

**WESTFALIA
SEPARATOR**

INSTRUCTION MANUAL AND PARTS LIST

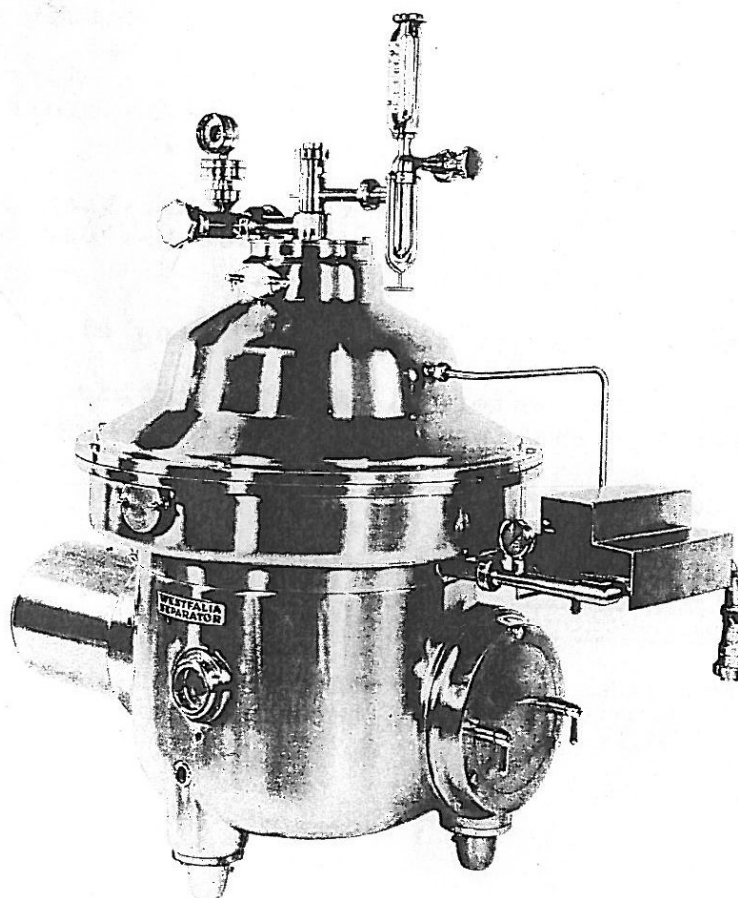
No. 1169 - 9001 - 000

WESTFALIA

Milk Separator

Model SAMM 7006

with self-cleaning bowl



WESTFALIA SEPARATOR AG./4740 OELDE 1 (W.-GERMANY).
CABLES: WESTFALIA OELDE · PHONE: (02522) 771 · TELEX: 89474

IMPORTANT HINTS
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The WESTFALIA Separator is a high-speed centrifuge which works reliably provided that it is operated and looked after in accordance with our Operating Instructions. Please read carefully through the directions so that you will be able to operate and service your separator in such a manner as to extract from it the greatest possible efficiency.

We recommend in your own interest to have your separator inspected by WESTFALIA service engineers at regular intervals. Such inspection will keep your separator working reliably and prevent undesirable shut-downs.

