



Milestone Industrial Co., Ltd

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DIESEL ENGINE FIRE PUMPS

Dreams, Struggles, Future!



## DIESEL ENGINE FIRE PUMPS

XBC Diesel Engine Fire Pump

SDC Dual Power Fixed Water Supply System For Fire Fighting

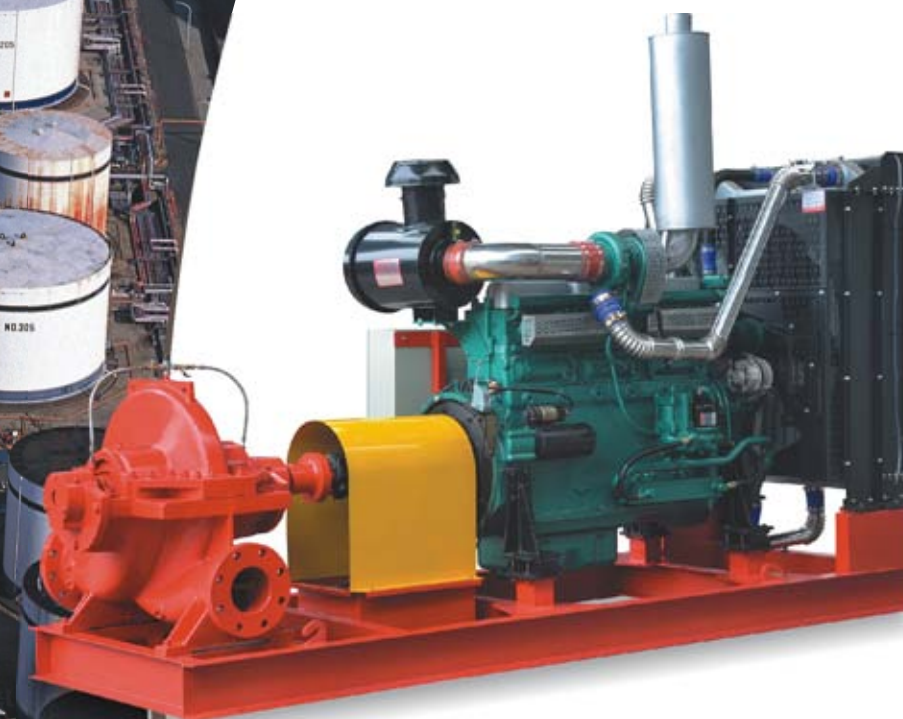
SHC Skid Mounted (Container type) Fire Water Supply System

EDJ Small Dual Power Fire Pump System



- If need any information, please refer to us or browse our company web page.
- Better has always been devoting to research and innovation of fluid equipment, any individual specification is subject to change without notice.
- Uses ecology paper printing.





## **XBC-S Single-stage Split-case Diesel Engine Fire Pump**

### Scope of Application

- Chemical, oil refining, metallurgy, energy, medicine and military and other enterprises;
- Processing or storage of petroleum or similar products;
- Docks, transport ships, etc.
- Large hotels, hospitals, gymnasium and other large public places;
- Large shopping malls, large complex;

### Scope of Performance

- Caliber: 25~500mm
- Flow Range: 10~1250L/s
- Pressure: 0.3~1.6MPa
- Matching Power: 84~1480kW
- Working Pressure:  $\leq 2.5$ MPa



## XBC-IS Single-stage End-suction Diesel Engine Fire Pump

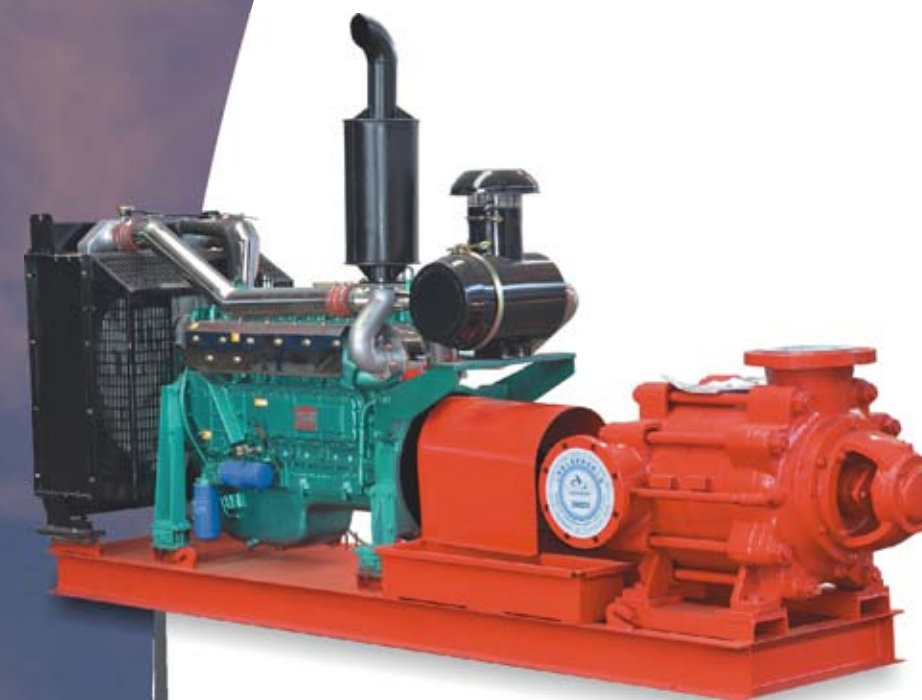
### Scope of Application

- Hotels, hospitals, gymnasium and other public places;
  - Chemical, oil refining, metallurgy, energy, medicine and military and other enterprises;
  - Shopping malls, similar to Wanda complex;
- Office buildings, high-end residential buildings;

### Scope of Performance

- Caliber: 65~350mm
- Flow Range: 5~250L/s
- Pressure: 0.3~1.5MPa
- Matching Power: 4~610kW
- Working Pressure:  $\leq 1.6$ MPa





## **XBC-D** Multistage Single-suction Diesel Engine Fire Pump

### Scope of Application

- High-rise hotel, high public places;
- High-rise office buildings, high-rise residential;
- Chemical, oil refining, metallurgical, enterprises;
- Energy, medicine and military, enterprises.

### Scope of Performance

- Caliber: 65~300mm
- Flow Range: 5~180L/s
- Pressure: 1.0~2.4MPa
- Matching Power: 20~630kW
- Working Pressure:  $\leq 2.5$ MPa



## **ZWC Diesel Engine Self-priming Sewage Pump (Agriculture Irrigation)**

### Scope of Application

- Car, trailer;
- Farmland irrigation;
- Small fire fighting place;
- Emergency drainage;
- The liquid level is lower than the pumping station and can be self-priming by gravity;

### Scope of Performance

- Caliber: 50~200mm
- Flow Range: 5~80L/s
- Pressure: 0.2~0.8MPa
- Matching Power: 4~132kW
- Working Pressure:  $\leq 1.0$ MPa



## Portable Hand Lift Fire Pump

### Scope of Application

- Small and medium-sized towns, mining wharfs, rural areas, fire engines difficult to reach, or timely arrival because of traffic restrictions, motorized fire pump with hose, water gun, suitable for fighting the general material fire, not restrictions to traffic, electricity, and regional

### Scope of Performance

- Rated Capacity: 600L/min
- Head: 65m
- Discharge Pressure: 0.6MPa
- Inlet and Outlet: 65mm
- Water Gun Diameter: 19mm
- Connect Method: screw
- Max Suction Depth: 7m
- Priming Time: ≤20s
- Start Method: manual, electric



## SDC Dual Power Fixed Water Supply Equipment Use for Fire Protection

### Scope of Application

- Industrial plant: automobile, brewery, pulp and paper, chemical, pharmaceutical;
- Government agencies: embassies, military bases, administrative buildings;
- Commercial buildings: high-rise buildings, hotels, offices, warehouses;
- Various institutions: hospitals, labor camps, nursing homes, schools;

### Scope of Performance

- Caliber: 65~350mm
- Flow Range: 5~400L/s
- Pressure: 0.3~1.5MPa
- Matching Power: 4~1000kW
- Working Pressure:  $\leq 1.6$ MPa
- Pipe Material: carbon steel / 304
- Valve Material: ductile iron / 304



## SHC Skid Mounted (Container Type) Fire Water Supply System

### Scope of Application

- Chemical, oil refining, metallurgy, energy, medicine and military enterprises;
- Processing or storage of petroleum;
- Docks, transport ships, etc.
- Large hotels, hospitals, gymnasium and other large public places;
- Large shopping malls, large complex;

### Scope of Performance

- Caliber: 25~500mm
- Flow Range: 1~300L/s
- Head: 0.15~1.6MPa
- Matching Power: 30~400kW
- Working Pressure:  $\leq 1.6$ MPa



# Cooperative Diesel Engine Brand

## 合作柴油机品牌



Cummins



DCEC Cummins



Quanchai



Shanghai



Caterpillar



FAWDE



Weichai



Volvo



ISUZU



Perkins



Chanchai



Yuchai



CSIC



Mitsubishi



Yanmar



Doosan

## Fire Pump Control Panel

- 1 Can be fixed on the base of the unit or split on the wall of the pump house, with anti-vibration design, local control or remote control;
- 2 Using large-screen display, all diesel engine operating parameters can be set from the controller panel; beautiful structure and practical, easy maintenance settings, reliable operation;
- 3 Diesel engine pump system consists of diesel engine pump controller and other electric pump control system, the system through a variety of sensors to control the module on diesel engine and motor for real-time control and data transmission, and the control panel shows the equipment running process parameters and status;
- 4 Control panel consist of control cabinet power switch, emergency stop, reset button, control mode and LCD display;
- 5 System configuration diesel engine speed control module, control signal start and stop the diesel engine through the external throttle;
- 6 The control system is equipped with two groups of automatic mains charging module, which can automatically charge the battery at any time, keep the battery enough power, and detect two groups battery working condition;
- 7 When the diesel engine over-speed protection device running, the controller automatically shut down and lock the diesel engine, until manual reset, return to standby condition;



Diesel Engine Fire Pump Control Panel












Dual Power Fixed Water Supply System for Fire Control Panel



# Contents

# 目录

	<b>01</b>	XBC Diesel Engine Fire Pump
	<b>05</b>	Pump Structure
	<b>09</b>	Diesel Engine Technical Parameter
	<b>17</b>	Diesel Engine Fire Pump Selection Performance Curve
	<b>27</b>	XBC-IS Diesel Engine End Suction Pump Technical Parameter
	<b>36</b>	XBC-D Diesel Engine Multistage Pump Technical Parameter
	<b>45</b>	XBC-S Diesel Engine Split Case Pump Technical Parameter
	<b>53</b>	XBC-JC Diesel Engine Vertical Turbine Fire Pump
	<b>57</b>	Portable Hand Lift Fire Pump
	<b>59</b>	EDJ Small Dual Power Fire Pump System
	<b>61</b>	ZWC Diesel Engine Self-priming Sewage Pump (Agrilculture Irrigation)
	<b>64</b>	SDC Dual Power Fire Water Supply System for Fire-protection
	<b>77</b>	SHC Skid Mounted (Container type) Fire Water Supply System
	<b>79</b>	H Right Angle Gearbox
	<b>83</b>	Fuel tank, Oil, Antifreeze, Pump House, Routine Maintenance
	<b>93</b>	Control Panel / Muffler Technical Parameter, Flame Arrester, Foundation

### Product Description

Milestone Pump Co., Ltd China manufactured diesel-driven fire pump manufactured according to GB6245-2006 "fire pump" design. Meets the latest certification CCCF requirements and obtain the certificate. The products' advantage is that when there's fire, power failure, and the electric fire pump can't work properly, diesel fire pump automatically put into operation to ensure fire fighting normally; Second, compared with the advantages of electric fire pump, diesel engine pump doesn't need long-term investment in power supply, saving electricity supply transformer and normal expenses. Diesel Fire Pump configure various automatic functions to meet the requirements of national standards to ensure the long-term normal standby equipment, ready to work at any time.

The fire fighting pump systems also apply to other emergent and standby occasions.

### Scope of Application

- Various fire hydrants, fire main pump spray pump;
- Suitable for a variety of fire booster pump regulator occasions;
- A variety of villas, residential and other fire-fighting system;
- Industrial and civil construction of fire water system.
- For a variety of fire rating depots, oil loading terminals, logistics parks and other demanding applications.

### Product Standard

- GB 6245-2006 "Fire Pump"

### Environmental and Working Conditions

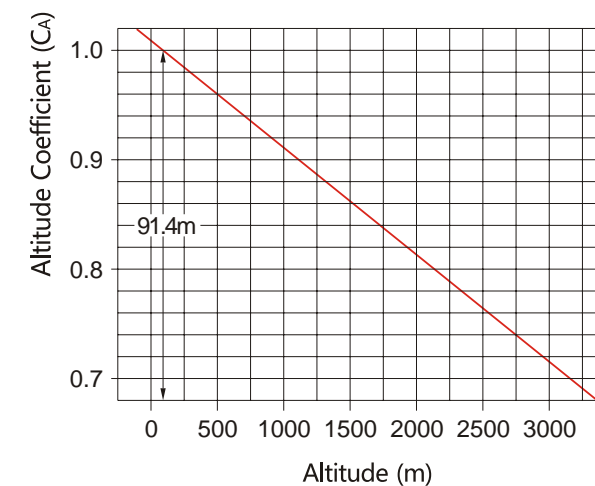
- **Ambient temperature:**
  - Ambient temperature range 4°C~40°C;
  - Working to improve the ambient temperature every 5°C, its power decreased by 1% (to 25°C as the base);
- **Altitude:**
  - Reference elevation 91.4m, the reference atmospheric pressure is 100KPa;
  - If the work to an altitude of over 1000m, reference should be corrected GB1105.1-1987 diesel engine power, you can consult the specific technical department;
  - Relative humidity ≤80% (20°C), outdoor allow 90% (when installed outdoors in the order presented, you can choose to configure the outdoor structure, protection class IP55).

### The Scope of Work

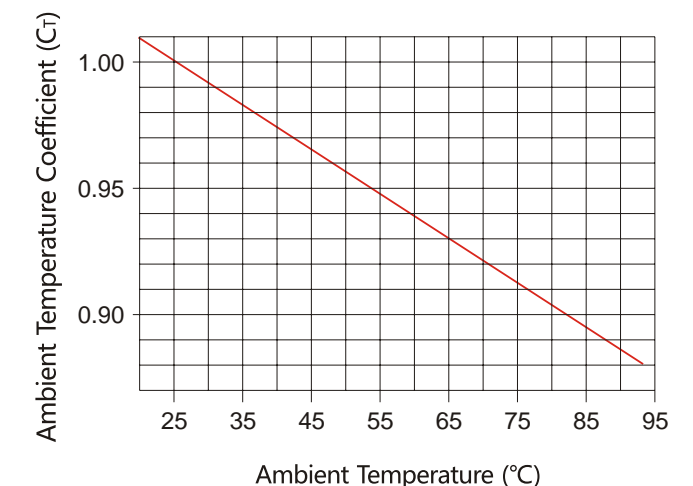
- Water pressure: 0.2-2.5MPa (20~250 meters);
- Flow range: 5~1200L/S
- Power: 3kW~2000kW;
- Speed range: 1500~3200r/min
- Permissible media: Drinking water, chilled water, fire water, and other impurities without abrasive or long-fiber impurities and no chemical or mechanical pump for corrosive media.
- Allow the maximum medium temperature 70°C, the maximum ambient temperature of 40°C;
- Maximum allowable working pressure of 1.6MPa, the maximum inlet pressure 0.6MPa.

### Diesel Engine

- **Diesel engine:**
  - Power less than 20kW using one or two cylinder diesel engine;
  - Power 20kW~30kW using QC380, Q385;
  - Power 30kW~56kW four-cylinder diesel engine 480, 485, 495, 4100,4102,4108 etc;
  - Power 70kW~300kW six-cylinder diesel engine 4135, 6105, 6113, 6135 etc;
  - Power 300kW~2000kW 8, 12, 16-cylinder diesel engine 12V135AZD, KT38, etc.
- **Diesel engine selection:**
  - The selection of diesel power rating should be greater than 10% of the maximum pump shaft power, under abnormal conditions of engine power will be less than the rated power. For proper operation, it should be used in high power diesel engine and pump support.
  - Note: Diesel engine 12 hours power in the state when the following criteria measured:
    - 1. Atmospheric pressure is 100KPa;
    - 2. Ambient temperature 25°C;
    - 3. Air relative humidity 30%.
  - Working to improve the ambient temperature every 5 %, its power decreased by 1% (to 25 % as the base);
  - Work to raise the altitude of 100m, its power is reduced by 3%;
  - Actual output power of diesel engine= ( CA+CT-1 ) ×12 hour power
    - CA----Altitude Correction Coefficient
    - CT----Ambient Temperature Correction Coefficient
  - Diesel engine for large flow, high pressure pump should consider the impeller rotor parts with the water moment of inertia calculation.



Altitude Correction Coefficient Chart



Ambient Temperature Correction Coefficient Chart

## Features

- Spectrum range: fire pump can use a single-stage end suction pump, a combination of multistage single-suction pumps, single-stage double-suction pumps and other kinds of pumps, pump or more kinds of parallel flow, wide pressure range.
- Automatically: when the engine fire pump receives a valid signal fire, remote control start signal when the unit will start automatically; when the fire pump motor supply failure or lack of signal phase, the unit will automatically standby. Diesel fire pump start 10s, if not start running, stop 10s, and then restart. The unit will automatically repeat three times.
- Alarm System: repeatedly failed to start alarm, low diesel engine oil pressure alarm, ultra-high temperature alarm diesel engine, diesel engine speed alarm, low battery alarm, charging failure alarm, an alarm indicating a lack of fuel.
- kinds of ways to start: signal fire started, manually start or remote start.
- Direct-attached: Automobile universal joints, high transmission efficiency, large torque diesel engine vibration isolation.
- Automatic charging: use electricity charge, usually in the automatic standby position, if the battery voltage is low, the unit automatically charging; When the battery voltage is adequate, can automatically stop charging to avoid damage to the battery.

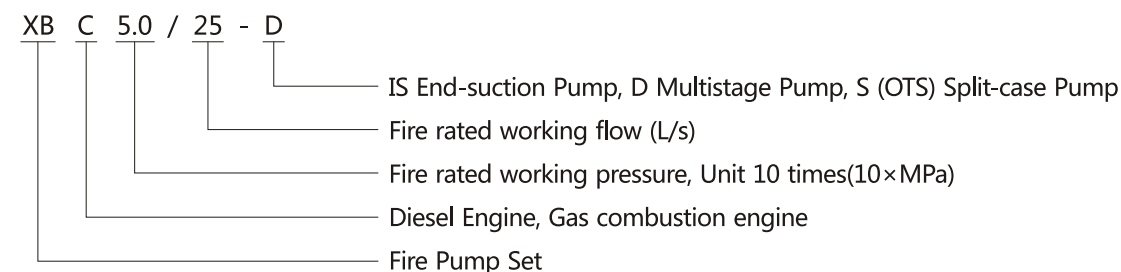
The following is a selection function, raised in order:

- Speed adjustable: pump flow, when the head is inconsistent with the actual requirements can be adjusted to change the engine speed to achieve consistent with the actual situation.
- Pairs of the battery circuit, with a preparation;
- Maintenance-free batteries: no maintenance add supplementary liquid;
- Pre-heating: guaranteed low temperature when the normal start;
- Regular inspection: inspection functions may be provided on a regular basis to ensure the unit normal operation;
- Data Remote: remote data transmission function can be realized on mobile phone APP can see in real time the operation of the equipment;
- Outdoor design, protection rating to IP44;
- Different engine brand
- Can select other similar power engine, such as gas engine;
- Parallel use of diesel engine fire pump, or together with the electric fire pump in parallel use when ordering;
- Normally, the pump is horizontal, if need vertical please inform when ordering.

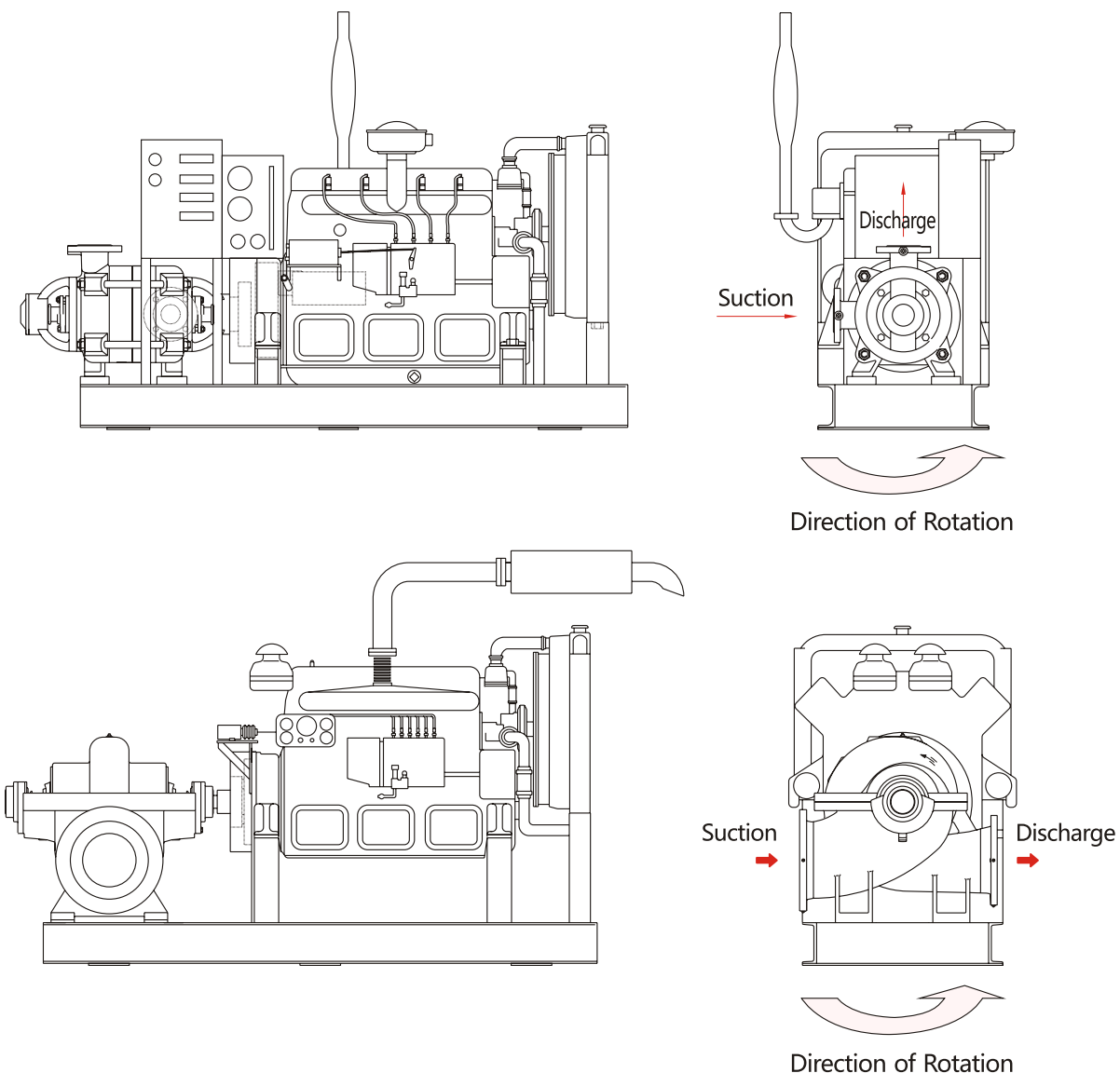
## Device Configuration

- Depending on the pump flow, head, you can choose single-stage end suction centrifugal pump (IS), single-stage split case centrifugal pump (S or OTS), a multistage single-suction centrifugal pump (D), in line with GB 6245-2006 "Fire pump" requirements.
- Cooling system: air-cooled (small power); water-cooled (big power).
- Diesel engine Speed (power), speed 1500r/min, 3000r/min.
- Other accessories: exhaust system with silencer, the engine cooling water system, fuel tank, engine control systems, fuel oil, lubricating oil, speed, temperature sensors; isolation pads, universal joint drive.

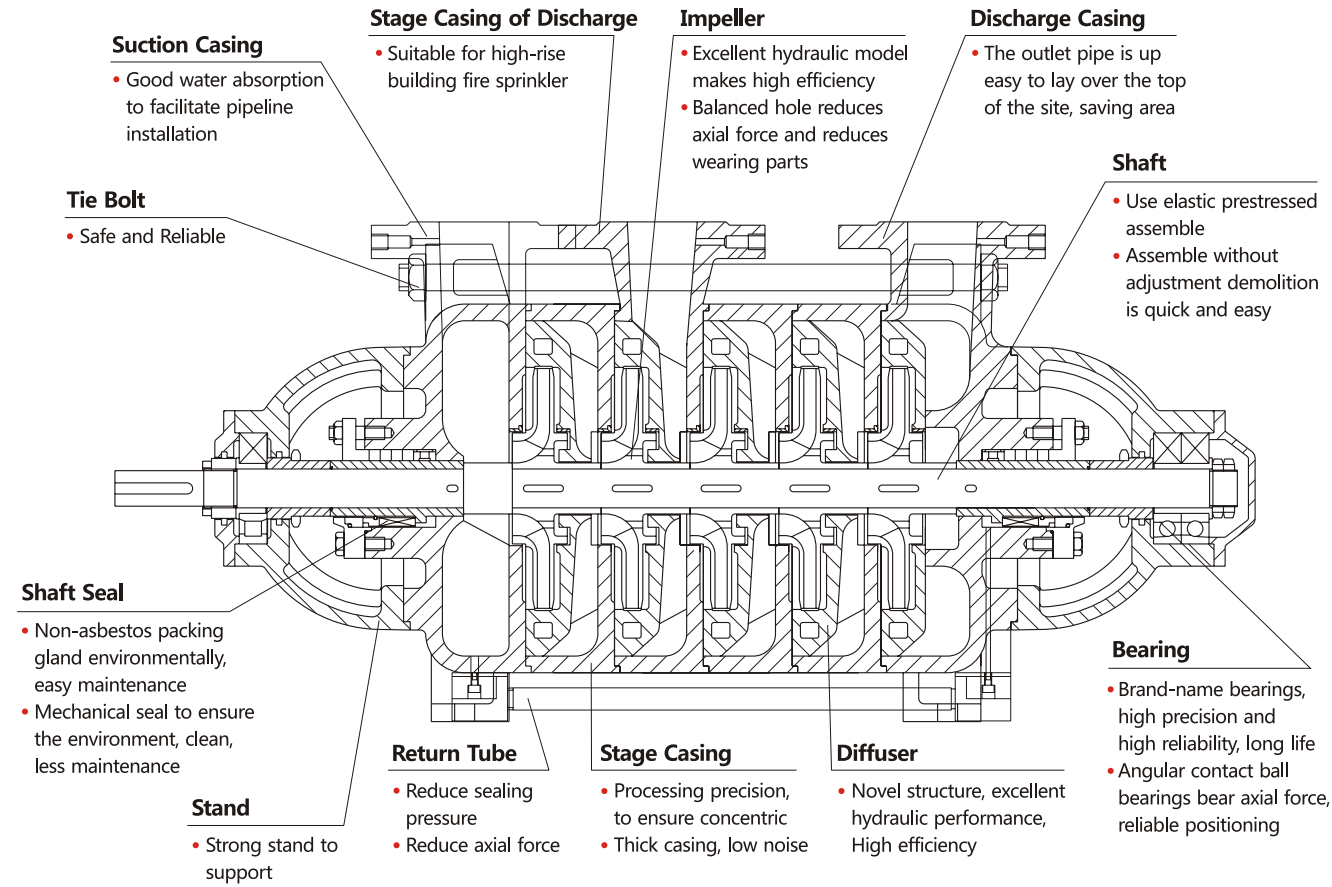
## Model Significance



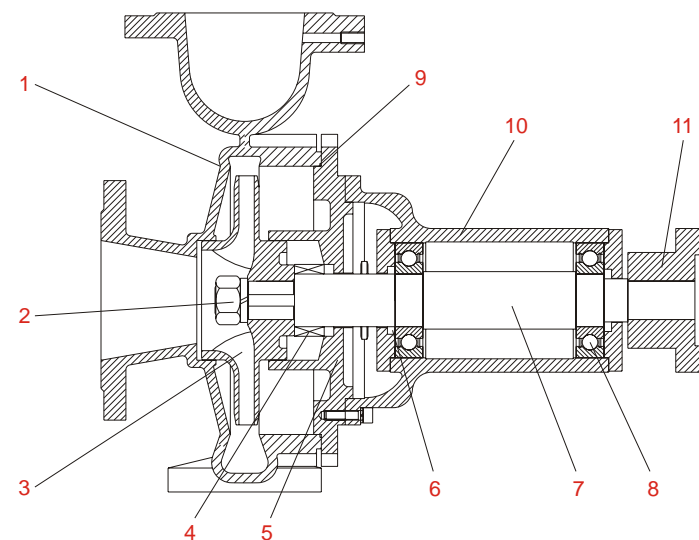
## Pump Rotation Instructions



**Pump Structure**



**D Multistage Single-suction Type**

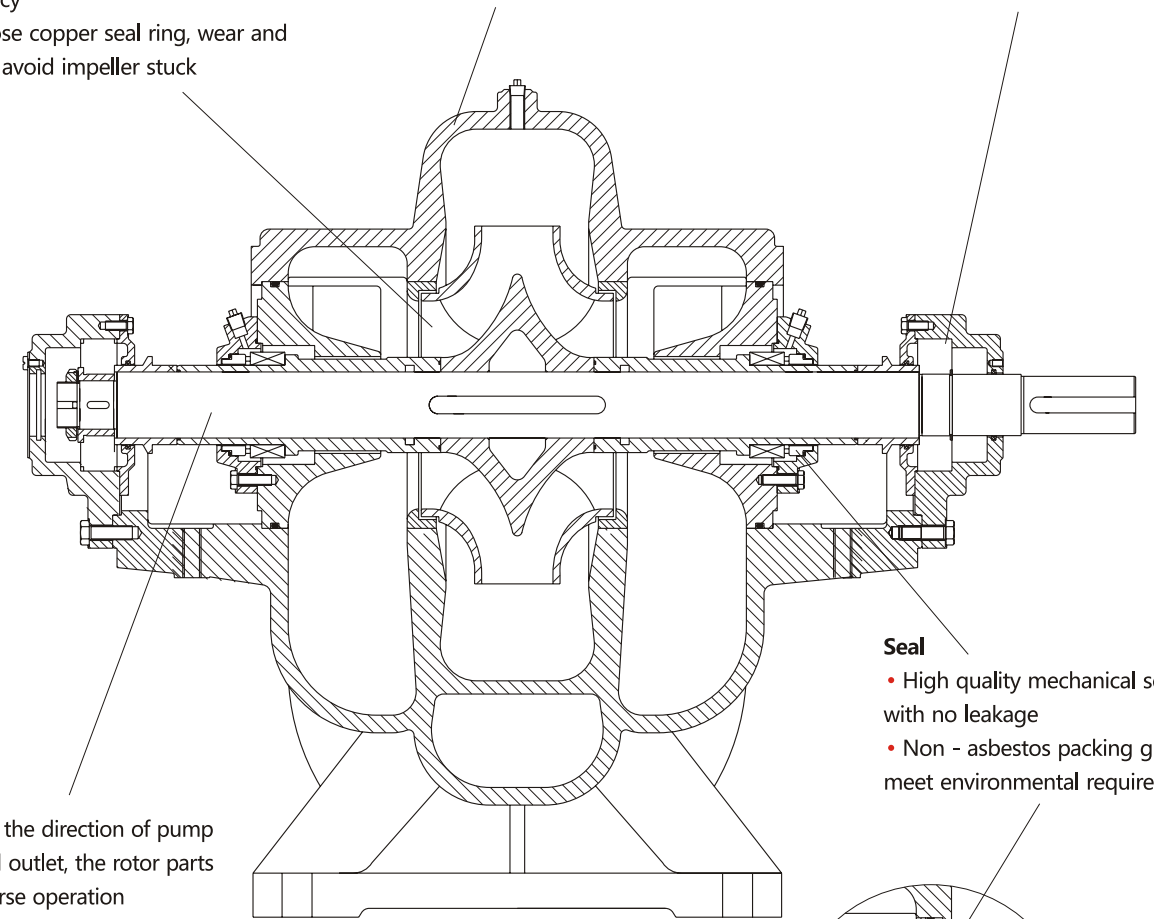


- |    |                     |
|----|---------------------|
| 1  | Pump Casing         |
| 2  | Impeller            |
| 3  | Impeller Nut        |
| 4  | Mechanical seal     |
| 5  | Pump Cover          |
| 6  | Suspension Oil Seal |
| 7  | Pump Shaft          |
| 8  | Bearing             |
| 9  | O Ring              |
| 10 | Bearing Seat        |
| 11 | Pump Connect        |

**IS Single-stage End Suction Type**

**Pump Structure**

- Impeller**
- Use double-suction impeller to minimize axial force
  - CAD optimization design the best hydraulic model, good performance
  - In addition to the prototype impeller, can also use adjust impeller to suit different working conditions, improve efficiency
  - Choose copper seal ring, wear and tear to avoid impeller stuck
- Pump Body**
- With a double volute type to reduce the radial force, bearing force is small, long life
  - Easy to install, automatically correct the pump cover
- Bearing**
- Grease lubricated bearings, easy maintenance, long life
  - Key mounting sleeve bearings, fixed reliable, easy disassembly
  - Imported no vortex, smooth operation, low loss

