



Batchwise refining of compounds, coatings, spreads and fillings based on high quality standards

The product

Many manufacturers of compounds, coatings, bread spreads and fillings have relied upon a wide variety of production methods, based on the recipes used, volumes required and fineness, viscosity and texture of the end products.

The conventional manufacturing system starts with a sugar mill, followed by the conventional system of melangeur/3-roller pregrinder, 5-roller refiner and a conche.

Duyvis Wiener, however makes use of a pre-mixer, ball mill refiners (intermediate and/or fine grinding) and if necessary conching facilities.

Duyvis Wiener, offers you the following grinding solutions:

- CHOC 425 with batch capacity up to 1000 kg, grinding capacity up to 425 kg/hr.
- CHOC 600 with batch capacity up to 1000 kg, grinding capacity up to 600 kg/hr.

The process

All ingredients (fat, powder, sugar, lecithin, etc.) can be fed in the premixer vessel by an inclined conveyor in manual and automatic mode. During the mixing cycle, the premixer makes a homogenous mass of the solids and liquids. The side and bottom-scrappers on the counter-rotating stirrer prevent that sugar will stick on wall and bottom of the vessel. For efficient ingredient handling, the premixer can be placed on loadcells (option), which can be controlled in the central control cabinet.

From the premixer vessel, the mass is fed to the W-85-G ballmill, for refining. The refining action is accomplished by a special shaft with agitator arms rotating in a vertical, jacketed grinding tank filled with especially hardened steel balls. The various layers of grinding elements move in the same direction although with different speeds. The ball speed at the tips of the grinding arms is highest, but almost zero at the periphery of the chamber, which in turn greatly reduces the rubbing effect between ball charge and chamber wall with a consequential low rate of wear.





CHOC 425

After the first pass through ball mill W-85-G, the product flows back to the premixer and the recirculation between the premixer vessel and the W-85-G ball mill continues.

During the circulation process the entire mass is simultaneously refined, until the required end product and end fineness is obtained, which will be discharged from the W-85-G ballmill with the transport pump. The exact processing time is a matter of practical experience and composition of the recipe. Once set, the cycle time will be controlled and no supervision is required during the operating process.

CHOC 600

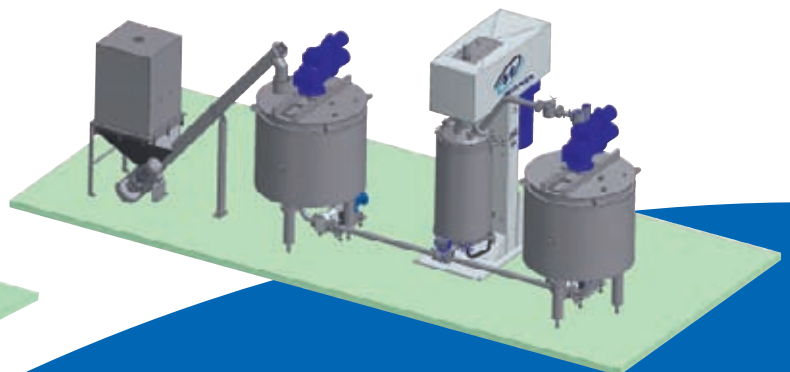
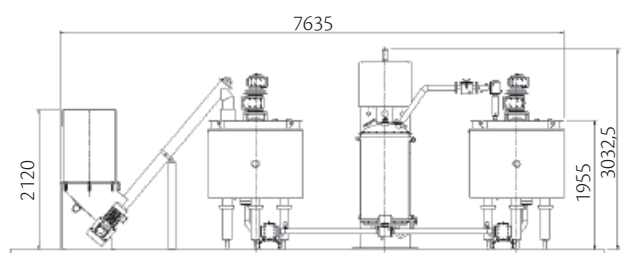
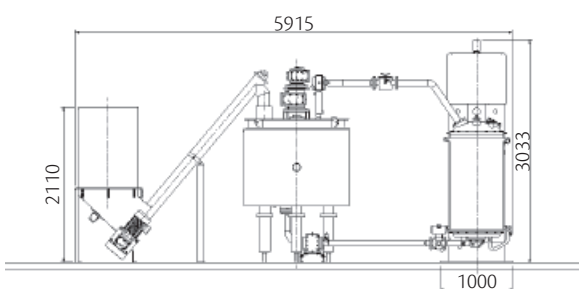
After the first pass through ball mill W-85-G, the product flows into the 1 ton circulation tank and the recirculation process continues.

During the circulation process the entire mass is simultaneously refined, until the required end product and end fineness is obtained. The finished product will be discharged from the 1 ton circulation tank. The advantage of the CHOC 600 is that during circulation process, the premixer can prepare a new mixture so that after discharging immediately a new batch can start to circulate. A more efficient way of production is resulting in shorter processing time, so larger output.

The specifications

Technical data	Batch capacity	Processing time* (20-25 micron)	Type Refiner Conche	Type Ballmill	Type Circulation vessel	Total installed power	Grinding media
CHOC 425	up to 1000 kg	130-150 minutes (powder, sugar – crystal sugar)	1000 kg premixer	W-85-G ballmill	-	83 kW	1800 kg steel balls Size 9,525 mm
CHOC 600	up to 1000 kg	95-105 minutes (powder, sugar – crystal sugar)	1000 kg premixer	W-85-G ballmill	1000 kg circulation tank	85 kW	1800 kg steel balls Size 9,525 mm

* Processing time will vary depending on the type of recipe, usage of ingredients and the initial and end-fineness.



Choc 425

Choc 600

Duyvis and Wiener

B.V. Machinefabriek P.M. Duyvis is a machine-building company with more than 120 years of experience. It is situated in the oldest industrial region of the Netherlands where most of the cocoa and cocoa butter processing factories are located.

Duyvis is specialized in engineering, producing and installing processing machines for the cocoa and chocolate industry. With its excellent engineering and mechanical team Duyvis holds an impressive record in providing innovative solutions to the industry in general and the cocoa and chocolate industry in particular.

Duyvis is also specialized in modifying, overhauling, repairing and maintaining all kinds of equipment worldwide. The Duyvis team is able to provide a technological solution to every problem, paying attention to preventive maintenance and striving to find the best technical solutions and operating practices.

Since 2004 **Wiener** is part of the Duyvis Group. Wiener is an innovative and dynamic company with a strong position in the cocoa, chocolate and confectionary market. It is worldwide recognized as manufacturer and supplier of cocoa and chocolate process machinery and turn-key projects for cocoa, chocolate/compound, ice cream, bakery and the candy industry.

Wiener and Duyvis engineers, start-up technicians and process development experts joined forces and are working side by side to guarantee process and product innovations. The integrated laboratory in Koog aan de Zaan is available for testing food products in general and cocoa, chocolate, cream and compound in particular. A database of more than 25 years of data is available.

The combined know-how of Duyvis and Wiener will ensure the continuation of the high quality standard as well as excellent service. This is the result of combining two companies, which have together more than 200 years of experience.

Contact us and we will help you reduce your processing costs of cocoa, compound and chocolate production.



COCOA, COMPOUND AND CHOCOLATE EQUIPMENT

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CHOC 425 / CHOC 600

BATCHWISE REFINING OF COMPOUND



WIENER