

# Equipment Information



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### Sealed Air GmbH

**Customer Systems Center**  
**D4 Park 4**  
**CH-6039 Root-Längenbold**

Telephone: +41 (0) 41 349 45 00

Telefax: +41 (0) 41 349 45 45

[www.sealedair-emea.com](http://www.sealedair-emea.com)

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# 1 Description and key features

## 1.1 Description

The Cryovac® VS20 semi-automatic belt vacuum-packaging machine is designed for packaging small/medium size industrial/consumer units of fresh red meat, processed meat and cheese in Cryovac® bags. It incorporates many novel features made possible by the latest advances in vacuum packaging technology. A typical example is the VCS (vacuum control system) function for optimizing the vacuum cycle when packaging wet and damp products. The possibility to run the machine in manual mode allows the operator to make the most efficient use of the vacuum chamber. Electricity and compressed air are the only two external services required.

The operator places the products on the internal conveyor (belt) and then presses the start button, the chamber cover closes and the vacuum cycle begins. On finishing the cycle, the vacuumized products are transferred onto the outfeed rollers.

If the VS20 has been fitted with the optional motorized infeed conveyor, three operation modes are available:

- **Manual mode:** The operator manually places the products in the vacuum chamber then presses the start button to initiate the vacuum cycle.
- **Semi-automatic mode:** The operator first places the products in the vacuum chamber then presses the start button. The chamber cover closes and the vacuum cycle begins. Whilst the products are being vacuumised and sealed, the operator places packed products on the infeed conveyor. On finishing the cycle the cover reopens, the vacuumised products exit the chamber, and the packed products are transferred into the vacuum chamber by the motorized infeed conveyor. The machine then stops and is ready for the operator to press the start button again to repeat the cycle.
- **Automatic mode:** On pressing the start button, the machine cycle is automatically repeated for a configured number of times (standard 10).

The machine is controlled by a PLC (programmable logic control) system which monitors and sequences each phase of the machine during operation. It incorporates 5 programmes, which have parameters that can be customised to suit particular requirements. Programming is very simple and made via a soft touch control panel and LCD display.

Construction is simple and robust. All critical parts are treated against the corrosive environment often found in food production and packaging rooms. Designed with ergonomics safety and hygiene in mind it is easy to use and clean, simple to maintain with the possibility to remove the side panels. It meets all relevant European legislation for safety and hygiene.

## 1.2

### Key features

- 1 operator required
- Machine achieves up to 2 cycles/min (dependent on pump configuration)
- Powered belts, adjustable in height (3 positions)
- Ultravac and vacuum control system fitted as standard
- Ultrasealing system®
  - Mono active, microprocessor controlled, no water-cooling needed and adjustable seal bar pressure
- New soft touch control panel TD 200 and PLC S7-200
- Active safety devices and a category 2 fail safe control system combined to provide a state of the art safety system
- Hygienic design and good access make cleaning and maintenance easy and effective
- Robust, high quality build standard using food approved materials throughout

