

# MAXI-LIFT



## ENGINEERING

### BUCKET ENGINEERING

- **CAPACITIES**  
ELEVATOR BUCKETS  
& ELEVATORS
- **SPEED CHARTS**  
AGRICULTURAL &  
INDUSTRIAL
- **PUNCHING**  
BELT & CHAINS
- **BULK MATERIAL  
HANDLING**



MAXI-LIFT



# CALCULATING CAPACITY

For More Information, Call 1-800-527-0657

## CALCULATING BUCKET ELEVATOR CAPACITY

CAPACITY of the Bucket at Water Level (Cubic Inches)	NUMBER OF BUCKETS Per Foot (12 ÷ Spacing In Inches)	NUMBER OF ROWS of Buckets on the Belt	SPEED of the Belt or Chain FPM (Feet Per Minute)	CUBIC IN. PER HOUR See Below for Conversion
_____	X _____	X _____	X _____	X $\frac{60}{\text{MINUTES}}$ = _____

For engineering purposes, Maxi-Lift recommends using water level capacity as the basis for calculation. Actual bucket fill will vary depending on the product and operational conditions.

- STEP 1** Multiply the CAPACITY of the bucket times the NUMBER OF BUCKETS per foot (12 divided by spacing) times the NUMBER OF ROWS of buckets. This will give the capacity in cubic inches of each running foot of the belt or chain.
- STEP 2** Multiply the answer times the SPEED of the belt or chain in FPM for the capacity discharged per minute.
- STEP 3** Then multiply by 60 minutes to get cubic inches per hour.

### CONVERT CUBIC INCHES PER HOUR AS FOLLOWS:

- BUSHEL:** Divide by 2,150 to convert to bushels.
- CUBIC FEET:** Divide by 1,728 to convert to cubic feet.
- SHORT TONS:** Multiply cubic feet capacity times weight of product per cubic foot and divide by 2,000.
- METRIC TONS:** Multiply cubic feet capacity times weight of product per cubic foot and divide by 2,204.62.

### FEET PER MINUTE

π	HEAD PULLEY DIAMETER (IN.)	RPM	IN. / FT.	FT. / MIN.
(3.1416)	X _____	X _____	÷ 12	= _____

### BUSHEL PER HOUR

CU. IN. / HOUR	CU. IN. / BUSHEL	BPH
_____	÷ 2,150	= _____

### CUBIC FEET PER HOUR

CU. IN. / HOUR	CU. IN. / CU. FT.	CU. FT. / HOUR
_____	÷ 1,728	= _____

### SHORT TONS PER HOUR

First determine cubic ft / hr. at water level using above formula then proceed as follows

CU. FT. / HOUR	WEIGHT OF PRODUCT / CU. FT.	LBS. / HOUR	LBS. / TON	TONS / HOUR
_____	X _____	= _____	÷ 2,000	= _____

### METRIC TONS PER HOUR

First determine cubic ft/hr. at water level using above formula then proceed as follows

CU. FT. / HOUR	WEIGHT OF PRODUCT / CU. FT.	LBS. / HOUR	LBS. / METRIC TON	METRIC TONS / HOUR
_____	X _____	= _____	÷ 2204.62	= _____

### CALCULATING HORSEPOWER

The formula below will result in the theoretical horsepower necessary. It is recommended that an additional 25% minimum be added for drive losses and up to 15% for elevator friction and cup digging through the boot.

$$\text{HP (at head Shaft)} = \frac{W \times H}{33,000} \quad W = \frac{\text{LBS. / HOUR}}{60 \text{ MINUTES}} \quad H = \text{Vertical Lift in Feet}$$

# SPEED CHARTS: HIGH SPEED ELEVATOR BUCKETS

TIGER-TUFF®, TIGER-CC®, HD-MAX®, CC-MAX®

## AGRICULTURAL ELEVATOR BUCKET SPEED CHART

Recommended Minimum and Optimum Pulley Speeds for the following Maxi-Lift Agricultural Elevator Buckets (Centrifugal discharge)



ELEVATOR BUCKET NOMINAL PROJ. (INCHES)		MINIMUM AND OPTIMUM PULLEY SPEEDS															
		PULLEY DIAMETER (INCHES) / PULLEY CIRCUMFERENCE (FEET)															
		4"	5"	6"	8"	10"	12"	14"	16"	20"	24"	30"	36"	42"	48"	60"	72"
3"	Minimum:	89	80	81	74	69	64	-	-	-	-	-	-	-	-	-	-
	Optimum:	158	143	131	115	103	95	-	-	-	-	-	-	-	-	-	-
4"	Minimum:	-	-	75	70	53	51	50	46	43	40	-	-	-	-	-	-
	Optimum:	-	-	146	127	109	103	96	89	79	72	-	-	-	-	-	-
5"	Minimum:	-	-	-	70	67	63	50	48	45	40	40	35	32	32	-	-
	Optimum:	-	-	-	161	131	111	102	95	90	75	67	61	55	51	-	-
6"	Minimum:	-	-	-	-	-	-	-	50	45	40	36	35	31	30	-	-
	Optimum:	-	-	-	-	-	-	-	93	84	73	67	61	55	51	-	-
7"	Minimum:	-	-	-	-	-	-	-	-	40	36	34	33	31	30	27	26
	Optimum:	-	-	-	-	-	-	-	-	80	78	73	65	59	55	50	45
8"	Minimum:	-	-	-	-	-	-	-	-	-	-	33	32	30	30	27	25
	Optimum:	-	-	-	-	-	-	-	-	-	-	60	58	57	56	47	43
10"	Minimum:	-	-	-	-	-	-	-	-	-	-	-	-	-	30	25	20
	Optimum:	-	-	-	-	-	-	-	-	-	-	-	-	-	52	45	42

## TIGER-CC®, CC-MAX® TABLE OF SPEEDS



CC-MAX TABLE OF SPEEDS					
PULLEY / SPROCKET DIAMETER (IN.)	PULLEY / SPROCKET CIRCUMFERENCE (FT.)	MIN. RPM	MAX. RPM	MIN. FPM	MAX. FPM
8"	2.09	85	170	178	356
10"	2.62	85	170	223	445
12"	3.14	75	145	236	456
14"	3.67	65	120	238	440
16"	4.19	55	100	230	419
18"	4.71	55	90	259	424
20"	5.24	55	85	288	445
22"	5.76	55	85	288	445
24"	6.28	42	80	264	503
30"	7.85	42	80	330	628
36"	9.42	42	80	396	754
42"	11.00	40	70	440	770
48"	12.57	40	65	503	817
54"	14.14	40	65	566	919
60"	15.71	40	60	628	942
72"	18.85	40	55	754	1037
84"	22.00	34	50	748	1100
96"	25.13	30	45	754	1131

**MINIMUM SPEED:** Slowest Speed at which Centrifugal Discharge will occur.  
**OPTIMUM SPEED:** Speed at which most desirable results are obtained.  
**MAXIMUM SPEED:** Maximum Speed is governed by many factors including Bonnet Shape, clearances, throat location, desired capacity and commodity elevated, therefore is not published.

The optimum speeds shown are based on free flowing whole grains. The optimum recommended speed for feed ingredients and other similar materials is 85% of the optimum speed shown.

These tables are for general reference only and do not guarantee perfect discharge for all bucket elevators at all speeds shown within speed range.

\*Note: Low profile buckets may require faster minimum speeds than shown on this chart at minimum spacing.

