



# WMV

always a winning combination

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**NASF Corporate Member**



## Application and Operating Mode

Numerous industrial facilities use WMV centrifuges to reduce their processing costs. The centrifuges are designed and constructed to provide many years of efficient, reliable and cost effective operation. The addition of a WMV centrifuge can raise profits, increase quality and recover treatment solutions and oils in facilities that perform machining, electroplating, heat treating and many other processes.

WMV centrifuges features and advantages:

- heavy duty construction for durability
- lid with safety interlock
- remote mounted control cabinet
- extended life air heaters
- simple to operate
- easy to maintain



### Operation

Perforated baskets are removed from the centrifuge and filled with parts or machining chips. The loaded basket is inserted into the centrifuge and the operator closes the lid. When the lid is closed it is automatically locked and the centrifuge process begins. A light on the operator's panel provides visual feedback that the machine is in operation. After a preset interval or manual actuation of the stop button the centrifuge is quickly stopped using the motor as a non-wearing regenerative brake. Once the centrifuge is safely stopped the lid automatically unlocks to allow the operator to open the lid and remove the basket of material.

In high production environments WMV transport hoists are utilized to automatically transfer baskets out of the line. WMV engineers can also automate and combine multiple processes and machines to create a completely automatic processing cell.



# Structure

## 1. Motor

A special centrifuge motor with non-wearing regenerative brake serves as drive element. The normal speed of the motor is 750 resp. 980 rpm. It is also infinitely variable via initiator or by means of a frequency controller, depending on the sensitivity of the parts.

## 2. Motor bearing

Motor and drum are equipped with a flexible rubber bearing (motor bearing) and fixed at the floor by means of a crosstype support to ensure a non-vibrating operation as best as possible.

## 3. Bowl insert

As a rule, the bowl insert consists of an upper and a lower part, the bottom is dished and may optionally be delivered with a perforation of 1.5 mm or without perforation. Depending on the type of design, the shell consists of perforated plate material of a thickness of 2, 3 or 4 mm, with a perforation of again 2, 3 or 4 mm. Moreover, special perforations ranging between 0.5 and 4 mm may also be supplied. For the rinsing and wetting process, the bowl inserts are provided inside with a non-perforated conical plate of a thickness of 2 – 3 mm. All bowl inserts are provided with carrying handles or cams. Special containers (bowl inserts) are optionally available. Centrifuge drums (centers or baskets) are available for extra-high centrifuges which mostly are used in plants. These screening drums, too, are available in various designs, purely cylindrical with a plane perforated bottom in shell perforation or with an upper and lower part. On top and at the bottom, the screening drums are provided with angular rings so that they can be moved using transport systems.

## 4. Drum/center seat

The drum seat consists of a base plate of a thickness of 15 mm to which 6 T-steel stays are welded for the guidance of the drum. A flat steel ring in the upper area serves for stabilization. The effect of the stays is similar to that of a fan thus improving indirectly the drying efficiency with the same heat output.

## 5. Locking of the lid

During operation, the lid is locked electromagnetically. Only at standstill, the zero-speed relay releases and the safety tumbler unlocks the lid automatically.

## 6 Lid relieving system

The lid relieving system using a pneumatic tension spring serves for a reduction of the lid weight, after unlocking the lid may be opened manually. In case of a lid relieving system with pneumatic cylinder, also the opening of the centrifuge is possible only after unlocking and will take place automatically. The space between lid and shell is provided with a sectional rubber seal.

## 7. External shell and cross-type support

The external shell and the cross-type support consist of a welded steel respectively steel sheet design. The thickness of the external shell is 4 mm. All parts have been varnished for protection against corrosion. The external shell is screwed to the cross-type support which has been fixed at the floor by dowels.

## 8. Heating system

The heating (not principally for all types) is effected via a heating rod across the surface of which air is blown by means of a blower. Via a pipe the air thus heated is guided through the centrifuge lid into the bowl insert respectively into the screening drum (center). The heating system can be controlled either by step switch or via temperature control by means of pt-100.

## 9. Control

Except for the operating elements, the control unit of the centrifuge is installed separately in a protected enclosure and connected with the machine via watertight multipole plug-in connectors.