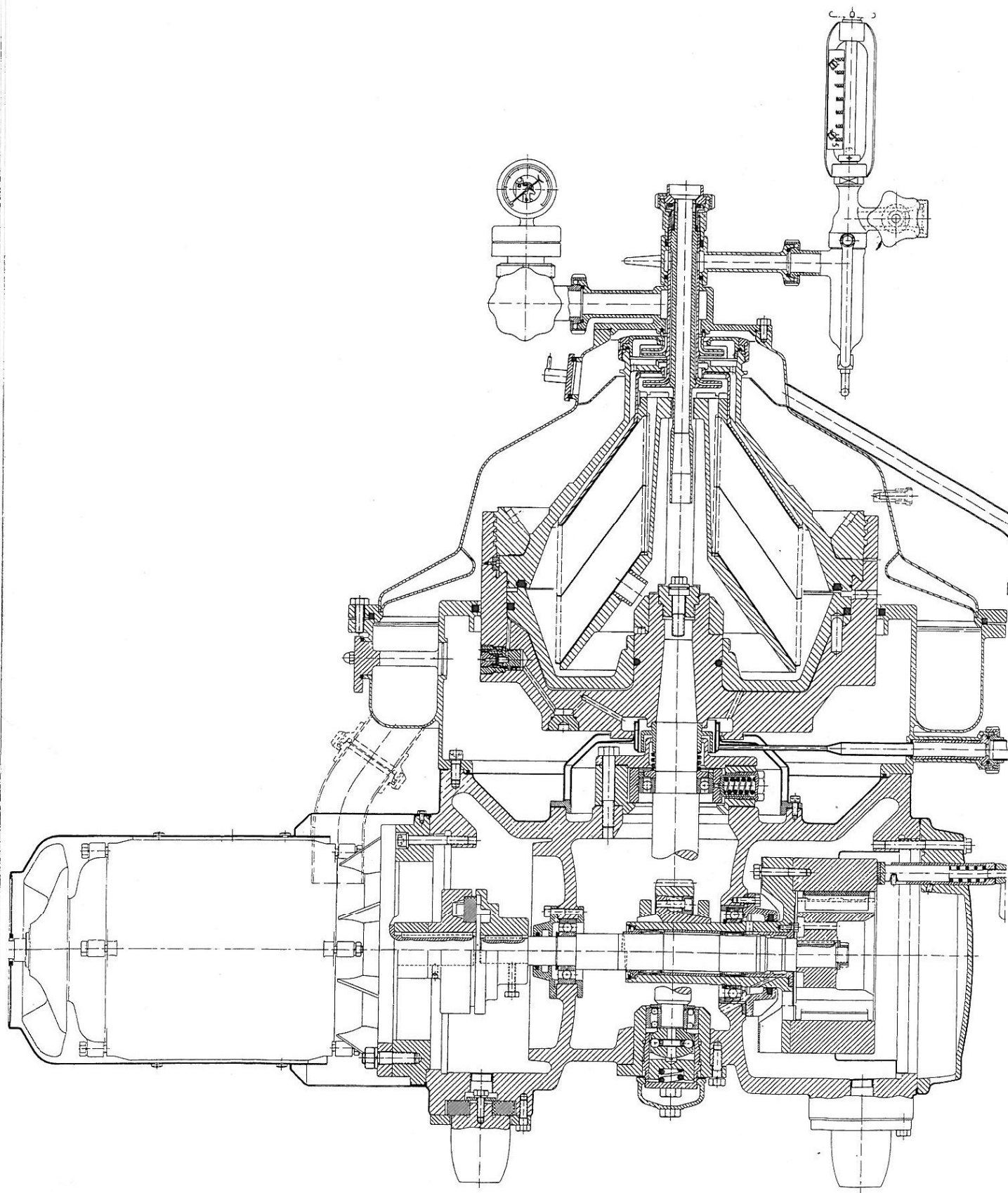
- 1) Before each start-up check if
lock rings are tightened securely ("0" marks must be aligned),
hood and centripetal pump are fastened tightly,
oil level is slightly above middle of sight glass,
brakes are released.
- 2) The PTC resistors built-in for motor protection have to be connected to an appropriate tripping device. External voltage higher than 2.5 volts must not be applied to the terminals of the PTC resistors. When testing for continuity, do NOT use a test lamp but only a conventional ohmmeter.
- 3) Feed liquid to separator only when bowl is closed which is accomplished by feeding operating water.
- 4) Make first oil change after 3 to 4 weeks. When gear parts are broken in, change oil every 2 to 3 months. Use only the type of oil specified on page 2/1.
- 5) Clean gear chamber every time when making oil change.
- 6) Check regularly for water in oil. To do this, unscrew oil drain screw and allow a small amount of oil to drain.
- 7) For reasons of safety be sure to replace ball bearings of worm spindle and worm wheel shaft every 5,000 working hours.
- 8) Do NOT loosen any part of the separator or of the feed and discharge connections before the bowl has stopped completely!

