

**Paras Hydrotech Pvt. Ltd.**  
Plot No. 266-267, Hansa Industrial Park  
Barwala Road, Derabassi (Punjab)  
(M) : 09888000391, 09814000391  
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## **PHPL-PADDLE DRYER FOR SLUDGE DRYING**

**Suitable to dry any type of sludge to less then 5% saving huge costs of disposal in powder form**

- ETP Sludge & Biological Sludge, Sewage Sludge
- Sludge from textile, pharmaceutical, paper, chemical, food, spent carbon
- Models for 250 kg,550 kg,1 ton sludge - can be customized as per need
- Minimum cost of drying using steam and electricity
- All contact parts in SS
- Payback in less than 12 months
- Reduce cost of disposal by 16 times



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PHPL Paddle type dryer has been designed and developed for drying of different types of paste like ETP/ STP biological/ chemical sludge, spent carbon , WTP sludge etc. These machines are highly efficient, mechanically agitated, indirect heating by steam or thermic fluid.

There are two counter rotating shaft with uniquely designed intermeshing wedge type paddles that produce intimate mixing and self cleaning of heat transfer surface for optimization of heat transfer resulting in minimizing the foot print of machine.



The material is continuously fed into the equipment, next it is agitated and mixed near the paddles. At the same time, the material is gradually dried by the heat conduction of paddle and jacket. The height of overflow weir can be changed to adjust residence time. In addition, steam produced in the drying process is discharged through the escape hole with trace amount of air.

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### Model – 2650 S

Selected Model	PHPL 312-2650S	Quantity	One
Capacity at inlet	0.20-0.250 M <sup>3</sup> / Hr. at solid concentration of 20%-22%	Solid at outlet	85%-95%

ITEM	SPECIFICATION
Over all Dimensions (L X W X H)	4342mm X 1634mm X 1298mm (approx.)
Internal dimensions (L X W X H)	2650mm X 779mm X 514mm (approx.)
Steam requirement	0.10 - 0.13 ton at 4kg/cm <sup>2</sup> for 200 kg of water to be evaporated. (2 hrs. batch)
MOC of body (mat. Contact part)	SS 304.
MOC of non-contact part.	Carbon steel as per IS: 2062
Dryer Drive Motor Power	7.5 HP
Dryer Gearbox Ratio	45:1
Final RPM	16-17
Insulation	50 mm thick Glass wool insulation with SS covering on jacket
Power Supply	415 V /50 Hz 3 phase.
Gear box	Helical
Bearing Type	Spherical roller bearing.
Rotary Union Joint	Cast steel casing and internal SS304 except seating face.
Transmission motor to gear box	V Belt /directly coupled
Transmission gearbox to dryer	Gear coupling
Heat transfer area	11.5 M <sup>2</sup>
Steam heating	In jacket and both rotating shaft
Electrical consumption	7 Kwh average.
Steam consumption	1000-1200 kg/ton of wet sludge (20% solid at inlet)
Steam Inlet in Jacket	25NB
Steam Outlet in Jacket	25NB
Steam Inlet in Paddle	32NB
Steam Outlet in Paddle	20NB
Fume Outlet	100NB Table E
No. of Fume Outlet	2

NOTE : Scrubber for flue gas can be provided at an extra cost.

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### Model -3450 S

<b>Selected Model</b>	PHPL 350-3450S	<b>Quantity</b>	One
<b>Capacity at inlet</b>	0.400-0.500M3/Hr. at solid concentration of 20%-22%	<b>Solid at outlet</b>	85%-95%
ITEM		SPECIFICATION	
Over all Dimensions (L X W X H)	6100mm X 1671mm X 1527mm (approx.)		
Internal Dimensions (L X W X H)	3444mm X 872mm X 651mm (approx.)		
Steam requirement	0.2 - 0.25 ton at 4kg/cm <sup>2</sup> for 225kg of water to be evaporated. (2Hrs. batch)		
MOC of body (mat. Contact part)	SS 304.		
MOC of non-contact part.	Carbon steel as per IS: 2062		
Dryer Drive Motor Power	10.0 HP		
Dryer Gearbox Ratio	45:1		
Final RPM	16-17		
Power Supply	415 V /50 Hz 3 phase.		
Insulation	50 mm thick Glass wool insulation with SS covering on jacket		
Gear box	Helical		
Bearing Type	Spherical roller bearing.		
Rotary Union Joint	Cast steel casing and internal SS304 except seating face.		
Transmission motor to gear box	V Belt		
Transmission gearbox to dryer	Gear coupling		
Heat transfer area	21.1 M <sup>2</sup>		
Steam heating	In jacket and both rotating shaft		
Electrical consumption	8.5 Kwh average.		
Steam consumption	1100-1200 kg/ton of wet sludge (20% solid)		
Steam Inlet in Jacket	32NB		
Steam Outlet in Jacket	25NB		
Steam Inlet in Paddle	32NB		
Steam Outlet in Paddle	20NB		
Fume Outlet	100NB Table E		
No. of Fume Outlet	2		

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### Model - 4300S

<b>Selected Model</b>	PHPL 435-4300S	<b>Quantity</b>	One
<b>Capacity at inlet</b>	0.80m <sup>3</sup> /hr. - 1.0m <sup>3</sup> /hr. at solid concentration of 20%-22%	<b>Solid at outlet</b>	85%-95%
ITEM		SPECIFICATION	
Over all Dimensions (L X W X H)	7563mm X 1867mm X 1691mm (approx.)		
Internal Dimensions (L X W X H)	4300mm X 1083mm X 724mm (approx.)		
Steam requirement	0.82 - 0.90 ton at 3kg/cm <sup>2</sup> for 750kg of water to be evaporated.		
MOC of body (mat. Contact part)	SS 304.		
MOC of non-contact part.	Carbon steel as per IS: 2062		
Dryer Drive Motor Power	25.0 HP		
Dryer Gearbox Ratio	45:1		
Final RPM	16-17		
Power Supply	415 V /50 Hz 3 phase.		
Insulation	50 mm thick Glass wool insulation with SS covering on jacket		
Gear box	Helical		
Bearing Type	Spherical roller bearing.		
Rotary Union Joint	Cast steel casing and internal SS304 except seating face.		
Transmission motor to gear box	V Belt		
Transmission gearbox to dryer	Gear coupling		
Heat transfer area	32.8 M <sup>2</sup>		
Steam heating	In jacket and both rotating shaft		
Electrical consumption	19 Kwh average.		
Steam consumption	1100-1200 kg/ton of wet sludge (20% solid)		
Steam Inlet in Jacket	40NB		
Steam Outlet in Jacket	25NB		
Steam Inlet in Paddle	40NB		
Steam Outlet in Paddle	25NB		
Fume Outlet	150NB Table E		
No. of Fume Outlet	2		

NOTE : Scrubber for flue gas can be provided at an extra cost.

## Paddle Dryer Client List

<b>SN No.</b>	<b>Client</b>	<b>Place</b>
1	Pashupati polytex pvt. ltd	Kashipur
2	Hero Motocorp	Gurgaon
3	Hero Cycles Ltd.	Ludhiana
4	CEMCOT	Chennai
5	Hindustan Unilever Limited	Haridwar
6	Coca Cola	Haryana , Pb, J&K
7	HL Agro	Kanpur
8	Bank Note Paper Mill Pvt. Ltd	Mysore