



P.A. - S.p.A. - EQUIPAGGIAMENTI TECNICI DEL LAVAGGIO

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RL51 – Spray gun 250 bar – 25 MPa

Technical manual : **E 133**

Guns suitable for use up to 250 bar – 25 MPa rated pressure pumps.

No fluid passage upon trigger release.

New mechanical device with double connecting rods to guarantee less strain when opening and holding
DN10



- **30.4100.10** RL51 G3/8 G1/4 FF

- Covered by shockproof plastic semi-housings.
- Sst seat and ball.
- Internal structure in brass and Sst.
- Ergonomic construction.
- Minimum fatigue for trigger opening and use
- New mechanical opening device with double connecting rods
- New trigger design, rotating on a fixed pin to guarantee better mobility and steadiness

TECHNICAL SPECIFICATIONS

P/N	RATED PRESSURE bar - MPa	PERMISSIBLE PRESSURE bar - MPa	MAX FLOW RATE l/min	(1) MAX TEMPERATURE °C	INLET OUTLET	WEIGHT gr
30.4100.10	250 - 25	280 - 28	50	160	G3/8 G1/4 FF	660

(1) The gun has been designed for continuous use, at a water temperature of 90°C (195°F). It can resist at the max temperature of 160°C (320°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.

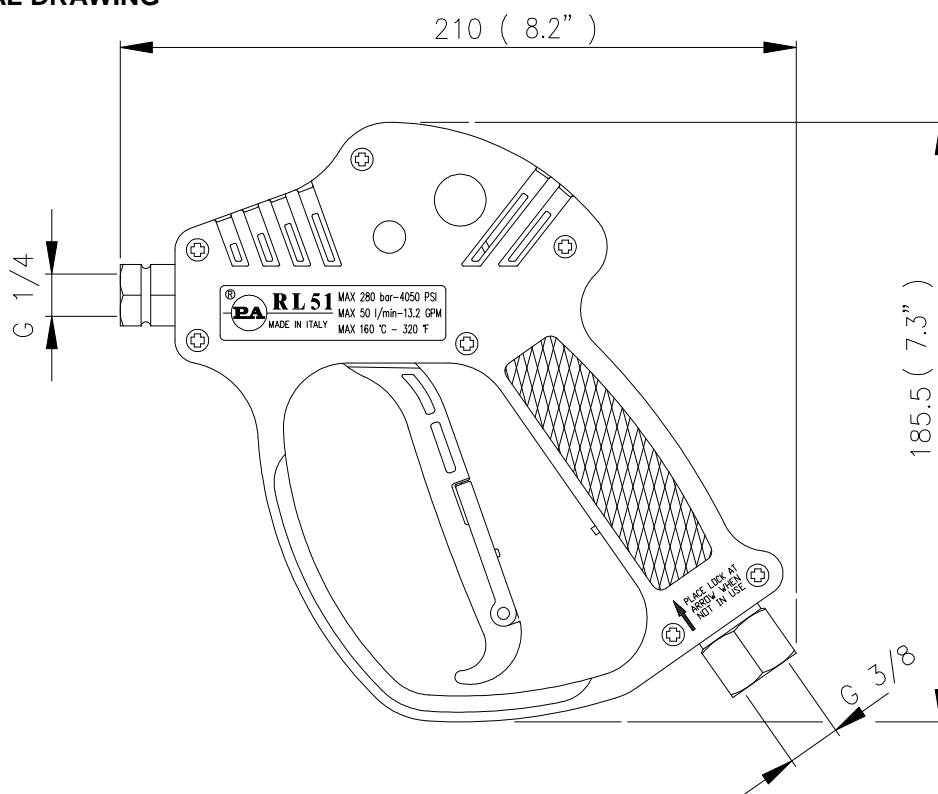
Using the gun at a water temperature higher than 60°C involves for the operator the use of adequate safety devices, such as gloves, glasses, etc.

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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. 12.9133.00

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.

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. **Attention: during pump activation always set the gun with its safety latch connected in order to prevent accidental openings**

WATER HOSE FEED

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	Presence of impurities Gun seat worn out	Clean Replace the seat Fit adequate filters and/or check
Leaking seals	Seals worn out	Replace seal
Difficult trigger opening	High pressure inside circuit	Check the bypass valve and adjust it if necessary

REGULATIONS

The design and construction of our products comply with: norm CEI EN 60335-2-79 first edition, published in 1999-03 and its respective variations on the project norm prEN 1829.

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.

The present manual is valid for all the guns named **RL 51**.

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**.

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.

