

FIRE PROTECTION OVERHEAD GATE

Type: **MARC-O EI120**

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1. INTRODUCTION

This manual for the fire protection overhead gate type MARC–O EI120 (hereinafter referred to as the fire protection device/gate) is the document that contains data and guidelines for the owner (user) necessary to know its operating principle, use, operation and maintenance.

To ensure long-term, safe use of the device, the user and operation personnel should fully read, understand and observe the requirements of this manual.

The use of the fire protection gate, including its operation and maintenance of proper technical condition and periodical inspections, maintenance, replacement of components and repairs should be completed in accordance with this manual.

This manual and other technical documents constituting annexes to it should be properly stored and available to the operation and service centre personnel.

We reserve the right to continuously review the content of this manual and to adjust it to the technical progress. We hope the user understands its content is subject to change without notice. Part of drawings or contents of the manual may differ from the physically delivered device due to improvement or regulatory changes and other reasons, the difference does not influence changes in recommendations for its use.

If the manual is lost or damaged, contact our service department to obtain the same version of the manual.

CAUTION!

The user's failure to adhere to the recommendations and guidelines in this manual shall release the manufacturer from any liability and warranty.

The scope of activities that can be performed by the service centre and the user is specified further in this manual. The installation, adjustment, replacement of components, repair and troubleshooting can only be performed by the manufacturer or their authorised service centre.

The manual includes standard equipment of the fire protection overhead gate, the possible use of optional equipment is described in the commercial contract.

The fire protection overhead gate should be used in accordance with the technical design developed for a specific structure, in which it is to be installed, considering:

- applicable technical and construction standards and regulations, in particular:
 - a) Regulation of the European Parliament and of the Council (EU) No. 305/2011 of 9 March 2011 laying down harmonised conditions for the marketing of construction products and repealing Council Directive 89/106/EEC (Official Journal of the European Union L88 of 4.4.2011, as amended),
 - b) Act of 16 April 2004 on construction products (Journal of Laws of 2019, item 266, 730),
 - c) The Construction Law Act of 7 July 1994 (Journal of Laws of 2019, item 1186, as amended),
 - d) Act of 13 April 2016 on the compliance and market supervision system (Journal of Laws of 2019, item 544),
 - e) Act of 24 August 1991 on fire protection (Journal of Laws of 2019, item 1372, 1518, 1593),
 - f) Regulation of the Minister of Infrastructure and Construction of 17 November 2016 on the method of declaring performance of construction products and marking them with the construction mark (Journal of Laws of 2016, item 1966),
 - g) Regulation of the Minister of Internal Affairs and Administration of 7 June 2010 on the fire protection of buildings, other structures and areas (Journal of Laws of 2010, no. 109, item 719, as amended),
 - h) Regulation of the Minister of Infrastructure of 12 April 2002 on the technical conditions, which must be fulfilled by buildings and their location (Journal of Laws of 2015, item 1422, as amended),
 - i) Harmonised standard EN 16034:2014-11 Pedestrian doorsets, industrial, commercial, garage doors and openable windows - Product standard, performance characteristics - Fire resisting and/or smoke control characteristics
 - j) Standard PN-EN 13501-2:2016-07 Fire classification of construction products and building elements –



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Part 2: Classification using data from fire resistance tests, excluding ventilation services.

- k) Harmonised standard EN 13241+A2:2016-10 Industrial, commercial, garage doors and gates. Product standard, performance characteristics
- l) Standard PN-EN 12635+A1:2010 Industrial, commercial and garage doors and gates – Installation and use,
- m) Standard PN-EN 12424:2002 Industrial, commercial and garage doors and gates – Resistance to wind load. – Classification;
- Declaration of Performance;
- this manual for the use, operation and maintenance.

In accordance with standard EN (i) and regulation MliB (f), the fire protection gate belongs to the group of construction products subject to the system 1 of assessment and verification of constancy of performance.

In accordance with the Regulation (a), the manufacturer, upon introduction of the construction product to the market, shall issue a Declaration of Performance and mark the fire protection gate with a legible CE marking label.

CAUTION!

A copy of the Declaration of Performance and the Warranty Card are delivered by the manufacturer to the user upon acceptance of the installation of the fire protection gate in accordance with the conditions of the contract (offer/contract).

A copy of the Declaration of Performance and the Warranty Card for the fire protection gate are an integral part of this manual and constitute annexes to it - see section 11 - ANNEXES.

The CE markings of the fire protection gate are placed on the nameplate – see section 10 - MARKING.

The current list of companies authorised to perform installation, service inspections and maintenance (including the assessment and confirmation of proper performance of these activities) is available on the website (www.malkowski.pl) – of the fire protection gate manufacturer.

2. SCOPE AND CONDITIONS OF USE

2.1 Intended use

The fire protection overhead gate type MARC-O EI120 constitutes a vertical, movable fire protection partition and it is used to close a passageway between fire partitions in industrial facilities, storage areas, technical storeys in office buildings, hospitals and other public buildings (it constitutes the so-called fire resistance partition)

The fire protection overhead gate type MARC-O in the basic version is made with the declared utility category C0 (number of cycles: 1 – 499, as per EN 16034:2014-11) and wind load resistance class 1 (as per PN-EN 12424:2002).

At the Customer's request, the overhead gate type MARC-O EI60 can be made with the declared utility category **1** (number of cycles: 500 – 9,999), **2** (number of cycles: 10,000 – 49,999), **3** (number of cycles: 50,000 – 99,999) or **4** (number of cycles: 100,000 – 199,999) and wind load resistance class **2, 3** or **4**.

2.2 IMPROPER USE

The fire protection overhead gate type MARC-O EI120 is not suitable for the following use:

- in potentially explosive atmospheres (Ex zones) – possible with suitable modifications made by the manufacturer,
- in an environment with dust, salts, acids, alkalis and other aggressive chemicals (e.g. cement, lime) that cause corrosion (permissible relative humidity: max 80%),
- in an area of strong magnetic field impact (above 0.1 T),
- in an area of wind load stronger than provided for by the declared class on the nameplate and in the copy of the Declaration of Performance;



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CAUTION!

The wind load resistance, as per PN-EN 12424:2002, applies to the gate in the closed position. The use of the gate under strong wind conditions may prove dangerous.

Furthermore, the following is not permissible:

- installation of the fire protection gate by a company/installation team not authorised by the manufacturer,
- independent repairs, troubleshooting, improvements, modifications, replacement and installation of assemblies, parts outside the limits specified in this manual or without the written consent of the manufacturer of the gate (see consent/lack of consent of the manufacturer – tables in section 6 - TECHNICAL DATA),
- installation of parts or components being the so-called “substitutes” of original parts or components, not specified and not authorised by the manufacturer of the gate,
- use of a defective gate or gate partially/completely non-compliant with properties or intended use (due to the impact of fire, construction disaster, etc.),
- use of the gate without operator inspections, periodical service inspections and maintenance according to this manual (see section 8 - INSPECTION, MAINTENANCE, REPAIR) or to the individual arrangements specified in the contract between the user and the manufacturer of the fire protection overhead gate,
- use of the gate with mechanical damage or other defects caused by improper operation, including after emergency stop without repairing damage,
- use of the gate after finding irregularities in its operation or in individual components of the machine, without notifying the supervision, appropriate service and service centre of the manufacturer of the gate,
- use of the gate with the nameplate removed or damaged,
- operation and repair works during the movement of gate components,
- walking/running or driving through during the gate movement,
- washing, cleaning the gate with corrosive agents, based on various types of acid and solvent and washing with a washer, pressurised liquid (see subsection 8.4 - CLEANING, LUBRICATION).

Failure to comply with the above restrictions will result in the loss of obligations and guarantees granted to the user in relation to the gate, including the maintenance of its declared fire resistance and the validity of the Declaration of Performance issued for this gate, by its manufacturer.

CAUTION!

The manufacturer shall be released from their obligations and guarantees for the gate in the following cases:

- installation of the product by an installation team not authorised by the manufacturer,
- natural wear, partial or complete, due to the performance or intended use of the gate (e.g. due to fire impact etc.),
- modifications, replacement of components, repairs, structural changes to the gate or its components by the user or third parties without agreement and written arrangement with the manufacturer,
- improper use or failure to perform ongoing maintenance of the gate or its components, in accordance with the provisions of this manual,
- failure to perform periodical inspection in accordance with this manual or in accordance with separate, documented arrangements with the manufacturer or their authorised service centre, if it influenced the formation of damage and other defects (including the removal or damage to the nameplate etc.).

In these cases, the manufacturer shall also not guarantee the maintenance of the declared fire resistance of the gate.

To ensure trouble-free operation and compliance with warranty conditions, please contact MAŁKOWSKI-MARTECH S.A. or a commercial partner to arrange a product training. The purpose of the training is to present



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the necessary information on proper use and, among other things, requirements for the operation personnel.

2.3 OHS RECOMMENDATIONS

During the use of the fire protection gate, observe generally applicable occupational health and safety regulations, including the conditions related to fire requirements (the so-called fire protection) and timely completion of the required periodical inspection and maintenance of the gate, replacement of components and repairs. Do not use the gate without eliminating damage in case of emergency stop.

During all works with the fire protection gate, observe the legal regulations related to the reduction of waste and its proper removal/disposal. In particular, during the cleaning, maintenance, replacement of components, repairs of the fire protection gate, make sure that no harmful substances, such as lubricants, cleaning products with solvents etc., reach the soil, sewage. These substances shall be collected, stored and transported in appropriate containers and disposed of in accordance with legal regulations.

2.4 REQUIREMENTS FOR OPERATION PERSONNEL

No special licences are required to operate the fire protection gate. The gate should be operated by the operator (e.g. maintenance technician) appointed for this purpose by the user. This person should be trained in operation by a representative of the manufacturer of the fire protection gate or their authorised installation team/company and the completion of training should be recorded in the report.

The user should make sure that the operation personnel is trained in occupational safety, including the potential hazards, as well as the requirements of job instructions, this manual and the manuals constituting annexes to it.

3. PACKAGING, STORAGE, TRANSPORT

Depending on the arrangements (individual provisions in the contract [offer/contract], the fire protection gate can be collected from the manufacturer warehouse or delivered to the installation site by the manufacturer, with reception confirmed in qualitative and quantitative terms in a "Delivery Note".

