

CAME ii ÖZAK

CAME.COM

VEHICLE ACCESS CONTROL SYSTEMS

ROAD BLOCKERS



BOLLARDS



WE SPEAK ABOUT QUALITY LIVING, IN ALL OF THE WORLD'S LANGUAGES.

CAME has nourished people's needs for over 60 years by using technology as a key to a quality life. All our projects and ideas drive our innovation and focus to make people's lives as comfortable as possible. This is where our company's skills and experience come into play. We know how to blend the functionality and design that drives our excellent performance.

It's about knowing that you can count on professionals able to shape our innovations into solutions. It's about customizing proposals for automation and integrating them with the cutting -edge of connectivity and mobile technology. CAME and partners strive together to satisfy our ever-more-demanding and culturally diverse customer-base, with its varying needs for transforming their living space into much more intelligent, and safer homes.



CAME 🕇

ALWAYS ONE STEP AHEAD

We are a leading brand in the design of integrated solutions for automation, video door entry, access control and public and private parking facilities. Over time, the group has incorporated highly specialised companies, which have allowed us to broaden our horizons and provide cutting-edge solutions for the residential, business and urban sectors, including home automation, temperature control, road barriers, high security bollards, sectional garage doors and industrial doors. Today, we have a single, unique vision which makes us an innovative and reliable technological partner.

CAME T BPT CAME T PARKARE CAME T URBACO CAME T GO CAME T ÖZAK

OUR WORLDWIDE NETWORK.

We have a worldwide network.

From our Treviso Headquarters - the heart of the Group - we coordinate 7 production plants and 6 R&D centres. We sit across the market thanks to branches in 21 countries, and operate in 118 countries through our business partners and distributors.

The complexity involved in living spaces and in mobility flows require ever greater protection and security, plus enhanced reactive capacity and greater know-how that embrace an integrated and global vision of the world.

We are the technology partner for those projects that require integrated systems for improving the quality of our living space - whether private or public. Our products are made for controlling homes, managing urban venues and workplaces, of any kind,anywhere in the world.

Our Group shares common goals, which go beyond single specializations. Thanks to the synergies among all our divisions and brands, we share an operating approach that enriches our diversity.

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CAME 🕇

CAME HQ Treviso, ITALY

BRANCHES EUROPE

- Italy Belgium Croatia France Germany Ireland Netherlands
- Poland Portugal Russia Spain The United Kingdom Turkey







COUNTRIES WITH PARTNERS AND DISTRIBUTORS



PRODUCTION PLANTS

Dosson di Casier - ITALY Sesto al Reghena - ITALY Spilimbergo - ITALY Hemel Hempstead - UK Entraigues - FRANCE Barcelona - SPAIN Kocaeli - TURKEY



WORLDWIDE DISTRIBUTORS **AND PARTNERS**

CAME.COM



South Africa

RESIDENTIAL SOLUTIONS

BUSINESS SOLUTIONS



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URBAN SOLUTIONS



RESIDENTIAL SOLUTIONS

We have gone beyond the simple idea of Home Automation, and taken the concept full circle. Now every device is fully integrated and connected into a system that improves people's lives. Today, we believe automation is at the heart of everything: to handle the entrances and blinds, to control awnings and shutters, plus video intercom-entry systems, CCTV, and, burglar alarms.

BUSINESS SOLUTIONS

₽€

For every public venue, our offer provides the most sophisticated systems for controlling accesses and the most evolved solutions for burglar systems, video-intercom entry panels and barriers for parking facilities. Small and large companies, commercial enterprises, large buildings: CAMEbranded Building-Automation operators provide control and safety in both small and large working environments.

URBAN SOLUTIONS

Our offer is geared to meet the different automation needs for urban planning and architectural scenarios. CAME solutions are engineered for managing safety and control in large works and for contributing to the planning of urban spaces so as to make them "Safe and Smart", as called for in today's fast-paced, metropolitan centres.

CAME.COM

EXTENSIVE SOLUTIONS OVER 40 YEARS FOR SECURITY AND WELL-BEING OF THE PEOPLE AROUND THE GLOBE.



CAME ÖZAK, a global player, has incorporated one of the widest range of products offering solutions in pedestrian and vehicle access control fields. We owe our success to our talented designers and engineers along with our flexible manufacturing processes. Understanding needs of the people, thus providing customised solutions tailored to expectations has made our offering a choice for numerous residential, governmental, urban and sports facilities. Our fully integratable, user friendly and high performance solutions are available with our solution partners all over the world.







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HRB ROAD BLOCKER (Heavy Duty Model)







Power	Standard 380V AC 3-Phase 50/60 Hz, 3,3 - 7,5 KvA motor (varies depending on blocker size).
	Opt. 220V, 110V 1-Phase 50/60 Hz (for some models/sizes only), optionally 24V DC for emergency situations in case of power failure.
Control Pack	24V DC powered and PLC control unit is placed in power unit cabinet.
	Solenoids 24V DC (Ops.12V DC / 220V AC).
Speed	Standard Operation ~2,5 - 6 sec. (ascend/descend) depending on unit dimensions.
	Emergency raise up (upwards) by optional hydraulic accumulator ~1,5 sec. and may vary depending on unit dimensions.
IP Rating	IP 55 - Hydraulic Power Unit,
	IP 67 - Electronics (optional), protection with housing/box,
	IP 68 - Hydraulic Piston
Crash / Impact	M50 P1 (K-12) crash tested and certified (HRB 30 R 90) according to ASTM 2656-07,
Rating	Designed and produced to withstand H30.

				Raising Height 65 - 50 cm	Raising Height 90 - 70 cm
	Product Code	Blocker Unit	Nr. of	Dimensions	Dimensions
		Width (X)	Pistons	(LxWxD)	(LxWxD)
*	HRB 10R	1000	1	1275 x 1170 x 975	1481 x 1170 x 1270
	HRB 15R	1500	1	1275 x 1670 x 975	1481 x 1670 x 1270
	HRB 20R	2000	1	1275 x 2170 x 975	1481 x 2170 x 1270
H	HRB 25R	2500	1	1275 x 2670 x 975	1481 x 2670 x 1270
	HRB 30R	3000	1	1275 x 3170 x 975	1481 x 3170 x 1270
	HRB 35R	3500	1	1275 x 3670 x 975	1481 x 3670 x 1270
0	HRB 35R	3500	2	1275 x 3670 x 975	1481 x 3670 x 1270
	HRB 40R	4000	1	1275 x 4170 x 975	1481 x 4170 x 1270
	HRB 40R	4000	2	1275 x 4170 x 975	1481 x 4170 x 1270
W	HRB 45R	4500	2	1275 x 4670 x 975	1481 x 4670 x 1270
1-	HRB 50R	5000	2	1275 x 5170 x 975	1481 x 5170 x 1270
	HRB 55R	5500	2	1275 x 5670 x 975	1481 x 5670 x 1270
	HRB 60R	6000	2	1275 x 6170 x 975	1481 x 6170 x 1270
	HRB 65R	6500	2	1275 x 6670 x 975	1481 x 6670 x 1270

Battery Back-up for Battery unit with capacity of min. 100 movements (50 deploy + 50 retract) when fully charged is					
Power-off Situation	optionally available.				
Axle Load Resistance	50T				
Hydraulic Cylinder	Heavy duty, dust sealed electrostatic powder coated hydraulic cylinder.				
Unit	Models between 1- 4 meter widths contain a single piston.				
	(Double piston versions are optionally available for models with 3,5 & 4 meter widths).				
	Models between 4,5 - 6,5 meter widths contain double pistons.				
	Cylinder unit features a safety valve against leakage and hose failure.				
Hydraulic Power Unit	Strengthened industrial pump, 40-120 It oil tank capacity with				
	magnetic metal collector and particle filter.				
	Built-in oil level and oil temperature sensor with low oil level warning.				
	70-100 Bar pressure; maximum running pressure is 150 Bar.				
	10 mt R2 (double wire braided mesh) reinforced hydraulic hose.				

System	Down, Up, Emergency and external sensor inputs/outputs (e.g. Loop Detector, Beam Detector, Signalization, Remote Control, etc.).												
	System alerts with an audio signal during lowering and raising operation. A loud siren output in case of alarm or emergency.												
A loud siren output in case of alarm or emergency. Can be lowered or raised automatically in case of emergency (User's preference). Can be lowered and raised manually in case of power failure or during the maintenance service with manual pump and manual vertices for the service with manual pump and manual vertices are services.													
											l numn and	manual	valve
Can be lowered and raised manually in case of power failure or during the maintenance service with manufeature. Automatic raise up mode deploys (optionally with synchronized loop detector) the road blocker and Sensor controlled stopping both at the top and bottom positions of the blocker unit										rker afte	r the vehicl	e has na	ssed over)
	Sensor controlled stop	oina both	at the top	and bott	om positior	ns of the	blocker ur	nit	10 1000 010			o nuo pu	0000 0001).
Power Unit Motor, hydraulic pump and solenoid valves are contained in an easily accessible hot-dip-galvanized and electros									ctrostatic po	wder pa	nted cabinet		
with a built-in lock lid. (Opt. Stainless Steel Cabinet)													
	Cabinet Dimensions: 1000 mm x 570 mm x 1200 mm (W x L x H).												
Blocker Cabinet	All parts are colored with industrial paint with two components.												
(underground unit)	U-shaped profile structure for maximum strength.												
	The blocker and cabinet are designed so that no vehicle crashing effect can displace it after embedded or installed in to the ground.												
Blocker Unit	All parts are colored w	th indust	rial paint w	ith two c	omponents	3.							
(impact blocking unit)	Hot dip galvanised veh	cle pass	through su	irface (to	p plates).								
	The construction is aes	thetically	and functi	ionally co	ompleted w	ith reflec	cting strips	and wa	rning signs				
	The hinge system is s	Decially o	esigned to	have a t	lattened su	Irface lev	vel with the	top plat	te so that v	enicles (can pass ov	er smoot	nly and
	quietiy. The blocker un	it is made	e of a reinic	DICEU CO	ISTRUCTION S	strengtne		IIII UIICK	special de	sign, v-	iorned, ver	lical soli	J Sleel
	absorption All vertical	imnact a	beorntion n	ung the i	ve special	ehano ai	nd contain	book tvr		iairí cria: (natent r	onding 201	119 UISUIL	S) for high
	impact resistance and	are insta	lled with e	nual dist	ance to ear	shape ai Shiother	and sunno	rted by a	1 nieces of	30v10n	nm solid ste	el heam	s to further
	strengthen the constru	rtion		quai uisi			and Suppo	ricu by -	+ piccos oi	507101	111 3010 310	or boarn	
		00011.											
					Impact	Absor	bing Pane	el Quan	tity				
	Blocker Size	1 m	1,5 m	2 m	2,5 m	3 m	3,5 m	4 m	4,5 m	5 m	5,5 m	6 m	6,5 m
	Single Piston	4	4	6	6	8	8	10					
	Double Piston						10	12	12	12	15	18	18
	Resistance of crash surface consisting of 6mm+3mm sheet metal is equal to resistance of a 74mm thick sheet metal due to it's construction structured with vertical solid panels and 30x10mm solid bars behind. Top panel where the vehicle pass over is made of 10/11mm thick non-slip surface steel hot-dip galvanised before paint. The system moves up and down with 50mm diameter stainless steel hinges (example: 3 meter blocker contains 7 pieces of 50mm diameter stainless steel hinges).												
	Blocker unit raises 45°	angle fro	om the grou	und level	and equip	ped with	ı built in inc	dicators	on side and	d front p	anels.		
	A top lid is provided for easy access for service and maintenance on the top plate.												
Control System	Manuel Control Button Unit:												
	Provided with an IP67 CRM yellow box including 3 switches for downwards, upwards, stop (optional emergency operation), can stop the blocker motion with the command/signal coming from detector, equipped with built-in LED visual indications and 10 mt cable.												
	Compatibility with Access Control Systems: Compatible with any access control system (by third parties).												
	Optional Unit: With the optional model "RB CONT.UNIT.V.001" users can monitor the diagnostic functions, can be accessed through LAN, RS485 protocols.												
	System is provided insi operations.	de a met	al cabinet f	that also	indudes th	e other f	functional s	switches	like downv	vard, up	ward,stop,	emergen	Cy
	with the built in 124x6	8 LUD SC	reen, all st re etetue, v	alus oi l	le operatio	n anu sy a aabina	/stern ulagr t. blocker r	10SLIC Ca	in de moni according t	ored th	ougn messa	aging iun	filos con bo
	displayed		is status, v	valei iev		e cabine	i, Diockei p	JUSILIUIT	according t	o user p		any .omp	nies can be
	The system is driven h	, the PI (
Optional Features and Acces-	Traffic lights (red-greer). Traffic	light Pole	l oon De	ector (dou	ole/sinal	e contact).	Beam D	etector 22	OV. 110\	/ motor, 24	/ DC for	emergency
sories	situations in case of po	wer failu	re, Remote	Control	(receiver a	nd transi	mitter are 3	3 channe	els), UPS, F	hotocell	Sensor (red	ceiver+ t	ransmitter
	with 50cm height pole	, RB COI	IT. UNIT.V.C	01 Cont	rol Unit, Int	ercom, E	External Bu	ttons, Ei	mergency S	Submers	ible Pump,	Hydraulio	;
	Accumulator for emerg	ency fas	raise up (⁻	1 piston	or 2 piston	s system	ns), Surface	e Frame	(sizes: from	1 250mr	n to 1000m	nm), Oil C	Cooler,
	Oil Heater, Heater for e	lectronic	componen	ts, hot-d	ip galvaniz	ation for	cabinet, bl	locker ai	nd impact s	surface i	inits, double	e effect h	ydraulic
	unit, double speed hyd	raulic un	t, ground n	nounting	plate, pow	vered aud	dio signal (siren), P	LC diagnos	tic moni	tor, IP67 bo	x (for PL	C, SMPS,
1	connectors etc inside p	ower un	t).										
Installation	Easy Installation with C30 grade concrete and steel rebar reinforcement.												





RRB ROAD BLOCKER (Reinforced Model)





Power	Standard 380V AC 3-Phase 50/60 Hz, 3,3 - 5,5 KvA motor (varies depending on blocker size).
	Opt. 220V, 110V 1-Phase 50/60 Hz (for some models/sizes only), optionally 24V DC for emergency situations in case of power failure.
Control Pack	24V DC powered and PLC control unit is placed in power unit cabinet.
	Solenoids 24V DC (Ops.12V DC / 220V AC)
Speed	Standard Operation ~4 - 6 sec. (ascend/descend) (opt. 2,5 - 4 sec.) depending on unit dimensions.
	Emergency raise up (upwards) by optional hydraulic accumulator ~1,5 sec. and may vary depending on unit dimensions.
IP Rating	IP 55 - Hydraulic Power Unit,
	IP 67 - Electronics (optional), protection with housing/box,
	IP 68 - Hydraulic Piston
Crash / Impact	Designed and produced to withstand M40 (K-8).
Rating	

				Raising Height 65 - 50 cm	Raising Height 90 - 70 cm
	Product Code	Blocker Unit	Nr. of	Dimensions	Dimensions
		Width (X)	Pistons	(LxWxD)	(LxWxD)
*	RRB 10F	1000	1	1275 x 1170 x 975	1481 x 1170 x 1270
<u> </u>	RRB 15F	1500	1	1275 x 1670 x 975	1481 x 1670 x 1270
	RRB 20F	2000	1	1275 x 2170 x 975	1481 x 2170 x 1270
	RRB 25F	2500	1	1275 x 2670 x 975	1481 x 2670 x 1270
	RRB 30F	3000	1	1275 x 3170 x 975	1481 x 3170 x 1270
	RRB 35F	3500	1	1275 x 3670 x 975	1481 x 3670 x 1270
	RRB 35F	3500	2	1275 x 3670 x 975	1481 x 3670 x 1270
	RRB 40F	4000	1	1275 x 4170 x 975	1481 x 4170 x 1270
	RRB 40F	4000	2	1275 x 4170 x 975	1481 x 4170 x 1270
W	RRB 45F	4500	2	1275 x 4670 x 975	1481 x 4670 x 1270
`	RRB 50F	5000	2	1275 x 5170 x 975	1481 x 5170 x 1270
	RRB 55F	5500	2	1275 x 5670 x 975	1481 x 5670 x 1270
	RRB 60F	6000	2	1275 x 6170 x 975	1481 x 6170 x 1270
	RRB 65F	6500	2	1275 x 6670 x 975	1481 x 6670 x 1270

ery Back-up for Battery unit with capacity of min.100 movements (50 deploy + 50 retract) when fully charged is					
optionally available.					
50T					
Heavy duty, dust sealed electrostatic powder coated hydraulic cylinder.					
Models between 1- 4 meter widths contain a single piston.					
(Double piston versions are optionally available for models with 3,5 & 4 meter widths).					
Models with 4,5 - 6,5 meter widths contain double pistons.					
Cylinder unit features a safety valve against leakage and hose failure.					
Strengthened industrial pump, 40-120 It oil tank capacity with magnetic					
metal collector and particle filter.					
Built-in oil level and temperature indicator,					
70-80 Bar pressure; maximum running pressure is 120 Bar					
10 mt R2 (double wire braided mesh) reinforced hydraulic hose.					