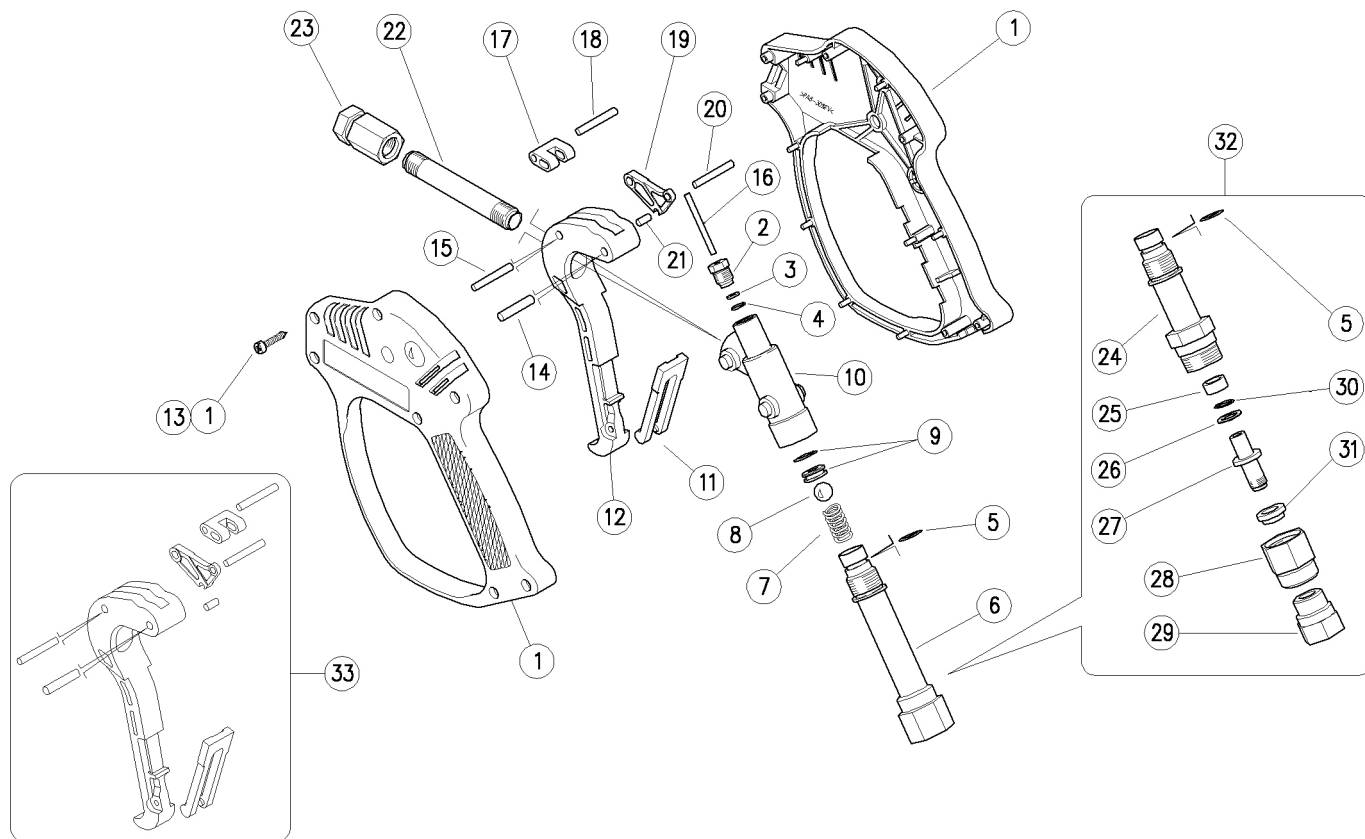
CAUTION: re-assemble the gun restoring the original conditions.

