



# HYDRO-POLAR

Centrifuge for operation in cycles for spinning-off grinding sludge with hydraulically operating and forced discharge incl. hydraulic power unit.

The new development in the  
**HYDRO-POLAR-series:**

## ZST 7

- great volume of cycles
- drying of the sludge up to 8% residual moisture
- low maintenance and service costs
- low overall height
- flexible programming of the operating cycles by plc-control
- solid, reliable construction

### Application

The ZST 7 can be used for treating grinding sludge of all types of metal and their alloys that are of common use. The recovered coolant (oil or emulsion) can be filtered and kept for further use.

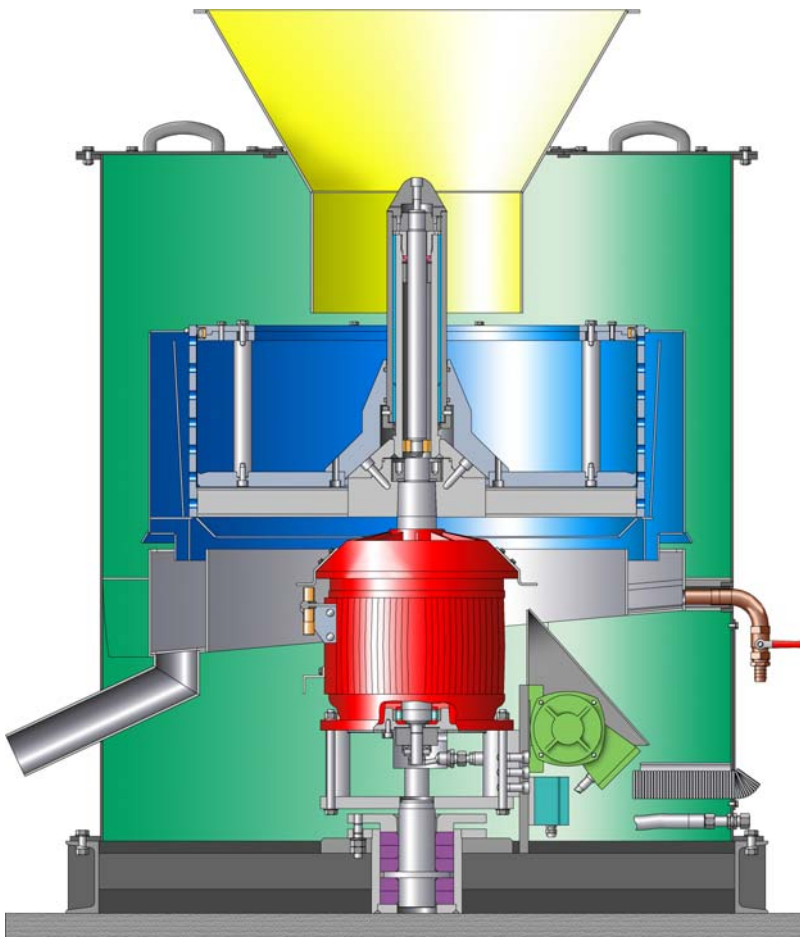
### Function

**drum lowered: loading and centrifuging process**

The centrifuge is filled e.g. by a scrape conveyor via a hopper fixed on the centrifuge. During the loading process the centrifuged material falls through the funnel pipe right over the middle of the axis of rotation into the centrifuge drum. The centrifuge drum is already rotating for an even distribution of the material.

The maximum volume of cycles to treated by the centrifuge drum is determined by a the preselected feeding time of the conveyor.

After the loading process the centrifuge drum accelerates to top speed while an electronic unbalance control assures the secure operation. During the centrifuging process the grinding sludge is distributed at the cylindrical drum case. The drum case is perforated and



## Function

lined with a fine sieve of 60 µm on the inside. Here the sludge is separated from its adhering liquid by centrifugal force.

According to the continuously preadjusted centrifuging time the drive motor brakes until complete standstill. The spun-off liquid collected in the outer drum case is now flowing into the lower part of the centrifuge casing and then further over an inclined discharge bottom, through the discharge tube and into a pipe and then to the collection tank standing outside the centrifuge.

Now starts the discharge process of the centrifuged sludge.

### drum lifted up: discharge process

During the discharge process the drum base and the drum cover, both fixed to a hydraulic cylinder mounted in the centre of the axis of rotation, are lifted up.

During this process, the cylindrical drum case keeps its position when the inner part of the drum is lifted up and pushes the centrifuged sludge over the drum rim. The grinded sludge may then fall down between the outer casing of the centrifuge and the totally enclosed area for the discharge of the liquid. If through the centrifuging-

process any sludge should get blocked at the cylindrical part of the drum it will surely be cut off when the solid drum base, provided with a peeling edge, is lifted up. A vibration motor puts the whole drum construction into vibration to support a thorough discharge.

Now the innerer part of the drum is lowered again completely to its initial position and the drum is closed for the next loading and centrifuging process.

The centrifuge is mounted on a frame so that the dry sludge falling out of the centrifuge may fall into a discharge system or be filled directly into a storage tank placed under the centrifuge.

## Technical data

THROUGH-PUT		max. 40 litres / cycle max. 12 starts or brakings / hour
CENTRIFUGE DRUM	shape cross-section height perforation lining	cylindrical approx. 700 mm approx. 300 mm 15 mm round perforat. wire-mesh 60µm
SCHLAMMENTLEERUNG	cross-section height	1042 mm acc. to instructions
SPECIAL CENTRIFUGE MOTOR SUITABLE WITH FU OPERATION	voltage start. current oper. current frequency speed	400 V 18 A 3,9 A 50 Hz max. 1500 rpm
VIBRATION MOTOR	voltage current	400 V 0,45 A
HYDRAULIC POWER UNIT	voltage current	400 V 1,43 A
DISPATCH DATA	space height weight	2,0 m x 1,6 m 1505 mm 1000 kgs

technical modifications reserved.

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