HABOR®

Small goods with

Great Performance

Habor Precise Industries（Taiwan）

Habor Precise Machine (ZheJiang)

HABOR (Shanghai)
HABOR (Zhejiang)
HABOR Headquarter (Taiwan)

Extremely precise

Environmental friendly

Energy saving

PID V Series PID Controlled : Control the coolant temperature with the precision of +/- 0.2°C by PID controlled proportional value.

ON / OFF ON/OFF Controlled : Control the coolant temperature within +/- 1°C

Application / Series	HBO	HK	HJ	HE	HW	HA	HPW/HPC	FU	HRD
	Oil Cooler				Water Cooler	Air Cooler	Heat Exchanger	Ventilation Filter With Fan	Air Dryer
High Speed Spindle	●	●			●				●
Linear Motor	●	●			●				
Ball Screw	●	●							
Hydraulic System	●				●				
Coolant		●	●						
CNC Cutting Machine	●	●	●		●	●	●	●	●
Laser Machine					●	●	●	●	●
CNC Lathe	●	●	●			●	●	●	●
Machining Center	●	●	●	●	●	●	●	●	●
EDM				●					
WireCut Machine					●	●	●	●	
PCB Drilling Machine	●				●	●	●	●	●
Injection Machine					●	●	●	●	
Semi Con Industrial Machine					●				●
Medical Equipment					●				
Printing Equipment					●				
Electronic or Electric Cabinets						●	●	●	
Tele-communication Equipment						●	●		
CNC Control Equipment						●	●	●	

Water Cooler

HWV Series
Water Cooler - Vertical Without Tank

HWK Series
Water Cooler - Vertical With Tank

HWH Series
Water Cooler- Horizontal Without Tank

HEW Series
Water-water Heat Exchanger

RW Series
Water Cooler - Water Cooled

▲ **EX. : HWK-250PTSBM**

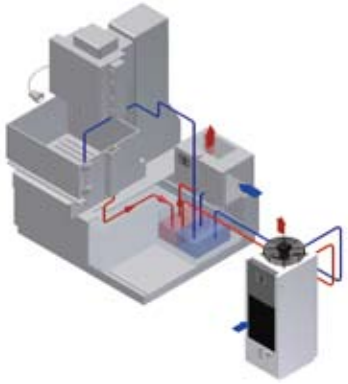
HWK - H V 250 P T H C S B M

- HWV: Water Cooler - Vertical Without Tank
- HWK: Water Cooler - Vertical With Tankcoolant
- HWH: Water Cooler- Horizontal Without Tank
- HEW: Water-water Heat Exchanger
- RW: Water Cooler - Water Cooled
- Tropical version（Ambient temperature10~50℃）
- High precision temperature control (+/-0.2ºC)
- Model (Refer to specification)
- Pump
- With tank (HWK, HEW, RW)
- Heater
- Timer
- Digital display control
- A: Fixed temperature control
- B: Differential temperature control
- R: Tracing ambient temperature
- M: Tracing machine body temperature

HW Series Water Cooler

Feature

- Precisely control temperature of industrial machines, improve production efficiency and reduce cost.
- Use stainless steel for water circuit
- Multi-safety devices are equipped to secure the safety of operator and machine.
- No need for cooling water tower (HWV, HWK, HWH).
- No heat exhaust (HEW, RW).



