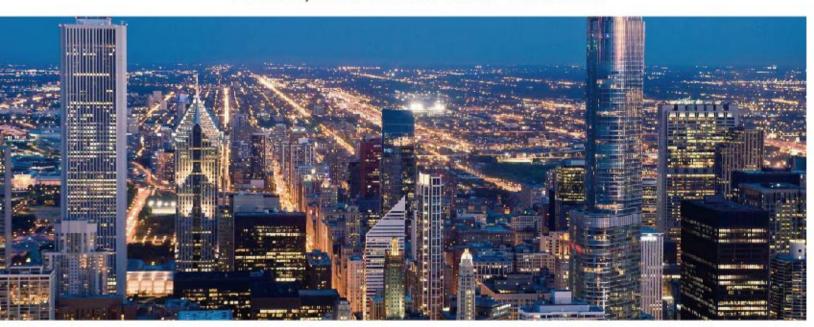
# **KOP**®

#### KOOP, Your Best Power Solution!



\* All datas are only for reference, actual configuration please refer to real product.



#### CHANGZHOU KOOP POWER MACHINERY CO.,LTD.

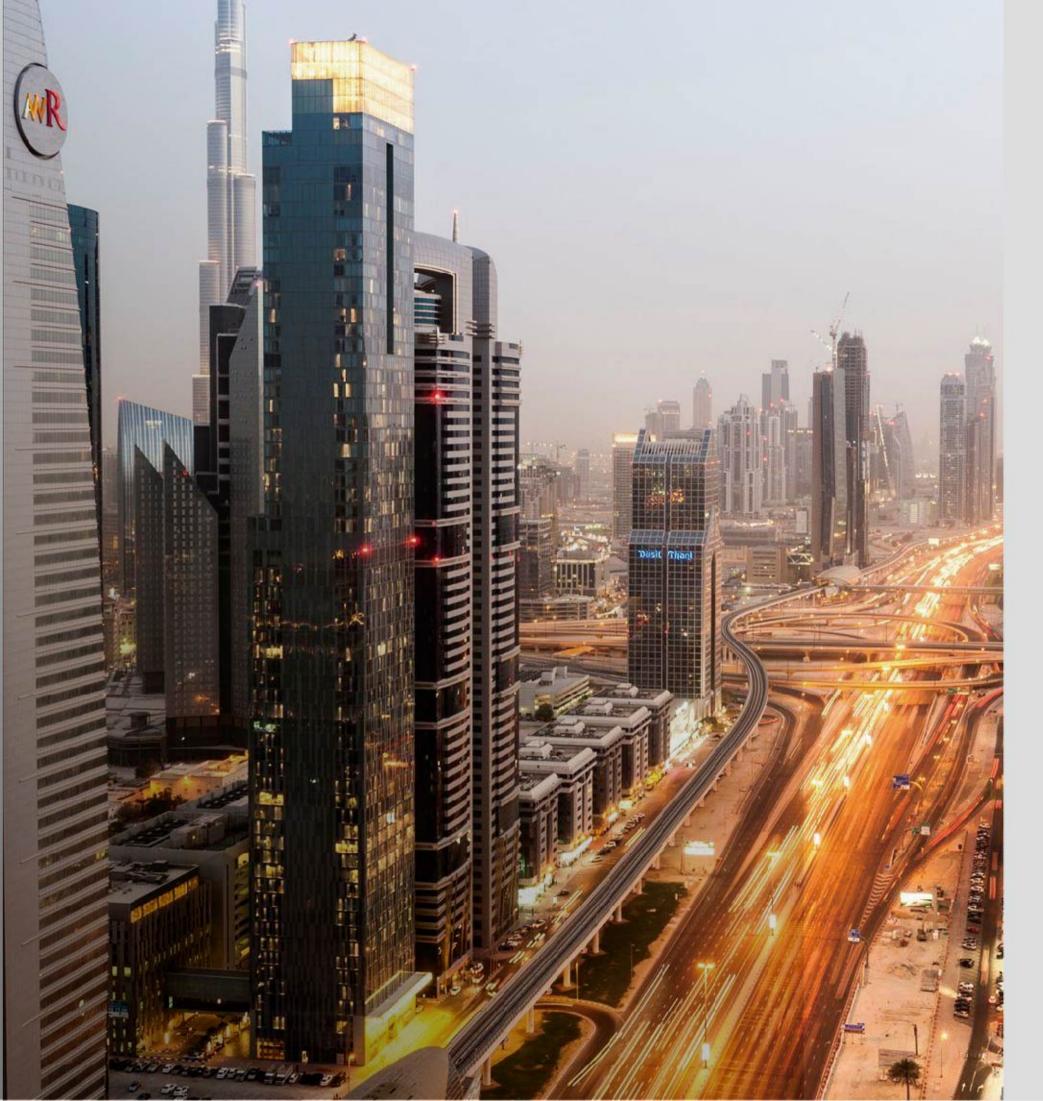
ADD: NO.6 Hexiang Road, Wujin Economic Development Zone, Changzhou Jiangsu China

TEL: 0086-519-88381659

FAX: 0086-519-88384889

E-mail: isaac@koopchina.com





### **CONTENT**

01-02 Company Profile

03-04 Advanced Production Line

Test Equipment Enterprise Honor

05-12 Diesel Engine

1-Cylinder Series 2-Cylinder Series

13-18 Open Frame Diesel Generator

1-Cylinder Series

2-Cylinder Series

19-22 Silent Diesel Generator

1-Cylinder Series

2-Cylinder Series

23-26 Diesel Welding Generator

1-Cylinder Series

27-32 Diesel Water Pump

General Water Pump

High-pressure Water Pump

Cast-iron Water Pump

33-36 Super Silent Generator





KOOP is an enterprise specialized in the research and manufacture of small power engine and standby power system. The core team is grouped by reputable technical experts in the industry and meritocracy, who have the remarkable design capability and rich engineering experience in internal combustion engine, electrical and electric field. Through unremitting efforts, KOOP has become the professional leading supplier of small power engine and mobile power industry in China.

KOOP was founded in August, 2007, a joint-stock private technology enterprise. Located in Wujin Economic Development zone, surrounded by beautiful landscaping and gardens with convenient traffic and high-speed hub, KOOP covers an area of 50,000 square meters and an architectural area of 26,000 square meters. It owns 6 automic flexible production lines and the testing center equipped with professional detection device for metallic phase, tension, fuel injector, fule injector pump, camshaft, gear, cylinder airway etc. Exports account for 70% of the company's main business income, and the market throughout the world, mainly in America, Africa, and Southeast Asia etc. KOOP export amount was more than 31.2 million US dollar since 2013.

As a provincial high-tech enterprise, KOOP has persisted in leaping company forward with techonogy innovation and strengthening company development through scientifific management. Over these years, it has been focused on developing core R&D resources and researching engine and power technology, obtaining 28 technology patents and supplying the demands of reliable power engine and high quality electrical energy. And KOOP products meet the standard of CE, EPA, ISO9001, and TS16949. KOOP awarded

"Provincial hi-tech enterprise" in 2012, many products awarded "hi-tech product", which make KOOP become member of engineering technology center and council member of agricultural machinery distribution association of Changzhou city.

KOOP always insists that "quality is the only foundation to win the market". Every product is manufactured according to the standard of "zero defect". The company has established quality control system with ISO9001 and TS16949 standard and strictly carried out the system. The excellent quality and service have won world-wide reputation.

