SECTIONAL GARAGE DOOR INSTALLATION MANUAL

1. INTRODUCTION

This manual provides the standard installation requirements and procedures for SOARSHINE Sectional Garage Doors.

Proper building conditions are essential to ensure:

- Safe installation
- Smooth operation
- Long service life
- Reliable sealing performance
- Correct balancing of the door system

For all dimensional references in this manual, left and right directions are defined as viewed from inside the garage looking outward.

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2. BUILDING REQUIREMENTS BEFORE INSTALLATION

2.1 Side Room (Jamb) Requirements

The wall sections located on both sides of the door opening are referred to as side jambs.

Minimum Requirements

Item	Requirement
Minimum Side Room	80 mm
Recommended Side Room	150 mm
Vertical Tolerance	⩽10 mm

Structural Requirements

The jamb surface must be constructed from:

- Reinforced concrete
- Solid brick
- Structural steel frame

The following materials are NOT suitable:

- Hollow brick
- Lightweight block wall
- Weak composite wall structures

Clearance Requirements

Within a distance equal to:

Door Height + 350 mm

from the opening toward the inside of the garage, no obstructions shall interfere with:

- Vertical tracks
- Horizontal tracks
- Door movement

2.2 Headroom Requirements

Headroom refers to the distance between the top of the door opening and the ceiling.

Standard Headroom

Track Configuration	Required Headroom
Double Track	⩾250 mm
Single Track	⩾350 mm

Minimum Headroom

Without Interior Beam:

⩾200 mm

With Interior Beam:

Headroom – Beam Height ⩾160 mm

Surface Alignment

The headroom area and both side jambs shall be located on the same interior plane.

2.3 Backroom Requirements

Backroom refers to the available ceiling depth extending into the garage.

Required distance:

Door Height + 900 mm

The following areas must remain free from obstacles:

- Horizontal tracks
- Torsion shaft assembly
- Door operator rail
- Door travel path

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3. STRUCTURAL LAYOUT REFERENCE

Figure 1 – Standard Installation Layout

Recommended Drawing Position:

[Insert Drawing No. 1]

Drawing should indicate:

- Door Opening Width (W)
- Door Opening Height (H)
- Side Room (SL / SR)
- Headroom (HR)
- Backroom (BR)
- Torsion Shaft
- Horizontal Track
- Vertical Track
- Operator Rail

Reference Formula:

BR = H + 900 mm

Minimum:

SL ⩾80 mm

SR ⩾80 mm

HR ⩾250 mm

Figure 2 – Installation with Interior Column

Recommended Drawing Position:

[Insert Drawing No. 2]

Where an interior column exists:

Effective Side Room

= Side Room − Column Width

The remaining side room must be:

⩾80 mm

If the column is located farther than:

Door Height + 300 mm

from the opening (double-track system)

or

Door Height + 100 mm

(single-track system)

the column will not affect installation.

Figure 3 – Installation with Interior Beam

Recommended Drawing Position:

[Insert Drawing No. 3]

When an interior beam exists:

Effective Headroom

= Headroom − Beam Height

Minimum Effective Headroom:

⩾160 mm

If the beam is located farther than:

Door Height + 900 mm

from the opening,

the beam does not affect installation.

Figure 4 – Power Outlet Location

Recommended Drawing Position:

[Insert Drawing No. 4]

Install a grounded 220V power outlet:

Location:

At the ceiling

Door centerline intersection

Distance from opening:

Door Height + 900 mm

If no interior beam exists:

Install outlet approximately 200 mm offset from centerline.

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4. INSTALLATION PROCEDURE

Step 1

Verify Building Dimensions

Check:

✓ Opening width

✓ Opening height

✓ Side room

✓ Headroom

✓ Backroom

✓ Structural strength

Step 2

Install Vertical Tracks

Requirements:

- Tracks must be plumb
- Securely anchored
- Parallel to opening

Maximum deviation:

⩽3 mm

Step 3

Install Horizontal Tracks

Requirements:

- Level alignment
- Proper rear support

Recommended slope:

1:200 to 1:100

toward the rear of the garage.

Step 4

Install Torsion Shaft Assembly

Components:

- Torsion springs
- End bearing brackets
- Cable drums
- Shaft couplings

Verify:

✓ Smooth shaft rotation

✓ Correct spring orientation

✓ Secure fastening

Step 5

Install Door Panels

Sequence:

Bottom Panel

→ Intermediate Panels

→ Top Panel

Verify:

- Panel alignment
- Hinge fastening
- Roller engagement

Step 6

Install Counterbalance System

Adjust spring torque until:

The door remains balanced at any position.

The door shall:

- Not fall downward
- Not rise upward by itself

Step 7

Install Garage Door Operator

Requirements:

- Centered above opening
- Secure ceiling mounting
- Proper travel limit adjustment

Power Supply:

220V AC

Step 8

Functional Testing

Perform:

✓ Opening test

✓ Closing test

✓ Remote control test

✓ Obstacle reversal test

✓ Manual release test

✓ Travel limit test

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5. FINAL INSPECTION CHECKLIST

Structural Inspection

☐ Side room compliant

☐ Headroom compliant

☐ Backroom compliant

☐ Solid mounting surfaces

Mechanical Inspection

☐ Track secure

☐ Shaft secure

☐ Springs adjusted

☐ Rollers operating smoothly

☐ Hinges secure

Electrical Inspection

☐ Operator functioning

☐ Remote controls functioning

☐ Safety reversal functioning

☐ Travel limits adjusted

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6. SAFETY NOTES

WARNING:

Disconnect power before servicing.

Never adjust torsion springs without proper training and tools.

Only qualified technicians should perform spring adjustments.

Always test safety reversal function after installation.

Failure to follow these instructions may result in serious injury or property damage.

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7. TECHNICAL SUPPORT

SOARSHINE DOOR

Sectional Garage Door Division

Website: www.chinagarage-industrialdoors.com

Email: sales@soarshinedoor.com

Technical Support: Available 24/7 for distributors and installation partners.