



# TMV Permanent Magnet Variable Speed Screw Air Compressor



## The Highest Motor Efficiency: Highly Efficient Permanent-Magnetic Motor

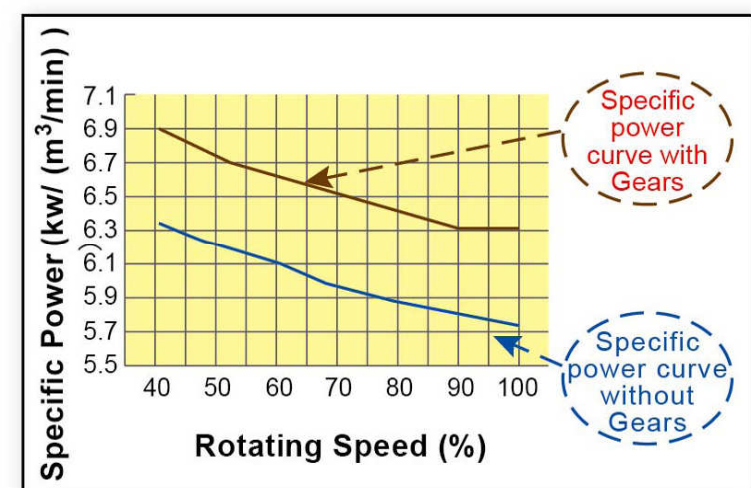
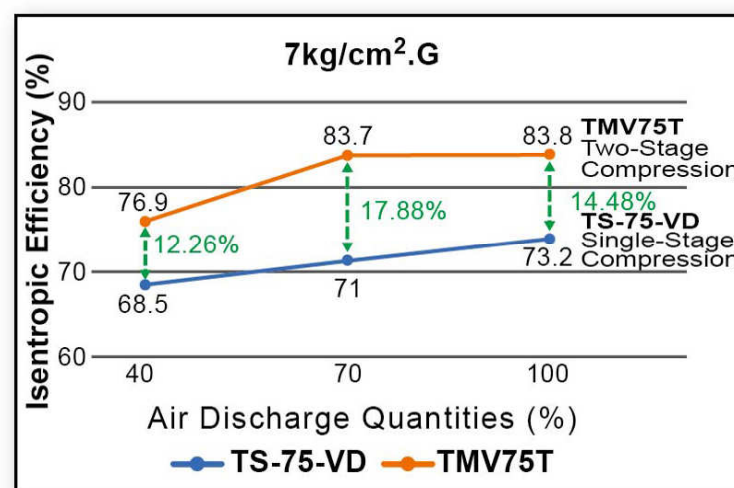
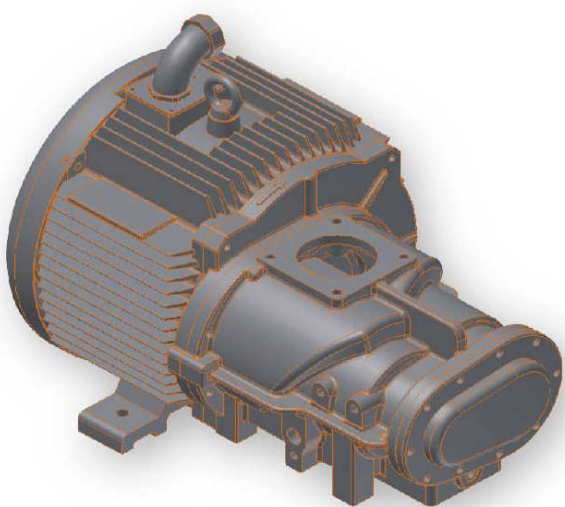
- Higher efficiency than IE4 Motors; energy saving; with 30% ~ 100% more adjustable running speed range; with 6 kg/cm<sup>2</sup> ~ 10 kg/cm<sup>2</sup> wider adjustable pressure range, suitable for big range applications and various industries.
- With F-Class insulation and excellent air-cooling system to keep much lower temperature rise in running to avoid over-heating to damage the motor.

