



1



11. EEC-Declaration

EEC-DECLARATION OF CONFORMITY FOR MACHINERY

(Derective 89/392/EEC, Annex II, sub A)

Manufacturer: hendor pompen b.v.

Address: P.O Box 9, 5530 AA Bladel (NL)

Leemskuilen 15, 5531 NK Bladel (NL)

(www.hendor.com Email: info@hendor.com)

Herewith declares that the product as specified in the list of description of pressure equipment;

- is in conformity with the provisions of the Pressure Equipment Directive 97/23/EEC:
- following the conformity assessment procedure according to module A

Confirmed at Bladel,

Signature

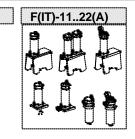
Technical director H.F.G. Bohncke.

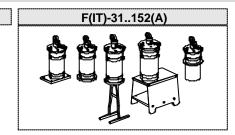


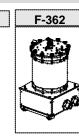
Contents

- 1. Productidentity
- Exploded views
- 3. Parts lists
- 4. Introduction
- 5. Safety instructions
- 6. Receipt
- 7. Installation
- 8. Operation
- 9. Trouble shooting
- 10. Dis-/assembly
- 11. EEC-Declaration
- 12. Indexlist

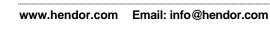
1. Productidentity







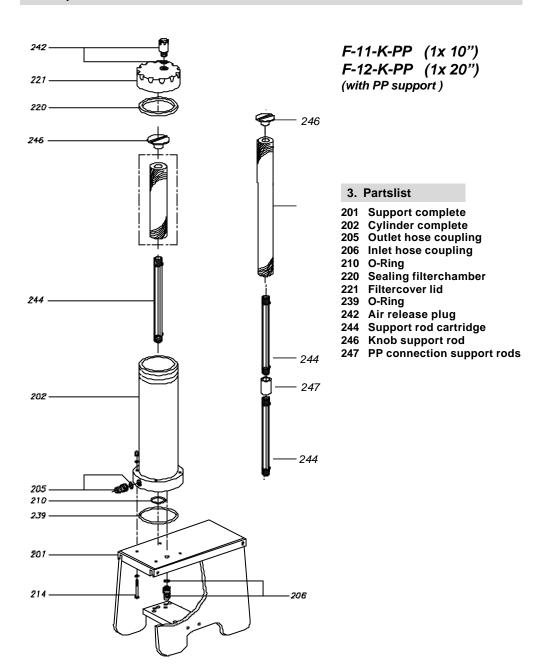












When ordering parts always quote chamber type and serial number





10. Dissassembly, cleaning/replacing and reassembling the filter (# F-362)

Opening the Filterchambers series 362

- Switch off the pump.
- Turn mains taps in off position.
 - Open the drain-valve.
- Open the air-release on top
- Loosen the ten (swing away type) star knobs.
- Now tighten the 2 remaining starknobs clockwise, which will slightly lift the top at the other side (so that the EPDM cylinder gasket will not stick anymore).
- Next loosen same 2 knobs partially by 4 turns anti-clockwise.
- Now the lid can be easily lifted with handgrip and put into leaning position.

Filtercartridges

- Loosen the button on top of the cartridge.
- Remove the cartridge.
- Clean or replace the cartridge and put it back.
- Lightly tighten the button of the cartridge rod.

Filterpaper

- Remove the upper pressure plate.
- Six filter plates can be removed at a time in a hygienic fashion by means of the lever in the centre of the filter plate. This lever remains assembled during cleaning. The bottom rubber plate remains in the filter chamber.
- Clean the filter plates and install new filter paper.
- Put back the filter plate package in sections of six filter plates.
- Place the top pressure plate with fitting edge downwards on to the upper filter plate.

Closing the Filterchambers series 362

- Check the cylinder sealing rubber in the lid for distortion.
- Close the filter chamber lid by tilting it.
- First tighten the two starknobs with the tilting mechanism
- Then, tighten the remaining starknobs crosswise.
- Finally, tighten the two buttons of the tilting mechanism once more.
- Turn off the air-release tap.
- Turn off the drain valve tap.



