

Continuous Mesh Belt



YAINBOW ONCE BUSINESS FOREVER FRIENDS

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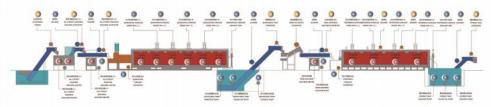
Harbin Rainbow Technology Co.,Ltd



连续式光辉渗碳(调质)淬火炉 Continuous Mesh Belt Carburizing (Hardening) Furnace Line



连续式淬火炉 负载运转指示灯 The Continuous Mesh Belt (Carburizing) Furnace Line running sign lamp



Continuous Mesh Belt (Carburizing) Furnace Line

MODEL	MID/HIGH CARBON STEEL CAPACITY (KG/HR)	MID/HIGH CARBON STEEL CAPACITY (T/MONTH)	LOW CARBON STEEL CAPACITY, HOUR (KG/HR)	LOW CARBON STEEL CAPACITY (T/MONTH)	TOTAL POWER SUPPLY (KW)	TOTAL POWER MID CARBON STEEL 85% LOW CARBON STEEL 70%	LENGTH OF FURNACE LINE MAN
RB-150	124-138	77-86	48-69	30-43	177-183	150/123	25495
RB-200	198-220	123-138	84-120	52-75	203-218	173/142	27995
RB-300	352-385	220-242	204-240	127-150	290-320	247/203	31495
RB-400	414-483	259-299	313-350	195-218	353-393	300/247	31995
RB-500	506-572	316-358	413-463	258-289	439-464	373/307	31995
RB-700	720-780	450-486	546-598	341-373	513-543	436/359	35995
RB-1000	1000-1100	624-686	833-917	520-572	615-655	522/430	39430
RB-1500	1250-1375	780-858	1040-1146	649-715	773-828	657/541	39430

*Size & Specification can be custom made

磁带式送料机 RB-700A Magnetic-Belt Type Feeder



前脱脂洗净槽 RB-700B Front Degreasing & Washing Tank



产品用途(Applications)

Magnetic-Belt Type Feeder

- ◆ 运送(小、中、大件)处理物至前脱脂洗净槽,使处理物品均匀进入炉内热处理。
- Conveying the small, medium, big workpieces to the Front Degreasing & Washing Tank for heating treatment uniformly.
 (Note: Can be customized according to customer's demanding)

Front Degreasing & Washing Tank

This device is water immersion type washer. It is mainly composed of washing tank, transmission system, sprinkler system, oil—water separator, skimming plant and hot air heating device, etc. It could clean off the oil stain at the surface of the work pieces and after cleaning it has a cold air cooling function. In order to reduce the loss of energy, refitting the tube device, make use of the heat at the mouth of hardening furnace to send it to the inside of washing machine.

RB-701吸热型瓦斯变成炉

Endothermic Type Gas Generator

产品特点(Features)

- ◆ 瓦斯控制保护系统,安全耐用,露点控制稳定,指示精确,并且可与 CO,控制器连结适用,达到自动控制的目标。
- ◆ 发热气体效率高,炉室可以打开,便于保养和维护。
- ◆ 管路设计预留清除杂物接头,便于清除杂物。
- Gas control with protection system, safe and durable for use, stable control on dew point control with precise indication available to be connected with CO₂ controller for auto control purpose.
- Heater's design with high efficiency, and the furnace can be opened for convenient maintenance and repair purpose.
- Reserved connectors for simple and easy cleaning the trash inside the pipe.





RB-702B 双点式 RB-702B单点式O₂碳浓度自动控制系统 RB-702B Double-Spot Type RB-702B Single-Spot Type O_a Automatic Carbon Potential Control System

产品特点 (Features)

- ◆ 采用美国进口O。碳浓度自动控制系统,控制精度±0.03%(碳浓度)。
- ◆ 设计组成: a. 氧探头 b. 电磁 c. 记录系统(温度、碳势、气体流量) d. 燃烧空气,标准空气管路。
- Adopts for O₂ carbon potential auto control system to control precisely ± 0.03%(carbon potential)
- Composed of

1.Oxygen probe 2.Solenoid Valve 3.Recording system(Temperature, carbon, gas flow) 4.Burning air standard piping.