Specification

Water Cooler - Vertical With Tank

Item / Model		HWK-50PTS	HWK-250PTS	HWK-400PTS	HWK-600PTS	HWK-750PTS	HWK-900PTS	HWK-1000PTS	HWK-2RPTS	HWK-3RPTS	HWK-4RPTS	HWK-5RPTS
Cooling capacity	KCAL/H 50/60Hz	450/500	840/1000	1400/1500	1700/2100	2600/3000	3200/3800	3750/4500	5000/6000	7500/9000	10000/12000	12500/15000
	W 50/60Hz	525/580	980/1170	1630/1750	1980/2450	2900/3500	3700/4400	4350/5250	5820/6980	8720/10470	11630/13960	14540/17450
	BTU/H 50/60Hz	1800/2000	3360/4000	5600/6000	6800/8400	10000/12000	12800/15200	15000/18000	20000/24000	30000/36000	40000/48000	50000/60000
Temperature controller	A	Fixed temperature control type (setting range 10~40 ºC)										
	B	Differential temperature control type (tracing ambient/machine body temperature, setting range -9.9~+9.9˚C)										
Use range	Ambient temperature˚C	10~40˚C (Standard)										
	Liquid temperature˚C	10~30˚C										
Power source		3Ø 200~230V 50/60Hz										
Motor	Compressor	460			740	1136	1450	1700	2480	3350	4400	5500
	Fan	56	50	95		180			350		500	
	Pump	120	750							1510		
Pump flow rate (L/min)	50Hz	2	40								60	80
	60Hz	3.5	50								80	130
Max Lift from pump(M)	50Hz	30	28							36		
	60Hz	38	40							53		
Piping diameter	Inlet	PT 1/2"		PT 3/4"					PT 1"		PT 3/4"	
	Outlet	PT 1/2"		PT 3/4"					PT 1"		PT 3/4"	
Water tank capacity		7L	13L	35L					22L	40L	90L	
Dimension WxDxH (mm)		367x508x567	370x483x925	425x500x1100		430x640x1295			550x770x1295	553x677x1430	1085x780x1400	
Weight (KG)		48	69	95		107		112	150	218	253	
Noise level		Below 70 dB(A)							Below 80 dB(A)			

The cooling capacity stated above is based on the condition of liquid temperature 22ºC, Ambient temperature of 32ºC and 60Hz.

Specification

Water Cooler - Vertical Without Tank

Item / Model		HWV-250PS	HWV-400PS	HWV-600PS	HWV-750PS	HWV-900PS	HWV-1000PS	HWV-2RPS	HWV-3RPS	HWV-4RPS	HWV-5RPS
Cooling capacity	KCAL/H 50/60Hz	840/1000	1400/1500	1700/2100	2600/3000	3200/3800	3750/4500	5000/6000	7500/9000	10000/12000	12500/15000
	W 50/60Hz	980/1170	1630/1750	1970/2450	2900/3500	3700/4400	4350/5250	5820/6980	8720/10470	11630/13960	14540/17450
	BTU/H 50/60Hz	3360/4000	5600/6000	6700/8300	10000/12000	12800/15200	15000/18000	20000/24000	30000/36000	40000/48000	50000/60000
Temperature controller	A	Fixed temperature control type (setting range 10~40 ºC)									
	B	Differential temperature control type (tracing ambient/machine body temperature, setting range -9.9~+9.9˚C)									
Use range	Ambient temperature˚C	10~40˚C (Standard)									
	Liquid temperature˚C	10~30˚C									
Power source		3Ø 200~230V 50/60Hz									
Motor	Compressor	478	845	845	1185	1500	1700	2480	3350	4400	5500
	Fan	50	180					350		500	
	Pump	57		80	750					1080	
Pump flow rate (L/min)	50Hz	27		32	58					100	
	60Hz	31		38	75					150	
Max Lift from pump(M)	50Hz	3.1		3.8	28						
	60Hz	4.3		5.4	40						
Piping diameter	Inlet	PT 1/2"	PT 1"							PT 3/4"	
	Outlet	PT 1/2"	PT 1"							PT 3/4"	
Dimension WxDxH (mm)		360x472x687	575x430x1045				480x580x1340	500x732x1295	554x660x1535	1085x780x1400	
Weight (KG)		51	73	73	75	75	105	152	180	253	
Noise level		Below 70 dB(A)						Below 80 dB(A)			

The cooling capacity stated above is based on the condition of liquid temperature 22ºC, Ambient temperature of 32ºC and 60Hz.