WARNING

CAUTION

- Open the main taps.
- Switch on the pump.
- Properly bleed the filter chamber.
- Treat and transport used filter material according to the appropriate environmental regulations.







10. Diss- Assembling the Filterchamber

F7A-B1/B2

Open filterchamber by unscrewing swing bolts crosswise first. By staying a screwdriver into the hole of the vertical strip of the cylinder clamping strip and by subsequently pushing down this screwdriver, the cover plate will come loose easily.

First take the PP filterbasket out of the filterchamber

Then insert the PP filterbag together with the rubber sealing ring

Be sure the rubber sealing ri ng fits properly around the PP filterbag and that it is well inserted into the PP basket (P.S. blue maze 2x is used for tin filtration (SN4+) only)

The filterbag must be fully pressed into the PP basket



When using PP fibres (Oil/Tin absorption) press the fibres into the filterbag as shown on the pictures (max 800 gr/ per bag).

For tin filtration it is advised to use an extra plastic maze (2x) between the filterbag and the PP basket



Close filterchamber by screwing starknobs crosswise.









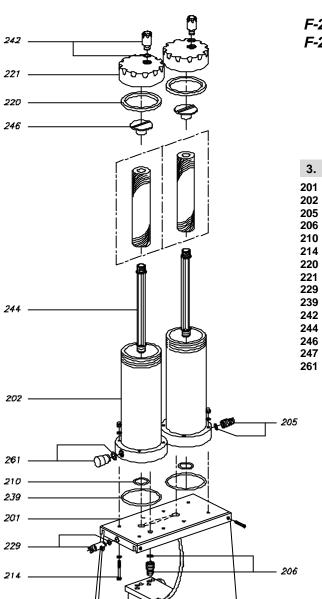








2. Exploded view



F-21-K-PP (2x 10") F-22-K-PP (2x 20")

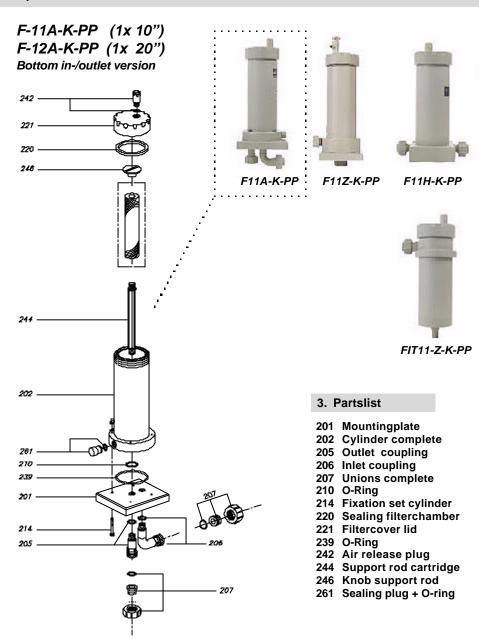
3. Partslist

- 201 Support complete
- 202 Cylinders complete
- 205 Outlet hose coupling
- 206 Inlet hose coupling
- 210 O-Ring
- 214 Fixation set cylinders
- Sealings filterchambers
- Filtercover lids
- 229 Drain valve complete
- 239 O-Ring
- 242 Air release plugs
- 244 Support rods cartridges
- 246 Knobs support rods
- 247 PP connection support rods
- 261 Sealing plug + O-ring

When ordering parts always quote chamber type and serial number







When ordering parts always quote chamber type and serial number





10. Disassembling, cleaning/replacing and reassembling the filter

Depending on the type of pump, the filter should be cleaned at a maximum difference in pressure of 1-2 bar.)

- Switch off the pump.
- Turn off the mains taps.
- Open the drain-valve.
- Open the air-release tap (in case of discharge at the bottom) or air-release plug (in case of discharge at the top).
- Loosen the star buttons. (or unscrew filterchamberlid by hand #11..22)
- Remove the filter chamber lid. (or open it carefully -> #362)

Replacing/cleaning filtermedia



For Series 11..22 (Single cartridge filterhousings)

- Loosen the button on top of the cartridge.
- Remove the cartridge.
- Clean or replace the cartridge and put it back.
- Lightly tighten the button of the cartridge-rod.



