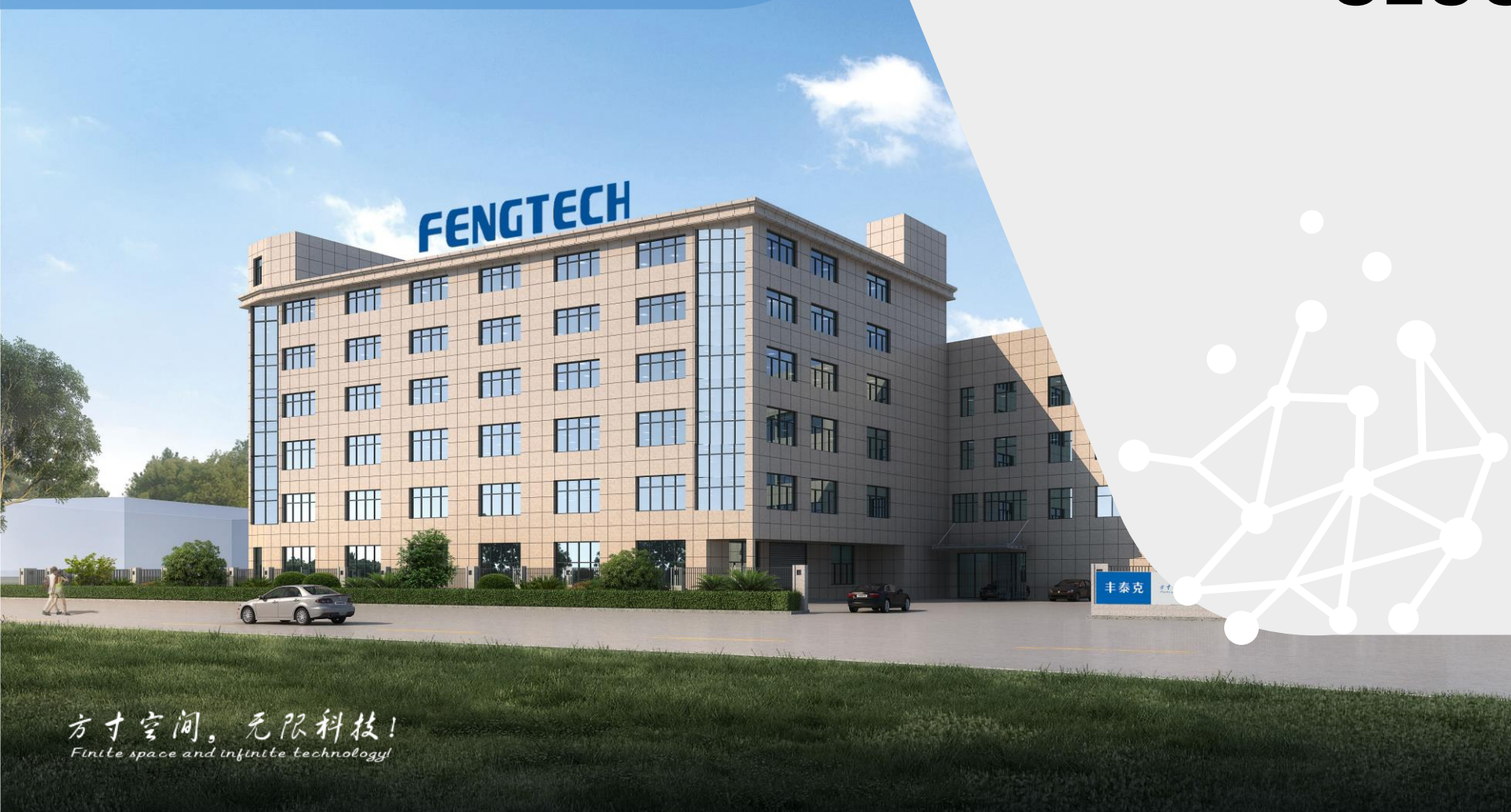




FENGTECH

■ 电机 • 风机 • 控制 ■

FENGTECH'S SOLUTION FOR SLUSH MACHINE ICE MAKER



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Finite space and infinite technology!

