

DRTA Paddy Separator

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Principle of separating—By means of difference in specific weight of paddy and brown rice

- Paddy and brown rice have different specific weight. During movement of the sieve plate, the heavier brown rice grains moves to the bottom and paddy flows on the surface. The pocket structure of sieve plate push brown rice to the upper side and paddy flow to the lower side of sieve plate during thus being separated from each other.

图2

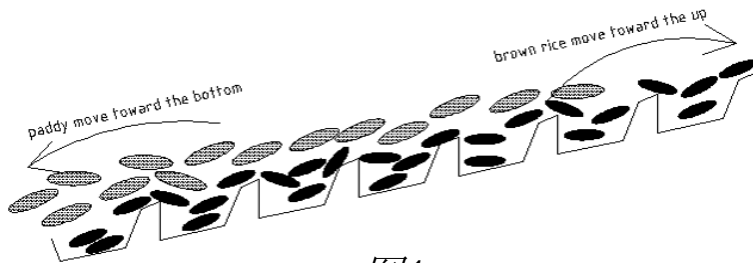
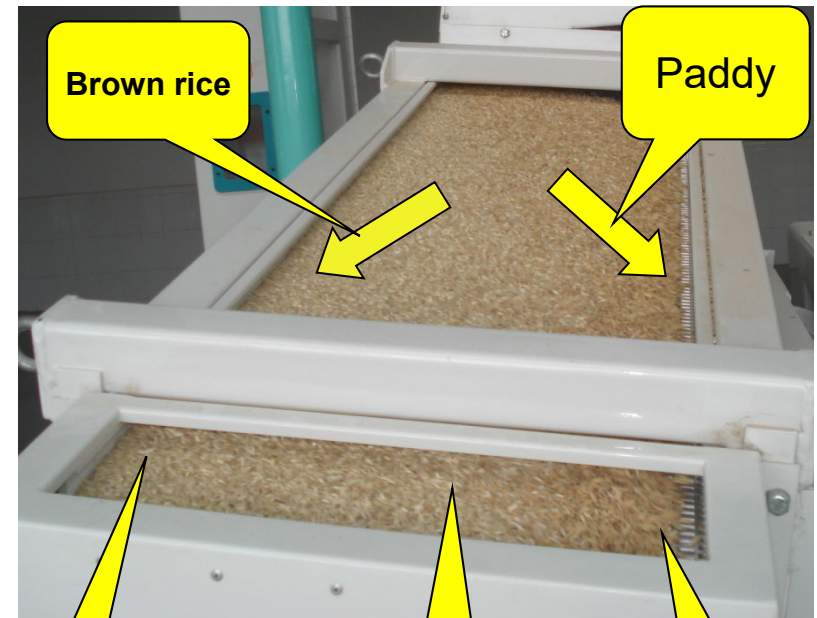


图1

➤ Main Performance data

Item	Target
paddy in brown rice (grains/kg)	≤ 40
rice in paddy %	10
returns to separator %	≤ 50