## The Best Compressing Efficiency: Single Shaft, Direct-Drive Compressors


- Without belts; without gears; without coupling, which results in ZERO power transmission loss in running.  
Power Transmission Loss Comparisons:  
With Belts: 5% loss TMV model: 0% loss  
With Gears: 2% loss TMV model: 0% loss  
With Coupling: 1% loss TMV model: 0% loss
- Two stages compression lowers down the compressing ratio, which increases the life of seal gasket and raises its volumetric efficiency.
- Spraying oil to cool down the compressed air between the first stage and the second stage; to reach to Isothermal compression in operation for energy-saving.

## The Best Performance: Two Motors, Two Stages, Direct-Drive Compression; Variable Frequency, Without Gears, Which Reach To The Best Performance

- Compared with the gear-driven two stage transmission mechanism, TMV-T series overcome the regular fixed gear proportion issue, will automatically adjust the running speed of each motor while the pressure of discharged air is changed; and always keep air end in optimal running efficiency.
- TMV-T series are able to adjust the pressure of each stage air end independently, allow discharged air pressure range to be between 6 kg/cm<sup>2</sup> to 10 kg/cm<sup>2</sup> for the best working efficiency.



**Please accommodate  
the compressors in a  
suitable room**

-  No rain, No vibration
-  No heat, No moisture
-  No dust, with clean air surroundings
-  Enough space for ventilation and heat dissipation



### Specification

Models	TMV15	TMV22	TMV37	TMV75	TMV37T	TMV75T	TMV110T	TMV160T
Suction Air Conditions	1 Atm , 2~40°C							
Discharged Air Temp. (°C)	≤ suction air temp. plus 13°C							
Discharged Air Pressure (kg/cm <sup>2</sup> )	7 / 8 / 10	7 / 8 / 10	7 / 8 / 10	7 / 8 / 10	7 / 8 / 10	7 / 8 / 10	7 / 8 / 10	7 / 8 / 10
Discharged Air Quantity F.A.D. (m <sup>3</sup> /min)	2.4 / 2.2 / 2.0	3.9 / 3.6 / 3.0	6.7 / 6.4 / 5.4	13.5 / 12.8 / 11.3	8.2 / 7.6 / 6.5	15.8 / 15 / 12.9	25.2 / 24.0 / 20.3	35.2 / 33.8 / 30.5
Rated Power (KW / HP)	15 / 20	22 / 30	37 / 50	75 / 100	37 / 50	75 / 100	110 / 150	160 / 215
Noise Level (dB(A))	66	67	71	75	71	75	77	78
Driven System	Single-stage, Single-shaft, Direct-drive				Two-stage, Two-motor, Single-Shaft, Direct -drive			
Outer Dimensions LxWxH (mm)	1000x1150x1450	1145x1190x1574	1220x1250x1770	2235x1770x1705	1800x1800x1500	2335x2185x1705	2950x2155x2040	3520x2155x2140

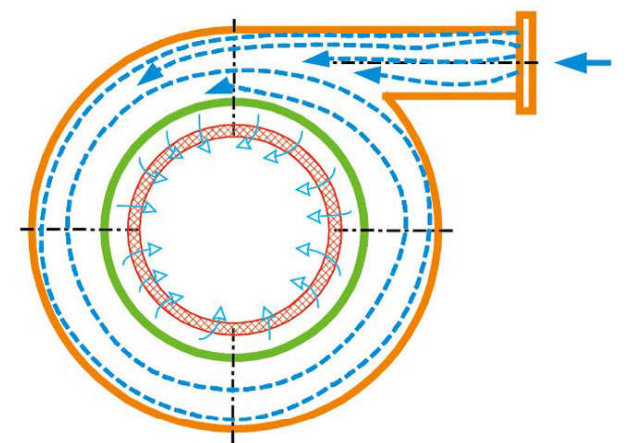
※We keep on developing for excellence and reserve the right to alter specifications without prior notice.

