

LMH003-300 Singeing machine

Technical instruction and process flow chart

1. Application: remove the fluff on the surface to make the surface smooth

2. Technical parameter:

Drive side: right / left

Machine width: 3000mm

Working width: 2800mm

Machine speed: 120m/min

Steam pressure: 0.2-0.3 Mpa

Compressed air pressure: 0.5Mpa

Water pressure:0.1-0.2Mpa

Power: 3 phase 380V 50Hz AC

Drive method: Multi AC gear motor drive, inverter synchronization speed adjusting,

PLC control, panel touch screen operation

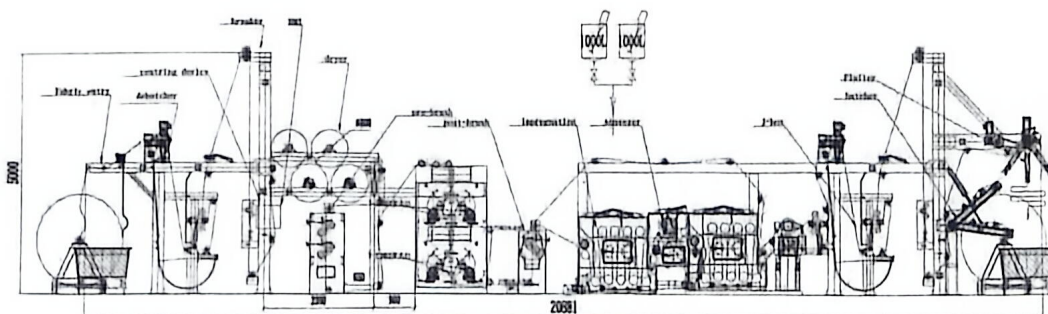
3. Process:

SG988 entry frame → Cylinder unit → MH012A pre-brush box (Dust remove device)

→ MH013 four-burner singeing → MH012B post-brush box (Dust remove device) →

SG2205 feeding tank →SG-P1 two-roll squeezer → SG2205 feeding tank → SG-P1

Two-roll squeezer → SG988 Exit frame



3.2, Supply list

No.	description	Qty. set	comment
1.	SG988 entry frame	1	With J-BOX
2.	Cylinder unit	1	
3.	MH012A pre-brush box	1	With Dust remove device
4.	MH013 four-burners singeing	1	
5.	MH012B post-brush box	1	With Dust remove device
6.	SG2205 feeding tank	2	
7.	SG-P1 two-roll squeezer	1	
8.	SG-P1 Two- roll squeezer	1	
9.	SG988 Exit frame	1	With J-box/ batcher/plaiter
10.	Electric control system	1	
11.	Cable、 cable tray	1	
12.	Spare parts	1	
13.	Chemical tank and mixer	2	1000L chemical tank Only two chemical tanks and two mixers
14.	A-frame	1	Some parts need to be welded in the customer's workshop for ease of transportation.

4. Unit feature:

4.1 SG988 entry frame

Standard section steel frame

SS304 guide rollers, diameter 180mm, top guide rollers with pneumatic braking device, adjust the tension of entry fabric

1 manual tensioner

1 traction padder

- Rubber drive roller, diameter 200mm

- AC gear motor drive

- SS press roller, diameter 125mm

- Pneumatic air cylinder

1 photoelectric centering device

J-BOX unit

1 SS star roller, diameter 225mm

SS J-BOX, cloth content 300m

Long arm pneumatic dance compensator

- SS dance roller, diameter 150mm

- Pneumatic air cylinder

- Linear pressure regulating valve, SMC brand/Japan

- Pressure switch

- Pressure gauge

- Chainless angel sensor

- Pneumatic central control, SS304 control box

4.2 Cylinder unit

Frame

- H shaped steel columns

- Section steel outer frame

Dry cylinder

- 4 cylinders, SS304, diameter 800mm

- Rotary steam inlet joint, Maier brand/Germany

- Steam trap, Spirax Sarco brand/UK

- Steam inlet, backwater steel pipes & metal hoses

- Every 2 cylinders 1 AC gear motor drive, SEW brand/Germany, total 2 sets

General steam inlet



- Stop valve
- Pressure gauge
- Safety valve

4.3 MH012A pre-brush box

Carbon steel box, painting surface

SS304 guide rollers, diameter 150mm

4 brush rollers, diameter 190mm, the contact surface length & angle with cloth adjustable

2 grinding rollers, diameter 190mm, 1 AC gear motor drive

1 dust suction motor

Dust remove device

1 set of a suction duct. Uniform suction port, uniform suction power.