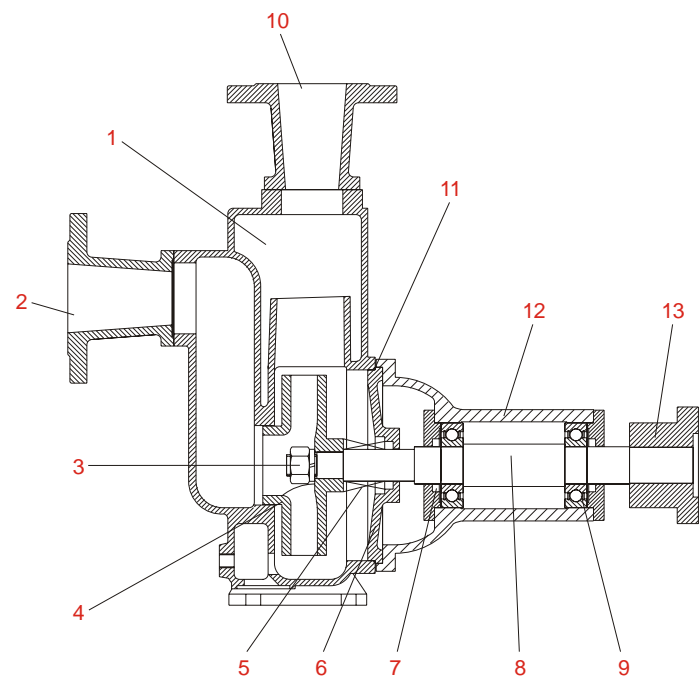


- Shaft**
- Adjust the direction of pump inlet and outlet, the rotor parts can reverse operation
  - Completely sealed shaft, don't touch the liquid, non-corrosive
  - Thread does not touch the liquid, non-corrosive
  - Parts to ensure assembly size, pump assembly don't need to adjust

- Seal**
- High quality mechanical seal with no leakage
  - Non - asbestos packing gland meet environmental requirements

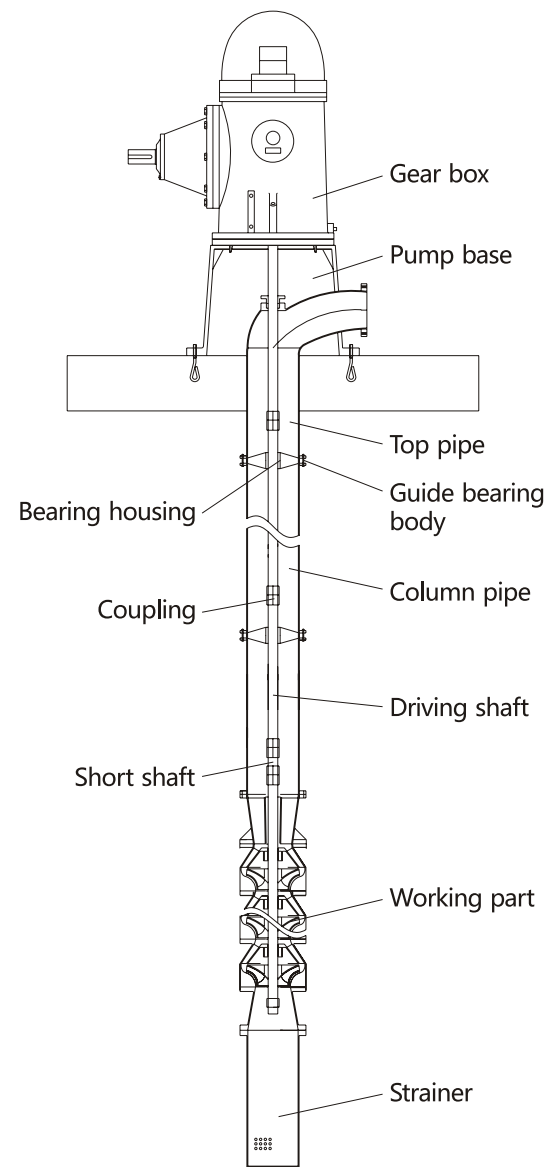
**OTS Single-stage Split case Type**

**Pump Structure**



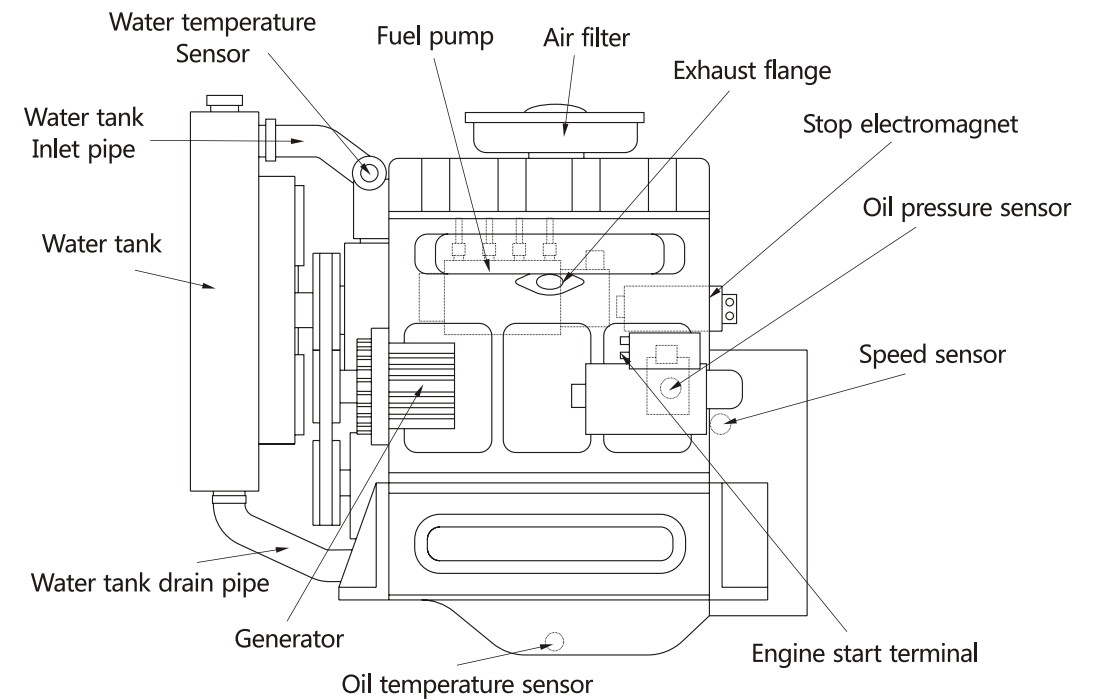
1	Pump body
2	Inlet
3	Impeller nut
4	Impeller
5	Mechanical seal
6	Pump cover
7	Suspension oil seal
8	Pump shaft
9	Bearing
10	Outlet
11	O ring
12	Bearing housing
13	Coupling

**ZWC Single-stage Self-priming Type**

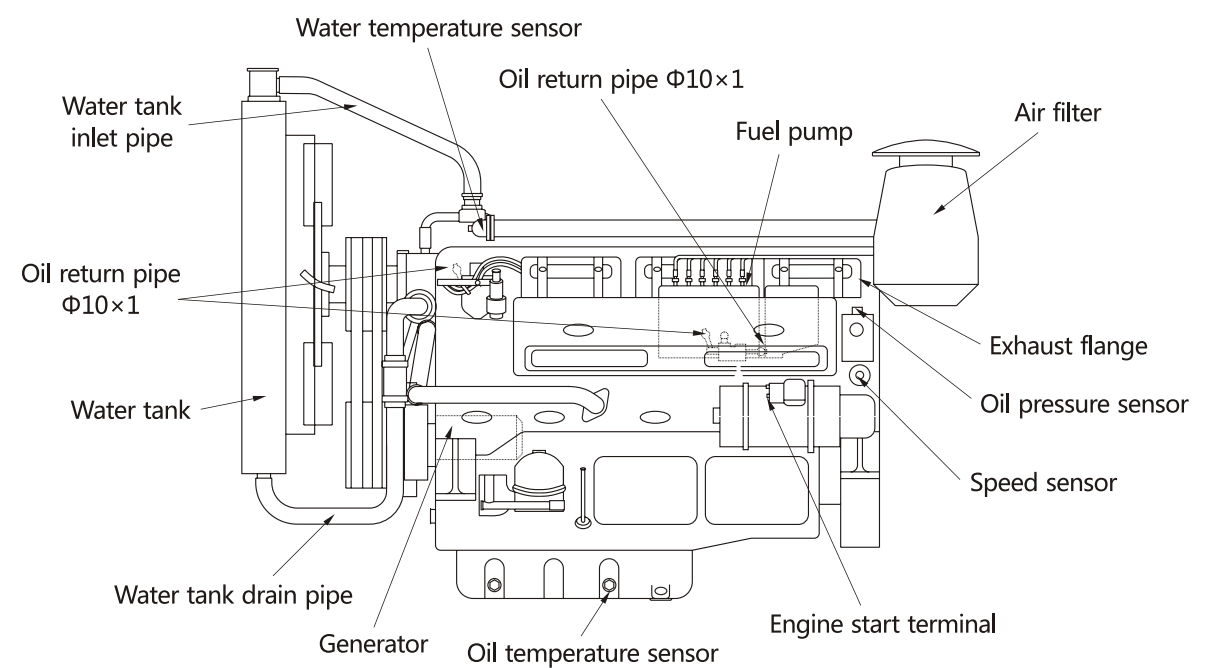


**JC Vertical Turbine Type**

**Diesel Engine Structure**



**80 90 95 100 102 105 108 Series**



**135 Series**

**Diesel Engine Technology Parameters**

**Parameters of PERKINS Diesel Engine (1500rpm)**

PERKINS is one of the world's first companies to produce engine companies. PERKINS diesel engine was founded in 1932, the annual output of nearly 40 million engines. Today, we have developed the name of PERKINS, our company has developed into a he top suppliers of 4-2000kW(5-2800hp) diesel in natural gas engine market. We believe that through the global mature support for mature agents and distributors, and our continued improvement in products, manpower and processes, your choice will never disappoint you.

Model	Speed	12h Power	1h Power	Cylinder	Diesel Consumption	Fuel Tank Capacity	Engine Oil	Cylinder Bore Stroke	Displacement	Exhaust	Cooling Water Total Volume	Smoke Exhaust	Exhaust Temperature
	r/min	kW	kW	No.	L/h	L/6h	L/6h	mm × mm	m³/min	L	L	m³/min	m³/min
403D-11G	1500	8.3	9.2	4	3.4	55	0.10	77×81	24	1.1	5	1	420
403D-15G	1500	12	13.2	4	4.1	55	0.13	77×81	31	1.5	5	3	450
404D-22G	1500	18.5	20.6	4	6.1	55	0.19	84×100	33	2.2	10	5	450
404D-22TG	1500	24	26.7	4	8.3	75	0.25	84×100	33	2.2	10	5	450
1103A-33G	1500	27	30.4	3	7.9	75	0.28	105×127	86	3.3	10	6	520
1103A-33TG1	1500	41	45.6	3	12.0	90	0.38	105×127	86	3.3	10	8	540
1103A-33TG1	1500	41	45.6	3	12.0	90	0.38	105×127	86	3.3	10	8	540
1103A-33TG2	1500	53	59.3	3	15.4	110	0.46	105×127	110	3.3	10	11	550
1104A-44TG2	1500	71	79.1	4	20.5	150	0.62	105×127	121	4.4	13	11	585
1104C-44TAG2	1500	90	99.5	4	24.9	200	0.75	105×127	187	4.4	13	18	530
1106TAG	1500	124	137.5	6	33.9	280	1.07	100×127	192	6.0	37	25	570
1106TAG2	1500	129	143	6	44	350	1.30	100×127	221	6.0	41	25	540
1306C-E87TAG4	1500	195	217	6	53	400	1.51	116.6×135.9	424	8.7	37	43	535
1306C-E87TAG4	1500	195	217	6	53	400	1.51	116.6×135.9	424	8.7	37	43	535
1306C-E87TAG6	1500	215	239	6	50	400	1.48	116.6×135.9	424	8.7	45	46	553
2206C-E13TAG2	1500	314	349	6	80	800	2.40	130×157	599	12.5	51	67	630
2206C-E13TAG3	1500	353	392	6	90	800	2.70	130×157	599	12.5	51	67	630
2506C-E15TAG1	1500	391	434	6	104	800	3.12	137×171	660	15.2	58	91	595
2506C-E15TAG2	1500	430	478	6	111	800	3.36	137×171	660	15.2	58	99	560
2806-E18TAG1A	1500	517	574	6	134	1000	4.02	145×183	840	18.1	61	99	550
2806A-E18TAG2	1500	548	609	6	143	1000	4.32	145×183	840	18.1	61	102	550
4006-23TAG2A	1500	606	673	6	173	1500	5.16	160×190	1500	23.0	105	127	560
4006-23TAG3A	1500	675	750	6	194	1500	5.82	160×190	1500	23.0	105	139	560
4008TAG2A	1500	1013	1125	8	341	2500	10.26	160×190	1680	30.6	143	201	560
4012-46TWG2A	1500	1049	1166	12	288	2000	8.64	160×190	1860	45.8	196	245	505
4012-46TWG3A	1500	1137	1263	12	318	2500	9.54	160×190	1860	45.8	196	245	505
4012-46TAG2A	1500	1256	1395	12	355	2500	10.08	160×190	2040	45.8	207	274	505
4012-46TAG3A	1500	1425	1583	12	405	3000	12.18	160×190	2400	45.8	207	274	505
4016TAG1A	1500	1521	1690	16	380	3000	11.40	160×190	2760	61.1	316	345	493
4016TAG2A	1500	2025	2250	16	435	3500	13.02	160×190	2760	61.1	316	387	493
4016-61TRG3A	1500	1697	1886	16	528	4000	15.84	160×190	3480	61.1	316	387	493

**YANMAR Series**

YANMAR 88 series prototype introduction of the Japanese YANMAR with power, product parts system high-end, superb processing technology, with low fuel consumption, strong power, high reliability, excellent heat dissipation, structure compact and other advantages, cost-effective than similar domestic products, fuel consumption than similar products save more than 15%, increase power, increase torque and other technical indicators in the leading domestic level. The weight of the machine only 180 kg, very suitable for small installation control use.

Model	Speed	12h Power	1h Power	Cylinder	Fuel Consumption	Diesel Consumption	Fuel Tank Capacity	Engine Oil	Cylinder Bore Stroke	Intake Method	Exhaust	Compression Ratio	Speed Control
	r/min	kW	kW	No.	g/kW.h	L/h	L/6h	L/6h	mm × mm		L		
3TNV88-GGS	3000	21	23	3	238	6.51	39.1	0.04	88×90	Naturally aspirated	1.646	18.2:1	Mechanical speed control
4TNV88-GGS	3000	31	33	4	238	9.35	56.1	0.06	88×90		2.192	18.2:1	
4TNV88-GTS	3000	41	45	4	230	12.32	79.9	0.08	88×90	Turbo boost	2.192	18.2:1	

**Diesel Engine Technology Parameters**

**Parameters of VOLVO PENTA Diesel Engine (1500rpm)**

VOLVO is a Swedish industrial company with 120 years of history and one of the oldest engine manufacturers in the world. So far its engine production has reached more than 1 million units and is widely used in automobiles, construction machinery, ships of the power part, it is the ideal power generator. VOLVO is the largest auto company in Northern Europe and one of the world's 20 largest industrial companies in Sweden. Founded in 1924, the founders are Assar Gabrielsson and Gustaf Larson.

Model	Speed	12h Power	1h Power	Cylinder	Diesel Consumption	Fuel Tank Capacity	Engine Oil	Cylinder Bore Stroke	Displacement	Exhaust	Cooling Water Total Volume	Smoke Exhaust	Exhaust Temperature
	r/min	kW	kW	No.	L/h	L/6h	L/6h	mm × mm	m³/min	L	L	m³/min	m³/min
TAD530GE	1500	75	83	4	18	145	0.42	108×130	90	4.76	22	15.4	610
TAD531GE	1500	88	98	4	21.3	150	0.48	108×130	120	4.76	20	16.2	557
TAD532GE	1500	112	125	4	24.8	200	0.48	108×130	222	4.76	22	23.2	532
TAD532GE	1500	112	125	4	27.8	200	0.48	108×130	222	4.76	22	23.2	532
TAD731GE	1500	120	133	6	30.6	240	0.6	108×130	222	7.15	24	30.2	540
TAD732GE	1500	158	176	6	39.7	300	0.54	108×130	222	7.15	38	35.1	542
TAD733GE	1500	176	195	6	42	300	0.54	108×130	222	7.15	38	37.2	530
TAD734GE	1500	214	238	6	52	375	0.18	108×130	240	7.15	38	33.4	550
TAD941GE	1500	279	310	6	65.4	470	0.24	120×138	330	9.36	41	52.2	539
TAD941GE	1500	279	310	6	70.8	500	0.24	120×138	330	9.36	41	52.2	539
TAD1343GE	1500	320	356	6	75.7	500	0.24	131×158	372	12.78	44	60	420
TAD1344GE	1500	350	389	6	83.6	600	0.24	131×158	390	12.78	44	67.5	465
TAD1345GE	1500	388	431	6	93.3	800	0.24	131×158	402	12.78	44	58.3	570
TAD1641GE	1500	425	473	6	111.7	800	0.6	144×165	423	16.12	60	98	455
TAD1642GE	1500	482	536	6	120.7	1000	0.66	144×165	423	16.12	60	100.7	494
TWD1643GE	1500	536	596	6	132.7	1000	0.66	144×165	423	16.12	95	111.8	463

**Parameters of MITSUBISHI Diesel Engine (1500rpm)**

MITSUBISHI as the world's leading generators complete sets of equipment manufacturers, continue to develop and create capacity from 0.5 horsepower to 56400 horsepower of various forms of diesel engines to meet the general purpose and special purpose of the customer from 1917. MITSUBISHI diesel generating units in the industry with small size, light weight, low fuel consumption and other characteristics, the purpose is to maximize save operating costs of the user. At the same time, MITSUBISHI sold at a very reasonable price to users all over the world.

Model	Speed	12h Power	1h Power	Cylinder	Diesel Consumption	Fuel Tank Capacity	Engine Oil	Cylinder Bore Stroke	Displacement	Exhaust	Cooling Water Total Volume	Smoke Exhaust	Exhaust Temperature
	r/min	kW	kW	No.	L/h	L/6h	L/6h	mm × mm	m³/min	L	L	m³/min	m³/min
S6R-PTA	1500	500	555	6	139	1000	4.3	170×180	582	24.51	113	123	500
S6R2-PTA	1500	572	635	6	158	1200	4.9	170×220	720	29.96	118	137	500
S6R2-PTAA	1500	639	710	6	179	1500	5.4	170×220	1040	29.96	132	159	500
S12A2-PTA	1500	662	735	12	179	1500	5.4	150×160	1140	33.93	132	164	500
S12H-PTA	1500	882	980	12	213	1500	6.5	150×175	1800	37.11	244	220	510
S12H-PTA	1500	882	980	12	248	1800	7.6	150×175	1800	37.11	244	220	510
S12R-PTA	1500	1071	1190	12	297	2500	9.3	170×180	1800	49.03	335	258	510
S12R-PTA2	1500	1157	1285	12	336	2500	9.9	170×180	1800	49.03	335	279	510
S12R-PTAA2	1500	1264	1404	12	350	2500	10.7	170×180	1800	49.03	317	318	520
S16R-PTA	1500	1431	1590	16	399.4	3000	12.3	170×180	1950	65.37	350	339	520
S16R-PTA2	1500	1584	1760	16	460.4	3500	13.7	170×180	2040	65.37	445	379	520
S16R-PTAA2	1500	1706	1895	16	472	3500	14.7	170×180	2500	65.37	400	420	520
S16R2-PTAW	1500	1950	2167	16	525	4000	12.6	170×220	2880	79.9	500	498	520

**Diesel Engine Technology Parameters**

**CUMMINS Series**

Chongqing CUMMINS Engine Co.,Ltd. is a joint venture with CUMMINS Corporation of the United States, mainly from the United States CUMMINS company introduced the world's advanced level M, N, K three series of high-speed, high-power diesel engine, power coverage of 184~1429kW. Its advanced economy, power, reliability, durability, and environmental safety are generally welcomed by domestic diesel engine users. CUMMINS in terms of design or production has been identified as well-known brands, is the world's engine industry in the field of science and technology model. Whenever you use, no matter how much power, you will find CUMMINS engine super power, stable and reliable performance, low fuel consumption, low operating costs. Global Uniform Standard Service Network. Efficient and reliable professional service desk network all over the world. Provide 2+24 hours after-sales service and spare parts supply.

Model	Speed	12h Power	1h Power	Cylinder	Fuel Consumption	Diesel Consumption	Fuel Tank Capacity	Engine Oil	Cylinder Bore Stroke	Intake Method	Exhaust L	Compression Ratio	Speed Control
	r/min	kW	kW	No.	g/kW.h	L/h	L/6h	L/6h	mm x mm		L	Ratio	
NT855-G	1500	205	225	6L	206	50.25	375	1.0	140×152	Inter-cooling boost	14	15:1	Mechanical speed control
NT855-GA	1500	231	254	6L	206	56.63	400	1.1	140×152		14	15:1	
MTA11-G2A	1500	234	257	6L	207	57.64	400	1.1	125×147		10.8	15:1	
NTA855-G1	1500	240	265	6L	207	59.12	500	1.2	140×152		14	14.5:1	
NTA855-G1A	1500	261	291	6L	206	63.98	500	1.3	140×152		14	14.5:1	
MTAA11-G3	1500	282	310	6L	210	70.47	500	1.4	125×147		10.8	14.5:1	
NTA855-G1B	1500	284	321	6L	210	70.97	500	1.4	140×152		14	14:1	
NTA855-G2	1500	283	321	6L	210	70.72	500	1.4	140×152		14	14:1	
NTA855-G2A	1500	313	343	6L	210	78.22	600	1.5	140×152		14	14:1	
NTA855-G4	1500	317	351	6L	210	79.22	600	1.6	140×152		14	14:1	
KTA19-G2	1500	336	369	6L	210	83.97	600	1.7	159×159		18.9	13.9:1	
NTAA855-G7	1500	343	377	6L	210	85.72	600	1.7	140×152		14	14:1	
NTAA855-G7A	1500	370	407	6L	210	92.46	800	1.8	159×159		14	14:1	
KTA19-G3	1500	403	448	6L	210	100.71	800	2.0	159×159		18.9	13.9:1	
KTA19-G4	1500	448	504	6L	210	111.96	800	2.2	159×159		18.9	13.9:1	
KTAA19-G5	1500	470	555	6L	210	117.45	1000	2.3	159×159		18.9	13.9:1	
KTAA19-G6	1500	520	570	6L	210	129.95	1000	2.6	159×159		18.9	13.9:1	
KTAA19-G8	1500	523	575	6L	210	130.70	1000	2.6	159×159		18.9	13.9:1	
KTAA19-G6A	1500	555	610	6L	210	138.69	1000	2.7	159×159		18.9	13:1	
KTAA19-G7	1500	555	610	6L	210	138.69	1000	2.7	159×159		18.9	13:1	
KT38-G	1500	560	615	12V	206	137.28	1000	2.7	159×159	37.8	15.5:1		
KTA38-G2	1500	664	731	12V	206	162.77	1200	3.2	159×159	37.8	14.5:1		
KTA38-G2B	1500	711	789	12V	206	174.29	1500	3.5	159×159	37.8	14.5:1		
KTA38-G2A	1500	813	895	12V	206	199.30	1500	3.9	159×159	37.8	14.5:1		
KTA38-G5	1500	880	970	12V	201	210.49	1500	4.2	159×159	37.8	13.9:1		
KTA38-G9	1500	990	1089	12V	201	236.80	1800	4.7	159×159	37.8	13.9:1		
KTAA38-G9A	1500	1000	1190	12V	201	239.19	1800	4.7	159×159	37.8	13.9:1		
KTA50-G3	1500	1097	1227	16V	215.9	281.84	2000	5.6	159×159	50.3	13.9:1		
KTA50-G8	1500	1300	1429	16V	215.9	334.00	2500	6.6	159×159	50.3	13.9:1		

**Changzhou YANMAR Air-cooled Series**

Model	Speed	12h Power	1h Power	Cylinder	Fuel Consumption	Diesel Consumption	Fuel Tank Capacity	Engine Oil	Cylinder Bore Stroke	Intake Method	Exhaust L	Compression Ratio	Speed Control
	r/min	kW	kW	No.	g/kW.h	L/h	L/6h	L/6h	mm x mm		L	Ratio	
178FE	3000	3.2	3.7	1	245	0.93	7	0.01	78×64	Naturally aspirated	0.305	13.5	Mechanical speed control
186FE	3000	5.1	5.7	1	245	1.49	11	0.01	86×72		0.406	13.5	
190FE	3000	9.5	10.5	1	245	2.77	20	0.01	90×75		0.456	13.5	

**Diesel Engine Technology Parameters**

**ISUZU Series**

ISUZU's predecessor is Ishikawajima-Harima, known for the production of commercial vehicles and diesel combustion engines. To the Ishinomiya next to the ISUZU River named after the "ISUZU" the trademark, with the Roman alphabet "ISUZU" through the modern design to become the current logo. ISUZU diesel engine production ranks the forefront of the world. ISUZU Shipbuilding Engineering Company was established in 1910, the company formally established ISUZU automatic car company from 1949, in 1971, cooperate with GM, USA to supply the US truck chassis and related parts, in 1975 began to set up the United States ISUZU company.

Model	Speed	12h Power	1h Power	Cylinder	Fuel Consumption	Diesel Consumption	Fuel Tank Capacity	Engine Oil	Cylinder Bore Stroke	Intake Method	Exhaust L	Compression Ratio	Speed Control
	r/min	kW	kW	No.	g/kW.h	L/h	L/6h	L/6h	mm x mm		L	Ratio	
4JB1-G1	3000	41	45	4	252	8.8	55	≤1.65	93×102	Naturally aspirated	2.771	17.4:1	Mechanical speed control
4JB1T-G1	3000	59	65	4	242	12.1	75	≤1.65	93×102	Pressure boost	2.771	17.4:1	
4JB1T-G2	3000	65	72	4	239	13.2	80	≤1.65	93×102		2.771	17.4:1	
4BD-Z1	3000	60	66	4	257	13.1	80	≤1.63	102×118	Naturally aspirated	3.856	17.5:1	
4BD-Z1	3000	74	82	4	245	15.4	90	≤1.63	102×118	Pressure boost	3.856	17.5:1	
4BD-Z	3000	80	88	4	242	16.5	110	≤1.63	102×118		3.856	17.5:1	
6BD-G	3000	90	100	6	248	19	125	≤1.63	102×118	Naturally aspirated	5.785	17.5:1	
6BD-Z	3000	113	125	6	240	23.1	145	≤1.63	102×118	Pressure boost	5.785	17.5:1	
6BD-ZL	3000	130	145	6	236	26.1	165	≤1.63	102×118	Inter-cooling boost	5.785	17.5:1	

**FAWDE Series**

FAWDE Jiefang Automobile Co., Ltd. Wuxi Diesel Engine Works (hereinafter referred to as "XICHA") is located in Wuxi City, Jiangsu Province, Chinese First Automobile Group Corporation under the wholly-owned enterprises. The factory was founded in 1943, is the only diesel engine industry to master VCU, GPS, EGR, engine brake and many other key core technology. It is Chinese first successful development of four-valve diesel engine, the first successful development of electronic control common rail diesel engine, a successful two-stage supercharged diesel engine and successfully promote the business.

Model	Speed	12h Power	1h Power	Cylinder	Fuel Consumption	Diesel Consumption	Fuel Tank Capacity	Engine Oil	Cylinder Bore Stroke	Intake Method	Exhaust L	Compression Ratio	Speed Control
	r/min	kW	kW	No.	g/kW.h	L/h	L/6h	L/6h	mm x mm		L	Ratio	
4DW91-45GBG2	3000	33	27	4	235	9.3	75	0.03	90×100	Naturally aspirated	2.54	17:1	Mechanical speed control
4DW92-68GG2	3000	50	40	4	235	14.0	110	0.04	90×100	Pressure boost	2.54	17:1	
4DX21-81GG2	3000	60	48	4	235	16.8	125	0.05	102×118	Naturally aspirated	3.86	17:1	
4DX22-110GG2	3000	80	62	4	235	22.4	165	0.07	102×118	Pressure boost	3.86	17:1	
4DX23-120GG2	3000	86	72	4	235	24.1	175	0.07	102×118	Inter-cooling boost	3.86	17:1	
6110/125-15GG2	3000	110	90	6	225	29.5	240	0.09	110×125	Naturally aspirated	7.13	17:1	
6110/125-17GG2	3000	125	102	6	225	33.5	240	0.10	110×125		7.13	17:1	

**CHANGCHAI Series**

CHANGCHAI Co.,Ltd. is the national agricultural machinery industry and Changzhou city, the first listed company, "CHANGCHAI" brand trademark known as China's well-known trademarks. Diesel engine mainly 80,85,90,4 L, 102 four series of products, power range of 1.7 to 72 kilowatts. CHANGCHAI will be the construction of "a century CHANGCHAI, 10 billion Group" for the enterprise development prospects and strategic development goals, efforts to CHANGCHAI into domestic first-class, internationally renowned modern engine manufacturing enterprises.

Model	Speed	12h Power	1h Power	Cylinder	Fuel Consumption	Diesel Consumption	Fuel Tank Capacity	Engine Oil	Cylinder Bore Stroke	Intake Method	Exhaust L	Compression Ratio	Speed Control
	r/min	kW	kW	No.	g/kW.h	L/h	L/6h	L/6h	mm x mm		L	Ratio	
CZ380CA	3000	20	22	3	250	5.9	55	0.04	80×90	Naturally aspirated	1.36	18:1	Mechanical speed control
CZ480QA	3000	31	34	4	250	9.2	75	0.06	80×90		1.81	18:1	
ZQ485	3000	36	41	4	250	10.9	80	0.08	85×95		2.16	18:1	
4D20DTCI	3000	40	44	4	250	11.8	90	0.08	84×90	Inter-cooling boost	2.00	18:1	
4D20TCI	3000	45	50	4	250	13.4	110	0.08	84×90		2.00	18:1	
CD28TCI	3000	65	72	4	250	19.3	145	0.08	95×100		2.84	18:1	
CD28TC	3000	72	79	4	250	21.4	165	0.15	95×100		2.84	18:1	



**Diesel Engine Technology Parameters**

**DCEC CUMMINS**

Dongfeng Cummins Engine Co., Ltd. ("DCEC") is located in Xiangyang City, Hubei Province High-tech Development Zone, the company's products include B, C, D, L, Z series platform engine, displacement of 3.9L, 4.5L, 5.9L, 6.7L, 8.3L, 8.9L, 9.5L, 13L, the power range of 80-680 horsepower, widely used in light, medium and heavy truck, in the high intercity bus, large and medium bus, construction machinery, Machines, generators and other fields. Products because of its advanced economy, power, reliability, durability and environmental safety by domestic and foreign users generally praise.

The company has been adhering to the "Cummins power to build a better life" business philosophy, the courage to assume social responsibility, to do a socially responsible corporate citizenship. Companies in strict accordance with the requirements of production consistency in line with national production standards of products, the green into the brand, is committed to building a clean green power.

Model	Speed	12h Power	1h Power	Cylinder	Fuel Consumption	Diesel Consumption	Fuel Tank Capacity	Engine Oil	Cylinder Bore Stroke	Intake Method	Exhaust L	Compression Ratio	Speed Control
	r/min	kW	kW		No.	g/kW.h	L/h	L/6h	L/6h				
QSB3.9-P50	3000	36	40	4	233	10	75	0.12	102 x 120	Turbo boost	3.9	17.3:1	Electronic speed control
QSB3.9-P80	3000	60	66	4	237	17	110	0.15	102 x 120				
QSB3.9-P115	3000	85	94	4	242	24	150	0.24	102 x 120				
QSB6.7-P160	3000	120	132	6	212	30	200	0.28	107 x 124				
QSB6.7-P200	3000	145	160	6	215	37	240	0.29	107 x 124				
QSB6.7-P230	3000	170	187	6	219	44	280	0.29	107 x 124				
Model	Speed	12h Power	1h Power	Cylinder	Fuel Consumption	Diesel Consumption	Fuel Tank Capacity	Engine Oil	Cylinder Bore Stroke	Intake Method	Exhaust L	Compression Ratio	Speed Control
r/min	kW	kW	No.		g/kW.h	L/h	L/6h	L/6h	mm x mm				
4B3.9-G1	1500	24	27	4	245	7.1	55	0.04	102 x 120	Turbo boost	3.9	17.3:1	Electronic speed control
4B3.9-G2	1500	24	27	4	229	6.7	55	0.04	102 x 120				
4BT3.9-G1	1500	36	40	4	229	10	75	0.05	102 x 120				
4BT3.9-G2	1500	36	40	4	214	9.3	55	0.05	102 x 120				
4BTA3.9-G2	1500	50	55	4	213	12.9	75	0.07	102 x 120				
4BTA3.9-G2	1500	58	64	4	212	14.9	90	0.08	102 x 120				
6BT5.9-G1	1500	86	92	6	208	21.7	110	0.12	102 x 120				
6BT5.9-G1	1500	92	101	6	208	23.2	145	0.13	102 x 120				
6BT5.9-G2	1500	86	92	6	214	22	145	0.12	102 x 120				
6BT5.9-G2	1500	96	106	6	208	24.2	145	0.14	102 x 120				
6BTA5.9-G2	1500	106	116	6	211	27	165	0.15	102 x 120				
6BTAA5.9-G2	1500	120	130	6	208	30	200	0.17	102 x 120				
6CTA8.3-G1	1500	163	180	6	215	42	280	0.24	114 x 135				
6CTA8.3-G2	1500	163	180	6	212	42	280	0.24	114 x 135				
6CTAA8.3-G2	1500	183	203	6	205	45	280	0.27	114 x 144				
6LTAA8.9-G2	1500	220	240	6	197	53	350	0.32	114 x 144				
QSM11-G2	1500	292	321	6	205	69	500	0.42	114 x 152				
QSZ13-G2	1500	400	440	6	191	88.8	600	0.58	140 x 144				
QSZ13-G3	1500	450	470	6	193	101	600	0.62	140 x 144				
6ZTAA13-G2	1500	390	415	6	192	89.1	600	0.55	140 x 144				
6ZTAA13-G3	1500	340	380	6	200	81	500	0.50	140 x 144				

**Diesel Engine Technology Parameters**

**SHANGCHAI Group**

Shanghai Diesel Engine Co., Ltd. (SDEC Power) is a national high-tech enterprise integrating development, design, manufacture and marketing. It covers diesel engine, fuel system, diesel generator set and investment. The product has a complete product structure of 135, G128, 12V135, C (121), D (114), P11C, 105, more than 300 variants. The power range covers 62~860kW, low fuel consumption, strong power, perfect, service outlets throughout the big small city.

