



# FirmaLoad™

## Bulk Bag Pallets

### SELECT THE RIGHT SIZE

#### STEP 1 — Determine the minimum and maximum size needed

**Minimum size** — In a properly filled bag, the base is the only portion in contact with the pallet. The size of the base determines the minimum size of the pallet that should be used for your application. Normally the bulk bag's dimensions can be found on the tag attached to the bag (figure A). Note that length is the first dimension listed. The minimum length of the pallet should

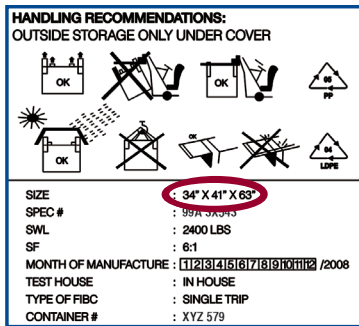


fig. A

be longer than the greater of the length (L) or width (W) of the bag's base (figure B).

**Maximum size** —

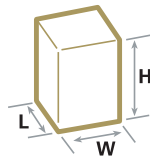


fig. B

To determine the maximum size of the pallet, add the length plus width dimensions of the bag together then multiply the sum by 2; divide that total by 3.1416 (pi). The result is the diameter of the bag when filled, and will be the maximum length of pallet needed.

**For example:** To find the diameter of a bag with a base that is 34 inches in length and 41 inches in width, calculate:

$$34 + 41 = 75$$

$$75 \times 2 = 150$$

$$150 / 3.1416 = 47.75$$

**The diameter of the filled bag is 47.75 inches.**

Therefore, the pallet's length in this example should be more than 41 inches and less than 48 inches.

#### FirmaLoad sizing worksheet:

Bag length (L): \_\_\_\_ + Bag width (W): \_\_\_\_ = \_\_\_\_\_  
 (Multiplied times 2) x 2  
 Bag circumference = \_\_\_\_\_  
 (Divided by pi) / 3.1416  
 Bag diameter = \_\_\_\_\_

**Minimum size:** \_\_\_\_\_ [larger of (L) or (W)]

**Maximum size:** \_\_\_\_\_ [bag diameter]

#### STEP 2 — Determine the best FirmaLoad pallet size

Choose a FirmaLoad bulk bag pallet that is longer than the larger dimension of (L) or (W) yet no larger than the bag diameter determined in your worksheet in Step 1.

Use your experience and good judgment to choose the ideal size, considering the following factors:

- The pallet should be large enough to allow the bulk bag to be easily centered and set down without taking valuable time to position it precisely.
- A bag that is too large for the pallet, or not properly placed on the pallet, may block the pallet's channels, prohibiting forklift access. Pallets should have channels long enough to allow adequate clearance.
- A pallet that is larger than necessary will take up valuable space in storage and shipping.

#### STEP 3 — Determine the FirmaLoad pallet's Safe Working Load (SWL)

When selecting a FirmaLoad bulk bag pallet it's important to know the filling weights being used and how many bags you plan to stack on top of one another in the operation. To calculate your FirmaLoad pallet's SWL, use the following formula:

**SWL** = Bag weight times the number of bags being stacked high.

**For example:** If filled bags are 2,200 lbs. each and stacked 3 bags high, the FirmaLoad bulk bag pallet must hold a total stacked weight of 6,600 lbs. (2,200 x 3). Therefore, the medium-duty FirmaLoad pallet is the best choice for this application.