Specification

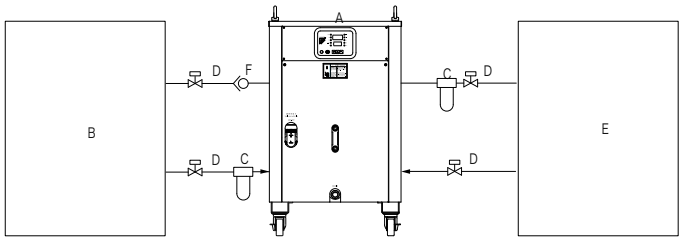
Water Cooler- Horizontal Without Tank

Item / Model		HWH-250PS	HWH-400PS	HWH-600PS	HWH-750PS	HWH-900PS	HWH-1000PS
Cooling capacity	KCAL/H 50/60Hz	840/1000	1250/1500	1700/2100	2600/3000	3200/3800	3750/4500
	W 50/60Hz	980/1170	1450/1750	1970/2450	2900/3500	3700/4400	4350/5250
	BTU/H 50/60Hz	3300/4000	5000/6000	6700/8300	10000/12000	12800/15200	15000/18000
Temperature controller	A	Fixed temperature control type (setting range 10~40 °C)					
	B	Differential temperature control type (tracing ambient/machine body temperature, setting range -9.9~+9.9°C)					
Use range	Ambient temperature°C	10~40°C (Standard)					
	Liquid temperature°C	10~30°C					
Power source		3Ø 200~230V 50/60Hz					
Compressor / Fan motor(W)		478/50	845/50		1185/95	1500/125	1700/125
Pump	W	57	80			135	
	Max.flow rate (L/min)	27/31	32/38			45/52	
	Max. liquid lift (M)	3.1/4.3	3.8/5.4			4.6/6.5	
Liquid inlet diameter		PT 3/4”					
Liquid outlet diameter		PT 3/4”					
Dimension WxDxH (mm)		540x400x340	630x420x420		630x480x520	710x540x570	710x540x570
Weight (KG)		44	65	65	74	83	83
Noise level		Below 70 dB(A)					

The cooling capacity stated above is based on the condition of liquid temperature 22°C, Ambient temperature of 32°C and 60Hz.

Piping diagram

A：HEW
B：Cooling water source
C：Filter
D：Ball valve
E：Machine tool
F：Check valve



Specification

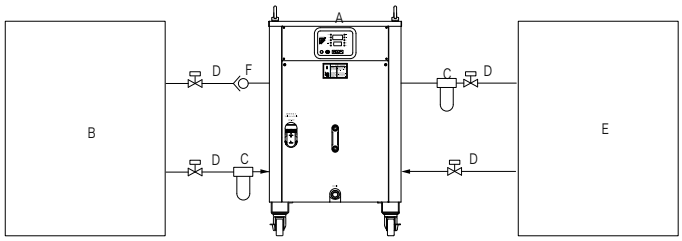
Water-water Heat Exchanger

Item / Model		HEW-800PTS	HEW-2RPTS	HEW-3RPTS
Cooling capacity	KCAL/H 50/60Hz	3000	6000	9000
	W 50/60Hz	3500	7000	10500
	BTU/H 50/60Hz	12000	24000	36000
Temperature controller	A	Fixed temperature control type (setting range 10~40 °C)		
	B	Differential temperature control type (tracing ambient/machine body temperature, setting range -9.9~+9.9°C)		
Power source		3Ø 200~230V 50/60Hz		
Pump	W	750	750	2650
	Max.flow rate (L/min)	50	50	100
	Max. liquid lift (M)	40	40	50
Min. flow requirement of cooling water (L/min)		40		
Liquid inlet diameter(PT)		3/4"		
Liquid outlet diameter(PT)		3/4"		
cooling water inlet diameter(PT)		3/4"		
cooling water outlet diameter(PT)		3/4"		
Water tank capacity		45L		
Dimension WxDxH (mm)		490x500x795		
Weight (KG)		90	98	100
Noise level		Below 70 dB(A)	Below 80 dB(A)	

The aboe cooling capacity is based on the condition of liquid temperature 22°C and cooling water source of 10°C

