

NEW

LR-ROTOR

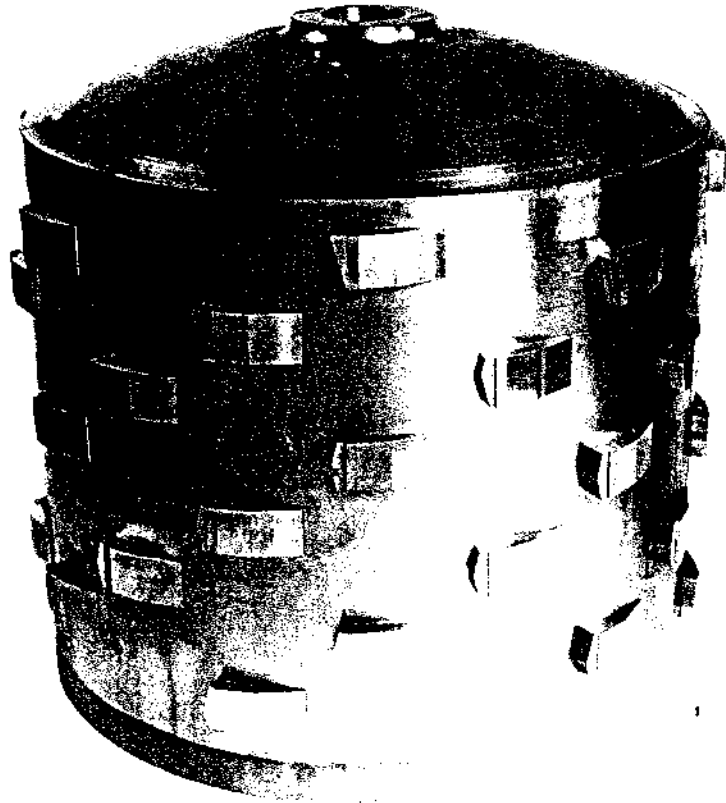
Ahlstrom's new LR-rotor is especially designed to comply with the variations that occur inside the screen in the **stock** quantity, stock density and amount of impurities.

The rotor is especially adapted for the screening of secondary stocks and chemical pulps. It is possible to run accept consistencies up to 4.0 %.

In the upper part of the LR-rotor the ... foils are of a feeding nature, whereas in the middle they are neutral and in the lower part opposed to the flow direction.

When the old type rotor is being replaced by the new LR-rotor it is possible to increase the capacity of one single screen by more than 50 % as is shown by the diagrams below.

Moreover, the LR-rotor essentially contributes to the cleanliness of

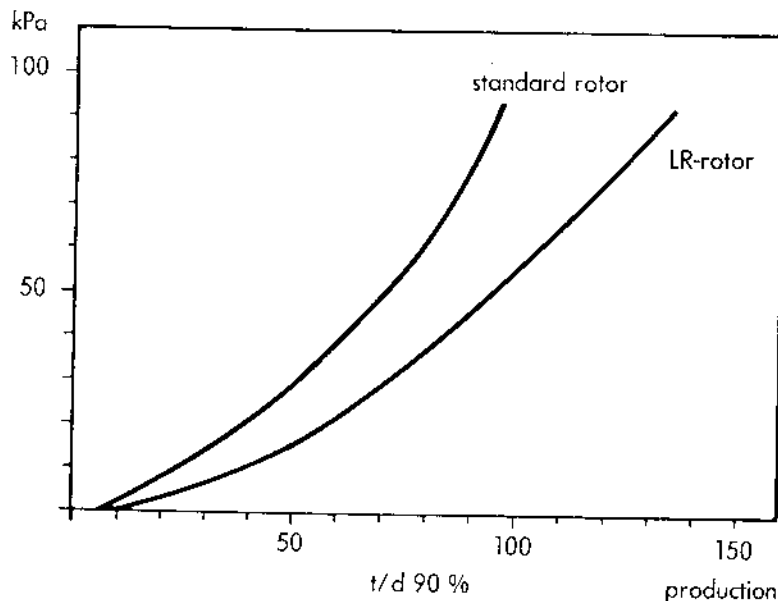


stock. Thus by maintaining stable process conditions a 12.0 to 14.0 % improved cleanliness is achieved.

The new LR-rotor is also easy to install into the Centrisorter-type screens already in operation.

THE CAPACITY OF SORTER M 200 VS. PRESSURE DIFFERENCY

pressure difference





SORTER M200
Machine book

Purchaser	Ahlstrom C & V Inc./ James River P.O. # 70235T PARCHEMENT, MI	
Year of manufacture	1990	
Manufacture No. of the screen	902	
Karhula work No.	N425600	
Order No.	AST-0011A-10	23.10.1990

The above mentioned information has always to be given in all
correspondence as well as in the orders of spare parts.

A. AHLSTROM CORPORATION
AHLSTROM MACHINERY
Fiberline processes

LIST OF PARTS

DRAWING
KRR10169A1

DESIGNATION
SORTER M 200
MADE BY
KCH

DRAWING KC-45867
SHOWS THE UNIT AND THIS
(SPACE) PARTS LIST.

DATE
12/3/90

<u>PART</u>	<u>PC.</u>	<u>DRAWING/PN</u>	<u>DESIGNATION</u>	<u>SFS#</u>	<u>MATERIAL</u>
1	1	KRF10299K1-A	CASE		
2	1	KF100472K1	BASE PLATE		
3	1	KR100441K1	BEARING FRAME		
4	1	KF201341K1-A	ROTOR		
5	1	KF200036K1	COVER		
6	1	KF200039K1	FASTENING RING		
7			MOTOR STATIVE 365T (not included)		
8	1	KF200075K1	PLATE		
9	1	KF300504K1-B	SEAL WATER DEVICE		
10	1	KF200755K1	STUFFING BOX		
11	1	KF200095K1	BEARING HOUSING		
12	1	KF200096K1	BEARING HOUSING		
13	1	S-1000K1	SHAFT		
14	1	KF200523K1	LUBRICATION HOSES		
15	1		SCREEN PLATE		
16	1	55V1180E	BELT PULLEY		
17	1	55V900E	BELT PULLEY		
18	1	KF300560K1-A	SIGN		
20	1	KF300084K1	SEAL CRANE		
21	1	KF302677K1-A	BEARING HOUSING COVER		
22	1	KF300085K1	BEARING HOUSING COVER		
23	1	KF300086K1	PROTECTIVE PLATE		
24	1	KF400416K1	COVER		
25	1	KF400684K1	SIGN		
26	1	KF401112K1	SIGN		
27	1	KF400154K1	SEALING WATER COVER		
28	1	KF400155K1	SHAFT SLEEVE		
29	1	KF400156K1	THROWING RING		
30	1	KF400157K1	THROWING RING		
31	1	KF400158K1	PRESSURE PLATE		
32	1	KF400159K1	SUPPORT RING		
33	1	KF400160K1	INTERMEDIATE RING		
34	1	KF400161K1	INTERMEDIATE SLEEVE		
35	1	KF400055K1	GASKET 1.5XD380/310		
36	1	KF400052K1	GASKET 1.5XD305/270		
37	1	KF400162K1	GASKET 1.5XD63/55		
40	1	KF400726K1	DIRECTION ARROW		
41	5	5VX900	V-BELT		
42			EL.MOTOR 365T 75 HP 1760 RPM (NOT INCLUDED)		
43	2		BEARING 7313 BG		
44	1		BEARING 6313		
45	2		SHAFT NUT N13		
46	2		LOCK WASHER W13		
47	1	KF300630K1	RING		

LIST OF PARTS

 DRAWING
 KRF10169A1

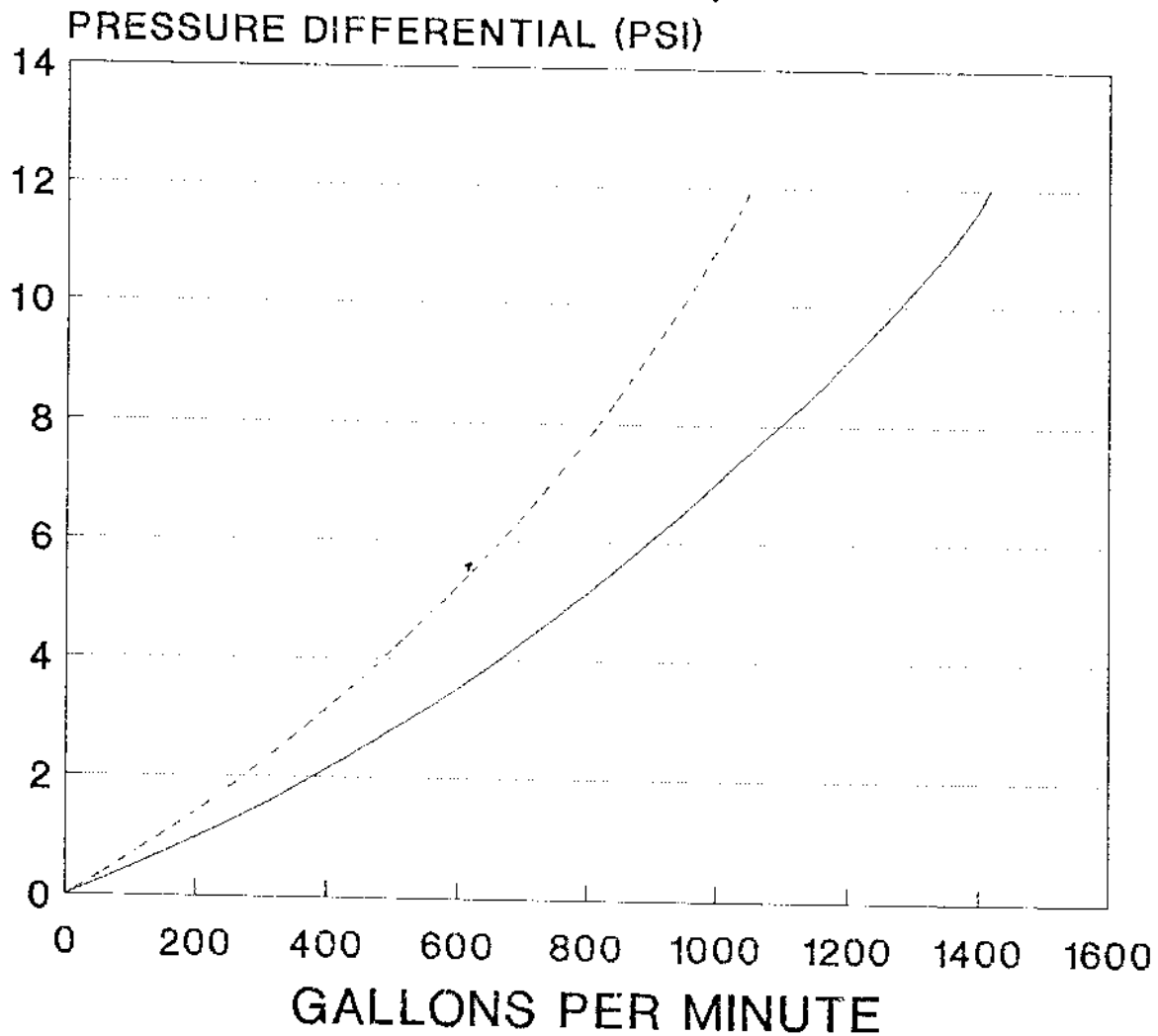
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 SORTER M 200
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 DATE
 12/3/90

