



### LIMAC MACHINERY WORKS CORPORATION, LANZHOU, CHINA



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# LIMAC SOAP MACHINERY





#### This photo shows the self-protected mechanical seal, and driving of the chamber

#### Vacuum drying chamber Type 8000ES-VSD-1700

8000 kg/h of toilet soap noodles or low TFM laundry soap noodles (water content of the soap noodles is around 28%) can be produced. All metallic parts in contact with soap are in stainless steel 304. Diameter of chamber: 1700 mm, max. ovalness is 1 mm. Diameter of main shaft:110 mm. Motor Power: 7.5 kW. Shaft speed:14 r/min. The speed reducers are supplied by Flender, Germany.

#### **Technical features:**

VSD vacuum dryer chamber can produce toilet soap noodles (Moisture of the soap noodles: from11% to 28%). All metallic parts in contact with soap are in stainless steel 304 or stainless steel 316L. The sealing of soap feeding nozzle are realized by rotating seal.

Туре	Cylinder diameter (mm)	Capacity (t/h)	Power (kW)
8000ES-VSD-1700	1700	6-10	7.5
3000ES-VSD-1500	1500	2-5	5.5
1000ES-VSD-1000	1000	1-1.5	4
500ES-VSD-1000	1000	0.5-0.8	3



### **PRODUCT OF LIMAC** SOAP POWDER EXTRUDER, CYCLONE SEPARATOR, **CRUTCHER, SOAP POWDER COLLEC TING BIN**



Soap powder extruder 8000ES-QE



Cyclone separator 8000ES-XFQ



Soap powder collecting bin 1.2 cub m in volume

Scraper inside the chamber

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Extruder's outlet which prevents soap powder from coming back to barrel







#### **PRODUCT OF LIMAC DUPLEX TWIN-WORM PELLETIZER**

#### 8000ES-SL-400 **Duplex Twin-worm Pelletizer**

#### Specification:

Capacity :8000 kg/h of toilet soap noodles Diameter of worms: 400mm The worm is from AI-Mg alloy or stainless steel

304.

Gears with case-hardened and ground teeth are for gear reducers, supplied by SEW, Germany Type 400 Pneumatic clutches are supplied by Eaton, USA.

Speed for upper and lower extrtder:5-19 r/min adjustable

Motor power: 2X75 kW

Pneumatic components are supplied by FETSO,Germany

8000ES-SL-400 8000 2 X 75 400   6000ES-SL-350 6000 2 X 55 350   4000ES-SL-300 4000 2 X 45 300	Туре	Capacity (kg/h)	Power (kW)	Worm diameter (mm)
	8000ES-SL-400	8000	2 X 75	400
4000ES-SL-300 4000 2 X 45 300	6000ES-SL-350	6000	2 X 55	350
	4000ES-SL-300	4000	2 X 45	300



#### Technical Specifications (for 8000ES-SL-400):

- Capacity: 8000 kg/h of toilet soap noodles
- Worm: 400 mm in diameter. The worm is whether welded from stainless steel 304 or casted Al-Mg alloy
- Worm speed: Upper and lower worms 5 to 19 r/min adjustable.
- Speed reducer: Gears with case-hardened and ground teeth are for gear reducers supplied by Flender, Germany.
- Pneumatic clutches Type 400 are supplied by Eaton, USA.
- Electric components by Schneider, France.
- Pneumatic components are supplied by Festo, Germany.



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Stainless steel worms inside Duplex Twin-Wprm Pelletizer Type 8000ES-SL-400





Pneumatic clutch is supplied by Eton, USA. Gear reducer is supplied by Flender, Germany.





#### PRODUCT OF LIMAC REFINER

Duplex single-worm refiner Type 1000ES-DR

#### Duplex single-worm refiner Type 3000ES-DR

#### Features:

- Pneumatic clutches for upper and lower extruders are supplied by Eaton, USA.
- Level probe inside the vacuum chamber is to control the start/stop of the upper extruder.
- Switches and other electric components are supplied by Schneider, France.
- · Frequency adjustable A.C. drive is supplied by
- Allen-Bradley, USA.
- · Operation panel is supplied by Rittal, Germany.
- Touch screen by EM, Taiwan.
- PLC by Allen Bradley, USA.
- Level probe by E+H, Germany.