R&D ability is the core competitive strength of the company, the R&D term continuously enriches product line and now has a variety product range of single, double cylinder air-cooled engines, gasoline engines, mobile portable power sets , pumping sets and garden machineries etc. Especially, KOOP took the lead in development and production of vertical two-cylinder diesel engine like KD292F, KD2V80, and KD2V86, which has won wide attention in the industry.

KOOP always remembers the social responsibility imposed on the company, it initiated the enterprise mission of "sharing the happiness of company growth with KOOP employees, customers and suppliers"; created the corporate culture of "being the brand of the new owner with company and actualize our own personal worth" and the service concept of "being the expert in power and providing excellent service". In the future, KOOP will certainly be dedicated to developing itself into becoming the best engine power supplier in China and offering best products and service for global customers.

# KOOP takes care of quality control as life. Each product is manufactured by heart.

KOOP follows strictly to ISO9001 and TS16949 quality standard.

Raw material analysis with analytical instruments.

Equipped with automatic assembly production line

Product air tightness and performance online test through intelligent equipment.

Create a staff keep improving working environment.

Make sure high quality of each product before shipping.

### Advanced Production Line >>



### Test Equipment >>



### Enterprise Honor >>









# KD ADVANTAGE



#### Patented product, excellent performance

The product has won numbers of patents, covering multiple aspects of performance, with the characteristic of low fuel consumption, high power output and low noise etc.



#### Aim to high-end market, high quality components

KOOP products aim to high-end diesel engine market, all key components are purchased from brand suppliers, to make sure high quality from raw materials.



#### Light weight, compact construction

New generation of small diesel engines, with more reasonable design, more output at same volume, meet multiple applications.



#### Process innovation, long service life

Continuous innovation in the details of production process, improvement in the process of assembling, relevant spare parts running in good, high mechanical strength, running smoothly, little vibration, long service life.

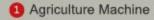


#### Easy maintenance, low operation cost

Easy lead to engine makes easy maintenance, high combustion ratio, low fuel consumption, large torque, strong power and low operation cost.









Outdoor Project



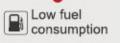
6 Emergency Power Supply



4 Standby Usage



Vessel and Car



With new tip-clearance fuel pump and bottom inertia injection technology, combine new type combustor and high burning rate, its fuel economy is much lower than gasoline engines.



Large reserves of torque, strong power, supper overload capacity.



Low noise

Well-designed gear transmission structure, make the vibration decreased and noise lowed, patented air cleaner, lower the noise of air inlet and outlet.



Excellent production process, strict QC system to make sure the products safe and reliable.



Wide application area

Various kinds of output forms are optional.







\* Italian type starter handle

\* Oil-bathed air filter

#### 1-Cylinder Series

| Model                                      | KD17                                  | KD170F/FE                                   |                              | KD178F/FE                     |                              | FA/FAE                 |
|--|---------------------------------------|---|------------------------------|-------------------------------|------------------------------|------------------------|
| Engine Type                                | 1-Cylinder, 4-Stroke                  | 1-Cylinder, 4-Stroke, Air-cooled, Veritical |                              | Air-cooled, Veritical         | 1-Cylinder, 4-Stroke         | , Air-cooled, Veritica |
| Combustion System                          | Direct in                             | njection                                    | Direct in                    | njection                      | Direct i                     | njection               |
| Bore*Stroke [mm]                           | 70                                    | *55   | 78                           | *62                           | 86                           | *72                    |
| Displacement [L]                           | 0.2                                   | 211   | 0.2                          | 96                            | 0.                           | 418                    |
| Compression Ratio                          | 20                                    | :1  | 20                           | :1                            | 19.                          | 5:1                    |
| Rated Speed [rpm]                          | 3000                                  | 3600  | 3000                         | 3600                          | 3000                         | 3600                   |
| Rated Power [kW]                           | 2.5                                   | 2.8   | 3.7                          | 4.0                           | 5.8                          | 6.6                    |
| Rated Power [hp]                           | 3.4                                   | 3.8   | 5.0                          | 5.4                           | 7.9                          | 9.0                    |
|  | F: Reco                               | F: Recoil start                             |                              | F: Recoil start               |                              | coil start             |
| Starting System                            | FE: Elec                              | FE: Electric start                          |                              | FE: Electric start FAE: Elect |                              | ctric start            |
| Fuel Tank Capacity [L]                     | 2                                     | 2.5   |                              | .5                            | 5                            | 5.5                    |
| Lube Oil Capacity [L]                      | 0.                                    | 75  | 1.10                         |                               | 1                            | .65                    |
| Fuel Consumpition [g/kW                    | h) 275                                | 280   | 275                          | 280                           | 275                          | 280                    |
| Fuel Type                                  | 0#(summer), -10#                      | (winter) Diesel oil                         | 0#(summer), -10#             | (winter) Diesel oil           | 0#(summer), -10              | #(winter) Diesel oil   |
| Lube Type                                  | SAE10W30 (CD                          | grade or above)                             | SAE10W30 (CD grade or above) |                               | SAE10W30 (CD grade or above) |                        |
| Overall Diemension (mm)                    | II Diemension [mm][L*W*H] 335*380*415 |   | 383*421*450                  |                               | 417*441*494                  |                        |
|  | F:                                    | 27  | F:                           | 33                            | FA                           | : 48                   |
| N.W [kg]                                   | FE:                                   | FE: 31                                      |                              | 38                            | FA                           | E: 53                  |
| Rotation Direction<br>(View from Flywheel) | Clock                                 | cwise                                       | Cloc                         | cwise                         | Cloc                         | ckwise                 |





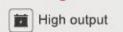
\* General starter handle

\* General air filter

| Model                                      | KD188                 | KD188FA/FAE                                 |                  | 2F/FE                   |
|--|-----------------------|---|------------------|-------------------------|
| Engine Type                                | 1-Cylinder, 4-Stroke, | 1-Cylinder, 4-Stroke, Air-cooled, Veritical |                  | , Air-cooled, Veritical |
| Combustion System                          | Direct in             | njection                                    | Direct in        | njection                |
| Bore*Stroke [mm]                           | 88                    | *75   | 92               | *75                     |
| Displacement [L]                           | 0.4                   | 56  | 0.4              | 199                     |
| Compression Ratio                          | 19.5                  | 5:1   | 19.5             | 5:1                     |
| Rated Speed [rpm]                          | 3000                  | 3600  | 3000             | 3600                    |
| Rated Power [kW]                           | 6.6                   | 6.9   | 7.6              | 8.6                     |
| Rated Power [hp]                           | 9.0                   | 9.4   | 10.3             | 11.7                    |
| Station Control                            | FA: Rec               | oil start                                   | F: Reco          | oil start               |
| Starting System                            | FAE: Elec             | FAE: Electric start                         |                  | tric start              |
| Fuel Tank Capacity [L]                     | 5                     | .5  | 5.5              |                         |
| Lube Oil Capacity [L]                      | 1.                    | 65  | 1.65             |                         |
| Fuel Consumpition [g/kWh]                  | 275                   | 280   | 275              | 280                     |
| Fuel Type                                  | 0#(summer), -10#      | (winter) Diesel oil                         | 0#(summer), -10# | (winter) Diesel oil     |
| Lube Type                                  | SAE10W30 (CD          | grade or above)                             | SAE10W30 (CD     | grade or above)         |
| Overall Diemension [mm][L*W*H]             | 417*4                 | 11*494                                      | 417*4            | 41*494                  |
| NI MATERIAL                                | FA                    | : 48  | F: 50            |                         |
| N.W [kg]                                   | FA                    | E: 53                                       | FE:              | 55                      |
| Rotation Direction<br>(View from Flywheel) | Clock                 | kwise                                       | Cloc             | kwise                   |







Two-cylinder design, compact construction, large displacement, high output.

