



# TECHNICAL MANUAL

## RGS

**FOR FIRE RESISTANT SHUTTERS SOMATI**  
(Description, usage and maintenance)

**Importer: Somati system s.r.o.**

Jihlavská 510/2c  
664 41 Troubsko, okr.Brno - venkov  
Tel.: 547 427 011  
Fax: 547 427 013  
E-mail: [export@somati-system.cz](mailto:export@somati-system.cz)  
[www.somati-system.cz](http://www.somati-system.cz)





## Table of Contents

<b>1 Introduction to fire resistant doors produced by company Somati...</b>	<b>3</b>
1.1 Technical Manual .....	4
1.2 Identification Plates .....	4
1.3 Information on Wastes .....	5
<b>2 Function of Fire Resistant Door .....</b>	<b>5</b>
<b>3 Description of the mechanical door system.....</b>	<b>7</b>
3.1 Fire rolling doors .....	7
3.2 List of structural components .....	8
3.3 Description of the design and variants of doors RGS.....	9
3.3.1 TypE RGS-NI.....	9
3.3.2 TypE RGS-45 .....	9
3.3.3 TypE RGS-60 .....	9
<b>4 Description of the door control system .....</b>	<b>10</b>
4.1 Types of drives and controls.....	10
4.1.1 General description of the door control Normal.....	10
4.1.2 General description of the door control Rolltronic .....	10
4.1.3 General description of the door control Fail safe (7RM2FS or FSTronic) .....	10
4.1.4 General description of the door control Overhead (6RM4xxx).....	10
4.2. Opening and closing the door.....	10
4.3 Fire self-closing function .....	11
<b>5 Safety instructions to control the the door.....</b>	<b>11</b>
5.1 General conditions .....	11
5.2 Safety regulations .....	11
<b>6 What to do in case of accident or failure .....</b>	<b>12</b>
<b>7. NOTE.....</b>	<b>13</b>





# 1 INTRODUCTION TO FIRE RESISTANT DOORS PRODUCED BY COMPANY SOMATI

The fire resistant door is the partitioning structure preventing from the spread of fire outside the fire compartments able to resist the effects of fire for a specified period of time. Fire resistance is the period of time for which the door is able to resist the effects of fire without damages to its function specified by the limit states of fire resistance. With respect to their functions, ČSN EN 1634-1 73 0852 covers the doors of type EI or EW for which the following limit states are applied: E – compactness, I – insulation, W – radiation.

Fire resistant sliding doors produced by SOMATI may be supplied in the following design and are produced custom-made according to the dimensional requirements of clients.

		Design RGS		
Type fire resistance	RGS-NI	RGS-45	RGS-60	
		EW 30 DP1	EI 15 DP1 EW 120 DP1	EI 60 DP1 EW 180 DP1
variants	- rolling	- rolling - vertical	- rolling - vertical - horizontal	
type of doors	Rolling doors with uncoated lamella height 100mm	Roller doors with isolated lamella with mineral wool, thickness of lamella 45mm, height 75mm	Roller doors with isolated lamella with mineral wool, thickness of lamella 60mm, height 150mm	
control of doors	- Tubular motor with controls ROLLTRONIC			
		- Motor normal with controls WS - Motor normal with controls TS - Motor Fail Safe with controls 7RM2FS - Motor Overhead with controls 6RM4		

Doors itself is composed of individual lamellas (sections) of galvanized steel sheet with fillings (or unfilled) of mineral wool. Rolling doors are wound on a steel drum in the horizontal (sectional) design lamellas are passing in a horizontal line.

The manual provides with the description of the fire resistant doors, their operating and maintenance. The manual includes the following:

- technical specification
- principles of maintenance and repairs
- schematic drawings
- list of structural components

All the instructions given in the manual apply only to the fire resistant rolling doors RGS. Before the commencement of any maintenance or repair, read the technical manual carefully.

Switch off the main supply line of electrical energy before any work being performed on the supplied equipment and check that no person may switch on the main supply line without letting you know.





Maintenance and periodic control shall be performed according to the instructions in this manual, the manufacturer or authorized by trained persons approved by the manufacturer. All work must be done for compliance with all safety measures with regard to the applicable fire safety regulations.

In most European countries is that the the fire doors was approved by the competent authorities concerned. The user is also obliged to conduct regular checks of equipment function. Periodicity of controls depends on applicable regulations in each country where there are fire doors installed.

To ensure proper operation of fire doors is necessary that the wings of the movement range of fire doors ie. the seating bar there are no obstacles and even the remains of fabric or paper.

