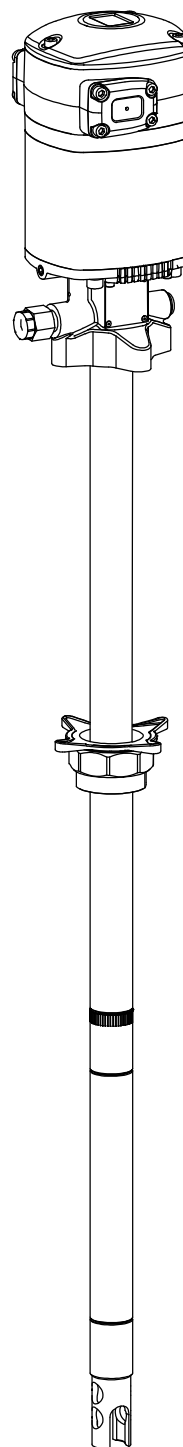


Parts and technical service guide
 Guía de servicio técnico y recambio
 Guide d'instructions et pièces de rechange



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EN	60:1 RATIO AIR OPERATED GREASE PM35	2
ES	BOMBA NEUMÁTICA DE GRASA PM35, RATIO 60:1	6
FR	POMPE À GRAISSE PNEUMATIQUE PM35, RAPPORT DE PRESSION 60:1	10

Compressed air operated piston-type reciprocating pump. This high flow capacity pump is compatible with mineral and synthetic grease and suitable for large installations with long lengths of piping supplying several outlets simultaneously. This pump is mounted directly on 20 kg, 50 kg and 185 kg drums.

WARNINGS



WARNING: Read all instruction manuals, tags, and labels before operating the equipment. This equipment is for professional use only.

- The use of non compatible fluids may cause damage in the pump and serious personal injury. This equipment is not intended for use with fluids that fall within the Group 1 fluid as defined that are explosive, extremely flammable, highly flammable, flammable, very toxic, toxic, oxidizing or where the vapor pressure is greater than 0,5 bar (7 psi) above the pressure atmospheric at the maximum allowable temperature.
- The pump generates high or very high pressures. Do not exceed the maximum air inlet pressure of 10 bar (145 psi).
- A direct hit against the human body may result in an injury.

- This unit may have stored pressure, release all pressure and disconnect from any fluid systems before servicing. To ensure safe operation of this unit, all service work should be by qualified personnel only.
- When not in use, be sure to shut off the air supply to avoid accidents.
- Do not alter or modify this equipment. Use only Samoa Industrial, S.A. genuine components. Any unauthorized tampering with this equipment, improper use, poor maintenance or removal of identification labels may invalidate the guarantee.
- All fittings in the system connected to the outlet of the pump should be suitable for the maximum possible pressure generated by the pump/air motor. If the systems cannot be designed to take the maximum pressure produced by the pump, safety valves or diverter valves should be fitted.

INSTALLATION

It is recommended to install this pump on a drum using the bundled bung adapter (410 001) with a suitable drum cover (418 006 for 185 kg drum, 418 004 for 50 kg drum and 418002 for 20 kg drum). Fasten the cover onto the drum and screw the nut of the bung adaptor securely into the 2" bung opening of the cover. Insert the pump through the nut and adjust it with the star nut to the desired height (see figure 2).

It is also possible mounting the pump directly fastened on a flat surface, using the 4 threaded holes (M8) disposed in a 90 mm pattern in the fluid outlet body.

TYPICAL INSTALLATION

Figure 3 is a typical installation shown with all the recommended accessories for the pump to operate correctly.

NOTE: The compressed air supply must be set between 2 and 10 bar (29 and 145 psi), being 6 bar (90 psi) the recommended pressure. An air closing valve must be installed, in order to be able to close the compressed air line at the end of the day (If the air inlet not is closed and there is a leakage in some point of the grease outlet circuit, the pump will start automatically, emptying the container).