Note that the bowl has NOT stopped before square-headed screw 9a (fig. 13/1) on front side of motor protection cover has ceased rotating.

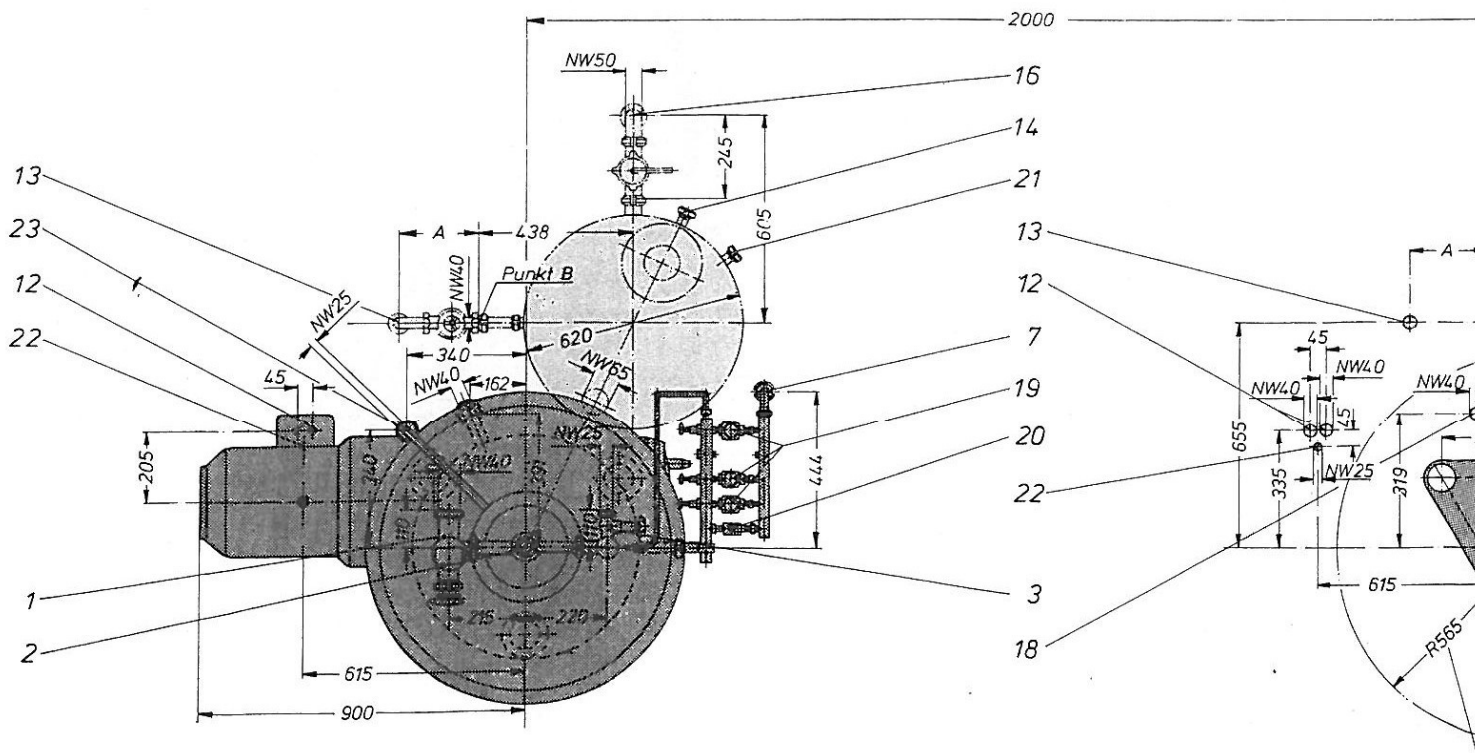
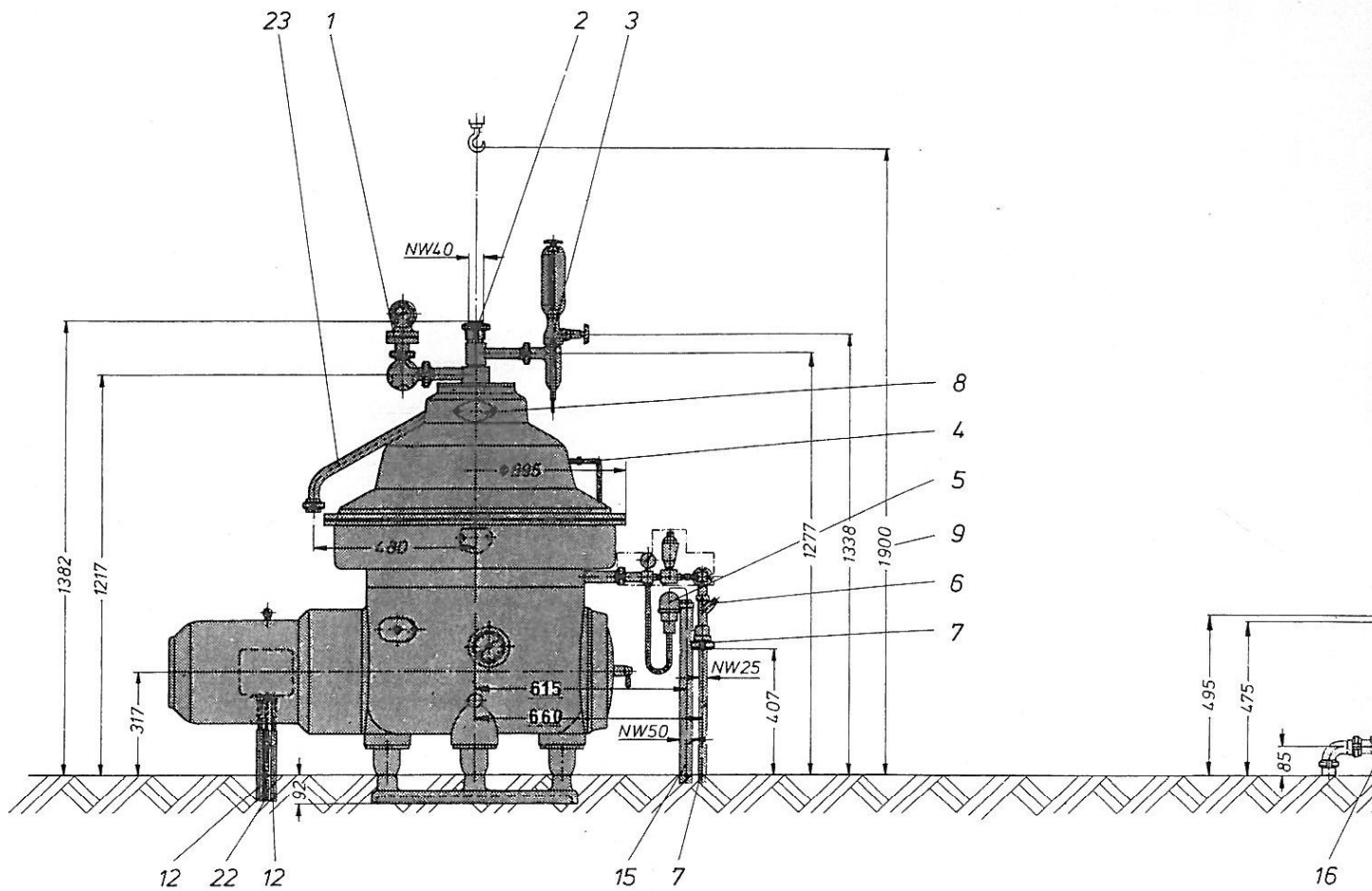
- 9) Dismantle the bowl once a month for inspection:
Thoroughly clean and wipe dry contact surfaces and threads of bowl bottom and lock ring and apply a thin film of lubricating paste furnished with the separator, to prevent galling of the threads.
- 10) When dismantling the bowl be sure to place bowl parts on a rubber mat or wooden surface, never on the stone floor.
- 11) After removing the bowl bottom, place splash cover 406 (fig. 20) over worm spindle to prevent wash liquid from seeping into the gear chamber.
Do NOT flush inside of upper section of frame with water hose; wash by hand.
- 12) Before installing bowl bottom, oil upper part of spindle (thread, cone, and cylindrical guide surface for spindle cap). It must be possible to move the spindle cap easily up and down on the spindle. Then clean and wipe dry the conical part of the spindle with a smooth rag. Also, clean the inside of the bowl hub carefully to assure proper fitting.
- 13) When assembling the bowl, strictly adhere to the instructions given in sect. 4 to avoid undue unbalance. IMPORTANT: Before starting the bowl be sure it is completely assembled.
- 14) When pressure in disc stack has slackened, add spare disc (see sect. 4.1, no. 17).
- 15) Never use blow-torch on bowl parts or expose bowl to heat of open flame!