### Low noise

structure, makes the vibration decreased and noise lowered; patented air filter, lowers the noise of air inlet and outlet.

#### Easy start

Multihole injection coupled with gear motor, starts easily and reliable.

#### Safe and reliable

Excellent production process, strict QC system to make sure the products safe and reliable.



Various kinds of output forms are optional.



### TECHNICAL DATA





\* Water-cooled Type

\* Air-cooled Type

| Model                          | KD2                     | V80                 | KD292F                  |                      |
|--------------------------------|-------------------------|---------------------|-------------------------|----------------------|
| Engine Type                    | V Type, 2-Cylinder, 4-S | troke, Water-cooled | Vertical, 2-Cylinder, 4 | -Stroke, Air-cooled  |
| Bore*Stroke [mm]               | 80                      | *79                 | 92                      | *75                  |
| Displacement [L]               | 0.7                     | 94                  | 0.9                     | 997                  |
| Compressed Ratio               | 23                      | :1                  | 19                      | :1                   |
| Rated Speed [rpm]              | 3000                    | 3600                | 3000                    | 3600                 |
| Rated Power [kW]               | 12.0                    | 14.0                | 14.0                    | 15.0                 |
| Rated Power [hp]               | 16.3                    | 19.0                | 19.0                    | 20.4                 |
| Starting System                | Electr                  | ic star             | Electr                  | ic star              |
| Lube Oil Capacity [L]          | 2.                      | 30                  | 2.75                    |                      |
| Fuel Type                      | 0#(summer), -10#        | (winter) diesel oil | 0#(summer), -10         | #(winter) diesel oil |
| Lube Type                      | SAE10W30 (CF            | grade or above)     | SAE10W30 (CF            | grade or above)      |
| Power-take-off                 | Crank                   | shaft               | Crankshaft              |                      |
| Overall Diemension [mm][L*W*H] | 616*4                   | 86*528              | 582*4                   | 62*582               |
| Net Weight [kg]                | 5                       | 8                   | 19                      | 8                    |





100% copper alternator,

class F insulation, high

conversion rate.

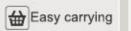




Digital panel

ensures stable voltage and less voltage waveform distortion.

Digital intelligent control panel with display of voltage, frequency and running time, makes easy



An open frame configuration means it's easy to move and use.

Wide application

Various output sockets are available to meet all customers' requirements.











#### 1-Cylinder Series

\* Round tube frame without wheel

\* Round tube frame with 4 wheels

| Model                     | KDF25                                       | 00X/XE               | KDF40                                       | 00X/XE               | KDF670                                      | 0X/XE(-3)                          |
|---------------------------|---|----------------------|---|----------------------|---|------------------------------------|
| Rated Frequency [Hz]      | 50  | 60                   | 50  | 60                   | 50  | 60                                 |
| Rated Voltage [V]         | 220,230,240,110/2                           | 20,115/230,120/240   | 220,230,240,110/22                          | 0,115/230,120/240    | 220,230,240,110/220,127/220,115/2           | 30,120/240,220/380,230/400,240/415 |
| Rated Output Power [kV    | A] 1.8                                      | 2.0                  | 2.6   | 2.8                  | 4.5(5.6)                                    | 5.0(6.3)                           |
| Max Output Power [kVA     | 2.0   | 2.2                  | 2.8   | 3.0                  | 5.0(6.3)                                    | 5.5(6.9)                           |
| Phase Number              | 1-P   | hase                 | 1-Ph  | nase                 | 1-Phase                                     | e / 3-Phase                        |
| Excitation Transistorized | Self-excita                                 | tion, brush          | Self-excita                                 | tion, brush          | Self-excit                                  | ation, brush                       |
| Power Factor Cos Φ        | 1   | .0                   | 1   | .0                   | 1.0   | 0(0.8)                             |
| Insulation Grade          | 3   | F                    | 3   | F                    |   | F                                  |
| Fuel Tank Capacity [L]    | 12  | 2.5                  | 12  | 2.5                  | 1   | 12.5                               |
| Frame Type                | 25*25mm Rou                                 | nd tube frame        | 25*25mm Rou                                 | nd tube frame        | 35*35mm Squa                                | re tube frame                      |
| Engine Medal              | X: KE                                       | 0170F                | X: KE                                       | 0178F                | X: KI                                       | D186FA                             |
| Engine Model              | XE: KE                                      | )170FE               | XE: KE                                      | 0178FE               | XE: KI                                      | D186FAE                            |
| Starting System           | X: Recoil start; XE: Electric start         |                      | X: Recoil start; XE: Electric start         |                      | X: Recoil start; XE: Electric start         |                                    |
| Engine Type               | 1-Cylinder, 4-Stroke, Air-cooled, Veritical |                      | 1-Cylinder, 4-Stroke, Air-cooled, Veritical |                      | 1-Cylinder, 4-Stroke, Air-cooled, Veritical |                                    |
| Bore*Stroke [mm]          | 70  | *55                  | 78*62                                       |                      | 8   | 6*72                               |
| Displacement [L]          | 0.2   | 211                  | 0.2   | 296                  | 0   | 418                                |
| Compression Ratio         | 20  | :1                   | 20  | :1                   | 19  | .5 : 1                             |
| Rated Rotation Speed [ŋ   | om] 3000                                    | 3600                 | 3000  | 3600                 | 3000  | 3600                               |
| Rated Power [kW]          | 2.5   | 2.8                  | 3.7   | 4.0                  | 5.8   | 6.6                                |
| Lube Oil Capacity [L]     | 0.  | 75                   | 1.  | 10                   | 1   | 1.65                               |
| Fuel Consumption [g/kV    | Vh] 275                                     | 280                  | 275   | 280                  | 275   | 280                                |
| Fuel Type                 | 0#(summer), -10#                            | (winter), Diesel oil | 0#(summer), -10#                            | (winter), Diesel oil | 0#(summer), -10                             | #(winter), Diesel oil              |
| Lube Type                 | SAE10W30 (CD grade or above)                |                      | SAE10W30 (CD                                | grade or above)      | SAE10W30 (CD                                | grade or above)                    |
|                           | A   | TS                   | А   | TS                   |   | ATS                                |
|                           | Remote control  Digital Smart Panel         |                      | Remote                                      | control              | Remot                                       | e control                          |
| Optional Standard         |   |                      | Digital Smart Panel                         |                      | Digital S                                   | mart Panel                         |
|                           | Wheel an                                    | nd handle            | Wheel an                                    | d handle             | Wheel and handle                            |                                    |
| Overall Diemension [mn    | n][L*W*H] 640*4                             | 60*520               | 660*4                                       | 60*540               | 740*  | 505*630                            |
| Net Weight [kg]           | X: 48                                       | XE: 63               | X: 63                                       | XE: 72               | X: 99                                       | XE: 113                            |





