# 主要产品

#### **Products**

重庆康明斯严格遵循康明斯公司的技术和 质量标准,制造耐用、可靠的四冲程柴油发动 机,包括机械式和模块化电子控制的两种类型。 发动机满足中国排放标准。 CCEC follows Cummins Technology and quality standards, manufactures tough and dependable four-cycle diesel power, including mechanically and electronically controlled emissions compliant diesel engine platforms.

### NT/QSN

排量

Displacement

14L

功率范围

Power Range

185-525HP

(138-391kW)

参考重量

Reference Weight

1280 (kg)



## KTA19/QSK19

排量

Displacement

19L

功率范围

Power Range

450-896HP

(336-669kW)

参考重量

Reference Weight

1820 (kg)

## KTA38/QSK38

排量 Displacement 38L

功率范围

Power Range

780-1845HP

(582-1377kW)

参考重量

Reference Weight

3723 (kg)



## K50/QSK50

排量 Displacement

50L

功率范围

Power Range

1250-2500HP

(932-1679kW)

参考重量

Reference Weight

5500 (kg)



# 发动机型谱

## Engine Ratings

序号 NO	系列 SERIES	机图 WODEL	发动机功率 Powerrating			الإمالية أي	THE COLUMN
			标准协采 Continuous	京用功率 Primer	書用功率 Standby	·····································	进气冲机方式 Aspiration and cooling
i		NT 855-P300		300HP(224kW)	300BHP(224kW)	1500	増圧 Turbocharged and 1P1L
2		NTA955-P400		360HP(266kW)	4006HP(298kW)		增压、中待 Turbocharged and 1P1L
1		NTA855-P470		425HP(316kW)	4708HP(351kW)		增压、中冷 Turbocharged and 1P1L
4		NT 855-P300	300HP(224kW)		h	1800	端压 Turbocharged and 1P1L
5		NT 855-P260		324HP(242kW)	360BHP(269kW)		增压 Turbocharged and 1P11
Ġ	:NT	NT 855-P400		360HP(268kW)	400BHP(298kW)		増圧 Turbocharged and 1P1L
,		NT4855-P450	-		450BHP(336kW)		遠压、中冷 Turbocharged and 1P1L
ŭ.		NTA855-P500		500BHP(373kW)	500BHP(373kW)		增压、中冷 Turbocharged and 1P1L
В		NTA955-P360	-	360HP(269kW)		:2100	增压、中洋 Turbocharged and 1P1L
10		NTA855-P400		400HP(298kW)			增压,中冷 Turbocharged and 1P1L
1		KTA19-P495		495HP(369kW)		1500	增压,中没 Turbocharged and 1P1L
2		KTA19-P500		455HP(340kW)	500HP(373kW)		增压,中没 Turbocharged and 1P1L
á		KTA19-P600		540HP(403kW)	500HP(448kW)		增度。中冷 Turbocharged and 1P1L
4		KTA19-P680		604HP(450kW)	680HP(507kW)		增压、中冷 Turbocharged and 1P1L
15		KTAA19-P673		673HP(507kW)	764HP(570kW)		增压、空空中冷 Turnocharged and CAN
16		KTAA19-PB18		732HP(531kW)	818HP(810kW)		端压。空空中冷 Turbocharged and CAN
17		KTA19-P600	450HP(336kW)	525HP(392kW)	600HP(448kW)	1800	编压、中冷 Turbocharged and 1P1L
18	K19	KTA19-P700	560HP(418kW)	630HP(470kW)	700HP(522kW)		增压,中冷 Turbocharged and 1P1L
19		KTA19-P750	570HP(425kW)	575HP(503kW)	750HP(559kW)		增压,中洋 Turbocharged and 1P1L
10		KTA19-P755		675HP(503kW)	755HP(563kW)		增压、中冷 Turbocharged and 1P1L
н		KTA19-P715			715HP(532kW)		增压,中没 Turbocharged and 1P1L
22		KTA19-P840			840HP(627kW)		均压、中冷 Turbocharged and 1P1L
23		KTAA19-P890			890HP(664KW)		增压,空空中冷 Turbochaiged and CAG
и		KTA19-P525		525HP(392kW)	5,11-25-314	2100	場圧、中沙 Turbocharged and 1P1L
25		KTA19-P600		600HP(448kW)			增压,中冷 Turbocharged and 1P1L
16		KT 38-P780	720HP(537kW)	7.00		1500	洲压 Turbocharged and 1P1L
27	1	KT 38-P830	755HP(564kW)	755HP(564kW)	830HP(619kW)		頭压 Turbocharged and 1P1L
28		KTA38-P980	805HP(600kW)	890HP(664kW)	980HP(731kW)		增压、中冷 Turbocharged and 1P1L
29		KTA38-P1080		1089EHP(B13kW)			增压、中海 Turbocharged and 1P1L
10		KTA38-P1200		. 1132.11 (23.31)	1200HP(895kW)		増圧、中沙 Turbocharged and 1P1L
31	K3B	KTA38-P1300	880HP(656kW)	1180HP(680kW)	1300HP(970kW)		增压,中冷 Turbocharged and 1P1L
12	1	KT 38-P780	720HP(537kW)	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	7-5-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-	1500	溶压 Turbocharged and 1P1L
13		KT 38-P1000	910HP(679kW)	910HP(679kW)	1000HP(745kW)		划压 Turbocharged and 1P1L
14		KTA38-P1200	912HP(660kW)	1085HP(809kW)	1200HP(895kW)		頭压、中沙 Turbocharged and 1P1L
16		KTA38-P1400	(see)	1250HP(940kW)	1400HP(1045kw)		增压、中沙 Turbocharged and 1P1L
36		KTA38-P1490		1350HP(1007kW)	1490HP(1112kw)		增压。中沙 Turbocharged and 1P1L
37		KTA50-P1645		Asia is riddy week	1645HP(1227kW)		增压。中冷 Turbocharged and 1P1L
38	K50	KTA50-P1915		1725HP(1287kW)	1915HP(1429kw)	1500	增压,中冷 Turbocharged and 1P2L
39	1,000	KTA50-P2220		1855HP(1384kW)	2220HP(1857kW)	1800	增压,中沙 Turbocharged and 1P2L

