#### **CALCULATED WEIGHT**

| Body Length    |      |      |      |      |      |      |      |      |      |      |
|----------------|------|------|------|------|------|------|------|------|------|------|
| Body<br>Height | 10′  | 12′  | 14′  | 16′  | 18′  | 20′  | 22′  | 24′  | 26′  | 28′  |
| GVSR79         | 2440 | 2685 | 2944 | 3194 | 3456 | 3707 | 3967 | 4221 | 4482 | 4732 |
| GVSR85         | 2505 | 2754 | 3019 | 3273 | 3539 | 3796 | 4059 | 4318 | 4584 | 4839 |
| GVSR91         | 2571 | 2824 | 3092 | 3352 | 3613 | 3884 | 4153 | 4418 | 4691 | 4947 |
| GVSR97         | 2635 | 2883 | 3166 | 3430 | 3705 | 3971 | 4244 | 4514 | 4789 | 5053 |
| GVSR103        |      |      | 3239 | 3510 | 3789 | 4057 | 4338 | 4611 | 4891 | 5160 |

Body Weight Includes: Base body, O/H rear door, D.O.T. underride, mud flaps, lighting per FMVSS 108, mounting kit, glassboard liner front, sides and ceiling, steel reinforcement for one-piece Reefer unit, 3" foam sides and ceiling, 4" foam front and floor, smooth extruded aluminum hat floor, 4" Jr. I-beam longitudinals.

#### REAR FINISHES (bumper blocks optional)



Standard 5" structural DOT underride with pooched surface (no dock bumper)



2 step fixed with pooched surface



Structural DOT underride & wood filled dock bumper



Center (Chicago) style drop step



Type "B" drop step with skid resistant step surface



Full width drop step with pooched surface

SIDE DOOR **OPTIONS** 



Single Panel Narrow Opening



**REAR DOOR OPTIONS** 



3 Panel Full Opening



2 Panel Narrow Opening



4 Panel Full Opening



Overhead Rear Door

2 Panel Full Opening



Single Opening



Double Opening

# Refrigerated Truck Bodies

## BENEFITS

- Morgan mounts refrigeration unit higher with heavy duty bracing and support increasing evaporator air flow and interior cargo space.
- Poured-in-place polyurethane foam in floors, walls and ceiling provides superior thermal integrity.
- Morgan's exclusive full-perimeter thermal breaks on doors and thresholds reduce outside heat from reaching inside cargo and decreasing refrigeration efficiency.
- USDA approved standard interior liners that assist with thermal integrity.
- Morgan's Aerodynamic front end and patented Poly-Tuff™ corner caps increase fuel efficiency
- Morgan's thermoplastic dormers and Poly-Tuff<sup>™</sup> corner caps help reduce damage and minimize repairs.
- Fully sealed, plugged together wiring for exterior clearance and ID lighting.
- Lifetime warranty on optional LED clearance and marker lighting.
- Extensive use of stainless steel fasteners to prevent corrosion.
- Slip resistant, composite reinforced rear door threshold.



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# \*//ORGAN®

# **HOW TO:** Build a Refrigerated Body



### **START BY ASKING:**

What is your business? What are you hauling? How do you load/unload? What is your present equipment? When do you need delivery?

#### STANDARD SPECS AND EQUIPMENT

#### SUBFRAME

3" I-beam crossmembers on 12" centers; wheelpans over tire area, with mylar tape between bottom rails; 4" I-beam longrails with glassboard subpan and 4" foam insulation.

#### **FLOOR TYPE**

1 1/4" extruded aluminum, with 6" scuff, 4 drains with kazoos

#### SIDE WALLS

Sheet and Post - .040" aluminum sheet, aluminum Z posts on 16" centers. Standard foam thickness is 3" poured polyurethane insulations (other foam thicknesses available).

#### LINER

 Seamless glassboard fastener free interior walls for thermal integrity.

#### FRONT-END ASSEMBLY

Aluminum Z posts, one-piece thermoplastic dormer and front top radius, with extraheavy steel support and lateral brace for refrigeration unit, stainless steel corner radius, 4" foam insulation, aluminum bottom rail. Steps and grab handle for refrigeration unit access.