\* Semi-closed canopy

| Model                         | KDF7500                    | X/XE(-3)                          | KDF8500                            | X/XE(-3)                          |
|-------------------------------|----------------------------|-----------------------------------|------------------------------------|-----------------------------------|
| Rated Frequency [Hz]          | 50                         | 60                                | 50                                 | 60                                |
| Rated Voltage [V] 220,230,2   | 40,110/220,127/220,115/230 | 0,120/240,220/380,230/400,240/415 | 220,230,240,110/220,127/220,115/23 | 0,120/240,220/380,230/400,240/415 |
| Rated Output Power [kVA]      | 5.0(6.3)                   | 5.5(6.9)                          | 6.0(7.5)                           | 6.5(8.1)                          |
| Max Output Power [kVA]        | 5.5(6.9)                   | 6.0(7.5)                          | 6.5(8.1)                           | 7.0(8.8)                          |
| Phase Number                  | 1-Phase /                  | 3-Phase                           | 1-Phase /                          | 3-Phase                           |
| Excitation Transistorized     | Self-excitati              | ion, brush                        | Self-excitat                       | tion, brush                       |
| Power Factor Cos Φ            | 1.0(0                      | 0.8)                              | 1.00                               | 0.8)                              |
| Insulation Grade              | F                          |                                   | F                                  | ř.                                |
| Fuel Tank Capacity [L]        | 12.                        | 5                                 | 12                                 | .5                                |
| Frame Type                    | 35*35mm Square             | tube frame                        | 35*35mm Square                     | e tube frame                      |
|                               | X: KD1                     | 88FA                              | X: KD                              | 192F                              |
| Engine Model                  | XE: KD1                    | 88FAE                             | XE: KD                             | 192FE                             |
| Starting System               | X: Recoil start; XE:       | Electric start                    | X: Recoil start; XE                | : Electric start                  |
| Engine Type                   | 1-Cylinder, 4-Stroke, /    | Air-cooled, Veritical             | 1-Cylinder, 4-Stroke,              | Air-cooled, Veritical             |
| Bore*Stroke [mm]              | 88*7                       | 75                                | 92*                                | 75                                |
| Displacement [L]              | 0.45                       | 56                                | 0.4                                | 99                                |
| Compression Ratio             | 19.5                       | :1                                | 19.5                               | :1                                |
| Rated Rotation Speed [rpm]    | 3000                       | 3600                              | 3000                               | 3600                              |
| Rated Power [kW]              | 6.6                        | 6.9                               | 7.6                                | 8.6                               |
| Lube Oil Capacity [L]         | 1.6                        | 5                                 | 1.0                                | 55                                |
| Fuel Consumption [g/kWh]      | 275                        | 280                               | 275                                | 280                               |
| Fuel Type                     | 0#(summer), -10#(          | winter), Diesel oil               | 0#(summer), -10#                   | (winter), Diesel oil              |
| Lube Type                     | SAE10W30 (CD g             | grade or above)                   | SAE10W30 (CD                       | grade or above)                   |
|                               | AT:                        | s                                 | AT                                 | 's                                |
|                               | Remote o                   | control                           | Remote                             | control                           |
| Optional Standard             | Digital Sma                | art Panel                         | Digital Sm                         | art Panel                         |
|                               | Wheel and                  | d handle                          | Wheel an                           | d handle                          |
| Overall Diemension [mm][L*W*H | 740*50                     | 5*630                             | 740*50                             | 95*630                            |
| Net Weight [kg]               | X: 100                     | XE: 114                           | X: 107                             | XE: 124                           |







#### 2-Cylinder Series

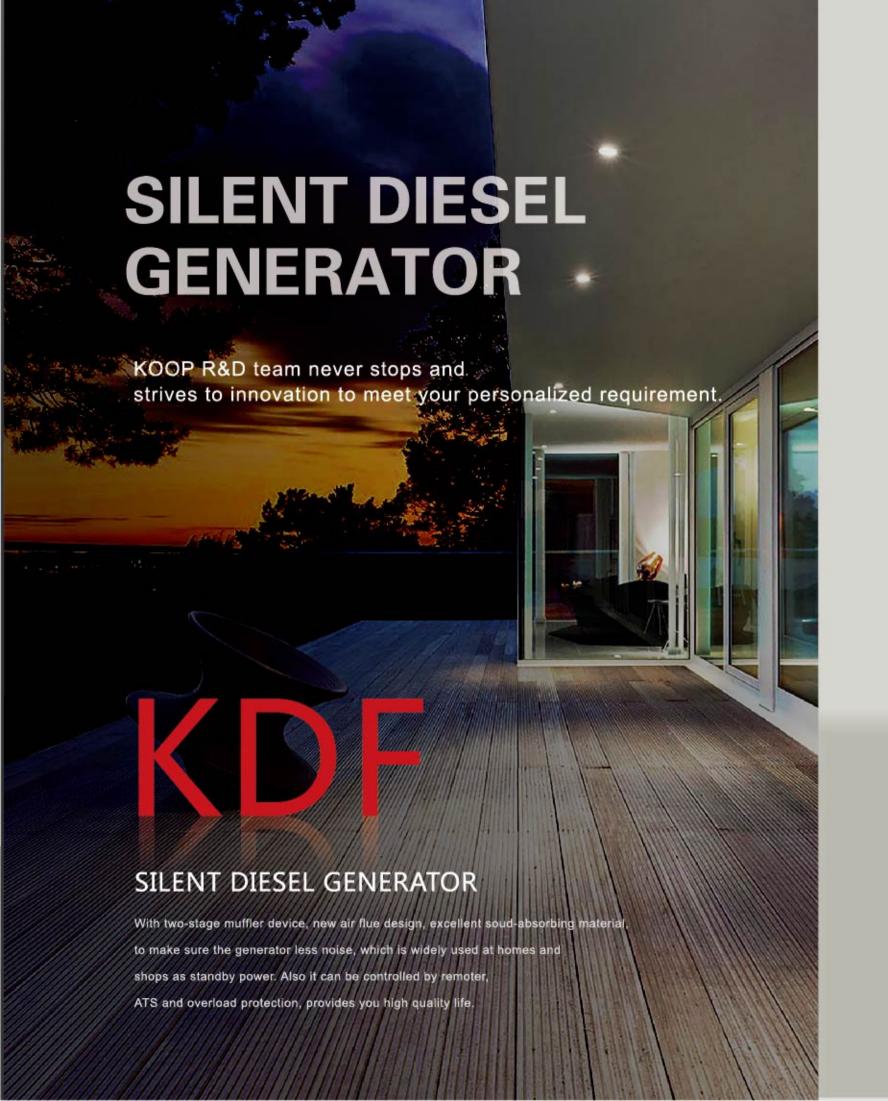
| Model                     | KDF120                       | 00XE(-3)                            | KDF160                                     | 00XE(-3)                           |
|---------------------------|------------------------------|-------------------------------------|--|------------------------------------|
| Frequency [Hz]            | 50                           | 60                                  | 50   | 60                                 |
| Voltage [V] 220,23        | 30,240,110/220,127/220,115/2 | 30,120/240,220/380,230/400,240/415  | 220,230,240,110/220,127/220,115/2          | 30,120/240,220/380,230/400,240/415 |
| Rated Power [kVA]         | 9.0(11.0)                    | 9.5(11.5)                           | 11.0(13.75)                                | 12.0(15.0)                         |
| Max. Power [kVA]          | 10.0(12.0)                   | 10.5(12.5)                          | 12.0(15.0)                                 | 13.0(16.0)                         |
| Phase Number              | 1-Phase                      | / 3-Phase                           | 1-Phase /                                  | / 3-Phase                          |
| Excitation Transistorized | Self-excitat                 | tion, brush                         | Self-excitat                               | tion, brush                        |
| Power Factor Cos Φ        | 1.00                         | (8.0)                               | 1.0(                                       | (0.8)                              |
| Insulation Grade          |                              | F                                   |  | F                                  |
| Fuel Capacity [L]         | 3                            | 4                                   | 34   |                                    |
| Frame Type                | 35*35mm Round                | 35*35mm Round tube frame            |  | nd tube frame                      |
| Engine Model              | KD2                          | KD2V80                              |  | 92F                                |
| Starting System           | Electr                       | Electric start                      |  | c start                            |
| Engine Type               | 2-Cylinder, 4-Stroke, W      | ater-cooled, V Type                 | 2-Cylinder, 4-Stroke, Air-cooled, Vertical |                                    |
| Bore*Stroke [mm]          | 2-80                         | 0*79                                | 2-92*75                                    |                                    |
| Displacement [L]          | 0.7                          | 94                                  | 0.997                                      |                                    |
| Compression Ratio         | 23                           | :1                                  | 19:1                                       |                                    |
| Rated Rotation Speed [rp  | om] 3000                     | 3600                                | 3000                                       | 3600                               |
| Rated Power [kW]          | 12.0                         | 14.0                                | 14.0                                       | 15.0                               |
| Lube Oil Capacity [L]     | 2.                           | 2.30                                |  | 75                                 |
| Fuel Type                 | 0#(summer), -10#             | 0#(summer), -10#(winter) diesel oil |  | (winter) diesel oil                |
| Lube Type                 | SAE10W30 (CF                 | SAE10W30 (CF grade or above)        |  | grade or above)                    |
| Overall Diemension [mm    | ][L*W*H] 1060*6              | 60*880                              | 930*6                                      | 50*910                             |
| Net Weight [kg]           | 2:                           | 20                                  | 2  | 30                                 |

