

[Alliance

Pellet mill





More than half a century's experience in the field of granulation of products with a reputation for being difficult to process such as alfalfa, straw and sugar beet pulp.

An experience and know-how which today allow Promill Stolz to dominate the emerging markets with a high potential, such as wood, energy and the Pelleting of by-products from the production of bio-fuel.



In order to fully meet the needs of the market, Promill Stolz has launched a new range of pellet mills called ALLIANCE – a direct descendant of the EVOLUTION pellet mill, which has played a large part in building Promill Stolz's reputation.

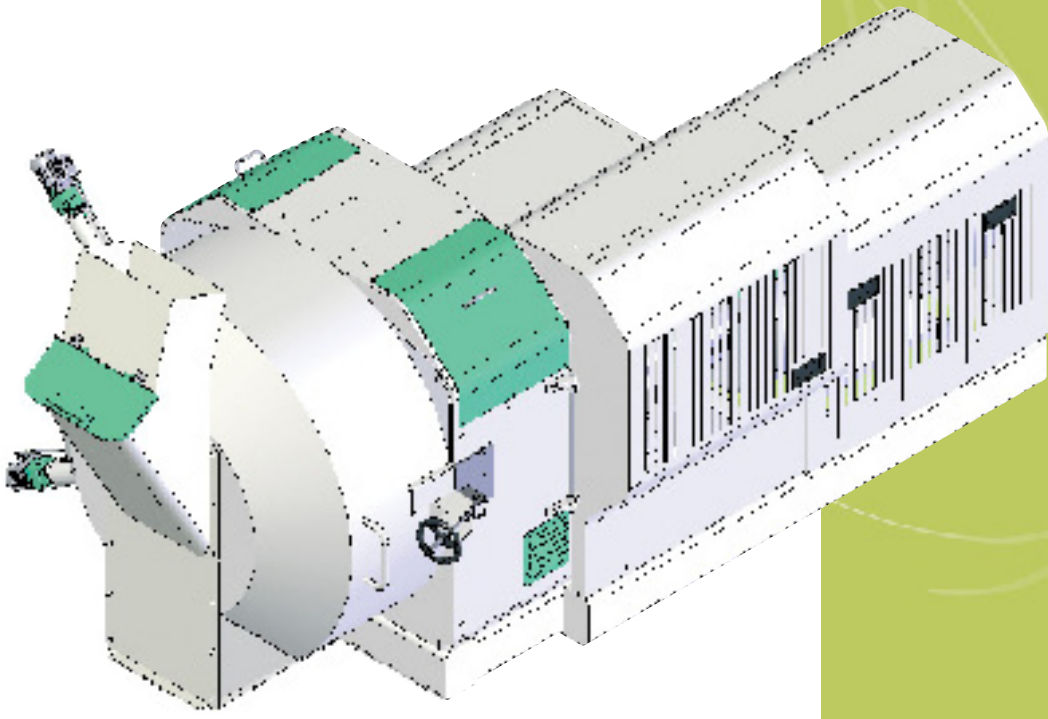
The Alliance range has been developed with the intension to respond to the many and varied needs of customers regarding :

- Food safety,
- Innovative functions,
- Ease of use,
- Quality price ratio,
- Operational cost.



Whilst providing easy maintenance and robust and reliable mechanics, reflecting the existing reputation of Promill-Stolz pellet mills.





Pellet mill Alliance...