拼号	系列	机型	额定功率/额定转速 kW/rpm	温大扭矩/转速 N.m/rpm	进气方式
1	TNSQ	QSNT-C235S30	175/1800	1085/1350	增压、空空中冷 Turbocharged and CAC
-2		QSNT-C250S31	187/2100	1097/1500	端压、空空中冷 Turbocharged and CAC
-4		QSNT-C280S30	209/2100	1139/1500	增压,空空中冷 Turbocharged and CAC
4		QSNT-C310S31	231/2100	1356/1300	增压、空空中冷 Turbocharged and CAC
- 5		QSNT-P360S30	269/2100	1464/1400	增度、空空中冷 Turbocharged and CAC
6		QSNT-P400S31	298/2100	1627/1400	增压,空空中没 Turbocharged and CAC
7		QSNT-P450S30	336/2100	1900/1400	增压、空空中冷 Turbocharged and CAC
8		QSNT-P500830	373/2000	2100/1400	地压。空空中冷 Turbocharged and CAC
9		QSK19-C525	392/2000.	2407/1500	塘压,空空中冷 Turbocharged and CAC
10		QSK19-C560	418/2000	2380/1500	增压,空空中冷 Turbocharged and CAC
117		QSK19-C800	448/2000	2644/1500	增压、空空中冷 Turbocharged and CAC
12	QSK19 -	Q5K19-C675	504/1800	2983/1500	增压,空空中冷 Turbocharged and CAC
13		QSK19-C700	522/1800	2983/1500	增压,空空中冷 Turbocharged and CAC
14		QSK19-C755	563/1800	3119/1700	增压、空空中海 Turbocharged and CAC
15		Q5K19-C760	567/2100	3086/1500	增压,空空中冷 Turbocharged and CAC
16		Q5K19-C800	597/2100	3086/1500	增压,空空中冷 Turbocharged and CAC
17	OSK38	QSK38-C1086	810/1800	4868/1350	增压、空空中冷 Turbocharged and CAC
18		QSK38-C1200	896/1800	5236/1400	增压,空空中冷 Turbocharged and CAC
18		QSK38-C1260	940/1800	5497/1400	增压,空空中冷 Turbocharged and CAC
20		QSK38-C1350	1007/1800	8151/1500	增压。空空中汽 Turbocharged and CAC
21		QSK38-C1500	1119/1800	6170/1500	期压,空空中冷 Turbocharged and CAC
22		QSK38-C1600	1194/1900	6242/1500	增压、空空中冷 Turbocharged and CAC
23	QSK50	QSK50-C1600	1194/1800	6835/1500	增压。空空中冷 Turbocharged and CAC
24		QSK50-C1800	1342/1800	8135/1400	增压、空空中冷 Turbocharged and CAC
25		QSK50-C2000	1491/1800	6135/1400	堵压、空空中冷 Turbocharged and CAC
26		QSK50-C2250	1678/1900	8542/1500	增压、空空中冷 Turbochargad and CAC
27		QSK50-C2500	1864/1900	9601/1500	增压、空空中冷 Turbocharged and CAC