For series 31A/32A/71A/72A/151A/152A

By staying a screwdriver into the hole of the vertical strip of the cylinder clamping strip and by subsequently pushing down this screwdriver, the cover plate will come loose easily. **Filtercartridges**

- Loosen the button on top of the cartridge.
- Remove the cartridge.
- Clean or replace the cartridge and put it back.
- Lightly tighten the button of the cartridge-rod.

Filterpaper

- Lift the filter plate package bodily from the filter chamber by means of the central button. (It is simply pressed into the base of the chamber with help of two O-rings)
- Place the filter package on the supplied synthetic half ring.
- Now the base of the filter package with the two O-rings can be removed by giving it a few turns.
- Now the filter plates and paper can be removed one by one.
- The package with new filter paper is assembled in reverse order. (Be sure to press it firmly by hand, so that both O-rings are properly fixed into the base of the filterchamber).





0-<u>ring</u> 235

232

8. Operating instructions and maintenance



The maximum pressure in Hendor filterchambers should not exceed 1.6 bar. Hendor filterchambers for higher pressure up to 2.5 bar, can be recognized by a stainless steel base plate supporting the bottom of the filterchamber

227

226

225

234

(During normal operation, the filter chamber should be checked periodically.)

Regularly check the following:

- flow (compare it to the position of the manometer)
- tubes, tube clamps, taps, manometer
- sealing rubber of the filter chamber

Topping up manometer liquid:

- Remove manometer. (228)
- Remove air-release screw (A).
- Top up manometer casing (227) with anti-freeze.
- Assemble manometer (mind O-ring 235).
- The liquid must show up in screw hole of A. Put back air-release screw (A) into manometer-casing and tighten it. (This to be sure no air remains)
- If liquid does not show up, repeat the procedures hereabove. If still no liquid shows membrane(226) is probably damaged and should be replaced. To do so remove manometer (228) (mind O-ring 235) then unscrew 4 screws (B); replace the membrane (226), refit 4 screws lightly, meanwhile holding down membrane by inserting an unsharp object in manometer-casing(227), then tighten 4 screws (not too tight). Remove air release screw(A) and repeat the procedures hereabove to top up the manometer liquid..

9. Trouble shooting (filterchambers)

problem:	possible causes:	
7.1	No or too little liquid flow	01 - 02 - 03 - 06
7.2	Leakage from the filter chamber lid	04 - 05
7.3	Manometer not reading correctly	07 - 08- 09
7.4	Filtered liquid is turbid	10 - 11 - 12 - 13 - 14 - 15 - 16
7.5	Foam formation in the bath	17 - 18 - 20
7.6	Air in the bath	06 - 18 - 19 - 20
Causes:		
01	Filter element is blocked	

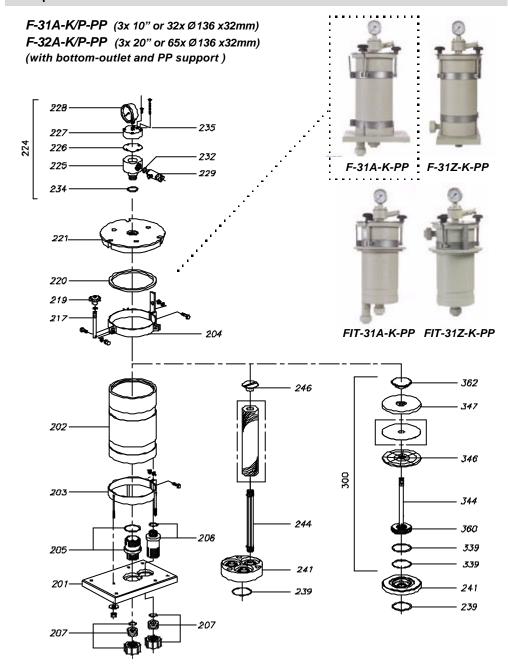
auses:	
01	Filter element is blocked.
02	Taps are in a wrong position.
03	The pump does not function properly (see the pump manual).
04	The star buttons are not tightened properly.
05	The sealing rubber of the filter chamber is damaged or warped.
06	The filter chamber is insufficiently bled.
07	The manometer is faulty.
08	There is no or too little liquid (anti-freeze) in the chamber below the

