



DIAF DIAMIX

Today, the trend of the developments is towards more products with greater viscosity and density.

DISSOLVERS AND DISSOLVERS WITH SCRAPERS

In order to meet the increasing demand for products with greater viscosity and density DIAF has manufactured a slow-speed scraper unit for the Dissolvers in respect of the mobile containers of 1,000-1,200 litres. These scraper units does also have a lifting/lowering device.

The final product is still completed to a great extent in the same container, after which it is packed.

Intermediate stage: DUROFLEX which is slightly disadvantaged because it does not have the lifting/lowering device which for some products can result in lamination.

This is why DIAF, in cooperation with representatives from some of the largest colour and varnish companies in Scandinavia, have developed the DIAMIX concept. This concept enables greater efficiency.

The companies wanted up to 6,000 litres pre-mixing which would with a conventional dissolver have required approx. 200 kW depending upon the product specification. This would also make greater demands on the construction and only be possible with a hydraulic solution (estimated price approx. DKK 1.5m)

The biggest challenge was, however, that the major part of the effect was employed to transport the product to the plate turbine and not to dispersion. The idea was therefore to create a mixer to carry out this task; anchor type agitator.

In the wake of the mixer several advantages followed:

- Good dispersion at low power consumption
- Easy manufacturing of thixotrope and high viscous paints
- Suitable for automation
- Easy cleaning due to anchor type agitator with spring-loaded scrapers and efficient cleaning equipment with automatic cycle
- Easy maintenance as well as wearing parts are easily exchangeable
- Easy to empty the container as the outlet connecting branch is placed centrally
- Top mounted anchor type agitator, no packing at the bottom of the container
- Load cells
- The machine is easy to operate
- Safety above all



TYPES OF DIAMIX

Obtainable in the following models: 2001 (laboratory/test) 1500, 3000, 4500, 6000 and 9000.

APPLICATION

Generally with all types of products which an ordinary Dissolver can produce and high-pigmented/thixotropic goods such as:

- Pastes
- File glues
- Fillers
- Emulsions
- Paint for roads
- Glues
- Primers
- Printing inks and Flexo inks

A DIAMIX can seem to be a large investment if, depending upon the required production level per day, it is used both as finished mixture and intermediate container before and during tapping.

Therefore, we usually recommend the use of the DIAMIX as a pre-mixing container to a maximum batch which then is pumped to intermediate/ready-to-use container in, if desired, 2 x or 3 x dilution. In this container the product is completed before tapping/grinding.

DIAMIX VERSUS DISSOLVER

An example from a Danish customer:

	DIAMIX	DISSOLVER
kW	55 kW	75 kW
Litres	1 x 6,000 litres	2 x 1,500 litres
Manpower	1 man	2 men
<u>Daily production (8 hours)</u>	<u>4 x 6,000 litres</u>	<u>8 x 1,500 litres</u>
In total per day=	24,000 litres	12,000 litres



This example shows the economic advantage when using DIAMIX. The production can be increased twofold and at the same time cut down working hours, reduce the energy consumption and manpower.

We do also have references in the pigment and resin industry with plants that disperse 6,000 litres potassium carbonate with 70% solids content.

Total time of process: 1 hour:

20 min. filling of the pigments and other products

20 min. dispersing

20 min. emptying

1 hour/batch