CATALOGUE



Made in Italy





make your world safer



CatLisST_54.03 - 31 marzo, 2017 9:39 m.

Manufacture Automation Company is the the result of the fusion between Mezzanotti Fausto Automazioni and MAC.

The company MAC srl operates in the field of automations from more than 30 years, producing products for any kind of customer and any environment.

It produces a vast range of products: from bollards, to road blockers and tyre killers; we're also introduced in many other fields for example in the field of urban fabric with our electrified manholes and our pedestrian signalling system. Our innovative products are built respecting the right relationship between price and quality; every single creation must respect and satisfy all the customer's needs, ensuring a hight durability during the years.

Seriousness, passion, innovation and, above all, efficiency and competence acquired over the years, lead our firm within the international reality, bringing its experience anywhere!

The deep company knowledge of the field enables MAC srl to ensure its customers the direct contact Firm-Customer, at all stages.

All it's made in tight collaboration with the customer: its needs become our challenge.

Our company's policy, is focused on the quality and the continuous improvement of the products; for this reason each product we build is completely hot galvanized, this treatment allows to increase the life of the product.

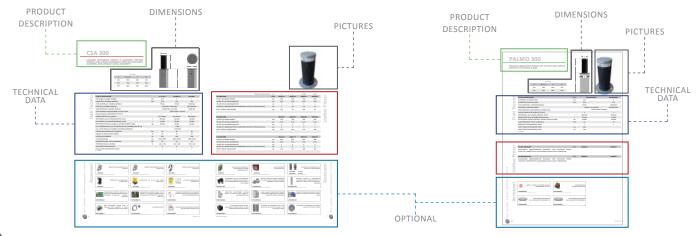
We have also many trademarks, the trademarks allow us to improve the security of our products: the sensitive head, the magnetic tracer, the emergency sounds recognizer device etc.

With our trademarks we can customize the product directly on the place, without causing big changes on the structure of the product and loosing many time.

MAC is always at disposal of its customers in order to find a made to measure solution to use our products as best as they can, and support the customer with the best after-sale service.

Our staff is always available to show and describe the products exposed in our showroom.

We are pleased to satisfy all your curiosity and/or expectations and vising the product fittest to your needs.





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Automatic Bollards

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CSA 300

THE CSA AUTOMATIC BOLLARDS WITH HYDRAULIC MOTION, ARE THE TOP LINE PRODUCTS OF MAC COMPANY, THESE BOLLARDS ARE THE RESULT OF THE CONTINUOUS DEVELOPMENT OF MORE THAN 25 YEARS OF EXPERIENCE.

- HYDRAULIC MOVEMENT, IT THE MOST RELIABLE TECHNOLOGY FOR INTENSE USE AND IT IS OF COURSE, THE BEST SOLUTION INDEPENDENTLY FROM ALL TEMPERATURES AND WEATHER CONDITIONS.
- BUILT-IN HYDRAULIC PUMP FOR A SIMPLE INSTALLATION OF THE BOLLARD.
- HOT GALVANIZED PIPE, EXTRACTABLE STRUCTURE AND FORMWORK FOR A LONG TERM RESISTANCE TO WEAR.
- WIDE RANGE OF CUSTOMIZATION: CUSTOM COLOURS, SENSITIVE HEAD, INTEGRATED LED, UNLOCK ELECTRICAL VALVE, HEATER RESISTANCE, BUZZER ETC. (SEE ACCESSORIES AND OPTIONAL ITEMS SHEET)

- Marrie	1122

TYPE OF BOLLARD		CSA300 Fe	CSA300 Fe	CSA300 I
THICKNESS OF CYLINDER	mm	12.5		4
DIAMETER OF CYLINDER	mm		273	
TYPE MATERIAL OF CYLINDER		FE510	FE360	INOX304
FINISHING OF CYLINDER		POLYEST	ER PAINT	SATIN
TREATMENT OF CYLINDER		HOT GAI	LVANIZED	INOX 304
TREATMENT OF FORMWORK AND STRUCTURE			HOT GALVANIZED	
REFLECTIVE ADHESIVE STRIPE		•	•	•
SAFETY PRESSOSTAT IP54		OPTIONAL	OPTIONAL	OPTIONAL
RESISTANCE TO BREAKING	J	482.000	225.000	250.000
RESISTANCE TO DEFORMATION (JOULE)	J	50.000	30.000	30.000
STATIC RESISTANCE BOLLARD OPEN (CERTIFIED)	Kg	40.000	40.000	40.000
DAILY CYCLES - INTENSIVE USE (INTERMITTENT CYCLE S3)			2.400	
AVERAGE LIFE CYCLES WITHOUT MAINTENANCE			1.500.000	
MAXIMUM PRESSURE OF WORKING	bar	30	30	30
PROTECTION GRADE OF THE PUMP	IP	67	67	67
POWER ABSORBED	W	500	500	500
POWER SUPPLY	Vac	230V 50Hz	230V 50Hz	230V 50Hz
BRIGHT HEAD POWER SUPPLY	Vdc	24	24	24
WORKING TEMPERATURE	°C	-20 / + 80	-20 / + 80	-20 / + 80
ELECTRICAL HEATER DEVICE IP67		0	0	0
SELF CERTIFIED ROHS PRODUCT		•	•	•
ELECTRICAL VALVE IP54		•	•	•
= on board				

)ptiona FOUR CHANNEL TRASMITTER 433 Mhz ANTENNA 433 Mhz STAINLESS STEEL TWO COILS MAGNET. INDUCTOR FOR LOOPS OF METAL REVEAL. ROLLING CODE WITH CABLE 7m 24Volt DC/AC 1540024 1540100 1630079 TRAFFIC LIGHT LED WITH 2 LIGHTS RED/GREEN WITH FLASHING LIGHT 230 Vac LED WITH INTERMITTENT BIODEGRADABLE HYDRAULIC OIL VERTICAL-WALL HEATER LED 230Vac OIL BOARD ISO E22 M 1650042 1655025 6964007 ELECT. CONTROL. BRAIN4 IP56 MANAGEMENT OF 4 ELECT. CONTROL. BRAIN1 IP56 MANAGEMENT OF 1 PROTECTION ACCESSORY FOR PARTS IN TENSION IN AUTOMAT. BOLLARD RADIO R. INCLUDED 1 ELECTRIC. VALV + TRAFFIC LIGHTS SUPPORT FOR FIXING CONDENDERS FOR BRAIN4 AUTOMAT. BOLLARDS RADIO R. INCLUDED ELECTRIC PLEXIGLASS AND 4 VALV + TRAFFIC LIGHTS 1 5050008602 5050008615 5050008620 RSME EMERGENCY VEHICLES SOUND RECOGNIZER \square ALLARM KIT ROAD MARKING OF SIGNALLING BE CAREFUL EUROPEAN APPORVED SIRENS INDICATE THE STATE BOLLARDS MOVING WITH POLE

MAC S.r.l. - Via Enrico Mattei n°9 - Loc. MORCIOLA - 61022 VALLEFOGLIA (PU) - Tel.: +39 0721 495447 - Fax: +39 0721 495438

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RECOMMENDED FOR:

- LIMIT TRANSIT IN PEDESTRIAN AREAS
- ACCESS CONTROL PARKING
- CONTROL DRIVEWAYS



TH	ICKNESS OF CYLINDER	mm	12	4	12 inox	4 inox
CSA300 H500			0301111	0301161	0301211	0301261
STROKE OF CYLINDER		mm	500	500	500	500
SPEED OF LIFT		sec	3.90	3.90	3.90	3.90
SPEED OF LOWERING		sec	3	3	3	3
SPEED OF LOWERING AS EMERGENCY (WITH ELECTRICA	L VALVE)	sec	3	3.5	3.5	3.5
TOTAL WEIGHT OF BOLLARD		Kg	123	87	133	93

CSA300 H700		0301101	0301151	0301201	0301251
STROKE OF CYLINDERSTROKE OF CYLINDER	mm	700	700	700	700
SPEED OF LIFT	sec	5.20	5.20	5.20	5.20
SPEED OF LOWERING	sec	4	4	4	4
SPEED OF LOWERING AS EMERGENCY (WITH ELECTRICAL VALVE)	sec	4	5	5	5
TOTAL WEIGHT OF BOLLARD	Kg	160	104	170	108

	0301121	0301171	0301221	0301271
mm	800	800	800	800
sec	5.30	5.30	5.30	5.30
sec	4	4	4	4
sec	4	5	5	5
Kg	170	117	180	125
	sec sec sec	mm 800 sec 5.30 sec 4 sec 4	mm 800 800 sec 5.30 5.30 sec 4 4 sec 4 5	mm 800 800 800 sec 5.30 5.30 5.30 sec 4 4 4 sec 4 5 5



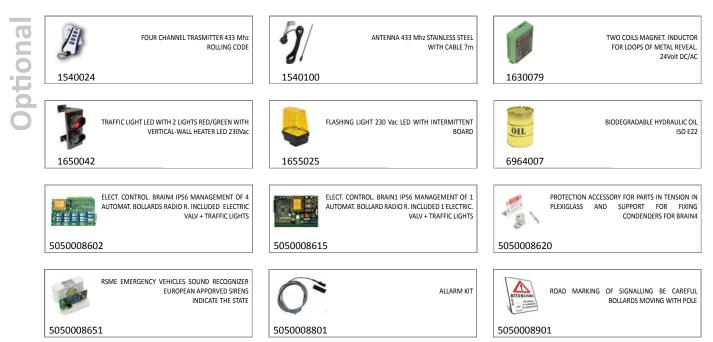
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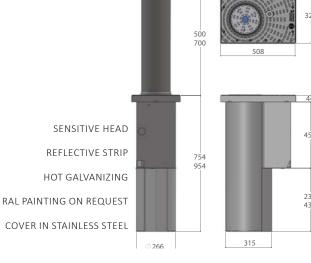
TYPE OF BOLLARD	Cod.	CSA 200 Fe	CSA200 Fe	CSA 200 i
THICKNESS OF CYLINDER	mm	12.5		4
DIAMETER OF CYLINDER	mm	2	00	206
TYPE MATERIAL OF CYLINDER		FE510	FE360	INOX304
FINISHING OF CYLINDER		POLYEST	ER PAINT	SATIN
TREATMENT OF CYLINDER		HOT GAI	VANIZED	INOX 304
TREATMENT OF FORMWORK AND STRUCTURE			HOT GALVANIZED	
REFLECTIVE ADHESIVE STRIPE			•	
SAFETY PRESSOSTAT IP54			OPTIONAL	
RESISTANCE TO BREAKING	J	242.000	111.000	180.000
RESISTANCE TO DEFORMATION (JOULE)	J	15.000	5.000	11.000
STATIC RESISTANCE BOLLARD OPEN (CERTIFIED)	Kg		40.000	
DAILY CYCLES - INTENSIVE USE (INTERMITTENT CYCLE S3)			2.400	
AVERAGE LIFE CYCLES WITHOUT MAINTENANCE			1.500.000	
MAXIMUM PRESSURE OF WORKING	bar	30		
PROTECTION GRADE OF THE PUMP	IP		67	
POWER ABSORBED	W		500	
POWER SUPPLY	Vac		230V 50Hz	
BRIGHT HEAD POWER SUPPLY	Vdc		24	
WORKING TEMPERATURE	°C		-20 / + 80	
ELECTRICAL HEATER DEVICE IP67			0	
SELF CERTIFIED ROHS PRODUCT			•	
ELECTRICAL VALVE IP54			•	
electrical valve IP34			•	

• = on board



RECOMMENDED FOR:

- LIMIT TRANSIT IN PEDESTRIAN AREAS
- ACCESS CONTROL PARKING
- CONTROL DRIVEWAYS



Т	HICKNESS OF CYLINDER	mm	12	4	4 INOX
CSA200 H500			030151212	030150402	030150352
STROKE OF CYLINDER		mm		500	
SPEED OF LIFT		sec		3.90	
SPEED OF LOWERING		sec		3	
SPEED OF LOWERING AS EMERGENCY (WITH ELECTRICA	L VALVE)	sec		3	
TOTAL WEIGHT OF BOLLARD		Kg	98	68	74
		116	50	00	74

CSA200 H700		030151214	030150404	030150354
STROKE OF CYLINDERSTROKE OF CYLINDER	mm		700	
SPEED OF LIFT	sec		5.20	
SPEED OF LOWERING	sec		4	
SPEED OF LOWERING AS EMERGENCY (WITH ELECTRICAL VALVE)	sec		4	
TOTAL WEIGHT OF BOLLARD	Kg	117	74	80

CSA200 H800		030151215	030150405	030150355
STROKE OF CYLINDERSTROKE OF CYLINDER	mm		800	
SPEED OF LIFT	sec		5.20	
SPEED OF LOWERING	sec		4	
SPEED OF LOWERING AS EMERGENCY (WITH ELECTRICAL VALVE)	sec		4	
TOTAL WEIGHT OF BOLLARD	Kg	125	77	



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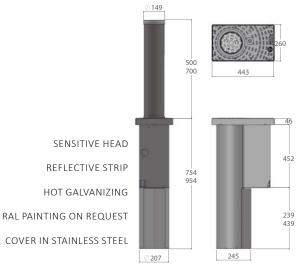
mm mm	12.5 FE510	140 FE360	4
mm	FE510	•	
	FE510	FE360	
		1 2000	inox
	POLYEST	ER PAINT	SATIN
	HOT GAL	VANIZED	INOX 304
		HOT GALVANIZED	
		•	
		OPTIONAL	
J	112.000	56.000	70.000
J	5.000	3.000	4.000
Kg		40.000	
		2.400	
		1.500.000	
bar		30	
IP		67	
W		500	
Vac		230V 50Hz	
Vdc		24	
°C		-20 / + 60	
		<+1	
		•	
		•	
	Kg bar IP W Vac Vdc	HOT GAI HOT GAI J 112.000 J 5.000 Kg bar IP W Vac Vac	HOT GALVANIZED HOT GALVANIZED - OPTIONAL J 112.000 56.000 J 5.000 3.000 Kg 40.000 Z.400 Kg 40.000 Z.400 I.500.000 Mac 2.400 I.500.000 Mac 30 Vac 230V 50Hz Vdc 24 °C -20 / + 60 < + 1

