

BONENG



博能 PK Planetary Gearmotor For Cooling Roll Crusher
博能 PK 篦冷机辊破装置专用行星齿轮马达

3/2019

Note: You must conform to the following instructions 注意事项！必须严格遵守以下各项！

- ◆ The structure scheme, appearance diagram and other attached diagrams in sample and examples, there is no strict proportion requirement. (The unmarked dimension units are mm).
- ◆ We can only refer to the marked weight in the manual.
- ◆ To prevent accidents, all the rotation parts should be added with protective covers according to local safety regulations and laws.
- ◆ Before testing, users should read instruction manual carefully.
- ◆ Gearbox has been tested before delivered, users should add lubrication oil before running.
- ◆ We can only refer to the marked oil in the manual, Actual oil filling level should be the same with the mark on oil immersion lens.
- ◆ Lubrication oil viscosity should be selected according to working conditions and the temperature of local environment.
- ◆ Users can only use high quality lubrication oil.
- ◆ 样本中的结构示意图、外形图及其他附图只属范例，无严格比例要求。（未注尺寸单位均为mm）。
- ◆ 所注重量仅为平均值，并不具有约束力。
- ◆ 为防止意外事故发生，所有旋转部件均按照使用者所在国家和地区的安全规范由购置方加罩保护。
- ◆ 试车之前必须认真阅读使用说明书。
- ◆ 齿轮箱在供货时已处于准运行状态，运行前需加注润滑油。
- ◆ 本样本中注油量只作为参考值，实际注油量应以油尺上的标记为准。
- ◆ 润滑油粘度应按齿轮箱使用工况及使用环境温度选取。
- ◆ 只能采用国际知名品牌的润滑油。

Product Function Mark



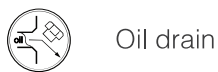
Oil glass



Breather



Oil filler



Oil drain

产品功能标识



油 镜



通气帽



进油孔



放油孔

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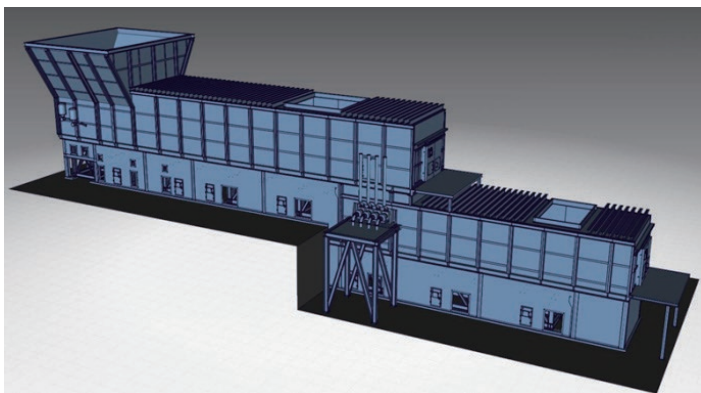
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1 Summary

The grate cooler is the main equipment for the cement clinker production line firing system. It not only cools, rolls and transports the hot clinker, but also is an important technical equipment of heat recovery in the cement clinker calcination system and a key equipment that directly affects the operating rate of rotary kiln. PK special planetary gear motor is a driving product specially developed for the cooling roll crusher, which has the following characteristics:

- ◆ Direct connection between motor and gearbox, compact structure and good performance;
- ◆ The direct-connected motor is a high-efficiency motor or an ultra-efficient motor, and the motor is equipped with a thermostat and a rainproof cover; The parameters are as follows:
 - I Continuous working mode S1;
 - II Voltage and frequency: 380V/50Hz;
 - III Insulation level: F;
 - IV Protection level: IP55;
 - V Cooling method: IC411;
- ◆ The gears material is excellent alloy steel and processed by carburization and quenching, and all gears are grinded.
- ◆ The output adopts fluorine rubber radial skeleton seals, the standard structure is double seals, high sealing reliability;
- ◆ Highly modular design, volume production is more economical.

Note: It is recommended that the strength grade of connecting bolts of torque arm and gearbox output flange should not be lower than 10.9;



1 概述

篦冷机是水泥熟料生产线烧成系统配套的主要设备，不仅对热熟料进行冷却、辊破和输送，而且是水泥熟料煅烧系统中热回收的重要工艺设备，也是直接影响回转窑运转率的关键设备。

PK专用行星齿轮马达是为篦冷机辊破装置专门开发的一款驱动产品，具有以下特点：

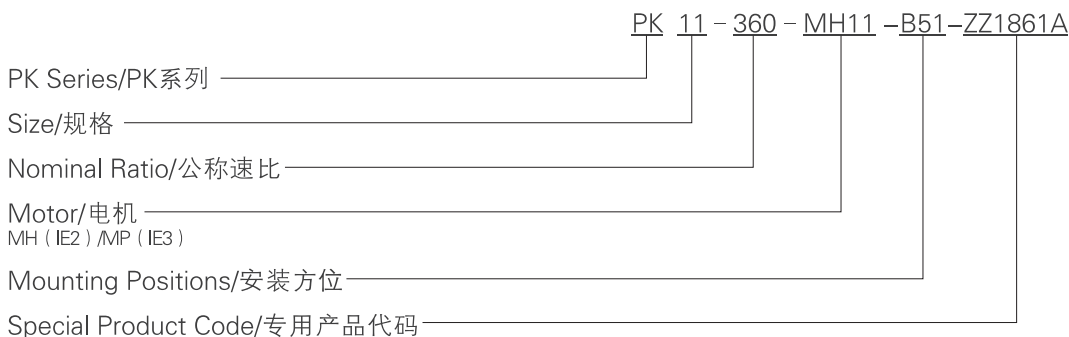
- ◆ 电机与齿轮箱直联，结构紧凑，性能良好；
- ◆ 直联电机为高效电机或超高效电机，电机标配热敏电阻和防雨罩；参数说明如下：
 - I 连续工作制S1；
 - II 电压和频率：380V/50Hz；
 - III 绝缘等级：F级；
 - IV 防护等级：IP55；
 - V 冷却方式：IC411；
- ◆ 齿轮采用优质合金钢渗碳淬火处理，所有齿轮均进行磨齿工艺；
- ◆ 输出采用氟橡胶径向骨架油封，标准结构为双油封设计，密封可靠性较高；
- ◆ 高度的模块化设计，批量生产更经济。