<u>PART</u>	<u>PC.</u>	<u>DRAWING</u>	<u>DESIGNATION</u>	<u>SFS#</u>	<u>MATERIAL</u>
48	1		SEALING RING A 70X90X10	DIN3760	NB
49	1		O-RING 5X1750		RUBBER
50	1		O-RING 54,3X3	SMS1586	NBR
51	3		KEY RING 55X62		
52	1		SCREW M16X250/150		
53	12		STUD BOLT M16X50		A4-80
54	5		HEX. HD. SCREW M20X40	2064	8.8ZNA2
55	4		HEX. HD. SCREW 5/8"UNCX3"LG.		
57	3		HEX. HD. SCREW M10X25	2064	8.87NA2
58	4		HEX. HD. SCREW M10X40	2063	A4-80
59	4		HEX. HD. SCREW M10X20	2064	A4-80
60	12		HEX.SOC.HD.CAP SCREW M16X50	2219	8.8ZNA
61	8		HEX.SOC.HD.CAP SCREW M16X70	2219	A4-80
62	4		HEX.SOC.HD.CAP SCREW M12X40	2219	A4-80
63	12		HEX.SOC.HD.CAP SCREW M10X30	2219	8.8ZNA2
64	8		HEX.SOC.HD.CAP SCREW M10X40	2219	A4-80
65	12		HEX.SOC.HD.CAP SCREW M10X30	2219	A4-80
66	6		CHEESE HD. SCREW M5X8	2176	A4-50
67	14		CHEESE HD. SCREW M3X8	2176	A4-50
68	12		HEX. NUT M16	2067	A4-80
69	4		HEX. NUT 5/8" UNC		8ZNA2
70	4		WASHER 22	2041	FEZNA
71	1		KEY .5X.5X3.5		
73	1	KF400203K1	PROTECTIVE COVER		
74	1	KF400204K1	SEAL 1.5XD100/62		
75	4		HEX.SOC.HD.CAP SCREW M12X40	2219	8.8ZNA2
76	4		HEX.SOC.HD.CAP SCREW M8X25	2219	A4-80
77	1		SLEEVE E SERIES 2-3/8" Ø BORE (1/2" HEX.HD.SCREWS INCLUDED)		
78	1		SEALING 2X110/70		KLINGERIT
79	1		O-RING 74,2X5,7 UNC	SMA1586	NBR
80	2		SCREW M6X10 SFS 4738		45H
81	1		SLEEVE E SERIES 2-1/8" Ø BORE (1/2" HEX.HD.SCREWS INCLUDED)		
83	2	KF300475K1	GUARD		
84	1	KF300476K1	GUARD		
85	2		HEX. HD. SCREW M16X150	2064	8.8ZNA2
87	17		HEX. HD. SCREW M8X16	2064	8.8ZNA
88	2		HEX. HD. SCREW M10X60	2063	A4-80
89	1	KF400604K1-A	SIGN		
90	1	KF300978K1	GUARD		
91	4		HEX. HD. SCREW M8X12	2064	8.8ZNA2
92	1	KF200886K1	COVER HOISTING MECHANISM		

AHLSTROM C&V SORTER M200/LR BELOIT SECONDARY SCREEN



APERTURE SIZE

— 0.010 PROFILE SLOTS - - - 0.008 PROFILE SLOTS



A. AHLSTROM CORPORATION
Fiberline Processes

SORTER M 200 AND 400
INSTRUCTIONS FOR OPERATION
AND MAINTENANCE

2-6948502

1(11)

CONSTRUCTION AND OPERATION OF THE SORTER

As the cross section drawing indicates, the pulp is pumped through the Sorter inlet pipe into the gutter on the frame where heavy reject particles, such as random iron pieces, are immediately separated. Freed from these heavy particles the stock flows over the inlet baffle into the screening space between the rotor and the fixed screen plate. Due to the pressure difference the accept passes through the screen plate, whereas the reject flows into the reject gutter.

The Sorter is driven by an electric motor provided with V-belt transmission.

The rotor, the core of the Sorter, rotates at a high speed and gives the stock a high-frequency vibration which keeps the stock in liquid form and its consistency even. This keeps the fibres properly separated and suspended.

If, in the future, you will decide to use the Sorter for some other purpose than the original one, we recommend that you consult A. Ahlstrom Corporation to make sure that the Sorter is suitable for this new application.

INSTALLATION AND OPERATION

SCREEN The Sorter is delivered in working order, but without motor. A motor stand constructed according to the dimensions of the motor supplied by the customer is installed to the Sorter. The height of the Sorter is given in the dimension drawing, also the space needed when removing the rotor and the bearings.

The foundation can be made of either concrete or structural steel. An adequate drainage from inside the base should be provided.

Refer to the foundation drawing for the size, number and location of the foundation bolts. The use of 2" plastic pipe will ensure the proper alignment of the foundation bolts.



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2(11)

Use ropes for lifting the Sorter. DO NOT USE THE LIFTING EYES ON THE COVER EXCEPT FOR LIFTING THE COVER ITSELF.

The machine is balanced by using the machined surface as reference surface. The screen can be completely drained during a shutdown, provided that it is exactly in the right position.

The drive belts are stretched with screws on installation. Avoid over-stretching. After one or two days of operation, check the belts and take up any looseness that may occur. After this the belts need not normally be further adjusted, but it is recommendable to check them periodically.

PIPING

The screen is connected to the piping according to the approved piping installation drawings.

INLET AND OUTLET PIPING

These pipes are equipped with stock valves which are mainly used as shut-off valves. Only the accept valve is used for flow regulation. The inlet valve must not be used for throttling.

On multiple installation of several units, individual throttling should be avoided by forming the inlet and outlet header tapered or stepped to even out the flow distribution and velocity. The Sorter inlet and outlet pipes should be designed so that air does not accumulate in the screen or the piping.

REJECT PIPE

The reject pipe should be equipped with a reject valve with automatic control. A drain pipe through which the water flows out during washing is connected to the (FIC) pipe near the screen. Where resetting of the reject valve is undesirable, a gate valve can be used as shut-off valve.

Pipe connections must be even.

JUNK TRAP

The trap consists of a 90o pipe elbow fastened to the flange and a system which includes a gate valve and a shut-off valve with an about 600 mm straight pipe line between them. The discharge occurs periodically through the pipe coming from the shut-off valve to the drain.

AIR DISCHARGE PIPE

The air discharge pipe on the screen cover is equipped with a flexible rubber or plastic hose. Air can be discharged periodically through the shut-off valve on the air pipe. This is necessary mainly during starts-up and shutdowns. If air is to be discharged continuously, take the other end of the hose to the Sorter supply vat.

SCREEN PLATE DILUTION

A connection for screen plate dilution is located on the side of the screen. Screen plate dilution is used for stock which has a high supply consistency and in cases separately agreed on with the screen supplier. This is not included in a normal delivery unless otherwise agreed.

FILLING AND DRAIN CONNECTIONS FOR FRESH WATER

A pipe connection for these pipes is on the outlet side of the screen for draining, back-flushing and filling of the screen before start-up. The drain pipe should be extended to the floor to prevent splashing in the vicinity of the drive belts. The top casing can be drained through the junk trap. The screen space can be drained either through the reject pipe or the reject discharge valve.

DILUTION WATER CONNECTION

A dilution water connection located opposite the reject discharge opening can be used if dilution is necessary. It may also be used for filling and flushing the Sorter before shut-down.

START-UP

1. Open the seal water valve and adjust the flow to 0.05 l/s. The feed pressure of the seal water must be 150 kPa higher than the maximum feed pressure of the stock. The pressure of the seal water going to the mechanical seal must be 10% higher than the working pressure of the Sorter. The seal water pressure cannot exceed the maximum working pressure of 500 kPa.
2. Close the air valve on the top part of the screen.
3. Start the screen motor.
4. Adjust the reject valve to desired flow. It should be 2/3 open at start-up. Open the accept valve abt. 20%. Open the reject dilution valve 30%.
5. Open the inlet valve.
6. Start the feed pump.
7. Set the accept valve to desired flow, the inlet valve being fully open.
8. Discharge air from the screen through the valve in the top part. Close the valve.

The pressure drop in the screen varies depending on the perforation of the screen cylinder, flow and consistency. An increase of flow or consistency increases the pressure drop. The blinding of the screen results in a violent increase of the pressure drop. To remedy this the accept valve should be closed and the screen should rotate until the pressure has dropped to its original value. This usually cleans the clogs. If the screen under abnormal conditions becomes so badly clogged that operation must cease, it is necessary to remove only the cover and flush the screen. The rotor and the screen cylinder need not be removed, if the screen cylinder holes are open.