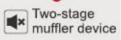
### SOCKET & PANEL SERIES

| Code | Description  | Specification | Picture    | Panel                     |
|------|--|---------------|------------|---------------------------|
| 501  | S.Asocket  | 25A, 250V     |            |                           |
| S02  | British socket   | 32A, 240V     |            |                           |
| S03  | British socket   | 16A, 240V     |            | A:type-Export standard    |
| 504  | Square American<br>type-socket                           | 20A, 120A     | - <u>-</u> |                           |
| \$05 | Germany socket   | 16A, 250V     |            | B:type-U.S.A standard     |
| S06  | Three-phase five holes socket                            | 16A, 415V     |            |                           |
| S07  | French socket  | 16A, 250V     |            |                           |
| 508  | Three phase four holes socket                            | 16A, 215V     |            | C:type-European standard  |
| S09  | American type 4-hole<br>anti loose socket                | 30A, 250V     |            |                           |
| \$10 | American double socket                                   | 20A, 125V     |            | D:type-Australia standard |
| S11  | 3-hole anti loose socket<br>(UL-anthentication optional) | 30A, 250V     |            | D.typervusualia standard  |
| S12  | Australian socket  | 16A, 250V     |            |                           |
| \$13 | Swiss socket   | 10A, 250V     |            | Three phase panel         |









Scientific damping effect, patent two-stage muffler silencer, advanced air-flue design and muffler device.



With KOOP four-stoke diesel engine, new tip-clearance fuel pump and bottom inertia injection technology, makes burning full and power strong.

### High conversion efficiency

diesel 100% copper alternator, ance class F insulation, high conversion efficiency, smart ology, AVR controller ensures d stable voltage and less voltage waveform distortion.



With air-preheating device, it can be easily started at low temperature.



Remoter: control anytime anywhere freely. ATS: automatic transfer from oily power and gen-set power. Intelligent digital control panel: with overload, over voltage, over current and low oil pressure protection function.

Product features









#### 1-Cylinder Series

\* General canopy

\* Tall canopy

| Model                     | KDF67              | 00Q(-3)                 | KDF750                 | 00Q(-3)                | KDF850               | 00Q(-3)                 |
|---------------------------|--------------------|-------------------------|------------------------|------------------------|----------------------|-------------------------|
| Rated Frequency [Hz]      | 50                 | 60                      | 50                     | 60                     | 50                   | 60                      |
| Rated Voltage [V]         |                    | 220,230,240,            | 110/220,127/220,115/23 | 0,120/240,220/380,230/ | 400,240/415          |                         |
| Rated Output Power [kVA]  | 4.5 (5.6)          | 5.0(6.3)                | 5.0(6.3)               | 5.5(6.9)               | 6.0(7.5)             | 6.5(8.1)                |
| Max Output Power [kVA]    | 5.0(6.3)           | 5.5(6.9)                | 5.5(6.9)               | 6.0(7.5)               | 6.5(8.1)             | 7.0(8.8)                |
| DC Output                 | 12V                | 8.3A                    | 12V                    | 8.3A                   | 12V                  | 8.3A                    |
| Phase Number              | 1-Phase /          | 3-Phase                 | 1-Phase /              | 3-Phase                | 1-Phase              | / 3-Phase               |
| Excitation Mode           | Self-excita        | tion, brush             | Self-excitat           | tion, brush            | Self-excita          | tion, brush             |
| Power Factor Φ            | 1.0                | (0.8)                   | 1.0(0                  | 0.8)                   | 1.0                  | (0.8)                   |
| Insulation Grade          |                    | F                       | F                      |                        |                      | F                       |
| Fuel Tank Capacity [L]    | 14                 | 4.5                     | 14                     | .5                     | 30                   | 0.0                     |
| Engine Model              | KD1                | B6FAE                   | KD18                   | 8FAE                   | KD1                  | 92FE                    |
| Starting System           | Electr             | c start                 | Electric               | c start                | Electri              | c start                 |
| Engine Type 1-0           | Cylinder, 4-Stroke | , Air-cooled, Veritical | 1-Cylinder, 4-Stroke,  | Air-cooled, Veritical  | 1-Cylinder, 4-Stroke | , Air-cooled, Veritical |
| Bore*Stroke [mm]          | 86                 | *72                     | 88*                    | 75                     | 92                   | *75                     |
| Displacement [L]          | 0.4                | 118                     | 0.4                    | 56                     | 0.4                  | 199                     |
| Compression Ratio         | 19.                | 5:1                     | 19.5                   | :1                     | 19.                  | 5:1                     |
| Rated Rotation Speed [rpn | n] 3000            | 3600                    | 3000                   | 3600                   | 3000                 | 3600                    |
| Rated Power [kW]          | 5.8                | 6.6                     | 6.6                    | 6.9                    | 7.6                  | 8.6                     |
| Lube Oil Capacity [L]     | 1.                 | 65                      | 1.6                    | 55                     | 1.                   | 65                      |
| Fuel Type                 | 0#(summer), -10#   | (winter), diesel oil    | 0#(summer), -10#       | (winter), diesel oil   | 0#(summer), -10#     | (winter), diesel oil    |
| Lube Type                 | SAE10W30 (CD       | grade or above)         | SAE10W30 (CD           | grade or above)        | SAE10W30 (CD         | grade or above)         |
| Low Oil Pressure Alarm Sy | stem W             | ith                     | Wi                     | th                     | W                    | ith                     |
|                           | А                  | TS                      | AT                     | rs                     | A                    | TS                      |
| Optional Standard         | Remote             | control                 | Remote                 | control                | Remote               | control                 |
|                           | Digital Sr         | nart Panel              | Digital Sm             | nart Panel             | Digital Sr           | nart Panel              |
| Overall Diemension [mm][L | *W*H] 910*5        | 30*740                  | 910*53                 | 0*740                  | 910*5                | 30*840                  |
| Net Weight [kg]           | 1                  | 49                      | 15                     | 1                      | 1                    | 71                      |