# SPEED CHART / HEAD SHAFT RATING

For More Information, Call 1-800-527-0657

## DURA-BUKET® AGRICULTURAL ELEVATOR BUCKET SPEED CHART

Recommended Minimum and Optimum Pulley Speeds for DURA-BUKET Agricultural Elevator Buckets (Centrifugal Discharge)



DURA-BUKET SS



DURA-BUKET LP

### DURA-BUKET MINIMUM AND OPTIMUM PULLEY SPEEDS

ELEVATOR BUCKET NOMINAL PROJ. (INCHES)		PULLEY DIAMETER (INCHES) / PULLEY CIRCUMFERENCE (FEET)															
		10"	12"	16"	18"	20"	22"	24"	30"	36"	42"	48"	54"	60"	72"	84"	96"
		2.62'	3.14'	4.19'	4.71'	5.24'	5.76'	6.28'	7.85'	9.42'	11.00'	12.57'	14.14'	15.70'	18.90'	22.00'	25.13'
3"	Minimum:	85	75	55	55	55	55	-	-	-	-	-	-	-	-	-	
	Optimum:	144	121	90	81	76	72	-	-	-	-	-	-	-	-	-	
4"	Minimum:	-	75	55	55	55	55	50	-	-	-	-	-	-	-	-	
	Optimum:	-	121	90	81	76	72	72	-	-	-	-	-	-	-	-	
5"	Minimum:	-	-	-	55	55	55	50	42	42	40	-	-	-	-	-	
	Optimum:	-	-	-	81	76	72	72	72	72	63	-	-	-	-	-	
6"	Minimum:	-	-	-	-	-	-	50	42	42	40	40	40	40	-	-	
	Optimum:	-	-	-	-	-	-	72	72	72	63	58	58	54	-	-	
7"	Minimum:	-	-	-	-	-	-	-	42	42	40	40	40	40	40	34	
	Optimum:	-	-	-	-	-	-	-	72	72	63	58	58	54	49	45	
8"	Minimum:	-	-	-	-	-	-	-	-	-	-	40	40	40	40	34	
	Optimum:	-	-	-	-	-	-	-	-	-	-	58	58	54	49	45	

### HEAD SHAFT DIAMETER PER HORSEPOWER RATING

HORSEPOWER	SHAFT DIAMETER (INCHES)
1-2	1-7/16
3	1-15/16
5	2-3/16
7 1/2 - 10	2-7/16
15	2-15/16
20	3-3/16
25-30	3-7/16
40	3-15/16
50 - 60	4-7/16
75 - 100	4-15/16
125	5-7/16
150	5-15/16
200	7
250	7

This table is provided for general reference only. Maxi-Lift assumes no liability from use of these figures.

**MINIMUM SPEED:** Slowest Speed at which Centrifugal Discharge will occur.

**OPTIMUM SPEED:** Speed at which most desirable results are obtained.

**MAXIMUM SPEED:** Maximum Speed is governed by many factors including Bonnet Shape, clearances, throat location and desired capacity.

This table is for general reference only and does not guarantee perfect discharge for all bucket elevators at all speeds shown within speed range.

Note: Low-Profile Elevator Buckets spaced on minimum centers may require faster minimum speeds than shown on this chart.

The optimum speeds shown are based on free flowing whole grains. The maximum recommended speed for feed ingredients and other similar materials is 85% of the optimum speed shown.

# INDUSTRIAL SPEED CHARTS

For More Information, Visit [WWW.MAXILIFT.COM](http://WWW.MAXILIFT.COM)



## INDUSTRIAL ELEVATOR BUCKET SPEED CHART

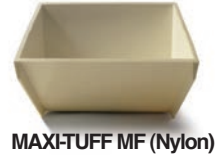
Recommended Minimum and Optimum Pulley Speeds for Maxi-Tuff / Tiger-Tuff industrial Elevator Buckets (Centrifugal Discharge)



ELEVATOR BUCKET NOMINAL PROJ. (INCHES)		MINIMUM AND OPTIMUM PULLEY SPEEDS											
		PULLEY DIAMETER (INCHES) / PULLEY CIRCUMFERENCE (FEET)											
		6"	8"	10"	12"	16"	18"	20"	24"	30"	36"	42"	48"
		1.57'	2.07'	2.62'	3.14'	4.19'	4.71'	5.24'	6.28'	7.85'	9.42'	11.00'	12.57'
3"	Minimum:	80	73	67	62	-	-	-	-	-	-	-	-
	Optimum:	85	77	71	66	-	-	-	-	-	-	-	-
	Maximum:	90	81	75	70	-	-	-	-	-	-	-	-
4"	Minimum:	-	-	65	60	54	-	-	-	-	-	-	-
	Optimum:	-	-	68	64	57	-	-	-	-	-	-	-
	Maximum:	-	-	72	67	60	-	-	-	-	-	-	-
5"	Minimum:	-	-	-	59	53	51	48	-	-	-	-	-
	Optimum:	-	-	-	62	55	53	51	-	-	-	-	-
	Maximum:	-	-	-	65	59	57	54	-	-	-	-	-
6"	Minimum:	-	-	-	-	52	49	47	44	-	-	-	-
	Optimum:	-	-	-	-	54	52	50	46	-	-	-	-
	Maximum:	-	-	-	-	57	55	53	49	-	-	-	-
7"	Minimum:	-	-	-	-	50	48	46	43	40	-	-	-
	Optimum:	-	-	-	-	53	51	49	46	42	-	-	-
	Maximum:	-	-	-	-	56	54	52	48	44	-	-	-
8"	Minimum:	-	-	-	-	-	-	46	43	39	36	34	-
	Optimum:	-	-	-	-	-	-	48	45	41	38	36	-
	Maximum:	-	-	-	-	-	-	51	48	44	41	38	-
10"	Minimum:	-	-	-	-	-	-	-	41	38	36	33	32
	Optimum:	-	-	-	-	-	-	-	45	40	37	35	33
	Maximum:	-	-	-	-	-	-	-	46	43	40	37	35

## MAXI-TUFF INDUSTRIAL MF ELEVATOR BUCKET SPEED CHART

This table is for general reference only and does not guarantee perfect discharge for all bucket elevators at all speeds shown within speed range. Recommended Minimum Spacing, Pulley Diameter and Speeds for Maxi-Tuff MF Elevator Buckets (Continuous Discharge)



BUCKET PROJECTION	BUCKET SIZE	MINIMUM SPACING (INCHES)	MINIMUM DIAMETER (INCHES)	MAXIMUM FPM
5"	8 x 5 x 7	7-1/2	10	250
	10 x 5 x 7			
7"	12 x 7 x 11	11-1/4	18	250
	14 x 7 x 11			
	16 x 7 x 11			
8"	12 x 8 x 11	11-1/4	18	250
	14 x 8 x 11			
	16 x 8 x 11			
	18 x 8 x 11			