Piping diagram

A：RW
B：Cooling water source
C：Filter
D：Ball valve
E：Machine tool
F：Check valve



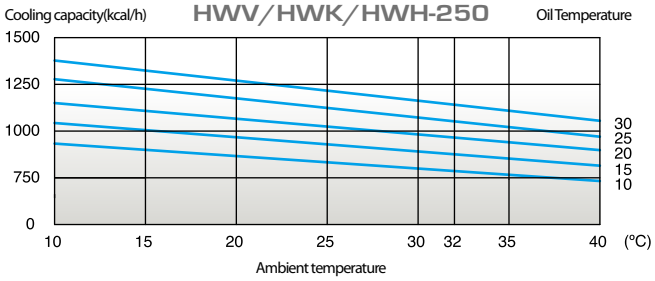
Specification

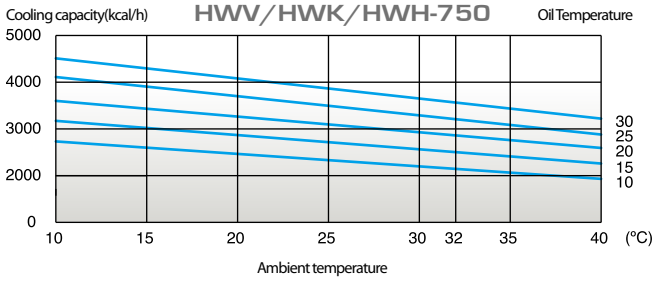
Water Cooler - Water Cooled

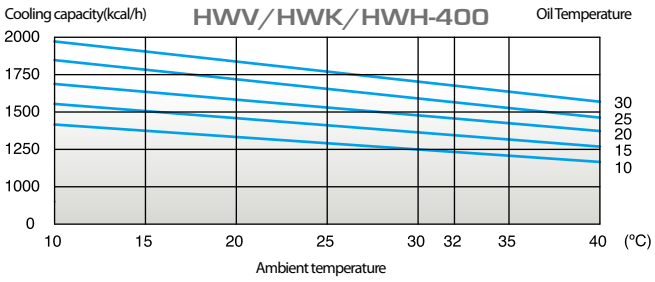
Item / Model		RW-3RPTS	RW-4RPTS	RW-5RPTS	RW-7.5RPTS
Cooling capacity	KCAL/H 50/60Hz	7000/9000	10000/12000	12500/15000	18600/22500
	W 50/60Hz	8700/10500	11600/14000	14500/17500	21600/26100
	BTU/H 50/60Hz	30000/36000	40000/48000	50000/60000	74000/89000
Temperature controller	A	Fixed temperature control type (setting range 10~40 °C)			
	B	Differential temperature control type (tracing ambient/machine body temperature, setting range -9.9~+9.9°C)			
Power source		3Ø 200~230V 50/60Hz			
Compressor Power (W)		3690	4540	6210	8300
Pump	W	845/1280	860/1510		
	Max.flow rate (L/min)	40/50	80/100		
	Max. liquid lift (M)	39/56	23/34		
Min. flow requirement of cooling water (L/min)		40		70	
Liquid inlet diameter(PT)		3/4”	1”		1-1/4”
Liquid outlet diameter(PT)		3/4”	1”		1-1/4”
cooling water inlet diameter(PT)		3/4”	1”		1-1/4”
cooling water outlet diameter(PT)		3/4”	1”		1-1/4”
Water tank capacity		65L	100L		170L
Dimension WxDxH (mm)		553x624x840	708x738x955		890x890x1255
Weight		154	217		406
Noise level		Below 80 dB(A)			

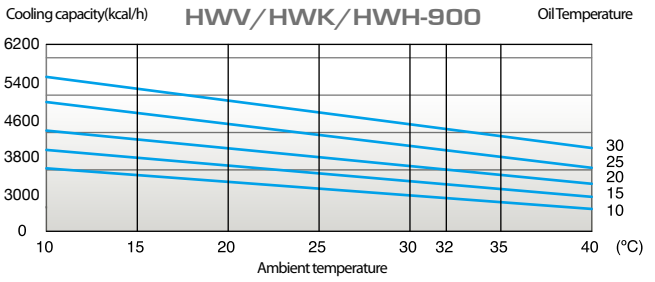
The aboe cooling capacity is based on the condition of liquid temperature 22ºC and cooling water source of 10ºC