- 电控发动机符合非道路国三排放法规要求
   The electronically controlled engine complies with the emission regulations of NRMM CS Ⅲ

   CAC: charged air cooler 空空中冷;
   1P1L:one-pump one-loop 单泵单循环;
- 1P2L:one-pump two-loop 双泵双循环;



### Selection and Design

#### 一、发动机选型步骤

- 设备类型:应急消防泵、远程供水系统、泵 浦消防车、灌溉泵、液压泵或其他泵类设备。
- 设备总功率
- 使用工况和环境:持续工况、常用工况、 备用工况、最大功率;常用地区、高海拔、海洋、 高寒、高温、高湿、高风沙。
- 设备组合方式:单台、多台组合、多组。
- 排放法规:豁免排放要求、非道路 I、非道路 II、非道路 III、Tier II、Tier III、Tier III;
- 总体布置:箱式、低噪声、撬装、车载上装、 上下车共用:冷却系统、进排气系统、燃油系统、 控制系统。
- 传动系统: 离合器、联轴器、变速箱、传动轴、 工作泵、附件驱动、液压泵。
- 控制系统:机旁、远程;机械、电控。
- 起动方式:电动、机械、气动、液压。
- 2、发动机选型

型谱、附件、接口和特殊要求。

- 3、方案确定:与重庆康明斯确认选型方案。
- 4、技术协议签订:确定发动机型号及性能参数, 配套系统技术规格要求,其他注意事项。
- 5、安装评审:首台样机需要在主机厂交付用户前,由主机厂与重庆康明斯应用工程师联合进行安装评审及测试,以评估设备和发动机配套满足设计和用户要求。
- 6、参考标准

GB6245 消防泵标准

GB/T 6072.1 往复式内燃机

SAE J1349-2011 发动机功率测试规程

NFPA20-2019 固定式消防泵安装标准

**FM** Approvals 1333-2020 柴油机消防泵驱动器 认证标准

UL1247 驱动固定式消防泵柴油机标准

#### Reference for Engine Model Selection

- 1. Confirmation of Basic Information
- Equipment type: emergency fire-fighting pump, long-distance water supply system, Pumper fire fighting vehicles, irrigation pump, hydraulic pump unit and other industrial pump equipment.
- Total power of equipment.
- Working condition and environment:

Continuous working condition, common working condition, intermittent working condition and maximum power.

Common areas, high altitude, ocean, high and cold, hot, wet, and high, dusty.

Combination method of equipment:

Single piece, multi-piece unit and multi-unit.

