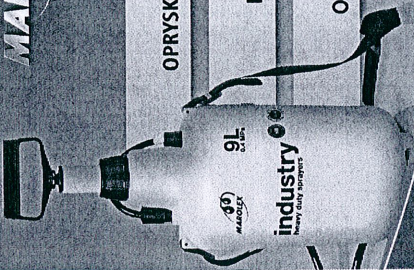


MAROLEX

**CIŚNIENIOWY
OPRYSKIWACZ RĘCZNY**

**PRESSURISED
HAND SPRAYER**

**ПОМПОВЫЙ
ОПРЫСКИВАТЕЛЬ**



industry
hand only sprayer

9L

INSTRUKCJA OBSŁUGI
OWNER MANUAL • INSTRUKCIJA PO EKSPLOATACJI

INDUSTRY 5, 7, 9, 12

50ml - 1.7 fl. oz.

data naprawy date of the repair	opis wady description of the fault	data i печать продавца stamp of the retailer and the date

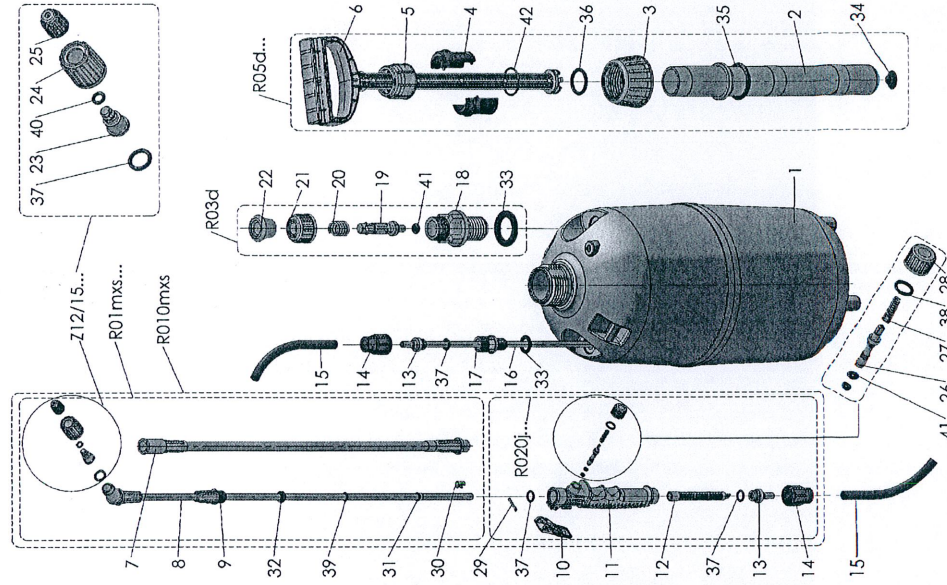


KARTA GWARANCYJNA
GUARANTEE CARD

ГАРАНТИЙНЫЙ ТАЛОН

Zestaw końcówka lancy z MR1.5 Lance tip with nozzle MR1.5 / Наконечник для штанги с MR1.5	Z12_15V/Z12_15E
Lança telescopowora bez rączki Telescopic lance without handle / Телескоп. штанга без рукоятки	R01mxs/R01mxSE
Lança telescopowora z rączką Telescopic lance with handle / Телескоп. штанга с рукояткой	R010mxs
Rączka lancy zintegrowana z zaworem dozującym kpl. Feeding valve integrated with handle / Компл. рукоятка штанги интегрированная с дозирующим клапаном	R020V/R020JE
Zawór bezpieczeństwa Safety valve / Предохранительный клапан	R03d
Pompa kompletna Complete pump / Комплексный насос	R05dV/R05dE
1 Zbiornik industry / container industry / Бачок industry	R60 (b) (c) (d)
2 Cylinder pompy / Pump cylinder / Цилиндр насоса	R19f
3 Nakrętka zbiornika / Container cap / Гайка бачка	R15
4 Półtelijka tłocznika / Piston half-case / Половинка втулки поршня	R147
5 Nakrętka pompy / Pump nut / Гайка насоса	R12a
6 Tłoczek pompy / Pump piston / Поршень насоса	R20u
7 Łanica obrotowy, fi 12 mm / Lance pipe, fi 12 mm / Штанга, fi 12 mm	R73mx50s
8 Łanica obrotowy, fi 8 mm / Lance pipe, fi 8 mm / Штанга, fi 8 mm	R73mx60s
9 Tulejka zaciskowa, fi 8 mm / Clasp case, fi 8 mm / Зажимная втулка, fi 8 mm	R103
10 Przycisk zaworu dozującego / Feeding valve trigger / Кнопка дозирующего клапана	R44
11 Rączka lancy / Lance handle / Рукоятка штанги	R02j
12 Filtrerek / Filter / Фильтр	R40
13 Końcówka węży - sztućce / Hose end piston / Наконечник шланга	R81f
14 Nakrętka węży / Hose nut / Гайка шланга	R80f
15 Wąż / Hose / Шланг	R011V/R011E
16 Rurka zasysająca / Sucking pipe / Трубка засасывающая жидкость	M08_
17 Końcówka przewodu / Hose stub pipe / Патрубок шланга	R82c
18 Korpus zaworu bezpieczeństwa - poręczność / Safety valve body / Корпус предохранительного клапана	R82d