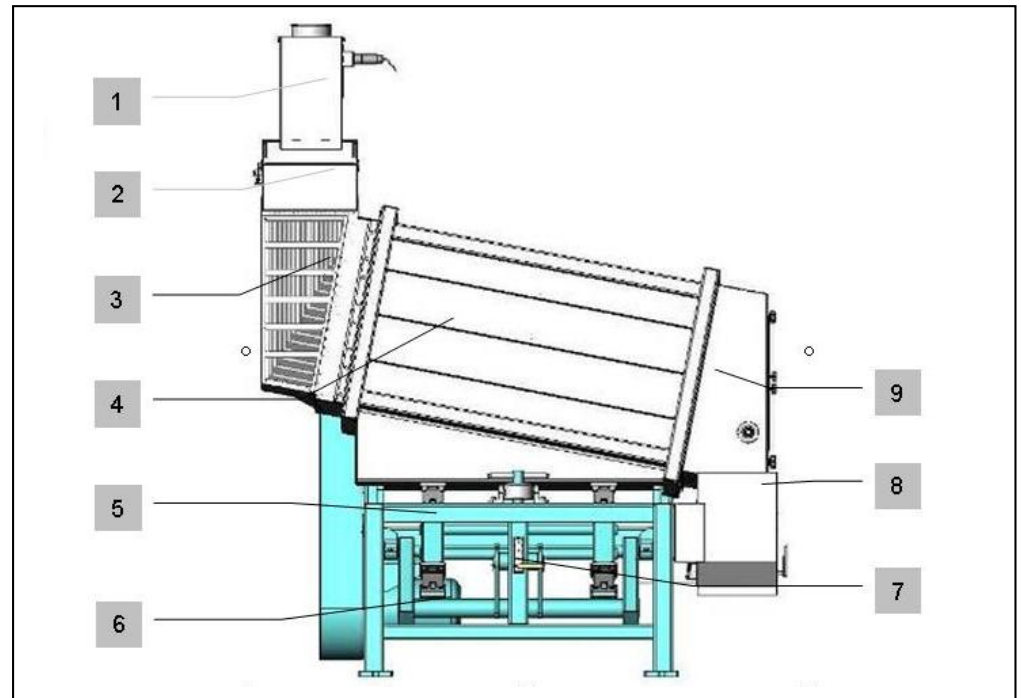
Brown rice

Mixture

Paddy

Introduce of equipment

- 1 Inlet
- 2 Inlet regulator
- 3 Inlet distributor
- 4 Sieves
- 5 Base frame
- 6 Power
- 7 Angle regulator
- 8 Outlet
- 9 Outlet divider



DRTA的构造

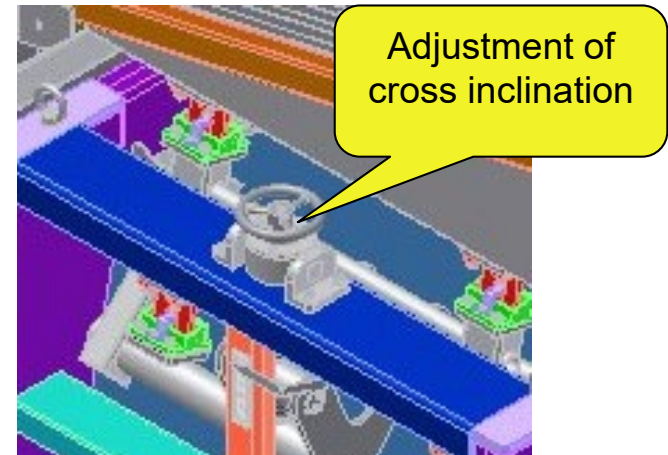
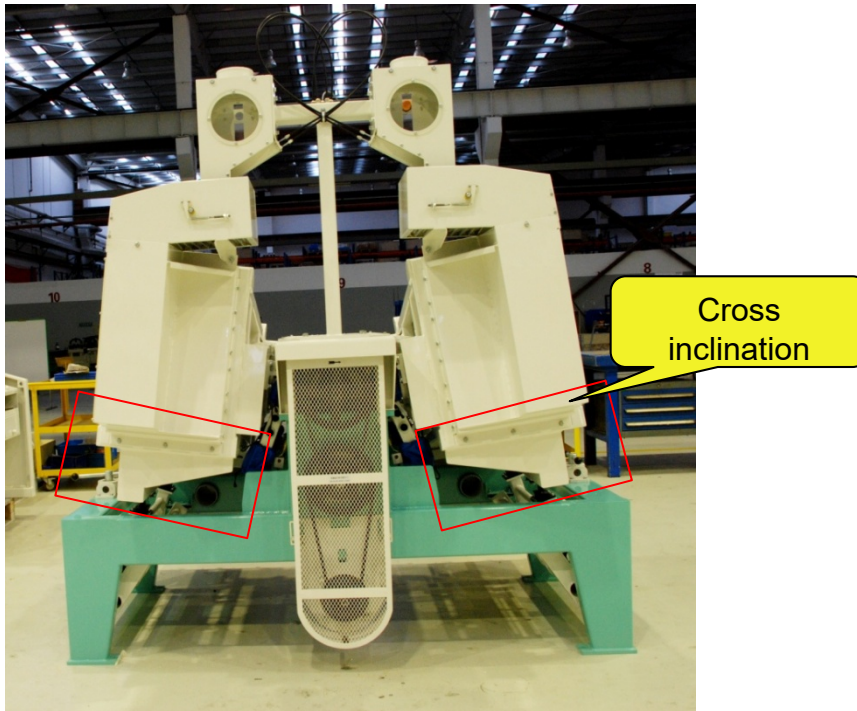
Influence factors of treatment results