## 1.1 Technical Manual

The manual has been completed in the program Microsoft Word version 97.  
Drawings and schemes have been made in the program AUTOCAD version 2000.

## 1.2 Identification Plates

Each wing of the fire resistant door is marked by metal plate containing the information:

- Information on producer
- Identify the authorized person issuing the certificate
- Serial number
- Fire resistant door
- Type design

Always present the above-mentioned basic data when communicating with the producer.





### 1.3 Information on Wastes

List of used components and materials and their classification.

Fire resistant plates PROMATECT H	Building waste
Chains	Recyclable metal material
Guiding rails	Recyclable metal material
Belt pulley	Recyclable metal material
Chain pulley	Recyclable metal material
Hangings	Recyclable metal material
Speed control	Recyclable metal material after the removal of oil. Oil: less special waste
Roller bearings	Recyclable metal material
Roller brackets	Recyclable metal material
Guiding wheels for horizontally sliding doors	Recyclable metal/plastic material
Steel rope	Recyclable metal material
Rope pulley	Recyclable metal material
Safety latch	Recyclable metal material
Motor with worm gearbox	Recyclable metal material after the removal of oil. Oil: less special waste
Control units:	
Terminals (Z1, A2, M1, etc.)	Electronic waste
Electromagnetic armature	Recyclable metal material
Photocells	Electronic waste
Relay	Electronic waste
Detectors (optical-smoke)	Electronic waste
Ionisation fire detector	Content of radioactive materials. Ask your safety engineer for instructions
Detectors caps	Electronic waste
Limit switches	Recyclable metal material

## 2 FUNCTION OF FIRE RESISTANT DOOR

The fire resistant sliding door is designed for the partitioning of manufacturing, storage and other halls and premises of buildings into the separate fire compartments. The wing is run by means of the bearing travels in the rail – steel C-section and in the bottom part by means of the bearing travels anchored in the floor on both sides of the construction floor hole. The rubber stops are installed in the end-of-travel positions both in the rail and on the floor.

Responsibility of the user is to perform visual control door during the use:

- \* Visual inspection for damage of any coating, guidance and propulsion.
- \* Gaps between sheathing and leadership.
- \* Tension of the chain.
- \* Noise operation during closing and opening.
- \* The functionality of whole







### 3 DESCRIPTION OF THE MECHANICAL DOOR SYSTEM

#### 3.1 Fire rolling doors



Automatic fire rolling doors are designed to separate the two fire sections and created the fire temporary barrier to prevent the spread of fire. Doors are not designed by their frequent use of weight as a normal door, their primary function is the closing in case of fire.







### 3.2 List of structural components

	Title	Type RGS NI	Type RGS 45	Type RGS 60	Producer
1	Lamellas	RGS NI	RGS 45	RGS 60	MiR
2	Roller	Ø 168	Ø 168	Ø 324	SOMATI
			Ø 102	Ø 133	SOMATI
3	Side guides	RGS NI	RGS 45	RGS 60	SOMATI
4	Horizontal labyrinth	RGS NI	RGS 45	RGS 60	SOMATI
5	Console of the roller	RGS NI	RGS 45	RGS 60	SOMATI
6	Components bearing	UCP 206	UCP 206	UCP 206	Haberkorn Ulmer
		UCP 208	UCP 208	UCP 208	Haberkorn Ulmer
			UCP 210	UCP 210	Haberkorn Ulmer
			UCFL 206	UCFL 206	Haberkorn Ulmer
			UCFL 208	UCFL 208	Haberkorn Ulmer
			UCFL 210	UCFL 210	Haberkorn Ulmer
7	Gravity brake	FG 40-30	FG 40-30	FG 40-30	GfA
		FG 80-40	FG 80-40	FG 80-40	GfA
			FG 120-50	FG 120-50	GfA
8	Čchain	10B-1	10B-1	10B-1	Haberkorn Ulmer
			12B-1	12B-1	Haberkorn Ulmer
9	Gear wheel	10B-1 (15 - 114 t.)	10B-1 (15 - 114 t.)	10B-1 (15 - 114 t.)	Haberkorn Ulmer
			12B-1 (15 - 114 t.)	12B-1 (15 - 114 t.)	Haberkorn Ulmer
10	Console of the engine	RGS NI	RGS 45	RGS 60	SOMATI
11	Tubular motor	R60/11M FKB			Becker
		R80/11M FKB			Becker
		R120/11M FKB			Becker
		R20/11M FKB			Becker
12	Motor FS	FS 15.20	FS 15.20	FS 15.20	GfA
		FS 25.20	FS 25.20	FS 25.20	GfA
		FS 50.20	FS 50.20	FS 50.20	GfA
		FS 110.18	FS 110.18	FS 110.18	GfA
13	Motor KE for types of control Normal WS Normal TS Overhead	KE 9.24	KE 9.24	KE 9.24	GfA
		KE 20.24	KE 20.24	KE 20.24	GfA
		KE 30.24	KE 30.24	KE 30.24	GfA
		KE 40.24	KE 40.24	KE 40.24	GfA
		KE 60.24	KE 60.24	KE 60.24	GfA
		KE 80.24	KE 80.24	KE 80.24	GfA
		KE 120.24	KE 120.24	KE 120.24	GfA
14	Controls of tubular motor	ROLLTRONIC			SOMATI
15	Controls FS	7RM2FS	7RM2FS	7RM2FS	SOMATI-EPO
16	Controls WS	WS 900	WS 900	WS 900	GfA
17	Controls TS	TS 956	TS 956	TS 956	GfA
		TS 961	TS 961	TS 961	GfA
18	Controls OVERHEAD	6RM4 GFA KE	6RM4 GFA KE	6RM4 GFA KE	SOMATI-EPO