19 Zawór bezpieczeństwa - poręczność / Safety valve - shank / Стержень предохран. клапана	R98
20 Sprężynka / Spring / Пружина	R13n
21 Nakrętka M-16 / Nut M-16 / Гайка M-16	R26
22 Zawór bezpieczeństwa - uchwyty / Safety valve - handle / Ручка предохран. клапана	R100
23 Rdzeń dyszy / Nozzle nucleus / Стержень форсунки	R114
24 Nakrętka dyszy / Nozzle nut / Гайка форсунки	R64
25 Nakrętka dyszy 1.5 do MR / Nozzle 1.5 nut for MR / Гайка форсунки 1.5 для MR	R115_1.5
26 Tłoczek / Piston / Поршень	R43
27 Sprężynka / Spring / Пружина	R48a
28 Nakrętka bez otworu / Nut without hole / Гайка без отверстия	R50
29 Pręt mosiężny, fi 3 mm / Brass bar, fi 3 mm / Латунный прут, fi 3 mm	M11
30 Pierścień zapinka lancy / Lance ring clasp / Цепной замок штанги	R107
31 Tulejka teleskopu / Telescope ring faucet / Втулка телескоп. штанги	R109
32 Pierścień zaciskowy / Clasp ring / Зажимное кольцо	R106
33 Uszczelka 16x24 / Seal 16x24 / Прокладка 16x24	R17
34 Grzybek / Pump valve-cap / Затворный клапан насоса	R24V/R24E

35 O-ring 38x5	R14
36 O-ring 28x4	R22V/R22E
37 O-ring 11.3x2.4	R47cV/R47cE
38 O-ring 10x2	R41V/R41E
39 O-ring 8x2	R108V/R108E
40 O-ring 5.3x2	R110V/R116E
41 O-ring 3x2	R42/R42V/R42E
42 O-ring 28x2	R22a



HEAVY DUTY COMPRESSION SPRAYER WITH TELESCOPIC LANCE

INDUSTRY 5, 7, 9, 12

The spraying device **INDUSTRY** has been designed to meet specific requirements of work with extremely strong chemicals.

1. TECHNICAL DATA

	Industry 5	Industry 7	Industry 9	Industry 12
Total container capacity	5,75 l	7,83 l	9,50 l	11,60 l
Working container capacity	5,00 l	7,00 l	8,00 l	11,00 l
Average liquid output	0.3 - 1.0 ltr/min			
Maximum working pressure	0.4 MPa (4 bar) (60 PSI)			
Overpressure protection	Safety valve R03d			
Container diameter	415 mm	470 mm	570 mm	600 mm
Sprayer height	2,00 kg	2,20 kg	2,30 kg	2,50 kg
Net weight	polypropylene			

2. INDUSTRY SPRAYER'S ELEMENTS

In each packing of the Industry sprayer can be found:

1. Complete container with hose and feeding valve integrated with lance handle.
2. Telescopic steel lance or segment, angular lance with regulated nozzle MR 1.5 mm.
3. Funnel with sieve.
4. A packet of additional spare parts, seals and silicone smear.
5. User's manual with the guarantee card.