# PUNCHING REFERENCE CHART

## Agricultural Elevator Buckets

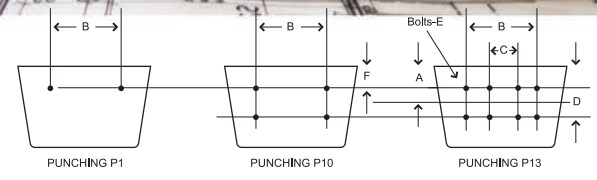
### PUNCHING FOR AGRICULTURAL ELEVATOR BUCKETS: STANDARD HOLE CENTERS

BUCKET SIZE, IN.	TIGER-TUFF	TIGER-CC	HD-MAX	CC-MAX	DURA-BUKET SS	DURA-BUKET LP	CC STEEL
3 x 2	-	-	1-3/4	-	-	-	-
4 x 3	-	-	2-1/4	-	2-1/4	2-1/4	2-1/2
4 x 4	-	-	-	-	-	-	2-1/2
5 x 4	-	-	3-3/16	3-3/16	3-3/16	3-3/16	3-3/16
6 x 4	-	-	4-3/8	4-3/8	4-3/8	4-1/4	4-3/8
7 x 4	-	-	2-5/8	2-11/16	2-11/16	2-5/8	2-11/16
8 x 4	-	-	-	-	-	-	3-1/16
9 x 4	-	-	-	-	-	-	3-5/8
6 x 5	4-3/8	-	4-3/8	4-3/8	4-3/8	4-1/4	4-3/8
7 x 5	2-11/16	-	2-5/8	2-11/16	2-5/8	2-5/8	2-11/16
8 x 5	3-1/16	-	3-1/16	3-1/16	3-1/16	3-1/16	3-1/16
9 x 5	3-5/8	-	3-1/2	3-5/8	3-1/4	3-1/4	3-5/8
10 x 5	4-1/8	-	4	4-1/8	-	-	4-1/8
11 x 5	3	-	3-1/8	3	-	-	3
12 x 5	3-3/8	-	3-3/8	-	-	-	3-3/8
8 x 6	3-1/16	-	3-1/16	3-1/16	3-1/16	2-11/16	3-1/16
9 x 6	3-5/8	-	3-1/2	3-5/8	3-1/2	3-1/2	3-5/8
10 x 6	4-1/8	-	4	4-1/8	4	4	4-1/8
11 x 6	3	-	3	3	3	2-7/8	3
12 x 6	3-3/8	-	3-3/8	3-3/8	3-3/8	3-1/4	3-3/8
13 x 6	3-5/8	-	3-5/8	3-5/8	3-5/8	3-5/8	3-5/8
8 x 7	-	-	-	-	-	-	3-1/16
9 x 7	-	-	-	-	-	-	3-5/8
10 x 7	-	-	4	4-1/8	4	4	4-1/8
11 x 7	-	-	3	3	3	3	3
12 x 7	3-3/8	-	3-3/8	3-3/8	3-3/8	3-1/4	3-3/8
13 x 7	3-5/8	-	3-5/8	3-5/8	3-5/8	3-5/8	3-5/8
14 x 7	3	-	3	3	3	4	3
15 x 7	3-1/4	-	3-1/4	3-1/4	3-1/4	2-5/8	3-1/4
16 x 7	2-7/8	-	3-1/2	2-7/8	3-1/2	2-5/8	2-7/8
18 x 7	-	-	-	-	-	-	3-1/8
20 x 7	-	-	-	-	-	-	3-1/2
22 x 7	-	-	-	-	-	-	4
24 x 7	-	-	-	-	-	-	3-1/2
9 x 8	-	-	-	-	-	-	3-5/8
10 x 8	-	-	4-1/8	-	-	-	4-1/8
11 x 8	3	-	3-1/8	-	-	-	3
12 x 8	3-3/8	3-3/8	3-3/8	3-3/8	3-3/8	3-1/4	3-3/8
13 x 8	3-5/8	-	-	3-5/8	-	-	3-5/8
14 x 8	3	3	3	3	3	4	3
15 x 8	-	-	3-1/4	-	-	-	3-1/4
16 x 8	2-7/8	2-7/8	3-1/2	2-7/8	3-1/2	2-5/8	2-7/8
17 x 8	-	-	-	-	-	-	3
18 x 8	3-1/8	3-1/8	3-1/8	3-1/8	3-1/8	3-1/8	3-1/8
20 x 8	3-1/2	3-1/2	-	3-1/2	-	-	3-1/2
22 x 8	4	-	-	-	-	-	4
24 x 8	3-1/2	-	-	-	-	-	3-1/2
16 x 10	2-7/8	-	-	-	-	-	-
18 x 10	3-1/8	-	-	-	-	-	-
20 x 10	3-1/2	3-1/2	-	-	-	-	-
21 x 10	-	3-5/8	-	-	-	-	-
22 x 10	-	4	-	-	-	-	-
23 x 10	-	3-3/8	-	-	-	-	-
24 x 10	-	3-1/2	-	-	-	-	-
25 x 10	-	3-5/8	-	-	-	-	-
26 x 10	-	3-7/8	-	-	-	-	-
27 x 10	-	3-3/8	-	-	-	-	-
28 x 10	-	3-5/8	-	-	-	-	-

Chart shows Standard Punching - Special Punching available on request. Please double check all punching with original manufacturer.

# BUCKET PUNCHING: CHAINS

Call 1-800-527-0657, Visit [MAXILIFT.COM](http://MAXILIFT.COM) for More Info

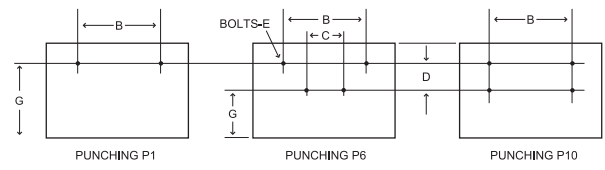


## PUNCHING: CENTRIFUGAL DISCHARGE ELEVATOR BUCKETS ON "K" ATTACHMENTS

CHAIN ATTACHMENT NUMBER	NOMINAL BUCKET SIZE, INCHES						PUNCHING	INCHES					
	TYPES AA, AA-RB		TYPE AC		TYPE SC			A	B	C	D	E	F
	Min.	Max.	Min.	Max.	Min.	Max.							
77-K1	6 x 4	10 x 6	-	-	8 x 6	10 x 8	P1	-	3	-	-	1/4	1
77-K2	6 x 4	10 x 6	-	-	8 x 6	10 x 8	P10	-	3	-	13/16	1/4	1
C 77-K1	6 x 4	10 x 6	-	-	8 x 6	10 x 8	P1	-	3	-	-	3/8	1
78-K1	6 x 4	10 x 6	-	-	8 x 6	10 x 8	P1	-	3-3/8	-	-	1/4	1
H 78-K1	6 x 4	12 x 6	-	-	8 x 6	12 x 8	P1	-	4	-	-	3/8	1
H 78-K2	6 x 4	12 x 6	-	-	8 x 6	12 x 8	P10	-	4	-	1-1/8	3/8	1
C 102B-K2	8 x 5	16 x 7	-	-	8 x 6	16 x 8	P10	-	5-5/16	-	1-3/4	3/8	1
SS 102B-K2	7 x 4-1/2	16 x 7	-	-	8 x 6	16 x 8	P10	-	5-5/16	-	1-3/4	3/8	1
C 102-1/2-K2	8 x 5	16 x 7	-	-	8 x 6	16 x 8	P10	-	5-5/16	-	1-3/4	1/2	1
SS 102-1/2-K2	8 x 5	16 x 7	-	-	8 x 6	16 x 8	P10	-	5-5/16	-	1-3/4	1/2	1
C 110-K2	8 x 5	16 x 7	-	-	8 x 6	16 x 8	P10	-	5-5/16	-	1-3/4	3/8	1
SS 110-K2	8 x 5	16 x 7	-	-	8 x 6	16 x 8	P10	-	5-5/16	-	1-3/4	3/8	1
C111-K2	9 x 6	18 x 8	-	-	10 x 8	16 x 8	P10	-	6-1/4	-	2-5/16	1/2	1
SS 111-K2	10 x 6	18 x 8	-	-	10 x 8	16 x 8	P10	-	6-1/4	-	2-5/16	1/2	1
C 132-K2	12 x 6	20 x 8	-	-	12 x 8	16 x 8	P10	-	7-1/2	-	2-3/4	1/2	1
188-K1	6 x 4	12 x 6	-	-	8 x 6	12 x 6	P1	-	3-3/4	-	-	3/8	1
C 188-K2	6 x 4	14 x 7	-	-	8 x 6	14 x 8	P10	-	4-3/16	-	1-1/4	5/16	1
SS 188-K1	6 x 4	12 x 6	-	-	8 x 6	12 x 8	P1	-	3-3/4	-	-	3/8	1
SS 188-K2	8 x 5	14 x 7	-	-	8 x 6	14 x 8	P10	-	4-3/16	-	1-1/4	5/16	1
SS 856-K2	10 X 6	18 X 10	-	-	10 X 8	16 X 8	P10	-	6-5/16	-	2-1/4	1/2	1
SS 856-K24	-	-	18 x 10	24 x 10	-	-	P10	-	7-1/4	-	2-1/2	5/8	1
SS 2857-K44	-	-	18 x 10	24 x 10	-	-	P13	-	12	-	3-1/2	1/2	1