Model	Speed	12h Power	1h Power	Cylinder	Fuel Consumption	Diesel Consumption	Fuel Tank Capacity	Engine Oil	Cylinder Bore Stroke	Intake Method	Exhaust L	Compression Ratio	Speed Control
	r/min	kW	kW		No.	g/kW.h	L/h	L/6h	L/6h				
SC4H95P2	1500	62	68	4	204	15	125	0.16	105 x 124	Pressure boost	4.3	17.3:1	
SC4H115P2	1500	78	86	4	218	20.2	145	0.20	105 x 124				
SC4H160P2	1500	105	116	4	200	25	200	0.24	105 x 124				
SC4H180P2	1500	120	132	4	200	28.6	240	0.28	105 x 124				
SC7H230P2	1500	154	170	6	200	36.5	280	0.20	105 x 124				
SC7H250P2	1500	168	185	6	200	39.9	300	0.22	105 x 124				
SC9D310P2	1500	208	228	6	204	50.6	375	0.41	114 x 144	Inter-cooling boost	8.82	18:1	Electronic/mechanical speed control
SC9D340P2	1500	228	250	6	200	54.1	400	0.30	114 x 144				
SC12E460P2	1500	307	338	6	196	71.6	500	0.40	128 x 153				
SC13G355P2	1500	236	260	6	209	58.6	500	0.62	135 x 150				
SC13G420P2	1500	280	308	6	196	65.2	500	0.74	135 x 150				
SC15G500P2	1500	330	363	6	208	81.2	600	0.87	135 x 150				
SC25G610P2	1500	405	445	12	208	100.4	800	1.07	135 x 150				
SC25G690P2	1500	459	505	12	193	105.2	800	1.21	135 x 150				
SC27G755P2	1500	505	555	12	210	126	1000	1.33	135 x 155				
SC27G830P2	1500	555	610	12	172	113.9	1000	1.46	135 x 155				
SC27G990P2	1500	602	662	12	159	113.9	1000	1.59	135 x 155				
SC33W990P2	1500	660	726	6	181	142.2	1200	2.61	180 x 215				
SC33W1150P2	1500	782	860	6	204	189.5	1500	3.09	180 x 215				

**QUANCHAI Series**

Anhui Quan Chai Group Co., Ltd. was established in 1949, is a collection of research and development, production, management, foreign trade, investment as one of the diversified large enterprise groups, the company's core holding company Anhui Chai Chai Power Co., Ltd. in 1998 successfully listed. Chai Duo cylinder diesel engine main business has been formed to vehicle, engineering machinery, agricultural equipment, generating units with the main power of supporting system, power coverage of 2 to 350 horsepower.

Model	Speed	12h Power	1h Power	Cylinder	Fuel Consumption	Diesel Consumption	Fuel Tank Capacity	Engine Oil	Cylinder Bore Stroke	Intake Method	Exhaust L	Compression Ratio	Speed Control
	r/min	kW	kW		No.	g/kW.h	L/h	L/6h	L/6h				
Q380	3000	20	22	3	248	5.9	55	0.03	80 x 90	Naturally aspirated	1.35	16.5	Mechanical speed control
Q385	3000	23	25.3	3	248	6.8	55	0.03	85 x 90				
Q480	3000	29	32	4	240	8.3	75	0.03	80 x 90				
Q485	3000	35	38	4	240	9.8	75	0.04	85 x 95				
Q490	3000	46	50.2	4	235	12.8	110	0.05	90 x 105				
Q490Z	3000	55	60	4	230	13.5	110	0.05	90 x 105				
Q495	3000	50	55	4	248	14.8	110	0.05	95 x 105				
Q498	3000	66	72	4	238	16.5	125	0.05	98 x 105				
4102QA	3000	63	69.3	4	228	17.1	125	0.06	102 x 118				
4105QA	3000	70	77	4	228	19	145	0.07	105 x 118				
4108QA	3000	76	83.6	4	228	20.6	150	0.08	108 x 118				

**Diesel Engine Technology Parameters**

**YUCHAI Series**

YUCHAI Machinery (Group) is China's largest production base of internal combustion engines. The main products are light, medium and heavy 22 large series of multi-cylinder diesel engine, power coverage 16~735kW. Products with high horsepower, high torque, high reliability, low fuel consumption, low emission, low noise, strong adaptability and improve the convenience of services, as the major domestic trucks, buses, construction machinery, agricultural machinery preferred supporting power.

Model	Speed	12h Power	1h Power	Cylinder	Fuel Consumption	Diesel Consumption	Fuel Tank Capacity	Engine Oil	Cylinder Bore Stroke	Intake Method	Exhaust L	Compression Ratio	Speed Control
	r/min	kW	kW		No.	g/kW.h	L/h	L/6h					
YC2108D	1500	18	19.8	2L	223	4.8	34	0.09	108×120	Naturally aspirated	2.28	17.5:1	Mechanical speed control
YC2115D	1500	27	29.7	2L	235	7.5	54	0.14	115×120	Naturally aspirated	2.50	17.5:1	
YC2115ZD	1500	33	36.3	2L	235	9.2	66	0.17	115×120	Turbo boost	2.52	17.5:1	
YC4D55-D10	1500	40	44	4L	225	10.7	77	0.19	108×115	Naturally aspirated	4.21	17:1	
YC4D70Z-D20	1500	50	55	4L	220	13.1	94	0.24	108×115	Turbo boost	4.33	17.5:1	
YC4D75-D20	1500	55	60.5	4L	225	14.7	106	0.27	108×115		4.58	17.5:1	
YC6B95-D10	1500	70	73.5	6L	225	18.7	135	0.34	108×125	Naturally aspirated	6.88	17.5:1	
YC6B115Z-D20	1500	84	92	6L	225	22.5	162	0.40	108×125	Turbo boost	6.95	17.5:1	
YC6B125Z-D20	1500	92	101	6L	225	24.6	177	0.44	108×125		7.02	17.5:1	
YC6B135L-D20	1500	98	107	6L	215	25.1	181	0.45	108×125	Inter-cooling boost	7.12	17.5:1	
YC6B155L-D20	1500	112	123	6L	215	28.7	206	0.52	108×125		7.20	17.5:1	
YC6A190L-D20	1500	139	153	6L	210	34.7	250	0.63	108×125		7.25	17:1	
YC6G205L-D20	1500	150	165	6L	210	37.5	270	0.67	112×132		7.80	16.8:1	
YC6M320L-D20	1500	235	258	6L	212	59.3	427	1.07	120×145		9.84	17.5:1	
YC6T550L-D20	1500	401	444	6L	196	93.5	673	1.68	145×155		15.15	15.5:1	
YC6T600-D20	1500	441	485	6L	194	101.8	733	1.83	145×165	16.35	15:1		

**CSIC Series**

Model	Speed	12h Power	1h Power	Cylinder	Fuel Consumption	Diesel Consumption	Fuel Tank Capacity	Engine Oil	Cylinder Bore Stroke	Intake Method	Exhaust L	Compression Ratio	Speed Control
	r/min	kW	kW		No.	g/kW.h	L/h	L/6h					
TBD234V6-318	1500	234	257	6	195	54	400	2.34	128×140	Naturally aspirated	10.8	15:1	Electronic speed control
TBD234V6-360	1500	265	292	6	198	62	500	2.65	128×140		10.8	15:1	
TBD234V8-388	1500	285	325	8	198	67	500	2.85	128×140		14.4	15:1	
TBD234V8-442	1500	325	360	8	198	76	600	3.25	128×140		14.4	15:1	
TBD234V8-470	1500	346	390	8	196	80	600	3.46	128×140		14.4	15:1	
TBD314V8-500	1500	367	410	8	196	85	800	3.67	132×140		17.5	15:1	
TBD314V8-550	1500	405	450	8	196	94	800	4.05	132×140		17.5	15:1	
TBD234V12-610	1500	448	509	12	196	104	800	4.48	128×140		21.6	15:1	
TBD234V12-695	1500	510	560	12	199	120	1000	5.10	128×140		21.6	15:1	
TBD604BL6-767	1500	564	622	6	191	128	1000	4.03	170×195		26.6	14:1	
TBD604BL6-808	1500	594	680	6	191	135	1000	4.24	170×195		26.6	14:1	
TBD604BL6-890	1500	655	726	6	191	148	1000	4.68	170×195		26.6	14:1	
TBD620L6-905	1500	665	735	6	195	154	1100	4.75	170×195		26.6	13.5:1	
TBD620L6-988	1500	726	800	6	205	177	1200	5.18	170×195		26.6	13.5:1	
TBD620L6-1100	1500	810	898	6	205	197	1500	8.10	170×195		26.6	13.5:1	
TBD620V8-1197	1500	880	968	8	193	202	1500	8.80	170×195		35.5	13.5:1	
TBD620V8-1367	1500	1005	1120	8	199	238	1800	10.05	170×195		35.5	13.5:1	
TBD620V12-1796	1500	1320	1452	12	190	298	2200	13.19	170×195		53.2	13.5:1	
TBD620V12-2040	1500	1500	1480	12	194	346	2500	14.99	170×195		53.2	13.5:1	
TBD620V16-2470	1500	1815	2035	16	195	421	3000	18.14	170×195		70.9	13.5:1	
TBD620V16-2770	1500	2035	2255	16	196	475	3500	20.34	170×195	70.9	13.5:1		

**Diesel Engine Technology Parameters**

**Explosion-proof Diesel Engine**

Explosion-proof diesel engine, refers to the potential for explosive gases, flammable gases, steam engine dust environment of the diesel engine. This diesel engine has an explosion-proof performance, working in an explosive atmosphere will not ignite the ambient gas, steam and dust, and the emission of gas indicators meet the requirements of special environmental requirements. Explosion-proof diesel engine for coal mine is a type I internal combustion engine for underground mine roadway where methane or flammable dust exists. It is used as an explosion-proof power plant for various fixed or mobile equipment in coal mine.

Our company to the national standard MT990-2006 "mine explosion-proof diesel engine general technical conditions" as the basis, the production of 4BTA3.9, 6BTA5.9 supercharged diesel engine on the basis of some of the relevant parts through the careful design and configuration, and carried out Repeated stringent test, to achieve the provisions of the indicators, developed into KMLY4102ZQFB and KMLY6102ZQFB coal mine explosion-proof diesel engine (collectively known as explosion-proof diesel).

The diesel engine part of the explosion-proof diesel engine must meet the requirements of GB / T 1147.1-2007.

Explosion-proof diesel engine electrical equipment should be consistent with GB3836.1-2010, GB3836.2-2010 and GB3836.4-2010 the relevant provisions.

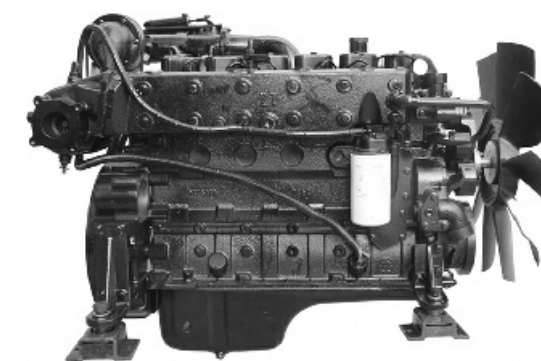
Explosion-proof diesel engine When one of the following conditions occur, the sound and light alarm device should be issued sound and light alarm signal, the sound and light signals must enable the driver to clearly identify the alarm after 1 minute delay the product should be automatically shut down:

- Exhaust temperature to (67±3)°C;
- Surface temperature to (147±3)°C;
- Cooling water temperature to (93±2)°C;
- The water level of the exhaust gas treatment tank is less than 30mm;
- Oil pressure to (0.08±0.01)MPa;
- Gas concentration of 1.0% (coal (rock) and gas outburst mine and gas discharge area in the gas concentration of 0.5%).



**KMLY4102ZQFB**

- Security number: MCG140095
- Type: inline, water-cooled, four-stroke, direct injection
- Rated speed: 2200r/min
- Rated power: 80kW
- Piston total displacement: 3.9L
- Start mode: compressed air start
- Maximum torque / speed: 375N.m/1800r/min
- Emission index: CO≤0.1%, NOx≤0.08%
- Surface temperature: ≤150°C
- Exhaust temperature: ≤70°C



**KMLY6102ZQFB**

- Security number: MCG140094
- Type: inline, water-cooled, four-stroke, direct injection
- Rated speed: 2200r/min
- Rated power: 105kW
- Piston total displacement: 5.9L
- Start mode: compressed air start
- Maximum torque / speed: 600N.m/1500r/min
- Emission index: CO≤0.1%, NOx≤0.08%
- Surface temperature: ≤150°C
- Exhaust temperature: ≤70°C

**Diesel Engine Fire Pump Selection Performance Range**

Head		Diesel Engine End Suction Fire Pump Performance Range (1500rpm)									
Psi	Bar										
175	12		250-120 6110IZLD 155kW	300-120 SH6126ZLD 218KW	350-120 6135BZLD 256kW	400-120 6135BZLD-1 310kW					
160	11	200-580 6110IZLD 155kW 6105IZLD 132kW 6105AZLD 110kW	250-110 6110IZLD 155kW	300-110 9H272 200kW	350-110 6135BZLD 256kW	400-110 6135BZLD 256kW					
145	10		250-100 6110IZLD 155kW	300-100 6110IZLD 155kW	350-100 SC9D340P2 228kW	400-100 6135BZLD 256kW					
130	9		250-90 6105IZD 132kW	300-90 6110IZLD 155kW	350-90 SC9D310P2 208kW	400-90 6135BZLD 256kW					
115	8	200-500 6105AZLD 110kW 6105ZD 84kW 4135AD 74kW	250-80 6105AZLD 110kW	300-80 6105IZD 132kW	350-80 6110IZLD 155kW	400-80 SC9D310P2 208kW					
100	7		250-70 6105ZD 84kW	300-70 6105AZLD 110kW	350-70 6105IZD 132kW	400-70 6110IZLD 155kW					
85	6		250-60 6105ZD 84kW	300-60 6105ZD 84kW	350-60 6105AZLD 110kW	400-60 6105IZD 132kW					
75	5	200-400 4105ZD 56kW 4105ZD 56kW 4100ZD 41kW	250-50 4135AD 74kW	300-50 6105ZD 84kW	350-50 6105ZD 84kW	400-50 6105AZLD 110kW					
60	4		250-40 4105ZD 56kW	300-40 4135AD 74kW	350-40 4135AD 74kW	400-40 6105AZLD 110kW					
50	3.5		250-35 4105ZD 56kW	300-35 4105ZD 56kW	350-35 4135AD 74kW	400-35 6105ZD 84kW					
45	3	200-315 4100D 41kW	250-30 4105ZD 56kW	300-30 4105ZD 56kW	350-30 4105ZD 56kW	400-30 6105ZD 84kW					
Flow	L/s	55	60	70	80	90	100	110	120		
	GPM	850	950	1100	1250	1450	1500	1750	1900		
175	12	500-120 6135BZLD-1 310kW	600-120 12V135AZLD 375kW	700-120 12V135AZLD 375kW	800-120 12V135AZLD-2 450kW	900-120 12V135BZLD-2 610kW					
160	11	500-110 6135BZLD-1 310kW	600-110 6135BZLD-1 310kW	700-110 12V135AZLD 375kW	800-110 12V135AZLD-2 450kW	900-110 12V135BZLD-2 610kW					
145	10	500-100 6135BZLD 256kW	600-100 6135BZLD-1 310kW	700-100 6135BZLD-1 310kW	800-100 12V135AZLD 375kW	900-100 12V135BZLD 510kW					
130	9	500-90 6135BZLD 256kW	600-90 6135BZLD 256kW	700-90 6135BZLD-1 310kW	800-90 12V135AZLD 375kW	900-90 12V135BZLD 510kW					
115	8	500-80 SH6126ZLD 218KW	600-80 6135BZLD 256kW	700-80 6135BZLD-1 310kW	800-80 6135BZLD-1 310kW	900-80 12V135AZLD-2 450kW					
100	7	500-70 9H272 200kW	600-70 SH6126ZLD 218KW	700-70 6135BZLD 256kW	800-70 6135BZLD-1 310kW	900-70 12V135AZLD-2 450kW					
85	6	500-60 6113AZLD 157kW	600-60 9H272 200kW	700-60 6135BZLD 256kW	800-60 6135BZLD 256kW	900-60 12V135AZLD 375kW					
75	5	500-50 6105IZD 132kW	600-50 6113AZLD 157kW	700-50 6113ZLDP 175kW	800-50 9H272 200kW	900-50 12V135AZLD 375kW					
60	4	500-40 6105AZLD 110kW	600-40 6105IZD 132kW	700-40 6113AZLD 157kW	800-40 6113AZLD 157kW	900-40 12V135AZLD 375kW					
50	3.5	500-35 6105AZLD 110kW	600-35 6105IZD 132kW	700-35 6113AZLD 157kW	800-35 6113AZLD 157kW	900-35 12V135AZLD 375kW					
45	3	500-30 6105ZD 84kW	600-30 6105AZLD 110kW	700-30 6105IZD 132kW	800-30 6105IZD 132kW	900-30 6135BZLD 256kW					
Flow	L/s	130	140	150	160	180	200	220	250		
	GPM	2000	2200	2400	2600	2800	3150	3500	4000		

**Diesel Engine Fire Pump Selection Performance Range**

Head		Diesel Engine End Suction Fire Pump Performance Range (3000rpm)											
Psi	Bar												
220	15		80-350 4102QA 63kW Q495 50kW Q490 46kW	100-350 6110-15GG2 110kW 4108QA 76kW 4108QA 76kW			150-350 6110-17GG2 125kW 6110-17GG2 125kW 6110-15GG2 110kW						
205	14												
190	13												
175	12	65-315 Q485 35kW Q480 29kW Q385 23kW Q380 20kW	80-315 Q490 46kW Q485 35kW Q485 35kW Q480 29kW	100-315 4108QA 76kW 4102QA 63kW Q495 50kW Q490 46kW	125-315 6110-15GG2 110kW 4108QA 75kW 4108QA 75kW 4102QA 63kW	150-315 6110-15GG2 110kW 6110-15GG2 110kW 4108QA 76kW 4108QA 76kW							
160	11												
145	10												
130	9												
115	8	65-250 Q380 20kW Q380 20kW 190FE 10.5kW	80-250 Q480 29kW Q385 23kW Q380 20kW	100-250 Q490 46kW Q485 35kW Q480 29kW	125-250 4102QA 63kW Q495 50kW Q490 46kW	150-250 4108QA 76kW 4102QA 63kW Q490 46kW							
100	7												
85	6												
75	5	65-200 190FE 10.5kW 190FE 10.5kW	80-200 Q380 20kW Q380 20kW	100-200 Q480 29kW Q385 23kW	125-200 Q490 46kW Q485 35kW	150-200 Q490 46kW Q485 35kW							
60	4												
45	3	65-160 186FA 5.7kW	80-160 190FE 10.5kW	100-160 Q380 20kW	125-160 Q480 29kW	150-160 Q480 29kW							
Flow	L/s	5	10	15	20	25	30	35	40	45	50	55	60
	GPM	80	160	250	320	400	500	550	650	700	800	850	950
350	24		D25-80×3 Q490 46kW	D46-50×5 Q495 50kW	D46-50×5 4102QA 63kW	D85-45×5 6110-15G 110kW	D85-45×6 6110-17G 125kW						
335	23												
320	22												
305	21												
290	20	D25-50×4 Q485 35kW	D46-50×4 Q490 46kW										
275	19												
260	18												
245	17	D25-30×6 Q480 29kW	D46-30×6 Q485 35kW										
230	16												
220	15												
205	14	D25-30×5 Q385 23kW	D46-30×5 Q485 35kW										
190	13												
175	12												
160	11	D25-30×4 Q380 20kW	D46-30×4 Q480 29kW										
145	10												
Flow	L/s	5	10	15	20	25	30	35	40	45	50	55	60
	GPM	80	160	250	320	400	500	550	650	700	800	850	950

**Diesel Engine Fire Pump Selection Performance Range**

Head		Diesel Engine Multistage Fire Pump Performance Range (1500rpm)											
Psi	Bar												
350	24	D155-30×8 9H272 200kW				200D288-43×6 12V135AZLD 375kW							
335	23												
320	22												
305	21	D155-30×7 6113ZLDP 175kW				200D288-43×5 6135BZLD-1 310kW							
290	20												
275	19												
260	18	D155-30×6 6105IZLD 132kW				200D288-43×4 6135BZLD 256kW							
245	17												
230	16												
220	15	D155-30×5 6105AZLD 110kW				200D288-43×3 SC9D310P2 208kW							
205	14												
190	13												
175	12	D155-30×4 6105AZD 100kW				200D288-43×2 6105IZLD 132kW							
160	11												
145	10												
Flow	L/s	35	40	45	50	55	60	65	70	75	80		
	GPM	550	650	700	800	850	950	1000	1100	1200	1250		

350	24	200D360-40×6 15H571 510kW		250D450-60×4 KPV 550kW				250D450-60×4 KPV630 630kW					
335	23												
320	22												
305	21	200D360-40×5 KP350 350kW		250D450-60×3 KP 425kW				250D450-60×3 KPV550 550kW					
290	20												
275	19												
260	18	200D360-40×4 SH615IZLD 268kW		250D450-60×2 SH615IZLD 268kW				300D600-60×2 SH618 IZLD 308kW					
245	17												
230	16												
220	15	200D360-40×3 9H272 200kW		250D450-60×2 SH615IZLD 268kW				300D600-60×2 SH618 IZLD 308kW					
205	14												
190	13												
175	12	200D360-40×3 9H272 200kW		250D450-60×2 SH615IZLD 268kW				300D600-60×2 SH618 IZLD 308kW					
160	11												
145	10												
Flow	L/s	90	100	110	120	130	140	150	160	170	180		
	GPM	1450	1500	1750	1900	2000	2200	2400	2600	2700	2850		

**Diesel Engine Fire Pump Selection Performance Range**

Head		Diesel Engine Split-case Fire Pump Performance Range (1500rpm)							
Psi	Bar								
175	12	OTS150-605A R6113ZLDP 175kW R6113ZLDP 175kW R6110IZD 155kW		OTS150-605A R6113ZLDP 175kW 9H272 200kW SH6126ZLD 218kW		OTS150-605A 9H272 200kW SH6126ZLD 218kW			
160	11								
145	10								
130	9	OTS150-605B R6105IZLD 132kW R6105IZLD 132kW R6105AZLD 110kW		OTS150-605B R6105IZLD 132kW R6110IZD 155kW R6113ZLDP 175kW		OTS150-605B R6113ZLDP 175kW R6113ZLDP 175kW		OST150-605A R6110IZD 155kW R6113ZLDP 175kW 9H272 200kW	
115	8								
100	7								
85	6	OTS150-460A R6105ZD 84kW		OTS150-460A R6105ZD 84kW R6105AZLD 110kW		OTS150-460A R6105AZLD 110kW		OTS150-605A R6110IZD 155kW	
75	5								
60	4								
Flow	L/s	100	105	110	115	120	125		
	GPM	1500	1650	1750	1800	1900	2000		

190	13	OTS150-605A R6110IZD 155kW R6113ZLDP 175kW 9H272 200kW SH6126ZLD 218kW SH615IZLD 268kW		OTS200-607B SH6126ZLD 218kW SH615IZLD 268kW		OTS200-607A 9H272 200kW SH6126ZLD 218kW SH615IZLD 268kW		OTS200-670B SH615IZLD 268kW 13H380 280kW 13H435 320kW 13H435 320kW	
175	12								
160	11								
145	10	OTS150-460A R6105IZLD 132kW		OTS150-605B R6105IZLD 132kW R6110IZD 155kW R6113ZLDP 175kW 9H272 200kW		OTS150-605A R6110IZD 155kW R6113ZLDP 175kW 9H272 200kW		OTS200-670A SH615IZLD 268kW SH615IZLD 268kW 13H435 320kW	
130	9								
115	8								
100	7	OTS150-460A R6105IZLD 132kW		OTS150-605B R6105IZLD 132kW R6110IZD 155kW R6113ZLDP 175kW 9H272 200kW		OTS150-605A R6110IZD 155kW R6113ZLDP 175kW 9H272 200kW		OTS200-520B R6113ZLDP 175kW 9H272 200kW	
85	6								
75	5								
60	4	OTS200-420B R6105AZLD 110kW		OTS200-420A R6105AZLD 110kW		OTS200-420A R6105AZLD 110kW		OTS150-605B R6113ZLDP 175kW	
45	3								
Flow	L/s							130	135
	GPM	2000	2150	2200	2300	2400	2500		

**Diesel Engine Fire Pump Selection Performance Range**

Head		Diesel Engine Split-case Fire Pump Performance Range (1500rpm)					
Psi	Bar						
220	15						
205	14						
190	13						
175	12						
160	11						
145	10						
130	9						
115	8						
100	7						
85	6						
75	5						
60	4						
Flow	L/s	155	160	165	170	175	180
	GPM	2500	2600	2650	2700	2800	2850

230	16						
220	15						
205	14						
190	13						
175	12						
160	11						
145	10						
130	9						
115	8						
100	7						
85	6						
75	5						
60	4						
45	3						
Flow	L/s	190	195	200	210	215	220
	GPM	3050	3100	3150	3300	3400	3500

**Diesel Engine Fire Pump Selection Performance Range**

Head		Diesel Engine Split-case Fire Pump Performance Range (1500rpm)					
Psi	Bar						
175	12						
160	11						
145	10						
130	9						
115	8						
100	7						
85	6						
75	5						
60	4						
Flow	L/s	230	235	240	245	250	255
	GPM	3600	3750	3800	3900	4000	4050

205	14						
190	13						
175	12						
160	11						
145	10						
130	9						
115	8						
100	7						
85	6						
75	5						
60	4						
Flow	L/s	260	270	280	300	320	340
	GPM	4100	4250	4400	4800	5100	5400

**Diesel Engine Fire Pump Selection Performance Range**

Head		Diesel Engine Split-case Fire Pump Performance Range (1500rpm)					
Psi	Bar						
230	16						
220	15						
205	14						
190	13						
175	12	OTS300-700B 26H612 450kW					
160	11	26H680 500kW 28H816 600kW					
145	10	28H843 620kW 28H960 700kW					
130	9	28H1150 750kW					
115	8						
100	7						
85	6	OTS300-560A SH615IZLD 268kW					
75	5	15H560 400kW×2					
60	4						
45	3						
Flow	L/s	350	380	400	430	440	450
	GPM	5550	6000	6450	6750	6950	7100
220	15						
205	14						
190	13						
175	12						
160	11						
145	10						
130	9						
115	8						
100	7						
85	6						
75	5						
60	4						
45	3						
Flow	L/s	460	480	500	540	550	580
	GPM	7350	7650	8100	8600	8750	9200

**Diesel Engine Fire Pump Selection Performance Range**

Head		Diesel Engine Split-case Fire Pump Performance Range (1500rpm)					
Psi	Bar						
145	10						
130	9						
115	8						
100	7						
85	6						
75	5						
60	4						
45	3						
Flow	L/s	620	700	750	800	840	900
	GPM	9850	11050	11800	12950	13350	14350
130	9						
115	8						
100	7						
85	6						
75	5						
60	4						
45	3						
Flow	L/s	980	1000	1080	1150	1250	
	GPM	15550	15950	17200	18350	19800	

**Diesel Engine Fire Pump Selection Performance Range**

Diesel Engine Vertical Turbine Fire Pump Performance Range											
Head MPa	Head Psi	Diesel Engine Model Power	Head MPa	Head Psi	Diesel Engine Model Power	Head MPa	Head Psi	Diesel Engine Model Power	Head MPa	Head Psi	Diesel Engine Model Power
1.52	220	×40 Q380 20kW	2.34	340	×26 Q380 20kW	1.89	275	×18 Q385 23kW			
1.25	180	×33 F190FE 10.5kW	1.80	260	×20 Q380 20kW	1.575	230	×15 Q380 20kW	2.00	290	×21 Q485 35kW
1.06	155	×18 F190FE 10.5kW	1.44	210	×16 Q380 20kW	1.26	180	×12 Q380 20kW	1.62	235	×17 Q485 35kW
0.68	100	×18 F186FA 5.7kW	1.08	155	×12 F190FE 10.5kW	1.05	150	×10 Q380 20kW	1.24	180	×13 Q385 23kW
0.49	70	×13 F178FA 3.7kW	0.72	110	×8 F190FE 10.5kW	0.84	120	×8 Q380 20kW	0.86	125	×9 Q380 20kW
0.38	55	×10 F178FA 3.7kW	0.45	65	×5 F190FE 10.5kW	0.63	90	×6 F190FE 10.5kW	0.57	80	×6 Q380 20kW
		100JC10-3.8 2950rpm			150JC10-9 2950rpm			150JC18-10.5 2950rpm			150JC30-9.5 2950rpm
Flow L/S		2.8			2.8			5			8.3
Flow GPM US		40~50			40~50			80~100			120~150
Head MPa	Head Psi	Diesel Engine Model Power	Head MPa	Head Psi	Diesel Engine Model Power	Head MPa	Head Psi	Diesel Engine Model Power	Head MPa	Head Psi	Diesel Engine Model Power
			1.26	180	×7 Q485 35kW				1.12	160	×7 Q495 50kW
0.94	135	×11 Q480 29kW	1.08	155	×6 Q485 35kW	1.04	150	×26 Q490Z 28kW	0.96	140	×6 Q490 46kW
0.77	110	×9 Q385 23kW	0.90	130	×5 Q480 29kW	0.88	130	×22 Q490 21kW	0.80	115	×5 Q485 35kW
0.60	85	×7 Q380 20kW	0.72	105	×4 Q385 23kW	0.72	105	×18 Q490 21kW	0.64	90	×4 Q480 29kW
0.43	60	×5 Q380 20kW	0.54	80	×3 Q380 20kW	0.56	80	×14 Q480 14kW	0.48	70	×3 Q385 23kW
0.26	40	×3 F190FE 10.5kW	0.36	55	×2 Q380 20kW	0.4	60	×10 Q480 14kW	0.32	45	×2 Q380 20kW
		150JC50-8.5 2950rpm			200JC50-18 2950rpm			200JC35-4 1450rpm			200JC80-16 2950rpm
Flow L/S		13.9			13.9			10			22
Flow GPM US		200~250			200~250			120~150			300~350

**Diesel Engine Fire Pump Selection Performance Range**

Diesel Engine Vertical Turbine Fire Pump Performance Range											
Head MPa	Head Psi	Diesel Engine Model Power	Head MPa	Head Psi	Diesel Engine Model Power	Head MPa	Head Psi	Diesel Engine Model Power	Head MPa	Head Psi	Diesel Engine Model Power
			1.44	210	×12 6105AZLD 110kW	1.44	210	×12 6105AZLD 110kW	1.44	210	×12 6105ZLD 132kW
1.20	175	×15 4105ZD 56kW	1.32	190	×11 6105ZD 84kW	1.32	190	×11 6105AZLD 110kW	1.32	190	×11 6105ZLD 132kW
1.04	150	×13 4105ZD 56kW	1.20	175	×10 6105ZD 84kW	1.20	175	×10 6105AZLD 110kW	1.20	175	×10 6105ZLD 110kW
0.80	115	×10 4100ZD 41kW	1.08	155	×9 6105ZD 84kW	1.08	155	×9 6105ZD 84kW	1.08	155	×9 6105AZLD 110kW
0.72	105	×9 4100ZD 41kW	0.96	140	×8 4108ZD 63kW	0.96	140	×8 6105ZD 84kW	0.96	140	×8 6105AZLD 110kW
0.64	90	×8 4100ZD 41kW	0.84	120	×7 4108ZD 63kW	0.84	120	×7 6105ZD 84kW	0.84	120	×7 6105ZD 84kW
0.56	80	×7 Q490Z 28kW	0.72	105	×6 4105ZD 56kW	0.72	105	×6 4108ZD 63kW	0.72	105	×6 6105ZD 84kW
0.48	70	×6 Q490Z 28kW	0.60	85	×5 4105ZD 56kW	0.60	85	×5 4105ZD 56kW	0.60	85	×5 4108ZD 63kW
0.40	60	×5 Q490 21kW	0.48	70	×4 4100ZD 41kW	0.48	70	×4 4100ZD 41kW	0.48	70	×4 4100ZD 41kW
0.32	45	×4 Q490 21kW	0.36	55	×3 Q480 29kW	0.36	55	×3 4100ZD 41kW	0.36	55	×3 4100ZD 41kW
0.24	35	×3 Q480 14kW	0.24	35	×2 Q490 21kW	0.24	35	×2 Q490Z 28kW	0.24	35	×2 Q490 21kW
		250JC80-8 1450rpm			300JC130-12 1450rpm			300JC160-12 1450rpm			300JC210-12 1450rpm
Flow L/S		22			35			45			60
Flow GPM US		300~350			500~600			700~750			90~1000
Head MPa	Head Psi	Diesel Engine Model Power	Head MPa	Head Psi	Diesel Engine Model Power	Head MPa	Head Psi	Diesel Engine Model Power	Head MPa	Head Psi	Diesel Engine Model Power
			0.68		×5 SC9D355P2 236kW	1.2	175	×5 SC27G830P2 662kW			
0.70	100	×6 Q490Z 28kW	0.68	100	×4 SC9D310P2 208kW	0.96	140	×4 SC15G500P2 373kW	0.92	135	×4 SC25G610P2 405kW
0.56	80	×5 Q490 21kW	0.51	100	×3 6110IZLD 155kW	0.72	105	×3 SC13G355P2 236kW	0.69	100	×3 SC12E460P2 307kW
0.42	60	×4 Q490 21kW	0.34	75	×2 6105AZLD 110kW	0.48	70	×2 SC9D310P2 208kW	0.46	65	×2 SC9D310P2 208kW
0.28	40	×3 Q480 14kW	0.17	50	×1 4105ZD 56kW	0.24	35	×1 6105ZD 84kW	0.23	35	×1 6105AZLD 110kW
		350JC340-14 1450rpm		25	400JC550-17 1450rpm			500JC700-24 1450rpm			500JC900-23 1450rpm
Flow L/S		100			150			200			250
Flow GPM US		1250~1500			2250~2500			3000~3500			3750~4000