Company Marolex Sp. z o.o. reserves a right to make changes in the enclosed with the sprayer parts.

3. PREPARATION AND OPERATION OF THE SPRAYER

1. In the first trial it is recommended to use the clean water. After filling the container in, put the pump in and screw it in properly. Pump the container and check the safety valve by pulling it handle up (R100).
2. Prepare the sprayer liquid according to the instructions given on the chemicals' packaging.
3. Screw the lance into the case of the feeding valve R020/R020E and make sure that there's an o-ring with 11.3x2.4mm inside the valve. Adjust the length of the telescopic lance and screw tight the locking sleeve so the lance won't extend under pressure – fig.4.
4. Unscrew the pump and pour liquid into the container using a funnel.
5. Put the pump back in, screw the pumps screw cap tight and pump until you get the right spraying or the safety valve opens. If the pressure is too high the safety valve will automatically open and release the excess air. CAUTION: The safety valve can release some liquid with the air when the pressure is too high.
6. After filling the container in and reaching the maximum pressure, the sprayer can be transported using the shoulder belt or the pump handle. For the transport position block the pump handle by pushing it down and turning 90 degrees left – fig.3.
7. While holding the lance handle, press the button to open the feeding valve.
8. When necessary, you can increase the pressure by further pumping up.

4. MAINTENANCE RECOMMENDATIONS

1. During the operation don't place the sprayer on its side, as the air not liquid will be sucked in.
2. It is not recommended to fill the container in over the working capacity.
3. The sprayer should be stored in a shaded place, in temperature above + 4 degrees.
4. The sprayer once used for spraying pesticides can not be used for any other purposes.
5. After finishing work, the sprayer must be emptied and thoroughly rinsed with water. The filter inside the handle must be taken out and cleaned. When the sprayer is completely assembled, pump it up and blow the air through it.
6. After noticing any resistance in the pump piston, feeding valve trigger or safety valve, the seals in these parts must be lubricated using the silicone smear. Failing to do it can cause damage to the seal and result in loss of the guarantee.
7. When using to spray plants with chemicals, you must comply with safety and hygiene regulations and strictly follow instructions given on the package of those chemicals.
8. If you leave some liquid in the lance during winter, expanding ice may damage the valve and the handle.

