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1,8>7,2 3,6>5,4

ONLYROTAR M21 OPERATING AND MAINTENANCE MANUAL

ENGLISH TRANSLATION

IMPORTANT READ THIS HANDBOOK CAREFULLY BEFORE UNPACKING THIS PRODUCT
ALWAYS KEEP CLOSE TO THE MACHINE FOR FURTHER REFERENCE



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ID SCHEDULE

Art.	Id NR	Year
1		
1		
0		
4		
8		

CONVENTIONAL SYMBOLS



General Danger: injuries to people



Caution - Volt tension: injuries to people



Caution – moving partes: **injuries to people**

NOTE

DANGER damages to the machine

IF THIS MACHINE IS USED IMPROPERLY OR THESE OPERATING INSTRUCTIONS ARE NOT FOLLOWED, THE MANUFACTURER DECLINES ANY AND ALL LIABILITY FOR INJURY TO PEOPLE OR DAMAGE TO PROPERTY. THIS HANDBOOK CAN BE UPDATED OR CHANGED ACCORDING TO THE MANUFACTURER'S REQUIREMENTS.

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TAV.1 TECHNICAL TABLE

Art.	Description	Voltage		Pressure washer		WEIGHT	size		
		Kw	VOLTS/HZ	Min	Max	Kg.	A	B	H
11048	ONLYROTAR M21	0.2	230/50/12c c	11l'	21	9	16	16	1260

OTHER FEATURES

Rated pressure 220bar 22MPa 3200psi
Rated pressure 250bar 25MPa 3650psi
Maximum capacity 21 l/m
Maximum temperature 90 degrees Celsius (195 degrees Fahrenheit)
weight kg 3.5
Rotation rpm 10
Water supply attack diam 14mm _m22x1.5
M4 nozzle attack
Engine power 12w
Power Cable length 10meters

CHAPTER 1: MACHINE DESCRIPTION

Thank you for choosing our ONLYROTAR M21 HEAD suitable for washing the internal surface of containers and tanks.

FOLLOWING THESE INSTRUCTIONS, you'll be able to quickly wash at high pressure with your hydrowasher, all containers within the specifications contained in this manual.

Full orbital washing. Minimum overall dimension.

Low-voltage power. Stainless steel construction for the parts at contact with liquid

Suitable for use in the food industry.

The head is rotated by the electric gearbox at the top end

CHAPTER 2 SECURITY GENERAL WARNING

2.1 In order to prevent possible damage to people and things, the head must be connected to a pressure circuit, usually powered by piston pumps on cleaners (which we provide on demand), equipped with all safety and control bodies (such as safety, regulatory valves, etc.), provided by the current regulations for such devices.



2.2 High-pressure jets can be dangerous if they are incorrectly used. The jet should not be directed towards people or electrical equipment under voltage.

2.3 Make sure that the pumping system is equipped with a safety valve that is suitable for the required performance.

2.4 To ensure the safety of the device, use only the original spare parts.

2.5 High-pressure ducts, joints and connections are important for the safety of the device.

2.6 Use only properly sized, correctly sized and manufacturer-guaranteed ducts, joints, and connections.

2.7 START THE HEAD ONLY AFTER HAVING INSERTED AND BLOCKED IT TO THE TANK.

2.8 REMOVE the HEAD FROM THE TANK ONLY AFTER HAVING STOPPED THE ROTATION AND THE ALIMENTATION OF THE WASHING LIQUID

2.9 WITH the USE of HOT WASHING LIQUID DO NOT TOUCH THE METAL PARTS.

CHAPTER 3: ADMITTED & NON ADMITTED USAGE

The HEAD is built to work with water up to 90 degrees Celsius, supplemented with detergents or general use disinfectants. If used with special liquids (different viscosity, strong chemical aggression or otherwise) ask our Technical Office. Always use the HEAD within the limits of Pressure, Temperature, Tension expected in the TECNICHE FEATURES of this manual.