The fire protection gate is delivered in assemblies and components to be assembled and installed on site of the user. Every assembly and component is separately protected from mechanical damage in transport, namely:

- gate leaf panels are placed on a pallet, not smaller than the dimensions of a single panel, on waste wool or expanded polystyrene spacers, foiled and strapped with polyester tape through protecting beams,
- formed components are placed on a mineral wool or expanded polystyrene spacers with leaf panels or on a separate pallet,
- small accessory items, such as fasteners, etc., are assembled in a separate cardboard box,
- each package (packaging) is appended with a label with identification data of the assemblies, components placed in it, with the customer's order no., assembly no., fire protection gate type, no. of the Declaration of Performance;

The following rules shall be adhered to during the transport, storage and installation of the fire protection gate:

- during the transport, assemblies, components, parts of the gate should be adequately protected (with belts, spacers etc.),
- after unloading/during storage, the components of the gate must be stored in a sheltered room, protecting them from damage, contamination, weather impact (rain, snow), etc.,
- it is prohibited to walk, drive on assemblies, components and parts of the gate, place loads, tools, chemicals on them, lean against them and perform any other activities not mentioned herein, which could cause damage to them and reduce their value /quality;



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4. INSTALLATION

The installation of the mechanical and electrical parts of the fire protection gate may only be performed by trained personnel of the manufacturer and installation teams/companies authorised by the manufacturer. As part of basic activities related to the installation of the fire protection gate:

- before starting the above works, check the delivered components for any quantitative deficiencies, including damage in transport or storage,
- check the compliance of installation conditions with the drawing of the order (with the drawing of the order),
- carefully perform and assemble all connections, check their proper seating.

The installation of the fire protection gate must be performed in accordance with the installation instructions (see section 11 - ANNEXES), proper performance of works and activities must be inspected after installation. The acceptance must be attended by the authorised representative of the Ordering Party and the representative of the manufacturer (or a member of the authorised installation team/company on the behalf of the manufacturer), who confirm this activity with a record in the Periodical Inspection and Maintenance Sheet (constituting an annex to this manual) or in a separate work acceptance protocol.

4.1 MECHANICAL INSTALLATION

The installation of the mechanical part of the fire protection gate must be performed in accordance with installation instructions (see section 11 - ANNEXES), which are special technical documentation, intended only for the foremen of installation teams with appropriate certificates/assembly certificates issued by the manufacturer of the fire protection gate.

CAUTION!

To properly capture, lift and attach the entire structure of the fire protection gate, appropriate OHS conditions and equipment must be provided, e.g. ladders of appropriate height, harnesses, lanyards and other tools, such as slings, lifting bars, winch or lift truck with lifting capacity and height corresponding to the weight and attachment height of this structure.

The contract specifies, who shall provide this equipment – also during the periodical inspection and maintenance.

4.2 ELECTRICAL INSTALLATION

The configuration of the electrical fittings kit of the fire protection gate depends on the order and the installation should be performed in accordance with special documentation (for installers), constituting annexes to this manual.

The electrical system diagram is included on the internal side of the control panel and in the installation instructions of the electrical fittings kit, constituting an annex to this document (see section 11 - ANNEXES).

CAUTION!

On the installation site of the fire protection gate, the user should ensure access to an appropriate electrical system with proper parameters and protection values, which enable connection and performance of operational tests and uninterrupted operation of the fire protection gate on the site of use.

The electrical system for connecting the electrical fittings kit of the fire protection gate should be checked and in case of failure repaired by an electrician with appropriate qualifications and licences.

5. OPERATING PRINCIPLE OF ELECTRICAL FITTINGS

The basic function of the electrical fittings set (see subsection 6.7 – 6.10 - ELECTRICAL FITTINGS SET) is to automatically start closing the gate upon detection of a fire hazard. A detailed description of the construction, installation and operation of the above used alarm set and fire detection in the delivered fire protection gate is included in the installation instructions of the electrical set, constituting the annex to this document.



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The fire protection gate leaf is placed in the guide assembly and maintained in the open position with an electromagnetic holder or electric motor, which is connected to the fire protection power supply, which in turn may be equipped with a fire protection panel by the manufacturer or connected directly to the facility fire alarm system (SAP).

If fire hazard is detected by smoke/temperature detectors, the fire protection panel (SAP) or power supply:

- isolates the voltage from the electromagnetic holder, the leaf is closed by gravity, while the leaf weight and balance weight difference enables maintaining the permissible closing speed.

- OR -

- through the power supply, the voltage is fed to the electrical motor, which starts the leaf (optional);

The leaf can be also released manually with a special button, also connected to the control panel.

When the cause of the fire alarm is eliminated, the control panel returns to the normal operation mode, while the gate should be moved to the open position manually, so that the contacts of the electromagnetic holder are shorted, or automatically, using the electrical drive until the gate leaf reaches the open position. Stop in the open position is achieved with limit switches built into the drive.

6. TECHNICAL DATA

Parameter description	Parameter value	Notes
Fire resistance class	EI ₂ 60	-
Closing speed	< 0.15 m/s	-
Operation (manual/mechanical)	-	closing by gravity, with the leaf and balance weight difference. Opening manually or using the electrical drive.
Leaf colour	any RAL colour on request	standard colours: RAL 9002, 9010, 7035
Cover colour		





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Wersja z pasami	Belt version
Wersja z linami	Line version

List of components of the fire protection overhead gate type MARC-O EI120

Item	Name	Quantity	Drawing/catalogue/standard no.
1	Gate leaf	1	2 – MARC-O120-01.01.00
2	Wall stop	3	3 – MARC-O120-01.02.00
3	Leaf guide assembly	2	4 – MARC-O120-01.03.00
4	Line/belt pulley assembly	2	5 – MARC-O120-01.04.00
5	Carrying line/belt	2	Ø6(8), 18x7+FC PN 12385-1, -4 50x4 mm, PN 12195-2
6	Balance weight assembly	2	6 – MARC-O120-01.05.00
7	Electromagnetic holder/VIC drive assembly*	1	7 – MARC-O120-01.06.00, * - depending on the order
8	Leaf guide cover	2	8 – MARC-O120-01.07.00

LIST OF ANCHORING COMPONENTS OF GUIDE PROFILES, LINE ASSEMBLIES

CAUTION. 1. The standard set supplied with the gate includes components intended for installation on concrete (C20/25) and reinforced concrete walls.

2. Using components other than listed for installation is possible, provided they were introduced to the market with the CE or B mark, at least with the same strength parameters and intended use.

Item	Anchoring components	Notes
A. FLOORS OF HOLLOW CORE SLABS OF STANDARD AND COMPRESSED CONCRETE		
A.1	Anchor for hollow core slabs (perforated) Fischer FHV, Hilti HKH	- size and type of components selected for transferred loads,
A.2	Anchor sleeve (driven) e.g. Fischer EA II, Hilti HKD	
B. WALLS, FLOORS AND UNIFORM CONCRETE AND REINFORCED BEAMS		
B.1	Anchor pin (ring) e.g. MKT BZ, Fischer FAZ II, Hilti HST3	- size and anchoring depth selected for transferred loads,
B.2	Screw-in anchor e.g. Fischer FBS II, Hilti HUS HR / CR	
B.3	Chemical attachment with threaded rod e.g. MKT VM Multi-plus, Fischer FIS SB	- rod min. M8 as per DIN 976, class min. 8.8 as per PN-EN ISO 898-1,
C. MASONRY WALLS OF CELLULAR CONCRETE BLOCKS (e.g. ytong, solbet, thermoalica)		
C.1	Chemical attachment with threaded rod e.g. MKT VM Multi-plus, Fischer FIS V, FIS P	- rod min. M8 as per DIN 976, class min. 8.8 as per PN-EN ISO 898-1,
C.2	Pass-through wall installation with threaded rod	- rod as per DIN 976, size selected for transferred loads, class min. 8.8 as per PN-EN ISO 898-1, - nut as per PN-EN ISO 4032, class min. 8, - broadened washer as per PN-EN ISO 7093-200 HV,
D. FULL MASONRY WALLS (e.g. concrete blocks, silicate, solid brick) AND DRILLED MASONRY WALLS (e.g. chequer brick, cavity brick, porotherm)		



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D.1	Chemical attachment with threaded rod e.g. MKT VM Multi-plus, Fischer FIS V, FIS P	- rod min. M8 as per DIN 976, class min. 8.8 as per PN-EN ISO 898-1,
D.2	Pass-through wall installation with threaded rod	- as in sec. C.2, with replaceable washers, - washers as per PN-EN ISO 4079-200 HV,

E. HOT-DIP GALVANISED STEEL STRUCTURES AND FIRE PROTECTION STUD WALLS ¹⁾		
E.1	Screw connection	- screw as per PN-EN ISO 4014-4017, size selected according to transferred loads, class min. 8.8 as per PN-EN ISO 898-1, - washers as per PN-EN ISO 4079-200 HV, - nut as per PN-EN ISO 4032, class min. 8,

1) – Internal steel profiles must transfer static and dynamic loads related to gate installation and operation

LIST OF ANCHORING COMPONENTS FOR WALL STOPS, COVERS ²⁾

F. REINFORCED CONCRETE WALLS, MASONRY, OF CELLULAR CONCRETE BLOCKS, FULL AND DRILLED		
F.1	Steel expansion anchor (frame anchor)	- M8, M10, - minimum length 72 mm,
F.2	Plastic anchor for Hilti HRD-CR frames	- size 8, 10 - minimum length 60 mm,
F.3	Screws for steel structures (sheet-metal screws) e.g. Hilti S-MD, Stalco WS / FD / FM, Etanco GT	- min. St 4.8 x 25, as per DIN 7504, - size selected according to transferred loads and thickness of walls of connected components,

2) – Except for the components listed below, all components from items B, C, D and E can be used

6.1 GATE LEAF

The leaf is the main part of the fire protection overhead gate. In the closed position, it forms a sealed partition with the fire resistance class EI120.

The gate leaf is 100 mm thick, consists of 400 – 1200 mm wide panels, two side profiles, a bottom profile, reinforcements and galvanised steel cladding.

Each panel of the gate leaf is filled with mineral wool boards, catalogue number PRO_{MM}17.

Vertical sheets of galvanised steel grade DX51D+Z275 as per PN-EN 10346:2015-09, thickness 0.5 – 0.7 mm, are attached to both sides of the leaf with adhesive, catalogue number PRO_{MM}2, PRO_{MM}12 or O-PA. A vertical rod of steel grade S235JR as per PN-EN 10025-2:2019-11, with a diameter of 8 mm and threaded ends, connecting the profile of the upper horizontal reinforcement with the lower profile, is placed inside every panel. The lower profile (top-hat) is shaped of steel sheet grade DX51D+Z275 as per PN-EN 10346:2015-09, with the thickness of 2.0 – 3.0 mm. The lower profile and the profile of the upper horizontal reinforcement are connected on both ends with vertical side profiles. Side profiles are also top-hat profiles of steel sheet grade DX51D+Z275 as per PN-EN 10346:2015-09, with the thickness of 2.0 – 3.0 mm. Two sliding blocks and steel angles of galvanised steel sheet with the thickness of 2.0 mm, constituting vertical labyrinth seals, are attached to each side profile of the leaf. On their surfaces, along the entire height, intumescent seals are placed, with the catalogue number PRO_{MM}15. The reinforcement steel profile is enclosed with fire-retardant strips with the catalogue number PRO_{MM}11. Closing steel profiles are also components of vertical labyrinth seals, on their surfaces, along the entire height, intumescent seals are placed, with the catalogue number PRO_{MM}15.

