voran® machinery

Twin belt press ZBP1100

English

Delicious quality

Natural juice

Naturally cloudy fruit and vegetable juices play an important role in a tasty, healthy, balanced and nutritious diet. They are a good source of trace elements, minerals and natural vitamins.

Hygiene

To retain these valuable nutrients during processing, it is essential that strict hygiene is maintained. That is why, in addition to food-grade contact parts, all voran® equipment is designed to facilitate easy cleaning.

Cost effectiveness

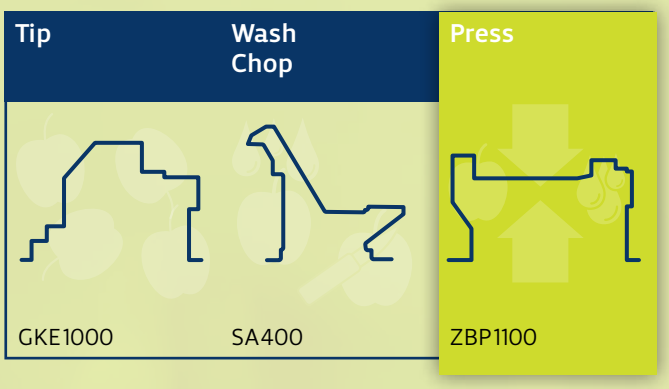
Our modern fruit processing equipment is characterised by excellent product quality and achieves high juice yields. In addition, our equipment is designed and manufactured to minimise operating, servicing and maintenance costs.

Fruit processing lines

The ZBP1100 twin belt press is designed to integrate into a fruit processing line, for producing natural and tasty juices.

Experience meets innovation

For decades voran® Holding has stood for quality, dynamism and professionalism in food and drink processing. As a financially stable medium-sized company we currently employ around 160 people in Pichl bei Wels – at the heart of the province of Upper Austria.



The flexible allround-machine for producing juice

voran®

Continuous high yield

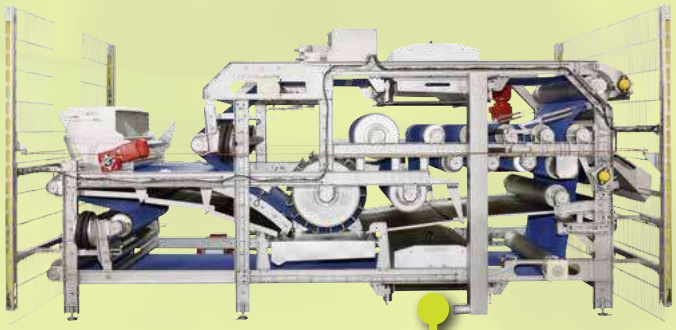
The mash is prepared by upstream voran equipment and fed to the dosing hopper automatically. The dosing system coats the mash continuously onto the lower belt. The mash film can be adjusted in thickness, width and throughput. Here the juice immediately starts to drain off through the belt, before it is forced between lower and upper belts. The finned main pressing roller ensures optimal juice extraction through both belts and delivers the mash to the high pressure zone, for maximum pressing of the mash. Decreasing roller diameters cause a progressive increase in pressure and shearing force.

The yield can be further increased by the post-pressing roller, which is independently adjustable to suit the specific character of the product being pressed. To minimise oxidation, the juice is discharged over the shortest possible distance to the central juice collection trough, where it is forwarded automatically by the juice pump.