#### FirmaLoad pallet SWL worksheet:

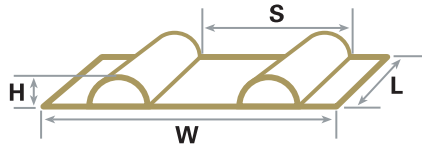
**Filled bag weight:** \_\_\_\_\_

(Multiplied by the number of bags per stack) x \_\_\_\_\_

**Total stacked weight (SWL) =** \_\_\_\_\_

| FirmaLoad pallet grade | Maximum weight load capacity (SWL) |       |
|------------------------|------------------------------------|-------|
|                        | lbs.                               | kg    |
| Standard duty          | 4,410                              | 2,000 |
| Medium duty            | 6,614                              | 3,000 |
| Heavy duty             | 8,819                              | 4,000 |

# SELECT AND ORDER



L = Channel length  
 W = Overall width  
 S\* = Channel spacing\*  
 H = Overall height: 3"

| Description   | Part #     | Pallet size | Dimensions (in.) |    |    | Weight per unit |     |
|---|------------|-------------|------------------|----|----|-----------------|-----|
|   |            |             | L                | W  | S  | Lbs.            | kg  |
| Standard-duty<br>FirmaLoad<br>bulk bag pallets<br><br>4,410 lbs.<br>(2,000kg) | 15029275   | 39x42       | 39               | 42 | 25 | 6.6             | 3.0 |
|   | 15036426   | 42x42       | 42               | 42 | 25 | 7.0             | 3.2 |
|   | 15036427   | 44x42       | 44               | 42 | 25 | 7.4             | 3.4 |
|   | 15029253   | 44x44       | 44               | 44 | 25 | 7.6             | 3.5 |
|   | 15029276   | 45x45       | 45               | 45 | 25 | 7.8             | 3.6 |
|   | 15029277   | 46x42       | 46               | 42 | 25 | 7.8             | 3.6 |
|   | 15029279   | 48x42       | 48               | 42 | 25 | 8.2             | 3.7 |
| Medium-duty<br>FirmaLoad<br>bulk bag pallets<br><br>6,614 lbs.<br>(3,000kg)   | 15029280   | 39x42       | 39               | 42 | 25 | 8.4             | 3.8 |
|   | 15036430   | 42x42       | 42               | 42 | 25 | 8.9             | 4.1 |
|   | 15029281   | 44x42       | 44               | 42 | 25 | 9.4             | 4.3 |
|   | 15041134   | 44x44       | 44               | 44 | 25 | 9.6             | 4.4 |
|   | 15039417   | 45x45       | 45               | 45 | 25 | 10.0            | 4.6 |
|   | 15039416   | 46x42       | 46               | 42 | 25 | 9.9             | 4.5 |
|   | 15029285   | 48x42       | 48               | 42 | 25 | 10.4            | 4.8 |
| Heavy-duty<br>FirmaLoad<br>bulk bag pallets<br><br>8,819 lbs.<br>(4,000kg)    | 15060505   | 39x42       | 39               | 42 | 25 | 12.0            | 5.5 |
|   | 15039444   | 42x42       | 42               | 42 | 25 | 12.8            | 5.8 |
|   | FL3444225H | 44x42       | 44               | 42 | 25 | 13.5            | 6.2 |
|   | FL3444425H | 44x44       | 44               | 44 | 25 | 13.7            | 6.2 |
|   | FL3454525H | 45x45       | 45               | 45 | 25 | 14.1            | 6.4 |
|   | FL3464225H | 46x42       | 46               | 42 | 25 | 14.2            | 6.5 |
|   | FL3484225H | 48x42       | 48               | 42 | 25 | 14.9            | 6.8 |

\* Channel spacing has been optimized to meet the broadest possible range of applications. Depending on the application (e.g. particle size/type of material being used with the bulk bag), there may be a need to customize the channel spacing to optimize the handling performance for the application. Please contact your Sonoco sales representative for more information. Minimum order quantities and set-up fees apply.

- All pricing is F.O.B. final assembly facility.
- Minimum order quantity of 46 FirmaLoad carriers (1 stack).
- Truckload quantity = 1,200 FirmaLoad bulk bag carriers = 26 stacks.
- Each stack is approximately 78" tall.
- Truckload quantity:  
 – 1,200 assembled FirmaLoad bulk bag pallets (26 stacks).



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