- e manometer.
- 09 The diaphragm of the manometer is warped.
- 10 The filter element is incorrectly assembled.
- 11 The filter element is incomplete (there is a bypass allowing unfiltered liquid to escape).
- 12 The filter material is of inferior quality.
- 13 The filter material has a deviant measure.
- 14 The selected filter material is too coarse.
- 15 The filter material is damaged or torn.
- 16 The liquid contains colloidal elements.
- 17 Unwashed cartridges have been used that contain residues of wetting agents.
- 18 There is an air leak in the suction pipe.
- 19 The return pipe is located above the bath surface (free fall of liquid!)
- 20 The supply pipe is too close to a point where air is blown into the liquid



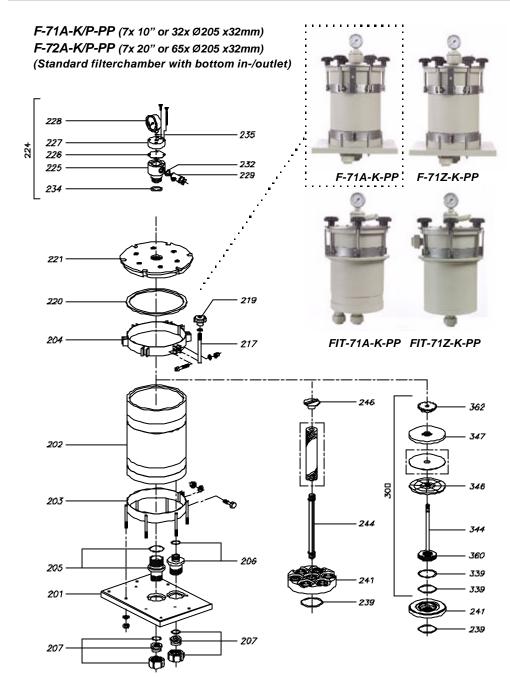


2. Exploded view









When ordering parts always quote chamber type and serial number





7. Installation of filterchambers



Check after installation if the filterchamber is connected according to the prescribed way. The user should always take into consider the personal safety and health of himself as well as his direct surrounding.

Plumbing (by hose or by piping)

The connections to the filterchamber should be provided with reliable, persistant (also for pressure) material; for hoses take care of the use of correct hoseclamps. Use the correct O-rings for connections. Check the tightness of the connections before starting up; hoses and piping should be clean inside before starting up. Thermoplastic chambers will not tolerate plumbing stress; be sure your plumbing is properly aligned and supported.



Installing

- Place the base of the filter chamber at the same level as the bath surface, or just above
 it. During cleaning, the liquid in the filter chamber can be led back to the bath via the
 draw-off tap. Moreover, the bath cannot empty via the filter chamber in case of emergency.
- If the filter chamber is placed below the bath surface, stopcocks will have to be installed in the supply pipe and outlet pipe, as well as a drain-valve tap in the supply pipe below the filterchamber
- When installing the filter chamber, take into account the need for easy access for cleaning and replacing the filter package.
- Adjust the diameter of the supply pipe and outlet pipe to the capacity of the pump.
- The maximum pressure of the pump should not exceed the maximum value indicated by the manometer.
- It is recommended that the outlet pipe of the filter chamber be placed as far as possible from the suction pipe of the pump in the bath to promote good bath movement.
- Before starting the filter, check to ensure that the filter package, filter chamber lid, pipework and valves are all properly attached.
- After starting the motor, the filter chamber needs to be properly bled. (If the filter chamber has an air-release tap, it is recommended to hang the tube of the air-release tap above the bath.)
- With pump series 361/362, the tiltable filter chamber lid can be placed in the desired position by turning the upper cylinder clamp, in accordance with the operating conditions.
 - A standard filter chamber is fitted with wheels. If so desired, these can easily be removed at the final location.





4. Introduction

Thank you for choosing a Hendor product. Before you start to use it Hendor strongly recommends you read this owner's manual carefully and follow the instructions as closely as possible, so your product will function properly for years to come.