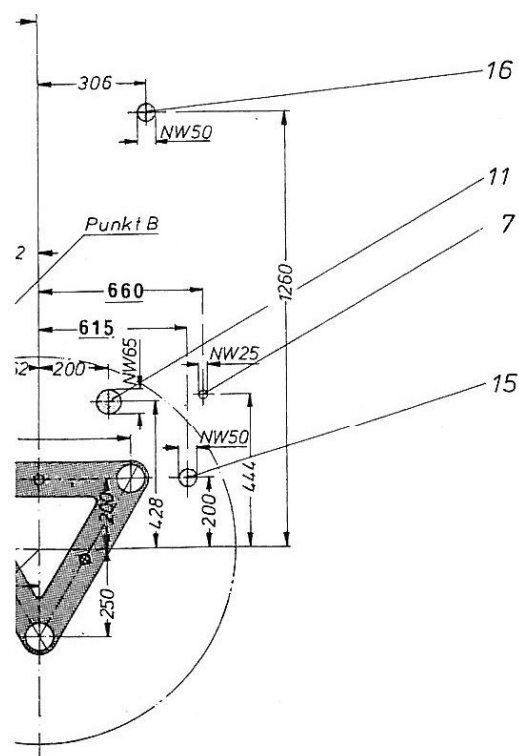
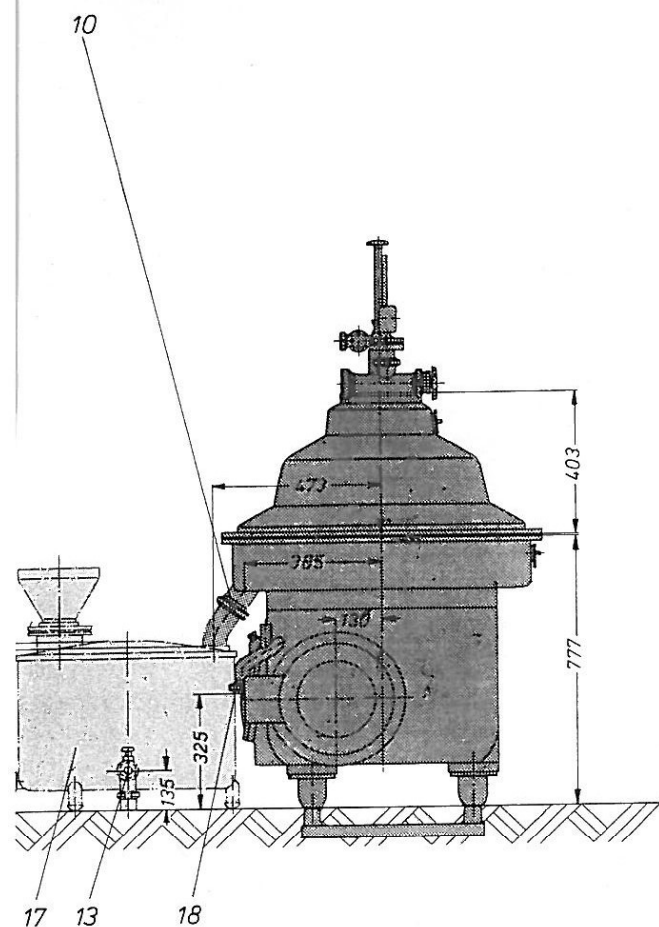
Vertical Section of the Separator