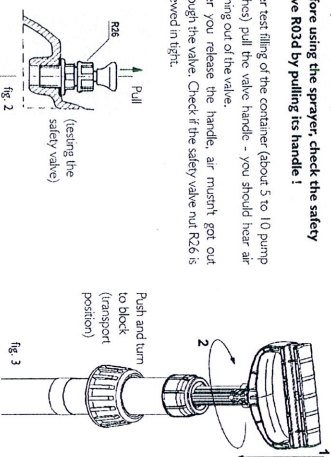
5. WORK SAFETY RECOMMENDATIONS

1. Children, pregnant women, people taking medicines or other drugs restricting the concentration powers or drinking alcohol are forbidden to operate the sprayer.
2. Before first spraying check the sprayer's action using clean water.
3. When working with chemicals (also during liquid preparation and destroying the packages) it is necessary to wear protective clothing (rubber boots, gloves, a coat, a cap and a mask).
4. It's forbidden to work with chemicals on an empty stomach and eat or drink during working. It's forbidden to drink alcohol one day before and one day after working with chemicals.
5. It's forbidden to pour the liquid remains to the open water reservoirs or biological sewage treatment plants. These rules apply also to the water after cleaning the container and other parts of the sprayer.
6. Disposable sprayer should be handed over for utilization.
7. In case of poisoning the doctor must be contacted.
8. People working using the sprayer should strictly comply to all the recommendations on the package of the spraying agents.
9. It's forbidden to work using leaky or disabled sprayer.
10. All the operations should be done after decompression of the sprayer.
11. Thoroughly clean the sprayer after each using and before servicing.
12. It's forbidden to use the sprayer for other purposes than stipulated in the owner manual.
13. The sprayer must be stored clean and in winter season it is essential to check, that there is no liquid left in the container or lance.
14. The only device for making the working pressure is a pump placed inside the container – it's forbidden to use any other devices for this purpose!!!
15. It's forbidden to spray with easy inflammable chemicals or substances which can cause an explosion e.g. Petrol, solvents. Spraying with chemicals based on chloro acid and sodium hypochlorite is strictly forbidden.
16. Changes in the sprayer or using it not according to its allocation can result in poisoning people or animals, polluting the environment, damaging the sprayer or accidents.
17. After finishing work, you should change your clothes (the protective clothes must be cleaned), wash your hands, face, mouth and throat, and clean your nose.
18. After spraying, adulterate the remaining liquid at least 10 times and spray it on the same area or plant again.
19. After finishing work, pour the water out, blow air through it by pumping through it a few times with feeding valve R020/R020E open.
20. The user is fully responsible for the damages caused by not complying with these recommendations.
21. The sprayer must be stored empty and non-pressurized.
22. It is forbidden to block the safety valve or make any unauthorized changes in the sprayers as it may cause damages or injury.
23. After the compression the container must not be hit or dropped.
24. Before commencing work the safety valve must be checked by pulling the valve out. The valve should move in and out easily.
25. We recommend filling in the tank through our funnel with sieve. The sieve will filter the liquid and this will protect the nozzle from clogging.
26. The sprayer while working and storing should be secured from any unauthorized people, especially children.

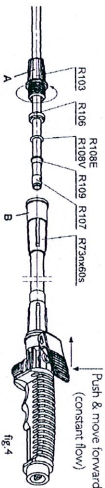
6. TECHNICAL INSTRUCTIONS

Safety valve R03d - fig.2
Before using the sprayer, check the safety valve R03d by pulling its handle !

After test filling of the container (about 5 to 10 pump pushes) pull the valve handle - you should hear air coming out of the valve. After you release the handle, air mustn't get out through the valve. Check if the safety valve nut R26 is screwed in tight.



After unscrewing 103 sleeve from lance sleeve 'B', move apart both '7A' and 'B' parts. While pulling the '7A' part the R107 clamp is helpful in removing R106 and R108V gaskets from the sleeve socket.
After unscrewing the R107 clamp, you can clean or replace R106 and R108V gaskets. After removing gaskets and the clamp, screw both sleeves together. Screw the R103 nut tight, so the lance '7A' won't be able to change its length when using.



NOZZLES. Liquid output at 0.35 MPa

nozzle	colour	liquid output	nozzle type	3 nozzle Z093	5 nozzle Z095	7 nozzle Z097
MR1.0	green	~0.40 ltr/min.	adjustable stream	✓	✓	✓
MR2.0	red	~0.80 ltr/min.	arise	✓	✓	✓
MF2.110	yellow	~0.80 ltr/min.		✓	✓	✓
MF3.110	blue	~1.15 ltr/min.		✓	✓	✓
MF4.110	red	~1.65 ltr/min.	bathtub	✓	✓	✓
MF4.45	red	~1.10 ltr/min.		✓	✓	✓
MF3.30	gold-brown	~1.60 ltr/min.		✓	✓	✓

The marked nozzles: MR1.5, MR1.0, MF3.110 are included with the sprayer Industry. The other nozzles can be purchased in kits at our distribution or in our e-shop <http://shop.marolex.pl>

7. GUARANTEE CONDITIONS AND REPAIRS

1. The guarantee period is 24 months from the date of purchase.
2. Sprayers with chemical remains will not be repaired.
3. Reclamation should be lodged to the seller of the sprayer.
4. The claim will be accepted after showing the detected part or giving the full description of the fault.
5. Number of repairs after which the seller can't refuse to exchange the sprayer for a new one (in case there are still defects) is 3.
6. Operations connected with exploitation of the sprayer and described in the manual are not treated as guarantee repairs.
7. The producer won't accept the claim if there were changes in pressure regulation or the strong operating, maintaining of the product were not according to the manual.
8. Mechanical damages caused by the user can't be the subject to reclamation. The damaged parts can be exchanged but the costs are charged.
9. The guarantee repairs should be made using always the genuine Marolex parts.