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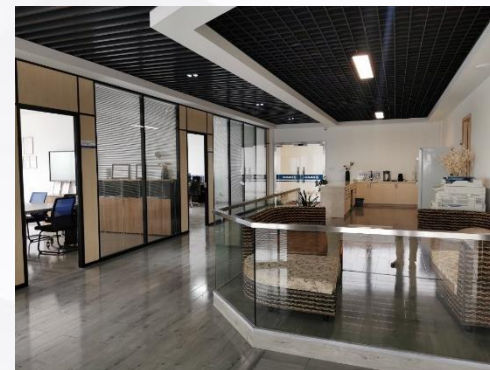


Company Brief

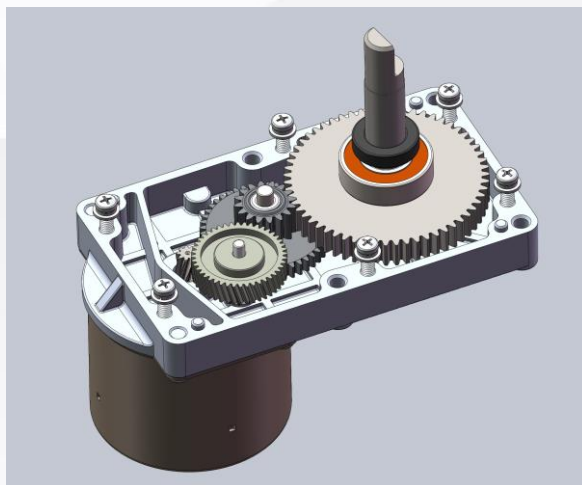
R&D capabilities

Slush Machine Solution

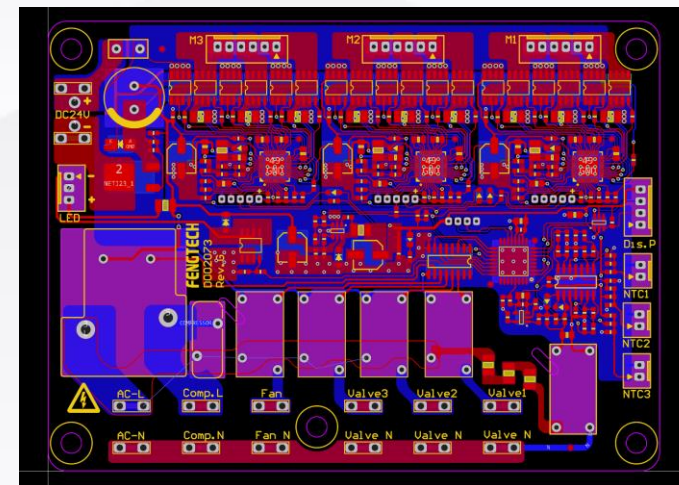
Nugget Ice Maker Solution



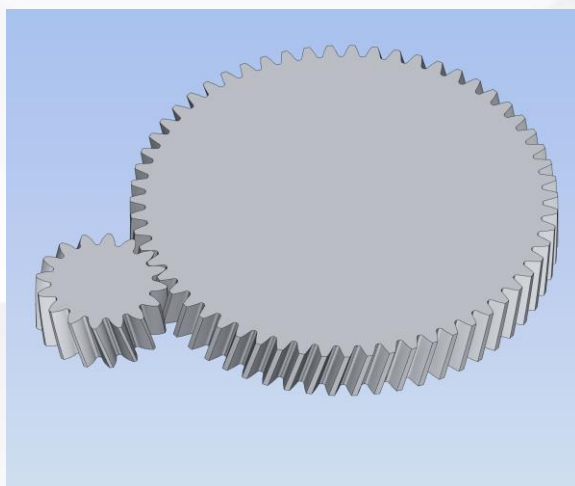
Motor design



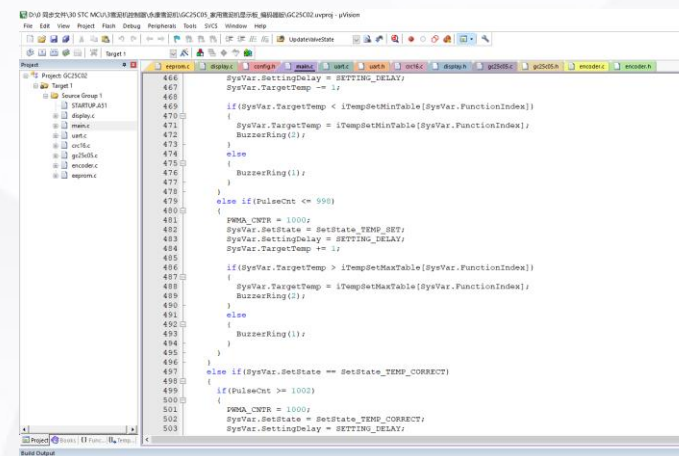
PCB Design

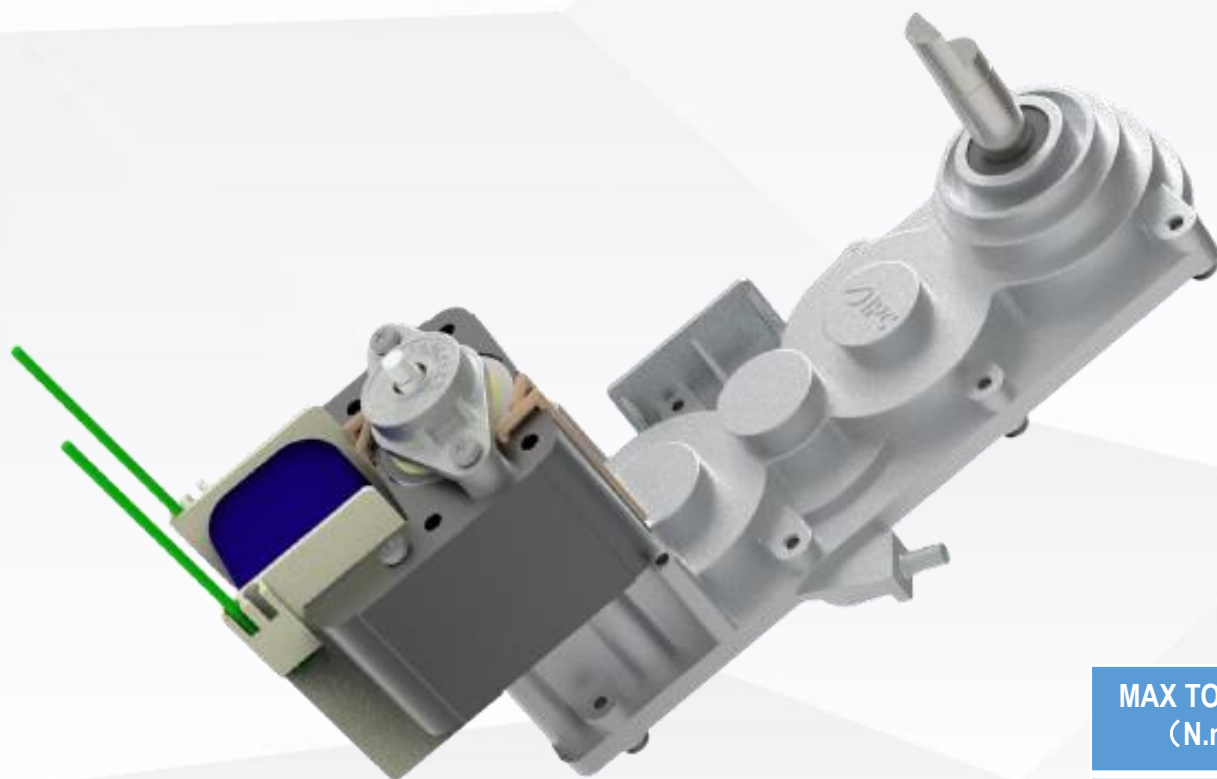


Gear analysis



Programming





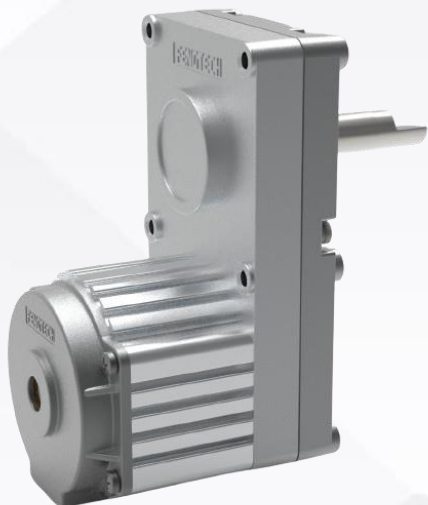
In 2017, in cooperation with IPC, we developed shaded pole gear motor for slush machine.

YJF6440-1701

MAX TORQUE (N.m)	SHAFT SPEED (rpm)	INPUT PWR (W)	OUTPUT PWR (W)	NOISE (dBA)
8.0	34	85	25	55



FAS-BL60



FAS-BL70

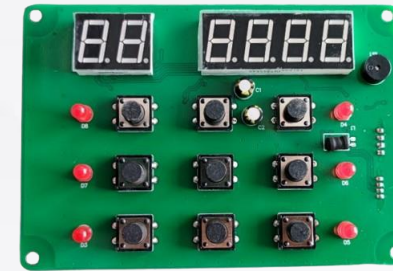
After deep-understanding the requirements for slush machines and the bottlenecks in the industry in 2019, we introduced a brushless DC motor solution to replace the AC motor for better performance.

