JENSEN
JENROLL EXPG

Integrated gas-fired burner and heat exchanger
Short heating time and stand-alone operation
Thermal fluid oil as heating medium
NEW Flexible chest design
Optimised output

Combines the well-known quality of the JENROLL concept with the self-contained thermal fluid oil-gas heated technology. Environmentally friendly solution for flatwork ironing. Based on design criteria as described in DIN 4754 for Thermal Fluid Oil installations

JENROLL EXPG
– the gas-heated, self-contained ironer

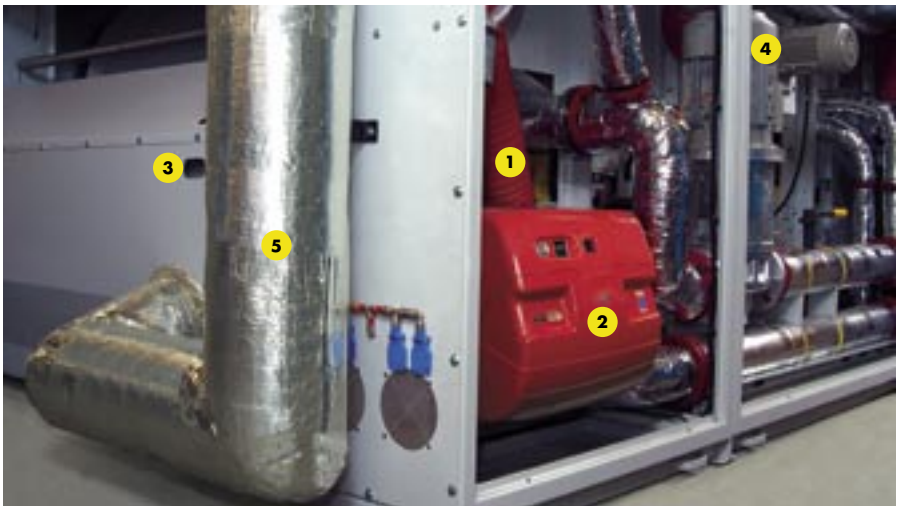
By introducing the JENROLL EXPG, JENSEN brings a new dimension into the word "flexibility".

The JENSEN JENROLL EXPG is designed to minimize the installation and set-up time, enabling a laundry to run or expand its flatwork operation without heavy external piping and boiler room. The JENROLL EXPG is simply to be set in place and hooked up to a gas supply.

In addition, the flexible chest – well-known from the JENROLL EXPress ironer – has been designed for the use of oil as the heating medium instead of steam, and the result is an ironer which can be heated in a fraction of time, and with a fraction of the energy required to heat a traditional ironer.

The JENSEN JENROLL EXPG – it´s as flexible as it gets.

The flexible chest.



1) External combustion air intake – 2) Gas-fired burner – 3) Heat exchanger – 4) Circulation pump – 5) Roll exhaust.

Excellent concept
The energy for evaporation of water in the linen is generated by the integrated gas-fired burner and heat exchanger, and transported to the ironer chest by a thermal fluid oil which is circulated by a pump. Transfer of heat via the oil medium allows for high efficiency – up to 40% higher than that of steam.

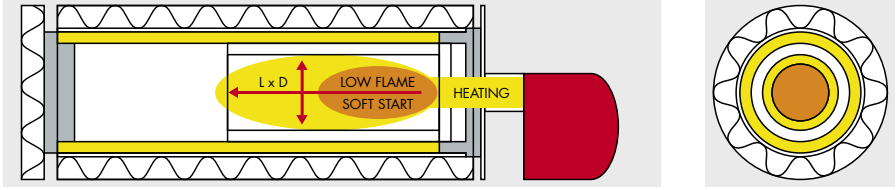
Optimal combustion
The JENROLL EXPG is supplied with external air supply. This feature prevents lint from the floor and side-frames from entering the combustion chamber, ensuring optimal combustion at all times.

Different flame sizes
The JENROLL EXPG operates with two power outputs designed to give soft start on heating when the oil is cold, and a safety distance between the flame and coil in operation.

Soft start on heating using a low flame when the oil temperature is below 120°C/248°F prevents hot spots and super-heating of the oil while the viscosity of the oil drops and the flow rate increases. A high flow rate ensures a high thermal capacity, a high coil turbulence, max. heat transfer and low oil change intervals.

In operation the burner uses a large flame and is designed with a safety distance between the flame and coil to prevent hot spots and super-heating of the oil. In addition, the JENROLL EXPG is supplied with a soft-stop feature which allows the oil pump to run for a period after production stop. All together, the soft-start and soft-stop features increase the lifespan of the ironer, and reduce the intervals between oil changes. The result is lower service costs and higher return.

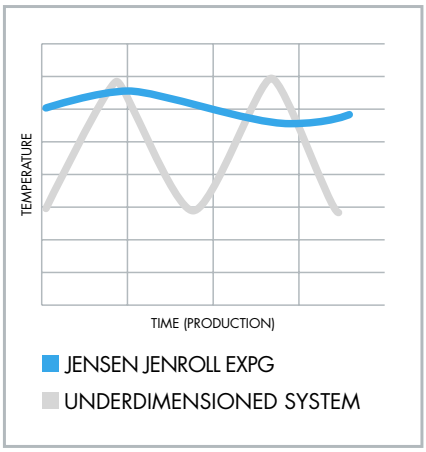
Different flame sizes and safety distance between flame and coil prevent hot-spots and super-heating of the oil.



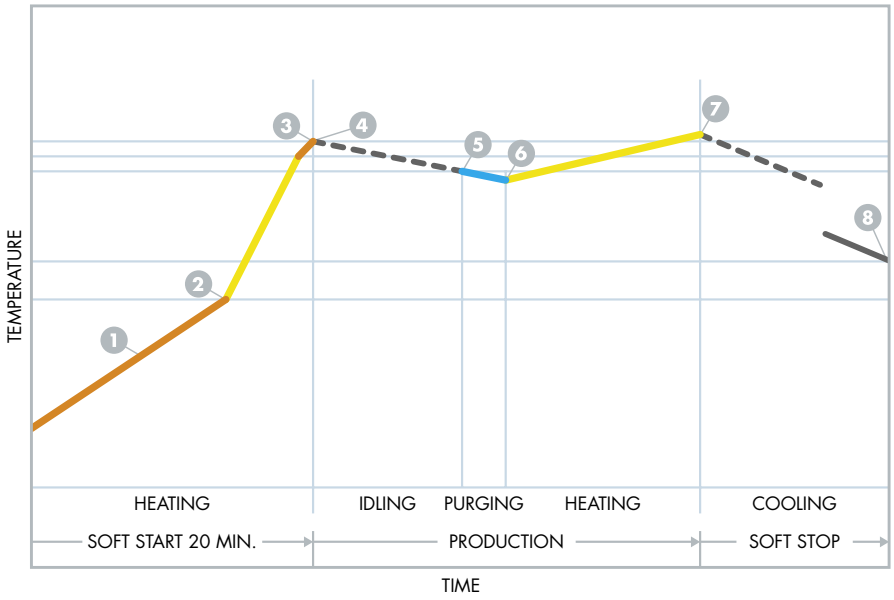
JENROLL EXPG
– optimized heat economy

JENSEN knows that controlling the heating temperature is essential in order to achieve top-quality ironing results, and we have put a great effort into achieving this goal.

The JENSEN heating concept using oil as the heating medium in combination with the flexible chest design allows for infinite temperature control of the ironer thus covering all current and future textile characteristics.



Optimized heat economy and top-quality ironing through the correct design of the heating system.



The heating cycle
1) Low flame – 2) Large flame – 3) User set-point temparature – 4) Burner shut-off – 5) Purging with clean air – 6) Oil temparature recovering – 7) Production shut-off – 8) Soft stop.

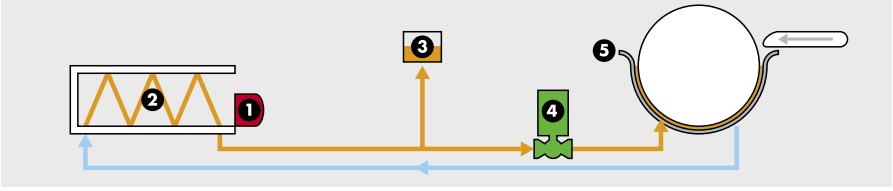
Reduced idle consumption

Due to the relatively low weight of the flexible chest it can be heated in a fraction of the time and with a fraction of the energy required to heat a traditional chest. Thus, the temperature of the chest can quickly be changed when the production is switched from e.g. cotton to visa.

Exhaust control

Exhaust control is essential to adjust each roll to the optimal vacuum in order to prevent padding from becoming moist and at the same time the roll from cooling down. The convection losses will be reduced to a minimum if they are adjusted to this optimum. In the JENROLL EXPG the exhaust is affected by a fan on each roll with a manually adjustable throttle valve, which is connected to the main exhaust duct at the rear of the ironer.