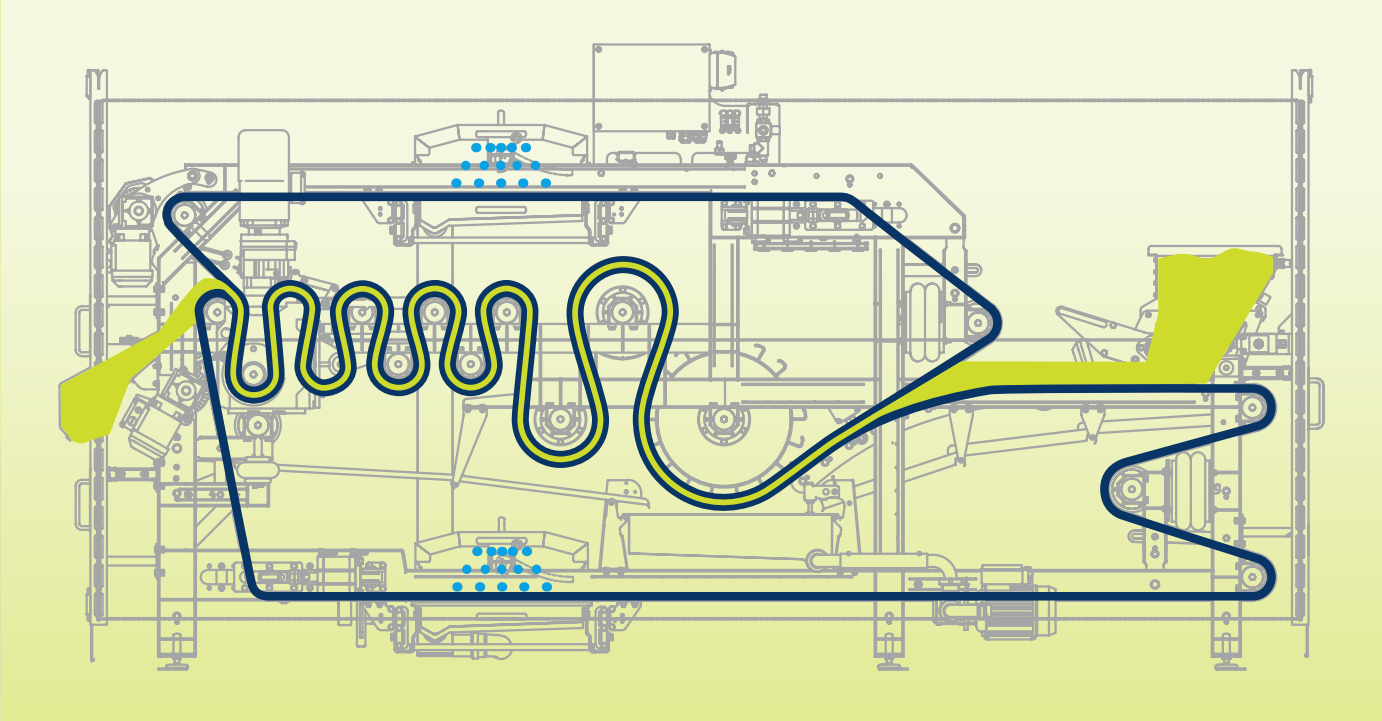
The belts are continuously cleaned of pomace by scrapers and by shiftable brush rollers and high pressure cleaning boxes, before being recharged with mash from the hopper.

Advantages

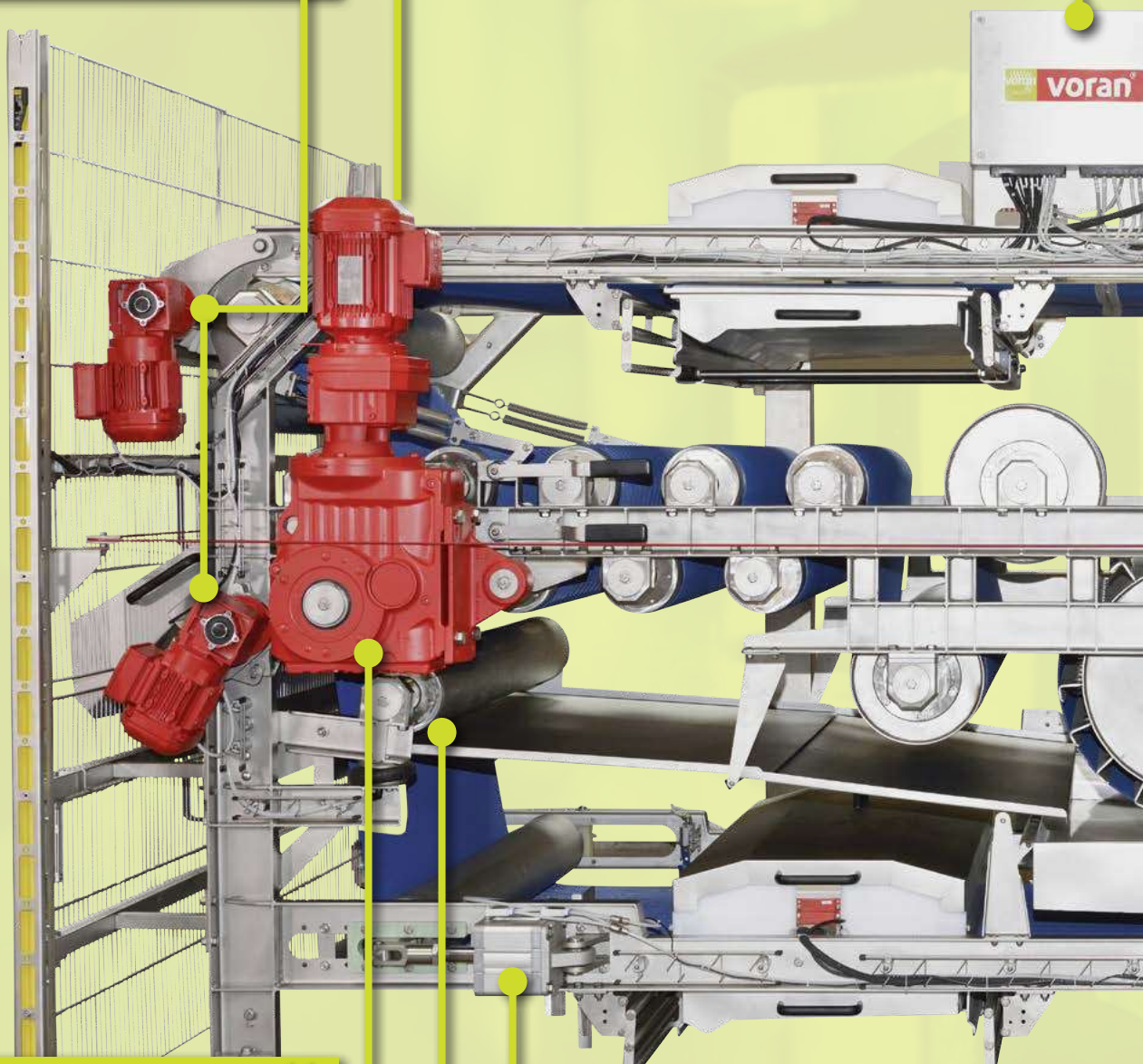
- Broad range of application for fruits, vegetables and special products
- High nominal capacity and yield through product flexible operating conditions
- Fast and careful juice extraction and low creation of clouding
- Hygiene-optimized design in stainless steel leads to highest juice quality
- Low current and air consumption
- Minimal staff/operational/service costs
- Robust and durable