\* Some chain punches may incur additional punching charges. Contact Maxi-Lift for details.

## PUNCHING: CONTINUOUS ELEVATOR BUCKETS ON "K" ATTACHMENTS

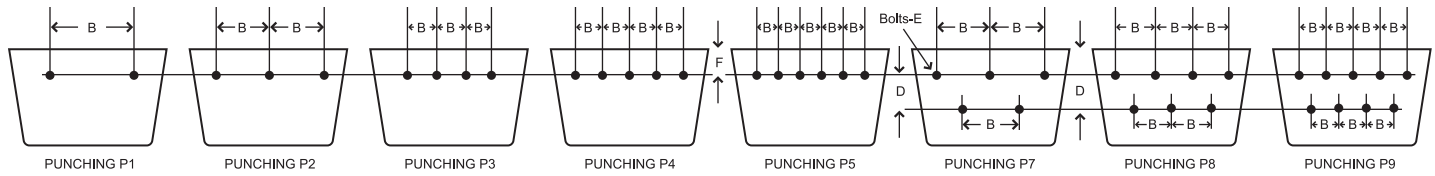


CHAIN ATTACHMENT NUMBER	NOMINAL BUCKET SIZE, INCHES								PUNCHING	INCHES				
	TYPE HF		TYPE HFO		TYPE MF		TYPE LF			B	C	D	E	G
	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.						
C 102B-K2	8 x 5	10 x 5	8 x 5	10 x 5	8 x 5	10 x 5	-	-	P10	5-5/16	-	1-3/4	3/8	1-7/8
SS 102B-K2	8 x 5	10 x 5	8 x 5	10 x 5	8 x 5	10 x 5	-	-	P10	5-5/16	-	1-3/4	3/8	1-7/8
C 102B-1/2-K2	8 x 5	10 x 5	8 x 5	10 x 5	8 x 5	10 x 5	-	-	P10	5-5/16	-	1-3/4	1/2	1-7/8
SS 102B-1/2-K2	8 x 5	10 x 5	8 x 5	10 x 5	8 x 5	10 x 5	-	-	P10	5-5/16	-	1-3/4	1/2	1-7/8
C 110-K2	10 x 7	16 x 8	10 x 7	16 x 8	10 x 7	18 x 8	10 x 7	16 x 8	P10	5-5/16	-	1-3/4	3/8	3-3/8
SS 110-K2	10 x 7	16 x 8	10 x 7	16 x 8	10 x 7	18 x 8	10 x 7	16 x 8	P10	5-5/16	-	1-3/4	3/8	3-3/8
C 111-K2	10 x 6	12 x 6	10 x 6	12 x 6	10 x 6	12 x 6	10 x 6	12 x 6	P10	6-1/4	-	2-5/16	1/2	2-3/32
SS 111-K2	10 x 6	12 x 6	10 x 6	12 x 6	10 x 6	12 x 6	10 x 6	12 x 6	P10	6-1/4	-	2-5/16	1/2	2-3/32
C 132-K2	10 x 7	16 x 8	10 x 7	16 x 8	12 x 7	20 x 8	12 x 7	20 x 8	P10	7-1/2	-	2-3/4	1/2	2-7/8
SS 150PLUS-K2	10 x 7	16 x 8	10 x 7	16 x 8	12 x 7	20 x 8	12 x 7	20 x 8	P10	7-1/2	-	2-3/4	1/2	2-7/8
SS 856-K2	10 x 7	16 x 8	10 x 7	16 x 8	12 x 7	20 x 8	12 x 7	20 x 8	P10	6-5/16	-	2-1/4	3/8	3-1/8

Other Chain Punches Available. **Verify Bucket Punching Before Ordering.**

# BUCKET PUNCHING: BELTS

For More Information, Call 1-800-527-0657



## PUNCHING: TYPES HF, HFO, MF AND LF

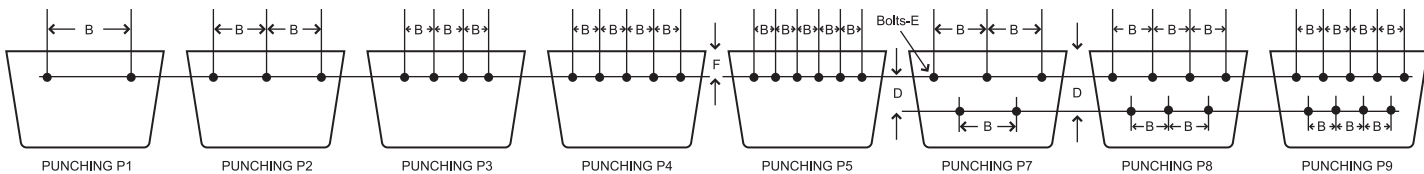
TYPES HF, HFO, MF AND LF CONTINUOUS ELEVATOR BUCKETS FOR BELTS								
BUCKET SIZE, INCHES			PUNCHING	BELT WIDTH INCHES	INCHES			
L - Length	P - Proj	D - Depth			B	D	E	F
8	5	7-3/4	P7	9-10	3	1	1/4	3-3/8
8	5	8-1/2	P7	9-10	3	1	1/4	3-3/4
9	6	9-1/4	P7	10	3	1	1/4	4-1/8
10	5	7-3/4	P7	11-12	3-1/2	1	5/16	3-3/8
10	5	8-1/2	P7	11-12	3-1/2	1	5/16	3-3/4
10	6	9-1/4	P7	11-12	3-1/2	1	5/16	4-1/8
10	6	10	P7	11-12	3-1/2	1	5/16	4-1/2
10	7	11-5/8	P7	11-12	3-1/2	1	5/16	5-5/16
10	7	12-1/2	P7	11-12	3-1/2	1	5/16	5-3/4
10	8	11-5/8	P7	11-12	3-1/2	1	5/16	5-5/16
11	6	9-1/4	P7	12	4	1	5/16	4-1/8
12	5	7-3/4	P7	13-14	4-1/2	1	5/16	3-3/8
12	6	9-1/4	P7	13-14	4-1/2	1	5/16	4-1/8
12	6	10	P7	13-14	4-1/2	1	5/16	4-1/2
12	7	11-5/8	P7	13-14	4-1/2	1	5/16	5-5/16
12	7	11-3/4	P7	13-14	4-1/2	1	5/16	5-3/8
12	7	12-1/2	P7	13-14	4-1/2	1	5/16	5-3/4
12	8	11-5/8	P7	13-14	4-1/2	1	5/16	5-5/16
12	8	12-1/2	P7	13-14	4-1/2	1	5/16	5-3/4
14	7	11-5/8	P8	15-16	4	1	5/16	5-5/16
14	7	12-1/2	P8	15-16	4	1	5/16	5-3/4
14	8	11-5/8	P8	15-16	4	1	5/16	5-5/16
14	8	11-3/4	P8	15-16	4	1	5/16	5-3/8
14	8	12-1/2	P8	15-16	4	1	5/16	5-3/4
16	7	11-3/4	P8	18	4-1/2	1	5/16	5-3/8
16	8	11-5/8	P8	18	4-1/2	1	5/16	5-5/16
16	8	12-1/2	P8	18	4-1/2	1	5/16	5-3/4
16	12	17-5/8	P8	18	4-1/2	1	5/16	8-5/16
16	12	18-5/8	P8	18	4-1/2	1	5/16	8-13/16
18	8	11-5/8	P8	20	5	1	5/16	5-5/16
18	10	15	P8	20	5	1	5/16	7
20	8	11-5/8	P9	22	4	1	5/16	5-5/16
20	12	17-5/8	P9	22	4	1	5/16	8-5/16
20	12	18-5/8	P9	22	4	1	5/16	8-13/16
24	10	11-5/8	P9	26	5	1	5/16	5-5/16
24	12	17-5/8	P9	26	5	1	5/16	8-5/16
24	12	18-5/8	P9	26	5	1	5/16	8-13/16