8. MAINTENANCE AND SERVICE RECOMMENDATIONS

1. After finishing work, cleaning the sprayer and blowing air through it, you should:
After unscrew hose connected to the handle, remove R40 filter, and clean it (preferably under running water).
2. Check if the pump works easy without any jamming. If you feel any resistance, remove the pump, unscrew the R20B piston rod, and lubricate: gaskets, piston rod, cylinder using silicon lubricant.
3. Unscrew the bottom nut R50 from the feeding valve - R020V/R020E, remove the valve piston with a spring, clean it, lubricate with silicon lubricant, put it back into the valve and screw in the nut tight.
4. Unscrew the nozzle cap, remove the nozzle, wash it, and reassemble.
5. Check if the safety valve handle, after pulling, returns to its normal position. If it jams, unscrew the R26 safety valve nut, remove the valve pin, clean it and lubricate slightly with silicon lubricant. Reassemble the valve and screw the valve nut tight.

It is recommended to use the Industry sprayer for chemicals from a similar group.

9. FAILURE REMOVING

Symptoms:	Cause:	Solution:
After winter season handle leaks from the handle	Freezing water up-tuned valve or the hose nut is not screwed tight	Replace it (valve & handle - R020V/R020E)
Feeding valve leaking	Damaged valves: cylinder top gasket (if wasn't lubricated periodically)	Screw the valve tight or replace gasket
Feeding valve is closed, but lance is leaking	Damaged valves: cylinder top gasket (if wasn't lubricated periodically)	Replace gaskets or the cylinder top gasket (even the R020E, valve (don't forget about lubricating the valve))
Weak spraying action although the pressure in the tank is high	Uncrew the hose, remove the R40 filter and clean it or replace with a new one	Uncrew the hose, remove the R40 filter and clean it or replace with a new one
Liquid stream is uneven	Nozzle end piece dirty	Uncrew the nozzle cap and clean nozzle and whiffle
You can not reach the maximum pressure	Pump rubber valve-cap is dirty	Clean or replace gaskets
	Pumps cylinder gasket is worn out	Lubricate the pump with silicon lubricant
	MF4-45 red pump	No silicon lubricant in the pump
There's air appearing in the hose and liquid stream is disrupted	Inable pipe M08 in the hose and liquid tight into R02C hose stub pipe	Uncrew the hose, remove the pipe and push the stub pipe hard in (you can also glue it together)

10. DISMANTLING AND UTILISATION

The damaged sprayer, not suitable for repair, should be utilised in such way as to not pollute the environment.
Chemical plastic elements should be recycled as well as the metal parts.

11. GENERAL REMARKS

In the lances handle there's a filter (R40) installed, designed to protect nozzles from clogging.
The container is protected against overpressuring by the R033 safety valve.
It is possible to use the pump handle to carry the sprayer (after locking the handle). Fig.3
You can adjust the stream angle by twisting MR1.0, MR1.5 nozzles.
There's a wide range of nozzles available from the MAROLEX catalogue.
With MAROLEX sprayers you can use a wide range of imported nozzles: cone-shaped, delatring, bathtubs, with adjustable stream angle and with different outputs.
All Marolex lances can be used interchangeably (the same thread in all of them).

12. SAFETY SIGNS

Sp.	sign	meaning	place
1.	tablet		on container
2.	Sign indicating possibility of unspecified danger, before starting work.		on container
3.	Sign indicating danger of poisoning. Eating or drinking while using the device is forbidden.		on container
4.			on container

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Distributor: