

## Small Tractor Mounted Hydraulic Pruner

### Utility

This is small Tractor operated hydraulic pruner has been designed for the pruning of orchards crops. The pruning system consisted of circular saw blades and hydraulic components like pump, motors, pressure relief valve, direction control valve, oil tank, hose pipe, radiator, power bank, etc. The pruning system consisted of a total of eight blades of the diameter of 500 mm (3 units, 100 teeth) and 400 mm (5 units, 100 teeth). Tools carriers assemble have designed, having three sections, two sections consisted of three blades on each and one section consisted of two blades. The pruning system consisted of circular saw blades, double-acting hydraulic cylinders, hydraulic motors, control valves, hose pipes, radiator, etc. The rod end of the cylinder is attached with the base frame of the tractor hood and bore end with the telescoping frame. The telescopic square frame pipe has provision to move up and down according to plant height with help of hydraulic cylinder. A four-bar linkage mechanism is used to free movement of the horizontally attached square pipe according to extend and retract mode of double-acting hydraulic cylinder.



### Specification and working features

Circular Saw blades diameter	:	500 mm (3 units), 400 mm (5 units)
Hydraulic system	:	Open centre
Hydraulic Power	:	Tractor PTO operated power pack pump
Hydraulic Pruner pruning average time	:	10–12 seconds/plant
Average pruning capacity	:	120 plants per hour
Average pruning diameter	:	3 to 65 mm
Field capacity	:	0.24 ha/h

**Design:** ICAR-CIAE, Bhopal

**Commercialization Status:** Ready for Commercialization

**Proposed stakeholders:** Horticultural crops growers, research institutes, manufacturers etc.

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