



INSTRUCTION MANUAL
BALL FLUID SECTIONS
- 'ALTO'

79cc / 2.7 oz: # 105 171 xx xx

124cc / 4.2 oz : # 105 172 xx xx

225cc / 7.6 oz: # 105 173 xx xx

Manual : 574.209.112 - 1111
'PMP1'

Date : 22/11/11 - Supersede : 05/11/07
Modif.: Update



TRANSLATION OF THE ORIGINAL MANUAL

IMPORTANT : Before assembly and start-up, please read and clearly understand all the documents relating to this equipment (professional use only).

THE PICTURES AND DRAWINGS ARE NON CONTRACTUAL. WE RESERVE THE RIGHT TO MAKE CHANGES WITHOUT PRIOR NOTICE.

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**INSTRUCTION MANUAL
BALL FLUID SECTIONS - 'ALTO'**

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Dear Customer,

You are the owner of our new equipment and we would like to take this opportunity to thank you.

To make sure your investment will provide full satisfaction, special care has been taken by KREMLIN REXSON during all designing and manufacturing processes.

To obtain the best result, safe and efficient operation of your equipment, we advice you to read and make yourself familiar with this instruction and service manual. Indeed, the non-compliance with instructions and precautions stated in this manual could reduce the equipment working life, result in operating trouble and create unsafe conditions.

1. WARRANTY

We reserve the right to make changes; these changes may be carried out after the receipt of our order. No claim will be accepted as a consequence of any change carried out in the instruction manuals or in the selection guides.

Our equipment is checked and tested prior to shipment. In the case of a problem arising with the equipment, this must be in writing, within ten days from the delivery date.

KREMLIN REXSON warrants all equipment manufactured bearing its name, to be free from defect in material or workmanship for a period of 12 months (one shift per day or 1800 hours - 1 term reached) from the date of delivery. Work life is based on single shift working - 8 hours per day. Warranty claims for defective items will only be accepted in writing and will be verified and confirmed by us.

The warranty does not cover fair wear tear, damage or wear caused by misuse, improper maintenance or non-observance of our recommendations.

KREMLIN REXSON will repair or replace parts (carriage paid to our plant and accepted as defective by us). We shall not be liable for any losses, resulting from a production breakdown. Upon request, we can carry out service work at your premises; all expenses (travelling and accommodation) for KREMLIN REXSON technicians will be chargeable.

In the event that it is found that equipment has been tampered with, this will invalidate the warranty. Equipment that is bought in will be subject to the supplier's warranty.

2. SAFETY INSTRUCTIONS

GENERAL SAFETY INSTRUCTIONS



CAUTION : The equipment can be dangerous if you do not use it according to the rules mentioned in this instruction manual. Read carefully all the instructions hereafter before operating your equipment.

Only trained operators can use the equipment. (To acquire an essential training, please contact the "KREMLIN REXSON University" training center - Stains).

The foreman must ensure that the operator has perfectly taken in the safety instructions of this equipment as well as the instructions in the manuals of the different parts and accessories.

Read carefully all instruction manuals, label markings before operating the equipment.

Incorrect use may result in injury. This equipment is for professional use only. It must be used only for what it has been designed for.

Guards (air motor cover, coupling shields, housings,...) have been designed for a safe use of the equipment.

The manufacturer will not be held responsible for bodily injury or failure and / or damage to property due to removal or partial removal of the guards.

Never modify the equipment. The parts and accessories supplied must be regularly inspected. Defective or worn parts must be replaced.

Never exceed the equipment components' maximum working pressure.

Comply with regulations concerning safety, fire risks, electricity in force in the country of final destination of the material. Use only products or solvent compatible with the parts in contact with the material (refer to data sheet of the material manufacturer).

PICTOGRAMS

A	D	F	E	C	G
NIP HAZARD	WARNING MOVING ELEVATOR	WARNING MOVING PARTS	WARNING MOVING SHOVEL	DO NOT EXCEED THIS PRESSURE	HIGH PRESSURE HAZARD
H	J	L	K	M	O
RELIEF OR DRAIN VALVE	WARNING HOSE UNDER PRESSURE	WEAR GLASSES OBLIGATORY	WEAR OF GLOVES IS OBLIGATORY	PRODUCT VAPOR HAZARDS	WARNING HOT PARTS OR AREAS
N	P	R	I	B	S
ELECTRICAL HAZARD	WARNING FIRE HAZARDS	EXPLOSION HAZARDS	GROUNDING	WARNING (USER)	WARNING SERIOUS INJURIES

PRESSURE HAZARDS



Current legislation requires that an **air relief** shut off valve is mounted on the supply circuit of the pump motor to let air off when closing the supply circuit. Without this precaution, the motor residual air of the motor may let the pump beat and cause a serious injury.

Please ensure that, a **material drain valve** is mounted on the material circuit to drain it (after shutting down air to the motor and the pressure relief) before any servicing on the equipment. These valves must be closed for air and opened for product when processing.

HIGH PRESSURE INJECTION HAZARDS

When working with high pressure equipment, special care is required. Fluid leaks can occur. Then there are injection risks in exposed parts of body that may cause severe injuries or amputations :



- Medical care must be handled immediately if product is injected under the skin or in other parts of the body (eyes, fingers).
- Never point the spray gun at any one. Never try to stop the spray with your hands or fingers nor with rags or similars.
- **Follow the shut down procedure and always depressurize air and fluid circuits** before carrying out any servicing on the gun (cleaning, checking, maintenance of the material or cleaning of the gun nozzles).
- For the guns equipped with a safety device, always lock the trigger when you do not start the gun.

FIRE - EXPLOSION - SPARKS - STATIC ELECTRICITY HAZARDS



A poor earth connection, inadequate ventilation, sparks or static electricity can cause an explosion or fire. to avoid these risks when using or servicing KREMLIN REXSON equipment, the following safety procedures must be followed :

- ensure a good earth connection and ground the parts to be handled i.e. solvents, materials, components and equipment,
- ensure adequate ventilation,
- keep working area clean and free from waste solvents, chemicals, or solid waste i.e. rags, paper and empty chemicals drums,
- never use electrical switches / power if in an atmosphere of volatile solvent vapour,
- stop working immediately in case of electrical arcs,
- never store chemicals and solvents in the working area.

TOXIC PRODUCT HAZARDS

Toxic products or vapours can cause severe injury not only though contact with the body, but also if the products are ingested or inhaled. It is imperative :



- to know the material products and their risks,
- notified or hazardous materials must be stored in accordance with the regulations,
- the material must be stored in an appropriate container, never place materials in a container where there is a risk o spillage or leakage,
- a procedure must be applied for the safe disposal of waste material. It must comply with all prevailing regulations and legislations of the country where the equipment is to be used,
- protective clothing should always be worn in compliance with the material manufacturers' recommendations,
- depending on the application and chemical safety instructions, safety glasses, hearing protective earplug, gloves, foot wear, protective masks and possible breathing equipment should be worn to comply with the regulations

(Refer to chapter "Safety equipment of KREMLIN selection guide).