This owner's manual contains all obligatory safety- instructions and it should be furnished to the enduser of this product. This owner's manualshould be present at site, so operator or maintenance crew can use this manual

5. Safety instructions

NOTICE

The following symbols are safety alert symbols. When you see the symbol(s) on the product or in the manual, be alert to the potential for personal injury



This label warnsThat failure to observe the precautions involve a risk of electric shock



DANGER

This label warns about hazards that **will** cause **serious personal injury**, death or major property damage if ignored. Remind the product contains chemical liquids;



This label warns about hazards that **can** cause **serious personal injury**, death or major property damage if ignored

CAUTION



This label warns about hazards that **will** or **can** cause **minor** personal injury or property damage if ignored.

WARNING

The label **NOTICE** indicates special instructions which are important but not related to hazards

Carefully read and follow all safety instructions in this manual and on the pump.

Keep safety labels in good condition. Replace missing or damaged safety labels

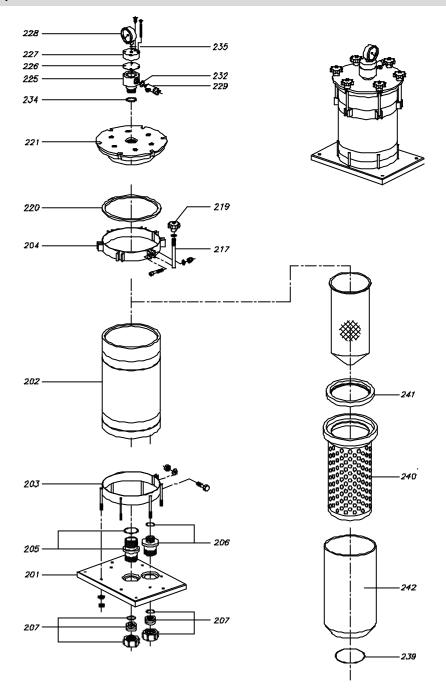
At receipt of the product, the identity of the product (by checking the nameplate data), the completeness of delivery as well as the absence of visible damage should be ascertained. Any problems arising from these checks, should be stated in writing and preferably signed by the forwarding agent for evidence.

When ordering parts always quote chamber type and serial number



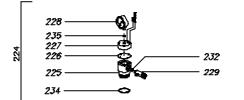


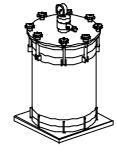
2. Exploded view #F7A-B1/B2





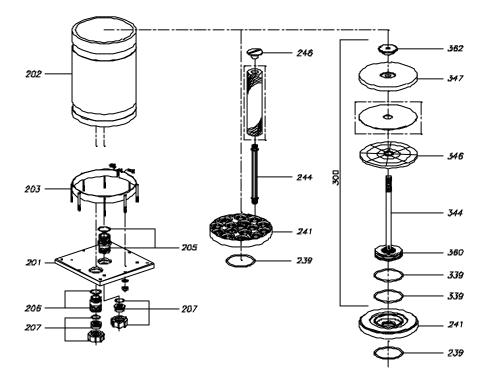






221 219 219 217 204

F-151A-K/P-PP (15x 10" or 32x Ø280 x50mm) F-152A-K/P-PP (15x 20" or 65x Ø280 x50mm) (Standard model with bottom in-/outlet)