Туре	Capacity	Worm diameter	Power
	(kg/h)	(mm)	(kW)
4000ES-DR	4000	400	45+45
3000ES-DR	3000	350	37+37
2000ES-DR	2000	300	30+30
1000ES-DR	1000	250	22+22
500ES-DR	500	200	11+11



Gear reducer and pneumatic clutch

Simplex single-worm refiner Type 2000S-DRD





A special duplex plodder with twin-worm 1st stage and two-outlets 2nd stage



#### PRODUCT OF LIMAC SINGLE-BLADE ELECTRONIC CUTTER WITH ENGRAVING ROLLERS

#### High-precision Single-Blade Electronic Cutter

- Power:3 kW
- Cutting length: 60-999 mm
- Speed :12-250 pieces/min
- Conveyor motor: 0.55 kW
- Cutting presicion:±1.2g,head face verticality <1°</li>
- Frequency adjustable A.C. drive, servomotor, servo controller, and PLC by Allen-Bradley, USA



Type 2000ES-QKI placed in a finishing line.

#### Brand-new updated design in 2012 High-precision, low driving torque ,No noisy, Zero fault point More durable,3-year fault-free guarantee,produced In batch .



Many technical improvements are made in these years on the design, machining precision, assembling of the Single-Blade Electronic Cutter Type 2000ES-QKI. Now the cams for the cutter are supplied by professional manufacturer, where the forming, shaping and heat treatment and assembling are followed by strictly professional high standard. That results in low driving torque, no overheating of servo-motor is observed since then, increasing the service life of the cutter.



Frequency adjustable AB.drive and PLC supplied by Allen-Bradley, USA.

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Cam working faces are accuratelly ground





#### **PRODUCT OF LIMAC AUTOMATIC VERTICAL STAMPER** WITH FREEZING DIES

#### Simple in mechanism, stable gearing system, high-efficiancy

The stampers in this Series is most simple in mechanical design in the world. Best professional vendors are selected to supply critical parts. e.g. gear reducer by Rossi, Italy, coupling and fixing sleeve by KTR, Germany, and the proprietary divider is by Zhucheng Precision Cam Factory, China, and linear guide way by THK, Japan. etc. So the stamper is in high reliability, easy to operate and easy to replace the worn parts.

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Туре	Capacity (kg/h)	Number of soap cake per one stroke (Pieces)	Motor (kW)	Optimal speed (Stroke/min)
500ES-MFS-2	500	2	2.2+0.5+0.5+0.55	10-55
1000ES-MFS-3	1000	3	3.0+0.5+0.5+0.55	10-55
2000ES-MFS-6	2000	6	5.5+0.5+0.5+0.75	10-50
3000ES-MFS-8	3000	8	7.5+0.5+0.5+0.55	10-50

Fabricated according to 2012 technology High quality,reasonable price and wold-level 3-year fault-free guarentee, produced in batch.

### PRODUCT OF LIMAC SIMPLE DRIVING MECHANISM FOR VERTICAL STAMPER WITH FREEZING DIES.

Speed reducer is supplied by Rossi, Italy. Couplings and clamping sleeves are supplied KTR, Germany; Electric components are supplied by Schneider, France. Rolling straight guide way is supplied by THK, Japan; Electric panels by Rittal, Germany. Angular encoder by Nemicon, Japan; Pneumatic components by Festo, Japan.



Pneumatic components by Festo, Germany, and stamping and soap billet feeding mechanisms.



The cam box for 60 degree rocking of stamping die mandrel for the vertical toilet soap stamper with frozen dies Series ES-MFS.





Driving mechanism of the vertical soap stamper with freezing dies is simple and clear-cut.



Cam boxes for soap bar infeeding cups and soap cake take-out cups.



#### **PRODUCT OF LIMAC PROFESSIONAL STAMPING DIES IN DIFFERENT SHAPES**



#### High-precision emulation technology

#### **Technical Features:**

The working part of the stamping die is made from brass 94.Hard aluminum alloy LC9 is for base plate of the stamping die, in order to reduce weight of the die and thus to make it easy to assemble and disassemble the die set.

There is a high-tech coating on the die's working surface, to make the die more durable, abrasionproof, and to prevent soap from sticking on the die surface.

There are creation.

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# every where, talents create excellence.

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#### **PRODUCT OF LIMAC Mixers**

#### LATEST PRODUCTS THREE-ROLL MILL Inclined Bottom Discharged 3-Roll Mill specially designed for soap production.



#### Features of the mixer:

It has functions of amalgamation, breaking, mixing and milling. Its performance is excellent.