It is not recommendable to run the screen with a small flow as it results in precipitation of fibres and an increase of the stock consistency in the reject space due to the loss of water. This may cause the blinding of the screen cylinder or the plugging of the reject pipe. The minimum flow varies depending on the cylinder size, stock type, consistency, etc.

If the flow is small or if the reject stock consistency is too high as for operation, dilution water can be added in order to reduce reject consistency. Use dilution water only, enough to keep the reject consistency acceptable in view of the secondary or reject stage supply.

SHUTDOWN PROCEDURE

1. Close the inlet and accept valves while the screen is running and stop the feed pump.
2. Open the fresh water or white water valve.
3. Close the reject valve after flushing the screen through the reject dilution valve.
4. Stop the screen motor.
5. The Sorter can now be drained by opening the drain pipes and reject pipe which start from the outlet pipe. This permits air to flow inside through the air discharge pipe in the cover.
6. The seal water valve can now be closed.

LUBRICATION

The Sorter is designed for high rotational speeds and continuous operation. To ensure trouble-free operation and maximum bearing life it is essential to carefully follow the proper lubrication schedule.

The drive shaft is mounted on antifriction bearings which have been lubricated with Mobilux EP2 at our workshop in Karhula exactly in accordance with the assembly and part drawings. The amount of grease needed is given on the lubrication instruction plate attached to the lubrication hose collector board. Each bearing should be lubricated with this amount once every three weeks.

Other recommendable lubricants are:

Shell Alvania Grease R2
Esso Beacon
BP Energrease LS2

MAINTENANCE

The Sorter, if maintained according to instructions, will require very little attention from the operating personnel.

CRANE

It is recommendable to install a crane moving on rails above the screen for lifting the rotor.

INSPECTION AND MAINTENANCE OF SEALS

The shaft seal should not be disassembled unless an excessive leakage is evident. Any leakage of the seal may be detected by water or stock falling onto the protective plate.

Should it become necessary to disassemble the shaft seal, use the following procedure:

Sorter m. 400

1. Remove the case cover. Remove the guard cover on the rotor hub.
2. Unscrew the fastening nut for the rotor.
3. Pull the rotor off the shaft by turning the guard cover upside down and by turning the screws through the holes in the guard cover to the rotor hub. The rotor is equipped with two tapped holes for lifting eyes.
4. Remove the screws which hold the seal casing to the bearing frame.
5. Disconnect the seal water hose from distributing board.
6. Carefully remove the entire seal assembly. The groove inside the seal sleeve may be used with a puller or a pry bar.
7. The seal may now be disassembled completely.



8. All seal parts can now be inspected.

Once the seal assembly is completely disassembled, the ceramic and carbon seals should not be reused. Do not remove the rubber bellows from the seal unless it is necessary to change them.

A shaft seal assembly drawing gives full instructions on its assembly. NOTE! Press ceramic and carbon seals very carefully to the ground surface. Keep the seals clean at all times and handle them very carefully to prevent breaking.

Sorter m. 200

1. Remove the case cover. Remove the guard cover on the rotor hub.
2. Unscrew the fastening nut for the rotor.
3. Pull the rotor off the shaft by using an extractor. The screws are turned through the extractor into the tapped holes of the rotor. The rotor is equipped with two tapped holes.
4. Remove the screws which hold the seal casing to the bearing frame.
5. Disconnect the seal water hose from distributing board.
6. Carefully remove the entire seal assembly. The groove inside the seal sleeve may be used with a puller or a pry bar.
7. The seal may now be disassembled completely.
8. All seal parts can now be inspected.

Once the seal assembly is completely disassembled, the ceramic and carbon seals should not be reused. Do not remove the rubber bellows from the seal unless it is necessary to change them.

A shaft seal assembly drawing gives full instructions on its assembly. NOTE! Press ceramic and carbon seals very carefully to the ground surface. Keep the seals clean at all times and handle them very carefully to prevent breaking.

**CLEAN-UP**

In mills with slime difficulties, remove the screen plate at times and flush the inner chambers thoroughly with high pressure hoses.

It is not necessary to open the Sorter where hot liquor can be circulated through the system. When the hot liquor is circulating, the Sorter motor is kept running and the reject valve closed. After the liquor circulation, carry out a thorough flushing with water. It is possible to isolate the screen from the piping with shut-off valves and clean only the screen with liquor, if required. Now the screen may be filled through any of the drain pipes. In mills where a thorough cleaning is not done within a reasonable period of time, it is recommendable to fill the screen with water during shutdowns to prevent hardening of additives, slime, etc.

DISASSEMBLY OF SCREEN FOR CLEAN-UP

Refer to assembly drawing and part list.

1. Shutdown procedure according to instructions.
2. Attach a warning tag to the power supply.
3. Disconnect the hose from the air discharge pipe, if necessary.
4. Remove the screen plate dilution nozzle from the screen drum.
5. Remove the cover.
6. Loosen the screen drum fastening ring.
7. Remove the screen drum. There is conical fitting at the bottom end of the screen drum, so it should come off easily. Remove the guard cover on the rotor hub.
8. Unscrew the fastening nut for the rotor. Pull the rotor out of the shaft by turning screws through the holes in the guard cover to the rotor hub. The rotor is equipped with two tapped holes for lifting eyes.

All internal parts can now be washed and inspected.



When installing the screen cylinder fastening ring, take care to ensure that it is pushed into its place evenly to make the fitting press the screen cylinder evenly from each side.

NOTE! Do not tighten the screen cylinder fastening ring too much so as not to damage the screen cylinder.

MAINTENANCE OF BEARINGS

The Sorter is equipped with two anti-friction bearings which have been selected to give extra long life. They must not be removed unless necessary. If the bearings must be replaced, use the following procedure:

1. Unfasten the V-belts.
2. Remove the screen cover.
3. Remove the screen plate diluting nozzle from the screen cylinder.
4. Unfasten the screen cylinder fastening ring.
5. Remove the screen cylinder.
6. Unfasten the fastening nut of the rotor.
7. Remove the rotor.
8. Disconnect all hoses from the distribution board.
9. Unscrew the screws holding the bearing frame to the stand. There are holes at the bottom for this purpose.
10. The entire rotating assembly can be lifted off with eye screws fastened to the shaft.
11. Remove the stuffing box unit using the procedure described above.
12. Remove the screws which hold the top and bottom bearing housings to the bearing frame.

REMOVING THE BOTTOM BEARING

1. Remove the protective plate.
2. Remove the lower splash ring, if there is one.
3. Remove the bottom cover of the bearing.
4. Unfasten the upper splash ring and move it up along the shaft.
5. Unfasten the bearing cover fastening bolts and move the cover upwards along the shaft.

The bottom bearing can now be inspected. Do not remove the bearing from the shaft, unless it is necessary to replace it. Since the bearing has a shrink fit on the shaft, it will be necessary to press the bearing off from the shaft. Once the bearing has been removed it must be replaced with a new one.

CAUTION! If a new bearing is placed in the bottom bearing housing, carefully follow the instructions below:

1. Apply grease exactly as instructed in the assembly and part drawings.
2. Add Permatex onto the inner edge of the seal when assembling it with the bearing cover as in assembly and part drawings.
3. After the assembly, add Permatex into the groove above the upper splash ring.

REMOVING THE TOP BEARING

1. Unfasten the splash ring for the top bearing.
2. Unfasten the top bearing cover.

The top bearing can now be inspected. Do not remove the bearing from the shaft unless it is necessary to replace it. Because this bearing, too, has a shrink fit on the shaft, it must be pressed off from the shaft. Once the bearing has been removed, it should be replaced with a new one.



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After the Sorter has been taken into operation it requires very little attention under normal operation conditions. The following routine inspections are recommended:

ONCE A SHIFT

1. Check the pressure drop in the screen.
2. Check the seal and the cooling water pressure after the filter.

WEEKLY

1. Empty the junk trap in the top part of the screen.
2. Let air out of the Sorter through the air discharge pipe on the screen cover.

EVERY THREE WEEKS

Grease the top and bottom bearing. The bearings should be greased with the amount given in the lubrication instructions.