The labyrinth edges of the gate leaf are finished with profiles of steel sheet grade DX51D+Z275 as per PN-EN 10346:2015-09 with the thickness of 0.5 – 0.7 mm, attached with steel rivets to cladding sheets.



Leaf - parameters

Parameter description	Unit	Parameter value	Notes
Width / height / thickness	mm	So ¹⁾ + 225 / Ho ²⁾ + 145 / 60	-
Colour	-	any RAL colour on request	standard colours: RAL 9002, 9010, 7035
Quantity	pcs.	1	-
Total weight	kg / m ²	40.0	-

1) – Width of the gate opening (opening in the building partition), 2) – Height of the gate opening

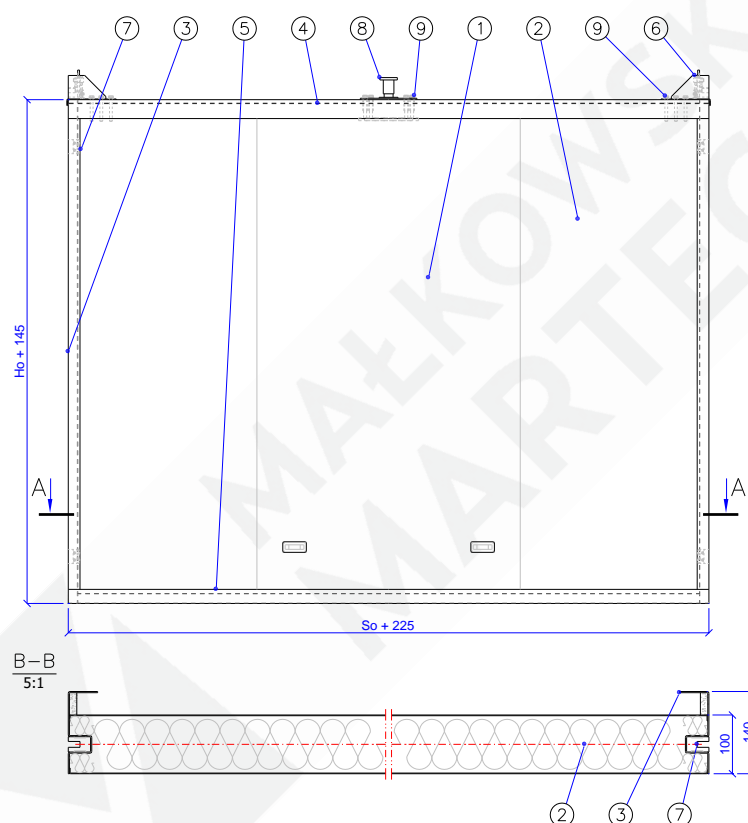


Fig. 2 – MARC-O120-01.01.00 [Gate leaf]

1 – Mid panel, 2 – Limit panel, 3 – Side fitting with stop, 4 – Top fitting with stop, 5 – Bottom fitting, 6 – Anti-fall brake, 7 – Slide, 8 – Electromagnetic holder jumper, 9 – M12x120 screw

Leaf - list of components

Item	Name	Il.	Replacement / Repair			Notes
			U ¹⁾	A ²⁾	P ³⁾	
1	Mid panel	*	-	-	YES	* - depending on the gate width
2	Limit panel	2	-	-	YES	-
3	Side fitting with stop	2	-	YES	YES	-
4	Top fitting with stop	1	-	YES	YES	-



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5	Bottom fitting	1	-	YES	YES	-
6	Anti-fall brake	2	-	YES	YES	-
7	Slide	4	-	YES	YES	-
8	Electromagnetic holder jumper	1*	-	YES	YES	* - 2 for So > 4500 mm
9	M12 x 120 hexagon head screw	8	-	YES	YES	PN-EN ISO 4017 / DIN 933, class 8.8

1) – User, 2) – Authorised service centre, 3) – Manufacturer

CAUTION! If parts reserved for the manufacturer only are replaced by a third party - this results in immediate nullity of the CE marking on the gate and related performance, in particular fire resistance, is cancelled.

6.2 WALL STOP

Wall stops are part of labyrinth seals of the gate opening. They are placed along each edge of opening. The stop is made of Z-shaped profile, made of steel sheet grade DX51D+Z275 as per PN-EN 10346:2015-09, with the thickness of 2.0 mm, protected with fire-retardant strips with the catalogue number PRO_{MM}3 and cover made of sheet of the same grade and thickness of 0.5 – 0.7 mm.

Along the stop profile, on the entire length, an intumescent seal is placed, with the catalogue number PRO_{MM}15.

Wall stop - parameters

Parameter description	Unit	Parameter value	Notes
Width / height / length	mm	90 / 45 / So ¹⁾ + 200 90 / 45 / Ho ²⁾ + 100	-
Colour	-	any RAL colour on request	standard colours: RAL 9002, 9010, 7035
Quantity / gate	set	3*	* - 2 vertical + 1 horizontal
Total weight	kg / lm.	3.25	-

1) – Width of the gate opening (opening in the building partition), 2) – Height of the gate opening

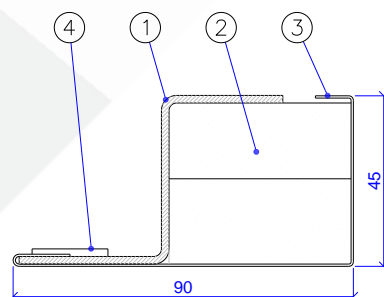


Fig. 3 – MARC-O120-01.02.00 [Wall stop]

1 – Rail, 2 – Rail connector, 3 – Cover mounting profile



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Wall stop - list of components

Item	Name	Il.	Replacement / Repair			Notes
			U ¹⁾	A ²⁾	P ³⁾	
1	Stop profile	1	-	YES	YES	-
2	Fire-proof panel	1	-	YES	YES	-
3	Cover	1	-	YES	YES	-
4	Expanding seal	1		YES	YES	PRO _{MM} 15

1) – User, 2) – Authorised service centre, 3) – Manufacturer

CAUTION! If parts reserved for the manufacturer only are replaced by a third party - this results in immediate nullity of the CE marking on the gate and related performance, in particular fire resistance, is cancelled.

6.3 LEAF GUIDE ASSEMBLY

The fire protection overhead gate type MARC-O is equipped with two rail assemblies, placed on both sides of the opening, in which the leaf moves.

The structure of each guide is a main profile made of galvanised steel sheet grade DX51D+Z275 as per PN-EN 10346:2015-09 with the thickness of 3.0 – 5.0 mm. Through this profile, the assembly is attached to the partition. The anchoring component type depends on the building partition material.

To the main profile, to the edge perpendicular to the partition, guide profiles of galvanised steel grade DX51D+Z275 as per PN-EN 10346:2015-09, with the thickness of 1.0 – 2.0 mm, are point-welded or screwed with steel sheet-metal self-tapping screws.

On the opposite side, a set of fire-retardant slabs with the length equal to the opening height, increased by 100 mm, is installed.

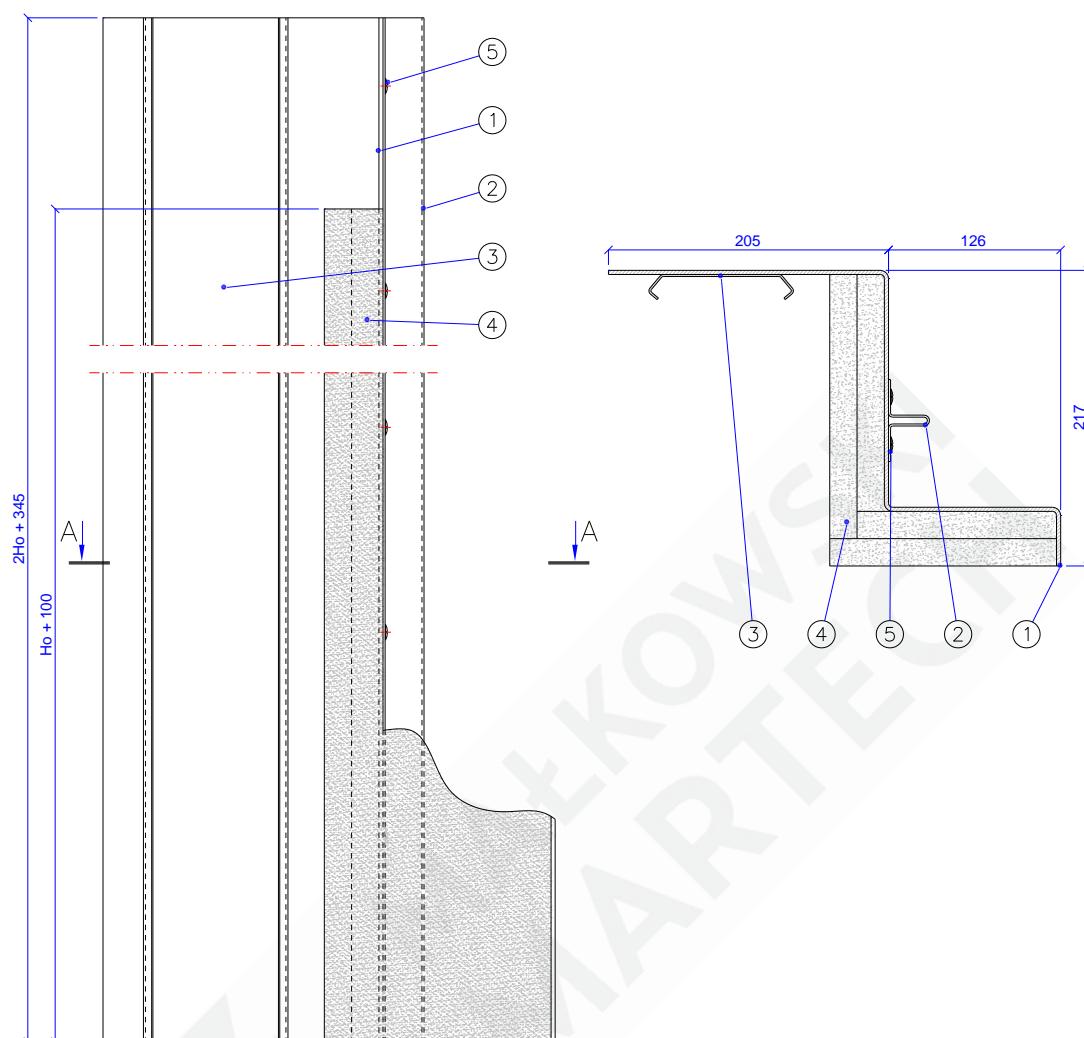
A balance weight guide is fitted to the edge of contact with partition, made of galvanised steel sheet grade DX51D+Z275 as per PN-EN 10346:2015-09 with the thickness of 2.0 mm.