## 2 Layout

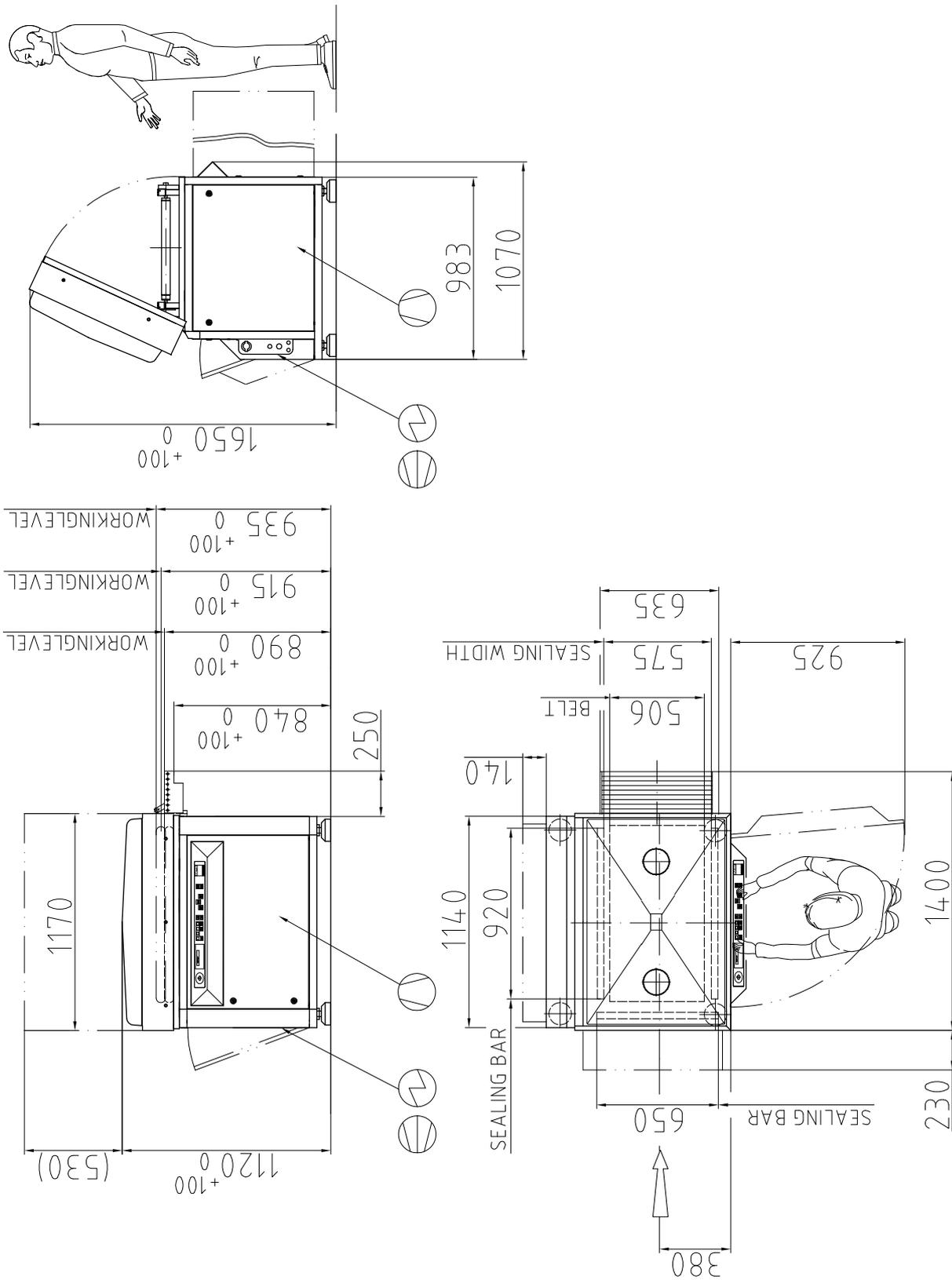