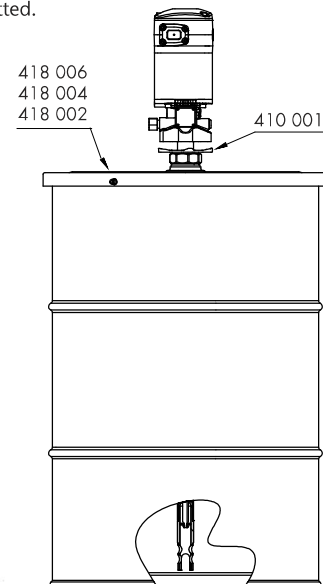


Fig. 2

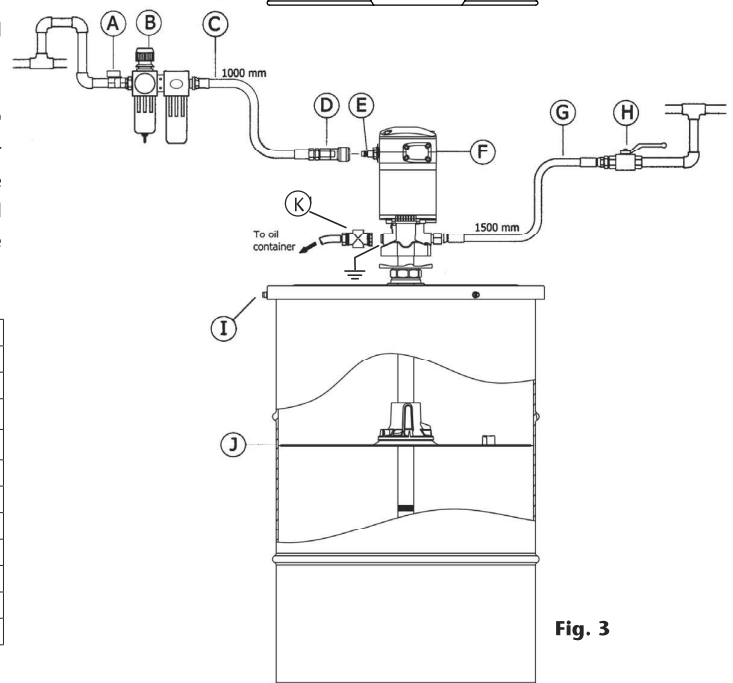


Fig. 3

Pos	Description	Part No.
A	Air shut off valve	950319+239004
B	Filter regulator	241001
C	Air hose	247710
D	Quick coupling	251438
E	Connection nipple	255338
F	Pump (185 kg drum)	530610
G	Grease hose	945676+841700+945557
H	Grease shut off valve	950304
I	Cover	418006
J	Follower plate	417012
K	Pressure Relief Valve	

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OPERATION

This pump is self-priming. To prime it the first time, it is convenient to connect the air supply to the pump while keeping the outlet gun opened, and increase the air pressure slowly from 0 to the desired pressure by using a pressure regulator. Once grease starts flowing through all the outlets, the pump is primed.

The pump starts to pump when an outlet valve is opened, for example a grease control gun.

NOTE: It is important that the foot valve do not come in contact with dirty areas, such as a workshop floor, because it may become contaminated with dirt or other particles that can damage the seals.

TROUBLESHOOTING

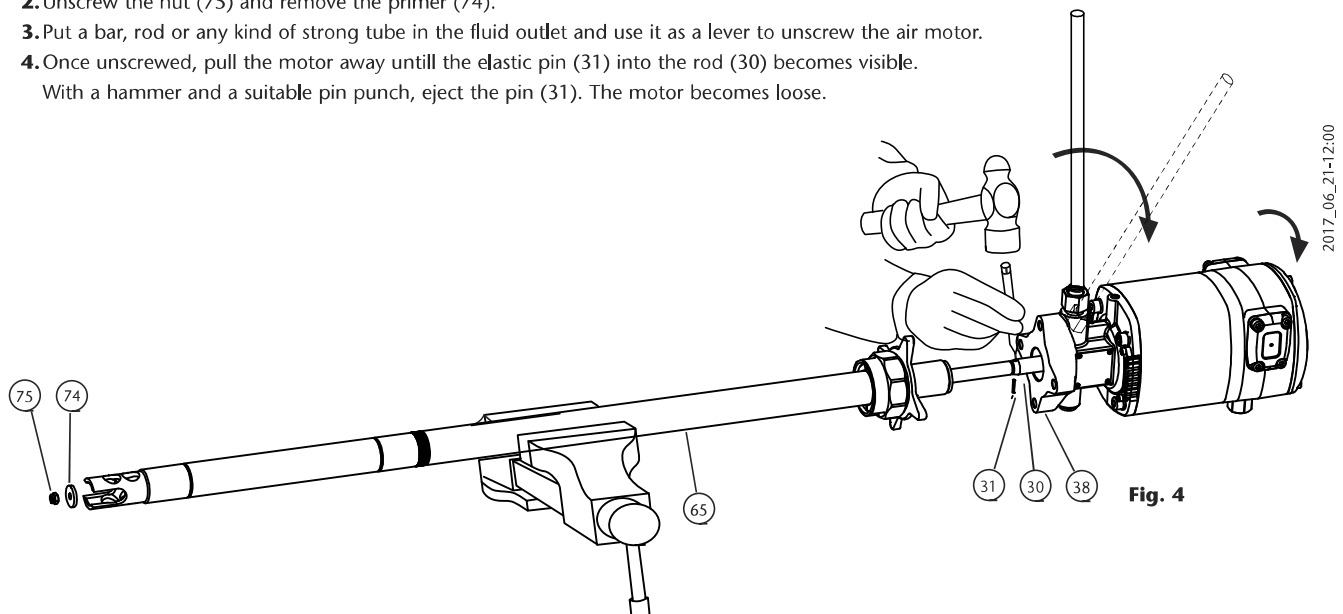
Symptoms	Possible Reasons	Solutions
The pump is not working or there is no grease delivery.	No suitable air supply pressure.	Increase the air supply pressure.
	Some outlet circuit element is clogged or closed.	Clean or open the outlet circuit.
	There is an air pocket in the grease inlet area.	Stir and repack the grease.
The pump begins to operate very fast.	The drum is empty or the grease level is beneath the suction tube inlet.	Replace the drum or insert the suction tube until the inlet reaches the grease level.
The pump keeps on operating although the grease outlet is closed.	There is a grease leakage at some point in the circuit.	Verify and tighten or repair.
	Contamination in the upper valve.	Disassemble and clean. Replace if damaged.
Grease leakage through the air outlet muffler or the leakage warning hole on the pump body (38).	Contamination in the foot valve.	Disassemble and clean. Replace if damaged.
	Grease has passed over to the air motor caused by scratched piston rod (30) or worn or damaged seals (2x34).	Verify the piston rod (30) and replace damaged / worn parts.
Air leakage through the air outlet muffler (54).	Damaged or worn piston O ring (25).	Replace O Ring (25).
	Damaged or worn spool seals.	Replace seals (4x11), 12 and 14, or replace instead the full assembled spool (539505) (recommended).
Grease output too low or diminishes over time.	Contamination in the foot valve.	Remove and clean. Replace if damaged.
	Contamination in the upper valve.	Remove and clean. Replace if damaged.
	The exhaust muffler is clogged by compressed air dirt or lubricant.	Replace the muffler felt (40).