Leaf guide assembly - parameters

Parameter description	Unit	Parameter value	Notes
Width / height / length	mm	331 x 217 x 2Ho ¹⁾ + 345	-
Colour	-	galvanised	any RAL colour on request
Quantity	pcs.	2	-
Total weight	kg / lm.	21.50	-

1) – Height of gate opening (opening in the building partition)




Fig. 4 – MARC-O120-01.03.00 [Leaf guide assembly]

1 – Main profile, 2 – Leaf guide, 3 – Balance weight guide, 4 – Fire-proof panel, 5 – Self-drilling screw 4.2x13

Leaf guide assembly - list of components

Item	Name	Il.	Replacement / Repair			Notes
			U ¹⁾	A ²⁾	P ³⁾	
1	Main profile	*	-	-	YES	-
2	Leaf guide	1	-	YES	YES	-
3	Balance weight guide	1	-	YES	YES	-
4	Fire-proof panel	4	-	YES	YES	-
5	4.2 x 13 self-drilling screw	4*	-	YES	YES	* - every 500 mm, DIN 7504 T

1) – User, 2) – Authorised service centre, 3) – Manufacturer

CAUTION! If parts reserved for the manufacturer only are replaced by a third party - this results in immediate nullity of the CE marking on the gate and related performance, in particular fire resistance, is cancelled.



6.4 LINE PULLEY ASSEMBLY

The line pulley assembly consists of two components: the pulley assembly and the wall bracket. The pulley assembly is a steel roller (with recess for guiding the steel line) with handle.

The wall bracket is made as welded of structural steel sheet components with the thickness of 8.0 mm. The pulley assembly is fitted to the bracket with M12 x 35 screws, with M12 nuts and flat washers.

Alternatively, a belt pulley can be used instead of a line pulley.

Line pulley assembly - parameters

Parameter description	Unit	Parameter value	Notes
Width / height / length	mm	140 / 140 / 230	-
Colour	-	galvanised	any RAL colour on request
Quantity	pcs.	2	-
Total weight	kg.	9.6	-

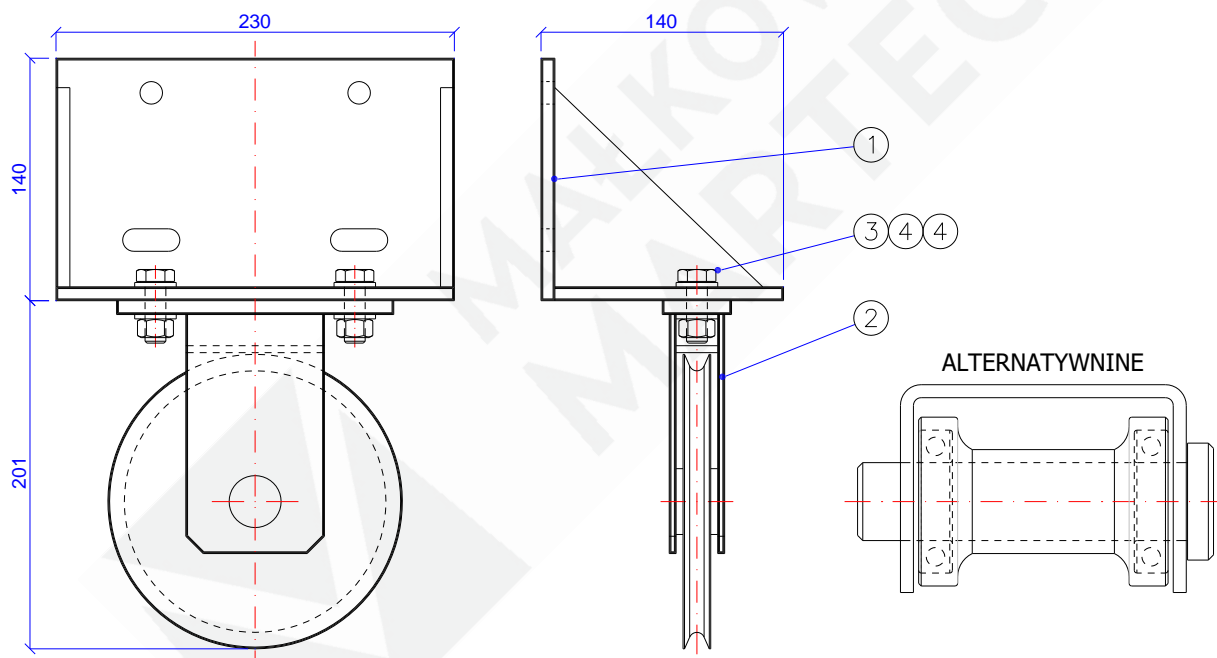


Fig. 5 – MARC-O120-01.04.00 [Line pulley assembly]

1 – Wall bracket, 2 – Pulley assembly, 3 – M12x35 screw, 4 – Plain washer 5 – M12 hexagon nut

alternatywnie	alternatively
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Line pulley assembly - list of components

Item	Name	Il.	Replacement / Repair			Notes
			U ¹⁾	A ²⁾	P ³⁾	
1	Wall bracket	1	-	YES	YES	-
2	Pulley assembly	1	-	YES	YES	-
3	M12 x 35 hexagon head screw	2	-	YES	YES	PN-EN ISO 4017 / DIN 933, class 8.8
4	Plain washer 13 200 HV	2	-	YES	YES	PN-EN ISO 7089
5	Hexagon nut M12	2	-	YES	YES	PN-EN ISO 4032, class 8

1) – User, 2) – Authorised service centre, 3) – Manufacturer

CAUTION! If parts reserved for the manufacturer only are replaced by a third party - this results in immediate nullity of the CE marking on the gate and related performance, in particular fire resistance, is cancelled.

6.5 BALANCE WEIGHT ASSEMBLY

The main component of the balance weight are steel rollers with the diameter of 120 mm (or another properly selected) and length of 250 mm. The following discs are connected using threaded M12 rods. The upper part of the balance weight assembly is fitted with a nut with eyelet and balance weight guide. The lower part is fitted with steel supplementary rollers, of which the number is specified during the assembly. The entire assembly is ended in the lower part with another balance weight guide and secured with two M12 nuts with washer.

Balance weight assembly - parameters

Parameter description	Unit	Parameter value	Notes
Diameter	mm	120*	* - standard dimension, other diameters are permissible
Colour	-	-	protection with primer paint
Quantity	set	2	-
Total weight	kg / lm.	90.0	-

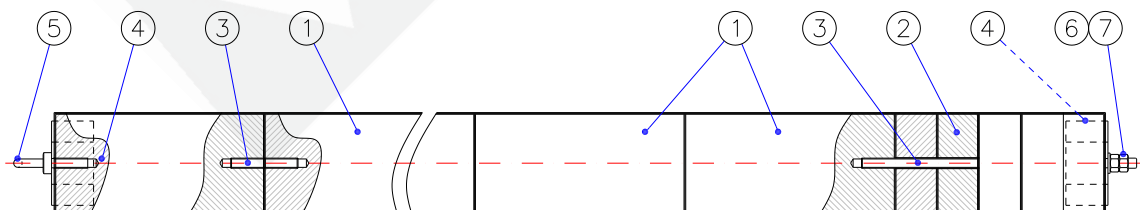


Fig. 6 – MARC-O120-01.05.00 [Balance weight assembly]

1 – Ballast rod 250 mm, 2 – Ballast rod 50 mm, 3 – Threaded connection rod M12,
4 – Balance weight guide, 5 – Line holder, 6 – M12 nut, 7 – Washer 13



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Balance weight assembly - list of components

Item	Name	ll.	Replacement / Repair			Notes
			U ¹⁾	A ²⁾	P ³⁾	
1	Ballast rod 250 mm	1	-	YES	YES	-
2	Ballast rod 50 mm	*	-	YES	YES	* - quantity depending on the leaf weight
3	Threaded connecting rod M12	*	-	YES	YES	* - quantity depending on the leaf weight
4	Balance weight guide	2	-	YES	YES	-
5	Line holder, M12 nut with eyelet	1	-	YES	YES	DIN 582, class 8
6	M12 nut	2	-	YES	YES	PN-EN ISO 4032, class 8
7	Plain washer 13	1	-	YES	YES	PN-EN ISO 7089

1) – User, 2) – Authorised service centre, 3) – Manufacturer

CAUTION! If parts reserved for the manufacturer only are replaced by a third party - this results in immediate nullity of the CE marking on the gate and related performance, in particular fire resistance, is cancelled.

6.6 ELECTROMAGNETIC HOLDER ASSEMBLY

The electromagnetic holder assembly consists of the part attached to the construction partition and part attached to the gate leaf.

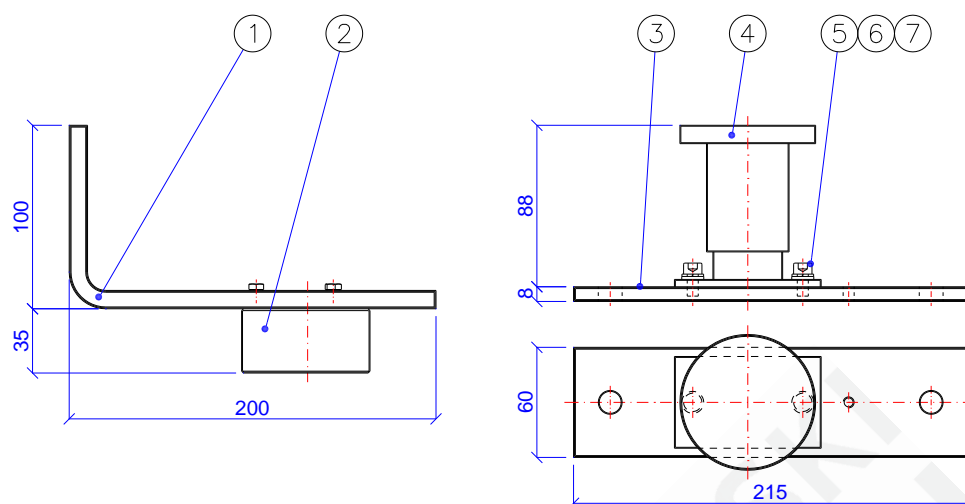
The partition is fitted with a wall bracket with a screwed electromagnetic holder

The leaf, in turn, is fitted with a mounting plate with holder jumper.