备注：建议扭力臂和齿轮箱输出法兰连接螺栓强度等级不低于10.9；



2 Type Designation

2 型号表示



3 Selection Table

3 选型表

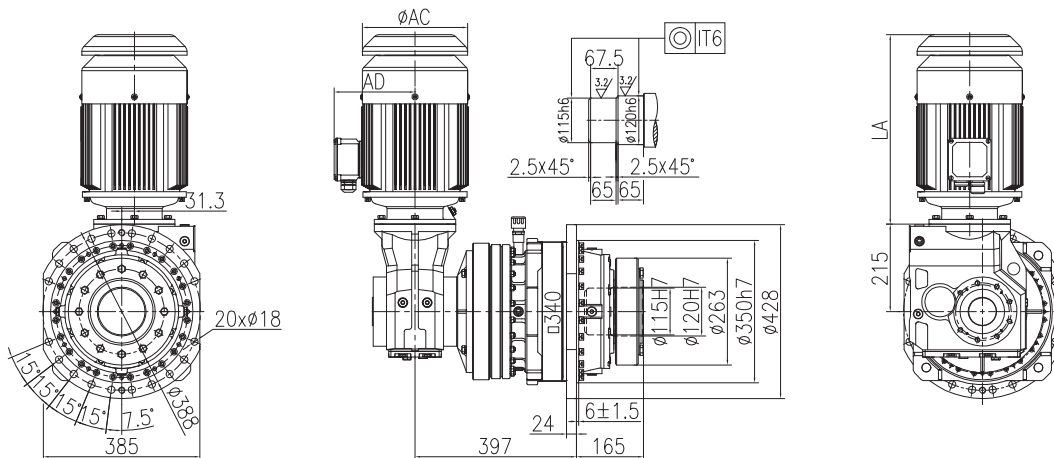
P_M kW	n_2 r/min	T_2 N·m	i_{ex}	T_{2N} N·m	SF	P Series Planetary Gearbox	K Helical-Bevel Gearmotor	PK Order Type	Weight kg	
4	3.74	9008	386.16	22000	2.44	P2NA09-31.5-B5-ZZ1861A	KF77A-12.5-MH4+E30+E80+E72-B52-180° -ZZ1861A	PK09-400-MH4-B51-ZZ1861A	286	
	3.77	8974	386.16	22000	2.45	P2NA09-31.5-B5-ZZ1861A	KF77A-12.5-MP4+E30+E80+E72-B52-180° -ZZ1861A	PK09-400-MP4-B51-ZZ1861A	290	
	4.15	8116	347.92	22000	2.71	P2NA09-28-B5-ZZ1861A	KF77A-12.5-MH4+E30+E80+E72-B52-180° -ZZ1861A	PK09-360-MH4-B51-ZZ1861A	286	
	4.18	8085	347.92	22000	2.72	P2NA09-28-B5-ZZ1861A	KF77A-12.5-MP4+E30+E80+E72-B52-180° -ZZ1861A	PK09-360-MP4-B51-ZZ1861A	290	
	4.31	7820	335.22	22000	2.81	P2NA09-40-B5-ZZ1861A	KF77A-8.1-MH4+E30+E80+E72-B52-180° -ZZ1861A	PK09-320-MH4-B51-ZZ1861A	286	
	4.34	7790	335.22	22000	2.82	P2NA09-40-B5-ZZ1861A	KF77A-8.1-MP4+E30+E80+E72-B52-180° -ZZ1861A	PK09-320-MP4-B51-ZZ1861A	290	
5.5	3.77	12318	386.16	31000	2.52	P2NA10-31.5-B5-ZZ1861A	KF77A-12.5-MH5.5+E30+E80+E72-B52-180° -ZZ1861A	PK10-400-MH5.5-B51-ZZ1861A	348	
	3.79	12249	386.16	31000	2.53	P2NA10-31.5-B5-ZZ1861A	KF77A-12.5-MP5.5+E30+E80+E72-B52-180° -ZZ1861A	PK10-400-MP5.5-B51-ZZ1861A	358	
	3.77	12318	386.16	22000	1.79	P2NA09-31.5-B5-ZZ1861A	KF77A-12.5-MH5.5+E30+E80+E72-B52-180° -ZZ1861A	PK09-400-MH5.5-B51-ZZ1861A	301	
	3.79	12249	386.16	22000	1.80	P2NA09-31.5-B5-ZZ1861A	KF77A-12.5-MP5.5+E30+E80+E72-B52-180° -ZZ1861A	PK09-400-MP5.5-B51-ZZ1861A	311	
	4.18	11098	347.92	22000	1.98	P2NA09-28-B5-ZZ1861A	KF77A-12.5-MH5.5+E30+E80+E72-B52-180° -ZZ1861A	PK09-360-MH5.5-B51-ZZ1861A	301	
	4.21	11036	347.92	22000	1.99	P2NA09-28-B5-ZZ1861A	KF77A-12.5-MP5.5+E30+E80+E72-B52-180° -ZZ1861A	PK09-360-MP5.5-B51-ZZ1861A	311	
	4.34	10693	335.22	22000	2.06	P2NA09-40-B5-ZZ1861A	KF77A-8.1-MH5.5+E30+E80+E72-B52-180° -ZZ1861A	PK09-320-MH5.5-B51-ZZ1861A	301	
	4.37	10633	335.22	22000	2.07	P2NA09-40-B5-ZZ1861A	KF77A-8.1-MP5.5+E30+E80+E72-B52-180° -ZZ1861A	PK09-320-MP5.5-B51-ZZ1861A	311	
	5.03	10446	289.35	22000	2.11	P2NA09-35.5-B5-ZZ1861A	KF77A-8.1-MH5.5+E30+E80+E72-B52-180° -ZZ1861A	PK09-280-MH5.5-B51-ZZ1861A	301	
	5.06	10388	289.35	22000	2.12	P2NA09-35.5-B5-ZZ1861A	KF77A-8.1-MP5.5+E30+E80+E72-B52-180° -ZZ1861A	PK09-280-MP5.5-B51-ZZ1861A	311	
	5.68	8165	255.99	22000	2.69	P2NA09-31.5-B5-ZZ1861A	KF77A-8.1-MH5.5+E30+E80+E72-B52-180° -ZZ1861A	PK09-250-MH5.5-B51-ZZ1861A	301	
	5.72	8120	255.99	22000	2.71	P2NA09-31.5-B5-ZZ1861A	KF77A-8.1-MP5.5+E30+E80+E72-B52-180° -ZZ1861A	PK09-250-MP5.5-B51-ZZ1861A	311	
	6.31	7357	230.64	22000	2.99	P2NA09-28-B5-ZZ1861A	KF77A-8.1-MH5.5+E30+E80+E72-B52-180° -ZZ1861A	PK09-225-MH5.5-B51-ZZ1861A	301	
	6.35	7316	230.64	22000	3.01	P2NA09-28-B5-ZZ1861A	KF77A-8.1-MP5.5+E30+E80+E72-B52-180° -ZZ1861A	PK09-225-MP5.5-B51-ZZ1861A	311	
7.5	3.67	17230	396.33	42000	2.44	P2NA11-31.5-B5-ZZ1861A	KF87A-12.5-MH7.5+E30+E80+E72-B52-180° -ZZ1861A	PK11-400-MH7.5-B51-ZZ1861A	528	
	3.70	17125	396.33	42000	2.45	P2NA11-31.5-B5-ZZ1861A	KF87A-12.5-MP7.5+E30+E80+E72-B52-180° -ZZ1861A	PK11-400-MP7.5-B51-ZZ1861A	536	
	3.77	16788	386.16	31000	1.85	P2NA10-31.5-B5-ZZ1861A	KF77A-12.5-MH7.5+E30+E80+E72-B52-180° -ZZ1861A	PK10-400-MH7.5-B51-ZZ1861A	361	
	3.79	16685	386.16	31000	1.86	P2NA10-31.5-B5-ZZ1861A	KF77A-12.5-MP7.5+E30+E80+E72-B52-180° -ZZ1861A	PK10-400-MP7.5-B51-ZZ1861A	369	
