Foundation Details

1. Foundation: 15'-3" x 9'-2" x 1'-2" with 3,625 psi concrete at 28 days.
2. Rebar: Top mat - #5 ASTM A615-60 10" o.c. each way; and Bottom mat - #5 ASTM A615-60 10" o.c. (width way) and #5 ASTM A615-60 7" o.c. (length way). [See manual.]
3. Foundation based on 490-foot mast height. For greater heights, contact Morrow engineering department.
4. Foundation designed for minimum soil bearing of 1,000 psf.
6. Refer to the manufacturer’s manual before installing, operating, servicing, repairing, jumping or dismantling hoist.
7. For specific information including dimensions, forces or alternative configurations, contact Morrow engineering.
8. 3/4" x 17" Williams™ High Tensile Spin-Lock Anchor Bolt and nut assembly. (R1S06C14 Head assembly with ASTM A109/C1045 bolt and nut) or approved equivalent. Bolt by contractor. Install according to bolt manufacturer’s requirements. Drill holes 1 3/4-in diameter allowing for 11" embedment. Bolt is also available through Morrow upon request. R1S-type anchor bolts not intended for use at extreme cold temperatures.
9. 1/2" x 3" x 3" sq. washer ASTM A36 steel plate by contractor. Washer also available from Morrow upon request. Drill hole = 13/16" dia. at centerline.
10. This datasheet contains information for "typical" FC 7100-12 installation, i.e., configured for car on lefthand side of mast (when viewing hoist from side opposite structure). Contact Morrow for additional information.

IMPORTANT: Verify that the use of a slab foundation conforms to all applicable federal, state and local standards and codes PRIOR to foundation installation.
Foundation Details

Mast section:
2'-4 5/8" x 2'-4 5/8" x 4'-11 3/8"
Weight: 254 lbs (sgl rack) each
Connecting material: 1" UNC galvanized, ISO 8.8 quality or higher (ASTM - A325)
Torque: 220 ft-lbs (300 Nm)

Note: Distance from building face to center of mast depends on the type of mast tie installed. Alternate anchoring methods available. Refer to Manual or contact Morrow Equipment for information.

Note: Hoist cars are equipped with doors at each end. An optional side door with a 10'-6" x 6'-7" opening is available.

Reinforced concrete foundation
[See General Notes 1, 2, 3, 4 and 5]
**Tie Details** (S3A System) • slab mounted

**Mast Tie Connection**
Slab-mounted – Side view

**S3A Mast Tie Assembly**
Slab-mount – Plan view

**Tie-in Bracket**
Typical – Slab mount position

---

**IMPORTANT:** ANSI A10.4 11.3 specifies a 1/2" (min.) to 2 1/2" (max.) clearance between car platform sill and landing sill. Verify before installing to assure compliance with applicable standards, codes and regulations.
**Tie Details** (S3A System) • wall mounted

![Diagram of S3A Mast Tie Assembly](image)

**Mast Tie Connection**

- **Wall-mount – Side view**
  - 2'-11" (890mm) center to center of bolt holes
  - 4 3/8" (110mm) center to center of bolt holes

**Note:** S3A System mast tie assemblies may be installed between ±8° from the horizontal.

**Important:** A reduction of 3" in mast tie length is made when using a slab-mounted tie connection.

**Plan View**

- **Wall-mounted mast tie**
  - 7'-8 1/4" (typical)
  - 13'-1 1/2"
  - 2'-9"
Tie-in Details

Hoist configuration shown is an example of an installation with optional side door. Other configurations are possible. Federal, state and local standards or codes may apply.

NOTE: Engineer of record to verify that slab/wall is adequate for anchor forces. Maximum mast tie spacing is based on ANSI A10.4.

Mast tie lengths are from 5'-4" minimum to 8'-2 1/2" maximum when angle of inclination is 0° (horizontal). Mast tie inclination 0° to ±15°. An additional 3" is gained in length (L) for wall mounting.