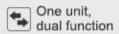




| Model                         | KDF1200                                    | 00Q(-3)                           | KDF160                              | 00Q(-3)                           |
|-------------------------------|--|-----------------------------------|-------------------------------------|-----------------------------------|
| Frequency [Hz]                | 50   | 60                                | 50                                  | 60                                |
| Voltage [V] 220,230,240,11    | 0/220,127/220,115/23                       | 0,120/240,220/380,230/400,240/415 | 220,230,240,110/220,127/220,115/2   | 0,120/240,220/380,230/400,240/415 |
| Rated Power [kVA]             | 9.0(11.0)                                  | 9.5(11.5)                         | 11.0(13.8)                          | 12.0(15.0)                        |
| Max. Power [kVA]              | 10.0(12.0)                                 | 10.5(12.5)                        | 12.0(15.0)                          | 13.0(16.0)                        |
| Phase Number                  | 1-Phase / 3-Phase                          |                                   | 1-Phase /                           | 3-Phase                           |
| Excitation Transistorized     | Self-excitati                              | on, brush                         | Self-excitat                        | ion, brush                        |
| Power Factor Cos Φ            | 1.0(0                                      | 0.8)                              | 1.00                                | 0.8)                              |
| Insulation Grade              | F  | ti.                               |                                     | F.                                |
| Fuel Capacity [L]             | 26   | i                                 | 26                                  |                                   |
| Noise Level [Db](@7m)         | 70   | )                                 | 75                                  |                                   |
| Engine Model                  | KD2V80                                     |                                   | KD292F                              |                                   |
| Engine Type 2                 | 2-Cylinder, 4-Stroke, Water-cooled, V Type |                                   | 2-Cylinder, 4-Stroke                | , Air-cooled, Vertical            |
| Starting System               | Electric start                             |                                   | Electri                             | c start                           |
| Bore*Stroke [mm]              | 2-80                                       | *79                               | 2-92*75                             |                                   |
| Displacement [L]              | 0.79                                       | 94                                | 0.997                               |                                   |
| Compression Ratio             | 23 :                                       | 1                                 | 19                                  | : 1                               |
| Rated Rotation Speed [rpm]    | 3000                                       | 3600                              | 3000                                | 3600                              |
| Rated Power [kW]              | 12.0                                       | 14.0                              | 14.0                                | 15.0                              |
| Lube Oil Capacity [L]         | 2.3  | 0                                 | 2.75                                |                                   |
| Fuel Type                     | 0#(summer), -10#                           | (winter) diesel oil               | 0#(summer), -10#(winter) diesel oil |                                   |
| Lube Type                     | SAE10W30 (CF g                             | grade or above)                   | SAE10W30 (CF grade or above)        |                                   |
| Overall Diemension [mm][L*W*H | r*H] 1200*650*890                          |                                   | 1250*650*890                        |                                   |
| Net Weight [kg]               | 31   | 0                                 | 3.                                  | 20                                |



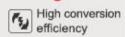




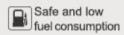
Welding and power supply at the same time.



With KOOP strong air-cooled 4-stroke diesel engine, provides supper welding



100% copper alternator, class F insulation, high conversion efficiency, smart AVR controller ensures stable voltage and less voltage waveform distortion.



With new tip-clearance fuel pump and bottom inertia injection technology, security is better than that of gasoline.



New design of frame, compact structure, four strong wheels, easy to move.

# Product features



### TECHNICAL DATA



| Model                            | KDF67                                | 00WE                  | KDF85                                       | 00WE                 |
|----------------------------------|--------------------------------------|-----------------------|---|----------------------|
| Rated Frequency [Hz]             | 50                                   | 60                    | 50  | 60                   |
| Rated Voltage [V]                | 220,230,240,110/22                   | 20,115/230,120/240    | 220,230,240,110/22                          | 20,115/230,120/240   |
| Rated Output Power [kVA]         | 2.0                                  | 2.2                   | 2.0   | 2.2                  |
| Welding Voltage Without Load [V] | 50-                                  | -65                   | 50-   | -65                  |
| Rated Current [A]                | 16                                   | 50                    | 20  | 00                   |
| Work Voltage[V]                  | 25-                                  | -30                   | 25-   | -30                  |
| Current Regulation Range [A]     | 50~                                  | 180                   | 70~   | 220                  |
| Welding Load Continuous Ration   | 60                                   | 9%                    | 60  | )%                   |
| Phase Number                     | 1-Ph                                 | ase                   | 1-Ph  | nase                 |
| Excitation Transistorized        | Self-excita                          | tion, brush           | Self-excita                                 | tion, brush          |
| Power Factor Φ                   | 1                                    | .0                    | 1.0   |                      |
| insulation Grade                 | F                                    |                       | F   |                      |
| Fuel Tank Capacity [L]           | 12                                   | 1.5                   | 12.5  |                      |
| Frame Type                       | 35*35mm Square tube frame            |                       | 35*35mm Square tube frame                   |                      |
| Engine Model                     | KD186FAE                             |                       | KD192FE                                     |                      |
| Starting System                  | Electri                              | c start               | Electric start                              |                      |
| Engine Type                      | 1-Cylinder, 4-Stroke,                | Air-cooled, Veritical | 1-Cylinder, 4-Stroke, Air-cooled, Veritical |                      |
| Bore*Stroke [mm]                 | 861                                  | 72                    | 92*75                                       |                      |
| Displacement                     | 0.4                                  | 18                    | 0.499                                       |                      |
| Compression Ratio                | 19.5                                 | i : 1                 | 19.5 : 1                                    |                      |
| Ration Rotation Speed [rpm]      | 3000                                 | 3600                  | 3000  | 3600                 |
| Rated Power [kW]                 | 5.8                                  | 6.6                   | 7.6   | 8.6                  |
| Power-take-off                   | Crank                                | shaft                 | Crankshaft                                  |                      |
| Lube Oil Capacity [L]            | 1.0                                  | 65                    | 1.  | 65                   |
| Fuel Type                        | 0#(summer), -10#(winter), Diesel oil |                       | 0#(summer), -10#(                           | (winter), Diesel oil |
| Lube Type                        | SAE10W30 (CD grade or above)         |                       | SAE10W30 (CD                                | grade or above)      |
| Low Oil Pressure Alarm System    | W                                    | ith                   | W   | ith                  |
| Overall Diemension [mm][L*W*H]   | 750*51                               | L5*640                | 750*5                                       | 15*640               |
| Net Weight [kg]                  | 11                                   | 16                    | 127   |                      |



# DIESEL WATER PUMP

Your requirement is our direction of research and development. KOOP will do all best to make your dream come true.

### DIESEL WATER PUMP

can meet various requirements

Supper suction capacity, with big flow, compact design, easy to move, widely used in agricultural irrigation, fishery, flood-fighting and emergency rescues, construction site, tunnels, etc. Self-suction pump, high pressure pump and iron pump to choose,

Low Fuel consumption

With KOOP strong air-cooled diesel engine, make sure low fuel consumption.

Portable design

New light weight and compact design make it easy and safe

Convenient Maintenance

Aluminum self-priming pump, maintenance free; open design, easy leads to the engine.