Electromagnetic holder assembly - parameters

Parameter description	Unit	Parameter value	Notes
Width / height / length	mm	215 / 231* / 60	* - set of components
Colour	-	galvanised	any RAL colour on request, for the bracket and mounting plate
Quantity	Set	1	-
Total weight	kg	2.5	-




Fig. 7 – MARC-O120-01.06.00 [Electromagnetic holder assembly]

1 – Wall bracket, 2 - Electromagnetic holder, 3 – Mounting plate, 4 – Electromagnetic holder jumper,
5 – M6x16 bolt, 6 – Washer 6.4, 7 – Spring washer 6.1

Electromagnetic holder assembly - list of components

Item	Name	Il.	Replacement / Repair			Notes
			U ¹⁾	A ²⁾	P ³⁾	
1	Wall bracket	1	-	YES	YES	-
2	Electromagnetic holder	1	-	YES	YES	-
3	Mounting plate	1	-	YES	YES	-
4	Electromagnetic holder jumper	1	-	YES	YES	-
5	M6 x 16 cheese head screw	2	-	YES	YES	DIN 912 / ISO 4762
6	Plain washer 6.4	2	-	YES	YES	PN-EN ISO 7089
7	Spring washer 6.1	2	-	YES	YES	DIN 127

1) – User, 2) – Authorised service centre, 3) – Manufacturer

CAUTION! If parts reserved for the manufacturer only are replaced by a third party - this results in immediate nullity of the CE marking on the gate and related performance, in particular fire resistance, is cancelled.



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6.7 LEAF GUIDE COVER

The cover protects complete sets of guides. It is made of 0.7 – 1.0 mm steel sheet grade DX51D+Z275 as per PN-EN 10346:2015-09.

On one side, it is attached to the main profile of the guide assembly, on the other side by means of a mounting clip – to the construction partition.

Guide cover - parameters

Parameter description	Unit	Parameter value	Notes
Width / depth / length	mm	335 / 200 / *	* - depending on the gate height
Colour	-	any RAL colour on request	standard colours: RAL 9002, 9010, 7035
Quantity	set	2	-
Total weight	kg / lm.	2.8 - 3.9*	* - depending on the sheet thickness

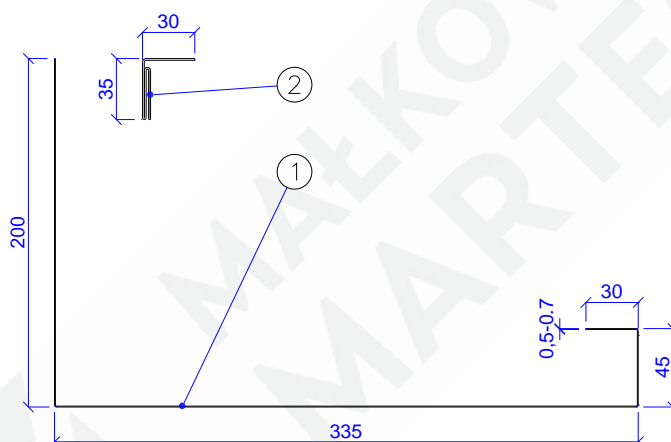


Fig. 8 – MARC-O120-01.07.00 [Guide cover]

1 – Cover, 2 – Mounting clip

Guide cover - list of components

Item	Name	Il.	Replacement / Repair			Notes
			U ¹⁾	A ²⁾	P ³⁾	
1	Cover	1	YES	YES	YES	-
2	Mounting clip	1	-	YES	YES	-

1) – User, 2) – Authorised service centre, 3) – Manufacturer

CAUTION! If parts reserved for the manufacturer only are replaced by a third party - this results in immediate nullity of the CE marking on the gate and related performance, in particular fire resistance, is cancelled.



6.8 ELECTRICAL FITTINGS KIT – VIC-EH

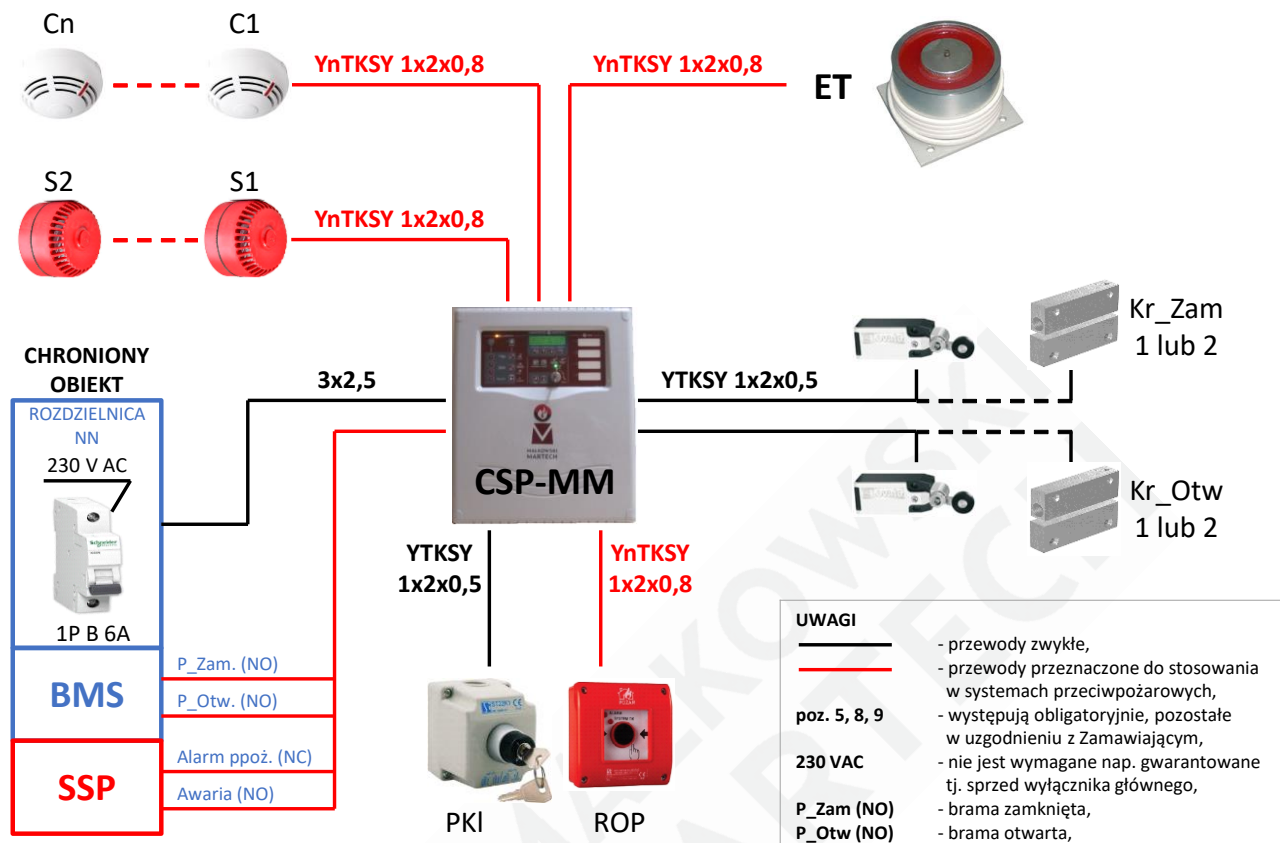


Fig. 9 – MARC-O control system with electromagnetic holder

CHRONIONY OBIEKT	MONITORED OBJECT
ROZDZIELNICA NN	LV SWITCHGEAR
BMS	BMS
SSP	SSP
P_Zam. (NO)	G_close (NO)
P_Otw. (NO)	G_open (NO)
Alarm ppoż. (NC)	Fire alarm (NC)
Awaria (NO)	Failure (NO)
PKI	PKI
ROP	ROP
UWAGI	NOTES
-przewody zwykłe	- regular wires
-przewody przeznaczone do stosowania w systemach przeciwpożarowych	- fire alarm system rated wires
poz.	item
-występują obligatoryjnie, pozostałe w uzgodnieniu z Zamawiającym	- obligatory, other in agreement with the Ordering Party
-nie jest wymagane nap. gwarantowane tj. sprzed wyłącznika głównego	- guaranteed voltage is not required, namely upstream of the main switch
P_Zam (NO)	G_close (NO)
P_Otw (NO)	G_open (NO)
-brama zamknięta	- gate closed
-brama otwarta	- gate open
Kr_Otw 1 lub 2	LS_open 1 or 2
Kr_Zam 1 lub 2	LS_close 1 or 2



Item	Figure marking	Item type	Item designation	Item code	Recommended quantity	Notes
1	C1 - Cn	point fire detector	optical smoke detector	DRP-100	2	recommended DRP-100, max. 32 pcs.
			class A1R heat detector	DCP-100	2	
			multi-vector smoke and heat detector	DMP-100	2	
2	C1 - Cn	detector receptacle	standard fire detector receptacle	DB100	2	quantity equal to number of detectors
3	ROP	manual call point	standard manual call point	ROP-100/PL	1	max. 10 pcs.
4	S1, S2	fire alarm indicator	fire alarm sounder, low base	SPP-100	1	max. 2 lines
5	ET	electromagnetic holder	land holder	EM-xxxx	1	-
6	LS_close	limit switch 1 mag. sensor 2	mecha. limit switch magnetic reed relay switch	KB F1 S11 MS-240-S45	1	application option, selection 1 or 2
7	LS_open	limit switch 1 mag. sensor 2	mecha. limit switch magnetic reed relay switch	KB F1 S11 MS-240-S46	1	application option, selection 1 or 2
8	PKI	keyswitch	keyswitch operated K1 control box	SP22K1/07-1	1	-
9	CSP-MM	control	universal drive controller	CSP-MM 1(2)	1	-