System Down, Up, Emergency and external sensor inputs/outputs (e.g. Loop Detector, Beam Detector, Signalization, Remote Control, e System alerts with an audio signal during lowering and raising operation.							ontrol, et	C.).					
A loud siren output in case of alarm or emergency. Can be lowered or raised automatically in case of emergency (User's preference).													
	Can be lowered or rais	sed auton	allcally in	case or (energency	(USELS	preference). tononoo	oonvioo wit	h monur		monual	volvo
	fosturo Automatic ra	iseu mai	da danlavr	se or por	wer ranure	or uurini nebroniz	od loop de	toctor) t	be read blo	n manua okor afti	a pump and		valve
	Sensor controlled stor	ise up mo ina both	at the top	and bot	tom positio	ons of the	e blocker u	nit	ine tuau bic			ie nas pa	.5560 0761.
Power Unit	Motor, hydraulic pump and solenoid valves are contained in an easily accessible hot-dip-dalvanized and electrostatic powder painted ca										inted cabinet		
	with a built-in lock lid. (Opt. Stainless Steel Cabinet)												
	Cabinet Dimensions: 1000 mm x 570 mm x 1200 mm (W x L x H).												
Blocker Cabinet	All parts are colored with industrial paint with two components.												
(underground unit)	U-shaped profile structure for maximum strength.												
	The blocker and cabinet are designed so that no vehicle crashing effect can displace it after embedded or installed in to the ground.										und.		
Blocker Cabinet	All parts are colored w	ith indust	rial paint v	vith two	component	S.							
(underground unit)	Hot dip galvanised vel	nicle pass	through su	urface (to	op plates).								
	The construction is ae	sthetically	and funct	ionally c	ompleted v	vith refle	ecting strips	s and wa	arning signs	3.			
	The hinge system is a	specially c	lesigned to	have a	flattened s	urface le	evel with th	e top pla	ate so that v	/ehicles	can pass ov	er smoo	thly
	and quietly. The block	er unit is	made of a	reinforce	ed construc	tion stre	ngthened I	oy 6mm	thick speci	al desigi	n, vertical so	olid steel	panels
	distanced between 35	i0-550mr	n along the	e blocker	r width and	assemb	led togethe	er with t	he main ch	assis for	evenly distr	ributed ir	npact
	absorption. All vertica	il impact a	absorption	panels h	ave specia	I shape	and contai	n hook t	ype holders	(patent	pending 20	15/1250	JG) for high
	Impact resistance and	a are insta	alled with e	equal dis	tance to ea	icn otner	r and supp	ortea by	4 pieces o	r 30x i Ur	nm solia ste	ei beam	s to further
	strengthen the construction.												
		Impact Absorbing Panel Quantity											
	Blocker Size	1 m	1,5 m	2 m	2,5 m	3 m	3,5 m	4 m	4,5 m	5 m	5,5 m	6 m	6,5 m
	Single Piston	4	4	6	6	8	8	10					
	Double Piston						10	12	12	12	15	18	18
	The system moves up and down with 50mm diameter stainless steel hinges (example: 3 meter blocker contains 7 pieces of 50mm diameter stainless steel hinges). Blocker unit raises 45° angle from the ground level and can be equipped with equipped with optional flashing light indicators on side and front panels.												
Control System	Manuel Control Butt	on Unit:											
•	Provided with an IP67 CRM yellow box including 3 switches for downwards, upwards, stop (optional emergency operation), can stop the												
	blocker motion with the command/signal coming from detector, equipped with built-in LED visual indications.												
	Compatibility with Access Control Systems:												
	companine with any access control system (by tillio parties).												
	Optional Unit:												
	With the optional mod	el "RB CC	NT.UNIT.V.	001" us	ers can mo	nitor the	e diagnostic	c functio	ns, can be	accesse	d through L	AN, RS4	85 protocols.
	System is provided ins	side a met	al cabinet	that also	o indudes tl	he other	functional	switche	s like down	ward, up	ward,stop,	emerger	ю
	operations.												
	With the built in 124x	58 LCD so	creen, all s	tatus of t	the operation	on and s	ystem diag	nostic c	an be mon	tored th	rough mess	aging fui	ictions like
	oil status, loop or bea	n detecto	rs status, i	water lev	el inside tr	ne cabine	et, blocker	position	according	to user p	preference, a	any .bmp) files can be
	displayed. The system	i is driven	by the PLO).						2011 4 4 6			
Optional Features	Iraffic lights (red-gree	n), Iraffic owor foilu	light Pole,	LOOP De	etector (dou	ible/sing	le contact)	, Beam I	Jetector, 22	20V, 110 2botocol	IV motor, 24 L Songor (roj	IV DC foi	emergency
dilu Accessories	with 50cm beight pole				trol I Init In	torcom	Evtornal R	uttone F	mergency	Submore	i Selisur (re sible Pump	Hudrauli	ransiniller c
		no cui	t raiso un <i>l</i>	1 nieton	or 2 nietor	ne evetor	ne) Surfac	o Framo	linergency	000111013 m 250m	m to 1000m	nyuraun nm) ∩il (Cooler Oil
	Heater, Heater for elec	stronic co	nponents	hot-din	galvanizatio	on for ca	binet bloc	ker and	impact sur	face unit	s. double et	ffect hvd	raulic unit
	double speed hydrauli	c unit. arr	und moun	iting plat	e. poweren	l audio s	ianal (sirer), PLC d	iagnostic n	nonitor. f	lashina liahi	t indicato	ors. round
	shaped front panel. oi	l level ser	sor, option	al speed	I, IP67 box	(for PLC	, SMPS, co	onnector	s etc inside	power	unit).		.,
Installation	Easy Installation with	C30 grade	e concrete	and stee	el rebar reir	forceme	ent.				,		

RB ROAD BLOCKER (Residential Model)





Power	Standard 380V AC 3-Phase 50/60 Hz, 3,3 - 5,5 KvA motor (varies depending on blocker size).
	Opt. 220V, 110V 1-Phase 50/60 Hz (for some models/sizes only), optionally 24V DC for emergency situations in case of power failure.
Control Pack	24V DC powered and PLC control unit is placed in power unit cabinet.
	Solenoids 24V DC (Ops.12V DC / 220V AC)
Speed	Standard Operation ~4 - 6 sec. (ascend/descend) (opt. 2,5 - 4 sec.) depending on unit dimensions.
	Emergency raise up (upwards) by optional hydraulic accumulator ~1,5 sec. and may vary depending on unit dimensions.
IP Rating	IP 55 - Hydraulic Power Unit,
	IP 67 - Electronics (optional), protection with housing/box,
	IP 68 - Hydraulic Piston
Crash / Impact	Designed and produced to withstand M30 (K-4).
Rating	



				Raising Height	Raising Height
	Product Code	Blocker Unit	Nr. of	Dimensions	90 - 70 cm Dimensions
		Width (X)	Pistons	(LxWxD)	(LxWxD)
	RB 10F	1000	1	1275 x 1170 x 975	1481 x 1170 x 1270
	RB 15F	1500	1	1275 x 1670 x 975	1481 x 1670 x 1270
	RB 20F	2000	1	1275 x 2170 x 975	1481 x 2170 x 1270
1	RB 25F	2500	1	1275 x 2670 x 975	1481 x 2670 x 1270
	RB 30F	3000	1	1275 x 3170 x 975	1481 x 3170 x 1270
	RB 35F	3500	1	1275 x 3670 x 975	1481 x 3670 x 1270
,	RB 35F	3500	2	1275 x 3670 x 975	1481 x 3670 x 1270
	RB 40F	4000	1	1275 x 4170 x 975	1481 x 4170 x 1270
	RB 40F	4000	2	1275 x 4170 x 975	1481 x 4170 x 1270
	RB 45F	4500	2	1275 x 4670 x 975	1481 x 4670 x 1270
	RB 50F	5000	2	1275 x 5170 x 975	1481 x 5170 x 1270
	RB 55F	5500	2	1275 x 5670 x 975	1481 x 5670 x 1270
	RB 60F	6000	2	1275 x 6170 x 975	1481 x 6170 x 1270
	RB 65F	6500	2	1275 x 6670 x 975	1481 x 6670 x 1270

Battery Back-up for	Battery unit with capacity of min. 100 movements (50 deploy + 50 retract) when fully charged is optionally available.			
Power-off Situation	ver-off Situation			
Axle Load Resistance	40T			
Hydraulic Cylinder Unit	Heavy duty, dust sealed electrostatic powder coated hydraulic cylinder.			
	Models between 1- 4 meter widths contain a single piston.			
	(Double piston versions are optionally available for models with 4 meter widths).			
	Models between 4,5 - 6,5 meter widths contain double pistons.			
	Cylinder unit features a safety valve against leakage and hose failure.			
Hydraulic Power Unit	Strengthened industrial pump, 40-120 It oil tank capacity with magnetic metal collector and particle filter,			
	Built-in oil level and temperature indicator, 70-80 Bar pressure; maximum running pressure is 120 Bar			
	10 mt R2 (double wire braided mesh) reinforced hydraulic hose.			

RB ROAD BLOCKER (Residential Model)

System	Down, Up, Emergency and external sensor inputs/outputs (e.g. Loop Detector, Beam Detector, Signalization, Remote Control, etc.).
	System alerts with an audio signal during lowering and raising operation.
	A loud siren output in case of alarm or emergency.
	Can be lowered or raised automatically in case of emergency (User's preference).
	Can be lowered and raised manually in case of power failure or during the maintenance service with manual pump and manual valve
	feature. Automatic raise up mode deploys (optionally with synchronized loop detector) the road blocker after the vehicle has passed over.
	Sensor controlled stopping both at the top and bottom positions of the blocker unit
Power Unit	Motor, hydraulic pump and solenoid valves are contained in an easily accessible hot-dip-galvanized and electrostatic powder painted cabinet
	with a built-in lock lid. (Upt. Stainless Steel Cabinet)
	Cabinet Dimensions: 1000 X 570 X 1200 mm (W X L X H).
Blocker Cabinet	All parts are colored with industrial paint with two components.
(underground unit)	U-snaped profile structure for maximum strength. The blacker and exhibits the decimend as that as well as a final and the second index of the state line is the second
	I ne blocker and cabinet are designed so that no venicle crashing effect can displace it after embedded or installed in to the ground.
BIOCKER UNIT	All parts are colored with Industrial paint with two components.
(impact blocking unit)	Hot off galvanised vehicle pass through surface (top plates).
	The bines susters is ensaiely and functionally completed with reflecting strips and warning signs.
	I ne ninge system is specially designed to have a flattened surface level with the top plate so that vehicles can pass over smoothly and
	yultuy. Tan nanal whata the vahiale nane over is made of 8/0mm thick non-alin surface steel bet din gelyanised before point
	The quater meyes up and down with 50mm diameter stainless steel hings (avample: 2 meter blocker contains 7 nices of 50mm diameter
	The system moves up and down with Somm diameter stanless steer ninges (example, S meter blocker contains 7 pieces of Somm diameter stailless steer ninges (example, S meter blocker contains 7 pieces of Somm diameter
	statilities steel hillyes). Riocker unit raises 45° and a from the around level and can be equipped with equipped with optional flacking light indicators on side and
	front papele
	None parlots. A tan lid is provided for easy access for service and maintenance on the tan plate
Control System	Manual Control Button Unit:
oona or system	Provided with an IP67 CPM vallow box including 3 switches for downwards, unwards, stop (optional emergency operation), can stop the
	blocker motion with the command/signal coming from detector, equipped with huilt-in LED visual indications
	Compatibility with Access Control Systems:
	Compatible with any access control system (by third parties).
	Optional Unit:
	With the optional model "RB CONT.UNIT.V.001" users can monitor the diagnostic functions, can be accessed through LAN, RS485 protocols.
	System is provided inside a metal cabinet that also indudes the other functional switches like downward, upward, stop, emergency
	operations.
	With the built in 124x68 LCD screen, all status of the operation and system diagnostic can be monitored through messaging functions like
	oil status, loop or beam detectors status, water level inside the cabinet, blocker position according to user preference, any .bmp files can be
	displayed. The system is driven by the PLC.
Optional Features	Traffic lights (red-green), Traffic light Pole, Loop Detector (double/single contact), Beam Detector, 220V, 110V motor, 24V DC for emergency
and Accessories	situations in case of power failure, Remote Control (receiver and transmitter are 3 channels), UPS, Photocell Sensor (receiver+ transmitter
	with 50cm height pole), RB CONT. UNIT.V.001 Control Unit, Intercom, External Buttons, Emergency Submersible Pump, Hydraulic
	Accumulator for emergency fast raise up (1 piston or 2 pistons systems), Surface Frame (sizes: from 250mm to 1000mm), Oil Cooler, Oil
	Heater, Heater for electronic components, hot-dip galvanization for cabinet, blocker and impact surface units, double effect hydraulic unit,
	double speed hydraulic unit, ground mounting plate, powered audio signal (siren), PLC diagnostic monitor, flashing light indicators, round
	shaped front panel, oil level sensor, optional speed, IP67 box (for PLC, SMPS, connectors etc inside power unit).
la stallation	