Reliable and durable

Safe and reliable engine with enhanced pump cover structure assure the pump durable service.

Head high and less self-priming

Strong engine and vortex impeller design, good sealing, greatly promote head of delivery, and less self-priming

**Product** features











### General Water Pump

| Model                      | KDP50B/BE/L/LE                              | KDP80B/BE/L/LE                              | KDP100B/BE/L/LE                             |
|----------------------------|---|---|---|
| Suction / Discharge Port D | iameter [mm] 50 (2*)                        | 80(3")                                      | 100 (4*)                                    |
| Cont. Capacity [m³/h]      | 22  | 35  | 40  |
| Cont. Head [M]             | 15  | -17   | 19  |
| Self-priming Time [s/4m    | 70  | 120   | 180   |
| Max.Suction Head [M]       | 7.0   | 7.0   | 7.0   |
|                            | B: small fuel tank (2.5L)                   | B: small fuel tank (3.5L)                   | B: small fuel tank (5.5L)                   |
| Fuel Tank Capacity [L]     | L: large fuel tank (12.5L)                  | L: large fuel tank (12.5L)                  | L: large fuel tank (12.5L)                  |
| Engine Type                | KD170F/FE                                   | KD178F/FE                                   | KD186FA/FAE                                 |
| Starting System            | F: Recoil start                             | F: Recoil start                             | FA: Recoil start                            |
| starting system            | FE: Electric start                          | FE: Electric start                          | FAE: Electric start                         |
| Engine Type                | 1-Cylinder, 4-Stroke, Air-cooled, Veritical | 1-Cylinder, 4-Stroke, Air-cooled, Veritical | 1-Cylinder, 4-Stroke, Air-cooled, Veritical |
| Bore*Stroke [mm]           | 70*55                                       | 78*62                                       | 86*72                                       |
| Displacement [L]           | 0.211                                       | 0.296                                       | 0.418                                       |
| Compression Ratio          | 20:1  | 20:1  | 19.5:1                                      |
| Rated Rotation Speed [r    | pm] 3600                                    | 3600  | 3600  |
| Rated Power [kW]           | 2.8   | 4.0   | 6.6   |
| Lube Oil Capacity [L]      | 0.75  | 1.10  | 1.65  |
| Fuel Type                  | 0#(summer), -10#(winter) Diesel oil         | 0#(summer), -10#(winter) Diesel oil         | 0#(summer), -10#(winter) Diesel oil         |
| Lube Type                  | SAE10W30 (CD grade or above)                | SAE10W30 (CD grade or above)                | SAE10W30 (CD grade or above)                |
| Overall Diemension [mm]    | [L*W*H] 490*410*520                         | 560*455*550                                 | 650*470*700                                 |
| N.W [kg]                   | 41  | 49  | 69  |



#### High Pressure Water Pump

| Model                                 | KDP40HB/HBE/HL/HLE                          | KDP50HB/HBE/HL/HLE                          |  |
|---------------------------------------|---|---|--|
| Suction / Discharge Port Diameter [mm | ] 40 (1.5*)                                 | 50 (2")                                     |  |
| Cont. Capacity [m³/h]                 | 12  | 18  |  |
| Cont. Head [M]                        | 42  | 45  |  |
| Self-priming Time [s/4m]              | 120   | 180   |  |
| Max.Suction Head [M]                  | 6.0   | 6.0   |  |
| Fuel Tank Capacity [L]                | B: small fuel tank (5.5L)                   | B: small fuel tank (5.5L)                   |  |
|                                       | L: large fuel tank (12.5L)                  | L: large fuel tank (12.5L)                  |  |
| Engine Type                           | KD178F/FE                                   | KD186FA/FAE                                 |  |
| Stanting Sustain                      | F: Recoil start                             | FA: Recoil start                            |  |
| Starting System                       | FE: Electric start                          | FAE: Electric start                         |  |
| Engine Type                           | 1-Cylinder, 4-Stroke, Air-cooled, Veritical | 1-Cylinder, 4-Stroke, Air-cooled, Veritical |  |
| Bore*Stroke [mm]                      | 78*62                                       | 86*72                                       |  |
| Displacement [L]                      | 0.296                                       | 0.418                                       |  |
| Compression Ratio                     | 20:1  | 19.5 : 1                                    |  |
| Rated Rotation Speed [rpm]            | 3600  | 3600  |  |
| Rated Power [kW]                      | 4.0   | 6.6   |  |
| Lube Oil Capacity [L]                 | 1.10  | 1.65  |  |
| Fuel Type                             | 0#(summer), -10#(winter) Diesel oil         | 0#(summer), -10#(winter) Diesel oil         |  |
| Lube Type                             | SAE10W30 (CD grade or above)                | SAE10W30 (CD grade or above)                |  |
| Overall Diemension [mm][L*W*H]        | 570*465*670                                 | 655*480*720                                 |  |
| N.W [kg]                              | 47  | 67  |  |





#### Cast-iron Water Pump

|                                      | 0.50  |   |  |
|--------------------------------------|---|---|--|
| Model                                | KDP40CB/CBE/L/LE                            | KDP50/40CB/CBE/L/LE                         |  |
| Suction / Discharge Port Diameter [m | m] 40(1.5°)                                 | 50(2")*40(1.5")                             |  |
| Cont. Capacity [m³/h]                | 19  | 30  |  |
| Cont. Head [M]                       | 70  | 80  |  |
| Self-priming Time [s/4m]             | 120   | 180   |  |
| Max.Suction Head [M]                 | 8.0   | 8.0   |  |
| Fuel Tank Capacity [L]               | B: small fuel tank (2.5L)                   | B: small fuel tank (3.5L)                   |  |
| ruel lank capacity (L)               | L: large fuel tank (12.5L)                  | L: large fuel tank (12.5L)                  |  |
| Engine Type                          | 170F/FE                                     | 178F/FE                                     |  |
| Starting System                      | F: Recoil start                             | F: Recoil start                             |  |
| starting system                      | FE: Electric start                          | FE: Electric start                          |  |
| Engine Type                          | 1-Cylinder, 4-Stroke, Air-cooled, Veritical | 1-Cylinder, 4-Stroke, Air-cooled, Veritical |  |
| Impeller Diemeter [mm]               | 160   | 175   |  |
| Bore*Stroke [mm]                     | 70*55                                       | 78*62                                       |  |
| Displacement [L]                     | 0.211                                       | 0.296                                       |  |
| Compression Ratio                    | 20:1  | 20:1  |  |
| Rated Rotation Speed [rpm]           | 3600  | 3600  |  |
| Rated Power [kW]                     | 2.8   | 4.0   |  |
| Lube Oil Capacity [L]                | 0.75  | 1.10  |  |
| Fuel Type                            | 0#(summer), -10#(winter) Diesel oil         | 0#(summer), -10#(winter) Diesel oil         |  |
| Lube Type                            | SAE10W30 (CD grade or above)                | SAE10W30 (CD grade or above)                |  |
| Overall Diemension [mm][L*W*H]       | 570*460*680                                 | 570*460*680                                 |  |
| N.W [kg]                             | 65  | 70  |  |