CAUTION!

It is forbidden using any solvent or with halogenated hydrocarbon base and also products with these solvents facing **aluminium** or **zinc**. The non-compliance with the instructions may cause explosion hazards causing serious or fatal injuries.

EQUIPMENT REQUIREMENTS

Guards (air motor cover, coupling shields, housings,...) have been designed for a safe use of the equipment.
The manufacturer will not be held responsible for bodily injury or failure and / or damage to property due to removal or partial removal of the guards.

PUMP

Before carrying out any work, it is imperative to get used with the compatibilities of motors with pumps before coupling. The operator shall understand the equipment and the safety instructions. These instructions are available in the manuals of the pumps.



The air motor is designed to be mounted with a pump. Never modify any components or couplings. When operating, please keep hands away from moving parts. Before starting up the equipment, please read the PRESSURE RELIEF instructions. Please ensure that any relief or drain valves fitted are in good working order.

HOSES

- Keep hoses out of circulation areas, moving parts or hot surfaces,
- Never expose product hoses to temperature higher than + 60°C / 140° F or lower than 0°C / 32° F,
- Never pull or use the hoses to move the equipment,
- Tighten all fittings as well as the hoses before operating the equipment,
- Check the hoses regularly; change them if they are damaged,
- Never exceed the maximum working pressure (MWP) indicated on the hose.

USED PRODUCTS

Considering the variety of products that may be used by the users and the impossibility to check off all chemical data, of possible reactions of chemicals to each other and their long term evolution, KREMLIN REXSON can not be considered as liable for :

- the bad compatibility of wetted parts,
- risks for staff and surroundings,
- for worn or out of order parts, for wrong working of equipments or units, as well as for the qualities of final product.

The user must know and prevent the possible risks as toxic vapours, fires or explosions due to used products. He shall determine the risks of immediate reactions or pursuant to repeated exposures of the staff.

KREMLIN REXSON shall not be liable for psychic injuries, direct or indirect material damages further to the use of chemicals.

3. INSTALLATION

■ HANDLING



The fluid sections with important weight and dimensions must be handled with the appropriate means.


■ STORAGE

Place the equipment safe from dampness after having closed the different air inlets and ports (plugs).

■ DESCRIPTION OF THE LABEL MARKING

Marking in accordance with the ATEX directive

	MOTEUR / MOTOR	POMPE / PUMP	MOTO-POMPE / MOTOR-PUMP
REF / SERIE	<input type="text"/>	<input type="text"/>	<input type="text"/>
○ Max.pres.(bar/psi)	<input type="text"/>	<input type="text"/>	<input type="text"/>
	<input type="text"/>		<input type="text"/>
	KREMLIN REXSON France	II2G	CE
			RATIO

KREMLIN REXSON FRANCE	Name and address of the manufacturer
MOTEUR /MOTOR	-
POMPE / PUMP	Fluid section part number and serial number. The two first numbers indicate the manufacturing year.
MOTO-POMPE / MOTOR-PUMP	-
	II : group II 2 : class 2 Surface equipment meant to area where explosive atmospheres due to gas, vapours, mists or air mixtures with dusts are liable to appear from time to time in usual operating. G : gas



Associated to a pneumatic motor, the fluid sections must be grounded via the earth cable of that motor.

The earth cable must be grounded to a safe earth.

The pumps are designed to be installed in a spray booth.

■ CONNECTION OF THE SUBSETS

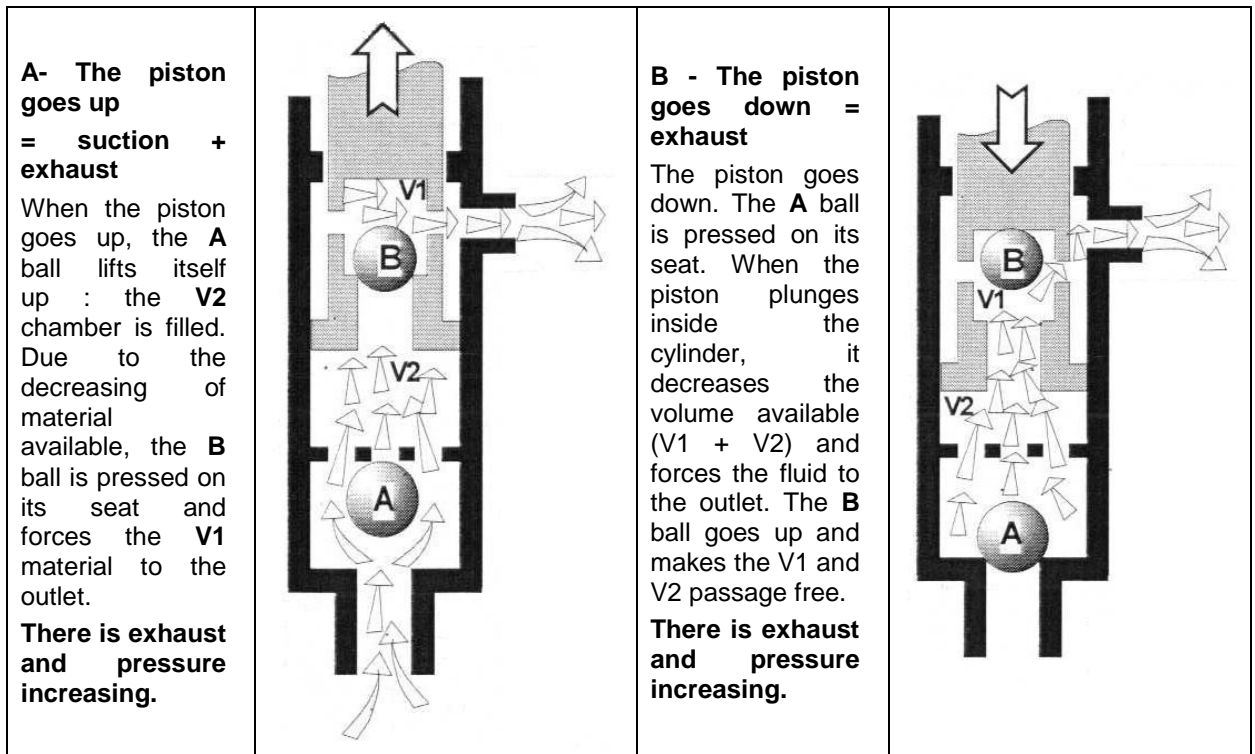
These fluid sections are designed for the coupling of pneumatic or hydraulic motors with similar stroke.
You must conform to a motor/fluid section association as planned by KREMLIN REXSON.

4. OPERATING

■ EXPECTED USE

These pumps coupled with pneumatic or hydraulic motors are designed for the transfer, the pouring off or the spraying of different liquid or viscous fluids with a requested outlet flow and pressure.

■ OPERATING DESCRIPTION



WARNING!

The frictions due to the displacement of fluid inside the pumps and accessories, as well as the one created by the tightness seals, generate static electricity that may cause fire or explosion. This is why the fluid section must be grounded (refer to the instruction manual of the motor for its grounding).