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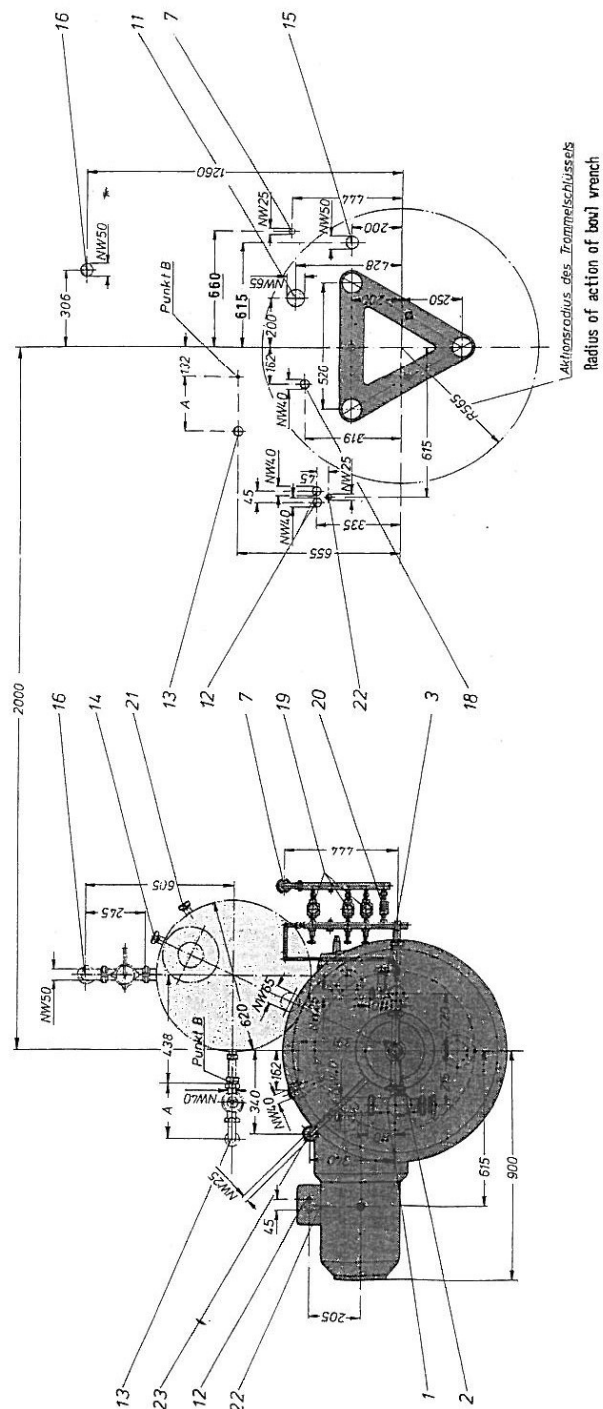
Dimensioned Drawing (for installation plan of flow constrictor refer to page 23/2)





23	Overflow	
22	Connection for PTC resistors	
21	Connecting piece for telethermometer	
20	Rapid-closing valve	
19	Solenoid valves	
18	Operating-water discharge	
17	Sterilizing vessel	
16	Outlet (sterilizing vessel)	
15	Power supply for solenoid valves and pressure switch	
14	Thermometer (sterilizing vessel)	
13	Steam supply (sterilizing vessel)	
12	Power supply for motor	
11	Sediment disposal through floor, if required	
10	Sediment discharge	
9	Minimum lifting height for hoist	
8	Overflow inspection cover	
7	Operating-water supply	
6	Strainer	
5	Pressure switch	
4	Flush line	
3	Cream discharge	
2	Feed	
1	Skim milk discharge	
A	The dimension depends on make and type of fittings used	
	Bowl speed	6500 rpm
	Total net weight of machine	1200 kg
	Minimum lifting capacity of hoist	250 kg
	Capacity when separating	7000 l/h
	Motor	15 kW (20 Hp) 50 Cycles