3. Partslist # F-362A-P (S)-PP





FILTERCHAMBERS # F-362

	/. /
	OP C
F.362A.	272
3605	26/1
6.5	3

				Y
Pos.	Description	Articlenr.		
40	Slurrytank complete	9011500700081		1
101	Frame	9063500700075		1
101	Frame PP	9011500700064	1	
102	Frontpanel discharge	9011500700090		1
102	Discharge tubes	9011500700014	1	
106	Flange DIN	9011657063001	2	
107	Support complete	9063500700008	1	
107	Support frame	9063500700076		1
108	Set of Wheels	9063500700006	2	
108	Support frame	9063500700086		1
109	Transport Wheel	9012629100020	4	4
110	Frame	9063500700087		1
111	Mountingplate motor	9011500700078		1
112	Mountingplate Slurrytank	9011500700088		1
113	Support Slurrytank	9063500700089		1
117	T-Part discharge+drain	9011500700063	1	1
118	Inlet socket + Union	9011500700062	1	1
201A	Mountingplate filter	9011500700304	1	1
201B	Mountingplate motor	9063500700301	1	1
202	Cylinder	9011500700010	1	1
203	Bottom Ring	9063500700308	1	1
204	Top Ring	9063500700309	1	1
205	Discharge coupling	9011700000105	1	1
206	Inlet coupling	9011700000153	1	1
217	Rod complete	9063500900086	10	10
218	Sealing	9031402001007	1	1
219	Starknob	9011626012001	10	10
220	Sealing	9031402001005	1	1
221	PP/SS Coverlid	9011500700065	1	1
224	Ass'y manometer compl.	9011500900094	1	1
225	Pressure gauge housing	9011500900007	1	1
226	Membrane pressure gauge	9031500900007	1	1
227	Cover pressure gauge	9011500900304	1	1
228	SS Gauge 0 2.5 bar	9063650000004	1	1
229	Drain valve complete	9011500900018	1	1
230	O-ring	90431236003	1	1
231	Hinge complete	9063500700066	1	1
232	O-Ring drain valve	90431016350	1	1
234	.,		1	1
235	O-Ring pressure housing	90431220003 90431005300	1	1
240	O-ring pressure gauge Spacer/Buffer	90431005300	1	1
240	Grip	9063500700068	1	1
305	Sealing ring		1	1
		9031402001008	67	-
314 319	Filterdiscs	9011505605001 9011500700003	1	67 1
319	Topplate Filterdiscs	9011500700003	1	1
324	Support plate Filterdiscs		1	1
-	Rubber bottomplate Lifter filterdiscs	9031403002001		11
328	Linter Hitteralscs	9011600307001	11	TT