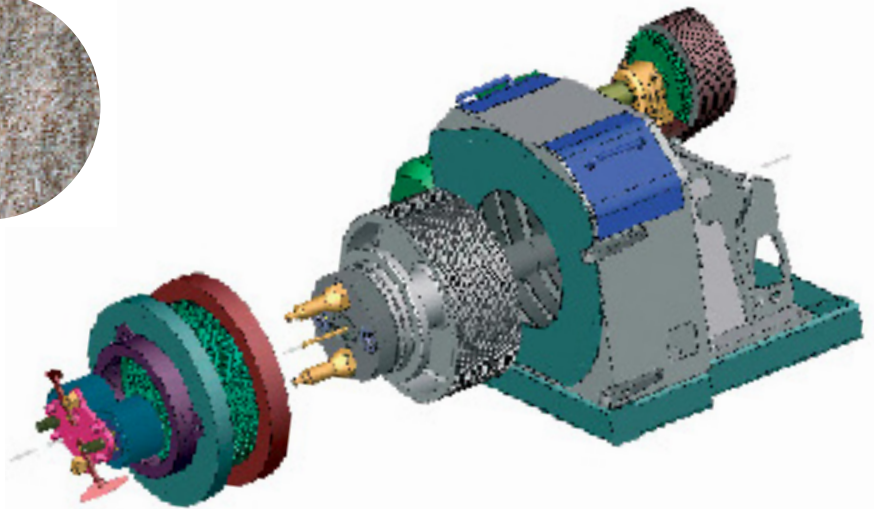
Promill- Stolz develops...

Promill-Stolz has developed and created the Alliance range of pellet mills.

Alliance : a range of pellet mills dedicated to the manufacture of all kinds of pellets: forage, compound feeds, wood pellets, cereal by-products, urban waste and animal slurry, fertilisers and soil additives conforming to health requirements, norms and security requirements.

Alliance : can accommodate several new options to optimize and secure operation whilst limiting operating and maintenance costs.

Alliance : unites high flexibility and easy implantation.



Conception

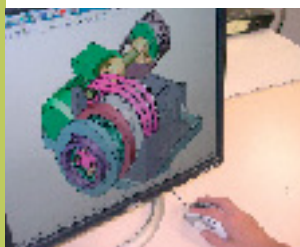
- a single frame for the 12 models,
- a single model of teeth belts.

Implantation

- 3 motor positions,
- 2 door opening directions.

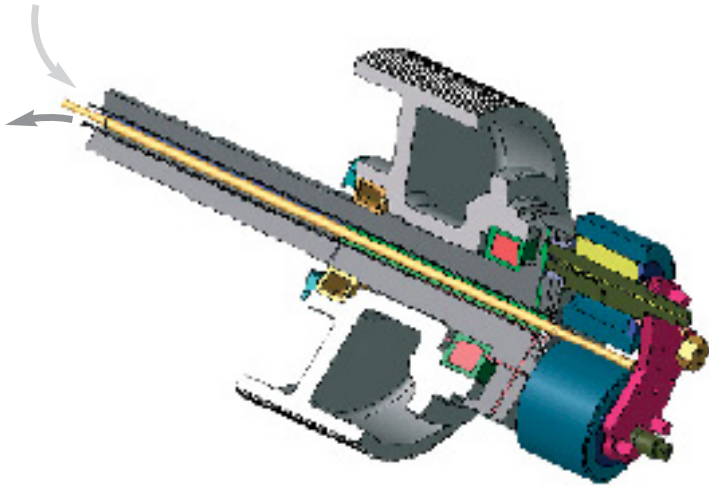
Flexibility

All options are additional and can be set up at the same time.



Promill-Stolz invents...

Stolz has invented a patented system, to eliminate product contamination from lubricants.

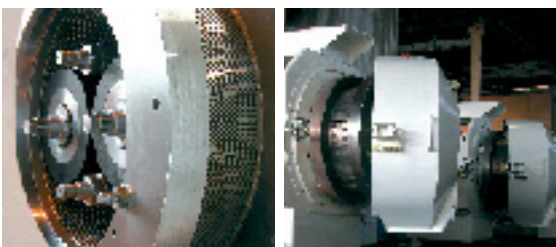


Promill-Stolz applies...

Stolz strongly applies all regulations concerning the use of lubricants.

Legislation in force: DGCCRF* / Judgment of 02/10/97
Directive CE 98 37
Norm ISO 14159

***DGCCRF** : Direction Générale de la Concurrence, de la Consommation et de la Répression des Fraudes (General Directorate for Competition, Consumption and Fraud Repression).





Housing & base frame

Principles

Housing & base frame common to all models of the range.
Mechanically welded and stabilized construction.