All plastic Maxi-Tuff MF Buckets that have a depth of 11-1/2", 11-5/8" or 11-3/4" will be punched with a 5-5/16" down dimension (F).



# BUCKET PUNCHING: BELTS

For More Information, Visit [WWW.MAXILIFT.COM](http://WWW.MAXILIFT.COM)



## PUNCHING: TYPES AA, TIGER-TUFF AND TIGER-CC INDUSTRIAL

### TYPES AA, TIGER-TUFF & TIGER-CC INDUSTRIAL CENTRIFUGAL DISCHARGE ELEVATOR BUCKETS FOR BELTS

NOMINAL BUCKET LENGTH INCHES	PUNCHING	BELT WIDTH INCHES	B	D	E	F
3	P1	4	1-3/8	—	1/4	1
4	P1	5	2-5/16	—	1/4	1
5	P1	6	3-3/16	—	1/4	1
6	P1	7-8	4-3/8	—	1/4	1
7	P2	8	2-1/2	—	1/4	1
8	P7	9-10	3	1	1/4	1
9	P7	10	3	1	1/4	1
10	P7	11-12	3-1/2	1	5/16	1
11	P7	12	4	1	5/16	1
12	P7	13-14	4-1/2	1	5/16	1
13	P8	14	3-1/2	1	5/16	1
14	P8	15-16	4	1	5/16	1
15	P8	16	4	1	5/16	1
16	P8	18	4-1/2	1	5/16	1
17	P8	18	4-1/2	1	5/16	1
18	P8	20	5	1	5/16	1
19	P9	20	4	1	5/16	1
20	P9	22	4	1	5/16	1
21	P9	22	4-1/2	1	5/16	1
22	P9	24	4-1/2	1	5/16	1
23	P9	24	5	1	5/16	1
24	P9	26	5	1	5/16	1