6.9 ELECTRICAL FITTINGS KIT – VIC-040x

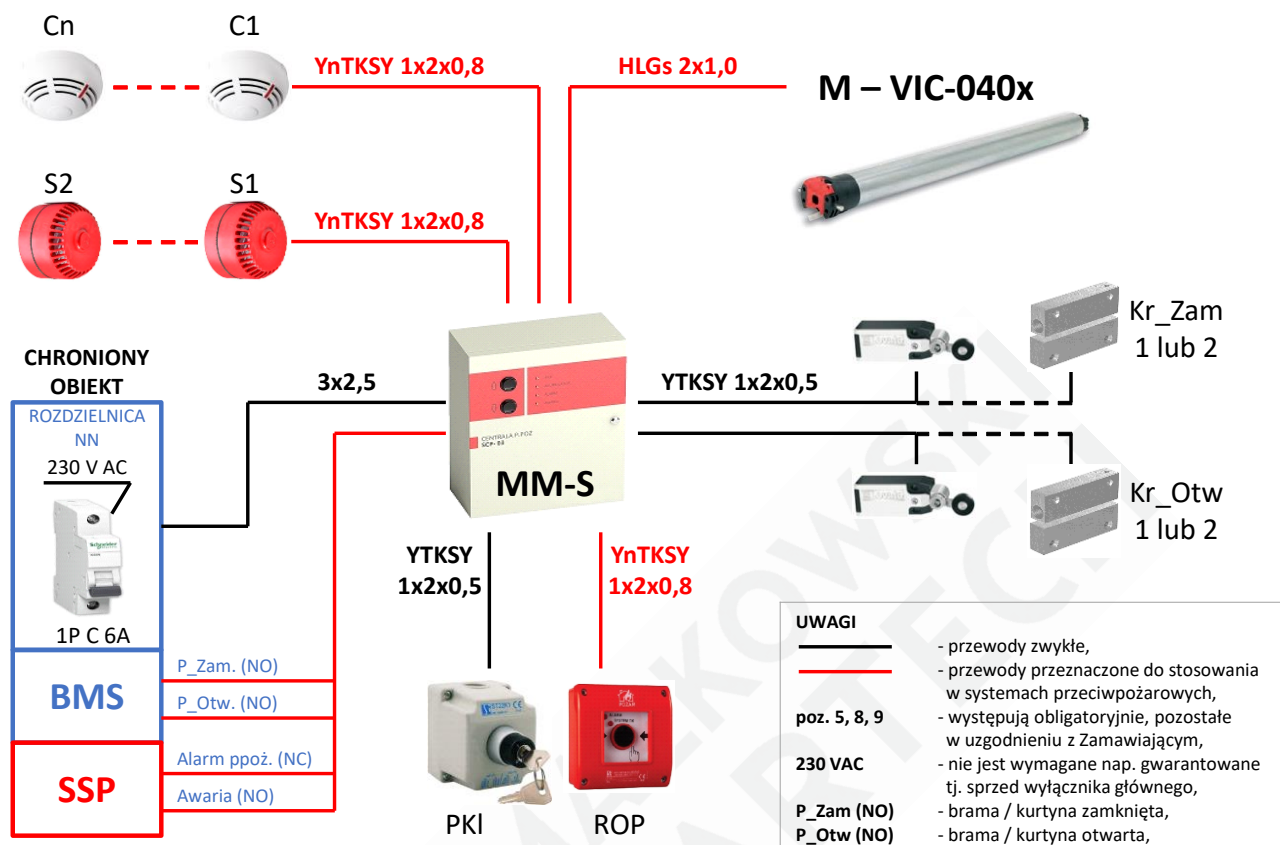


Fig. 10 – MARC-O control system with internally-mounted (tubular) 24 V DC drive unit

CHRONIONY OBIEKT	MONITORED OBJECT
ROZDZIELNICA NN	LV SWITCHGEAR
BMS	BMS
SSP	SSP
P_Zam. (NO)	G_close (NO)
P_Otw. (NO)	G_open (NO)
Alarm ppoż. (NC)	Fire alarm (NC)
Awaria (NO)	Failure (NO)
PKI	PKI
ROP	ROP
UWAGI	NOTES
-przewody zwykłe	- regular wires
-przewody przeznaczone do stosowania w systemach przeciwpożarowych	- fire alarm system rated wires
poz.	item
-występują obligatoryjnie, pozostałe w uzgodnieniu z Zamawiającym	- obligatory, other in agreement with the Ordering Party
-nie jest wymagane nap. gwarantowane tj. sprzed wyłącznika głównego	- guaranteed voltage is not required, namely upstream of the main switch
P_Zam (NO)	G_close (NO)
P_Otw (NO)	G_open (NO)
-brama / kurtyna zamknięta	- gate / curtain closed
-brama /kurtyna otwarta	- gate / curtain open
Kr_Otw 1 lub 2	LS_open 1 or 2
Kr_Zam 1 lub 2	LS_close 1 or 2



Item	Figure marking	Item type	Item designation	Item code	Recommended quantity	Notes
1	C1 - Cn	point fire detector	optical smoke detector	ID100	2	recommended ID100, max. 6 pcs.
			class A1R heat detector	ID200	2	
			smoke and heat detector	ID300	2	
2	C1 - Cn	detector receptacle	standard fire detector receptacle	EB0010	2	quantity equal to number of detectors
3	ROP	manual call point	standard manual call point	ROP OP1	1	max. 10 pcs.
4	S1, S2	fire alarm indicator	fire alarm sounder, low base	SPP-100	1	max. current 200 mA
5	M	electric drive	internal (tubular)	VIC-040x	1	-
6	LS_close	limit switch 1 mag. sensor 2	mecha. limit switch magnetic reed relay switch	KB F1 S11 MS-240-S45	1	application option, selection 1 or 2
7	LS_open	limit switch 1 mag. sensor 2	mecha. limit switch magnetic reed relay switch	KB F1 S11 MS-240-S46	1	application option, selection 1 or 2
8	PKI	key switch	key switch operated K1 control box	SP22K1/07-1	1	-
9	MM-S	control	universal drive controller	MM-S	1	-



6.10 ELECTRICAL FITTINGS KIT – VIC-010x

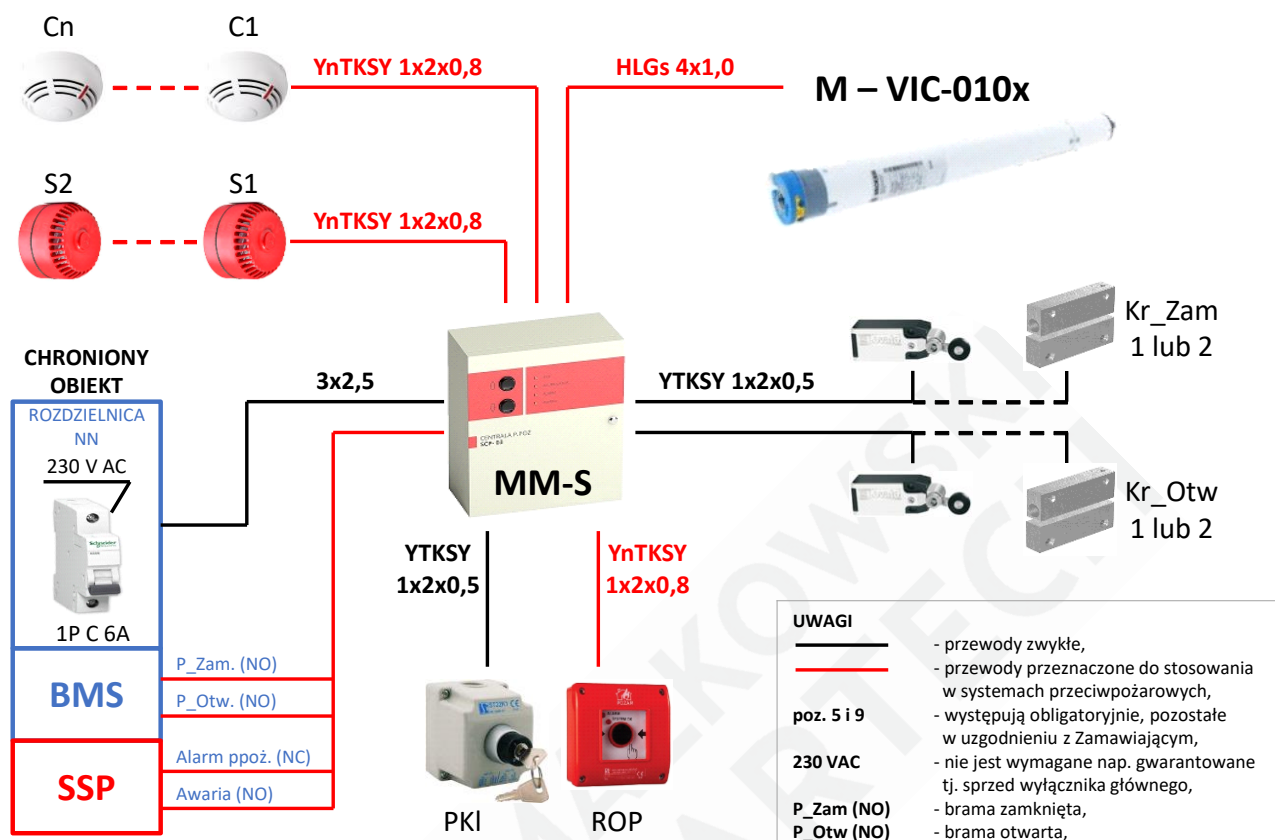


Fig. 11 – MARC-O control system with internally-mounted (tubular) 24 V DC drive unit

CHRONIONY OBIEKT	MONITORED OBJECT
ROZDZIELNICA NN	LV SWITCHGEAR
BMS	BMS
SSP	SSP
P_Zam. (NO)	G_close (NO)
P_Otw. (NO)	G_open (NO)
Alarm ppoż. (NC)	Fire alarm (NC)
Awaria (NO)	Failure (NO)
PKI	PKI
ROP	ROP
UWAGI	NOTES
-przewody zwykłe	- regular wires
-przewody przeznaczone do stosowania w systemach przeciwpożarowych	- fire alarm system rated wires
poz. 5 i 9	items 5 and 9
-występują obligatoryjnie, pozostałe w uzgodnieniu z Zamawiającym	- obligatory, other in agreement with the Ordering Party
-nie jest wymagane nap. gwarantowane tj. sprzed wyłącznika głównego	- guaranteed voltage is not required, namely upstream of the main switch
P_Zam (NO)	G_close (NO)
P_Otw (NO)	G_open (NO)
-brama zamknięta	- gate closed
-brama otwarta	- gate open
Kr_Otw 1 lub 2	LS_open 1 or 2
Kr_Zam 1 lub 2	LS_close 1 or 2



Item	Figure marking	Item type	Item designation	Item code	Recommended quantity	Notes
1	C1 - Cn	point fire detector	optical smoke detector	ID100	2	recommended ID100, max. 6 pcs.
			class A1R heat detector	ID200	2	
			smoke and heat detector	ID300	2	
2	C1 - Cn	detector receptacle	standard fire detector receptacle	EB0010	2	quantity equal to number of detectors
3	ROP	manual call point	standard manual call point	ROP OP1	1	max. 10 pcs.
4	S1, S2	fire alarm indicator	fire alarm sounder, low base	SPP-100	1	max. current 200 mA
5	M	electric drive	internal (tubular)	VIC-010x	1	-
6	LS_close	limit switch 1 mag. sensor 2	mecha. limit switch magnetic reed relay switch	KB F1 S11 MS-240-S45	1	application option, selection 1 or 2
7	LS_open	Limit switch 1 mag. sensor 2	mecha. limit switch magnetic reed relay switch	KB F1 S11 MS-240-S46	1	application option, selection 1 or 2
8	PKI	key switch	key switch operated K1 control box	SP22K1/07-1	1	-
9	MM-S	control	universal drive controller	MM-S	1	-