MAX TORQUE (N.m)	SHAFT SPEED (rpm)	INPUT PWR (W)	OUTPUT PWR (W)	NOISE (dBA)
12	30	35	20	50

Smart slush machine controller

Prevents the cylinder from being frozen

adapt to a variety of different raw materials including low-sugar beverages, coffee drinks, alcoholic beverages, etc



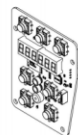
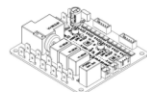
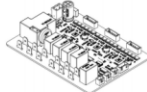



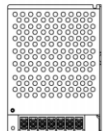





Slush machine control system

This control system is specially designed and developed for commercial slush/cold drink machine, and is equipped with our FAS-BL60 series slush machine brushless mixing motor. It has the advantages of excellent and stable performance, large stirring torque, low motor heating, low power consumption, perfect protection mechanism, long life and high cost performance. Its stirring torque can be twice that of the traditional shaded pole motor, and the power consumption is only 1/3~1/2 of it. In addition, it can monitor the working current, speed, temperature and other parameters of the mixing motor in real time, and cooperate with the intelligent control algorithm to ensure that the slush machine does not freeze the tank, effectively solving the pain points of the traditional slush machine.

- ◎ High torque, high-efficiency motors.
- ◎ Intelligent control algorithms.
- ◎ Full protection mechanism.
- ◎ Customizable display panel.

© Customizable display panel:

	Display panel	Main board 1/2 Set	Main board 3 Set	Mixing motor	Temp. sensor	Light	Power supply	Wires		
										
	The display panel is suitable for 1/2/3 cylinders, which is convenient for customers to produce and assemble. The 6-digit digital tube displays the working status and parameters. display panel can be customized.	The main board adopts a compact design and uses a highly integrated small package chip, which saves valuable space inside the slush machine. The main control board integrates 1~3 channels of motor drive control, 1~3 channels of temperature acquisition, 1 channel of compressor control, 1 channel of evaporator fan control, 1~3 channels of solenoid valve control, 1 channel of LED light control, etc.	It uses a brushless DC motor with high efficiency and high torque, and a high-strength gear. It has the characteristics of large stirring force, low calorific value and long service life.	Special customized temperature sensors. The shell is made of food-grade stainless steel.	DC low-voltage LED light source, with long life, low heat generation.	Gallium nitride (GaN) power supplies from big factories, which is compact and highly reliable. It has UL/EN/CCC and other certifications.	The wiring harness adopts snap-on connectors, which are firmly connected and not easy to loosen. The length of the wiring harness can be customized for customers to facilitate wiring.			
1Set machine	1	1	/	1	1	1	DC24V/75W	1	1	1
2Set machine	1	1	/	2	2	2	DC24V/100W	1	2	1
3Set machine	1	/	1	3	3	3	DC24V/150W	1	3	1