Designed to accommodate:

- the main electrical motor 1500 rpm,
- the main shaft and quill shaft,
- the door and feeding chute,
- the guard's casings,
- the greasing automatic pump,
- the electrical box.

Advantages

Limited overall dimensions.

Restricted vibration level: guarantee of long life for the pellet mill.

Several door and motor positions available.

Compact in height construction, making it easy to replace an existing pellet mill.

**Very strength.
Setting up flexibility.**

Transmission

Principles

Reduction gear by use of:

- a first set of v-belts,
- and a second set of synchronous teeth belts.

Avantages

Transmission using a double set of belts enables:

- to modulate the pellet mill speed according to the type of product (3.8 to 6.7 m/s),
- to absorb shocks in the case of a sudden overload,
- to limit maintenance and spare parts costs (oil, gears, seals...).

Half cost in maintenance costs compared to a gear box pellet mill.

Main shaft & quill shaft

Principles

Mechanical set designed to accommodate:

- the pelleting set (die and rollers),
- the lubrication channels,
- the cables for roller temperature control (optional),
- the roller remote control system transmission shaft (optional).

Advantages

“Spinal column” of the pellet mill,
the main shaft supports:

- the rollers and the different options chosen,
- the quill shaft and the die.

High precision.
Robust mechanics.



Main shaft & quill shaft

Door & guard's casing

Principles

Largely dimensioned door and feed chute in stainless steel
(2 sizes per model of mill).

Curved design to limit the potential retention of
compressed product. (in option).

The door is standard equipped with two pellet knives that are manual-
ly adjusted at a standstill.

The feed chute is equipped with a top sampling hatch
and a by-pass hatch.

Painted steel protective housings equipped with:

- air vents,
- seals,
- gas operated jack.

Advantages

Low noise level.

Easy limited cleaning.

Limited risk of contamination.

Ergonomics.
Hygienic safety..



Door & guard's casing

... standard manufacturing



Pelleting section

Principles

3 inner die diameters: 700 / 800 / 900 mm.
4 die widths per die diameter.

The compression unit is composed of:

- 2 rollers held in position on the main shaft by the forward plate,
- a revolving ring die,
- a front collar,
- a flat bowl,
- product scrapers.



Advantages

The pellet mill's central system is largely enough dimensioned to ensure the long life of the rollers and the die whilst increasing operating comfort.

Limited wear.
Safe mechanics.



Die fixing system by hot hooping

Principles

When the pellet mill stops, a heating belt is placed on the quill shaft. After a few minutes of heating, the quill shaft dilates so that the die is freed and can be replaced.

When the new die is installed, the temperatures of the quill shaft and the die equal themselves out. The die becomes perfectly centered and tightened on the hollow shaft.



Advantages

No die clamps.
Exclusive system guaranteeing perfect mechanical behavior of the die.
Reduction of pellet mill vibrations.

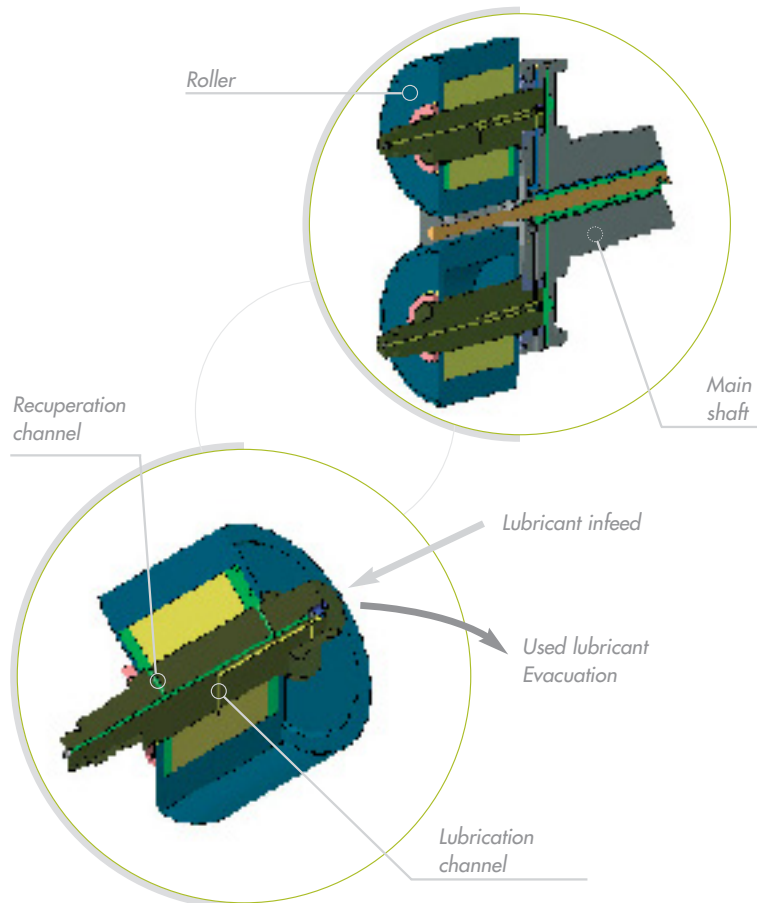
Simplified die fixing.

