UNITING THE
UNIKING
STRONGEST LINKS

AGRICULTURAL INDUSTRY

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ELEVATOR BUCKETS

Maxi-Lift Inc.®

AGRICULTURAL PRODUCT LINES

Products, Materials & Applications

BEST IN INDUSTRY

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Polyethylene: Food Grade Applications

TIGER-TUFF, TIGER-CC
Nylon: Hot, Abrasive Applications

TIGER-TUFF, TIGER-CC
Urethane: Sticky, Abrasive Applications

BETTER

HD-STAX - Stackable
Polyethylene: Food Grade Applications

HD-MAX
Polyethylene: Food Grade Applications

HD-MAX
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Nylon: Hot, Abrasive Applications

GOOD

CC-MAX
Polyethylene: Food Grade Applications

CC-MAX
Nylon: Hot, Abrasive Applications

CC-MAX
Urethane: Sticky, Abrasive Applications

GOOD

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STANDARD DUTY STEEL CC
Fabricated Steel

STANDARD DUTY CC DIGGER
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BELTING & ACCESSORIES

Elevator Belting
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Elevator Bolts & Accessories

Lagging

HOW TO ORDER BUCKETS
Measuring, Style, Venting & Material Options

STEP 1. Measure Your Elevator Bucket
Most manufacturers identify part sizes by molding dimensions into the bottom of the elevator bucket.

LENGTH = 12 7/8"
The bucket length is measured at the back mounting surface. Lay the bucket on its back for actual measurement dimensions.

PROJECTION = 8 7/8"
Projection is measured vertically to the lip, as it would project from the belt or chain.

DEPTH = 8 1/4"
Depth is measured for the overall side profile dimension.

STEP 2. Select Your Bucket Style
There are two main categories of elevator buckets; agricultural and industrial. Our agricultural buckets are located on pages 12-17 and the industrial buckets are on pages 18-22. More styles are available.

TIGER-TUFF
Maximum Duty: Agricultural

TIGER-CC
Maximum Duty: Agricultural

HD-STAX
Heavy Duty Stackable: Agricultural

HD-MAX
Heavy Duty: Agricultural

CC-MAX
Heavy Duty: Agricultural

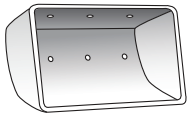
MAXI-TUFF
Heavy Duty: Industrial

STEP 3. Choose Your Bucket Material
Buckets are available in the following materials, plus ductile iron and steel for industrial applications.

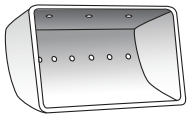
	POLYETHYLENE	NYLON	URETHANE	FDA NYLON
Color				
Application	Grain & Food Products	Hot, high impact, abrasive dense products	Heavy abrasion, sticky materials	Hot, high impact, abrasive food grade products
Temperature Range	-120° F to + 180° F (210° F Intermittent)	-60° F to + 300° F (350° F Intermittent)	-60° F to + 180° F (210° F Intermittent)	-60° F to + 300° F
FDA Approved Material	Yes	No	Yes	Yes
Comments	Economical, high density polyethylene. FDA approved material for handling food grade products.	Best for high heat applications, with tough impact and abrasion needs.	Most flexible and abrasion resistant Resists product sticking and sharp cutting particles.	Best for high heat food grade applications, with tough impact and abrasion needs.

STEP 4. Pick Your Bucket Vent Pattern *(Call for Industrial Bucket venting recommendations)*
Venting an elevator bucket aids in bucket fill and discharge with light, fluffy materials. Lightweight, fluffy materials, and those that are extremely dense or flow poorly can be difficult to handle in bucket elevators at high speeds. Because these materials tend to trap air when being handled by an elevator bucket, it is necessary to provide air relief to assist in their filling and discharge. Materials in this category might be various flours, meals, feed mash or sreenings. As these materials enter the bucket, air is released through a series of vent holes in the bottom of the bucket allowing for a more complete fill. These vent holes also allow air to re-enter the bucket, which facilitates full release of product into the discharge.
Standard hole diameter is equal to the size of the bolt mounting holes for Vent Pattern #1. All other vent patterns have 11/32 diameter holes unless otherwise requested by customer.

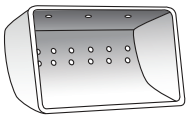
#1 VENT - Same holes in body as bolt mounting holes.



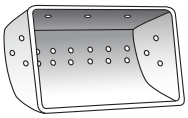
#2 VENT - One row of holes on 1-1/8"centers



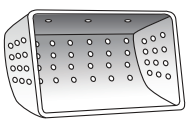
#3 VENT - Two rows of holes on 1-1/8"centers



#4 VENT - Same as #3, plus three holes in each end cap.



CUSTOM VENT - Vented as required



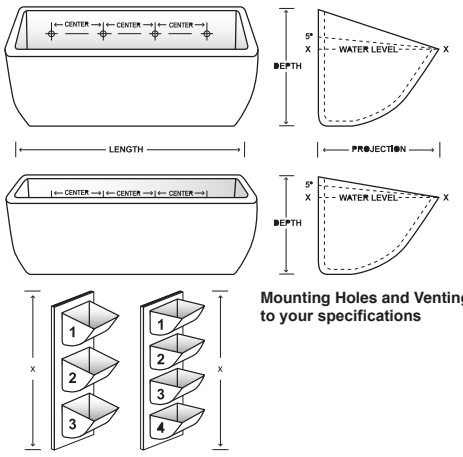
TIGER-TUFF® MAXIMUM DUTY

High Speed Centrifugal Discharge 210 - 900 FPM

TIGER-TUFF
MAXIMUM DUTY ELEVATOR BUCKETS.

The **TIGER-TUFF** is the original maximum duty elevator bucket, designed and engineered to increase bucket life and reduce breakage. This will reduce down time and lower maintenance costs. The **TIGER-TUFF** bucket has the thickest lip, back wall and corners to extend the life of the bucket. The most common applications include grain, fertilizers, pellets, corn, wheat, soybeans and other agricultural and light industrial applications. This is the best bucket for high volume applications. Minimum spacing is nominal projection + 1".

The T**IGER-TUFF Low Profile** has a reduced height modification for closer vertical spacing on the belt. The low profile system allows more buckets per foot of elevator belt. When upgrading to **TIGER-TUFF Low Profile** buckets, horsepower requirements must be evaluated due to increased capacity.



Mounting Holes and Venting to your specifications

STANDARD VS LP SPACING

FEATURES & BENEFITS

- **Thicker Corners**
- **Thicker Walls, Heavy Front Lip for Digging**
- **Increases Elevator Capacity**
- **Cleaner Discharge**
- **High Impact / Abrasion Resistant**
- **Lowers Elevator Maintenance**
- **Decreases Elevator Down Time**
- **Extends Bucket Life**
- **Non-Corrosive, Non-Sparking**

BUCKET SIZE	Length		Projection		Depth		Back Wall Thickness	PUNCHING, IN.				CAPACITY, CU. IN.	
	in.	mm	in.	mm	in.	mm		Centers	# of Holes	Bolt Size	Top Down	Water Level	Usable 5 Deg.
6 x 5	6-5/8	168	5-3/4	146	5	127	0.33	4-3/8	2	1/4	1-5/8	67.20	73.98
7 x 5	7-5/8	194	5-3/4	146	5	127	0.33	2-11/16	3	1/4	1-5/8	79.72	89.24
8 x 5	8-5/8	219	5-3/4	146	5	127	0.33	3-1/16	3	1/4	1-5/8	88.54	97.98
9 x 5	9-5/8	244	5-3/4	146	5	127	0.33	3-5/8	3	1/4	1-5/8	107.37	121.27
10 x 5	10-5/8	270	5-3/4	146	5	127	0.33	4-1/8	3	1/4	1-5/8	121.30	138.89
11 x 5	11-5/8	295	5-3/4	146	5	127	0.33	3	4	1/4	1-5/8	140.70	153.16
12 x 5	12-5/8	321	5-3/4	146	5	127	0.33	3-3/8	4	1/4	1-5/8	159.87	167.14
8 x 6	8-5/8	219	6-7/8	175	6	152	0.40	3-1/16	3	1/4	1-5/8	135.56	150.85
9 x 6	9-5/8	244	6-7/8	175	6	152	0.40	3-5/8	3	1/4	1-5/8	150.26	165.87
10 x 6	10-5/8	270	6-7/8	175	6	152	0.40	4-1/8	3	1/4	1-5/8	170.69	185.62
11 x 6	11-5/8	295	6-7/8	175	6	152	0.40	3	4	1/4	1-5/8	185.18	200.36
12 x 6	12-5/8	321	6-7/8	175	6	152	0.40	3-3/8	4	1/4	1-5/8	200.37	220.58
13 x 6	13-5/8	346	6-7/8	175	6	152	0.40	3-5/8	4	1/4	1-5/8	220.78	240.48
12 x 7	12-7/8	327	7-7/8	200	7	178	0.42	3-3/8	4	5/16	2	269.24	298.12
13 x 7	13-7/8	352	7-7/8	200	7	178	0.42	3-5/8	4	5/16	2	292.51	323.22
14 x 7	14-7/8	378	7-7/8	200	7	178	0.42	3	5	5/16	2	315.77	350.58
15 x 7	15-7/8	403	7-7/8	200	7	178	0.42	3-1/4	5	5/16	2	346.64	383.38
16 x 7	16-7/8	429	7-7/8	200	7	178	0.42	2-7/8	6	5/16	2	377.41	415.14
11 x 8	11-7/8	302	8-7/8	225	8-1/4	210	0.50	3	4	5/16	2	340.02	374.70
12 x 8	12-7/8	327	8-7/8	225	8-1/4	210	0.50	3-3/8	4	5/16	2	373.00	411.05
13 x 8	13-7/8	352	8-7/8	225	8-1/4	210	0.50	3-5/8	4	5/16	2	404.85	446.15
14 x 8	14-7/8	378	8-7/8	225	8-1/4	210	0.50	3	5	5/16	2	436.80	481.35
16 x 8	17	432	9-1/4	235	8-1/4	210	0.50	2-7/8	6	5/16	2-1/2	512.57	566.39
18 x 8	19	483	9-1/4	235	8-1/4	210	0.50	3-1/8	6	5/16	2-1/2	567.49	627.08
20 x 8	21	533	9-1/4	235	8-1/4	210	0.50	3-1/2	6	5/16	2-1/2	646.81	714.73
22 x 8	23	584	9-1/4	235	8-1/4	210	0.50	4	6	5/16	2-1/2	701.90	757.40
24 x 8	25	635	9-1/4	235	8-1/4	210	0.50	3-1/2	7	5/16	2-1/2	763.40	831.08
16 x 10	17	432	11-1/4	286	10	254	0.75	2-7/8	6	5/16	2-1/2	795.70	875.37
18 x 10	19	483	11-1/4	286	10	254	0.75	3-1/8	6	5/16	2-1/2	910.00	1001.21
20 x 10	21	533	11-1/4	286	10	254	0.75	3-1/2	6	5/16	2-1/2	1032.50	1135.98

LOW PROFILE

SIZE		CAP.
Depth		Usable
in.	mm	5 Deg.
4	102	73.98
4	102	89.24
4	102	97.98
4	102	121.27
4	102	138.89
4	102	153.16
4	102	167.14
5	127	150.85
5	127	165.87
5	127	185.62
5	127	200.36
5	127	220.58
5	127	240.48
5-3/4	146	298.12
5-3/4	146	323.22
5-3/4	146	350.58
5-3/4	146	383.38
5-3/4	146	415.14
6-3/4	171	374.70
6-3/4	171	411.05
6-3/4	171	446.15
6-3/4	171	481.35
6-3/4	171	566.39
6-3/4	171	627.08
6-3/4	171	714.73
6-3/4	171	757.40
6-3/4	171	831.08
8-1/2	216	875.37
8-1/2	216	1001.21
8-1/2	216	1135.98

Disclaimer: Weights, dimensions, & capacities are estimated. Actual measurements may vary.
Some sizes are made to order. Low profle spacing is Projection minus (-) 1 inch.
- Indicates TIGER-TUFF punch pattern differs from HD-MAX.

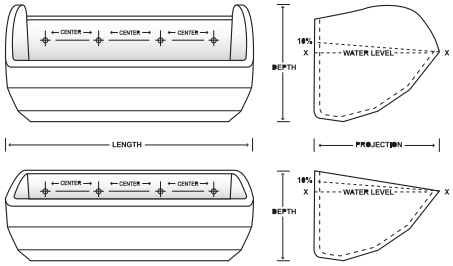
TIGER-CC® MAXIMUM DUTY

High Speed Centrifugal Discharge 210 - 900 FPM

TIGER-CC
MAXIMUM DUTY ELEVATOR BUCKETS

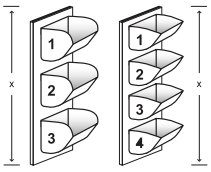
The **TIGER-CC** Maximum Duty Elevator Buckets were designed to combine the style of the traditional CC elevator bucket with the ruggedness and toughness of the **TIGER-TUFF** elevator bucket. This will increase bucket life and provide less breakage and more capacity. The most common applications include grain, fertilizers, pellets, corn, wheat, soybeans and other agricultural and light industrial applications. Minimum spacing is nominal projection + 1".

The **TIGER-CC Low Profile** Maximum Duty Elevator Bucket has a reduced height modification for closer vertical spacing on the belt. The low profile system allows more buckets per foot of elevator belt. When upgrading to **TIGER-CC Low Profile** buckets, horsepower requirements must be evaluated due to increased capacity.



FEATURES & BENEFITS

- **Traditional CC Style w/ High Sides and Breaks in the Bottom of Bucket**
- **Thicker Corners**
- **Thicker Walls, Heavy Front Lip for Digging**
- **Cleaner Discharge**
- **Impact & Abrasion Resistant**
- **Non-Corrosive, Non-Sparking**
- **Extends Bucket Life**
- **Increases Elevator Capacity**
- **Lowers Elevator Maintenance**
- **Decreases Elevator Down Time**



STANDARD VS LP SPACING

Mounting Holes and Venting to Your Specifications

BUCKET SIZE	Length		Projection		Depth		Back Wall Thickness	PUNCHING, IN.				CAPACITY, CU. IN.	
	in.	mm	in.	mm	in.	mm		Centers	# of Holes	Bolt Size	Top Down	Water Level	Water Level + 10%
10 x 7	10-7/8	276	8-1/8	206	6-7/8	174	0.50	4-1/8	3	5/16	2-3/16	8	403
11 x 7	11-7/8	301	8-1/8	206	6-7/8	174	0.50	3	4	5/16	2-3/16	8	473
12 x 7	12-7/8	327	8-1/8	206	6-7/8	174	0.50	3-3/8	4	5/16	2-3/16	8	561
13 x 7	13-7/8	352	8-1/8	206	6-7/8	174	0.50	3-5/8	4	5/16	2-3/16	8	616
14 x 7	14-7/8	377	8-1/8	206	6-7/8	174	0.50	3	5	5/16	2-3/16	8	720
15 x 7	15-7/8	403	8-1/8	206	6-7/8	174	0.50	3-1/4	5	5/16	2-3/16	8	1106
16 x 7	16-7/8	428	8-1/8	206	6-7/8	174	0.50	2-7/8	6	5/16	2-3/16	8	1161
12 x 8	12-7/8	327	9-1/4	235	8-7/8	225	0.55	3-3/8	4	5/16	2	366	403
14 x 8	14-7/8	377	9-1/4	235	8-7/8	225	0.55	3	5	5/16	2	430	473
16 x 8	16-7/8	428	9-1/4	235	8-7/8	225	0.55	2-7/8	6	5/16	2	510	561
18 x 8	18-7/8	479	9-1/4	235	8-7/8	225	0.55	3-1/8	6	5/16	2	560	616
20 x 8	20-7/8	530	9-1/4	235	8-7/8	225	0.55	3-1/2	6	5/16	2	655	720
18 x 10	19	481	11-1/2	292	10-3/8	264	0.70	3-1/8	6	3/8	2-1/4	915	1005
20 x 10	21	533	11-1/2	292	10-3/8	264	0.70	3-1/2	6	3/8	2-1/4	1005	1106
21 x 10	22	558	11-1/2	292	10-3/8	264	0.70	3-5/8	6	3/8	2-1/4	1055	1161
22 x 10	23	584	11-1/2	292	10-3/8	264	0.70	4	6	3/8	2-1/4	1105	1216
23 x 10	24	609	11-1/2	292	10-3/8	264	0.70	3-3/8	7	3/8	2-1/4	1155	1271
24 x 10	25	635	11-1/2	292	10-3/8	264	0.70	3-1/2	7	3/8	2-1/4	1206	1327
25 x 10	26	660	11-1/2	292	10-3/8	264	0.70	3-5/8	7	3/8	2-1/4	1256	1381
26 x 10	27	685	11-1/2	292	10-3/8	264	0.70	3-7/8	7	3/8	2-1/4	1306	1437
27 x 10	28	711	11-1/2	292	10-3/8	264	0.70	3-3/8	8	3/8	2-1/4	1356	1492
28 x 10	29	737	11-1/2	292	10-3/8	264	0.70	3-5/8	8	3/8	2-1/4	1400	1540

LOW PROFILE

SIZE		CAP.
Depth		Water
in.	mm	Level + 5%
5-3/4	146	384
5-3/4	146	452
5-3/4	146	536
5-3/4	146	588
5-3/4	146	688
5-3/4	146	1055
5-3/4	146	1108
6-3/4	171	384
6-3/4	171	452
6-3/4	171	536
6-3/4	171	588
6-3/4	171	688
8-3/4	222	960
8-3/4	222	1055
8-3/4	222	1108
8-3/4	222	1160
8-3/4	222	1213
8-3/4	222	1266
8-3/4	222	1318
8-3/4	222	1371
8-3/4	222	1424
8-3/4	222	1470

Disclaimer: Weights, dimensions, & capacities are estimated. Actual measurements may vary.
Some sizes are made to order. Low profle spacing is Projection minus (-) 1 inch.