RB-703甲醇储存罐 Methanol Storage Tank

产品特点 (Features)

- ◆ 甲醇采用气化室炉内裂解,减少电力及甲醇消耗。
- ◆ 可代替瓦斯变成炉, 节约成本。
- Methanol adopts air decomposition in the furnace to reduce the consumption of electricity and methanol.
- It is able to replace for the use of gas and saves the cost.





- ◆ 洗净槽配有加热器, 利用渗碳炉预热区的热水加温器,提供热水,节省电力。
- ◆ 洗净槽配备油水分离机及强风吹干设备。
- ◆ 将附着在处理物上的淬火油,送回到淬火油槽再使用。
- Tank has attached with heater to supply hot water with preheating zone in carburizing furnace to save electricity.
- It has equipped with oil and water separator and strong air blower.
- Tempering oil staining on the object under treatment can be reused after delivering back to the tank.

RB-705 连续式光辉渗碳(调质)淬火炉(主体)

Continuous Bright Carburizing (hardening) Quenching Furnace (Main Furnace)



产品特点 (Features)

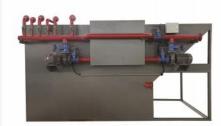
- ◆ 省电:使用高强度矽酸钙板,陶瓷纤维板,高断热的保温材料,可达电热热量最高效率。
- ◆ 操作: 采用自动化控制运转操作, 节省人力。
- ◆ 品质: 采用多段式控制搅拌风扇,温度均匀,提高品质。
- ◆ 炉气: 采用变成炉或甲醇裂解,炉气稳定,确保品质。
- ◆ 稳定性: CP值公差±0.03%(碳浓度),炉内均匀性±5℃
- ◆ 采用自润轴承(可节省保养,打黄油)
- Electricity-saving: adopts high tensile calcium silicate board, Ceramic fiber board heat-resistant material for high performance.
- Operation: adopts automatic control to save man power.
- Quality: equipped a cariable step stirring fan in the furnace to get uniform temperature for high quality.
- Gas: adopts gas generator or methanol decomposition to stabilize gas and to ensure for quality.
- ◆ Stability: CP value tolerance ± 0.03%(carbon potential), and temperature equally dispersed at ±5°C.
- Adopts self-lubricant bearing (to save for maintenance with greasing).



RB-706 淬火冷却油(水)槽 Quenching Cooling Oil(Water) Tank

产品特点 (Features)

- ◆ 采用板式热交换器,能迅速地控制及调整油(水)温度。
- ◆油(水)槽喷洒冷却系统,依物品大小,可任意调整喷洒速
- ◆油(水)槽设有过滤网抽换设备,在作业上,不至于因杂物累积,造成冷却热交换器堵塞。
- Adopts board-type heat exchanger to control rapidly the temperature of oil(water).
- The injection cooling system in the tank, speed of injection can be adjusted freely according to the size of work piece.
- Filter is equipped in the tank, and so the dirt will not be stored in exchanger to lose its cooling function.





RB-707 后脱脂洗净槽 RB-707 Degreasing & Washing Tank

产品特点 (Features)

- ◆洗净槽配有加热器,利用渗碳炉预热区的热水加温器,提供热水, 节省电力。
- ◆洗净槽配备油水分离机及强风吹干设备。
- ◆ 将附着在处理物上的淬火油送回到淬火油槽再使用。
- Tank has attached with heater to supply hot water with preheating zone in carburzing furnace to save electricity.
- It has equipped with oil and water separator and strong air blower.
- Tempering oil staining on the object under treatment can be reused after delivering back the the tank.

