



**P.A. – S.p.A. – EQUIPAGGIAMENTI TECNICI DEL LAVAGGIO**

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 ART. 2497 – BIS C.C. DIREZIONE E COORDINAMENTO BENETTI srl R.I. TRIB. DI RE 01480690351  
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## RL600 Sst –600 bar – 60 MPa gun

Technical manual : E 102

Gun suitable for use with pumps up to 600 bar – 60 MPa rated pressure.



- **30.5800.00** RL600 Sst
- **30.5820.00** RL600 Sst with microswitch
- Assembly on tubes equipped with G3/8" couplings
- Entirely made of stainless steel
- Ergonomic construction
- The trigger opens up with minimum effort
- Microswitch version with REED bulb (\*)
- Highly resistant Reed switch
- Protection degree **IPX3**
- Protection class **III**
- Magnetically controlled by the movement of the trigger
- In compliance with norms

### TECHNICAL SPECIFICATIONS MAGNETIC MICROSWITCH WITH REED BULB

Rated voltage:	<b>220 V</b>	Commutable voltage max :	<b>10 VA</b>
Cable length :	<b>2000 mm</b>	Wire:	<b>2 x 0,25mm<sup>2</sup></b>
Room temperature:	<b>100°C</b>	Type of action:	<b>1C</b>
Current max:	<b>0.5 A</b>		

P/N	RATED PRESSURE bar - MPa	PERMISSIBLE PRESSURE bar - MPa	MAX FLOW RATE l/min	(1) MAX TEMPERATURE °C	INLET OUTLET	WEIGHT gr
<b>30.5800.00</b>	600 - 60	660 - 66	60	100	G3/8F-F	1005
<b>*30.5820.00</b>	600 - 60	660 - 66	60	100	G3/8F-F	1020

#### (1) **Attention !!!**

The work limit of the magnetic microswitch with REED bulb attached to the gun must be maximum: 48 volt ac-cc

(2) The gun has been designed for continuous use, at a water temperature of 60°C (140°F). It can resist at the max temperature of 100°C (210°F) for short periods only, as, when the gun shuts off, the heater continues to transmit the heat to the water, thus increasing both temperature and pressure up to high, dangerous values.

Using the gun at a water temperature higher than 60°C involves for the operator the use of adequate safety devices, such as gloves, etc.

#### **Attention !!!**

In order to prevent the risk of **INSTABILITY** of the gun due to pressure spikes, **CHECK** (fig. 3) the use of safety devices (**SHOULDER SUPPORT**) in the **CHART** enclosed, in function of the parameters of Pressure / Flow Rate..

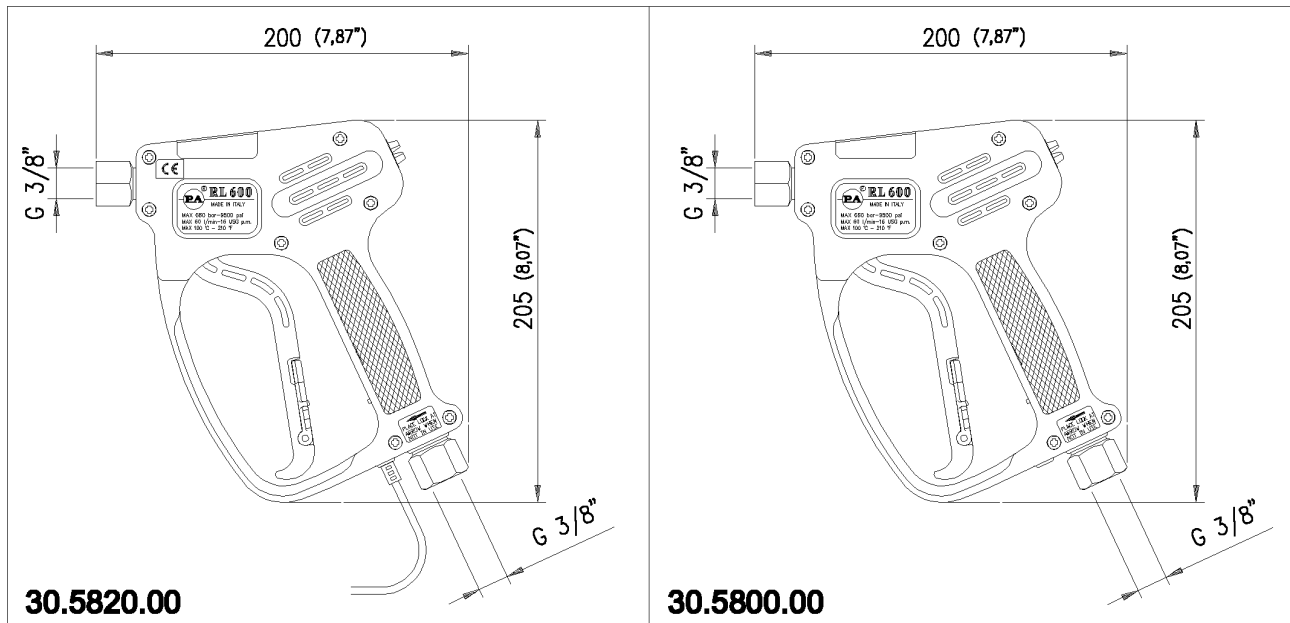
**Instruction manual, maintenance, installation, spare parts.**