	4.18	15125	347.92	31000	2.05	P2NA10-28-B5-ZZ1861A	KF77A-12.5-MH7.5+E30+E80+E72-B52-180° -ZZ1861A	PK10-360-MH7.5-B51-ZZ1861A	361	
	4.21	15033	347.92	31000	2.06	P2NA10-28-B5-ZZ1861A	KF77A-12.5-MP7.5+E30+E80+E72-B52-180° -ZZ1861A	PK10-360-MP7.5-B51-ZZ1861A	369	
	4.34	16493	335.22	31000	1.88	P2NA10-40-B5-ZZ1861A	KF77A-8.1-MH7.5+E30+E80+E72-B52-180° -ZZ1861A	PK10-320-MH7.5-B51-ZZ1861A	361	
	4.37	16392	335.22	31000	1.89	P2NA10-40-B5-ZZ1861A	KF77A-8.1-MP7.5+E30+E80+E72-B52-180° -ZZ1861A	PK10-320-MP7.5-B51-ZZ1861A	369	
	5.03	12579	289.35	31000	2.46	P2NA10-35.5-B5-ZZ1861A	KF77A-8.1-MH7.5+E30+E80+E72-B52-180° -ZZ1861A	PK10-280-MH7.5-B51-ZZ1861A	361	
	5.06	12502	289.35	31000	2.48	P2NA10-35.5-B5-ZZ1861A	KF77A-8.1-MP7.5+E30+E80+E72-B52-180° -ZZ1861A	PK10-280-MP7.5-B51-ZZ1861A	369	
	5.03	12579	289.35	22000	1.75	P2NA09-35.5-B5-ZZ1861A	KF77A-8.1-MH7.5+E30+E80+E72-B52-180° -ZZ1861A	PK09-280-MH7.5-B51-ZZ1861A	314	
	5.06	12502	289.35	22000	1.76	P2NA09-35.5-B5-ZZ1861A	KF77A-8.1-MP7.5+E30+E80+E72-B52-180° -ZZ1861A	PK09-280-MP7.5-B51-ZZ1861A	322	
	5.68	11129	255.99	22000	1.98	P2NA09-31.5-B5-ZZ1861A	KF77A-8.1-MH7.5+E30+E80+E72-B52-180° -ZZ1861A	PK09-250-MH7.5-B51-ZZ1861A	314	
	5.72	11061	255.99	22000	1.99	P2NA09-31.5-B5-ZZ1861A	KF77A-8.1-MP7.5+E30+E80+E72-B52-180° -ZZ1861A	PK09-250-MP7.5-B51-ZZ1861A	322	
	6.31	10026	230.64	22000	2.19	P2NA09-28-B5-ZZ1861A	KF77A-8.1-MH7.5+E30+E80+E72-B52-180° -ZZ1861A	PK09-225-MH7.5-B51-ZZ1861A	314	
	6.35	9965	230.64	22000	2.21	P2NA09-28-B5-ZZ1861A	KF77A-8.1-MP7.5+E30+E80+E72-B52-180° -ZZ1861A	PK09-225-MP7.5-B51-ZZ1861A	322	
	11	3.82	24344	382.65	60000	2.46	P2NA12-31.5-B5-ZZ1861A	KF87A-12.5-MH11+E30+E80+E72-B52-180° -ZZ1861A	PK12-400-MH11-B51-ZZ1861A	675
		3.85	24073	382.65	60000	2.49	P2NA12-31.5-B5-ZZ1861A	KF87A-12.5-MP11+E30+E80+E72-B52-180° -ZZ1861A	PK12-400-MP11-B51-ZZ1861A	683
4.07		22811	358.56	42000	1.84	P2NA11-28-B5-ZZ1861A	KF87A-12.5-MH11+E30+E80+E72-B52-180° -ZZ1861A	PK11-360-MH11-B51-ZZ1861A	528	
4.11		22558	358.56	42000	1.86	P2NA11-28-B5-ZZ1861A	KF87A-12.5-MP11+E30+E80+E72-B52-180° -ZZ1861A	PK11-360-MP11-B51-ZZ1861A	536	
4.22		22025	346.2	60000	2.72	P2NA12-28-B5-ZZ1861A	KF87A-12.5-MH11+E30+E80+E72-B52-180° -ZZ1861A	PK12-360-MH11-B51-ZZ1861A	675	
4.26		21780	346.2	60000	2.75	P2NA12-28-B5-ZZ1861A	KF87A-12.5-MP11+E30+E80+E72-B52-180° -ZZ1861A	PK12-360-MP11-B51-ZZ1861A	683	
4.52		20537	322.82	42000	2.05	P2NA11-40-B5-ZZ1861A	KF87A-8.1-MH11+E30+E80+E72-B52-180° -ZZ1861A	PK11-320-MH11-B51-ZZ1861A	528	
4.57		20309	322.82	42000	2.07	P2NA11-40-B5-ZZ1861A	KF87A-8.1-MP11+E30+E80+E72-B52-180° -ZZ1861A	PK11-320-MP11-B51-ZZ1861A	536	
5.20		17872	280.93	42000	2.35	P2NA11-35.5-B5-ZZ1861A	KF87A-8.1-MH11+E30+E80+E72-B52-180° -ZZ1861A	PK11-280-MH11-B51-ZZ1861A	528	
5.25		17674	280.93	42000	2.38	P2NA11-35.5-B5-ZZ1861A	KF87A-8.1-MP11+E30+E80+E72-B52-180° -ZZ1861A	PK11-280-MP11-B51-ZZ1861A	536	
5.84		15903	249.97	42000	2.64	P2NA11-31.5-B5-ZZ1861A	KF87A-8.1-MH11+E30+E80+E72-B52-180° -ZZ1861A	PK11-250-MH11-B51-ZZ1861A	528	
5.90		15726	249.97	42000	2.67	P2NA11-31.5-B5-ZZ1861A	KF87A-8.1-MP11+E30+E80+E72-B52-180° -ZZ1861A	PK11-250-MP11-B51-ZZ1861A	536	
6.46		14387	226.15	42000	2.92	P2NA11-28-B5-ZZ1861A	KF87A-8.1-MH11+E30+E80+E72-B52-180° -ZZ1861A	PK11-225-MH11-B51-ZZ1861A	528	
6.52		14227	226.15	42000	2.95	P2NA11-28-B5-ZZ1861A	KF87A-8.1-MP11+E30+E80+E72-B52-180° -ZZ1861A	PK11-225-MP11-B51-ZZ1861A	536	