RB-708 连续式热风回火炉 Continuous Hot Blast Tempering Furnace



产品特点 (Features)

- ◆ 发热体采用上下排列设计,温度均匀,寿命长,故障率低。
- ◆ 炉内配有搅拌风扇, 使炉室内的温度均匀。
- ◆ Heater adopts up-down design to get uniform temperature and has long service life and low faulty rate.
- The stirring fan furnished in the furnace makes uniform temperature in the furnace and good hardness.

RB-709 双层式着色槽 Double-Layer Dyeing Tank



RB-710 电脑程序式控制系统 Computer Program Control System



产品特点 (Features)

- ◆ 利用回火余热来着色,节约能源。
- ◆ 采用高性能热交换器,防止着色槽油温太高,以免发生火灾。
- ◆ 着色槽采用变层式,设有循环油泵,可任意抽取着色剂。
- Making use of tempering heat for dyeing to save energy.
- Adopts high-efficiency heat exchanger to prevent fire caused by overheated oil.
- Uses double-layer type dyeing tank with circulation pump and the color of dyeing can be optional.



RBG 连续式光辉渗碳(调质)淬火炉(瓦斯加热)

Continuous Bright Carburizing (Hardening)Quenching Furnace (Gas Burner Heating Type)



产品用途 (Applications)

- ◆ 适用于螺丝、螺帽、脚踏车零件、手工具、五金零件等之调质渗碳处理。
- Carburizing or tempering treating to screw, nut, bicycle parts, hand tools, hardware parts, etc.

产品特点(Features)

- ◆ 采用美国制造瓦斯燃烧机系统,并安装原厂系统的热交换器,可使燃烧效率提升 20%。
- ◆ 辐射管采用进品耐热钢离心铸造管,变形小,寿命长。
- ◆ 温度控制采用压力式控制,温度控制精度其温差可达要求精度范围内。
- ◆ 升温时间较使用电力之升温时间缩短,适合大量生产使用且不受输出功率之限制影响。
- Adopts U.S.A.gas combustion system and install original brand heat exchanger will rise 20% burning efficiency.
- Radiate tube adopts imported heat-resistant steel and centrifugal casting tube, small per-centage of deformation and last longer.
- Temperature is controlled by pressure type which can make precise of temperature to needed.
- Heated by gas and electricity to reduce manufacturing cost.lt is the best choice for areas having difficulty in applying for lots of electricity.
- Temperature-rising takes less time than that uses electricity, suitable for mass production and it is not affected by output power.

型号 Model	中高碳钢产能 Treating Capacity to Middle/High Carbon Steel (Kg/hr)	低碳钢产能 Treating Capacity to Low Carbon Steel (Kg/hr)	网宽 Conveyer Width (m/m)	炉内高度 Inside Height (m/m)	加热长度 Length of Heating Section (m/m)	燃烧能力 Combustion Ability (max)kcal/hr	电力 Power (Max)(Kw)
RBG-500	506-572	413-463	800	100	6000	180000	45
RBG-700	720-780	546-598	800	100	8000	300000	90
RBG-1000	1000-1100	833-917	800	100	10000	450000	90
RBG-1800	1800-1980	1499-1650	1200	100	12000	690000	135

*Size & Specification can be custom made

RBG-711 温度自动控制盘 Automatic Temperature Control Panel



RBG-712 发热型瓦斯变成炉 (DX发生机) Heating Type Gas Generator(DX Gas)



RBG-713发热型瓦斯变成炉(DX发生机) Heating Type Gas Generator(DX Gas)

产品用途 (Applications)

- ◆ 金属零件连续黑化回处理(处理温度450℃以上)
- ◆ Rich 为还原性气体、弱脱碳性、碳折出倾向小、适用于低中碳钢之光辉淬火、退火、焊接等。
- ◆ Lean为氧化性气体,强脱碳性、无碳折出倾向,适用于中碳钢之黑化处理、铜及铜合金的光辉退火。
- ◆ Continuous blackening tempering treating to metal parts(Treating temperature must be above 450 ℃)
- Rich is deoxidation gas, weak decarbonization, little carbon lost, suitable for low/middle carbon's bright quenching, annealing, welding, etc.
- Lean is oxidation gas, strong decarbonization, no carbon lost, suitable for middle carbon's blackening treating and bright annealing for copper and alloy metal.