Other Belt Punches Available. **Verify Bucket Punching Before Ordering.**

# BUCKET ELEVATOR QUESTIONNAIRE

Please complete and Fax to: (972)735-8896

## CLIENT INFORMATION

COMPANY: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

LOCATION : \_\_\_\_\_

1. CURRENT BUCKET SIZE: \_\_\_\_\_

2. CURRENT BUCKET STYLE: \_\_\_\_\_

3. BUCKET MANUFACTURER: \_\_\_\_\_

4. BUCKET SPACING ON BELT: \_\_\_\_\_

5. NUMBER OF BUCKET ROWS: \_\_\_\_\_

6. PRODUCT BEING ELEVATED: \_\_\_\_\_

7. PRODUCT DENSITY: \_\_\_\_\_

8. MOISTURE: \_\_\_\_\_

9. OIL OR FAT CONTENT: \_\_\_\_\_

10. PARTICLE SIZE: \_\_\_\_\_

11. PRODUCT TEMPERATURE: \_\_\_\_\_

12. HEAD PULLEY DIAMETER: \_\_\_\_\_

13. HEAD PULLEY WIDTH: \_\_\_\_\_

14. HEAD SHAFT DIAMETER: \_\_\_\_\_

15. HEAD SHAFT RPM: \_\_\_\_\_

16. MOTOR HORSEPOWER: \_\_\_\_\_

17. BOOT PULLEY DIAMETER: \_\_\_\_\_

18. FEED INLET, UP OR DOWN LEG: \_\_\_\_\_

19. FEED INLET, OPENING WIDTH: \_\_\_\_\_

20. BUCKET ELEVATOR MANUFACTURER: \_\_\_\_\_

21. REQUIRED CAPACITY: \_\_\_\_\_

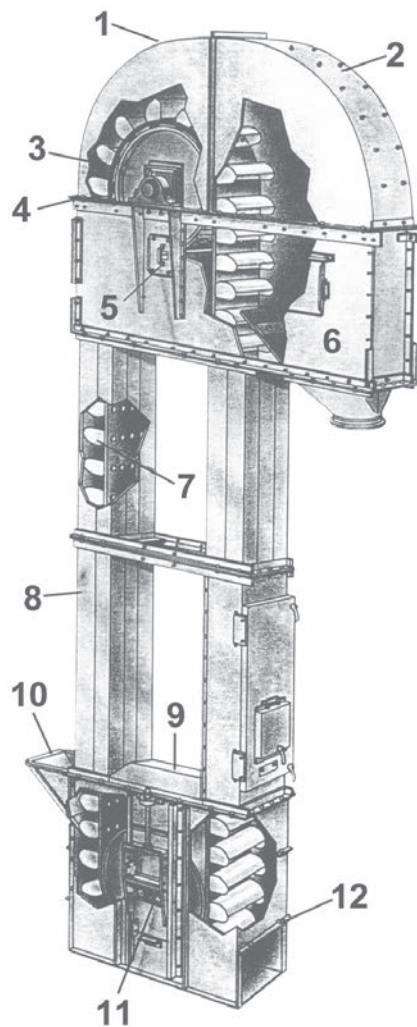
22. CURRENT CAPACITY: \_\_\_\_\_

CONTACT: \_\_\_\_\_

REF: \_\_\_\_\_

EMAIL: \_\_\_\_\_

PHONE: \_\_\_\_\_ FAX: \_\_\_\_\_



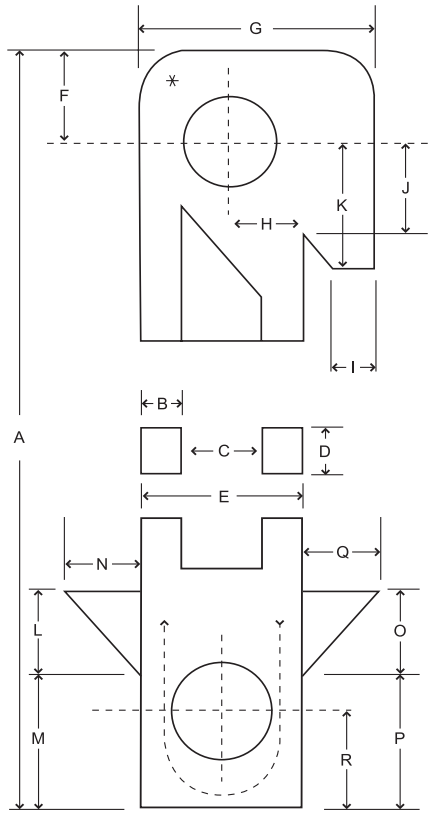
- |  |                                      |
|--|--------------------------------------|
| 1. Up-Leg Bonnet                                       | 7. Elevator Belt & Buckets           |
| 2. Down-Leg Discharge Bonnet<br>w/ Internal Wear Liner | 8. Elevator Leg Casing<br>& Trunking |
| 3. Head Shaft & Bearing                                | 9. Boot Section                      |
| 4. Head Section  | 10. Up-Leg Inlet Hopper              |
| 5. Pulley Lagging Inspection Door                      | 11. Boot Shaft & Take-Up Bearing     |
| 6. Discharge Throat & Throat Wiper                     | 12. Boot Clean-Out Slide             |

# BUCKET ELEVATOR QUESTIONNAIRE

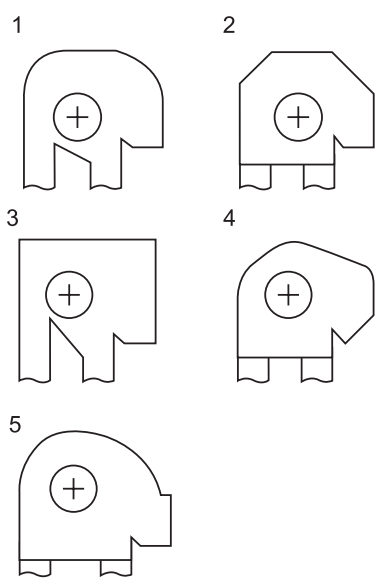
For More Information, Visit [WWW.MAXILIFT.COM](http://WWW.MAXILIFT.COM)

## BUCKET ELEVATOR QUESTIONNAIRE (CONT.)

- A. HEIGHT OF ELEVATOR: \_\_\_\_\_
- B. DEPTH OF LEG CASING: \_\_\_\_\_
- C. SPACING BETWEEN LEG CASING: \_\_\_\_\_
- D. HEIGHT OF LEG CASING: \_\_\_\_\_
- E. OVERALL WIDTH OF ELEVATOR: \_\_\_\_\_
- F. HEIGHT FROM HEAD SHAFT TO BONNET: \_\_\_\_\_
- G. DEPTH OF BONNET: \_\_\_\_\_
- H. WIDTH FROM HEAD SHAFT TO LEG CASING: \_\_\_\_\_
- I. DIAMETER OF DISCHARGE SPOUT: \_\_\_\_\_
- J. DISTANCE FROM HEAD SHAFT CENTERLINE DOWN TO TOP OF DISCHARGE THROAT:  
\_\_\_\_\_
- K. DISTANCE FROM HEAD SHAFT CENTERLINE DOWN TO DISCHARGE SPOUT:  
\_\_\_\_\_
- L. HEIGHT OF UP LEG INLET HOPPER: \_\_\_\_\_
- M. HEIGHT FROM BOTTOM OF ELEVATOR TO BOTTOM OF UP LEG INLET HOPPER:  
\_\_\_\_\_
- N. DEPTH OF UP LEG INLET HOPPER: \_\_\_\_\_
- O. HEIGHT OF DOWN LEG INLET HOPPER: \_\_\_\_\_
- P. HEIGHT FROM BOTTOM OF ELEVATOR TO BOTTOM OF DOWN LEG INLET HOPPER:  
\_\_\_\_\_
- Q. DEPTH OF DOWN LEG INLET HOPPER: \_\_\_\_\_
- R. HEIGHT FROM BOTTOM OF ELEVATOR TO BOOT SHAFT: \_\_\_\_\_



### CIRCLE HEAD SHAPE:



# BULK MATERIAL DENSITY

For More Information, Call 1-800-527-0657

## BULK MATERIAL DENSITY CHARTS

MATERIAL DESCRIPTION	LOOSE BULK DENSITY # / CU.FT.
Alfalfa Meal	14-22
Alfalfa Pellets	41-43
Alfalfa Seed	10-15
Almonds, Broken	28-30
Almonds, Whole Shelled	28-30
Alum, Fine	45-50
Alum, Lumpy	50-60
Alumina Fines	35
Alumina	50-65
Alumina Sized or Briquette	65
Aluminum Chips, Oily	7-15
Aluminum Chips, Dry	7-15
Aluminum Hydrate	13-20
Aluminum Oxide	60-120
Aluminum Silicate (Andalusite)	49
Aluminum Sulfate	45-58
Aluminum Chloride, Crystalline	45-52
Aluminum Nitrate	45-62
Aluminum Sulfate	45-58
Ammonium Chloride	45-52
Ammonium Nitrate	45
Ammonium Sulfate, Granular	45-58
Ash, Black Ground	105
Ashes, Coal, Dry-1/2"	34-35
Ashes, Coal, Dry-3" & under	35-40
Ashes, Coal, Wet-1/2"	45-50
Ashes, Coal, Wet-3" & under	45-50
Asphalt Binder	80-85
Asphalt, Crushed-1/2"	45
Bakelite, Fine	30-45
Baking Powder	40-55
Baking Soda (Sodium Bicarbonate)	40-55
Barite (Barium Sulfate)+1/2"	120-180
Barite, Powder	120-180
Barium, Carbonate	72
Bark, Wood, Refuse	10-20
Barley, Fine, Ground	24-38
Barley, Malted	31
Barley, Meal	28
Barley, Scoured	41
Barley, Whole	36-48
Basalt	80-105
Bauxite, Dry, Ground	68
Bauxite, Crush-3	75-85
Bauxite, Mine Run	66-90
Beets, Whole	48
Bentonite, Crude	35-40
Benzene Hexachloride	56
Blood, Dried	35-45
Blood, Ground	30
Bones, Whole	35-50
Bones, Crushed	35-50
Bones, Ground	50
Bonemeal	50-60
Bone Ash (Tricalcium Phosphate)	40-50