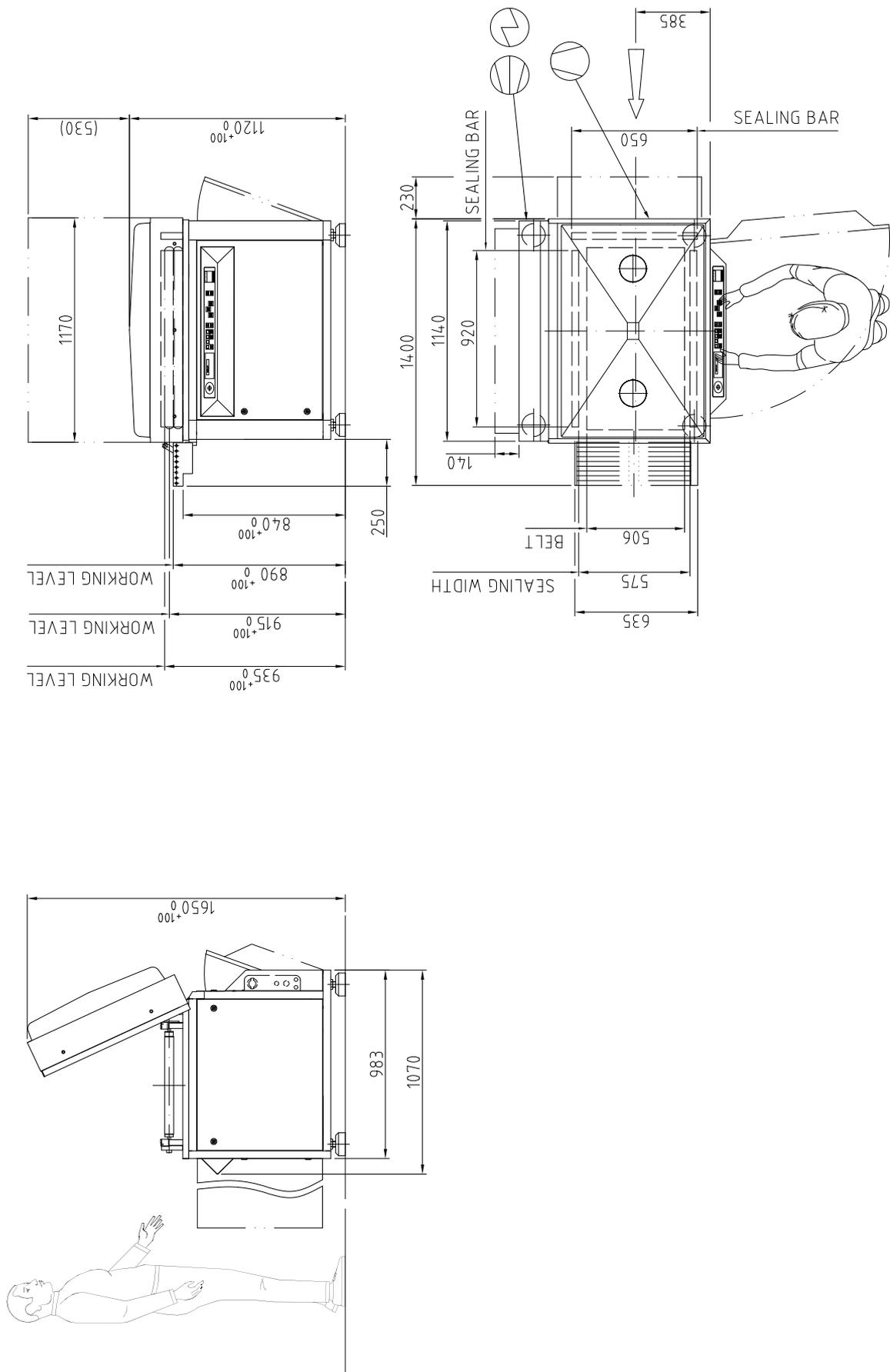