- Emission: emission exemption, non-road mobile machinery China stage I (NRMM CSI), NRMM CSII, NRMM CSIII; EPA Off-highway Tier I, Tier II and Tier III; EU NRMM Stage I, Stage II and Stage III.
- General arrangement: Box-type (low noise), skid-mounted, truck-mounted, used for both Pump and truck driven; Cooling system, intake and exhaust system, fuel system, control system.
- Drive system: Clutch, transmission, drive shaft, working pump, accessory drive and hydraulic pump.
- Control system: Local, remote, mechanical and electric control.
- Starting mode: Electric, hydraulic, pneumatic and mechanical.
- 2. Engine Model Selection: Engine Model and power rating, accessories, interfaces and special requirements.
- 3. Determination of Scheme: Determine the model selection scheme with CCEC.
- 4. Technical Agreement Signing: Engine model and performance parameters, description of application technology and other notes.
- 5. Installation Review: Before the first prototype engine arrived end user, OEM and CCEC shall jointly carry out installation review and test, so as to meet the technical requirement of engine.
- 6. Reference Standards:

GB6245 Standard for Fire Pump

GB/T 6072.1-2008 Reciprocating Internal Combustion Engines

SAE J1349-2011 Engine Power Test Code - Spark Ignition and Compression Engine.

NFPA20-2019 Standard for the Installation of Stationary Pumps for Fire Protection

FM Approvals 1333-2020 Examination Standard For Diesel Engine Fire Pump Drivers

UL1247 STANDARD FOR SAFETY Diesel Engines for Driving Stationary Fire Pumps

### Selection and Design

#### 二、发动机适配功率计算

发动机额定功率 =P/a1/a2/a3+B1+B2+B3

- 确定传动系统零部件的传动效率 a, 例如: 离合器 a1, 传动轴 a2, 变速箱 a3。
- 确定泵的轴输出功率 P, 并确认工作泵的实际工况,例如:发动机 24 小时连续或间隙功率使用情况。

泵功率 = 排量×压力/效率 (0.85)

- 确定发动机所需附件功率时需考虑附件功率损失,例如:风扇 B1、发电机 B2、空压机B3等附属取力设备。
- 确定接口:通常飞轮壳 N 系列发动机 SAE 1号; K19系列发动机 SAE0号 SAE1号; K38、K50系列发动机 SAE 0号。通常选配接口为柔性盘或飞轮,选择柔性盘时为湿式飞轮壳,选择飞轮时为干式飞轮壳。
- 高原机的选型情况:康明斯的数据单对每一款发动机都有使用海拔说明,一旦出现超过使用高度时,就需要根据海拔高度和环境温度对发动机功率输出修正后再选型。
- 鉴于泵用设备大多数在备用工况条件下使用,因此在实际工况中对发动机功率需要进行修正,可参考重庆康明斯技术部提供发动机性能曲线、数据单。
- 根据所计算的发动机额定功率参照重庆康 明斯提供的发动机型谱进行选型配套。



#### Calculation of Engine Adapted Power

Rated power of engine=P/a1/a2/a3+B1+B2+B3

- Determine the drive efficiency "a" of the components in drive system, such as clutch a1, drive shaft a2 and transmission a3.
- Determine the shaft output power P of the pump and confirm the actual working condition of working pump, such as the 24-hour continuous or intermittent power utilization condition of engine.

Pump power=pump capacity\*pressure/efficiency (0.85)

- The power loss of accessories shall be considered during determination of the necessary accessory power for engine, such as fan B1, starting motor B2 and generator B3, etc.
- Determine the interface: in general, flywheel housing N-series engine SAE #1, K19-series engine SAE #0 and SAE#1, K38-series and K50-series engine SAE #0 both the wet-type and the dry-type flywheel housing selection. Flywheel Intended Drive Hardware is SAE#14 and/or SAE#18 over center clutch, a special flexplate flywheel is for Allison transmission,
- Model selection of plateau engine: the data sheet of Cummins specifies the operating altitude of each engine. Once the altitude exceeds the operating altitude, the power output of engine shall be corrected according to the altitude and operating temperature before model selection.
- As pump equipment mostly operates under standby working condition, the power of engine shall be corrected in the actual working condition in reference to the performance curve and data sheet of engine provided by Technical Dept. of CCEC.
- According to the calculated rated power of engine, refer to the model spectrum provided by CCEC to carry out model selection and matching.