## Much Better Features

- Space Saving: As compared with traditional motor, PM motor itself can be 30% less volume and 25% less weight. Besides, its single shaft direct-drive mechanism design will reduce 20% volume of the air end.
- Life time extension: With bigger rotors and lower speed of air ends, TMV series can extend the life of spare parts due to much lower vibration and less abrasion in running.
- With high efficient centrifugal cooling fan to lessen the motor's load and save 50% power consumption of the unit.
- Oil tank with pre-filtering mechanism design to reach the oil content of the discharged air to be much less.
- The inverter motor is able to maintain the stable pressure in operation, which can decrease the pressure loss during power On/Off and loading/unloading of the compressor unit.

## Less Noise Level

- The bigger air end is always running under low speed and makes less noise
- Compared with axial fan, centrifugal fan reduces 3dB of noise level.
- With huge suction air filter and double-layer structure design to lessen the noise.
- With single shaft, direct-drive mechanism design to avoid any running noise from transmitting parts such as gears and belts.

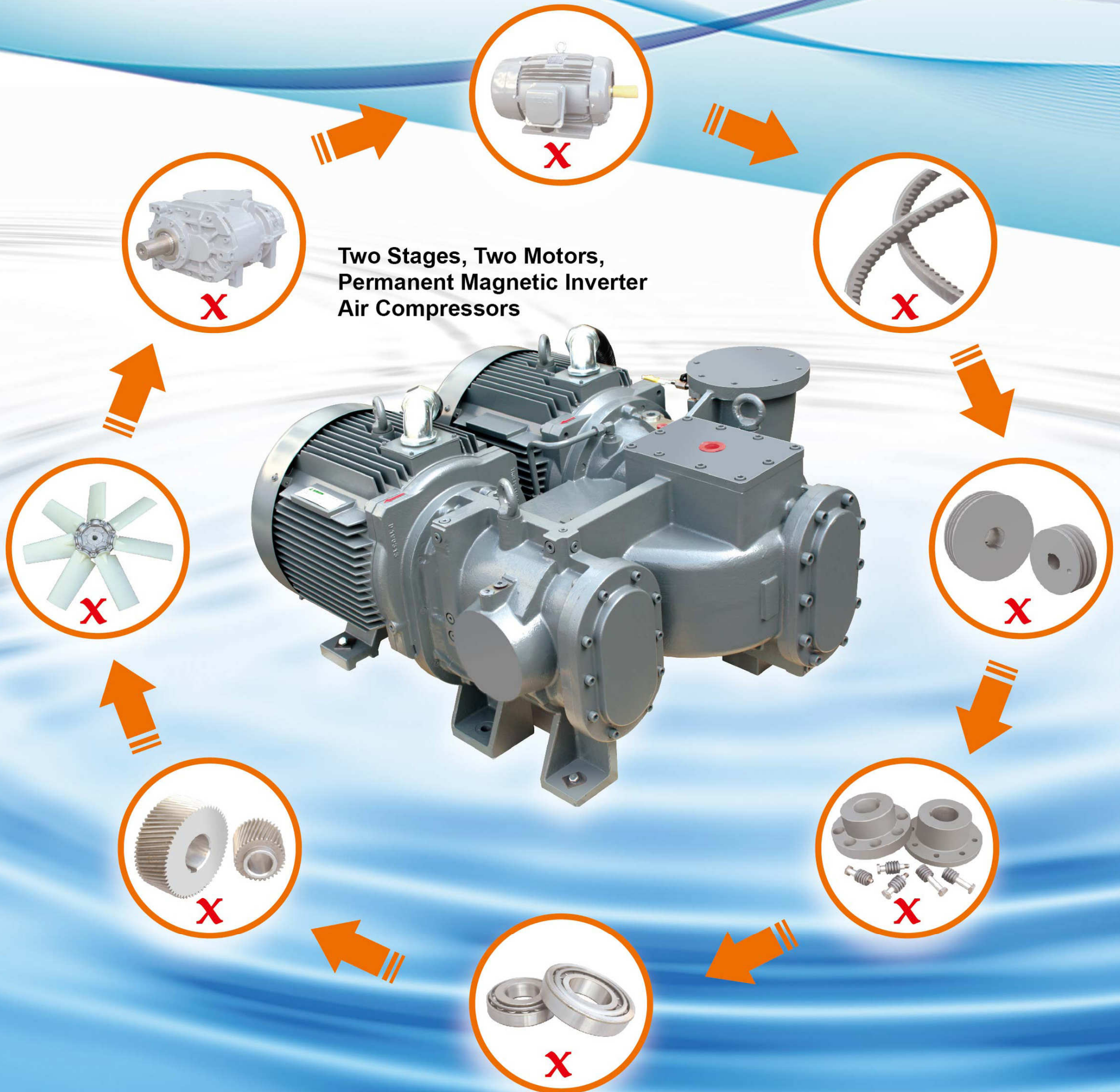
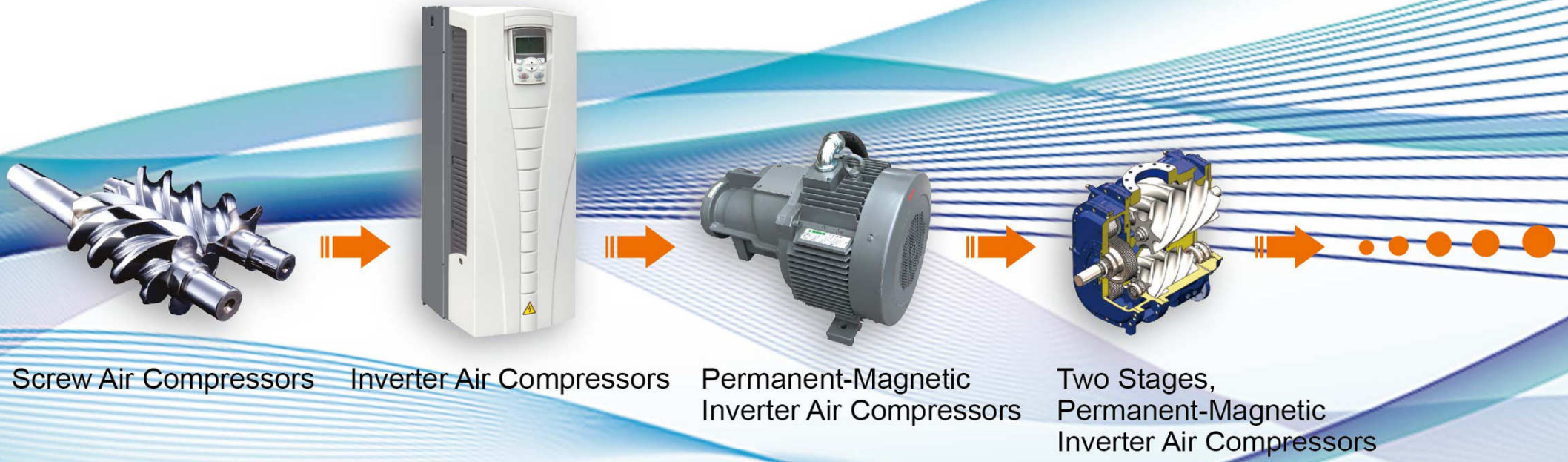


## Easy Maintenance

- Direct-drive design, no need to maintain or replace the belts or gears, to refill the motor bearing oil and to replace the bearings.
- Vertical cooler design makes it easy to clean and drain out the waste oil.
- The electric cabinet is equipped with an independent fan to cool down the electric components effectively.
- The electric cabinet is both water-proof and dust-proof, equipped with magnetic contactors to ensure electric safety when abrupt power disconnection occurs.



# Improvement From Generation To Generation





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Thinking, Watching, Challenging, and Improving are always our belief and persistence for over 60 years.

SWAN listens to the voices and view points from our customers and think for any possibility to develop new products to meet the requirements from the market.



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