CHAPTER 4 SETTING UP: GENERAL RULES

4.1 CONNECT For the connection use a hose of appropriate section and resistance,

The head must be anchored firmly at the mouth of the tank or with special support, the nozzles must be possibly in the center of the tank and equidistant from the walls.

4.2 CHOICE OF THE NOZZLES The NOZZLES (in number of two) of the type of washing in high pressure with straight jet, must be adequate to the range and the pressure at which you intend to operate (see D2), bearing in mind that the value of the Pressure to be considered in the choice is what is obtained by subtracting from the value of Pressure in the pump the value of the Pressure Fall determined by the mandate line and the head. The latter value can be obtained from the D1 diagram in this manual.

4.3 FILTER

The liquid sent by the system to the head must be filtered to prevent foreign bodies from entering, causes a malfunction and consequently more frequent maintenance, the recommended degree of filtering is at least **300 microns**.

CHAPTER 5 OPERATION

The HEAD is rotated by the electric gearbox at the top end, powered by low voltage (24V.cc) for total safety. At least 3 full cycles are recommended for careful washing.

CHAPTER 6 MAINTENANCE

Daily after normal use, perform an internal wash of the head by feeding it with clean water without additives. Perform an internal check after 100 hours of work to check the condition of the interior parts (gears, bearings, dynamic seals). The incorrect choice of the OR material (dynamic seals), causes an abnormal operation and rapid deterioration of these details, in presence of dimensional alterations (swelling) of dynamic seals (OR-PTFE).

Check the compatibility of the OR with the liquids used, if they are not compatible, contact our TECHNICAL OFFICE.

Perform an internal check every 300 to 400 hours of work to check for wear on the interior details. We recommend replacing dynamic seals (pos.4) by preemptively verifying that the sliding surfaces are in good condition; if worn replace them.

Also check the conditions of the gears; if damaged replace them. Use only original parts.

In the areas and times of the year at risk of frost, make sure, at the end of the work, that the HEAD is completely empty.

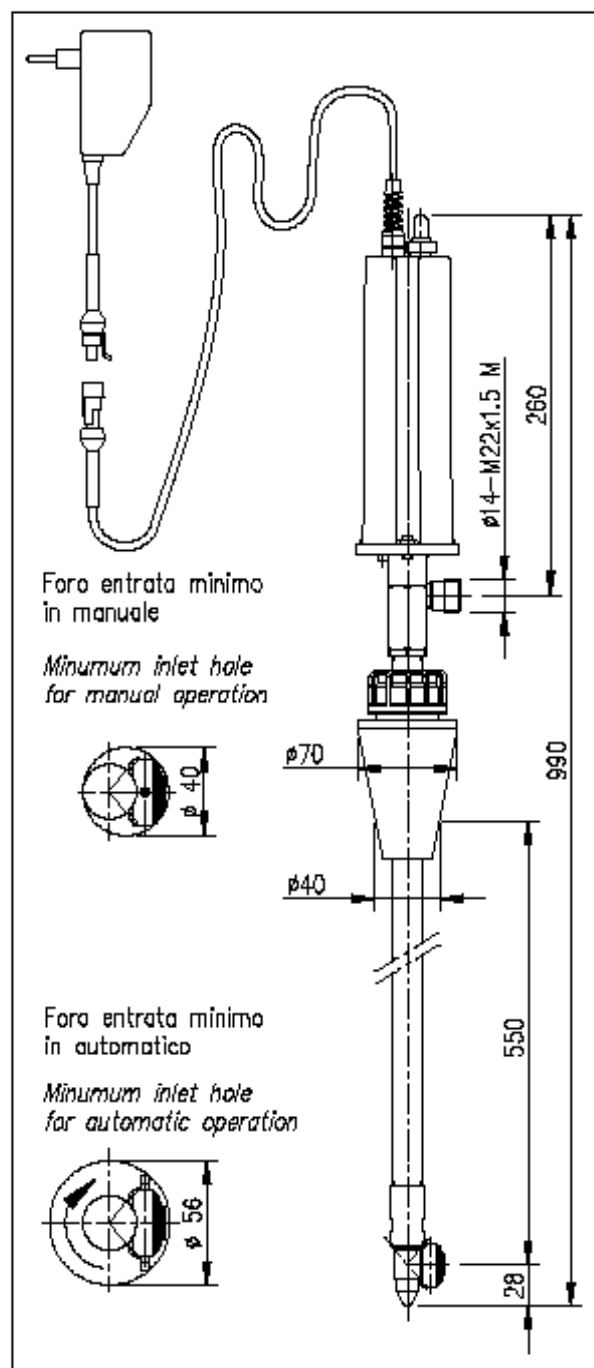
Lubricate only with fat SILICONIC code: 14.6552.00 , DO NOT USE FAT OR OIL AT MINERAL BASE, RISK OF THE BREAKING OF INTERNAL PARTS.