Central drain of belt cleaning box



Design



Media-Connection-Panel on top of the machine

Variable speed adjustable mash-flow (frequency converter)

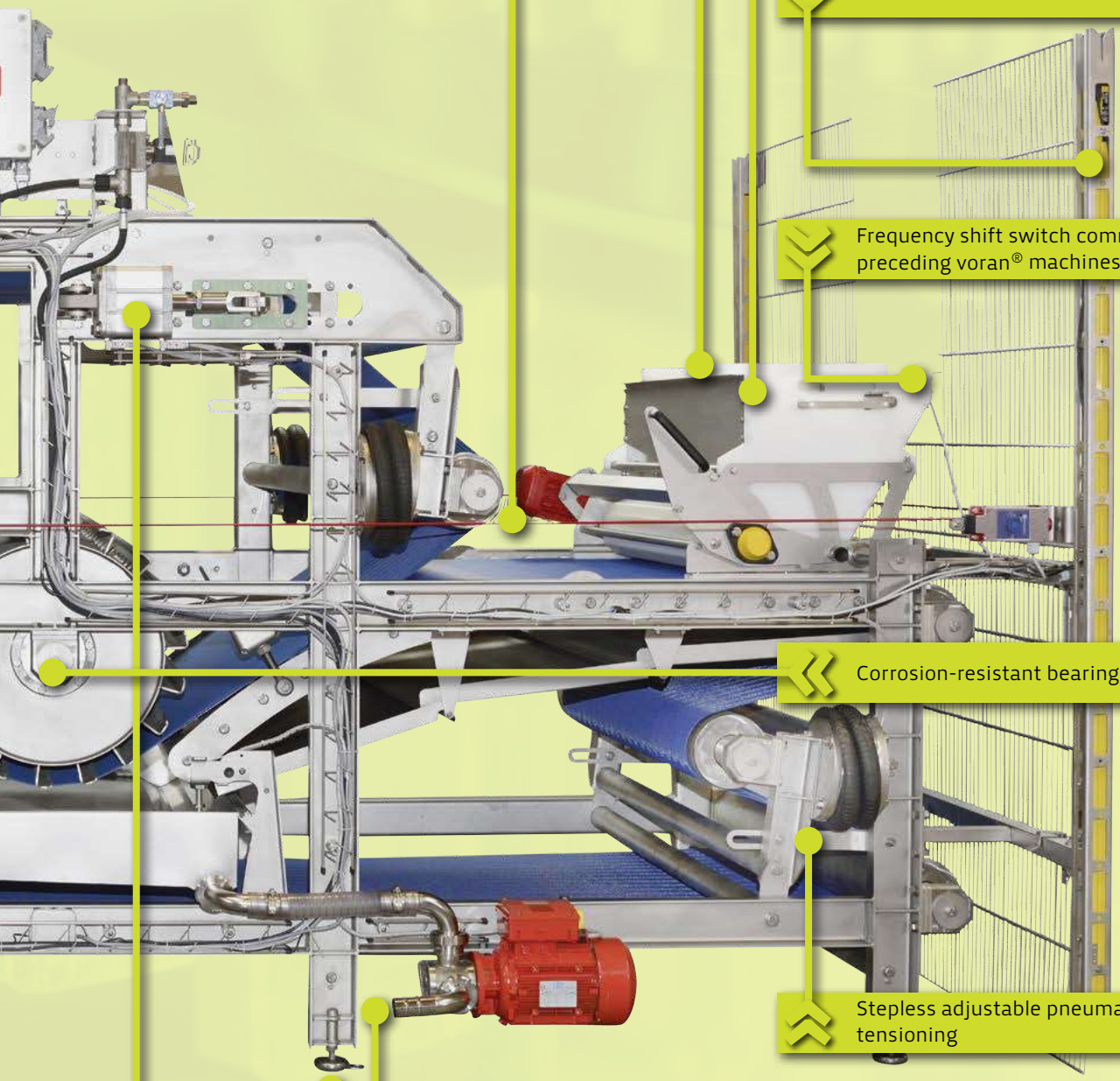
Adjustable belt cleaner with electrically driven brush-roller (included as standard)