When ordering parts always quote chamber type and serial number

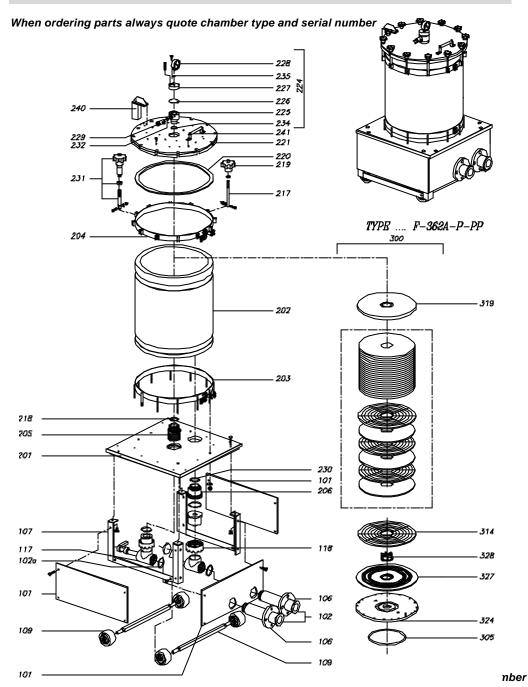




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2. Exploded view



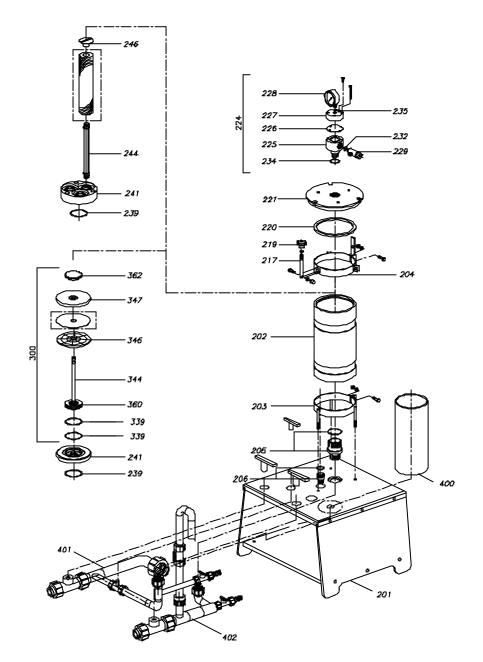
3. Partslist F-31A/71A/151A-K/P-PP

- 201 Support/Mountingplate complete
- 202 Cylinder complete
- 203 SS bottom ring complete
- 204 SS top ring complete
- 205 Outlet coupling
- 206 Inlet coupling
- 207 Union coupling complete
- 217 SS Rod complete
- 219 PP Star knob
- 220 Sealing filterchamber
- 221 SS/PP Filter cover lid
- 224 Pressure gauge ass'y complete
- 225 Pressure gauge housing
- 226 Membrane pressure gauge
- 227 Cover pressure gauge housing
- 228 Pressure gauge
- 229 Drain valve complete
- 232 O-ring drain valve
- 235 O-ring pressure gauge
- 239 O-Ring
- 241 Centre core
- 244 Support rod cartridge
- 246 Knob support rod
- 247 PP connection support rods (20")
- 300 Filterinsert complete AP
 - 241 = AP bottom disc
 - 339 = O-ring seal
 - 344 = rod discholder
 - 346 = PP filterdisc
 - 347 = PP top disc filterpaper insert
 - 360 = bottom discholder
 - 362 = PP nut filterinsert





2. Exploded view F- 31A-K/P-S-PP



When ordering parts always quote chamber type and serial number

3. Partslist # F-362A-K(S)-PP

(15)

hendor

FILTERCHAMBERS # F-362

			/	F.3618
Pos.	Description	Articlenr.	_	
	Description			4
40	Slurrytank complete	9011500700081		1
101	Frame	9063500700075		1
101	Frame PP	9011500700064	1	
102	Frontpanel discharge	9011500700090		1
102	Discharge tubes	9011500700014	1	
103	Sidepanel	9011500700091	1	1
106	Flange DIN	9011657063001	2	
107	Support complete	9063500700008	1	
107	Support frame	9063500700076		1
108	Set of Wheels	9063500700006	2	
108	Support frame	9063500700086		1
109	Transport Wheel	9012629100020	4	4
110	Frame	9063500700087		1
111	Mountingplate motor	9011500700078		1
112	Mountingplate Slurrytank	9011500700088		1
113	Support Slurrytank	9063500700089		1
117	T-Part discharge+drain	9011500700063	1	1
118	Inlet socket + Union	9011500700062	1	1
201A	Mountingplate filter	9011500700304	1	1
201B	Mountingplate motor	9063500700301	1	1
202	Cylinder	9011500700010	1	1
203	Bottom Ring	9063500700308	1	1
204	Top Ring	9063500700309	1	1
205	Discharge coupling	9011700000105	1	1
206	Inlet coupling	9011700000103	1	1
217	Rod complete	9063500900086	10	10
218	Sealing	9033300900080	10	10
219	Starknob	9011626012001	10	10
220	Sealing		10	1
		9031402001005	-	-
221	PP/SS Coverlid	9011500700065	1	1
224	Ass'y manometer compl.	9011500900094	1	1
225	Pressure gauge housing	9011500900007	1	1
226	Membrane pressure gauge	9031500900304	1	1
227	Cover pressure gauge	9011500900075	1	1
228	SS Gauge 0 2.5 bar	9063650000004	1	1
229	Drain valve complete	9011500900018	1	1
230	O-ring	90431236003	1	1
231	Hinge complete	9063500700066	1	1
232	O-Ring drain valve	90431016350	1	1
234	O-Ring pressure housing	90431220003	1	1
235	O-ring pressure gauge	90431005300	1	1
240	Spacer/Buffer	9011500700067	1	1
241	Grip	9063500700068	1	1
301	Knob cartridge rod	9011500900309	36	36
302	Wound Filtercartridge (option)	4411WW20P010	36	36
303	Cartridge rod	9011500900308	72	72
304	Bottom pressure plate	9011500700315	1	1
305	Sealing ring	9031402001008	1	1
306	PP connection for 20" cartridges	9011500900026	36	36