ONLYROTAR M21E – SUBCODES

SIZE SCHEME

M21E 25.4300.00 (I)
 25.4300.24 (AUS)
 25.4300.60 (USA)
 25.4300.62 (J)

MANUALE D'ISTRUZIONE
 GENERAL INTRUCTION BOOK



TESTINA ELETTRICA
 PULIZIA CISTERNE

- Lavaggio superfici interne di contenitori e serbatoi.
- Portata ridotta, alta pressione, elevata forza di impatto.
- Copertura orbitale completa degli interni.
- Minimo ingombro radiale che ne permette l'intruduzione attraverso passaggi ridotti.
- Alimentazione elettrica a bassa tensione.
- Costruzione in acciaio inox.
- Idonea per impiego settore alimentare.

ATTENZIONE !

- La Testina STANDARD è fornita di guarnizioni (DINAMICHE) in PTFE + O-Ring EPDM.
- Lubrificare esclusivamente con GRASSO SILICONICO codice: 14.6552.00
- Per l'utilizzo di liquidi detergenti, additivi chimici ecc. non compatibili con le guarnizioni standard è indispensabile contattare il nostro UFFICIO TECNICO.
- A richiesta le guarnizioni (DINAMICHE) O-RING sono disponibili anche in diverso materiale, NBR-FFKM(kalrez)-FKM(viton).

ELECTRIC TANK CLEANING HEAD

- Cleaning of interior surfaces of tanks and drums.
- Reduced flow, high pressure, high cleaning impact.
- Complete orbital coverage of all interior surfaces.
- Small spray turret that fits through reduced tank opening.
- Low tension electric power.
- Stainless steel construction.
- Suitable for utilization in food industry.

ATTENTION !

- The STANDARD Tank cleaning head is supplied with seals (DYNAMIC) in PTFE + O-Ring EPDM.
- Lubricate ONLY with SILICONE GREASE P/N: 14.6552.00
- For use with Detergent liquid, Chemical additives etc that are not compatible with the standard seals, it is essential to contact our TECHNICAL OFFICE for further information.
- On request, the O-RING seals (DYNAMIC) are available in different materials such as NBR-FFKM(kalrez)-FKM(viton).

