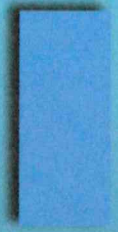
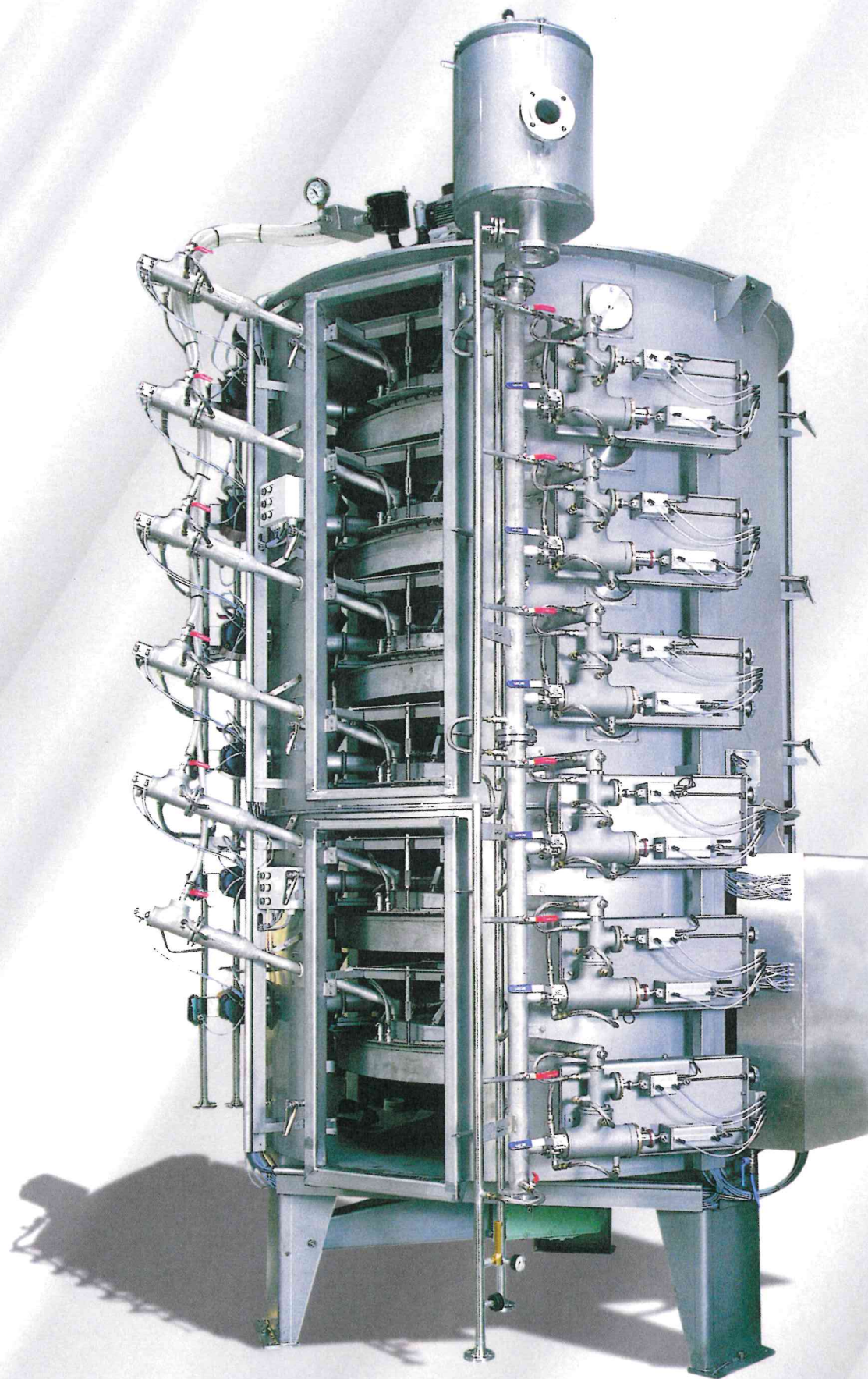


Disc Pastillator



GOUDA



Developed to meet demands

GMF-Gouda began development of its Disc Pastillator™ in the early '90s, to meet the industry's repeated demands for a machine able to make solid pastilles from molten products.

The design brief was rigorous. The machine should be equipped with a closed cooling system. This would eliminate the detrimental effect of water or other coolant vapour in the processing environment – as well as the risk of coolant pollution.

Gas-tight construction would be required: the facility to inertize the process using gas would prevent product oxidation and guarantee quality. Size was an important consideration, too. In some cases, the pastillator would be replacing flaking machines in existing production lines, so floor space would be limited.