Evacuation of used grease®

Principles

Hermetic design enabling the recuperation of used grease.
Channels of distribution and collection of lubricants from

- the roller bearings,
 - the main shaft bearings,
- with evacuation of the used lubricant at the rear of the pellet mill.



Advantages

- Puts an end to pellet contamination by lubricants.
- Maintains the use of present greases.
- Increases the long life of rollers.
- Controls the quality and the consumption of the grease.

Hygienic safety.

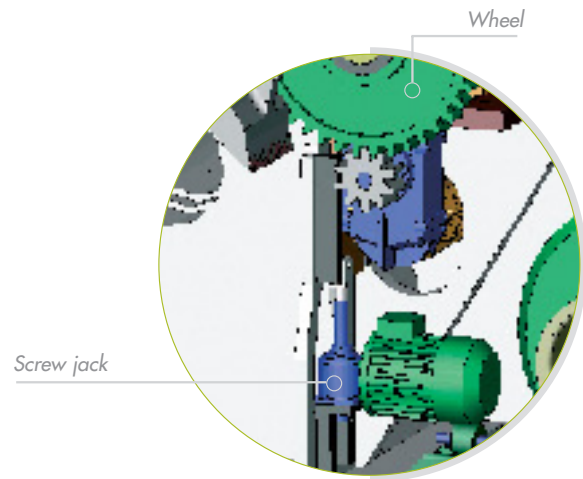
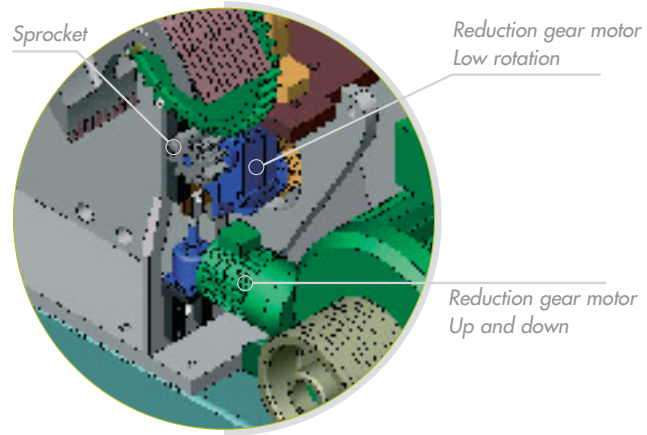
Evacuation of used grease®

... standard manufacturing

Slow die speed

Principles

- Slow disengageable rotation.
- Two-way die rotation.
- Low speed (1 r.p.m.) and strong torque available.



Advantages

- Adjustment control of gap between die and rollers.
- Help to release the product.
- Easy repositioning of the safety pin.

Optimized and safe adjustment.