Fig. 2-1, Layout - standard machine - LR



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Fig. 2-2, Layout - standard machine - RL

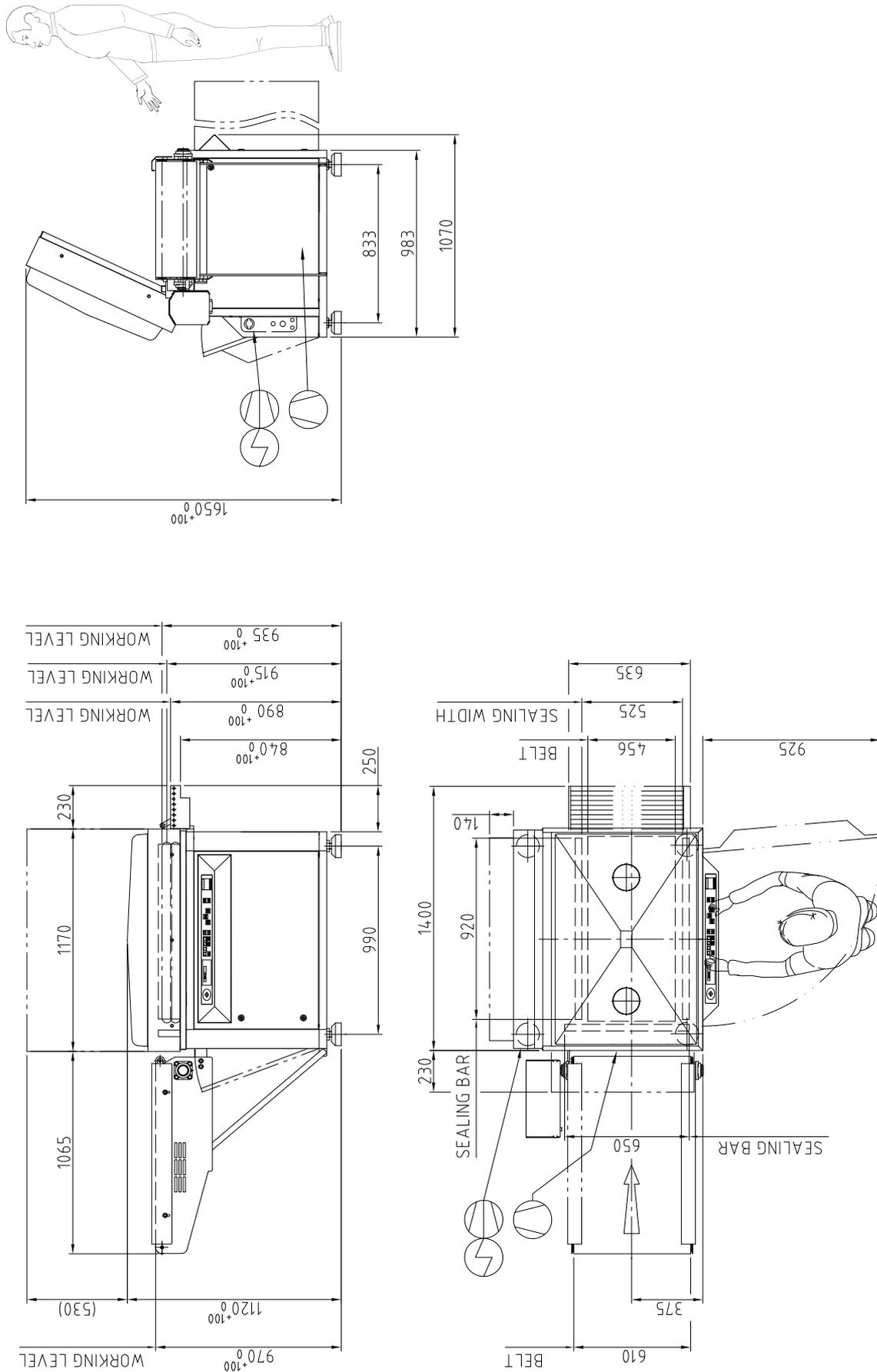


Fig. 2-3, Layout - with motorized infeed conveyor - LR

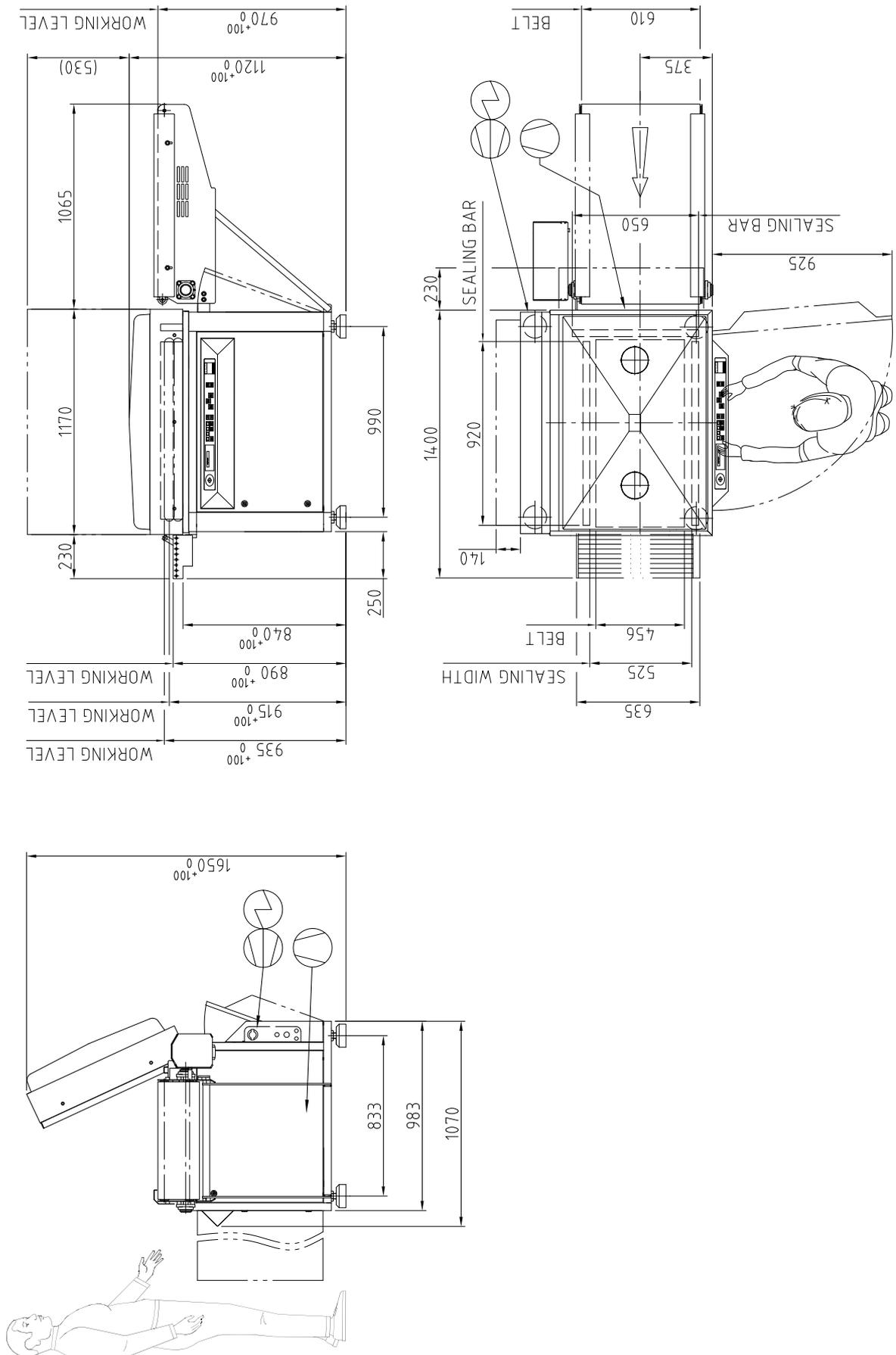


Fig. 2-4, Layout - with motorized infeed conveyor - RL

### 3 Nominal technical data

#### 3.1 Machine dimensions

Length, width & height See machine layout

#### 3.2 Weight

Standard 650 kg approx.  
 With motorized infeed conveyor 750 kg approx.

#### 3.3 Utilities

##### 3.3.1 Compressed air



Quality (ISO8573-1:2001) Class 5.4.4  
 Class 3.4.2 when using oils containing esters  
 Class 3.3.2 when equipment is used below 5°C  
 Pressure 0.6 MPa (6 bar)  
 Supply pipe diameter 15 / 21 mm  
 Connection type G 1/2" external thread  
 Consumption 3 Nm³/h

##### 3.3.2 Electrical



Voltage 400 V  
 No. of phases 3 + earth  
 Frequency 50 / 60Hz  
 Energy consumption per hour (average) 6.5 kWh  
 Installed power 13 kW  
 Current protection 40 A

##### 3.3.3 Vacuum



Main pump 300 m³/h Busch RA0302 (standard)

## **3.4 Working characteristics**

### **3.4.1 Product dimensions**

Length with longitudinal seal bars	550 mm max. (without motorized infeed conveyor) 500 mm max. (with motorized infeed conveyor)
Length with transversal seal bar	920 mm max.
Height	up to 190 mm
Weight	30 kg max. total per conveyor

### **3.4.2 Sealing Bars**

Length longitudinal	920 mm
Length transversal	650 mm
Height	20 / 40 / 65 mm