HRB ROAD BLOCKER (Heavy Duty - Shallow Mount Model)





Power	Standard 380V AC 3-Phase 50/60 Hz, 3,3 - 7,5 KvA motor (varies depending on blocker size).
	Opt. 220V, 110V 1-Phase 50/60 Hz (for some models/sizes only), optionally 24V DC for emergency situations in case of power failure.
Control Pack	24V DC powered and PLC control unit is placed in power unit cabinet.
	Solenoids 24V DC (Ops.12V DC / 220V AC)
Speed	Standard Operation ~2,5 - 6 sec. (ascend/descend) depending on unit dimensions.
	Emergency raise up (upwards) by optional hydraulic accumulator ~1,5 sec. and may vary depending on unit dimensions.
IP Rating	IP 55 - Hydraulic Power Unit,
	IP 67 - Electronics (optional), protection with housing/box,
	IP 68 - Hydraulic Piston
Crash / Impact Rating	Designed and produced to withstand impacts at M50 (K-12).



			Raising Height (H) 90 cm
Product Code	Blocker Unit	Nr. of	Dimensions
	Width (X)	Pistons	(LxWxD)
HRB 10PSRF	1000	1	2025 x 1455 x 390
HRB 15PSRF	1500	1	2025 x 1955 x 390
HRB 20PSRF	2000	1	2025 x 2455 x 390
HRB 25PSRF	2500	1	2025 x 2955 x 390
HRB 30P SRF	3000	1	2025 x 3455 x 390
HRB 35PSRF	3500	1	2025 x 3955 x 390
HRB 35P SRF	3500	2	2025 x 3955 x 390
HRB 40PSRF	4000	2	2025 x 4445 x 390
HRB 45PSRF	4500	2	2025 x 4955 x 390
HRB 50PSRF	5000	2	2025 x 5455 x 390
HRB 55P SRF	5500	2	2025 x 5955 x 390
HRB 60P SRF	6000	2	2025 x 6455 x 390
HRB 65P SRF	6500	2	2025 x 6955 x 390

Battery Back-up for	Battery unit with capacity of min. 100 movements (50 deploy + 50 retract) when fully charged is optionally available.		
Power-off Situation			
Axle Load Resistance	50T		
Hydraulic Cylinder Unit	Heavy duty, dust sealed electrostatic powder coated 50 mm hydraulic cylinder.		
	Models between 1- 3 meter widths contain a single piston.		
	(Double piston version is optionally available for model with 3,5 meter width).		
	Models between 4,0 - 6,5 meter widths contain double pistons.		
	Cylinder unit features a safety valve against leakage and hose failure.		
Hydraulic Power Unit	Strengthened industrial pump, 60 It oil tank capacity with magnetic metal collector and particle filter.		
	Built-in oil level sensor and oil temperature indicator.		
	70-100 bar pressure; maximum running pressure is 150 bar.		
	10 mt R2 (double wire braided mesh) reinforced hydraulic hose.		

System	Down, Up, Emergency and external sensor inputs/outputs (e.g. Loop Detector, Beam Detector, Signalization, Remote Control, etc.).		
	System alerts with an audio signal during lowering and raising operation.		
	A loud siren output in case of alarm or emergency.		
	Can be lowered or raised automatically in case of emergency (User's preference).		
	Can be lowered and raised manually in case of power failure or during the maintenance service with manual pump and manual valve		
	feature. Automatic raise up mode deploys (optionally with synchronized loop detector) the road blocker after the vehicle has passed over).		
	Sensor controlled stopping both at the top and bottom positions of the blocker unit.		
Power Unit	Motor, hydraulic pump and solenoid valves are contained in an easily accessible hot-dip-galvanized and electrostatic powder painted cabinet		
	with a built-in lock lid. (Opt. Stainless Steel Cabinet)		
Blocker Cabinet	All parts are colored with industrial paint with two components.		
(underground unit)	U-shaped profile structure for maximum strength to withstand impacts at M50 (K12) level.		
	The blocker and cabinet are designed so that no vehicle crashing effect can displace it after embedded or installed in to the ground.		
Blocker Unit	All parts are colored with industrial paint with two components.		
(impact blocking unit)	Hot dip galvanised vehicle pass through surface (top plates).		
	The hinge system is specially designed to have a flattened surface level with the top plate so that vehicles can pass over smoothly and		
	quietly. Top panel where the vehicle pass over is made of 10/11mm thick non-slip surface steel hot-dip galvanised before paint.		
	The system moves up and down with 50mm diameter stainless steel hinges (example: 3 meter blocker contains 7 pieces of 50mm diameter		
	stainless steel hinges).		
	Blocker unit raises 45° angle from the ground level.		
	A top lid is provided for easy access for service and maintenance on the top plate.		
	Accordion type panel closure on front is optionally available.		
Control System	Manuel Control Rutton Unit		
control oyotom	Provided with an IP67 CBM vellow box including 3 switches for downwards, upwards, stop (optional emergency operation), can stop the		
	blocker motion with the command/signal coming from detector, equipped with built-in LED visual indications and 10 mt cable.		
	Compatibility with Access Control Systems:		
	Compatible with any access control system (by third parties).		
	Optional Unit:		
	With the optional model "RB CONT.UNIT.V.001" users can monitor the diagnostic functions, can be accessed through LAN, RS485 protocols.		
	System is provided inside a metal cabinet that also indudes the other functional switches like downward, upward, stop, emergency		
	operations.		
	With the built in 124x68 LCD screen, all status of the operation and system diagnostic can be monitored through messaging functions like		
	on status, loop or beam detectors status, water level inside the cabinet, blocker position according to user preference, any .bmp lifes can be		
	uispiayeu. The custom is driven by the DLC		
Ontional Fasturas	Traffic lights (red group). Traffic light Dela Leon Detector (deuble/single contect). Deem Detector, 2001/ 1101/ meter, 201/ DC for americanou		
	itallic lights (red-green), itallic light Pole, Loop Detector (double/single contact), beam Detector, 220v, 110v motor, 24v Dc for entergency		
anu Accessories	situations in case of power failure, Remote control (receiver and utansmitter are 5 chamiles), OFS, Filotocen Sensor (receiver + italismitter		
	(1 nisten ar 2 nistens avatams). Surface Frame (aizas) from 250mm to 1000mm). Oil Coslar, Oil Hoster, Haster for electronic companente		
	(1 piston of 2 pistons systems), surface right (sizes, non 200min to 1000min), on cooler, on realer, realer to electronic components,		
	nor-ulp yaivanization for cabinet, blocker and impact sundle units, double enect nyuraunc unit, double speed nyuraunc unit, powered addio		
	signal (siren), PLC diagnostic monitor, iP67 box (for PLC, SWPS, connectors etc inside power unit), LED indicator on front, accordion type front closure.		
Installation	Easy Installation with C30 grade concrete and steel rebar reinforcement.		
	Ground leveling and preparation works shall be done before concrete pouring.		
	Allowable bearing value of the ground shall be minimum 1/2 kg/cm ² .		





RB ROAD BLOCKER (Residential - Shallow Mount Model)



Power	Standard 380V AC 3-Phase 50/60 Hz, 3,3 - 5,5 KvA motor (varies depending on blocker size).
	Opt. 220V, 110V 1-Phase 50/60 Hz (for some models/sizes only), optionally 24V DC for emergency situations in case of power failure.
Control Pack	24V DC powered and PLC control unit is placed in power unit cabinet.
	Solenoids 24V DC (Ops.12V DC / 220V AC)
Speed	Standard Operation ~2,5 - 6 sec. (ascend/descend) depending on unit dimensions.
	Emergency raise up (upwards) by optional hydraulic accumulator ~1,5 sec. and may vary depending on unit dimensions.
IP Rating	IP 55 - Hydraulic Power Unit,
	IP 67 - Electronics (optional), protection with housing/box,
	IP 68 - Hydraulic Piston
Crash / Impact Rating	Designed and produced to withstand impacts at M30 (K-4).

