

# DESTILA®

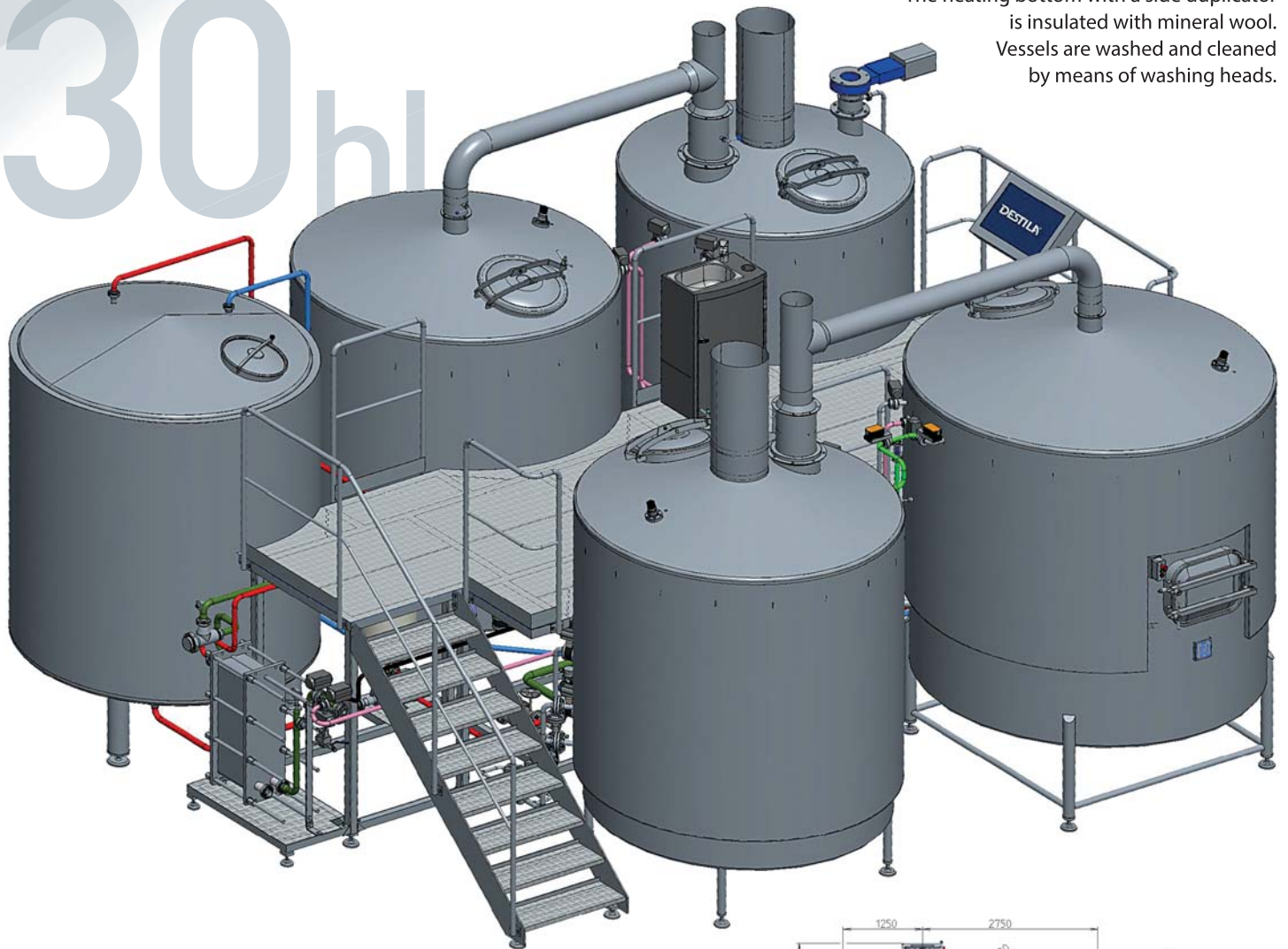
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## Brewhouse for 30 hl of cold wort

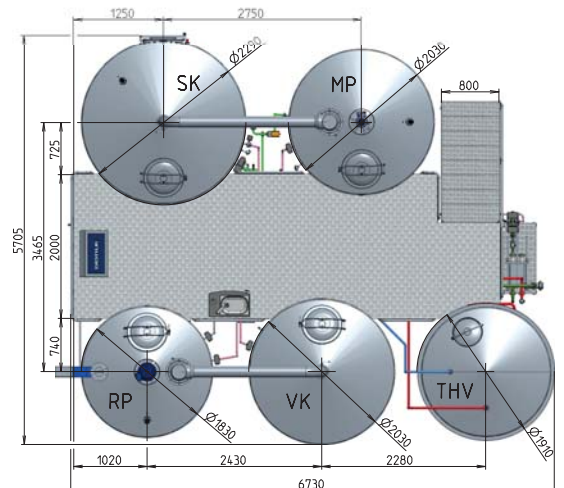
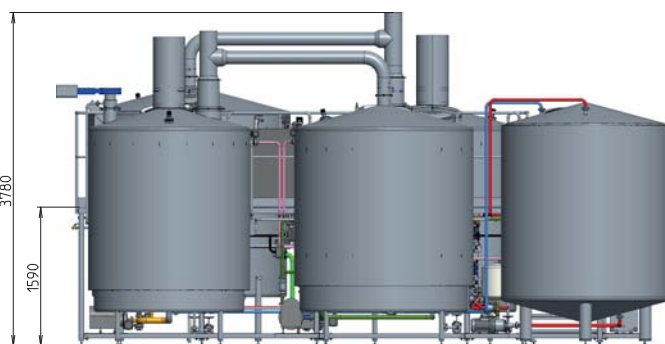
A four-vessel brewhouse from stainless steel for brewing 30 hl of cold wort with stainless chimneys for steam discharge. If it is not possible to ensure natural steam discharge, it is possible to add waste vapour condensers. The brewhouse enables brewing by means of both decoction and infusion. The mash and wort tub is heated by gas or electric steam generator with the output of 500 kg of steam per hour with the working pressure pressure of 4.4 bars. The vessels and connecting pipes are from stainless steel DIN 1.4301. The inner surface roughness in the vessels is  $Ra \leq 0.8$ . The outer jackets of the vessels are also from stainless steel and they are welded. The outer surface is brushed. The heat insulation of the cylindrical part of the vessels is from a 50 mm layer of PUR foam.

