

# **OPD** Prepress System



### Application:

The OPD Prepress system is designed for distribution, prepressing and portioning of blocks of cheese Curd. The OPD prepress system can be used for a wide range of cheese types ranging from very hard cheeses, hard cheeses to semi hard cheeses.



# Working principle

The OPD prepress can be combined with two different types of curd distribution under whey (OCD-G), or for distribution of drained off curd (OCD-T)

First the whey is pumped into the APV OPD prepress from the Cheese Vat until a level just above the draining belt are reached. The drain belt design will make sure there are air separation from the Whey. Then the cheese curd is pumped continues into the OPD through the (OCD-G) distributor. The OCD-G distributor will move from one end to the other end and backwards in a preprogrammed speed to distribute the curd in a uniform way under whey level. The OPD-G distributor outlet end is hold near to the curd by the whey Level control sensor

After the distribution of the curd the lid of APV OPD pre press the is lowered automatic down in order to reach the selected pressure. After pressing the curd blocks is cut to the pre-set size (dimension), If the APV OPD is equipped with the scanning option and the automatic knife option then the scanning will take place after the pressing lid lifted. The scanning result will automatic adjust the knifes in order to reach the optimum the volume of block size. After the block has been cut they will be transport ed gently to the conveyor (tilsit types-dry distribution) the telescopic dam is parked close to the front and dam (OCD-T). The curte on the distribution is lowered and the curd/ whey milk is pumped to the distributor. The curd7whey mix parses two vibrating sieries where the whey is drained off.

The cheese graines are led via the chute dired into the pressing vat, and at the same time the bottom belt is moved backwards at a controlled speed allowing the curd to build up a layer of equal height. finally the vibration sieved are flushed with water and the chute is repasitioned.



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# **OPD** PrePress

## **OPD Prepress standard design consisting of:**

- Pre-press vat in stainless steel
- Plastic lamella drain belt with special drain pattern
- Automatic operated perforated pressing plate with lid
- Cutting section automatic operated
- Discharge section optimized to gentle handling
- Software/hardware for automatic operation and the design and construction
  of the OPD pre-press ensure an optimum standard as regards to production
  hygiene, cleaning,function and maintenance. The APV OPD pre-press is
  designed with all movable parts are mounted inside the machine implies maximum
  hygienic conditions for CIP and production.
- The OPD pre-press is made of stainless steel (AISI 304) and all materials in contact with the product are FDAapproved.

#### **Pre-press vat**

The inclination of the bottom in vat ensures that the whey flows to the bottom outlet of the press vat. The bottom outlet is connected to the discharge unit of the press vat. The vat is supported by legs with adjustable feet and is provided with a gangway along the sides.

#### Automatic pressing plate with Lid

The litting and lowering movements of the pressing plate are activated electromechanically by means of a combined spindle/wire system. When the pressing plate is in the bottom position the lid rests on the edge of the vat and is locked to this position.

#### **Cutting edge**

#### The cutting section consist of:

Vertically moving guillotine knife unit for cutting the cheese mat in crosswise direction.

#### **Discharge Section**

#### The cutting section consist of:

- Transfer belt consisting of a short, open slat type conveyer belt of polypropylene plac
- Pushing device placing the cheese on a transversal conveyor
- Discharge conveyor positioned transversal to the transfer belt, -500mm wide no distage units

## The MCC/PLC panel for location in dry enviroment

- PLC
- main switch
- Power supply 24 DC

#### Frequency converters

Stainleess steel panel placed in the process area including build in panel computer with 17" touch screen. The operation panels will have the following general functions rutine operations license software/hardware for automatic operation and production data

#### Finish

The inside surface is in coldrolled 2B/oil-brushed finish with smoothly ground weldsgrain 200, max 1.0mm. The outside surface is in cold-roled 2B finish with welds ground smooth -max 1.6mm.



# Main dimensions

OPD size	L	W	Н
Effective pressing length	Total Length	Total Width	Total height
4m	10100 mm		
5,5 m	11600 mm		
7m	13100 mm	3650 mm	3450 mm
8,5 m	14600 mm		0400 11111
10 m	16100 mm		
11,5 m	17600 mm		
13 m	19100 mm		

#### **Technical data**

#### Service Consumptions. Including connections/size

Connections:	
Main compressed air:	ø12 smooth
Whey/Curd/CIP inlet:	DN100
Whey/CIP outlet:	DN80
Flush Water:	DN 50
Steam for sterilization:	1/2 inch BSP

# Bottom Whey needed/batch

OPD Prepress length	Bottom whey
4	1500
5.5	1950
7	2400
8.5	2850
10	3300
11.5	3800
13	4300

### **Options connections:**

Compressed air for Whey blowing in connection with scanning option:  $\frac{1}{2}$  inch BSP

#### **Consumption:**

Electricity (3 x 400V, 50 Hz +earth +0) :

depending on used pattern pre-fuse 63 amp

Compressed air (peak): 1.000 I/min 8 bar and 2.500 I/min 6 bar CIP:

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50.000 l/h

Flushing Water:

20.000 l/h where in use

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