- *The angle of sieve plate*
- *The pocket of sieve plate*
- *Thickness of materiel*
- *The husking yield of huller %*
- *The moisture of raw materiel*



➤ ***Influence of Inclination of sieve plate***

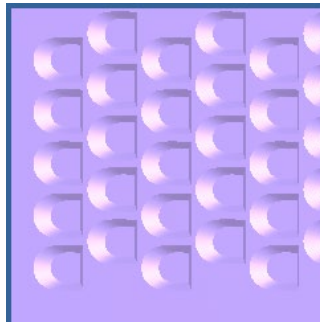
If cross inclination is too big, it will be difficult for brown rice to move up to the higher side, more rice grains will be found in paddy. If the inclination is too small, paddy can not flow easily to the lower side, paddy in rice ratio will become higher.



➤ **By adjusting the inclination, the optimal separating result can be achieved.**

➤ ***Influence of pocket size***

The pocket size have some influence on the separating performance. Based on tests, three sieve plate types with different pocket size are developed.

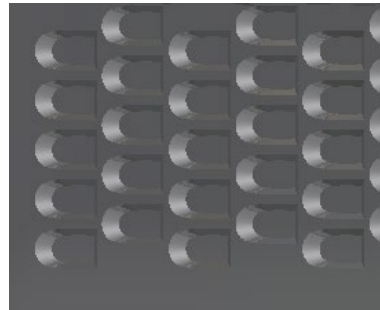


DRTA-14057-010

Size: 7.5X7.5X1.75

Application: Basmati

Rice

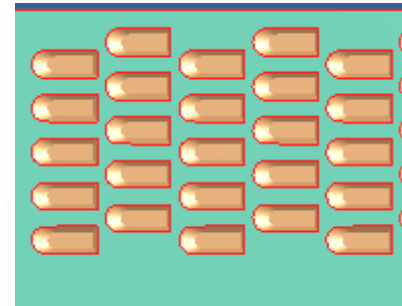


DRTA-14058-010

Size: 8.5X5.5X1.5

Application: long

grain rice



DRTA-14059-010

Size: 8.5X3X1.5

Application: Short

grain rice

➤ **Thickness of material layer**

The feeding of DRTA must be adjusted that the material layer may have a thickness of about 2-3 time the thickness of rice grain. If the material layer is too thin (fig. 3) or too thick (fig.4), separating can not take place properly resulting too high a ratio of paddy in rice or rice in paddy.