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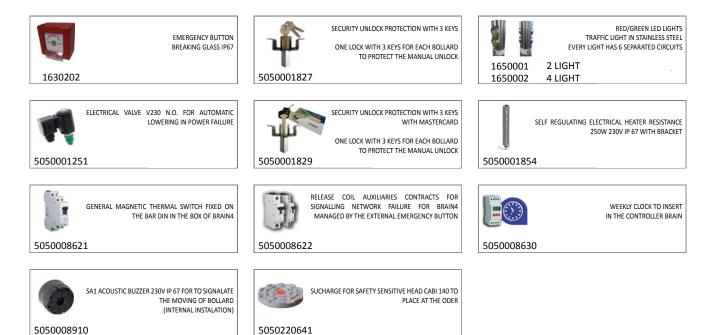
RECOMMENDED FOR:

- LIMIT TRANSIT IN PEDESTRIAN AREAS
- ACCESS CONTROL PARKING
- CONTROL DRIVEWAYS



	HICKNESS OF CYLINDER	mm	12	4	4 inox
CSA140 H500		Cod.	030141212	030140402	030140452
STROKE OF CYLINDER		mm		500	
SPEED OF LIFT		sec		3.90	
SPEED OF LOWERING		sec		3	
SPEED OF LOWERING AS EMERGENCY (WITH ELECTRIC	AL VALVE)	sec		3	
TOTAL WEIGHT OF BOLLARD		Kg	75	51	56

	030141214	030140404	030140454
mm		700	
sec		5.20	
sec		4	
sec		5	
Kg	86	63	68
	sec sec sec	mm sec sec sec	mm 700 sec 5.20 sec 4 sec 5



info@mac-srl.it

CSA 300P

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- PNEUMATIC MOVEMENT, IT ENSURES THE FUNCTIONING OF THE BOLLARD AS A RESULT OF THE FIRST CLASS MATERIALS AND TECHNOLOGIES USED IN THE MANUFACTURING PROCESS.
- HIGH QUALITY COMPRESSORS, ENSURE THE HIGH PERGORMANCE OF THE BOLLARD.
- HOT GALVANIZED PIPE, EXTRACTABLE STRUCTURE AND FORMWORK FOR A LONG TERM RESISTANCE TO WEAR.
- WIDE RANGE OF CUSTOMIZATION: CUSTOM COLOURS, SENSITIVE HEAD, INTEGRATED LED, UNLOCK ELECTRICAL VALVE, HEATER RESISTANCE, BUZZER ETC. (SEE ACCESSORIES AND OPTIONAL ITEMS SHEET)



TYPE OF BOLLARD		CSA300 Fe	CSA300 Fe	CSA300 I
THICKNESS OF CYLINDER	mm	12.5		4
DIAMETER OF CYLINDER	mm		273	
TYPE MATERIAL OF CYLINDER		FE510	FE360	INOX304
FINISHING OF CYLINDER		POLYEST	ER PAINT	SATIN
TREATMENT OF CYLINDER		HOT GAI	VANIZED	INOX 304
TREATMENT OF FORMWORK AND STRUCTURE			HOT GALVANIZED	
REFLECTIVE ADHESIVE STRIPE		•	•	•
SAFETY PRESSOSTAT		OPTIONAL	OPTIONAL	OPTIONAL
RESISTANCE TO BREAKING	J	482.000	225.000	250.000
RESISTANCE TO DEFORMATION (JOULE)	J	50.000	30.000	30.000
STATIC RESISTANCE BOLLARD OPEN (CERTIFIED)	Kg	40.000	40.000	40.000
DAILY CYCLES - INTENSIVE USE (INTERMITTENT CYCLE S3)			2.400	
AVERAGE LIFE CYCLES WITHOUT MAINTENANCE			1.500.000	
MAXIMUM PRESSURE OF WORKING	bar		6	
POWER SUPPLY	Vac	230V 50Hz	230V 50Hz	230V 50Hz
BRIGHT HEAD POWER SUPPLY	Vdc	24	24	24
WORKING TEMPERATURE	°C	-20 / + 80	-20 / + 80	-20 / + 80
ELECTRICAL HEATER DEVICE IP67		0	0	0
SELF CERTIFIED ROHS PRODUCT		•	•	•
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RECOMMENDED FOR:

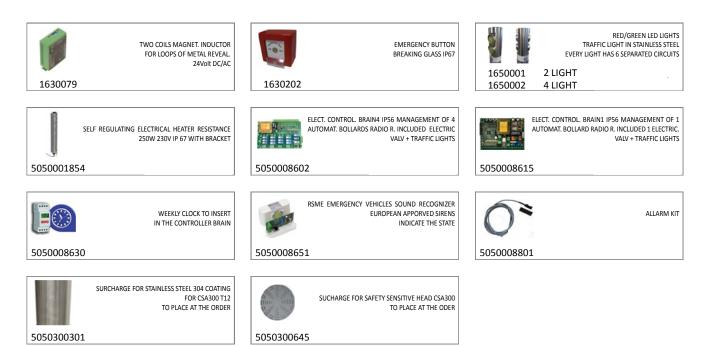
- LIMIT TRANSIT IN PEDESTRIAN AREAS
- ACCESS CONTROL PARKING
- CONTROL DRIVEWAYS



THICKNESS OF CYLINDER	mm	12	4	4 inox
	Cod.	0301511	0301561	0301661
	mm	500	500	500
	sec	3.90	3.90	3.90
	sec	3	3	3
RICAL VALVE)	sec	3	3.5	3.5
	Kg	123	87	93
	THICKNESS OF CYLINDER	Cod. mm sec sec RICAL VALVE) sec	Cod. 0301511 mm 500 sec 3.90 sec 3 RICAL VALVE) sec 3	Cod. 0301511 0301561 mm 500 500 sec 3.90 3.90 sec 3 3 RICAL VALVE) sec 3 3.5

CSA300 H700		0301501	0301551	0301651
STROKE OF CYLINDERSTROKE OF CYLINDER	mm	700	700	700
SPEED OF LIFT	sec	5.20	5.20	5.20
SPEED OF LOWERING	sec	4	4	4
SPEED OF LOWERING AS EMERGENCY (WITH ELECTRICAL VALVE)	sec	4	5	5
TOTAL WEIGHT OF BOLLARD	Kg	160	104	108

	0301521	0301571	0301671
mm	800	800	800
sec	5.20	5.20	5.20
sec	4	4	4
sec	4	5	5
Kg	170	117	125
	sec sec sec	mm 800 sec 5.20 sec 4 sec 4	mm 800 800 sec 5.20 5.20 sec 4 4 sec 4 5



CSA 200P

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TYPE OF BOLLARD	Cod.	CSA 200 Fe	CSA 200 Fe	CSA 200 i
THICKNESS OF CYLINDER	mm	12.5		4
DIAMETER OF CYLINDER				206
	mm			
TYPE MATERIAL OF CYLINDER		FE510	FE360	INOX304
FINISHING OF CYLINDER			ER PAINT	SATIN
TREATMENT OF CYLINDER		HOT GAL	VANIZED	INOX 304
TREATMENT OF FORMWORK AND STRUCTURE			HOT GALVANIZED	
REFLECTIVE ADHESIVE STRIPE			•	
SAFETY PRESSOSTAT			OPTIONAL	
RESISTANCE TO BREAKING	J	242.000	111.000	180.000
RESISTANCE TO DEFORMATION (JOULE)	J	15.000	5.000	11.000
STATIC RESISTANCE BOLLARD OPEN (CERTIFIED)	Kg		40.000	
DAILY CYCLES - INTENSIVE USE (INTERMITTENT CYCLE S3)			2.400	
AVERAGE LIFE CYCLES WITHOUT MAINTENANCE			1.500.000	
MAXIMUM PRESSURE OF WORKING	bar		6	
POWER SUPPLY	Vac		230V 50Hz	
BRIGHT HEAD POWER SUPPLY	Vdc		24	
WORKING TEMPERATURE	°C		-20 / + 80	
ELECTRICAL HEATER DEVICE IP67			0	
SELF CERTIFIED ROHS PRODUCT			•	
• = on board				



RECOMMENDED FOR:

- LIMIT TRANSIT IN PEDESTRIAN AREAS
- ACCESS CONTROL PARKING
- CONTROL DRIVEWAYS



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THICKNESS OF CYLINDE	ER mm	12	4	4 inox
CSA200 H500	Cod.	030251212	030250402	030250452
STROKE OF CYLINDER	mm	500	500	500
SPEED OF LIFT	sec	3.90	3.90	3.90
SPEED OF LOWERING	sec	3	3	3
SPEED OF LOWERING AS EMERGENCY (WITH ELECTRICAL VALVE)	sec	3	3.5	3.5
TOTAL WEIGHT OF BOLLARD	Kg	98	68	74

COVER IN STAINLESS STEEL

CSA200 H700		030251214	030250404	030250454
STROKE OF CYLINDERSTROKE OF CYLINDER	mm	700	700	700
SPEED OF LIFT	sec	5.20	5.20	5.20
SPEED OF LOWERING	sec	4	4	4
SPEED OF LOWERING AS EMERGENCY (WITH ELECTRICAL VALVE)	sec	4	5	5
TOTAL WEIGHT OF BOLLARD	Kg	117	74	80

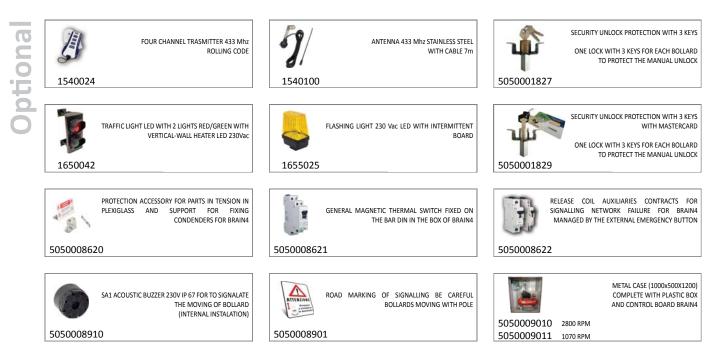


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TYPE OF BOLLARD	Cod.	CSA 140 Fe	CSA 140 Fe	CCA 140 :
				CSA 140 i
THICKNESS OF CYLINDER	mm	12.5	4	1
DIAMETER OF CYLINDER	mm		140	
TYPE MATERIAL OF CYLINDER		FE510	FE360	inox
FINISHING OF CYLINDER		POLYEST	ER PAINT	SATIN
TREATMENT OF CYLINDER		HOT GAL	VANIZED	INOX 304
TREATMENT OF FORMWORK AND STRUCTURE			HOT GALVANIZED	
REFLECTIVE ADHESIVE STRIPE			•	
SAFETY PRESSOSTAT			OPTIONAL	
RESISTANCE TO BREAKING	J	112.000	56.000	70.000
RESISTANCE TO DEFORMATION (JOULE)	J	5.000	3.000	4.000
STATIC RESISTANCE BOLLARD OPEN (CERTIFIED)	Kg		40.000	
DAILY CYCLES - INTENSIVE USE (INTERMITTENT CYCLE S3)			2.400	
POWER SUPPLY	Vac		230V 50Hz	
BRIGHT HEAD POWER SUPPLY	Vdc		24	
WORKING TEMPERATURE	°C		-20 / + 60	
ELECTRICAL HEATER DEVICE IP67			< + 1	
SELF CERTIFIED ROHS PRODUCT			•	

• = on board

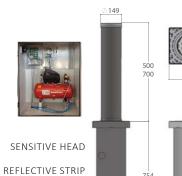




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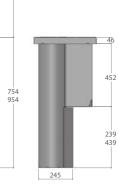
- LIMIT TRANSIT IN PEDESTRIAN AREAS
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- CONTROL DRIVEWAYS



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HOT GALVANIZING RAL PAINTING ON REQUEST

COVER IN STAINLESS STEEL



TI	HICKNESS OF CYLINDER	mm	12	4	4 inox
CSA140 H500		Cod.	030241212	030240402	030240452
STROKE OF CYLINDER		mm	500	500	500
SPEED OF LIFT		sec	3.90	3.90	3.90
SPEED OF LOWERING		sec	3	3	3
SPEED OF LOWERING AS EMERGENCY (WITH ELECTRICA	L VALVE)	sec	3	3.5	3.5
TOTAL WEIGHT OF BOLLARD		Kg	75	51	56

	030241214	030240404	030240454
mm	700	700	700
sec	5.20	5.20	5.20
sec	4	4	4
sec	4	5	5
Kg	86	63	68
	sec sec sec	mm 700 sec 5.20 sec 4 sec 4	mm 700 700 sec 5.20 5.20 sec 4 4 sec 4 5



5050220641



SemiAutomatic Bollards

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PALMO 300	Pag.	22
PALMO 200	Pag.	23
PALMO 140	Pag.	24

PALMO 300

SEMIAUTOMATIC BOLLARDS PALMO WITH SIGLE EFFECT GAS MOTION HAVE AN EXTERNAL ASPECT SIMILAR TO THAT OF THE CSA MODEL, THIS ALLOWS A COMBINED USE OF BOTH VERSIONS SIMULTANEOUSLY. THESE BOLLARDS ARE THE RESULT OF THE CONTINUOUS DEVELOPMENT OF MORE THAN 25 YEARS OF EXPERIENCE.