Selection and Design

### 三、发动机配套系统的选定

散热器(热交换器&风扇水箱)

散热器必须保证设备在最高环境温度下工作时发动机的出水口温度,不超过发动机数据单的限定值,注意考虑环境温度差异对散热器面积和效率需求。

#### ● 风扇

风扇安装不能超过风扇轮毂要求的最大惯量和 弯矩,风扇功率不能超过风扇驱动装置的最大 驱动能力,具体可咨询重庆康明斯应用工程师。

#### ● 冷却液

必须使用发动机操作保养手册和康明斯服务公告规定的冷却液规范(康明斯所有发动机禁止使用未达标的水作为冷却液)。

#### 2. 讲气系统

- 进气系统的滤清效率必须满足发动机的使 用要求。
- 进气系统必须有足够的容灰度以提供合理的滤芯更换周期。
- 进气系统装备所有附件后,发动机在最大进气流量下,进气阻力不得大于发动机数据单上规定的限定值。
- 进气系统应保证正常工作时进气温升最大 值不得超过发动机数据单上规定的限定值。
- 进气系统对发动机进气口产生的弯矩应小 于发动机数据单上规定的限值。

#### 3. 排气系统

- 在发动机额定功率和转速条件下,排气系统产生的排气背压不得大于发动机数据单上规定的限定值。
- 排气系统应防止水进入发动机或涡轮增压器,无论是来自喷雾、雨水、冲洗或任何其他来源。
- 对于竖直布置的排气系统需要设计有排水 孔,用以避免排气系统的冷凝水倒流进入发动 机的排气系统,损害发动机。
- 排气系统排出的尾气远离空气滤清器等进

气系统,以免提高进气温度,远离冷却系统,以免引起发动机过热,远离驾驶员,以免引起人生伤害。

- 可选择灭火花式消声器以满足泵机特殊要求。
- 4、发动机附件
- 空气压缩机 / 液压泵:发动机上机械式驱动的空压机 / 液压泵或其他附件都不能超过极限。如果超过极限,必须使用尾部支撑进行支撑。安装支架后系统的固有频率必须超过发动机最大转速下点火频率的 10% 以上。
- 液压泵(转向泵):驱动功率,扭矩不能超过限定值。驱动连接(花键尺寸)要满足 SAE J744。
- 前端取力,参考发动机数据单或咨询重庆 康明斯应用工程师。

#### 5、安全建议

- 为确保设备能在寿命期内正常使用,设备输出连接、仪表控制、起动方式、蓄电池与充电、泵组与发动机保护、系统报警及超压保护、发动机冷却、排气、通风、燃油与供给等系统的选择,可参考相关行业标准及安全及防护规范。
- 对发动机操作人员需要进行防护措施培训, 预防发动机故障时可能带来的人生伤害。
- 三、发动机设计评审和安装评审
- 1、设计评审
- 发动机在选型阶段,为避免出现选型错误, 主机厂可以通过重庆康明斯授权的经销商或重 庆康明斯应用工程师进行指导选型。

#### 2、主机厂设备成套

- 发动机在主机厂的设备成套后,可邀请重 庆康明斯应用工程师等到现场指导成套和调试。
- 3、终端安装、调试及验收
- 主机厂成套后的设备,在终端客户处安装、调试及验收过程中,均可以邀请重庆康明斯授权的经销商或重庆康明斯应用工程师等进行现场指导。

### Selection and Design

#### **Equipped System Selection**

- 1. Engine Cooling System
- Radiator

With operation of the radiator, it shall be ensured that when the equipment is working in the maximum operating temperature, the water outlet temperature of engine will not exceed the limit in Engine Parameter List of Engine data sheet. Pay attention to the necessary radiator Cooling area and efficiency for different operating temperatures.