For a correct utilization, follow the directions of this manual.

**Re-print them on the Use and Maintenance booklet of the machine.**

n. 12.9102.00  
Ed. 04/2002

## DIMENSIONAL DRAWING



## INSTRUCTIONS

This product is to be utilized with clean fresh water, even slightly additivated with normal detergents. For use involving different or corrosive liquids, contact the PA Technical department. Appropriate filtration should be installed when using unclean liquids. Choose the gun in line with the data of nominal running (system rated pressure, max flow and max temperature). In any case, the pressure of the machine should not exceed the permissible pressure rate imprinted on the gun.

## INSTALLATION

This gun was designed to operate with **hot water** (in compliance with the technical specs). Provide the plant generating **hot water** with an equipment limiting the incidental increase of the fluid temperature.

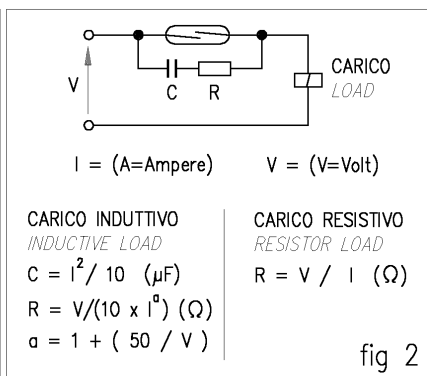
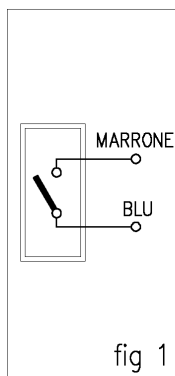
**Always** fit a safety valve to protect the delivery conduct when the latter is under pressure.

Choose a suitable nozzle and adjust the valve mounted in the front of the gun, thus obtaining a constant supply and avoiding unpleasant pressure spike when closing the system.

If the nozzle wears out, the pressure falls. When you install a new nozzle, adjust the system back to the original pressure.

## Wiring Connection

For the connection of the wiring, see the chart in **fig.1**



ESEMPIO CARICO INDUTTIVO  
DATI DI FUNZIONAMENTO 230V-0,5A

ES. INDUCTIVE LOAD  
WORKING DATA 230V-0,5A

$$C = I^2 / 10 \text{ (}\mu\text{F)} = 0,5^2 / 10 = 0,025 \mu\text{F}$$

$$\alpha = 1 + (50 / V) = 1 + (50 / 230) = 1,2$$

$$R = V / (10 \times I^\alpha) \text{ (}\Omega) = 230 / (10 \times 0,5^{1,2}) = 53 \Omega$$

ESEMPIO CARICO RESISTIVO  
DATI DI FUNZIONAMENTO 230V-0,5A

ES. RESISTOR LOAD  
WORKING DATA 230V-0,5A

$$R = V / I \text{ (}\Omega) = 230 / 0,5 = 460 \Omega$$

## ELECTRIC LIFE OF THE CONTACT

The electric circuit inside the sensor consists of a reed switch, which can work at up to 1 million operations. Current and/or voltage values higher than the permitted limits damage the contacts remarkably thus reducing their electric life (gluing or "craters" on the moving plates). In order to prevent these phenomena, it is necessary to value, the transitory system, in which the starting current can be 10-12 times stronger than the standard current. The cut-off of inductive loads can take the circuit to potential difference values (ddp) of thousands Volts. Thus, pay attention to such situations of overload and over voltage, showing either at the start when the circuit closes up (starting currents) and at the stop when the circuit opens up (disconnecting voltage). In order to avoid these problems it is necessary to provide the system with adequate protections. There are various suitable circuits, one of the most common and effective is shown in **fig.2**

## OPERATIONS

The gun opens and closes a high pressure conduct by means of a piston acting on a seat; the return is controlled by a spring which releases the trigger.