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

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

30.4100.10 RL51 spr.gun 3/8F-1/4F Bsp
30.4100.60 RL51 spr.gun 3/8F-1/4F Npt

30.4120.10 RL51 spr.gun +sw 3/8F-1/4F Bsp



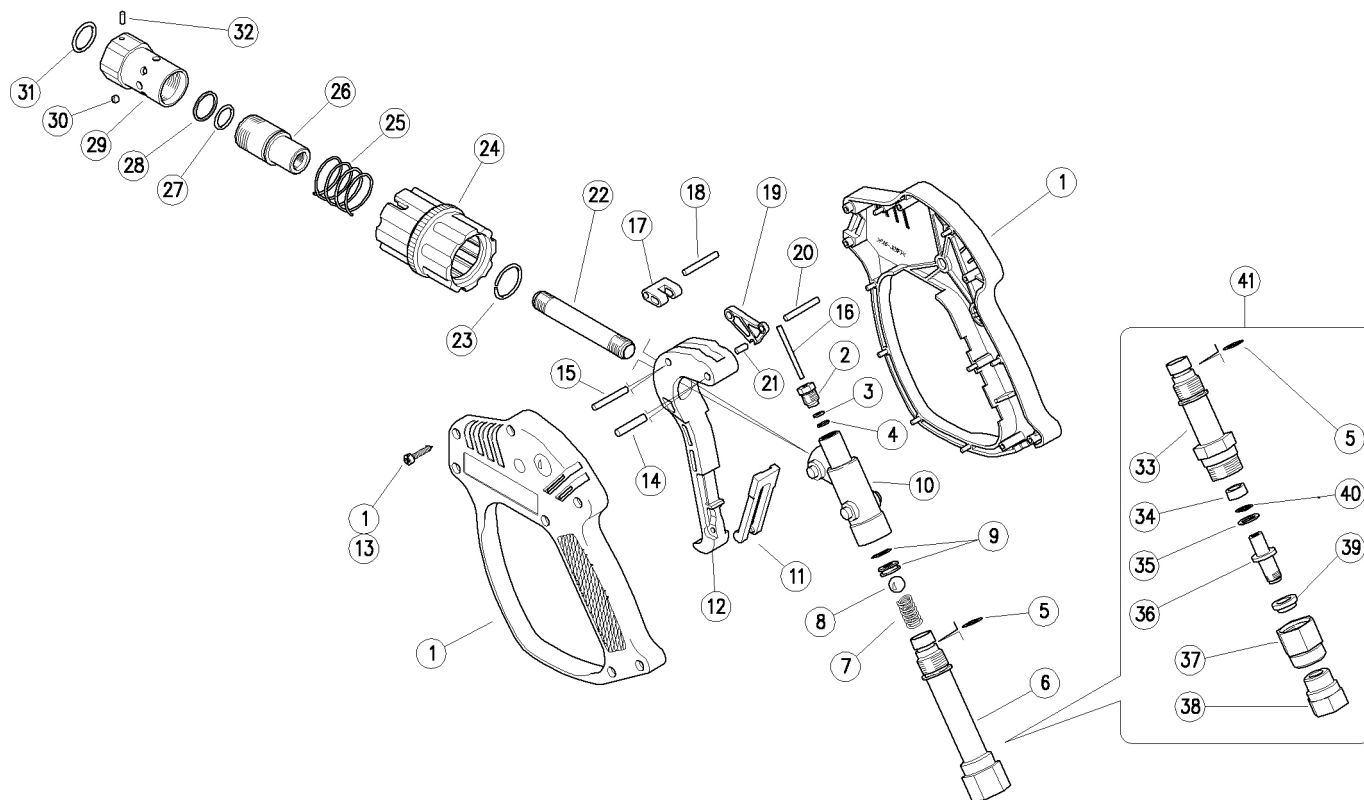
Pos.	P/N	Description	Q.ty	K1	K2	K3	K4	
1	30.4129.24	Casing-kit -RL51 +screws	1					1
2	30.4115.31	Front Plug, M10x1 brass	1					10
3	10.4018.00	Back-up ring, 3,2x7,5x1,2 mm	1	•	•			10
4	10.3165.00	O-ring, 2,62x2,84 mm Vi 70	1	•	•			10
5	10.3060.01	O-ring, 1,78x12,42 mm Ni 85	1	•	•			10
6	30.4106.35	Inlet housing, 3/8F Bsp brass (1)	1					3
6	30.4119.35	Inlet housing, 3/8F Npt brass (2)	1					3
7	30.4108.51	Spring, 1,6x8,8x24 mm Sst.	1					10
8	14.7461.00	Ball, 13/32" Sst.	1	•	•			10
9	30.1002.20	Seat, 7mm Sst. +O-ring 1,78 mm	1	•	•			10
10	30.4105.35	Housing -RL51/56, brass	1					3
11	30.1514.84	Safety latch, PA yellow	1					10
12	30.4127.84	Trigger -RL51/56, PA black	1					10
13	16.3077.00	S/tapping screw, DIN7981 3,5x18 mm	7					10
14	30.4114.51	Parallel pin, 5x33 mm Sst.	1					10
15	30.4121.51	Parallel pin, 5x22 mm Sst.	1					10
16	30.4109.51	Piston, 3x37,6 mm Sst.	1	•	•			10
17	30.4104.84	Connecting rod , PA black	1					10