Cutting device	100%-cutting
Distance between the longitudinal sealing bars	575 mm (without motorized infeed conveyor) 525 mm (with motorized infeed conveyor)
Concept	1 longitudinal sealing bar 1 transversal sealing bar (L-Sealing) 2 longitudinal sealing bars 1 transversal sealing bar (U-Sealing) 2 longitudinal sealing bars (Parallel-Sealing)

### **3.4.3 Bag details**

Length	To suit product
Width	To suit product
Bag type(s)	BB4, BB4L, BB305, BB405, BB325, BB355, TBG

### **3.4.4 Functional details**

Working speed	2 cycles/min
Noise level	72 dB (A) at operator's working position
No. of operators	1 operator

## **4 Configuration**

### **4.1 Standard**

- Siemens PLC S7-200
- Soft touch panel TD-200
- Pneumatic powered belts
- 1 longitudinal sealing bar, incorporating:
  - Ultraseal sealing system®
  - Final cutting system
- 1 transversal sealing bar, incorporating:
  - Ultra sealing system
  - Final cutting system
- Ultravac system
- Vacuum control system
- Vacuum pump
- Spare parts kit
- Installation kit
- Technical Manual
- Declaration of Conformity

### **4.2 Versions**

- Alternative power supply on request
- Left or right hand standard machine
- Standard machine without main pump
- Additional longitudinal sealing bar (U-Sealing)
- Additional longitudinal sealing bar without transversal sealing bar (Parallel-Sealing)
- Motorized infeed conveyor

### **4.3 Options**

- Anti-ballooning kit
- Motorized exit rollers

### **4.4 Recommended line assembly**

BL19 + VS20 + ST12