- SINGLE EFFECT GAS MOTION, THE MOST RECOMMENDED SOLUTION TO BE USED TO CONTROL THE TRANSIT OR THE STATIONING OF VEHICLES IN DAILY TRAFFIC LIMITED ZONES.
- HOT GALVANIZED PIPE, EXTRACTABLE STRUCTURE AND FORMWORK FOR A LONG TERM RESISTANCE TO WEAR.
- WIDE RANGE OF CUSTOMIZATION: CUSTOM COLOURS, INTEGRATED LED ETC. (SEE ACCESSORIES AND OPTIONAL ITEMS SHEET)



TYPE OF BOLLARD	
THICKNESS OF FIXE	Ē
DIAMETER OF FIXE	C
TYPE MATERIAL OF	:
FINISHING OF CYLI	Ν
TREATMENT OF FO	F
REFLECTIVE ADHES	51
RESISTANCE TO BR	E
RESISTANCE TO DE	F
STATIC RESISTANCE	2
ALIMENTAZIONE T	E
PRODOTTO RISPON	1

Technical Data

TYPE OF BOLLARD	Cod.	PALMO300 Fe	PALMO300 I
THICKNESS OF FIXED CYLINDER	mm	12.5	4
DIAMETER OF FIXED CYLINDER	mm	273	273
TYPE MATERIAL OF CYLINDER		FE510	INOX304
FINISHING OF CYLINDER		POLYESTER PAINT	SATIN
TREATMENT OF FORMWORK AND STRUCTURE		I	HOT GALVANIZED
REFLECTIVE ADHESIVE STRIPE		•	٠
RESISTANCE TO BREAKING	J	482.000	250.000
RESISTANCE TO DEFORMATION (JOULE)	J	25.000	11.000
STATIC RESISTANCE BOLLARD OPEN (CERTIFIED)	Kg	40.000	40.000
ALIMENTAZIONE TESTA LUMINOSA	Vcc	24	24
PRODOTTO RISPONDENTE RHOS		•	•
PESO TOTALE DISSUASORE H500	kg	100	
PESO TOTALE DISSUASORE H700 • = on board	kg	140	

PALMO 300 H500	Cod.	0333021	0333041
MANUALE RETRACTABLE BOLLARD COMPLETE WITH FORMOWORK, GAS SPRING AND SECURITY LOCK			
PALMO 300 H700	Cod.	0333031	0333051

nal	RED LIGHT LED HIGH LUMINOSITY FOR HEAD CABI/LIBRA/PALMO 24Vcc 20mA		FEEDER 220Va OUTPUT 24 Vcc 300m/
Ę	5050000651	5050000670	
0 0	HEAD RING SUPPORT WITH 8 RESINATE LED T12,5		HEAD RING SUPPOR WITH 8 RESINATE LEI T.
	5050300656	5050300658	

PALMO 200

SEMIAUTOMATIC BOLLARDS PALMO WITH SIGLE EFFECT GAS MOTION HAVE AN EXTERNAL ASPECT SIMILAR TO THAT OF THE CSA MODEL, THIS ALLOWS A COMBINED USE OF BOTH VERSIONS SIMULTANEOUSLY. THESE BOLLARDS ARE THE RESULT OF THE CONTINUOUS DEVELOPMENT OF MORE THAN 25 YEARS OF EXPERIENCE.

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- HOT GALVANIZED PIPE, EXTRACTABLE STRUCTURE AND FORMWORK FOR A LONG TERM RESISTANCE TO WEAR.
- WIDE RANGE OF CUSTOMIZATION: CUSTOM COLOURS, INTEGRATED LED ETC. (SEE ACCESSORIES AND OPTIONAL ITEMS SHEET)



TYPE OF BOLLARD	Cod.	PALMO200 Fe	PALMO200 Fe	PALMO200/I
THICKNESS OF FIXED CYLINDER	mm	12.5	4	3
DIAMETER OF FIXED CYLINDER	mm	200	200	206
TYPE MATERIAL OF CYLINDER		FE510	FE360	INOX304
FINISHING OF CYLINDER		POLYEST	ER PAINT	SATIN
TREATMENT OF FORMWORK AND STRUCTURE			HOT GALVANIZED	
REFLECTIVE ADHESIVE STRIPE			•	
RESISTANCE TO BREAKING	J	242.000	111.000	122.000
RESISTANCE TO DEFORMATION (JOULE)	J	15.000	5.000	5.000
STATIC RESISTANCE BOLLARD OPEN (CERTIFIED)	Kg	40.000	40.000	40.000
ALIMENTAZIONE TESTA LUMINOSA	Vcc	24	24	24
PRODOTTO RISPONDENTE RHOS		•	•	•
PESO TOTALE DISSUASORE H500	kg	90	43	48
PESO TOTALE DISSUASORE H700 • = on board	kg	110	51	56

PALMO 200 H500					Cod.	0332021	0332001	0332041
MANUALE RETRACTABLE FORMOWORK, GAS SPRIN			COMPLETE	WITH				

PALMO 200	H700					Cod.	0332031	0332011	0332051
MANUALE	RETRACTABLE	BOLLARD	COMPLETE	COMPLETE	WITH				
FORMOWO	RK, GAS SPRING	AND SECUR	ITY LOCK						

			FEEDER 220Vac OUTPUT 24 Vcc 300mA
5050000651		5050000670	
	-		
LIGHT HIGH LUMINOSITY			FIXED HEAD WITH RED LED LIGHT HIGH LUMINOSITY T12.5
5050210556		5050210558	
	CABI/LIBRA/PALMO 24Vcc 20mA 5050000651 FIXED HEAD WITH RED LED LIGHT HIGH LUMINOSITY T3	Fixed head with red led LIGHT HIGH LUMINOSITY T3	CABI/LIBRA/PALMO 24Vcc 20mA Sold 5050000651 5050000670 FixeD HEAD WITH RED LED LIGHT HIGH LUMINOSITY T3 Sold

PALMO 140

SEMIAUTOMATIC BOLLARDS PALMO WITH SIGLE EFFECT GAS MOTION HAVE AN EXTERNAL ASPECT SIMILAR TO THAT OF THE CSA MODEL, THIS ALLOWS A COMBINED USE OF BOTH VERSIONS SIMULTANEOUSLY. THESE BOLLARDS ARE THE RESULT OF THE CONTINUOUS DEVELOPMENT OF MORE THAN 25 YEARS OF EXPERIENCE.

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- HOT GALVANIZED PIPE, EXTRACTABLE STRUCTURE AND FORMWORK FOR A LONG TERM RESISTANCE TO WEAR.
- WIDE RANGE OF CUSTOMIZATION: CUSTOM COLOURS, INTEGRATED LED ETC. (SEE ACCESSORIES AND OPTIONAL ITEMS SHEET)



TYPE OF BOLLARD	Cod.	PALMO140 Fe	PALMO140 Fe	PALMO140/I	
THICKNESS OF FIXED CYLINDER	mm	12.5	4	3	
DIAMETER OF FIXED CYLINDER	mm	140	140	140	
TYPE MATERIAL OF CYLINDER		FE510	FE360	INOX304	
FINISHING OF CYLINDER		POLYEST	ER PAINT	SATIN	
TREATMENT OF FORMWORK AND STRUCTURE		HOT GALVANIZED			
REFLECTIVE ADHESIVE STRIPE			•		
RESISTANCE TO BREAKING	J	112.000	56.000	63.000	
RESISTANCE TO DEFORMATION (JOULE)	J	5.000	3.000	3.000	
STATIC RESISTANCE BOLLARD OPEN (CERTIFIED)	Kg	40.000	40.000	40.000	
ALIMENTAZIONE TESTA LUMINOSA	Vcc	24	24	24	
PRODOTTO RISPONDENTE RHOS		•	•	•	
PESO TOTALE DISSUASORE H500	kg	70	31	37	
PESO TOTALE DISSUASORE H700 • = on board	kg	81	39	44	

PALMO 140 H500				Cod.	0331021	0331001	0331041	
	CTABLE BOLLARD SPRING AND SECU		COMPLETE	WITH				

PALMO 140 H700				Cod.	0331031	0331011	0331051		
MANUALE	RETRACTABLE	BOLLARD	COMPLETE	COMPLETE	WITH				
FORMOWORK, GAS SPRING AND SECURITY LOCK									

			FEEDER 220Vac OUTPUT 24 Vcc 300mA
5050000651		5050000670	_
	FIXED HEAD WITH RED LED LIGHT HIGH LUMINOSITY T4		FIXED HEAD WITH RED LED LIGHT HIGH LUMINOSITY T12.5
5050220556		5050220558	_
	CA 5050000651	FIXED HEAD WITH RED LED LIGHT HIGH LUMINOSITY T4	CABI/LIBRA/PALMO 24Vcc 20mA SOSO000651 Fixed HEAD WITH RED LED LIGHT HIGH LUMINOSITY T4 SOSO000670





Fix Bollards

LIBRA 300	Pag. 28
LIBRA 200	Pag. 29
LIBRA 140	Pag. 30
LIBRA 300 FLE	Pag. 31
LIBRA 200 FLE	Pag. 32
LIBRA 140 FLE	Pag. 33
LIBRA 300 FLI	Pag. 34
LIBRA 200 FLI	Pag. 35
LIBRA 140 FLI	Pag. 36

LIBRA 300

FIXED BOLLARD LIBRA WITH DIFFERENT ANCHORING SYSTEMS, HAVE AN EXTERNAL ASPECT SIMILAR TO THAT OF THE CSA MODEL, THIS ALLOWS A COMBINED USE OF BOTH VERSIONS SIMULTANEOUSLY. THESE BOLLARDS ARE THE RESULT OF THE CONTINUOUS DEVELOPMENT OF MORE THAN 25 YEARS OF EXPERIENCE.

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- THE INSTALLATION IS MADE FIXING THE BOLLARD USING ITS DEDICATED INTERNAL FLANGE.
- HOT GALVANIZED PIPE, FOR A LONG TERM RESISTANCE TO WEAR.
- WIDE RANGE OF CUSTOMIZATION: CUSTOM COLOURS, INTEGRATED LED ETC. (SEE ACCESSORIES AND OPTIONAL ITEMS SHEET)





J	TYPE OF BOLLARD	Cod.	LIBRA300/12	LIBRA300/4	LIBRA300/4 I
÷	HEIGHT OF CYLINDER	mm	500 / 700	500 / 700	500 / 700
σ	THICKNESS OF FIXED CYLINDER	mm	12,5	4	4
	DIAMETER OF FIXED CYLINDER	mm	273	273	273
	TYPE MATERIAL OF CYLINDER		FE 510	FE 360	INOX304
σ	FINISHING OF CYLINDER		POLYESTI	ER PAINT	SATIN
0	TREATMENT OF CYLINDER		HOT GAL	VANIZED	SATIN
echnid	REFLECTIVE ADHESIVE STRIPE		•	•	•
5	RESISTANCE TO BREAKING	J	482.000	225.000	250.000
5	RESISTANCE TO DEFORMATION (JOULE)	J	25.000	11.000	11.000
ā	TOTAL WEIGHT OF BOLLARD H500 (ALUMINIUM HEAD)	Kg	61	22	26
H	TOTAL WEIGHT OF BOLLARD H700 (ALUMINIUM HEAD) • = on board	Kg	78	29	34
	LIBRA 300 H500	Cod.	0344601	0344621	0344651
	BOLLARD FIXED ON THE GROUND BY BRICKWORK, ALUMINIUM HEAD. AVAILABLE WITH LED HEAD (NO BRACKETS)				
	LIBRA 300 H500	Cod.	0344603	0344623	0344653
	BOLLARD FIXED ON THE GROUND BY BRICKWORK, FLAT HEAD, (NO BRACKETS)				
	LIBRA 300 H700	Cod.	0344611	0344631	0344655
	BOLLARD FIXED ON THE GROUND BY BRICKWORK, ALUMINIUM HEAD. AVAILABLE WITH LED HEAD (NO BRACKETS)				
	LIBRA 300 H700	Cod.	0344613	0344633	0344656
	BOLLARD FIXED ON THE GROUND BY BRICKWORK, FLAT HEAD, (NO BRACKETS)				

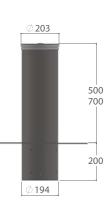


5050300658

LIBRA 200

FIXED BOLLARD LIBRA WITH DIFFERENT ANCHORING SYSTEMS, HAVE AN EXTERNAL ASPECT SIMILAR TO THAT OF THE CSA MODEL, THIS ALLOWS A COMBINED USE OF BOTH VERSIONS SIMULTANEOUSLY. THESE BOLLARDS ARE THE RESULT OF THE CONTINUOUS DEVELOPMENT OF MORE THAN 25 YEARS OF EXPERIENCE.