Pos.	P/N	Description	Q.ty	K1	K2	K3	K4	
18	30.4113.51	Parallel pin, 4x29 mm Sst.	1					10
19	30.4124.84	Connecting rod -RL51/56, PA black	1					10
20	30.4112.51	Parallel pin, 4x20 mm Sst.	1					10
21	30.4122.51	Parallel pin, 4x13 mm Sst.	1					10
22	30.4110.56	Front tube, 1/4Bsp MM 85mm Sst.	1					3
23	30.4111.31	Outlet coupl., 1/4Bsp FF brass (1)	1					3
23	30.4117.31	Outlet coupl., 1/4F Bsp-1/4F Npt brs. (2)	1					5
24	30.4521.31	Swivel inlet housing, brass (3)	1					3
25	26.1046.84	Bushing, 10x14x7 mm Plast. (3)	1	•				5
26	10.4010.01	Back-up ring, 10,2x13,9x1,2mm (3)	1	•				50
27	26.1041.31	Pin, M12x1,25 brass (3)	1					10
28	26.1042.31	Ring nut, M22x1 brass	1					10
29	30.4522.31	Coupl., M12x1,25F-3/8F Bsp brass (3)	1					3
30	10.3109.95	O-ring, 2,4x9,3 mm Vi 70 (3)	1	•				25
31	26.1045.84	Bushing, 12x20x6 mm Plast. (3)	1	•				5
32	30.4125.24	Tube+sw. -RL51, 3/8F Bsp (3)	1					3
33	30.4131.24	Trigger kit -RL50-51, yellow saf.latch	1					1

Kit	P/N	Description	
K1	30.4118.24	Spar.kit -RL50-51, 7(6)x1pcs.	1
K2	30.4123.24	Spares kit -RL50/1+sw, 11(10)x1pcs.	1

(1) 30.4100.10 (2) 30.4100.60 (3) 30.4120.10

30.4140.23 RL51 spr.gun +sw 3/8F Bsp+ARS 23



Pos.	P/N	Description	Q.ty	K1	K2	K3	K4
1	30.4129.24	Casing-kit -RL51 +screws	1				1
2	30.4115.31	Front Plug, M10x1 brass	1				10
3	10.4018.00	Back-up ring, 3,2x7,5x1,2 mm	1	•			10
4	10.3165.00	O-ring, 2,62x2,84 mm Vi 70	1	•			10
5	10.3060.01	O-ring, 1,78x12,42 mm Ni 85	1	•			10
6	30.4106.35	Inlet housing, 3/8F Bsp brass	1				3
7	30.4108.51	Spring, 1,6x8,8x24 mm Sst.	1				10
8	14.7461.00	Ball, 13/32" Sst.	1	•			10
9	30.1002.20	Seat, 7mm Sst. +O-ring 1,78 mm	1	•			10
10	30.4105.35	Housing -RL51/56, brass	1				3
11	30.1514.84	Safety latch, PA yellow	1				10
12	30.4127.84	Trigger -RL51/56, PA black	1				10
13	16.3077.00	S/tapping screw, DIN7981 3,5x18 mm	7				10
14	30.4114.51	Parallel pin, 5x33 mm Sst.	1				10
15	30.4121.51	Parallel pin, 5x22 mm Sst.	1				10
16	30.4109.51	Piston, 3x37,6 mm Sst.	1	•			10
17	30.4104.84	Connecting rod , PA black	1				10
18	30.4113.51	Parallel pin, 4x29 mm Sst.	1				10
19	30.4124.84	Connecting rod -RL51/56, PA black	1				10
20	30.4112.51	Parallel pin, 4x20 mm Sst.	1				10
21	30.4122.51	Parallel pin, 4x13 mm Sst.	1				10

Pos.	P/N	Description	Q.ty	K1	K2	K3	K4
22	30.4110.56	Front tube, 1/4Bsp MM 85mm Sst.	1				3
23	26.2103.51	Snap ring, 2x21,7 mm Sst.	1				5
24	26.2105.21	Grip -ARS23, black	1				3
25	26.2033.51	Spring, 1,4x29,1x25 mm Sst.	1				10
26	26.2301.31	Housing, 1/4 Bsp F	1				3
27	10.3181.53	O-ring, 2,62x17,2 mm	1				10
28	10.4036.29	Back-up Ring, 14x17x2,9 mm	1				10
29	26.2302.31	Ball Housing, -ARS23	1				3
30	14.7410.10	Ball, 3/16" Sst.	8				10
31	10.3179.10	O-ring, 2,62x13,94 mm Vi 70	1				10
32	15.1018.00	Parallel pin, 3x8 mm Sst.	1				10
33	30.4521.31	Swivel inlet housing, brass	1				3
34	26.1046.84	Bushing, 10x14x7 mm Plast.	1	•			5
35	10.4010.01	Back-up ring, 10,2x13,9x1,2mm	1	•			50
36	26.1041.31	Pin, M12x1,25 brass	1				10
37	26.1042.31	Ring nut, M22x1 brass	1				10
38	30.4522.31	Coupl., M12x1,25F-3/8F Bsp brass	1				3
39	26.1045.84	Bushing, 12x20x6 mm Plast.	1	•			5
40	10.3109.95	O-ring, 2,4x9,3 mm Vi 70	1	•			25
41	30.4125.24	Tube+sw. -RL51, 3/8F Bsp	1				3

Kit	P/N	Description	Q.ty
K1	30.4123.24	Spares kit -RL50/1+sw, 11(10)x1pcs.	1