MATERIAL DESCRIPTION	LOOSE BULK DENSITY # / CU.FT.
Borax 2"-3" Lump	60-70
Borax 1 1/2"-2" Lump	55-60
Borax Screening - 1/2"	55-60
Borax, Fine	45-55
Boric Acid, Fine	55
Boron	75
Bran, Rice-Rye Wheat	16-20
Brewer's Grain, Spent, Dry	14-30
Brewer's Grain, Spent, Wet	55-60
Brick, Hard Burned	125
Brick, Soft Burned	100
Brick, Ground 1/8"	100-120
Bronze Chips	30-50
Buckwheat	37-42
Calcine, Flour	75-85
Calcium Acetate	125
Calcium Carbide (Crushed)	70-80
Calcium Lactate	26-29
Calcium Carbonate	90-100
Calcium Oxide (See Lime, Unslaked)	40-50
Carbon, Activated, Dry, Fine	8-20
Carbon, Black, Pelleted	20-25
Carbon, Black, Powder	4-7
Carborundum	100
Cashew Nuts	32-37
Cast Iron, Chips	130-200
Caustic Soda	88
Caustic Soda, Flakes	47
Cement, Clinker	75-95
Cement, Portland	94
Cement, Aerated (Portland)	60-75
Cement, Mortar	133
Chalk, Crushed	75-95
Chalk, Pulverized	67-75
Charcoal, Lumps	18-28
Charcoal, Ground	18-28
Chips Hogged Fuel	15-25
Chrome Ore	125-140
Cinders, Blast Furnace	57
Cinders, Coal	40
Clay, Calcined	80-100
Clay, Brick, Dry, Fines	100-120
Clay, Ceramic, Dry, Fines	60-80
Clay, Dry, Lumpy	60-75
Coal, Anthracite, Sized - 1/2"	55-60
Coal, Bituminous, Mined 50M & under	50-54
Coal, Bituminous, Mined	40-60
Coal, Bituminous, Mined, Sized	45-55
Coal, Bituminous, Mined, Run of Mine	45-55
Coal, Bituminous, Mined, Slack	43-50
Coal, Bituminous, Stripping, Not cleaned	50-60
Coal, Lignite	40-45
Coal, Char	24
Cocoa Beans	30-40
Cocoa , Nibs	35

\* Material density is approximate. Weight can change due to moisture content of product.

# BULK MATERIAL DENSITY

For More Information, Visit [WWW.MAXILIFT.COM](http://WWW.MAXILIFT.COM)

## BULK MATERIAL DENSITY CHARTS

MATERIAL DESCRIPTION	LOOSE BULK DENSITY # / CU.FT.
Cocoa, Powdered	50
Coconut, Shredded	29
Coffee, Green Bean	45-60
Coffee, Ground, Dry	70-80
Coffee, Ground, Wet	85
Coffee, Roasted Bean	65-85
Coffee, Soluble	110-130
Coke, Loose	90-110
Coke, Petroleum, Calcined	65-75
Coke, Breeze, 1/4 inch and under	90-100
Concrete, Cinder	90-100
Concrete, 2 Inch Slump	104
Concrete, 4 Inch Slump	115
Concrete, 6 Inch Slump	85-90
Concrete, In Place, Stone	10-13
Concrete, Pre-Mix, Dry	65
Copper Ore	27-41
Copper Ore, Crushed	90-100
Copper Sulfate (Bluestone)	85-90
Cork, Fine Ground	80
Cork, Granulated	31
Corn, Cracked	80
Corn Cobs, Ground	130-180
Corn Cobs, Whole	60-65
Corn, Ear	90-100
Corn Germ	80-90
Corn Grits	70-80
Corn Oil Cake	82-85
Corn, Seed	85-95
Corn, Shelled	40-50
Corn, Sugar	45-55
Cornmeal	15-35
Cottonseed Cake, Crushed	15-25
Cottonseed Cake, Lumpy	15-50
Cottonseed, Dry, Delinted	5-15
Cottonseed, Dry, Not Delinted	20-25
Cottonseed Flakes	40-50
Cottonseed Hulls	50
Cottonseed Meal, Extracted	55-65
Cottonseed Meal, Expeller	20-35
Cottonseed Meats, Dry	75
Cottonseed Meats, Rolled	72
Cracklings, Crushed	75
Cullet, Fine	70-80
Cullet, Lump	50-60
Diatomaceous Earth	96
Dicalcium Phosphate	40-43
Disodium Phosphate	30-40
Distillers' Grain, Spent, Dry	18-25
Distillers' Grain, Spent, Wet	27-30
Dolomite, Crushed	40
Dolomite, Lumpy	40
Earth, As Excavated, dry	45-50
Earth, Loam, Dry, Loose	25-50
Earth, Wet, Containing Clay	100-150

MATERIAL DESCRIPTION	LOOSE BULK DENSITY # / CU.FT.
Epsom Salts	40-50
Feldspar, Ground	65-80
Feldspar, Lumps	90-100
Feldspar, Powder	100
Feldspar, Screening	70-85
Ferrous Sulfate	60-70
Ferrous Sulfide, 1/2 Inch	120-135
Ferrous Sulfide, Powder	105-120
Fish Meal	35-40
Fish Scrap	40-50
Flaxseed	45
Flaxseed Cake (Linseed Cake)	48-50
Flaxseed Meal (Linseed Meal)	25
Flour, Wheat	35-40
Flue Dust, Blast Furnace	110-125
Flue Dust, Basic Oxygen Furnace	45-60
Flue Dust, Boiler House, Dry	35-40
Fluorspar Fine (Calcium Fluoride)	80-100
Fluorspar, Lumps, 1-1/2 to 3 Inch	90-100
Fluorspar, Screenings, 1/2 Inch	85-105
Fly Ash	30-45
Foundry Refuse, Old Sand Cores, Etc	70-100
Fuller's Earth, Dry, Raw	30-35
Fuller's Earth, Oily, Spent	60-65
Fuller's Earth, Burned, Roasted	40
Glass Batch	80-100
Glue, Ground	40
Glue, Pearl	40
Glue, Vegetable, Powdered	40
Gluten Meal	40
Granite, Broken	95-100
Granite, Lumps 1-1/2-3 Inch	85-90
Granite, Screenings, 1/2 Inch	80-90
Graphite, Flake	40
Graphite Flour	28
Graphite Ore	65-75
Grass Seed	10-12
Gravel, Bank Run	90-100
Gravel, Dry, Sharp	90-100
Gravel, Pebbles	90-100
Gypsum, Calcined	55-60
Gypsum, Calcined, Powdered	60-80
Gypsum Dust, Aerated	60-70
Gypsum Dust, Non Aerated	93
Gypsum, Lumps, 1-1/2 to 3 Inch	70-80
Gypsum, Raw, 1 Inch	70-80
Gypsum, Screenings, 1/2 Inch	70-80
Guano, Dry	70
Hops, Spent, Dry	35
Hops, Spent, Wet	50-55
Iron Borings, Machine Shop	125
Iron Ore	100-200
Iron Ore, Concentrates	120-180
Iron Ore, Crushed	135-150
Iron Oxide, Pigment	25

\* Material density is approximate. Weight can change due to moisture content of product.

