

WELCOME TO THE FUTURE

ANALYSIS



CU DYNAMIC PELLET MILL



Van Aarsen

The vital link to your feed chain

The new CU Dynamic pellet mill by Van Aarsen

Interview with Hans Graat, Factory manager at Havens feeds.

“With the motor-operated roller adjustment you just push a button and you are sure to have the optimal settings” Thus says Hans Graat, Manager at Havens Feeds in Maashees, The Netherlands.

During a visit at the Havens factory Hans Graat talks about the pilot with the new generation Van Aarsen pellet mill. Almost two years ago, an existing C900 pellet mill was upgraded to a CU Dynamic pellet mill, offering motor-operated roller adjustment and active roller slip control.

Hans Graat continues: “The frequent adjustment of the rollers is often skipped. Certainly in our case, where we have about 600 recipes. You cannot change the roller settings continuously by hand because we would not be able to produce the required capacity. Now, with the motor-operated roller adjustment you just push a button and you are sure to have the optimal settings”

“This we have experienced and proven in practice.”

Hans Graat explains how the roller adjustment helps him to optimize production capacity and quality: “in some cases in the past, the recipe had to be adapted because it was too difficult to be pelleted. While now, with a very precise setting of the rollers it is easier to pellet difficult recipes.” “And what we noticed ourselves, when the rollers were adjusted manually they were often positioned tight to the die. This was not bad for the quality of the end product but obviously we had a lot more wear and tear of the rollers and dies. With the motor-operated roller adjustment we were also able to make a big step forward. The wear and tear of the die and rollers is a lot less. This we have experienced and proven in practice.”

“We tend to load the pellet mill on the safe side. The consequences of a roller slip are severe. Operators are always very cautious for this because when the pellet mill really blocks - in worst case scenario - it will not be possible to get the die to pellet again. The die needs to be replaced which means two hours of production loss. “We expected that in case of a real improvement provided by the active roller slip control, we would certainly use it. And in practice this is actually the case. The active roller slip control reacts immediately. Without it you are always too late when the pellet mill slips. “



Hans Graat, Factory manager at Havens in conversation with Maril van Kempen and Hans Boonen (Van Aarsen International)

What is...

Motor-operated roller adjustment

The motor-operated roller adjustment enables the operator to easily choose the desired roller distance to the die, even when the pellet mill is in full operation. Together with the intelligent software, this system offers precise and recipe controlled pellet mill operation.

What is...

Active roller slip control

The active roller slip control is another intelligent system designed to optimize the pellet mill production rate. This system detects roller slip and activates the system to automatically resolve the slip if desired, reducing the downtime of the pellet mill due to roller slip to nil.

It also offers the opportunity to experiment with the roller distance and steam addition for the recipes to boost the feed quality and production efficiency. You can rely on this system while exploring the settings for the most optimum production.

“ When you consider all of this, the benefits of the motor-operated roller adjustment are evident.”



HAVENS

Havens animal feed produces feed for intensive livestock farming. The whole package, including feed for pigs, cattle, goats, horses, rabbits and poultry. Internationally they are well known for their quality horse feeds, formulated to match all nutritional requirements; from breeding to leisure riding, racing or top-level sports (including the Olympic Games). Havens produces about 600 different recipes.

BEFORE AND AFTER

Before: C900 Pellet mill	After: CU Dynamic Pellet mill with motor-operated roller adjustment and active roller slip control
Limited adjustment of the rollers as it was too time consuming to do this by hand	Recipe controlled adjustment of the rollers
	High production capacity – no production time is lost by adjusting the rollers.
Rollers positioned tight to the die	Optimal roller distance
High wear and tear of the dies and rollers	Low wear and tear of the dies and rollers. The rollers retract automatically when the pellet mill is running empty, preventing metal to metal contact
Difficult to produce recipes might be adjusted	Higher flexibility to answer to market demands – difficult to produce recipes are no problem with precise settings
Loading of the pellet mill on the safe side to prevent the risk of roller slip and downtime due to blockages	High production capacity - Higher load is no problem. Downtime of the pellet mill due to roller slip is reduced to nil.
High feed quality	High feed quality against lower costs: You can rely on this system while exploring the settings for the most optimum production.





Upgrade your existing Pellet mill

When you are not looking for a new pellet mill but are interested in the additional benefits of the CU Dynamic, it will also be possible to upgrade your existing Van Aarsen C-type pellet mill to this new standard. An upgrade could especially be interesting the moment the die holder should be replaced as the costs for this revision can be saved.