### Safety

Our machines are in conformity with the valid VDE- and UVV-regulations as well as with the EC regulations and directives concerning machines CE. Together with the machine, you will receive a detailed documentation including a Certificate of Conformity, Operating Instructions including safety instructions for the prevention of accidents, as well as maintenance instructions, risk analysis, spare part drawings with list of spare parts, drum documents with drum test forms, drum calculation and manufacturer's certificates as well as documentations for outsourced parts.

## 10. Upon request with lifting device and electric hoist

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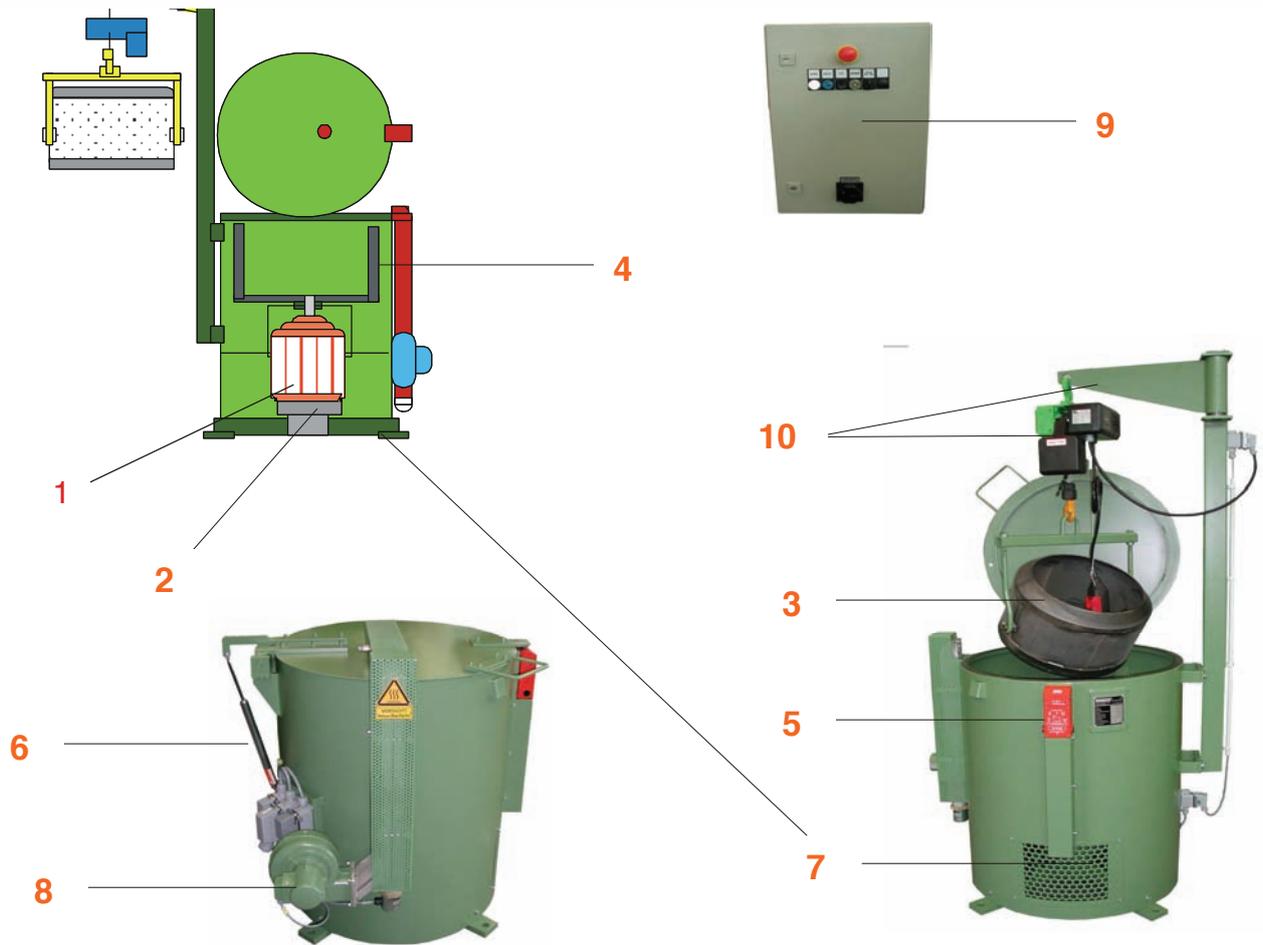
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Type	Z 400-(H)	Z 500-(H)	Z 600I-(H)	Z 600II-(H)	Z 700-(H)
Loading volume	0.7 cu ft	1.58 cu ft	2.8 cu ft	2.8 cu ft	4.6 cu ft
Loading weight	110 lbs	220 lbs	330 lbs	660 lbs	660 lbs
Optional heat output	0-6 kW	0-6 kW	0-12 kW	0-12 kW	0-20 kW
Speed	980 rpm	980 rpm	750 rpm	750 rpm	750 rpm
Drum opening	11.81"	15.74"	19.68"	19.68"	21.65"
Drum height	10.23"	13"	16.14"	16.14"	17.71"
Drum diameter	15.74"	19.68"	23.62"	23.62"	27.55"
Standard drum perforation	2mm 0.078"	3mm 0.118"	4mm 0.157"	4mm 0.157"	4mm 0.157"
Weight of centrifuge with one heater	710 lbs	820 lbs	970 lbs	1,040 lbs	1,005 lbs
Total height of centrifuge	39"	43"	47"	47"	49"
Diameter of centrifuge	28"	32"	36"	36"	40"