P _M kW	n ₂ r/min	T ₂ N·m	i _{ex}	T _{2N} N·m	SF	P Series Planetary Gearbox	K Helical-Bevel Gearmotor	PK Order Type	Weight Kg
15	3.82	33169	382.65	60000	1.81	P2NA12-31.5-B5-ZZ1861A	KF87A-12.5-MH15+E30+E80+E72-B52-180° -ZZ1861A	PK12-400-MH15-B51-ZZ1861A	693
	3.85	32831	382.65	60000	1.83	P2NA12-31.5-B5-ZZ1861A	KF87A-12.5-MP15+E30+E80+E72-B52-180° -ZZ1861A	PK12-400-MP15-B51-ZZ1861A	715
	4.22	30009	346.20	60000	2.00	P2NA12-28-B5-ZZ1861A	KF87A-12.5-MH15+E30+E80+E72-B52-180° -ZZ1861A	PK12-360-MH15-B51-ZZ1861A	693
	4.26	29703	346.20	60000	2.02	P2NA12-28-B5-ZZ1861A	KF87A-12.5-MP15+E30+E80+E72-B52-180° -ZZ1861A	PK12-360-MP15-B51-ZZ1861A	715
	4.68	27017	311.69	60000	2.22	P2NA12-40-B5-ZZ1861A	KF87A-8.1-MH15+E30+E80+E72-B52-180° -ZZ1861A	PK12-320-MH15-B51-ZZ1861A	693
	4.73	26742	311.69	60000	2.24	P2NA12-40-B5-ZZ1861A	KF87A-8.1-MP15+E30+E80+E72-B52-180° -ZZ1861A	PK12-320-MP15-B51-ZZ1861A	715
	5.20	24351	280.93	42000	1.72	P2NA11-35.5-B5-ZZ1861A	KF87A-8.1-MH15+E30+E80+E72-B52-180° -ZZ1861A	PK11-280-MH15-B51-ZZ1861A	587
	5.25	24103	280.93	42000	1.74	P2NA11-35.5-B5-ZZ1861A	KF87A-8.1-MP15+E30+E80+E72-B52-180° -ZZ1861A	PK11-280-MP15-B51-ZZ1861A	609
	5.38	23512	271.24	60000	2.55	P2NA12-35.5-B5-ZZ1861A	KF87A-8.1-MH15+E30+E80+E72-B52-180° -ZZ1861A	PK12-280-MH15-B51-ZZ1861A	693
	5.44	23272	271.24	60000	2.58	P2NA12-35.5-B5-ZZ1861A	KF87A-8.1-MP15+E30+E80+E72-B52-180° -ZZ1861A	PK12-280-MP15-B51-ZZ1861A	715
	5.84	21668	249.97	42000	1.94	P2NA11-31.5-B5-ZZ1861A	KF87A-8.1-MH15+E30+E80+E72-B52-180° -ZZ1861A	PK11-250-MH15-B51-ZZ1861A	587
	5.90	21447	249.97	42000	1.96	P2NA11-31.5-B5-ZZ1861A	KF87A-8.1-MP15+E30+E80+E72-B52-180° -ZZ1861A	PK11-250-MP15-B51-ZZ1861A	609
	6.05	20920	241.34	60000	2.87	P2NA12-31.5-B5-ZZ1861A	KF87A-8.1-MH15+E30+E80+E72-B52-180° -ZZ1861A	PK12-250-MH15-B51-ZZ1861A	693
	6.11	20706	241.34	60000	2.90	P2NA12-31.5-B5-ZZ1861A	KF87A-8.1-MP15+E30+E80+E72-B52-180° -ZZ1861A	PK12-250-MP15-B51-ZZ1861A	715
	6.46	19603	226.15	42000	2.14	P2NA11-28-B5-ZZ1861A	KF87A-8.1-MH15+E30+E80+E72-B52-180° -ZZ1861A	PK11-225-MH15-B51-ZZ1861A	587
6.52	19403	226.15	42000	2.16	P2NA11-28-B5-ZZ1861A	KF87A-8.1-MP15+E30+E80+E72-B52-180° -ZZ1861A	PK11-225-MP15-B51-ZZ1861A	609	
18.5	3.85	40576	382.04	83000	2.05	P2NA13-31.5-B5-ZZ1861A	KF97A-12.5-MH18.5+E30+E80+E72-B52-180° -ZZ1861A	PK13-400-MH18.5-B51-ZZ1861A	971
	3.86	40441	382.04	83000	2.05	P2NA13-31.5-B5-ZZ1861A	KF97A-12.5-MP18.5+E30+E80+E72-B52-180° -ZZ1861A	PK13-400-MP18.5-B51-ZZ1861A	989
	4.27	36558	344.21	83000	2.27	P2NA13-28-B5-ZZ1861A	KF97A-12.5-MH18.5+E30+E80+E72-B52-180° -ZZ1861A	PK13-360-MH18.5-B51-ZZ1861A	971
	4.29	36436	344.21	83000	2.28	P2NA13-28-B5-ZZ1861A	KF97A-12.5-MP18.5+E30+E80+E72-B52-180° -ZZ1861A	PK13-360-MP18.5-B51-ZZ1861A	989
	4.51	34580	325.59	83000	2.40	P2NA13-40-B5-ZZ1861A	KF97A-8.1-MH18.5+E30+E80+E72-B52-180° -ZZ1861A	PK13-320-MH18.5-B51-ZZ1861A	971
	4.53	34465	325.59	83000	2.41	P2NA13-40-B5-ZZ1861A	KF97A-8.1-MP18.5+E30+E80+E72-B52-180° -ZZ1861A	PK13-320-MP18.5-B51-ZZ1861A	989
22	3.85	48239	382.04	117000	2.43	P2NA14-31.5-B5-ZZ1861A	KF97A-12.5-MH22+E30+E80+E72-B52-180° -ZZ1861A	PK14-400-MH22-B51-ZZ1861A	1183
	3.86	48071	382.04	117000	2.43	P2NA14-31.5-B5-ZZ1861A	KF97A-12.5-MP22+E30+E80+E72-B52-180° -ZZ1861A	PK14-400-MP22-B51-ZZ1861A	1199
	3.85	48239	382.04	83000	1.72	P2NA13-31.5-B5-ZZ1861A	KF97A-12.5-MH22+E30+E80+E72-B52-180° -ZZ1861A	PK13-400-MH22-B51-ZZ1861A	993
