Back to Basics — Finished Chocolate to Finished Products

Chocolate Moulding — Process and Equipment

The number and type of chocolate-moulding step processes will determine the final product shape, composition and quality.

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According to the book Chocolate, Cocoa, and Confectionery by Bernard W. Minifie, moulding is “…the casting of chocolate into moulds … followed by cooling and demoulding.” This is a good, intuitive definition explaining how the moulding process is composed of a sequence of steps or operations producing perfectly formed chocolate products.

However, an efficient moulding process producing good-quality products requires more operations than casting, cooling and demoulding. We will discuss the sequence of process steps, and then the specific operations. Some of these steps are fundamental and are part of any type of moulding process; others are specific to some type of moulding.

Before discussing the steps of the moulding process, we need to identify the various types of processes by identifying the types of products that are produced and the characteristics of the materials used to make them.

Types of Moulded Products

We can identify several different types of moulding products (Figure 1). The main ones follow:

Solid
The product is moulded using only chocolate.

Inclusions
The product is moulded using chocolate and inclusions. The inclusions can be deposited into the moulds before depositing the chocolate, they can be mixed with the chocolate before depositing or they can be deposited into the mould after the chocolate. In this last case, backing off of the product may or may not be required (by backing off we mean the deposit of a layer of chocolate to form the bottom of the product).

Cookies and wafers
Chocolate is deposited first into the mould cavity and then cookies or wafers are pressed into it. Backing off of the chocolate may or may not be required.

Chocolates with centers (fat based, sugar based, liquid, etc.)
This can be done by codepositing of shell and centers (one-shot, triple-shot, multishot, etc.) or center depositing into a shell. Center depositing can be done by traditional shell forming or cold-matrix