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- HOT GALVANIZED PIPE, FOR A LONG TERM RESISTANCE TO WEAR.
- WIDE RANGE OF CUSTOMIZATION: CUSTOM COLOURS. INTEGRATED LED ETC. (SEE ACCESSORIES AND OPTIONAL ITEMS SHEET)





TYPE OF BOLLARD	Cod.	LIBRA200/12	LIBRA200/4	LIBRA200/4
HEIGHT OF CYLINDER	mm	500 / 700	500 / 700	500 / 700
THICKNESS OF FIXED CYLINDER	mm	12,5	4	4
DIAMETER OF FIXED CYLINDER	mm	200	200	206
TYPE MATERIAL OF CYLINDER		FE 510	FE 360	INOX304
FINISHING OF CYLINDER		POLYEST	ER PAINT	
TREATMENT OF CYLINDER		HOT GAL	VANIZED	SATIN
REFLECTIVE ADHESIVE STRIPE		•	•	•
RESISTANCE TO BREAKING	J	169.000	72.000	150.000
RESISTANCE TO DEFORMATION (JOULE)	J	15.000	5.000	9.000
TOTAL WEIGHT OF BOLLARD H500 (ALUMINIUM HEAD)	Kg	35	14	19
TOTAL WEIGHT OF BOLLARD H700 (ALUMINIUM HEAD)	Kg	51	19	24
LIBRA 200 H500	Cod.	0344701	0344721	0344815
	Cou.	0344701	0544721	0544015
BOLLARD FIXED ON THE GROUND BY BRICKWORK, ALUMINIUM HEAD. AVAILABLE WITH LED HEAD (NO BRACKETS)				
LIBRA 200 H500	Cod.	0344703	0344723	0344817
BOLLARD FIXED ON THE GROUND BY BRICKWORK, FLAT HEAD, (NO BRACKETS)				
LIBRA 200 H700	Cod.	0344711	0344731	0344819
DOLLARD FIVED ON THE CROLIND BY BRICKWORK ALTERNING VERS				

BOLLARD FIXED ON THE GROUND BY BRICKWORK, ALUMINIUM HEAD. AVAILABLE WITH LED HEAD (NO BRACKETS)

LIBRA 200 H700	Cod.	0344713	0344733	0344821
BOLLARD FIXED ON THE GROUND BY BRICKWORK, FLAT HEAD, (NO BRACKETS)				



5050000203







5050000670

FEEDER 220Vac OUTPUT 24 Vcc 300mA

ТЗ





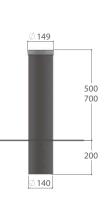
5050000651

Lachnical Data

LIBRA 140

FIXED BOLLARD LIBRA WITH DIFFERENT ANCHORING SYSTEMS, HAVE AN EXTERNAL ASPECT SIMILAR TO THAT OF THE CSA MODEL, THIS ALLOWS A COMBINED USE OF BOTH VERSIONS SIMULTANEOUSLY. THESE BOLLARDS ARE THE RESULT OF THE CONTINUOUS DEVELOPMENT OF MORE THAN 25 YEARS OF EXPERIENCE.

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- HOT GALVANIZED PIPE, FOR A LONG TERM RESISTANCE TO WEAR.
- WIDE RANGE OF CUSTOMIZATION: CUSTOM COLOURS, INTEGRATED LED ETC. (SEE ACCESSORIES AND OPTIONAL ITEMS SHEET)





YPE OF BOLLARD	Cod.	LIBRA140/12	LIBRA140/4	LIBRA140/4 i	
IEIGHT OF CYLINDER	mm	500 / 700	500 / 700	500 / 700	
HICKNESS OF FIXED CYLINDER	mm	12,5	4	4	
DIAMETER OF FIXED CYLINDER	mm	140	140	140	
YPE MATERIAL OF CYLINDER		FE 510	FE 360	INOX304	
INISHING OF CYLINDER		POLYEST	ER PAINT	SATIN	
REATMENT OF CYLINDER		HOT GAL	HOT GALVANIZED		
EFLECTIVE ADHESIVE STRIPE		•	•	•	
ESISTANCE TO BREAKING	J	112.000	56.000	79.000	
ESISTANCE TO DEFORMATION (JOULE)	J	5.000	3.000	3.000	
OTAL WEIGHT OF BOLLARD H500 (ALUMINIUM HEAD)	Kg	26	8	13	
OTAL WEIGHT OF BOLLARD H700 (ALUMINIUM HEAD) = on board	Kg	35	10	15	
IBRA 140 H500	Cod.	0344841	0344861	0345881	
OLLARD FIXED ON THE GROUND BY BRICKWORK, ALUMINIUM HEAD. VAILABLE WITH LED HEAD (NO BRACKETS)					
IBRA 140 H500	Cod.	0344843	0344863	0345883	
SOLLARD FIXED ON THE GROUND BY BRICKWORK, FLAT HEAD, (NO BRACKETS)					
IBRA 140 H700	Cod.	0344851	0344871	0345885	
OLLARD FIXED ON THE GROUND BY BRICKWORK, ALUMINIUM HEAD. VAILABLE WITH LED HEAD (NO BRACKETS)					
IBRA 140 H700	Cod.	0344853	0344873	0345887	
SOLLARD FIXED ON THE GROUND BY BRICKWORK, FLAT HEAD, (NO BRACKETS)					
KIT 4 BRACKETS HOT GALVANIZED RED LIGHT LED HIG		ITY FOR HEAD		FEEDER 2	

5050000203

Optional





5050000651

Т4

5050220558

FIXED HEAD WITH RED LED

LIGHT HIGH LUMINOSITY

T12.5

5050000670

LIBRA 300 FLE

FIXED BOLLARD LIBRA WITH DIFFERENT ANCHORING SYSTEMS, HAVE AN EXTERNAL ASPECT SIMILAR TO THAT OF THE CSA MODEL, THIS ALLOWS A COMBINED USE OF BOTH VERSIONS SIMULTANEOUSLY. THESE BOLLARDS ARE THE RESULT OF THE CONTINUOUS DEVELOPMENT OF MORE THAN 25 YEARS OF EXPERIENCE.

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- WIDE RANGE OF CUSTOMIZATION: CUSTOM COLOURS, INTEGRATED LED ETC. (SEE ACCESSORIES AND OPTIONAL ITEMS SHEET)



σ	TYPE OF BOLLARD
Ţ	HEIGHT OF CYLINDER
Ö	THICKNESS OF FIXED CYLI
	DIAMETER OF FIXED CYLI
	TYPE MATERIAL OF CYLIN
σ	FINISHING OF CYLINDER
\mathbf{O}	TREATMENT OF CYLINDER
5	REFLECTIVE ADHESIVE ST
	RESISTANCE TO BREAKING
$\overline{\mathbf{C}}$	RESISTANCE TO DEFORMA
ă	TOTAL WEIGHT OF BOLLA
Ĕ	TOTAL WEIGHT OF BOLLA • = on board

TYPE OF BOLLARD	Cod.	LIBRA300/12	LIBRA300/4	LIBRA300/4 i	
HEIGHT OF CYLINDER	mm	500 / 700	500 / 700	500 / 700	
THICKNESS OF FIXED CYLINDER	mm	12,5	4	4	
DIAMETER OF FIXED CYLINDER	mm	273	273	273	
TYPE MATERIAL OF CYLINDER		FE 510	FE 360	INOX304	
FINISHING OF CYLINDER		POLYEST	POLYESTER PAINT		
TREATMENT OF CYLINDER		HOT GAL	VANIZED	SATIN	
REFLECTIVE ADHESIVE STRIPE		•	•	•	
RESISTANCE TO BREAKING	J	386.000	180.000	200.000	
RESISTANCE TO DEFORMATION (JOULE)	J	20.000	9.000	9.000	
TOTAL WEIGHT OF BOLLARD H500 (ALUMINIUM HEAD)	Kg	61	22	26	
TOTAL WEIGHT OF BOLLARD H700 (ALUMINIUM HEAD) • = on board	Kg	78	29	34	

LIBRA FLE300 H500	Cod.	0344401	0344421	0344501
BOLLARD FIXED ON THE GROUND BY EXTERNAL FLANGE, ALUMINIUM HEAD. AVAILABLE ALSO WITH LED HEAD				
LIBRA FLE300 H500	Cod.	0344403	0344423	0344503
BOLLARD FIXED ON THE GROUND BY EXTERNAL FLANGE, FLAT HEAD				

LIBRA FLE300 H700	Cod.	0344411	0344431	0344505
BOLLARD FIXED ON THE GROUND BY EXTERNAL FLANGE, ALUMINIUM				
HEAD. AVAILABLE ALSO WITH LED HEAD				
LIBRA FLE300 H700	Cod.	0344413	0344433	0344507

BOLLARD FIXED ON THE GROUND BY EXTERNAL FLANGE, FLAT HEAD



MAC S.r.l. - Via Enrico Mattei n°9 - Loc. MORCIOLA - 61022 VALLEFOGLIA (PU) - Tel.: +39 0721 495447 - Fax: +39 0721 495438

LIBRA 200 FLE

FIXED BOLLARD LIBRA WITH DIFFERENT ANCHORING SYSTEMS, HAVE AN EXTERNAL ASPECT SIMILAR TO THAT OF THE CSA MODEL, THIS ALLOWS A COMBINED USE OF BOTH VERSIONS SIMULTANEOUSLY. THESE BOLLARDS ARE THE RESULT OF THE CONTINUOUS DEVELOPMENT OF MORE THAN 25 YEARS OF EXPERIENCE.

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- WIDE RANGE OF CUSTOMIZATION: CUSTOM COLOURS. INTEGRATED LED ETC. (SEE ACCESSORIES AND OPTIONAL ITEMS SHEET)



σ	TYPE OF BOLLARD
Ţ	HEIGHT OF CYLINDER
Ö	THICKNESS OF FIXED CYLI
	DIAMETER OF FIXED CYLIN
	TYPE MATERIAL OF CYLINI
σ	FINISHING OF CYLINDER
C	TREATMENT OF CYLINDER
5	REFLECTIVE ADHESIVE ST
	RESISTANCE TO BREAKING
$\overline{\mathbf{a}}$	RESISTANCE TO DEFORMA
ă	TOTAL WEIGHT OF BOLLA
H	TOTAL WEIGHT OF BOLLA • = on board

TYPE OF BOLLARD		LIBRA200/12	LIBRA200/4	LIBRA200/4 I
HEIGHT OF CYLINDER	mm	500 / 700	500 / 700	500 / 700
THICKNESS OF FIXED CYLINDER	mm	12,5	4	4
DIAMETER OF FIXED CYLINDER	mm	200	200	206
TYPE MATERIAL OF CYLINDER		FE 510	FE 360	INOX304
FINISHING OF CYLINDER		POLYESTI	ER PAINT	SATIN
TREATMENT OF CYLINDER		HOT GAL	VANIZED	SAIIN
REFLECTIVE ADHESIVE STRIPE		•	•	•
RESISTANCE TO BREAKING	J	194.000	89.000	93.000
RESISTANCE TO DEFORMATION (JOULE)	J	12.000	4.000	7.000
TOTAL WEIGHT OF BOLLARD H500 (ALUMINIUM HEAD)	Kg	35	14	19
TOTAL WEIGHT OF BOLLARD H700 (ALUMINIUM HEAD) • = on board	Kg	51	19	24

LIBRA FLE200 H500	Cod.	0344781	0344801	0344831
BOLLARD FIXED ON THE GROUND BY EXTERNAL FLANGE, ALUMINIUM HEAD. AVAILABLE ALSO WITH LED HEAD				
LIBRA FLE200 H500	Cod.	0344783	0344803	0344833
BOLLARD FIXED ON THE GROUND BY EXTERNAL FLANGE, FLAT HEAD				

LI	BRA FLE200 H700	Cod.	0344791	0344811	0344835
В	OLLARD FIXED ON THE GROUND BY EXTERNAL FLANGE, ALUMINIUM				
Н	EAD. AVAILABLE ALSO WITH LED HEAD				
LI	BRA FLE200 H700	Cod.	0344793	0344813	0344837

BOLLARD FIXED ON THE GROUND BY EXTERNAL FLANGE, FLAT HEAD



LIBRA 140 FLE

FIXED BOLLARD LIBRA WITH DIFFERENT ANCHORING SYSTEMS, HAVE AN EXTERNAL ASPECT SIMILAR TO THAT OF THE CSA MODEL, THIS ALLOWS A COMBINED USE OF BOTH VERSIONS SIMULTANEOUSLY. THESE BOLLARDS ARE THE RESULT OF THE CONTINUOUS DEVELOPMENT OF MORE THAN 25 YEARS OF EXPERIENCE.

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- WIDE RANGE OF CUSTOMIZATION: CUSTOM COLOURS. INTEGRATED LED ETC. (SEE ACCESSORIES AND OPTIONAL ITEMS SHEET)



σ	TYPE OF BOLLARD
H	HEIGHT OF CYLINDER
	THICKNESS OF FIXED CY
	DIAMETER OF FIXED CYI
	TYPE MATERIAL OF CYLI
σ	FINISHING OF CYLINDEF
0	TREATMENT OF CYLIND
5	REFLECTIVE ADHESIVE S
=	RESISTANCE TO BREAKIN
$\overline{\mathbf{a}}$	RESISTANCE TO DEFORM
a	TOTAL WEIGHT OF BOLL
Ĕ	TOTAL WEIGHT OF BOLL • = on board

TYPE OF BOLLARD	Cod.	LIBR140/12	LIBRA140/4	LIBRA140/4 i
HEIGHT OF CYLINDER	mm	500 / 700	500 / 700	500 / 700
THICKNESS OF FIXED CYLINDER	mm	12,5	4	4
DIAMETER OF FIXED CYLINDER	mm	140	140	140
TYPE MATERIAL OF CYLINDER		FE 510	FE 360	INOX304
FINISHING OF CYLINDER		POLYEST	ER PAINT	SATIN
TREATMENT OF CYLINDER		HOT GAI	SATIN	
REFLECTIVE ADHESIVE STRIPE		•	•	•
RESISTANCE TO BREAKING	J	90.000	45.000	79.000
RESISTANCE TO DEFORMATION (JOULE)	J	4.000	2.000	3.000
TOTAL WEIGHT OF BOLLARD H500 (ALUMINIUM HEAD)	Kg	26	8	13
TOTAL WEIGHT OF BOLLARD H700 (ALUMINIUM HEAD) • = on board	Kg	35	10	15

LIBRA FLE140 H500	Cod.	0344921	0344941	0344971
BOLLARD FIXED ON THE GROUND BY EXTERNAL FLANGE, ALUMINIUM HEAD. AVAILABLE ALSO WITH LED HEAD				
LIBRA FLE140 H500	Cod.	0344923	0344943	0344973

LIBRA FLE140 H700	Cod.	0344931	0344951	0344975
BOLLARD FIXED ON THE GROUND BY EXTERNAL FLANGE, ALUMINIUM HEAD. AVAILABLE ALSO WITH LED HEAD				
LIBRA FLE140 H700	Cod.	0344933	0344953	0344977

BOLLARD FIXED ON THE GROUND BY EXTERNAL FLANGE, FLAT HEAD



KIT 4 BRACKETS HOT GALVANIZED







FEEDER 220Vac OUTPUT 24 Vcc 300mA

5050000670

FIXED HEAD WITH RED LED LIGHT HIGH LUMINOSITY T12.5

5050090004



5050000651

FIXED HEAD WITH RED LED LIGHT HIGH LUMINOSITY T4

5050220558

info@mac-srl.it

LIBRA 300 FLI

FIXED BOLLARD LIBRA WITH DIFFERENT ANCHORING SYSTEMS, HAVE AN EXTERNAL ASPECT SIMILAR TO THAT OF THE CSA MODEL, THIS ALLOWS A COMBINED USE OF BOTH VERSIONS SIMULTANEOUSLY. THESE BOLLARDS ARE THE RESULT OF THE CONTINUOUS DEVELOPMENT OF MORE THAN 25 YEARS OF EXPERIENCE.