## WATER PIPES

By high or very unsteady pressure values on delivery, it is necessary to mount a pressure reducer, both to level the flow rate on delivery and to protect the system components.

## PROBLEMS AND SOLUTIONS

PROBLEMS	PROBABLE CAUSES	SOLUTIONS
Leakage from the nozzle side of the gun	Presence of impurities Gun seat worn out	Clean Replace the seat (see manual 10.9127.00)
Leakages from the seals	Seals worn out	Replace the seals (see manual 10.9127.00)
The trigger opens up with difficulty	The pressure inside the circuit is too high	Check the bypass valve and adjust it if necessary
No electric contact	Rupture or demagnetisation of the Reed switch	Replace the magnetic sensor (pos. 26)

## REGULATIONS :

The design and construction of our products are in conformity with: norm CEI EN 60336-2-79 first edition, publication date 1999-03 and relevant design variations of norm prEN1829.

Read this manual before starting the assembly.

For a correct utilization, follow the directions described in this manual and re-print them on the Use and maintenance manual of the machine.

Make sure that you are given **the Original Conformity Declaration** for the accessory chosen. The present manual is valid for all the guns named **RL 600**.

## SPARES

Use original PA spares only in order to get both a correct operation and a long lasting, reliable product.

## MAINTENANCE

Maintenance has to be carried out by **Specialized Technicians**.

For a correct assembly, follow the instructions given in the User's Manual P/N: 10.9126.00 (see package).

**STANDARD:** every 400 working hours (circa 10,000 cycles), check and lubricate the seals with water resistant grease.

**SPECIAL:** every 800 working hours (circa 20,000 cycles), check the wear of the seals and internal parts and if necessary, replace with original PA parts, taking care during installation to lubricate with water resistant grease.

**CAUTION:** re-assemble the gun restoring the original conditions.

**The manufacturer is not to be considered responsible for damage as a result from incorrect fitting and maintenance-**

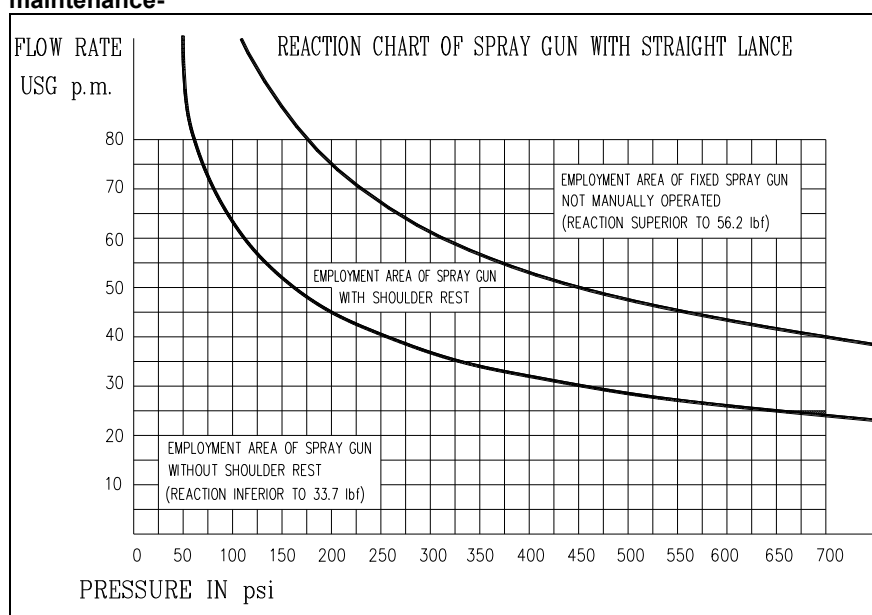
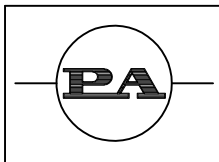