Robust drive unit

Adjustable post-pressing roller

Automatic belt alignment system

voran®



- Emergency tripwire
- Product dependent adjustable dosage
- Feeding hopper with integrated level-sensor
- Safety light curtain for easy cleaning
- Frequency shift switch communicates with preceding voran® machines
- Corrosion-resistant bearing cases
- Stepless adjustable pneumatic belt tensioning
- Automatic pump for fast juice forwarding (included as standard)
- Adjustable, dampened machine feet for optimal levelling — with fixing eyes

Details

Construction

The carefully designed ZBP1100 is of stainless steel (AISI 304) construction throughout for optimum hygiene.

The frame is further reinforced to withstand the high pressing forces that ensure high juice yield and excellent performance.

The frame is of open design to allow easy access for cleaning.

Sliding water trays for easy cleaning

Adjustable feeding hopper for different mash-width'

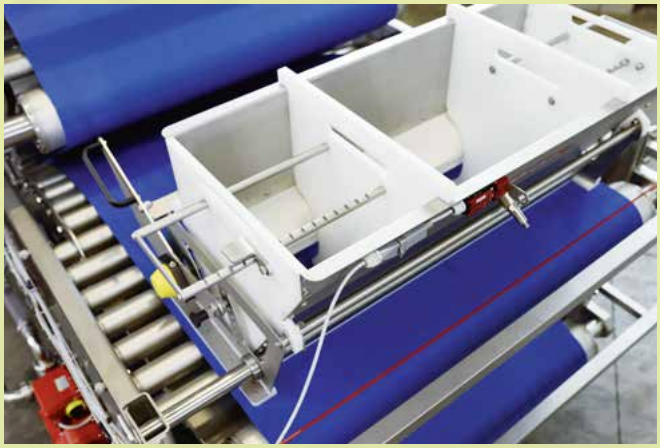
Both belts are cleaned by a high-pressure-cleaner during operating.

Either water-saving brush cleaning and/or highly efficient high-pressure jet cleaning can be switched on.

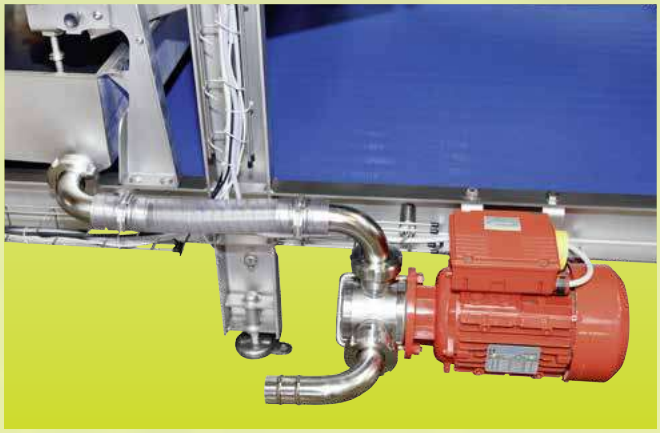
The long pressure-optimised wedge-shaped straining zone enables the best possible pre-pressing, and stabilises the mash cake. It also helps to keep pulp from the edge of the belt to prevent unwanted pulp from falling into the juice.

The stainless steel central control cabinet (for wall-mounting) contains electrical controls and operating elements and features a 12 inch full colour touch-screen display.

The pneumatic service unit (for wall-mounting) houses the belt tension control and post-pressing roller control.