- THE MOST RECOMMENDED SOLUTION TO BE USED TO CONTROL THE TRANSIT OR THE STATIONING OF VEHICLES IN PEDESTRIAN ZONES.
- THE INSTALLATION IS MADE FIXING THE BOLLARD USING ITS DEDICATED INTERNAL FLANGE.
- HOT GALVANIZED PIPE, FOR A LONG TERM RESISTANCE TO WEAR.
- WIDE RANGE OF CUSTOMIZATION: CUSTOM COLOURS, INTEGRATED LED ETC. (SEE ACCESSORIES AND OPTIONAL ITEMS SHEET)



LIBRA300/4

500 / 700

4

273

FE 360

157.000

8.000

22

29

0344471

POLYESTER PAINT

HOT GALVANIZED



LIBRA300/4 i

500 / 700

4

273

INOX304

SATIN

175.000

8.000

26

34

0344551

TYPE OF BOLLARD HEIGHT OF CYLINDER THICKNESS OF FIXED CYLINDER DIAMETER OF FIXED CYLINDER echnical **C** TYPE MATERIAL OF CYLINDER FINISHING OF CYLINDER TREATMENT OF CYLINDER **REFLECTIVE ADHESIVE STRIPE RESISTANCE TO BREAKING RESISTANCE TO DEFORMATION (JOULE)** TOTAL WEIGHT OF BOLLARD H500 (ALUMINIUM HEAD) TOTAL WEIGHT OF BOLLARD H700 (ALUMINIUM HEAD) = on board

LIBRA FLI300 H500	Cod.	0344451
BOLLARD FIXED ON THE GROUND BY INTERNAL FLANGE, ALUMINIUM HEAD, AVAILABLE ALSO WITH LED HEAD	M	
HEAD. AVAILABLE ALSO WITH LED HEAD		

LIBRA FLI300 H500	Cod.	0344453	0344473	0344553
BOLLARD FIXED ON THE GROUND BY INTERNAL FLANGE, FLAT HEAD				

Cod.

mm

mm

mm

1

1

Kg

Kg

LIBRA300/12

500 / 700

12,5

273

FE 510

337.000

18.000

61

78

LIBRA FLI300 H700	Cod.	0344461	0344481	0344555
BOLLARD FIXED ON THE GROUND BY INTERNAL FLANGE, ALUMINIUM HEAD. AVAILABLE ALSO WITH LED HEAD				
LIBRA FLI300 H700	Cod.	0344463	0344483	0344557

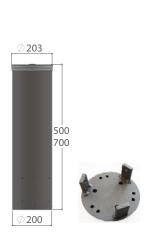
BOLLARD FIXED ON THE GROUND BY INTERNAL FLANGE, FLAT HEAD



LIBRA 200 FLI

FIXED BOLLARD LIBRA WITH DIFFERENT ANCHORING SYSTEMS, HAVE AN EXTERNAL ASPECT SIMILAR TO THAT OF THE CSA MODEL, THIS ALLOWS A COMBINED USE OF BOTH VERSIONS SIMULTANEOUSLY. THESE BOLLARDS ARE THE RESULT OF THE CONTINUOUS DEVELOPMENT OF MORE THAN 25 YEARS OF EXPERIENCE.

- THE MOST RECOMMENDED SOLUTION TO BE USED TO CONTROL THE TRANSIT OR THE STATIONING OF VEHICLES IN PEDESTRIAN ZONES.
- THE INSTALLATION IS MADE FIXING THE BOLLARD USING ITS DEDICATED INTERNAL FLANGE.
- HOT GALVANIZED PIPE, FOR A LONG TERM RESISTANCE TO WEAR.
- WIDE RANGE OF CUSTOMIZATION: CUSTOM COLOURS, INTEGRATED LED ETC. (SEE ACCESSORIES AND OPTIONAL ITEMS SHEET)





σ	TYPE OF BOLLARD	Cod.	LIBRA200/12	LIBRA200/4	LIBRA200/4 I
1	HEIGHT OF CYLINDER	mm	500 / 700	500 / 700	500 / 700
σ	THICKNESS OF FIXED CYLINDER	mm	12,5	4	4
	DIAMETER OF FIXED CYLINDER	mm	200	200	206
	TYPE MATERIAL OF CYLINDER		FE 510	FE 360	INOX304
σ	FINISHING OF CYLINDER		POLYEST	ER PAINT	CATIN
echnic	TREATMENT OF CYLINDER		HOT GAL	VANIZED	SATIN
-	REFLECTIVE ADHESIVE STRIPE		•	•	•
	RESISTANCE TO BREAKING	J	169.000	72.000	150.000
	RESISTANCE TO DEFORMATION (JOULE)	J	10.000	3.000	9.000
	TOTAL WEIGHT OF BOLLARD H500 (ALUMINIUM HEAD)	Kg	35	14	19
Ĕ	TOTAL WEIGHT OF BOLLARD H700 (ALUMINIUM HEAD) <i>= on board</i> 	Kg	51	19	24
	LIBRA FLI200 H500	Cod.	0344741	0344761	0344823
	BOLLARD FIXED ON THE GROUND BY INTERNAL FLANGE, ALUMINIUM HEAD. AVAILABLE ALSO WITH LED HEAD				
	LIBRA FLE200 H500	Cod.	0344743	0344763	0344825
	BOLLARD FIXED ON THE GROUND BY INTERNAL FLANGE, FLAT HEAD				
	LIBRA FLI200 H700	Cod.	0344751	0344771	0344827
	BOLLARD FIXED ON THE GROUND BY INTERNAL FLANGE, ALUMINIUM HEAD. AVAILABLE ALSO WITH LED HEAD				
	LIBRA FLI200 H700	Cod.	0344753	0344773	0344829
	BOLLARD FIXED ON THE GROUND BY INTERNAL FLANGE, FLAT HEAD				
onal	KIT 4 BRACKETS HOT GALVANIZED		MO 24Vcc 20mA		FEEDER 220Vac OUTPUT 24 Vcc 300mA
	505000203 5050000651		505	0000670	

FIXED HEAD WITH RED LED

LIGHT HIGH LUMINOSITY

Т3



FIXED HEAD WITH RED LED LIGHT HIGH LUMINOSITY T12.5

5050210558

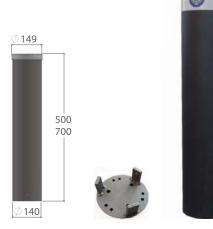
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Califica I

5050210556

FORMWORK TO BUILD IN LIBRA 200 FLI

LIBRA 140 FLI



σ	TYPE OF BOLLAF
4	HEIGHT OF CYLI
σ	THICKNESS OF F
	DIAMETER OF FI
	TYPE MATERIAL
σ	FINISHING OF C
U	TREATMENT OF
5	REFLECTIVE ADH
	RESISTANCE TO I
<u> </u>	RESISTANCE TO I
	TOTAL WEIGHT (
Ĕ	TOTAL WEIGHT (

TYPE OF BOLLARD		LIBR140/12	LIBRA140/4	LIBRA140/4 I
HEIGHT OF CYLINDER		500 / 700	500 / 700	500 / 700
THICKNESS OF FIXED CYLINDER		12,5	4	4
DIAMETER OF FIXED CYLINDER		140	140	140
TYPE MATERIAL OF CYLINDER		FE 510	FE 360	INOX304
FINISHING OF CYLINDER		POLYESTER PAINT HOT GALVANIZED		SATIN
TREATMENT OF CYLINDER				
REFLECTIVE ADHESIVE STRIPE		•	•	•
RESISTANCE TO BREAKING		79.000	39.000	79.000
RESISTANCE TO DEFORMATION (JOULE)		4.000	2.000	3.000
TOTAL WEIGHT OF BOLLARD H500 (ALUMINIUM HEAD)		26	8	13
TOTAL WEIGHT OF BOLLARD H700 (ALUMINIUM HEAD) • = on board	Kg	35	10	15
LIBRA FLI140 H500	Cod.	0344881	0344901	0344961
HEAD. AVAILABLE ALSO WITH LED HEAD		0344883	0344903	0344963
BOLLARD FIXED ON THE GROUND BY INTERNAL FLANGE, FLAT HEAD				
LIBRA FLI140 H700		0344891	0344911	0344965
BOLLARD FIXED ON THE GROUND BY INTERNAL FLANGE, ALUMINIUM HEAD. AVAILABLE ALSO WITH LED HEAD	Cod.			
LIBRA FLI140 H700		0344893	0344913	0344967
BOLLARD FIXED ON THE GROUND BY INTERNAL FLANGE, FLAT HEAD				
KIT 4 BRACKETS HOT GALVANIZED				FEEDER 220 OUTPUT 24 Vcc 300





FIXED HEAD WITH RED LED LIGHT HIGH LUMINOSITY Τ4

5050220558

FIXED HEAD WITH RED LED LIGHT HIGH LUMINOSITY T12.5

Optional





Removable Bollards

BLINDO	300	Pag.	40
BLINDO	200	Pag.	41
BLINDO	140	Pag.	42

BLINDO 300

REMOVABLE BOLLARDS BLINDO HAVE AN ARCHITECTURAL APPEARANCE SIMILAR TO THAT OF THE CSA OR PALMO SERIES, THIS ALLOWS A COMBINED USE OF ALL VERSIONS SIMULTANEOUSLY. THESE BOLLARDS ARE THE RESULT OF THE CONTINUOUS DEVELOPMENT OF MORE THAN 25 YEARS OF EXPERIENCE.

- MANUAL MOTION, THE MOST RECOMMENDED SOLUTION TO BE USED TO CONTROL THE TRANSIT OR THE STATIONING OF VEHICLES IN DAILY TRAFFIC LIMITED ZONES.
- THE INSTALLATION IS MADE FIXING THE BOLLARD ON THE DEDICATED BURRIED FORMWORK.
- HOT GALVANIZED PIPE, FOR A LONG TERM RESISTANCE TO WEAR.
- WIDE RANGE OF CUSTOMIZATION: CUSTOM COLOURS ETC. (SEE ACCESSORIES AND OPTIONAL ITEMS SHEET)



TYPE OF BOLLARD	Cod.	BLINDO300/12	BLINDO300/4	BLINDO300/4 I
HEIGHT OF CYLINDER	mm	500 / 700	500 / 700	500 / 700
THICKNESS OF FIXED CYLINDER	mm	12,5	4	4
DIAMETER OF FIXED CYLINDER	mm	273	273	273
TYPE MATERIAL OF CYLINDER		FE 510	FE 360	INOX304
FINISHING OF CYLINDER		POLYEST	ER PAINT	CATIN
TREATMENT OF CYLINDER		HOT GAL	VANIZED	SATIN
REFLECTIVE ADHESIVE STRIPE		•	•	•
RESISTANCE TO BREAKING	J	337.000	157.000	175.000
RESISTANCE TO DEFORMATION (JOULE)	J	18.000	8.000	8.000
TOTAL WEIGHT OF BOLLARD H500 (ALUMINIUM HEAD)	Kg	61	22	26
TOTAL WEIGHT OF BOLLARD H700 (ALUMINIUM HEAD) • = on board	Kg	78	29	34

BLINDO 300 H500		Cod.	0342641	0341641	0341741
REMOVABLE BOLLARD FIXED ON THE GROUND THROUGH FORMWORK, ALUMINIUM HEAD	BURIED				
BLINDO 300 H700		Cod.	0342651	0341651	0341751
REMOVABLE BOLLARD FIXED ON THE GROUND THROUGH FORMWORK, ALUMINIUM HEAD	BURIED				

Optional

KIT 2 BRACKETS HOT GALVANIZED BLINDO

Ţ	FORMWORK	то	BUILD	BLINDO REMOVAB	
505044000	1				

505000204

Technical Data

BLINDO 200

REMOVABLE BOLLARDS BLINDO HAVE AN ARCHITECTURAL APPEARANCE SIMILAR TO THAT OF THE CSA OR PALMO SERIES, THIS ALLOWS A COMBINED USE OF ALL VERSIONS SIMULTANEOUSLY. THESE BOLLARDS ARE THE RESULT OF THE CONTINUOUS DEVELOPMENT OF MORE THAN 25 YEARS OF EXPERIENCE.

- MANUAL MOTION, THE MOST RECOMMENDED SOLUTION TO BE USED TO CONTROL THE TRANSIT OR THE STATIONING OF VEHICLES IN DAILY TRAFFIC LIMITED ZONES.
- THE INSTALLATION IS MADE FIXING THE BOLLARD ON THE DEDICATED BURRIED FORMWORK.
- HOT GALVANIZED PIPE, FOR A LONG TERM RESISTANCE TO WEAR.
- WIDE RANGE OF CUSTOMIZATION: CUSTOM COLOURS ETC. (SEE ACCESSORIES AND OPTIONAL ITEMS SHEET)



BLINDO200/4

500 / 700

4

200

FE 360

•

72.000 3.000

14

19

BLINDO200/4 I

500 / 700

4

206

INOX304

SATIN

•

150.000

9.000

19

24

TYPE OF BOLLARD	Cod.	BLINDO200/12	BLIND
HEIGHT OF CYLINDER	mm	500 / 700	500
THICKNESS OF FIXED CYLINDER	mm	12,5	4
DIAMETER OF FIXED CYLINDER	mm	200	20
TYPE MATERIAL OF CYLINDER		FE 510	FE 3
FINISHING OF CYLINDER		POLYEST	ER PAINT
TREATMENT OF CYLINDER		HOT GAI	LVANIZED
REFLECTIVE ADHESIVE STRIPE		•	
RESISTANCE TO BREAKING	J	169.000	72.
RESISTANCE TO DEFORMATION (JOULE)	J	10.000	3.0
TOTAL WEIGHT OF BOLLARD H500 (ALUMINIUM HEAD)	Kg	35	1
TOTAL WEIGHT OF BOLLARD H700 (ALUMINIUM HEAD) = on board 	Kg	51	1

BLINDO 200 H500	Cod.	0342621	0341621	0341721
REMOVABLE BOLLARD FIXED ON THE GROUND THROUGH BURIED FORMWORK, ALUMINIUM HEAD				
BLINDO 200 H700	Cod.	0342631	0341631	0341731
REMOVABLE BOLLARD FIXED ON THE GROUND THROUGH BURIED FORMWORK, ALUMINIUM HEAD				

Optional

KIT 2 BRACKETS HOT GALVANIZED BLINDO

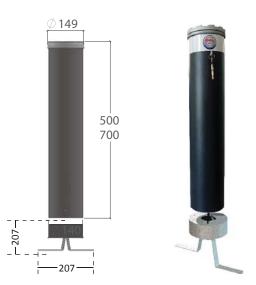
ŗ	FORMWORK	то	BUILD	BLINDO REMOVAB	
505043001	1				

BLINDO 140

REMOVABLE BOLLARDS BLINDO HAVE AN ARCHITECTURAL APPEARANCE SIMILAR TO THAT OF THE CSA OR PALMO SERIES, THIS ALLOWS A COMBINED USE OF ALL VERSIONS SIMULTANEOUSLY. THESE BOLLARDS ARE THE RESULT OF THE CONTINUOUS DEVELOPMENT OF MORE THAN 25 YEARS OF EXPERIENCE.

- MANUAL MOTION, THE MOST RECOMMENDED SOLUTION TO BE USED TO CONTROL THE TRANSIT OR THE STATIONING OF VEHICLES IN DAILY TRAFFIC LIMITED ZONES.
- THE INSTALLATION IS MADE FIXING THE BOLLARD ON THE DEDICATED BURRIED FORMWORK.
- HOT GALVANIZED PIPE, FOR A LONG TERM RESISTANCE TO WEAR.

• WIDE RANGE OF CUSTOMIZATION: CUSTOM COLOURS ETC. (SEE ACCESSORIES AND OPTIONAL ITEMS SHEET)



BLINDO140/4

BLINDO140/4 I

σ	TYPE OF BOLLARD
Ţ	HEIGHT OF CYLINI
	THICKNESS OF FIX
	DIAMETER OF FIX
	TYPE MATERIAL O
σ	FINISHING OF CYL
O	TREATMENT OF C
5	REFLECTIVE ADHE
	RESISTANCE TO BE
	RESISTANCE TO DI
	TOTAL WEIGHT OF
Ľ	TOTAL WEIGHT OF
	 = on board

EIGHT OF CYLINDER	mm	500 / 700	500 / 700	500 / 700
HICKNESS OF FIXED CYLINDER	mm	12,5	4	4
IAMETER OF FIXED CYLINDER	mm	140	140	140
YPE MATERIAL OF CYLINDER		FE 510	FE 360	INOX304
INISHING OF CYLINDER		POLYEST	ER PAINT	SATIN
REATMENT OF CYLINDER		HOT GAL	VANIZED	SATIN
EFLECTIVE ADHESIVE STRIPE		•	•	•
ESISTANCE TO BREAKING	J	79.000	39.000	79.000
ESISTANCE TO DEFORMATION (JOULE)	J	4.000	2.000	3.000
OTAL WEIGHT OF BOLLARD H500 (ALUMINIUM HEAD)	Kg	26	8	13
OTAL WEIGHT OF BOLLARD H700 (ALUMINIUM HEAD) = on board	Kg	35	10	15

Cod.

BLINDO140/12

BLINDO 140 H500	Cod.	0342601	0341601	0341701
REMOVABLE BOLLARD FIXED ON THE GROUND THROUGH BURIED FORMWORK, ALUMINIUM HEAD				
BLINDO 140 H700	Cod.	0342611	0341611	0341711

Optional

KIT 2 BRACKETS HOT GALVANIZED BLINDO

T.	FORMWORK	то	BUILD	BLINDO REMOVAB	
505042001	1				



KIT

DEVICES REQUIRED TO ADAPT A BOLLARD IN DIFFERENT CONDITIONS OF USE: PRIVATE USE, PRIVATE AND PUBLIC USE AND PUBLIC USE.

KIT

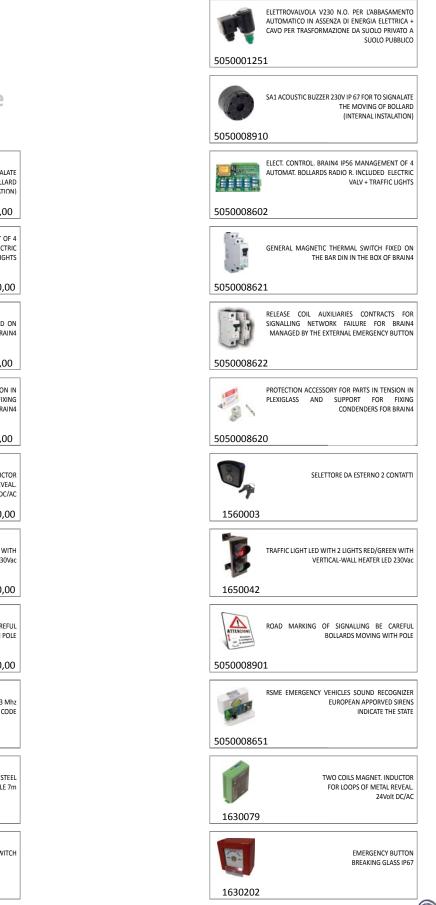
DEVICES REQUIRED TO ADAPT A BOLLARD IN DIFFERENT CONDITIONS OF USE: PRIVATE USE, PRIVATE AND PUBLIC USE AND PUBLIC USE.



Private

ELECT. CONTROL. BRAINA IP56 MANAGEMENT OF AUTOMAT. BOLLARDS RADIO R. INCLUDED ELECTRI VALV + TRAFFIC LIGHT 5050008602 € 500,00 GENERAL MAGNETIC THERMAL SWITCH FIXED O THE BAR DIN IN THE BOX OF BRAIN 5050008621 € 45,00 PROTECTION ACCESSORY FOR PARTS IN TENSION I PLEXIGLASS AND SUPPORT FOR FIXIN CONDENDERS FOR BRAIN 5050008620 € 50,000
General Magnetic Thermal switch fixed on the bar din in the box of brain 5050008621 € 45,00 PROTECTION ACCESSORY FOR PARTS IN TENSION I PLEXIGLASS PROTECTION ACCESSORY FOR PARTS IN TENSION I CONDENDERS FOR BRAIN
THE BAR DIN IN THE BOX OF BRAIN 5050008621 € 45,00 PROTECTION ACCESSORY FOR PARTS IN TENSION I PLEXIGLASS AND SUPPORT CONDENDERS FOR BRAIN
PROTECTION ACCESSORY FOR PARTS IN TENSION I PLEXIGLASS AND SUPPORT FOR FIXIN CONDENDERS FOR BRAIN
PLEXIGLASS AND SUPPORT FOR FIXIN CONDENDERS FOR BRAIN
5050008620 € 50,00
Two coils magnet. inductor For Loops of Metal revea 24voit DC/A 1630079
FOUR CHANNEL TRASMITTER 433 MH ROLLING COE 1540024
ANTENNA 433 Mhz STAINLESS STEE WITH CABLE 70 1540100
SELETTORE DA ESTERNO 2 CONTAT 1560003
+39 0721 495447 - Fax: +39 0721 495438 www.mac-s

Public



Private public use





Road Blocker

TITANO	Pag.	50-51
TITANO P300	Pag.	52-53



TITANO

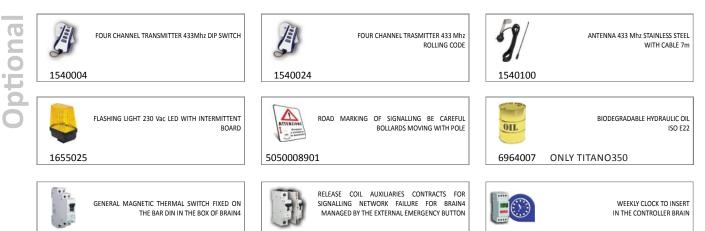
ROAD BLOCKERS TITANO WITH HYDRAULIC MOTION, ARE THE PERFECT SOLUTION TO PROTECT COMPANIES, HOTELS AND CONVENTIONS CENTERS ENTRIES BESIDES ALL THE HIGH DENSITY AREAS. CURRENT MODELS ARE THE RESULT OF THE CONTINUOUS DEVELOPMENT OF MORE THAN 25 YEARS OF EXPERIENCE.

- HYDRAULIC MOVEMENT, IT THE MOST RELIABLE TECHNOLOGY FOR INTENSE USE AND IT IS OF COURSE, THE BEST SOLUTION INDEPENDENTLY FROM ALL TEMPERATURES AND WEATHER CONDITIONS.
- BUILT-IN HYDRAULIC PUMP FOR A SIMPLE INSTALLATION OF THE BOLLARD.
- HOT GALVANIZED STRUCTURE AND FORMWORK FOR A LONG TERM RESISTANCE TO WEAR.
- WIDE RANGE OF CUSTOMIZATION: CUSTOM COLOURS, INTEGRATED LED, UNLOCK ELECTRICAL VALVE, HEATER RESISTANCE, BUZZER ETC. (SEE ACCESSORIES AND OPTIONAL ITEMS SHEET)



σ	TITANO	Cod.	TITANO350 Fe	TITANO700Fe	TITANO900 Fe	TITANO1000Fe
Ţ	MATERIAL		FE360	FE360	FE360	FE360
σ	FINISHING			POLYEST		
	TREATMENT				VANIZED	
	TREATMENT OF FORMWORK AND STRUCTURE			HUTGAL		
σ	REFLECTIVE ADHESIVE STRIPE		•	•	•	•
O	SAFETY PRESSOSTAT			OPTI	ONAL	
D	RESISTANCE TO BREAKING	J	800.000	1.800.000	2.00	0.000
-	RESISTANCE TO DEFORMATION (JOULE)	J		10.	000	
	STATIC RESISTANCE BOLLARD OPEN (CERTIFIED)	Kg		40.	000	
ă	DAILY CYCLES - INTENSIVE USE (INTERMITTENT CYCLE S3)			2.4	100	
Ĕ	AVERAGE LIFE CYCLES WITHOUT MAINTENANCE			1.50	0.000	
	MAXIMUM PRESSURE OF WORKING	bar	30		40 - 80	
	PROTECTION GRADE OF THE PUMP	IP	67		55	
	POWER ABSORBED	W	500		1100 - 3000	
	POWER SUPPLY	Vac	230V 50Hz		380V 50Hz	
	BRIGHT HEAD POWER SUPPLY	Vac		2	4	
	WORKING TEMPERATURE	°C		-20 /	′ + 80	
	ELECTRICAL HEATER DEVICE			(D	
	SELF CERTIFIED ROHS PRODUCT		•	•	•	•
	MANUAL HANDLING (ON REQUEST)		-	•	•	•

 = on board - = not on board

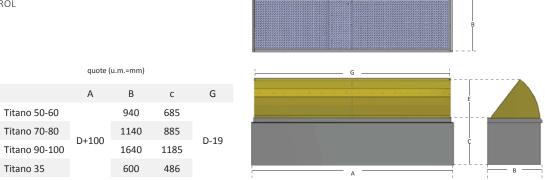


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5050008622

CONSIGLIATO PER:

- CONTROL THE TRANSIT OF VEHICLES IN HOTEL'S PEDESTRIAN ZONES, COMPANIES, CONGRESS CENTERS ETC. 0
- PARKING ACCESS CONTROL
- DRIVEWAY ACCESS CONTROL 0



		Titano 35	Titano 50	Titano 60	Titano 70	Titano 80	Titano 90	Titano 100
STROKE OF CYLINDER	(E)	350	500	600	700	800	900	1000
SPEED OF LIFT		3			1	0		
SPEED OF LOWERING		2			7	7		
SPEED OF LOWERING AS EMERGENCY (wit	h electrical valve)	2			7	7		
	LENGTH (D)							
	1000mm	0351104	0352104		0354104			
	2000mm	0351106	0352106	0353106	0354106	0355106	0356106	0357106
	3000mm	0351107	0352107	0353107	0354107	0355107	0356107	0357107
	4000mm	0351108	0352108	0353108	0354108	0355108	0356108	0357108
	5000mm	0351109	0352109	0353109	0354109	0355109	0356109	0357109
	6000mm	0351100	0352100	0353100	0354100	0355100	0356100	0357100



TITANO P300

ROAD BLOCKERS TITANO WITH HYDRAULIC MOTION, ARE THE PERFECT SOLUTION TO PROTECT COMPANIES, HOTELS AND CONVENTIONS CENTERS ENTRIES BESIDES ALL THE HIGH DENSITY AREAS. CURRENT MODELS ARE THE RESULT OF THE CONTINUOUS DEVELOPMENT OF MORE THAN 25 YEARS OF EXPERIENCE.