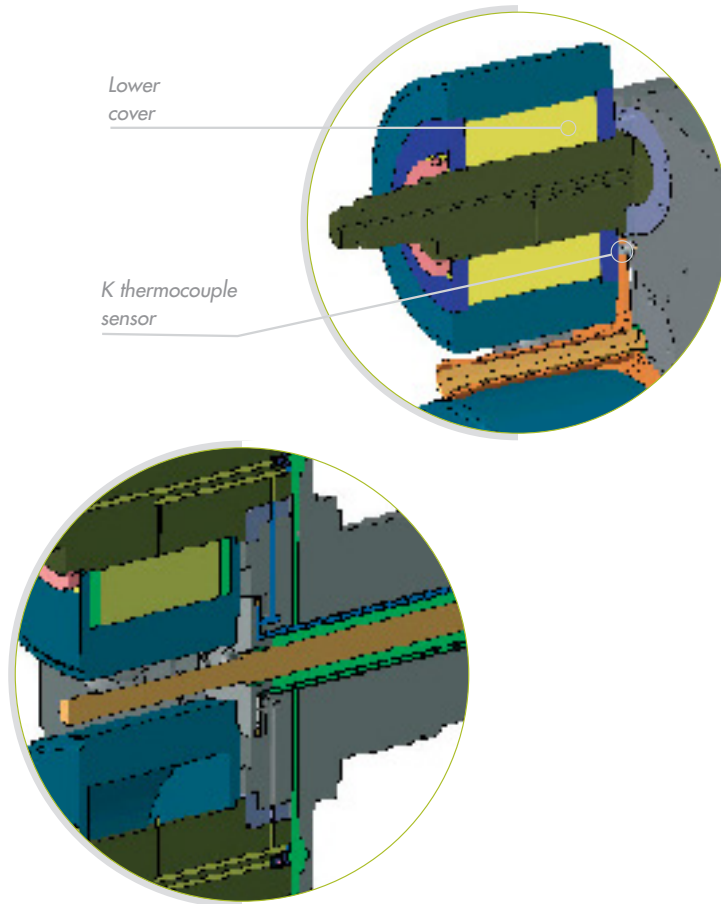
Referenced applications:

Animal feed, alfalfa, sugar beet pulp, wood...

Roller temperature detection

Principle

Measures the rise in temperature of the rollers for pellet mill automation and control.



Advantages

- Controls the die roller gap.
- Detects roller, die and bearing wear.
- Controls the correct working of the lubrication system.
- Reduces fire risks.

Controlled operation.
Safe maintenance.

Referenced applications:

Animal feed, alfalfa, sugar beet pulp, wood.

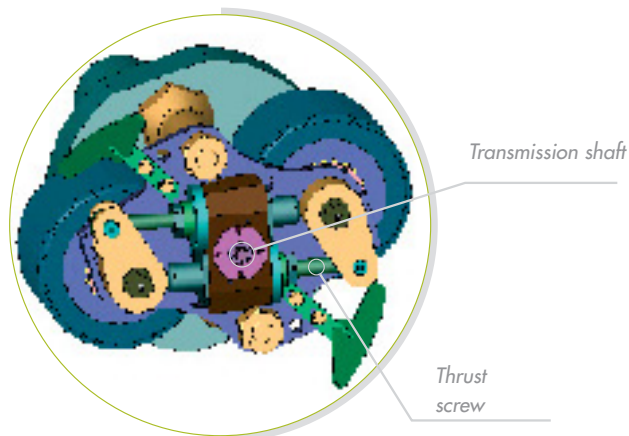
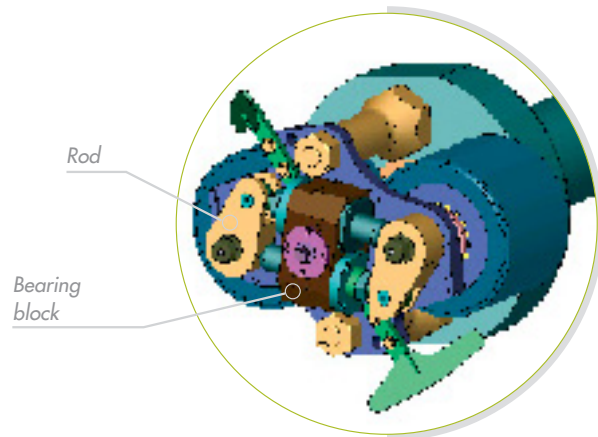
Roller temperature detection

... optional

Remote control of rollers

Principles

Electromechanical system for the monitoring and continuous remote control of the rollers, driven by a gear motor situated at the rear of the mill.