	3.86	48071	382.04	83000	1.73	P2NA13-31.5-B5-ZZ1861A	KF97A-12.5-MP22+E30+E80+E72-B52-180° -ZZ1861A	PK13-400-MP22-B51-ZZ1861A	1009
	4.27	43462	344.21	117000	2.69	P2NA14-28-B5-ZZ1861A	KF97A-12.5-MH22+E30+E80+E72-B52-180° -ZZ1861A	PK14-360-MH22-B51-ZZ1861A	1183
	4.29	43310	344.21	117000	2.70	P2NA14-28-B5-ZZ1861A	KF97A-12.5-MP22+E30+E80+E72-B52-180° -ZZ1861A	PK14-360-MP22-B51-ZZ1861A	1199
	4.27	43462	344.21	83000	1.91	P2NA13-28-B5-ZZ1861A	KF97A-12.5-MH22+E30+E80+E72-B52-180° -ZZ1861A	PK13-360-MH22-B51-ZZ1861A	993
	4.29	43310	344.21	83000	1.92	P2NA13-28-B5-ZZ1861A	KF97A-12.5-MP22+E30+E80+E72-B52-180° -ZZ1861A	PK13-360-MP22-B51-ZZ1861A	1009
	4.51	40967	325.59	83000	2.03	P2NA13-40-B5-ZZ1861A	KF97A-8.1-MH22+E30+E80+E72-B52-180° -ZZ1861A	PK13-320-MH22-B51-ZZ1861A	993
	4.53	40967	325.59	83000	2.03	P2NA13-40-B5-ZZ1861A	KF97A-8.1-MP22+E30+E80+E72-B52-180° -ZZ1861A	PK13-320-MP22-B51-ZZ1861A	1009
	5.23	35485	281.03	83000	2.34	P2NA13-35.5-B5-ZZ1861A	KF97A-8.1-MH22+E30+E80+E72-B52-180° -ZZ1861A	PK13-280-MH22-B51-ZZ1861A	993
	5.25	36361	281.03	83000	2.28	P2NA13-35.5-B5-ZZ1861A	KF97A-8.1-MP22+E30+E80+E72-B52-180° -ZZ1861A	PK13-280-MP22-B51-ZZ1861A	1009
	5.91	31394	248.63	83000	2.64	P2NA13-31.5-B5-ZZ1861A	KF97A-8.1-MH22+E30+E80+E72-B52-180° -ZZ1861A	PK13-250-MH22-B51-ZZ1861A	993
	5.93	31284	248.63	83000	2.65	P2NA13-31.5-B5-ZZ1861A	KF97A-8.1-MP22+E30+E80+E72-B52-180° -ZZ1861A	PK13-250-MP22-B51-ZZ1861A	1009
	6.56	28285	224.01	83000	2.93	P2NA13-28-B5-ZZ1861A	KF97A-8.1-MH22+E30+E80+E72-B52-180° -ZZ1861A	PK13-225-MH22-B51-ZZ1861A	993
6.58	28186	224.01	83000	2.94	P2NA13-28-B5-ZZ1861A	KF97A-8.1-MP22+E30+E80+E72-B52-180° -ZZ1861A	PK13-225-MP22-B51-ZZ1861A	1009	
30	3.85	65793	382.04	117000	1.78	P2NA14-31.5-B5-ZZ1861A	KF97A-12.5-MH30+E30+E80+E72-B52-180° -ZZ1861A	PK14-400-MH30-B51-ZZ1861A	1239
	3.86	65557	382.04	117000	1.78	P2NA14-31.5-B5-ZZ1861A	KF97A-12.5-MP30+E30+E80+E72-B52-180° -ZZ1861A	PK14-400-MP30-B51-ZZ1861A	1259
	4.27	59277	344.21	117000	1.97	P2NA14-28-B5-ZZ1861A	KF97A-12.5-MH30+E30+E80+E72-B52-180° -ZZ1861A	PK14-360-MH30-B51-ZZ1861A	1239
	4.29	59064	344.21	117000	1.98	P2NA14-28-B5-ZZ1861A	KF97A-12.5-MP30+E30+E80+E72-B52-180° -ZZ1861A	PK14-360-MP30-B51-ZZ1861A	1259
	4.51	56071	325.59	117000	2.09	P2NA14-40-B5-ZZ1861A	KF97A-8.1-MH30+E30+E80+E72-B52-180° -ZZ1861A	PK14-320-MH30-B51-ZZ1861A	1239
	4.53	55870	325.59	117000	2.09	P2NA14-40-B5-ZZ1861A	KF97A-8.1-MP30+E30+E80+E72-B52-180° -ZZ1861A	PK14-320-MP30-B51-ZZ1861A	1259
	5.23	48397	281.03	117000	2.42	P2NA14-35.5-B5-ZZ1861A	KF97A-8.1-MH30+E30+E80+E72-B52-180° -ZZ1861A	PK14-280-MH30-B51-ZZ1861A	1239
	5.25	48223	281.03	117000	2.43	P2NA14-35.5-B5-ZZ1861A	KF97A-8.1-MP30+E30+E80+E72-B52-180° -ZZ1861A	PK14-280-MP30-B51-ZZ1861A	1259
	5.23	48397	281.03	83000	1.71	P2NA13-35.5-B5-ZZ1861A	KF97A-8.1-MH30+E30+E80+E72-B52-180° -ZZ1861A	PK13-280-MH30-B51-ZZ1861A	1049
	5.25	48223	281.03	83000	1.72	P2NA13-35.5-B5-ZZ1861A	KF97A-8.1-MP30+E30+E80+E72-B52-180° -ZZ1861A	PK13-280-MP30-B51-ZZ1861A	1069
	5.91	42818	248.63	83000	1.94	P2NA13-31.5-B5-ZZ1861A	KF97A-8.1-MH30+E30+E80+E72-B52-180° -ZZ1861A	PK13-250-MH30-B51-ZZ1861A	1049
	5.93	42664	248.63	83000	1.95	P2NA13-31.5-B5-ZZ1861A	KF97A-8.1-MP30+E30+E80+E72-B52-180° -ZZ1861A	PK13-250-MP30-B51-ZZ1861A	1069
	6.56	38577	224.01	83000	2.15	P2NA13-28-B5-ZZ1861A	KF97A-8.1-MH30+E30+E80+E72-B52-180° -ZZ1861A	PK13-225-MH30-B51-ZZ1861A	1049
	6.58	38439	224.01	83000	2.16	P2NA13-28-B5-ZZ1861A	KF97A-8.1-MP30+E30+E80+E72-B52-180° -ZZ1861A	PK13-225-MP30-B51-ZZ1861A	1069