REPAIR AND CLEANING PROCEDURE

WARNING: Before starting any kind of maintenance or repair, disconnect the compressed air supply and open the valve to relieve the grease pressure.

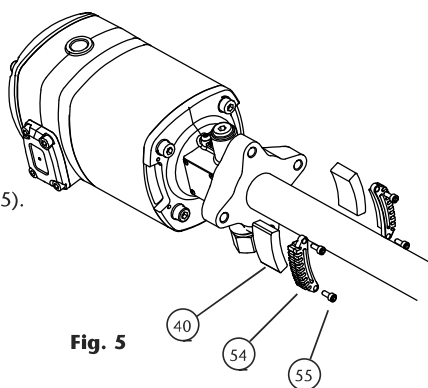
SEPARATE THE AIR MOTOR FROM THE PUMP

1. Fix the pump in a vise in horizontal position (fig. 4). Gently blow with a hammer the upper tube (65) close to the body (38) in order to break the thread locker.
2. Unscrew the nut (75) and remove the primer (74).
3. Put a bar, rod or any kind of strong tube in the fluid outlet and use it as a lever to unscrew the air motor.
4. Once unscrewed, pull the motor away until the elastic pin (31) into the rod (30) becomes visible. With a hammer and a suitable pin punch, eject the pin (31). The motor becomes loose.



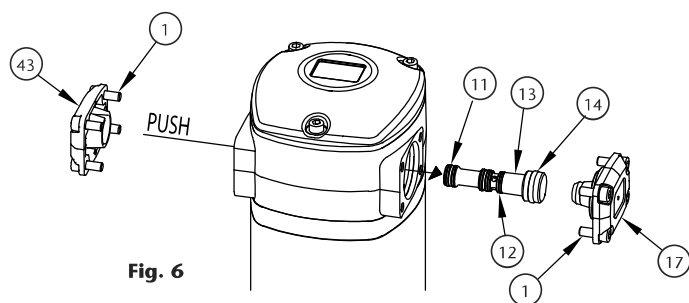
CLEAN THE MUFFLER (FIG. 5)

1. Unscrew the 4 screws (55).
2. Remove both exhaust covers (54).
3. Replace both felts (40) by new ones.
4. Put back the covers (54) with their screws (55).



AIR DISTRIBUTOR (FIG. 6)

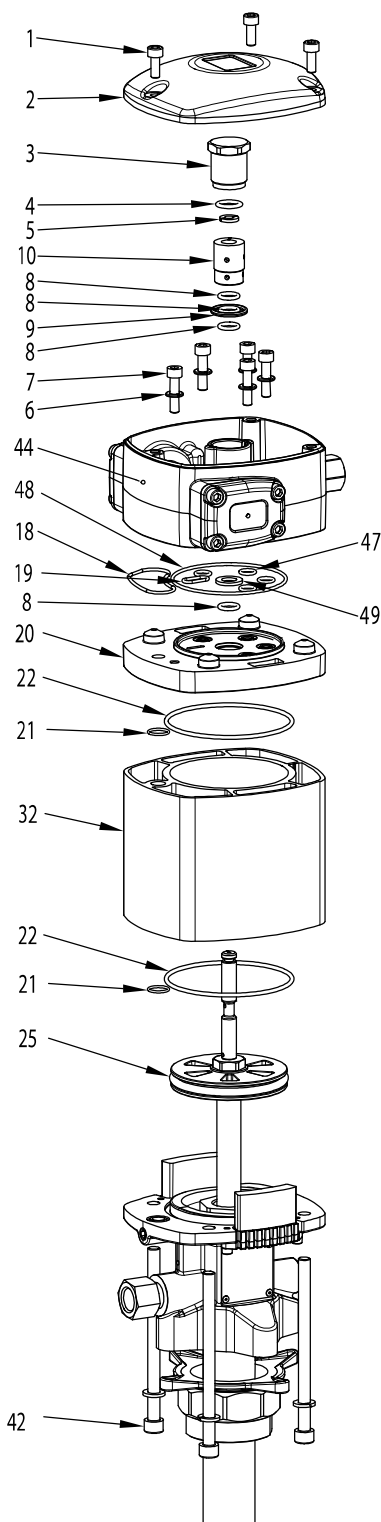
1. Unscrew the 4 bolts (1) from the cover (17) and remove it.
2. Unscrew the 4 bolts (1) from the cover (43) and remove it.
3. Gently strike the spool (13) with a plastic tool by its minor diameter side (see fig. 6), through the motor, and remove the spool (13).
4. Replace the seals (4x11), (12) and (14) with new ones or replace the whole spool (13) with its seals factory installed (kit 539505). This is strongly recommended in order to ensure the correct assembly of the seals.



