

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

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# LINEAR 100/170 Spray gun - 170 bar - 17 MPa

Technical manual: **E 150** 

Gun suitable for use with 170 bar – 17 MPa rated pressure pumps. No fluid passage upon trigger release

**DN15** 



- 30.0650.00 LINEAR 100/170 G1/2" FF
  30.0650.00 LINEAR 100/170 1/2"NPT FF
  - Covered by shockproof plastic semi-housings
  - Seat and ball in Sst
  - Assembly on hoses equipped with G 1/2" fittings
  - Entirely built of Sst and body in brass
  - Ergonomic construction
  - Minimum fatigue for trigger opening
  - Minimum load loss (see chart)

# **TECHNICAL SPECIFICATIONS**

P/N	RATED PRESSURE bar - MPa	PERMISSIBLE PRESSURE bar - MPa	MAX FLOW RATE I/min	(1) MAX TEMPERATURE °C	INLET OUTLET	WEIGHT gr
30.0650.00	170 - 17	190 – 19	100	100	G1/2 F-F	1176
30.0650.50	170 - 17	190 – 19	100	100	1/2NPT F-F	1176

(1) The gun has been designed for continuous use, at a water temperature of  $60^{\circ}$ C ( $140^{\circ}$ F). It can resist at the max temperature of  $100^{\circ}$ C ( $210^{\circ}$ 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.

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.					
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#### **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 <u>hot water</u> (in compliance with the technical specs). Provide the plant generating <u>hot water</u> 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 ad just 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

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PROBLEMS	PROBABLE CAUSES	SOLUTIONS							
Leakage from the nozzle side of the	Presence of impurities	Clean							
gun	Gun seat worn out	Replace the seat							
Leakages from the seals	Seals worn out	Replace the seals							
The trigger opens up with difficulty	The pressure inside the circuit is too high	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 <u>Use and maintenance</u> manual of the machine.

The present manual is valid for all the guns named LINEAR 100/170.

#### **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-

# 30.0650.50 Linear 100/170 spr.gun 1/2 FF Npt



F	Pos.	P/N	Description	Q.ty	K1	K2	K3 k	(4		Pos.	P/N
	1	30.3203.31	Plug, M16x1 brass	1					5	13	10.3064.01 O-
	2	30.0651.35	Housing -Linear 100/170, brass	1					2	14	30.0652.51 Co
	3	30.4115.31	Front Plug, M10x1 brass	1					10	14	30.0659.51 St
	4	10.4018.00	Back-up ring, 3,2x7,5x1,2 mm	1	•				10	15	30.5104.56 Tu
	5	10.3165.00	O-ring, 2,62x2,84 mm Vi 70	1	•				10	16	30.0653.51 Co
	6	30.5308.51	Seat, Sst.	1	•				3	16	30.5107.51 Co
	7	14.7465.00	Ball, 1/2" Sst.	1	•				5	17	30.2517.31 Pa
	8	30.5304.51	Spring, 2x29x9,9 mm Sst.	1					5	18	30.5303.84 Tri
	9	30.3205.31	Spring plug, M26x1 brass	1					2	19	30.0682.51 St
	10	10.3072.01	O-ring, 1,78x20,35 mm Ni 85	1	•				10	20	30.1510.84 Sa
	11	10.3068.01	O-ring, 1,78x17,17 mm Ni 85	1	•				10	21	30.0657.24 Ca
	12	30.0654.51	Sst.plunger D.5 x L.63mm	1	•				2	22	16.3075.51 S/t

Kit	P/N	Description	
Κ1	30.0658.24	Spares kit -Linear 100/170 8x1pcs.	1

(1) 30.0650.00

Pos.	P/N	Description	Q.ty	Κ1	K2	К3	K4	
13	10.3064.01	O-ring, 1,78x14 mm Ni 85	1					10
14	30.0652.51	Coupling, 1/2" Npt F sst.	1					2
14	30.0659.51	Stt. coupling, 1/2" Bsp F (1)	1					2
15	30.5104.56	Tube, M18x1,5 138,5 mm Sst.	1					5
16	30.0653.51	Coupling, 1/2" Npt F Sst.	1					2
16	30.5107.51	Coupl., M18x1,5F-1/2F Bsp Sst. (1)	1					3
17	30.2517.31	Parallel pin, 5x27,5 mm brass	1					10
18	30.5303.84	Trigger, black	1					5
19	30.0682.51	Stop pin, 8x7,3mm Sst.	1					10
20	30.1510.84	Safety latch, PA red	1					10
21	30.0657.24	Casing kit -Linear 100/170 + ss.screws	1					1
22	16.3075.51	S/tapping scr. 3.5x18 mm sst.	7					10