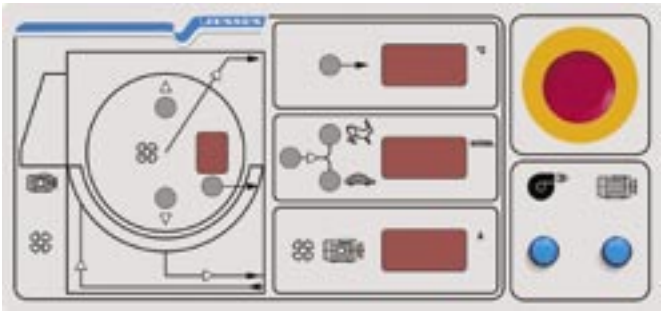
An optional automatic exhaust control can be installed, using a pressure gauge in the first roll. This controls a motor driven throttle valve in the main exhaust outlet, to maintain a vacuum of 0.5 mbar.

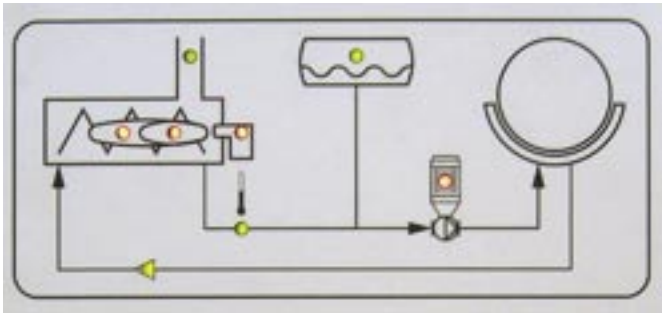


Flow diagram
1 Burner
2 Heat exchanger
3 Expansion tank
4 Pump
5 Chest

JENROLL EXPG
– the finishing line philosophy

Being the world's largest supplier of total laundry automation, JENSEN develops and delivers equipment according to the "Finishing Line Philosophy" that claims that a finishing line should form one single system, as explained in the six steps below:





A. Easy to install
Each JENROLL is equipped with an integrated finishing line control, so that both feeder and folder can be easily connected. The JENROLL serves as a distribution center for all energy supplies to the other equipment in the finishing line.

B. Easy to operate
It is possible to control the entire finishing line from the control panel of the feeder. By changing the operating program of the feeder, the speed of the finishing line and the folding program are automatically changed.

C. Easy to control
The main, analog and system surveillance control panels all monitor the performance of the ironer. The control panels will give the following information and warnings in one view:
- Speed indication
- The current (ampere) used by the drive motor (indication starts flashing when waxing is needed)
- Temperature of exhaust and oil
- Oil pressure
- Ironing pressure
- Warning light for cold chest
- Warning light for low air pressure
- Pump indication
- Oil circulation
- Oil temperature
- Flue gas temperature
- Oil level
- Burner
- Burner (steps 1 & 2)

D. Easy to maintain
By using maintenance-free technologies such as e.g. V-belts, frequency inverter, etc., the only maintenance left is keeping the ironer clean and changing the oil of the gearboxes.

E. High availability
JENSEN has insisted on the highest standards of design and components for the JENROLL EXPG. Main components, such as the chest, rolls, motors and cylinders, are built by reputable suppliers in accordance with JENSEN's specifications and Quality Assurance.

F. Operator safety
When one of the guards or emergency buttons in the finishing line is activated, all rolls are raised and stopped immediately.

All machines in a finishing line are connected in the same emergency stop circuit, which means that in case of an emergency stop, the entire finishing line will stop.

Design criteria and safety precautions
The JENROLL EXPG is built to the highest safety standards with fail safety security systems that will stop the gas-fired burner at once in case of any malfunction. The ironer is equipped with an expansion tank, release valves and level switch to avoid any risk of excessive oil pressure. Thermal oil flow pressure, temparature and burner exhaust temparatures are constantly monitored, making no compromise on safety. *The JENROLL EXPG is based on design criteria as described in DIN 4754 for Thermal Fluid Oil installations.*

JENROLL EXPG
– the flexible chest

The ironer´s job is to evaporate water and provide the linen with a good finish in an economical manner.

In order to realize the highest possible evaporation, it is essential to optimize the heat transfer into the linen.

JENSEN has designed the flexible chest with spot pattern to guide the oil in the desired parallel flow pattern, and the heat transfer can be divided into three stages:

1.
High oil velocity/ turbulent flow
The heat transfer is optimal when the oil flow is turbulent.

The flexible chest consists of a lot of small channels supplied with oil from all corners. Due to the small channels, the velocity of the oil is so high that the flow becomes turbulent and is automatically distributed over the entire surface of the chest.