# XBC-IS

## Single-stage End-suction Diesel Engine Fire Pump

### XBC-IS Diesel Engine End Suction Fire Pump Technical Paramter

No.	Model	Pump								Diesel Engine					Connect	
		Pump Model	Rated Speed	Rated Flow		Head		Power	Inlet / Outlet	Model	Brand	Rated Speed	Power			Battery
			rpm	GPM	L/s	MPa	Psi	kW	mm			rpm	hp	kW		
1	XBC3/5-IS	IS65-160	2950	80	5	0.3	45	4	65/65	186FA	Changzhou	3000	7.5	5.7	1/12V	Universal Joint
2	XBC4/5-IS	IS65-200A	2950	80	5	0.4	60	5.5	65/65	190FE	Changzhou	3000	14	10.5	1/12V	
3	XBC5/5-IS	IS65-200	2950	80	5	0.5	75	7.5	65/65	190FE	Changzhou	3000	14	10.5	1/12V	
4	XBC6/5-IS	IS65-250B	2950	80	5	0.6	85	7.5	65/65	190FE	Changzhou	3000	14	10.5	1/12V	
5	XBC7/5-IS	IS65-250A	2950	80	5	0.7	100	11	65/65	Q380	Quanchai	3000	27	20	1/12V	
6	XBC8/5-IS	IS65-250	2950	80	5	0.8	115	15	65/65	Q380	Quanchai	3000	27	20	1/12V	
7	XBC9/5-IS	IS65-315C	2950	80	5	0.9	130	15	65/65	Q380	Quanchai	3000	27	20	1/12V	
8	XBC10/5-IS	IS65-315B	2950	80	5	1.0	145	18.5	65/65	Q385	Quanchai	3000	31	23	1/12V	
9	XBC11/5-IS	IS65-315A	2950	80	5	1.1	160	22	65/65	Q480	Quanchai	3000	39	29	1/12V	
10	XBC12/5-IS	IS65-315	2950	80	5	1.2	175	30	65/65	Q485	Quanchai	3000	48	35	1/12V	
11	XBC3/10-IS	IS80-160	2950	160	10	0.3	45	5.5	80/80	190FE	Changzhou	3000	14	10.5	1/12V	
12	XBC4/10-IS	IS80-200A	2950	160	10	0.4	60	11	80/80	Q380	Quanchai	3000	27	20	1/12V	
13	XBC5/10-IS	IS80-200	2950	160	10	0.5	75	15	80/80	Q380	Quanchai	3000	27	20	1/12V	
14	XBC6/10-IS	IS80-250B	2950	160	10	0.6	85	15	80/80	Q380	Quanchai	3000	27	20	1/12V	
15	XBC7/10-IS	IS80-250A	2950	160	10	0.7	100	18.5	80/80	Q385	Quanchai	3000	31	23	1/12V	
16	XBC8/10-IS	IS80-250	2950	160	10	0.8	115	22	80/80	Q480	Quanchai	3000	39	29	1/12V	
17	XBC9/10-IS	IS80-315C	2950	160	10	0.9	130	22	80/80	Q480	Quanchai	3000	39	29	1/12V	
18	XBC10/10-IS	IS80-315B	2950	160	10	1.0	145	30	80/80	Q485	Quanchai	3000	48	35	1/12V	
19	XBC11/10-IS	IS80-315A	2950	160	10	1.1	160	30	80/80	Q485	Quanchai	3000	48	35	1/12V	
20	XBC12/10-IS	IS80-315	2950	160	10	1.2	175	37	80/80	Q490	Quanchai	3000	62	46	1/12V	
21	XBC13/10-IS	IS80-350B	2950	160	10	1.3	190	37	80/80	Q490	Quanchai	3000	62	46	1/12V	
22	XBC14/10-IS	IS80-350A	2950	160	10	1.4	205	45	80/80	Q495	Quanchai	3000	68	50	1/12V	
23	XBC15/10-IS	IS80-350	2950	160	10	1.5	220	55	80/80	4102QA	Changchai	3000	86	63	1/12V	
24	XBC3/15-IS	IS80-160	2950	240	15	0.3	45	7.5	80/80	190FE	Changzhou	3000	14	10.5	1/12V	
25	XBC4/15-IS	IS80-200A	2950	240	15	0.4	60	11	80/80	Q380	Quanchai	3000	27	20	1/12V	
26	XBC5/15-IS	IS80-200	2950	240	15	0.5	75	15	80/80	Q380	Quanchai	3000	27	20	1/12V	
27	XBC6/15-IS	IS80-250B	2950	240	15	0.6	85	15	80/80	Q380	Quanchai	3000	27	20	1/12V	
28	XBC7/15-IS	IS80-250A	2950	240	15	0.7	100	18.5	80/80	Q385	Quanchai	3000	29	23	1/12V	
29	XBC8/15-IS	IS80-250	2950	240	15	0.8	115	22	80/80	Q480	Quanchai	3000	39	29	1/12V	
30	XBC9/15-IS	IS80-315C	2950	240	15	0.9	130	22	80/80	Q480	Quanchai	3000	39	29	1/12V	
31	XBC10/15-IS	IS80-315B	2950	240	15	1.0	145	30	80/80	Q485	Quanchai	3000	47	35	1/12V	
32	XBC11/15-IS	IS80-315A	2950	240	15	1.1	160	30	80/80	Q485	Quanchai	3000	47	35	1/12V	
33	XBC12/15-IS	IS80-315	2950	240	15	1.2	175	37	80/80	Q490	Quanchai	3000	62	46	1/12V	
34	XBC13/15-IS	IS80-350B	2950	240	15	1.3	190	37	80/80	Q490	Quanchai	3000	62	46	1/12V	
35	XBC14/15-IS	IS80-350A	2950	240	15	1.4	205	45	80/80	Q495	Quanchai	3000	68	50	1/12V	
36	XBC15/15-IS	IS80-350	2950	240	15	1.5	220	55	80/80	4102QA	Changchai	3000	86	63	1/12V	
37	XBC3/20-IS	IS100-160	2950	315	20	0.3	45	15	100/100	Q380	Quanchai	3000	27	20	1/12V	
38	XBC4/20-IS	IS100-200A	2950	315	20	0.4	60	18.5	100/100	Q385	Quanchai	3000	29	23	1/12V	









**XBC-IS Diesel Engine End Suction Fire Pump Technical Paramter**

No.	Model	Pump								Diesel Engine					Connect	
		Pump Model	Rated Speed	Rated Flow		Head		Power	Inlet / Outlet	Model	Brand	Rated Speed	Power			Battery
			rpm	GPM	L/s	MPa	Psi					kW	mm	rpm		
267	XBC5/180-IS	IS700-50	1450	2850	180	0.5	75	160	300/250	SC9D310P2	Shanghai	1450	283	208	2/24V	Universal Joint
268	XBC6/180-IS	IS700-60	1450	2850	180	0.6	85	185	300/250	6135BZLD	Shanghai	1450	348	256	2/24V	
269	XBC7/180-IS	IS700-70	1450	2850	180	0.7	100	220	300/250	6135BZLD	Shanghai	1450	348	256	2/24V	
270	XBC8/180-IS	IS700-80	1450	2850	180	0.8	115	250	300/250	6135BZLD-1	Shanghai	1450	422	310	2/24V	
271	XBC9/180-IS	IS700-90	1450	2850	180	0.9	130	250	300/250	6135BZLD-1	Shanghai	1450	422	310	2/24V	
272	XBC10/180-IS	IS700-100	1450	2850	180	1.0	145	280	300/250	SC15G500P2	Shanghai	1450	448	330	2/24V	
273	XBC11/180-IS	IS700-110	1450	2850	180	1.1	160	315	300/250	12V135AZLD	Shanghai	1450	510	375	2/24V	
274	XBC12/180-IS	IS700-120	1450	2850	180	1.2	175	355	300/250	SC25G610P2	Shanghai	1450	550	405	2/24V	
275	XBC3/200-IS	IS700-30	1450	3150	200	0.3	45	110	300/250	6105IZD	Longxin	1450	180	132	2/24V	
276	XBC4/200-IS	IS700-40	1450	3150	200	0.4	60	132	300/250	6113AZLD	Longxin	1450	214	157	2/24V	
277	XBC5/200-IS	IS700-50	1450	3150	200	0.5	75	160	300/250	SC9D310P2	Shanghai	1450	283	208	2/24V	
278	XBC6/200-IS	IS700-60	1450	3150	200	0.6	85	185	300/250	6135BZLD	Shanghai	1450	348	256	2/24V	
279	XBC7/200-IS	IS700-70	1450	3150	200	0.7	100	220	300/250	6135BZLD	Shanghai	1450	348	256	2/24V	
280	XBC8/200-IS	IS700-80	1450	3150	200	0.8	115	250	300/250	6135BZLD-1	Shanghai	1450	422	310	2/24V	
281	XBC9/200-IS	IS700-90	1450	3150	200	0.9	130	250	300/250	6135BZLD-1	Shanghai	1450	422	310	2/24V	
282	XBC10/200-IS	IS700-100	1450	3150	200	1.0	145	280	300/250	SC15G500P2	Shanghai	1450	448	330	2/24V	
283	XBC11/200-IS	IS700-110	1450	3150	200	1.1	160	315	300/250	12V135AZLD	Shanghai	1450	510	375	2/24V	
284	XBC12/200-IS	IS700-120	1450	3150	200	1.2	175	355	300/250	SC25G610P2	Shanghai	1450	550	405	2/24V	
285	XBC3/220-IS	IS800-30	1450	3500	220	0.3	45	110	300/250	6105IZD	Longxin	1450	180	132	2/24V	
286	XBC4/220-IS	IS800-40	1450	3500	220	0.4	60	132	300/250	6113AZLD	Longxin	1450	214	157	2/24V	
287	XBC5/220-IS	IS800-50	1450	3500	220	0.5	75	160	300/250	SC9D310P2	Shanghai	1450	283	208	2/24V	
288	XBC6/220-IS	IS800-60	1450	3500	220	0.6	85	220	300/250	6135BZLD	Shanghai	1450	348	256	2/24V	
289	XBC7/220-IS	IS800-70	1450	3500	220	0.7	100	250	300/250	6135BZLD-1	Shanghai	1450	422	310	2/24V	
290	XBC8/220-IS	IS800-80	1450	3500	220	0.8	115	280	300/250	SC15G500P2	Shanghai	1450	448	330	2/24V	
291	XBC9/220-IS	IS800-90	1450	3500	220	0.9	130	315	300/250	12V135AZLD	Shanghai	1450	510	375	2/24V	
292	XBC10/220-IS	IS800-100	1450	3500	220	1.0	145	355	300/250	SC25G610P2	Shanghai	1450	550	405	2/24V	
293	XBC11/220-IS	IS800-110	1450	3500	220	1.1	160	400	300/250	12V135AZLD-2	Shanghai	1450	612	450	2/24V	
294	XBC12/220-IS	IS800-120	1450	3500	220	1.2	175	400	300/250	12V135AZLD-2	Shanghai	1450	612	450	2/24V	
295	XBC3/250-IS	IS900-30	1450	3950	250	0.3	45	200	350/300	6135BZLD	Shanghai	1450	348	256	2/24V	
296	XBC4/250-IS	IS900-40	1450	3950	250	0.4	60	315	350/300	12V135AZLD	Shanghai	1450	510	375	2/24V	
297	XBC5/250-IS	IS900-50	1450	3950	250	0.5	75	355	350/300	SC25G610P2	Shanghai	1450	550	405	2/24V	
298	XBC6/250-IS	IS900-60	1450	3950	250	0.6	85	355	350/300	SC25G610P2	Shanghai	1450	550	405	2/24V	
299	XBC7/250-IS	IS900-70	1450	3950	250	0.7	100	400	350/300	12V135AZLD-2	Shanghai	1450	612	450	2/24V	
300	XBC8/250-IS	IS900-80	1450	3950	250	0.8	115	400	350/300	12V135AZLD-2	Shanghai	1450	612	450	2/24V	
301	XBC9/250-IS	IS900-90	1450	3950	250	0.9	130	450	350/300	12V135BZLD	Shanghai	1450	694	510	2/24V	
302	XBC10/250-IS	IS900-100	1450	3950	250	1.0	145	450	350/300	12V135BZLD	Shanghai	1450	694	510	2/24V	
303	XBC11/250-IS	IS900-110	1450	3950	250	1.1	160	500	350/300	12V135BZLD-2	Shanghai	1450	830	610	2/24V	
304	XBC12/250-IS	IS900-120	1450	3950	250	1.2	175	500	350/300	12V135BZLD-2	Shanghai	1450	830	610	2/24V	



**XBC-D**  
Multistage Single-suction Diesel Engine Fire Pump



XBC-D Diesel Engine Multistage Fire Pump Technical Paramter

Table with 16 columns: No., Model, Pump Model, Rated Speed, Rated Flow, Head, Power, Inlet / Outlet, Diesel Engine Model, Brand, Rated Speed, Power, Battery, Connect. Rows 1-42.

Universal Joint

XBC-D Diesel Engine Multistage Fire Pump Technical Paramter

Table with 16 columns: No., Model, Pump Model, Rated Speed, Rated Flow, Head, Power, Inlet / Outlet, Diesel Engine Model, Brand, Rated Speed, Power, Battery, Connect. Rows 43-84.

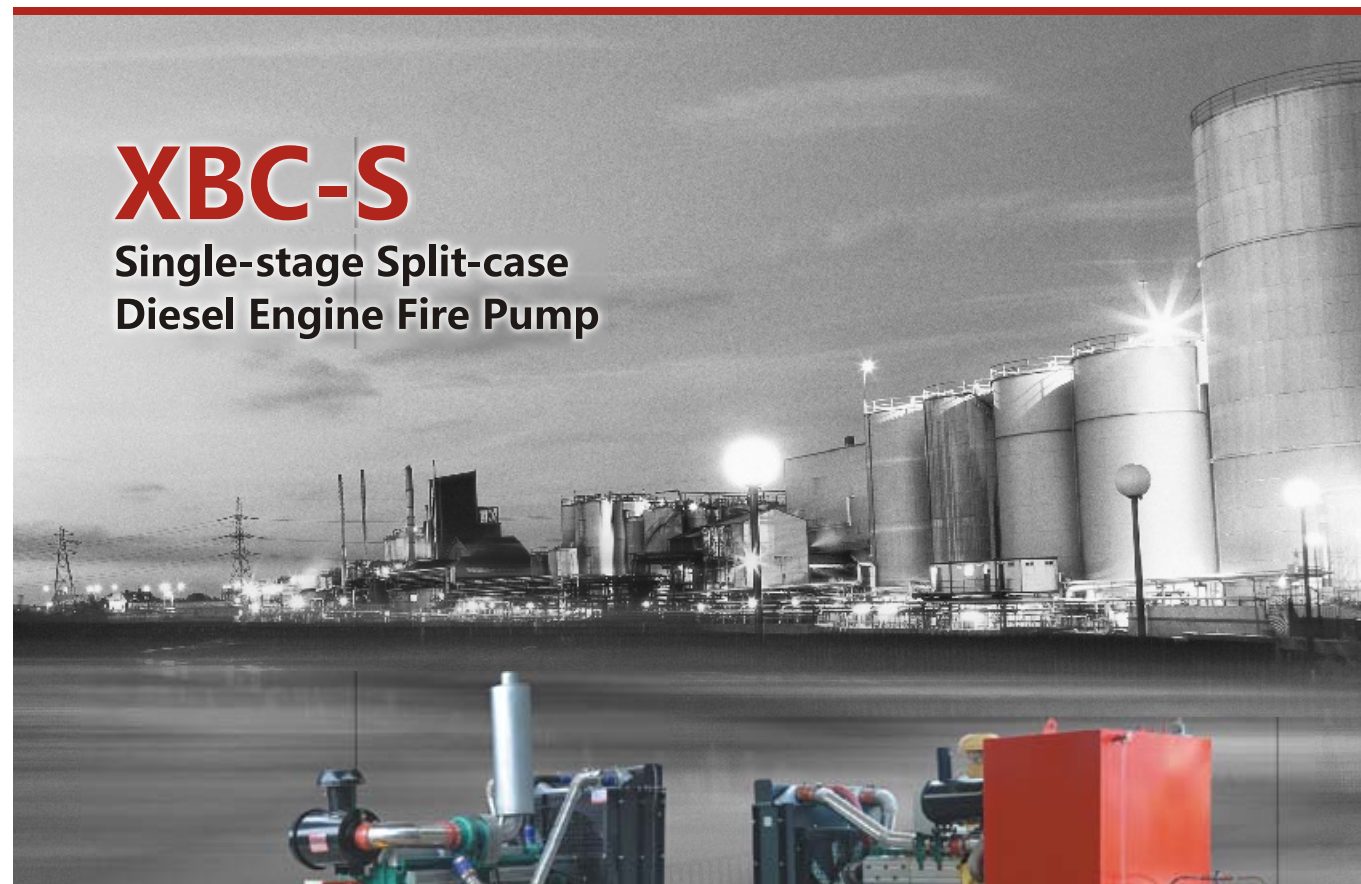
Universal Joint





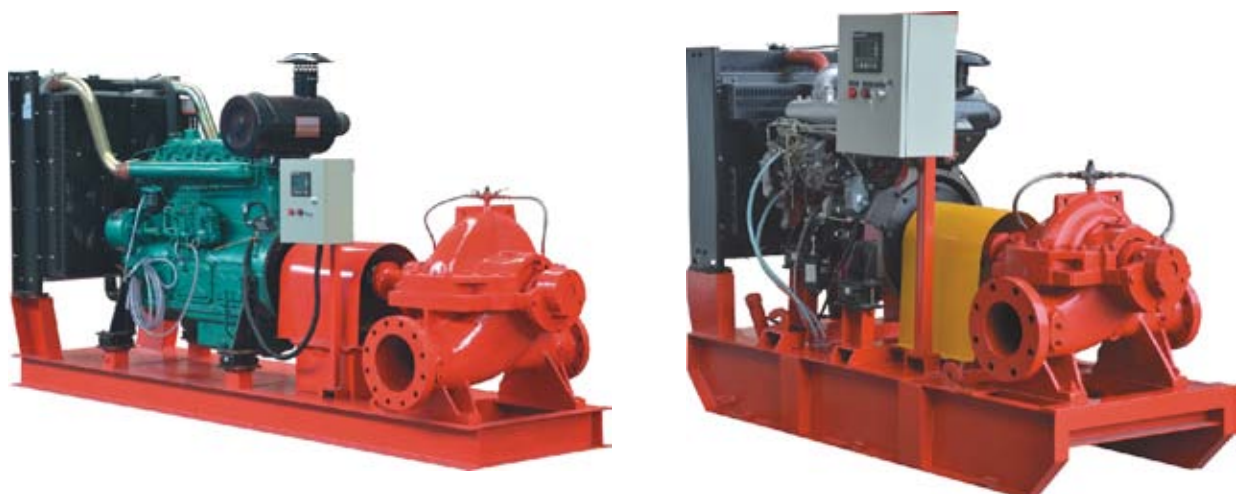
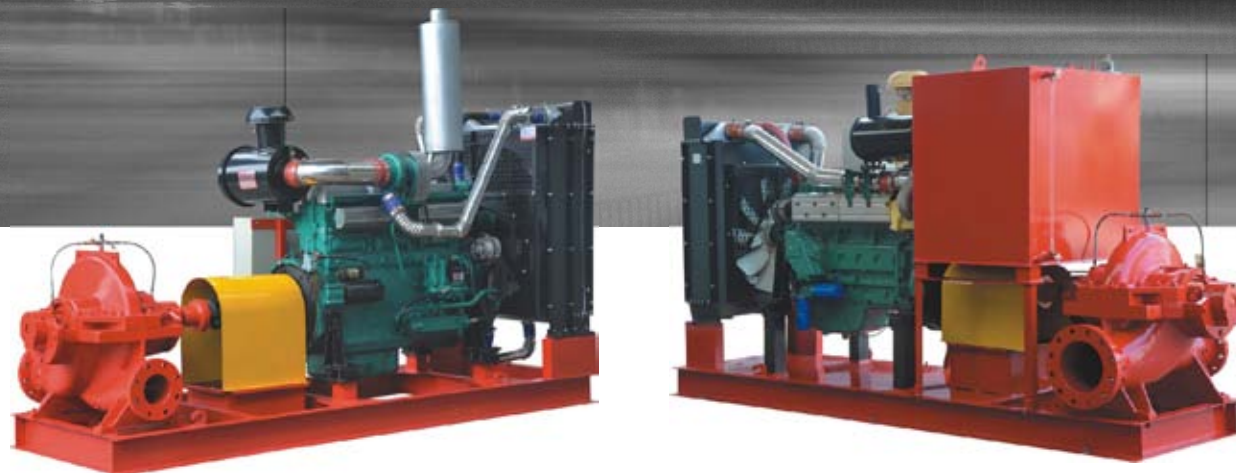






# XBC-S

Single-stage Split-case  
Diesel Engine Fire Pump



**XBC-S Diesel Engine Split Case Fire Pump Technical Paramter**

No.	Model	Pump								Diesel Engine					Connect	
		Pump Model	Rated Speed	Rated Flow		Head		Power	Inlet / Outlet	Model	Brand	Rated Speed	Power			Battery
			rpm	GPM	L/s	Bar	Psi	kW	mm			rpm	hp	kW		
1	XBC4.8/45-S	OTS125-500B	1450	700	45	4.8	70	28.2	200/125	K4100ZD	Weichai	1500	56	41	1/12V	Universal Joint
2	XBC5.0/50-S	OTS125-500A	1450	800	50	5.0	75	34.2	200/125	K4100ZD	Weichai	1500	56	41	1/12V	
3	XBC5.7/50-S	OTS125-500B	1450	800	50	5.7	85	37.5	200/125	R4105ZD	Weichai	1500	76	56	1/12V	
4	XBC4.5/55-S	OTS125-500B	1450	900	55	4.5	65	32.5	200/125	K4100ZD	Weichai	1500	56	41	1/12V	
5	XBC6.0/55-S	OTS125-500A	1450	900	55	6.0	85	44	200/125	R4105ZD	Weichai	1500	76	56	1/12V	
6	XBC3.4/60-S	OTS125-290A	1450	950	60	3.4	50	24.2	200/125	495D	Weichai	1500	36	26.5	1/12V	
7	XBC6.5/60-S	OTS125-500B	1450	950	60	6.5	95	50.1	200/125	4135AD	Shangchai	1500	100	73.5	1/12V	
8	XBC4.0/65-S	OTS125-500B	1450	1050	65	4.0	60	34.5	200/125	K4100ZD	Weichai	1500	56	41	1/12V	
9	XBC4.2/65-S	OTS125-290A	1450	1050	65	4.2	60	31.8	200/125	R4105ZD	Weichai	1500	76	56	1/12V	
10	XBC4.7/65-S	OTS125-500A	1450	1050	65	4.7	70	38.8	200/125	R4105ZD	Weichai	1500	76	56	1/12V	
11	XBC5.3/65-S	OTS125-500B	1450	1050	65	5.3	75	42.5	200/125	R4105ZD	Weichai	1500	76	56	1/12V	
12	XBC5.5/65-S	OTS125-500B	1450	1050	65	5.5	80	64.3	200/125	R6105ZD	Weichai	1500	114	84	1/12V	
13	XBC7.0/65-S	OTS125-500A	1450	1050	65	7.0	100	56.7	200/125	4135AD	Shangchai	1500	100	73.5	1/12V	
14	XBC7.5/65-S	OTS125-500B	1450	1050	65	7.5	110	61.7	200/125	4135AD	Shangchai	1500	100	73.5	1/12V	
15	XBC3.2/70-S	OTS125-290A	1450	1150	70	3.2	45	26.8	200/125	K4100ZD	Weichai	1500	56	41	1/12V	
16	XBC3.6/70-S	OTS150-460B	1450	1150	70	3.6	50	33.5	200/150	K4100ZD	Weichai	1500	56	41	1/12V	
17	XBC4.5/70-S	OTS125-500A	1450	1150	70	4.5	65	40.7	200/125	R4105ZD	Weichai	1500	76	56	1/12V	
18	XBC5.0/70-S	OTS125-290A	1450	1150	70	5.0	75	41.2	200/125	R4105ZD	Weichai	1500	76	56	1/12V	
19	XBC5.6/70-S	OTS125-500A	1450	1150	70	5.6	80	50.6	200/125	4135AD	Shangchai	1500	100	73.5	1/12V	
20	XBC4.8/75-S	OTS125-500B	1450	1200	75	4.8	70	47.3	200/125	R4105ZD	Weichai	1500	76	56	1/12V	
21	XBC6.1/75-S	OTS125-500B	1450	1200	75	6.1	90	57.4	200/125	4135AD	Shangchai	1500	100	73.5	1/12V	
22	XBC8.2/75-S	OTS125-500A	1450	1200	75	8.2	120	73.7	200/125	K4100ZD	Weichai	1500	56	41	1/12V	
23	XBC3.9/80-S	OTS125-290A	1450	1300	80	3.9	55	36	200/125	R4105ZD	Weichai	1500	76	56	1/12V	
24	XBC4.4/80-S	OTS150-460B	1450	1300	80	4.4	65	46.5	200/150	R4105ZD	Weichai	1500	76	56	1/12V	
25	XBC6.7/80-S	OTS125-500A	1450	1300	80	6.7	95	67.3	200/125	4135AD	Shangchai	1500	100	73.5	1/12V	
26	XBC7.0/80-S	OTS125-500B	1450	1300	80	7.0	100	70.3	200/125	R6105ZD	Weichai	1500	114	84	1/12V	
27	XBC2.8/85-S	OTS125-290A	1450	1350	85	2.8	40	29.8	200/125	K4100ZD	Weichai	1500	56	41	1/12V	
28	XBC4.7/85-S	OTS125-290A	1450	1350	85	4.7	70	47.2	200/125	R4105ZD	Weichai	1500	76	56	1/12V	
29	XBC5.2/85-S	OTS125-500A	1450	1350	85	5.2	75	56.6	200/125	4135AD	Shangchai	1500	100	73.5	1/12V	
30	XBC3.3/90-S	OTS150-460B	1450	1450	90	3.3	50	37.3	200/150	K4100ZD	Weichai	1500	56	41	1/12V	
31	XBC3.8/90-S	OTS150-460A	1450	1450	90	3.8	55	42.6	200/150	R4105ZD	Weichai	1500	76	56	1/12V	
32	XBC5.4/90-S	OTS150-460B	1450	1450	90	5.4	80	60.3	200/150	4135AD	Shangchai	1500	100	73.5	1/12V	
33	XBC6.3/90-S	OTS150-605B	1450	1450	90	6.3	90	73.4	200/150	R6105ZD	Weichai	1500	114	84	2/24V	
34	XBC7.6/90-S	OTS125-500A	1450	1450	90	7.6	110	82.7	200/125	R6105ZD	Weichai	1500	114	84	2/24V	
35	XBC3.6/95-S	OTS125-290A	1450	1500	95	3.6	50	40.4	200/125	R4105ZD	Weichai	1500	76	56	1/12V	
36	XBC4.8/95-S	OTS150-460A	1450	1500	95	4.8	70	57	200/150	4135AD	Shangchai	1500	100	73.5	1/12V	
37	XBC6.2/95-S	OTS125-500A	1450	1500	95	6.2	90	74.8	200/125	R6105AZLD	Weichai	1500	150	110	2/24V	
38	XBC4.0/100-S	OTS150-460B	1450	1600	100	4.0	60	51	200/150	4135AD	Shangchai	1500	100	73.5	1/12V	
39	XBC4.4/100-S	OTS125-290A	1450	1600	100	4.4	65	52.3	200/125	4135AD	Shangchai	1500	100	73.5	1/12V	
40	XBC6.3/100-S	OTS125-500B	1450	1600	100	6.3	90	78.5	200/125	R6105ZD	Weichai	1500	114	84	2/24V	







### Product Applicant

XBC-JC diesel engine Vertical turbine pump is for pumping water from deep wells, rivers, lakes, sea and water less than 100°C from the hot spring water. XBC-JCW type pump is more suitable for cities, factories, sewage and large river with mud, river, sea water, widely applicable to industrial and mining, towns, oil power plants and farmland irrigation.

### Product Structure

XBC-JC diesel engine Vertical turbine pump consists of four parts: the working part of the pump and the part of the water pipe, the part of the transmission located above the wellhead and the part of the diesel engine.

There are two types of connections: flange connection and screw connection. Transmission methods are: vertical hollow shaft motor or vertical motor drive, belt drive and gearbox drive and so on. The latter two drives are suitable for deep well pumps driven by horizontal motors or internal combustion engines.



### Bearing and Lubrication

XBC-JC diesel engine vertical turbine fire pump shaft use rubber bearings, use the water lubrication and cooling. for the sewage deep well pump use pipe structure, use external water lubrication and cooling.

Axial force support is supported by a vertical hollow shaft motor or transmission, use grease lubrication.

### Transmission

From the direction of the drive, the pump shaft should be rotated counterclockwise. In order to prevent reverse rotation, the motor or transmission device is provided with a reverse device.

### Material

- Impeller: gray cast iron, alloy cast iron, cast steel, stainless steel, copper, duplex steel
- Casing: gray cast iron, alloy cast iron, cast steel, stainless steel, copper, duplex steel
- Cone sets: carbon steel, stainless steel, copper, duplex steel
- Pump shaft: high quality carbon steel or stainless steel
- Drive shaft: cold drawn carbon steel, stainless steel
- Bearing: rubber
- Column pipe: high-frequency steel pipe, seamless steel pipe, stainless steel pipe

### XBC-JC Diesel Engine Vertical Turbine Fire Pump Technical Parameter

No.	Model	Pump Model	Pump								Gear Box Model	Diesel Engine				
			Rated Speed rpm	Rated Flow		Rated Pressure		Head m	Power kW	Outlet mm		Model	Speed r/min	Power 12h		
				L/s	GPM	MPa	Psi							hp	kW	
1	XBC3.8/2.8-JC	100JC10-3.8×10	2900	2.8	45	0.38	55	38	3	65	H20	F178FA	3000	5	3.7	
2	XBC4.9/2.8-JC	100JC10-3.8×13	2900			0.49	70	49.4	3			F178FA	3000	5	3.7	
3	XBC6.9/2.8-JC	100JC10-3.8×18	2950			0.69	100	68.5	4			F186FA	3000	8	5.7	
4	XBC10.7/2.8-JC	100JC10-3.8×28	2950			1.07	155	106.5	5.5			190FE	3000	14	10.5	
5	XBC12.6/2.8-JC	100JC10-3.8×33	2950			1.26	180	125.5	7.5			190FE	3000	14	10.5	
6	XBC15.2/2.8-JC	100JC10-3.8×40	2950			1.52	220	152	11			Q380	3000	27	20	
7	XBC4.5/2.8-JC	150JC10-9×5	2950	2.8	45	0.45	65	45	5.5	80	H20	190FE	3000	14	10.5	
8	XBC7.2/2.8-JC	150JC10-9×8	2950			0.72	105	72	5.5			190FE	3000	14	10.5	
9	XBC10.8/2.8-JC	150JC10-9×12	2950			1.08	155	108	7.5			190FE	3000	14	10.5	
10	XBC14.4/2.8-JC	150JC10-9×16	2950			1.44	210	144	11			Q380	3000	27	20	
11	XBC18.0/2.8-JC	150JC10-9×20	2950			1.80	260	180	11			Q380	3000	27	20	
12	XBC23.4/2.8-JC	150JC10-9×26	2950			2.34	340	234	15			Q380	3000	27	20	
13	XBC6.3/5-JC	150JC18-10.5×6	2950	5.0	80	0.63	90	63	7.5	80	H20	190FE	3000	14	10.5	
14	XBC8.4/5-JC	150JC18-10.5×8	2950			0.84	120	84	11			Q380	3000	27	20	
15	XBC10.5/5-JC	150JC18-10.5×10	2950			1.05	150	105	11			Q380	3000	27	20	
16	XBC12.6/5-JC	150JC18-10.5×12	2950			1.26	185	126	15			Q380	3000	27	20	
17	XBC15.8/5-JC	150JC18-10.5×15	2950			1.58	230	157.5	15			Q380	3000	27	20	
18	XBC18.9/5-JC	150JC18-10.5×18	2950			1.89	275	189	18.5			Q385	3000	31	23	
19	XBC23.1/5-JC	150JC18-10.5×22	2950	2.31	335	231	30	H40	Q485	3000	46	35				
20	XBC5.7/8.3-JC	150JC30-9.5×6	2950	8.3	132	0.57	85	57	11	100	H20	Q380	3000	27	20	
21	XBC8.6/8.3-JC	150JC30-9.5×9	2950			0.86	125	85.5	15			Q380	3000	27	20	
22	XBC12.4/8.3-JC	150JC30-9.5×13	2950			1.24	180	123.5	18.5			Q385	3000	31	23	
23	XBC16.2/8.3-JC	150JC30-9.5×17	2950			1.62	235	161.5	30			H40	Q485	3000	46	35
24	XBC20.0/8.3-JC	150JC30-9.5×21	2950			2.00	290	199.5	30				Q485	3000	46	35
25	XBC2.6/13.9-JC	150JC50-8.5×3	2950			13.9	220	0.26	35			25.5	7.5	100	H20	190FE
26	XBC4.3/13.9-JC	150JC50-8.5×5	2950	0.43	60			42.5	11	Q380	3000	27	20			
27	XBC6.0/13.9-JC	150JC50-8.5×7	2950	0.60	85			59.5	15	Q380	3000	27	20			
28	XBC7.7/13.9-JC	150JC50-8.5×9	2950	0.77	110			76.5	18.5	Q385	3000	31	23			
29	XBC9.4/13.9-JC	150JC50-8.5×11	2950	0.94	135			93.5	22	Q480	3000	39	29			
30	XBC3.6/14-JC	200JC50-18×2	2950	0.36	50			36	11	H20	Q380	3000	27			20
31	XBC5.4/14-JC	200JC50-18×3	2950	0.54	80	54	15	Q380	3000		27	20				
32	XBC7.2/14-JC	200JC50-18×4	2950	0.72	105	72	18.5	Q385	3000		31	23				
33	XBC9.0/14-JC	200JC50-18×5	2950	0.90	130	90	22	Q480	3000		39	29				
34	XBC10.8/14-JC	200JC50-18×6	2950	1.08	155	108	30	H40	Q485		3000	46	35			
35	XBC12.6/14-JC	200JC50-18×7	2950	1.26	185	126	30		Q485		3000	46	35			
36	XBC14.4/14-JC	200JC50-18×8	2950	1.44	210	144	37		Q490	3000	62	46				
37	XBC16.2/14-JC	200JC50-18×9	2950	1.62	235	162	37		Q490	3000	62	46				
38	XBC18.0/14-JC	200JC50-18×10	2950	1.80	260	180	45	Q495	3000	68	50					



**9HP  
Diesel Engine  
Fire Pump**



Rated Capacity	540L/min
Head	65m
Outlet Pressure	0.45MPa
Inlet and Outlet	65/65mm
Nozzle Diameter	19mm
Max Suction Depth	7m
Priming Time	≤20s
Start Mode	Manual, and also make electric
Engine Model	9HP,186KAMA diesel, single cylinder
Speed	3600r/min

**11HP  
Gasoline  
Fire Pump**



Rated Capacity	500L/min
Head	55m
Outlet Pressure	0.46MPa
Inlet and Outlet	65/65mm
Nozzle Diameter	19mm
Max Suction Depth	7m
Priming Time	≤20s
Start Mode	Manual, electric
Engine Model	11HP,LF182F gasoline, single cylinder
Speed	3600r/min

**13HP  
Diesel Engine  
Fire Pump**



Rated Capacity	600L/min
Head	65m
Outlet Pressure	0.55MPa
Inlet and Outlet	65/65mm
Nozzle Diameter	19mm
Max Suction Depth	7m
Priming Time	≤20s
Start Mode	Manual, electric
Engine Model	13HP,186FB diesel, single cylinder
Speed	3600r/min

**13HP  
Gasoline  
Fire Pump**



Rated Capacity	600L/min
Head	65m
Outlet Pressure	0.6MPa
Inlet and Outlet	65/65mm
Nozzle Diameter	19mm
Max Suction Depth	7m
Priming Time	≤20s
Start Mode	Manual, electric
Engine Model	13HP,LF188F gasoline, single cylinder
Speed	3600r/min

**22HP  
Diesel Engine  
Fire Pump**



Rated Capacity	1000L/min
Head	72m
Outlet Pressure	0.63MPa
Inlet and Outlet	80/65mm
Nozzle Diameter	19mm
Max Suction Depth	7m
Priming Time	≤20s
Start Mode	Electric
Engine Model	22HP,R2V840 diesel, double cylinder
Speed	3600r/min

**15HP  
Gasoline  
Fire Pump**



Rated Capacity	720L/min
Head	65m
Outlet Pressure	0.55MPa
Inlet and Outlet	65/65mm
Nozzle Diameter	19mm
Max Suction Depth	7m
Priming Time	≤20s
Start Mode	Manual, electric
Engine Model	15HP,LF190F gasoline, single cylinder
Speed	3600r/min

**9HP  
Gasoline  
Fire Pump**



Rated Capacity	420L/min
Head	45m
Outlet Pressure	0.4MPa
Inlet and Outlet	65/65mm
Nozzle Diameter	19mm
Max Suction Depth	7m
Priming Time	≤20s
Start Mode	Manual, and also can make electric
Engine Model	9HP,177F gasoline, single cylinder
Speed	3600r/min

**20HP  
Gasoline  
Fire Pump**



Rated Capacity	800L/min
Head	78m
Outlet Pressure	0.63MPa
Inlet and Outlet	80/65mm
Nozzle Diameter	19mm
Max Suction Depth	7m
Priming Time	≤20s
Start Mode	Manual, electric
Engine Model	20HP,2V78F gasoline, double cylinder
Speed	3600r/min

### Product Summary

"GB 27898.5-2011 fixed fire water supply equipment Part 5" provides a definition of fire dual power water supply equipment: the motor pump and engine pump combination, the system control cabinet, control instruments and other related accessories, the use of pre-set Fire water supply equipment for continuous water supply to fire pipe network. To achieve frequent start, efficient operation, high reliability of the dual power booster pump unit, will be the development direction of modern fire water supply equipment.