#### Fan

The mounting of fan shall not exceed the maximum bending moment and fan inertia required of fan hub. The power of fan shall not exceed the maximum driving capacity of fan drive device.

#### Coolant

The coolant for utilization shall be the one specified in Engine Operation and Maintenance Manual and CCEC/Cummins Service Bulletin (it is prohibited to use water as the coolant for all CCEC engines).

- 2. Air Intake system
- The air filtering efficiency of intake system must meet the operating requirements of engine.
- The intake system shall be of enough dirt holding capacity, so as to provide reasonable replacement cycle for filter element.
- After the intake system is equipped with all accessories, under the maximum intake airflow, the intake resistance of engine shall not exceed the limit specified in Technical Parameter List of Engine data sheet.
- With operation of the intake system, it shall be ensured that the maximum value of intake air temperature rise during normal operation will not exceed the limit specified in Technical Parameter List of Engine data sheet.
- The bending moment produced by intake system for the air intake of engine shall be less than the limit specified in Technical Parameter List of Engine data sheet.
- 3. Exhaust system
- Under the rated power and speed of engine, the exhaust back pressure must not exceed the limit specified in Technical Parameter List of Engine data

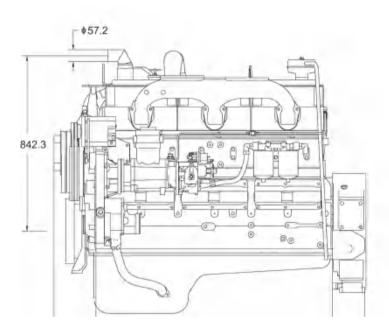
sheet.

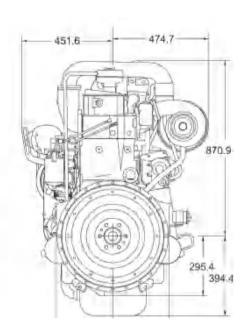
- The exhaust system must prevent the entrance of water into the engine or turbocharger whether it's from spray, rain, washing, or any other source.
- For vertical exhaust system, water outlets shall be designed, so as to avoid condensed water of exhaust system from flowing back into the exhaust system of engine and damaging the engine.
- The tail gas discharged form exhaust system shall be away from the intake system including air filter, gas so as to avoid increasing the intake temperature, the tail exhaust gas shall be away from cooling system, so as to avoid overheat of engine; the tail gas shall be away from the driver to avoid personal injury.
- The muffler and spark arrester can be selected to meet the special safety requirements.
- 4. Accessories of Engine
- Air compressor/ hydraulic pump: the mechanically driven hydraulic pump or other accessories on engine shall not exceed the limits. If they exceed the limits, rear support shall be used. After the support is installed, the inherent frequency of the system must exceed over 10% of the ignition frequency at the maximum engine speed.
- Hydraulic pump (steering pump): the drive power and torque shall not exceed the limits. Drive connection (spline size) shall meet SAE J744.
- The front-end power takeoff shall be selected in reference to Engine Data Sheet or through consulting CCEC application engineers.
- 5. Safety Suggestions
- In order to ensure normal operation during the service life of equipment, please refer to International Oil Field Equipment Industry Standard and Safety Protection Specification for selection of equipment output connections, instrument control, starting method, storage battery and charging, fracturing pump set and engine protection, system alarm and over-voltage protection, engine cooling, air exhaust, ventilation, fuel and supply systems and other systems.
- Protective measures training shall be carried out for engine operators, so as to avoid possible personal injury during engine fault.