				Raising Height 65 - 50 cm	Raising Height 90 - 70 cm
	Product Code	Blocker Unit Width (X)	Nr. of Pistons	Dimensions (LxWxD)	Dimensions (LxWxD)
$\mathbf{\lambda}$	RB 10PSRF	1000	1	1342 x 1440 x 210	2665 x 1440 x 210
+		1500	1	1342 x 1910 x 210	2665 x 1910 x 210
	RB 20PSRF	2000	1	1342 x 2440 x 210	2665 x 2440 x 210
	RB 25PSRF	2500	1	1342 x 2910 x 210	2665 x 2910 x 210
	RB 30PSRF	3000	1	1342 x 3440 x 210	2665 x 3440 x 210
	RB 35PSRF	3500	1	1342 x 3910 x 210	2665 x 3910 x 210
	RB 35PSRF	3500	2	1342 x 3910 x 210	2665 x 3910 x 210
Mr.	RB 40PSRF	4000	1	1342 x 4440 x 210	2665 x 4440 x 210
	RB 40PSRF	4000	2	1342 x 4440 x 210	2665 x 4440 x 210
	RB 45PSRF	4500	2	1342 x 4910 x 210	2665 x 4910 x 210
	RB 50PSRF	5000	2	1342 x 5440 x 210	2665 x 5440 x 210
	RB 55PSRF	5500	2	1342 x 5910 x 210	2665 x 5910 x 210
	RB 60PSRF	6000	2	1342 x 6440 x 210	2665 x 6440 x 210
	RB 65PSRF	6500	2	1342 x 6910 x 210	2665 x 6910 x 210

Battery Back-up for	Battery unit with capacity of min. 100 movements (50 deploy + 50 retract) when fully charged is optionally available.		
ower-off Situation			
Axle Load Resistance	50T		
Hydraulic Cylinder Unit	Heavy duty, dust sealed electrostatic powder coated 50 mm hydraulic cylinder.		
	Models between 1-4 meter widths contain a single piston.		
	(Double piston versions are optionally available for models 3,5 & 4 meter widths).		
	Models between 4,5 - 6,5 meter widths contain double pistons.		
	Cylinder unit features a safety valve against leakage and hose failure.		
Hydraulic Power Unit	Strengthened industrial pump, 60 It oil tank capacity with magnetic metal collector and particle filter.		
	Built-in oil level and oil temperature indicator.		
	70-80 Bar pressure; maximum running pressure is 120 Bar.		
	10 mt R2 (double wire braided mesh) reinforced hydraulic hose.		

RB ROAD BLOCKER (Residential - Shallow Mount Model)

System	Down, Up, Emergency and external sensor inputs/outputs (e.g. Loop Detector, Beam Detector, Signalization, Remote Control, etc.).		
0,010111	System alerts with an audio signal during lowering and raising operation		
	A loud siren output in case of alarm or emergency		
	A low end or raised automatically in case of emergency (I lser's preference)		
	Can be lowered and raised manually in case of nower failure or during the maintenance service with manual numn and manual valve		
	our be lowered and raised manually in ease of power lander of damp are manufacture once wat manual point and manual varie feature. (Antona) is a second out of the second out		
	Sancer centrelled stepping both at the ten and bettern positions of the blocker unit		
Derver Unit	Sensor controlled supplying bour at the top and bottom positions of the booker unit.		
Power Unit	whork, hydraulic pump and solenoid valves are contained in an easily accessible not-dip-gawanized and electrostatic powder painted cabinet		
	with a duilt-in lock lid. (Upt. Stainless Steel Cabinet)		
Blocker Cabinet	Aii parts are colored with industrial paint with two components.		
(underground unit)	U-shaped profile structure for maximum strength.		
	The blocker and cabinet are designed so that no vehicle crashing effect can displace it after embedded or installed in to the ground.		
Blocker Unit	All parts are colored with industrial paint with two components.		
(impact blocking unit)	Hot dip galvanised vehicle pass through surface (top plates).		
	The hinge system is specially designed to have a flattened surface level with the top plate so that vehicles can pass over smoothly and		
	quietly. Top panel where the vehicle pass over is made of 8/9mm thick non-slip surface steel hot-dip galvanised before paint.		
	The system moves up and down with 50mm diameter stainless steel hinges (example: 3 meter blocker contains 7 pieces of 50mm diameter		
	stainless steel hinges).		
	Blocker unit raises 45° angle from the ground level.		
	A top lid is provided for easy access for service and maintenance on the top plate.		
	Accordion type panel closure on front is optionally available.		
Control Custom	Manual Control Dutton Unit.		
Control System	manuel control button ont: Desided with a 1002 ODM values has including 2 avitabas for devenuenda, star (article) anarrage values the		
	Provided with an 1667 CRM yellow box including 3 switches for downwards, upwards, stop (optional emergency operation), can stop the		
	blocker motion with the command/signal coming from detector, equipped with built-in LED visual indications and 10 mt cable.		
	Compatibility with Access Control Systems:		
	Compatible with any access control system (by third parties).		
	Optional Unit:		
	With the optional model "RB CONT.UNIT.V.001" users can monitor the diagnostic functions, can be accessed through LAN, RS485 protocols.		
	System is provided inside a metal cabinet that also indudes the other functional switches like downward, upward, stop, emergency		
	operations.		
	With the built in 124x68 LCD screen, all status of the operation and system diagnostic can be monitored through messaging functions like		
	oil status, loop or beam detectors status, water level inside the cabinet, blocker position according to user preference, any .bmp files can be		
	displayed.		
	The system is driven by the PLC.		
Optional Features	Traffic lights (red-green), Traffic light Pole, Loop Detector (double/single contact), Beam Detector, 220V, 110V motor, 24V DC for emergency		
and Accessories	situations in case of power failure, Remote Control (receiver and transmitter are 3 channels), UPS, Photocell Sensor (receiver+ transmitter		
	with 50cm height pole), RB CONT. UNIT.V.001 Control Unit, Intercom. External Buttons, Hydraulic Accumulator for emergency fast raise up		
	(1 piston or 2 pistons systems). Surface Frame (sizes: from 250mm to 1000mm). Oil Cooler. Oil Heater, Heater for electronic components.		
	hot-dip galvanization for cabinet, blocker and impact surface units, double effect hydraulic unit, double speed hydraulic unit, powered audio		
	signal (siren). PLC diagnostic monitor. IP67 hox (for PLC, SMPS, connectors etc. inside nower unit). I ED indicator on front, oil level sensor		
	accordion type front closure.		
Installation	Easy Installation with C30 orade concrete and steel rehar reinforcement		
	Ground leveling and preparation works shall be done before concrete pouring		
	Allowable bearing value of the around shall be minimum $1/2 \text{ kn/cm}^2$		







ROAD BLOCKERS

General Technical Specifications (embedded series)						
	HRB (Heavy Duty Road Blocker)RRB (Reinforced Road Blocker)RB (Residential Type Road B					
	Standard Fe	eatures and Built-in Properties				
Axle Load	50 T.	50 T.	40 T.			
Panel Thicknesses	Solid 6 mm (at every 35-55 cm)	Solid 6 mm (at every 35-55 cm)	Solid 4 mm panels			
Flashing Light	Standard	Optional	Optional			
Round Front Panel	Standard	Optional	Optional			
Top Plate	10/11 mm	8/9 mm	8/9 mm			
Oil Level Sensor	Standard	Optional	Optional			
Impact Resistance (Crash Test)	M50 P1 (K-12) tested & certified (HRB 30 R 90). Designed and produced to withstand H30.	Designed and produced to withstand M40 (K-8).	Designed and produced to withstand M30 (K-4).			
Front Panel Thickness	30+6 (opt. 10)+3mm	30+6mm	4 (mm)			
Speed	2,5 / 6 sn	4 / 6 sn (Opt. 2,5 / 4 sn)	4 / 6 sn (Opt. 2,5 / 4 sn)			
	· · · · ·	380V 3-Phase AC.				
	IP 67 mar	nual control button unit 3 functions.				
		Emergency button.				
	Down/descend butto	n (manual) in case of power off or maintenance.				
		PLC control unit.				
		24 V DC control.				
		24 V DC solenoids.				
	Automatic/ma	nual programmable access authorisation.				
	Outp	buts (siren, light, beam, flashes).				
		Movement buzzer.				
	Special design hinge structur	re spread on the total width of the blocker witho	out gap.			
	Unladen piston connection at top and be	ottom positions of the blocker enabling free-stal	nding of the piston			
	Galvanise Hot din galvaniz	a sneet metal main body side covers.				
	Hot dip galvariz	60 It oil tank				
	IP 55 - Hydraulic Power Unit IP 58	- Blocker Cabinet (underground unit) IP 68 - Hv	draulic Piston			
		lid impact absorbtion papels				
	Maximum	reinforced static construction cabin.				
Service access lid (screwed).						
	Reinforced industrial paint with two components in vellow and black colors.					
	High visibility with yel	low and black diagonal stripes on impact surface	е.			
Reflective marking.						
Hose for Hydraulic Oil (10mt)						
25 cc hand pump (manual).						
Oil level and temperature indicator.						
Protective valve for oil hose.						
Oil tank with particule filter.						
Oil tank with magnetic metal collector.						
Ground mounting apparatus						
Eacy installation						
Edsy Installation.						

	HRB (Heavy Duty Road Blocker)	RRB (Reinforced Road Blocker)	RB (Residential Type Road Blocker)		
		Optional Features			
	Р	LC diagnostic monitor (LAN).			
	Hot dip galva	nisation both for cabinet and blocker unit			
	Hot di	p galvanisation for impact surface			
	Dou	ıble effect hydraulic movement.			
		Double speed.			
	Oj	otional speeds for RRB and RB.			
	Accumulator fo	r emergency fast raise up (app.1,5sn speed).			
		Traffic lights (red-green).			
	Traffic ligh	nts (red-green), dia:100mm or 200mm			
		Loop dedector.			
		Beam dedector.			
	Photocell.				
Kemote control (wireless).					
Kain water drainage pump (emergency submersible pump).					
Rounded front panel (recommended for residential use for safety).					
Oil level sensor					
1 phase 220 V AC or 24 V DC Motor					
Oil cooler					
Oil beater.					
Component heater.					
IP 67 control box (for PLC, SMPS, connectors, circuit breakers, loop detector (if any), relays).					
Surface frames in optional sizes (25cm to 100cm).					
	Audio Signal (Siren, powered).				