Adjustable (width, height) mash application roller results in a symmetrical mash-film.



The swift pressing process, low fall height and rapid draining of the strained juice into the small volume main juice collection trough reduces oxidation to a minimum.

The total of twelve press rollers in the high pressure zone are arranged on a single level resulting in an overlap-free arc of contact, which optimises yield.

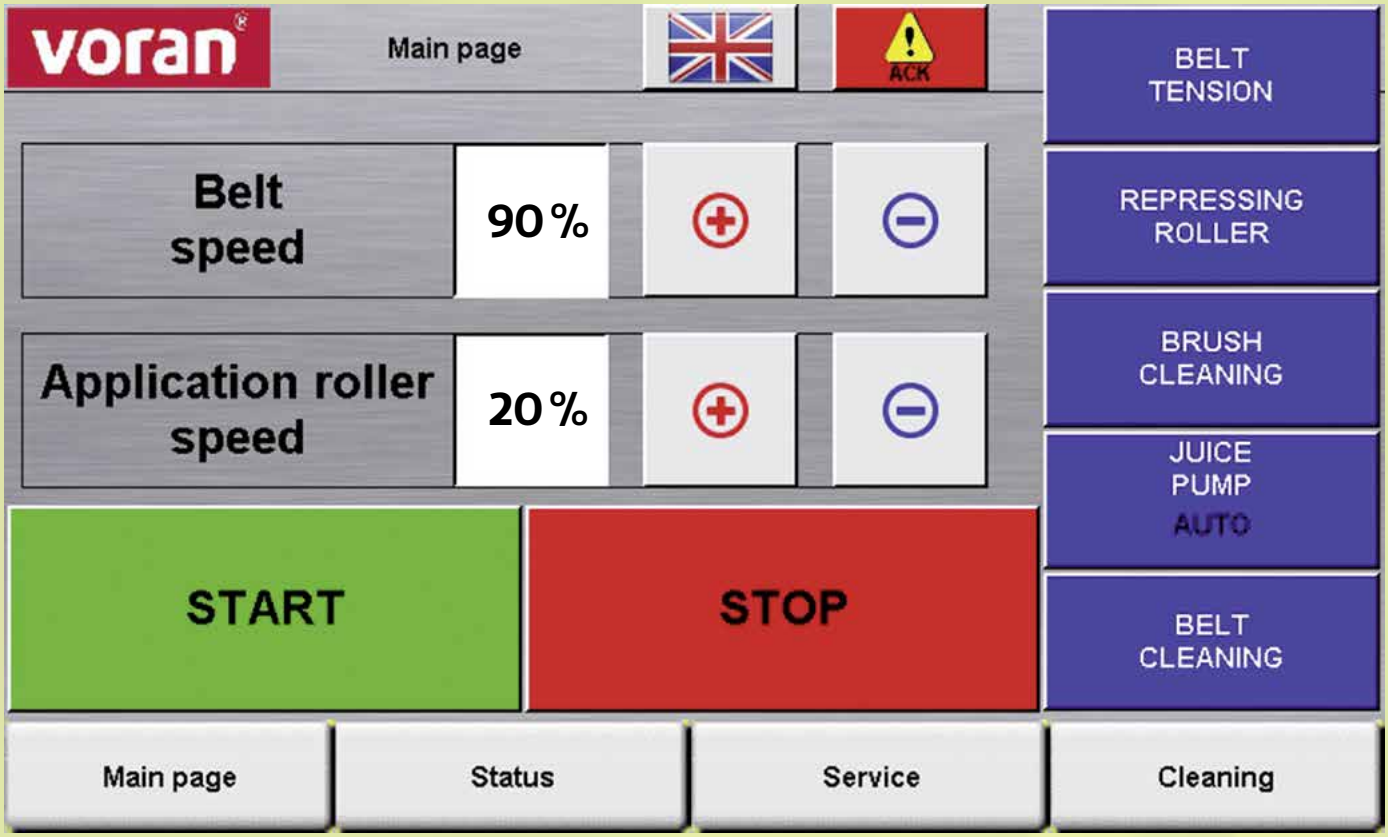
Other advantages

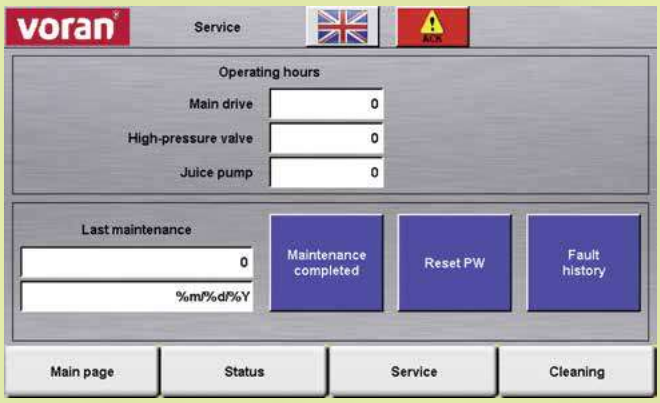
- Guarded with a light sensor curtain.
- Easy to clean.
- Single outlet central drainage of cleaning water.
- A safety-button on the high-pressure cleaner allows to switch on the belt drive when cleaning the machine.
- Regulation of the belt running alignment takes place automatically during pressing to maintain high output.
- The main juice collection trough can be lowered by a lever system and also removed for thorough cleaning, as can the juice channelling components from the wedge and high pressure zone.
- The infinitely variable speed regulation and the optimal belt and weld design optimises yield.