The heating bottom with a side duplicator is insulated with mineral wool. Vessels are washed and cleaned by means of washing heads.

# 30 hl



Brewhouse 30 hl (illustration)



# Brewhouse parts

## Filtration vat

A cylindrical vessel with a flat bottom. Above the bottom there is a stainless-steel strainer from welded trapezoid wire. The vessel is equipped with a stirrer for better wort filtration and a height-adjustable bar enabling malt residue discharge.

ACCESSORIES: the stirring arm drive with FM revolution regulation and a lifting gear box are situated below the vat, side malt residue discharge, nozzles for rinsing the area under the filtration bottom, temperature sensor PT100, manhole, washing head, inner LED light in the vessel, steam chimney imitation

## Mash tub

A cylindrical vessel with a slightly conical bottom equipped with a stainless-steel heating bottom and a separately controlled side duplicator in the lower part of the vessel for steam heating. Steam duplicators meet the requirements of the Czech Republic government decree No 219/2016 Coll. (Regulation of the European Parliament and Council No 2014/68/EU) for pressurized vessels. The steam supply valves allow continuous regulation. The vessel is equipped with a stirrer with continuous setting of revolutions.

ACCESSORIES: heating bottom with a side duplicator, the stirrer drive with FM revolution regulation is situated above the tub and hidden in the steam chimney imitation, heat sensor PT100, manhole, inner LED light in the vessel

## Wort tub

A cylindrical vessel with a slightly conical bottom equipped with a stainless-steel heating bottom and a separately controlled side duplicator in the lower part of the vessel for steam heating. Steam duplicators meet the requirements of the Czech Republic government decree No 219/2016 Coll. (Regulation of the European Parliament and Council No 2014/68/EU) for pressurized vessels. The steam supply valves allow continuous regulation.

ACCESSORIES: heating bottom with a side duplicator, temperature sensor PT100, manhole, inner LED light in the vessel, steam chimney imitation

## Whirling vat

A cylindrical vessel with a special bottom in the shape of an inverted cone. It ensures ideal sludge residue retention.

ACCESSORIES: a tangential nozzle for wort whirling, mash and sludge outlet in the bottom part of the vat, washing head

## Centrifugal pumps

Separate pumps for mash and wort, filtration and fermentation with an open impeller wheel. The pump revolutions are controlled by FM.

## Board wort cooler

A single-stage cooler for wort cooling from +98 °C to the yeast starter temperature. The cooling medium is ice-cold water. The input temperature is +1°C, the output temperature is +70 °C. The wort output temperature regulation is controlled manually or automatically according to the temperature set on the control power of the brewing room. The cooler output is 5,000 l/hours, the maximum overpressure is 0.6 MPa.

## Operator's ramp

It enables access to the tanks, control elements and control panel of the brewing room.

## Wort aerator, connecting pipeline

### Tools for the brewhouse operation

3 saccharometers, 1 cooling cylinder, 1 stainless steel sink, automatic water mixer, 2 measuring rods, 2 malt residue containers, tools for the technologist, brushes

## Waste vapour condenser

It ensures condensation of the steam generated during brewing and its discharge to sewerage. At the same time, it minimizes the smell in the brewing room area. The discharged steam also heats water which is collected in a hot water vessel. In the pipeline there is a showering head preventing deposition of hop oil sediments.

## Brewhouse control

A semi-automatic control unit with a touch screen and programmable automatic control (PLC) Simatic S7 1200 by Siemens company. From the panel it is possible to control pneumatically controlled flaps, pump motors and drives of the brewing room stirrers with continuous revolution regulation by means of a frequency converter. It also controls automatic hot water heating and ice-cold water cooling and wort cooling. The panel enables setting parameters, programming and running technological processes, changing their modes and displaying and archiving the course of the measured values and error states. It also enables a remote access and control through the Internet.

Vat [hl]	30
Overall dimensions L/W/H [mm]	6700 × 5300 × 3400
Ramp height [mm]	1550
Empty brewhouse weight incl. the ramp [kg]	7200
Total filtration vat volume [l]	4975
Maximum filtration strainer load [kg/m <sup>2</sup> ]	160
Total mash tub volume [l]	3745
Total brewing kettle volume [l]	5045
Total whirling vat volume [l]	4050
Average load per 1 m <sup>2</sup> with full brewhouse [kg]	290
Heating steam consumption [kg/hour]	500
Steam consumption [per 1 batch]	1350
Electric steamer input [kW]	240
Water consumption for waste vapour cooling [l/batch]	600