Van Aarsen International – The vital link to your feed chain

Van Aarsen is developer, manufacturer and supplier of state of the art machines and complete feed mill solutions for the production of compound feed and premixes worldwide. The better the animal feed, the better the food on the table! It's as simple as that. We take our crucial role in the 'agro-feed' chain seriously, helping you to achieve optimal solutions. Our innovative machines and complete feed mill solutions are designed and constructed to increase production and lower operational costs with minimum energy consumption and maximum benefit to feed safety and ease of operation. Since 1949.

Van Aarsen International
advice@arsen.com
www.arsen.com

The development of a new generation pellet mill

Van Aarsen recognized the need for a pellet mill which offers precise settings for each recipe and which could be simply operated. Hans Boonen, developer at Van Aarsen since 2010 was asked to design a new pellet mill ...from scratch. New technologies and materials offer new opportunities and applications. It was time to let go of old principles and develop this new pellet mill completely open minded. This resulted in a truly new generation of pellet mills.

In an interview with Hans Boonen he explains how this new generation pellet mill arose.

“We deliberately chose to have no limits in order to achieve an optimal concept and working principle.”

Thus explains Hans Boonen. “It was decided to make this a completely new development. Everything has been re-examined which resulted in a lot of adjustments that are not visible at first glance. Like the use of components that are less sensitive for vibrations making the machine more durable”

“We could purely develop the concept with its function as starting point and were not limited in terms of dimensions or the existing construction. I investigated the feasibility of several concepts in terms of added value and costs. From these concepts we chose the best which were further developed.”

“Obviously the machine is well tested.”

“We created a design that should fulfill the function. Next we tested if the initial development met the requirements as formulated. First we tested all possible extreme situations at Van Aarsen. For example, the motor-operated roller adjustment was tested with the most unfavorable load. We let the rollers press as hard as possible against the die with a pressure that does not occur in practice to see if it would bent or break. Actually, that’s the best part of the test - we tried to break it – because it should be indestructible. When the test results were good, the machine was exposed to an endurance test at Havens, a client of ours who is located nearby and was open minded to these developments.”

Based on the endurance test the machine was further optimized.

Hans Boonen continues “The endurance test led to further improvements. For instants, we designed a new bearing because wear and tear of standard components was not acceptable. And we made improvements in the software and control of the pellet mill to improve the monitoring of several functions and make the machine more user-friendly.”

Meanwhile, the machine has been running almost two years in several feed mills to great satisfaction of our clients and now is ready to be released to the world.



Notice how you can benefit

The acquisition costs of a machine are just half the truth. The operating costs determine the real investment in your machine. The extra investment of a new CU Dynamic pellet mill compared to a CU Basic pellet mill has a short payback time. Even less than 2 years is realistic.

	Old C-type pellet mill	New Generation pellet mill	
		CU Basic pellet mill	CU Dynamic pellet mill
Design			
Robust design and use of high quality materials	Yes	Yes, even more New and improved design <ul style="list-style-type: none"> • Less sensitive for vibrations which results in less down time 	
High capacity			
Active roller slip control	No	Prepared Can be added in the future	Yes <ul style="list-style-type: none"> • Down time due to roller slip is brought back to nil • It allows you to explore the settings and thus enables you to maximize the load of the pellet mill main motor and increase your capacity
Die cleaning mode enabling the operator to clean the die after a batch	No	Prepared Can be added in the future	Yes This will provide a quick start-up of the pellet mill after a standstill, because the product doesn't get the chance to cake onto the die
High feed quality			
Motor-operated roller adjustment	No	Prepared Can be added in the future	Yes <ul style="list-style-type: none"> • Precise roller distance • Recipe controlled roller distance
Low maintenance costs			
All critical components are treated with an easy to clean coating	No	Yes Reduced cleaning time	
Quick and easy adjusting the roller lever and changing of the rollers	No	Yes <ul style="list-style-type: none"> • Simplified • Just two wrenches needed 	
Motor-operated roller adjustment	No	Prepared Can be added in the future	Yes <ul style="list-style-type: none"> • Automatic retraction of the rollers during empty running • Increases the life time of die and rollers up to 30% by preventing metal to metal contact • Quicker die change due to automatic roller adjustment into maintenance position
High energy efficiency			
Motor-operated roller adjustment	No	Prepared Can be added in the future	Automatic retraction of the rollers during empty running results in less energy consumption