5. USE



Protective clothing (gloves, protective masks, glasses, hearing protective earplug, protective clothing...) should be worn to comply with the recommendations.

The working area must be correctly ventilated.

Guards (air motor cover, coupling shields, housings,...) have been designed for a safe use of the equipment.

The manufacturer will not be held responsible for bodily injury or failure and / or damage to property due to removal or partial removal of the guards.

■ ADJUSTMENTS

Wetting cup nut :

Before starting the equipment, half fill the cup with T lubricant.

The cup nut must be slightly tightened. A too important tightening would damage quickly the cup seals. A wrench is supplied to allow a correct tightening.

Tightening of the wetting cup nut :

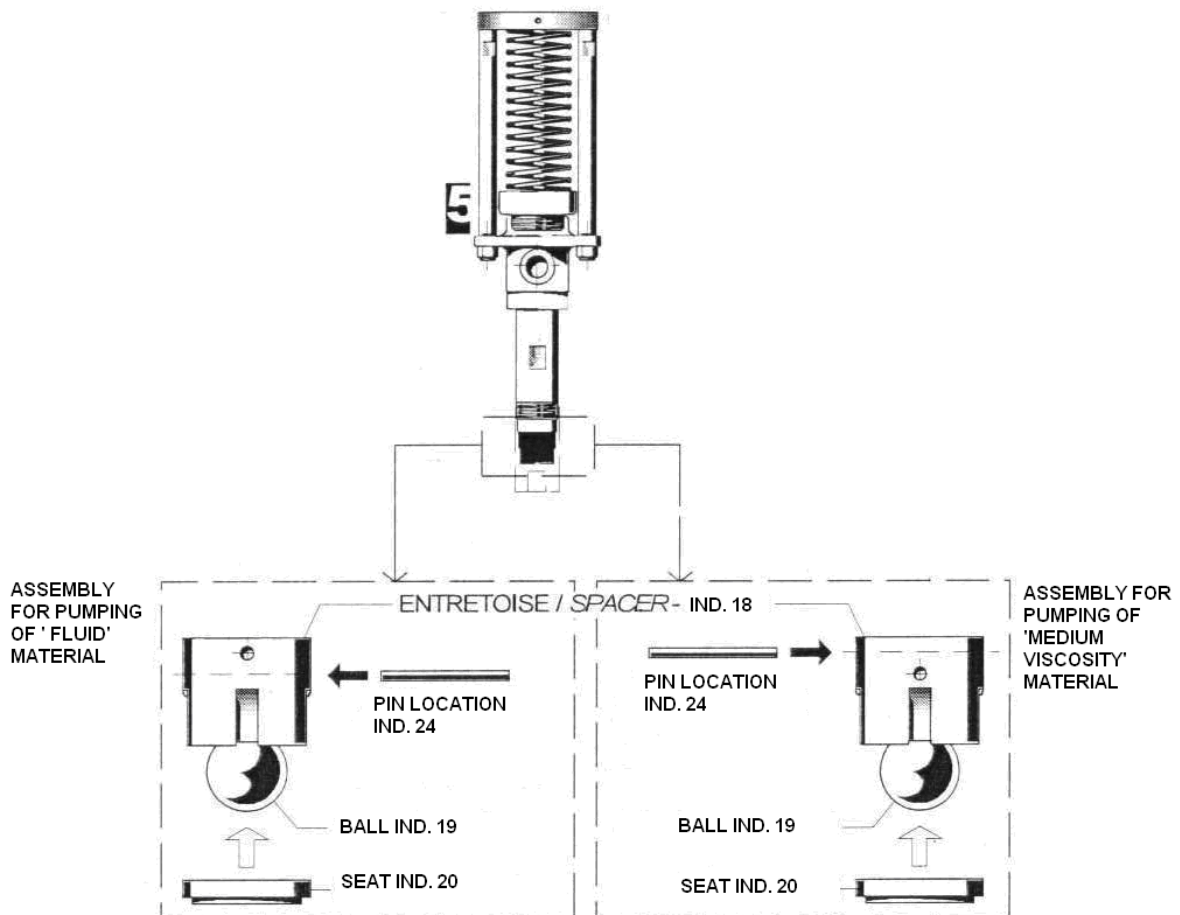
- Fill the cup with T lubricant,
- Operate the pump, then tighten the cup after 10 minutes, then after 1 hour, then after one working day.
- If there is a leak, the cup must be tightened.

Tightening instructions :

- Depressurize the motor (refer to pressure relief instructions),
- Depressurize the fluid circuit (refer to pressure relief instructions),
- Tighten the cup, clean it and fill it with T lubricant,
- Close the pump drain circuits,
- Open the motor air valve.

Adjustment of the suction valve pin :

Depending upon the fluid viscosity to be pumped, locate the lower valve pin as indicated hereafter.





As the pump is designed for the transfer and the spraying of viscous material, the pin is, at the factory, located to its higher position which enables the ball to run out from the seat and makes the material circulate during suction without stopping it.

■ START UP

The pumps are tested in our workshop with lubricant.

Before starting up, you must flush the pump with the appropriate solvent.

At the end of the working day, carry out a flushing with the appropriate solvent. We advice you to stop the fluid section in the "low position" to prevent material spreading on the piston rod.

■ TROUBLESHOOTINGS



Before any intervention on the pump, please carry out the release pressure and drain general instructions.

To prevent from injuries, material injections, injuries due to moving parts or sparks during the stopping of the system, the assembly, the cleaning or changing of the nozzle, **you must follow the stages hereafter** before intervening :

- Close the guns,
- Shut off the air inlet using the pressure release to evacuate the residual air.
- Move the gun near to a metallic drum to get back the fluid. Keep it against the drum to maintain the grounding (if necessary use a wire to ground the metallic drum).
- Open the gun to drain the circuit.
- Open the drain valve of the pump and get back the fluid in a metallic drum correctly grounded.
- Let the drain valve open during the intervention.

Check the conformity of cabling before intervening.

DEFECTS	CAUSES	SOLUTIONS
Leakage at the cup seals	Insufficient tightening of the cup. Bad mounting of the seals Damaged or worn seals. Bad choice of the seals' material	Screw the cup. Check the mounting Replace them. Check the compatibility.
The cup seals get rapidly damaged	No lubricant in the cup (pumped product drying on the piston rod). Compatibility product / seals.	Clean, replace parts if necessary. During a long duration shutdown, stop the pump, the piston is in the the low position. Check.
The pump is stopped	The fluid is polymerized, hardened, dried in the pump. The cup is too tightened. Broken part(s) in the pump.	Clean the pump; change parts if necessary. Unscrew. Remove, check and replace.
The motor seems to operate but the pump does not deliver product	Internal parts of the motor defective. Defective coupling.	Check the operating of the motor. Check coupling.
The pump operates but irregular flow	Valve clogged on the seat, incorrectly mounted or worn. Air inlet in the suction circuit.	Check mounting, state of the parts, tightening of parts and seals.

