DECANTING CENTRIFUGES
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TECHNICAL SPECIFICATION
DECAOIL DO37-362
with eccentric gear

DESCRIBING

Decanting-centrifuge for the two-phase separation. Rotor, with consists of a conical and a cylindrical solid bowl end, a screw conveyor and a feed pipe.

APPLICATION

Separation of a solid-liquid-mixtures, consisting from two liquid and a solid phase. The specific density of the solid matter is higher than those of the two liquid phases are. The liquid phases distinguish also through their specific density. (Example: solid matter/water/oil)

FUNCTION

The feed suspension reaches the rotating feed compartment into the screw conveyor over a feed pipe. The suspension is accelerated in that compartment in the direction of rotation and enters the rotating bowl via opening.

The solid particles move towards the bowl wall of the cylindrical section under the effect of centrifugal forces. The centrifuged solids are taken by the screw conveyor via the conical section to the outlet openings of the bowl.

The „heavy“ liquid phase (e.g. water) flow out with the solid via the outlet openings in the conical bowl.

The „light“ liquid phase (e.g. oil) becomes about return channels too the guided overflow edge (weir plates), who are in the heigt adjustable, and flow out from the bowl.

BEARING

The rotating bowl is supported in the pillow block frames and by main bearings. Both pillow block frames are bolted and pinned to the base frame. The base frame is flexibly mounted on hollow rubber buffers.

We reserve the right to technical modifications!

DATA OF THE CENTRIFUGE

Inside bowl diameter	372 mm
Bowl length	1339 mm
Max. bowl speed	4200 rpm
Acceleration	3645 x g
Relation of bowl length and diameter	3.6

WEIGHT

Weight of the machine	26.0 kN
Weight without quartz sand filling	22.6 kN

DIMENSIONS

Length	2577 mm
Width	1350 mm
Height	1090 mm

MATERIAL

Parts	Stainless steel (with alternative)	Carbon steel (with alternative)
Parts in contact with process-product		
Bowl material	1.4571 / 1.4408	St52 / 1.0425
Screw conveyor material	1.4408 / 1.4301	St52 / St37
Housing material	1.4301	St37
Special material	1.4571 (AISI: 316Ti)	-
Parts not in contact with process-product	carbon steel, cast steel	
Screws	Screws in contact with process-product (if possible from the static) are in stainless steel (A4-80).	

WEAR PROTECTION

concerned parts	standard wear protection	special wear protection
screw / operating chamber	hardsurfing with flame sprayed wolfram carbid powder	hardsurfing with flame sprayed wolfram carbid powder
screw / vane		replaceable plates from the material cemented carbid, ceramic or silicon carbide
screw / inlet openings		
bowl / solid matter discharge		

LUBRICATION

Lubrication of the main bearing and the screw bearings by grease lubrication.

SEALS

Screw bearing	radial shaft seal
Main bearing	labyrinth seal
Housing	labyrinth seal

PAINT FINISH

Application	Type	Tint	Min.dry-coat thickness
Priming	tow-component metal-prime on the basis of epoxy resin with active protection against corrosion	dull grey	40 mµ
Top coat	two-component polyurethan-structure varnish half-shiny, structure medium	RAL 5002 navy-blue	60-80 mµ
coat bowl/screw	coating with Inertol-Poxitar sw - only carbon steel machine type	black	50 mµ

BOWL DRIVE

An electrical motor drives the bowl and the screw conveyor about a hydraulic coupling and two v-belt pulley pairs. The coupling (fix bowl speed) can be replaced by a frequency converter (variable bowl speed) in a system-side way fitted. About the combination with the housing of a planetary gearing, the first v-belt pulley pair dirves the bowl. The housing of the gear is combined with the bowl firmly.

Data of the electric motor	
output	18.5 kW
speed	3000 rpm
voltage	400/690 V (50 Hz)
type	160 L
design	B3
type of protection	IP55

SCREW DRIVE

A second v-belt pulley pair drives the drive shaft of a planetary gearing parallel to the bowl drive. The output shaft of the gear is combined with the screw conveyor, the differential speed is made by that.

Data of the gear	
construction	eccentric gear
type	ZS218-25
gear ratio	25
permanent torque	3930 Nm
differential speed	18 rpm