

User Guide for the Load Calculator

Load Calculator is available on
<https://www.charlottepipe.com>

Charlotte Pipe and Foundry Company
Administrative Division
2109 Randolph Road
Charlotte, NC 28207
_SDSupport@charlottepipe.com

Table of Contents

Load Calculator	1
<i>Material Search</i>	<i>2</i>
<i>Material Selection.....</i>	<i>4</i>
<i>Load Calculation.....</i>	<i>7</i>
<i>Additional Load Building Notes</i>	<i>8</i>
<i>Division Change – Cast Iron.....</i>	<i>9</i>

Load Calculator

Material Search

Material Type
 You may select the display **ALL** plastic pipe materials, or use the pull-down to display items within a specific material group of pipe materials.

Material Type: ALL Materials SKIDS FEET Multi-Item Search

Material Search: NONE Items Per Page: 5

Material Number	Description	Material	Size	Length	Pieces Per Skid	Feet Per Skid	Skids Per Truck
PVC 04005 0600	PVC SCH 40 PLAIN END	PE	1/2"	10'	450	4,500'	56
PVC 04005 0800	PVC SCH 40 BELLED	PE	1/2"	20'	450	9,000'	28
PVC 04007 0600	PVC FOAM CORE	PE	3/4"	10'	350	3,500'	56
PVC 04007 0800	PR-200 & PR-160	PE	3/4"	20'	350	7,000'	28

Material Search
 Enter a specific material to display **ONLY** that item. Enter the Charlotte Pipe part number, and click the magnifying glass to search.

Material Type: ALL Materials SKIDS FEET Multi-Item Search

Material Search: PVC 07112 0800 Items Per Page: 5

Material Number	Description	Material	Size	Length	Pieces Per Skid	Feet Per Skid	Skids Per Truck	Feet Per Truck
PVC 07112 0800	PVC 07112 1 1/2X20 DWV SCH 40 PIPE		1 1/2"	20'	165	3,300'	24	79,200'

SKIDS or FEET
 Select whether you want to enter the material quantity in **SKIDS** or **FEET**. Click the toggle of your selection.

Material Type: ALL Materials SKIDS FEET

Material Search:

Multi-Item Search

To search for a list of specific materials, check the **Multi-Item Search** feature. Enter the Charlotte Pipe part number for the materials in the **Material Search** box, making sure each item is on a separate line. When you have entered all of the part numbers, click the magnifying glass to search for the items.

Material Type: ALL Materials SKIDS FEET Multi-Item Search

Material Search: Multi-Item Search Material Numbers must match the Charlotte Pipe Material Number format and have a Line Break after each item.

Example:
PVC 07400 0600
PVC 04005B 0600
AW 14002 0020C
PVC 07300 0800

Items Per Page: 5

Items Per Page

Personalize how many items are displayed on the page using the **Items Per Page** selection. The minimum number of items to display is five. When displaying the minimum number of items, use the page numbers at the bottom of the page to advance the material listing. The maximum number of items to display is 40.

Material Type: ALL Materials SKIDS FEET Multi-Item Search

Material Search: Multi-Item Search Material Numbers must match the Charlotte Pipe Material Number format and have a Line Break after each item.

Example:
PVC 07400 0600
PVC 04005B 0600
AW 14002 0020C
PVC 07300 0800

Items Per Page: 5

Material Selection

After entering all the material selection criteria, click on the *magnifying glass* to search.

Division: Plastic Cast Iron

Material Type: ALL Materials SKIDS FEET Multi-Item Search

Material Search:

PVC 10010B 0600

PVC 07400 0600

PVC 04300 0600

PVC 04400 0600

PVC 07600 0600

All the materials meeting the search criteria entered above will show beneath the search criteria:

Items Per Page: 5										
Material Number	Description	Size	Length	Pieces Per Skid	Feet Per Skid	Skids Per Truck	Feet Per Truck	T/L % Metric Per Skid	SKIDS	SELECT
PVC 07400 0600	PVC 07400 4X10 DWV SCH 40 PIPE	4"	10'	67	670'	24	16,080'	1	<input type="text"/>	+
PVC 07600 0600	PVC 07600 6X10 DWV SCH 40 PIPE	6"	10'	33	330'	24	7,920'	1.166	<input type="text"/>	+
PVC 04300 0600	PVC 04300 3X10 DWV SCH 40 FOAM CORE PIPE	3"	10'	113	1,130'	24	27,120'	1	<input type="text"/>	+
PVC 04400 0600	PVC 04400 4X10 DWV SCH 40 FOAM CORE PIPE	4"	10'	67	670'	24	16,080'	1	<input type="text"/>	+
PVC 10010B 0600	PVC 10010B 1X20 SCH 80 PIPE BELLED END-GREY	1"	20'	177	3,540'	28	99,120'	0.7	<input type="text"/>	+
									Select All	

Enter the number of skids (or footage) of the material and click the **+** to **select** the material.