- Available upon request - extended lead time required

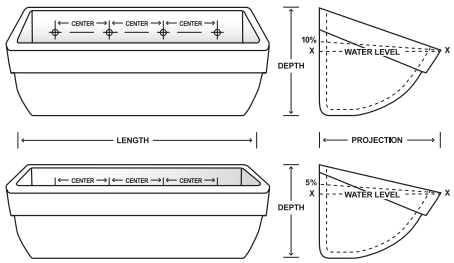
HD-STAX® STACKABLE

High Speed Centrifugal Discharge 210-900 FPM

HD-STAX
STACKABLE HEAVY DUTY BUCKETS

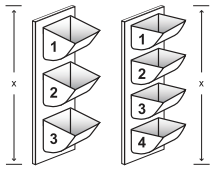
The **HD-STAX** is a patented **stackable** elevator bucket, designed to give long life, more capacity, better reliability, and will optimize your shipping and storing costs. Designed to stack (nest) together, the **HD-STAX** gives you up to 3 times more buckets per box, skid and container. The **HD-STAX** bucket simply slides together to provide more savings in storage and shipping costs.

The **HD-STAX** also features a thicker, heavier wear lip, molded across the front and sides of the bucket, for a tougher, stronger and longer lasting design. The wear lip is thicker in the corners to give you sustainable life when digging in tough agricultural applications.



FEATURES & BENEFITS

- **3 Sided Reinforced Front Lip for Digging, Longer Life, More Reliability**
- **Stackable: Efficient Shipping, Reduced Storage**
- **High Impact & Abrasion Resistant**
- **Non-Corrosive, Non-Sparking**
- **Extends Bucket Life**
- **Increases Elevator Capacity**
- **Cleaner Discharge**
- **Lowers Elevator Maintenance**
- **Decreases Elevator Down Time**



STANDARD VS LOW PROFILE SPACING

Mounting Holes and Venting to Your Specifications

BUCKET SIZE	Length		Projection		Depth		Back Wall Thickness	PUNCHING, IN.				CAPACITY, CU. IN.	
	in.	mm	in.	mm	in.	mm		Centers	# of Holes	Bolt Size	Top Down	Water Level	Useable + 10%
4 x 3	4-1/4	108	3-5/8	92	2-7/8	73	0.25	2-1/4	2	1/4	7/8	16	18
5 x 4	5-5/8	143	4-5/8	118	4	102	0.32	3-3/16	2	1/4	1-1/8	38	42
6 x 4	6-5/8	168	4-5/8	118	4	102	0.32	4-3/8	2	1/4	1-1/8	46	51
7 x 4	7-5/8	194	4-5/8	118	4	102	0.32	2-5/8	3	1/4	1-1/8	52	57
6 x 5	6-3/4	172	5-3/4	146	5	127	0.35	4-3/8	2	1/4	1-5/8	72	79
7 x 5	7-3/4	197	5-3/4	146	5	127	0.35	2-5/8	3	1/4	1-5/8	85	94
8 x 5	8-3/4	222	5-3/4	146	5	127	0.35	3-1/16	3	1/4	1-5/8	103	113
9 x 5	9-3/4	248	5-3/4	146	5	127	0.35	3-1/2	3	1/4	1-5/8	110	121
8 x 6	8-11/16	221	6-7/8	175	6-1/8	156	0.36	3-1/16	3	1/4	1-5/8	140	154
9 x 6	9-11/16	246	6-7/8	175	6-1/8	156	0.36	3-1/2	3	1/4	1-5/8	158	174
10 x 6	10-11/16	271	6-7/8	175	6-1/8	156	0.36	4	3	1/4	1-5/8	176	194
11 x 6	11-11/16	297	6-7/8	175	6-1/8	156	0.36	3	4	1/4	1-5/8	194	213
12 x 6	12-11/16	322	6-7/8	175	6-1/8	156	0.36	3-3/8	4	1/4	1-5/8	212	233
13 x 6	13-11/16	348	6-7/8	175	6-1/8	156	0.36	3-5/8	4	1/4	1-5/8	230	253
10 x 7	10-15/16	278	7-15/16	202	7-1/8	181	0.38	4	3	5/16	1-7/8	246	271
11 x 7	11-15/16	303	7-15/16	202	7-1/8	181	0.38	3	4	5/16	1-7/8	272	299
12 x 7	12-15/16	329	7-15/16	202	7-1/8	181	0.38	3-3/8	4	5/16	1-7/8	296	326
13 x 7	13-15/16	354	7-15/16	202	7-1/8	181	0.38	3-5/8	4	5/16	1-7/8	320	352
14 x 7	14-15/16	379	7-15/16	202	7-1/8	181	0.38	3	5	5/16	1-7/8	345	380
16 x 7	16-15/16	430	7-15/16	202	7-1/8	181	0.38	3-1/2	5	5/16	1-7/8	400	440
12 x 8	13-1/8	333	8-15/16	227	8-1/8	206	0.40	3-3/8	4	5/16	2	395	435
14 x 8	15-1/8	384	8-15/16	227	8-1/8	206	0.40	3	5	5/16	2	470	517
16 x 8	16-1/8	435	8-15/16	227	8-1/8	206	0.40	3-1/2	5	5/16	2	550	605
18 x 8	19-1/8	486	8-15/16	227	8-1/8	206	0.40	3-1/8	6	5/16	2	615	677

LOW PROFILE

SIZE		CAP.
Depth		Useable
in.	mm	+ 5%
2-3/4	70	17
3-1/2	89	40
3-1/2	89	48
3-1/2	89	55
4	102	76
4	102	89
4	102	108
4	102	116
4-7/8	124	147
4-78	124	166
4-7/8	124	185
4-7/8	124	204
4-7/8	124	223
4-7/8	124	242
6	152	258
6	152	286
6	152	311
6	152	336
6	152	362
6	152	420
6-3/4	171	415
6-3/4	171	494
6-3/4	171	578
6-3/4	171	646

Disclaimer: Weights, dimensions, & capacities are estimated. Actual measurements may vary.
Some sizes are made to order. Low profile spacing is Projection minus (-) 1 inch. Special punching available upon request.
■ - Indicates HD-STAX punch pattern differs from TIGER-TUFF & CC-MAX.

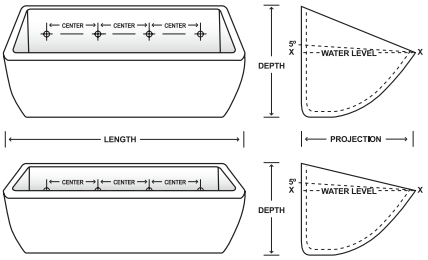
HD-MAX® HEAVY DUTY

High Speed Centrifugal Discharge 210 - 900 FPM

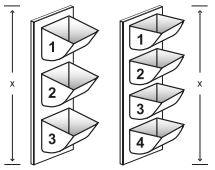
HD-MAX HEAVY DUTY BUCKETS®

The **HD-MAX Heavy Duty** elevator bucket is engineered to exceed the performance requirements of a standard bucket. This bucket is designed with thicker walls and a reinforced front lip to increase bucket life and reduce breakage. Replacing existing standard duty buckets with the **HD-MAX** will create longer bucket life and less frequent replacements. Minimum spacing is nominal projection +1". The most common applications include grain, fertilizer, pellets, corn, wheat, soybeans and other agricultural applications.

The **HD-MAX Low Profile** bucket has a reduced height modification for closer vertical spacing on the belt. The low profile system allows more buckets per foot of elevator belt. When upgrading to **HD-MAX Heavy Duty Low Profile** buckets, horsepower requirements must be evaluated due to increased capacity.



Mounting Holes and Venting to Your Specifications



STANDARD VS LOW PROFILE SPACING

FEATURES & BENEFITS

- **Thicker Walls, Heavy Front Lip for Digging**
- **High Impact & Abrasion Resistant**
- **Non-Corrosive, Non-Sparking**
- **Extends Bucket Life**
- **Increases Elevator Capacity**
- **Cleaner Discharge**
- **Lowers Elevator Maintenance**
- **Decreases Elevator Down Time**

LOW PROFILE

BUCKET SIZE	Length		Projection		Depth		Back Wall Thickness	PUNCHING, IN.				CAPACITY, CU. IN.		SIZE		CAP.
	in.	mm	in.	mm	in.	mm		Centers	# of Holes	Bolt Size	Top Down	Water Level	Usable 5 Deg.	Depth in.	Depth mm	Useable 5 Deg.
3 x 2	3-1/4	83	2-5/16	59	2-1/4	57	0.17	1-3/4	2	1/4	7/8	6.71	7.93	2-1/4	57	7.93
4 x 3	4-3/8	111	3-1/4	83	3	76	0.17	2-1/4	2	1/4	7/8	15.26	17.70	2-3/4	70	17.70
5 x 4	5-1/4	133	4-1/2	114	4	102	0.30	3-3/16	2	1/4	1-1/8	36.20	39.82	3-1/4	83	39.82
6 x 4	6-1/4	159	4-1/2	114	4	102	0.30	4-3/8	2	1/4	1-1/8	44.20	49.58	3-1/2	89	49.58
7 x 4	7-1/4	184	4-1/2	114	4	102	0.30	2-5/8	3	1/4	1-1/8	51.31	57.01	3-1/2	89	57.01
6 x 5	6-3/8	162	5-5/8	143	5	127	0.30	4-3/8	2	1/4	1-5/8	67.20	73.98	4	102	73.98
7 x 5	7-3/8	187	5-5/8	143	5	127	0.30	2-5/8	3	1/4	1-5/8	79.72	89.24	4	102	89.24
8 x 5	8-3/8	213	5-5/8	143	5	127	0.30	3-1/16	3	1/4	1-5/8	102.85	115.85	4	102	115.85
9 x 5	9-3/8	238	5-5/8	143	5	127	0.30	3-1/2	3	1/4	1-5/8	107.37	121.27	4	102	121.27
10 x 5	10-1/4	260	5-5/8	143	5	127	0.30	4	3	1/4	1-5/8	121.30	138.89	4-1/2	114	138.89
11 x 5	11-1/4	286	5-5/8	143	5	127	0.30	3-1/8	4	1/4	1-5/8	140.70	153.16	4-1/2	114	153.16
12 x 5	12-1/4	311	5-5/8	143	5	127	0.30	3-3/8	4	1/4	1-5/8	159.87	167.14	4-1/2	114	167.14
8 x 6	8-3/8	213	6-5/8	168	6	152	0.30	3-1/16	3	1/4	1-5/8	135.56	150.85	5	127	150.85
9 x 6	9-3/8	238	6-5/8	168	6	152	0.30	3-1/2	3	1/4	1-5/8	150.26	165.87	5	127	165.87
10 x 6	10-3/8	264	6-5/8	168	6	152	0.30	4	3	1/4	1-5/8	170.69	185.62	5	127	185.62
11 x 6	11-3/8	289	6-5/8	168	6	152	0.30	3	4	1/4	1-5/8	185.18	200.36	5	127	200.36
12 x 6	12-3/8	314	6-5/8	168	6	152	0.30	3-3/8	4	1/4	1-5/8	200.37	220.58	5	127	220.58
13 x 6	13-3/8	340	6-5/8	168	6	152	0.30	3-5/8	4	1/4	1-5/8	220.78	240.48	5	127	240.48
10 x 7	10-1/2	267	7-3/4	197	7-1/8	181	0.33	4	3	5/16	1-7/8	240.91	264.59	6	152	264.59
11 x 7	11-1/2	292	7-3/4	197	7-1/8	181	0.33	3	4	5/16	1-7/8	269.32	292.41	6	152	292.41
12 x 7	12-1/2	318	7-3/4	197	7-1/8	181	0.33	3-3/8	4	5/16	1-7/8	292.41	319.63	6	152	319.63
13 x 7	13-1/2	343	7-3/4	197	7-1/8	181	0.33	3-5/8	4	5/16	1-7/8	344.20	356.40	6	152	356.40
14 x 7	14-1/2	368	7-3/4	197	7-1/8	181	0.33	3	5	5/16	1-7/8	356.40	389.90	6	152	389.90
15 x 7	15-1/2	394	7-3/4	197	7-1/8	181	0.33	3-1/4	5	5/16	1-7/8	379.50	408.20	6	152	408.20
16 x 7	16-1/2	419	7-3/4	197	7-1/8	181	0.33	3-1/2	5	5/16	1-7/8	406.40	432.00	6	152	432.00
10 x 8	10-1/2	267	8-3/4	222	8	203	0.40	4-1/8	3	5/16	2	328.52	353.97	6	152	353.97
11 x 8	11-1/2	292	8-3/4	222	8	203	0.40	3-1/8	4	5/16	2	358.11	388.30	6-3/4	171	388.30
12 x 8	12-1/2	318	8-3/4	222	8	203	0.40	3-3/8	4	5/16	2	390.67	423.22	6-3/4	171	423.22
14 x 8	14-1/2	368	8-3/4	222	8	203	0.40	3	5	5/16	2	465.00	502.80	6-3/4	171	502.80
15 x 8	15-1/2	394	8-3/4	222	8	203	0.40	3-1/4	5	5/16	2	511.30	541.90	6-3/4	171	541.90
16 x 8	16-1/2	419	8-3/4	222	8	203	0.40	3-1/2	5	5/16	2	543.10	571.10	6-3/4	171	571.10
18 x 8	18-1/2	470	8-3/4	222	8	203	0.40	3-1/8	6	5/16	2	610.20	648.00	6-3/4	171	648.00

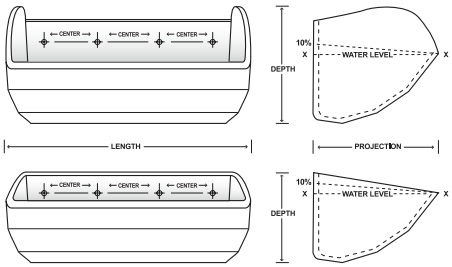
Disclaimer: Weights, dimensions, & capacities are estimated. Actual measurements may vary.
Some sizes are made to order. Low profile spacing is Projection minus (-) 1 inch.
- Indicates HD-MAX punch pattern differs from TIGER-TUFF & CC-MAX.

CC-MAX® HEAVY DUTY

High Speed Centrifugal Discharge 210 - 900 FPM

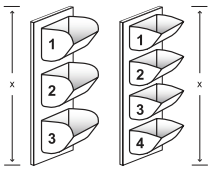
The **CC-MAX Heavy Duty** elevator bucket is a grade above older CC style buckets. It has the traditional shape, fill and discharge characteristics, with the thicker wear surfaces our buckets are famous for. The result is longer life and greater performance. **CC-MAX** buckets are direct replacements for CC and other standard bucket styles. Minimum spacing is nominal projection +1". The most common applications include grain, fertilizer, pellets, corn, wheat, soybeans and other agricultural applications.

The **CC-MAX Low-Profile** bucket has a reduced height modification for closer vertical spacing on the belt. The low profile system allows more buckets per foot of elevator belt. When upgrading to **CC-MAX Heavy Duty Low Profile** buckets, horsepower requirements must be evaluated due to increased capacity



FEATURES & BENEFITS

- **Thicker Lip - Up to 20%**
- **Thicker Corners - Up to 20%**
- **More Capacity - Up to 5%**
- **Clean Discharge**
- **High Impact / Abrasion Resistant**
- **Non-Corrosive, Non-Sparking**
- **Longer Bucket Life**
- **Increase / Maintain Capacity Longer**
- **Decreases Elevator Down-Time**
- **Resists Hang-Ups**



STANDARD VS LP SPACING

Mounting Holes and Venting to Your Specifications

BUCKET SIZE	Length in.	Length mm	Projection in.	Projection mm	Depth in.	Depth mm	Back Wall Thickness	PUNCHING, IN. Centers	# of Holes	Bolt Size	Top Down	CAPACITY, CU. IN. Water Level	Water Level + 10%
5 x 4	5-1/2	140	4-1/2	114	4-1/4	108	0.21	3-3/16	2	1/4	1-7/16	38.30	42.13
6 x 4	6-1/2	165	4-1/2	114	4-1/4	108	0.21	4-3/8	2	1/4	1-7/16	45.38	49.92
7 x 4	7-1/2	191	4-1/2	114	4-1/4	108	0.21	2-11/16	3	1/4	1-7/16	52.10	57.31
6 x 5	6-1/2	165	5-1/2	140	5	127	0.26	4-3/8	2	1/4	1-11/16	70.87	77.96
7 x 5	7-1/2	191	5-1/2	140	5	127	0.26	2-11/16	3	1/4	1-11/16	80.75	88.83
8 x 5	8-1/2	216	5-1/2	140	5	127	0.26	3-1/16	3	1/4	1-11/16	90.85	99.94
9 x 5	9-1/2	241	5-1/2	140	5	127	0.26	3-5/8	3	1/4	1-11/16	100.99	111.09
10 x 5	10-1/2	267	5-1/2	140	5	127	0.26	4-1/8	3	1/4	1-11/16	114.22	125.64
11 x 5	11-1/2	292	5-1/2	140	5	127	0.26	3	4	1/4	1-11/16	127.44	140.18
8 x 6	8-1/16	205	6-5/8	168	6	152	0.27	3-1/16	3	1/4	2	136.00	149.60
9 x 6	9-9/16	243	6-5/8	168	6	152	0.27	3-5/8	3	1/4	2	149.19	164.11
10 x 6	10-9/16	268	6-5/8	168	6	152	0.27	4-1/8	3	1/4	2	166.89	183.58
11 x 6	11-9/16	294	6-5/8	168	6	152	0.27	3	4	1/4	2	180.62	198.68
12 x 6	12-9/16	319	6-5/8	168	6	152	0.27	3-3/8	4	1/4	2	200.76	220.83
13 x 6	13-1/16	332	6-5/8	168	6	152	0.27	3-5/8	4	1/4	2	215.00	236.50
10 x 7	10-9/16	268	7-7/8	200	7	178	0.32	4-1/8	3	5/16	2-3/16	236.00	259.60
11 x 7	11-9/16	294	7-7/8	200	7	178	0.32	3	4	5/16	2-3/16	247.74	272.52
12 x 7	12-9/16	319	7-7/8	200	7	178	0.32	3-3/8	4	5/16	2-3/16	267.27	293.99
13 x 7	13-9/16	344	7-7/8	200	7	178	0.32	3-5/8	4	5/16	2-3/16	284.60	316.93
14 x 7	14-9/16	370	7-7/8	200	7	178	0.32	3	5	5/16	2-3/16	303.57	333.93
15 x 7	15-9/16	395	7-7/8	200	7	178	0.35	3-1/4	5	5/16	2-3/16	335.00	368.50
16 x 7	16-9/16	421	7-7/8	200	7	178	0.35	2-7/8	6	5/16	2-3/16	350.87	385.95
12 x 8	12-9/16	319	8-7/8	225	8-1/4	210	0.35	3-3/8	4	5/16	2	373.00	409.00
13 x 8	13-9/16	344	8-7/8	225	8-1/4	210	0.35	3-5/8	4	5/16	2	404.00	440.00
14 x 8	14-9/16	370	8-7/8	225	8-1/4	210	0.35	3	5	5/16	2	435.07	478.58
16 x 8	16-9/16	421	8-7/8	225	8-1/4	210	0.38	2-7/8	6	5/16	2	515.62	567.18
18 x 8	18-9/16	471	8-7/8	225	8-1/4	210	0.39	3-1/8	6	5/16	2	580.61	638.67
20 x 8	20-9/16	497	8-7/8	225	8-1/4	210	0.42	3-1/2	6	5/16	2	655.00	720.00