MONTHLY

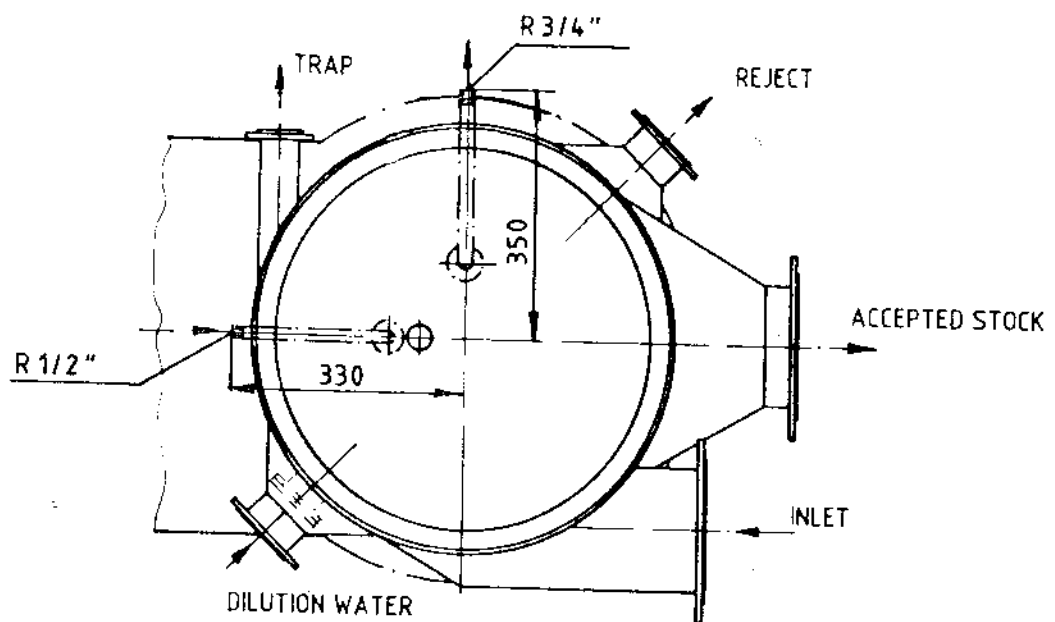
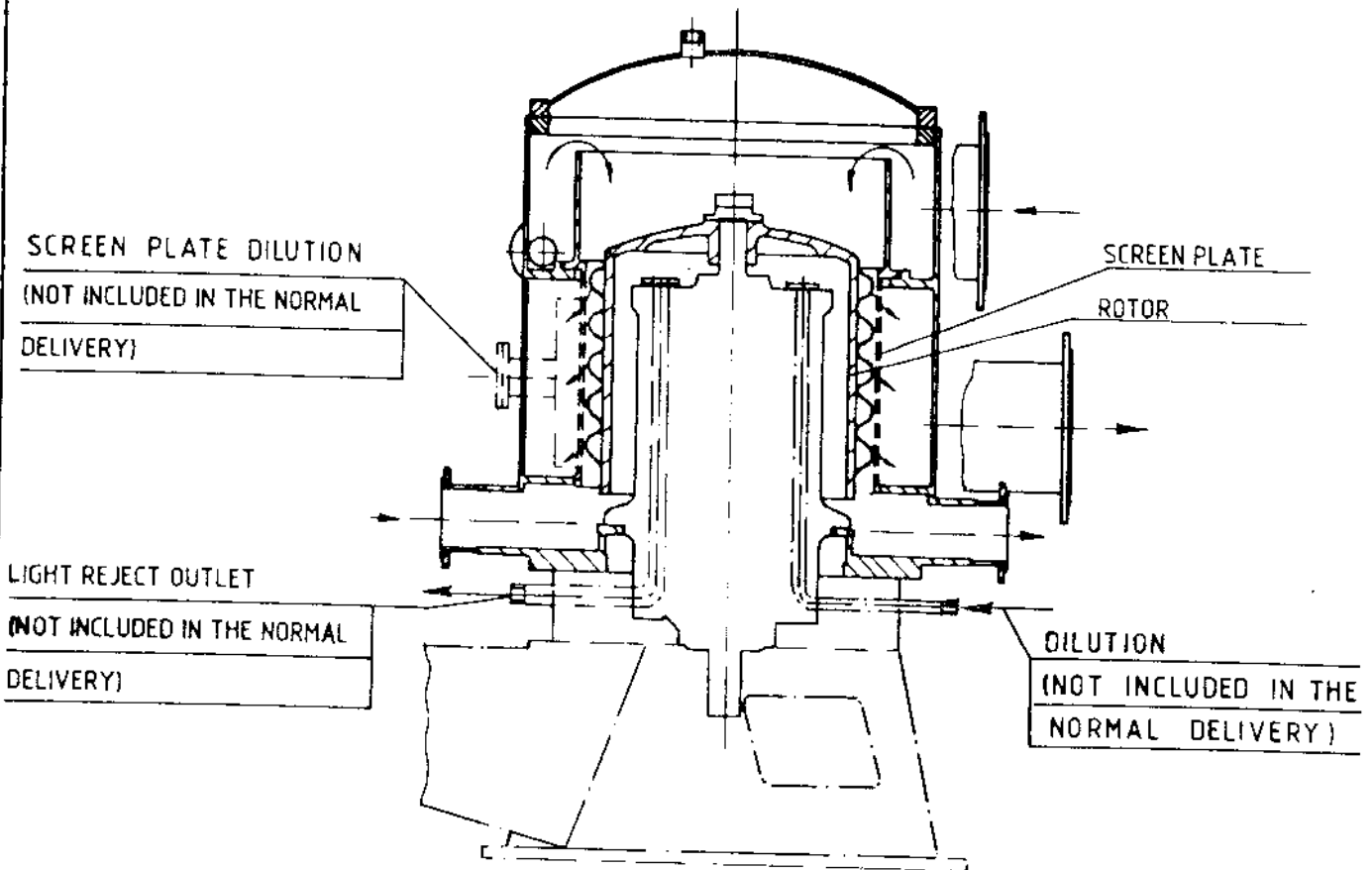
Check the tightness of the V-belts.

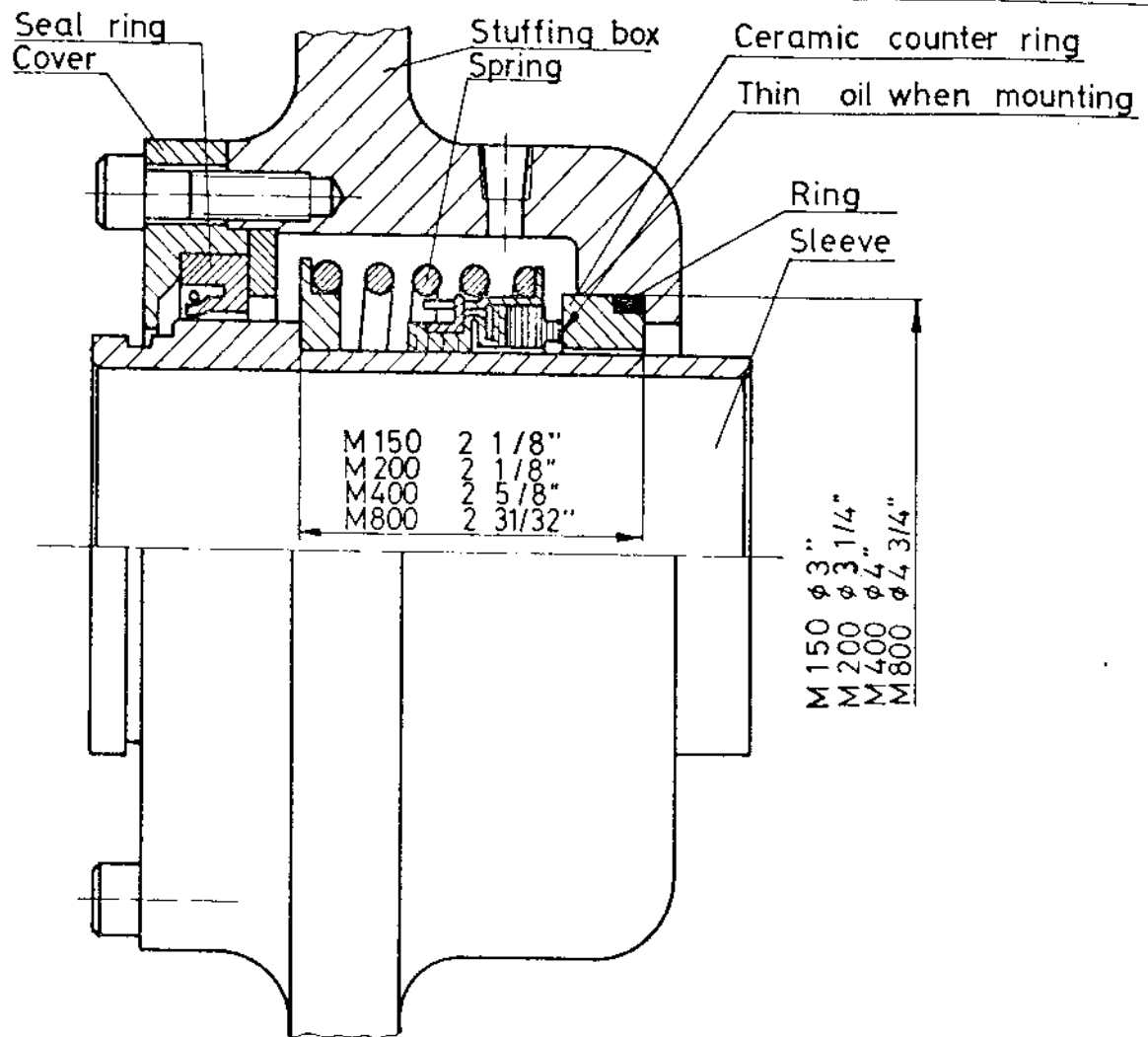
ONCE A YEAR

Only the bottom bearing is cleaned once a year.

LIGHT REJECT OUTLET

KF401525



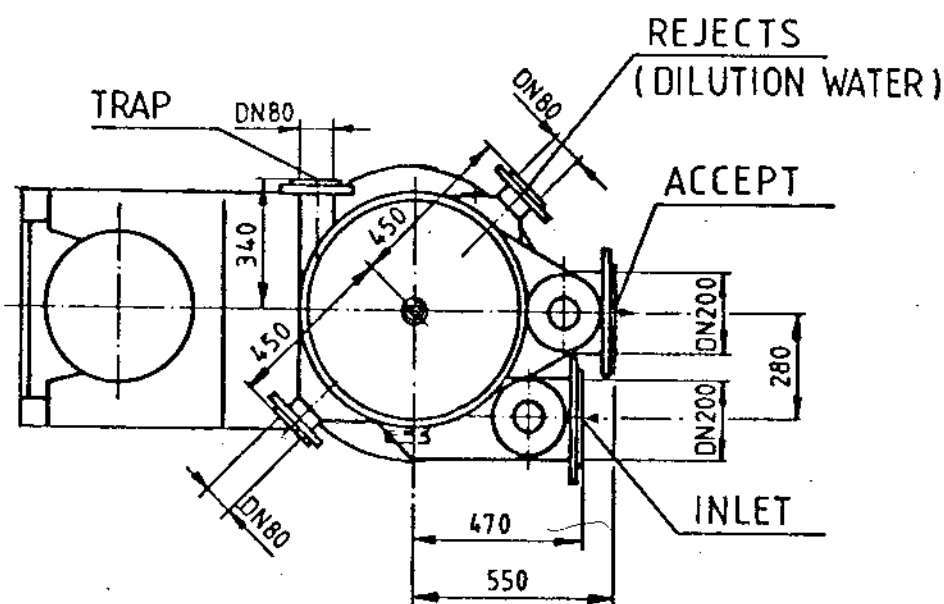


Mount ceramic counter ring with o-ring into stuffing box. Lubricate ceramic counter ring and sleeve with thin oil and mount shaft seal parts around sleeve. Glue carbon ring onto rubber bellow. Clean bellow part before glueing. Sleeve and bellow are to be mounted into stuffing box before glue dries. After this mount seal ring onto upper end of sleeve and mount cover by means of screws. Let bellow and carbon ring set for 30mins before opening seal water valve or starting motor.