4 Outline Dimensions

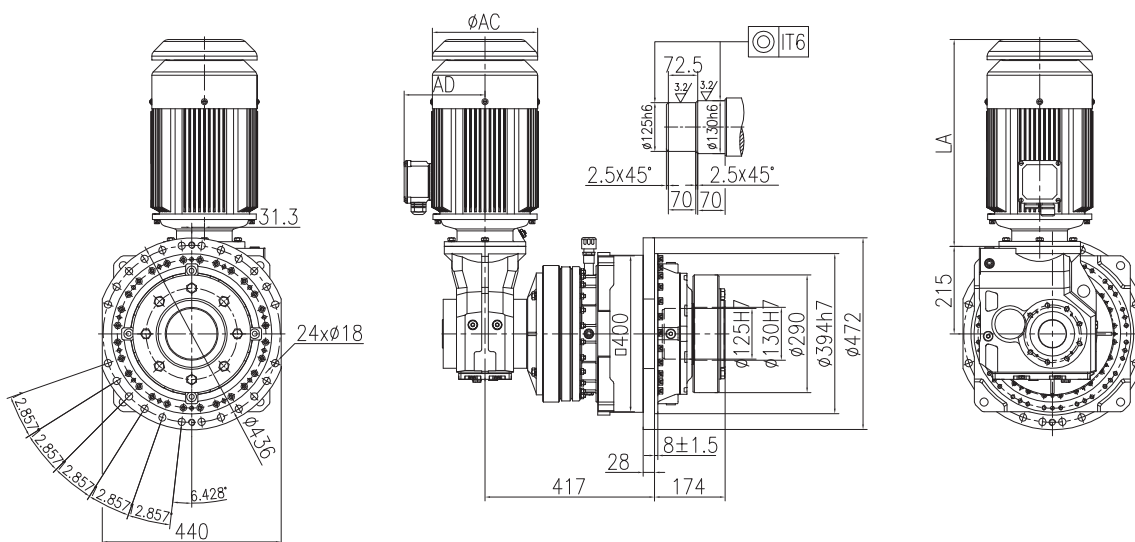
4 外形尺寸图

PK09



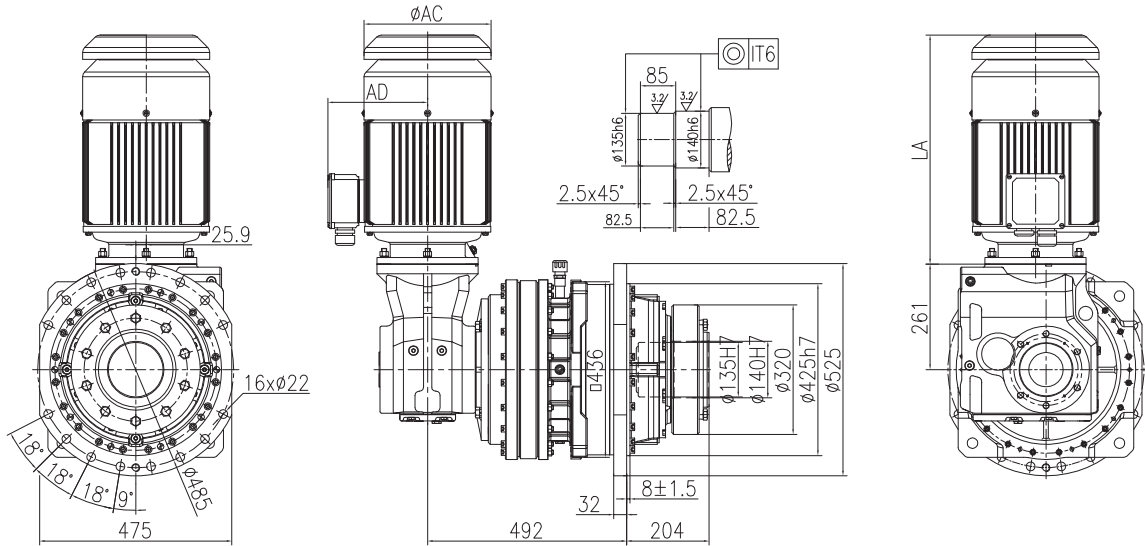
Motor	AC(mm)	AD(mm)	LA(mm)
MH4	220	178	496
MP4	220	178	496
MH5.5	259	199	466
MP5.5	259	199	509
MH7.5	259	199	509
MP7.5	259	199	547

PK10



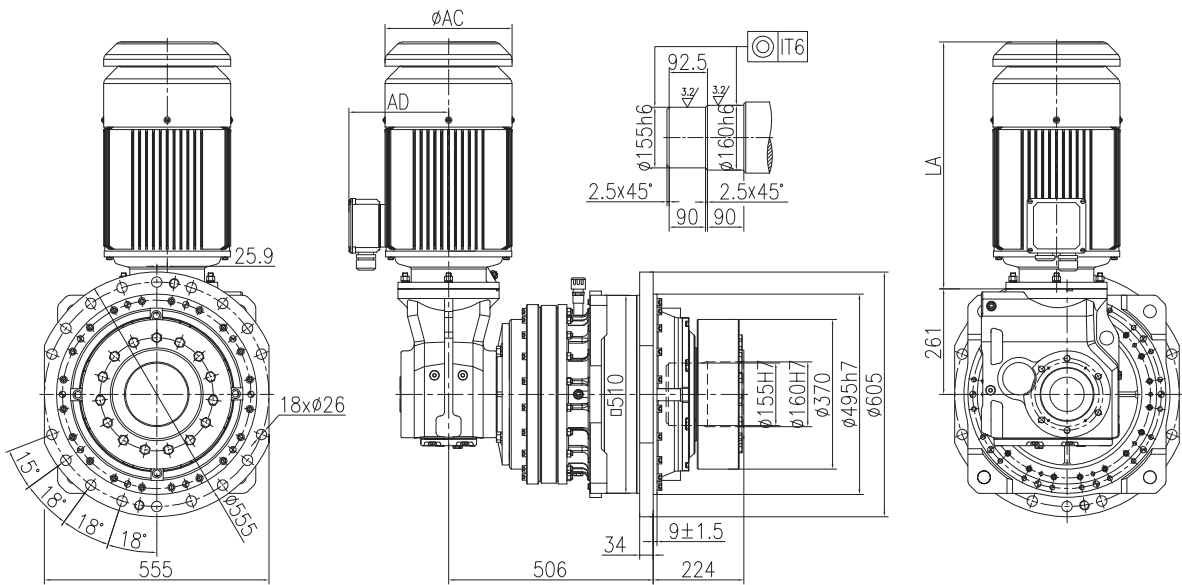
Motor	AC(mm)	AD(mm)	LA(mm)
MH5.5	259	199	466
MP5.5	259	199	509
MH7.5	259	199	509
MP7.5	259	199	547