AIR DISTRIBUTOR SEALS (FIG. 7)

1. Remove the 3 bolts (1) and then the cap (2).
2. Remove the part (3) and its o-ring (4). Remove o-ring (4) and replace it later by a new one.
3. Take away the 2 curved keys (5).
4. Unscrew the 5 bolts (7) and take them away along with their washers (6).
5. Pull upwards the head of the motor (44) till it's free from the rest of the pump.
6. Pull upwards the part (10) till it's out of the head of the motor. Remove o-rings (3x8 and 9) and replace them later by new ones.
7. Remove o-rings (18, 19, 48, 4x47) and the one (8) below the washer (49). Replace them later by new ones.
8. Remove the 4 bolts (42), pull upwards the part (20) and then remove o-rings (21) and (22). Replace them later with new ones.
9. Pull upwards the cylinder (32) and replace o-rings (21), (22) and (25).
10. Reassemble in reverse order, applying thread locker in part (3).

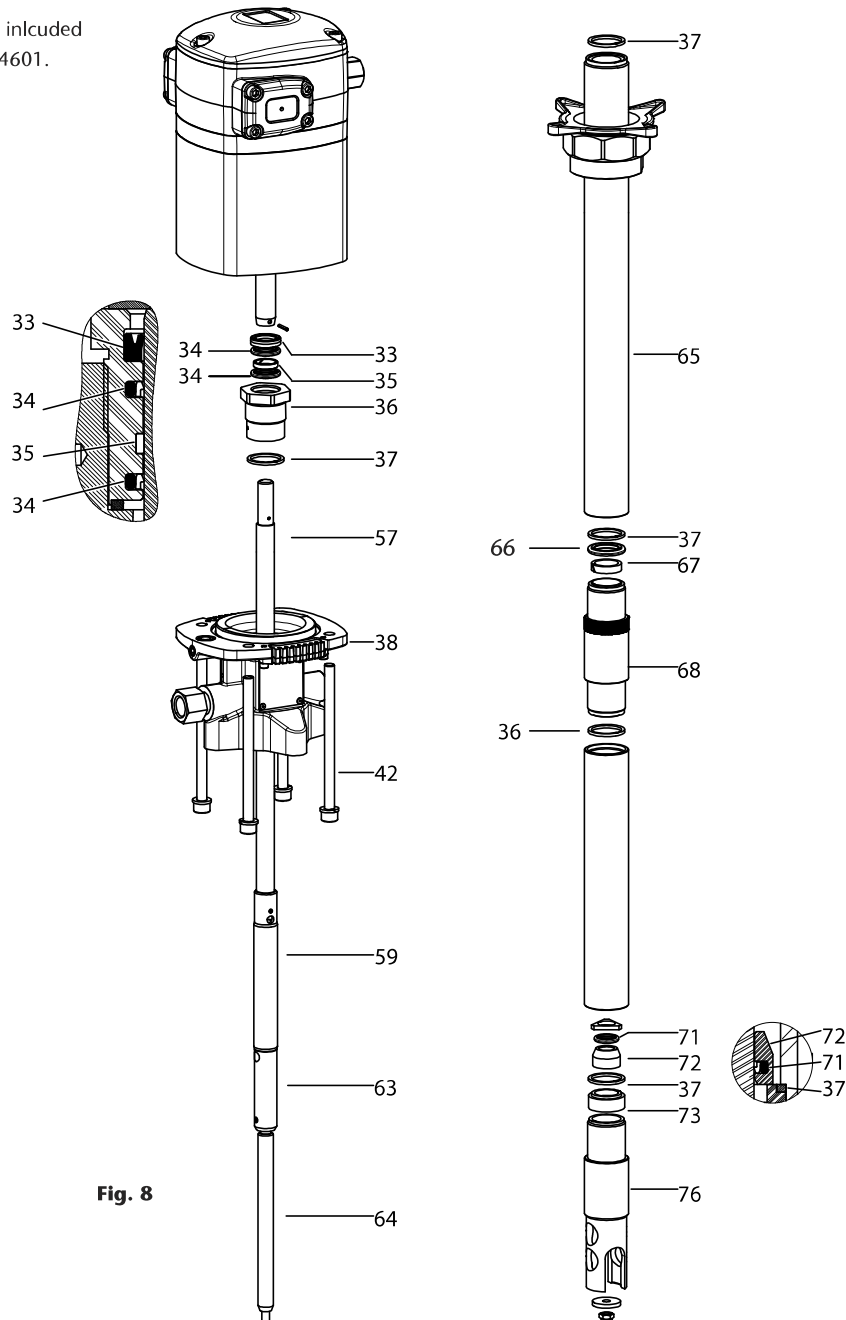
NOTE: all these seals are included in the available kit 539502.