- The small double-power booster pump consists of a motor-driven fire jockey pump, a diesel engine-driven fire pump and a common fire pump control cabinet, a small diaphragm pressure tank, a silencer check valve, a dark bar gate valve, a sensor and the base and so on.

- The electric pump should be connected to the motor either directly or with a coupling, either vertically or horizontally.

- The motor is a three-phase asynchronous motor, with the required rated power.

- The diesel engine is fixed with a vibration-proof rubber pad on the base and the pump is connected directly to the diesel engine.

- The electrical system voltage (starting voltage) of the diesel engine is 12V DC.

- Diesel engine consists of starter motor, fuel system, lubrication system, exhaust system and other components.

When the electricity is normal, the small voltage booster pump unit perform the task by the motor pump. When there is no electricity on the diesel booster pump unit, in these two conditions, the pressure on the pipeline to control motor or diesel start and stop. The start-up battery of the diesel engine is automatically charged under normal electricity, until it is full and stops.

- The diesel module has all the functions of the diesel engine fire main pump.



### Using Condition

- Ambient temperature: 40°C, medium temperature: 100°C
- Medium weight does not exceed 1000kg/m<sup>3</sup>.
- The liquid level must be higher than the pump inlet, and no liquid idling is prohibited.

### Working Scope

- Suction and discharge diameter: 50~150mm
- Flow: 6~100m<sup>3</sup>/h
- Head: 24~150m
- Structure: fixed, mobile
- Diesel engine speed: 1500~3000r/min
- Main use: the regulation of the fire system piping and so on

### EDJ Small Dual Power Fire Pump System Technical Parameters

No.	Pump						Electric Pump		Diesel Engine Pump					Electric Jockey Pump				
	Model	Flow		Pressure		Head	Model	Power	Model	Power	Engine Model	Power	Effective Volume	Model	Flow	Head	Power	
		L/s	GPM	MPa	Psi	bar		kW										hp
1	30/3-ED24-01C	1.9	30	0.3	45	3	40-160	2.2	40-160	2.2	178FA	5	3.68	24				
2	35/5-ED24-01C	2.2	35	0.5	75	5	50-200	5.5	50-200	5.5	190FE	14	10.5	24				
3	50/5-ED24-01C	3.2	50	0.5	75	5	50-200	5.5	50-200	5.5	190FE	14	10.5	24				
4	50/6-ED24-01C	3.2	50	0.6	90	6	50-250B	5.5	50-250B	5.5	190FE	14	10.5	24				
5	50/7-ED24-01C	3.2	50	0.7	100	7	50-250A	7.5	50-250A	7.5	190FE	14	10.5	24				
6	50/8-ED24-01C	3.2	50	0.8	115	8	50-250	11	50-250	11	Q380	27	20	24				
7	50/9-ED24-01C	3.2	50	0.9	130	9	50-315B	15	50-315B	15	Q380	27	20	24				
8	60/6-ED24-01C	3.8	60	0.6	90	6	50-250A	7.5	50-250A	7.5	190FE	14	10.5	24				
9	70/6-EDJ100-01C-S-D	4.4	70	0.6	90	6	65-250A	11.0	65-250A	11.0	Q380	27	20	100	CDL4-100	17.6	8	2.2
10	75/6-ED24-01C	4.7	75	0.6	90	6	65-250A	11.0	65-250A	11.0	Q380	27	20	24				
11	80/10-ED100-103	5.0	80	1	145	10	65-315B	18.5	65-315B	18.5	Q385	31	23	100				
12	100/5-ED100-01C-S-D	6.3	100	0.5	75	5	65-200	7.5	65-200	7.5	190FE	14	10.5	100	CDL4-90	17.6	7	2.2
13	100/5-EDJ100-103	6.3	100	0.5	75	5	65-200	7.5	65-200	7.5	190FE	14	10.5	100				
14	100/6-ED100-01C-S-D	6.3	100	0.6	90	6	65-250B	7.5	65-250B	7.5	190FE	14	10.5	100	CDL4-100	17.6	8	2.2
15	100/6-EDJ100-103	6.3	100	0.6	90	6	65-250B	7.5	65-250B	7.5	190FE	14	10.5	100				
16	100/7-ED100-01C-S-D	6.3	100	0.7	100	7	65-250A	11	65-250A	11	Q380	27	20	100	CDL4-130	17.6	10	3
17	100/7-EDJ100-103	6.3	100	0.7	100	7	65-250A	11	65-250A	11	Q380	27	20	100				
18	100/8-ED100-01C-S-D	6.3	100	0.8	115	8	65-250	15	65-250	15	Q380	27	20	100	CDL4-140	17.6	11	3
19	100/8-EDJ100-103	6.3	100	0.8	115	8	65-250	15	65-250	15	Q380	27	20	100				
20	100/9-EDJ100-103	6.3	100	0.9	130	9	65-315B	18.5	65-315B	18.5	Q385	31	23	100				
21	100/10-EDJ100-103	6.3	100	1	145	10	65-315A	22	65-315A	22	Q480	39	29	100				
22	125/7-EDJ50-103	7.9	125	0.7	100	7	65-250	15	65-250	15	Q380	27	20	50				
23	150/4-EDJ100-103	9.5	150	0.4	60	4	80-200B	7.5	80-200B	7.5	190FE	14	10.5	100				
24	150/5-EDJ100-103	9.5	150	0.5	75	5	80-200A	11	80-200A	11	Q380	27	20	100				
25	150/6-EDJ100-103	9.5	150	0.6	90	6	80-250B	15	80-250B	15	Q380	27	20	100				
26	150/6-ED100-01C-S-D	9.5	150	0.6	90	6	80-250B	15	80-250B	15	Q380	27	20	100	CDL4-100	17.6	8	2.2
27	150/7-EDJ100-103	9.5	150	0.7	100	7	80-250A	18.5	80-250A	18.5	Q385	31	23	100				
28	150/8-EDJ100-103	9.5	150	0.8	115	8	80-250	22	80-250	22	Q480	39	29	100				
29	175/8-EDJ100-103	11.0	175	0.8	115	8	80-250	22	80-250	22	Q480	39	29	100				
30	200/5-EDJ100-103	12.6	200	0.5	75	5	80-200	15	80-200	15	Q380	27	20	100				
31	200/6-EDJ100-103	12.6	200	0.6	90	6	80-250B	15	80-250B	15	Q380	27	20	100				
32	200/7-EDJ100-103	12.6	200	0.7	100	7	80-250A	18.5	80-250A	18.5	Q385	31	23	100				
33	200/8-EDJ100-103	12.6	200	0.8	115	8	80-250	22	80-250	22	Q480	39	29	100				
34	200/9-EDJ100-108	12.6	200	0.9	130	9	80-315B	30	80-315B	30	Q485	48	35	100				
35	250/4-EDJ100-103	15.8	250	0.4	60	4	80-200	15	80-200	15	Q380	27	20	100				



### Product Description

ZWC diesel engine self-priming sewage pump (diesel engine irrigation pump), is a diesel-powered pump. The pump has self-priming function, can transport clean water, rain with sediment, etc. It can be widely used in farmland irrigation, flood prevent, emergency rescue and so on.

### Scope of Applicant

It can be used for non-power areas of agricultural irrigation, municipal engineering, drought and drainage, the installation of two or four wheel mobile chassis or outdoor rain shell, to adapt to the field of mobile.



### Scope of Performance

- Type: fixed, trailer, irrigation car
- Flow: 6~800m<sup>3</sup>/h
- Head: 7~80 (m)
- Matching motor power: 3.68~63(kW)
- Brand / Model: XZQ/ZWC
- Whether to provide custom processing: Yes

### Standard Consist and Supply Scope

#### • Diesel engine

To use domestic or imported brand-name diesel engine, but also according to the user's request to use other high-quality diesel engine; generally 4-stroke, closed water-cooled, mechanical or electronic speed, speed 1500r/min~3000r/min.

#### • Self-priming pump

The self-priming pump, according to customer's requirements flow, head or the use of the nature of the requirements, also according to customer's needs to choose other pumps.

#### • Trailer base (with traction)

The base of the diesel water pump unit is welded by heavy steel structure. The diesel engine and the water pump are integrated. The heavy steel structure is welded and specially treated to make it work more durable and reliable.

#### • Non-standard composition and scope of supply

Diesel fuel pump unit daily fuel tank, electric pump switch screen, diesel pump unit and electric pump signal interconnection and linkage control.

### ZWC Diesel Engine Self-priming Sewage Pump Technical Parameter

No.	Pump							Diesel Engine					Connect	
	Model	Rated Flow		Head		Power	Inlet/Outlet	Model	Brand	Speed	Power12h			Battert
		L/s	GPM	m	Psi	kW	mm			r/min	hp	kW		
1	25ZWC6-10	1.7	26	10	15	1.1	25	178FA	Yanmar	3000	5	3.68	1/12V	Direct
2	25ZWC8-12	2.2	35	12	15	1.1	25	178FA	Yanmar	3000	5	3.68	1/12V	
3	25ZWC8-15	2.2	35	15	20	1.5	25	178FA	Yanmar	3000	5	3.68	1/12V	
4	32ZWC8-12	2.2	35	12	15	1.1	32	178FA	Yanmar	3000	5	3.68	1/12V	
5	32ZWC10-15	2.8	44	15	20	1.5	32	178FA	Yanmar	3000	5	3.68	1/12V	
6	32ZWC10-20	2.8	44	20	30	2.2	32	178FA	Yanmar	3000	5	3.68	1/12V	
7	32ZWC20-12	5.6	88	12	15	2.2	32	178FA	Yanmar	3000	5	3.68	1/12V	
8	32ZWC8-22	2.2	35	22	30	2.2	32	178FA	Yanmar	3000	5	3.68	1/12V	
9	40ZWC10-15	2.8	44	15	20	1.5	40	178FA	Yanmar	3000	5	3.68	1/12V	
10	40ZWC10-20	2.8	44	20	30	2.2	40	178FA	Yanmar	3000	5	3.68	1/12V	
11	40ZWC15-30	4.2	66	30	45	3	40	186FA	Yanmar	3000	8	5.7	1/12V	
12	50ZWC20-7	5.6	88	7	10	1.1	50	178FA	Yanmar	3000	5	3.68	1/12V	
13	50ZWC10-10	2.8	44	10	15	1.1	50	178FA	Yanmar	3000	5	3.68	1/12V	
14	50ZWC8-12	2.2	35	12	15	1.1	50	178FA	Yanmar	3000	5	3.68	1/12V	
15	50ZWC10-15	2.8	44	15	20	1.5	50	178FA	Yanmar	3000	5	3.68	1/12V	
16	50ZWC10-20	2.8	44	20	30	2.2	50	178FA	Yanmar	3000	5	3.68	1/12V	
17	50ZWC20-12	5.6	88	12	15	2.2	50	178FA	Yanmar	3000	5	3.68	1/12V	
18	50ZWC15-15	4.2	66	15	20	2.2	50	178FA	Yanmar	3000	5	3.68	1/12V	
19	50ZWC15-30	4.2	66	30	45	3	50	186FA	Yanmar	3000	8	5.7	1/12V	
20	50ZWC40-15	11.1	176	15	20	4	50	186FA	Yanmar	3000	8	5.7	1/12V	
21	65ZWC25-7	6.9	110	7	10	1.5	65	178FA	Yanmar	3000	5	3.68	1/12V	
22	65ZWC20-14	5.6	88	14	20	2.2	65	178FA	Yanmar	3000	5	3.68	1/12V	
23	65ZWC25-10	6.9	110	10	15	2.2	65	178FA	Yanmar	3000	5	3.68	1/12V	
24	65ZWC15-30	4.2	66	30	45	3	65	186FA	Yanmar	3000	8	5.7	1/12V	
25	65ZWC25-15	6.9	110	15	20	3	65	186FA	Yanmar	3000	8	5.7	1/12V	
26	65ZWC30-10	8.3	132	10	15	3	65	186FA	Yanmar	3000	8	5.7	1/12V	
27	65ZWC30-18	8.3	132	18	25	4	65	186FA	Yanmar	3000	8	5.7	1/12V	
28	65ZWC25-20	6.9	110	20	30	4	65	186FA	Yanmar	3000	8	5.7	1/12V	
29	65ZWC32-25	8.9	141	25	35	5.5	65	190FE	Yanmar	3000	14	10.5	1/12V	
30	65ZWC40-20	11.1	176	20	30	5.5	65	190FE	Yanmar	3000	14	10.5	1/12V	
31	65ZWC20-30	5.6	88	30	45	5.5	65	190FE	Yanmar	3000	14	10.5	1/12V	
32	65ZWC25-40	6.9	110	40	60	7.5	65	190FE	Yanmar	3000	14	10.5	1/12V	
33	65ZWC30-30	8.3	132	30	45	7.5	65	190FE	Yanmar	3000	14	10.5	1/12V	
34	65ZWC40-30	11.1	176	30	45	11	65	Q380	Quanchai	3000	27	20	1/12V	
35	65ZWC30-40	8.3	132	40	60	11	65	Q380	Quanchai	3000	27	20	1/12V	
36	65ZWC30-50	8.3	132	50	75	11	65	Q380	Quanchai	3000	27	20	1/12V	
37	80ZWC40-10	11.1	176	10	15	3	80	186FA	Yanmar	3000	8	5.7	1/12V	
38	80ZWC43-13	11.9	189	13	20	3	80	186FA	Yanmar	3000	8	5.7	1/12V	
39	80ZWC40-16	11.1	176	16	25	4	80	186FA	Yanmar	3000	8	5.7	1/12V	
40	80ZWC65-15	18.1	286	15	20	5.5	80	190FE	Yanmar	3000	14	10.5	1/12V	
41	80ZWC50-20	13.9	220	20	30	5.5	80	190FE	Yanmar	3000	14	10.5	1/12V	
42	80ZWC40-25	11.1	176	25	35	5.5	80	190FE	Yanmar	3000	14	10.5	1/12V	
43	80ZWC65-25	18.1	286	25	35	7.5	80	190FE	Yanmar	3000	14	10.5	1/12V	

**ZWC Diesel Engine Self-priming Sewage Pump Technical Parameter**

No.	Pump							Diesel Engine					Connect	
	Model	Rated Flow		Head		Power	Inlet/Outlet	Model	Brand	Speed	Power12h			Batter
		L/s	GPM	m	Psi	kW	mm			r/min	hp	kW		Set/Volt.
44	80ZWC80-15	22.2	352	15	20	7.5	80	190FE	Yanmar	3000	14	10.5	1/12V	Universal Joint
45	80ZWC40-40	11.1	176	40	60	11	80	Q380	Quanchai	3000	27	20	1/12V	
46	80ZWC50-40	13.9	220	40	60	11	80	Q380	Quanchai	3000	27	20	1/12V	
47	80ZWC65-35	18.1	286	35	50	11	80	Q380	Quanchai	3000	27	20	1/12V	
48	80ZWC80-35	22.2	352	35	50	15	80	Q380	Quanchai	3000	27	20	1/12V	
49	80ZWC40-50	11.1	176	50	75	18.5	80	Q385	Quanchai	3000	31	23	1/12V	
50	80ZWC50-60	13.9	220	60	85	22	80	Q480	Quanchai	3000	39	29	1/12V	
51	100ZWC110-7	30.6	485	7	10	5.5	100	190FE	Yanmar	3000	14	10.5	1/12V	
52	100ZWC80-10	22.2	352	10	15	5.5	100	190FE	Yanmar	3000	14	10.5	1/12V	
53	100ZWC120-7	33.3	529	7	10	7.5	100	190FE	Yanmar	3000	14	10.5	1/12V	
54	100ZWC100-10	27.8	441	10	15	7.5	100	190FE	Yanmar	3000	14	10.5	1/12V	
55	100ZWC100-15	27.8	441	15	20	7.5	100	190FE	Yanmar	3000	14	10.5	1/12V	
56	100ZWC80-20	22.2	352	20	30	7.5	100	190FE	Yanmar	3000	14	10.5	1/12V	
57	100ZWC120-15	33.3	529	15	20	11	100	Q380	Quanchai	3000	27	20	1/12V	
58	100ZWC100-20	27.8	441	20	30	11	100	Q380	Quanchai	3000	27	20	1/12V	
59	100ZWC100-25	27.8	441	25	35	15	100	Q380	Quanchai	3000	27	20	1/12V	
60	100ZWC120-20	33.3	529	20	30	15	100	Q380	Quanchai	3000	27	20	1/12V	
61	100ZWC100-28	27.8	441	28	40	18.5	100	Q385	Quanchai	3000	31	23	1/12V	
62	100ZWC120-25	33.3	529	25	35	22	100	Q480	Quanchai	3000	39	29	1/12V	
63	100ZWC100-30	27.8	441	30	45	22	100	Q480	Quanchai	3000	39	29	1/12V	
64	100ZWC100-35	27.8	441	35	50	30	100	Q490	Quanchai	3000	62	46	1/12V	
65	100ZWC100-40	27.8	441	40	60	30	100	Q490	Quanchai	3000	62	46	1/12V	
66	100ZWC80-60	22.2	352	60	85	37	100	Q490	Quanchai	3000	62	46	1/12V	
67	100ZWC80-80	22.2	352	80	115	45	100	Q495	Quanchai	3000	68	50	1/12V	
68	125ZWC120-20	33.3	529	20	30	15	125	LN490	Lion	1450	29	21	1/12V	
69	125ZWC200-15	55.6	881	15	20	15	125	LN490	Lion	1450	29	21	1/12V	
70	150ZWC145-7	40.3	639	7	10	7.5	150	LN480	Lion	1450	19	14	1/12V	
71	150ZWC200-10	55.6	881	10	15	11	150	LN490	Lion	1450	29	21	1/12V	
72	150ZWC200-15	55.6	881	15	20	15	150	LN490	Lion	1450	29	21	1/12V	
73	150ZWC200-18	55.6	881	18	25	18.5	150	LN490Z	Lion	1450	38	28	1/12V	
74	150ZWC200-20	55.6	881	20	30	22	150	LN490Z	Lion	1450	38	28	1/12V	
75	150ZWC200-25	55.6	881	25	35	30	150	4100ZD	Lion	1450	56	41	1/12V	
76	150ZWC150-35	41.7	661	35	50	37	150	4100ZD	Lion	1450	56	41	1/12V	
77	150ZWC250-25	69.4	1101	25	35	45	150	4105ZD	Lion	1450	76	56	1/12V	
78	200ZWC300-10	83.3	1322	10	15	18.5	200	LN490Z	Lion	1450	38	28	1/12V	
79	200ZWC280-14	77.8	1233	14	20	22	200	LN490Z	Lion	1450	38	28	1/12V	
80	200ZWC400-10	111	1762	10	15	30	200	4100ZD	Lion	1450	56	41	1/12V	
81	200ZWC300-18	83.3	1322	18	25	37	200	4100ZD	Lion	1450	56	41	1/12V	
82	200ZWC400-15	111	1762	15	20	45	200	4105ZD	Lion	1450	76	56	1/12V	
83	200ZWC280-28	77.8	1233	28	40	55	200	4108ZD	Lion	1450	86	63	1/12V	
84	200ZWC420-20	117	1850	20	30	55	200	4108ZD	Lion	1450	86	63	1/12V	
85	200ZWC800-14	222	3524	14	20	55	200	4108ZD	Lion	1450	86	63	1/12V	



**SDC**

**Dual Power Fixed  
Water Supply Equipment  
Used for Fire-protection**



### Product Summary

Dual Power Fixed Water Supply Equipment Used For Fire-protection manufactured by Better Technology Co.,LTD. is Designed and manufactured in accordance with GB 27898.5-2011 Fixed Fire-fighting Equipment Part 5 "Dual Power Water Supply Equipment Used For Fire protection". Meet the latest certification CCCF requirements and obtain the certificate. The advantage is When a fire occurs, can have a more reliable way to ensure water security. When electricity is normal, the electric start work; When the electricity supply fails, the electric fire pump not normally put into use, the diesel engine fire pump will automatically put into operation, to ensure the normal fire fighting; Diesel fire pump configure various automatic functions to meet the requirements of national standards, to ensure the equipment long-term normal standby and ready for extinguishing at any time.

The fire dual power water supply equipment is also suitable for a variety of emergency standby pump occasions.

### Product Nomenclature

Dual Power Fixed Water Supply Equipment Used For Fire-protection: refers to the engine engine and electric motor pumps combinations, the control cabinet, control instrumentation and related accessories. Using pre-programmed way to the fire control network continued water supply of fire water supply equipment.

Electric fire pump refers to the fire pump of motor driven.

Engine pump refers to engine driven (usually diesel, gasoline, natural gas internal combustion engine) as a driving power source of the fire pump water pump.

### Application Scope

- Various fire hydrants, fire main pump spray pump;
- Suitable for a variety of fire booster and constant-pressure pump occasions;
- A variety of villas, residential and other fire-fighting system;
- Industrial and civil construction of fire water system.
- For a variety of depots, oil loading dock, logistics parks and other high fire demanding occasions.

### Product Standard

- GB 27898.5-2011 Fixed Water Supply Equipment  
Part 5: Dual Power fixed Water Supply Equipment Used For Fire-protetction

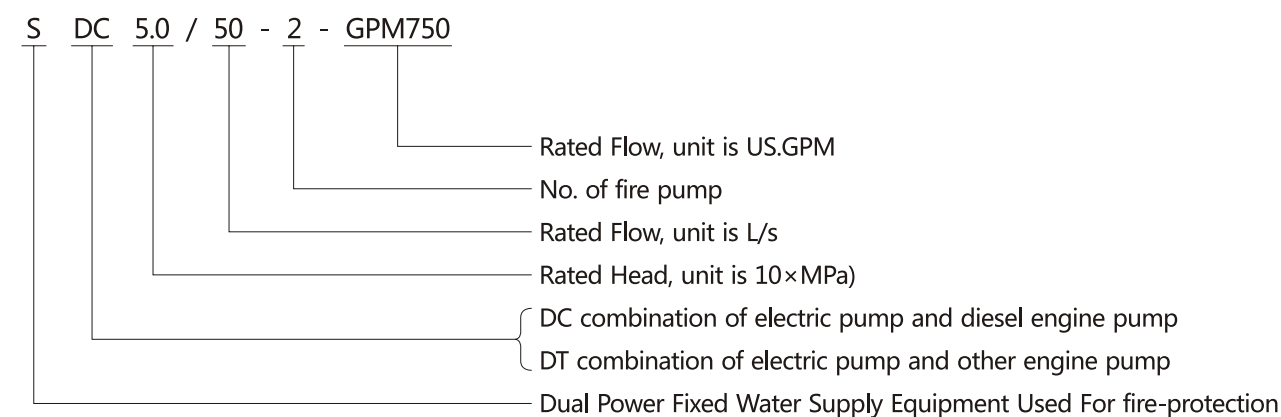
### Environment and Working Conditions

- **Ambient temperature**
  - Ambient temperature scope 4°C ~ 40°C;
  - Working to improve the ambient temperature every 5°C, its power decreased by 1% (to 25 °C as a benchmark);
- **Alititude**
  - Referring altitude 91.4m, the reference atmospheric pressure is 100KPa;
  - If the altitude is over 1000m, Referring GB1105.1-1987 should be amended to diesel power, and specific consulting technology department;
  - Relative Humidity≤80%(20°C), outdoor 90% (Outdoor installation should be made at the time of ordering, you can choose to configure the outdoor structure, protection class IP55);
  - Equipment generally used in place of running non-conductive or explosive dust, non-corrosive metal or destroy insulation of gas or vapor, flameproof be customized.

### Application Scope

- Water Pressure: 0.3~3.0MPa(30~300m)
- Flow Range: 10~1000L/s, 150GPM~10000GPM(U.S)
- Power: 7kW~550kW
- Speed scope: 1500~3000r/min
- Allowable media: water, fire water and other impurities without abrasive or long-fiber impurities and no chemical or mechanical pump for corrosive media.
- Maximum allowable medium temperature 70°C, the maximum ambient temperature of 40°C;
- Maximum allowable Working pressure 1.6MPa, Maximum allowable suction Pressure 0.6MPa.

### Model Meaning



**Electric Jockey Pump Technical Parameters (50Hz/60Hz)**

No.	Model	Flow	Head	Speed	Power	No.	Model	Flow	Head	Speed	Power
		GPM	Psi	r/min	kW			GPM	Psi	r/min	kW
1	CDL2-60	10	65	2950	0.75	11	CDL4-50	18	60	2950	1.1
2	CDL2-70	10	75	2950	0.75	12	CDL4-70	18	80	2950	1.5
3	CDL2-90	10	95	2950	1.1	13	CDL4-80	18	95	2950	1.5
4	CDL2-100	10	110	2950	1.1	14	CDL4-90	18	105	2950	2.2
5	CDL2-110	10	120	2950	1.1	15	CDL4-100	18	115	2950	2.2
6	CDL2-130	10	140	2950	1.5	16	CDL4-120	18	140	2950	2.2
7	CDL2-140	10	155	2950	1.5	17	CDL4-140	18	150	2950	3
8	CDL2-150	10	165	2950	1.5	18	CDL4-140	18	165	2950	3
9	CDL2-170	10	185	2950	2.2	19	CDL4-150	18	175	2950	3
10	CDL2-180	10	195	2950	2.2	20	CDL4-170	18	200	2950	4

No.	Model	Flow	Head	Speed	Power	No.	Model	Flow	Head	Speed	Power
		GPM	Psi	r/min	kW			GPM	Psi	r/min	kW
21	CDL6-60	25	75	2950	2.2	31	CDL8-60	35	80	2950	3
22	CDL6-70	25	90	2950	3	32	CDL8-70	35	90	2950	3
23	CDL6-90	25	100	2950	3	33	CDL8-80	35	100	2950	4
24	CDL6-80	25	110	2950	3	34	CDL8-90	35	115	2950	4
25	CDL6-100	25	125	2950	3	35	CDL8-100	35	130	2950	4
26	CDL6-110	25	135	2950	4	36	CDL8-110	35	145	2950	5.5
27	CDL6-120	25	150	2950	4	37	CDL8-120	35	155	2950	5.5
28	CDL6-130	25	160	2950	4	38	CDL8-130	35	170	2950	5.5
29	CDL6-140	25	175	2950	5.5	39	CDL8-140	35	185	2950	5.5
30	CDL6-150	25	185	2950	5.5	40	CDL8-150	35	195	2950	7.5

No.	Model	Flow	Head	Speed	Power	No.	Model	Flow	Head	Speed	Power
		GPM	Psi	r/min	kW			GPM	Psi	r/min	kW
41	CDL12-60	50	90	2950	4	51	CDL16-60	70	90	2950	7.5
42	CDL12-70	50	100	2950	5.5	52	CDL16-70	70	105	2950	7.5
43	CDL12-90	50	115	2950	5.5	53	CDL16-80	70	120	2950	7.5
44	CDL12-80	50	130	2950	5.5	54	CDL16-90	70	140	2950	9
45	CDL12-100	50	145	2950	7.5	55	CDL16-100	70	155	2950	9
46	CDL12-110	50	160	2950	7.5	56	CDL16-110	70	170	2950	11
47	CDL12-120	50	175	2950	7.5	57	CDL16-120	70	185	2950	13
48	CDL12-130	50	190	2950	11	58	CDL16-130	70	200	2950	13
49	CDL12-140	50	205	2950	11	59	CDL16-140	70	215	2950	13
50	CDL12-150	50	220	2950	11	60	CDL16-150	70	230	2950	15

**SDC Technical Parameters of Dual Power Fixed Water Supply Equipment Used for Fire-protection**

SDC*/10-2-GPM150													
Jockey Pump No.	Specifications				Diesel Enigne Fire Pump				Electric Fire Pump			Diaphragm Tank	
	Equipment Model	Rated Flow		Rated Pressure		Diesel Enigne Pump Model	Rated Speed rpm	Power kW	Diesel Enigne Model	Electric Pump Model	Rated Speed rpm	Power kW	Effective Volume L
		L/s	GPM	MPa	Psi								
1	SDC3/10-2-GPM150	10	150	0.3	45	XBC3/10-IS	3000	10.5	190FE	XBD3/10-IS	2950/3450	5.5	24~50
2	SDC4/10-2-GPM150	10	150	0.4	60	XBC4/10-IS	3000	20	Q380	XBD4/10-IS	2950/3450	11	24~50
3	SDC5/10-2-GPM150	10	150	0.5	75	XBC5/10-IS	3000	20	Q380	XBD5/10-IS	2950/3450	15	24~50
4	SDC6/10-2-GPM150	10	150	0.6	85	XBC6/10-IS	3000	20	Q380	XBD6/10-IS	2950/3450	15	24~50
5	SDC7/10-2-GPM150	10	150	0.7	100	XBC7/10-IS	3000	23	Q385	XBD7/10-IS	2950/3450	18.5	24~50
6	SDC8/10-2-GPM150	10	150	0.8	115	XBC8/10-IS	3000	29	Q480	XBD8/10-IS	2950/3450	22	24~50
7	SDC9/10-2-GPM150	10	150	0.9	130	XBC9/10-IS	3000	29	Q480	XBD9/10-IS	2950/3450	22	24~50
8	SDC10/10-2-GPM150	10	150	1.0	145	XBC10/10-IS	3000	35	Q485	XBD10/10-IS	2950/3450	30	24~50
9	SDC11/10-2-GPM150	10	150	1.1	160	XBC11/10-IS	3000	35	Q485	XBD11/10-IS	2950/3450	30	24~50
10	SDC12/10-2-GPM150	10	150	1.2	175	XBC12/10-IS	3000	46	Q490	XBD12/10-IS	2950/3450	37	24~50