# 发动机外形图

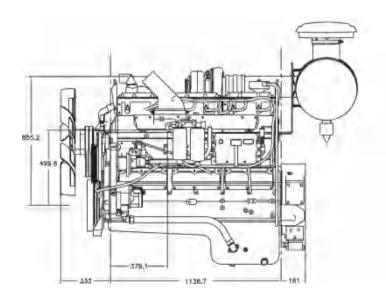
Installation Diagram

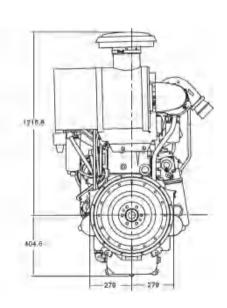
ΝT



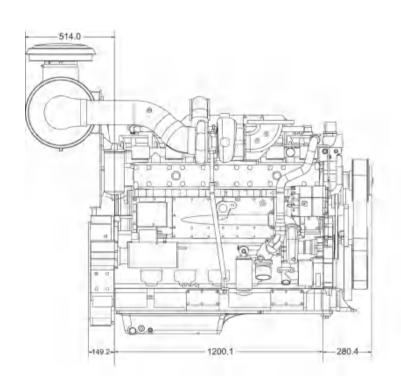


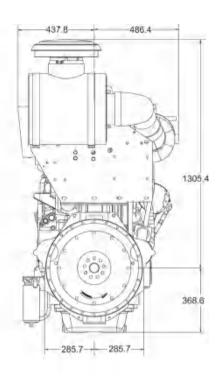
QSNT



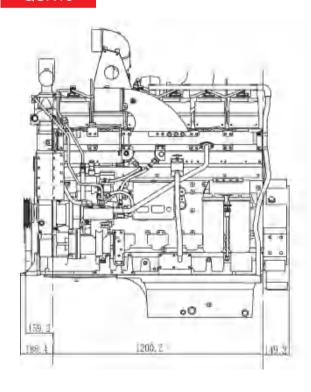


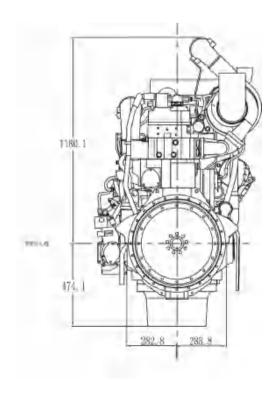
## K19





## QSK19

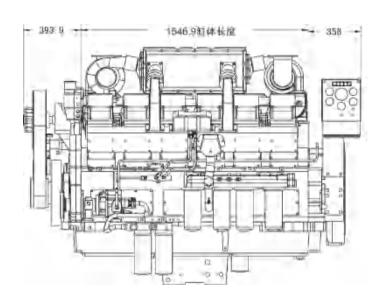


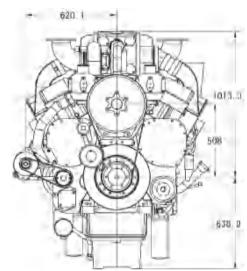


# 发动机外形图

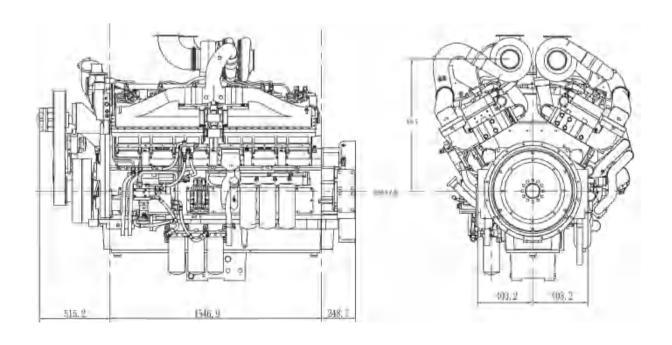
Installation Diagram

## K38

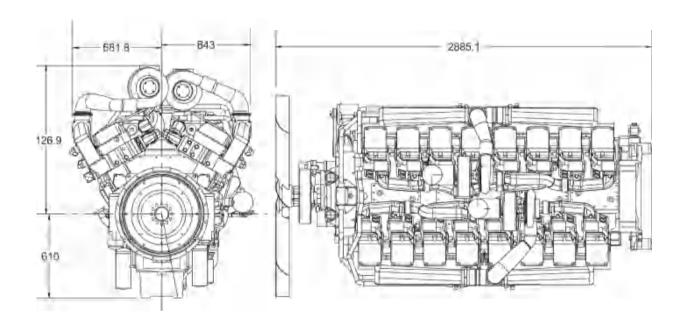




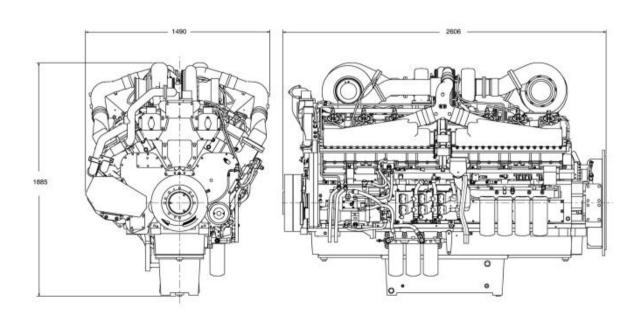
## QSK38



## K50



## QSK50



# 典型应用

**Typical Application** 

## 典型市场应用 Typical Application

油库 Bulk Plant



宾馆 Hotel

机库 Hangar



高楼 High-rise Building

港口 Port





钢铁厂转炉 Steel Works Converter



化工厂 Chemical Plant







钢铁厂连铸 Steel Works Continuous Casting



冶金厂 Metallurgic Plant









### 成功案例 Successful Cases

配套乌鲁木齐航空基地维修机库 KTA38-P1200 做 驱 动 动 力, 在 1800 转时可持续 1 小时输出 895 千瓦的动力。驱动泵的流量 每秒可输出 420 升,扬程达到 140 米。

#### Urumqi Aviation Base Maintenance Hangar

KTA38-P1200 work as driving force, output 895 kW of power



for 1 hour at 1800 rpm. The flow rate of the driven pump can output 420 liters per second, and the head can reach 140 meters.

浙江舟山石化基地 数 十 套 重 庆 康 明 斯 KTA19-P600 泵 用发 动 机, 在此基地使用。

#### Zhejiang Zhoushan Petrochemical Base

Dozens of Chongqing Cummins KTA19-P600 power unit engines work in the base.