6.11 ELECTRICAL FITTINGS KIT – VIC-012x

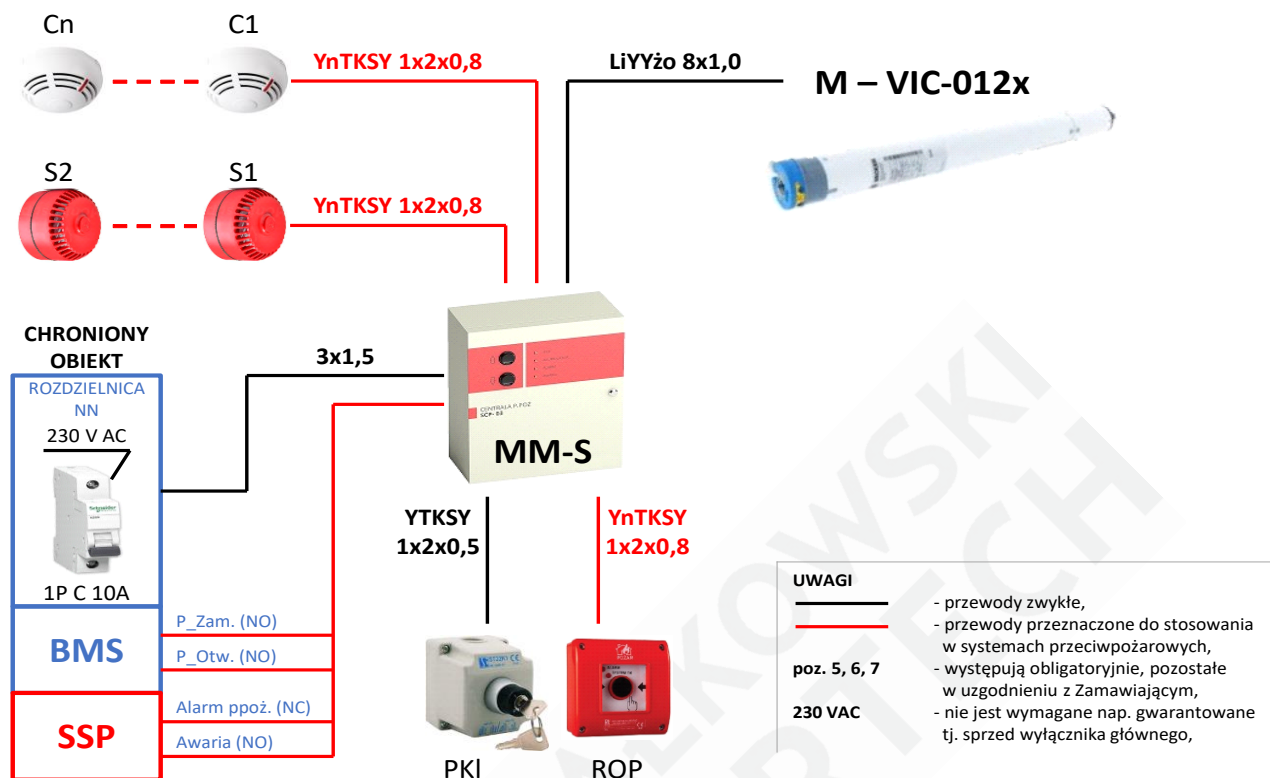


Fig. 12 – MARC-O control system with internally-mounted (tubular) 230 V AC drive unit (closing by gravity)

CHRONIONY OBIEKT	MONITORED OBJECT
ROZDZIELNICA NN	LV SWITCHGEAR
BMS	BMS
SSP	SSP
P_Zam. (NO)	G_close (NO)
P_Otw. (NO)	G_open (NO)
Alarm ppoż. (NC)	Fire alarm (NC)
Awaria (NO)	Failure (NO)
PKI	PKI
ROP	ROP
UWAGI	NOTES
-przewody zwykłe	- regular wires
-przewody przeznaczone do stosowania w systemach przeciwpożarowych	- fire alarm system rated wires
poz.	item
-występują obligatoryjnie, pozostałe w uzgodnieniu z Zamawiającym	- obligatory, other in agreement with the Ordering Party
-nie jest wymagane nap. gwarantowane tj. sprzed wyłącznika głównego	- guaranteed voltage is not required, namely upstream of the main switch

Item	Figure marking	Item type	Item designation	Item code	Recommended quantity	Notes
1	C1 - Cn	point fire detector	optical smoke detector	ID100	2	recommended ID100, max. 6 pcs.
			class A1R heat detector	ID200	2	



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			smoke and heat detector	ID300	2	
2	C1 - Cn	detector receptacle	standard fire detector receptacle	EB0010	2	quantity equal to number of detectors
3	ROP	manual call point	standard manual call point	ROP OP1	1	max. 10 pcs.
4	S1, S2	fire alarm indicator	fire alarm sounder, low base	SPP-100	1	max. current 200 mA
5	M	electric drive	internal (tubular)	VIC-012x	1	-
6	PKI	key switch	key switch operated K1 control box	SP22K1/07-1	1	-
7	MM-S	control	universal drive controller	MM-S	1	-

7. PROBABLE FAILURES AND RESOLUTION OPTIONS

All failures of the fire protection overhead gate must be reported to the manufacturer and eliminated in accordance with their recommendations, by authorised persons (see section 8 - INSPECTION, MAINTENANCE, REPAIR).

Failure type	Causes of failure / operation error	Method of troubleshooting by operator
Gate leaf is not lowered/lifted	Blocked or damaged guides	Call the service centre for clearing or replacement of the track
	Mechanical damage to structural component	Call the service centre for repair, replacement of the damaged component
	Blocked balance weight	
Fire detector does not work / does not activate the control system	Contaminated, damaged	Call the service centre for cleaning, adjustment, replacement
Optoacoustic sounder does not activate	Damage to the system component	
Local control system (panel) displays an error		Call the service centre to eliminate the failure
Manual call point does not work / is damaged	Broken glass in the call point	Call the service centre for replacement

8. INSPECTION, MAINTENANCE, REPAIR

8.1 INSPECTION AND MAINTENANCE INTERVALS TABLE

Inspections, maintenance and repairs of the fire protection gate should be performed by a person with proper knowledge and experience in these activities.

Manufacturer of the fire protection gate or their authorised installation teams/companies (see guidelines in section 1 - INTRODUCTION and subsection 2.4 - REQUIREMENTS FOR OPERATION PERSONNEL in this manual) in accordance with the conditions in the contract, perform paid service inspections and maintenance, repairs, troubleshooting of the fire protection gate. The above-mentioned have proper technical resources, spare parts and qualified service personnel with the required qualifications.

Written orders for the performance of the above works shall be sent to the service centre of MAŁKOWSKI-MARTECH S.A. (serwis@malkowski.pl or fax: + 48 61 22 27 501). The contact addresses of the service centre are also included on the manufacturer's website and in the warranty document.



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Inspections and maintenance should be performed in accordance with this manual (see the guidelines in the following tables), ensure proper and safe use and they are obligatory to maintain the declared performance of the fire protection overhead gate and during the warranty subject to it becoming null and void.

Inspection type	Frequency	Completed by
Inspection before use	Before each use (not applicable to fire situation)	Operator
Monthly inspection	Every 1 month	
Service inspection and maintenance	Every 6 months	Authorised service centre

S - check, review, clean; **X** - adjust, lubricate

Inspection and maintenance intervals table

Assembly, component	Activity required	Before every use	Every 1 month	Every 6 months
Entire device				
Design of the device	Check the varnished surface (no contamination, rust etc.), clean if necessary.		S	S
	Check the completeness of components, check for no mechanical and operational damage	S	S	S
	Check the gate marking (if the nameplate is present and legible)		S	S
Gate leaf	Check for contamination, mechanical damage, etc, clean if necessary	S	S	S
Brackets, covers	Check the fastenings and their conditions			S
Gate leaf closing/opening assembly				
Guide	Check the fastenings, its condition and blockage.			S
Balance weight assembly	Check the fastening of lines and their condition			S
	Check for travel block, lubricate if required ¹⁾		S	S
Electrical / control system				
Complete set of electrical fittings	Check proper operation of the set by triggering the detectors, adjust if necessary			SX
Fire detector	Check the condition, clean, adjust if necessary			SX
Manual fire alarm	Check the condition and proper activation			S
Controller (panel)	Check proper operation of all components in the panel			S
	Check if no error are displayed	S	S	S
Key switch	Check the condition, namely for damage, operation		S	S
Electric drive motor	Check the condition (even operation, no jerking, no chirping, vibrations etc.)		S	S
Battery	Check the condition of terminals and cables, clean if necessary, lubricate ¹⁾		S	SX
	Check the electrolyte level, charge level, add electrolyte if necessary, charge		S	S
Electrical system ²⁾	Check the fittings attachments, line tracks and their condition		S	S

1) – technical vaseline is recommended

2) - check the insulation resistance of the power supply electrical system and the continuity of wires at least every 5 years



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Replace worn and damaged parts, only replace with new parts. For maintenance and repairs, use only original parts authorised by the manufacturer of the fire protection gate. The performance of inspection, maintenance, overhaul is certified by the authorised employee with records in accordance with the scope in the Periodical Inspection and Maintenance Sheet included in section 11 - ANNEXES of this manual or in a separate report.

The user of the fire protection gate should retain the records of performed inspections, maintenance, repair and overhauls.

8.2 INSPECTIONS BY OPERATOR

Inspection by operator should be performed by a person designated for this purpose by the user and trained by the manufacturer of the fire protection gate or their authorised installation team/company (see also the guidelines in subsection 2.4 - REQUIREMENTS FOR OPERATION PERSONNEL and 8.1 - INSPECTION AND MAINTENANCE INTERVALS TABLE).

During inspection works, use basic personal protection equipment, e.g. rubber gloves etc.

In case of failure, damage to the fire protection gate or noticing of irregularities in operation, notify the supervisor and manufacturer or their authorised installation team/company.

8.3 SERVICE INSPECTIONS AND MAINTENANCE

Servicing is performed by teams of qualified and experienced personnel of the manufacturer, MAŁKOWSKI-MARTECH S.A., or subcontracting teams/companies authorised by the manufacturer to service fire protection gates.

For the Customers to be sure that the service is performed by a fully professional/authorised team/company, the personnel authorised to these works should hold and present the Installation Authorisation Certificate, and service technicians — a Facility Service Authorisation Certificate issued by the manufacturer of the fire protection gate. MAŁKOWSKI-MARTECH SA

According to the "Lists of components, parts" in section 6 - TECHNICAL DATA, in this manual, the manufacturer of the fire protection gate clearly defined, who has the right to perform repairs /replacement of assemblies, components and parts, subject to the loss of warranty and invalidity of the declaration of performance of the fire protection gate.

CAUTION!

According to the Regulation (Journal of Laws 2010.109.719, as amended) §3.2 "Fire protection equipment (...) should be subject to technical inspections and maintenance activities in accordance with the rules and as specified in the Polish Standards applicable to fire protection equipment and extinguishers, in the operation and maintenance manual and in operation manuals prepared by their manufacturers". §3.3 "Technical inspections and maintenance activities should be performed at intervals set by the manufacturer, not less frequently, however, than once per year".

The service inspections, maintenance, repairs, overhauls of the fire protection gate may only be performed by trained employees of the manufacturer or their authorised service team/company.

The user of the fire protection overhead gate or their authorised entity/person shall arrange and hold documented confirmations of the performance of service inspections and maintenance at least once per six months, unless stated otherwise in the contract (or special local requirements/conditions at the user's require different intervals of service inspections and maintenance).



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8.4 CLEANING

The operator shall keep the workplace and the fire protection gate clean. For cleaning, use commercially available household cleaning agents – such as dishwashing liquid.