Advantages

- Limits electrical power consumption during the pellet mill start up.
- Allows complete cleaning of the die working band.
- Optimizes and memorizes the gap adjustment between the die and the rollers for each formula.
- Makes pellet mill operating more flexible.

Traceability.
Quality control.

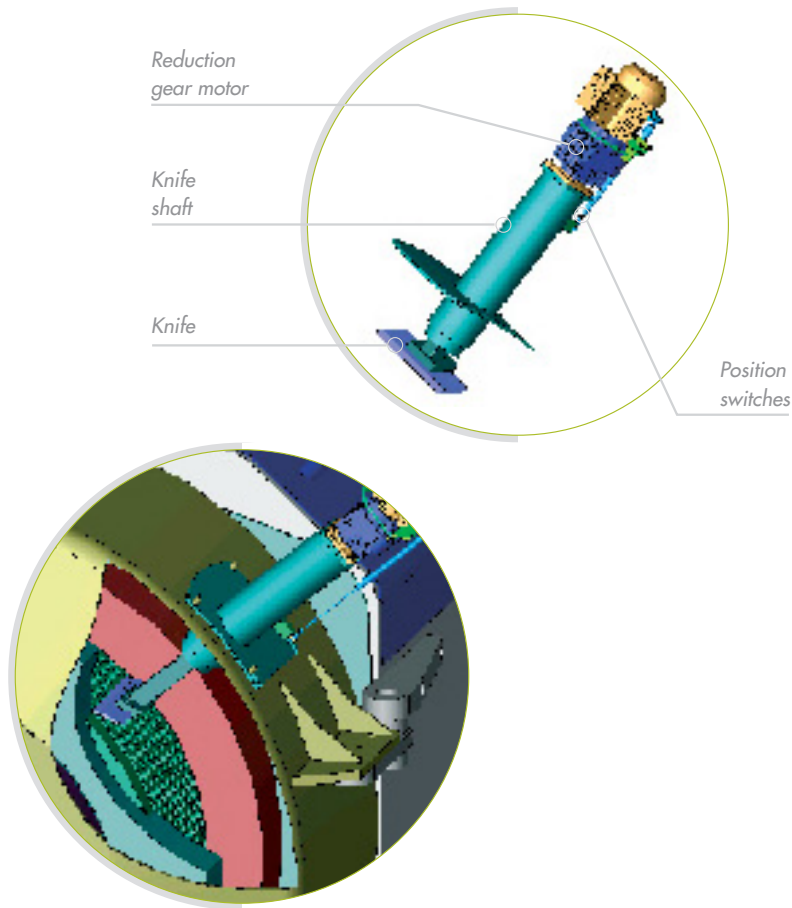
Referenced application:

Animal feed.

Motorized knives positions

Principle

Knives adjustable during operation, controlled by gear motor with position switches.



Advantages

- Reduce manual adjustment errors.
- Standardize the pellet length.
- Allow secure adjustments during operation.