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- HOT GALVANIZED STRUCTURE AND FORMWORK FOR A LONG TERM RESISTANCE TO WEAR.
- WIDE RANGE OF CUSTOMIZATION: CUSTOM COLOURS, INTEGRATED LED, UNLOCK ELECTRICAL VALVE, HEATER RESISTANCE, BUZZER ETC. (SEE ACCESSORIES AND OPTIONAL ITEMS SHEET)



ACCESSORIES AND OPTIONAL ITEMIS SHEET)					
TITANO	Cod.	TITANO350 Fe	TITANO700Fe	TITANO900 Fe	TITANO1000Fe
MATERIAL		FE360	FE360	FE360	FE360
FINISHING			POLYESTER PAINT		
TREATMENT			HOT GALVANIZED		
TREATMENT OF FORMWORK AND STRUCTURE			HOT GAL		
REFLECTIVE ADHESIVE STRIPE		•	•	•	•
SAFETY PRESSOSTAT			OPTI	ONAL	
RESISTANCE TO BREAKING	J	800.000	1.800.000	2.00	0.000
RESISTANCE TO DEFORMATION (JOULE)	J		10.	000	
STATIC RESISTANCE BOLLARD OPEN (CERTIFIED)	Kg		40.000		
DAILY CYCLES - INTENSIVE USE (INTERMITTENT CYCLE S3)			2.400		
AVERAGE LIFE CYCLES WITHOUT MAINTENANCE			1.50	0.000	
MAXIMUM PRESSURE OF WORKING	bar	30		40 - 80	
PROTECTION GRADE OF THE PUMP	IP	67		55	
POWER ABSORBED	W	500		1100 - 3000	
POWER SUPPLY	Vac	230V 50Hz		380V 50Hz	
BRIGHT HEAD POWER SUPPLY	Vac		2	.4	
WORKING TEMPERATURE	°C		-20 /	′ + 80	
ELECTRICAL HEATER DEVICE				D	
SELF CERTIFIED ROHS PRODUCT		•	•	•	•
MANUAL HANDLING (ON REQUEST)		-	•	•	•
• = on board					

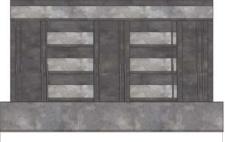
- = not on board



CONSIGLIATO PER:

- CONTROL THE TRANSIT OF VEHICLES IN HOTEL'S PEDESTRIAN ZONES, COMPANIES, CONGRESS CENTERS ETC.
- PARKING ACCESS CONTROL
- DRIVEWAY ACCESS CONTROL





Lunghezza (D)

	Titano 50	Titano 70	Titano 10	
STROKE OF CYLINDER (E) 500	700	1000	
SPEED OF LIFT		5		
SPEED OF LOWERING		4		
SPEED OF LOWERING AS EMERGENCY (with electrical valve)		4		
LENGTH (D)				
2000mm	035120422	035140422	035170422	
3000mm	035120423	035140423	035170423	
4000mm	035120424	035140424	035170424	
5000mm	035120425	035140425	035170425	
6000mm	035120426	035140426	035170426	
Additional price for non standard pieces every 250mm	035120420	035140420	035170420	
Emergency lifting circuit	035128000	035148000	035178000	
Painted frontal covering sheet (at linear meter)	035127011	035147011	035177011	
Lifting manual oump	035106000			
Led signallers from 2m to 3m n°2 pieces				
Led signallers from 4m a 5m n°3 pieces				
Led signallers from 6m n°4 pieces	5050000644			
			10	10 mm
TWO COILS MAGNET. INDUCTOR	TRAFFIC LIGHT LE	D WITH 2 LIGHTS RED/GR	EEN WITH	RED/GREEN LED LIGHTS TRAFFIC LIGHT IN STAINLESS STEEL
FOR LOOPS OF METAL REVEAL. 24Volt DC/AC	, v	/ERTICAL-WALL HEATER LI	ED 230Vac	EVERY LIGHT HAS 6 SEPARATED CIRCUITS
			1	.650001 2 LIGHT ,
1630079 1650	042		1	.650002 4 LIGHT
ELECTRICALVALVE V230 N.O. FOR AUTOMATIC				PROTECTION ACCESSORY FOR PARTS IN TENSION IN
LOWERING IN POWER FAILURE FOR CHANGE FROM PRIVATE TO PUBLIC LAND	SELF REGULATING	3 ELECTRICAL HEATER RI 250W 230V IP 67 WITH	4.0	PLEXIGLASS AND SUPPORT FOR FIXING CONDENDERS FOR BRAIN4
				100 T
5050001253 ONLY TITANO350 505000	1854		505	50008620
			-	
	SA1 ACOUSTIC BU	IZZER 230V IP 67 FOR TO S		BRAIN4 2R1 TRIFASE PER 1 ROAD BLOCKER
		THE MOVING OF (INTERNAL INS		
505000801	9010			50008609
5050008801 505000	016910		505	50008609

info@mac-srl.it



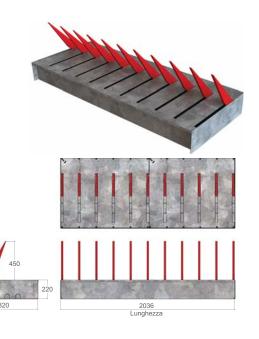


Tyre Killer

TRAFFIC PLATE Pag. 56-59

TRAFFIC PLATE TYRE KILLER WITH HYDRAULIC MOTION, IS COMPOSED BY IRON SPURS WITH 20MM OF THICKNESS. IN ORDER TO IMPROVE ITS EFFICENCY, IT CAN BE INSTALLED AND USED IN COUPLE WITH OTHER MAC'S DEVICES.

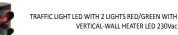
- HYDRAULIC MOTION.
- THE PRODUCTS IS HOT GALVANIZED IN ORDER TO IMPROVE ITS RESISTANCE TO THE WEAR.
- WIDE RANGE OF CUSTOMIZATION: CUSTOM COLOURS (SEE ACCESSORIES AND OPTIONAL ITEMS SHEET).



TRAFFIC PLATE	Cod.	TRAFFIC PLATE
MATERIAL OF THE SPURS		FE360
FINISHING OF THE SPURS		FE360
FORMWORK AND STRUCTURE TREATMENT		HOT GAIVANIZED
COVER FINISHING		HUT GALVANIZED
THICKNESS	mm	20
LOAD CHARGE RESISTANCE	KG	40.000
SECURITY PRESSURE SWITCH		-
DAILY CYCLES INTENSIVE USE (1 CYCLE EVERY 3 SECONDS)		2.400
CYCLES WITHOUT MAINTENANCE BEFORE BREAKING		1.500.000
MAX WORKING PRESSURE	BAR	30
PUMP PROTECTION DEGREE	IP	67
POWER CONSUMPTION	W	500
POWER SUPPLY	Vac	230V / 50Hz
WORKING TEMPERATURE	°C	-20 / +80
ROSH PRODUCT		•
• = standard		
= non standard		

HYDRAULIC UNDERGROUNDED TYRE KILLER h450 pitch 200	Length	Cod.	
	2000	039545032	
	3000	039545033	
	4000	039545034	
	5000	039545035	
	6000	039545036	
non-standard cost every 200mm		039545030	
emergency circuit		035128000	
manual pump		035106000	







ANTENNA 433 Mhz STAINLESS STEEL WITH CABLE 7m

1650042



TWO COILS MAGNET. INDUCTOR FOR LOOPS OF METAL REVEAL. 24Volt DC/AC



ROLLING CODE

FOUR CHANNEL TRASMITTER 433 Mhz

MAC S.r.I. - Via Enrico Mattei n°9 - Loc. MORCIOLA - 61022 VALLEFOGLIA (PU) - Tel.: +39 0721 495447 - Fax: +39 0721 495438

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1630079

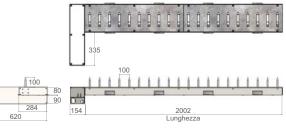
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TRAFFIC PLATE TYRE KILLER WITH HYDRAULIC MOTION, IS COMPOSED BY IRON SPURS WITH 10MM OF THICKNESS. IN ORDER TO IMPROVE ITS EFFICENCY, IT CAN BE INSTALLED AND USED IN COUPLE WITH OTHER MAC'S DEVICES.

• HYDRAULIC MOTION.

Technical Data

- THE PRODUCTS IS HOT GALVANIZED IN ORDER TO IMPROVE ITS RESISTANCE TO THE WEAR.
- WIDE RANGE OF CUSTOMIZATION: CUSTOM COLOURS (SEE ACCESSORIES AND OPTIONAL ITEMS SHEET).



1

TRAFFIC PLATE	Cod.	TRAFFIC PLATE
MATERIAL OF THE SPURS		INOX
FINISHING OF THE SPURS		INOX
FORMWORK AND STRUCTURE TREATMENT		HOT GALVANIZED
COVER FINISHING		HUT GALVANIZED
THICKNESS	mm	10
LOAD CHARGE RESISTANCE	KG	40.000
SECURITY PRESSURE SWITCH		-
DAILY CYCLES INTENSIVE USE (1 CYCLE EVERY 3 SECONDS)		2.400
CYCLES WITHOUT MAINTENANCE BEFORE BREAKING		1.500.000
MAX WORKING PRESSURE	BAR	30
PUMP PROTECTION DEGREE	IP	67
POWER CONSUMPTION	W	500
POWER SUPPLY	Vac	230V / 50Hz
WORKING TEMPERATURE	°C	-20 / +80
ROSH PRODUCT		•
• = standard		
= non standard		

HYDRAULIC UNDERGROUNDED TYRE KILLER h100 pitch 100	Length	Cod.
	2000	039510532
	3000	039510533
	4000	039510534
	5000	039510535
	6000	039510536
non-standard cost every 250mm		039510530
manual pump		035106000

170

ANTENNA 433 Mhz STAINLESS STEEL WITH CABLE 7m 1540100

TRAFFIC LIGHT LED WITH 2 LIGHTS RED/GREEN WITH VERTICAL-WALL HEATER LED 230Vac



TWO COILS MAGNET. INDUCTOR FOR LOOPS OF METAL REVEAL. 24Volt DC/AC

FOUR CHANNEL TRASMITTER 433 Mhz ROLLING CODE

1540024 info@mac-srl.it

1630079

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TRAFFIC PLATE TYRE KILLER WITH HYDRAULIC MOTION, IS COMPOSED BY IRON SPURS WITH 10MM OF THICKNESS. IN ORDER TO IMPROVE ITS EFFICENCY, IT CAN BE INSTALLED AND USED IN COUPLE WITH OTHER MAC'S DEVICES.

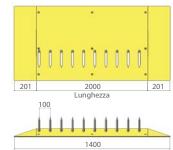
- HYDRAULIC MOTION.
- THE PRODUCTS IS HOT GALVANIZED IN ORDER TO IMPROVE ITS RESISTANCE TO THE WEAR.
- WIDE RANGE OF CUSTOMIZATION: CUSTOM COLOURS (SEE ACCESSORIES AND OPTIONAL ITEMS SHEET).



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TRAFFIC PLATE	Cod.	TRAFFIC PLATE
MATERIAL OF THE SPURS		INOX
FINISHING OF THE SPURS		INOX
FORMWORK AND STRUCTURE TREATMENT		HOT GALVANIZED
COVER FINISHING		HUT GALVANIZED
THICKNESS	mm	10
LOAD CHARGE RESISTANCE	KG	40.000
SECURITY PRESSURE SWITCH		-
DAILY CYCLES INTENSIVE USE (1 CYCLE EVERY 3 SECONDS)		2.400
CYCLES WITHOUT MAINTENANCE BEFORE BREAKING		1.500.000
MAX WORKING PRESSURE	BAR	30
PUMP PROTECTION DEGREE	IP	67
POWER CONSUMPTION	W	500
POWER SUPPLY	Vac	230V / 50Hz
WORKING TEMPERATURE	°C	-20 / +80
ROSH PRODUCT • = standard		•

- = non standard

Technical Data

HYDRAULIC EXTERNAL TYRE KILLER h100 pitch 100	Length	Cod.	
	2000	039410532	
	3000	039410533	
	4000	039410534	
	5000	039410535	
	6000	039410536	
non-standard cost every 250mm		039410530	
manual pump		035106000	







TWO COILS MAGNET. INDUCTOR FOR LOOPS OF METAL REVEAL. 24Volt DC/AC



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FOUR CHANNEL TRASMITTER 433 Mhz ROLLING CODE

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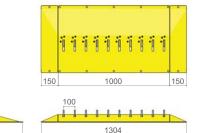
ANTENNA 433 Mhz STAINLESS STEEL

WITH CABLE 7m

TRAFFIC PLATE TYRE KILLER WITH MECHANICAL MOTION, IS COMPOSED BY IRON SPURS WITH 10MM OF THICKNESS. IN ORDER TO IMPROVE ITS EFFICENCY, IT CAN BE INSTALLED AND USED IN COUPLE WITH OTHER MAC'S DEVICES.

- MECHANICAL MOTION WITH SPRING COMEBACK.
- THE PRODUCTS IS HOT GALVANIZED IN ORDER TO IMPROVE ITS RESISTANCE TO THE WEAR.
- WIDE RANGE OF CUSTOMIZATION: CUSTOM COLOURS (SEE ACCESSORIES AND OPTIONAL ITEMS SHEET).