REPAIR AND CLEANING PROCEDURE

LOWER SEALS KIT (FIG. 8)

1. Take away the air motor from the lowers, as described previously.
2. Unscrew the bolts (42) and remove the body (38).
3. Unscrew the scraper nut (36) and extract the washer (37). Replace seals (33), (34)x2 and (35).
4. Take away the assembly consisting of parts (57), (59), (63) and (64) from the lowers.
5. With the tube (65) secured on a vise, unscrew the tube (76).
6. Extract the parts (37), (72) and (73). Replace the seal (71) by a new one.
7. Unscrew the part (68) and replace the seals (66) and (67) by new ones.
8. Assemble again in reverse order, replacing all metallic seals 4x(37) by new ones.
9. All necessary seals are included in the available kit 534601.



CLEANING OR REPLACING THE LOWERS VALVES

1. Disassembling the lowers as described previously, the fluid valves can be easily accessed.
2. Lower valve: parts from (70) to (73). Kit 534 602.
3. Upper valve: parts from (60) to (63). Kit 534 603.

NOTE: to unscrew the upper valve (63), secure it in a vise and unscrew the rod (59) by grabbing it in the pin (58) area in order to avoid damaging the quality of the surface intended for sealing.

PARTS LIST / TECHNICAL DATA / DIMENSIONS

SPARE PARTS SEE PAGES: 14, 15, 16 and 17.

PARTS LIST / LISTA DE RECAMBIOS / PIÈCES DE RECHANGE

Repair kit / Kit de reparación / Pièces de rechange				
Part. No. / Cód. / Réf.	Description	Descripción	Description	Ind. pos.
534 601	Lower seals kit	Kit juntas bajos	Kit joints bas	33, 2x34, 35, 5x37, 66, 67, 71
534 602	Lower valve kit	Kit válvula inferior	Kit soupape inférieure	70, 71, 72, 73
534 603	Upper valve kit	Kit válvula superior	Kit soupape supérieure	60, 61, 62, 63
539 502	Air motor seals kit	Kit juntas motor aire	Kit joints moteur air	4, 4x8, 9, 18, 19, 2x21, 2x22, 25, 4x47, 48
539 504	Exhaust muffler kit	Kit silenciador	Kit silencieux d'échappement	2x40, 2x54, 4x55
539 505	Spool + seals kit	Kit corredera + juntas	Kit distributeur + joints	4x11, 12, 13, 14

POS	Part. No. / Cód.	Description	Descripción	Description	Cant
1	940389	Screw	Tornillo	Vis	11
2	853111	Top cover	Tapa superior	Capot supérieur	1
3	753228	Pilot sleeve	Tapón inversor	Capuchon inverseur	1
4	946192	O-ring	Junta tórica	Joint torique	1
5	753230	Inverter stopper	Tope sensor	Butée inverseur	2
6	942206	Spring washer	Arandela muelle	Rondelle à ressort	5
7	940381	Screw	Tornillo	Vis	5
8	946010	O-ring	Junta tórica	Joint torique	4
9	946032	O-ring	Junta tórica	Joint torique	1
10	853610	Pilot valve	Casquillo piloto	Vanne de contrôle	1
11	853506	Distributor seal	Junta corredera	Joint du distributeur	2
12	946766	O-ring	Junta tórica	Joint torique	1
13	853612	Distributor spool	Corredera	Distributeur à tiroir	1
14	946072	O-ring	Junta tórica	Joint torique	1
15	946042	O-ring	Junta tórica	Joint torique	1
16	853616	Spool bumper	Amortiguador corredera	Amortisseur tiroir	1
17	853115	Distributor stopper	Tope corredera	Butée tiroir	1
18	946168	O-ring	Junta tórica	Joint torique	1
19	946012	O-ring	Junta tórica	Joint torique	1
20	753112	Flange	Brida	Bride	1
21	946041	O-ring	Junta tórica	Joint torique	2
22	946085	O-ring	Junta tórica	Joint torique	2
23	853481	Sensor rod	Vástago sensor	Tige du capteur	1
24	853480	Air piston	Émbolo de aire	Piston d'air	1
25	946767	O-ring	Junta tórica	Joint torique	1
26	943010	Elastic pin	Pasador elástico	Goupille élastique	1
27	840450.001	Sensor spoke	Varilla tope inversor	Tige de butée d'inverseur	1
28	946013	O-ring	Junta tórica	Joint torique	1
29	753240	Air piston washer	Arandela émbolo	Rondelle de piston d'air	1
30	853489	Air motor rod	Vástago motor	Tige du moteur d'air	1
31	943021	Elastic pin	Pasador elástico	Goupille élastique	1
32	853113	Air motor cylinder	Cilindro de aire	Cylindre du moteur d'air	1
33	946585	Pneumatic V-ring	Collarín neumático	Bague à lèvres pneumatique	1
34	946805	HP seal	Junta alta presión	Joint à haute pression	2
35	946219	Slide ring	Aro guía	Bague de guidage	1
36	853490	HP seals gasket	Portajuntas alta presión	Porte-joint haute pression	1
37	942024	Metallic seal	Junta metálica	Joint métallique	5
38	753005	Pump body	Cuerpo de salida	Corps de pompe	1