LOW PROFILE

SIZE Depth in.	SIZE Depth mm	CAP. Useable 5 %
2-3/4	70	40.22
2-3/4	70	47.65
2-3/4	70	54.70
3-3/4	95	74.41
3-3/4	95	84.79
3-3/4	95	95.39
3-3/4	95	106.04
3-3/4	95	119.93
3-3/4	95	133.81
4-3/4	121	142.00
4-3/4	121	156.65
4-3/4	121	175.23
4-3/4	121	189.65
4-3/4	121	210.79
4-3/4	121	225.75
5-3/4	146	247.80
5-3/4	146	260.13
5-3/4	146	280.63
5-3/4	146	302.53
5-3/4	146	318.75
5-3/4	146	351.75
5-3/4	146	368.41
6-3/4	171	391.65
6-3/4	171	424.20
6-3/4	171	456.83
6-3/4	171	541.40
6-3/4	171	609.64
6-3/4	171	688.00

Disclaimer: Weights, dimensions, & capacities are estimated. Actual measurements may vary.
Some sizes are made to order. Low profile spacing is Projection minus (-) 1 inch.
■ - Indicates CC-MAX punch pattern differs from HD-MAX.

DURA-BUKET® SS

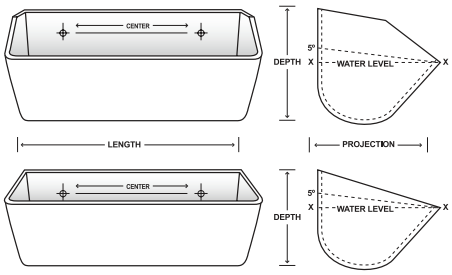
High Speed Centrifugal Discharge 220 - 900 FPM

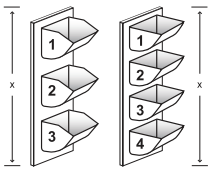
Dura-Buket®

The Original Elevator Bucket

The **SS** or **SUPER STRENGTH DURA-BUKET** is the original plastic elevator bucket. The SUPER STRENGTH elevator bucket has been running for over 60 years. It is designed at a 45-degree discharge angle and can be spaced closer on a belt giving a clean superior discharge. This bucket is lightweight and tapered for easy shipping and storage. Standard spacing is nominal projection + 1". The most common applications include grain, wheat, corn, flour, sugar and other agricultural applications. The SS has the most versatile design of any grain bucket and performs well in a broad range of speeds and applications.

DURA-BUKET Low Profile or **LP** buckets have a reduced height modification for closer vertical spacing on the belt. The low profile system allows more buckets per foot of elevator belt. When upgrading to Low Profile buckets horsepower requirements must be evaluated due to increased capacity.





STANDARD VS LP SPACING

Mounting Holes and Venting to Your Specifications

FEATURES & BENEFITS

- **Lightweight**
- **Shape Memory**
- **Cleaner Discharge**
- **Tapered End Cap Design**
- **Non-Corrosive, Non-Sparking**
- **Resists Hang-Ups**

BUCKET SIZE	Length		Projection		Depth		PUNCHING, IN.				CAPACITY, CU. IN.		LOW PROFILE SIZE		LOW PROFILE CAP.
	in.	mm	in.	mm	in.	mm	Centers	# of Holes	Bolt Size	Top Down	Water Level	Useable 5 Deg.	Depth in.	Depth mm	Useable 5 Deg.
4 x 3	4-1/4	108	3-1/8	79	3	76	2-1/4	2	1/4	1	10.4	11.0	3	76	11.0
5 x 4	5-1/4	133	4-1/8	105	3-3/4	95	3-3/16	2	1/4	1	24.4	29.9	3	76	29.9
6 x 4	6-1/4	159	4-1/8	105	3-3/4	95	4-3/8	2	1/4	1	30.8	33.1	3	76	33.1
7 x 4	7-1/4	184	4-1/8	105	3-3/4	95	2-11/16	3	1/4	1	33.6	36.7	3	76	36.7
6 x 5	6-3/8	162	5-1/4	133	4-7/8	124	4-3/8	2	1/4	1-1/4	47.1	52.0	3-3/4	95	52.0
7 x 5 +	7-3/8	187	5-1/4	133	4-7/8	124	2-5/8	3	1/4	1-1/4	61.6	62.4	3-3/4	95	62.4
8 x 5	8-3/8	213	5-1/4	133	4-7/8	124	3-1/16	3	1/4	1-1/4	67.7	69.8	3-3/4	95	69.8
9 x 5	9-3/8	238	5-1/4	133	4-7/8	124	3-1/4	3	1/4	1-1/4	69.6	77.1	3-3/4	95	77.1
8 x 6	8-3/8	213	6-3/8	162	6-1/4	159	3-1/16	3	1/4	1-1/4	104.4	107.7	4-1/2	114	107.7
9 x 6 +	9-3/8	238	6-5/8	162	6-1/4	159	3-1/2	3	1/4	1-1/4	124.5	132.2	4-1/2	114	132.2
10 x 6	10-3/8	264	6-3/8	162	6-1/4	159	4	3	1/4	1-3/4	128.2	145.8	4-1/2	114	145.8
11 x 6	11-3/8	289	6-3/8	162	6-1/4	159	3	4	1/4	1-3/4	147.7	157.9	4-1/2	114	157.9
12 x 6** +	12-3/8	314	6-3/4	171	6-1/2	165	3-3/8	4	1/4	1-3/4	172.1	183.6	5	127	183.6
13 x 6**	13-3/8	340	6-3/4	171	6-1/2	165	3-5/8	4	1/4	1-3/4	196.5	208.7	5	127	208.7
10 x 7	10-3/8	264	7-3/8	187	7-1/4	184	4	3	5/16	1-3/4	175.8	187.3	5-1/4	133	187.3
11 x 7	11-3/8	289	7-3/8	187	7-1/4	184	3	4	5/16	1-3/4	210.5	216.7	5-1/4	133	216.7
12 x 7**	12-3/8	314	7-3/8	187	7-1/4	184	3-3/8	4	5/16	1-3/4	223.2	241.1	5-1/4	133	241.1
13 X 7**	13-3/8	340	7-3/8	187	7-1/4	184	3-5/8	4	5/16	1-3/4	236.8	244.8	5-1/4	133	244.8
14 X 7**	14-3/8	365	7-3/8	187	7-1/4	184	3	5	5/16	1-1/2	269.7	290.1	5-1/4	133	290.1
15 x 7**	15-3/8	391	7-3/8	187	7-1/4	184	3-1/4	5	5/16	1-1/2	284.4	295.0	5-1/4	133	295.0
16 x 7**	16-3/8	416	7-3/8	187	7-1/4	184	3-1/2	5	5/16	1-1/2	289.9	304.8	5-1/4	133	304.8
12 x 8**	12-3/8	314	8-3/8	213	8-1/4	210	3-3/8	4	5/16	1-3/4	272.5	299.9	5-3/4	146	299.9
14 x 8**	14-3/8	340	8-3/8	213	8-1/4	210	3	5	5/16	1-1/2	324.7	364.8	5-3/4	146	364.8
16 x 8**	16-3/8	365	8-3/8	213	8-1/4	210	3-1/2	5	5/16	2	362.5	407.6	5-3/4	146	407.6
18 x 8**	18-3/8	391	8-3/8	213	8-1/4	210	3-1/8	6	5/16	2	404.9	440.6	5-3/4	146	440.6

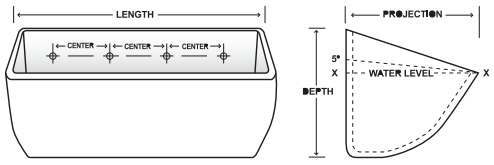
Disclaimer: Weights, dimensions, & capacities are estimated. Actual measurements may vary.
Some sizes are made to order. *Buckets with 12" lengths and up have a center brace. + Buckets are designed without ears on the ends of the parts.
Low profile spacing is Projection minus (-) 1 inch.
▭ - Indicates SS and LP punch patterns differ.

TIGER-TUFF® INDUSTRIAL

Slow Speed Centrifugal Discharge 125-450 FPM

TIGER-TUFF INDUSTRIAL ELEVATOR BUCKETS

The **TIGER-TUFF Industrial** is a maximum duty industrial elevator bucket, designed and engineered to maximize bucket life and elevated capacity. This will reduce down time and lower maintenance costs. The **TIGER-TUFF Industrial** bucket has the thickest lip, back wall and corners to maximize bucket life and maintain capacity. Standard spacing is projection x 2. The most common applications include cement, sand, gypsum, limestone, clay, concrete and many, many more. The **TIGER-TUFF Industrial** is the maximum duty industrial bucket for your most demanding industrial applications.



Mounting Holes and Venting to Your Specifications

FEATURES & BENEFITS

- **Reduces Weight on Elevator up to 80%**
- **Cleaner Discharge Than Steel Buckets**
- **Non-Corrosive, Non-Sparking**
- **Thicker Walls, Heavy Front Digging Lip**
- **Heat, Impact & Abrasion Resistant**
- **Lowers Elevator Maintenance**
- **Extends Bucket Life**
- **Decreases Elevator Down Time**
- **Easy to Install and Replace**
- **Saves Money vs. Carbon Steel**

BUCKET SIZE	Length		Projection		Depth		Back Wall Thickness	CAPACITY, CU. IN.	
	in.	mm	in.	mm	in.	mm		Water Level X-X, Cu. In.	Water Level X-X, Cu. Ft.
6 x 5	6-5/8	168	5-3/4	146	5	127	0.33	67.20	0.039
7 x 5	7-5/8	194	5-3/4	146	5	127	0.33	79.72	0.046
8 x 5	8-5/8	219	5-3/4	146	5	127	0.33	88.54	0.051
9 x 5	9-5/8	244	5-3/4	146	5	127	0.33	107.37	0.062
10 x 5	10-5/8	270	5-3/4	146	5	127	0.33	121.30	0.070
11 x 5	11-5/8	295	5-3/4	146	5	127	0.33	140.70	0.081
12 x 5	12-5/8	321	5-3/4	146	5	127	0.33	159.87	0.093
8 x 6	8-5/8	219	6-7/8	175	6	152	0.40	135.56	0.078
9 x 6	9-5/8	244	6-7/8	175	6	152	0.40	150.26	0.087
10 x 6	10-5/8	270	6-7/8	175	6	152	0.40	170.69	0.099
11 x 6	11-5/8	295	6-7/8	175	6	152	0.40	185.18	0.107
12 x 6	12-5/8	321	6-7/8	175	6	152	0.40	200.37	0.116
13 x 6	13-5/8	346	6-7/8	175	6	152	0.40	220.78	0.123
12 x 7	12-7/8	327	7-7/8	200	7	178	0.42	269.24	0.156
13 x 7	13-7/8	352	7-7/8	200	7	178	0.42	292.51	0.169
14 x 7	14-7/8	378	7-7/8	200	7	178	0.42	315.77	0.183
15 x 7	15-7/8	403	7-7/8	200	7	178	0.42	346.64	0.201
16 x 7	16-7/8	429	7-7/8	200	7	178	0.42	377.41	0.218
11 x 8	11-7/8	302	8-7/8	225	8-1/4	210	0.50	340.02	0.197
12 x 8	12-7/8	327	8-7/8	225	8-1/4	210	0.50	373.00	0.216
13 x 8	13-7/8	352	8-7/8	225	8-1/4	210	0.50	404.85	0.234
14 x 8	14-7/8	378	8-7/8	225	8-1/4	210	0.50	436.80	0.253
16 x 8	17	432	9-1/4	235	8-1/4	210	0.50	512.57	0.297
18 x 8	19	483	9-1/4	235	8-1/4	210	0.50	567.49	0.328
20 x 8	21	533	9-1/4	235	8-1/4	210	0.50	646.81	0.374
22 x 8	23	584	9-1/4	235	8-1/4	210	0.50	701.90	0.406
24 x 8	25	635	9-1/4	235	8-1/4	210	0.50	763.40	0.441
16 x 10	17	432	11-1/4	286	10	254	0.75	795.70	0.461
18 x 10	19	483	11-1/4	286	10	254	0.75	910.00	0.527
20 x 10	21	533	11-1/4	286	10	254	0.75	1032.50	0.598

Disclaimer: Weights, dimensions, & capacities are estimated. Actual measurements may vary. Standard spacing is Projection x 2. Some sizes are made to order.

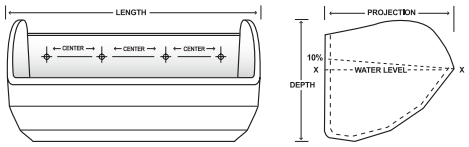
TIGER-CC® INDUSTRIAL

Slow Speed Centrifugal or Continuous Discharge

TIGER-CC INDUSTRIAL ELEVATOR BUCKETS®

Slow Speed Centrifugal Discharge 125-450 FPM

The **TIGER-CC** Industrial is a maximum duty industrial elevator bucket designed in the traditional CC style. The **TIGER-CC** is engineered to maximize bucket life and elevator capacity, reduce down time and lower maintenance costs. The **TIGER-CC** Industrial bucket has the thickest lip, back wall and corners to maximize bucket life and maintain capacity. Standard spacing is projection x 2. The most common applications include sand, gypsum, limestone, clay, cement and many, many more. The **TIGER-CC** Industrial is the maximum duty industrial bucket for your most demanding industrial applications.



Mounting Holes and Venting to Your Specifications

FEATURES & BENEFITS

- **Largest Capacity, Move More Material in a Single Row**
- **Thicker Corners**
- **Thicker Walls, Heavy Front Lip for Digging**
- **Cleaner Discharge**
- **Heat, Impact & Abrasion Resistant**
- **Non-Corrosive, Non-Sparking**
- **Extends Bucket Life**
- **Increases Elevator Capacity**
- **Lowers Elevator Maintenance**
- **Decreases Elevator Down Time**

BUCKET SIZE	Length		Projection		Depth		Back Wall Thickness	CAPACITY, CU. IN.	
BUCKET SIZE	in.	mm	in.	mm	in.	mm		Water Level Cu. In. X-X	Water Level Cu. Feet X-X
10 x 7	10-7/8	276	8-1/8	206	6-7/8	174	0.50	217.3	0.126
11 x 7	11-7/8	301	8-1/8	206	6-7/8	174	0.50	236.2	0.137
12 x 7	12-7/8	327	8-1/8	206	6-7/8	174	0.50	258.3	0.149
13 x 7	13-7/8	352	8-1/8	206	6-7/8	174	0.50	299.7	0.173
14 x 7	14-7/8	377	8-1/8	206	6-7/8	174	0.50	313.1	0.181
15 x 7	15-7/8	403	8-1/8	206	6-7/8	174	0.50	338.7	0.196
16 x 7	16-7/8	428	8-1/8	206	6-7/8	174	0.50	352.2	0.204
12 x 8	12-7/8	327	9-1/4	235	8-7/8	225	0.55	366.0	0.212
14 x 8	14-7/8	377	9-1/4	235	8-7/8	225	0.55	430.0	0.249
16 x 8	16-7/8	428	9-1/4	235	8-7/8	225	0.55	510.0	0.295
18 x 8	18-7/8	479	9-1/4	235	8-7/8	225	0.55	560.0	0.324
20 x 8	20-7/8	530	9-1/4	235	8-7/8	225	0.55	655.0	0.379
18 x 10	19	481	11-1/2	292	10-3/8	264	0.70	914.7	0.529
20 x 10	21	533	11-1/2	292	10-3/8	264	0.70	1005.0	0.581
21 x 10	22	558	11-1/2	292	10-3/8	264	0.70	1055.0	0.611
22 x 10	23	584	11-1/2	292	10-3/8	264	0.70	1105.0	0.639
23 x 10	24	609	11-1/2	292	10-3/8	264	0.70	1155.0	0.668
24 x 10	25	635	11-1/2	292	10-3/8	264	0.70	1206.0	0.698
25 x 10	26	660	11-1/2	292	10-3/8	264	0.70	1256.0	0.727
26 x 10	27	685	11-1/2	292	10-3/8	264	0.70	1306.0	0.756
27 x 10	28	711	11-1/2	292	10-3/8	264	0.70	1356.0	0.785
28 x 10	29	737	11-1/2	292	10-3/8	264	0.70	1400.0	0.810

*Injection molded materials shrink at differing rates. External dimensions may vary. Weights, Dimensions & Capacities have been estimated from engineered elevator bucket drawings. Actual molded parts will vary from numbers on charts. Some sizes are made to order. Standard spacing is Projection x 2.