SDC*/15-2-GPM250													
Jockey Pump No.	Specifications				Diesel Enigne Fire Pump				Electric Fire Pump			Diaphragm Tank	
	Equipment Model	Rated Flow		Rated Pressure		Diesel Enigne Pump Model	Rated Speed rpm	Power kW	Diesel Enigne Model	Electric Pump Model	Rated Speed rpm	Power kW	Effective Volume L
		L/s	GPM	MPa	Psi								
1	SDC3/15-2-GPM250	15	250	0.3	45	XBC3/15-IS	3000	10.5	190FE	XBD3/15-IS	2950/3450	7.5	24~50
2	SDC4/15-2-GPM250	15	250	0.4	60	XBC4/15-IS	3000	20	Q380	XBD4/15-IS	2950/3450	11	24~50
3	SDC5/15-2-GPM250	15	250	0.5	75	XBC5/15-IS	3000	20	Q380	XBD5/15-IS	2950/3450	15	24~50
4	SDC6/15-2-GPM250	15	250	0.6	85	XBC6/15-IS	3000	20	Q380	XBD6/15-IS	2950/3450	15	24~50
5	SDC7/15-2-GPM250	15	250	0.7	100	XBC7/15-IS	3000	23	Q385	XBD7/15-IS	2950/3450	18.5	24~50
6	SDC8/15-2-GPM250	15	250	0.8	115	XBC8/15-IS	3000	29	Q480	XBD8/15-IS	2950/3450	22	24~50
7	SDC9/15-2-GPM250	15	250	0.9	130	XBC9/15-IS	3000	29	Q480	XBD9/15-IS	2950/3450	22	24~50
8	SDC10/15-2-GPM250	15	250	1.0	145	XBC10/15-IS	3000	35	Q485	XBD10/15-IS	2950/3450	30	24~50
9	SDC11/15-2-GPM250	15	250	1.1	160	XBC11/15-IS	3000	35	Q485	XBD11/15-IS	2950/3450	30	24~50
10	SDC12/15-2-GPM250	15	250	1.2	175	XBC12/15-IS	3000	46	Q490	XBD12/15-IS	2950/3450	37	24~50

**SDC Technical Parameters of Dual Power Fixed Water Supply Equipment Used for Fire-protection**

SDC*/20-2-GPM300													
Jockey Pump No.	Specifications				Diesel Enigne Fire Pump				Electric Fire Pump			Diaphragm Tank	
	Equipment Model	Rated Flow		Rated Pressure		Diesel Enigne Pump Model	Rated Speed rpm	Power kW	Diesel Enigne Model	Electric Pump Model	Rated Speed rpm	Power kW	Effective Volume L
		L/s	GPM	MPa	Psi								
11	SDC3/20-2-GPM300	20	300	0.3	45	XBC3/20-IS	3000	20	Q380	XBD3/20-IS	2950/3450	15	24~50
12	SDC4/20-2-GPM300	20	300	0.4	60	XBC4/20-IS	3000	23	Q385	XBD4/20-IS	2950/3450	18.5	24~50
13	SDC5/20-2-GPM300	20	300	0.5	75	XBC5/20-IS	3000	29	Q480	XBD5/20-IS	2950/3450	22	24~50
14	SDC6/20-2-GPM300	20	300	0.6	85	XBC6/20-IS	3000	29	Q480	XBD6/20-IS	2950/3450	22	24~50
15	SDC7/20-2-GPM300	20	300	0.7	100	XBC7/20-IS	3000	35	Q485	XBD7/20-IS	2950/3450	30	24~50
16	SDC8/20-2-GPM300	20	300	0.8	115	XBC8/20-IS	3000	46	Q490	XBD8/20-IS	2950/3450	37	24~50
17	SDC9/20-2-GPM300	20	300	0.9	130	XBC9/20-IS	3000	46	Q490	XBD9/20-IS	2950/3450	37	24~50
18	SDC10/20-2-GPM300	20	300	1.0	145	XBC10/20-IS	3000	50	Q495	XBD10/20-IS	2950/3450	45	24~50
19	SDC11/20-2-GPM300	20	300	1.1	160	XBC11/20-IS	3000	63	4102QA	XBD11/20-IS	2950/3450	55	24~50
20	SDC12/20-2-GPM300	20	300	1.2	175	XBC12/20-IS	3000	90	6110-15G2	XBD12/20-IS	2950/3450	75	24~50

SDC*/25-2-GPM400													
Jockey Pump No.	Specifications				Diesel Enigne Fire Pump				Electric Fire Pump			Diaphragm Tank	
	Equipment Model	Rated Flow		Rated Pressure		Diesel Enigne Pump Model	Rated Speed rpm	Power kW	Diesel Enigne Model	Electric Pump Model	Rated Speed rpm	Power kW	Effective Volume L
		L/s	GPM	MPa	Psi								
11	SDC3/25-2-GPM400	25	396	0.3	45	XBC3/25-IS	3000	20	Q380	XBD3/25-IS	2950/3450	15	24~50
12	SDC4/25-2-GPM400	25	396	0.4	60	XBC4/25-IS	3000	23	Q385	XBD4/25-IS	2950/3450	18.5	24~50
13	SDC5/25-2-GPM400	25	396	0.5	75	XBC5/25-IS	3000	29	Q480	XBD5/25-IS	2950/3450	22	24~50
14	SDC6/25-2-GPM400	25	396	0.6	85	XBC6/25-IS	3000	29	Q480	XBD6/25-IS	2950/3450	22	24~50
15	SDC7/25-2-GPM400	25	396	0.7	100	XBC7/25-IS	3000	35	Q485	XBD7/25-IS	2950/3450	30	24~50
16	SDC8/25-2-GPM400	25	396	0.8	115	XBC8/25-IS	3000	46	Q490	XBD8/25-IS	2950/3450	37	24~50
17	SDC9/25-2-GPM400	25	396	0.9	130	XBC9/25-IS	3000	46	Q490	XBD9/25-IS	2950/3450	37	24~50
18	SDC10/25-2-GPM400	25	396	1.0	145	XBC10/25-IS	3000	50	Q495	XBD10/25-IS	2950/3450	45	24~50
19	SDC11/25-2-GPM400	25	396	1.1	160	XBC11/25-IS	3000	63	4102QA	XBD11/25-IS	2950/3450	55	24~50
20	SDC12/25-2-GPM400	25	396	1.2	175	XBC12/25-IS	3000	90	6110-15G2	XBD12/25-IS	2950/3450	75	24~50

**SDC Technical Parameters of Dual Power Fixed Water Supply Equipment Used for Fire-protection**

SDC*/30-2-GPM500													
Jockey Pump No.	Specifications				Diesel Enigne Fire Pump				Electric Fire Pump			Diaphragm Tank	
	Equipment Model	Rated Flow		Rated Pressure		Diesel Enigne Pump Model	Rated Speed rpm	Power kW	Diesel Enigne Model	Electric Pump Model	Rated Speed rpm	Power kW	Effective Volume L
		L/s	GPM	MPa	Psi								
21	SDC3/30-2-GPM500	30	476	0.3	45	XBC3/30-IS	3000	20	Q380	XBD3/30-IS	2950/3450	15	50
22	SDC4/30-2-GPM500	30	476	0.4	60	XBC4/30-IS	3000	23	Q385	XBD4/30-IS	2950/3450	18.5	50
23	SDC5/30-2-GPM500	30	476	0.5	75	XBC5/30-IS	3000	29	Q480	XBD5/30-IS	2950/3450	22	50
24	SDC6/30-2-GPM500	30	476	0.6	85	XBC6/30-IS	3000	29	Q480	XBD6/30-IS	2950/3450	22	50
25	SDC7/30-2-GPM500	30	476	0.7	100	XBC7/30-IS	3000	34.5	Q485	XBD7/30-IS	2950/3450	30	50
26	SDC8/30-2-GPM500	30	476	0.8	115	XBC8/30-IS	3000	45.6	Q490	XBD8/30-IS	2950/3450	37	50
27	SDC9/30-2-GPM500	30	476	0.9	130	XBC9/30-IS	3000	45.6	Q490	XBD9/30-IS	2950/3450	37	50
28	SDC10/30-2-GPM500	30	476	1.0	145	XBC10/30-IS	3000	50	Q495	XBD10/30-IS	2950/3450	45	50
29	SDC11/30-2-GPM500	30	476	1.1	160	XBC11/30-IS	3000	63	4102QA	XBD11/30-IS	2950/3450	55	50
30	SDC12/30-2-GPM500	30	476	1.2	175	XBC12/30-IS	3000	90	6110-15G2	XBD12/30-IS	2950/3450	75	50

SDC*/35-2-GPM550													
Jockey Pump No.	Specifications				Diesel Enigne Fire Pump				Electric Fire Pump			Diaphragm Tank	
	Equipment Model	Rated Flow		Rated Pressure		Diesel Enigne Pump Model	Rated Speed rpm	Power kW	Diesel Enigne Model	Electric Pump Model	Rated Speed rpm	Power kW	Effective Volume L
		L/s	GPM	MPa	Psi								
21	SDC3/35-2-GPM550	35	555	0.3	45	XBC3/35-IS	2200	29	Q480	XBD3/35-IS	2950/3450	22	50
22	SDC4/35-2-GPM550	35	555	0.4	60	XBC4/35-IS	2200	35	Q485	XBD4/35-IS	2950/3450	30	50
23	SDC5/35-2-GPM550	35	555	0.5	75	XBC5/35-IS	3000	46	Q490	XBD5/35-IS	2950/3450	37	50
24	SDC6/35-2-GPM550	35	555	0.6	85	XBC6/35-IS	3000	46	Q490	XBD6/35-IS	2950/3450	37	50
25	SDC7/35-2-GPM550	35	555	0.7	100	XBC7/35-IS	3000	50	Q495	XBD7/35-IS	2950/3450	45	50
26	SDC8/35-2-GPM550	35	555	0.8	115	XBC8/35-IS	3000	63	4102QA	XBD8/35-IS	2950/3450	55	50
27	SDC9/35-2-GPM550	35	555	0.9	130	XBC9/35-IS	3000	63	4102QA	XBD9/35-IS	2950/3450	55	50
28	SDC10/35-2-GPM550	35	555	1.0	145	XBC10/35-IS	3000	90	6110-15G2	XBD10/35-IS	2950/3450	75	50
29	SDC11/35-2-GPM550	35	555	1.1	160	XBC11/35-IS	3000	90	6110-15G2	XBD11/35-IS	2950/3450	75	50
30	SDC12/35-2-GPM550	35	555	1.2	175	XBC12/35-IS	3000	110	6110-17G2	XBD12/35-IS	2950/3450	90	50

**SDC Technical Parameters of Dual Power Fixed Water Supply Equipment Used for Fire-protection**

SDC*/40-2-GPM600													
Jockey Pump No.	Specifications				Diesel Enigne Fire Pump				Electric Fire Pump			Diaphragm Tank	
	Equipment Model	Rated Flow		Rated Pressure		Diesel Enigne Pump Model	Rated Speed rpm	Power kW	Diesel Enigne Model	Electric Pump Model	Rated Speed rpm	Power kW	Effective Volume L
		L/s	GPM	MPa	Psi								
31	SDC3/40-2-GPM600	40	600	0.3	45	XBC3/40-IS	3000	29	Q480	XBD3/40-IS	2950/3450	22	50
32	SDC4/40-2-GPM600	40	600	0.4	60	XBC4/40-IS	3000	35	Q485	XBD4/40-IS	2950/3450	30	50
33	SDC5/40-2-GPM600	40	600	0.5	75	XBC5/40-IS	3000	46	Q490	XBD5/40-IS	2950/3450	37	50
34	SDC6/40-2-GPM600	40	600	0.6	85	XBC6/40-IS	3000	46	Q490	XBD6/40-IS	2950/3450	37	50
35	SDC7/40-2-GPM600	40	600	0.7	100	XBC7/40-IS	3000	50	Q495	XBD7/40-IS	2950/3450	45	50
36	SDC8/40-2-GPM600	40	600	0.8	115	XBC8/40-IS	3000	63	4102QA	XBD8/40-IS	2950/3450	55	50
37	SDC9/40-2-GPM600	40	600	0.9	130	XBC9/40-IS	3000	63	4102QA	XBD9/40-IS	2950/3450	55	50
38	SDC10/40-2-GPM600	40	600	1.0	145	XBC10/40-IS	3000	90	6110-15G2	XBD10/40-IS	2950/3450	75	50
39	SDC11/40-2-GPM600	40	600	1.1	160	XBC11/40-IS	3000	90	6110-15G2	XBD11/40-IS	2950/3450	75	50
40	SDC12/40-2-GPM600	40	600	1.2	175	XBC12/40-IS	3000	110	6110-17G2	XBD12/40-IS	2950/3450	90	50

SDC*/50-2-GPM800													
Jockey Pump No.	Specifications				Diesel Enigne Fire Pump				Electric Fire Pump			Diaphragm Tank	
	Equipment Model	Rated Flow		Rated Pressure		Diesel Enigne Pump Model	Rated Speed rpm	Power kW	Diesel Enigne Model	Electric Pump Model	Rated Speed rpm	Power kW	Effective Volume L
		L/s	GPM	MPa	Psi								
31	SDC3/50-2-GPM800	50	800	0.3	45	XBC3/50-IS	3000	35	Q485	XBD3/50-IS	2950/3450	30	50
32	SDC4/50-2-GPM800	50	800	0.4	60	XBC4/50-IS	3000	46	Q490	XBD4/50-IS	2950/3450	37	50
33	SDC5/50-2-GPM800	50	800	0.5	75	XBC5/50-IS	3000	50	Q495	XBD5/50-IS	2950/3450	45	50
34	SDC6/50-2-GPM800	50	800	0.6	85	XBC6/50-IS	3000	63	4102QA	XBD6/50-IS	2950/3450	55	50
35	SDC7/50-2-GPM800	50	800	0.7	100	XBC7/50-IS	3000	90	6110-15G2	XBD7/50-IS	2950/3450	75	50
36	SDC8/50-2-GPM800	50	800	0.8	115	XBC8/50-IS	3000	90	6110-15G2	XBD8/50-IS	2950/3450	75	50
37	SDC9/50-2-GPM800	50	800	0.9	130	XBC9/50-IS	3000	110	6110-17G2	XBD9/50-IS	2950/3450	90	50
38	SDC10/50-2-GPM800	50	800	1.0	145	XBC10/50-IS	3000	110	6110-17G2	XBD10/50-IS	2950/3450	90	50
39	SDC11/50-2-GPM800	50	800	1.1	160	XBC11/50-IS	3000	110	6110-17G2	XBD11/50-IS	2950/3450	110	50
40	SDC12/50-2-GPM800	50	800	1.2	175	XBC12/50-IS	3000	110	6110-17G2	XBD12/50-IS	2950/3450	110	50

**SDC Technical Parameters of Dual Power Fixed Water Supply Equipment Used for Fire-protection**

SDC*/65-2-GPM1000													
Jockey Pump No.	Specifications				Diesel Enigne Fire Pump				Electric Fire Pump			Diaphragm Tank	
	Equipment Model	Rated Flow		Rated Pressure		Diesel Enigne Pump Model	Rated Speed rpm	Power kW	Diesel Enigne Model	Electric Pump Model	Rated Speed rpm	Power kW	Effective Volume L
		L/s	GPM	MPa	Psi								
31	SDC3/65-2-GPM1000	65	1030	0.3	45	XBC3/65-IS	1500	41	4100ZD	XBC3/65-IS	1450/1750	37	50
32	SDC4/65-2-GPM1000	65	1030	0.4	60	XBC4/65-IS	1500	56	4105ZD	XBC4/65-IS	1450/1750	45	50
33	SDC5/65-2-GPM1000	65	1030	0.5	75	XBC5/65-IS	1500	84	6105ZD	XBC5/65-IS	1450/1750	55	50
34	SDC6/65-2-GPM1000	65	1030	0.6	85	XBC6/65-IS	1500	84	6105ZD	XBC6/65-IS	1450/1750	75	50
35	SDC7/65-2-GPM1000	65	1030	0.7	100	XBC7/65-IS	1500	84	6105ZD	XBC7/65-IS	1450/1750	75	50
36	SDC8/65-2-GPM1000	65	1030	0.8	115	XBC8/65-IS	1500	110	6105AZLD	XBC8/65-IS	1450/1750	90	50
37	SDC9/65-2-GPM1000	65	1030	0.9	130	XBC9/65-IS	1500	132	6105IZD	XBC9/65-IS	1450/1750	110	50
38	SDC10/65-2-GPM1000	65	1030	1.0	145	XBC10/65-IS	1500	155	6113ZLD	XBC10/65-IS	1450/1750	132	50
39	SDC11/65-2-GPM1000	65	1030	1.1	160	XBC11/65-IS	1500	218	6126ZLD	XBC11/65-IS	1450/1750	160	50
40	SDC12/65-2-GPM1000	65	1030	1.2	175	XBC12/65-IS	1500	218	6126ZLD	XBC12/65-IS	1450/1750	160	50

SDC*/80-2-GPM1250													
Jockey Pump No.	Specifications				Diesel Enigne Fire Pump				Electric Fire Pump			Diaphragm Tank	
	Equipment Model	Rated Flow		Rated Pressure		Diesel Enigne Pump Model	Rated Speed rpm	Power kW	Diesel Enigne Model	Electric Pump Model	Rated Speed rpm	Power kW	Effective Volume L
		L/s	GPM	MPa	Psi								
31	SDC3/80-2-GPM1250	80	1268	0.3	45	XBC3/80-IS	1500	56	4105ZD	XBC3/80-IS	1450/1750	45	50
32	SDC4/80-2-GPM1250	80	1268	0.4	60	XBC4/80-IS	1500	84	6105ZD	XBC4/80-IS	1450/1750	55	50
33	SDC5/80-2-GPM1250	80	1268	0.5	75	XBC5/80-IS	1500	84	6105ZD	XBC5/80-IS	1450/1750	75	50
34	SDC6/80-2-GPM1250	80	1268	0.6	85	XBC6/80-IS	1500	84	6105ZD	XBC6/80-IS	1450/1750	75	50
35	SDC7/80-2-GPM1250	80	1268	0.7	100	XBC7/80-IS	1500	110	6105AZLD	XBC7/80-IS	1450/1750	90	50
36	SDC8/80-2-GPM1250	80	1268	0.8	115	XBC8/80-IS	1500	132	6105IZD	XBC8/80-IS	1450/1750	110	50
37	SDC9/80-2-GPM1250	80	1268	0.9	130	XBC9/80-IS	1500	155	6113ZLD	XBC9/80-IS	1450/1750	132	50
38	SDC10/80-2-GPM1250	80	1268	1.0	145	XBC10/80-IS	1500	218	6126ZLD	XBC10/80-IS	1450/1750	160	50
39	SDC11/80-2-GPM1250	80	1268	1.1	160	XBC11/80-IS	1500	218	6126ZLD	XBC11/80-IS	1450/1750	185	50
40	SDC12/80-2-GPM1250	80	1268	1.2	175	XBC12/80-IS	1500	268	615IZLD	XBC12/80-IS	1450/1750	200	50

**SDC Technical Parameters of Dual Power Fixed Water Supply Equipment Used for Fire-protection**

SDC*/100-2-GPM1500													
Jockey Pump No.	Specifications				Diesel Enigne Fire Pump				Electric Fire Pump			Diaphragm Tank	
	Equipment Model	Rated Flow		Rated Pressure		Diesel Enigne Pump Model	Rated Speed rpm	Power kW	Diesel Enigne Model	Electric Pump Model	Rated Speed rpm	Power kW	Effective Volume L
		L/s	GPM	MPa	Psi								
31	SDC3/100-2-GPM1500	100	1585	0.3	45	XBC3/100-IS	1500	84	6105ZD	XBD3/100-IS	1450/1750	75	100
32	SDC4/100-2-GPM1500	100	1585	0.4	60	XBC4/100-IS	1500	84	6105ZD	XBD4/100-IS	1450/1750	75	100
33	SDC5/100-2-GPM1500	100	1585	0.5	75	XBC5/100-IS	1500	110	6105AZLD	XBD5/100-IS	1450/1750	90	100
34	SDC6/100-2-GPM1500	100	1585	0.6	85	XBC6/100-IS	1500	132	6105IZD	XBD6/100-IS	1450/1750	110	100
35	SDC7/100-2-GPM1500	100	1585	0.7	100	XBC7/100-IS	1500	155	6113ZLD	XBD7/100-IS	1450/1750	132	100
36	SDC8/100-2-GPM1500	100	1585	0.8	115	XBC8/100-IS	1500	218	6126ZLD	XBD8/100-IS	1450/1750	160	100
37	SDC9/100-2-GPM1500	100	1585	0.9	130	XBC9/100-IS	1500	218	6126ZLD	XBD9/100-IS	1450/1750	160	100
38	SDC10/100-2-GPM1500	100	1585	1.0	145	XBC10/100-IS	1500	218	6126ZLD	XBD10/100-IS	1450/1750	185	100
39	SDC11/100-2-GPM1500	100	1585	1.1	160	XBC11/100-IS	1500	268	615IZLD	XBD11/100-IS	1450/1750	200	100
40	SDC12/100-2-GPM1500	100	1585	1.2	175	XBC12/100-IS	1500	268	615IZLD	XBD12/100-IS	1450/1750	220	100

SDC*/130-2-GPM2000													
Jockey Pump No.	Specifications				Diesel Enigne Fire Pump				Electric Fire Pump			Diaphragm Tank	
	Equipment Model	Rated Flow		Rated Pressure		Diesel Enigne Pump Model	Rated Speed rpm	Power kW	Diesel Enigne Model	Electric Pump Model	Rated Speed rpm	Power kW	Effective Volume L
		L/s	GPM	MPa	Psi								
41	SDC3/130-2-GPM2000	130	2061	0.3	45	XBC3/130-IS	1500	84	6105ZD	XBD3/130-IS	1450/1750	75	100
42	SDC4/130-2-GPM2000	130	2061	0.4	60	XBC4/130-IS	1500	110	6105AZLD	XBD4/130-IS	1450/1750	90	100
43	SDC5/130-2-GPM2000	130	2061	0.5	75	XBC5/130-IS	1500	132	6105IZD	XBD5/130-IS	1450/1750	110	100
44	SDC6/130-2-GPM2000	130	2061	0.6	85	XBC6/130-IS	1500	155	6113ZLD	XBD6/130-IS	1450/1750	132	100
45	SDC7/130-2-GPM2000	130	2061	0.7	100	XBC7/130-IS	1500	218	6126ZLD	XBD7/130-IS	1450/1750	160	100
46	SDC8/130-2-GPM2000	130	2061	0.8	115	XBC8/130-IS	1500	218	6126ZLD	XBD8/130-IS	1450/1750	185	100
47	SDC9/130-2-GPM2000	130	2061	0.9	130	XBC9/130-IS	1500	268	615 IZLD	XBD9/130-IS	1450/1750	200	100
48	SDC10/130-2-GPM2000	130	2061	1.0	145	XBC10/130-IS	1500	268	615 IZLD	XBD10/130-IS	1450/1750	220	100
49	SDC11/130-2-GPM2000	130	2061	1.1	160	XBC11/130-IS	1500	308	618 IZLD	XBD11/130-IS	1450/1750	250	100
50	SDC12/130-2-GPM2000	130	2061	1.2	175	XBC12/130-IS	1500	308	618 IZLD	XBD12/130-IS	1450/1750	280	100

**SDC Technical Parameters of Dual Power Fixed Water Supply Equipment Used for Fire-protection**

SDC*/160-2-GPM2500													
Jockey Pump No.	Specifications				Diesel Enigne Fire Pump				Electric Fire Pump			Diaphragm Tank	
	Equipment Model	Rated Flow		Rated Pressure		Diesel Enigne Pump Model	Rated Speed rpm	Power kW	Diesel Enigne Model	Electric Pump Model	Rated Speed rpm	Power kW	Effective Volume L
		L/s	GPM	MPa	Psi								
41	SDC3/160-2-GPM2500	160	2536	0.3	45	XBC3/160-IS	1500	110	6105AZLD	XBD3/160-IS	1450/1750	90	100
42	SDC4/160-2-GPM2500	160	2536	0.4	60	XBC4/160-IS	1500	132	6105 IZD	XBD4/160-IS	1450/1750	110	100
43	SDC5/160-2-GPM2500	160	2536	0.5	75	XBC5/160-IS	1500	155	6113ZLD	XBD5/160-IS	1450/1750	132	100
44	SDC6/160-2-GPM2500	160	2536	0.6	85	XBC6/160-IS	1500	218	6126ZLD	XBD6/160-IS	1450/1750	185	100
45	SDC7/160-2-GPM2500	160	2536	0.7	100	XBC7/160-IS	1500	268	615 IZLD	XBD7/160-IS	1450/1750	200	100
46	SDC8/160-2-GPM2500	160	2536	0.8	115	XBC8/160-IS	1500	268	615 IZLD	XBD8/160-IS	1450/1750	220	100
47	SDC9/160-2-GPM2500	160	2536	0.9	130	XBC9/160-IS	1500	308	618 IZLD	XBD9/160-IS	1450/1750	250	100
48	SDC10/160-2-GPM2500	160	2536	1.0	145	XBC10/160-IS	1500	308	618 IZLD	XBD10/160-IS	1450/1750	280	100
49	SDC11/160-2-GPM2500	160	2536	1.1	160	XBC11/160-IS	1500	339	12V135AZLD	XBD11/160-IS	1450/1750	315	100
50	SDC12/160-2-GPM2500	160	2536	1.2	175	XBC12/160-IS	1500	339	12V135AZLD	XBD12/160-IS	1450/1750	315	100

SDC*/200-2-GPM2500													
Jockey Pump No.	Specifications				Diesel Enigne Fire Pump				Electric Fire Pump			Diaphragm Tank	
	Equipment Model	Rated Flow		Rated Pressure		Diesel Enigne Pump Model	Rated Speed rpm	Power kW	Diesel Enigne Model	Electric Pump Model	Rated Speed rpm	Power kW	Effective Volume L
		L/s	GPM	MPa	Psi								
41	SDC3/200-2-GPM2500	200	3170	0.3	45	XBC3/200-IS	1500	132	6105 IZD	XBD3/200-IS	1450/1750	110	100
42	SDC4/200-2-GPM2500	200	3170	0.4	60	XBC4/200-IS	1500	155	6113ZLD	XBD4/200-IS	1450/1750	132	100
43	SDC5/200-2-GPM2500	200	3170	0.5	75	XBC5/200-IS	1500	218	6126ZLD	XBD5/200-IS	1450/1750	160	100
44	SDC6/200-2-GPM2500	200	3170	0.6	85	XBC6/200-IS	1500	268	615 IZLD	XBD6/200-IS	1450/1750	200	100
45	SDC7/200-2-GPM2500	200	3170	0.7	100	XBC7/200-IS	1500	268	615 IZLD	XBD7/200-IS	1450/1750	250	100
46	SDC8/200-2-GPM2500	200	3170	0.8	115	XBC8/200-IS	1500	308	618 IZLD	XBD8/200-IS	1450/1750	280	100
47	SDC9/200-2-GPM2500	200	3170	0.9	130	XBC9/200-IS	1500	339	12V135AZLD	XBD9/200-IS	1450/1750	315	100
48	SDC10/200-2-GPM2500	200	3170	1.0	145	XBC10/200-IS	1500	410	12V135BZLD	XBD10/200-IS	1450/1750	355	100
49	SDC11/200-2-GPM2500	200	3170	1.1	160	XBC11/200-IS	1500	410	12V135BZLD	XBD11/200-IS	1450/1750	355	100
50	SDC12/200-2-GPM2500	200	3170	1.2	175	XBC12/200-IS	1500	504	12V135BZLD-1	XBD12/200-IS	1450/1750	400	100

**SDC Technical Parameters of Dual Power Fixed Water Supply Equipment Used for Fire-protection**

SDC*/250-2-GPM4000													
Jockey Pump No.	Specifications				Diesel Enigne Fire Pump				Electric Fire Pump				Diaphragm Tank
	Equipment Model	Rated Flow		Rated Pressure		Diesel Enigne Pump Model	Rated Speed rpm	Power kW	Diesel Enigne Model	Electric Pump Model	Rated Speed rpm	Power kW	Effective Volume L
		L/s	GPM	MPa	Psi								
51	SDC3/250-2-GPM4000	250	3963	0.3	45	XBC3/250-IS	1500	155	6113ZLD	XBD3/250-IS	1450 1750	132	150
52	SDC4/250-2-GPM4000	250	3963	0.4	60	XBC4/250-IS	1500	218	6126ZLD	XBD4/250-IS	1450 1750	160	150
53	SDC5/250-2-GPM4000	250	3963	0.5	75	XBC5/250-IS	1500	268	615 IZLD	XBD5/250-IS	1450 1750	250	150
54	SDC6/250-2-GPM4000	250	3963	0.6	85	XBC6/250-IS	1500	308	618 IZLD	XBD6/250-IS	1450 1750	280	150
55	SDC7/250-2-GPM4000	250	3963	0.7	100	XBC7/250-IS	1500	308	618 IZLD	XBD7/250-IS	1450 1750	280	150
56	SDC8/250-2-GPM4000	250	3963	0.8	115	XBC8/250-S	1500	339	12V135AZLD	XBD8/250-S	1450 1750	315	150
57	SDC9/250-2-GPM4000	250	3963	0.9	130	XBC9/250-S	1500	410	12V135BZLD	XBD9/250-S	1450 1750	355	150
58	SDC10/250-2-GPM4000	250	3963	1.0	145	XBC10/250-S	1500	504	12V135BZLD-1	XBD10/250-S	1450 1750	400	150
59	SDC11/250-2-GPM4000	250	3963	1.1	160	XBC11/250-S	1500	504	12V135BZLD-1	XBD11/250-S	1450 1750	450	150
60	SDC12/250-2-GPM4000	250	3963	1.2	175	XBC12/250-S	1500	555	12V135BZLD-2	XBD12/250-S	1450 1750	500	150

SDC*/280-2-GPM4400													
Jockey Pump No.	Specifications				Diesel Enigne Fire Pump				Electric Fire Pump				Diaphragm Tank
	Equipment Model	Rated Flow		Rated Pressure		Diesel Enigne Pump Model	Rated Speed rpm	Power kW	Diesel Enigne Model	Electric Pump Model	Rated Speed rpm	Power kW	Effective Volume L
		L/s	GPM	MPa	Psi								
51	SDC3/280-2-GPM4400	280	4400	0.3	45	XBC3/280-IS	1500	155	6113ZLD	XBD3/280-IS	1450 1750	132	150
52	SDC4/280-2-GPM4400	280	4400	0.4	60	XBC4/280-IS	1500	218	6126ZLD	XBD4/280-IS	1450 1750	160	150
53	SDC5/280-2-GPM4400	280	4400	0.5	75	XBC5/280-IS	1500	268	615 IZLD	XBD5/280-IS	1450 1750	250	150
54	SDC6/280-2-GPM4400	280	4400	0.6	85	XBC6/280-IS	1500	308	618 IZLD	XBD6/280-IS	1450 1750	280	150
55	SDC7/280-2-GPM4400	280	4400	0.7	100	XBC7/280-IS	1500	308	618 IZLD	XBD7/280-IS	1450 1750	280	150
56	SDC8/280-2-GPM4400	280	4400	0.8	115	XBC8/280-IS	1500	339	12V135AZLD	XBD8/280-IS	1450 1750	315	150
57	SDC9/280-2-GPM4400	280	4400	0.9	130	XBC9/280-IS	1500	410	12V135BZLD	XBD9/280-IS	1450 1750	355	150
58	SDC10/280-2-GPM4400	280	4400	1.0	145	XBC10/280-IS	1500	504	12V135BZLD-1	XBD10/280-IS	1450 1750	400	150
59	SDC11/280-2-GPM4400	280	4400	1.1	160	XBC11/280-IS	1500	504	12V135BZLD-1	XBD11/280-IS	1450 1750	450	150
60	SDC12/280-2-GPM4400	280	4400	1.2	175	XBC12/280-IS	1500	555	12V135BZLD-2	XBD12/280-IS	1450 1750	500	150

**SDC Technical Parameters of Dual Power Fixed Water Supply Equipment Used for Fire-protection**

SDC*/320-2-GPM5000													
Jockey Pump No.	Specifications				Diesel Enigne Fire Pump				Electric Fire Pump				Diaphragm Tank
	Equipment Model	Rated Flow		Rated Pressure		Diesel Enigne Pump Model	Rated Speed rpm	Power kW	Diesel Enigne Model	Electric Pump Model	Rated Speed rpm	Power kW	Effective Volume L
		L/s	GPM	MPa	Psi								
51	SDC3/320-2-GPM5000	320	5072	0.3	45	XBC3/320-S	1500	218	6126ZLD	XBD3/320-S	1450 1750	160	150
52	SDC4/320-2-GPM5000	320	5072	0.4	60	XBC4/320-S	1500	268	615 IZLD	XBD4/320-S	1450 1750	200	150
53	SDC5/320-2-GPM5000	320	5072	0.5	75	XBC5/320-S	1500	308	618 IZLD	XBD5/320-S	1450 1750	250	150
54	SDC6/320-2-GPM5000	320	5072	0.6	85	XBC6/320-S	1500	339	12V135AZLD	XBD6/320-S	1450 1750	315	150
55	SDC7/320-2-GPM5000	320	5072	0.7	100	XBC7/320-S	1500	410	12V135BZLD	XBD7/320-S	1450 1750	355	150
56	SDC8/320-2-GPM5000	320	5072	0.8	115	XBC8/320-S	1500	504	12V135BZLD-2	XBD8/320-S	1450 1750	400	150
57	SDC9/320-2-GPM5000	320	5072	0.9	130	XBC9/320-S	1500	504	12V135BZLD-2	XBD9/320-S	1450 1750	450	150
58	SDC10/320-2-GPM5000	320	5072	1.0	145	XBC10/320-S	1500	564	TBD604BL6	XBD10/320-S	1450 1750	500	150
59	SDC11/320-2-GPM5000	320	5072	1.1	160	XBC11/320-S	1500	655	TBD604BL6	XBD11/320-S	1450 1750	560	150
60	SDC12/320-2-GPM5000	320	5072	1.2	175	XBC12/320-S	1500	726	TBD620L6	XBD12/320-S	1450 1750	620	150

SDC*/420-2-GPM6600													
Jockey Pump No.	Specifications				Diesel Enigne Fire Pump				Electric Fire Pump				Diaphragm Tank
	Equipment Model	Rated Flow		Rated Pressure		Diesel Enigne Pump Model	Rated Speed rpm	Power kW	Diesel Enigne Model	Electric Pump Model	Rated Speed rpm	Power kW	Effective Volume L
		L/s	GPM	MPa	Psi								
51	SDC3/420-2-GPM6600	420	6600	0.3	45	XBC3/420-S	1500	308	618 IZLD	XBD3/420-S	1450 1750	250	150
52	SDC4/420-2-GPM6600	420	6600	0.4	60	XBC4/420-S	1500	339	12V135AZLD	XBD4/420-S	1450 1750	280	150
53	SDC5/420-2-GPM6600	420	6600	0.5	75	XBC5/420-S	1500	410	12V135BZLD	XBD5/420-S	1450 1750	315	150
54	SDC6/420-2-GPM6600	420	6600	0.6	85	XBC6/420-S	1500	504	12V135BZLD-2	XBD6/420-S	1450 1750	355	150
55	SDC7/420-2-GPM6600	420	6600	0.7	100	XBC7/420-S	1500	504	12V135BZLD-2	XBD7/420-S	1450 1750	400	150
56	SDC8/420-2-GPM6600	420	6600	0.8	115	XBC8/420-S	1500	564	TBD604BL6	XBD8/420-S	1450 1750	450	150
57	SDC9/420-2-GPM6600	420	6600	0.9	130	XBC9/420-S	1500	655	TBD604BL6	XBD9/420-S	1450 1750	500	150
58	SDC10/420-2-GPM6600	420	6600	1.0	145	XBC10/420-S	1500	655	TBD604BL6	XBD10/420-S	1450 1750	560	150
59	SDC11/420-2-GPM6600	420	6600	1.1	160	XBC11/420-S	1500	726	TBD620L6	XBD11/420-S	1450 1750	620	150
60	SDC12/420-2-GPM6600	420	6600	1.2	175	XBC12/420-S	1500	810	TBD620L6	XBD12/420-S	1450 1750	710	150



### Product Summary

SHC skid-mounted firefighting system consists of standard container, diesel engine fire pump, electric pump, jockey pump, automatic control system, ventilation system, dust control system, lighting system, shock absorption system, quiet system and other automatic fire fighting water supply system.