PK11



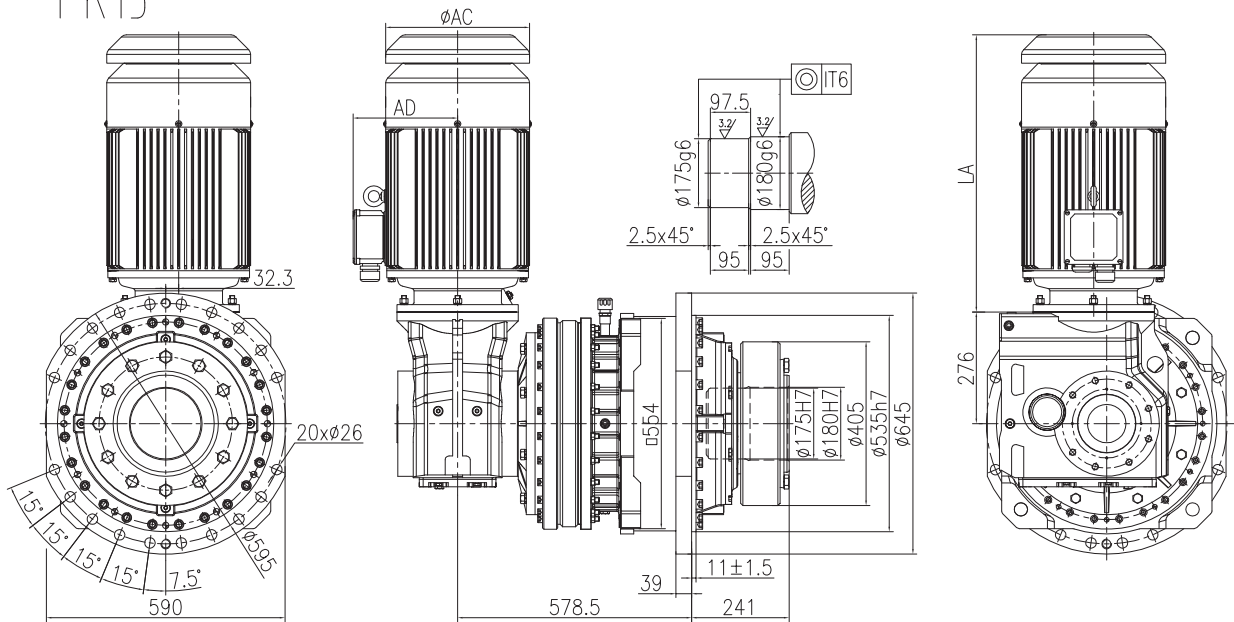
Motor	AC(mm)	AD(mm)	LA(mm)
MH7.5	259	199	501
MP7.5	259	199	539
MH11	314	247	566
MP11	314	247	610
MH15	314	247	610
MP15	314	247	640

PK12



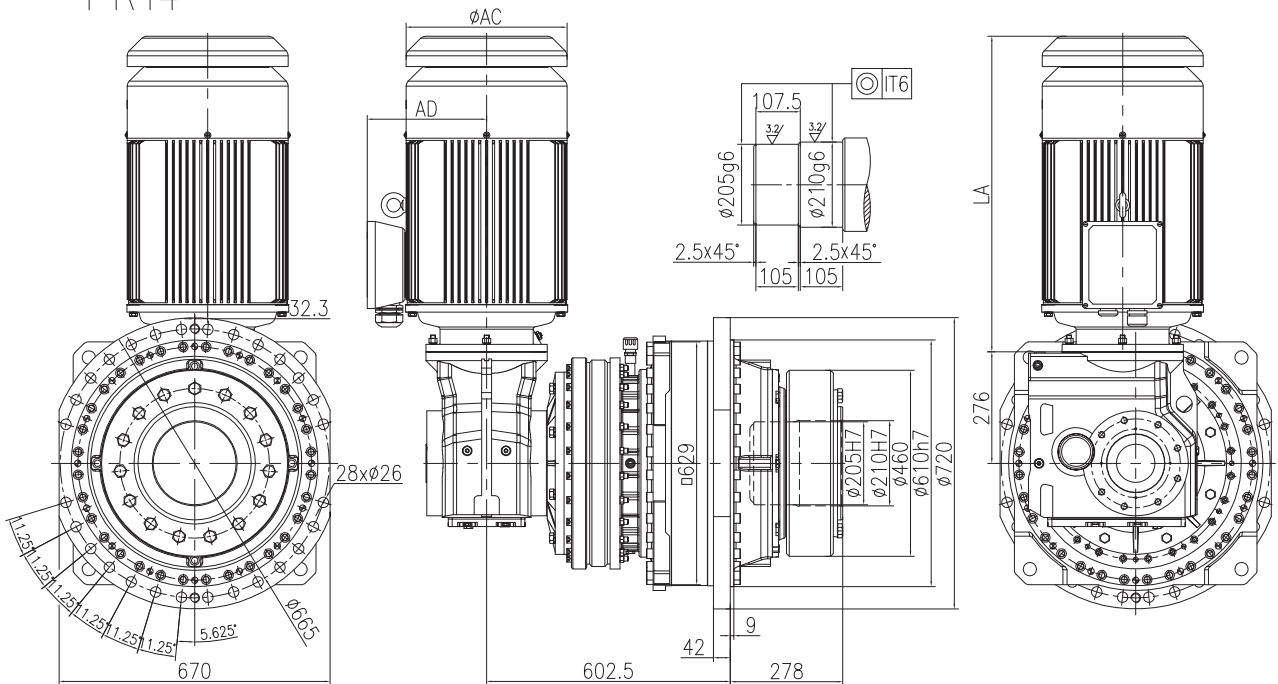
Motor	AC(mm)	AD(mm)	LA(mm)
MH11	314	247	566
MP11	314	247	610
MH15	314	247	610
MP15	314	247	640

PK13



Motor	AC(mm)	AD(mm)	LA(mm)
MH18.5	356	259	685
MP18.5	356	259	685
MH22	356	259	733
MP22	356	259	733
MH30	398	295	780
MP30	398	295	780

PK14



Motor	AC(mm)	AD(mm)	LA(mm)
MH22	356	259	733
MP22	356	259	733
MH30	398	295	780
MP30	398	295	780

5 Lubrication Specification

The gearbox has been tested before delivered, users should add lubrication oil before running. If not specified, the gearbox is shipped without oil. The actual oil value should be done as the oil glass level. Lubrication viscosity (heavy industrial gear oil) [VG320 and VG460]

5 润滑说明

齿轮箱在供货时已处于准运行状态，运行前需加注润滑油。如无特殊说明，齿轮箱发货不含油。实际注油量应以油镜上的标记为准。润滑油（重负荷工业齿轮油）粘度牌号选用【VG320和VG460】