Indicates Available upon request - extended lead time required.

ELEVATOR BUNDLES

BUNDLES
BUCKETS & BELT

ONE SOURCE, ONE SHIPMENT AND ONE INVOICE!

SAVINGS & CONVENIENCE FOR YOU
LESS PAPERWORK, PHONE CALLS, AND WORRY... LOWER COSTS, FASTER SHIPMENTS, AND LESS RISK

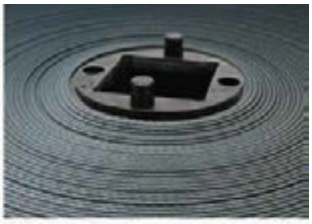
YOUR BENEFITS
NO HEADACHE OF RECEIVING MULTIPLE SHIPMENTS...
LESS WORRY - BUCKET HOLES & BELT HOLES MATCH EVERY TIME

SINGLE SOURCE: MAXI-LIFT
MAXI-LIFT STANDS BEHIND EVERY COMPONENT OF YOUR ELEVATOR BUNDLE

YOUR SOURCE FOR...

- A Comprehensive Range of Agricultural & Industrial Duty Elevator Buckets
- A Complete Line of Elevator Belting, Available in Both Rubber & PVC
- A Full Array of Belt Splices / Belt Fastening Systems
- A Wide Scope of Elevator Bolts & Hardware Options...
  All Available in a Single Order & Delivered in a Single Shipment!


Buckets

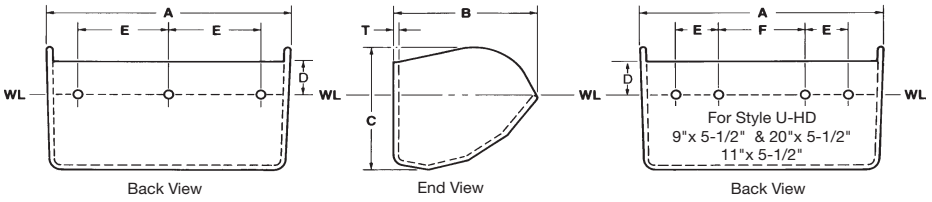

Belting


Belt Splices


Elevator Bolts

Tapco® Inc.

HIGH DENSITY **POLYETHYLENE** ELEVATOR BUCKETS



STYLE CC-HD BUCKETS

SIZE (Nominal) Metric	SIZE (Nominal) Inches	Dimension-Actual (Inches) Tolerance A, B, C± 3/16" T± 1/64" Length A	Proj. B	Depth C	Thickness T	Drilling-Standard (Inches) ⑤ Tolerance D ± 1/4" From Top D	Center to Center E	F	# of Holes	Bolt Diameter	Capacity① Tolerance ± 3% WL Cu. In.	WL Cu. Ft.	WL + 10% Cu. In.	WL + 10% Cu. Ft.	Spacing on Belt (Min.) Inches	Weight (Pounds) Each (Avg.)	Per Carton (Avg.)	Number Per Carton
80-60	3 X 2	3-1/4	2-1/2	2-1/16	11/64	7/8	1-3/4		2	1/4	6.0	.0035	6.6	.0038	3	0.13	3.6	24
120-80	4 X 3	4-1/4	3-1/2	3-1/16	3/16	7/8	2-1/2		2	1/4	16.8	.0097	18.5	.0107	4	0.26	7.1	24
140-120	5 X 4	5-1/4	4-1/2	4-1/16	13/64	1-1/4	3-3/16		2	1/4	35.8	.0207	39.4	.0228	5	0.46	12.6	24
160-120	6 X 4	6-1/4	4-1/2	4-1/16	13/64	1-1/4	4-3/8		2	1/4	43.3	.0251	47.6	.0276	5	0.53	13.8	24
180-120	7 X 4	7-1/4	4-1/2	4-1/16	13/64	1-1/4	2-11/16		3	1/4	49.7	.0288	54.7	.0316	5	0.60	15.9	24
160-140	6 X 5	6-5/16	5-1/2	5-1/16	1/4	1-1/2	4-3/8		2	1/4	68.3	.0395	75.1	.0435	6	0.80	20.8	24
180-140	7 X 5	7-5/16	5-1/2	5-1/16	1/4	1-1/2	2-11/16		3	1/4	75.8	.0439	83.4	.0483	6	0.98	25.2	24
200-140	8 X 5	8-5/16	5-1/2	5-1/16	1/4	1-1/2	3-1/16		3	1/4	85.4	.0494	93.9	.0544	6	1.10	28.3	24
230-140	9 X 5	9-5/16	5-1/2	5-1/16	1/4	1-1/2	3-5/8		3	1/4	97.9	.0567	107.7	.0623	6	1.02	26.4	24
260-140	10 X 5	10-5/16	5-1/2	5-1/16	1/4	1-1/2	4-1/8		3	1/4	113.5	.0657	124.9	.0723	6	1.24	32.1	24
280-140	11 X 5	11-5/16	5-1/2	5-1/16	1/4	1-1/2	3		4	1/4	127.2	.0736	139.9	.0766	6	1.27	32.7	24
300-140	12 X 5	12-5/16	5-1/2	5-1/16	1/4	1-1/2	3-3/8		4	1/4	143.1	.0828	157.4	.0911	6	1.35	34.8	24
200-160	8 X 6	8-5/16	6-5/8	6-1/16	1/4	1-3/4	3-1/16		3	1/4	124.5	.0720	137.0	.0793	7	1.34	35.0	24
230-160	9 X 6	9-5/16	6-5/8	6-1/16	1/4	1-3/4	3-5/8		3	1/4	135.9	.0786	149.5	.0865	7	1.45	37.6	24
260-160	10 X 6	10-5/16	6-5/8	6-1/16	1/4	1-3/4	4-1/8		3	1/4	150.4	.0870	165.4	.0957	7	1.57	40.5	24
280-160	11 X 6	11-5/16	6-5/8	6-1/16	1/4	1-3/4	3		4	1/4	173.4	.1003	190.7	.1104	7	1.69	43.5	24
300-160	12 X 6	12-5/16	6-5/8	6-1/16	1/4	1-3/4	3-3/8		4	1/4	185.4	.1073	203.9	.1180	7	1.76	45.2	24
330-160	13 X 6	13-5/16	6-5/8	6-1/16	1/4	1-3/4	3-5/8		4	1/4	203.8	.1179	224.2	.1297	7	1.85	24.6	12
② 350-160	14 X 6	13-7/8	6-5/8	5-7/8	1/4	1-3/4	3		5	1/4	198.3	.1148	218.1	.1262	7	1.98	26.2	12
260-180	10 X 7	10-7/16	7-3/4	7-1/16	9/32	2	4-1/8		3	5/16	219.4	.1270	241.3	.1397	8	2.01	18.5	8
280-180	11 X 7	11-7/16	7-3/4	7-1/16	9/32	2	3		4	5/16	234.2	.1355	257.6	.1491	8	2.31	21.1	8
300-180	12 X 7	12-7/16	7-3/4	7-1/16	9/32	2	3-3/8		4	5/16	248.2	.1436	273.0	.1580	8	2.43	22.0	8
330-180	13 X 7	13-7/16	7-3/4	7-1/16	9/32	2	3-5/8		4	5/16	284.4	.1646	312.8	.1810	8	2.62	23.7	8
350-180	14 X 7	14-7/16	7-3/4	7-1/16	9/32	2	3		5	5/16	301.9	.1747	332.1	.1922	8	2.76	25.0	8
370-180	15 X 7	15-7/16	7-3/4	7-1/16	9/32	2	3-1/4		5	5/16	331.4	.1918	364.5	.2110	8	3.02	26.9	8
400-180	16 X 7	16-7/16	7-3/4	7-1/16	9/32	2	2-7/8		6	5/16	346.5	.2005	381.2	.2206	8	3.13	27.9	8
④ 450-180	18 X 7	18-7/16	7-3/4	7-1/16	11/32	2	3-1/8		6	5/16	396.7	.2296	436.4	.2525	8	4.00	35.9	11
④ 500-180	20 X 7	20-7/16	7-3/4	7-1/16	13/32	2	3-1/2		6	5/16	433.3	.2508	476.6	.2758	8	4.50	41.9	11

STYLE CC-HD *"SUPER CAPACITY"* BUCKETS

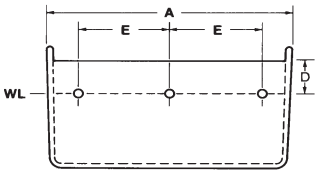
260-215	10 X 8	10-7/16	8-3/4	8-13/16	11/32	2-1/4	4-1/8		3	5/16	297.0	.1719	326.7	.1891	9	2.95	26.6	8
280-215	11 X 8	11-7/16	8-3/4	8-13/16	11/32	2-1/4	3		4	5/16	325.9	.1886	358.5	.2075	9	2.99	26.9	8
300-215	12 X 8	12-7/16	8-3/4	8-13/16	11/32	2-1/4	3-3/8		4	5/16	362.0	.2095	398.2	.2304	9	3.02	27.4	8
330-215	13 X 8	13-7/16	8-3/4	8-13/16	11/32	2-1/4	3-5/8		4	5/16	390.2	.2258	429.2	.2484	9	3.17	28.8	8
350-215	14 X 8	14-7/16	8-3/4	8-13/16	11/32	2-1/4	3		5	5/16	429.6	.2486	472.6	.2735	9	3.31	30.0	8
370-215	15 X 8	15-7/16	8-3/4	8-13/16	11/32	2-1/4	3-1/4		5	5/16	458.9	.2656	504.8	.2921	9	3.72	33.2	8
400-215	16 X 8	16-7/16	8-3/4	8-13/16	3/8	2-1/4	2-7/8		6	5/16	511.1	.2958	562.2	.3254	9	4.27	37.7	8
450-215	18 X 8	18-7/16	8-3/4	8-13/16	25/64	2-1/4	3-1/8		6	5/16	564.4	.3266	620.8	.3593	9	4.89	43.2	8
500-215	20 X 8	20-7/16	8-7/8	8-15/16	13/32	2-1/4	3-1/2		6	5/16	644.2	.3728	708.6	.4101	9	5.77	52.2	8
400-230	16 X 9	16-7/16	10	10-1/8	7/16	2-1/2	2-7/8		6	5/16	614.8	.3558	676.3	.3914	10	6.06	39.4	6
500-230	20 X 9	20-7/16	10	10-1/8	15/32	2-1/2	3-1/2		6	5/16	770.5	.4459	847.6	.4905	10	7.75	49.9	6

STYLE U-HD BUCKETS fit Universal Industries Elevators

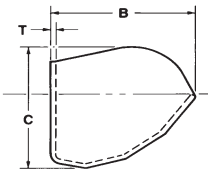
③ 120-80	4 X 3	3-7/8	3	3-1/16	3/16	7/8	1-7/8		2	1/4	11.3	.0065	12.4	.0072	3-1/4	0.19	5.6	24
160-120	6 X 4	6-1/4	4-1/8	4-1/16	13/64	1-1/2	2-3/4		2	1/4	35.4	.0205	38.9	.0225	4-1/4	0.51	13.4	24
180-120	7 X 4-1/2	7-/1/4	4-3/8	4-1/16	13/64	1-1/2	2-1/2		3	1/4	44.2	.0256	48.6	.0281	5	0.58	15.1	24
230-150	9 X 5-1/2	9-5/16	5-1/2	5-1/16	1/4	1-3/4	1-3/4	3-1/2	4	1/4	97.9	.0567	107.7	.0623	6	1.02	26.4	24
④ 500-150	20 X 5-1/2	20-7/16	6	5-1/2	13/32	2	1-3/4	3-1/4	7	1/4	157.0	.0909	172.7	.0999	6	2.83	49.5	16
280-160	11 X 5-1/2	11-5/16	6-5/8	6-1/16	1/4	1-3/4	1-3/4	2-3/4	5	1/4	173.4	.1003	190.7	.1104	6	1.69	43.5	24
280-180	11 X 7	11-7/16	7-3/4	7-1/16	9/32	2	3-1/8		4	5/16	234.2	.1355	257.6	.1491	8	2.31	21.1	8
300-215	12 X 8	12-7/16	8-3/4	8-13/16	11/32	2-1/4	3-3/8		4	1/4	362.0	.2095	398.2	.2304	9	3.02	27.4	8
350-215	14 X 8	14-7/16	8-3/4	8-13/16	11/32	2-1/4	3		5	1/4	429.6	.2656	472.6	.2735	9	3.31	30.0	8

① Tapco recommends using WL (water level) fill + 10% for usable capacity. A gross capacity figure is no longer provided as it is inappropriate for rating an agricultural elevator bucket.
② 14 X 6 bucket was designed to fit Hunter Mfg. Grizzly elevators. ③ Universal refers to this bucket as 3-3/4 X 3 in fabricated steel, the buckets are completely interchangeable.
④ Modified (cut down) from an 8" projection bucket. ⑤ Holes Drilled 1/32" Oversize.

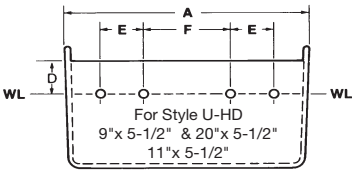
SUPER TOUGH NYLON ELEVATOR BUCKETS



Back View



End View



Back View

STYLE CC-HD BUCKETS

SIZE (Nominal) Metric	SIZE (Nominal) Inches	Dimension-Actual (Inches) Tolerance A, B, C± 3/16" T± 1/64" Length A	Proj. B	Depth C	Thickness T	Drilling-Standard (Inches) Tolerance D ± 1/4" ⑤ From Top D	Center to Center E	F	# of Holes	Bolt Diameter	Capacity① Tolerance ± 3% WL Cu. In.	WL Cu. Ft.	WL + 10% Cu. In.	WL + 10% Cu. Ft.	Spacing on Belt (Min.) Inches	Weight (Pounds) Each (Avg.)	Per Carton (Avg.)	Number Per Carton
80-60	3 X 2	3-3/8	2-7/16	2-1/4	11/64	7/8	1-3/4		2	1/4	6.2	.0036	6.8	.0039	3	0.14	3.8	24
120-80	4 X 3	4-3/8	3-7/16	3-1/4	3/16	7/8	2-1/2		2	1/4	17.5	.0101	19.3	.0111	4	0.29	7.9	24
140-120	5 X 4	5-7/16	4-9/16	4-3/16	13/64	1-1/4	3-3/16		2	1/4	37.2	.0215	40.9	.0237	5	0.52	14.0	24
160-120	6 X 4	6-7/16	4-9/16	4-3/16	13/64	1-1/4	4-3/8		2	1/4	45.0	.0260	49.5	.0286	5	0.60	15.9	24
180-120	7 X 4	7-7/16	4-9/16	4-3/16	13/64	1-1/4	2-11/16		3	1/4	51.7	.0299	56.9	.0329	5	0.68	17.8	24
160-140	6 X 5	6-1/2	5-9/16	5-3/16	1/4	1-1/2	4-3/8		2	1/4	71.0	.0411	78.1	.0452	6	0.91	23.5	24
180-140	7 X 5	7-1/2	5-9/16	5-3/16	1/4	1-1/2	2-11/16		3	1/4	78.8	.0456	86.7	.0502	6	1.17	29.9	24
200-140	8 X 5	8-1/2	5-9/16	5-3/16	1/4	1-1/2	3-1/16		3	1/4	88.8	.0514	97.7	.0565	6	1.32	33.7	24
230-140	9 X 5	9-1/2	5-9/16	5-3/16	1/4	1-1/2	3-5/8		3	1/4	101.8	.0589	112.0	.0648	6	1.19	30.6	24
260-140	10 X 5	10-1/2	5-9/16	5-3/16	1/4	1-1/2	4-1/8		3	1/4	118.0	.0683	129.8	.0751	6	1.40	35.1	24
280-140	11 X 5	11-1/2	5-9/16	5-3/16	1/4	1-1/2	3		4	1/4	132.3	.0766	145.5	.0842	6	1.46	37.5	24
300-140	12 X 5	12-1/2	5-9/16	5-3/16	1/4	1-1/2	3-3/8		4	1/4	148.8	.0861	163.7	.0947	6	1.78	45.3	24
200-160	8 X 6	8-1/2	6-11/16	6-3/16	1/4	1-3/4	3-1/16		3	1/4	129.5	.0749	142.5	.0824	7	1.42	37.0	24
230-160	9 X 6	9-1/2	6-11/16	6-3/16	1/4	1-3/4	3-5/8		3	1/4	141.3	.0818	155.4	.0899	7	1.68	43.1	24
260-160	10 X 6	10-1/2	6-11/16	6-3/16	1/4	1-3/4	4-1/8		3	1/4	156.4	.0905	172.0	.0996	7	1.86	47.4	24
280-160	11 X 6	11-1/2	6-11/16	6-3/16	1/4	1-3/4	3		4	1/4	180.3	.1043	198.3	.1148	7	1.96	50.1	24
300-160	12 X 6	12-1/2	6-11/16	6-3/16	1/4	1-3/4	3-3/8		4	1/4	192.8	.1116	212.1	.1227	7	2.03	51.8	24
330-160	13 X 6	13-1/2	6-11/16	6-3/16	1/4	1-3/4	3-5/8		4	1/4	212.0	.1227	233.2	.1350	7	2.19	28.5	12
② 350-160	14 X 6	13-7/8	6-11/16	6	1/4	1-3/4	3		5	1/4	206.2	.1193	226.8	.1313	7	2.49	32.2	12
260-180	10 X 7	10-9/16	7-7/8	7-3/16	9/32	2	4-1/8		3	5/16	228.2	.1321	251.0	.1453	8	2.56	22.9	8
280-180	11 X 7	11-9/16	7-7/8	7-3/16	9/32	2	3		4	5/16	243.6	.1410	268.0	.1551	8	2.76	24.7	8
300-180	12 X 7	12-9/16	7-7/8	7-3/16	9/32	2	3-3/8		4	5/16	258.1	.1494	283.9	.1643	8	2.82	25.2	8
330-180	13 X 7	13-9/16	7-7/8	7-3/16	9/32	2	3-5/8		4	5/16	295.8	.1712	325.4	.1883	8	3.12	27.7	8
350-180	14 X 7	14-9/16	7-7/8	7-3/16	9/32	2	3		5	5/16	314.0	.1817	345.4	.1999	8	3.35	29.3	8
370-180	15 X 7	15-9/16	7-7/8	7-3/16	9/32	2	3-1/4		5	5/16	344.7	.1995	379.2	.2194	8	3.40	30.1	8
400-180	16 X 7	16-9/16	7-7/8	7-3/16	9/32	2	2-7/8		6	5/16	360.4	.2086	396.4	.2294	8	3.69	32.4	8
④ 450-180	18 X 7	18-9/16	7-7/8	7-3/16	11/32	2	3-1/8		6	5/16	412.6	.2388	453.9	.2627	8	4.52	40.2	11
④ 500-180	20 X 7	20-9/16	7-7/8	7-3/16	13/32	2	3-1/2		6	5/16	450.6	.2608	495.7	.2860	8	5.08	46.6	11