600

TRAFFIC PLATE

FE360 / INOX304 FE360 / INOX304

HOT GALVANIZED POWDER PAINTED HOT GALVANIZED 5

40.000

ta I	TRAFFIC PLATE	Cod.
	MATERIAL OF THE SPURS	
σ	FINISHING OF THE SPURS	
	FORMWORK AND STRUCTURE TREATMENT	
	COVER FINISHING EXTERNAL MODEL	
σ	COVER FINISHING UNDERGROUNDED MODEL	
\mathbf{O}	THICKNESS	mm
	LOAD CHARGE RESISTANCE • = standard	KG

TRAFFIC PLATE UNDERGROUNDED 1000MM	Cod.	
FORMWORK IN STAINLESS STEEL 304	0390220	
HEAD FOR FORMWORK	0390201	
JOINT FOR FORMWORK 304	0390202	
TRAFFIC PLATE COMPLETE WITH FORMWORK (MOVEMENT MECHAN IN HOT GALVANIZED FE360)	ISM 0391120	
TRAFFIC PLATE COMPLETE WITH FORMWORK (MOVEMENT MECHAN IN STAINLESS STEEL)	ISM 0391220	
TRAFFIC PLATE EXTERNAL 1000MM	Cod.	
HEAD TRAFFIC PLATE	0391390	
TRAFFIC PLATE COMPLETE WITH FORMWORK (MOVEMENT MECHAN IN HOT GALVANIZED FE360)	ISM 0391320	
TRAFFIC PLATE COMPLETE WITH FORMWORK (MOVEMENT MECHAN IN STAINLESS STEEL)	ISM 0391420	

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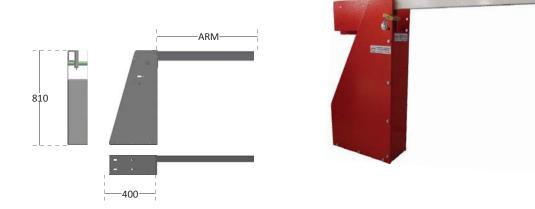
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SBARRA	Pag. 62
GTA	Pag. 63

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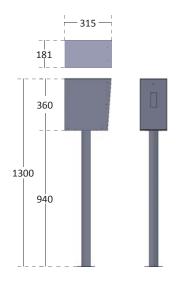
MANUAL BARRIER



MANUAL BARRIER	Cod.
PAINTED MANUAL BARRIER	0461001
HOT GALVANIZED AND PAINTED MANUAL BARRIER	0461000



GTA 1300



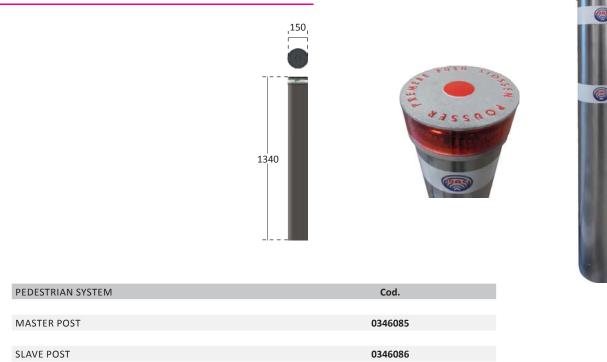


COIN BOX	Cod.
PAINTED COIN BOX	1560070



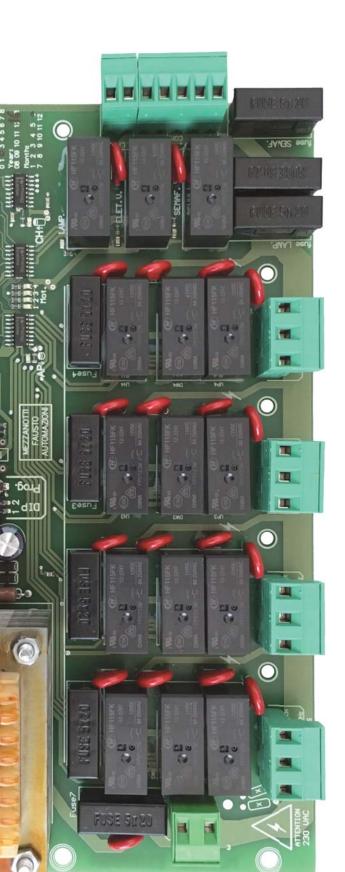
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Optional

Pag. 68-70

OPTIONAL

5050210301	SURCHARGE FOR COATING STAINLESS STEEL 304 GLOSSY, FOR CABI T12 TO PLACE AT THE ORDER	SURCHARC 5050300301	SE FOR STAINLESS STEEL 304 COATING FOR CSA300 T12 TO PLACE AT THE ORDER		
5050210301 5050110451	ALUMINIUM TRAMPLING PLATFORM LIBRA300 + CAP	5050060451	ALUMINIUM TRAMPLING PLATFORM PALMO 200	5050050451	ALUMINIUM TRAMPLING PLATFORM PALMO 140
5050210453	ALUMINIUM TRAMPLING PLATFORM CSA200 + CAP	5050210454	ALUMINIUM TRAMPLING PLATFORM CSA200 INOX + CAP	5050220451	ALUMINIUM TRAMPLING PLATFORM CSA140 + CAP
5050210556	FIXED HEAD WITH RED LED LIGHT HIGH LUMINOSITY T3	5050210558	FIXED HEAD WITH RED LED LIGHT HIGH LUMINOSITY T12.5		
5050220556	FIXED HEAD WITH RED LED LIGHT HIGH LUMINOSITY T4	5050220558	FIXED HEAD WITH RED LED LIGHT HIGH LUMINOSITY T12.5		
5050300656	HEAD RING SUPPORT WITH 8 RESINATE LED T12,5	5050300658	HEAD RING SUPPORT WITH 8 RESINATE LED T4		
5050000203	KIT 4 BRACKETS HOT GALVANIZED	КІТ 2 505000204	2 BRACKETS HOT GALVANIZED BLINDO	5050090003	FORMWORK TO BUILD IN LIBRA 140 FLI
5050090004	FORMWORK TO BUILD IN LIBRA 140 FLE		ORMWORK TO BUILD IN LIBRA 200 FLI	5050100004	FORMWORK TO BUILD IN LIBRA 200 FLI
5050110001	FORMWORK TO BUILD IN LIBRA 300 FLI	5050110004	ORMWORK TO BUILD IN LIBRA 300FLE FLANGE ABOVE PAVEMENT	5050110005	FORMWORK TO BUILD IN LIBRA 300FLE FLANG + PLATFORM BUILD IN
FORMWA 5050420011	DRK TO BUILD IN BLINDO 140 C5/C7 (REMOVABLE BOLLARD)	FORMWORK 1 5050430011	TO BUILD IN BLINDO 200 C5/C7 (REMOVABLE BOLLARD)	FORMWC 5050440001	ORK TO BUILD IN BLINDO 300 C5/C7 (REMOVABLE BOLLARD)

	SAFETY LOCK		
5820002			
5050001829	SECURITY UNLOCK PROTECTION WITH 3 KEYS WITH MASTERCARD ONE LOCK WITH 3 KEYS FOR EACH BOLLARD TO PROTECT THE MANUAL UNLOCK	SECURITY UNLOCK PROTECTION WITH 1 KEY WITH MASTERCARD MAX 4 IDENTICAL LOCKS WITH 1 KEY FOR EACH BOLLARD TO PROTECT THE MANUAL UNLOCK	
5050001827	SECURITY UNLOCK PROTECTION WITH 3 KEYS ONE LOCK WITH 3 KEYS FOR EACH BOLLARD TO PROTECT THE MANUAL UNLOCK	SECURITY UNLOCK PROTECTION WITH 1 KEY MAX 4 IDENTICAL LOCKS WITH 1 KEY FOR EACH BOLLARD TO PROTECT THE MANUAL UNLOCK	
ELECT	RICAL VALVE V230 N.O. FOR AUTOMATIC LOWERING IN POWER FAILURE	GENERAL MAGNETIC THERMAL SWITCH FIXED ON THE BAR DIN IN THE BOX OF BRAINA	
5050001251		5050008621	5050008622
0°	ALLARM KIT	SELF REGULATING ELECTRICAL HEATER RESISTANCE 250W 230V IP 67 WITH BRACKET	TWO COILS MAGNET. INDUCTOR FOR LOOPS OF METAL REVEAL 24Voit DC/AC



5050008801

Security

RED/GREEN LED LIGHTS TRAFFIC LIGHT IN STAINLESS STEEL EVERY LIGHT HAS 6 SEPARATED CIRCUITS 1650001 2 LIGHT 1650002 4 LIGHT	TRAFFIC LIGHT LED WITH 2 LIGHTS RED/GREEN WITH VERTICAL-WALL HEATER LED 230Vac 1650042	
FLASHING LIGHT SMART LED	PROTECTION ACCESSORY FOR PARTS IN TENSION IN PLEXIGLASS AND SUPPORT FOR FIXING CONDENDERS FOR BRAIN4	
1655026	5050008620	
RSME EMERGENCY VEHICLES SOUND RECOGNIZER EUROPEAN APPORVED SIRENS INDICATE THE STATE 5050008651	ROAD MARKING OF SIGNALLING BE CAREFUL BOLLARDS MOVING WITH POLE 5050008901	SA1 ACOUSTIC BUZZER 230V IP 67 FOR TO SIGNALATE THE MOVING OF BOLLARD (INTERNAL INSTALATION) 5050008910

5050001854

1630079

info@mac-srl.it

OPTIONAL

OIL

6964007

Other

BIODEGRADABLE HYDRAULIC OIL ISO E22



5050000651

RED LIGHT LED HIGH LUMINOSITY FOR HEAD CABI/LIBRA/PALMO 24Vcc 20mA



KIT 8 RESINATED LED LIGHTS 20mA FOR HEAD RING

KIT 8 RESINATED LED LIGHTS FOR HEAD RING + 5050000663









1540024

BRAIN4 2R1 TRIFASE PER 1 ROAD BLOCKER

FOUR CHANNEL TRASMITTER 433 Mhz

ROLLING CODE



ANTENNA 433 Mhz STAINLESS STEEL WITH CABLE 7m



Control



CTITE.

5050008602





WEEKLY CLOCK TO INSERT IN THE CONTROLLER BRAIN

5050008609





5050008615



ELECT. CONTROL. BRAIN4 IP56 MANAGEMENT OF 4

AUTOMAT. BOLLARDS RADIO R. INCLUDED ELECTRIC VALV + TRAFFIC LIGHTS



METAL CASE (1000x500X1200) COMPLETE WITH PLASTIC BOX AND CONTROL BOARD BRAIN4 5050009010 2800 RPM

GENERAL SALES CONDITIONS

- 1. report the code of the article in the order.
- We recommend to specify your carrier or if the transport is effectuated by your own means; otherwise the goods will be transported by our carrier with charge on the invoice.

The order is confirmed when the order confirmation or the proforma invoice is sent

Orders for products must contain all the product information: code, description, quantity, etc. and must be submitted by mail or fax.

- All offers and proposals elaborated by MAC s.r.l. shall last 60 (sixty) days, 3. unless agreed otherwise.
- 4. Eventually granted discounts must be approved by Commercial Management of MAC s.r.l. before the practical application.
- The equipped material has a guarantee of 24(twenty-four) months, from the date of delivery, against defects of material or manufacture.MAC s.r.l. undertakes to free replacement or repair of the faulty part after the restitution of the same directly to MAC s.r.l. or to its local Services in order to allow the identification of the fault and the last of the guarantee.

Product under guarantee: the product will be repaired and send to the costumer within 45 working days from the date of receipt.

Functioning product: the product will return with no intervention. The inspection cost will be charged.

Transport: the goods must be delivered free port, otherwise they won't be accepted.

- 6. The products out of guarantee will be repaired, after having been confirmed by the buyer. If the charge won't be accepted, the goods will be returned.
- Will be considered OUT OF GUARANTEE, at unquestionable judgment of 7. MAC s.r.l:

- devices that are out of the temporal period of 2 (two) years;

- devices that have manumissions or failures due to incompetence or other like:

• various burns, electric engine burned, repair attempts, oxidation due to water infiltration.

• mechanical failures induced on the circuit and/or its components

· whatever else caused by negligence, improper use of the product or the occurrence of natural events.

- The merchandise out of production and the obsolete goods will be 8. substituted by others with similar technical characteristics.
- Eventual complaints or disputes must be sent, with documentation, to MAC 9. s.r.l. or to its local Services, within eight days from the date of receiving of the material; complaints or disputes do not confer the right to suspend payments. Any returned goods must be agreed and authorized by MAC s.r.l. before the return.

The goods must be returned ex works, with carriage and packaging at cost, charged in the invoice. Goods travel at buyer's risk: the company MAC s.r.l. won't be held responsible for any delay, stealing and damage (total or partial) caused during transport.

Claims on the packaging must be reported within 24 hours from the date of delivery of the goodsattaching the documentation of shipping and purchase, otherwise the claim falls.

10. The terms of payment must be strictly respected. If payment will be delayed, the company MAC s.r.l. can suspend deliveries in progress and future deliveries, following written communication, until that the amounts due won't be paid. The buyer can not claim any non-compliance if payments are not in order. The products will remain the property of MAC s.r.l. until the full purchase price will be paid.

- This catalogue substitutes all the previous catalogues. We recommend to 11. Sales disputes: any dispute pertaining to this contract and/or individual sales contracts, including disputes regarding validity, interpretation, implementation or settlement, must be resolved exclusively in the Court of Pesaro.
 - 12. The company MAC s.r.l. reserves the right to modify its price list with no notice; the prices are considered ex works, excluding VAT and packaging at cost with charge in the invoice.

MAC srl

Sede e stabilimento: Via Enrico Mattei, 9 - Loc. MORCIOLA 61022 VALLEFOGLIA (PU) Tel. +39 0721 495447 - Fax.+39 0721 495438 Internet: http://www.mac-srl.it E-mail: info@mac-srl.it





Reseller	 	 _	_	_	_	_	_	 _	_	_	_	_	_	_	٦
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