Fig. 3

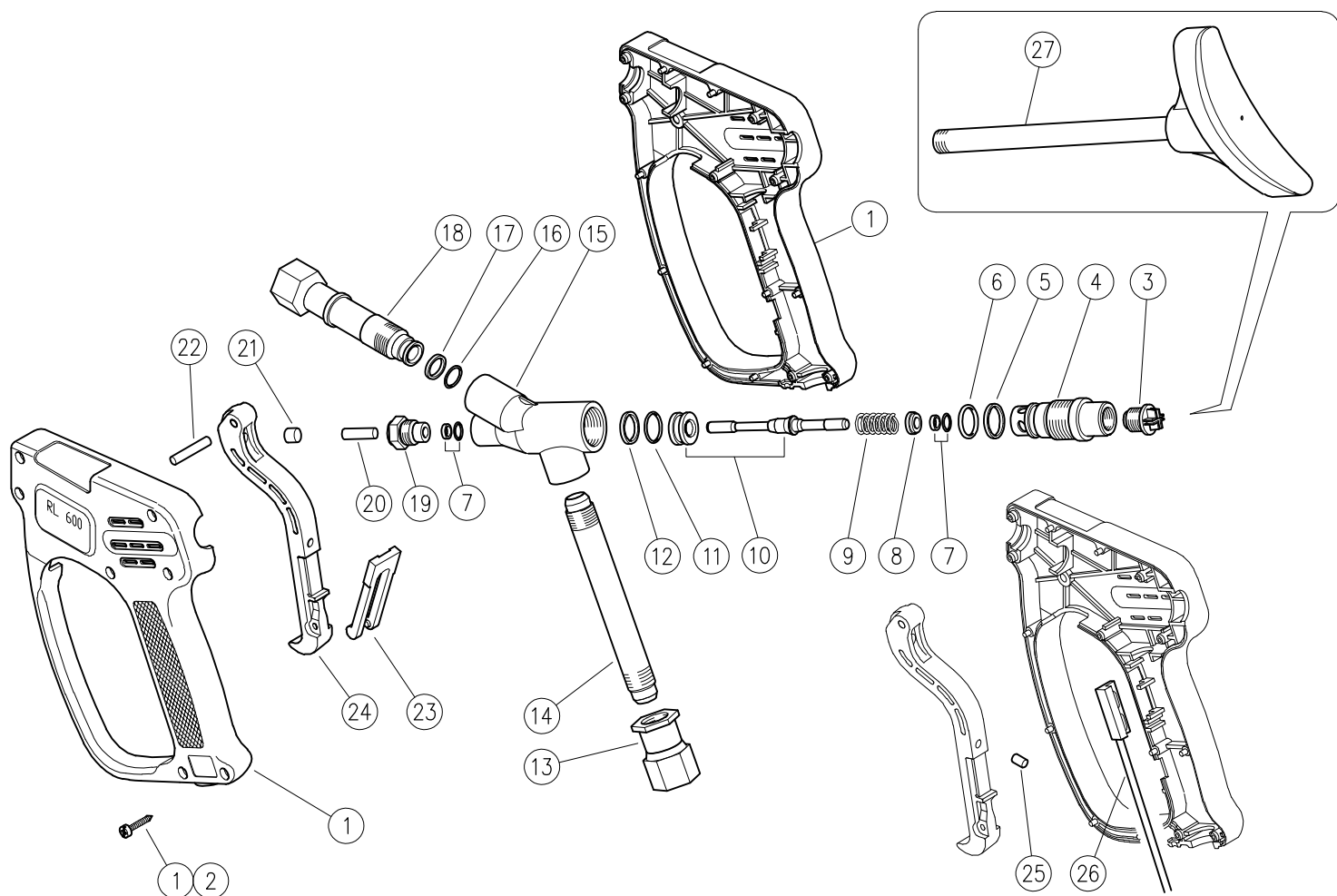
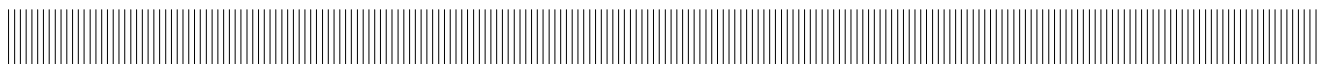
Technical data, descriptions and illustrations are indicative and liable to modification without notice