# BULK MATERIAL DENSITY

For More Information, Call 1-800-527-0657

## BULK MATERIAL DENSITY CHARTS

MATERIAL DESCRIPTION	LOOSE BULK DENSITY # / CU.FT.
Iron Oxide, Mill Scale	75
Kaffir Corn	40-45
Kaolin Clay, 3 Inch and Under	63
Kaolin Clay, Talc, 100 Mesh	42-56
Lactose	32
Lead Arsenate	72
Lead Arsenite	72
Lead Carbonate	240-260
Lead Ore, 1/8 Inch	200-270
Lead Ore, 1/2 Inch	180-230
Lead Oxide (Red Lead) 100 Mesh	30-150
Lead Oxide (Red Lead) 200 Mesh	30-180
Lead Sulfide, 100 Mesh	240-260
Lime, Ground, 1/8 Inch and Under	60-65
Lime, Hydrated, 1/8 Inch and Under	40
Lime, Hydrated, Pulverized	32-40
Lime, Pebble	56-56
Limestone, Agricultural, 1/8 Inch and Under	68
Limestone, Crushed	85-90
Limestone, Dust	55-95
Litharge, Pulverized (Lead Oxide)	200-250
Magnesium, Chloride	33
Malt, Dry Ground	20
Malt, Dry Whole	20-30
Malt, Meal	36-40
Malt, Sprouts	13-15
Malt, Wet or Green	60-65
Manganese Dioxide	70-85
Manganese Ore	125-140
Manganese Oxide	120
Manganese Sulphate	70
Marble, Crushed	80-95
Meat, Scrap with Bone	40
Mica, Flakes	17-22
Mica, Ground	13-15
Mica, Pulverized	13-15
Milk, Dried Flakes	5-6
Milk, Malted	30-35
Milk, Powdered	20-45
Milk, Whole, Powdered, Dry	20-36
Milk Sugar	32
Mill Scale	120-125
Milo	40-45
Milo, Ground	32-36
Molybdite, Powder	107
Mortar, Wet	150
Mustard Seed	45
Monosodium Phosphate	50
Niacin (Nicontinic Acid)	35
Nickel (Cobalt Sulphate Ore)	80-150
Oats	26
Oats, Crimped	19-26
Oats, Crushed	22
Oats, Rolled	35
Oat Flour	19-24

MATERIAL DESCRIPTION	LOOSE BULK DENSITY # / CU.FT.
Oat Hulls	8-12
Oil Cake	45-50
Orange Peel, Dry	15
Oxalic Acid, Crystals	60
Oyster Shells, Ground	50-60
Oyster Shells, Whole	80
Paper Pulp (4% or less)	62
Paper Pulp (6% to 15%)	60-62
Peanuts, Raw, Uncleaned, Unshelled	15-20
Peanuts, Clean, In Shell	15-20
Peanuts, Shelled	35-45
Peanut Meal	30
Peas, Dried	45-50
Perlite, Expanded	8-12
Perlite, Expanded, Powder	4-12
Phosphate Acid Fertilizer	60
Phosphate Rock Broken	75-85
Phosphate Rock Pulverized	60
Phosphate Sand	90-100
Phosphate, Triple Super, Ground	50-55
Polyethylene Resin, Pellets	30-35
Polystyrene Beads	40
Polyvinyl Chloride, Pellets	20-30
Polyvinyl Chloride, Powder	20-30
Potash (Muriate) Dry	70
Potash (Muriate) Mine Run	75
Potash Salt (Sylvite)	80
Potassium Carbonate	51
Potassium Chloride, Pellets	120-130
Potassium Nitrate	76
Potassium Nitrate	80
Potassium Sulfate	42-48
Potato Flour	48
Pumice, Ground	40-45
Pyrites, Iron	135-145
Pyrites, Iron, Pellets	120-130
Quartz Dust	70-80
Quartz	80-95
Rice, Hulled	45-49
Rice, Polished	30
Rice, Rough	32-36
Rice Bran	20
Rice Grits	42-45
Rice Hulls	20-21
Rubber, Reclaimed, Ground	23-50
Rubber, Reclaimed	25-30
Rubber, Pellets	50-55
Rye	42-48
Rye Feed	33
Rye Meal	35-40
Rye Middlings	42
Rye Bran	15-20
Rye, Shorts	32-33
Safflower Seed	45
Safflower Cake	50

\* Material density is approximate. Weight can change due to moisture content of product.

# BULK MATERIAL DENSITY

For More Information, Visit [WWW.MAXILIFT.COM](http://WWW.MAXILIFT.COM)



## BULK MATERIAL DENSITY CHARTS

MATERIAL DESCRIPTION	LOOSE BULK DENSITY # / CU.FT.
Safflower Meal	50
Salicylic Acid	29
Salt, Dry Coarse	45-60
Salt, Dry Fine	70-80
Salt Cake, Dry Coarse	85
Salt Cake, Dry Pulverized	65-85
Sand, Dry, Bank (Damp)	110-130
Sand, Dry, Bank (Dry)	90-110
Sand, Foundry, Prepared	65-75
Sand, Foundry (Shake Out)	90-100
Sand, Dry Silica	90-100
Sand, (Resin Coated) Silica	104
Sand, (Resin Coated) Zircon	115
Sandstone, Broken	85-90
Sawdust, Dry	10-13
Sea-Coal	65
Sesame Seed	27-41
Shale, Broken	90-100
Shale, Crushed	85-90
Shellac	80
Shellac, Powdered or Granulated	31
Silica, Flour	80
Slag, Blast Furnace, Crushed	130-180
Slag, Furnace, Granular, Dry	60-65
Slag, Furnace, Granular, Wet	90-100
Slate, Crushed, Minus 6	80-90
Slate, Dust	70-80
Slate, Crushed, Minus 1/8	82-85
Slate, Lump	85-95
Sludge, Sewage, Dried	40-50
Sludge, Sewage, Dry Ground	45-55
Soap, Beads or Granules	15-35
Soap, Chips	15-25
Soap, Detergent	15-50
Soap, Flakes	5-15
Soap, Powder	20-25
Soapstone, Talc, Fine	40-50
Soda Ash Briquettes	50
Soda Ash, Heavy	55-65
Soda Ash, Light	20-35
Soda Alum	75
Sodium Aluminate, Ground	72
Sodium Aluminate Sulphate	75
Sodium Nitrate	70-80
Sodium Phosphate	50-60
Sodium Sulfite	96
Soy Bean, Cake	40-43
Soy Bean, Cracked	30-40
Soy Bean, Flake, Raw	18-25
Soy Bean, Flour	27-30
Soy Bean Meal, Cold	40
Soy Bean Meal, Hot	40
Soy Beans, Whole	45-50
Starch	25-50
Steel, Turnings, Crushed	100-150

MATERIAL DESCRIPTION	LOOSE BULK DENSITY # / CU.FT.
Steel, Trimmings	75-150
Sugar Beet Pulp, Dry	12-15
Sugar Beet Pulp, Wet	25-45
Sugar, Refined, Granulated, Wet	50-55
Sugar, Raw	55-65
Sugar Cane, Knifed	15-18
Sulphur, Crushed Minus 1/2	50-60
Sulphur, Lumpy Minus 3"	80-85
Sulphur, Powdered	50-60
Sunflower, Seed	19-38
Taconite, Pellets	116-130
Talcum Powder	50-60
Talcum, Minus 1/2"	80-90
Talc, Solid	165
Tallow	58
Tanbark, Ground	55
Trap Rock, Screenings	90-100
Trap Rock, Lumps	100-110
Tricalcium Phosphate	40-50
Trisodium Phosphate	60
Trisodium Phosphate, Granular	60
Trisodium Phosphate, Pulverized	50
Triple Super Phosphate	50-55
Urea Prills, Coated	43-46
Vermiculite, Ore	80
Vermiculite, Expanded	16
Vetch	48
Walnut Shells, Crushed	35-45
Wheat	45-48
Wheat Bran	16-20
Wheat, Cracked	40-45
Wheat, Flour	33-40
Wheat, Germ	18-28
Wheat, Middlings	20-24
White Lead, Dry	75-100
Wood Chips, Screened	10-30
Wood Chips, Hogged Fuel	15-25
Wood, Flour	16-36
Wood, Shavings	8-16
Zinc, Concentrate Residue	75-80
Zinc, Dust	200
Zinc, Ore, Crushed	160
Zinc, Ore, Roasted	110
Zinc Oxide, Heavy	30-35
Zinc Oxide, Light	10 15

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