#### **REAR FRAME**

Stainless steel construction, Morgan's exclusive thermal breaks on all floors, thresholds and doors, built-in clearance light protector and rain deflector, roadside and curbside grab handles.

#### **EXTERIOR LIGHTS**

 Per FMVSS-108 specifications, including sealed plugged together wiring harness in loom and reflectors.

#### **ROOF ASSEMBLY**

 .032" aluminum sheet with 3" foam insulation, extruded aluminum top rail, aluminum Z post roof bows on 24" centers, seamless glassboard ceiling liner, stainless steel recessed incandescent dome light with switch in cab.

### **POPULAR OPTIONS**

- 4" and 5" insulation packages available
- Morgan low mount monorail walkramp
- Liftgates
- Refrigeration unit and installation
- Cargo restraint systems
- Strip curtains
- Bulkheads permanent or moveable
- Side and rear door options
- Various flooring options
- SmoothWall<sup>TM</sup> construction
- Custom paint and decal installation
- Various lighting options
- Galvannealed rear frame
- Multi-temperature applications
- Custom side door steps
- Customized rear bumpers
- Fiberglass reinforced plywood (FRP)
- Shelving and rack systems
- Various scuff plate options
- Maximizer swing side door

# Questions to Ask

- A. Available lengths 10'- 28', widths 96" and 102", heights 79", 85", 91", 97", 103" and 109".
- Q. Are there any critical dimensions such as overall length, width or height?
- Special lengths, widths and heights available upon request.
- Q. What product is being transported?
- Product temperature is critical in calculating the amount of insulation.
- Q. What temperature(s) do you need to maintain?
- A. More or less insulation according to door openings (daily) and temperature required.
- Q. How often will the doors be opened daily?
- A. Optional moveable partitions available.
   Contact Morgan with customer requirements.
- Q. What type of floor is required?
- A. Duct board floor standard, flat floors available upon request.
- Q. What type of body construction is required?
- A. Aluminum sheet and post or FRP Fiberglass Reinforced Plywood.
- Q. What refrigeration equipment is being used? (Type and Power)
- A. Mechanical refrigeration is available.
- Q. How is your cargo restrained?
- A. "E" or "F" track, tie rings, surface or recessed mount. Reminder: specify location!
  - NOTE: Federal Motor Carrier Safety Regulations stipulate that the owner / operator is at all times responsible for insuring cargo is properly secure at all times.
- 0. What are your side and rear door requirements?
- A. Overhead and panel-swing doors along with door curtains are available.

#### Q. Is a forklift or pallet jack used?

A. Interior lighting avalable in incandescent, flourescent and LED versions. Exterior lighting available in incandescent or LED versions. Recessed tailights available in SOME rear frames.

#### Q. What interior/exterior lighting options do you require?

A. Interior lighting options include domelights and spotlights; Exterior lighting options include additional clearance lights, marker lights and spotlights. Recessed taillights in corner posts.

#### Q. Is there a liftgate required?

A. Cycle time is one of the most critical items to help determine which liftgate is appropriate. Ask how many times the liftgate will be operated. Liftgate options include tuck away, conventional and rail type models. (Please consider platform size and capacity, bumper type, structural or fabricated.) Stop, turn and taillights provided with chassis or recessed in corner post. (Recessed in corner post feature suggested with tuckunder liftgate application.)

# Q. What bumper, step and/or ramp requirements are necessary?

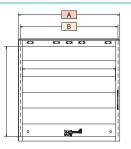
A. Bumper options include standard DOT underride and step bumpers; folding steps are available; walkramp options include Morgan standard or ventilated with available spring assist for easier operation.

NOTE: For rear finish you should be asking about dock loading or ground loading / unloading to make sure the correct type of bumper / step is offered.