- Standard container adopts international standard container to improve it to meet the needs of long-term operation of finished products.
- Electric pump: available single-stage pump, horizontal split case pump, end suction pump, multi-stage pump. The material can be cast iron or stainless steel, impeller can be bronze or stainless steel 304.
- Diesel engine pump: flow same as electric pump, the diesel engine through the high elastic coupling or universal joint connected into a fire pump group, the unit also includes fuel tanks, water tanks (heaters), fans, control panels and other components.
- Jockey pump: horizontal or vertical, small flow, head higher than the electric pump and diesel pump 1.5~2bar.
- Automatic control system: automatic control of electric pumps, diesel pumps and jockey pumps and ventilation, lighting, cooling and other systems, with overload, over-current protection and other functions.
- Ventilation system: to meet the needs of long-term operation of the product, from the inlet and outlet, grille, exhaust fan and other components.
- Dust system: in the ventilation or other daily operation to prevent other dust, insects and other entry.
- Lighting system: to meet the needs of equipment at night.
- Damping system: meet the relevant standards, the operation does not produce resonance.
- Mute system: The unit noise limit at runtime is 110dB(A) (at 1 m from the unit).
- Accessories are muffler check valve, soft connector, dark bar gate valve, diaphragm type pressure tank (0.6,1.0,1.6,2.5MPa) pressure sensor, inlet and outlet common piping and common base.

### Product Applicant

SHC skid-mounted firefighting system are for the warehouse, terminal, airport, oil, chemicals, factories, power plants, liquefied petroleum gas, textile, ships, cruise ships and other occasions, fire fighting supply and emergency water supply.

### Working Condition

- Altitude: ≤2500 meters
- Ambient temperature: -25~55°C
- Air relative humidity: 9~95%
- Seismic intensity: 7 degrees
- Flow range: 10~1400 (L/s)
- Head range: 32~240m
- Diesel power: 18~1800kW



### Detailed Description

Consists of the electric pump, diesel pump, jockey pump.

- Working status: main pump (electric pump) + standby pump (diesel and pump) + jockey pump
- Flow: 100, 150, 200, 300, 400, 500, 750, 1000... GPM
- Head: 4, 5, 6, 8, 10... Bar.
- Pressure tank: 25, 50, 75, 100... L
- Pressure 0.6mpa, 1.0mpa, 1.6mpa, according to pump flow and head

According to customer's requirements and fire standards to design it. The complete fire pump assembly is fixed in the pump room and has all standard accessories, valves and accessories for fire pumps and pump test equipment. In addition to these fire pump components, the pump house also includes lighting for the pumping station and the necessary fire fighting equipment, such as independent thermal detectors and fire extinguishers. All internal wiring and piping are completed at the factory, the external connector is set on the outer surface of the housing, enabling simple piping and power connections.

All major fire pump components such as fire pumps, actuators, controllers, valves, pressure gauges and flowmeters comply with the NFPA 20 standard and the CCCF standard. Only high-quality parts and accessories can be used with the pump room to ensure reliable performance and long service life. Need to be in the field to suck exhaust pipe, diesel exhaust pipe and power input connection. Before shipping according to the standard, the complete packaging is thoroughly tested and inspected.

This fire pump systems contain the following standard components:

Specially designed prefabricated houses (containers)	Jockey pump check valve
Specially designed piping system	Diesel pump check valve
Electric pump	Diesel fuel tank
Electric motor	Battery
Diesel engines	Independent pressure sensor
Diesel pump	External power connection terminal
Jockey pump	External pipe connection
Suction gate valve	Indoor weather protection lights
Electric pump, diesel engine, jockey pump, flexible joint	Light steel structure and wheel
Electric pump check valve	Steel frame ventilation fan
Discharge gate valve	Safety valve
Suction pipe	Fuel tank ventilation pipe
Discharge pipe	Emergency lights
Electric pump, diesel engine, jockey pump control panel	Fire traditional control panel
Ball valve	Electrical auxiliary system
Suction pressure gauge	Fire extinguisher
Discharge pressure gauge	Etc.

**Feature and Application**

H series of right-angle gear box can be the prime mover horizontal axis power to the vertical pump shaft, it has economic, efficient, space-saving and suitable for a variety of climatic conditions and so on.

H series of right angle gear box directly with the diesel engine, horizontal motor or steam turbine supporting for long axis pump, deep well pump, diagonal pump, axial pump, liquid pump and other vertical Pump drive and speed, can also be used for a variety of vertical axis of the machine at right angles and speed. H series of right angle gear box can directly bear the working machinery may exist in the axial force, simplify the structure of the working machinery. Can be widely used in farmland irrigation, water conservancy projects, municipal engineering, metallurgical and mining, petrochemical, fire and marine engineering and other fields.

A variety of models and transmission ratio can meet the high and low speed prime mover and pump use requirements.

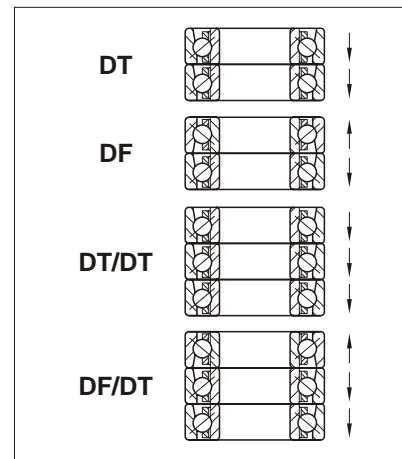


**Thrust bearing form selection**

Vertical shaft (hollow shaft) can be used to withstand the upper part of the larger thrust bearings, to meet most of the pump and different head requirements. In most cases, the thrust of the gearbox itself is mainly used to reduce the load on the shaft "thrust bearing", so there is a minimum downward thrust to prevent vertical axis "thrust bearing" separation.

- Unless otherwise specified, H series gearboxes are generally arranged in the form of DT, corresponding to the "standard" thrust shown in the technical data sheet.
- If you are subjected to "upward thrust" or "downward thrust" is not enough, you can use the DF way layout, corresponding to the technical parameters shown in the "two-way" thrust.
- If the "thrust down" exceeds the standard thrust value in the technical parameter table, it can be selected according to the heavy type, corresponding to the DT/DT arrangement.
- The heavy force can also be arranged according to the DF/DT mode. At this time, the downward thrust corresponds to the "standard" thrust value in the technical parameter table, and the upward thrust is selected according to the "two direction" in the technical parameter table.

**Arrange Mode**



**Parameter Selection**

When used to drive the deep well pump, the technical parameters table already contains the appropriate load factor, the user can directly use, other circumstances, please consult the company.

American Gear Manufacturers Association provisions spiral bevel gear load factor should be greater than or equal to 1.5, different applications, the load coefficient values are different. In addition, other factors that affect the rated power of the gearbox include bearings, shafts, temperature and lubrication, etc., technical parameters have been considered in the table.

The choice of oil cooling mode should take into account the thrust, speed, ventilation and operating conditions and other factors. For gearboxes equipped with an oil cooler, the coolant should be operated at about 20°C.

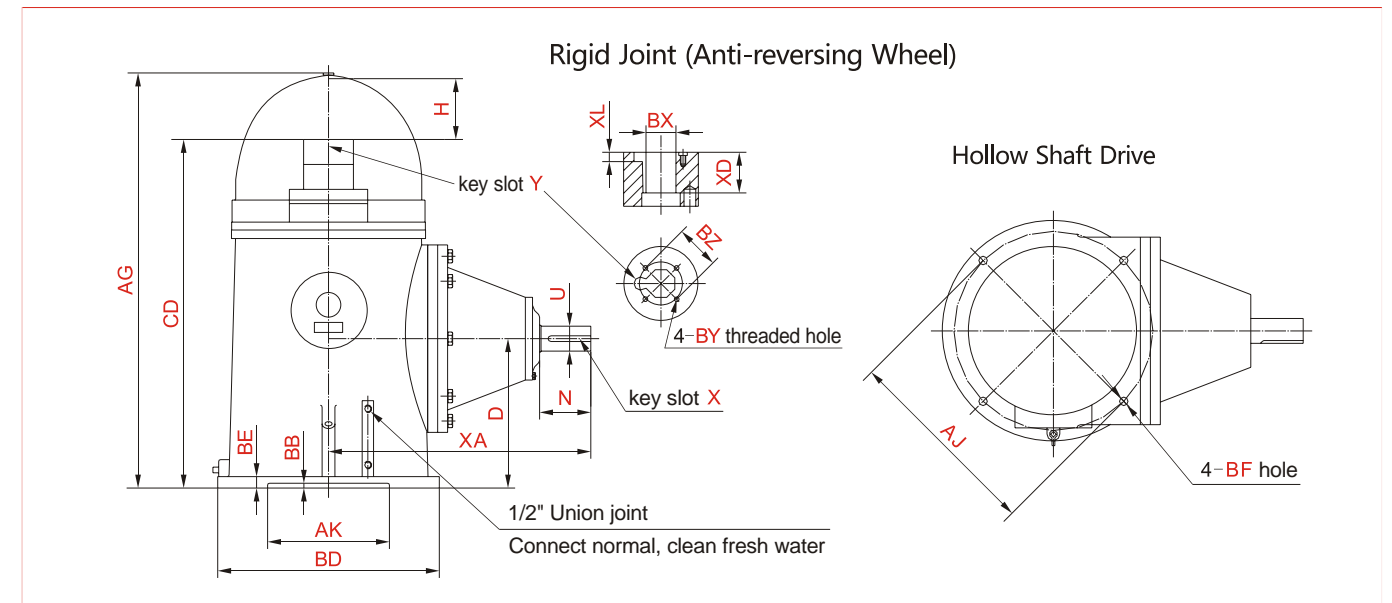
**H Right-angle Gear Box Technical Parameter (Thrust Value)**

Model	Speed	Power	Standard		Heavy Force		Double Direction
			Single Downward Thrust (N)				Maximum Downward or Upward Thrust
			Minimal	Maximum	Minimal	Maximum	
H20	1160	15/11		6230	3337	10200	6230
	1460	17/12.5		5785		9800	5785
	1760	20/15		5340		8900	5340
	3460	30/22		4450		7100	4450
H40	1160	30/22	4000	19580			11500
	1460	35/26	3780	18690			11100
	1760	40/30	3560	17800			10700
H60	860	34/25	6450	26700			16000
	960	38/28	6100	25580			15200
	1160	43/32	5780	24500			14700
	1460	52/38	5560	23100			13800
	1760	60/44	5340	22200			13350
H80	860	46/34	9120	32900	6675	43200	19600
	960	50/37	8980	31540		42100	19100
	1160	58/43	8680	30700		40500	18250
	1460	69/51	8000	28500		36900	16910
	1760	80/60	7560	26700		35600	13350
H110	860	63/46	10450	32900	8000	43200	19600
	960	69/51	9920	31540		42100	19100
	1160	80/60	9790	30700		40500	18250
	1460	95/70	9120	28500		37800	16910
	1760	110/81	8450	26700		35600	13350
H125	720	63/46	12900	37800	12460	54300	22700
	860	72/53	12000	35600	11800	51600	21400
	960	79/58	11780	34790	11560	50400	21000
	1160	90/66	11350	33400	11100	48000	20000
	1460	108/79	10680	31150	10200	44900	18700
H150	720	75/55	13570	43600	14000	66750	26250
	860	87/64	13130	41830	13350	63630	24900
	960	95/70	12890	40120	13000	62120	24100
	1160	108/79	12240	39160	12460	59180	23600
	1460	129/95	11570	36930	11570	55620	22250
H200	720	100/73.5	16000	53400	15130	72085	30000
	860	116/85	14680	48950	14240	68080	28000
	960	126/93	14100	47680	13920	65610	27000
	1160	144/106	13570	45400	13350	63630	25360
	1460	172/126.5	12680	42270	12680	60000	23580
H300	720	150/110	16700	60700	16700	83660	36500
	860	174/128	15800	57850	16000	79650	34700
	960	189/139	15500	56100	15600	77210	33200
	1160	216/159	14900	54300	14900	74310	32500
	1460	258/190	14000	51200	14000	69860	30700
1760	300/220	13350	48950	13350	66750	29400	

**H Right-angle Gear Box Technical Parameter (Thrust Value)**

Model	Speed r/min	Power HP/kW	Standard		Heavy Force		Double Direction
			Single Downward Thrust (N)				Maximum Downward or Upward Thrust N
			Minimal	Maximum	Minimal	Maximum	
H350	720	175/129	18900	72530	18700	89000	43600
	860	203/149	18000	68970	17800	84500	41400
	960	221/162	17700	67300	17400	82400	40300
	1160	252/185	16700	64100	16700	79200	38300
	1460	301/221	15800	60500	15600	74300	36500
	1760	350/257	15130	57850	15100	71200	34700
H425	720	213/156.5	20700	83200	21100	111200	49840
	860	246/181	19800	79650	20200	106800	47610
	960	268/197	19100	77230	19700	103700	46510
	1160	306/225	18500	73870	18700	97900	44500
	1460	366/269	17350	69860	17800	93400	41830
	1760	425/312	16900	66750	16900	89000	40050
H500	720	250/184	23360	83200	23360	111200	49840
	860	290/213	22250	79650	22470	106800	47610
	960	315/232	21870	77160	21670	103700	46510
	1160	360/265	20700	73870	20470	97900	44500
	1460	430/316	19580	69860	19580	93400	41830
	1760	500/367.5	18690	66750	18690	89000	40050
H600	720	300/220	24500	89000	24250	115700	53400
	860	348/256	23140	84500	23360	111200	50730
	960	378/278	22670	82400	22770	107100	49720
	1160	432/317	21800	79200	21580	102300	47610
	1460	516/379	20500	74300	20470	97900	44500
	1760	600/441	19580	71200	19580	93400	42720
H750	720	375/276	27600	89000	27800	115700	53400
	860	435/320	26250	84500	26700	111200	50730
	960	473/347	25300	82800	26000	107100	49720
	1160	540/397	24500	79200	24500	102300	47610
	1460	645/474	23140	74300	23580	97900	44500
	1760	750/551	22250	71200	22250	93400	42720
H1000	490	279/205	34500	108000	37500	125000	60000
	580	329/242	32000	102000	34200	120000	57800
	720	408/300	30700	97000	30900	115700	53400
	860	488/359	29340	93400	29700	111200	50730
	960	544/400	28500	91700	29200	107100	49720
	1160	660/485	27600	87300	28500	102300	47610
	1460	830/610	26250	84500	27200	97900	44500
1760	1000/735	24000	79100	25000	93400	42720	
H1360	490	680/500	35000	108000	38600	125000	60000
	580	821/604	32600	102000	35400	120000	57800
	720	1020/750	31200	97000	31800	115700	53400
	860	1217/895	29800	93400	30600	111200	50730
	960	1360/1000	29700	91700	30200	107100	49720
	1160	1643/1208	28200	87300	29500	102300	47610
1460	2067/1520	26900	84500	28300	97900	44500	

**Outline Dimension (As NEMA Standard)**



Model	CD	D	U	XA	N	AG	H	BE	BD	AJ	AK	BB	BF	Key Slot X	Max.BX		XD
															FIG.1,4	FIG.2,3	
H20	368	162	28	330	70	457	76	16	254	232	210	5	11.5	8×3.5×57	25		32
H40	514	228.5	38	406	90	629	102	19	419	375	343	5	18	10×4×70	38	38	45
H60	514	228.5	38	406	90	629	102	19	419	375	343	5	18	10×4×70	40	42	45
H80	514	228.5	48	419	90	629	102	19	419	375	343	5	18	14×4.5×70	40		45
H110	635	289	50	445	90	749	102	25	419	375	343	5	18	14×4.5×70	50	50	54
H125	635	289	50	445	90	749	102	25	419	375	343	5	18	14×4.5×70	50	50	54
H150	762	336.5	60	521	120	876	102	25	508	375	343	5	18	18×5.5×95	55	55	60
H200	762	336.5	60	521	120	876	102	25	508	375	343	5	18	18×5.5×95	55	55	60
H300	870	381	70	610	140	1016	133	29	508	375	343	5	18	20×6×121	60	60	66
H350	978	419	70	737	140	1168	178	32	622	559*	343	10	24	20×6×121	60	60	76
H425	1003	419	75	762	145	1168	159	32	622	559*	343	10	24	20×6×121	60	60	85
H500	1003	419	90	787	170	1168	159	32	622	559*	343	10	24	25×7×140	75	75	85
H600	1080	419	95	838	190	1295	203	32	622	559*	343	10	24	25×7×140	75	80	100
H750	1162	482.5	100	914	190	1372	197	38	775	660	559	10	24	28×8×152	90	90	100
H1000	1405	545	110	1043	210	1610	153	35	920	860	600	7	8-28	28×8×170	100		
H1360	1507	550	130	1290	250	1725	153	35	1250	1180	1120	-5	8-28	32×9×220	110		

- Notes:
- When the size of the heavy thrust drive CD and H may change, the reduction ratio of 7:4~4:1 size XA, U, N and X can change, please contact the company.
  - When the speed ratio is 3:4~1:2, the dimensions D, CD, AG, XA, U, N and X may change. Please contact us.
  - FIG. 2 to FIG.4 shows the rotation, heavy thrust, reduction ratio of 7:4~3:1, the growth rate of 3:4~1:2 and other four kinds of cases are produced according to special orders.
  - Tolerance: Shaft diameter U, base slot AK, coupling hole BX.
  - \* Four M16 deep 25 screw holes can also be arranged on the circumference of diameter Φ375.

### Fuel Tank Selection

• **Fuel tank capacity**

Tank capacity is generally the engine of fuel per hour at rated power load is generally 190~250g/kW.h, calculate the fuel consumption of 6 hours, leaving 10 to 15 percent margin. Specific reference diesel technology parameter table.

• **Oil storage tank capacity**

The main fuel storage tank rated capacity is based on anticipated fuel consumption and operating time to be calculated. In the design of fuel tank capacity, in order to ensure continuous operation of the lowest fuel supply as a standard.

### Fuel Tank Specification

Fuel Tank Specification L	Square B×H×L	Fuel Tank Specification L	Vertical Cylindrical D×H	Horizontal Cylindrical D×L
45	310×260×700	350	680×650×900	
55	310×260×800	375	720×580×1000	
75	370×340×695	400	615×590×1200	
80	400×280×830	500	Φ750×1260	
90	470×315×680	600	Φ850×1260	
110	500×305×800	800	Φ950×1260	
125	420×380×900	1000	Φ1070×1260	
145	540×440×680	1200	Φ1150×1260	
150	480×400×870	1500	Φ1200×1500	
165	480×400×950	1800	Φ1300×1500	
175	620×500×630	2000		Φ1120×2250
200	480×400×1200	2500		Φ1250×2250
240	620×500×860	3000		Φ1370×2250
280	680×650×720	3500		Φ1480×2250
300	620×500×1060	4000		Φ1500×2500

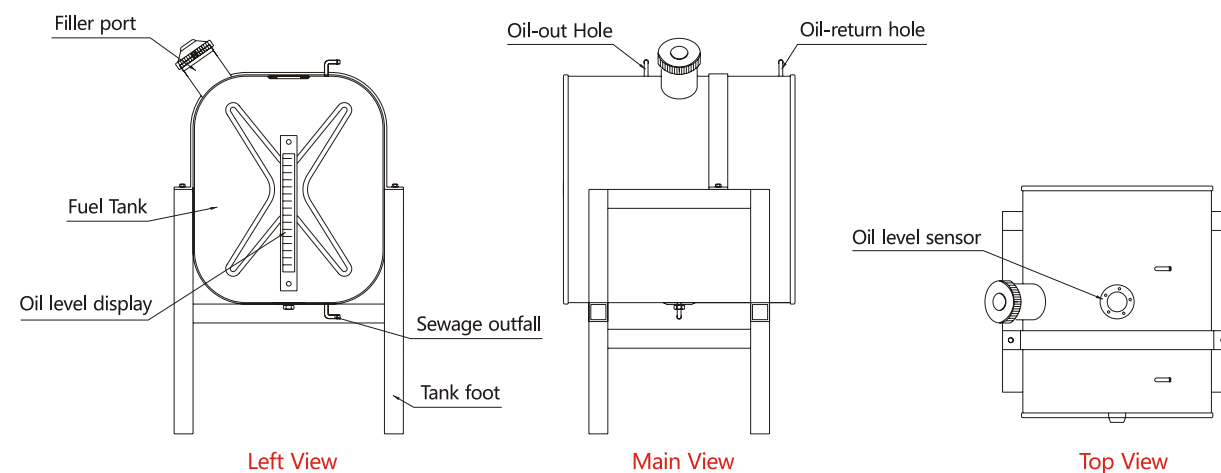
Notes : L—length, B—width, H—height, D—diameter (unit: mm).

### Grade of diesel engine

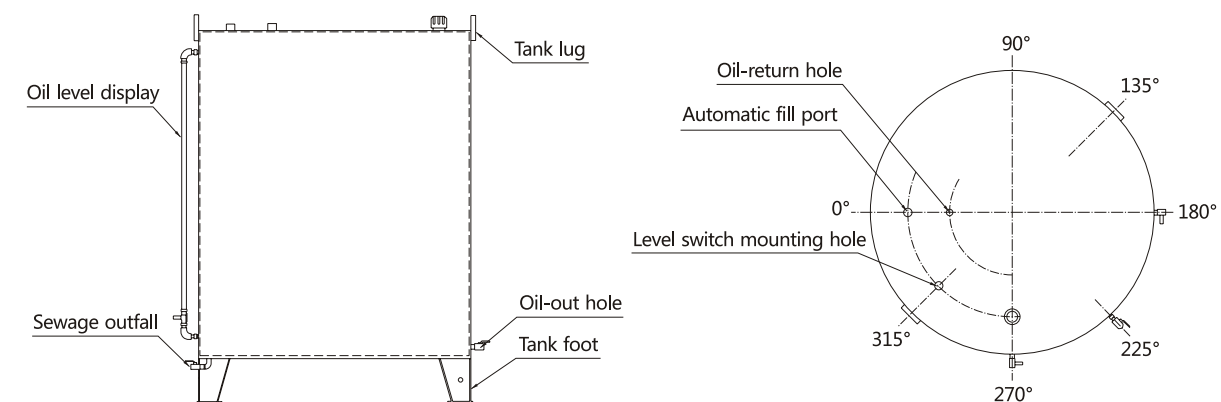
Light diesel oil is used for high-speed diesel 1000r/min or more in fuel, light diesel oil products are now standard for the implementation of GB252-2000 "light diesel" standard, grade division is based on diesel freezing point of diesel. Temperature customer should choose the appropriate workplace grades of diesel.

Minimum Ambient Temperature(°C)	Light Diesel Oil Grades	Minimum Ambient Temperature(°C)	Light Diesel Oil Grades
> 4	0#	-14~-29	-35#
> -5	-10#	-29~-44	-50#
-5~-14	-20#		

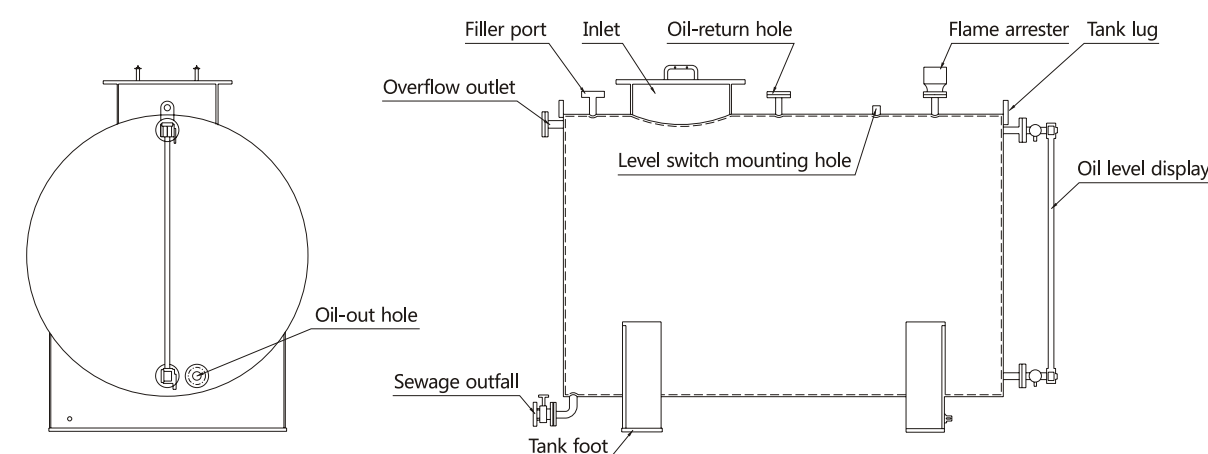
### Fuel Tank Outline Structure



Horizontal Square Tank



Vertical Cylinder Fuel Tank

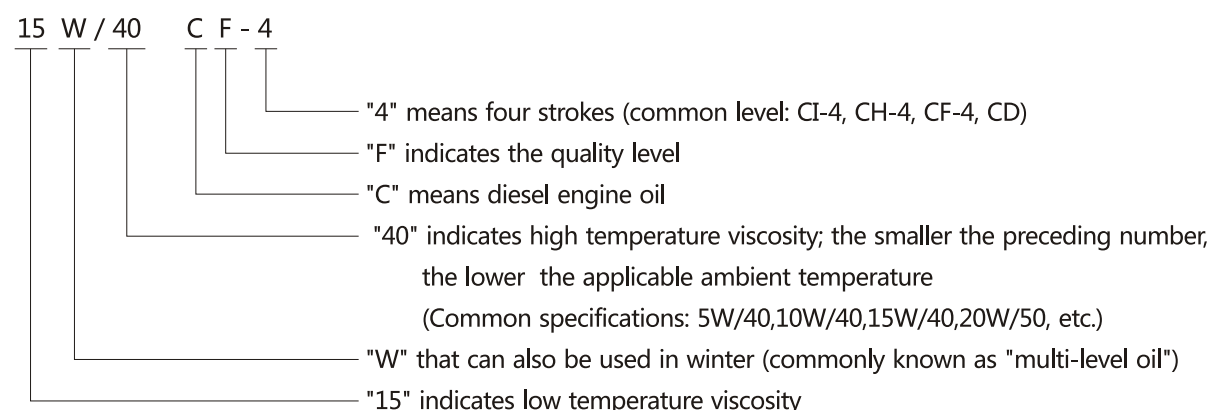
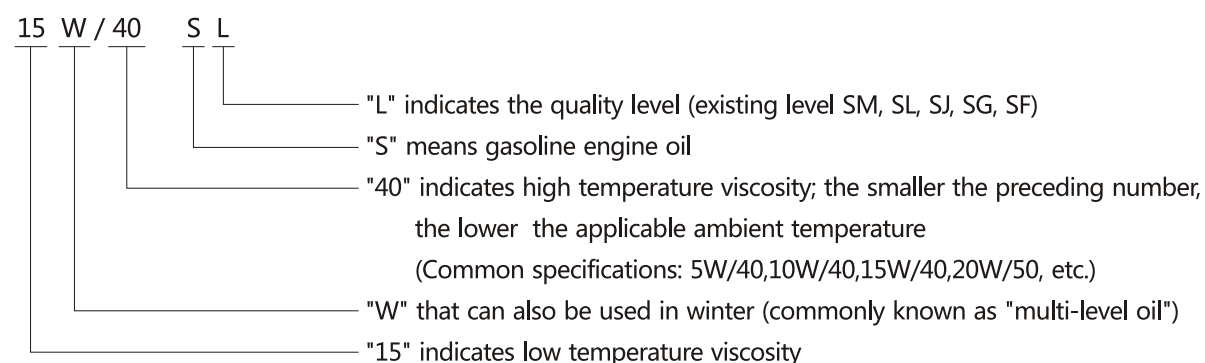


Horizontal Cylinder Fuel Tank

### Engine Oil Selection

- **Oil selection should meet the following two conditions**
- Oil level, according to the technical requirements of the engine to meet the requirements of the engine level of oil;
- Viscosity, oil used in different seasons for local climatic conditions.

• **Model of oil**



• **Oil selection recommendations**

- 15W/40 CF-4 above the level of regular brand of oil (for ambient temperature -20°C~40°C);

• **Oil brand recommendation**

• Shell was founded in 1907 by the UK and the Netherlands, the world's top 500 enterprises, one of the largest chemical products operators in the Netherlands, Shell is a global energy and chemical group, headquartered in The Hague, the Netherlands is currently China's largest International lubricants supplier, in addition to Shell or China's largest international gas technology and asphalt suppliers, about 600 Shell gas stations can provide services.

• Mobil: founded in 1882 the United States, the world famous brand, the world's second largest oil company, Essen Mobil is the world's leading oil and chemical company, founded by John Rockefeller in 1882, is the world's largest non-governmental oil and gas producers And the world's largest non-government natural gas distributor; one of the world's four major crude oil suppliers, large multinational corporations.

• The Great Wall is one of the world's largest energy companies. The Great Wall is the first in China. Asia's largest high-grade lubricants production and sales group is the fastest growing in the world. Lubricating oil brand.

### Engine Oil Selection

Type	Condition	Usage
CI-4	In Use	September 5th, 2002 implementation. The 2002 implementation of the four-stroke engine for high speed is designed to meet the 2004 exhaust standard lubricants. CI-4 lubricants are configured according to the durability requirements of the exhaust gas recirculation engine. Develop diesel engine with sulfur content up to 0.5% diesel. Can replace CD, CE, CF4, CG-4 and CH-4 lubricating oil.
CH-4	In Use	Implemented in 1998. For high-speed, four-stroke engines are designed to meet the 1998 emission standards. CH-4 Lubrication oil is specially developed for diesel engines with up to 0.5% sulfur content. Can replace CD, CE, CF-4 and CG-4 lubricating oil.
CG-4	In Use	Implemented in 1995. For diesel oil with less than 0.5% sulfur content of heavy load, high speed, four-stroke engine. CG-4 lubricants are used in engines that meet the 1994 emission standards. Can replace CD, CE and CF-4 lubricants.
CF-4	In Use	Implemented in 1990. For high speed, four stroke, naturally aspirated and turbo charged engine. Can replace CD and CE lubricating oil.
CF-2	In Use	Implemented in 1994. For heavy duty, two-stroke engine. Can replace CD-II lubricants.
CF	In Use	Implemented in 1994. For off-road, direct injection and other diesel engines, including diesel sulfur content of more than 0.5% machine. Can replace CD lubricants.
CE	Abolish	Implemented in 1987. For high speed, four stroke, naturally aspirated and turbo charged engine. Can replace CC and CD lubricating oil.
CD-II	Abolish	Implemented in 1987. Used for two-stroke engines.
CD	Abolish	Implemented in 1955. For some naturally aspirated and turbo charged engines.

## Oil Change

- **Diesel engine oil change cycle**

Diesel engine oil after a period of time use, will be dirty, oxidation, deterioration, lubrication, cooling, cleaning, sealing and other performance significantly deteriorated. In the main performance indicators after falling to a certain extent, it must be replaced.

However, due to the working environment, the use of diesel engine technology status and so on, the staff is difficult to determine whether the replacement, so according to the use of Oil for analysis and determination based on whether to replace the oil.

- **The principle of oil sampling**

- Do not add new oil to the diesel engine before sampling;

- Sampling should be used after the thermal shutdown of diesel engines 15 to 30 minutes after the end, as far as possible from the oil under the sampling;

- The sampler should be dry and clean.

- **Four simple ways to judge the quality of oil**

- Color check method

The oil on the white paper, or the oil sample will be extracted in a glass bottle for some time, and then compared with the fresh oil samples observed, the difference is not that oil quality can be. Such as oil deep or completely black, the oil has been seriously deteriorated, should be with the change.

- Visual inspection method

Sampling a certain amount of oil slowly pour out from the container, observe the oil luster, turbidity, such as oil can maintain slender and uniform, with a certain viscosity, that is oil in the debris, less water, you can continue to use.

- Filter check method

Take 100ml with oil, add 200ml of unleaded petrol diluted, and then filter with filter paper and be dried, when the sludge sediment to 2 grams should be replaced when the oil.

- Odor inspection method

In the use of oil such as oxidation is serious, there will be a strong pungent smell; if diluted by diesel, you will smell a strong smell of diesel.

- **The principle of oil selection**

- Preferred branded products;

- Preference for oil with lower viscosity grades;

- Choose to use cost-effective products;

- Try to use multi-grade oil.