DEFECTS	CAUSES	SOLUTIONS
At stop, pump piston carries on going down	Valve worn or incorrectly mounted Plug or drain valve not tightened	Check and replace parts.
At stop, pump piston carries on going up	Head piston seals or upper valve worn or incorrectly mounted. Plug or drain valve not tightened	Check and replace parts.
The piston is going down quickly (simple effect working)	Bad feeding of the pump. Product is too viscous. Lower valve worn. A foreign product obstructs the lower valve.	Check use parameters of the accessories (pressure on follower plate or suction rod,...). Accessories can be not adapted or clogged. Bad definition of the pump. Check and replace parts. Clean and check.
The piston goes up quickly	Valve worn or damaged. A foreign product obstructs the upper valve.	Check and replace parts. Clean and check.
The piston goes out and down at different speeds	Valve, head piston seals or cylinder worn. Seals incorrectly mounted or damaged	Replace parts. Check the mounting; change if necessary.
The pump does not deliver enough pressure	Insufficient air pressure to the motor (valve insufficiently open, air leak,...) Insufficient air inlet on the motor or outlet clogged.(hose not adapted) Cup or head piston seals too tightened.	Check; adjust. Check filter, mounting, hose not adapted. Check mounting or loosen cup nut.
Abnormal operating after racing or too important temperature.	Head piston or cup seals too tightened, damaged. Product drum empty.	Check mounting; reduce pumping rhythm. Replace parts if necessary. Fill the drum; check the suction circuit and possible air leakage.
Important pressure drop when going down	Lower valve lift too important	Displace the pin.
Fluid leakage from the pump body	Cylinder tightened No seals or seals damaged	Check parts and change them if necessary

6. MAINTENANCE



WARNING!

Before any intervention, please follow the pressure release instructions and read carefully the safety instructions.

During a long duration shutdown, stop the pump when the piston is in low position.

Guards (air motor cover, coupling shields, housings,...) have been designed for a safe use of the equipment.

The manufacturer will not be held responsible for bodily injury or failure and / or damage to property due to removal or partial removal of the guards.

■ PREVENTIVE MAINTENANCE

Daily care :

Check if there are leaks. Check that the hoses are in good conditions.

Keep the piston of the pumps clean to prevent from material drying.

Check the PE level inside the shell (keep the level halfway up). Fill it if necessary. The lubricant will normally be coloured by the material.

Tighten moderately if necessary the cup nut with the wrench provided.

Check the tightening of the different parts.

If the pump is fitted with a follower plate : check that the plate seal is in good condition, clean top and bottom parts of the follower plate.

Manipulate (open and close) all the valves of the installation.

Keep the spray area clean.

Bimonthly care :

If the lubricant is excessively coloured in the cup, fill the cup with new lubricant. Leave the cup clean and clean it regularly with lubricant after having drained the lubricant.

■ CURATIVE MAINTENANCE

We advice you to schedule a systematic maintenance after a given working time. The rhythm is defined by the maintenance staff of the user and is done according to the product, the rate of work and the regular using pressure. Read the pump disassembly / assembly instructions and the spare parts' list.

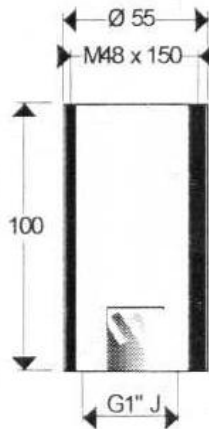
Before intervening on the equipment :

- **Clean the parts with the appropriate cleaning solvent,**
- **Install new seals if necessary after having lubricated them,**
- **Lubricate the piston and the inside of the cylinder to prevent from damaging the seals,**
- **Install new parts if necessary.**

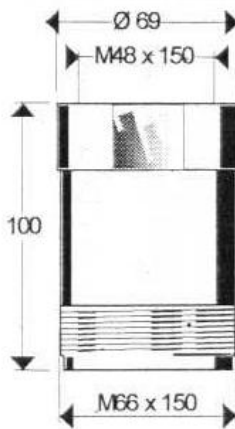
7. CODIFICATION OF THE BALL FLUID SECTIONS
- 'ALTO' 79 -124 - 225cc / 2.7 - 4.2 - 7.6 oz

# Fluid sections	Foot-valve body						Description
	# 209613	# 209640	# 105496	# 209650	# 209642	# 105497	
105 171 01xx	X						Standard use
105 171 02xx		X					For follower plates
105 171 03xx			X				For follower plates
105 172 01xx	X						Standard use
105 172 02xx		X					For follower plates
105 172 03xx			X				For follower plates
105 173 01xx				X			Standard use
105 173 02xx					X		For follower plates
105 173 03xx						X	For follower plates