STYLE CC-HD "SUPER CAPACITY" BUCKETS

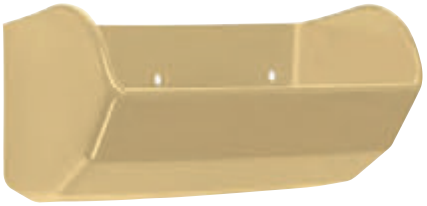
260-215	10 X 8	10-9/16	8-7/8	8-3/4	11/32	2-1/4	4-1/8		3	5/16	308.9	.1788	339.8	.1966	9	3.10	27.8	8
280-215	11 X 8	11-9/16	8-7/8	8-3/4	11/32	2-1/4	3		4	5/16	338.9	.1961	372.8	.2157	9	3.41	30.3	8
300-215	12 X 8	12-9/16	8-7/8	8-3/4	11/32	2-1/4	3-3/8		4	5/16	376.5	.2179	414.2	.2397	9	3.72	33.1	8
330-215	13 X 8	13-9/16	8-7/8	8-3/4	11/32	2-1/4	3-5/8		4	5/16	405.8	.2348	446.4	.2583	9	4.03	35.6	8
350-215	14 X 8	14-9/16	8-7/8	8-3/4	11/32	2-1/4	3		5	5/16	446.8	.2586	491.5	.2844	9	4.34	38.3	8
370-215	15 X 8	15-9/16	8-7/8	8-3/4	11/32	2-1/4	3-1/4		5	5/16	477.3	.2762	525.5	.3038	9	4.65	40.6	8
400-215	16 X 8	16-9/16	8-7/8	8-3/4	3/8	2-1/4	2-7/8		6	5/16	531.5	.3076	584.7	.3383	9	5.08	41.1	8
450-215	18 X 8	18-9/16	8-7/8	8-3/4	25/64	2-1/4	3-1/8		6	5/16	587.0	.3397	645.7	.3737	9	5.72	50.1	8
500-215	20 X 8	20-9/16	8-7/8	9	13/32	2-1/4	3-1/2		6	5/16	670.0	.3877	737.0	.4265	9	6.47	57.8	8
400-230	16 X 9	16-9/16	10	10-3/16	7/16	2-1/2	2-7/8		6	5/16	639.4	.3700	703.3	.4070	10	6.87	44.4	6
500-230	20 X 9	20-9/16	10	10-3/16	15/32	2-1/2	3-1/2		6	5/16	801.3	.4637	881.4	.5101	10	8.56	54.9	6

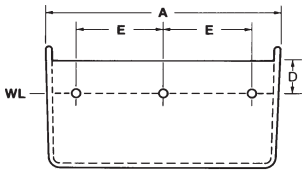
STYLE U-HD BUCKETS fit Universal Industries Elevators

③ 120-80	4 X 3	3-7/8	3	3-1/16	3/16	7/8	1-7/8		2	1/4	11.8	.0065	13.3	.0075	3-1/4	0.23	6.4	24
160-120	6 X 4	6-3/8	4-1/4	4-3/16	13/64	1-1/2	2-3/4		2	1/4	36.8	.0213	40.5	.0235	4-1/4	0.60	15.6	24
180-120	7 X 4-1/2	7-3/8	4-1/2	4-3/16	13/64	1-1/2	2-1/2		3	1/4	46.0	.0266	50.6	.0293	5	0.68	17.5	24
230-150	9 X 5-1/2	9-1/2	5-9/16	5-3/16	1/4	1-3/4	1-3/4	3-1/2	4	1/4	101.8	.0589	112.0	.0650	6	1.19	30.6	24
④ 500-150	20 X 5-1/2	20-9/16	6	5-1/2	13/32	2	1-3/4	3-1/4	7	1/4	163.3	.0945	179.6	.1039	6	3.20	55.5	16
280-160	11 X 5-1/2	11-1/2	6-11/16	6-3/16	1/4	1-3/4	1-3/4	2-3/4	5	1/4	180.3	.1046	198.4	.1151	6	1.96	50.1	24
280-180	11 X 7	11-9/16	7-7/8	7-3/16	9/32	2	3-1/8		4	5/16	243.6	.1410	267.9	.1554	8	2.76	24.7	8
300-215	12 X 8	12-9/16	8-7/8	8-3/4	11/32	2-1/4	3-3/8		4	1/4	376.5	.2179	414.2	.2397	9	3.72	33.1	8
350-215	14 X 8	14-9/16	8-7/8	8-3/4	11/32	2-1/4	3		5	1/4	446.8	.2586	491.5	.2844	9	4.34	38.3	8

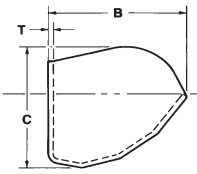
① Tapco recommends using WL (water level) fill + 10% for usable capacity. A gross capacity figure is no longer provided as it is inappropriate for rating an agricultural elevator bucket.
② 14 X 6 bucket was designed to fit Hunter Mfg. Grizzly elevators. ③ Universal refers to this bucket as 3-3/4 X 3 in fabricated steel, the buckets are completely interchangeable.
④ Modified (cut down) from an 8" projection bucket. ⑤ Holes Drilled 1/32" Oversize.

SEVERE DUTY **URETHANE** ELEVATOR BUCKETS

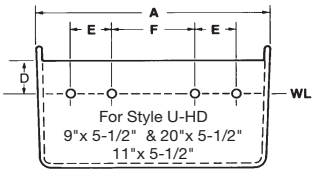




Back View



End View



For Style U-HD
9"x 5-1/2" & 20"x 5-1/2"
11"x 5-1/2"
Back View

STYLE CC-HD BUCKETS

SIZE (Nominal) Metric	SIZE (Nominal) Inches	Dimension-Actual (Inches) Tolerance A, B, C± 3/16" T± 1/64" Length A	Proj. B	Depth C	Thickness T	Drilling-Standard (Inches) ⑤ Tolerance D ± 1/4" From Top D	Center to Center E	F	# of Holes	Bolt Diameter	Capacity① Tolerance ± 3% WL Cu. In.	WL Cu. Ft.	WL + 10% Cu. In.	WL + 10% Cu. Ft.	Spacing on Belt (Min.) Inches	Weight (Pounds) Each (Avg.)	Per Carton (Avg.)	Number Per Carton
80-60	3 X 2	3-7/16	2-1/2	2-1/4	11/64	7/8	1-3/4		2	1/4	6.2	.0036	6.8	.0039	3	0.17	4.5	24
120-80	4 X 3	4-7/16	3-1/2	3-1/4	3/16	7/8	2-1/2		2	1/4	17.5	.0101	19.3	.0111	4	0.35	9.3	24
140-120	5 X 4	5-1/2	4-5/8	4-1/4	13/64	1-1/4	3-3/16		2	1/4	37.2	.0215	40.9	.0237	5	0.64	16.7	24
160-120	6 X 4	6-1/2	4-5/8	4-1/4	13/64	1-1/4	4-3/8		2	1/4	45.0	.0260	45.5	.0286	5	0.74	19.1	24
180-120	7 X 4	7-1/2	4-5/8	4-1/4	13/64	1-1/4	2-11/16		3	1/4	51.7	.0299	56.9	.0329	5	0.82	21.0	24
160-140	6 X 5	6-9/16	5-5/8	5-3/8	1/4	1-1/2	4-3/8		2	1/4	71.0	.0411	78.1	.0452	6	1.10	28.1	24
180-140	7 X 5	7--9/16	5-5/8	5-3/8	1/4	1-1/2	2-11/16		3	1/4	78.8	.0456	86.7	.0502	6	1.34	33.8	24
200-140	8 X 5	8-9/16	5-5/8	5-3/8	1/4	1-1/2	3-1/16		3	1/4	88.8	.0514	97.7	.0565	6	1.52	38.5	24
230-140	9 X 5	9-9/16	5-5/8	5-3/8	1/4	1-1/2	3-5/8		3	1/4	101.8	.0589	112.0	.0648	6	1.38	35.2	24
260-140	10 X 5	10-9/16	5-5/8	5-3/8	1/4	1-1/2	4-1/8		3	1/4	118.0	.0683	129.8	.0751	6	1.65	42.1	24
280-140	11 X 5	11-9/16	5-5/8	5-3/8	1/4	1-1/2	3		4	1/4	132.3	.0766	145.5	.0842	6	1.94	49.1	24
300-140	12 X 5	12-9/16	5-5/8	5-3/8	1/4	1-1/2	3-3/8		4	1/4	148.8	.0861	163.7	.0947	6	2.11	53.2	24
200-160	8 X 6	8-9/16	6-3/4	6-1/4	1/4	1-3/4	3-1/16		3	1/4	129.5	.0749	142.5	.0824	7	1.76	45.1	24
230-160	9 X 6	9-9/16	6-3/4	6-1/4	1/4	1-3/4	3-5/8		3	1/4	141.3	.0818	155.4	.0899	7	1.97	50.1	24
260-160	10 X 6	10-9/16	6-3/4	6-1/4	1/4	1-3/4	4-1/8		3	1/4	156.4	.0905	172.0	.0996	7	2.09	53.0	24
280-160	11 X 6	11-9/16	6-3/4	6-1/4	1/4	1-3/4	3		4	1/4	180.3	.1043	198.3	.1148	7	2.26	57.3	24
300-160	12 X 6	12-9/16	6-3/4	6-1/4	1/4	1-3/4	3-3/8		4	1/4	192.8	.1116	212.1	.1227	7	2.41	60.9	24
330-160	13 X 6	13-9/16	6-3/4	6-1/4	1/4	1-3/4	3-5/8		4	1/4	212.0	.1227	233.2	.1350	7	2.54	32.8	12
② 350-160	14 X 6	14	6-3/4	6-1/16	1/4	1-3/4	3		5	1/4	206.2	.1193	226.8	.1313	7	2.91	37.9	12
260-180	10 X 7	10-5/8	7-15/16	7-7/16	9/32	2	4-1/8		3	5/16	228.2	.1321	251.0	.1453	8	2.94	26.1	8
280-180	11 X 7	11-5/8	7-15/16	7-7/16	9/32	2	3		4	5/16	243.6	.1410	268.0	.1551	8	3.29	28.9	8
300-180	12 X 7	12-5/8	7-15/16	7-7/16	9/32	2	3-3/8		4	5/16	258.1	.1494	283.9	.1643	8	3.34	29.4	8
330-180	13 X 7	13-5/8	7-15/16	7-716	9/32	2	3-5/8		4	5/16	295.8	.1712	325.4	.1883	8	3.58	31.3	8
350-180	14 X 7	14-5/8	7-15/16	7-7/16	9/32	2	3		5	5/16	314.0	.1817	345.4	.1999	8	3.81	33.0	8
370-180	15 X 7	15-5/8	7-15/16	7-7/16	9/32	2	3-1/4		5	5/16	344.7	.1995	379.2	.2194	8	4.23	36.8	8
400-180	16 X 7	16-5/8	7-15/16	7-7/16	9/32	2	2-7/8		6	5/16	360.4	.2086	396.4	.2294	8	4.39	38.1	8
④ 450-180	18 X 7	18-5/8	7-15/16	7-7/16	11/32	2	3-1/8		6	5/16	412.6	.2388	453.9	.2627	8	5.20	45.6	11
④ 500-180	20 X 7	20-5/8	7-15/16	7-7/16	13/32	2	3-1/2		6	5/16	450.6	.2608	495.7	.2860	8	5.85	52.8	11

STYLE CC-HD *"SUPER CAPACITY"* BUCKETS

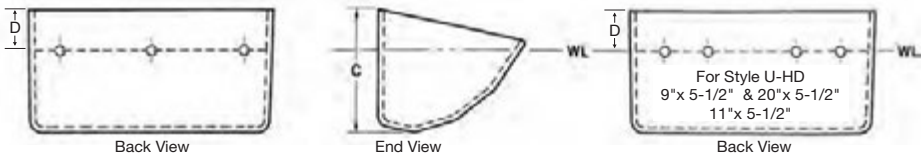
260-215	10 X 8	10-5/8	8-15/16	8-7/8	11/32	2-1/4	4-1/8		3	5/16	308.9	.1788	339.8	.1966	9	3.67	32.4	8
280-215	11 X 8	11-5/8	8-15/16	8-7/8	11/32	2-1/4	3		4	5/16	338.9	.1961	372.8	.2157	9	4.04	35.3	8
300-215	12 X 8	12-5/8	8-15/16	8-7/8	11/32	2-1/4	3-3/8		4	5/16	376.5	.2179	414.1	.2396	9	4.40	38.5	8
330-215	13 X 8	13-5/8	8-15/16	8-7/8	11/32	2-1/4	3-5/8		4	5/16	405.8	.2348	446.4	.2583	9	4.77	41.5	8
350-215	14 X 8	14-5/8	8-15/16	8-7/8	11/32	2-1/4	3		5	5/16	446.8	.2586	491.5	.2844	9	5.13	44.6	8
370-215	15 X 8	15-5/8	8-15/16	8-7/8	11/32	2-1/4	3-1/4		5	5/16	477.3	.2762	525.0	.3038	9	5.50	47.4	8
400-215	16 X 8	16-5/8	8-15/16	8-7/8	3/8	2-1/4	2-7/8		6	5/16	531.5	.3076	584.7	.3383	9	5.78	49.7	8
450-215	18 X 8	18-5/8	8-15/16	8-7/8	25/64	2-1/4	3-1/8		6	5/16	587.0	.3397	645.7	.3737	9	6.68	56.9	8
500-215	20 X 8	20-5/8	9	9-1/16	13/32	2-1/4	3-1/2		6	5/16	670.0	.3877	737.0	.4265	9	7.84	68.8	8
400-230	16 X 9	16-3/4	10-1/8	10-3/16	7/16	2-1/2	2-7/8		6	5/16	639.4	.3700	703.3	.4070	10	8.31	53.0	6
500-230	20 X 9	20-3/4	10-1/8	10-3/16	15/32	2-1/2	3-1/2		6	5/16	801.3	.4637	881.4	.5101	10	10.42	66.1	6

STYLE U-HD BUCKETS fit Universal Industries Elevators

③ 120-80	4 X 3	3-7/8	3	3-1/16	3/16	7/8	1-7/8		2	1/4	11.8	.0068	13.0	.0075	3-1/4	0.23	6.4	24
160-120	6 X 4	6-3/8	4-1/4	4-3/16	13/64	1-1/2	2-3/4		2	1/4	36.8	.0213	40.5	.0234	4-1/4	0.74	19.0	24
180-120	7 X 4-1/2	7-3/8	4-1/2	4-3/16	13/64	1-1/2	2-1/2		3	1/4	46.0	.0266	50.6	.0293	5	0.81	20.6	24
230-150	9 X 5-1/2	9-9/16	5-5/8	5-3/8	1/4	1-3/4	1-3/4	3-1/2	4	1/4	101.8	.0589	112.0	.0648	6	1.38	35.2	24
④ 500-150	20 X 5-1/2	20-9/16	6	5-1/2	13/32	2	1-3/4	3-1/4	7	1/4	163.3	.0945	179.6	.1039	6	3.20	55.5	16
280-160	11 X 5-1/2	11-9/16	6-3/4	6-1/4	1/4	1-3/4	1-3/4	2-3/4	5	1/4	180.3	.1043	198.3	.1148	6	2.26	57.3	24
280-180	11 X 7	11-5/8	7-15/16	7-7/16	9/32	2	3-1/8		4	5/16	243.6	.1410	268.0	.1551	8	3.29	28.9	8
300-215	12 X 8	12-5/8	8-15/16	8-7/8	11/32	2-1/4	3-3/8		4	1/4	376.5	.2179	414.1	.2396	9	4.40	38.5	8
350-215	14 X 8	14-5/8	8-15/16	8-7/8	11/32	2-1/4	3		5	1/4	446.8	.2586	491.5	.2844	9	5.13	44.6	8

① Tapco recommends using WL (water level) fill + 10% for usable capacity. A gross capacity figure is no longer provided as it is inappropriate for rating an agricultural elevator bucket.
② 14 X 6 bucket was designed to fit Hunter Mfg. Grizzly elevators. ③ Universal refers to this bucket as 3-3/4 X 3 in fabricated steel, the buckets are completely interchangeable.
④ Modified (cut down) from an 8" projection bucket. ⑤ Holes Drilled 1/32" Oversize.