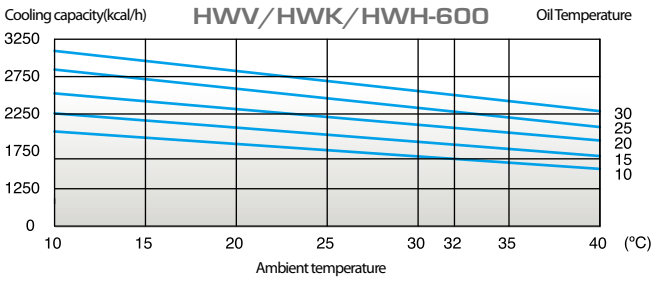
PERFORMANCE CURVE OF WATER COOLER

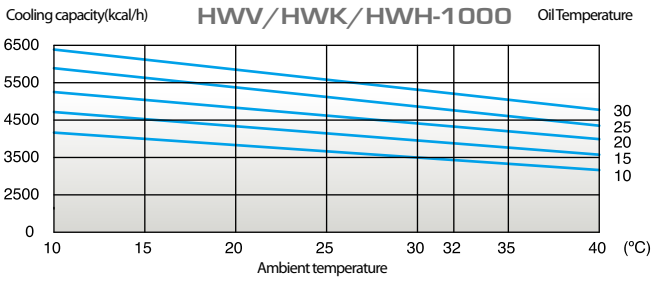




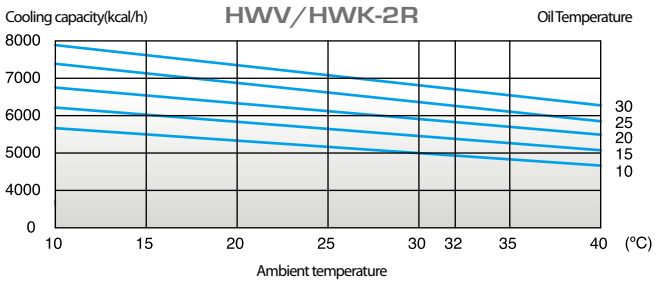


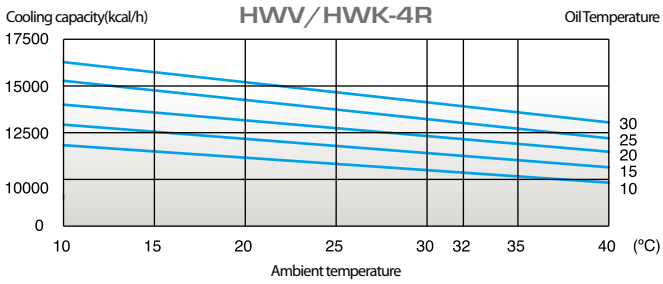


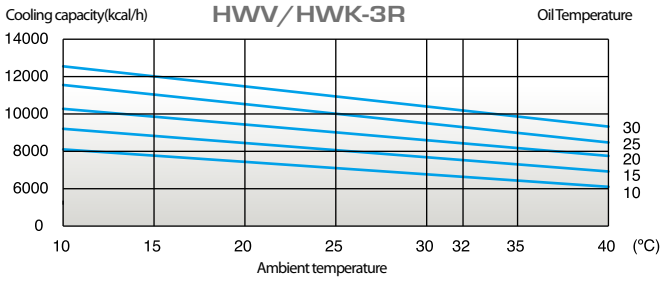


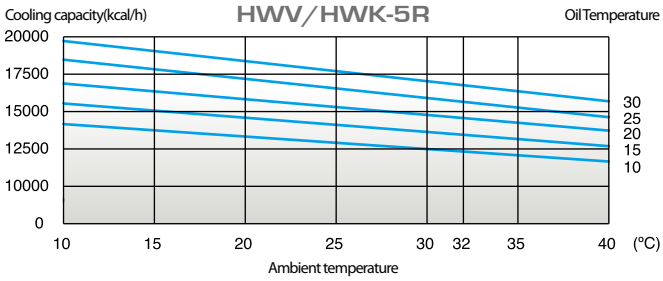


PERFORMANCE CURVE OF WATER COOLER









1. The above cooling capacity is based on the condition of 60 Hz, ambient temperature 32°C and liquid temperature 22°C.
2. The maximum pressure capacity of the evaporator is 5kg/cm^2; please contact us for special request on high pressure pump.
3. Please contact us for special request on specification.
4. Design and specification are subject to change without prior notice.