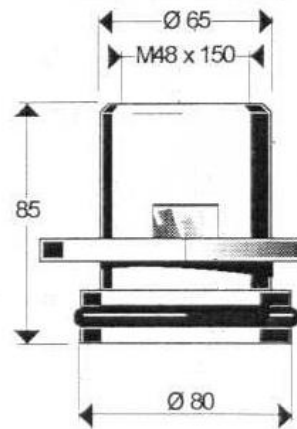
209613



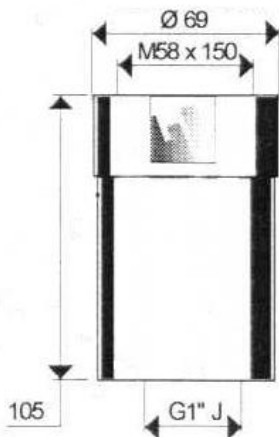
209640



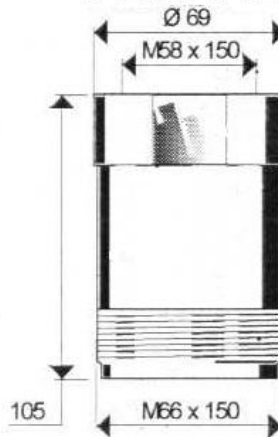
105496



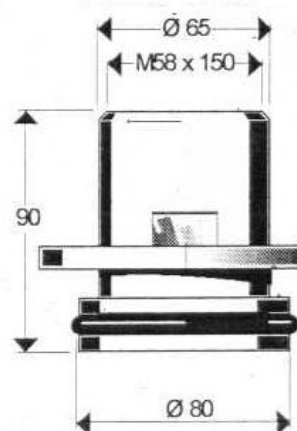
209650



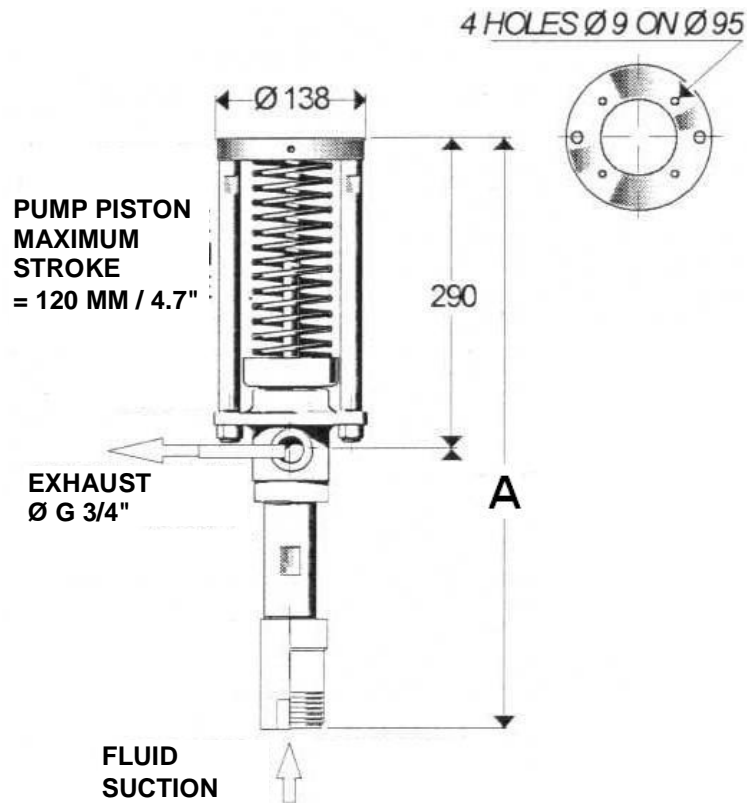
209642



#105497



8. SPECIFICATIONS



# Fluid section	A (mm / ")
105 171 xxxx	547 / 21.5"
105 172 xxxx	547 / 21.5"
105 173 xxxx	561 / 22.1"

Features of the fluid sections	# 105 171 xxxx	# 105 172 xxxx	# 105 173 xxxx
Capacity	39.5 cc / 1.3 oz	62 cc / 2.1 oz	112.5 cc / 3.8 oz
Delivery per cycle	79 cc / 2.7 oz	124 cc / 4.2 oz	225 cc / 7.6 oz
Stroke	120 mm / 4.7"		
Fluid outlet connections	3/4 "G		
Weight	8 kg / 17.6 lb	9 kg / 19.8 lb	10 kg / 22.04 lb
Maximum fluid temperature	80°C / 176° F		
Wetted parts	steel treated stainless steel / PTFE / tungsten carbide		
Packings	Depending upon seal kit		

9. DISASSEMBLY / ASSEMBLY



WARNING!

Before any intervention, please follow the pressure relief and safety instructions.

The equipment is manufactured under the ATEX agreement and can not be modified. KREMLIN REXSON will not be held responsible for any failure to comply with that instruction.

Guards (air motor cover, coupling shields, housings,...) have been designed for a safe use of the equipment.

The manufacturer will not be held responsible for bodily injury or failure and / or damage to property due to removal or partial removal of the guards.

Disassembly of the pump :

- Unscrew the 2 nuts (16) and put aside the flange (1), the tie rods (10) and the protection (4),
- Clamp the pump horizontally through the body with a vice (7),
- Unscrew the foot-valve body assembly (23) taking off if necessary the washer (25),
- Take off the piston (11) downwards,
- Put aside the cylinder (21).

Lower valve :

- Push the ball (19) to remove the spacer (18),
 - Take off the seat (20), the seal (22) and the pin (24),
 - Put aside the seal (9),
 - Clean the parts, check them if they are damaged or worn.
- Reinstall the parts in the reverse order of the disassembly sequence.

Wetting cup seals :

- Unscrew the wetting cup nut (5),
 - Take off the washers (6 & 13),
 - Put aside the seals,
 - Clean the parts, check them if they are damaged or worn.
- Reinstall the parts in the reverse order of the disassembly sequence.

Piston head :

- Unscrew the seat (17),
- Take off the ball (15), the washers (6 & 13) and the seals (14),
- Clean the parts, check them if they are damaged or worn.

Complete assembly of the fluid section :

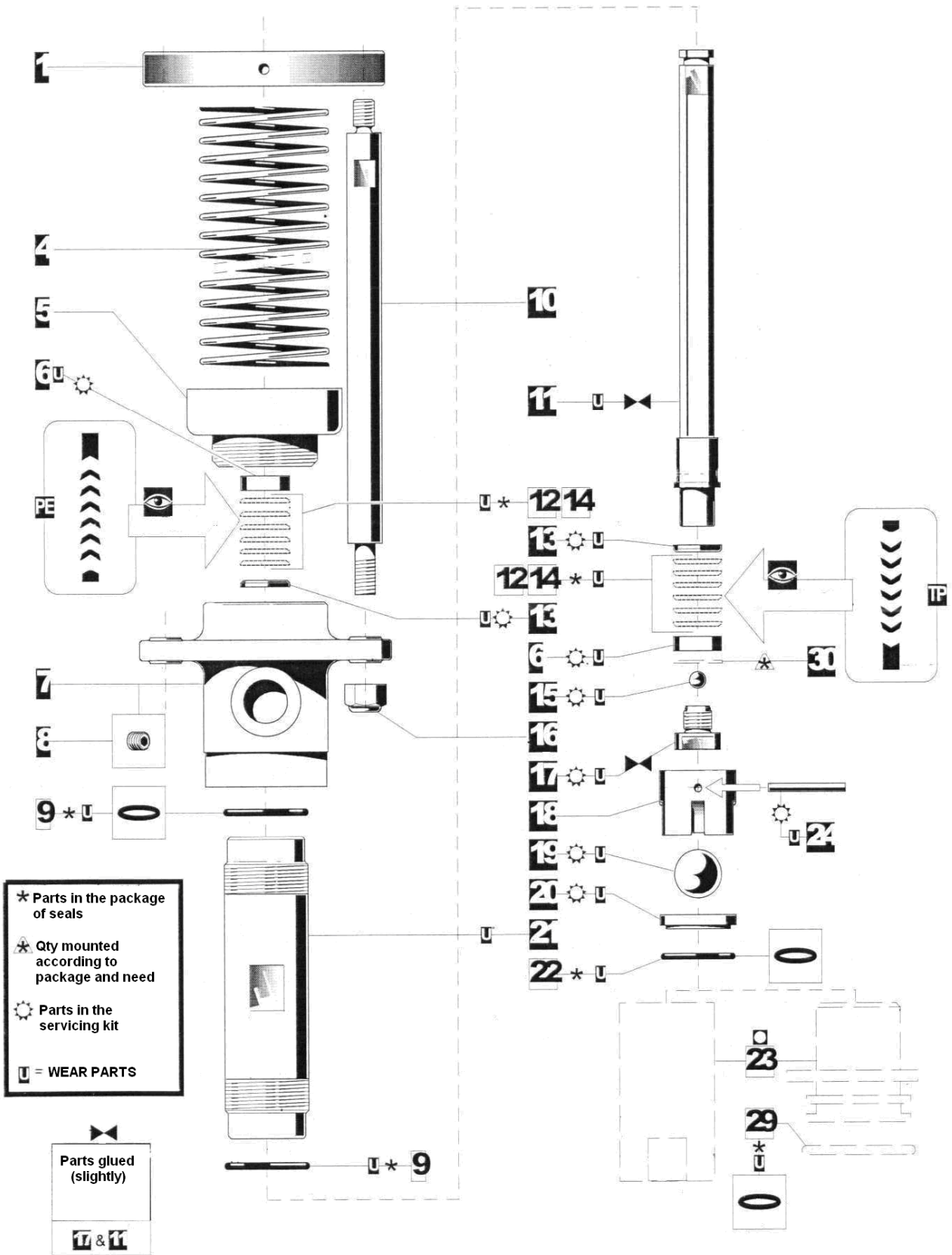
- Lubricate the wetting cup seals and the piston head seals,
- Slide the piston rod (11) assembly inside the body (7), push it upwards,
- Screw the cylinder (21) (to top) into the body (7),
- Screw the foot-valve body (23) assembly to top, tighten slightly,
- Reinstall the protective spring (4), the connection flange (1) and the tie-rods (10). Screw the 2 nuts (16),
- Reassemble the pump to the pneumatic motor.