Material Number	Description	Size	Length	Pieces Per Skid	Feet Per Skid	Skids Per Truck	Feet Per Truck	T/L % Metric Per Skid	SKIDS	SELECT
PVC 07400 0600	PVC 07400 4X10 DWV SCH 40 PIPE	4"	10'	67	670'	24	16,080'	1	<input type="text" value="5"/>	+
PVC 07600 0600	PVC 07600 6X10 DWV SCH 40 PIPE	6"	10'	33	330'	24	7,920'	1.166	<input type="text" value="12"/>	+
PVC 04300 0600	PVC 04300 3X10 DWV SCH 40 FOAM CORE PIPE	3"	10'	113	1,130'	24	27,120'	1	<input type="text" value="7"/>	+
PVC 04400 0600	PVC 04400 4X10 DWV SCH 40 FOAM CORE PIPE	4"	10'	67	670'	24	16,080'	1	<input type="text" value="4"/>	+
PVC 10010B 0600	PVC 10010B 1X20 SCH 80 PIPE BELLED END-GREY	1"	20'	177	3,540'	28	99,120'	0.7	<input type="text" value="3"/>	+
									Select All	

You may enter the amount for a material and **select** it individually, or enter the amounts for all of the materials and add them all at once, using the **Select All** button.

The bottom portion of the page will give a summary of all the **selected** materials and the quantities entered:

Selected Materials															<input checked="" type="radio"/> SKIDS <input type="radio"/> FEET
Material Number	Description	Size	Length	Pieces Per Skid	Feet Per Skid	Skids Per Truck	Feet Per Truck	T/L % Metric Per Skid	SKIDS	FEET	WEIGHT	UPDATE	REMOVE	T/L % Metric	
PVC 07400 0600	PVC 07400 4X10 DWV SCH 40 PIPE	4"	10'	67	670'	24	16,080'	1	<input type="text" value="5"/>	3,350	6,777	+	-	5	
PVC 07600 0600	PVC 07600 6X10 DWV SCH 40 PIPE	6"	10'	33	330'	24	7,920'	1.166	<input type="text" value="12"/>	3,960	14,094	+	-	13.992	
PVC 04300 0600	PVC 04300 3X10 DWV SCH 40 FOAM CORE PIPE	3"	10'	113	1,130'	24	27,120'	1	<input type="text" value="7"/>	7,910	7,079	+	-	7	
PVC 04400 0600	PVC 04400 4X10 DWV SCH 40 FOAM CORE PIPE	4"	10'	67	670'	24	16,080'	1	<input type="text" value="4"/>	2,680	3,417	+	-	4	
PVC 10010B 0600	PVC 10010B 1X20 SCH 80 PIPE BELLED END-GREY	1"	20'	177	3,540'	28	99,120'	0.7	<input type="text" value="3"/>	10,620	4,322	+	-	2.1	
<input type="button" value="Update All"/>												<input type="button" value="Remove All"/>			

Column	Data Summary
Skids / Feet	Selection Option to show quantities in Skids or Feet
Material Number	Charlotte Pipe Material ID
Size	Size of the pipe
Length	Length of the pipe
Pieces Per Skid	Number of pieces in a skid of the material
Feet Per Skid	Footage in a skid of the material
Skids Per Truck	Number of skids to a truck
Feet Per Truck	Footage for a full truckload
T/L Factor Per Skid	Amount of truck space we estimate a skid of the material will consume
Skids	Selected number of skids entered
Feet	Total footage of the number of skids selected
Weight	Total weight of the number of skids selected
Update	Option to update any changes made to the material quantity selected
Remove	Option to remove the material from your selection
T/L Factor	Amount of truck space we estimate your selection will consume
Update All	Selection Option to <u>update</u> all material quantity changes at once
Remove All	Selection Option to <u>remove</u> all of the selected items at once

You may change the data presentation of the **Selected Materials** from SKIDS to FEET (or vice versa) by changing the toggle.

Material Type: ALL Materials SKIDS FEET

Material Search: PVC 10010B 0600
 PVC 07400 0600
 PVC 04300 0600
 PVC 04400 0600
 PVC 07600 0600

The highlighted fields in the **Selected Materials** section are available to edit.