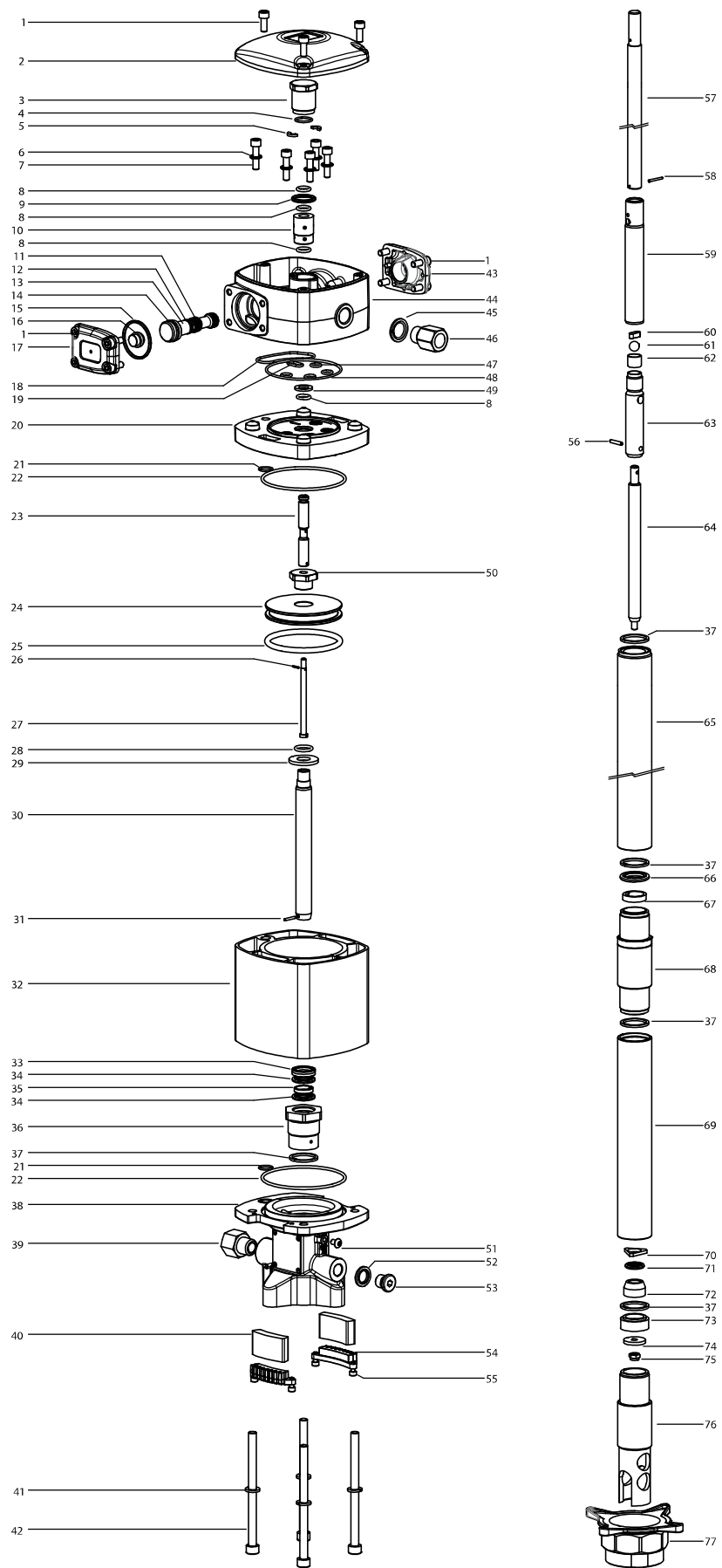
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PARTS LIST / LISTA DE RECAMBIOS / PIÈCES DE RECHANGE