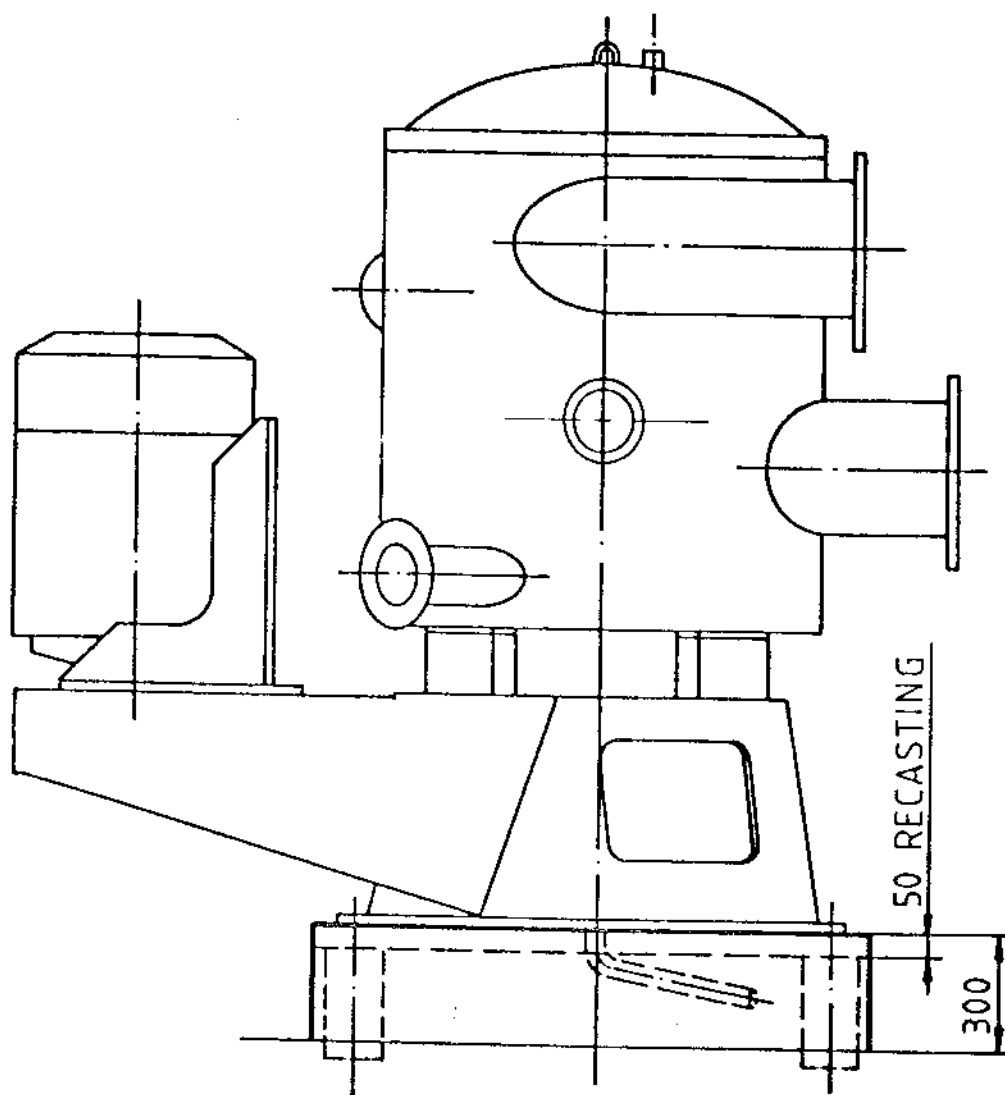
Note:

Sleeve and rotor should be mounted within a short period of time to allow sleeve and rubber bellow to set in their places in view of each other.

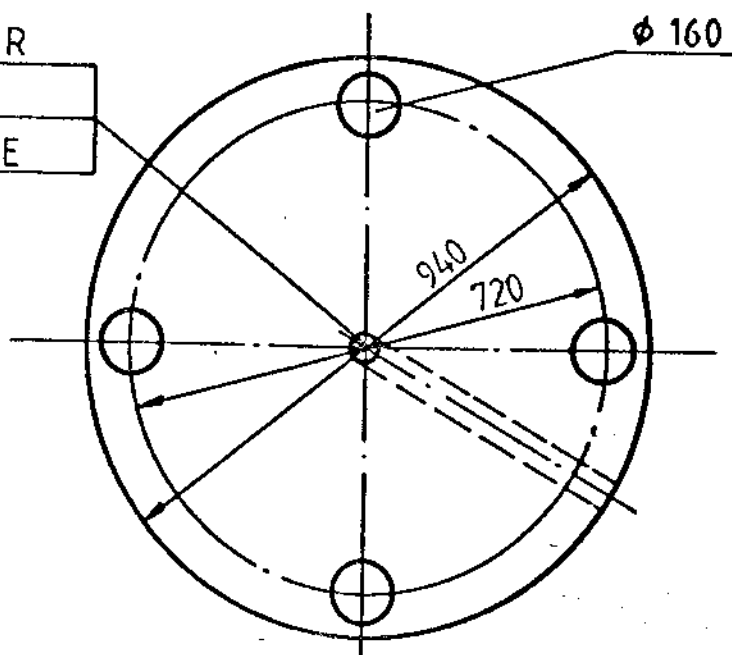
After the shaft seal has been installed into the sorter, but the rotor is not yet in its place, push the shaft seal sleeve down to check the assembly. It must move downwards about 1,5 - 3,0mm. If the sleeve does not move downwards, the entire seal assembly must be rechecked.

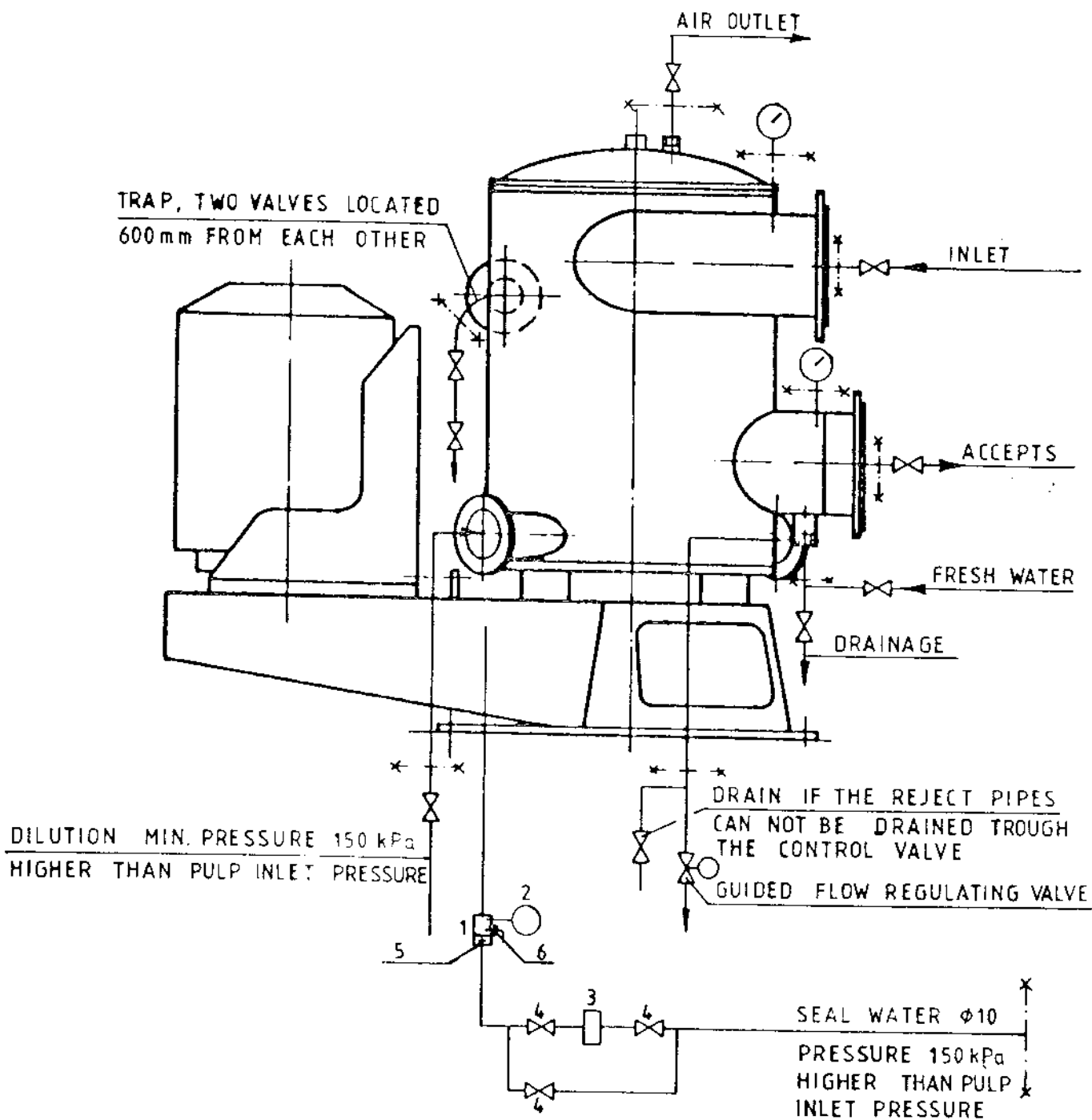


FLANGE DIN PN 10
LOWER MOTOR BEARING TYPE NU
MAX. WORKING PRESSURE 5,0 BAR
TOTAL WEIGHT FILLED WITH STOCK ~1500 KG
THE OPENINGS FOR DEFECT DILUTION WATER



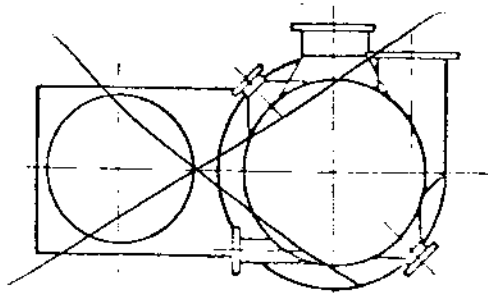
50 mm PLASTIC OR
STEEL PIPE FOR
WATER DISCHARGE