Note: The list of components is a general standard door types. For a specific list of spare parts please contact the manufacturer's and bring serial number closure. Doors are made to order and can be used by other parts according to the type of design







### 3.3 Description of the design and variants of doors RGS

#### 3.3.1 TYPE RGS-NI

Rolling doors for fire resistance EW 30 DP1. Doors are made of uninsulated lamellas of galvanized steel sheet wg.1mm. Height of lamellas is 100 mm. Doors RGS-NI are produced only in the variant roller - lamellas are rolled onto a steel roller with a diameter of 168 mm directly above the hole.

#### 3.3.2 TYPE RGS-45

Rolling doors for fire resistance EI 15 DP1 to EW 120 DP1. Doors are made of insulated lamellas of galvanized steel sheet wg.0,6 mm. The thickness is 45 mm, height 75 mm. RGS-45 Doors are manufactured in variants:

- Rolling

Lamellas are rolled onto a steel cylinder with a diameter of 168 mm. Directly above the opening at the top of doors, lamellas are pressed to the hole clamping roller with a diameter of 102 mm.

- Vertical

On the winding drum are wound insulated lamellas RGS-NI to pull up door leaf from the isolated lamellas. In the open position of door leaf is pulled out of the hole. The advantage of vertical variations is only right to reduce the torque of the drive.

#### 3.3.3 TYPE RGS-60

Rolling doors for fire resistance EI 60 DP1 to EW 180 DP1. Doors are made of insulated lamellas of galvanized steel sheet wg.0,8mm. Lamellas are isolated with mineral wool. The thickness 60 mm, height 150 mm. Doors RGS-60 are manufactured in variants:

- Rolling

Lamellas are rolled onto a steel roller with a diameter of 324 mm directly above the opening at the top of doors lamellas are pressed to the hole a pressing roller with a diameter of 133 mm.

- Vertical

On the winding drum are wound insulated lamellas RGS-NI to pull up door leaf from the isolated lamellas. In the open position of door leaf is pulled out of the hole. The advantage of vertical variations is only right to reduce the torque of the drive.

- Horizontal

On the winding drum are wound insulated lamellas RGS-NI to pull up door leaf from the isolated lamellas. In the open position of door leaf is pulled out of the hole. The advantage of vertical variations is only right to reduce the torque of the drive. and particular the reduction of space requirements in lintel (ideally 450 mm)





## 4 DESCRIPTION OF THE DOOR CONTROL SYSTEM

RGS fire shutters can be fitted with different types of control for an accurate description of the door control is necessary to study the manual door control and traction, which is supplied to his cap as original equipment

### 4.1 Types of drives and controls

#### 4.1.1 GENERAL DESCRIPTION OF THE DOOR CONTROL NORMAL

Drive type Normal is a standard drive of rolling doors that does not ensure backup engine or gravity closing. The door control buttons in the "dead man", can add security features for impulse control. To ensure proper of fire function is necessary to ensure the backup drive motor from a central backup power supply according to the requirements of a particular engine type or operating regulations necessary to ensure that the doors was always in the closed position.

#### 4.1.2 GENERAL DESCRIPTION OF THE DOOR CONTROL ROLLTRONIC

Rolltronic Control is designed to control the motor tube (for RGS-NI). The door control buttons in the "dead man". In the event of a fire alarm doors closes automatically by gravity when the actuator can be ensured even when doors open to external alarm button "Emergency open". When a power failure, doors remain open for sufficient battery backed brake motor, the battery doors is closed and can not be opened. To ensure proper function of fire is not necessary to backup drive - ensure gravity closing.