39	853494	"xxxxx0" PUMPS: 3/8"NPT-M - 3/8"BSP-F adapter	Bombas "xxxxx0": adaptador 3/8"NPT-M - 3/8"BSP-H	Pompes "xxxxx0": adaptateur 3/8"NPT-M - 3/8"BSP-F	1
40	853614	Felt	Filtro	Filtre	2
41	942208	Spring washer	Arandela muelle	Rondelle à ressort	4
42	940631	Screw	Tornillo	Vis	4
43	853114	Exhaust muffler cover	Tapa silenciador	Couvercle du silencieux	1
44	753117	Air motor body	Cuerpo motor de aire	Corps du moteur Air	1
45	946603	"xxxxx1" PUMPS: Bonded seal	Bombas "xxxxx1": Junta metaloplástica	POMPES "xxxxx1": joint métaloplastique	1
46	945692	"xxxxx1" PUMPS: 3/8"BSP-M - 3/8"NPSM-F adapte	Bombas "xxxxx1": Adaptador 3/8"BSP-M - 3/8"NPSM-H	Pompes "xxxxx1": adaptateur 3/8"BSP-M - 3/8"NPSM-F	1
47	946166	O-ring	Junta tórica	Joint torique	4
48	946087	O-ring	Junta tórica	Joint torique	1
49	740616	Washer	Arandela	Rondelle	1
50	753229	Air piston nut	Tuerca émbolo aire	Écrou du piston d'air	1
51	940370	Screw	Tornillo	Vis	1
52	946601	Bonded seal	Junta metaloplástica	Joint métaloplastique	1
53	945100	Plug	Tapón	Bouchon	1
54	853615	Felt cover	Tapa fieltro	Couverde du filtre	2
55	940300	Screw	Tornillo	Vis	4
56	943042	Elastic pin	Pasador elástico	Goupille élastique	1
57	853492	"xxxx1x" Pumps: long connecting rod	Bombas "xxxx1x": varilla conexión larga	Pompes "xxxx1x": longue bielle	1
	853495	"xxxx2x" Pumps: short connecting rod	Bombas "xxxx2x": varilla conexión corta	Pompes "xxxx2x": courte bielle	
	853496	"xxxx3x" Pumps: bulk connecting rod	Bombas "xxxx3x": varilla conexión p/granel	Pompes "xxxx3x": bielle	
58	943022	Elastic pin	Pasador elástico	Goupille élastique	1
59	853487	HP piston	Pistón alta presión	Piston à haute pression	1
60	943806	Key	Chaveta	Cotter	1
61	944010	Ball	Bola	Balle	1
62	853422	Ball spacer	Espaciador bola	Boule entretoise	1
63	853491	Valve body	Cuerpo válvula	Soupape	1
64	840468,001	Priming rod	Varilla cebador	Tige d'entrée	1
65	753235	"xxxx1x" Pumps: long upper tube	Bombas "xxxx1x": tubo superior largo	Pompes "xxxx1x": longue tube supérieur	1
	753236	"xxxx2x" Pumps: short upper tube	Bombas "xxxx2x": tubo superior corto	Pompes "xxxx2x": courte tube supérieur	
	753237	"xxxx3x" Pumps: bulk upper tube	Bombas "xxxx3x": tubo superior p/granel	Pompes "xxxx3x": tube supérieur p/ silo	
66	946806	HP seal	Junta alta presión	joint à haute pression	1
67	946218	Slide ring	Aro guía	Bague de guidage	1
68	753238	Piston sleeve	Camisa pistón	Tube de piston	1
69	753234	Tube	Tubo	Tube	1
70	753239	Foot valve stopper	Tope válvula pie	Butée soupape inférieure	1
71	946102	HP seal	Junta alta presión	Joint à haute pression	1
72	840480	Valve body	Cuerpo válvula	Soupape	1
73	853488	Valbe base	Asiento válvula pie	Noyau de valve	1
74	840469	Primer	Cebador	Entrée laveuse	1
75	941106	Nut	Tuerca	Écrou	1
76	753233	Lower tube	Tubo inferior	Tube d'entrée	1
77	410001	Bung adapter	Adaptador deslizante	Adaptateur coulissant	1

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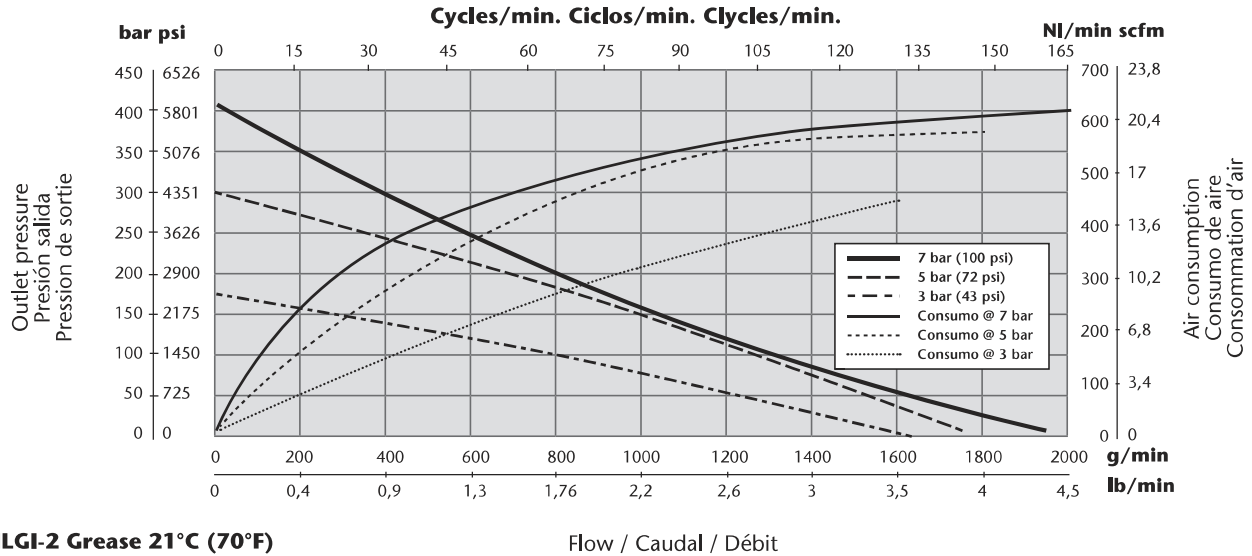
PARTS LIST / LISTA DE RECAMBIOS / PIÈCES DE RECHANGE