- The press rollers are provided with rigid shafts in stainless steel shaft block mountings and encapsulated roller bearings to prevent flexion.
- The torsionally rigid frame construction and the range of operational adjustments, together with careful machine installation, ensure that the automatic belt alignment system is used as little as possible, for minimal down time.
- Rotating brushes, which can be switched on as required, also help to remove both press cake from the surface of the belts and particles embedded in the weave of the belt, for effective cleaning and reduction of water consumption throughout the cleaning process.

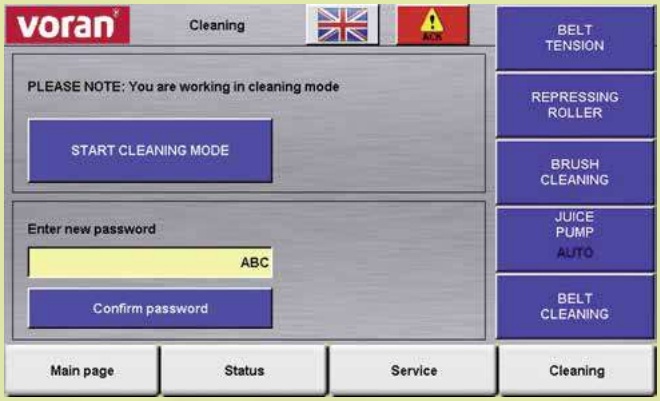
The special open construction of the main press roller guarantees fast and unhindered penetration and drain-off.

Operation

Big touch-display with intuitive user guidance







Menu-based Control

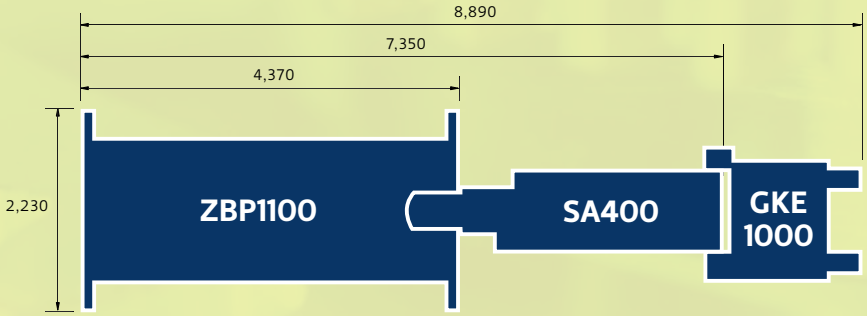
...of all main features

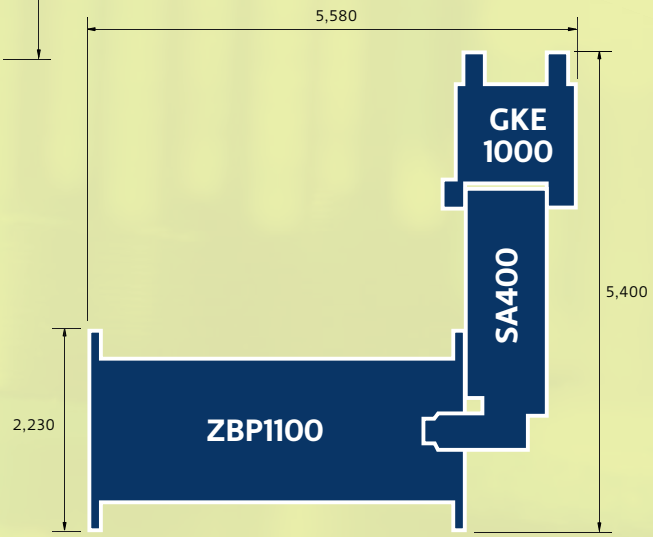
- Belt drive speed
- Activation of brush-cleaning
- Activation of high-pressure-cleaning