The result is everything you asked for: the GMF-Gouda Disc Pastillator.



The patented Disc Pastillator: how it works

The Disc Pastillator consists of one or more horizontal jacketed discs, depending on the required capacity. A hollow, vertical driven shaft connects the cooling discs. Rotation of the shaft, and consequently the circumferential speed of the discs, is infinitely adjustable by a variable speed drive.

Refrigerant feeds and discharges in a closed circuit via a single central rotary joint connected to the hollow shaft. A constant temperature from the inner diameter of the discs is ensured by a counter-rotating flow pattern in the water coolant. Molten product is processed through a feeding device designed to create the pastilles: size and quantity are determined by the number and type of dosing nozzles selected.

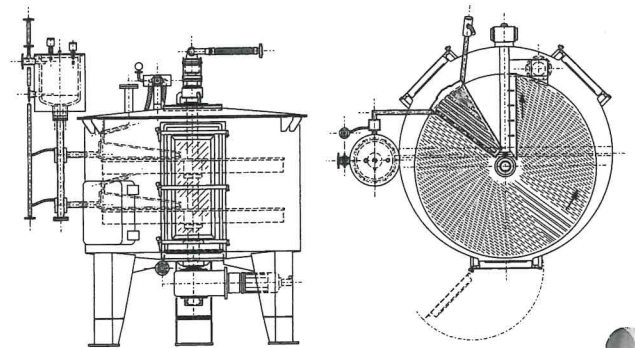
As drops are fed onto the cooling disc, synchronization is achieved between disc and feed system to provide for perfect shaping of the pastilles. A heavy-duty holder contains an assortment of knives for removing the pastilles.

Applications of the Disc Pastillator:

- Chemical industry
- Fine chemical industry
- Food industry
- Pharmaceutical industry

Side view

Top view



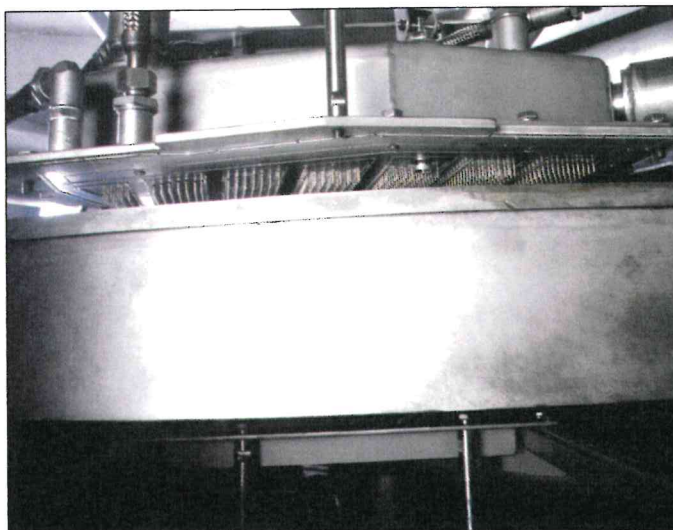
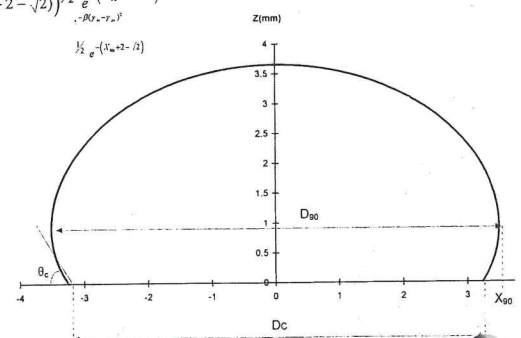
$$\cos \theta_c = \frac{\gamma_{sv} - \gamma_{sl}}{\gamma_{lv}}$$

$$\gamma_{sl} = \gamma_{lv} + \gamma_{sv} - 2\sqrt{\gamma_{lv}\gamma_{sv}} e^{-\beta(\gamma_{lv} - \gamma_{sv})^2}$$

$$\frac{1}{B} = \frac{2\sqrt{2\pi}}{1 + \sqrt{2}} \left(X_{90} + 2 - \sqrt{2} \right)^{1/2} e^{-\left(X_{90} + 2 - \sqrt{2} \right)^2} \cdot \beta(\gamma_{lv} - \gamma_{sv})^2}$$