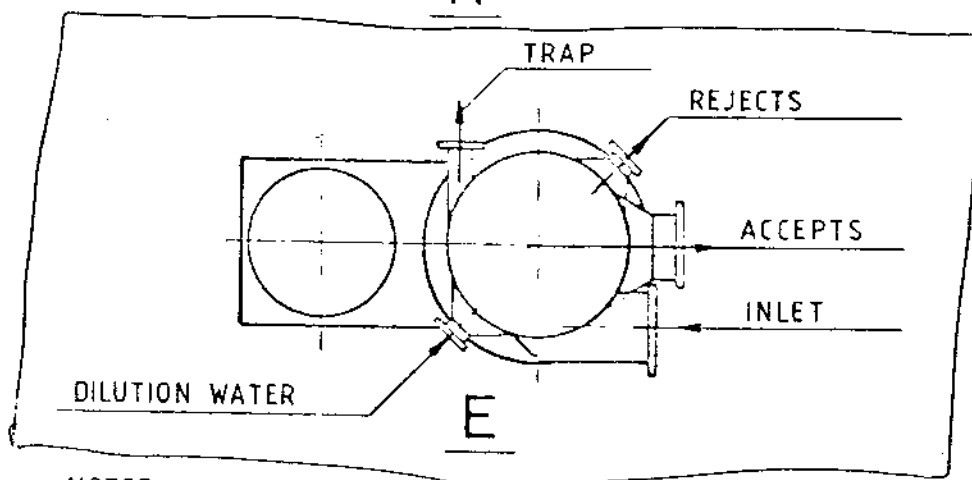


SEAL WATER ASSEMBLY

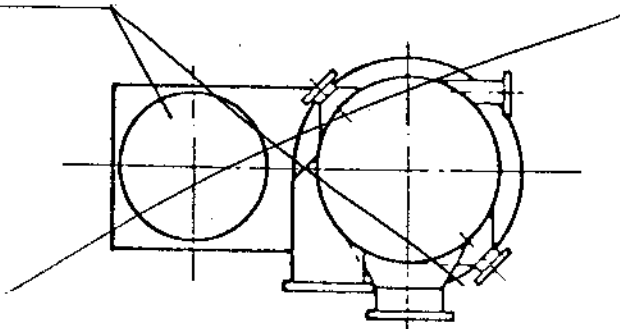
1	ROTAMETER
2	MANOMETER
3	FILTER 40 mesh.
4	VALVE
5	REGULATING VALVE
6	FLOW SWITCH



N



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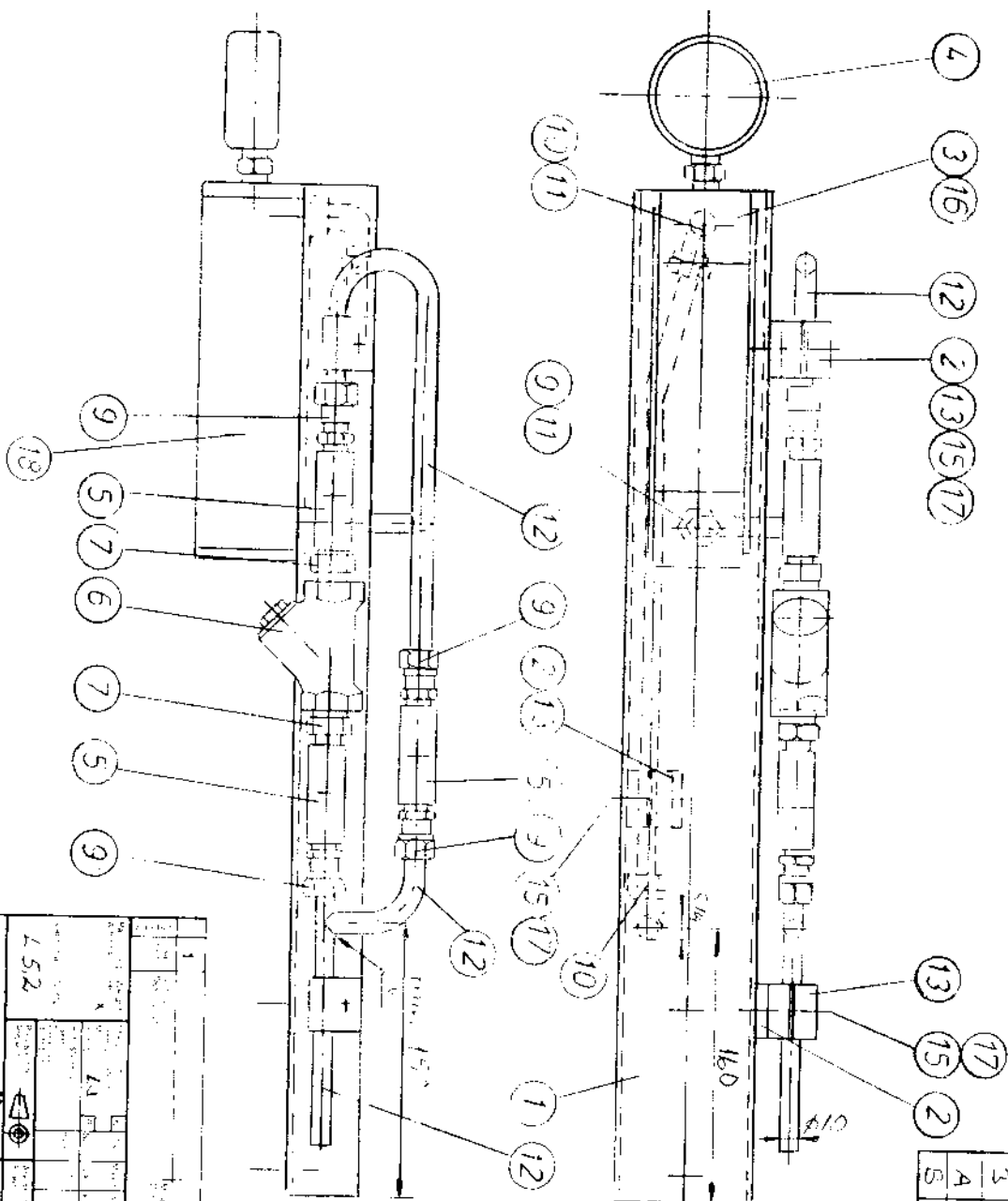


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Ergebnisse des Kautschuk-Finanz



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2

[illegible]

DRAWING DESIGNATION
KF300504K1-B SEAL WATER DEVICE
WORK MADE BY
TAAVITSAINEN VEIJO

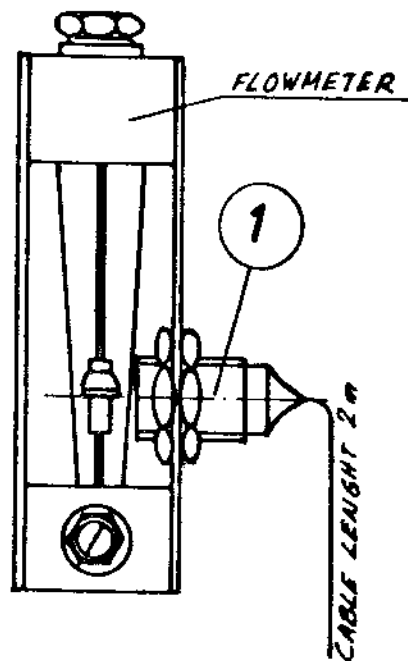
WEIGHT/KG
5
DATE
02.09.1985

22

PART NO.	DRAWING	DESIGNATION	MATERIAL
1	1	KF300503K1-A MOUNTING STAND	
2	3	KF400523K1 INTERMEDIATE PIECE	
3	1	ROTAMETER VDK-3 KA-D	
4	1	PRESSURE GAUGE WIKA 213.63.10A	
5	3	BALL VALVE R 1/4"/8	2343
6	1	SLUDGE SEPARATOR R 1/2 40 MESH	2343
7	2	RED. DOUBLE NIPPLE 1/2X1/4	2343
9	5	FITTING DL 10	DIN 2353 2343
10	2	FITTING 90 GL 10	DIN 2353 2343
11	2	REDUCING NIPPLE 1/2X1/4	2343
12	1	STEEL PIPE 10X1X900 D3-T3	DIN 2465 2343
13	3	FRAME 110 PP STAUFF	
14	1	CHEESE HD. SCREW M6X35	SFS 2176 A4-50
15	3	CHEESE HD. SCREW M6X40	SFS 2176 A4-50
16	4	CHEESE HD. SCREW M6X12	SFS 2176 A4-50
17	3	HEX.NUT M6	SFS 2067 A4-80
18	1	KF401976K1-B SENSOR	

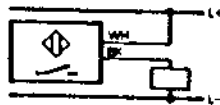
Design	Date	Approved	Used	Number	Material Sign	Revision	
HEI	25.10.-89			1	A	Muutettu	X
HEI	22.11.-90			1	B	Tehdy engl. kielenen osaluettelo	

23



connections

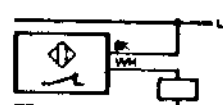
PNP switching
normally open



NPN switching
normally open



PNP switching
normally closed




NPN switching
normally closed



SIS 2093
DIN 8570
SIS 4001
DIN 7166

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						B			

TA 1 ITD Imperial NIM 0.7 mm

DRAWING DESIGNATION
KF401976K1-B SENSOR
WORK MADE BY
HARKONEN EIJA

WEIGHT/KG

DATE
11.08.1989

2A

PARTPC. DRAWING
1 1

DESIGNATION
SENSOR

MATERIAL

OPERATING VOLTAGE: 10-55 V DC (INCL.
RESIDUAL RIPPLE)

MAX. CURRENT LOAD CONTINUOUS: 400MA
SHORT CIRCUIT AND OVERLOAD PROTECTION
PEAK: 400 MA

VOLTAGE DROP: $-< 4,6V$

LEAKAGE CURRENT: $-< 0,5 MA$

MINIMUM LOAD CURRENT: 4 MA

PERMISSIBLE PEAK FROM THE MAINS:

MAX. 1000 V/10 MS AT A SOURCE IMPEDANCE
OF 5KOHM

SWITCHING FREQUENCY: 200 HZ

SWITCHING STATUS INDICATION: LED

PROTECTION GRADE: IP 67

AMBIENT TEMPERATURE: -24 DEGREE C TO
 $+80$ DEGREE C.