#### Q. What about company color and graphics?

A. Prepainted sheets and panels, custom paint and decal installation.

# **DIMENSIONAL FEATURES**

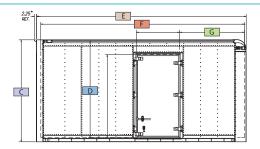


### DIMENSIONAL KEY

- A = Overall Width
- B = Interior Width (Includes 1/4" Plywood Liner)
- C = Exterior Height
- D = Interior Height

| E = Rear Door Opening Width |      |               |          |          |          |   |  |  |  |  |
|-----------------------------|------|---------------|----------|----------|----------|---|--|--|--|--|
|                             |      | WIDTH DIN     | MENSIONS |          |          |   |  |  |  |  |
| Exterior<br>Body<br>Width   |      | "B"           |          |          |          |   |  |  |  |  |
|                             | "A"  | 1.38"<br>Foam | 3" Foam  | 4" Foam  | 5" Foam  |   |  |  |  |  |
| 90                          | 90"  | 86 3/16"      | 83 ¾6"   | 81 3/16" | 79 3/16" |   |  |  |  |  |
| 96                          | 96"  | 92 3/16"      | 89 3/16" | 87 3/16" | 85 3/16" |   |  |  |  |  |
| 102                         | 102" | 98 3/16"      | 95 3/16" | 93 3/16" | 91 3/16" |   |  |  |  |  |
|                             |      |               |          |          |          | 1 |  |  |  |  |

Notes: Interior width dimension is from scuff to scuff.



- F = Rear Door Opening Height
- G = Side Door Opening Width
- H = Standard Side Door Opening Height
- I = Leading Edge Of Side Door To Inside Front Of Body
- J = Exterior Length Of Body\*\*
- K = Inside Front Liner To Inside Rear Door Panel

| HEIGHT DIMENSIONS |        |         |         |         |  |  |  |  |
|-------------------|--------|---------|---------|---------|--|--|--|--|
| Body              |        | "D"     |         |         |  |  |  |  |
| Height            | "C"    | 3" Foam | 4" Foam | 5" Foam |  |  |  |  |
| 79                | 85 %"  | 73 %"   | 72 1/8" | 71 %"   |  |  |  |  |
| 85                | 91 %"  | 79 %"   | 78 %"   | 77 1/8" |  |  |  |  |
| 91                | 97 %"  | 85 %"   | 84 %"   | 83 %"   |  |  |  |  |
| 97                | 103 %" | 91 %"   | 90 %"   | 89 %"   |  |  |  |  |
| 103               | 109 %" | 97 %"   | 96 %"   | 95 %"   |  |  |  |  |

Notes: Exterior height does not include longitudinals. Interior height is based on standard 4" floor foam. Subtract 1" to 5" floor foam. Add 3 % or foam between sills.

|                  | BODY LENGTH DIMENSIONS   |          |          |          |          |          |          |          |          |          |  |  |
|------------------|--|----------|----------|----------|----------|----------|----------|----------|----------|----------|--|--|
| Normal<br>Length | 10'  | 12'      | 14'      | 16'      | 18'      | 20'      | 22'      | 24'      | 26'      | 28'      |  |  |
| Е                | 10' 5 %"   | 12' 5 %" | 14' 5 %" | 16' 5 %" | 18' 5 %" | 20' 5 %" | 22' 5 %" | 24' 5 %" | 26' 5 %" | 28' 5 %" |  |  |
| F                | 9' 7"  | 11' 7"   | 13' 7"   | 15' 7"   | 17' 7"   | 19' 7"   | 21' 7"   | 23' 7"   | 25' 7"   | 27' 7"   |  |  |
| Notes: O/H D     | Notes: O/H Door Dimensions are for a single insulated door. Subtract 1" for double insulated door. |          |          |          |          |          |          |          |          |          |  |  |

| STANDARD SIDE DOOR LOCATIONS |          |     |     |          |     |     |     |     |     |     |
|------------------------------|----------|-----|-----|----------|-----|-----|-----|-----|-----|-----|
| Body<br>Length               | 10'      | 12' | 14' | 16'      | 18' | 20' | 22' | 24' | 26' | 28' |
| G                            | 29 1/16" |     |     | 61 1/16" |     |     |     |     |     |     |

Note: Foremost location of side door is 13 ½ fe" from inside front wall.

Door can be moved fore and aft of standard location on 2" increments only.

Door location is based on 4" of foam in front wall.

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