"LOW PROFILE" ELEVATOR BUCKETS



All Other Dimensions Typical of Tapco Style CC Buckets

"LOW PROFILE" STYLE CC-HD BUCKETS

SIZE (Nominal) Metric	SIZE (Nominal) Inches	Spacing on Belt (Min.) Inches	Depth C ± 1/8"	Down D ± 1/4"	Polyethylene Capacity WL① Tolerance ± 3% Cu. In.	Polyethylene Capacity WL① Tolerance ± 3% Cu. Ft.	◆ Weight Pounds (Average)	Urethane Capacity WL① Tolerance ± 3% Cu. In.	Urethane Capacity WL① Tolerance ± 3% Cu. Ft.	◆ Weight Pounds (Average)	Nylon Capacity WL① Tolerance ± 3% Cu. In.	Nylon Capacity WL① Tolerance ± 3% Cu. Ft.	◆ Weight Pounds (Average)
80-60	3 X 2	2	2	3/8	6.0	.0035	.11	6.2	.0036	0.14	6.2	.0036	0.12
120-80	4 X 3	3	3	5/8	16.8	.0097	.23	17.5	.0101	0.32	17.5	.0101	0.25
140-120	5 X 4	3	2-3/4	5/8	35.8	.0207	.38	37.2	.0215	0.51	37.2	.0215	0.42
160-120	6 X 4	3	2-3/4	5/8	43.3	.0251	.44	45.0	.0260	0.60	45.0	.0260	0.49
180-120	7 X 4	3	2-3/4	5/8	49.7	.0288	.49	51.7	.0299	0.67	51.7	.0299	0.55
160-140	6 X 5	4	3-3/4	3/4	68.3	.0395	.37	71.0	.0411	0.91	71.0	.0411	0.75
180-140	7 X 5	4	3-3/4	3/4	75.8	.0439	.82	78.8	.0456	1.11	78.8	.0456	0.96
200-140	8 X 5	4	3-3/4	3/4	85.4	.0494	.94	88.8	.0514	1.28	88.8	.0514	1.11
230-140	9 X 5	4	3-3/4	3/4	97.9	.0567	.86	101.8	.0589	1.18	101.8	.0589	1.02
260-140	10 X 5	4	3-3/4	3/4	113.5	.0657	1.05	118.0	.0683	1.39	118.0	.0683	1.18
280-140	11 X 5	4	3-3/4	3/4	127.2	.0736	1.07	132.2	.0766	1.63	132.2	.0766	1.23
300-140	12 X 5	4	3-3/4	3/4	143.1	.0828	1.20	148.8	.0861	1.84	148.8	.0861	1.55
200-160	8 X 6	5	4-3/4	1	124.5	.0720	1.14	129.5	.0749	1.49	129.5	.0749	1.20
230-160	9 X 6	5	4-3/4	1	135.9	.0786	1.22	141.3	.0818	1.71	141.3	.0818	1.46
260-160	10 X 6	5	4-3/4	1	150.4	.0870	1.31	156.4	.0905	1.80	156.4	.0905	1.60
280-160	11 X 6	5	4-3/4	1	173.4	.1003	1.43	180.3	.1043	1.90	180.3	.1043	1.65
300-160	12 X 6	5	4-3/4	1	185.4	.1073	1.58	192.8	.1116	2.14	192.8	.1116	1.80
330-160	13 X 6	5	4-3/4	1	203.8	.1179	1.64	212.0	.1227	2.22	212.0	.1227	1.90
② 350-160	14 X 6	5	4-3/4	1	198.3	.1148	1.70	206.2	.1193	2.45	206.2	.1193	2.16
260-180	10 X 7	6	5-3/4	1-1/4	219.4	.1270	1.90	228.2	.1321	2.58	228.2	.1321	2.25
280-180	11 X 7	6	5-3/4	1-1/4	234.2	.1355	2.06	243.6	.1410	2.90	243.6	.1410	2.43
300-180	12 X 7	6	5-3/4	1-1/4	248.2	.1436	2.08	258.1	.1494	2.91	258.1	.1494	2.46
330-180	13 X 7	6	5-3/4	1-1/4	284.4	.1646	2.36	295.8	.1712	3.21	295.8	.1712	2.80
350-180	14 X 7	6	5-3/4	1-1/4	301.9	.1747	2.49	314.0	.1817	3.28	314.0	.1817	2.89
370-180	15 X 7	6	5-3/4	1-1/4	331.4	.1918	2.71	344.7	.1995	3.83	344.7	.1995	3.08
400-180	16 X 7	6	5-3/4	1-1/4	346.5	.2005	2.77	360.4	.2086	3.85	360.4	.2086	3.23
450-180	18 X 7	6	5-3/4	1-1/4	396.7	.2296	3.24	412.6	.2388	4.50	412.6	.2388	3.96
500-180	20 X 7	6	5-3/4	1-1/4	433.3	.2508	3.60	450.6	.2608	5.00	450.6	.2608	4.40

"LOW PROFILE" STYLE CC-HD *"SUPER CAPACITY"* BUCKETS

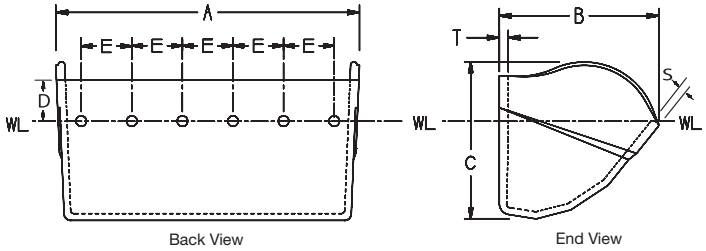
260-215	10 X 8	7	6-3/4	1-1/4	297.0	.1719	2.54	308.9	.1788	3.37	308.9	.1788	2.89
280-215	11 X 8	7	6-3/4	1-1/4	325.9	.1886	2.59	338.9	.1961	3.46	338.9	.1961	2.92
300-215	12 X 8	7	6-3/4	1-1/4	362.0	.2095	2.63	376.5	.2179	3.48	376.5	.2179	3.18
330-215	13 X 8	7	6-3/4	1-1/4	390.2	.2258	2.99	405.8	.2348	4.13	405.8	.2348	3.49
350-215	14 X 8	7	6-3/4	1-1/4	429.6	.2486	3.01	446.8	.2586	4.29	446.8	.2586	3.55
370-215	15 X 8	7	6-3/4	1-1/4	458.9	.2656	3.25	477.3	.2762	4.42	477.3	.2762	3.99
400-215	16 X 8	7	6-3/4	1-1/4	511.1	.2958	3.57	531.5	.3076	4.96	531.5	.3076	4.32
450-215	18 X 8	7	6-3/4	1-1/4	564.4	.3266	4.17	587.0	.3397	5.58	587.0	.3397	4.86
500-215	20 X 8	7	6-3/4	1-1/4	644.2	.3728	5.07	670.0	.3877	6.77	670.0	.3877	5.63
400-230	16 X 9	8	7-3/4	1-1/4	614.8	.3558	5.16	639.4	.3700	5.83	639.4	.3700	6.71
500-230	20 X 9	8	7-3/4	1-1/4	770.5	.4459	6.58	801.3	.4637	7.44	801.3	.4637	8.55

"LOW PROFILE" STYLE U-HD BUCKETS fit Universal Industries Elevators

③ 120-80	4 X 3	2-1/2	2-1/4	7/8	11.3	.0065	.16	11.8	.0068	0.21	11.8	.0068	0.18
160-120	6 X 4	3	2-3/4	7/8	35.4	.0205	.42	36.8	.0213	0.50	36.8	.0213	0.49
180-120	7 X 4-1/2	3	2-3/4	7/8	44.2	.0256	.47	46.0	.0266	0.57	46.0	.0266	0.56
230-150	9 X 5-1/2	4	3-3/4	7/8	97.9	.0567	.86	101.8	.0589	1.17	101.8	.0589	1.01
500-150	20 X 5-1/2	5	4-3/4	7/8	157.0	.0909	2.75	163.3	.0945	3.58	163.3	.0945	3.11
280-160	11 X5-1/2	5	4-3/4	1	173.4	.1003	1.48	180.3	.1043	1.90	180.3	.1043	1.72
280-180	11 X 7	6	5-3/4	1-1/4	234.2	.1355	2.06	243.6	.1410	2.90	243.6	.1410	2.44
300-215	12 X 8	7	6-3/4	1-1/4	362.0	.2095	2.63	376.5	.2179	3.48	376.5	.2179	3.18
350-215	14 X 8	7	6-3/4	1-1/4	429.6	.2486	3.01	446.8	.2586	4.29	446.8	.2586	3.55

① Tapco recommends using WL (water level) fill + 5% for usable capacity. A gross capacity figure is no longer provided as it is inappropriate for rating an agricultural elevator bucket.
② 14 X 6 bucket was designed to fit Hunter Mfg. Grizzly elevators.
③ Universal refers to this bucket as 3-3/4 X 3 in fabricated steel, the buckets are completely interchangeable. Standard Bolt Holes Drilled on the WL (Water Level) Line ± 1/4"
◆ Weights are for CC-HD buckets.

HIGH DENSITY **POLYETHYLENE** ELEVATOR BUCKETS



STYLE CC-XD "SUPER CAPACITY" BUCKETS

SIZE Inches (Millimeters) (Nominal)	Dimension-Actual (Inches) Tolerance A, B, C ± 1/8" T ± 1/64"					Drilling-Standard (Inches) ② Tolerance D ± 1/4"				Capacity① Tolerance ± 3%				Spacing on Belt Inches (Minimum)	Weight (Pounds)		
										WL		WL + 10%			Each (Average)	Per Carton (Average)	Number Per Carton
	Length A	Proj. B	Depth C	Thick-ness T	Thick-ness S	From Top D	Center to Center E	No. of Holes	Bolt Dia.	Cu. In.	Cu. Ft.	Cu. In.	Cu. Ft.				
11 X 7 280-180	11-11/16	7-15/16	7-7/8	3/8	1/2	2	3-3/8	4	5/16	253.5	.1467	281.7	.1630	8	3.46	31.0	8
12 X 7 300-180	12-11/16	7-15/16	7-7/8	3/8	1/2	2	3-3/8	4	5/16	277.8	.1607	305.6	.1769	8	3.82	35.0	8
13 x 7 330-180	13-11/16	7-15/16	7-7/8	3/8	1/2	2	3-5/8	4	5/16	302.0	.1747	332.2	.1442	8	4.04	36.0	8
14 X 7 350-180	14-11/16	7-15/16	7-7/8	3/8	1/2	2	3	5	5/16	326.4	.1889	359.0	.2076	8	4.22	38.0	8
15 X 7 370-180	15-11/16	7-15/16	7-7/8	3/8	1/2	2	3-1/4	5	5/16	350.7	.2030	372.6	.2156	8	4.46	40.0	8
16 X 7 400-180	16-11/16	7-15/16	7-7/8	3/8	1/2	2	2-7/8	6	5/16	374.9	.2170	386.2	.2235	8	4.69	42.0	8
12 X 8 300-215	12-11/16	9-1/16	8-7/8	1/2	1/2	2-1/4	3-3/8	4	5/16	362.0	.2095	398.2	.2304	9	4.85	43.0	8
14 X 8 350-215	14-11/16	9-1/16	8-7/8	1/2	1/2	2-1/4	3	5	5/16	429.6	.2486	472.6	.2775	9	5.26	46.0	8
16 X 8 400-215	16-11/16	9-1/16	8-7/8	1/2	1/2	2-1/4	2-7/8	6	5/16	511.1	.2958	562.2	.3254	9	5.75	50.0	8
18 X 8 450-215	18-11/16	9-1/16	8-7/8	1/2	1/2	2-1/4	3-1/8	6	5/16	564.4	.3266	620.8	.3593	9	6.59	57.0	8
20 X 8 500-215	20-11/16	9-1/16	8-7/8	1/2	1/2	2-1/4	3-1/2	6	5/16	644.2	.3728	708.6	.4101	9	7.17	64.0	8
20 X 10 500-260	20-11/16	11-5/16	11-1/8	5/8	5/8	2-3/4	3-1/2	6	3/8	960.5	.5558	1056.6	.6115	11	11.56	77.0	6

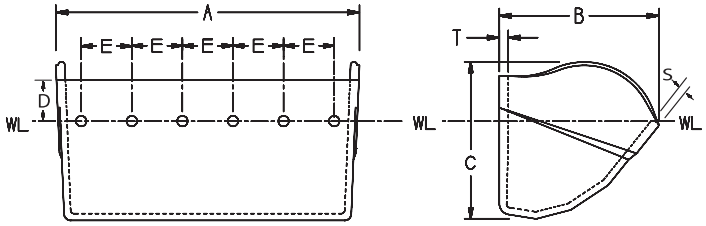
Standard Bolt Holes Drilled on the WL (Water Level) Line ± 1/4"

① Tapco recommends using WL (water level) fill + 10% for usable capacity. A gross capacity figure is no longer provided as it is inappropriate for rating an agricultural elevator bucket.

② Holes Drilled 1/32" Oversize

NOTE ON DESIGN: Over 35 years ago, Tapco Inc. introduced the first "Heavy Duty" nonmetallic elevator bucket to the agricultural industry. This bucket, manufactured in the highly proven "CC" style, soon became the standard of the industry. Now, as design engineers, manufacturers, and elevator operators demand more from their legs in both throughput and extended life, Tapco is proud to introduce its new line of "CC-XD" Xtreme Duty elevator buckets. These buckets, molded in the same "CC" style, industry proven since 1938, offer benefits not found in other brands. This allows the designer, manufacturer or operator to directly interchange existing "CC-HD" buckets with the new "CC-XD" and maintain the same precise operating parameters that are expected from a correctly engineered bucket.

SUPER TOUGH **NYLON** ELEVATOR BUCKETS



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STYLE CC-XD "SUPER CAPACITY" BUCKETS

SIZE Inches (Millimeters) (Nominal)	Dimension-Actual (Inches) Tolerance A, B, C ± 1/8" T ± 1/64"					Drilling-Standard (Inches) ② Tolerance D ± 1/4"				Capacity① Tolerance ± 3%				Spacing on Belt Inches (Minimum)	Weight (Pounds)		
	Length A	Proj. B	Depth C	Thick-ness T	Thick-ness S	From Top D	Center to Center E	No. of Holes	Bolt Dia.	WL		WL + 10%			Each (Average)	Per Carton (Average)	Number Per Carton
										Cu. In.	Cu. Ft.	Cu. In.	Cu. Ft.				
11 X 7 280-180	11-11/16	7-15/16	7-7/8	3/8	1/2	2	3-3/8	4	5/16	264.1	.1528	293.4	.1698	8	3.93	36.0	8
12 X 7 300-180	12-11/16	7-15/16	7-7/8	3/8	1/2	2	3-3/8	4	5/16	288.9	.1672	317.8	.1839	8	4.27	38.0	8
13 x 7 330-180	13-11/16	7-15/16	7-7/8	3/8	1/2	2	3-5/8	4	5/16	314.1	.1818	345.5	.1999	8	4.36	39.0	8
14 X 7 350-180	14-11/16	7-15/16	7-7/8	3/8	1/2	2	3	5	5/16	339.5	.1967	373.4	.2160	8	4.60	41.0	8
15 X 7 370-180	15-11/16	7-15/16	7-7/8	3/8	1/2	2	3-1/4	5	5/16	364.7	.2111	401.2	.2321	8	4.93	44	8
16 X 7 400-180	16-11/16	7-15/16	7-7/8	3/8	1/2	2	2-7/8	6	5/16	389.9	.2256	428.9	.2482	8	5.25	46.0	8
12 X 8 300-215	12-11/16	9-1/16	8-7/8	1/2	1/2	2-1/4	3-3/8	4	5/16	376.5	.2179	414.2	.2397	9	5.38	47.0	8
14 X 8 350-215	14-11/16	9-1/16	8-7/8	1/2	1/2	2-1/4	3	5	5/16	446.8	.2586	491.5	.2844	9	6.00	52.0	8
16 X 8 400-215	16-11/16	9-1/16	8-7/8	1/2	1/2	2-1/4	2-7/8	6	5/16	531.5	.3076	584.7	.3383	9	6.56	56.0	8
18 X 8 450-215	18-11/16	9-1/16	8-7/8	1/2	1/2	2-1/4	3-1/8	6	5/16	587.0	.3397	645.7	.3737	9	7.36	63.0	8
20 X 8 500-215	20-11/16	9-1/16	8-7/8	1/2	1/2	2-1/4	3-1/2	6	5/16	670.0	.3877	737.0	.4265	9	8.04	71.0	8
20 X 10 500-260	20-11/16	11-5/16	11-1/8	5/8	5/8	2-3/4	3-1/2	6	3/8	998.9	.5781	1098.8	.6359	11	13.48	88.0	6

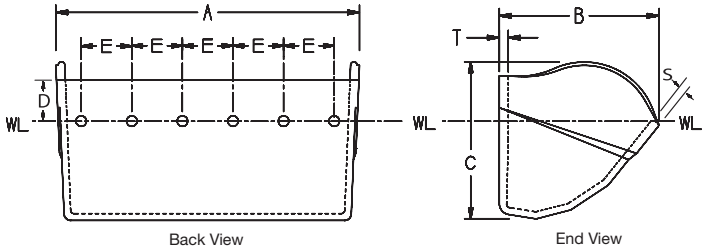
Standard Bolt Holes Drilled on the WL (Water Level) Line ± 1/4"

① Tapco recommends using WL (water level) fill + 10% for usable capacity. A gross capacity figure is no longer provided as it is inappropriate for rating an agricultural elevator bucket.