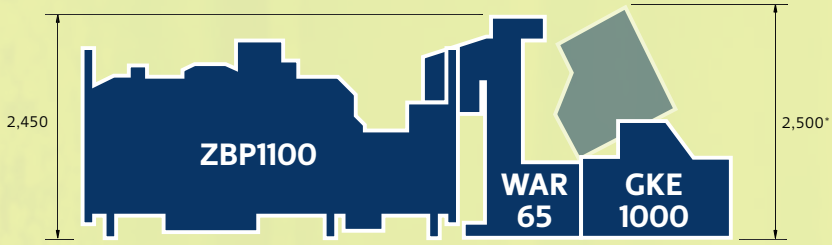
...and all safety- and convenience features

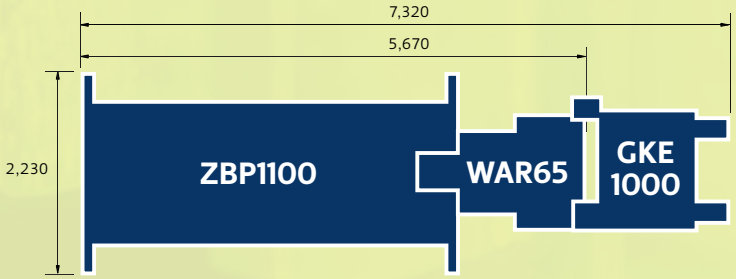
- Language selection
- Status display
- Error description in clear text

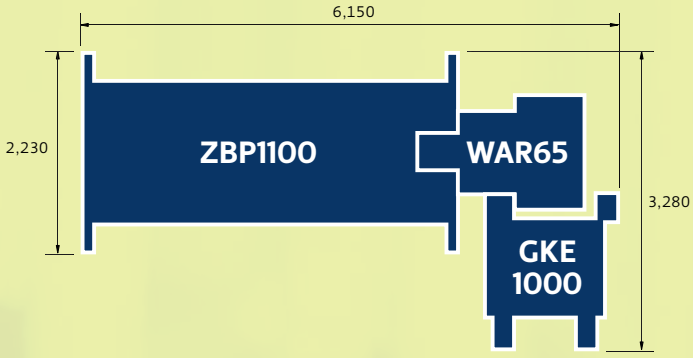
Typical line-layouts











* Box size 1,200 mm

Additions

WAR65

The WAR65 combines performance and robustness with space-saving design. Easy cleaning thanks to the rotating turret. The flow rate of mash is controlled by the belt press. The quality of the mash can be adjusted to the type and quality of fruit being processed using replaceable screens – no tools required. This system is suitable for processing a wide range of fruit and vegetables with a capacity of up to 6,000 kg per hour.

Elevator with centrifugal mill SA400-RM75

Washing system of stainless steel for fruits and vegetables with attached pivoting centrifugal mill. The washing system consists of sorting grid, washing vessel, chain conveyor and add-on pivoting centrifugal mill RM75. The conveyor speed can be adjusted by using the integrated frequency converter. The fruits are cleaned carefully by rubbing against each other.

GKE

Bulk bin tipper including hydraulic power unit for standardised bin sizes (L/W/H = 1,200/1,000/800). This bin tipper is designed for easy and consistent feeding of voran® washing systems. The GKE 1000 is the perfect solution for regulated tipping of bins. The boxes can be inserted by a forklift or a pallet truck. It is tipped hydraulically by pressing the tip-button. When the button is released, the box stops and remains in its current position until the button is pressed once more. By an additional button the box turns back into its home position.

Standard bins up to a height of 800 mm can be placed under the ZBP1100 pomace-ejector.