BOLLARDS

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42	RETRACTABLE (HYDRAULIC) BOLLARDS
42	DEEP EXCAVATED SERIES
42	HBD - HEAVY DUTY MODEL
44	RBD - REINFORCED MODEL
48	TBD - TRAFFIC CONTROL MODEL
50	FIXED (STATIC) BOLLARDS
50	DEEP EXCAVATED SERIES
50	HBD - HEAVY DUTY FIXED MODEL
51	SHALLOW MOUNT SERIES
51	HBD - HEAVY DUTY SHALLOW MOUNT FIXED MODEL
52	GENERAL FIXED BOLLARDS
52	GENERAL FIXED BOLLARDS
53	REMOVABLE BOLLARD
53	REMOVABLE BOLLARD

CAME T ÖZAK





M40 Installation



20

for crash test video



max. pene fo (1 mt





m+

ÖZAK actual penetration: P1 (0,82 mt).

Ē

tration allowance or P1 level from bollard).













M50 Installation











HBD BOLLARD (Heavy Duty Model)



Technical Features

Power	Standard 380V AC 3-Phase 50/60 Hz, 2,2-5,5 kW motor (depending on the number of bollards in the set to be fed). Opt. 220V, 110V 1-Phase 50/60 Hz (for some models/sizes only), optionally 24V DC for emergency situations in case of power failure.			
Control Pack	24V DC powered and PLC control unit is placed in power unit cabinet. Solenoids 24V DC (Ops.12V DC / 220V AC)			
Speed	Standard Operation ~2.5 - 5 sec. (ascend/descend) (depending on the number of bollards in the set to be fed).			
	Emergency raise up (upwards) by optional hydraulic accumulator ~1,5 sec.			
IP Rating	IP 55 - Hydraulic Power Unit,			
	IP 67 - Electronics (optional), protection with housing/box,			
	IP 68 - Hydraulic Piston			
Crash / Impact Rating	M50 (K-12) & M40 (K-8) crash tested and certified according to			
	ASTM 2656-07 (HBD 275 H 90 only).			
Axe Load Resistance	70T			

HBD BOLLARD (Heavy Duty Model)

Hydraulic Cylinder Unit Heavy duty, double acting, electrostatic powder coated, dust sealed hydraulic cylinder.				
Hydraulic Power Unit	Strengthened industrial pump, 30-150 It (depending on the number of bollards in the set to be fed) oil tank capacity with magnetic metal			
	collector and particle filter.			
	Built-in oil level and oil temperature indicators and oil level sensor with low oil level warning.			
	20-120 Bar (depending on the number of bollards in the set to be fed) pressure (max. 160 bar); 10mt R2 (double wire braided mesh)			
	reinforced hydraulic hose.			
	Interconnecting hoses for multiple bollard installations will be supplied.			
System	Down, Up, Emergency and external sensor inputs/outputs (e.g. Loop Detector, Beam Detector, Signalization, Remote Control, etc.).			
	System alerts with an audio signal during lowering and raising operation.			
	A loud siren output in case of alarm or emergency.			
	Can be lowered or raised automatically in case of emergency (user's preference, optional at no cost), programmed to stop as standard.			
	Can be lowered and raised manually in case of power failure or during the maintenance service with manual pump and manual discharge			
	Teature. Automatic, raise up made deploye (aptionally with synahrapized, loop datastar) the bellard after the vahiale has percent over			
Bower Unit	Automatic raise up mode deploys (optionally with synchronized loop detector) the bollard after the vehicle has passed over.			
Power Unit	motor, myuraunc pump and solehold valves are contained in an easily accessible hot-uip-galvanized and electrostatic powder painted cobinet with a built in lock lid. (Det. Stainlose Steel Cobinet)			
	Cabinet Dimensiones: 1000 x 570 x 1200mm (M x L x H)			
Indorground	Ballard Anobarana Casing:			
Structure	March Anchorage Casing.			
onuolare	Casing is designed so that no vehicle crashing effect can displace it after embedded or installed into the ground. Ground assembly is			
	supported with hars			
	Hydraulic hose and cable entry openings enabling to use both of the directions as per hyraulic power unit position and site conditons.			
	Designed for easy access to hydraulic hose and cable connections.			
	Ground mounting plate with installation holes for bolt type easy ground fixing.			
	Includes cut-out for connection of submersible pump for rainwater drainage.			
	Main Housing:			
	Ø324 / 406 mm hot dip galvanised steel, structured to provide main housing for the bollard cylinder.			
	Bollard cylinder pivoted with and moves through replaceable 5 rails (inner railing) made of special non-metal and positioned with equal			
	distances from eachother for maximum rigidity and minimum material fraction.			
	Contains the hydraulic cylinder lower connection.			
	I hanks to the bollard anchorage casing, the main housing can be easily replaceable together with the bollard cylinder in case of a damage			
Above Crewed	In any Kino.			
Structure	Donard cynnuei (impact blocking unity. Ø270 and 324 mm bat din galvanisad staal ning with 10 mm wall thickness and accentrically 65-00 mm solid staal (noviding bighar			
Suuciaic	resistance compared to pipes with 40 mm wall thickness) and composite infilled impact surface. colored with electrostatic powder coating			
	in BAI 9006 as standard (other BAI colors are optionally available)			
	Demountable bollard top plate made of aluminium with 360° visible red flashing LED indicators.			
	Furnished with red, white or yellow reflecting strips compliant to "E" standard.			
	Special star-formed, vertical 10 mm solid steel infills for evenly distributed impact absorption.			
	Bollard cylinder pivoted with and moves through replaceable 5 rails (outer railing) made of special non-metal and positioned with equal			
	distances from eachother for maximum rigidity and minimum material fraction.			
	Contains the hydraulic cylinder upper connection.			
	Road Surface Plate:			
	15 mm steel hot-dip galvanised, colored with elctrostatic powder coating in RAL9006 (other RAL colors are optionally available).			
	Easy disassembly by its bolt type connection.			
	Dust sealant (winer assi			
Pottory Pook up for	Dust sealant / wiper seal.			
Power-off Situation	contains battery unit with capacity of our roomovements at run charge (deproynetract) is optionally available (minimum number of movements change according to the number of hollards in the system)			
Control System	Manual Control Rutton Unit:			
oona or oystem	Provided with an IP67 CBM vellow box and 10mt cable including 3 switches for downwards, upwards, stop (optional emergency operation).			
	equipped with built-in LED visual indications.			
	Compatibility with Access Control Systems:			
	Compatible with any access control system (by third parties).			
Optional Features	Traffic Lights (red-green), Traffic Light Pole, Loop Detector (double/single antenna), Beam Detector, 220V, 110V motor. 24V DC for			
and Accessories	emergency situations in case of power failure, Remote Control (receiver and transmitter are 3 channels), UPS, Photocell Sensor (receiver+			
	transmitter with 50cm height pole), RB CONT. UNIT.V.001 Control Unit, Intercom, External Buttons, Emergency Submersible Pump,			
	Hydraulic Accumulator for Emergency Fast Raise-up, Oil Cooler, Oil Heater, Heater for Electronic Components, Powered Audio Signal			
	(siren), PLC Diagnostic Monitor, IP67 box (for PLC, SMPS, connectors etc inside power unit).			
Installation	Easy Installation with C30 grade concrete and steel rebar reinforcement. Possible to install multiple units. In case of multiple unit			
	installation, 1200mm gap between the bollards is recommended for M40 certified installations.			
	For M50 certified installations: minimum 2 bollards shall be installed keeping the gap, between bollards at 800 mm			

RBD BOLLARD (Reinforced Model)





Dimensions (mm)





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Technical Features

Power	Standard 380V AC 3-Phase 50/60 Hz, 2,2-5,5 kW motor (depending on the number of bollards in the set to be fed).			
	Opt. 220V, 110V 1-Phase 50/60 Hz (for some models/sizes only), optionally 24V DC for emergency situations in case of power failure.			
Control Pack	24V DC powered and PLC control unit is placed in power unit cabinet.			
	Solenoids 24V DC (Ops.12V DC / 220V AC)			
Speed	Standard Operation ~2.5 -5 sec. (ascend/descend) (depending on the number of bollards in the set to be fed).			
	Emergency raise up (upwards) by optional hydraulic accumulator ~1,5 sec.			
IP Rating	IP 55 - Hydraulic Power Unit,			
	IP 67 - Electronics (optional), protection with housing/box,			
	IP 68 - Hydraulic Piston			
Crash / Impact	Designed and produced to stop a vehicle weighing 6800 kg and travelling with 30 miles/hour according to ASTM 2656-07 standard at			
Rating	M30 (K-4) level.			
Axle Load Resistance	50T			

RBD BOLLARD (Reinforced Model)