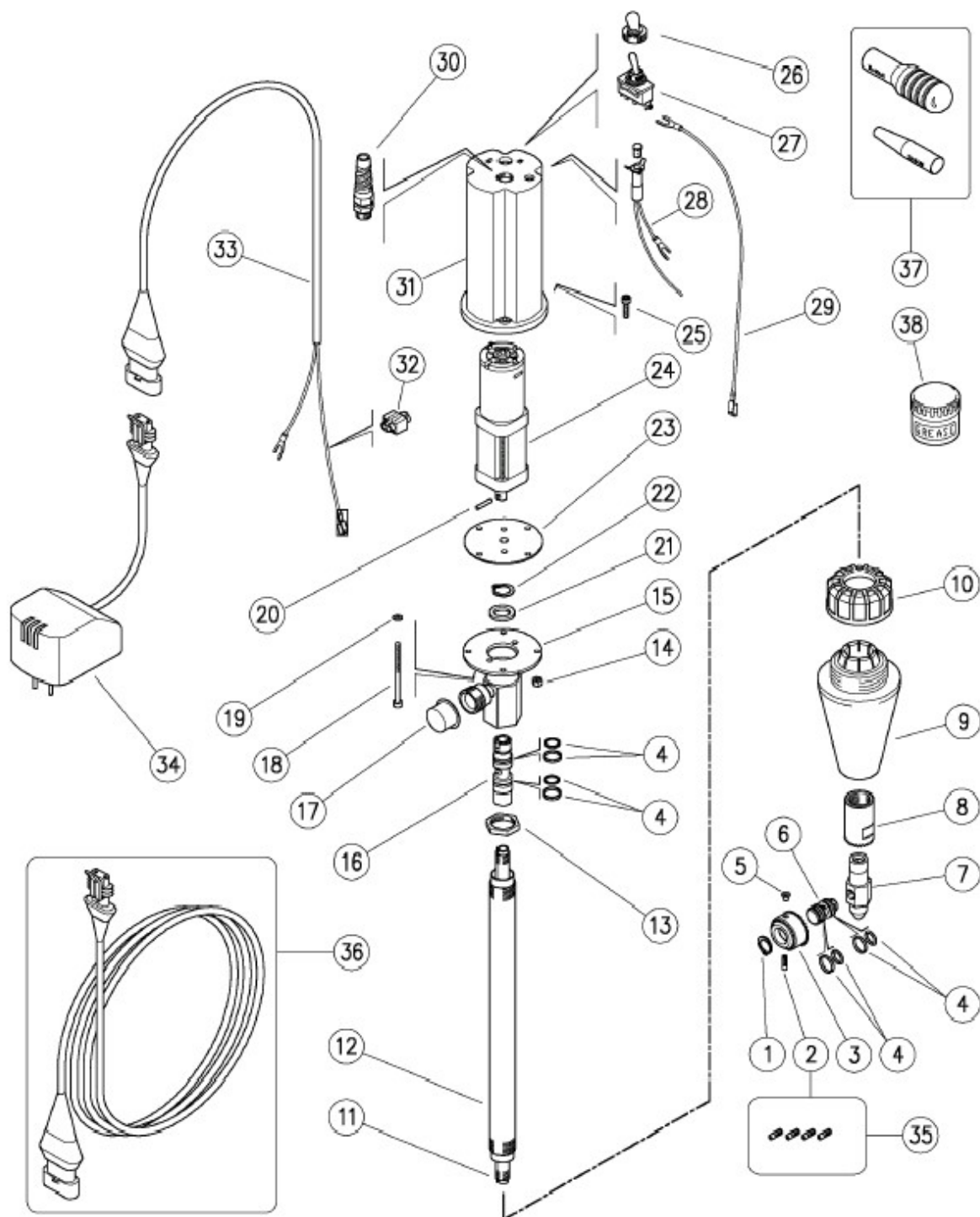
ATTENZIONE: NON UTILIZZARE
 L'APPARECCHIO PRIMA DI AVER LETTO
 QUESTO MANUALE DI ISTRUZIONE

CAUTION: DO NOT USE THE
 CLEANING HEAD BEFORE HAVING READ
 THE INSTRUCTION BOOK

25.4300.00 M21E test.mot.el.220Vca/50Hz
 25.4300.24 M21E test.mot.el.240Vca/50Hz AUS


25.4300.60 M21E test.mot.el.110Vca/60Hz USA
 25.4300.62 M21E test.mot.el.100Vca/60Hz JAP

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SPARE Parts, In list onlyrotar m21