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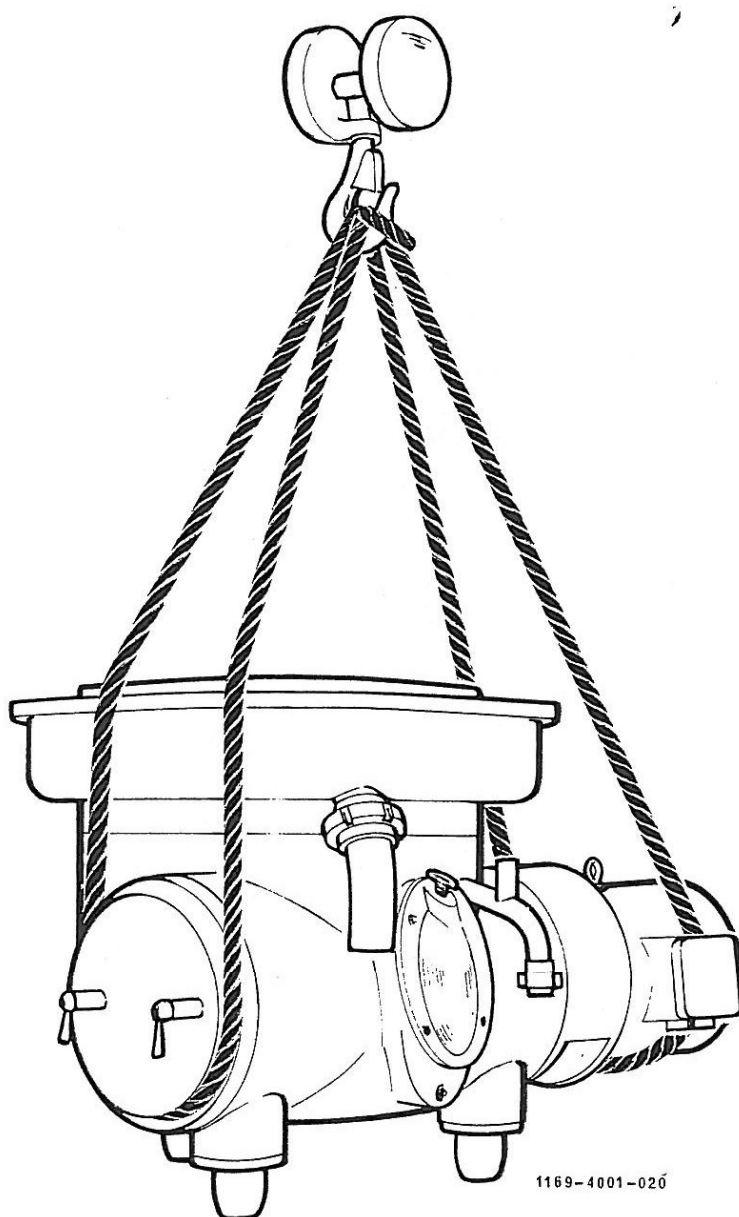
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WORKING INSTRUCTIONS

1. Installation

1.1. Transport

Suspend the separator as shown in fig. 1/1. To prevent ropes slipping, wind part of a rope around the crane hook. When lowering the separator, make sure it touches down gently.



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Weight: 750 kg

Fig. 1/1

1.2. Installation

For dimensions of the separator refer to page 0/7. For the installation of separator and of flow constrictor refer to page 23/2.

When installing the separator make sure that sufficient room is available (at least 15") for mounting and removing the motor and for removing the horizontal drive shaft which is to be pulled out towards the motor side.

Do NOT install a shut-off device in the line which will be connected to the operating-water discharge line 9 (fig. 13/2). The line should have 1 1/2" I.D. It should have sufficient fall and must NOT be too long to allow the discharging operating-water to flow off freely, since otherwise the water will rise and enter the upper section of the frame, resulting in slowing-down of the bowl.

