160         | 220          | 280          |
|               | Continuous Torque (N·m)                  | 75          | 90           | 110          |
|               | Max Speed (RPM)                          | 12000       | 15000        | 16000        |
| Reducer       | Reduction Ratio                          | 10.89       | 11.93        | 11.93        |
|               | Input Voltage (VAC)                      | 90~264      | 90~264       | 90~264       |
| OBC           | Output Voltage (VDC)                     | 200~420     | 230~450      | 230~450      |
|               | Continuous Power (KW)                    | 3.3/6.6     | 6.6          | 6.6          |
|               | Input Voltage (VDC)                      | 200~420     | 230~450      | 230~450      |
| DCDC          | Output Voltage (VDC)                     | 14          | 14           | 14           |
|               | Continuous Power (KW)                    | 1.5/2       | 2.5          | 2.5          |
|               | OBC Interface/Fuse (A)                   | 30          | 40           | 40           |
|               | PTC Interface/Fuse (A)                   | 40          | 40           | 40           |
| PDU           | AC Interface/Fuse (A)                    | 30          | 20           | 20           |
|               | Fast Charging<br>Interface/Contactor (A) | 150         | 250*2        | 250*2        |
|               | Max Wheel Speed (RPM)                    | 1100        | 1257         | 1341         |
| System        | Max Wheel Torque (N·m)                   | 1742        | 2624         | 3340         |
| System        | Continuous Wheel Torque (N·m)            | 817         | 1090         | 1312         |
|               | Protection Class                         | IP67        | IP67         | IP67         |

# Multi-in-1 Powertrain

#### 3-in-1 Powertrain



| Model                         | EPT1-36 | EPT1-55        | EPT2-120 |
|-------------------------------|---------|----------------|----------|
| Operating Voltage Range (V)   | 240-420 | 240-420        | 240-460  |
| Continuous Power (KW)         | 16      | 20             | 60       |
| Max Power (KW)                | 36      | 55             | 120      |
| Continuous Torque (N·m)       | 44      | 45             | 125      |
| Max Torque (N·m)              | 96      | 115            | 280      |
| Max Speed (RPM)               | 12000   | 12700          | 12000    |
| Reducer Speed Ratio           | 10.89   | 10.89          | 9.11     |
| Max Wheel Speed (RPM)         | 1102    | 1166           | 1317     |
| Max Wheel Torque (N·m)        | 998     | 1189           | 2550     |
| Continuous Wheel Torque (N·m) | 446     | 456            | 1138     |
| Cooling Method                |         | Liquid Cooling |          |
| EMC                           |         | Class3         |          |
| Operating Temperature         |         | -40~85         |          |
| Protection Class              |         | IP67           |          |

# PMSM Motor + Controller

#### 30KW/60KW



| TZ180XS-30                   |                |  |
|------------------------------|----------------|--|
| Rated Voltage (VDC)          | 360/540        |  |
| Continuous /Max Power (KW)   | 30/60          |  |
| Continuous /Max Torque (N·m) | 90/223         |  |
| Maximum Speed (RPM)          | 9000           |  |
| Cooliing Method              | Liquid Cooling |  |

#### 40KW/80KW



| TZ180XS-40-02 Drive Motor Parameters |                |  |
|--------------------------------------|----------------|--|
| Rated Voltage (VDC)                  | 360            |  |
| Continuous /Max Power (KW)           | 40/80          |  |
| Continuous /Max Torque (N·m)         | 100/235        |  |
| Maximum Speed (RPM)                  | 11000          |  |
| Cooling Method                       | Liquid Cooling |  |

# PMSM Motor + Controller

#### 100KW/200KW



| TZ260XS-100-02    |                |  |
|-------------------|----------------|--|
| Rated Voltage     | 540V           |  |
| Continuous Power  | 100KW          |  |
| Continuous Power  | 200KW          |  |
| Continuous Torque | 215N·m         |  |
| Peak Torque       | 550N·m         |  |
| Rated Speed       | 4441 RPM       |  |
| Peak Speed        | 8000 RPM       |  |
| Cooling Method    | Liquid Cooling |  |

#### 60KW/110KW





| Drive Motor Parameters       |                |  |
|------------------------------|----------------|--|
| Rated Voltage (VDC)          | 336            |  |
| Continuous /Max Power (KW)   | 60/110         |  |
| Continuous /Max Torque (N·m) | 191/400        |  |
| Maximum Speed (RPM)          | 3000/8500      |  |
| Cooling Method               | Liquid Cooling |  |

#### Other Components for Light Trucks/Passenger Cars

#### EV Battery Pack

40kwh, 60kwh solution or customized battery system.