Hydraulic Cylinder Unit	Heavy duty, double acting electrostatic powder coated, dust sealed hydraulic cylinder.		
Hydraulic Power Unit Strengthened industrial pump, 30-150 lt (depending on the number of bollards in the set to be fed) oil tank capacity and particle filter.			
	collector and particle filter.		
	Built-in oil level and oil temperature indicators with low oil level warning.		
	20-120 Bar (depending on the number of bollards in the set to be fed) pressure (max. 160 bar);		
	10mt K2 (double wire braided mesh) reinforced hydraulic hose.		
Sustam	Interconnecting hoses for multiple bollard installations will be supplied.		
System	Lown, op, Entry and external sensor inputs/outputs (e.g. Loop Datactor, Ream Datactor, Signalization, Remote Control, etc.)		
	(e.g. Loop beleetor, beam beleetor, orginalization, heriote control, etc.).		
	A loud siren output in case of alarm or emergency		
	Can be lowered or raised automatically in case of emergency (user's preference, optional at no cost), programmed to stop as standard.		
	Can be lowered and raised manually in case of power failure or during the maintenance service with manual pump and manual discharge		
	feature.		
	Automatic raise up mode deploys (optionally with synchronized loop detector) the bollard after the vehicle has passed over.		
Power Unit	Motor, hydraulic pump and solenoid valves are contained in an easily accessible hot-dip-galvanized and electrostatic powder painted cabinet		
	with a built-in lock lid. (Opt. Stainless Steel Cabinet)		
	Cabinet Dimensions: 1000 mm x 570 mm x 1200 mm (W x L x H).		
Underground Structure	Bollard Anchorage Casing:		
	Ø338 / 420 mm steel casing hot dip galvanized and structured for maximum strength.		
	Casing is designed so that no vehicle crashing effect can displace it after embedded installed into the ground. Ground assembly is		
	supported with bars.		
	Hydraulic hose and cable entry openings enabling to use both of the directions as per hyraulic power unit position and site conditons.		
	Designed for easy access to hydraulic hose and cable connections.		
	Ground mounting plate with installation holes for bolt type easy ground fixing.		
	Includes cut-out for connection of submersible pump for rainwater drainage.		
	Main Housing:		
	Ø324 / 406 mm not op galvansed steel, structured to provide main nousing for the boliard cylinder.		
	distances from eachother for maximum rigidity and minimum material fraction		
	Contains the bydraulic cylinder lower connection		
	Thanks to the hollard anchorage casing, the main housing can be easily replaceable together with the hollard cylinder in case of a damage		
	in any kind.		
Above Ground	Bollard Cylinder (impact blocking unit) :		
Structure	Ø270 and 324 mm hot-dip galvanised steel with 10mm wall thickness and eccentrically 65-90 mm solid steel (providing higher resistance		
	compared to pipes with 27 mm wall thickness) and composite infilled impact surface, colored with electrostatic powder coating in RAL9006		
	as standard (other RAL colors are optionally available).		
	Demountable bollard top plate made of aluminium with 360° visible red flashing LED indicators.		
	Furnished with red, white or yellow reflecting strips compliant to "E" standard.		
	Special star-formed, vertical 5 mm solid steel infills for evenly distributed impact absorption.		
	Bollard cylinder pivoted with and moves through replaceable 5 rails (outer railing) made of special non-metal and positioned with equal		
	distances from eachother for maximum rigidity and minimum material fraction.		
	Contains the hydraulic cylinder upper connection.		
	Road Surface Plate:		
	15 mm steel not-oip galvanised, colored with electrostatic powder coating in KAL9006 (other KAL colors are optionally available).		
	Easy disassembly by its boil type connection.		
Pottory Pook up for	Dust statelit / Wilet stat.		
Dattery Dack-up to	movements change according to the number of bellards in the system)		
Control System	Manual Control Button Unit:		
Control System	Maliaa control batton one. Provided with an ID67 CDM vellow box and 10mt cable including 2 ewitches for downwards, unwards, stap (aptional amorganey operation).		
	equipped with built-in LED vieual indications		
	equipped with built-in LED visual indications.		
	Compatibility with Access Control Systems:		
	Compatible with any access control system (by third parties)		
Optional Features and	Traffic Lights (red-green), Traffic Light Pole, Loop Detector (double/single antenna), Ream Detector 220V 110V motor 24V DC for		
Accessories	emergency situations in case of nower failure. Remote Control (receiver and transmitter are 3 channels). IPS. Photocell Sensor (receiver		
transmitter with 50cm hainht nole) RR CONT LINIT VOOL Control Unit Intercom External Ruttons Emorroupou Submorr			
	Accumulator for Emergency Fast Raise-up, Oil Cooler. Oil Heater. Heater for Electronic Components. Powered Audio Signal (siren). PI C		
	Diagnostic Monitor, IP67 box (for PLC, SMPS, connectors etc inside power unit), oil level sensor		
Installation	Easy Installation with C30 grade concrete and steel rebar reinforcement. Possible to install multiple units. In case of multiple unit installation.		

1200mm gap between the bollards is recommended.





TBD BOLLARD (Traffic Control Model)





Dimensions (mm)



Technical Features

Power	Standard 380V AC 3-Phase 50/60 Hz, 2,2-5,5 kW motor (depending on the number of bollards in the set to be fed).		
	Opt. 220V, 110V 1-Phase 50/60 Hz (for some models/sizes only), optionally 24V DC for emergency situations in case of power failure.		
Control Pack	24V DC powered and PLC control unit placed in power unit cabinet.		
	Solenoids 24V DC (Ops.12V DC / 220V AC)		
Speed	Standard Operation ~1,8 - 4 sec. (ascend/descend) (depending on the number of bollards in the set to be fed).		
	Emergency raise up (upwards) by optional hydraulic accumulator ~1,5 sec.		
IP Rating	IP 55 - Hydraulic Power Unit,		
	IP 67 - Electronics (optional), protection with housing/box,		
	IP 68 - Hydraulic Piston		

TBD BOLLARD (Traffic Control Model)

Crash / Impact Rating	-		
Axle Load Resistance	50T		
Hydraulic Cylinder Unit	Heavy duty, double acting electrostatic powder coated, dust sealed hydraulic cylinder.		
Hydraulic Power Unit	Strengthened industrial pump, 30-150 It (depending on the number of bollards		
	in the set to be fed) oil tank capacity with magnetic metal collector and particle filter.		
	Built-in oil level and oil temperature indicators with low oil level warning.		
	20-120 Bar (depending on the number of bollards in the set to be fed) pressure (max. 160 bar);		
	10mt R2 (double wire braided mesh) reinforced hydraulic hose.		
Custom	Interconnecting noses for multiple bollard installations will be supplied.		
System	Down, op, Emergency and external sensor inputs/outputs		
	(e.g. Loop Delector, Beam Delector, Signalization, Remote Control, etc.).		
	A loud siren output in case of alarm or emergency		
	Can be lowered or raised automatically in case of emergency (user's preference, optional at no cost), programmed to stop as standard.		
	Can be lowered and raised manually in case of power failure or during the maintenance service with manual pump and manual discharge		
	feature.		
	Automatic raise up mode deploys (optionally with synchronized loop detector) the bollard after the vehicle has passed over.		
Power Unit	Motor, hydraulic pump and solenoid valves are contained in an easily accessible hot-dip-galvanized and electrostatic powder painted cabinet		
	with a built-in lock lid. (Opt. Stainless Steel Cabinet)		
	Cabinet Dimensions: 1000 mm x 570 mm x 1200 mm (W x L x H).		
Underground Structure	Bollard Anchorage Casing:		
	0284 / 338 mm steel casing hot dip galvanized and structured for maximum strength.		
	Casing is designed so that no venicle crashing effect can displace it after embedded or installed into the ground.		
	Hydraulic hose and cable entry openings enabling to use entrief or the time directions as per hydraulic power unit position and site conditions.		
	Designed for easy access to hydraulic nose and cable connections.		
	Includes cut-out for connection of submersible pump for rainwater drainage		
	Main Housing:		
	Ø273 / 324 mm hot dip galvanised steel, structured to provide main housing for the bollard cylinder.		
	Bollard cylinder pivoted with and moves through replaceable 5 rails (inner railing) made of special non-metal and positioned with equal		
	distances from eachother for maximum rigidity and minimum material fraction.		
	Contains the hydraulic cylinder lower connection.		
	Thanks to the bollard anchorage casing, the main housing can be easily replaceable together with the bollard cylinder in case of a damage in		
	any kind.		
Above Ground	Bollard Cylinder (impact blocking unit) :		
Structure	0220 / 270 mm stamless steel sleeve on not-up galvanised steel with 5 mm wan unckness.		
	Demountable bollato top plate made of alon minimum with 500 visible red hashing LED indicators.		
	Rollard cylinder nivoted with and moves through replaceable 5 rails (outer railing) made of special non-metal and positioned with equal		
	distances from eachother for maximum rigidity and minimum material fraction.		
	Contains the hydraulic cylinder upper connection.		
	Road Surface Plate:		
	15 mm steel hot-dip galvanised, colored with elctrostatic powder coating in (other RAL colors are optionally available).		
	Easy disassembly by its bolt type connection.		
	Dust sealant / wiper seal.		
Battery Back-up for	Contains battery unit with capacity of 60-100 movements at full charge (deploy/retract) is optionally available (minimum number of movements		
Control System	Change according to the number of bollaros in the system).		
Control System	Manual Control Dutton Onit. Provided with an IPG7 CRM vellow hoy and 10mt cable including 3 switches for downwards, unwards, stop (optional emergency operation)		
	equipped with built-in LED visual indications.		
	Compatibility with Access Control Systems:		
	Compatible with any access control system (by third parties).		
Optional Features	Traffic Lights (red-green), Traffic Light Pole, Loop Detector (double/single antenna), Beam Detector, 220V, 110V motor, 24V DC for emergency		
and Accessories	situations in case of power failure, Remote Control (receiver and transmitter are 3 channels), UPS, Photocell Sensor (receiver+ transmitter with		
	50cm height pole), RB CONT. UNIT.V.001 Control Unit, Intercom, External Buttons, Emergency Submersible Pump, Hydraulic Accumulator for		
	Emergency Fast Raise-up, Oil Cooler, Oil Heater, Heater for Electronic Components, Powered Audio Signal (siren), PLC Diagnostic Monitor, IP67		
	box (tor PLC, SMPS, connectors etc inside power unit), oil level sensor.		
Installation	Easy installation with U3U grade concrete and steel rebar reinforcement. Possible to install multiple units. In case of multiple unit installation,		
	ו בטטחוות אמא הפואפאר וווב הטוומותא וא הפרטווווובותופנו.		