**Safe adjustments.
Controlled pellet length.**

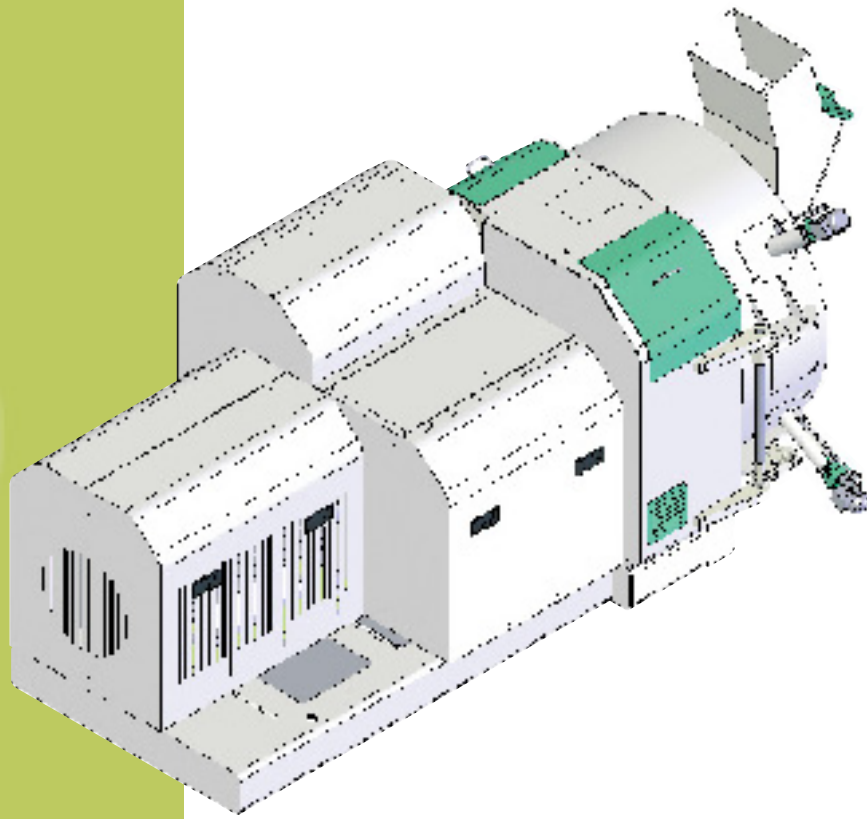
Referenced application:

Animal feed.

Motorized knives positions

... optional

Pellet mill Alliance



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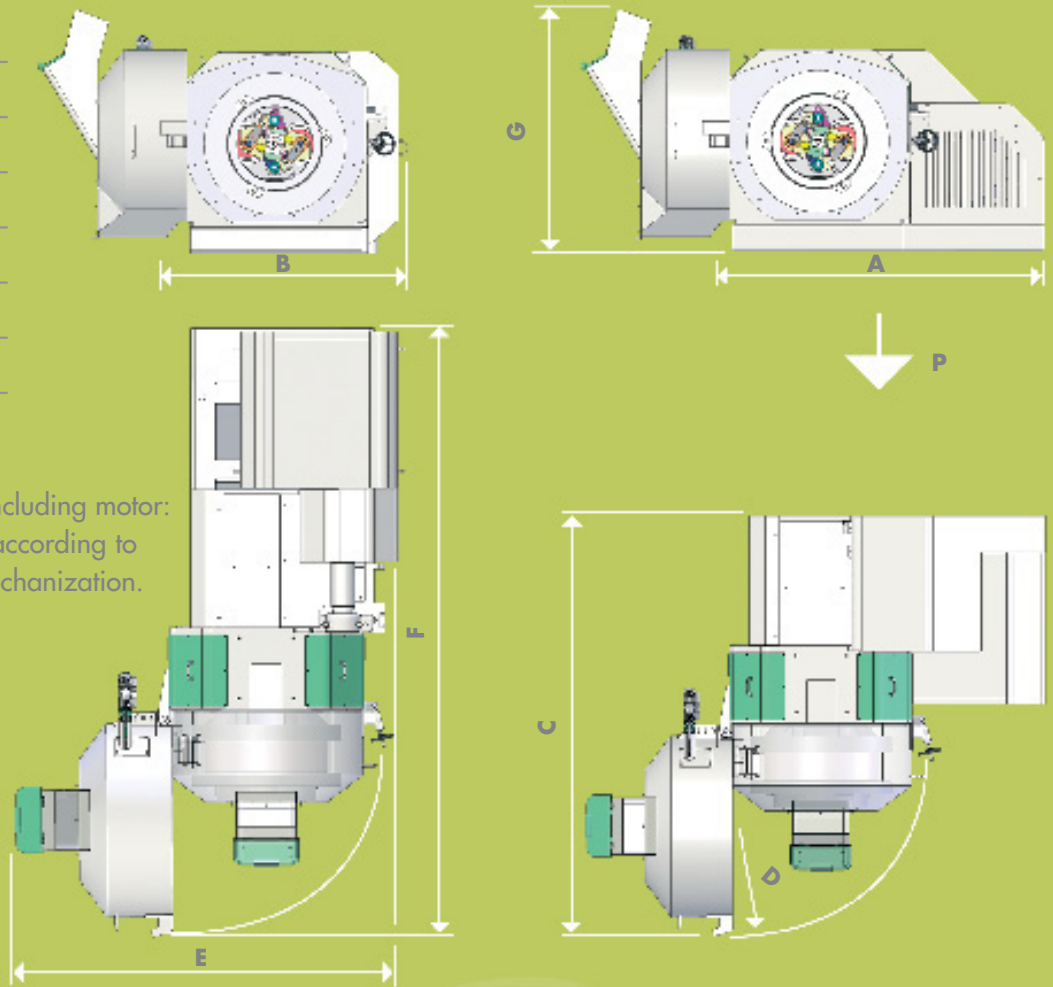
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Overall dimensions