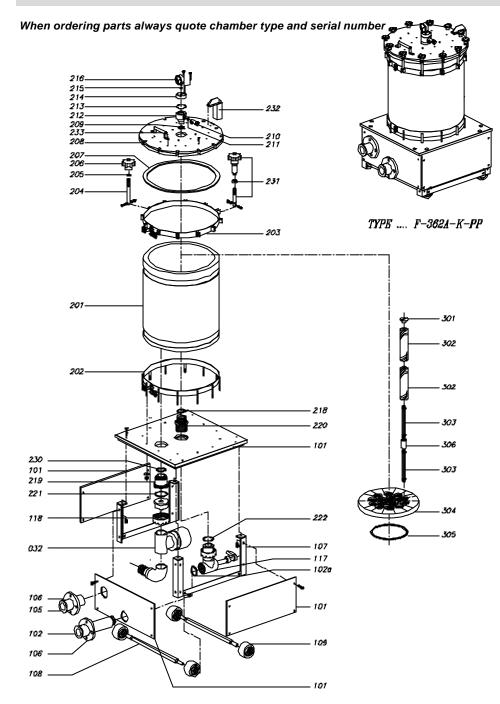




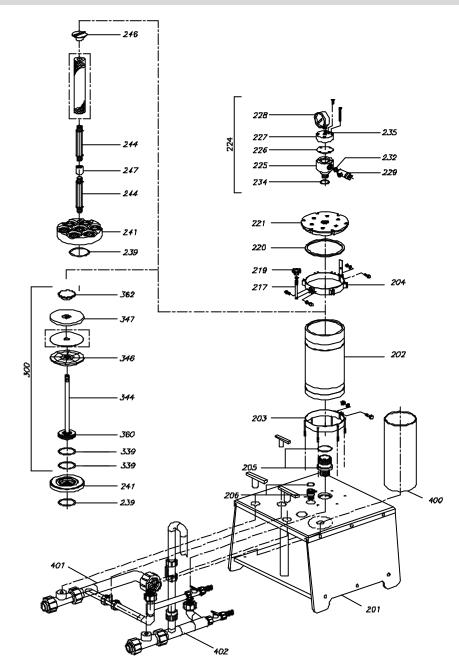
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2. Exploded view



2. Exploded view #F71A - K/P - S-PP

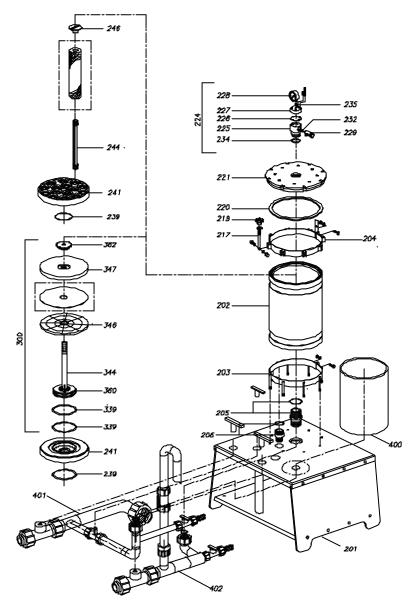


When ordering parts always quote chamber type and serial number





F-151A-K/P-S-PP (15x 10" or 32x Ø280 x50mm+Slurrytank 18L) F-152A-K/P-S-PP (15x 20" or 65x Ø280 x50mm+ Slurrytank 38L) (Standard Filter(pump)-model with bottom in-/outlet)



When ordering parts always quote chamber type and serial number





3. Partslist #F-31A/71A-151A-K/P-S-PP

- 201 Support/Mountingplate complete
- 202 Cylinder complete
- 203 SS bottom ring complete
- 204 SS top ring complete
- 205 Outlet coupling
- 206 Inlet coupling
- 207 Union coupling complete
- 217 SS Rod complete
- 219 PP Star knob
- 220 Sealing filterchamber
- 221 SS/PP Filter cover lid
- 224 Pressure gauge ass'y complete
- 225 Pressure gauge housing
- 226 Membrane pressure gauge
- 227 Cover pressure gauge housing
- 228 Pressure gauge
- 229 Drain valve complete
- 232 O-ring drain valve
- 235 O-ring pressure gauge
- 239 O-Ring
- 241 Centre core
- 244 Support rod cartridge
- 246 Knob support rod
- 247 PP connection support rods (20")
- 300 Filterinsert complete AP 241 = AP bottom disc

 - 339 = O-ring seal
 - 344 = rod discholder
 - 346 = PP filterdisc
 - 347 = PP top disc filterpaper insert
 - 360 = bottom discholder
 - 362 = PP nut filterinsert
- 400 Slurry tank
- 401+
- 402 Piping, bends, valves, union connections complete