重庆康明斯泵用发动机,可满足FM\UL认证需求。

CCEC power unit engines meet the FM/UL certification requirements.



#### 重庆康明斯的服务体系

实施与全球康明斯标准一致的质量保障和保修承诺。

按照全球康明斯标准建立的快速服务体系实施维修服务;建立24小时用户服务热线,具有健全的全国服务网络,全国近100家特约经销商,600多名经过专业培训的服务技师,从事专业维修服务工作,拥有功能齐全的康明斯东亚地区大功率发动机技术培训中心。

重庆康明斯与康明斯(中国)投资有限公司签署有全球范围产品保修服务支持协议,对于重庆康明斯所有出口产品(包括随主机厂设备出口的发动机),康明斯全球各地服务网络将提供保修服务支持。

#### 重庆康明斯服务承诺

- -30 分钟内对用户的服务要求作出回应
- -8 小时到达用户现场
- -24 小时完成一般故障修复
- -72 小时完成所有故障修复

#### Service System

Cummins

Carry out the same quality assurance and warranty commitment standards as Cummins. Set up quick service system according to

Global standards; 24hours customer hotline, National service network, about 100 Authorized Service Dealers, more than 600 specialized technicians providing professional engine service, have Heavy Duty and High Horse Power engine technical training center in Cummins East Asia.

Chongqing Cummins and Cummins (China) Investment Co., Ltd have agreement on warranty service support in global area. Cummins Global service network provide warranty service for Chongqing Cummins exported engines (Including Chongqing Cummins Engines equipped in OEM exported machines).

# Chongqing Cummins Quick Service Commitment

- -- Respond customer service requirement within 30 minutes
- -- Arrive customer site within 8 hours
- -- Complete minor repair within 24 hours
- -- Complete major repair within 72 hours