Maxi (in mm)

A	3 000
B	2 300
C	3 800
D	1 850
E	3 300
F	5 200
G	2 150

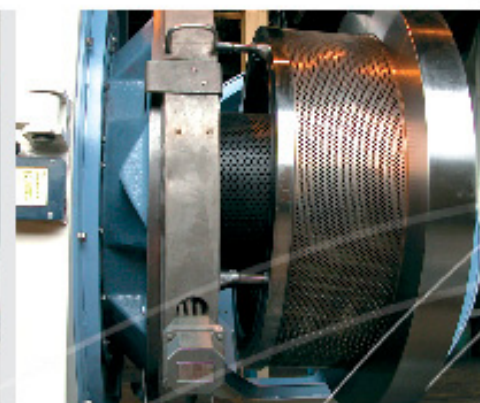
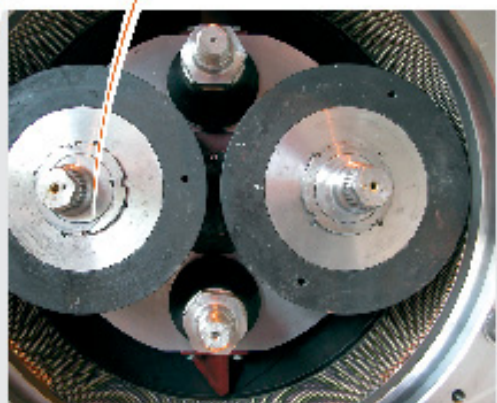
P : Total weight including motor:
10 or 12,5 T, according to
the type of mechanization.



Twelve models

Model	∅ Die mm	Die length mm	Installed power kW	Motor speed r.p.m.	Die speed r.p.m.	Tip speed m/s	Work surface dm ²
Alliance 90-28	900	280	220 / 355	1500	81 / 138	3,8 / 6,5	79
Alliance 90-25	900	250	220 / 355	1500	81 / 138	3,8 / 6,5	71
Alliance 90-22	900	220	220 / 355	1500	81 / 138	3,8 / 6,5	62
Alliance 90-19	900	190	220 / 355	1500	81 / 138	3,8 / 6,5	54
Alliance 80-25	800	250	200 / 315	1500	91 / 154	3,8 / 6,5	63
Alliance 80-22	800	220	200 / 315	1500	91 / 154	3,8 / 6,5	55
Alliance 80-19	800	190	200 / 315	1500	91 / 154	3,8 / 6,5	48
Alliance 80-16	800	160	200 / 315	1500	91 / 154	3,8 / 6,5	40
Alliance 70-22	700	220	160 / 250	1500	104 / 177	3,8 / 6,5	48
Alliance 70-19	700	190	160 / 250	1500	104 / 177	3,8 / 6,5	42
Alliance 70-16	700	160	160 / 250	1500	104 / 177	3,8 / 6,5	35
Alliance 70-13	700	130	160 / 250	1500	104 / 177	3,8 / 6,5	29

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