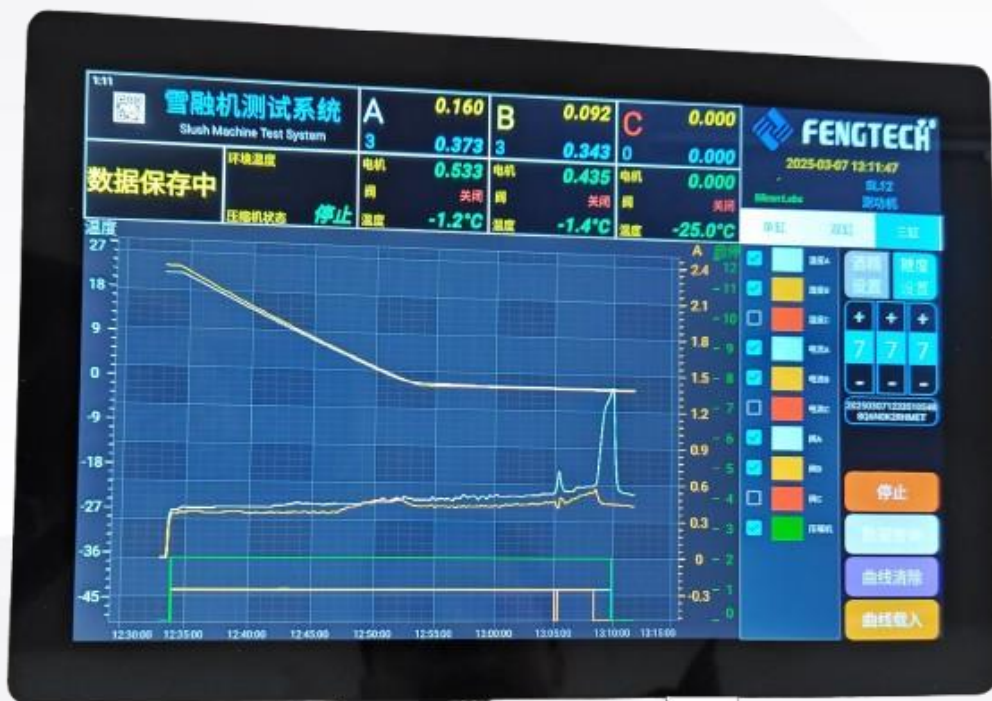
Laboratory for Slush Machine

We have multiple brands of slush machines for the testing (CarpiGiani, Bunn, Chinese Brand)



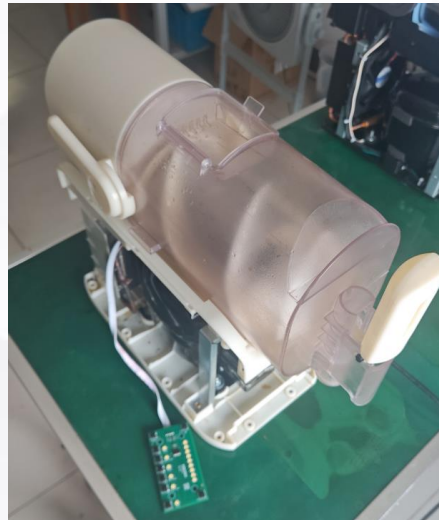
Testing system for Slush Machine

We develop a testing system for the slush machine . It can record the temperature change during the working process, the working status of the solenoid valve, compressor and motor. It also is a good tool for helping us to optimize the control logic.



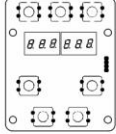
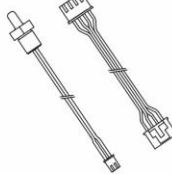