1 set dedusting fan. Special dust suction fan for textile is adopted, with motor power of 5.5KW.

1 set Cyclone cleaner. The air containing impurities such as fluff is sent to the dust collection bag by the dedusting fan, and there is no fluff leakage.

4.4 MH013 four-burner singeing

Full closed box, with inspection windows

4 burners, copy osthoff type anti-high temperature, no deformable, high performance; 2 burners width: 2000mm, 2 burners width: 3000mm

The route of the singeing machine is suggested: burn the reverse side first, and then burn the front side. The cloth is baked by singeing and evaporating water drier for better front singeing.

Program control start-up, auto ignition & extinguishing devices



Distance between burner and fabric adjustable

Pneumatic burner angle adjusting,

4 cooling cylinders, diameter 200mm, each with 2 rotary joints

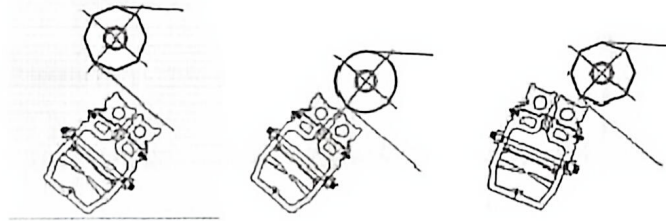
Emergency stop, burner with automatic turning and limited speed turning function

1 dust suction device

Gas & air mixing tube, fan system of hot gas valve

Burner exit with extinguishing device

Relying on the pneumatic lifting of the chilled water roller and the two-stage steering of the burner, multi-functional singeing can be carried out: cut burning, butt burning, and penetrating burning.



Suitable for liquefied petroleum gas heating.

1 set liquefied petroleum gas heaters.

4.5 MH012B post-brush box

1 set frame

2 pieces stainless steel rollers, diameter 185mm

1 set transmission system Two motors are directly connected to the brush roller. The motors have a power of 1.1KW and their rotational speed is controlled by frequency conversion.

1 set brush adjustment device

1 set dust suction duct

1 set dust removal fan

1 set water curtain dust removal



4.6 SG2205 feeding tank

Full closed washer box

- Cloth content 11m,
- SS304 washer box, pickling and passivation surface
- Bearing sides thickness 4+3mm, top cover 1.5mm, others 3mm
- Both sides glass windows, rubber stripe seal
- Top covers assisted spring open

Internal guide roller

- SS304, diameter 200mm
- up 4 down 5 structure
- External bearing support, SS bearing seats, mechanical seal
- indirect heating device

pneumatic drainage valve

4.7 SG-P1 two-roll squeezer

1 carbon steel frame, painting surface, inclined structure

1 rubber roller, diameter 300mm, shore A80',

1 SS304 drive roller, diameter 300mm, AC gear motor drive SEW brand



1 rubber bow roller before squeezer, diameter 125mm

1 SS304 spray tube before squeezer

1 pneumatic pressurization system, air cylinder pressing direct from top to bottom, with pressure gauge, pressure adjustable, padding rollers auto-separating while pressure release

1 linear pressure regulating valve, SMC brand/Japan

1 SS control box, pneumatic central control

4.8 SG-P1 Two-roll padder

SS section steel support frame

1 rubber squeeze roller, diameter 300mm, shore A80'C

1 SS304 squeeze roller, diameter 300mm, AC gear motor drive, SEW brand

Pneumatic pressurization

- Pneumatic air cylinder top to down pressurization
- Linear pressure regulating valve, SMC brand/Japan
- Pressure switch valve
- Pressure gauge
- SS pneumatic central control box