$$\frac{1}{2} e^{-\left(X_{90} + 2 - \sqrt{2} \right)^2}$$

Pastille-shape



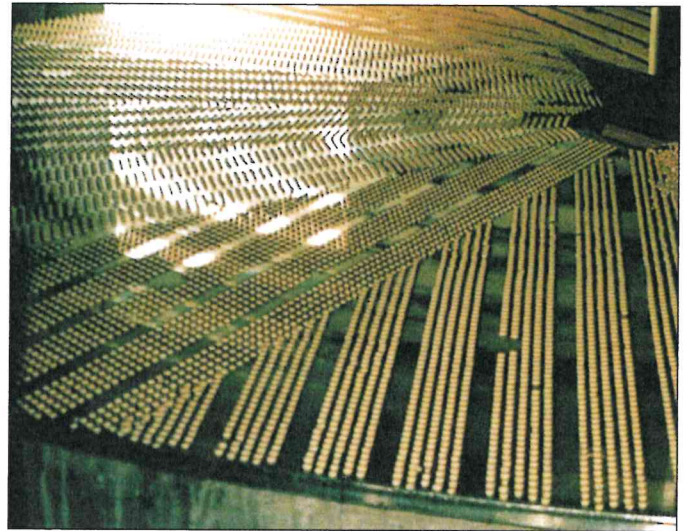
Uniform, free-flowing pastilles

The patented GMF-Gouda Disc Pastillator enables processing of molten products into excellent quality pastilles. A unique feeding system for the molten provides for the uniform, free-flowing characteristics of the pastille product.

The Disc Pastillator was developed following many years of thorough investigation. Its outstanding features can be demonstrated in GMF-Gouda's pilot plant.

Advantages of the Disc Pastillator:

- Makes uniform, free-flowing pastilles.
- Completely closed cooling system, absolutely no cross-contamination between refrigerant and product.
- Compact unit, little floor space required.
- Gas- or dust-tight enclosures at competitive prices.
- Perfect inertization of the process.
- Unit designed with good access for maintenance and cleaning.
- Construction material ranges from carbon steel to various grades of stainless steel, Hastelloy, etc.



Performance with new applications

GMF-Gouda is able to perform studies and trials at a specially-equipped pilot-plant, run by highly qualified staff. With its expertise founded on thorough investigation, GMF-Gouda is uniquely equipped to develop new applications for the Disc Pastillator. Pilot units are available for product testing to generate design data and provide samples.

Test facilities:

Feasibility test:

Requires a small amount of product to determine its 'pastillability'.

Bench-scale test:

Requires approximately 1 kg of product on a single-nozzle bench scale Disc Pastillator DP 5/1 to determine pastille behaviour and produce a small sample.

Pilot-plant test:

Requires approximately 100 kg of product to determine a guaranteed capacity and process parameters on a Pilot Plant Disc Pastillator DP 10/1.



Disc Pastillator types

Type DP		10/1	20/1	20/2	20/3	20/4	20/5	20/6	25/5	25/6
Total Disc Surface	m ²	0,75	3,0	6,0	9,0	12,0	15,0	18,0	22,5	27,0
Disc Diameter	Ø mm	1000	2000	2000	2000	2000	2000	2000	2500	2500
Number of Discs	pcs.	1	1	2	3	4	5	6	5	6
Length	m	1,8	3,4	3,4	3,4	3,4	3,4	3,4	3,9	3,9
Width	m	1,6	2,8	2,8	2,8	2,8	2,8	2,8	3,3	3,3
Height	m	2,5	2,5	3,1	3,5	3,9	4,5	5,1	4,9	5,5
Weight for Foundation	tons	1,8	2,8	3,6	4,4	5,2	6,0	6,6	8,2	9,4
Shipping weight Gross	tons	1,4	3,1	4,0	4,8	5,7	6,6	7,3	9,0	10,3
Shipping Volume	m ³	10	24	30	33	37	43	49	63	71
Drive Power	kW	1,1	1,5	2,2	3,0	4,0	4,0	5,5	7,5	7,5



HEAD OFFICE

GMF-GOUDA • Coenecoop 88 • 2741 PD Waddinxveen, The Netherlands
P.O. Box 375 • 2740 AJ Waddinxveen
Tel.: (+31) 182 - 623 723 • Fax: (+31) 182 - 619 217
gmfmail@gmfgouda.nl • www.gmfgouda.com

GMF-Gouda has branch offices in :
Germany, France, Indonesia, Singapore, China and the U.S.A.
Adresses: www.gmfgouda.com

"All tenders and contracts for the performance and deliveries by us outside Holland are governed by the "ORGALIME" conditions".