**NOTE: Mast tie spacing varies based on job site specific criteria. Consult hoist manual or Morrow for information.**

**NOTE: Maximum overhang varies. Consult hoist manual or Morrow for information.**

Mast tie lengths are from 7'-5 1/4" minimum to 8'-1 1/8" maximum when angle of inclination is 0° (horizontal). Mast tie inclination 0° to ±8°. Tie length adjustments are in 2" (50mm) increments. An additional 3" is gained in length (L) for wall mounting.

---

**S3A Mast Tie**

Attachment points

Inclination details

Mast tie lengths are from 7'-5 1/4" minimum to 8'-1 1/8" maximum when angle of inclination is 0° (horizontal). Mast tie inclination 0° to ±8°. Tie length adjustments are in 2" (50mm) increments. An additional 3" is gained in length (L) for wall mounting.

**S1A Mast Tie**

Attachment points

Inclination details

Mast tie lengths are from 5'-4" minimum to 8'-2 1/2" maximum when angle of inclination is 0° (horizontal). Mast tie inclination 0° to ±15°. An additional 3" is gained in length (L) for wall mounting.
Tie Details (S1A System)

Note: S1A system mast tie assemblies may be installed between ±15° from the horizontal.

S1A Tie-in Bracket
Typical – Slab mount position

IMPORTANT: ANSI A10.4 11.3 specifies a 1/2" (min.) to 2 1/2" (max.) clearance between car platform sill and landing sill. Verify before installing to assure compliance with applicable standards, codes and regulations.
S P E C I F I C A T I O N S

GENERAL
Max. load capacity ......................7,100 lbs
Number of passengers .................29
Car inside dimensions (approx.) ....12'-9" x 4'-11" x 7'-6 1/2"
Door opening ..............................6'-6 3/4" x 4'-10 3/4"
Mast section length.......................4'-11 3/8"
Speed .........................................Up to 175 fps
Motors (VFD)................................3 x 14.7 hp
Power requirement 1 ..............................480 Volt - 3 phase - 60 Hz

Max. height on standard masts .........................660'
Max. freestanding mast height 2 ..................30'-0"
Maximum mast overhang 3 ...................30'-0"
Maximum mast tie spacing 3 ..................19'-8"
Power supply fuses..........................100 Amps
Starting current.............................91 Amps
Power consumption........................66 kVA

WEIGHTS
Base enclosure (without car).............2,358 lbs
Base enclosure (with car)................7,605 lbs
Motorpack (3 x 14.7 hp)..................1,965 lbs
Hoist car (without motorpack).........3,282 lbs
Mast section (single rack) ..............254 lbs

SAFETY FEATURES
- Electronic and mechanical door interlocks on hoist car and base enclosure doors.
- Automatic stop and final limit switches limit hoist car travel when reaching end positions.
- Main "ON/OFF" switch lockable to prevent unauthorized operation.
- Spring buffers.
- NO counterweights required.

KEY FEATURES
- Equipped with highly efficient variable frequency drives for smooth, economical and dependable operation.
- Mast sections can be added without special equipment.
- Modular design facilitates ease of transport, erection and dismantlement.
- Recessed stainless steel control panel.
- Internal fault diagnosis system.

IMPORTANT:
Refer to manufacturer’s manual before installing, operating, servicing, repairing, jumping or dismantling hoist. This datasheet contains general information for a “typical” Alimak FC 7100-12 (650 FC 32/39 I) single car installation. For dimensions, reaction forces, mast tie locations, alternate configurations and special applications, contact Morrow Equipment.

Specifications and equipment shown are subject to modification without prior notification.

This product and its components must be used in a safe manner, in conformity with manufacturer’s specifications and in compliance with all applicable standards, codes, regulations, etc.

1 480 V phase–phase, 277 V each phase to ground with 120° phase shift between phases. 3-phase, 60 Hz power supply plus ground wire. Do not use Open-Delta supply.
2 Requires use of an embedded foundation frame in lieu of mast anchor expansion bolts. See operation manual or contact Morrow engineering for specific information.
3 Overhang and mast tie spacing figures vary. See operation manual or contact Morrow engineering for specific information.