#### 4.1.3 GENERAL DESCRIPTION OF THE DOOR CONTROL FAIL SAFE (7RM2FS OR FSTRONIC)

Control Fail Safe is designed for motor control FS. The door control buttons in the "dead man". In the event of a fire alarm doors closes automatically by gravity when the actuator can be ensured even with doors open alarm button standard driver, after releasing the button, the doors close again. When a power failure, doors remain open for sufficient battery backed brake motor, the door battery is closed and can not be opened. To ensure proper function of fire is not necessary to backup drive - ensure gravity closing.

#### 4.1.4 GENERAL DESCRIPTION OF THE DOOR CONTROL OVERHEAD (6RM4XXX)

Overhead control is designed for motor control KE. The door control buttons in the "dead man". In the event of a fire alarm doors closes automatically on its own backup power motor. Doors is also possible to open an external alarm button "Emergency open" after releasing the button, the door close again - this function is subject to regular replacement of backup power batteries. When a power failure, door control buttons can be operated for sufficient capacity UPS, the UPS decrease capacity, the door automatically closes.

### 4.2. Opening and closing the door

Open and close the door by buttons or key switch to verify compliance with safety regulations. Stand next to the door and visually check the door in motion. Check carefully that no persons or objects are in the safety zone of the door (see sections 5.2). Keep a safe distance from all moving components and using the door.

Control (button or key switch) are mounted near the door and are installed under the system "dead man", it means that the door stops immediately when you release the button or key.





### 4.3 Fire self-closing function

When the door are in the open position at the time the signal from the fire, the door closes automatically

#### **IMPORTANT:**

Doors can not stop. (buttons or key switches are inactive).

Doors can not stop. (buttons or key switches are inactive).

As mentioned in the safety regulations, no person or objects may be in the danger zone, and certainly not under the gate (see safety regulations "important").

**Before operating the door read carefully safety instructions of the door supplied drive!**

## 5 SAFETY INSTRUCTIONS TO CONTROL THE THE DOOR

### 5.1 General conditions

Somati system s.r.o. can not held liable for damages caused by unprofessional use door RGS. Repair work, adaptation or addition to the mechanical or electrical components door performs only Somati system s.r.o. (or Somati system s.r.o. authorized person).

Maintenance, servicing and inspections are carried only Somati system s.r.o. (or Somati system s.r.o. authorized person).

Fire tests and other tests are performed only in the presence of a representative Somati system s.r.o. or in the presence of the authorized person by Somati system s.r.o.

If you do not respect these safety regulations, you can not applied the guarantee.

To avoid any accidents or injuries, it must followed strictly safety regulations.

### 5.2 Safety regulations

Control of door takes care of (preferably only one) a beneficiary. The safety zone around the door is intended to approx. 1 meter. We recommend that this safety zone marked on the floor. Against manipulation the door, make sure there are no persons or objects in this safety zone (around, under or next door). You must be outside the security zone in the control doors. Always open and close whole door (door will stop automatically when reaching the limit switch).

**Important:** Although the door are not used, it is necessary to ensure that free safety zone.

During a fire, the door closes automatically (unattended!) which means that it can not hack, so the door can not be left items. If the door is unable to close completely (up to the floor), it is not work correctly of fire doors.

**Before operating the door read carefully safety instructions of the door supplied drive!**





## 6 WHAT TO DO IN CASE OF ACCIDENT OR FAILURE

- concussion the line door: do not control the gate, contact Somati system s.r.o.
- concussion the door coating: do not control the door, contact Somati system s.r.o. (a lot of damage is caused by forklift, when the gate is completely open.
- electric door do not function: check fuses.
- electric door do not function: unwinding security features ("parachute") is activated: do not control the gate, contact Somati system s.r.o.
- doors do not rolling horizontally or do not work well: leadership the door is closed or broken: do not use gates, contact Somati system s.r.o.
- when opening the the door, or letting the button (key switch), or when reaching the position of "open" (open) (limit switch at the top), close the door again: this means that the doors are self-closing position of the fire alarm or test - check the alarm signal or contact Somati system s.r.o.)
- The door scrolls from the lap: it means that something happened to the door (with an electric or automatic closing): do not use doors, contact Somati system s.r.o.
- - doorsor drive are creaking: contact Somati system s.r.o. for maintenance.





## 7. NOTE

A series of horizontal dashed lines for writing notes.