Mixer with sigma agitators

Туре	Name	Diameter of mixing blade (mm)	Speed (r/min)	Capacity (kg/batch)	Motor (kW)
3000ES-600Z	Mixer with	600		400	18.5+18.5
2000ES-600Z	two	540	shaft A 36	300	15+15
1000ES-600Z	Z-shaped	450	shaft B 22	200	11+11
500ES-600Z	agitators	300		100	7.5+7.5





Cooling water inlets/outlets

- more translucent;

Specifications to	r horizontal thre	ee-roll mill		
Туре	Roll Diameter (mm)	Roll Length (mm)	Speed (r/min)	Motor (kW)
XSG-405-1000	405	1000		37
XSG-405-800	405	800	Slow roll 20, Medium roll 60,	30
SG-260	260	675	Fast roll 180	11
SG-150	150	300		4

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#### Mechanical seals are used for water inlets/outlets.

#### Specifications for horizontal three-roll mill



#### **PRODUCT OF LIMAC** CHILLERS, BELT CONVEYORS, AIR COMPRESSORS







Туре	Capacity (kg/h)	Worm diameter (mm)	Stamping force (kg)	Max. mass of toilet soap cake stamped (g)	Motor (kW)
100-XSY	100	100	1000	80	7
200-XSY	200	120	2000	100	9
300-XSY	300	150	3000	125	11





#### **PRODUCT OF LIMAC PILOT SOAP MACHINES**



# Pilot soap line with capacity of 200 kg/h



Pilot soap machines of 300-XSY



# LIMAC MACHINERY WORKS CORPORATION, LANZHOU, CHINA **THE PASSIONATE PURSUIT OF PERFECTION**



LIMAC MACHINERY WORKS CORPORATION, LANZHOU, CHINA In just six years, by effort of her designing and manufacturing team composed of more than 40 outstanding elites most of them have more than three decades of working experience. Besides, LIMAC integrated into her design many features from most up-to-date technical resources, both domestic and abroad. Working diligently and unnoticed, LIMAC has being producing world-level soap-making machines that are praised by world-famous soap producers. The total export contract value is more than three million U.S.dollars annually in average. In this increasingly competitive soap machine manufacturing industry, many companies have fallen down; however, LIMAC is like a big mountain stands firmly there by her strong belief, sense of innovation, excellent techniques and outstanding product quality and all-round service.

#### LIMAC is:

- world
- the world

LIMAC is not afraid of failure, or losses, because she believes: The glittering of a gold will be noticed after all by people passing-by.

# 01/02

### **BRIEF INTRODUCTION**

•A quality supplier and loyal friends of all soap producers in the

• The Pearl of the Orient among the soap machine manufacturers in

 A miracle in the house-hold chemical industry in China; An exotic flower blossom in northwest China.





## WORLD BECOMES DIFFERENT BECAUSE OF LIMAC'S EXISTANCE

LIMAC is not afraid of failure, or losses, because she believes: The glittering of a gold will be noticed after all by people passing-by.

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### WORLD BECOMES DIFFERENT BECAUSE **OF LIMAC'S EXISTANCE**

#### Limac's purpose:

Making a breakthrough in soap producing technology Making the soap come to higher quality level and more eco-friendly in producing it.

#### Features of Limac's soap machinery:

Simpler in structure of the machinery Easier to operate Fewer point of failure Longer service life Higher reliability since world-famous vendors are seleced to supply their electronic, instrumental and mechanical parts for LIMAC's machinery

#### LIMAC CAN PROVIDE YOU WITH FOLLOWING MACHINERY AND EQUIPMENT

Fatty-acid neutrulization unit with capacity up to 10t/h Liquid soap vacuum drying unit to produce soap needles with capacity up to 10t/h Toilet /Laundry soap finishing line with capacity up to 4t/h Two-colored sandwich soap production line with capacity up to 3t/h

Foreign customers have high opinion of Limac soap machinery!





### LIMAC'S CUSTOMERS ARE ALL OVER THE WORD



#### Limac's customers are all over the world

Two companies in Yangon, Myanmar, three companies in Jakarta and Medan, Indonesia, two companies in Demascus, Syria, and other soap producers in Poland, Malaysia, Kyrgyzstan, Russia, United States, France, Portugal, Uganda, Dubai EAU, Brazil, Kuwait, Algeria, Benin, Sri Lanka, Togo, Canada and Ghana etc.

### Foreign customers have high opinion of Limac's soap machinery!

A Brazil soap maker buys two toilet soap finishing lines in one contract!







A toilet soap finishingh line in Ethiopia

Two-color sandwich soap production line in Togo



The two - colour sandwich soap manuatured by Limac machinery is the first invented in China! 90% of Lanzhou Limac soap machinery which is with top techology has been exported all over the world!

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Foreign customers have high opinion of Limac's soap machinery!