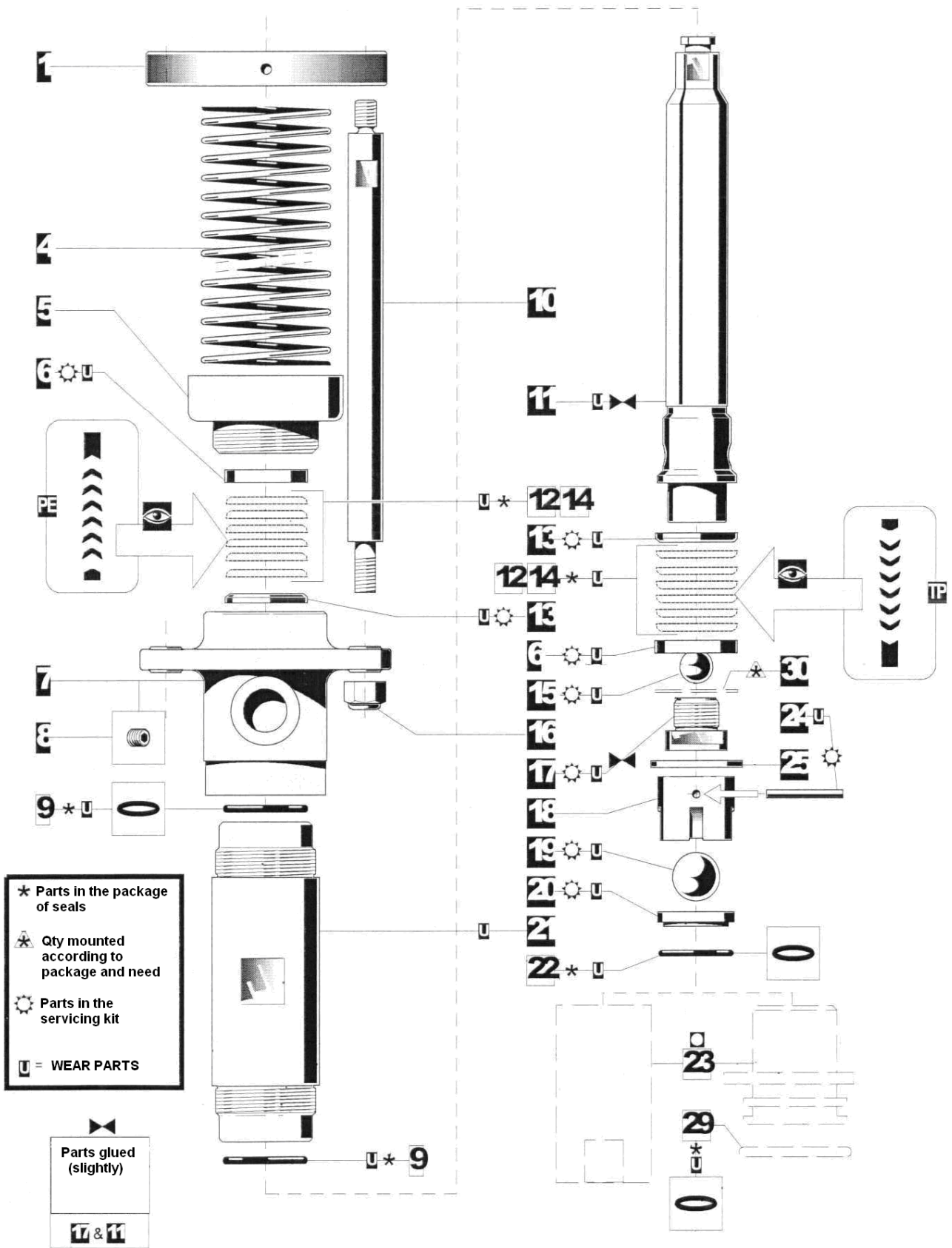
Before intervening on the pump :

- **Clean the parts with the appropriate cleaning solvent,**
- **Install new seals if necessary after having lubricated them,**
- **Lubricate the piston and the inside of the cylinder to prevent from damaging the seals,**
- **Install new parts if necessary.**

10. EXPLODED VIEW AND SPARE PARTS' LIST

105 171 xxxx / 105 172 xxxx





* Parts in the package of seals
 ▲ Qty mounted according to package and need
 ⚙ Parts in the servicing kit
 U = WEAR PARTS

Parts glued (slightly)
 17 & 11

■ SPARE PARTS 'LIST

		105 171 xxxx	105 172 xxxx	105 173 xxxx	
Ind.	Description	#			Qty
1	Connection flange	209 600			1
4	Protection	209 602			1
5	Wetting cup nut	209 604	209 624	209 644	1
* 6	'F' washer	NSS			2
7	Pump body	209 603	209 623	209 643	1
8	Plug	906 314 211			1
9	O-Ring	NSS			-
10	Tie-rod	209 601			2
* 11	Piston	209 605	209 625	209 645	1
* 12	Chevron seal	NSS			-
* 13	'M' washer	NSS			2
* 14	Chevron seal	NSS			-
* 15	Ball	NSS			1
16	Lock nut	88 335			2
* 17	Upper piston seal	NSS			1
18	Spacer	209 611			1
* 19	Ball	87 328			1
* 20	Lower seat	209 612			1
21	Cylinder	209 608	209 628	209 648	1
22	O-Ring	NSS			-
23	Foot-valve body	Refer to codification § 8			1
* 24	Pin	NSS			1
25	Washer	-	-	209 653	-
* 29	O-Ring	NSS			-
30	Adjustment block	210 339	210 340	210 341	-
*	Repair kit	105 431 (Ind. 6, 13, 15, 17, 19, 20, 24)	105 432 (Ind. 6, 13, 15, 17, 19, 20, 24)	105 433 (Ind. 6, 13, 15, 17, 19, 20, 24)	1
*	Seal kit	Depending upon choice (Refer to chart) (Ind. 9, 12, 14, 22, 29, 30)			1

* Preceding the index number denotes a suggested spare part. N S S : Denotes parts are not serviceable separately.