HBD BOLLARD (Heavy Duty - Fixed Model)







Dimensions (mm)





Technical Features

Bollard Type	Anti-terror/high security, fixed/static type.			
Impact Resistance	Crash tested and certified according to ASTM 2656-15 M50 (K-12) standard (HBD 275 S 100 model only).			
	Bollard Anchorage			
Underground	High resistant bollard anchorage, containing 700 x 700 mm anchorage plate with 4 vertical anchorage supports welded to the bollard cylinder			
Structure	(impact blocking unit) and having 4 stud bolts/nuts for easy leveling.			
	Bollard anchorage is strengthened and designed so that no vehicle crashing effect can displace it after installed into the ground.			
	Bollard Cylinder (impact blocking unit)			
Above Ground	700 - 1000 mm high from the ground, Ø270 and 324mm hot-dip galvanised steel, colored with electrostatic powder coating in RAL9006 as			
Structure	standard (other RAL colors are optionally available).			
	Furnished with red, white or yellow reflecting strips compliant to "E" standard.			
Optional Features and Accessories	Demountable bollard top plate with 360° visible red flashing LED indicators,			
	stainless steel bollard post sleeve, different color options, different product			
	dimensions.			
Installation	With 4 bolts for easy leveling and using C30 grade concrete and steel			
	rebar reinforcement.			
	Ground leveling and preparation works shall be done before concrete pouring.			
	Allowable bearing value of the ground shall be minimum $1/2 \text{ kg/cm}^2$.			

HBD BOLLARD (Heavy Duty - Fixed - Shallow Mount) Model





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Dimensions (mm)







Technical Features

Bollard Type	Anti-terror/high security, shallow mount type (bollard underground anchorage height of 210mm only).			
	Crash tested and certified according to;			
Impact Resistance	IWA 14-1:2013 Fixed Bollard V/7200[N3C]/64			
	PAS68:2013 Fixed Bollard V/7500[N3]/64			
	ASTM 2656-18 C740/7200 standards (HBD 275 S 95/8 SRF model).			
	Bollard Anchorage			
	High resistant bollard anchorage with 2 anchorage plates having gaps for easy and overall penetration of the concrete, strengthened with			
Underground	200mm thick "HEB" beams on impact direction and having 4 stud bolts/nut for easy levelling. Providing shallow mounting with bollard			
	underground anchorage height of 210mm only.			
Structure	Underground element connections are extra strengthened by fastening wedge type, 10.9 grade bolted and welded together at the same time.			
	Bollard post is hot-dip galvanised, strengthened and designed so that no vehicle crashing effect can be displace it after installed into the			
	ground.			
Abaua Graund	Bollard Cylinder (impact blocking unit)			
Above Ground	950mm high from the ground, Ø270 mm hot-dip galvanized steel in RAL9006 color as standard (other RAL colors optionally available).			
Structure	Furnished with red, white or yellow reflecting strips compliant to "E" standard.			
Optional Features	Demountable bollard top plate with 360° visible red flashing LED indicators, stainless steel bollard post sleeve, different color options, different			
and Accessories	product dimensions.			
Installation	With 4 bolts for easy leveling and gaps for easy and overall penetration of the concrete easy installation using C30 grade concrete and steel			
	rebar reinforcement.			
	Ground leveling and preparation works shall be done before concrete pouring.			
	Allowable bearing value of the ground shall be minimum 1/2 kg/cm ² .			

250 - 300

FIXED BOLLARD





Technical Features

Operation	Fixed, non-retractable		
Diameter	220mm - 324mm (other diameters available optionally)		
Height (Above Ground)	500-1200mm (other heights available optionally)		
Installation	Ground embedding, easy fixed.		
Options and Accessories	Different material and colour options, 360° visible LED indicator.		

*Shape and sizes are for reference only. Fixed bollards can be produced identically with your retractable bollard or are available in any other specific shape and dimension.

REMOVABLE BOLLARD

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Bollard Type	Removable, traffic control type	
Underground Structure	Hot-dip galvanised steel in reinforced structure.	
Above Ground Structure	Hot-dip galvanised and electrostatic powder coated in RAL colors steel (opt. 304 grade stainless steel) bollard body and lockable road level lid. Road level lid is designed to retract into underground unit when the bollard is in use avoiding risk of getting lost. Road level lid can be closed and locked when the bollard is removed providing a plain road surface. Furnished with red, White or yellow reflecting strips compliant to "E" standard.	
Locking Mechanism	Hot-dip galvanised steel, special design sliding type locking mechanism. It is impossible to unlock the locking mechanism without its own key. Locking mechanism fastens the bollard body when it is in use and the road level lid when the bollard body is not in use.	
Optional Features and Accessories	360° visible red flashing indicators, different product dimensions and various material options.	
Installation	Easy installation, leveling with 4 bolts and using steel rebars and concrete.	

Fixed bollard versions also identical with removable bollards are available upon request.

BOLLARDS

General Technical Specifications (hydraulic series)			
	HBD (Heavy Duty Bollard)	RBD (Reinforced Bollard)	TBD (Traffic Bollard)
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Standard Features and Built-in Properties					
Axle Load	70 T.	50 T.	50 T.		
Wall Thickness	10 mm + 65/90 mm special star formed solid beams of 10 mm thickness (providing higher resistance compared to pipes with 40 mm wall thickness)	10 mm + 65/90 mm special star formed solid beams of 5 mm thickness (providing higher resistance compared to pipes with 27 mm wall thickness)	5 mm		
Oil Level Sensor (PLC)	Standard	Optional	Optional		
Impact Resistance Crash Test	M50 (K 12) & M40 (K 8) tested&certified (HBD 275 H 90).	Designed and produced to withstand M30 (K4)	-		
Ground Assembly Supporting Bars	Standard	Standard	V form		
Finish	Electrostatic powder coated.	Electrostatic powder coated.	Stainless steel sleeve.		
Speed	2.5 - 5 sec. (single unit installation)	2.5 - 5 sec. (single unit installation)	1,8 - 4 sec. (single unit installation)		
380V 3-Phase AC.					
IP 67 manual control button unit 3 functions.					
	Emerg	ency button.			
	Down/descend valve (manual)	in case of power off or maintenance			
Double acting hydraulic movement.					
	PLC	control unit.			
24 V DC control.					
24 V DC solenoids.					
Automatic/manual programmable access authorisation.					
Outputs (siren, light, beam, flashes).					
Movement buzzer.					
Hot dip galvanised steel main body.					
Easy accesibility for servicing.					
Aluminium top plate with 25mm thickness.					
360 °C with high visibility flashing LED's in red.					
Reflecting strips compliant to E standard, red/white/yellow colors.					
Hoses for Hydraulic Oil (for interconnection in case of multiple installations)					
noses for nyuraulic of (for interconnection in case of multiple installations).					
25 cc ridiu pullip (fidiludi). Oil lovel and temperature indicator					
45 / 60 It oil tank canacity (depending on the number of bollards in case of multiple installations)					
A y oo it on tank capacity (depending on the number of bonards in case of multiple installations).					
Qil tank with magnetic metal collector.					
Hot dip galvanised power & control unit cabin.					
-5°C / +55°C (Opt30°C / +70°C)					
Easy installation.					
IP 55 - Hydraulic Power Unit, IP 58 - Underground Structure. IP 68 - Hydraulic Piston					

	HBD (Heavy Duty Bollard)	RBD (Reinforced Bollard)	TBD (Traffic Bollard)	
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	Option	al Features		
PLC diagnostic monitor (LAN).				
Accumulator for emergency fast raise up (app.1,5sn speed).				
Traffic lights (red-green), dia:100mm or 200mm				
Traffic light pole.				
Loop dedector.				
Beam dedector.				
Photocell.				
Remote control (wireless).				
Cillevel sensor				
1 phase 220 V AC or 24 V DC Motor				
UPS.				
Oil cooler.				
Oil heater.				
Component heater.				
IP 67 control box (for PLC, SMPS, connectors, circuit breakers, loop detector (if any), relays).				
Different materials and colors.				
Audio Signal (Siren, powered).				







ÖZAK GEÇİŞ TEKNOLOJİLERİ SAN. TİC. A.Ş.

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BELGIUM CAME Benelux, Lessines

CROATIA CAME Adriatic, Kastav

FRANCE CAME France, Paris **URBACO**, Avignone

GERMANY CAME Deutschland GmbH, Stuttgart

IRELAND CAME BPT Ireland, Dublin

NETHERLANDS CAME Nederland, Breda

POLAND CAME Poland, Warszawa

PORTUGAL CAME Portugal, Lisbon

RUSSIA CAME Rus, Moscow

SPAIN CAME Spain, Madrid PARKARE, Barcelona

UK CAME United Kingdom, Nottingham CAME PARKARE UK, Bristol ASIA INDIA CAME India Automation Solutions, New Delhi

U.A.E. CAME Gulf, Dubai

AMERICAS BRAZIL CAME do Brasil Serviços de Automaçao, São Paulo

CHILE CAME PARKARE Chile, Santiago

MEXICO CAME Automatismos de Mexico, Mexico City CAME PARKARE México, México D.F.

PERÚ CAME PARKARE Perù, Lima

USA CAME Americas Automation, Miami

AFRICA SOUTH AFRICA CAME BPT South Africa, Johannesburg

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