② Holes Drilled 1/32" Oversize

NOTE ON DESIGN: Over 35 years ago, Tapco Inc. introduced the first "Heavy Duty" nonmetallic elevator bucket to the agricultural industry. This bucket, manufactured in the highly proven "CC" style, soon became the standard of the industry. Now, as design engineers, manufacturers, and elevator operators demand more from their legs in both throughput and extended life, Tapco is proud to introduce its new line of "CC-XD" Xtreme Duty elevator buckets. These buckets, molded in the same "CC" style, industry proven since 1938, offer benefits not found in other brands. This allows the designer, manufacturer or operator to directly interchange existing "CC-HD" buckets with the new "CC-XD" and maintain the same precise operating parameters that are expected from a correctly engineered bucket.

SEVERE DUTY **URETHANE** ELEVATOR BUCKETS



Back View

End View

STYLE CC-XD "SUPER CAPACITY" BUCKETS

SIZE Inches (Millimeters) (Nominal)	Dimension-Actual (Inches) Tolerance A, B, C ± 1/8" T ± 1/64"					Drilling-Standard (Inches) ② Tolerance D ± 1/4"				Capacity① Tolerance ± 3%				Spacing on Belt Inches (Minimum)	Weight (Pounds)		
										WL		WL + 10%			Each (Average)	Per Carton (Average)	Number Per Carton
	Length A	Proj. B	Depth C	Thick-ness T	Thick-ness S	From Top D	Center to Center E	No. of Holes	Bolt Dia.	Cu. In.	Cu. Ft.	Cu. In.	Cu. Ft.				
11 X 7 280-180	11-11/16	7-15/16	7-7/8	3/8	1/2	2	3-3/8	4	5/16	264.1	.1528	293.4	.1698	8	4.63	41.0	8
12 X 7 300-180	12-11/16	7-15/16	7-7/8	3/8	1/2	2	3-3/8	4	5/16	288.9	.1672	317.8	.1839	8	4.95	44.0	8
13 x 7 330-180	13-11/16	7-15/16	7-7/8	3/8	1/2	2	3-5/8	4	5/16	314.1	.1818	345.5	.1999	8	5.24	46.0	8
14 X 7 350-180	14-11/16	7-15/16	7-7/8	3/8	1/2	2	3	5	5/16	339.5	.1967	373.4	.2160	8	5.46	48.0	8
15 X 7 370-180	15-11/16	7-15/16	7-7/8	3/8	1/2	2	3-1/4	5	5/16	364.7	.2111	401.2	.2321	8	5.78	51	8
16 X 7 400-180	16-11/16	7-15/16	7-7/8	3/8	1/2	2	2-7/8	6	5/16	389.9	.2256	428.9	.2482	8	6.09	53.0	8
12 X 8 300-215	12-11/16	9-1/16	8-7/8	1/2	1/2	2-1/4	3-3/8	4	5/16	376.5	.2179	414.2	.2397	9	6.51	56.0	8
14 X 8 350-215	14-11/16	9-1/16	8-7/8	1/2	1/2	2-1/4	3	5	5/16	446.8	.2586	491.5	.2844	9	7.00	60.0	8
16 X 8 400-215	16-11/16	9-1/16	8-7/8	1/2	1/2	2-1/4	2-7/8	6	5/16	531.5	.3076	584.7	.3383	9	7.72	66.0	8
18 X 8 450-215	18-11/16	9-1/16	8-7/8	1/2	1/2	2-1/4	3-1/8	6	5/16	587.0	.3397	645.7	.3737	9	8.41	71.0	8
20 X 8 500-215	20-11/16	9-1/16	8-7/8	1/2	1/2	2-1/4	3-1/2	6	5/16	670.0	.3877	737.0	.4265	9	9.56	83.0	8
20 X 10 500-260	20-11/16	11-5/16	11-1/8	5/8	5/8	2-3/4	3-1/2	6	3/8	998.9	.5781	1098.8	.6359	11	15.35	99.0	6

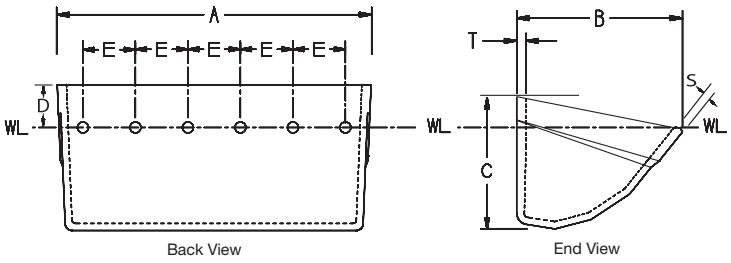
Standard Bolt Holes Drilled on the WL (Water Level) Line ± 1/4"

① Tapco recommends using WL (water level) fill + 10% for usable capacity. A gross capacity figure is no longer provided as it is inappropriate for rating an agricultural elevator bucket.

② Holes Drilled 1/32" Oversize

NOTE ON DESIGN: Over 35 years ago, Tapco Inc. introduced the first "Heavy Duty" nonmetallic elevator bucket to the agricultural industry. This bucket, manufactured in the highly proven "CC" style, soon became the standard of the industry. Now, as design engineers, manufacturers, and elevator operators demand more from their legs in both throughput and extended life, Tapco is proud to introduce its new line of "CC-XD" Xtreme Duty elevator buckets. These buckets, molded in the same "CC" style, industry proven since 1938, offer benefits not found in other brands. This allows the designer, manufacturer or operator to directly interchange existing "CC-HD" buckets with the new "CC-XD" and maintain the same precise operating parameters that are expected from a correctly engineered bucket.

"LOW PROFILE" CC-XD ELEVATOR BUCKETS



All Other Dimensions Typical of Tapco Style CC-XD Buckets

"LOW PROFILE" STYLE CC-XD *"SUPER CAPACITY"* BUCKETS

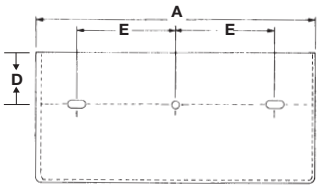
SIZE (Nominal) Metric	SIZE (Nominal) Inches	Spacing on Belt (Min.) Inches	Depth C ± 1/8"	From Top D	Polyethylene Capacity WL① Tolerance ± 3%		Weight Pounds (Average)	Urethane Capacity WL① Tolerance ± 3%		Weight Pounds (Average)	Nylon Capacity WL① Tolerance ± 3%		Weight Pounds (Average)	Number per Cartom
					Cu. In.	Cu. Ft.		Cu. In.	Cu. Ft.		Cu. In.	Cu. Ft.		
280-180	11 X 7	6	5-3/4	1	253.5	0.1467	2.85	264.1	0.1528	4.22	264.1	0.1528	3.17	9
300-180	12 X 7	6	5-3/4	1	277.8	0.1607	3.08	288.9	0.1672	4.56	288.9	0.1672	3.42	9
330-180	13 X 7	6	5-3/4	1	302.0	0.1747	3.21	314.1	0.1818	4.76	314.1	0.1818	3.57	9
350-180	14 X 7	6	5-3/4	1	326.4	0.1889	3.43	339.5	0.1967	5.08	339.5	0.1967	3.81	9
370-180	15 X 7	6	5-3/4	1	350.7	0.2030	3.64	364.7	0.2110	5.39	364.7	0.2110	4.01	9
400-180	16 X 7	6	5-3/4	1	374.9	0.2170	3.85	389.9	0.2256	5.70	389.9	0.2256	4.28	9
300-215	12 X 8	7	6-3/4	1	362.0	0.2095	3.98	362.0	0.2179	5.90	362.0	0.2179	4.42	9
350-215	14 X 8	7	6-3/4	1	429.6	0.2486	4.49	429.6	0.2586	6.65	429.6	0.2586	4.99	9
400-215	16 X 8	7	6-3/4	1	511.1	0.2958	4.82	511.1	0.3076	7.14	511.1	0.3076	5.36	9
450-215	18 X 8	7	6-3/4	1	564.4	0.3266	5.53	564.4	0.3397	8.19	564.4	0.3397	6.14	9
500-215	20 X 8	7	6-3/4	1	644.2	0.3728	6.05	644.2	0.3877	8.96	644.2	0.3877	6.72	9
500-260	20 X 10	9	8-3/4	1-1/2	960.5	0.5558	10.2	998.9	0.5781	15.11	998.9	0.5781	11.33	9

Standard Bolt Holes Drilled on the WL (Water Level) Line ± 1/4"

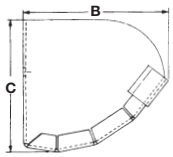
① Tapco recommends using WL (water level) fill + 5% for usable capacity. A gross capacity figure is no longer provided as it is inappropriate for rating an agricultural elevator bucket.

NOTE ON DESIGN: Over 35 years ago, Tapco Inc. introduced the first "Heavy Duty" nonmetallic elevator bucket to the agricultural industry. This bucket, manufactured in the highly proven "CC" style, soon became the standard of the industry. Now, as design engineers, manufacturers, and elevator operators demand more from their legs in both throughput and extended life, Tapco introduces its "CC-XD" Xtreme Duty elevator buckets. These buckets, molded in the same "CC" style, industry proven since 1938, offer benefits not found in other brands. This allows the designer, manufacturer or operator to directly interchange existing "CC-HD" buckets with the new "CC-XD" and maintain the same precise operating parameters that are expected from a correctly engineered bucket.

FABRICATED STEEL ELEVATOR BUCKETS



Back View



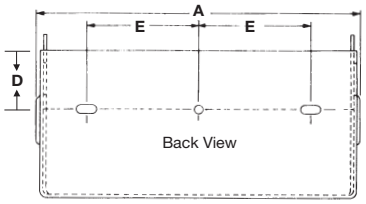
End View

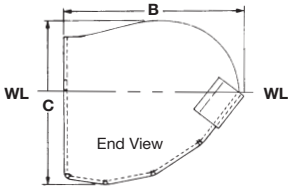
STYLE CC-B BUCKETS

SIZE (Nominal) Millimeter	SIZE (Nominal) Inches	Dimensions-Actual (Inches) Tolerance A, B & C ±1/4"				Drilling-Standard (Inches) Holes Punched 1/16" Oversize				Weight (Average) Pounds	Bucket Capacity Gross ① 100%	Number Per Carton
		Length A	Proj. B	Depth C	Gauge	Distance Down D	Center to Center E	Number Of Holes	Bolt Diameter			
120-80	4 X 3	4	3-3/16	2-11/16	16	7/8	2-1/2	2	1/4	.62	22	24
120-120	4 X 4	4	4-3/16	4	18	1-3/4	2-1/2	2	1/4	.90	39	24
140-120	5 X 4	5	4-3/16	4	18	1-3/4	3-3/16	2	1/4	.95	52	24
160-120	6 X 4	6	4-3/16	4	18	1-3/4	4-3/8	2	1/4	1.10	62	24
180-120	7 X 4	7	4-3/16	4	18	1-3/4	2-11/16	3	1/4	1.25	70	24
200-120	8 X 4	8	4-3/16	4	18	1-3/4	3-1/16	3	1/4	1.50	79	24
230-120	9 x 4	9	4-3/16	4	18	1-3/4	3-5/8	3	1/4	1.70	90	24
160-140	6 X 5	6	5-1/4	5	16	1-7/8	4-3/8	2	1/4	1.60	94	24
180-140	7 X 5	7	5-1/4	5	16	1-7/8	2-11/16	3	1/4	1.75	110	24
200-140	8 X 5	8	5-1/4	5	16	1-7/8	3-1/16	3	1/4	2.00	125	24
230-140	9 X 5	9	5-1/4	5	16	1-7/8	3-5/8	3	1/4	2.50	140	24
260-140	10X 5	10	5-1/4	5	16	1-7/8	4-1/8	3	1/4	2.70	155	24
280-140	11X 5	11	5-1/4	5	16	1-7/8	3	4	1/4	2.90	170	24
300-140	12X 5	12	5-1/4	5	16	1-7/8	3-3/8	4	1/4	3.00	185	24
180-160	7 x 6	7	6-5/16	6	16	2-3/16	2-11/16	3	1/4	2.85	155	24
200-160	8 X 6	8	6-5/16	6	16	2-3/16	3-1/16	3	1/4	3.10	178	24
230-160	9 X 6	9	6-5/16	6	16	2-3/16	3-5/8	3	1/4	3.40	202	24
260-160	10X 6	10	6-5/16	6	16	2-3/16	4-1/8	3	1/4	3.50	222	24
280-160	11X 6	11	6-5/16	6	16	2-3/16	3	4	1/4	3.75	244	24
300-160	12X 6	12	6-5/16	6	16	2-3/16	3-3/8	4	1/4	4.00	267	24
330-160	13X 6	13	6-5/16	6	16	2-3/16	3-5/8	4	1/4	4.50	289	12
350-160	14X 6	14	6-5/16	6	16	2-3/16	3	5	1/4	4.75	312	12
215-180	8 X 7	8	7-3/16	7	14	3-3/16	3-1/16	3	5/16	4.60	242	8
230-180	9 X 7	9	7-3/16	7	14	3-3/16	3-5/8	3	5/16	4.80	276	8
260-180	10X 7	10	7-3/16	7	14	3-3/16	4-1/8	3	5/16	5.00	302	8
280-180	11X 7	11	7-3/16	7	14	3-3/16	3	4	5/16	5.25	333	8
300-180	12X 7	12	7-3/16	7	14	3-3/16	3-3/8	4	5/16	6.25	362	8
330-180	13X 7	13	7-3/16	7	14	3-3/16	3-5/8	4	5/16	6.75	393	8
350-180	14X 7	14	7-3/16	7	14	3-3/16	3	5	5/16	7.00	424	8
370-180	15X 7	15	7-3/16	7	14	3-3/16	3-1/4	5	5/16	7.50	454	8
400-180	**16 X 7	16	7-3/16	7	14	3-3/16	2-7/8	6	5/16	8.00	486	8
450-180	**18 X 7	18	7-3/16	7	14	3-3/16	3-1/8	6	5/16	8.50	544	8
500-180	**20 X 7	20	7-3/16	7	14	3-3/16	3-1/2	6	5/16	9.25	605	8
560-180	**22 X 7	22	7-3/16	7	14	3-3/16	4	6	5/16	10.00	664	8
600-180	**24 X 7	24	7-3/16	7	14	3-3/16	3-1/2	7	5/16	10.75	725	8
230-215	9 x 8	9	8-1/8	8	14	3-1/2	3-5/8	3	5/16	5.60	349	8
260-215	10 X 8	10	8-1/8	8	14	3-1/2	4-1/8	3	5/16	6.10	388	8
280-215	11 X 8	11	8-1/8	8	14	3-1/2	3	4	5/16	6.75	427	8
300-215	12 X 8	12	8-1/8	8	14	3-1/2	3-3/8	4	5/16	7.50	466	8
330-215	13 X 8	13	8-1/8	8	14	3-1/2	3-5/8	4	5/16	7.75	505	8
350-215	14 X 8	14	8-1/8	8	14	3-1/2	3	5	5/16	8.25	543	8
370-215	15 X 8	15	8-1/8	8	14	3-1/2	3-1/4	5	5/16	8.50	582	8
400-215	**16 X 8	16	8-1/8	8	14	3-1/2	2-7/8	6	5/16	9.00	621	8
430-215	**17 X 8	17	8-1/8	8	14	3-1/2	3	6	5/16	9.50	660	8
450-215	**18 X 8	18	8-1/8	8	14	3-1/2	3-1/8	6	5/16	9.75	698	8
500-215	**20 X 8	20	8-1/8	8	14	3-1/2	3-1/2	6	5/16	10.75	776	8
560-215	**22 X 8	22	8-1/8	8	14	3-1/2	4	6	5/16	11.50	854	8
600-215	**24 X 8	24	8-1/8	8	14	3-1/2	3-1/2	7	5/16	12.00	931	8

①Tapco recommends using gross x .75, for usable capacity. ** Supplied with lip brace, lip brace is optional on other sizes at slightly higher cost.

