Whirlwind® Air Classifier
Fishmeal for Aquaculture / Aquafeed

BACKGROUND/ CHALLENGE

Today 40% of global fish consumption comes from aquaculture farms and the market is growing every year. Fish raised in these high density, confined farms require quality fishmeal with high protein levels to promote optimal aquaculture fish growth and health.

A leading supplier of fishmeal in Southeast Asia recognized that super-high premium protein products sell for significantly higher prices than standard products. The supplier wanted a cost effective way to make these high-quality products, while avoiding the conventional practice of using vibrating or high-frequency screens, which are susceptible to blinding and costly maintenance. As the company researched its expansion it was led to Sturtevant's unique approach of air classification, a technology that would allow them to separate the fines, converting their standard fishmeal into a high-value, super premium, high-protein grade product. At the same time, the coarse fraction would still contain enough protein that it could be sold as regular grade fishmeal for aquaculture or petfood.

STURTEVANT® PERFORMANCE

The supplier consulted with Sturtevant, a company with more than 95 years of classifying experience in countless applications – among them a number of global installations within large protein meal production operations. Sturtevant's specialized air classifier technology is specifically designed to separate protein meals. Sturtevant was chosen for its proprietary equipment, air classifier experience and engineering skills, as well as its ability to test product specifications in their own lab.

Tests determined that processing parameters and end product requirements would be exceeded by the use of a 10-foot Whirlwind Classifier, a unit that does not require auxiliary equipment (baghouses, cyclones, or ductwork) to capture higher protein fine product. Because the model features an internal fan and air recycle design, the meal stays fluidized, does not clog frequently and there are minimal dead zones where high fat and sticky material can settle. This makes the unit both low in maintenance and reliable for continuous use.

EQUIPMENT RECOMMENDATIONS

MODEL	HP	AIR FLOW VENT (CFM)	FEED RATE (TPH)	APPROXIMATE WEIGHT (LBS)	(KG)	HEIGHT (FT)	(MM)	DIAMETER (FT)	(MM)	MIN. CLEARANCE (FT)	(MM)
3'	7.5 – 10	65 – 125	0.5-1	1,500	680	6' 7"	2007	3' 3"	991	3' 0"	914
4.5'	10 – 15	75 – 150	1-3	2,400	1089	8' 8	2642	4' 10"	1473	3' 0"	914
6'	15 - 25	90 - 175	2-5	6,800	3084	10' 9"	3277	6' 4"	1930	3' 8"	1118
8'	20 - 30	150 - 300	4-8	9,500	4309	13' 0"	3962	8' 4"	2540	4' 8"	1422
10'	30 - 40	190 - 375	6-14	13,000	5897	15 ' 8"	4775	10' 4"	3150	4' 8"	1422
12'	40 - 50	275 - 550	10-20	18,500	8392	19' 1"	5817	12' 4"	3760	5' 6"	1676
14'	50 - 75	400- 800	13-27	21,500	9752	21' 1"	6426	14' 5"	4394	5' 6"	1676

Measurements are for general reference only. Please consult dimensional drawings for exact measurements.
Larger sizes are available, for a complete list see the Whirlwind® Air Classifier Product Bulletin.

SUMMARY

Once the classifier was in full production, the protein meal producer found that they could increase the protein content in the fishmeal from 63% to as high as 67 to 73-percent, which is suitable for a super-premium product for the aquaculture / aquafeed market.

The Sturtevant Whirlwind Air Classifier has already sucessfully increased the protien content in several species of fishmeal process, including Catfish, Menhaden, Pollock, Redfish, Sardines, etc.

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