

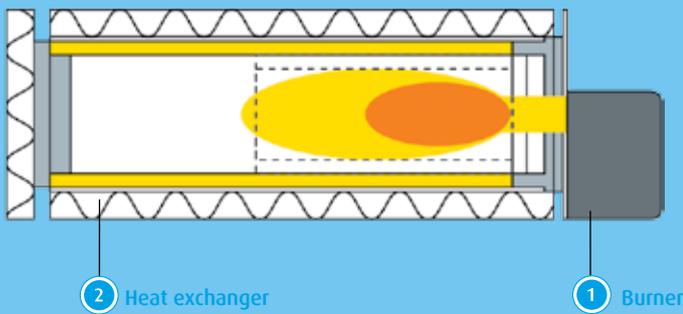
Optimum energy efficiency through integrated
gas-fired burner and heat-exchanger

Jenroll XPG 2000

Optimum evaporation capacity through the flexible
chest designed for thermal fluid oil

Top-quality finishing by mono-roll

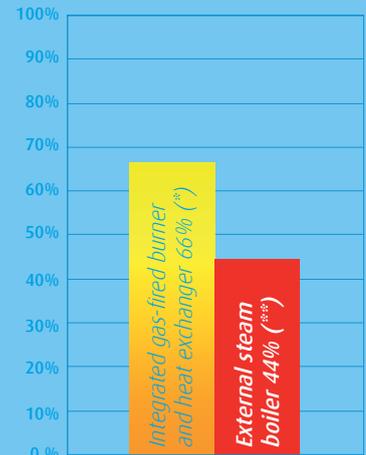




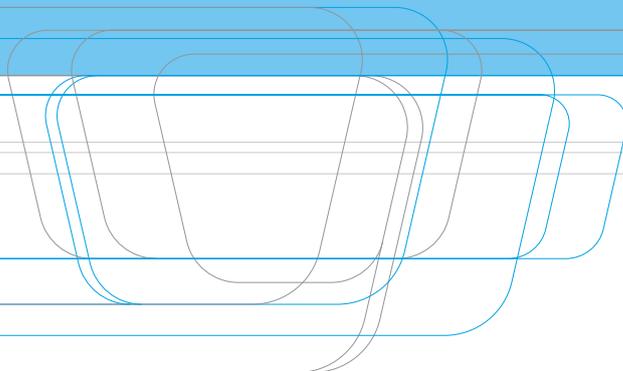
Integrated gas-fired burner and heat exchanger

(*) Based on measured flue gas temperature showing loss of 7% giving an energy efficiency of 93%.

(**) Based on a thermal efficiency of 82% (51-82% measured at 300 sites by Carbon Trust, UK, 2003).



Energy efficiency of direct heating vs external steam boiler

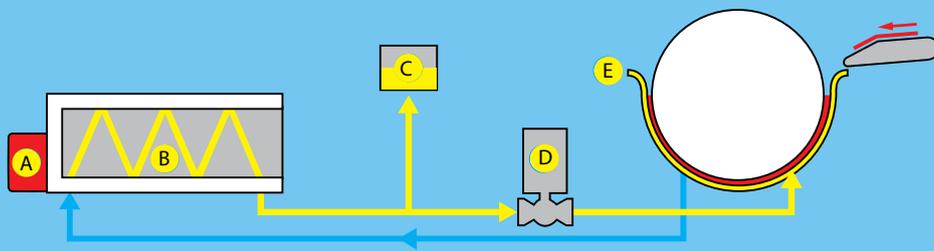


Jenroll EXPG 2000

Stand-alone operation through integrated gas-fired burner and heat exchanger

Jenroll EXPG - A winning concept

The Jensen Jenroll EXPG brings a new dimension to the word "flexibility". By using a flexible chest designed for the use of oil as the heating medium and an integrated gas-fired burner and heat exchanger, the Jenroll EXPG minimizes the installation and set-up time, enabling a laundry to lift off steam capacity for other purposes, and 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 self-contained oil-gas heating concept has proven to be the most energy efficient concept, as the energy efficiency of the Jenroll EXPG is 66%, which can be up to 50% higher than that of a traditional steam installation incorporating a central steam boiler operating with an energy efficiency of 44% or lower. The Jenroll EXPG is a winning concept based on well-proven JENSEN technology since 2003, ensuring optimum production and flexibility, and minimum energy consumption.