EQUIPAGGIAMENTI  
TECNICI  
LAVAGGIO

MANUTENZIONE PISTOLA RL600  
TRIGGER GUN RL600-SERVICING  
30.5800.00 - 30.5820.00

(I)	17/06/02
(GB)	<b>1</b>
10.9127.00	



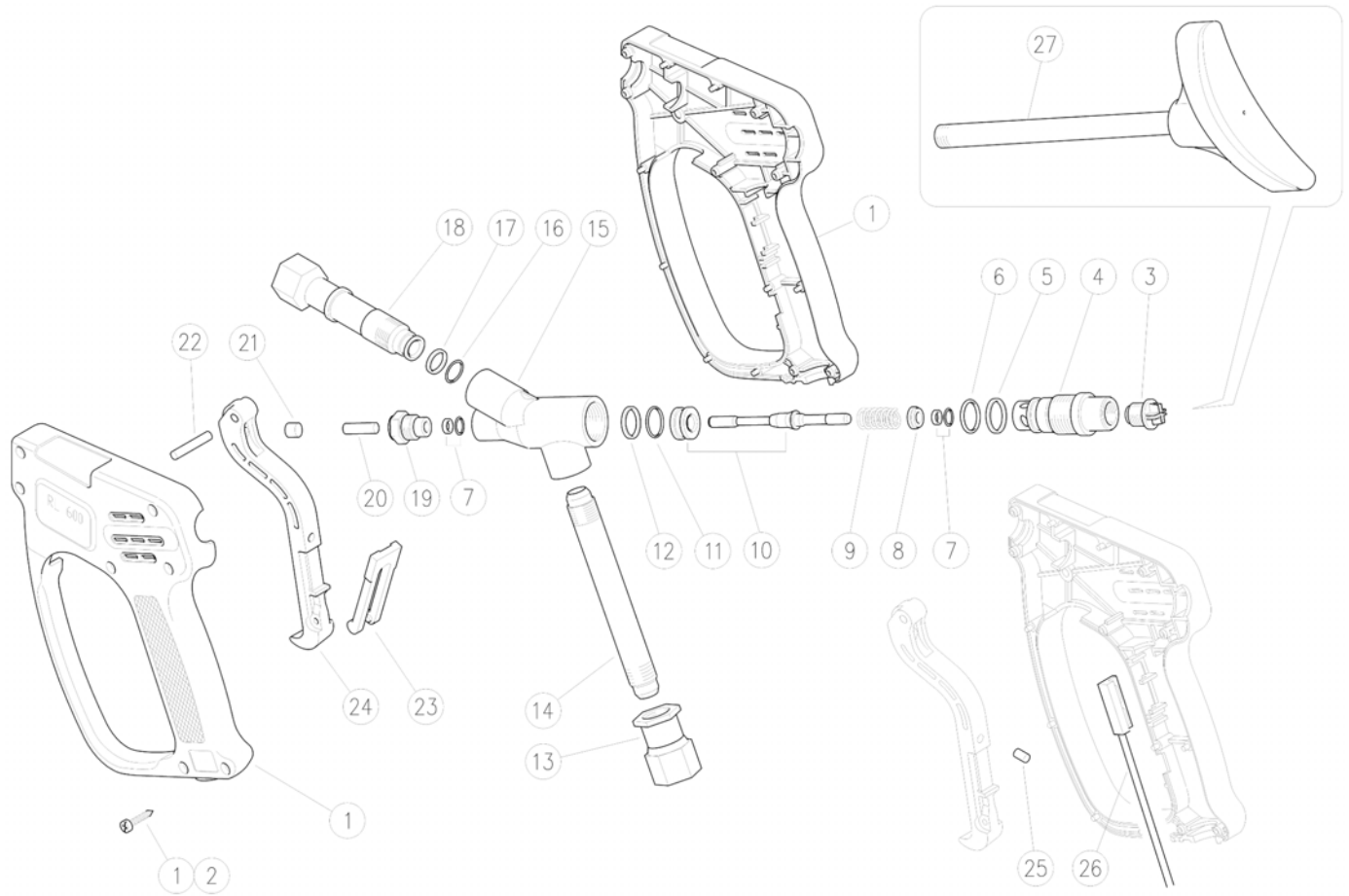
COD 30.5800.00  
COD 30.5820.00

## ISTRUZIONI PER LA MANUTENZIONE (I)

–IMPORTANTE: i particolari pos. 10 vengono forniti accoppiati e non possono ESSERE UTILIZZATI SEPARATAMENTE.  
–Lubrificare con grasso le Guarnizioni di tenuta pos. 5, 6, 7, 11, 12.  
–Terminare il montaggio avvitando il tappi pos. 4, 19 rispettivamente con coppie di serraggio: 35–40Nm (pos. 4), 25–30Nm (pos. 19).  
–A montaggio terminato, SE LA TENUTA NON RISULTASSE PERFETTA, eseguire una coniatura della Sede nel modo seguente: dopo aver rimosso il Tappo in plastica pos.3 (oppure il part. pos.27), battere una o più volte sul Pistone interno utilizzando un Punteruolo adeguato ed un Martello da circa 0.5 Kg.

## SERVICING INSTRUCTIONS (GB)

–IMPORTANT: parts of position 10 are supplied coupled and CANNOT BE UTILIZED SEPERATELY.  
–Grease the gaskets in position 5,6,7,11,12.  
–Complete the assembly by screwing the plugs in position 4,19 with a torque wrench setting: 35–40Nm (pos.4), 25–30Nm (pos.19).  
–After assembly, IF THE SEALING IS NOT COMPLETE, coning of the seat should be made as follows: after having removed the plastic plug pos.3 (or pos.27), strike a few times, with an adequate punch and hammer of 0,5kg, the internal piston pos.10.



Pos.	P/N	Description	Q.ty	K1	K2	K3	K4		Pos.	P/N	Description	Q.ty	K1	K2	K3	K4	