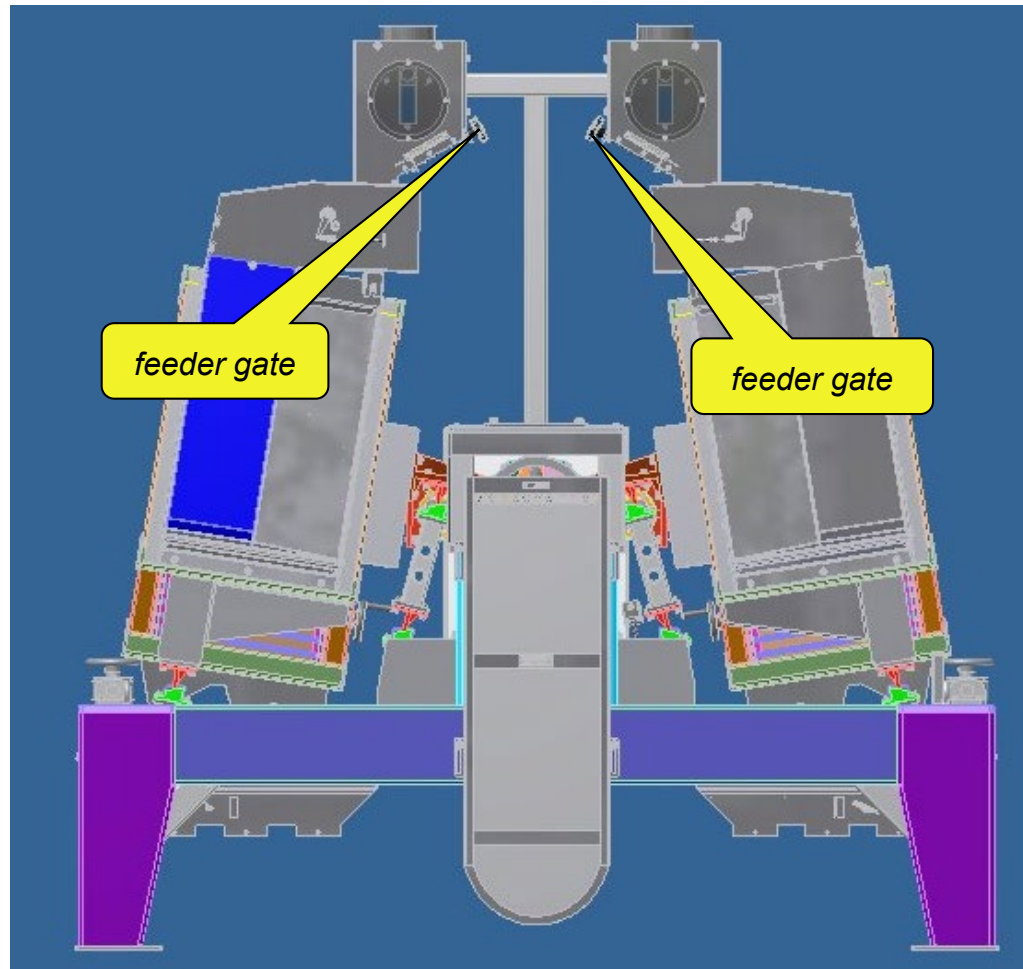
Drawing 3



Drawing 4

➤ ***Optimal thickness of material layer***

By means of adjusting the feeder gate, thickness of material layer can be adjusted. Optimal thickness should be 6-8 mm. The brown rice capacity will be 6-7 t/h.