For cleaning, do not use aggressive cleaning agents and organic solvents, do not use pressure washing (with water etc.). In case of contamination of the fire protection overhead gate with non-soluble materials, remove them mechanically, while taking care not to cause damage to the paint coating, scratches etc.

8.5 REPLACEABLE PARTS

When ordering replaceable parts, specify: year of manufacture of the fire protection gate, part number and name, quantity.

REPLACEMENT PARTS, USED TO PERFORM INSPECTIONS, MAINTENANCE, REPAIRS, OVERHAULS SHOULD BE ORIGINAL PARTS OF THE MANUFACTURER IN ACCORDANCE WITH THE LISTS AS IN "LISTS OF COMPONENTS, PARTS..." IN SECTION 6 - TECHNICAL DATA, IN THIS MANUAL.

9. DISPOSAL

Disposal of the fire protection gate and its worn components should be performed in accordance with applicable regulations.

In the case of total wear, destruction of the fire protection gate or its individual components:

- remove the door components and the electrical system by reversing the installation and hand over the components for recycling (e.g.: electric motor),
- hand over plastic, rubber, mineral wool components for disposal,
- cut the steel structure, sheets, profiles, rods and scrap with other steel components (screws, pins etc.).

9.1 INFORMATION FOR USE

No component of the fire protection overhead gate contains asbestos or coatings/components that cause the release of gases with adverse impact on the ozone layer of the atmosphere. Colourants and anti-corrosion coatings of the structures and components do not contain cadmium chromates, etc., which could contaminate the air and aquifers of the soil.



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10. MARKING

The fire protection overhead gate type MARC-O is marked with nameplate, of which the template is shown below. Parameters related to the supplied fire protection gate are given on the label placed on it.




 2434
 MAŁKOWSKI-MARTECH SA Czołowo ul. Leśna 57 62-035 Kórnik 20 Declaration of performance no.:/CPR/MARC-O/2020 - PL
<p>EN 16034:2014 Fire protection gate single-leaf, overhead MARC®-O EI120</p> <p>Use: fire partitions</p> <p>Fire resistance: EI₂120</p> <p>Ability to release: Released</p> <p>Self-closing: C</p> <p>Durability of the ability to release: release maintained</p> <p>Durability of self-closing in relation to degradation: use category:</p> <p>Durability of self-closing in relation to ageing (corrosion) achieved</p> <p>EN 13241:2003+A2:2016 Resistance to wind load: class</p>
Serial number: / 202...

Fig. 13 – Example nameplate of the fire protection overhead gate (as per EN 16034:2014-11)

The nameplate is placed in factory on the door leaf, near the shell pull.



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11. ANNEXES:

- Periodical inspection, maintenance sheet,
- Warranty card - example,
- Copy of the Declaration of Performance,
- Available for companies with installation authorisation certificate issued by the manufacturer:
 - Installation instructions for the VIC type electrical fitting sets,
 - Installation instructions for the fire protection overhead gate type MARC-O EI120;



PERIODICAL INSPECTION, MAINTENANCE SHEET

Device type:		Serial number:	Year of manufacture,
--------------	--	----------------	----------------------

Item	Works performed	Date, stamp and signature of authorised person	Notes
1			
2			
3			
4			
6			
7			
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9			
10			
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19			
20			



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WARRANTY CARD

Warranty for the Purchaser / Eligible under the warranty*:		Installation site*:			
Warranty period(:		According to the agreement, order no.*:			
Item	Subject of sale	Additional description*:		Designation no.*:	Quantity*:
1	Fire protection gate, single-leaf, overhead MARC-O EI120	EI ₂ 120			1
2	Local control system (panel)	CSP M-M			1
3	Fire detector, thermal	DRP-100			2
4	Manual fire alarm	ROP-100/PL			1
5	Optoacoustic sounder	SPP-100			1

§ 1

Shipment; Acceptance of the product; Activities before installation

1. The acceptance of the subject of sale in qualitative terms is performed before loading at MAŁKOWSKI-MARTECH S.A. (hereinafter referred to as the Guarantor). The signature of the Installer/Buyer, on the delivery note delivered with the subject of sale confirms that the subject of sale is complete and consistent with the specification in this delivery note.
2. Before installing the subject of sale, the installer should carefully and thoroughly check it for damage in transport, it is in perfect condition and corresponds to the order placed by the Buyer. Upon finding non-compliance of the subject of sale with the order and/or occurrence of any defect, immediately stop installing the subject of sale and immediately notify the Guarantor of the fact.
3. If the defect of the subject of sale may have been identified, with due diligence, before starting the installation of the subject of sale - COMPLAINTS submitted after installation will be dismissed as unfounded.

§ 2

General terms of warranty

1. The Entitled shall retain warranty rights provided that:
 - a) performance of the installation of the subject of sale by the Guarantor or entity holding the Installation Authorisation Certificate (granted by the Guarantor), confirmed by entry on the last page of this warranty card.
 - b) ordering cyclical service inspections were performed by the Guarantor or the entity holding the Servicing Certificate (on the basis of a separate agreement) of the subject of sale covered by this Warranty, at the following intervals:
 - every 6 months - in the case of the subject of sale remaining, without cyclical activation, in an extreme position – open or closed,
 - every 3 months - in the case of using the subject of sale otherwise than in the above cycle, according to the criteria specified by the Guarantor in the above-mentioned agreement;
2. These warranty conditions apply to the subject of sale of the Warrantor purchased and installed in the territory of the Republic of Poland.
3. Service inspections listed in item 1 are performed against payment.
4. The Entitled under warranty shall submit copies of the reports of service inspections performed by an entity with the Service Authorisation Certificate to the Guarantor within 14 days of performance:
 - a) by e-mail to the following e-mail address: serwis@malkowski.pl and,
 - b) to the address of the registered office of the Guarantor, subject to losing the warranty rights.
5. The warranty period shall run from the date of official acceptance of the subject of sale after installation.
6. The rights under the Warranty granted do not include the right to demand reimbursement of lost profits, to



compensate for any damage related to the failure of the subject of sale.

§ 3

Procedure for reporting claims and exercising the rights under the Warranty

1. The Entitled shall immediately report any defect of the subject of sale in writing, not later than within 14 days of its discovery.
2. Any claim shall be submitted to the Guarantor in writing, otherwise being null and void.
3. The claim should include:
 - a) a copy of the Warranty Card,
 - b) a detailed description of the discovered damage, causes and conditions of the defect,
 - c) serial number of the subject of sale,
 - d) confirmation of performance of the periodical service inspections of the subject of sale in accordance with the provisions in § 2, item 4.
4. In order to ensure a smooth warranty procedure, it is recommended to attach pictures of the damaged subject of sale allowing for an evaluation of the damage.
5. The Entitled under warranty shall ensure the conditions (in particular by enabling access to the subject of sale and disabling other equipment that could be dangerous to the person performing the repairs) to permit and enable repairing the subject of sale.
6. Failure to submit a claim within the time limit specified in section 1 shall release the Guarantor from the obligation to satisfy the claim.

§ 4

Warranty rights

1. If claims under the Guarantee is justified, the Guarantor shall, at its own discretion, remove the defect of the subject of sale (perform a repair) or replace the subject of sale (or a part thereof) with a new one.
2. The replaced defective subject of sale shall become the property of the Guarantor.
3. If defects or failures preventing the use of the subject of sale are discovered during the warranty period, the Guarantor shall take the necessary actions to remove the defects or failures within 10 working days from the moment of reporting the defect.
4. If defects or failures preventing the use of the subject of sale are discovered during the warranty period, the Guarantor shall take the necessary actions to remove the defects or failures within 20 working days from the moment of reporting the defect.
5. The time limits specified in sections 3 and 4 above may be extended for important reasons, in particular if:
 - a) the parts necessary for the execution of warranty rights are not available on the market at a given moment,
 - b) it is necessary to import some parts from abroad,
 - c) for reasons beyond the control of the Guarantor, of the occurrence of which the Entitled shall be notified.
6. Business days shall be understood as days from Monday to Friday, excluding holidays and other statutory days off work.
7. If, in the performance of its obligations, the Guarantor supplies the Entitled under warranty with an item free of defects instead of a defective item, or has made significant repairs of the item covered by the guarantee, the guarantee period shall run again from the moment of delivery of the item free of defects or return of the repaired item.
8. The warranty for the above-mentioned parts shall start again from the moment of delivery of the part being free of defects or repaired, in relation to the part mentioned.
9. The replacement of parts shall not result in extending the warranty on the whole subject of sale.
10. The Guarantor is entitled to charge the Entitled under warranty with the costs related to the unfounded notification of damage (in which case it should be understood as a lack of defect or a notification of a request to remove the defect not covered by the warranty).
11. The costs referred to in section 10 above include in particular the costs of travel and the costs of removal of the defect if it is removed.
12. The costs of removing defects not covered by the Warranty shall be valued according to the price list of the Guarantor.



§ 5**Exclusions of rights under the Warranty**

The warranty does not cover:

1. defects caused for reasons other than those existing in the subject of sale
2. defects resulting from making any interference in the subject of sale by the Entitled under warranty or third parties, in particular modifications and structural changes of the subject of sale, without the prior written consent of the Guarantor, subject to the invalidity of the DECLARATION OF PERFORMANCE AND THE WARRANTY GRANTED,
3. defects caused by improper use of the subject of sale or lack of ongoing maintenance, in particular use and maintenance contrary to the provisions of its operation manual, to which this warranty card is an annex,
4. defects resulting from assembly or repair works performed by persons who do not hold the Guarantor's authorisation,
5. the subject of sale installed in the facility covered by the warranty, in respect of which service inspections have not been performed by the Guarantor or entity with Service Authorisation Certificate,
6. parts of the subject of sale subject to natural partial/total wear in accordance with their properties or their intended use (e.g. due to slide components, batteries etc.),
7. mechanical damage to the subject of sale and defects caused thereby,
8. defects resulting from defectiveness of the structure, in which the subject of sale has been installed,
9. incorrect selection of the subject of sale to the conditions existing at the installation site,
10. defective operation of the installed equipment not originating from the Guarantor having a negative impact on the performance of the subject of sale. Upon identification of such a facts, the DECLARATION OF PERFORMANCE ISSUED FOR THE SUBJECT OF SALE AND THE WARRANTY GRANTED shall immediately become null and void.
11. defects resulting from the action of external factors, in particular: fire, abnormal weather conditions and fortuitous events,
12. damage caused as a result of improper or inconsistent use of the subject of sale, including its excessive operation,
13. the use of spare parts of other manufacturers other than the original parts of the Guarantor,
14. the subject of sale, for which this Warranty Card has been changed or replaced in any way,
15. the subject of sale, of which the nameplate has been removed, damaged or modified,
16. a security seal on the subject of sale has been broken or damaged.

.....
Date and signature of the authorised Representative of the company with the Installation Authorisation Certificate of the Guarantor

.....
Authorization no. and date of issue