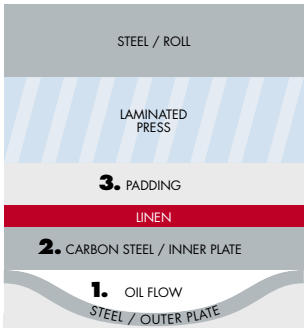
2.
Thermal conduction
JENSEN has carried out extensive studies of the physical qualities of the chest material.

For the flexible chest, JENSEN has chosen a top grade carbon steel. Carbon steel has a thermal conduction, which is four times higher than that of e.g. stainless steel. Because of this the surface temperature will be higher resulting in a more efficient heat transfer to the linen.

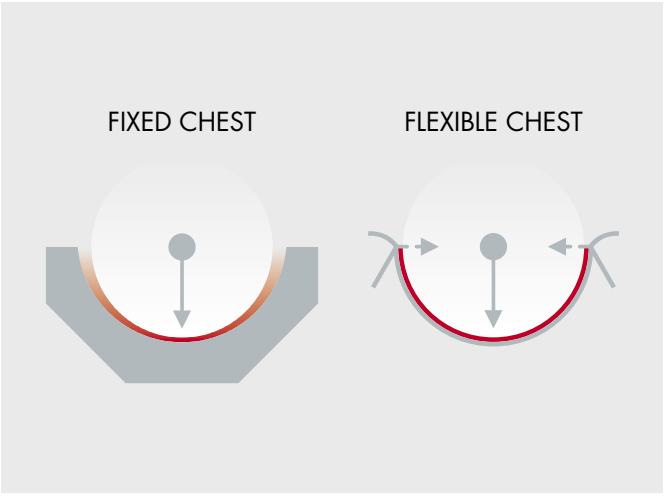
3.
Extraordinary contact angle
Contact is the key to a good heat transfer from the chest surface to the linen. A good contact is realized by the padding, pressing the linen against the chest surface.

A traditional fixed chest loses contact when the padding wears out and the roll diameter is reduced.

Being shaped around the roll, the flexible chest of the JENROLL EXPG evens out the reductions in the roll diameter. By doing this, a full contact angle is guaranteed. As a result of this stable contact angle you will experience a 50% higher evaporation capacity over time than with a traditional ironer incorporating the fixed chest.



JENROLL EXPG has optimal heat transfer in all three stages (1, 2 and 3).



Flexible chest
– shaped around the roll.

Rolls
The EXPG rolls are made of perforated steel with support rings welded to the inner side. After welding, all EXPG rolls are machined to size.

JENROLL EXPG
– increased performance

Extraordinary evaporation capacity

The JENROLL EXPG with the flexible chests provides more than 50% higher evaporation over time, which makes e.g. the performance of a two-roll JENROLL EXPG equal to that of a three-roll ironer with a traditional chest.

Extraordinary heat economy

Reduced losses of energy by means of convection and radiation.
No boiler room required, thus no distribution of energy loss.

Reduced operating costs

The oil-gas heated concept eliminates the need of a traditional boiler room, thus no water treatment, condensate return lines, traps and check valves needed, and no authorized boiler staff required.

Excellent finishing quality

High finishing quality due to the low friction by using iron for ironing.

Space saving

The footprint of a two-roll JENROLL EXPG is equal to that of a two-roll ironer with a traditional chest. The performance, however, is equal to that of a three-roll ironer.

Installation
JENSEN will be happy to provide lay-outs and technical data describing your project.
To ensure correct performance, installation should be carried out by an authorized JENSEN distributor or a JENSEN engineer.

Service
Built into JENSEN equipment is more than 40 years of experience of design, installation and maintenance of finishing systems for clients all over the world. In addition, JENSEN provides back-up support through a worldwide network of highly qualified distributors, all with their own maintenance and spare parts services.

Call us ...
JENSEN provides a complete range of equipment to the heavy-duty laundries, delivered and installed according to your specifications. Please do not hesitate to contact us for further advice and information, e.g. by paying us a visit at www.jensen-group.com.

www.jensen-group.com

– A world of competence

JENSEN GROUP

The JENSEN GROUP's world of competence comprises the following JENSEN brand names:

JENSEN – the market leader in finishing automation
METRICON – the world's most advanced garment sorting and handling system
SENKING – the market leader in washing equipment
FUTURAIL – world leader in customised laundry handling solutions and logistics systems
D'HOOGE/L-TRON – the washer extractor and dryer product range

LSG
JENSEN GROUP
– the heavy-duty laundry division in LSG, Laundry Systems Group

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