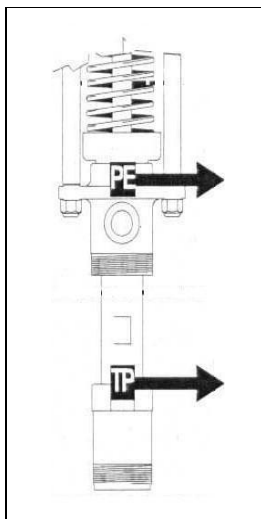
■ SEAL KITS RECOMMENDED

Code	Composition	Use
01	PTFE (+ FPM)	Solvent - Ether - Ketone - Aromatic alcohol - some varnishes and paints
02	PTFE (+ FPM / FEP)	Solvent - Ether - Ketone - Aromatic alcohol - some varnishes and paints, PU paints - Pharmacy - Cosmetics - Some foodstuffs
03	PTFE + PE (+ FPM)	Epoxy glue - Butyl - Silicone - Some varnishes - Paint
04	PE + LEATHER (+ FPM)	Paint - Varnishes - Grease - Oil - Ink - Hydro soluble paint
05	GRAPHITED PTFE (+ FPM)	Paints - Varnishes - Inks - PVC compounds - Butyl
06	PU + GRAPHITED PTFE (+ FPM)	Mastics - PVC - Butyl

■ SEAL KITS' COMPOSITION - PUMP, model 105171xxxx

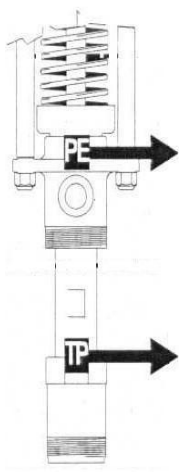
# FLUID SECTION		105 171 xx 01			105 171 xx 02			105 171 xx 03		
Kit : # :		01 105 235			02 105 236			03 105 237		
Ind.	Description	Qty	#	Material	Qty	#	Material	Qty	#	Material
*9	O-Ring	3	84 180	FPM	3	84 393	FPM / FEP	3	84 180	FPM
*12 14	Cup packing	8	209 616	PTFE	8	209 616	PTFE	4	209 616	PTFE
	Piston packing	6	209 616	PTFE	6	209 616	PTFE	4	209 617	PE
								3	209 616	PTFE
								3	209 617	PE
*22	O-Ring	1	84 390	PTFE	1	84 390	PTFE	1	84 390	PTFE
*29	O-Ring	1	909 130 540	FPM	1	909 130 540	FPM	1	909 130 540	FPM
*30	Adjustment block	-			-			-		



	PTFE	→	^	PTFE	→	^	PTFE	→	^
	PTFE	→	^	PTFE	→	^	PE	→	^
	PTFE	→	^	PTFE	→	^	PTFE	→	^
	PTFE	→	^	PTFE	→	^	PE	→	^
	PTFE	→	^	PTFE	→	^	PTFE	→	^
	PTFE	→	^	PTFE	→	^	PE	→	^
	PTFE	→	^	PTFE	→	^	PTFE	→	^
	PTFE	→	^	PTFE	→	^	PE	→	^
	PTFE	→	v	PTFE	→	v	PE	→	v
	PTFE	→	v	PTFE	→	v	PTFE	→	v
	PTFE	→	v	PTFE	→	v	PE	→	v
	PTFE	→	v	PTFE	→	v	PTFE	→	v
	PTFE	→	v	PTFE	→	v	PE	→	v
	PTFE	→	v	PTFE	→	v	PTFE	→	v

# FLUID SECTION		105 171 xx 04			105 171 xx 05			105 171 xx 06					
Kit : # :		04 105 239			05 105 240			06 105 241					
Ind.	Description	Qty	#	Material	Qty	#	Material	Qty	#	Material			
*9	O-Ring	3	84 180	FPM	3	84 180	FPM	3	84 180	FPM			
*12 14	Packing cup	3	209 618	LEATHER	8	209 619	PTFE G	3	84 409	PU			
		4	209 617	PE				1	209 617	PE			
	Piston packing	2	209 618	LEATHER				6	209 619	PTFE G	6	209 619	PTFE G
		3	209 617	PE									
*22	O-Ring	1	84 390	PTFE	1	84 390	PTFE	1	84 390	PTFE			
*29	O-Ring	1	909 130 540	FPM	1	909 130 540	FPM	1	909 130 540	FPM			
*30	Adjustment block	4	210 339	ST STEEL	-			-					



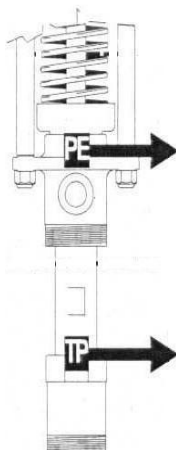
	PE	→	^	PTFE G	→	^	ACETAL RESIN	→	□
	LEATHER	→	^	PTFE G	→	^	PU	→	^
	PE	→	^	PTFE G	→	^	PU	→	^
	LEATHER	→	^	PTFE G	→	^	PU	→	^
	PE	→	^	PTFE G	→	^	PE	→	^
	LEATHER	→	^	PTFE G	→	^			
	PE	→	^	PTFE G	→	^			
				PTFE G	→	^			
				PTFE G	→	^			
	PE	→	v	PTFE G	→	v	PTFE G	→	v
	LEATHER	→	v	PTFE G	→	v	PTFE G	→	v
	PE	→	v	PTFE G	→	v	PTFE G	→	v
	LEATHER	→	v	PTFE G	→	v	PTFE G	→	v
	PE	→	v	PTFE G	→	v	PTFE G	→	v

PTFE G = Graphited PTFE

■ PACKAGE OF SEALS COMPOSITION - PUMP, model 105172xxxx

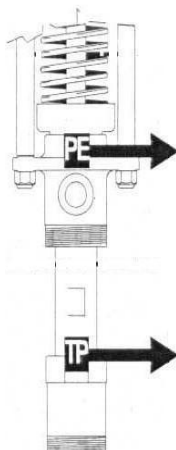
# FLUID SECTION		105 172 xx 01			105 172 xx 02			105 172 xx 03		
Kit : # :		01 105 243			02 105 244			03 105 245		
Ind.	Description	Qty	#	Material	Qty	#	Material	Qty	#	Material
*9	O-Ring	3	84 180	FPM	3	84 393	FPM / FEP	3	84 180	FPM
*12 14	Cup packing	8	209 616	PTFE	8	209 616	PTFE	4	209 616	PTFE
	Piston packing	6	209 616	PTFE	6	209 616	PTFE	4	209 617	PE
*22	O-Ring	1	84 390	PTFE	1	84 390	PTFE	3	209 616	PTFE
*29	O-Ring	1	909 130 540	FPM	1	909 130 540	FPM	3	209 617	PE
*30	Adjustment block	-			-			-		