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Pos.	Art.					
	11048	25.4300.00 M21E test.mot.el.aspir.230Vca/50Hz				
	11048a	25.4300.60 M21E test.mot.el.aspir.115Vca/60Hz USA				
	11048b	25.4300.24 M21E test.mot.el.aspir.240Vca/50Hz AUS				
	11048c	25.4300.62 M21E test.mot.el-aspir.100Vca/60HZ JA				
Pos.	Art.	Code	Description	Qty.		
1		10.1000.15	An. "I'm not And 15 stainless	1		
2		15.3704.00	Plastic cap	2		10
2		80.0350.51	Ugello 02 /1.0mm M4 stainless green ch.2	2		10
2		80.0351.51	Ugello 02 5/1,1mmM4 stainless pink ch.2	2		10
2		80.0352.51	Ugello 003/ 1,2mmM4 white stainless ch.2	2		10
2		80.0353.51	Ugello 03 5/1,3mm M4 brown stainless ch.2	2		10
2		80.0354.51	Ugello 04 /1,4mm M4 yellow stainless ch.2	2		10
3		80.0312.51	Pignone nozzles. z.29 M4 FF stainless	1		1
4		10.2032.00	Mr Guarn. pistone 10x15x2 mm	4		4
5		15.3704.00	M4 plast cap.	2		4
6		80.0313.51	Pin M10x1 stainless	1		1
7		80.0314.51	Rejecting M10x1 stainless	1		1
8		80.0311.51	Fixed pignon z.24 stainless	1		1
9		80.0315.84	Black TPEs conical cap	1		1
10		80.0316.84	Black PP dial	1		10
11		80.0310.56	Tube M10x1 MM 672mm stainless	1		1
12		80.0309.56	Tube M20x1 MM 655mm stainless	1		1
13		80.0308.51	Stainless M20x1 dive	1		1
14		11.4513.10	Nut eg. M4 stainless	4		10
15		80.0304.21	Stainless collector	1		1
16		80.0303.51	Stainless Transmission Tree	1		1
17		15.3700.00	Cap 20.5 mm pvc	1		10
18		16.1860.00	Screw DIN912 M4x60 mm stainless	2		10
19		14.3519.00	Rosetta 4x8x0.5 mm Oct.	2		10
20		15.1030.00	Spina elast. 3x16 mm stainless	1		10
21		80.0302.31	An. spacer 13x21x3.8mm	1		3
22		10.1000.13	An. "I'm not And 13 stainless	1		5
23		80.0317.88	I would like to do so. motor, NBR	1		2
24		13.0827.00	Engine 12V 10Rpm	1		1
25		16.1852.10	Screw DIN912 M4x14 mm stainless	1		10
26		12.5016.05	Switch protection	4		5
27		12.5016.10	Interr.unipol. on/off	1		3
28		12.5019.31	Lamp	1		5
29		12.5019.25	Cable 1x0.75 L.250 mm	1		5
30		13.5997.00	Press1/4	1		5

31		80.0301.84	Carter black PA engine	1		1
32		12.5019.47	Stolen	1		5
33		12.5019.10	Cable 2x1.5 mm 10m-connection F	1		5
34		12.5071.00	Transf. 230Vca/12Vcc EU (1)	1		1
34		12.5071.24	Transf. 240Vca/12Vcc AUS (2)	1		1
34		12.5071.60	Transf. 115Vca-60Hz/12Vcc USA (3)	1		1
34		12.5071.62	Transf. 100Vca-60Hz/12Vcc JAP (4)	1		1
35		25.4320.24	Kit Ugelli M4 - M21E 2x5pz.	1		1
36		25.4353.20	Prol. -M21E 20m 12Vcc MF	1		1
37		25.4321.24	Montag.Guarn Tools Kit. -M21E 2pz. **	1		1
38		14.6552.00	Fat silicone with teflon **	1		2
On demand						
K1, K1	34030a	25.4320.24	M21E nozzle kit M4 pz.2x5	1	24,00	1