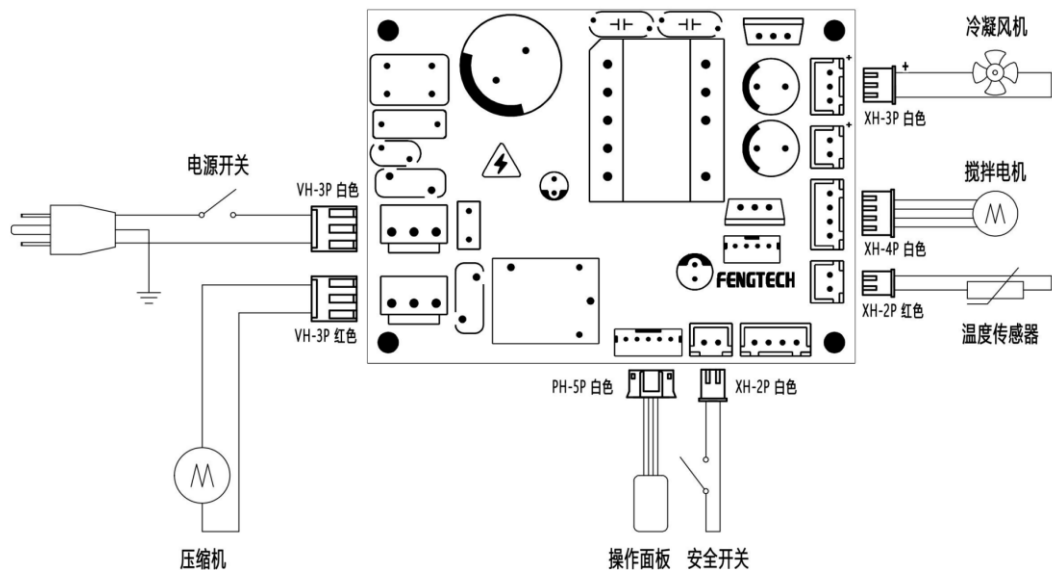
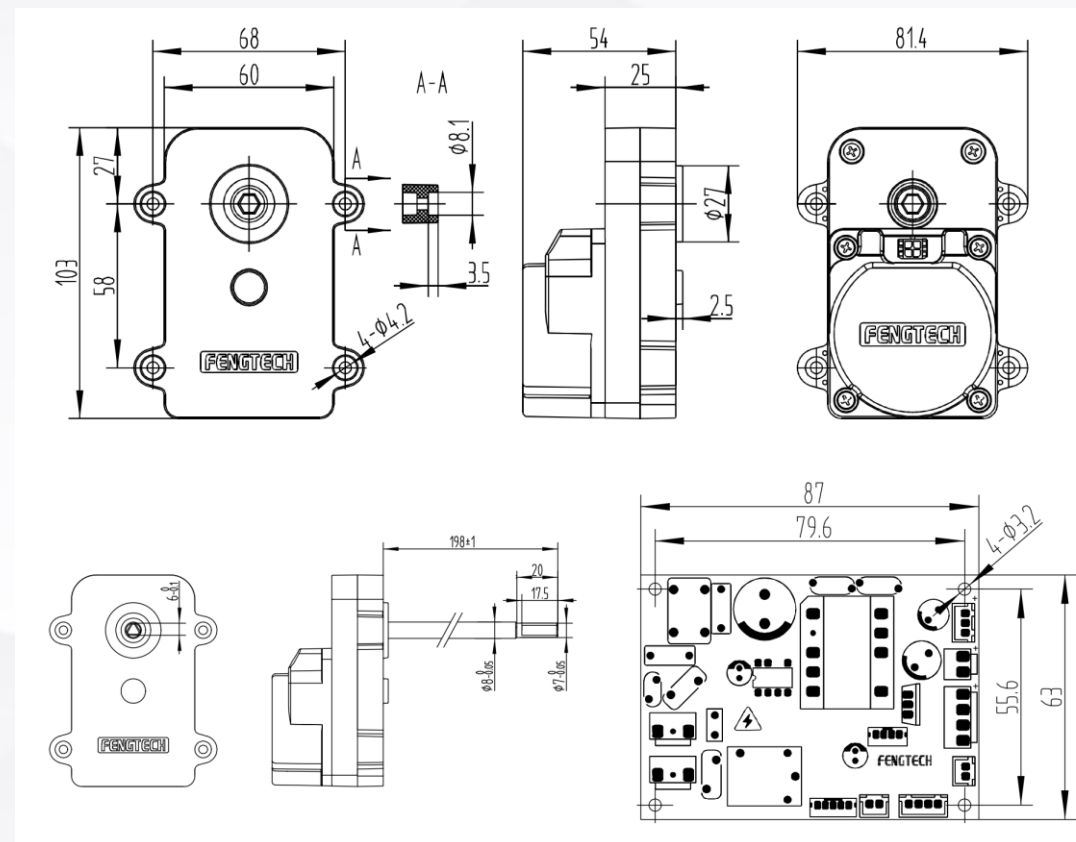


In 2024, building on the success of commercial slush machine motors, we developed motors and control systems for household slush machines. These systems inherit the characteristics of commercial motors such as high efficiency and low noise, and have been adopted by multiple clients.



Slush machine(Motor & controller)

			
<p>M1</p> <ul style="list-style-type: none"> * DC12V 50RPM * 最大扭矩 2.5N.m * 适合 3L雪泥机 * RS-485接口 * 过压、过流、堵转保护 * 可定制转轴 	<p>雪泥机控制板(3L/1Set)</p> <ul style="list-style-type: none"> * 全电压适配 * 大功率压缩机继电器 * 温度、电流双环控制算法 * 冻缸提前感知 * 完善的保护算法 	<p>定制您的专属操作面板</p>	<p>温度传感器及线束</p> <ul style="list-style-type: none"> * 食品级材质 * NTC强化连接处理 * 测温精度高



Nugget ice maker(Motor, evaporator & controller)

Household ice maker



- FAX-BL70C
- * DC12/24V 5.5RPM
 - * Max torque 30N.m
 - * Modbus via RS485
 - * Full protection



- * 100~240VAC Input
- * Intelligent control
- * Full protection system



- * Food-grade stainless steel
- * High-efficiency heat exchange
- * 15~25 kg/day

Commercial ice maker



FQB-BL70C

- * DC24V 10RPM
- * Max torque 35N.m
- * Modbus via RS485
- * Full protection



- * DC24V Input
- * Intelligent control
- * Full protection system



- * Food-grade stainless steel
- * High-efficiency heat exchange
- * 30~60 kg/day



THANK YOU