## Antifreeze Selection and Usage

- **Antifreeze selection**

- Choose an antifreeze for better engine

Now on the market of antifreeze is generally divided into inorganic antifreeze and organic antifreeze. Simply put, the inorganic antifreeze can not be watered, and organic antifreeze can be. Between the two, the use of anhydrous antifreeze on the engine will be more favorable.

- See the date of antifreeze production

Antifreeze is generally valid for two years, but the more new the better, when the purchase to be optimistic about the production date, placed more than a year can not buy, will produce more scale and other impurities, adverse to the diesel engine.

- Choose seasonal antifreeze

Now most of the antifreeze are four seasons common, so save the winter to replace the antifreeze trouble. But some owners seek cheap, summer use of some of the antifreeze, winter and then change the better, so in fact, but not save money.

- Use the same brand antifreeze

Different brands of antifreeze can not be mixed because antifreeze is a coolant containing special additives. Different manufacturers will have a certain difference between the formula, mixed use will inevitably appear without certain chemical reactions, protection is not anti-harm.

- **Antifreeze use method**

- Select the freezing point (the freezing point) according to the ambient temperature conditions of the diesel engine. Freezing point is an important indicator of antifreeze, under normal circumstances the freezing point should be selected in the local environmental conditions than the minimum winter temperature is about 10°C lower; antifreeze grade is generally its freezing point value, different areas of the purchase reference value should be different, The Yangtze River to the south of the year can be used for the number of -25 antifreeze, some areas can also use the freezing point of -15°C water tank coolant; north of the Yangtze River, northeast and northwest region should be selected for -35~-50 antifreeze. Note that different manufacturers, different grades of antifreeze can not be mixed use.

- Temporarily replace antifreeze

In order to make antifreeze to play a better role, must be replaced regularly, usually every year or run 500 hours to replace once, frequent use of diesel engines should be replaced some ground. Replace the thoroughly clean the old liquid, clean the cooling system, and replace the new antifreeze.

- Do not go watered

Many owners in order to save money, summer like to use mineral water instead of antifreeze, in fact, this is very good for the vehicle. Antifreeze in addition to antifreeze effect, as well as cooling, anti-corrosion, anti-scaling effect, if the water instead of antifreeze, likely to cause the engine compartment corrosion and accumulation of scale.

- If the amount is not enough, the cooling effect is not enough. If the filling is excessive, it will cause the tank to expand, and 5% of the expansion space must be set aside.

## Diesel Engine Fire Pump Room Cooling and Ventilation

- **Two sets of independent ventilation systems**

To put the pump system in room in the low temperature environment for the operation of diesel engines to provide environmental protection at the same time, but also brought ventilation problems. Consider the following two questions:

- Such as diesel engine fire pump installed in a closed pump room, because the conventional case of diesel fire pump does not work, ready to start state, need to design a set of independent a daily ventilation system outside the diesel engine;
- Provide the necessary fresh air ventilation system for the combustion of diesel fuel;

For this, the pump should be set up two sets of independent ventilation system, using low in and high out the natural ventilation to achieve pump ventilation. The use of natural ventilation of the engine room to be sufficient size of the air inlet and outlet, the location should ensure that the temperature limit within the range of sufficient fresh air to the diesel engine combustion. Such as natural ventilation does not meet the requirements, can be taken to force ventilation, installed in the ventilator into the fan or exhaust fan. Fan specifications and engine room inlet and outlet position should be selected for the diesel engine to provide adequate cold air, while taking away the hot air inside the room. The minimum air flow rate of the unit should be 6-7 times of the diesel engine intake.

- **Pump system ventilation system design**

The diesel fire pump room belongs to the machinery space, in the summer working conditions, the indoor maximum temperature is higher than the outdoor temperature, just keep the ventilation to provide adequate fresh air. Winter conditions, the outdoor temperature is under zero, the room should be maintained at about 5°C.

- Diesel engine to be activated under the room ventilation design

(1) In order to ensure the positive pressure of the pump room, the pump room with mechanical air into the natural exhaust. Calculate ventilation by hourly ventilation.

$$Q_1 = n_1 \times V_1$$

Q<sub>1</sub>---ventilation volume (m<sup>3</sup>/h); n<sub>1</sub>---ventilation times 5 times/hour; V<sub>1</sub>---ventilation room volume (m<sup>3</sup>)

(2) in the winter low temperature environment, the pump room need to set the heating fan or other ways to keep warm, to improve the room temperature to ensure that the diesel engine start temperature requirements.

- Ventilation design after start the diesel engine

Diesel engine start after the air demand in two parts, part of the diesel fuel combustion to provide adequate oxygen, the other part of the diesel engine used to take away the heat sending in the surrounding air. Ie  $Q = Q_2 + Q_3$ (1) The combustion air consumption can be found in the diesel performance data sheet. Diesel engine operation to achieve the power of different, its consumption is also different, calculated by the full load operation of the consumption calculation can also be calculated according to the following formula:

$$Q_2 = P_c \times m_c / \rho_a$$

Q<sub>2</sub>---to ensure that the diesel engine fuel combustion required air volume (m<sup>3</sup>/s);

P<sub>c</sub>---the maximum power of the diesel engine when the shaft power (kW);

m<sub>c</sub>---diesel engine unit power combustion required air volume (kg/kW·s); ρ<sub>a</sub>---the air density to take 1.2kg/m<sup>3</sup>.

- The ventilation required for body cooling

Because the cooling water cooling unit is air-cooled and water-cooled two, air-cooled is the use of fan forced ventilation away from the cooling water absorbed from the unit, water cooling through the heat exchanger cools the heat absorbed from the unit into the open fluid to cool the unit. Calculation of cooling ventilation should be considered separately. For oil fire pump, because the seawater is more convenient, multi-purpose open water on the closed cooling water for water cooling. In this case, the ventilation volume can be reduced. Ventilation is calculated according to the following formula:

$$Q_3 = H_2 / (\rho_a \times c_a \times \Delta T)$$

Q<sub>3</sub>---The required air volume to take away heat dissipation (m<sup>3</sup>/s); H<sub>2</sub>---heat dissipation (kW); ρ<sub>a</sub>---air density, take 1.2kg/m<sup>3</sup>;

c<sub>a</sub>---air mass heat capacity, take 1.005 kJ/(kg·K); ΔT---air temperature and the cabin temperature difference, K which,

Heat dissipation can be found from the diesel engine performance data sheet, more accurate. Can also be calculated according to the formula:

$$H_2 = w \cdot P \quad (7)$$

w---the heat dissipation rate relative to the diesel power, typically 6%; P---the calibration power of the diesel engine;

Through the above calculation can be drawn the total ventilation of the pump room, and then according to the wind speed control, you can calculate the size of the ventilation blinds, according to the

$$A = Q / v \cdot \psi$$

A---the effective ventilation rate of the blinds (m<sub>2</sub>); v---the airflow rate of the blinds is less than 3m/s;

ψ---the effective ventilation rate of the blinds (%)

## Diesel Engine Fire Pump Room Cooling and Ventilation

- Safety facilities Fire damper and fire detectors and other equipment

According to the degree of fire hazard of the diesel fire pump room, it is possible to determine the corresponding fire integrity level of the pumping station and the adjacent separation zone. When the ventilation duct passes through the bulkhead or deck, the duct shall meet the requirements of the safety rules for the integrity of the ducts through the ducts, and install the certified fire damper at the necessary location. Pump room daily ventilation system, in the mechanical air inlet and natural exhaust should be set fire damper, in the natural exhaust to install a gravity dam. Diesel fire pump working ventilation system inlet and outlet are set double pneumatic blinds, the inner layer is normally open fire shutters, after receiving the fire signal closed. The outer part is a normally closed pneumatic damper, which is opened when the pump start signal is received. In the double-sided pneumatic shutters on the outside need to set a fixed rain shutters, with anti-bird network. At the same time, combustible gas detectors should be installed in accordance with the requirements of the ventilation and combustion air at the entrance to ensure that can detect combustible gases and steam, and to ensure that its work from the environment.

- **Installation precautions**

In order to ensure that the ventilation system of the pump house can run well, it is necessary to pay attention to the following when designing or installing: When arranging the intake and exhaust shutters, it is necessary to meet the main wind direction of the platform, which will help the air flow smoothly to ensure good ventilation. At the same time, should also pay attention to the end of the exhaust pipe diesel engine to stay away from the pump inlet and outlet, to avoid the smoke and air mixed. As the air volume, low wind speed, blinds generally larger size, should be considered effective in the installation support. If the double louvers are installed indoors, ensure that there is sufficient access to the surroundings of the unit to avoid obstruction of the blinds or to extend the passageway as the louvers extend into the room. Such as installed in the outdoors, should also consider the escape channel not to be blocked by the blinds. Blinds around the pneumatic actuator should be left enough maintenance space, while avoiding the wall insulation structure covered. This should be taken into account when designing or installing.

## Diesel Engine Fire Pump Routine Maintenance

- **Features of diesel engine fire pump**

The biggest difference between diesel engine fire pump and electric water pump is that it has its own independent power supply system battery, so the diesel engine fire pump start and run can be completely out of the relationship with the electricity.

Diesel engine fire pumps are usually used as a backup facility, so that only when the fire signal comes, and the electric water pump failure or power failure in the case of automatic start. When it has ultra-low pressure start device, and its supporting electric water pump control cabinet, there should be ultra-low pressure start device, and the two lower pump should have a certain pressure difference. Of course, I can also according to customer requirements, designed more suitable for customer demand control system.

- **Diesel engine fire pump maintenance**

The proper maintenance of the diesel engine fire pump, especially the preventive maintenance, is the easiest and most economical maintenance, so it is the key to prolong the service life and reduce the use cost. Routine maintenance The following steps can be taken to check the fuel consumption of the fuel tank to observe the fuel tank fuel consumption, according to the need to add.

- Check the oil level in the oil pan to see if the oil level reaches the mark on the oil scale. If it is insufficient, it should be added to the specified amount, but not above the upper limit of the scale.
- Check the fuel injection pump governor oil plane If you do not meet the specified marking mark, should be add enough oil (some fuel injection pump governor without ruler, you can save this step)
- Check whether there is sufficient grease in the oil filling point of the pump to remove the oil filler from the diesel pump on the circulating pump to see if the grease inside is sufficient, if enough, apply the oil gun to fill the inside with sufficient grease.
- Check the antifreeze in the tank is sufficient to find the water tank in the antifreeze should be added in time to add the antifreeze should be the same brand of the same model. Or according to the local minimum temperature configuration appropriate freezing point of the antifreeze, glycol antifreeze formula is as follows:

Ethylene Glycol	Water	Solidifying Point	Ethylene Glycol	Water	Solidifying Point
60%	40%	-55°C	50%	50%	-32°C
55%	45%	-40°C	40%	60%	-22°C

## Diesel Engine Fire Pump Routine Maintenance

- Check the three leaks (antifreeze, oil, gas) check the tubing, water pipe joints at the sealing surface, found a leak, should be resolved immediately. If the exhaust pipe, cylinder head gasket at the supercharger loose or leak phenomenon, it should be promptly ruled out.
- Regular (one month) to observe the electrolyte surface height, such as the liquid level down to the minimum liquid level (min) the following, you should add the regular manufacturers of battery recharge liquid to the highest liquid level (max), is strictly prohibited to join other rivers and other media.
- Check the installation of the accessories of the diesel engine, including the stability of the installation of the annex, the foot screw and the device connected with the firmness.
- Check the fuel pump drive connection plate connection screw is loose, if loose, should be re-calibrated fuel injection advance angle, and tighten the connection screw.
- Clean the appearance of the diesel engine and the auxiliary equipment Wipe the fuselage, the turbocharger, the cylinder head cover, the air cleaner, etc. on the surface with a dry cloth or a soaked diesel cloth. Blowing clean the generator, radiator, fan and other surface dust.
- **Preparation of diesel engine fire pump**  
Diesel engine fire pump in the structure than the electric pump more complex, so start the preparatory work is also more cumbersome.
  - We should first check the control cabinet on the voltmeter display is 24V, if less than 24V, should promptly identify the cause, troubleshooting.
  - Check whether the various parts of the diesel engine are normal, whether the attachment is reliable, and remove the abnormal phenomenon.
  - Check whether the oil in the oil pan and the governor is within the oil level. If the oil is found to be insufficient, add the same type of oil.
  - Check if there is sufficient antifreeze in the tank. If the open recirculation cooling system is used, the water supply should be switched on.
  - Use a hand pump on the fuel pump to inject fuel into the fuel system and unscrew the bleed screw on the fuel injection pump to remove the air from the fuel system. When there is no more air, tighten the screw and then continue the pump Oil until the return pipe has oil, and finally the hand pump tight.
  - Release the high-pressure tubing joint nuts on each cylinder injector, place the governor handle in the diesel engine running position, turn the diesel engine, and drain the air in each high-pressure tubing. This step is generally ignored. When the start fails Should not be ignored).
  - For the new machine or parked for more than 5 days without using the diesel engine, turn the crankshaft 3~5 turn before starting.
  - If there is preheat start device, and the need to warm up the start (temperature 5°C below), should also check the glow plug is normal (rated voltage 24V glow plug under normal conditions, resistance is 0.025 or so, 12V smaller)

- **Diesel engine fire pump inspection**

In order to improve the diesel engine fire pump on the fire signal response capability, it is recommended to patrol once a week. Taking into account the water hammer effect and the characteristics of the diesel engine itself, we should start the diesel engine at low speed, and then slowly accelerate to the fire required speed 1500r/min or (3000r/min). When the water temperature, oil temperature can reach 60°C when the gradual deceleration, but still need to idle before stopping (300~750r/min) running 2~3min, so as to avoid sudden shutdown due to supercharger overheating caused by supercharger bearing killed.

After parking, be sure to adjust the speed to 1500r / min, to prepare for fire needs.

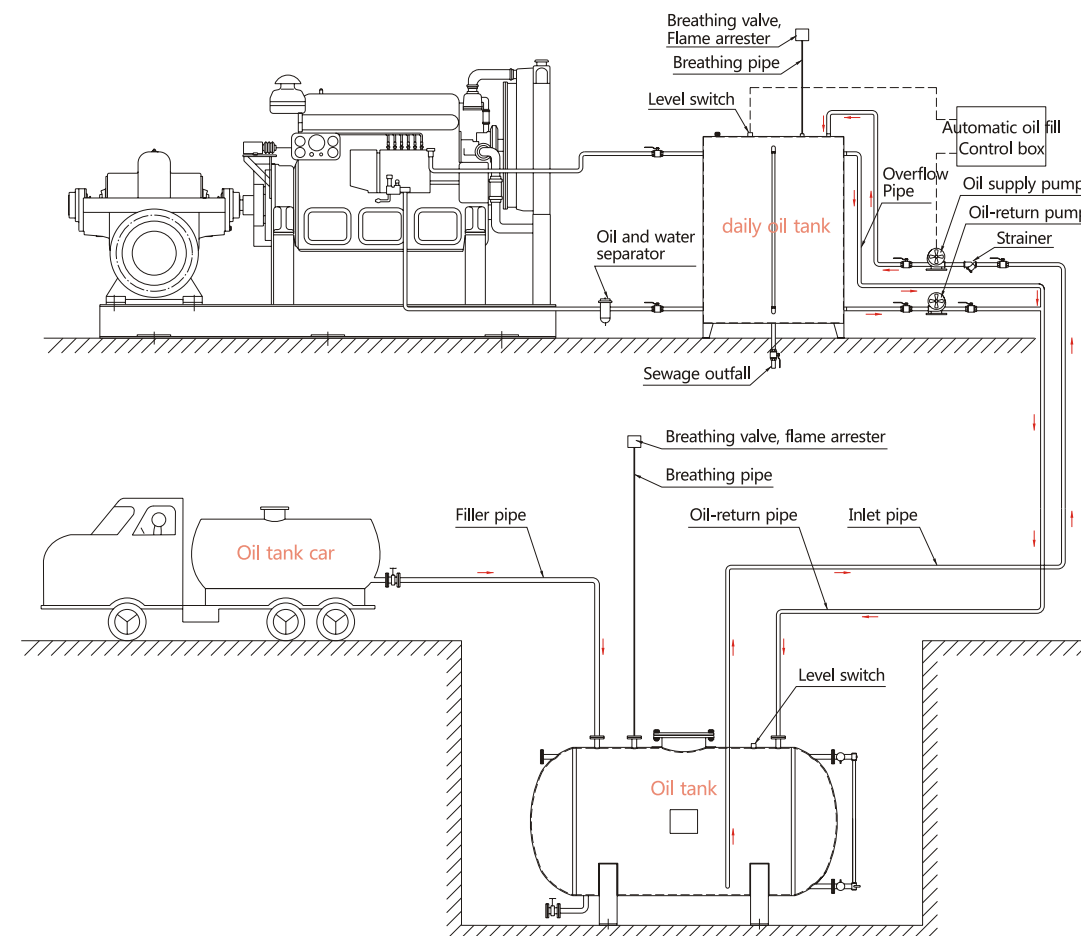
As the diesel engine fire pump inspection process is more complex, so if there is no customer's special requirements, we generally do not consider the design process of automatic inspection, it is recommended that users use manual inspection mode!

- **Diesel engine fire pump daily management**

To ensure the reliability of the entire control system, improve the daily management is inseparable. Although the diesel engine fire pump has a high degree of automation, but the human destructive factors to make it lose the function of things often happen! Components damaged or lost, the time relay and charger parameters are incorrectly modified, the user has to reflect! So the pump key to have someone to manage, but also to regularly check the equipment components are missing or damaged by other factors, and the parameters of the components are scientific and reasonable.

## Fuel Tank Auxiliary Function

- Automatic oil charge function: the user can install the oil pump, automatic control device, high oil level switch and low oil level switch to achieve the fuel automatic charge function.
- Automatic alarm function: the user can choose low oil level alarm switch, to provide low oil level alarm signal.



## Fuel Tank Installation Precautions

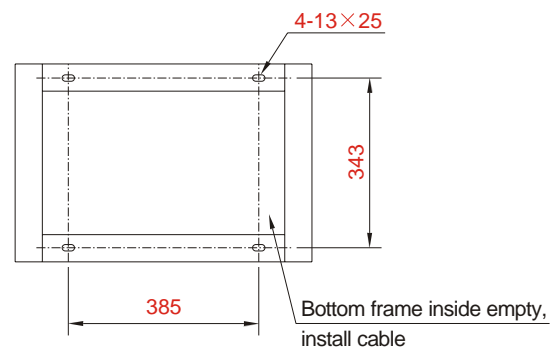
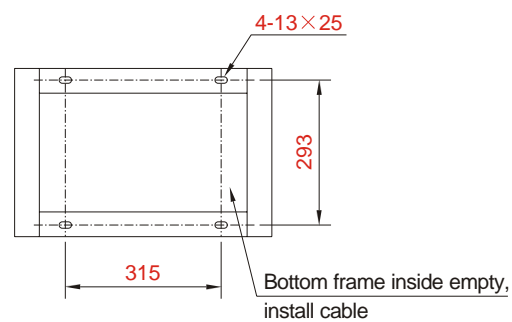
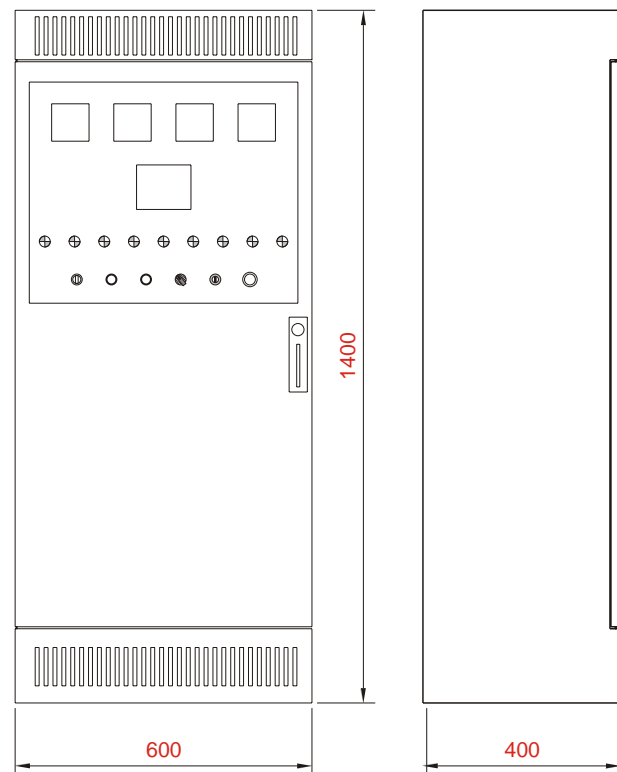
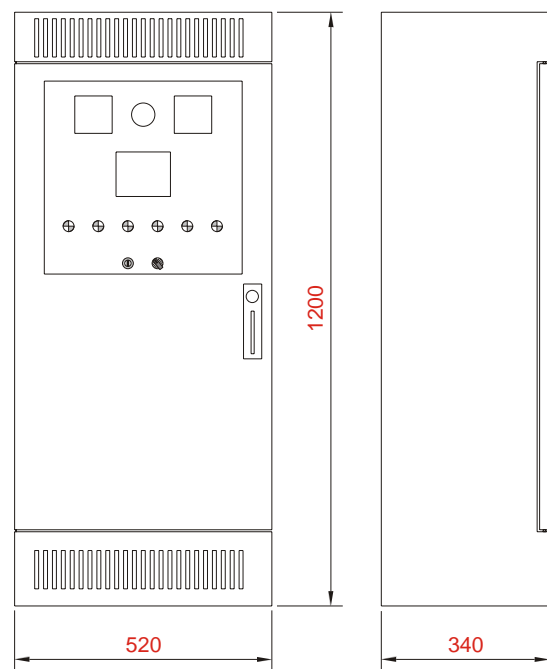
- Suggest the user to install the oil and water separator on the pipe of supply oil.
- In the tank connection, it is strictly forbidden to use ordinary raw materials to bring the seal to prevent the dissolution into the diesel engine, resulting in pipeline blockage.
- The tank should be installed position to avoid heat and vibration, as vibration causes the precipitate to appear and the heating causes a decrease in power.
  - Consider firefighting requirements more than 1000L fuel tank recommended to be placed separately, isolated from diesel engine fire pump.
  - Fuel temperature is an important factor in the good operation of diesel engines. Oil temperatures above 60°C can cause volume expansion, significantly reducing the fuel unit volume Heat capacity so that the diesel engine output power is reduced, should avoid the external heat source on the oil temperature.
  - When the user installing , the tank should be installed the position the maximum suction head should not exceed 2 meters. The suction head of the output pump be calculated from the bottom of the tank.
  - The tank should avoid exposure, the tank should be placed away from the fire source, near the tank are not allowed to smoke, not allowed to produce a spark or flame, volatile fuel can cause explosion Fried and the vicinity of the fuel tank should have the corresponding fire facilities (such as foam fire extinguishers, sand etc.) is strictly prohibited water as fire material, suggest more than 2000L of the tank placed Should be approved by the fire department.



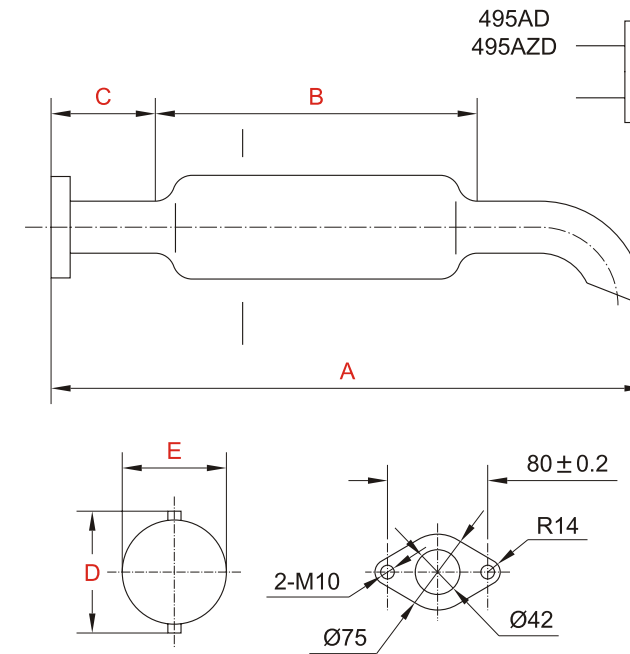
Technical Parameters of Control Panel

Dual Power Fixed Water Supply Equipment

Diesel Engine Fire Pump Control Panel

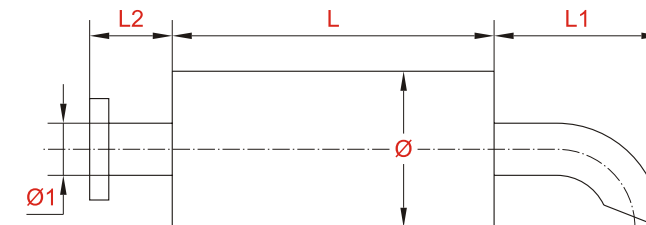


Technical Parameters of Acoustic Damper

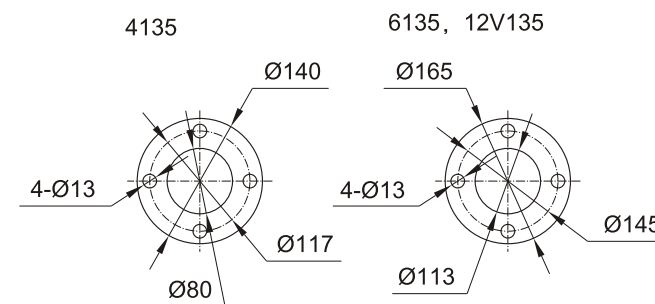


	A	B	C	D	E
380 385	540	300	80	90	80
480 485 490	1175	375	120	110	80
495 4100 4102 4105 4108	1100	665	65	100	90

80 90 95 100 102 105 108 Series



	Ø	Ø1	L	L1	L2
4135	200	80	785	310	50
6135 12V135AB	254	112	720	310	60
12V135JZB W12V135AZLB W12V138AZLB	360	110	1100	440	100



135 Series

## Working Principle and Classification of Diesel Engine Flame Arrester

Flame arrester (also known as fire extinguisher, fire extinguisher) is used to prevent flammable gases and flammable liquid vapor flame spread safety device.

- **The flame retardant mechanism of the flame arrester**

Most of the flame arresters are made of solid materials that can pass through many small passages or voids of the gas, and these channels or voids are required to be as small as possible to make the flame extinguish. Flame can be extinguished by the mechanism of heat transfer and wall effect.

- Heat transfer effect

The flame arrester is made up of many small passages or voids, and when the flame enters these tiny passages, many small flame flows are formed. As the channel heat transfer area, the flame through the channel wall after heat exchange, the temperature dropped to a certain extent the flame can be extinguished.

- Wall effect

Combustion and explosion phenomenon is in the external energy (heat, radiation, energy, chemical energy, etc.) under the excitation, so that the molecular bond is destroyed, resulting in free radicals. These new free radicals repeatedly react, and consumption and generation, continue to go on. It can be seen that the combustion conditions of the combustible mixture are: the newly generated free radical number is equal to or greater than the number of free radicals.

With the decrease of the size of the flame arrester channel, the probability of collision between the free radical and the reactive molecule decreases, and the probability of collision between the free radical and the channel wall increases, which leads to the decrease of the free radical reaction. When the channel size is reduced to a certain value, this wall effect caused the flame can not continue to spread the conditions, the flame is blocked. So the wall effect is the main mechanism to prevent the flame.

- **Selection of flame arrester**

- Flame arrester select by usage

Flame arrester according to the use can be divided into tank fire arrester, gas station fire arrester, furnace fire arrester, torch flame arrester, vent tube fire arrester, gas pipe fire arrester.

- Flame arrester select by install position

Pipe end flame arrester: installed in the end of the exhaust pipe;

Pipe flame arrester: installed in the middle of the pipeline.

- Flame arrester select by the speed to prevent flame

Explosion-proof flame arrester: can prevent the explosion through the subsonic transmission of the flame through;

Piston-type flame arrester: to prevent the shock wave is characterized by the transmission of supersonic explosion through the flame.

- Flame arrester select by gas classification

Suitable for class I gas flame arrester;

Suitable for Class II A gas flame arrester;

Suitable for Class II B gas flame arrester;

Suitable for IIC grade gas flame arrester (see HGJ 21289 for gas classification)

- **Classification of flame arrester (flame arrester is divided into different structure)**

- Corrugated flame arrester: This structure of the flame arrester by the different corrugated board and the plate wound into different specifications of the pores of the fire layer, manufacturing is relatively simple to prevent the deflagration and detonation flame through, is widely used.

- Foamed metal flame arrester: The flame retardant layer of the flame arrester uses a porous, foamed metal with a structure similar to that of a porous foam. Its advantages are small, light weight, but the resistance is large, easy to plug.

- Parallel plate type flame arrester: The flame retardant layer of the flame arrester is arranged vertically and parallel to the stainless steel sheet, and this structure can withstand the more violent explosion. It is easy to manufacture and clean, but bulky, large flow resistance.

- Porous plate type flame arrester: The flame retardant layer of the flame arrester is formed by the horizontal direction of the stainless steel sheet, and the resistance of the flame arrester is small, but it can not withstand the violent explosion.

- Water seal type flame arrester: water seal used to prevent, control airflow. The principle is to use the performance of the water level difference to prevent the flame through, because the flame through the water seal when the absorption of a lot of heat, forcing the flame to extinguish. Applicable to prevent the deflagration flame through, its structure is simple, bulky, so the use of its limitations.

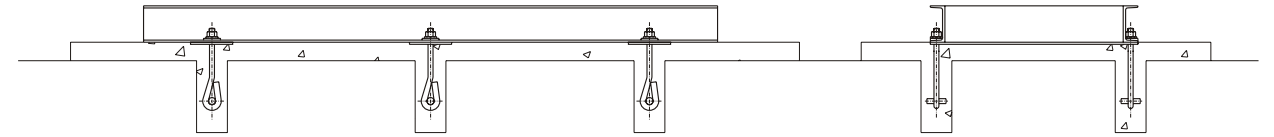
- Filled flame arrester: the fire layer for the filler gravel, ceramic rings and glass beads and other fillings, the use of gaps between the filler to prevent the flame through. Filled flame arrester structure is simple, but the flow resistance, can effectively prevent the detonation flame through.



## Foundation

The foundation should have sufficient rigidity to support the pump and absorb vibration, using a concrete platform above the ground to prevent flooding of the unit and keep the site clean. The unit is fixed with anchor bolts, and the length of the anchor bolts is 15 times than the diameter of the bolts. In order to install the unit better, the anchor bolts hole should be more than 4 times the diameter of the anchor bolts, using secondary grouting.

Every side of the foundation should exceed the unit base about 300mm.



## Common Unit Conversion Table

### Length

1米(m)=3.281英尺(ft)=1.094码(yd)

1厘米(cm)=0.394英寸(in)

1英尺(ft)=0.3048米(m)

1英寸(in)=2.54厘米(cm)

1海里(n mile)=1.852千米(km)

1英尺(ft)=12英寸(in)

### Volume

1立方米(m<sup>3</sup>)=1000升(L)=35.315立方英尺(ft<sup>3</sup>)

1立方英尺(ft<sup>3</sup>)=0.0283立方米(m<sup>3</sup>)=28.317升(L)

1桶(bbl)=0.159立方米(m<sup>3</sup>)=42美加仑(gal)

1美加仑(gpm)=3.785升(L)

1英加仑(gpm)=4.546升(L)

1升/秒(L/s)=3.6吨/小时(m<sup>3</sup>/h)

### Weight

1吨(t)=1000千克(kg)=2205磅(lb)

1千克(kg)=2.205磅(lb)

### Density

1千克/米<sup>3</sup>(kg/m<sup>3</sup>)=0.001克/厘米<sup>3</sup>(g/cm<sup>3</sup>)

1磅/英尺<sup>3</sup>(lb/ft<sup>3</sup>)=16.02千克/米<sup>3</sup>(kg/m<sup>3</sup>)

1磅/美加仑(lb/gal)=119.826千克/米<sup>3</sup>(kg/m<sup>3</sup>)

### Kinematic Viscosity

1英尺<sup>2</sup>/秒(ft<sup>2</sup>/s)=9.29030×10<sup>-2</sup>米<sup>2</sup>/秒(m<sup>2</sup>/s)

1斯(St)=10<sup>-4</sup>米<sup>2</sup>/秒(m<sup>2</sup>/s)=1厘米<sup>2</sup>/秒(cm<sup>2</sup>/s)

### Dynamic viscosity

1泊(P)=0.1帕秒(Pa·s)

1厘泊(cP)=10<sup>-3</sup>帕秒(Pa·s)

### Strength

1牛顿(N)=0.225磅力(lbf)=0.102千克力(kgf)

1千克力(kgf)=9.81牛(N)

1磅力(lbf)=4.45牛顿(N)

### Pressure

1巴(bar)=105帕(Pa)

1千帕(kPa)=0.145磅力/英寸<sup>2</sup>(psi)=0.0102千克力/厘米<sup>2</sup>(kgf/cm<sup>2</sup>)=0.0098大气压(atm)

1物理大气压(atm)=101.325千帕(kPa)=14.696磅/英寸<sup>2</sup>(psi)=1.0333巴(bar)

1工程大气压=98.0665千帕(kPa)

1毫米水柱(mmH<sub>2</sub>O)=9.80665帕(Pa)

1毫米汞柱(mmHg)=133.322帕(Pa)

### Thermal power

1焦耳=0.10204千克力·米=2.778×10<sup>-7</sup>千瓦·小时

1卡(cal)=4.1868焦耳(J)

1千克力米(kgf·m)=9.80665焦耳(J)

1米制马力小时(hp·h)=2.64779×106焦耳(J)

1千瓦时(kW·h)=3.6×106焦耳(J)

1大卡=4186.75焦耳(J)

### Power

1千克力·米/秒(kgf·m/s)=9.80665瓦(w)

1米制马力(hp)=735.499瓦(W)

1卡/秒(cal/s)=4.1868瓦(W)

1英热单位/时(Btu/h)=0.293071瓦(W)

### Speed

1英尺/秒(ft/s)=0.3048米/秒(m/s)

1英里/时(mile/h)=0.44704米/秒(m/s)