



GmbH

FMB



Operating instructions vibratory bowl feeder



Typen

:

**BTH-16
BTH-20
BTH-25
BTH-25/40
BTH-30
BTH-40
BTH-63
BTH-80**

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General Information

Symbols



Notice

This icon marks notes, which contain information for proper operation.



Attention

This symbol is found in all safety instructions in this manual, where there is danger to life and limb in front of people. These notes and behave in such cases special care. Pass on all occupational safety tips to other users. In addition to these instructions, the general safety and accident prevention rules are considered.

Introduction

This information should be read by those understood and complied with in all respects responsible for the machine.

This manual should always be kept near the machine.

A careful reading of this manual is particularly important, as the producer for damage or disruption, which result from the failure to observe the operation, no liability.

This manual, technical changes designed to improve or technical progress is reserved.

Application and use

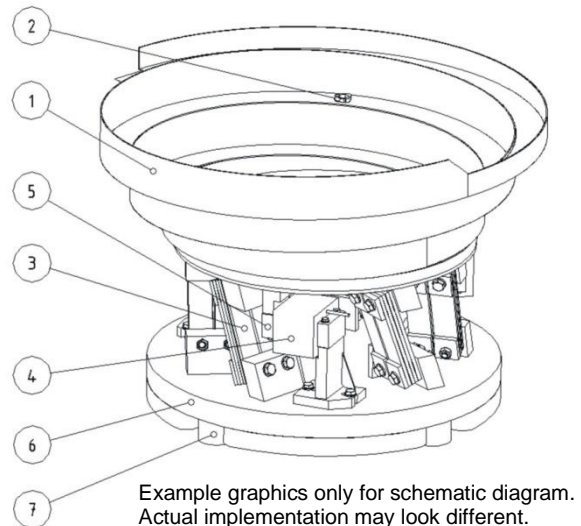
The device is designed only to be described in this document functions and services. Any other use is considered improper. Shall not be liable for damages resulting from the manufacturer. The risk is on the user.

Non-observance of the warranty!

Structure and function description

A vibratory bowl feeder is a device that electromagnetically induced vibrations in mechanical vibrations and converts this transfer of work to use. The basic structure of a vibratory bowl feeder consists of the following:

- Pos. 1 = Funding pot
- Pos. 2 = Conveyed
- Pos. 3 = Spring bank
- Pos. 4 = Oscillating magnet
- Pos. 5 = Anchor
- Pos. 6 = Against ground
- Pos. 7 = Vibration mounts



If the magnet that is permanently connected to the counterweight, electricity is supplied, it produces a force that attracts the armature, depending on the resonant frequency of the network and releases.

Because the armature is connected to the conveyor track (spiral sort of pot) in a fixed, does this also with the haunting movement. This raises the conveyed, from due to the angle of the leaf springs and the slope angle of the spiral, at every vibration of the conveyor belt and carries out little jumps in the direction perpendicular to the leaf spring plane.

In a period of 50 Hz AC system, the magnet reached twice its maximum tension, since it is independent of the direction of current flow. The magnet thus generates an oscillation frequency of 100 Hz.

This resonant frequency of 100 Hz is applied to devices in order to achieve a quiet and gentle transport for smaller or lighter workpieces.

For heavier or larger workpieces it is advisable to use a resonant frequency of 50 Hz. Here, a half wave of AC current through a diode or a thyristor is blocked.



Notice

It is important to make sure that is set on the connected control device, the correct resonant frequency for the particular drive types. This is done according to the control unit, for example by internal DIP switches, bridges, or via the Settings menu. Otherwise, components of the equipment damaged.

Maintenance and Cleaning



Notice

The vibration of the vibratory bowl feeder drive is virtually maintenance free will. The following checks and maintenance should the specified time intervals, however, carried out in:

Nr.	Assembly	Action	Frequency
1	Vibratory bowl feeder drive	- Check for unusual noises	daily
2	Vibratory bowl feeder-uppers	- Control of the conveying behavior	daily
3	Vibratory bowl feeder-uppers	- On pollution control - Cleaning the surfaces of the conveyed - Eliminate foreign parts	daily



Attention

For all maintenance and inspection work, the chapter >>Safety<< in Appex 03 (Manual of drive manufacturer) must be observed.

Breakdowns, caused by inadequate or improper maintenance can cause very high costs. Regular maintenance is essential. Due to the different operating conditions is generally applicable definition of maintenance and inspection intervals are not a possibility. When the operating conditions an appropriate routine is established.

Cleaning:

It is recommended to clean the unit regularly, e.g. after the end of each shift, all traces of dirt, debris and possibly falling down. Coatings, e.g. polyurethane, brush or other product-specific support surface coatings, must be cleaned with for example acetone. Coatings in pharmaceutical goat right equipment can be cleaned with a pharmaceutically acceptable detergents.

Wear control:

Wear parts, ie, all parts that move against each other or come into contact with feed are checked from time to time to wear and if necessary readjust or replace.

Manufacturer

Manufacturer of drive unit:

See Appendix 02, Operating instructions of drive manufacturer.

The manufacturer is responsible for ensuring that the device meets at least the following standards:

- EC Machinery Directive 2006/42/EC
- Low voltage directive 2014/35/EU
- EMC directive 2014/30/EU

Applied harmonised standards:

- DIN EN 60204-1
- DIN EN ISO 12100-2010

Manufacturer of the resonant structure (for complete units from the factory FMB):**FMB GmbH**

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Appendix