	PTFE	→	^	PTFE	→	^	PTFE	→	^
	PTFE	→	^	PTFE	→	^	PE	→	^
	PTFE	→	^	PTFE	→	^	PTFE	→	^
	PTFE	→	^	PTFE	→	^	PE	→	^
	PTFE	→	^	PTFE	→	^	PTFE	→	^
	PTFE	→	^	PTFE	→	^	PE	→	^
	PTFE	→	^	PTFE	→	^	PTFE	→	^
	PTFE	→	^	PTFE	→	^	PTFE	→	^
	PTFE	→	^	PTFE	→	^	PE	→	^
	PTFE	→	v	PTFE	→	v	PE	→	v
	PTFE	→	v	PTFE	→	v	PTFE	→	v
	PTFE	→	v	PTFE	→	v	PE	→	v
	PTFE	→	v	PTFE	→	v	PTFE	→	v
	PTFE	→	v	PTFE	→	v	PE	→	v
PTFE	→	v	PTFE	→	v	PTFE	→	v	

# FLUID SECTION		105 172 xx 04			105 172 xx 05			105 172 xx 06		
Kit : # :		04 105 247			05 105 248			06 105 249		
Ind.	Description	Qty	#	Material	Qty	#	Material	Qty	#	Material
*9	O-Ring	3	84 180	FPM	3	84 180	FPM	3	84 180	FPM
*12 14	Cup packing	3	209 635	LEATHER	8	209 636	PTFE G	3	84 410	PU
		3	209 634	PE				1	209 634	PE
	Piston packing	2	209 635	LEATHER				6	209 636	PTFE G
		3	209 634	PE				1	211 752	ACETAL RESIN
*22	O-Ring	1	84 390	PTFE	1	84 390	PTFE	1	84 390	PTFE
*29	O-Ring	1	909 130 540	FPM	1	909 130 540	FPM	1	909 130 540	FPM
*30	Adjustment block	4	210 340	ST STEEL	-			-		



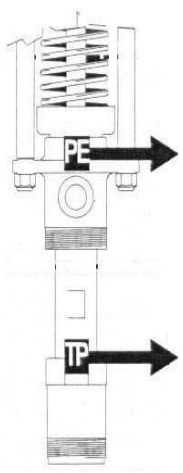
	PE	→	^	PTFE G	→	^	ACETAL RESIN	→	□
	LEATHER	→	^	PTFE G	→	^	PU	→	^
	PE	→	^	PTFE G	→	^	PU	→	^
	LEATHER	→	^	PTFE G	→	^	PU	→	^
	PE	→	^	PTFE G	→	^	PE	→	^
	LEATHER	→	^	PTFE G	→	^			
				PTFE G	→	^			
				PTFE G	→	^			
	PE	→	v	PTFE G	→	v	PTFE G	→	v
	LEATHER	→	v	PTFE G	→	v	PTFE G	→	v
	PE	→	v	PTFE G	→	v	PTFE G	→	v
	LEATHER	→	v	PTFE G	→	v	PTFE G	→	v
	PE	→	v	PTFE G	→	v	PTFE G	→	v
				PTFE G	→	v	PTFE G	→	v

PTFE G = Graphited PTFE

■ PACKAGE OF SEALS COMPOSITION - PUMP, model 105173xxxx

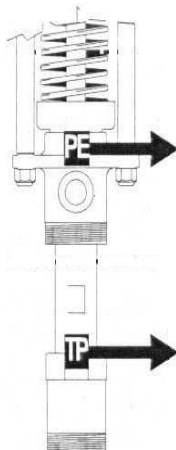
# FLUID SECTION		105 173 xx 01			105 173 xx 02			105 173 xx 03		
Kit : # :		01 105 253			02 105 254			03 105 255		
Ind..	Description	Qty	#	Material	Qty	#	Material	Qty	#	Material
*9	O-Ring	3	84 183	FPM	3	84 394	FPM / FEP	3	84 183	FPM
*12 14	Packing cup	6	209 655	PTFE	6	209 655	PTFE	3	209 655	PTFE
	Piston packing	6	209 655	PTFE	6	209 655	PTFE	3	209 655	PTFE
								3	209 656	PE
*22	O-Ring	1	84 390	PTFE	1	84 390	PTFE	1	84 390	PTFE
*29	O-Ring	1	909 130 540	FPM	1	909 130 540	FPM	1	909 130 540	FPM
*30	Adjustment block	-			-			-		



	PTFE	→	^	PTFE	→	^	PTFE	→	^
	PTFE	→	^	PTFE	→	^	PE	→	^
	PTFE	→	^	PTFE	→	^	PTFE	→	^
	PTFE	→	^	PTFE	→	^	PE	→	^
	PTFE	→	^	PTFE	→	^	PTFE	→	^
	PTFE	→	^	PTFE	→	^	PE	→	^
	PTFE	→	v	PTFE	→	v	PE	→	v
	PTFE	→	v	PTFE	→	v	PTFE	→	v
	PTFE	→	v	PTFE	→	v	PE	→	v
	PTFE	→	v	PTFE	→	v	PTFE	→	v
	PTFE	→	v	PTFE	→	v	PE	→	v
	PTFE	→	v	PTFE	→	v	PTFE	→	v

# FLUID SECTION		105 173 xx 04			105 173 xx 05			105 173 xx 06		
Kit : # :		04 105 257			05 105 258			06 105 259		
Ind.	Description	Qty	#	Material	Qty	#	Material	Qty	#	Material
*9	O-Ring	3	84 183	FPM	3	84 183	FPM	4	84 183	FPM
*12 14	Cup packing	2	209 657	LEATHER	6	209 658	PTFE G	3	84 411	PU
		3	209 656	PE				1	209 659	ACETAL RESIN
	Piston packing	2	209 657	LEATHER	6	209 658	PTFE G	6	209 658	PTFE G
		3	209 656	PE						
*22	O-Ring	1	84 390	PTFE	1	84 390	PTFE	1	84 390	PTFE
*29	O-Ring	1	909 130 540	FPM	1	909 130 540	FPM	1	909 130 540	FPM
*30	Adjustment block	4	210 341	ST STEEL	-			-		



	PE	→	^	PTFE G	→	^	ACETAL RESIN			
	LEATHER	→	^	PTFE G	→	^	PU	→	□	
	PE	→	^	PTFE G	→	^	PU	→	^	
	LEATHER	→	^	PTFE G	→	^	PU	→	^	
	PE	→	^	PTFE G	→	^				
					PTFE G	→	^			
	PE	→	v	PTFE G	→	v	PTFE G	→	v	
	LEATHER	→	v	PTFE G	→	v	PTFE G	→	v	
	PE	→	v	PTFE G	→	v	PTFE G	→	v	
	LEATHER	→	v	PTFE G	→	v	PTFE G	→	v	
PE	→	v	PTFE G	→	v	PTFE G	→	v		

PTFE G = Graphited PTFE