Included with delivery

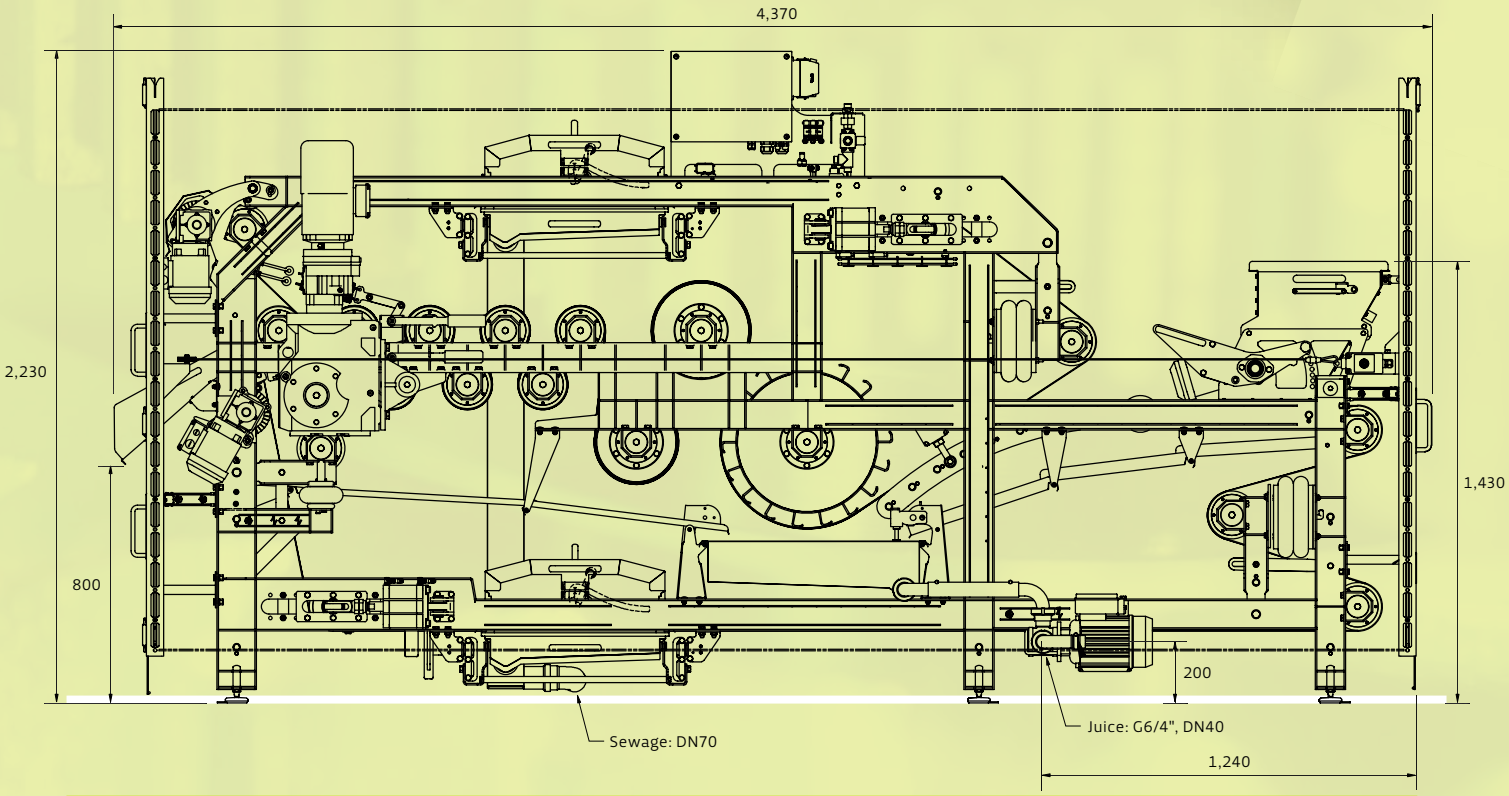
We rely on trusted branded quality for our accessories.

compressor

high pressure cleaner

Technical data

ZBP1100



Type	ZBP1100
*Nominal output in kg/h**	7,000
*Maximum yield in %**	80
Contact time in min	1,5—6
Belt speed in m/min	1,2—4,5
Belt width in mm	1.100
Belt length in mm	14,500 and 10,900
Width of mash feed in mm	320—870
Height of mash feed in mm	10—50
Motor power drive/belt cleaning/HP-cleaner/compressor in kW	4.2 / 0.37 / 7.5 / 1.1
*Electrical connection***	400 V/50 Hz (three-phase)
Minimal fuse in A	3x16 (slow-blow)
Plug	CEE 32 A
Control voltage in V	24
Protection class	IP65, drives IP54
Water consumption HP-cleaner in l/min	10 (at 50 % power-on time)
Minimal air pressure in bar	8
Sound power level (LW, A) belt press/HP-cleaner/compressor in dB	<80 / 78 / 84
Height of mash feed in mm	1,430
Height of pomace ejector in mm	800
Dimensions length/width/height in mm	4,400/2,250/2,200
Dimensions control cabinet length/width/height in mm	1,200/600/300
Connector juice pump/fresh water/waste water	DN 40 / ¾" / DN70
Construction	stainless steel***
Weight belt press/HP-cleaner/compressor in kg	3,400 / 57 / 31

*Depending on the raw material being processed **Other voltages and net specifications on request ***Complies with EC 1935/2004

Subject explicitly to technical changes and errors.

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voran business lines

- machines
- machine construction
- plant construction
- facades

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