#### Cast-iron Water Pump

| Model                              | KDP50CB                         | /CBE/L/LE             | KDP80CB                      | /CBE/L/LE             | KDP100/800                   | CB/CBE/L/LE           |
|------------------------------------|---------------------------------|-----------------------|------------------------------|-----------------------|------------------------------|-----------------------|
| Suction/Discharge Port Diameter [r | nm] 50(2*)                      | 50(2*)                | 80(3*)                       | 80(3*)                | 100/80(4"/3")                | 100/80(4*/3*)         |
| Cont. Capacity [m³/h]              | 30                              | 35                    | 47                           | 40                    | 90                           | 150                   |
| Cont. Head [M]                     | 80                              | 92                    | 80                           | 102                   | 60                           | 75                    |
| Self-priming Time [s/4m]           | 180                             | 180                   | 180                          | 180                   | 200                          | 200                   |
| Max.Suction Head [M]               | 8.0                             | 8.0                   | 8.0                          | 8.0                   | 8.0                          | 8.0                   |
| Fuel Tank Capacity [L]             | B: small fuel tank (3.5L /5.5L) |                       | B: small fuel tank (5.5L)    |                       | B: small fuel tank (5.5L)    |                       |
|                                    | L: large fuel                   | tank (12.5L)          | L: large fuel tank (12.5L)   |                       | L: large fuel tank (12.5L)   |                       |
| Engine Type                        | 178F/FE                         | 186FA/FAE             | 186FA/FAE                    | 188FA/FAE             | 186FA/FAE                    | 188FA/FAE             |
| Starting System                    | F: Recoil start                 | FA: Recoil start      | FA: Recoil start             |                       | FA: Recoil start             |                       |
|                                    | FE: Electric start              | FAE: Electric start   | FAE: Electric start          |                       | FAE: Electric start          |                       |
| Engine Type 1                      | -Cylinder, 4-Stroke,            | Air-cooled, Veritical | 1-Cylinder, 4-Stroke,        | Air-cooled, Veritical | 1-Cylinder, 4-Stroke         | Air-cooled, Veritical |
| Impeller Diemeter [mm]             | 175                             | 198                   | 188                          | 208                   | 150                          | 175                   |
| Bore*Stroke [mm]                   | 78*62                           | 86*72                 | 86*72                        | 88*75                 | 86*72                        | 88*75                 |
| Displacement (L)                   | 0.296                           | 0.418                 | 0.418                        | 0.456                 | 0.418                        | 0.456                 |
| Compression Ratio                  | 20:1                            | 19.5 : 1              | 19.5 : 1                     | 19.5 : 1              | 19.5 : 1                     | 19.5 : 1              |
| Rated Rotation Speed [rpm]         | 3600                            | 3600                  | 3600                         | 3600                  | 3600                         | 3600                  |
| Rated Power [kW]                   | 4.0                             | 6.6                   | 6.6                          | 6.9                   | 6.6                          | 6.9                   |
| Lube Oil Capacity [L]              | 1.10                            | 1.65                  | 1.65                         | 1.65                  | 1.65                         | 1.65                  |
| Fuel Type                          | 0#(summer), -10#(               | winter) Diesel oil    | 0#(summer), -10#(            | winter) Diesel oil    | 0#(summer), -10#(            | (winter) Diesel oil   |
| Lube Type                          | SAE10W30 (CD grade or above)    |                       | SAE10W30 (CD grade or above) |                       | SAE10W30 (CD grade or above) |                       |
| Overall Diemension [mm][L*W*H      | 570*460*680                     | 570*495*720           | 570*460*720                  | 570*495*720           | 570*495*720                  | 570*495*720           |
| N.W [kq]                           | 75                              | 78                    | 80                           | 80                    | 85                           | 85                    |









The sound level achieves international leading level; which overturns traditional image of Chinese silent diesel generator.



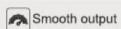
New structure design, KOOP brand unique out-looking with red and black color.

### U-type air flue design

With new U-type air flue design, all inlet and exhaust air go through it, achieves the effect of sound insulation.

### Super strong structure

New design canopy with thicker base frame to enhance generator structural strength, meanwhile achieve the effect of sound insulation and vibration reduction.



100% copper alternator, class F insulation, high conversion efficiency, smart AVR controller ensures stable voltage and less voltage waveform distortion.

# Product features



## TECHNICAL DATA



| Model                                      | KDF6700                            | )QQ(-3)                         | KDF8500                                     | QQ(-3)                           |  |  |
|--|------------------------------------|---------------------------------|---|----------------------------------|--|--|
| Rated Frequency [Hz]                       | 50                                 | 60                              | 50  | 60                               |  |  |
| Rated Voltage [V]                          | 220,230,240,110/220,127/220,115/23 | 0,120/240,220/380,230/400,240/4 | 15 220,230,240,110/220,127/220,115/230      | ,120/240,220/380,230/400,240/415 |  |  |
| Rated Output Power [i                      | (VA) 4.2(5.3)                      | 4.5(5.6)                        | 5.5(6.9)                                    | 6.0(7.5)                         |  |  |
| Max Output Power [k\                       | (A) 4.5(5.6)                       | 5.0(6.3)                        | 6.0(7.5)                                    | 6.5(8.1)                         |  |  |
| Phase Number                               | 1-Phase /                          | 3-Phase                         | 1-Phase / 3-Phase                           |                                  |  |  |
| Excitation Mode                            | Self-excitat                       | ion, brush                      | Self-excitation , brush                     |                                  |  |  |
| Power Factor Φ                             | 1.0(0                              | 0.8)                            | 1.0(0.8)                                    |                                  |  |  |
| Insulation Grade                           | F                                  |                                 | F   |                                  |  |  |
| Fuel Tank Capacity [L]                     | 14.                                | 5                               | 14.5  | 14.5                             |  |  |
| Noise Level [Db](@7m                       | ) 65                               | 66                              | 66  | 67                               |  |  |
| Engine Model                               | KD186                              | 6FAE                            | KD192FE                                     |                                  |  |  |
| Starting System                            | Electric                           | start                           | Electric                                    | Electric start                   |  |  |
| Engine Type                                | 1-Cylinder, 4-Stroke,              | Air-cooled, Veritical           | 1-Cylinder, 4-Stroke, Air-cooled, Veritical |                                  |  |  |
| Bore*Stroke [mm]                           | 86*                                | 72                              | 92*75                                       |                                  |  |  |
| Displacement [L]                           | 0.4                                | 18                              | 0.499                                       |                                  |  |  |
| Compression Ratio                          | 19.5                               | :1                              | 19.5 : 1                                    |                                  |  |  |
| Rated Rotation Speed                       | [rpm] 3000                         | 3600                            | 3000  | 3600                             |  |  |
| Rated Power [kW]                           | 5.8                                | 6.6                             | 7.6   | 8.6                              |  |  |
| Lube Oil Capacity [L]                      | 1.6                                | 5                               | 1.65  |                                  |  |  |
| Fuel Type                                  | 0#(summer), -10#(                  | winter) Diesel oil              | 0#(summer), -10#(winter) Diesel oil         |                                  |  |  |
| Lube Type                                  | SAE10W30 (CD g                     | rade or above)                  | SAE10W30 (CD grade or above)                |                                  |  |  |
| Low Oil Pressure Alarn                     | n System Wit                       | th                              | With  |                                  |  |  |
| Optional<br>Standard                       | AT                                 | ATS                             |   | ATS                              |  |  |
|  | Remote o                           | Remote control                  |   | Remote control                   |  |  |
| Overall Diemension [mm][L*W*H] 995*645*890 |                                    | 995*645*890                     |   |                                  |  |  |
| Net Weight [kg] 207                        |                                    | 210                             |   |                                  |  |  |
|  |                                    |                                 |   |                                  |  |  |