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#### LATEST PRODUCTS OF LIMAC **TWO - COLORED SANDWICH SOAP PRODUCTION LINE**



#### Two-colored sandwich soap

The two-colored sandwich soap becomes popular and popular in international soap market these days. To change the traditional single-color toilet /laundry soap into two-colored, Limac has successfully developed a complete set of machinery to make soap cake with two different colors (and with different formulation, if required). For example, darker part of the sandwich soap has high detergency and the white part of that sandwich soap is for skin care. One soap cake has two different functions in its different part. It not only gives new experience to customers, but also brings enjoyment to customers who use it.



Two-colored sandwich soap



Two-colored striped sandwich soap, the spacing of color stripes is changeable



Diagonally patterned two-color sandwich soap.



Two-colored sandwich soap with equally spaced stripes. However you can change the space, for example to ratio 1:2; 1:4; or 1:3

#### Make a breakthrough at technology, make a Future for soap machinery!

Zero-slip driving mechanism is used in the duplex two-colored sandwich soap plodder Type 2000S-DRDP-A, to make it easy to control the pressure in the two worm barrels





LATEST PRODUCTS OF LIMAC **DUPLEX VACUUM PLODDER FOR TWO - COLORED SANDWICH SOAP** 





Refiner Type 2000ES-DRD-A for **Two-Colored Sandwich Soap** 

Duplex vacuum plodder Type 2000S-DRDP-A for two-colored sandwich soap. Here shows a sandwiching device.



Speed reducers for Duplex Plodder Type 2000S-DRDP-A for Two-Colored Sandwich Soap, the four speed reducers are controlled separately in order to adjust pressure in each worm barrel.



There are four inverters in the electric panel for Duplex Two-Colored Sandwich Soap Plodder Type 2000ES-DRDP-A, in order to control the speed of each worm separately.





Duplex vacuum plodder Type 3000ES-DRDP-A for two colored sandwich soap



LATEST PRODUCTS OF LIMAC **TWO - COLORED SANDWICH SOAP PRODUCTION LINE** 



Duplex plodder Type 2000ES-DRDP-A for two -colored sandwich soap.

#### Features:

Capacity: 2000 kg/h finished two-colored sandwich soap cake.

Worm: 250 mm in diameter, made from welded stainless steel 304 or Al-Mg alloy casting. Motors: 4x18.5=74 kW

Electric heaters at the conical outlet head: 2 kW+1 kW

There are 8 speed reducers in the plodder. The gears of the reducers are with high precision Class 6 and the teeth are case-hardened and ground.

#### Specification of plodders in Series ES-DRDP for 2-colored sandwich soap production

Туре	Worm diameter (mm)	Power (kW)	Capacity (kg/h)
1000ES-DRDP-A	200	4X5.5+1+0.5	1000
2000ES-DRDP-A	250	4X18.5+2+1	2000
3000ES-DRDP-A	300	44X22+2+1	3000

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### 2000kg/h TWO -COLORED SANDWICH SOAP **PRODUCTION LINE**





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### **PRODUCT OF LIMAC CARTON PACKING MACHINE FOR TOILET SOAP**



Carton Packing Machine Type LIMAC-ZH-XZB-200

Simple in structure, easy to operate, no point of fault, low noise. The percent of acceptable packing is over 99.99%.









Automatic hot-gtue system Type LIMAC-ZH-XZB-250

#### Technical specifications:

- Speed: 200 packs/min(LIMAC-ZH-XZB-200)
- Speed: 250 packs/min(LIMAC-ZH-XZB-250)
- Motor: 1.5 kW, electric heater: 3 kW
- All parts in contact with soap are in stainless steel 30.
- PLC is supplied by Mitsubishi, Japan
- Pneumatic components by Festo, Germany
- · Electric components by Schneider, France

#### Product features:

The carton packing machine developed by LIMAC-ZH integrates good ideas in design of packing machines made in Germany and Italy. And to adapt itself to the Chinese market there are some stream lining in the original design. The machine is up to the world advanced technical level. The machine is simple in structure, easy to operate, no point of fault, low noise. The percent of acceptable packing is over 99.99%. There are two options of carton sealing forms: hotglue or flap folding. The machine is selling well in world market.





The feeding of cartion Type LIMAC-ZH-XZB-200

Electric components of the carton packing machine Type LIMAC-ZH-XZB-200

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Cam driving mechanismType LIMAC-ZH-XZB-200





Soap cake turn-round by rotating cups Type LIMAC-ZH-XZB-200



**PRODUCTS OF LIMAC FLOW-WRAPPING MACHINE FOR TOILET OR LAUNDRY SOAP** 



#### Features:

- Up tp 250 pack/min automaticaliy Auto-feeding by 4-servo groups • Simple in mechanism, easy to
- operate Reliable and durable
- Over 99.9% packs pass the quality control

Driving mechanism



Control system



Control system

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