#### OBC

6.6KW 2 in 1; 11KW 2 in 1; 6.6KW 3 in 1 (OBC+DCDC+PDU).



#### EHPS

| Low Voltage (V)      | 12    |
|----------------------|-------|
| Rated Power (KW)     | 0.5   |
| Flow Range (L/MIN)   | 5-9.5 |
| Pressure Range (MPA) | 12    |



#### Air Conditioner Compressor

| Displacement (cc/rev)       | 18        |
|-----------------------------|-----------|
| Rotated Speed Range (RPM)   | 2000-6000 |
| Refrigerating Capacity (KW) | 2.9       |



#### Other Components for Light Trucks/Passenger Cars



EPS

Maximum output rack force: 4/6/7/11/12KN

#### Water Pump



50W, 80W and 100W water pumps.



#### DCDC

| Range of Input Voltage | 110V-180V     |
|------------------------|---------------|
| Rated Output Power     | 1.2 KW        |
| Rated Output Voltage   | 27.5V         |
| DC/DC Type             | Isolated Type |
|                        |               |

# **Project Cases**

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Exported low-chassis truck powertrains to Australia.



Implemented a direct-drive powertrain system in vans.



Introduced the Middle East's first electric bus with our wheelside electric axle solution.



Powered Spain's first electric boat (13M, 60T) with our propulsion system and EVE battery.



Developed a 40-ton semi-truck prototype in India, integrating a 350KW motor with a fast 6-speed gearbox.

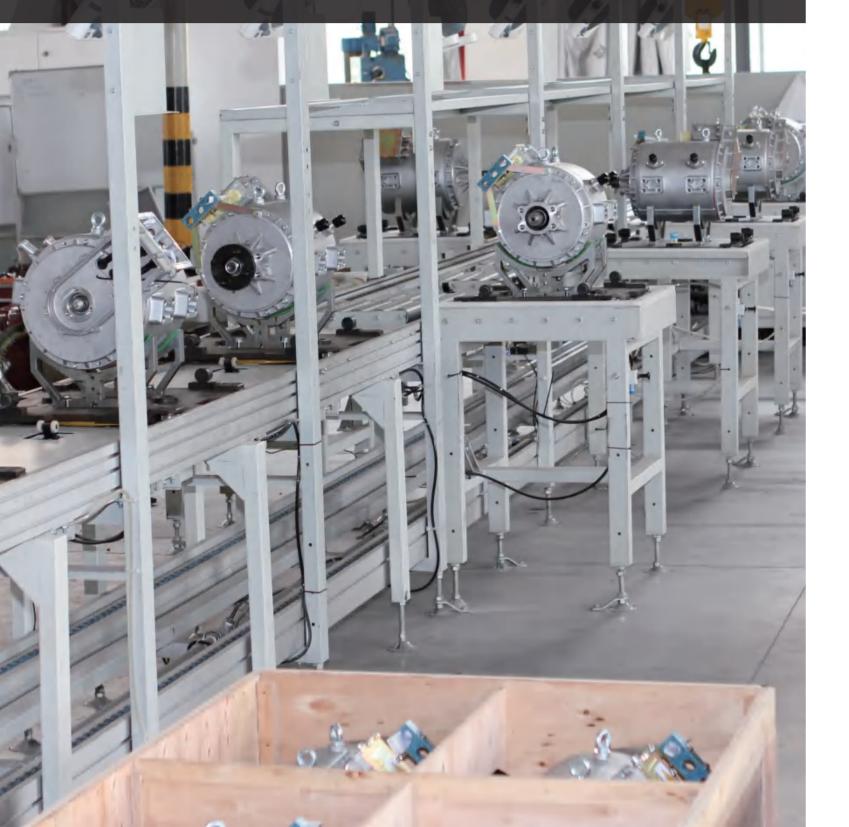


Supplied well-known Korean Airlines with a 120KW drive motor, EHPS and DCDC for light trucks at the airport.

## **Manufacturing Capacity**

One of our factories in Wuhu, which is more than 30,000 square meters, has a high automation rate of stator winding and dipping line, controller line, motor and powertrain assembly line, with a maximum daily output of 1500 sets of various categories of drive system capacity;

Shanghai OE's production line has high flexibility and is compatible with the production of single motor, single controller, two-in-one drive system integrated with motor and controller, three-in-one drive system integrated with motor, controller and reducer, and multi-in-one drive system integrated with motor, controller, reducer, OBC and DCDC.



# Certifications









CE ROHS IATF16949