The supply line to the operating-water connection should have 1" I.D., the operating-water pressure should be approx. 21 psi.

For mounting and removing the bowl parts, a 250 kg hoist (minimum lifting height 1900 mm; see installation plan) will be indispensable. On request a WESTFALIA Swing Crane can be supplied.

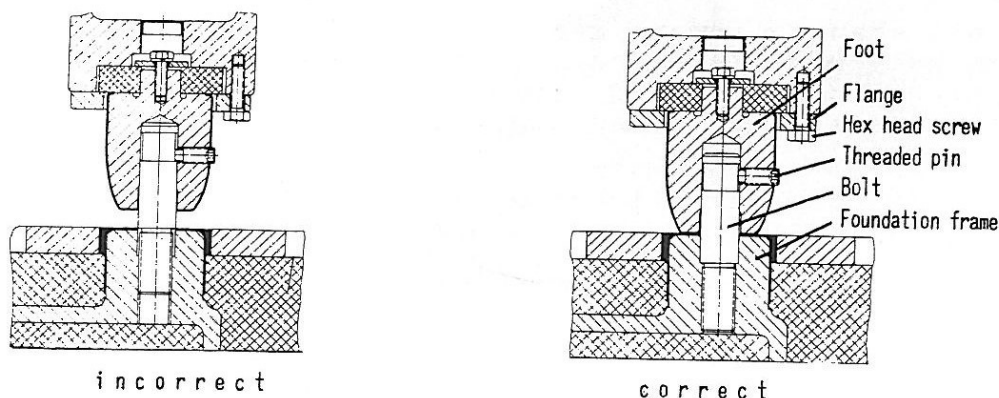


Fig. 1/1

Screw bolts into the three mounting blocks of foundation frame; make sure they are tight. Embed the foundation frame in the floor so that the mounting blocks of the frame protrude above the plane of the floor by about 5 mm = 0.2". Fill up the space below the foundation frame with concrete. Make sure that the mounting blocks are absolutely level. Fit caps on mounting blocks. Grout the frame with concrete, inside and outside. To accelerate setting of cement, commercial rapid binding agents may be used.

By means of flanges and hex head screws fasten feet 2a-g (fig. 13/3) to separator frame. Then lift the separator frame with its feet onto the bolts of the foundation frame and tighten the threaded pins with wrench 401 (fig. 20).

3. Motor Connection =====

3.1. 'Loher' Three-phase AC motor Type A160 LA-4, 15 kW

The separator is driven by a totally enclosed three-phase AC flange-type motor via a centrifugal clutch. This motor is started by means of an automatic star-delta switch according to wiring diagram 8134-0002-0381. Switching over from star to delta takes place after 3 - 4 seconds.

Motor protection is ensured by PTC resistor type temperature feelers incorporated in the winding of the motor. These PTC resistor type temperature feelers have to be connected to an appropriate tripping device. External voltage higher than 2.5 volts must not be applied to the terminals of the temperature feelers. When testing for continuity, do NOT use a test lamp but only a conventional ohmmeter.

The starting current of the motor can reach 1.7 times the value of the rated current. Therefore, dimensioning of switches, wiring and fuses should be based upon the starting current and NOT on the rated current.

50 Cycles		Minimum Section of lead-in-wires. mm ²	Rated Current of Fuses Amps
Voltage V	Rated Current Amps		
220	52	16	80
380	30	6	50

3.2. Direction of rotation of the bowl

The bowl must turn in clockwise direction when looked at from above. The direction of rotation of the bowl is correct when square-headed screw 9a (fig. 13/1) on front side of motor protection cover rotates in direction of arrow. The direction of rotation is reversed by interchanging two lead-in wires.

3.3. Speed and starting time of the bowl

The bowl speed is 6500 rpm and is indicated by the tachometer.

The starting time of the bowl ranges between 8 - 10 minutes, depending on the condition of the clutch shoes.

Make sure that the bowl reaches its rated speed (as per name-plate of the separator) within its starting time and that this speed is maintained during operation (see 10.1.1 - 10.1.2).