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TECHNICAL DATA / DATOS TÉCNICOS / SPÉCIFICATIONS TECHNIQUES

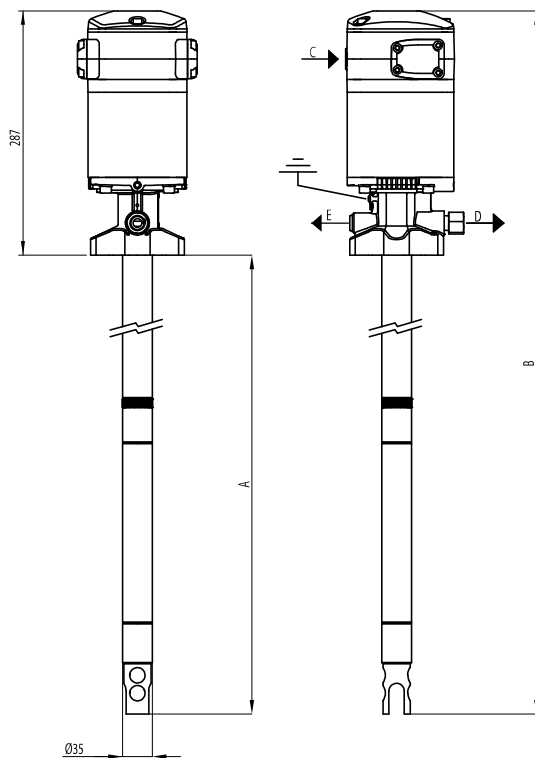
			530610 / 530620 / 530630	530611 / 530621 / 530631
Maximum air pressure	Presión de aire máxima	Pression d'air maxi	10 bar	(145 psi)
Minimum air pressure	Presión de aire mínima	Pression d'air mini	2 bar	(29 psi)
Maximum delivery	Caudal máximo	Débit maxi	2 kg/min @ 7 bar	(4.4 lb/min @ 100 psi)
Air inlet thread	Rosca entrada aire	Filetage en entrée d'air	3/8" BSP-F	3/8" NPT-F
Fluid outlet thread	Rosca salida fluido	Filetage en sortie fluide	3/8" BSP-F	3/8" NPT-F
Air piston diameter	Diámetro pistón de aire	Diamètre du piston d'air	80 mm	3.15"
Stroke	Carrera	Course	80 mm	3.15"
Weight	Peso	Poids	11.1 / 10 kg / 8.8 kg	24.5 / 22 / 19.4 lb



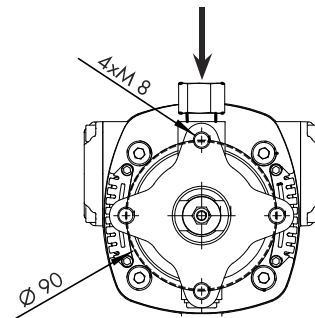
NLGI-2 Grease 21°C (70°F)

Flow / Caudal / Débit

DIMENSIONS / DIMENSIONES / DIMENSIONS



4xM8 holes / agujeros / orifices
 Ø90 mm hole pattern
 / gabarit de perçage



MODEL	A (mm)	B (mm)	WEIGHT
530610 / 530611	925	1212	11 kg
530620 / 530621	730	1017	10 kg
530630 / 530631	516	803	9 kg

MODEL	C, D	E
530610 / 530620 / 530630	3/8" BSP-F	1/4" BSP-F
530611 / 530621 / 530631	3/8" NPT-F	

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NOTES / NOTAS / NOTES

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CE CONFORMITY DECLARATION / DECLARATION CE DE CONFORMIDAD DÉCLARATION CE DE CONFORMITÉ

EN

SAMOA INDUSTRIAL, S.A., Pol. Ind. Porceyo, I-14 · Camino del Fontán, 831 · 33392 - Gijón - Spain, declares that this product conforms with the EU Directive:

2006/42/EC

ES

SAMOA INDUSTRIAL, S.A., Pol. Ind. Porceyo, I-14 · Camino del Fontán, 831 · 33392 - Gijón - España, declara que este producto cumple con la Directiva de la Unión Europea:

2006/42/CE

FR

SAMOA INDUSTRIAL, S.A., Pol. Ind. Porceyo, I-14 · Camino del Fontán, 831 · 33392 - Gijón - Espagne, déclare que ce produit est conforme au Directive de l'Union Européenne:

2006/42/CE

For **SAMOA INDUSTRIAL, S.A.**
Por **SAMOA INDUSTRIAL, S.A.**
Pour **SAMOA INDUSTRIAL, S.A.**



2017_06_21-12:00

Pedro E. Prallong Álvarez

Production Director

Director de Producción

Directeur de Production