1 rubber bow roller before nip, diameter 125mm



4.9 SG988 exit frame for batcher/plaiter

Carbon steel bending frame, painting surface

Guide rollers

- SS304
- Diameter 180mm

J-BOX unit

1 SS star roller, diameter 225mm

SS J-BOX, cloth content 300m

Long arm pneumatic dance compensator

- SS dance roller, diameter 150mm
- Pneumatic air cylinder
- Linear pressure regulating valve, SMC brand/Japan
- Pressure switch
- Pressure gauge
- Chainless angel sensor
- Pneumatic central control, SS304 control box

Plaiter

- Traction padder
- 1 rubber drive roller, diameter 200mm
- AC gear motor drive,
- 1 SS press roller, diameter 125mm
- Pneumatic air cylinder lifting
- Plaiting mechanism
- AC gear motor drive

Batcher

- Swing arms
- Pneumatic air cylinder
- Rubber batching roller, diameter 200mm
- AC gear motor drive, SEW brand/Germany
- Rubber bow roller, diameter 125mm
- Safety guard & Safety switch

4.10 , All pipes, valves & connectors outside of machine covered by buyer

5. Electric control system



SAGA supplies a safety & easy operation electric control system, max assure the continuous running of the machine.

The control system is operated easily and the program help machine have the best process ability. It must be repeatable and the highest technology level in safety.

SAGA provide the parts of the hardware:

PLC Mitsubishi brand/Japan;

Inverter Mitsubishi brand/Japan;

Low voltage Schneider brand/France;

Touch screen Fuji brand/Japan;

Control program of Machine Management

Machine status stand-by, set-up, production

Operation step

Production speed

Work time

Meter counter for daily & total production

Temperature display

Record past process procedures

Drives management

AC main drives programming & surveillance

Drives synchronization

Auxiliary motors programming & surveillance

Controllers & history

Automatic error detection with source information

Alarm forwarding at critical machine conditions

Emergency shutdown system

Remote operation and diagnostic system based on the Internet of Things 4G

Customer provide internet connection

Integrated ERP or MES system access port

Communication protocol OPC UA

The standard port of Process setting data, Consumption data

SAGA supplies standard electric cabinet. Supply the cable from electric cabinet to motors, placement of electric box within 5m from machine.



6. Main configuration description

Main AC gear motor reducer	SEW brand/Germany
Auxiliary motors	Made in China
Pneumatic regulating pressure valve	SMC brand/Japan
The bearings of squeezer	TWB brand
Inverter	Mitsubishi brand/Japan
PLC	Mitsubishi brand/Japan
Touch screen	Fuji brand/Japan
Contactora	Schneider brand/France
Button	IDEC brand/Japan
Low voltage power supply & relay	Omron brand/Japan
Breaker	Schneider brand/France
Burner	Same function as Osthoff type ; high-temperature energy-saving aluminum alloy new fire ports

7. Content of supply

Content of supply sees in contract details

Exclude:

- Preparation of the required foundation for the machine and all related work.
- the supply of working stock and auxiliaries of any kind
- Chemical containers and the required piping material,
- The piping to the connection points of the each machine units.
- Main drainage channel for waste water

8. , Spare parts

No.	name	quantity
1	bearing seat of bow rubber roller	1 pc
2	padder's bearing	1 pc



3	washer's bearing	1 pcs
4	mechanical seal	2pcs
5	glass doors	1 pcs
6	rubber seal for the glass door	1 pcs
7	circuit breaker	1 pc
8	ignition transformer	1pcs
9	pressure gauge	1 pcs
10	pressure adjusting valve	1 pcs
11	pressure switch valve	1pcs
12	fuse	10 pcs

江苏赛格纺织机械有限公司
JIANGSU SAGA TEXTILE MACHINERY CO., LTD