1	30.5817.24	Casing-kit -RL600 + screws, Sst.	1					1	15	30.5805.55	Housing -RL600, Sst.	1					3
2	16.3075.51	S/tapping scr. 3,5x18 mm sst.	7					10	16	10.3059.01	O-ring, 1,78x11,11 mm Ni 85	1	•				10
3	30.5815.84	Plug, 1/4M Bsp DIN259 Plast. black	1					10	17	10.4036.00	Back-up ring, 11,7x14,5x2 mm	1	•				10
4	30.5809.51	Spring coupl., 1/4F Bsp-M22x1M Sst.	1					5	18	30.5803.51	Front body, 3/8F Bsp Sst.	1					3
5	10.4037.00	Back-up ring, 16,7x19,5x2 mm	1	•				10	19	30.5808.51	Front Plug, M14x1 Sst.	1					5
6	10.3066.01	O-ring, 1,78x15,6 mm Ni 85	1	•				10	20	30.5813.31	Parallel pin, 6x20 mm brass	1					3
7	10.2006.00	Stem seal, 6x11x2,2 mm +O-ring	2	•				10	21	30.0675.51	Stop pin, 8x7,1mm Sst.	1					10
8	30.5812.51	Spacer ring, Sst.	1	•				5	22	30.2517.31	Parallel pin, 5x27,5 mm brass	1					10
9	30.5810.51	Spring, 2,2x12x27 mm Sst.	1	•				5	23	30.1510.84	Safety latch, PA red	1					10
10	30.5816.24	Piston+Seat -RL600, 2x1pcs.	1	•				1	24	30.5804.84	Trigger -RL600, PA black	1					5
11	10.3064.01	O-ring, 1,78x14 mm Ni 85	1	•				10	25	30.5821.51	Magnet, 5x8 mm (1)	1					5
12	10.4038.00	Back-up ring, 15,2x18x2 mm	1	•				10	26	12.5003.00	Probe with cable 2000 mm (1)	1					5
13	30.5807.51	Coupl., M16x1,5F-G3/8F Sst.	1					3	27	30.5060.00	Shoulder rest -RL600 1/4M Bsp 300mm **	1					1
14	30.5806.56	Tube, M16x1,5 FF 135mm Sst.	1					5									

\*\* On request

Kit	P/N	Description	
K1	30.5819.24	Spares kit -RL600, 10(11)x1pcs.	1

(1) 30.5820.00