

## Continuous Vada making machine

### 1. Introduction:

Urad-vada is a popular snack food, consumed in India and to some extent abroad. Vada is prepared from black gram cotyledons (dhal). The black gram dhal soaked in water at room temperature for about 2 hrs and ground to a fine viscous batter with addition of salt to taste. The prepared batter is made in to donut shaped balls with a hole in the centre and deep fat fried. This involves two important operational viz. forming in to doughnut shape and dispersed and secondly, formed vada is fried in a continuous deep fat fryer to get golden coloured, crisp fried vada continuously and of consistent quality. A continuous vada making machine is developed at this Institute and the design drawing for which is available for commercialization.

### 2. Features of the machine:

The machine will be employed for the production of doughnut shaped urad vada continuously and consistently in predetermined form, shape and size. The frying operation pertaining to the frying time depends upon the raw material characteristics and capacity can be varied by adjusting the residence time and temperature of the oil by means of controls. The unit is simple to operate, frying and discharging vada continuously in a predetermined shape and size. The unit is economically cheaper and hygienic. Less charred deposits and residuals in the fryer due to less movable parts in the frying trough. The unit can also be used for other products similar to urad-vada. It is easy to dismantle and clean the machine. Occupies less space and can be suitably mounted and there is no extended parts of the device.

### 3. Technical specifications:

Capacity of the machine:	600-650 vada/hour
LPG:	0.6 kg/ hr
Power:	0.75 Kw/ h
Oil holding capacity:	15 liters
Approx. machine dimension:	4' x 1 ½' x 2 ½'

**Suggested capacity of the fabrication unit:** 48 machines per annum (4 machines per month)

### 4. Project Economics- Fixed Cost – Working Capital (in Rs.'000)

#### (Estimate for a model project)

(a)	Land & Building (54M <sup>2</sup> )	60.00
(b)	Principal plant & equipment	650.00
(c)	Auxiliary equipment	0.00
(e)	Other fixed assets	0.00
	Preliminary/ preoperative expenses	0.00
	Total Fixed Capital	<b>710.00</b>
	Working capital (Margin)	120.00
	Total project cost	830.00

**Means of Finance**

- |                          |        |
|--------------------------|--------|
| - Promoters contribution | 297.50 |
| - Term loan              | 532.50 |

**5. Technology/Manufacturing Process – Availability:**

The design drawing for **continuous vada making unit** has been developed at CFTRI, Mysore, after taking up sufficient trials on the proto type machine. The CFTRI has the necessary expertise to provide technical assistance and guidance for setting up of fabrication unit of this machine (the facilities can also be used for fabrication of other food processing equipments also). The CFTRI can offer further technical assistance for development and problem solving under technical consultancy arrangements.