Update the T/L Factor with any item changes by clicking + on the item.

Remove a single material from the T/L Factor calculation by clicking the - to remove it.

Selected Materials													<input type="radio"/> SKIDS <input checked="" type="radio"/> FEET	
Material Number	Description	Size	Length	Pieces Per Skid	Feet Per Skid	Skids Per Truck	Feet Per Truck	T/L % Metric Per Skid	SKIDS	FEET	WEIGHT	UPDATE	REMOVE	T/L % Metric
PVC 07400 0600	PVC 07400 4X10 DWV SCH 40 PIPE	4"	10'	67	670'	24	16,080'	1	6.49	4350	8,800	+	-	6.49
PVC 07600 0600	PVC 07600 6X10 DWV SCH 40 PIPE	6"	10'	33	330'	24	7,920'	1.166	2	660	2,349	+	-	2.332
PVC 04300 0600	PVC 04300 3X10 DWV SCH 40 FOAM CORE PIPE	3"	10'	113	1,130'	24	27,120'	1	1	1130	1,011	+	-	1
Update All											Remove All			

Edit more than one item at a time and use the **Update All** button to re-calculate the T/L Factor with all the changes entered.

Selected Materials													<input type="radio"/> SKIDS <input checked="" type="radio"/> FEET	
Material Number	Description	Size	Length	Pieces Per Skid	Feet Per Skid	Skids Per Truck	Feet Per Truck	T/L % Metric Per Skid	SKIDS	FEET	WEIGHT	UPDATE	REMOVE	T/L % Metric
PVC 07400 0600	PVC 07400 4X10 DWV SCH 40 PIPE	4"	10'	67	670'	24	16,080'	1	6.49	4350	8,800	+	-	6.49
PVC 07600 0600	PVC 07600 6X10 DWV SCH 40 PIPE	6"	10'	33	330'	24	7,920'	1.166	2	660	2,349	+	-	2.332
PVC 04300 0600	PVC 04300 3X10 DWV SCH 40 FOAM CORE PIPE	3"	10'	113	1,130'	24	27,120'	1	1	1130	1,011	+	-	1
Update All											Remove All			

Remove all the items shown in the Selected Materials section by clicking **Remove All**.

Selected Materials													<input type="radio"/> SKIDS <input checked="" type="radio"/> FEET	
Material Number	Description	Size	Length	Pieces Per Skid	Feet Per Skid	Skids Per Truck	Feet Per Truck	T/L % Metric Per Skid	SKIDS	FEET	WEIGHT	UPDATE	REMOVE	T/L % Metric
PVC 07400 0600	PVC 07400 4X10 DWV SCH 40 PIPE	4"	10'	67	670'	24	16,080'	1	6.49	4350	8,800	+	-	6.49
PVC 07600 0600	PVC 07600 6X10 DWV SCH 40 PIPE	6"	10'	33	330'	24	7,920'	1.166	2	660	2,349	+	-	2.332
PVC 04300 0600	PVC 04300 3X10 DWV SCH 40 FOAM CORE PIPE	3"	10'	113	1,130'	24	27,120'	1	1	1130	1,011	+	-	1
Update All											Remove All			

Load Calculation

Directly under the Material Selection section of the page, is the **Load Calculator**. This feature provides a summary of the materials selected as well as an estimation of how much space the selected materials will consume on a standard 48' flatbed.

10' Skids	20' Skids	TOTAL Skids	TOTAL Weight(lbs)	MAX T/L Factor	TOTAL T/L Factor
28	3	<u>31</u>	35,902	28	32.092

Column	Data Summary
10' Skids	Total number of 10' Skids based on the material selected
20' Skids	Total number of 20' Skids based on the material selected
TOTAL Skids	Total number of Skids for the material selected
TOTAL Weight (lbs)	Total weight of the material selected
MAX T/L Factor*	Guideline for how much space material can consume on the truck; see the additional loading notes below
TOTAL T/L Factor	Total calculation of how much space your selected material will consume on the truck

Important note: Truckload Factors are estimates only. Height restrictions may apply. Regardless of Truckload Factor, you cannot exceed the maximum weight of 45,000 lbs per truckload.

T/L Factor shown in **GREEN TEXT** = T/L Factor for the selected material is within acceptable range for a "good" load.

TOTAL T/L Factor
27.992

T/L Factor shown in **RED TEXT** = T/L Factor for the selected material is acceptable, but nearing maximum. Be mindful of the material combinations and weight of the load.