Ambient temperature °C	-20°C ~ +40°C	+30°C ~ +50°C
Viscosity	VG320	VG460

Note:

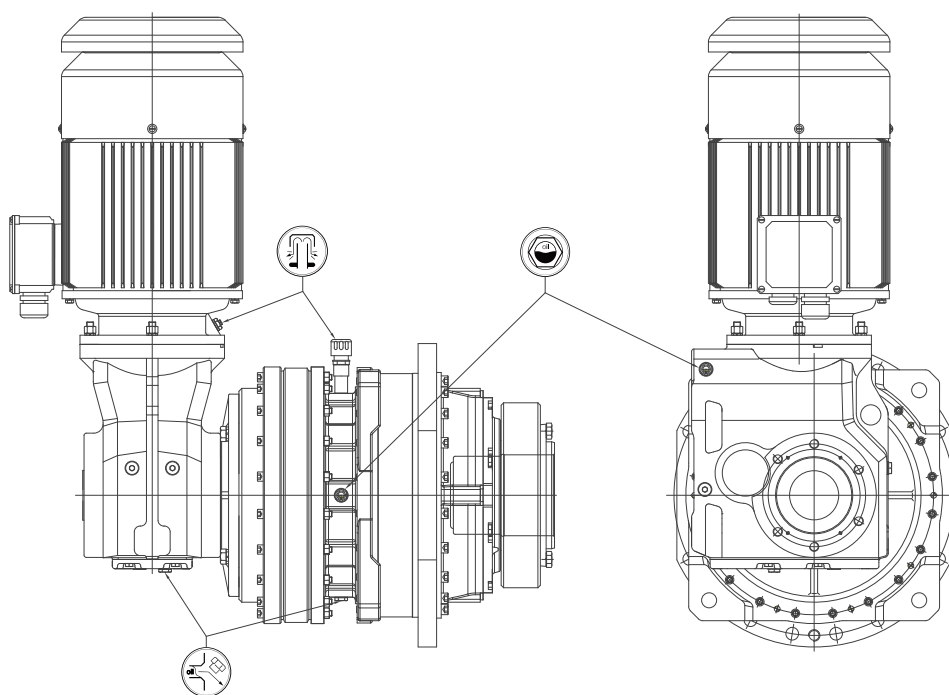
1. The gearbox is lubricated by oil. Product series P and K oil paths are blocked by oil seal, need to be refueled separately.
2. Above table viscosity is only for the temperature under 40°C.
3. Ambient temperature below -10°C must use synthetic oil.
4. To make sure the long using life, we suggest to use synthetic oil.
5. If the ambient temperature is not in the range of the table, please consult BONENG.



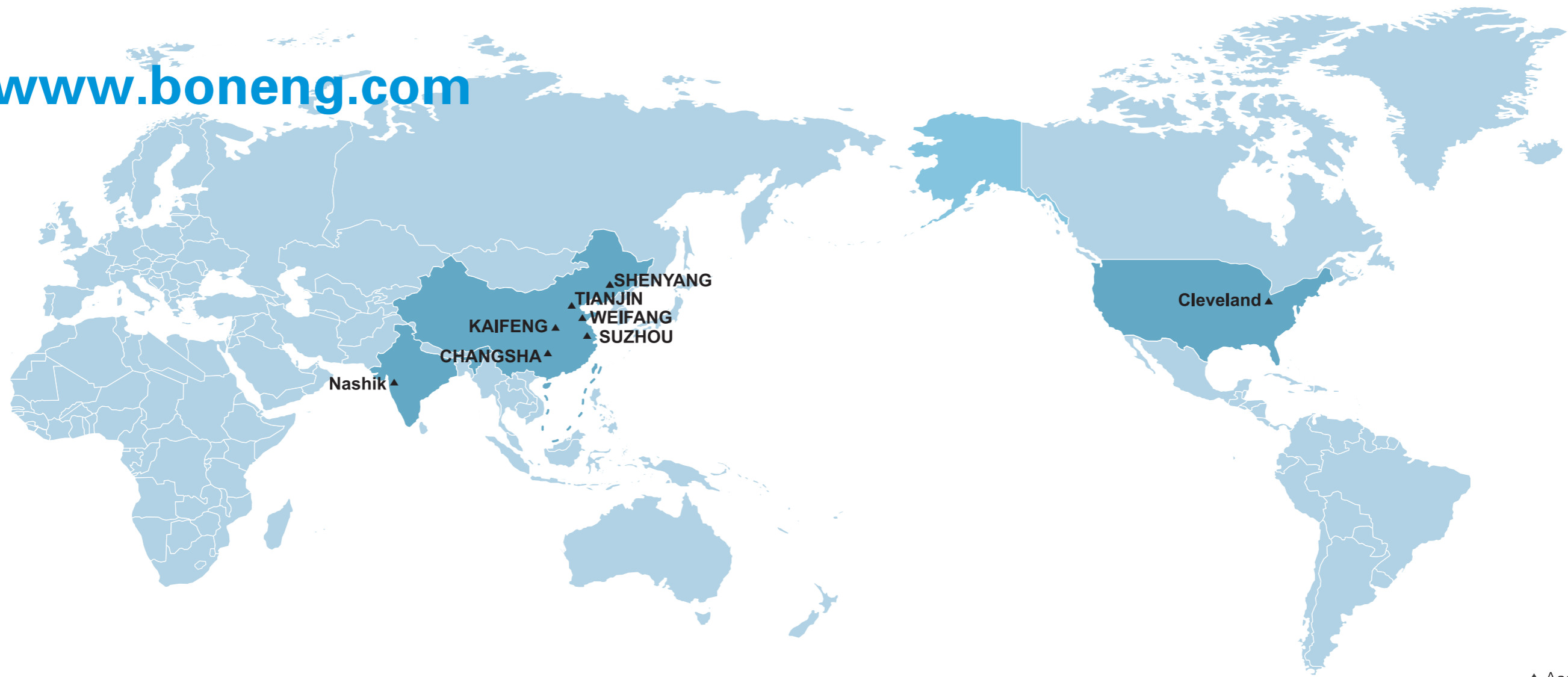
注:

1. 齿轮箱采用浸油润滑，产品系列P和K油路不通，用油封隔绝，需分别加油。
2. 上表中粘度牌号为40° C温度下的ISO—VG粘度。
3. 环境温度低于-10° C必须使用合成油。
4. 为保证产品寿命，实际使用中建议使用合成油。
5. 若环境温度超出上述范围，敬请垂询。

Oil level (L)						
Size	PK09	PK10	PK11	PK12	PK13	PK14
P	3	4	6	8	10	16
K	8.5	8.5	11.5	11.5	22	22



Along with the technology advancedet.,the product of the manual of Boneng will be changed,please forgive.



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