Temperature Sensor

Diagram 1

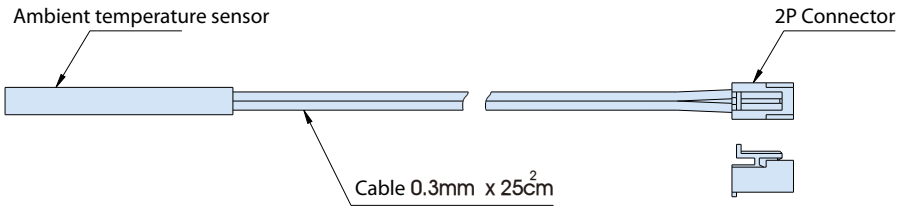


Diagram 2

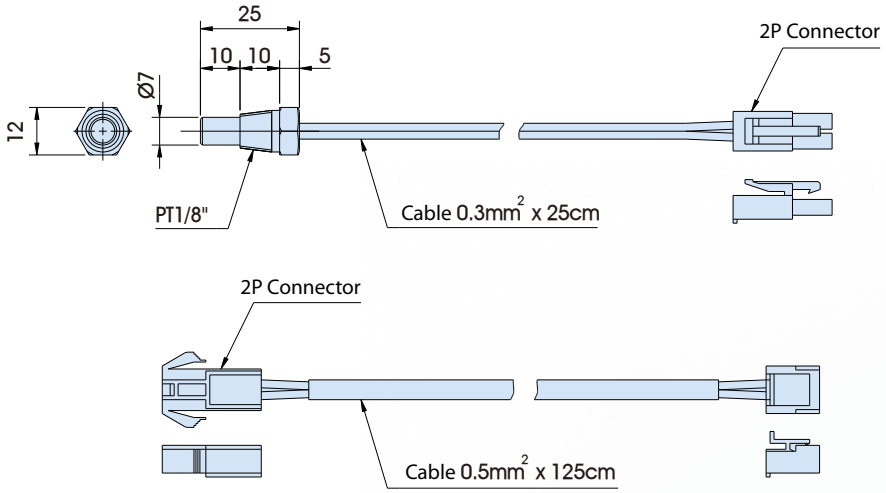
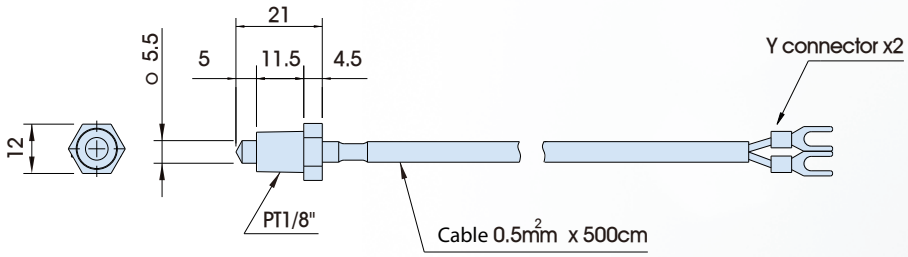


Diagram 3



Temperature Sensor

Sensor Type	Specifications	Dimension Diagram	Application Model
Room temperature sensor	RA	Diagram 1	Diff. temp. control tracing ambient temp.
Machine Body Temperature Sensor	RM	Diagram 3	Diff. temp. control tracing machine body temp
Oil temperature sensor	RO	Diagram 2	Oil cooler series
Water temperature sensor	RW	Diagram 2	Water cooler series

Electronics Temperature Controller

- Display of liquid temperature, ambient temperature and setting value.
- Micro digital circuit design makes high precise control.
- Output of alarm message.
- Function of compressor protection.
- Customized control is available upon request.
- Optional RS485 communication port.

PID Controller Panel

- Parameter display
- Parameter value display
- Standby button
- Parameter changing button
- Push button of setting value (Up)
- Push button of setting value (Down)

ON/OFF Controller Panel

- Indicator of refrigeration system fault
- Indicator of pump motor fault
- Indicator of compressor fault
- Liquid / base temperature
- Indicator of liquid temperature
- Indicator of base temperature
- Indicator of pump running
- Indicator of compressor running
- Indicator of heating (Optional)
- Setting value
- Change button for liquid / base temperature
- Push button of setting value (Up)
- Push button of setting value (Down)
- Indicator of liquid circulation system fault
- Indicator of reverse power

SUMMER CODE 04, 2329, 5555

HABOR PRECISE INDUSTRIES CO.,LTD.

77,Industrial 20th Rd., Taiping City,
Taichung County 411, Taiwan
TEL:+886-4-2271-3588
FAX:+886-4-2271-3535
http://www.habor.com
E-mail:habor@ms17.hinet.net

HABOR PRECISE MACHINE (ZHE JIANG) CO.,LTD.

No.282, Fengxiang E. Rd., Wutong Street,
Tong-Xiang City, Zhejiang 314500, China
TEL:+86-573-8827-9588
FAX:+86-573-8827-6588
E-mail:habor_zj@hotmail.com

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