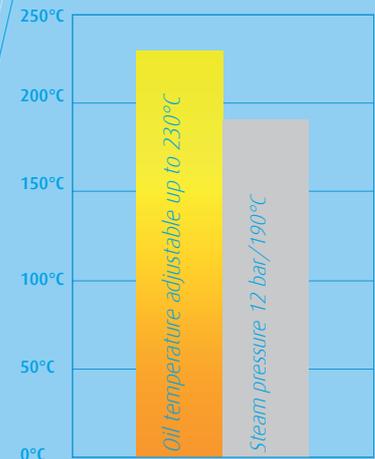
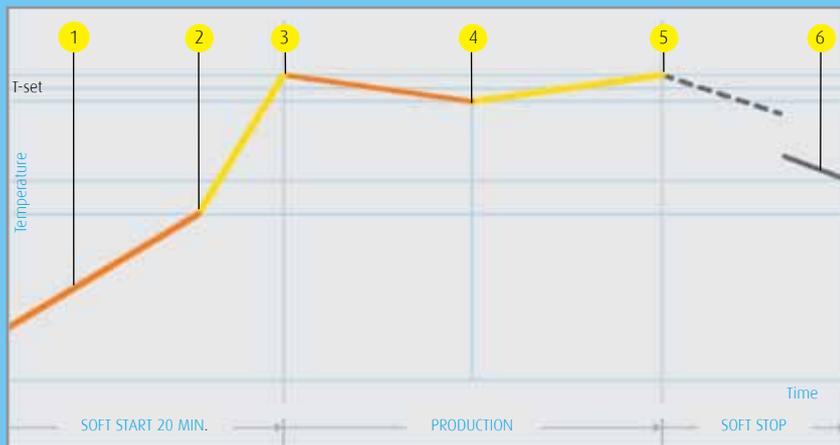


3 Flow diagram

A: Burner - B: Heat exchanger - C: Expansion tank - D: Pump - E: Chest

Heating cycle

1) Low flame - 2) Large flame - 3) Low flame - 4) Large flame - 5) Production shut-off - 6) Soft stop



7 Ironing temperature - Oil vs steam

1 2 Direct heating

The energy for evaporation of water in the linen is generated by the integrated gas-fired burner and heat exchanger. The burner is supplied with fresh air through an external air supply, ensuring optimum combustion and longer lifetime of the burner.

3 Optimum flow

The heat energy is transferred to the ironer chest by a thermal fluid oil which is circulated by a pump. As hot oil expands, an expansion tank is connected to the heat exchanger and the chest to absorb the heated oil.

4 Soft start

The Jenroll EXPG operates with two power outputs designed to ensure soft start on heating when the oil is cold. Soft start on heating using a low flame prevents hot spots and super-heating of the oil until the viscosity of the oil decreases and the flow rate increases.

5 Temperature control

The Jenroll EXPG maintains the set-point temperature within $\pm 2/-5^{\circ}\text{C}$ by using an intelligent burner, thus modulating between a low flame and a large flame depending on production speed. The temperature is set in each category, and the chest temperature can be quickly changed when the production is switched from e.g. cotton to visa.

6 Soft stop

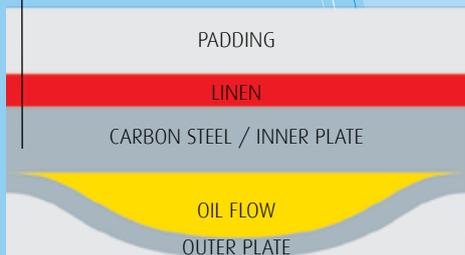
The Jenroll EXPG is supplied with a soft-stop feature which allows the oil pump to run for a period after production stop, thus preventing superheating of the oil. All together, the soft-start and soft-stop features increase the life-span of the ironer and reduce oil change requirements.

7 High temperature possible

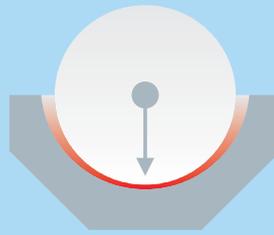
By using oil as the heating medium a chest temperature of up to 230°C is possible, which is 40°C higher than that of steam, when operating at a pressure of 12 bar. Furthermore, as standard, the chest temperature of the Jenroll EXPG is adjustable in each category, thus covering all current and future textile characteristics.



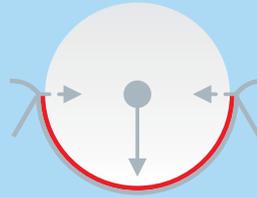
8



The flexible chest has optimum heat transfer



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



9 The vertical pressure of the roll on the flexible chest makes the sides of the chest press to the roll and results in a uniform pressure over the entire width of the chest.

Optimum heat transfer

Transfer of heat via the oil medium allows for high efficiency – up to 40% higher than that of steam. The key to an optimum transfer of heat from the oil into the chest is a high oil velocity and a turbulent flow combined with a flexible chest made of carbon steel material. Carbon steel has a thermal conduction which is four times higher than that of e.g. stainless steel, maintaining a higher temperature of the surface and thus a more efficient heat transfer to the linen.

Low friction

Carbon steel gives not only optimum thermal conduction, but also a low friction with wet linen, resulting in a nice finish. The low friction also reduces the wear of padding and linen, and it reduces the total energy consumption of the machine.

8 Flexible chest

The flexible chest consists of two layers of sheet metal welded together in a matrix pattern by a laser. This sandwich plate is rolled to the roll diameter and blasted with high pressure, thus forming small channels between the weldings. The flexibility of this sandwich construction allows the adaption to the actual roll diameter, and 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 be quickly changed when the production is switched from e.g. cotton to visa.

9 Optimum contact angle

A traditional fixed chest loses contact when the padding wears out and the roll diameter is reduced, whereas the flexible chest adapts to the actual roll diameter, thus maintaining a maximum contact angle. As a result of this stable contact angle a 50% higher evaporation capacity can be achieved over time than that of a fixed chest.