TOTAL T/L Factor
30.992

T/L Factor shown in **RED TEXT WITH STRIKETHROUGH** = T/L Factor for the selected material is **too high** and it will not fit on the truck. You should remove some of the material.

TOTAL T/L Factor
35.992

Additional Load Building Notes

PVC Pipe Shipping Guidelines

- **28** is the maximum **Truckload Factor** of **20ft** pipe.
- **35** is the maximum **Truckload Factor** for a combination of **10ft** and **20ft** pipe.
- **28** is the maximum **Truckload Factor** of **10ft** sizes 1½" and 2" (Foam/PVC).
- **24** is the maximum **Truckload Factor** of **10ft** sizes 3", 4", and 6" (Foam/PVC); review the Loading Chart to utilize additional space on truck.
- **24** is the maximum **Truckload Factor** of **20ft** sizes 4", 6", 8" and 10" (Foam/PVC); review the Loading Chart to utilize additional space on truck.
- **24** is the minimum **Truckload Factor** for a full truckload.

ABS Pipe Shipping Guidelines

- **5 skids high** is the max height on ABS.
- **28** is the maximum **Truckload Factor** of **10ft** ABS pipe.
- **28** is the maximum **Truckload Factor** of **20ft** ABS pipe.
- **35** is the maximum **Truckload Factor** for a combination of **10ft** and **20ft** pipe.

Division Change – Cast Iron

The Material Type will default to Plastic but can be toggled to Cast Iron using the Division selection located at the top of the webpage.



The Loading Calculator for Cast Iron functions the same as for Plastic, with the only exceptions being the columns showing different quantity values.

Cast Iron

Material Type: ALL Materials Multi-Item Search

Material Search: Material Number Items Per Page: 5

Material Number	Description	Skid Qty	1/2 Crate Qty	Full Crate Qty	lbs Per Piece	Pieces	SELECT
CP 00033 1000	CP 00033 3 IN SPECIALTY COUPLING CAST IRON TO PVC				2.425	<input style="width: 30px;" type="text"/>	+
CP 00044 1200	CP 00044 4 IN SPECIALTY COUPLING CAST IRON TO PVC				2.425	<input style="width: 30px;" type="text"/>	+
CP 00200 0800	CP 00200 2 IN SPECIALTY COUPLING CAST IRON TO PVC				2.425	<input style="width: 30px;" type="text"/>	+
EZS 00001 0600	EZS 00001 2X1 1/2 FIGURE ONE NO HUB TOP		200	400	4.487	<input style="width: 30px;" type="text"/>	+
EZS 00006D 0600	EZS 00006D 3X2 NH FIGURE 6 DOUBLE		137	275	13	<input style="width: 30px;" type="text"/>	+
<input type="button" value="Select All"/>							
1 2 3 4 5 6 7 8 9 10 ...							
TOTAL Pieces	TOTAL Weight(lbs)	MAX Weight(lbs)	% Truckload				
0	0.000	42,500	0				

Plastic

Material Type: ALL Materials SKIDS FEET Multi-Item Search

Material Search: Material Number Items Per Page: 5

Material Number	Description	Size	Length	Pieces Per Skid	Feet Per Skid	Skids Per Truck	Feet Per Truck	T/L % Metric Per Skid	SKIDS	SELECT
PVC 04005 0600	PVC 04005 1/2X10 SCH 40 PLAIN END PIPE	1/2"	10'	450	4,500'	56	252,000'	0.5	<input style="width: 30px;" type="text"/>	+
PVC 04005 0800	PVC 04005 1/2X20 SCH 40 PLAIN END PIPE	1/2"	20'	450	9,000'	28	252,000'	1	<input style="width: 30px;" type="text"/>	+
PVC 04007 0600	PVC 04007 3/4X10 SCH 40 PLAIN END PIPE	3/4"	10'	350	3,500'	56	196,000'	0.5	<input style="width: 30px;" type="text"/>	+
PVC 04007 0800	PVC 04007 3/4X20 SCH 40 PLAIN END PIPE	3/4"	20'	350	7,000'	28	196,000'	1	<input style="width: 30px;" type="text"/>	+
PVC 04010 0600	PVC 04010 1X10 SCH 40 PLAIN END PIPE	1"	10'	300	3,000'	44	132,000'	0.5	<input style="width: 30px;" type="text"/>	+
<input type="button" value="Select All"/>										
1 2 3 4 5 6 7 8 9 10 ...										
10' Skids	20' Skids	TOTAL Skids	TOTAL Weight(lbs)	MAX T/L % Metric	TOTAL T/L % Metric					
0	0	0		28						