京瓦斯	瓦斯、空气比	变成瓦斯组成范围Composition Range of Gas Generation							
Original Gas	Proportion of Gas&Air	со	CO ₂	H ₂	CH ₄	N ₂	N ₂ O		
СН₄	1:6-9	8-1	7-10	15-10	约approx.0	68-86	约approx.2		
C ₃ H ₈	1:11-23	16-1	3-11	20-1	0	59-83	2		
C4H10	1:13-30	18-1	2-3	22-1	0	56-83	2		
	CO2	со	H ₂	CH₄	H ₂ O	N ₂	露点 Dew poin		
DX Lean	10.5	1.5	0.8	0.0	0.8	86	+5		
DX Rich	5.0	10.5	12.5	0.5	0.8	70.7	+5		

*Size & Specification can be custom made

Crucible Type Annealing Furnace







- ◆ 中,低碳钢材,球状化退火及光辉烧钝,钢带束退火,铜及合金热处理。
- Spheroidizing annealing & bright annealing for middle /low carbon wire material, annealing for steel belt, and heat treating for copper&alloy.



- ◆ 采用O₂ 控制系统,自动控制碳浓度,配合温度程序式控制系统,自动导入保护气,节省人力。
- Adopt O₂ control system to automatically control carbon potential working with temperature program control system, it can lead in protective gas automatically, labor force is saved.

使用温度(Service Temperature)

◆ 200°C~ 850°C

使用气体 (Gases used)

- ◆ 氮气+丙烯 (或+甲醇裂解气)
- Nitrogen+Propylene (Or+Methanol decomposing gas)

型号 Model	本炉外部直径x 高度 Furnace outer Dia x height (mm)	保护桶尺寸 Protective tank size (mm)	有效尺寸 Effective dimension (mm)	产能(炉) Output(furnace) (kg)	使用电力 Power (kw)
RB-707-1	Ф3474х2610	2450x2300	2600x1800	5000-6000	325
RB-707-2	Ф3474х3410	2750x3210	2600x2600	7000-9000	365
RB-707-3	Ф4074х3266	3350x2910	3150x2200	12000-14000	414
RB-707-4	Ф4924х3750	4000x2925	3500x2700	18000-20000	772
RB-707-5	Ф5424х4550	4500x3725	4000x3500	27000-30000	800

*Size & Specification can be custom made



产品用途(Applications)

- ◆ 中,低碳钢材,球状化退火及光辉烧钝,钢带束退火,铜及合金热 处理。
- Spheroidizing annealing & bright annealing for middle /low carbon wire material, annealing for steel belt, and heat treating for copper&alloy.



- ◆ 强大的大型搅拌风扇,高对流循环系统,缩短升温时间同时物料温度均匀,於退火工程中得到均一的产品。
- ◆ 采用高性能之瓦斯燃烧机,并有自动点火系统及安全检知系统,确保作业安全。
- ◆ 采用O₂控制系统,自动控制碳浓度,配合温度程序式控制系统, 自动导入保护气,节省人力。
- Heavy duty big agitating fan, high convection current circulation system to shorten the time to rise temperature and to make material's temperature uniform so that uniform quality can be made during the annealing procedure.
- Adopt high-performance gas burner, it also equipped with auto-ignition system and safety inspection system to ensure operation safety.
- Adopt O₂ control system to automatically control carbon potential working with temperature program control system, it can lead in protective gas automatically, labor force is saved.



型号 Model	本炉外部直径x 高度 Furnace outer Dia x height (m/m)	保护桶尺寸 Protective tank size (m/m)	有效尺寸 Effective dimension (w/ml	产能(炉) Output(furnace) (kg)	使用电力 Power (kw)
RBW4	Ф5028х3750	Ф4000х2925	Ф3500х2700	18000-20000	800000
RBW5	Ф5528x4550	Ф4000х3725	Ф4000х3500	26000-30000	1000000

*Size & Specification can be custom made