Tav.1
choice indicative range factor N2 nozzles

PRESSIONE bar – MPa – PRESSURE PSI

PORTATA POMPA l/min – PUMP FLOW USGp.m.	21 5,5					215 21.5 3150	180 18 2600	155 15.5 2250	130 13 1900	110 11 1600	100 10 1450	85 8.5 1200
	20 5,3					195 19.5 2850	160 16 2300	140 14 2050	120 12 1750	105 10.5 1500	90 9 1300	75 7.5 1100
	19 5				200 20 2900	175 17.5 2550	145 14.5 2100	125 12.5 1800	105 10.5 1500	95 9.5 1350	85 8.5 1200	70 7 1000
	18 4,8			215 21.5 3150	180 18 2600	160 16 2300	130 13 1900	110 11 1600	95 9.5 1350	85 8.5 1200	75 7.5 1100	60 6 870
	17 4,5			190 19 2750	160 16 2300	140 14 2050	115 11.5 1700	100 10 1450	85 8.5 1200	75 7.5 1100	65 6.5 950	55 5.5 800
	16 4,2		200 20 2900	170 17 2450	140 14 2050	125 12.5 1800	105 10.5 1500	90 9 1300	75 7.5 1100	65 6.5 950	60 6 870	50 5 725
	15 4		175 17.5 2550	150 15 2200	125 12.5 1800	110 11 1600	90 9 1300	75 7.5 1100	65 6.5 950	55 5.5 800	50 5 725	
	14 3,7	195 19.5 2850	155 15.5 2250	130 13 1900	105 10.5 1500	95 9.5 1350	80 8 1150	65 6.5 950	55 5.5 800	50 5 725		
	13 3,4	195 19.5 2850	165 16.5 2400	130 13 1900	110 11 1600	90 9 1300	80 8 1150	65 6.5 950	55 5.5 800	50 5 725		
	12 3,2	170 17 2450	140 14 2050	110 11 1600	95 9.5 1350	80 8 1150	70 7 1000	55 5.5 800	50 5 725			
	11 2,9	140 14 2050	120 12 1750	95 9.5 1350	80 8 1150	65 6.5 950	60 6 870					
FATTORE PORTATA N°1 UGELLO FLOW FACTOR N°1 NOZZLE	*		*		*		*		*			
N° UGELLI DA MONTARE N° OF NOZZLES TO BE FITTED	2	2	2	2	2	2	2	2	2	2	2	2

* UGELLI DISPONIBILI TIPO CORTO

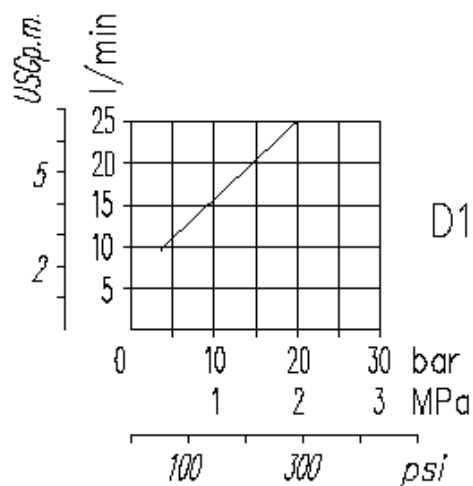
* NOZZLES AVAILABLE SHORT TYPE

N.B. E' OBBLIGATORIO MONTARE N°2 UGELLI AVENTI LO STESSO FATTORE DI PORTATA

N.B. IT IS MANDATORY TO FIT 2 NOZZLES HAVING THE SAME FLOW FACTOR

CADUTA DI PRESSIONE IN FUNZIONE DELLA PORTATA

LOSS OF PRESSURE IN RELATION TO FLOW



D2

UGELLI - NOZZLES

	codice	D(mm)	l/min(100bar)	F.P.
*	80.0350.51	1.00	4.6	02
	25.1191.51	1.05	5	023
*	80.0351.51	1.10	5.6	025
	25.1192.51	1.15	6.1	027
*	80.0352.51	1.20	6.7	03
	25.1193.51	1.25	7.1	032
*	80.0353.51	1.30	7.8	035
	25.1098.51	1.35	8.4	037
*	80.0354.51	1.40	9.1	04
	25.1194.51	1.45	9.7	043
	25.1095.51	1.50	10.3	045
	25.1195.51	1.55	11.2	05
	25.1196.51	1.60	12	053
	25.1197.51	1.62	12.6	055
	25.1186.51	1.66	13.7	06
	25.1198.51	1.72	14.8	065
	25.1199.51	1.8	16	07
	25.1085.51	2.00	18.2	08

* Ugelli forniti di serie (tipo corto)

* Standard nozzles supplied (short type) 11-2