NOMINAL SENSING RANGE SN: 15MM NON
FLUSH MOUNTABLE

REAL SENSING RANGE SN: SN $\pm 10\%$ REFERRED
TO A TARGET TO EN 50010

SWITCHING HYSTERESIS: $3\% - 15\%$ OF THE
SENSING RANGE

CORRECTION FACTORS (APPROX.)

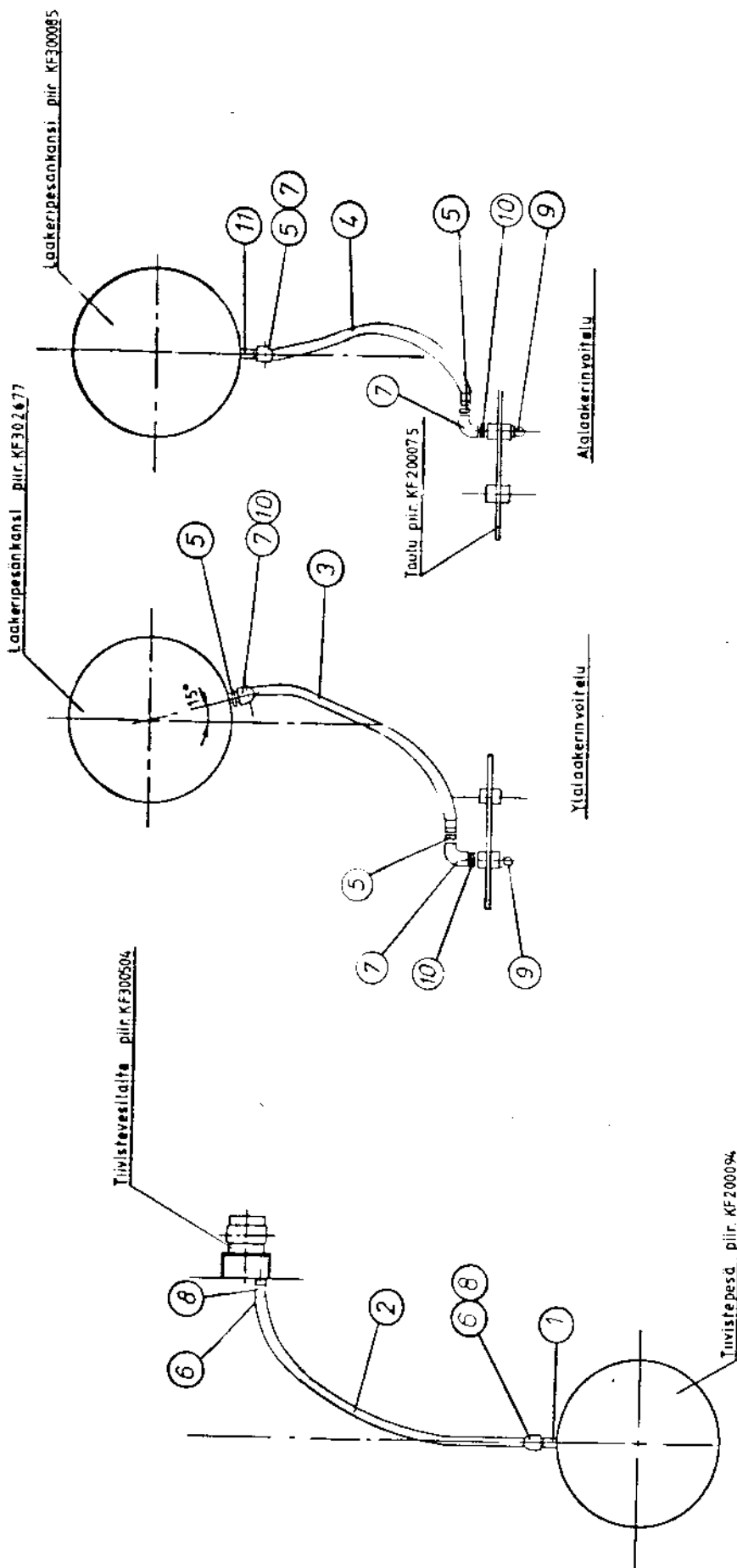
MILD STEEL = 1 ; STAINLESS STEEL = 0,7;

BRASS = 0,4; COPPER = 0,3

SWITCHING POINT DRIFT: $< \pm 10\%$ OF SR

HOUSING PLASTIC: POLYBUTYLENTERPHTH.;

METAL: NICEL-PLATED BRASS



Tiivistepäson vest

25

[illegible]

DRAWING DESIGNATION
 KF200523K1 LUBRICATION HOSES
 WORK MADE BY
 TAAVITSAINEN VEIJO

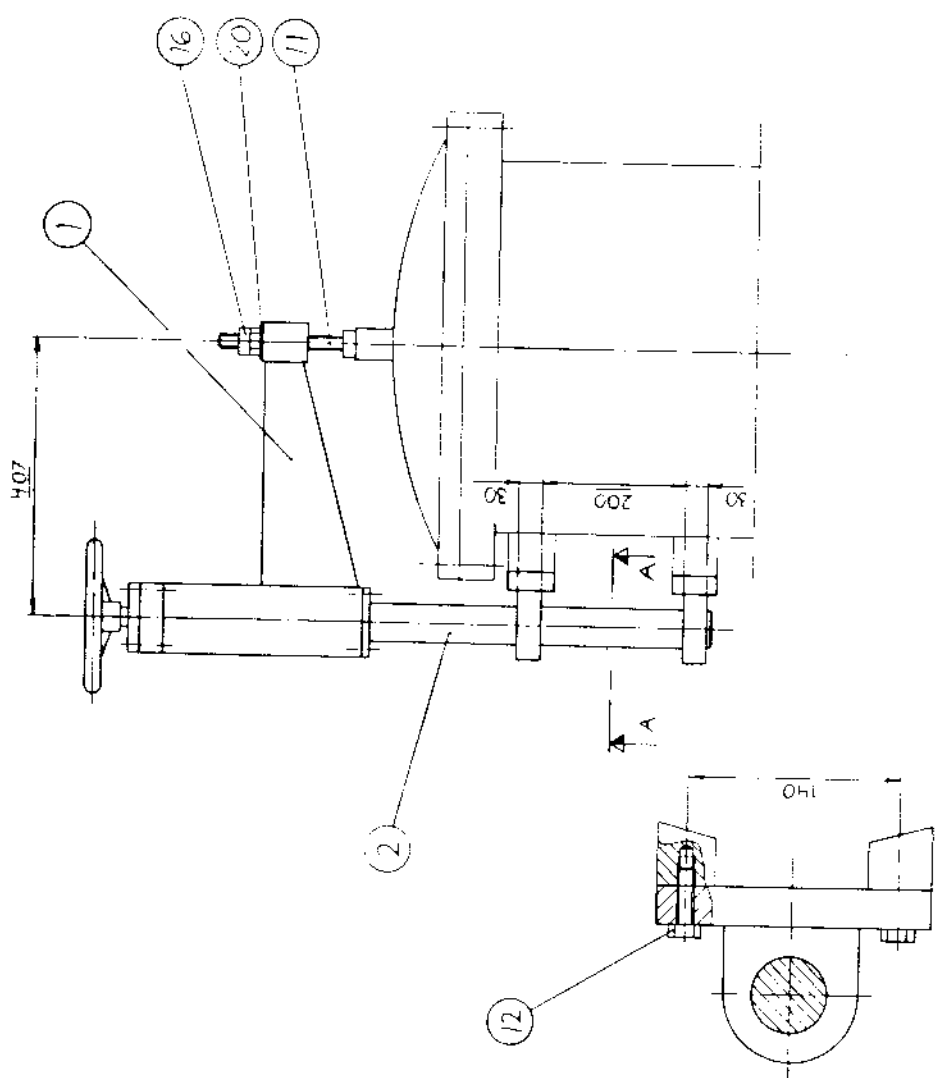
WEIGHT/KG
 4
 DATE
 10.02.1987

25

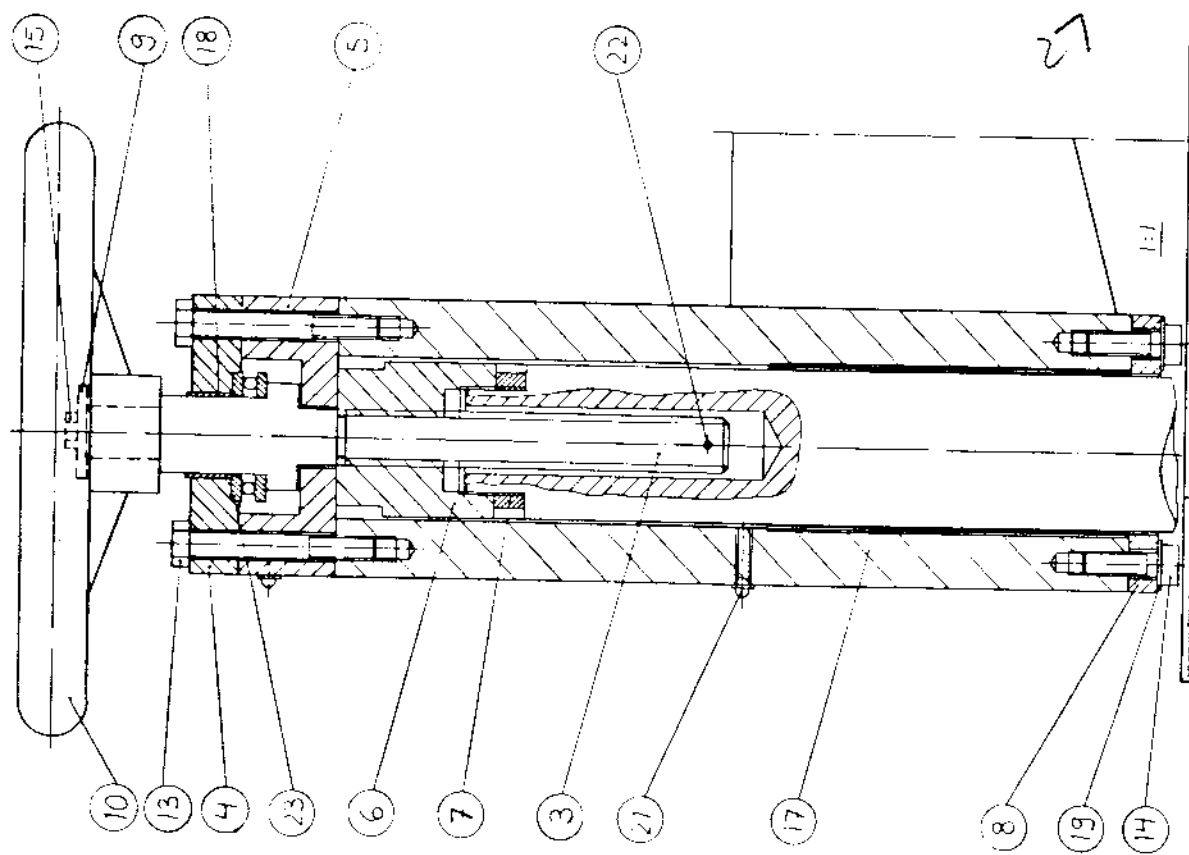
PART NO.	DRAWING	DESIGNATION	MATERIAL
1	1 KF400186K1	PIPE L=60	
2	1	HOSE 202-5/2651-5/202-5	L=1200
3	1	HOSE 202-5/2651-5/202-5	L=700
4	1	HOSE 202-5/2651-5/202-5	L=400
5	4	NIPPLE 135-2-4	
6	2	NIPPLE 136-4	
7	4	ELBOW 1/8	2343
8	2	ELBOW 1/4	2343
9	2	GREASE NIPPLE A R1/8	FEZNA
10	3	DOUBLE NIPPLE 1/8	2343
11	1 KF400642K1	PIPE	

DIN 71412

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A-A
1:25



AHLSTRÖM ENGINEERING WORKS KARKKALA KARKKALA FINLAND		Drawing No. KF200856 Date 20.10.1951 Scale 1:1 Author U. S. I. Checker U. S. I. Engineer U. S. I. Designer U. S. I. Drafter U. S. I. Finisher U. S. I. Inspector U. S. I. Material U. S. I. Quantity U. S. I. Unit U. S. I. Price U. S. I. Total U. S. I.
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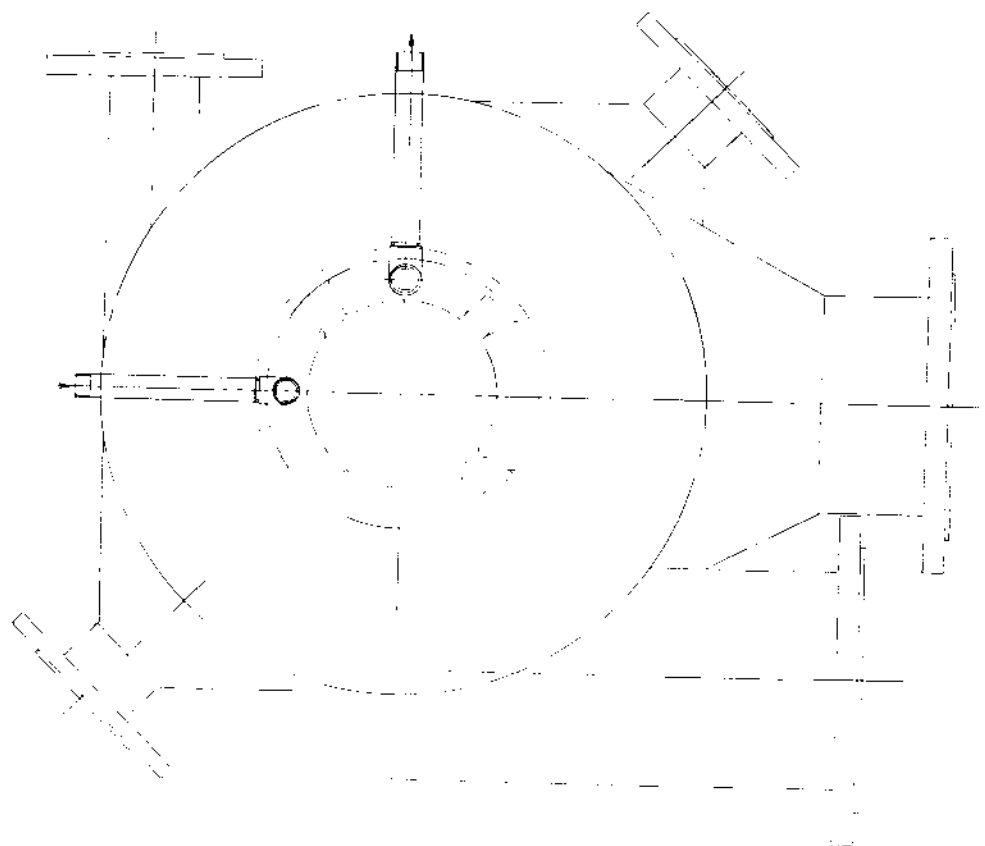
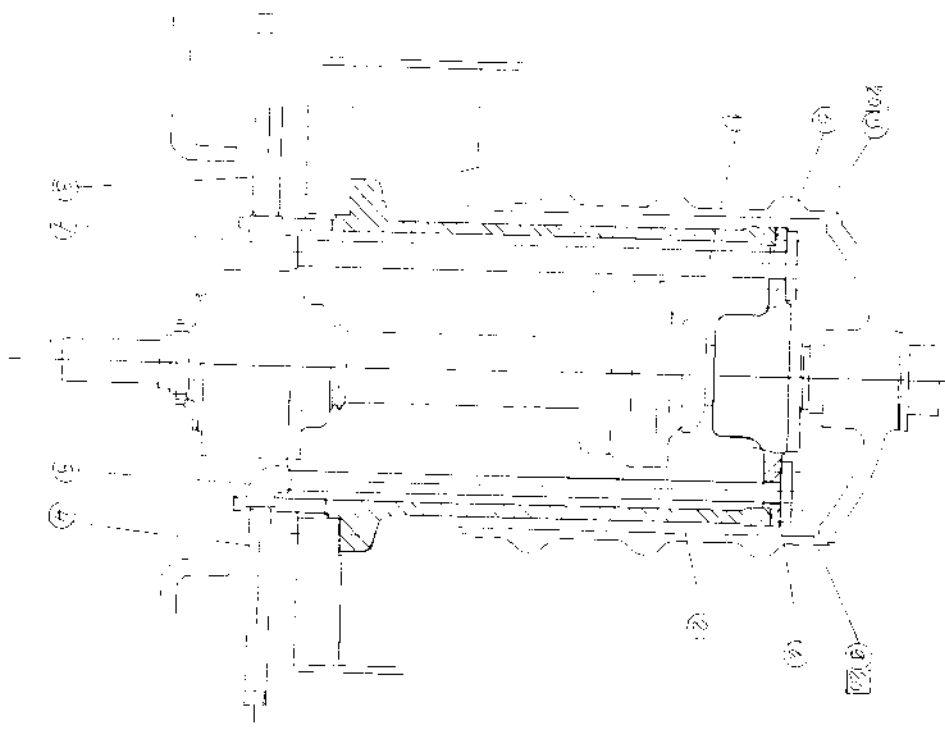
FIBERLINE

DRAWING DESIGNATION
 KF200886K1 COVER HOISTING MECHANISM
 WORK MADE BY
 INSU

WEIGHT/KG
 30
 DATE
 16.03.1988

23

PART NO.	DRAWING	DESIGNATION	MATERIAL
1	1 KF300967K1-A	SUPPORT	
2	1 KF300968K1	ROD	
3	1 KF300952K1	SCREW	
4	1 KF400903K1	COVER	
5	1 KF400904K1-A	FLANGE	
6	1 KF400905K1	NUT	
7	1 KF400906K1	NUT	
8	1 KF400907K1	FLANGE	
9	1 KF400908K1	WASHER	
12	8	HEX. HD. SCREW M12X45	SFS 2063 8.8ZNA2
13	6	HEX. HD. SCREW M8X60	SFS 2063 8.8ZNA
14	4	HEX. SOC. HD. CAP. SCREW M8X25	SFS 2219 8.8ZNA2
15	1	HEX. HD. SCREW M6X16	SFS 2064 8.8ZNA
16	3	HEX. NUT M20	SFS 2067 8ZNA2
17	2	BEARING SLEEVE MB 50 60 DU	
18	1	BEARING SLEEVE MB 25 15 DU	
19	4	WASHER 8,4	SFS 2041 FEZNA
20	1	WASHER 21	SFS 2041 FEZNA
21	2	GREASE NIPPLE	DIN 71412 FEZNA
22	1	SPRING COTTER 2,5X18	DIN 1481
23	1	AXIAL ROLL BEARING 51105	



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FIBERLINE

DRAWING
KF100790K1
WORK

DESIGNATION
LIGHT REJECT REMOVING
MADE BY
PYLKKANEN RISTO

WEIGHT/KG 30

DATE
17.12.1987

PART	PC.	DRAWING	DESIGNATION	MATERIAL
1	1	KF300867K1	PIPE	
2	1	KF300868K1	PIPE	
3	1	KF400439K1	PIPE	
4	1	KF400773K1	PIPE	
5	1	KF400774K1	SEALING	
6	1	KF400775K1	SEALING	
7	1		ELBOW 3/4"	2343
8	1		ELBOW 1/2"	2343
9	8		HEX. SOC. HD. CAP SCREW M10X20	A4-80
			SFS 2219	