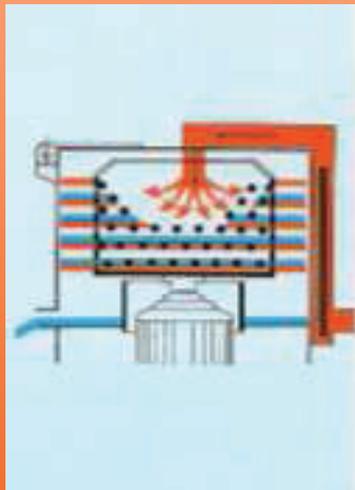
## Degreasing

Baskets are filled with parts or other materials such as chips contaminated with oil. To recover oil, the basket is spun at a high rate of speed. This simple process recovers up to 98% of the liquid that is trapped in or on the parts. To reduce part processing costs the recovered oil is often returned to the previous process. An additional benefit is reduced stress on part cleaning systems.



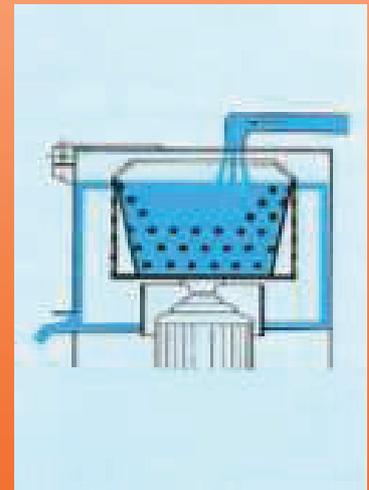
## Drying

Centrifuge spin dryers provide a quick and efficient method to dry parts. The result is parts without spots and consistent high quality corrosion resistance. Features such as optional stainless steel baskets make the dryer suitable for all part ranges. Hollow and complex parts that hold liquids are reoriented in specially designed dryers to assure the maximum amount of liquid is evacuated from the part.



## Rinsing/Coating

Centrifuges can rinse or coat parts with waxes, friction modifiers, rust inhibitors or various other materials. The centrifuge is supplied with a solution tank and pump system to deliver liquid to the parts. Once parts are treated excess liquid is centrifuged off and returned to the supply tank. Optional equipment available include mixers and temperature control of the solution tank, heaters to dry parts after treatment and quick change solution tanks.



**WMV**  
**stands for modern problem solutions**  
**in the field of economic system technology**

**Degreasing**

**Washing**

**Rinsing**

**Drying**

**Passivation**

**Coating**

**Loading**

**Conveying**



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