JENSEN

THIS PART TO BE CUT OFF



Combined drive motor and planetary gear.

Using planetary gears on the roll is a principle JENSEN has applied for years. The planetary gear minimizes the counter torque and prevents the roll from lifting up. Due to this, the roll will stay in centered position without the application of a vertical force on the drive side.

Jenroll EXPG - the finishing line philosophy

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



The Jenroll HMI PLC control system represents the recent and most advanced PLC control system with touch-screen and multi-language facilities.

A Easy to install

Each Jenroll is equipped with an integrated finishing line control, ensuring that both feeder and folder can be easily connected. The Jenroll serves as a distribution centre for all energy supplies to the other equipment in the finishing lines.

B Easy to operate

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

C Easy to control

Both the main and the analogue control panels can monitor the performance of the ironer.

The control panels will give the following information and warnings:

- Burner status
- Speed indication
- The current (ampere) used by the drive motor (indication starts flashing when waxing is needed)
- Temperature of exhaust and flue gas
- Oil level, oil pressure, and oil temperature
- Ironing pressure
- Warning light of cold chest
- Warning light of low air pressure
- Pump indication

D Easy to maintain

By using maintenance-free technologies such as e.g. combined drive motor and planetary gear, frequency inverter, etc., the only maintenance left is keeping the ironer clean and changing the oil of the gearbox.

E High availability

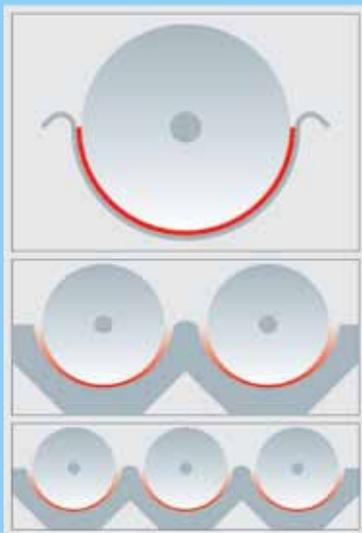
The Jenroll EXPG is based on design criteria as described in DIN 4754 for Thermal Fluid Oil installations. JENSEN has insisted on the highest standards of design and components for the Jenroll EXPG. Main components, such as the chest, roll, motors and cylinders, are built by reputable suppliers in accordance with JENSEN's specifications and Quality Assurance.

F Operator's safety

When one of the guards or emergency buttons in the finishing line is activated, the roll is immediately raised and stopped. 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.



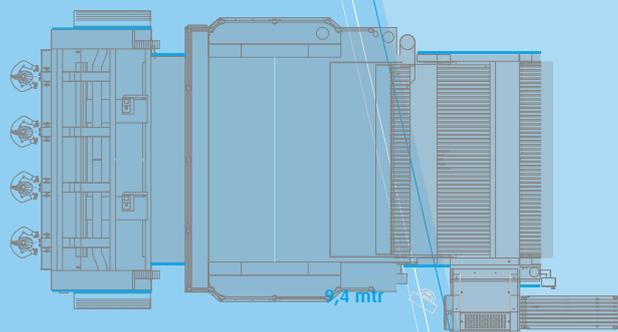
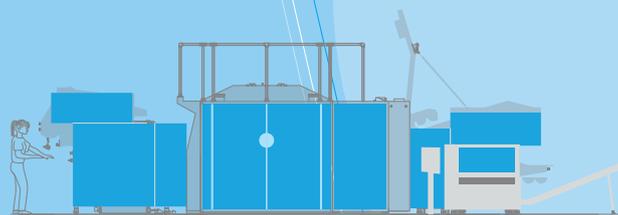
10 Scraper plates instead of ironer tapes give top-quality finishing



1x2000

2x1200

3x800



Jenroll EXPG 2000 in a compact, multi-purpose line

11 Jenroll EXPG 2000 - a space-saving solution.

10 Top-quality finishing

One roll only requires no gap piece between rollers. By using scraper plates to release the linen from the roller at the outlet no ironer tapes are required, thus no ironer tape marks are found on the linen.

11 Space saving solution

The Jenroll EXPG 2000 is a space saving solution as the performance of a Jenroll EXPG 2000 combining a large-diameter roll and a flexible chest heated by oil makes it an alternative to a steam-heated 2x1200 or 3x800 ironer incorporating fixed chests.

Models

Roll diameter 2000 mm.

Number of rolls per machine: 1

Working widths: From 3000 to 4200 mm.

Installation

JENSEN is pleased to assist you in planning your laundry providing excellent consulting, layouts and technical data. Authorized JENSEN distributors or JENSEN engineers should carry out the installation to ensure the correct performance.

Service

In addition JENSEN provides an extraordinary after sales service through a worldwide network of highly qualified Sales and Service Centers and distributors, all with their own maintenance and spare parts services.

Call us...

JENSEN provides a complete range of heavy-duty equipment for the laundry industry, delivered and installed according to your specifications. Please do not hesitate to contact us for further advice and information, or visit www.jensen-group.com

Contact address