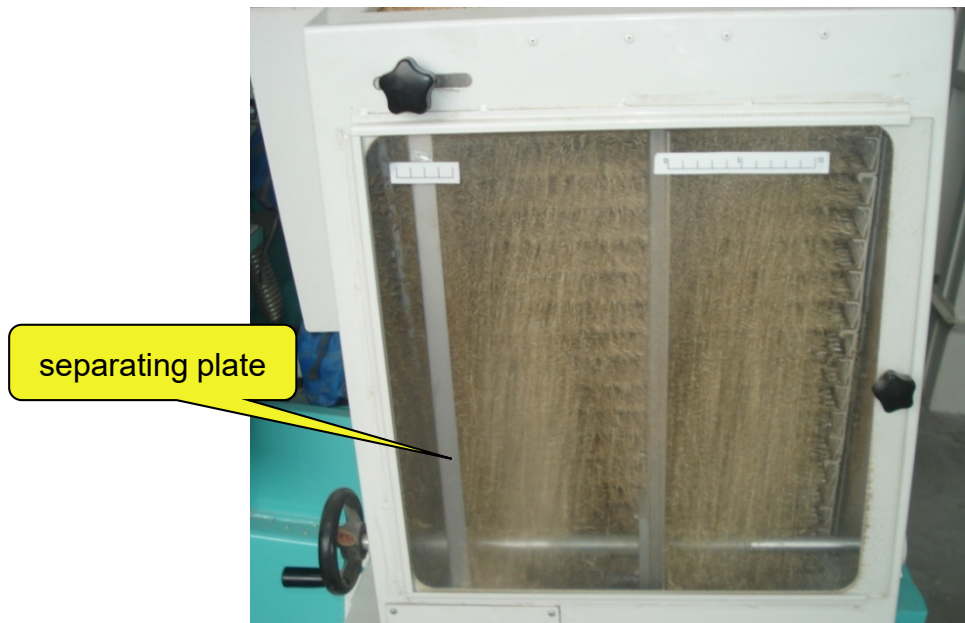


➤ ***Influence of hulling degree***

By keeping the material layer at 6-8mm, hulling degree has influence in separating performance: If hulling degree too high, rice in paddy ratio become higher; if hulling degree too low, paddy in rice ratio become higher.

➤ ***Suggestion***

Tests show, hulling degree between 75 – 85% has optimal separating result. By adjusting separating plate, rice in paddy/paddy in rice can be reduced.



➤ ***Influence of moisture***

If moisture of raw material is too high, bran and dust stick more easily in the pocket, separating performance becomes worse.

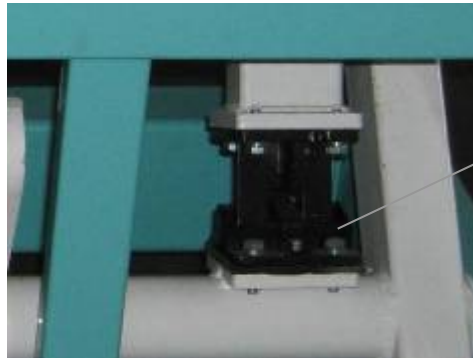
➤ ***Suggestion***

Sieve plate should be kept clean, free from bran and dust stuck in the pockets.

2.Easy to maintenance and repair

***Bearing house
lubricate***

***Main bearing
lubricate***



*Oil the bearing house
after 500 hour*

Cleaning the sieves

*In order to prolongs the
service life ,at stated time
to clear up the sieves.*



Compare DRTA with PS400D

		布勒 DRTA	日本 PS400D
机器参数/Data			
1.1	动力/Power	2.2kw	2.2kw
1.2	转速/Speed	295-300r.P.m	295-300r.P.m
测试数据/Test data			
2.1	脱壳率/Hulling degree(%)	80.4	80.77
2.2	原谷湿度/Raw Paddy moisture(%)	13.30%	13.70%
2.3	净糙含谷/Paddy in Brown rice(Kenels/kg)	15	14
2.4	谷中含糙率/Brown rice in Paddy(%)	7	3
2.5	总入机流量/Total through capacity(t/h)	18.06	18.73
2.6	糙米产量/Capacity of brown rice(t/h)	7.69	7.17
2.7	回砻谷量/Capacity return to huller(t/h)	1.76	2.14
2.8	回流量/Capacity self return(t/h)	8.61	9.42
If change the raw material,the data will be change			

The test result of actual performance



Paddy in Brown rice=15 pcs/Kg



Brown rice in Paddy=7%

Capacity self return =47.67%

Result

- The performance had been above the demand of national standard.
- The result of compare DRTA with PS400D
 - Power: Same
 - Outlet: Slighted larger
 - Capability: Same
 - Quality: A litter better

Customer

- COFCO(Wenzhen, JiangXi)
- Time: 6.2010
- Quantity of the equipment: 2
- Row material: Indica Rice
- Outlet: 7 t/h



Customer

- BAIYAN rice mill(Guangdong Shunde)
- Time: 4.2010
- Quantity of the equipment: 1
- Row material: Maba Rice
- Outlet: 5 t/h



Thanks!