STEEL "DIGGER" ELEVATOR BUCKETS





STYLE CC BUCKETS

Size (Nominal) Millimeter	Size (Nominal) Inches	Dimensions-Actual (Inches) Tolerance A,B & C ±1/4"					Drilling-Patterns (Inches) Holes drilled 1/16" oversize					Capacity① Tolerance ± 3%				Carbon Steel Weight	Stainless Steel Weight
												WL		WL + 10%			
		Length A	Proj. B	Depth C	Gauge Carbon	Gauge Stainless	Hole Shape	Distance Down D	Center to Center E	Number of Holes	Bolt Diam.	Cu. In.	Cu. Ft.	Cu. In.	Cu. Ft.		
80-60	3 X 2	3-1/2	2-5/8	2-1/16	12	14	Round	7/8	1-3/4	2	1/4	6.0	.0035	6.6	.0038	1.55	1.40
120-80	4 X 3	4-1/2	3-5/8	3-1/16	12	14	Slotted	7/8	2-1/4, 2-1/2	2	1/4	16.8	.0097	18.5	.0107	2.16	1.60
140-120	5 X 4	5-1/2	4-3/4	4-1/16	12	14	Round	1-1/4	3-3/16	2	1/4	35.8	.0207	39.4	.0228	2.47	2.00
160-120	6 X 4	6-1/2	4-3/4	4-1/16	12	14	Slotted	1-1/4	4-3/8, 4-1/2	2	1/4	43.3	.0251	47.6	.0276	3.33	2.10
180-120	7 X 4	7-1/2	4-3/4	4-1/16	12	14	Slotted	1-1/4	2-11/16, 2-5/8	3	1/4	49.7	.0288	54.7	.0316	3.12	2.16
160-140	6 X 5	6-5/8	5-5/8	5-1/16	10	14	Slotted	1-1/2	4-3/8, 4-1/2	2	1/4	68.3	.0395	75.1	.0435	4.73	2.96
180-140	7 X 5	7-5/8	5-5/8	5-1/16	10	14	Slotted	1-1/2	2-5/8, 2-11/16	3	1/4	75.8	.0439	83.4	.0483	5.07	3.03
200-140	8 X 5	8-5/8	5-5/8	5-1/16	10	14	Round	1-1/2	3-1/16	3	1/4	85.4	.0494	93.9	.0544	5.52	3.32
230-140	9 X 5	9-5/8	5-5/8	5-1/16	10	14	Slotted	1-1/2	3-1/4, 3-1/2, 3-5/8	3 *	1/4	97.9	.0567	107.7	.0623	6.00	3.58
260-140	10 X 5	10-5/8	5-5/8	5-1/16	10	14	Slotted	1-1/2	4, 4-1/8	3	1/4	113.5	.0657	124.9	.0723	6.73	3.78
280-140	11 X 5	11-5/8	5-5/8	5-1/16	10	14	Slotted	1-1/2	3, 3-1/8	4	1/4	127.2	.0736	139.9	.0766	7.26	4.10
300-140	12 X 5	12-5/8	5-5/8	5-1/16	10	14	Round	1-1/2	3-3/8	4	1/4	143.1	.0828	157.4	.0911	8.37	4.34
200-160	8 X 6	8-5/8	6-7/8	6-1/16	10	14	Slotted	1-3/4	2-11/16, 3-1/16	3	1/4	124.5	.0720	137.0	.0793	7.69	4.50
230-160	9 X 6	9-5/8	6-7/8	6-1/16	10	14	Slotted	1-3/4	3-1/2, 3-5/8	3	1/4	135.9	.0786	149.5	.0865	8.00	4.60
260-160	10 X 6	10-5/8	6-7/8	6-1/16	10	14	Slotted	1-3/4	4, 4-1/8	3	1/4	150.4	.0870	165.4	.0957	9.78	4.83
280-160	11 X 6	11-5/8	6-7/8	6-1/16	10	14	Slotted	1-3/4	2-7/8, 3	4	1/4	173.4	.1003	190.7	.1104	8.71	5.00
300-160	12 X 6	12-5/8	6-7/8	6-1/16	10	14	Slotted	1-3/4	3-1/4, 3-3/8	4	1/4	185.4	.1073	203.9	.1180	9.08	5.52
330-160	13 X 6	13-5/8	6-7/8	6-1/16	10	14	Round	1-3/4	3-5/8	4	1/4	203.8	.1179	224.2	.1297	10.13	5.60
350-160	14 X 6	14-1/4	6-7/8	5-7/8	10	14	Round	1-3/4	3	5	1/4	198.3	.1148	218.1	.1262	10.53	7.60
260-180	10 X 7	10-5/8	8	7-1/16	10	14	Slotted	2	4, 4-1/8	3	5/16	219.4	.1270	241.3	.1397	10.31	5.70
280-180	11 X 7	11-5/8	8	7-1/16	10	14	Round	2	3	4	5/16	234.2	.1355	257.6	.1491	10.41	6.07
300-180	12 X 7	12-5/8	8	7-1/16	10	14	Slotted	2	3-1/4, 3-3/8	4	5/16	248.2	.1436	273.0	.1580	11.82	6.54
330-180	13 X 7	13-5/8	8	7-1/16	10	14	Round	2	3-5/8	4	5/16	284.4	.1646	312.8	.1810	12.16	6.80
350-180	14 X 7	14-5/8	8	7-1/16	10	14	Round	2	3	5	5/16	301.9	.1747	332.1	.1922	12.38	7.20
370-180	15 X 7	15-5/8	8	7-1/16	10	14	Round	2	3-1/4	5	5/16	331.4	.1918	364.5	.2110	15.13	8.50
400-180	16 X 7	16-5/8	8	7-1/16	10	14	Slotted	2	2-5/8, 2-7/8	6	5/16	346.5	.2005	381.2	.2206	16.14	9.10
450-180	18 X 7	18-5/8	8	7-1/16	10	14	Round	2	3-1/8	6	5/16	396.7	.2296	436.4	.2525	18.25	10.30
500-180	20 X 7	20-5/8	8	7-1/16	10	14	Round	2	3-1/2	6	5/16	433.3	.2508	476.6	.2758	20.27	11.40

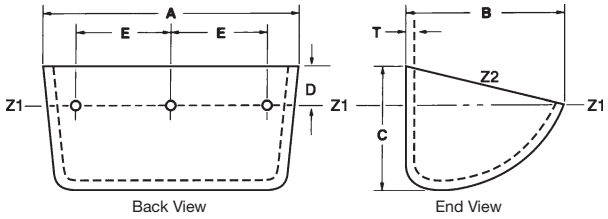
* Two extra holes on 3-1/2 centers are provided to accommodate Universal Industries standard four hole pattern

STYLE CC "SUPER CAPACITY" BUCKETS

260-215	10 X 8	10-3/4	9	8-3/16	10	12	Round	2-1/4	4-1/8	3	5/16	297.0	.1719	326.7	.1891	12.30	9.70
280-215	11 X 8	11-3/4	9	8-3/16	10	12	Round	2-1/4	3	4	5/16	325.9	.1886	358.5	.2075	13.52	10.60
300-215	12 X 8	12-3/4	9	8-3//16	10	12	Slotted	2-1/4	3-1/4, 3-3/8	4	5/16	362.0	.2095	398.2	.2304	14.70	11.60
330-215	13 X 8	13-3/4	9	8-3/16	10	12	Round	2-1/4	3-5/8	4	5/16	390.2	.2258	429.2	.2484	14.87	12.60
350-215	14 X 8	14-3/4	9	8-3/16	10	12	Round	2-1/4	3	5	5/16	429.6	.2486	472.6	.2735	15.05	13.00
370-215	15 X 8	15-3/4	9	8-3/16	10	12	Round	2-1/4	3-1/4	5	5/16	458.9	.2656	504.8	.2921	15.23	14.00
400-215	16 X 8	16-3/4	9	8-3/16	10	12	Slotted	2-1/4	2-5/8, 2-7/8	6	5/16	511.1	.2958	562.2	.3254	15.86	14.30
450-215	18 X 8	18-3/4	9	8-13/16	10	12	Round	2-1/4	3-1/8	6	5/16	564.4	.3266	620.8	.3593	18.25	16.40
500-215	20 X 8	20-7/8	9-1/4	8-15/16	10	12	Round	2-1/4	3-1/2	6	5/16	644.2	.3728	708.6	.4101	22.77	16.80
400-230	16 X 9	16-7/8	10-1/4	10-3/16	10	12	Round	2-1/2	2-7/8	6	5/16	614.8	.3558	676.3	.3914	24.80	19.50
500-230	20 X 9	20-7/8	10-1/4	10-3/16	10	12	Round	2-1/2	3-1/2	6	5/16	770.5	.4459	847.6	.4905	31.00	24.31
500-260	20X10	21	11-1/2	11-3/8	10	12	Round	2-3/4	3-1/2	6	3/8	960.5	.5558	1056.6	.6115	40.64	31.86

① Tapco recommends using WL (water level) + 10% for usable capacity. A gross capacity figure is no longer provided as it is inappropriate for rating an agricultural elevator bucket. *All sizes of Digger buckets can be manufactured in a low profile configuration for these applictions. Digger buckets are manufactured to be greater in projection and length than non-metellic buckets. Exact dimensions will vary by gauge of material used.*

HIGH DENSITY **POLYETHYLENE** ELEVATOR BUCKETS



STYLE SUPER EUROBUCKET

SIZE (Millimeters) Inches Nominal	Dimension-Actual (mm) Inches Tolerance A, B, C ± (3.0mm) G, T ± (0.4mm) Tolerance A, B, C ± 1/8" G, T ± 1/64"				Hole Drilling-Standard (mm) Inches					Capacity (Liters) Cubic Inches Tolerance ± 3%		Spacing (Buckets / Meter ▪) Inches Between Buckets	Weight (Kg) Pounds		
	Length A	Proj. B	Depth C	Thickness T	Center to Center E	No. of Holes	Bolt Dia.	Hole Dia.	Distance Down D	Z2	Z1		Each (Average)	Per Carton (Average)	Number Per Carton
(100-90) **4 X 3-1/2**	(110) 4-5/16	(96) 3-3/4	(72) 2-7/8	(5.1) 13/64	(50) 2	2	(8) 5/16	(9.0) 11/32	(23) 7/8	(.36) 22.0	(.26) 15.9	(14.0) 3	(0.12) 0.26	(2.7) 5.9	20
(130-120) **5 X 4-1/2**	(141) 5-9/16	(127) 5	(95) 3-3/4	(5.5) 7/32	(70) 2-3/4	2	(8) 5/16	(9.0) 11/32	(28) 1-1/8	(.85) 51.9	(.63) 38.4	(10.5) 4	(0.22) 0.49	(5.0) 11.0	20
(140-120) **5-1/2 X 5**	(151) 5-15/16	(127) 5	(95) 3-3/4	(5.5) 7/32	(70) 2-3/4	2	(8) 5/16	(9.0) 11/32	(28) 1-1/8	(.92) 56.1	(.68) 41.5	(10.5) 4	(0.24) 0.53	(5.5) 12.1	20
(180-140) **7 X 5-1/2**	(193) 7-9/16	(157) 6-3/16	(118) 4-5/8	(6.5) 1/4	(100) 3-15/16	2	(8) 5/16	(9.0) 11/32	(33) 1-5/16	(1.83) 111.7	(1.37) 83.6	(8.6) 5	(0.44) 0.97	(10.0) 22.0	20
(200-140) **8 X 5-1/2**	(213) 8-3/8	(157) 6-3/16	(118) 4-5/8	(6.5) 1/4	(100) 3-15/16	2	(8) 5/16	(9.0) 11/32	(33) 1-5/16	(2.04) 124.5	(1.53) 93.4	(8.6) 5	(0.48) 1.06	(10.8) 23.8	20
(230-160) **9 X 6-1/2**	(244) 9-5/8	(168) 6-5/8	(126) 4-15/16	(6.9) 1/4	(120) 4-3/4	2	(10) *3/8	(11.0) 13/32	(35) 1-3/8	(2.71) 165.4	(2.03) 123.9	(8.0) 5	(0.62) 1.37	(12.7) 27.9	20
(280-165) **11 X 6-1/2**	(294) 11-9/16	(172) 6-3/4	(135) 5-5/16	(6.9) 1/4	(80) 3-3/16	3	(10) *3/8	(11.0) 13/32	(40) 1-5/8	(3.71) 226.4	(2.84) 173.3	(7.4) 6	(0.77) 1.69	(16.8) 37.0	20
(300-180) **12 X 7**	(315) 12-3/8	(192) 7-9/16	(144) 5-5/8	(7.7) 5/16	(100) 3-15/16	3	(10) *3/8	(11.0) 13/32	(40) 1-5/8	(4.65) 283.7	(3.49) 213.0	(7.1) 6	(1.01) 2.23	(21.4) 47.1	20
(330-215) **13 X 8-1/2**	(345) 13-9/16	(233) 9-3/16	(175) 6-7/8	(8.9) 11/32	(120) 4-3/4	3	(10) 3/8	(11.0) 13/32	(54) 2-1/8	(7.49) 457.0	(5.62) 342.9	(5.7) 7	(1.61) 3.55	(25.0) 55.0	15
(370-215) **14-1/2X8-1/2**	(385) 15-3/16	(233) 9-3/16	(175) 6-7/8	(8.9) 11/32	(90) 3-9/16	4	(10) 3/8	(11.0) 13/32	(54) 2-1/8	(8.45) 515.6	(6.35) 387.5	(5.7) 7	(1.73) 3.81	(27.3) 60.0	15

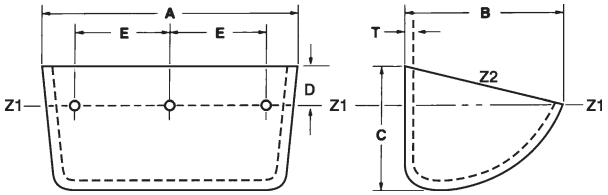
Standard Bolt Holes Drilled on the Z1 (Water Level) Line ± (6.0 mm) ± 1/4"

Super EuroBuckets are designed to replace Super Starco, Jet and other European manufactured elevator buckets. For sizes not shown, we suggest using one of the CC-HD low profile buckets to meet your needs.

* **IMPORTANT:** Buckets can be drilled for 8 mm or 10 mm bolts, please specify. 10 mm is standard.

▪ Spacing at which the maximum number of buckets per meter will physically fit the belt. This does not mean the buckets will fit and discharge perfectly at this spacing under all circumstances.

SUPER TOUGH **NYLON** ELEVATOR BUCKETS



STYLE SUPER EUROBUCKET

SIZE (Millimeters) Inches Nominal	Dimension-Actual (mm) Inches Tolerance A, B, C ± (3.0mm) G, T ± (0.4mm) Tolerance A, B, C ± 1/8" G, T ± 1/64"				Hole Drilling-Standard (mm) Inches					Capacity (Liters) Cubic Inches Tolerance ± 3%		Spacing (Buckets / Meter ▪) Inches Between Buckets	Weight (Kg) Pounds		
	Length A	Proj. B	Depth C	Thickness T	Center to Center E	No. of Holes	Bolt Dia.	Hole Dia.	Distance Down D	Z2	Z1		Each (Average)	Per Carton (Average)	Number Per Carton
(100-90) **4 X 3-1/2**	(111) 4-3/8	(96) 3-3/4	(72) 2-7/8	(5.5) 7/32	(50) 2	2	(8) 5/16	(9.0) 11/32	(23) 7/8	(.38) 22.9	(.27) 16.5	(14.0) 3	(0.13) 0.29	(3.0) 6.6	20
(130-120) **5 X 4-1/2**	(143) 5-5/8	(127) 5	(95) 3-3/4	(5.5) 7/32	(70) 2-3/4	2	(8) 5/16	(9.0) 11/32	(28) 1-1/8	(.89) 54	(.65) 39.9	(10.5) 4	(0.25) 0.55	(5.5) 12.1	20
(140-120) **5-1/2 X 5**	(152) 6	(127) 5	(95) 3-3/4	(6.5) 1/4	(70) 2-3/4	2	(8) 5/16	(9.0) 11/32	(28) 1-1/8	(.96) 58.3	(.71) 43.2	(10.5) 4	(0.27) 0.59	(5.8) 12.7	20
(180-140) **7 X 5-1/2**	(194) 7-5/8	(157) 6-3/16	(118) 4-5/8	(6.5) 5/16	(100) 3-15/16	2	(8) 5/16	(9.0) 11/32	(33) 1-5/16	(1.90) 116.2	(1.42) 86.9	(8.6) 5	(0.50) 1.10	(10.9) 24.1	20
(200-140) **8 X 5-1/2**	(214) 8-7/16	(157) 6-3/16	(118) 4-5/8	(7.7) 5/16	(100) 3-15/16	2	(8) 5/16	(9.0) 11/32	(33) 1-5/16	(2.12) 1295	(1.59) 97.1	(8.6) 5	(0.51) 1.12	(11.4) 25.2	20
(230-160) **9 X 6-1/2**	(246) 9-11/16	(168) 6-5/8	(126) 4-15/16	(7.7) 5/16	(120) 4-3/4	2	(10) *3/8	(11.0) 13/32	(35) 1-3/8	(2.82) 172.0	(2.11) 128.9	(8.0) 5	(0.71) 1.56	(14.6) 32.3	20
(280-165) **11 X 6-1/2**	(295) 11-5/8	(172) 6-3/4	(135) 5-5/16	(7.7) 5/16	(80) 3-3/16	3	(10) *3/8	(11.0) 13/32	(40) 1-5/8	(3.86) 235.5	(2.95) 180.2	(7.4) 6	(0.86) 1.89	(18.4) 40.5	20
(300-180) **12 X 7**	(316) 12-7/16	(192) 7-9/16	(144) 5-5/8	(7.7) 5/16	(100) 3-15/16	3	(10) *3/8	(11.0) 13/32	(40) 1-5/8	(4.83) 295.0	(3.63) 221.5	(7.1) 6	(1.13) 2.49	(27.6) 52.1	20
(330-215) **13 X 8-1/2**	(346) 13-5/8	(233) 9-3/16	(175) 6-7/8	(9.5) 3/8	(120) 4-3/4	3	(10) 3/8	(11.0) 13/32	(54) 2-1/8	(7.79) 475.3	(5.84) 356.6	(5.7) 7	(1.79) 3.95	(28.9) 63.3	15
(370-215) **14-1/2X8-1/2**	(387) 15-1/4	(233) 9-3/16	(175) 6-7/8	(9.5) 3/8	(90) 3-9/16	4	(10) 3/8	(11.0) 13/32	(54) 2-1/8	(8.79) 536.2	(6.60) 403.0	(5.7) 7	(1.96) 4.32	(31.8) 70.0	15

Standard Bolt Holes Drilled on the Z1 (Water Level) Line ± (6.0 mm) ± 1/4"

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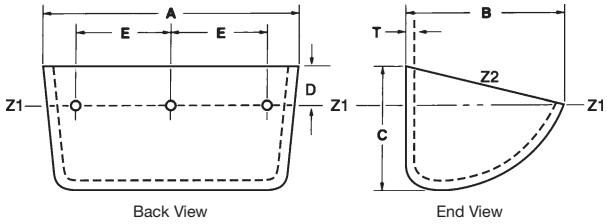
***IMPORTANT:** Buckets can be drilled for 8 mm or 10 mm bolts, please specify. 10 mm is standard.

▪ Spacing at which the maximum number of buckets per meter will physically fit the belt. This does not mean the buckets will fit and discharge perfectly at this spacing under all circumstances. Contact your bucket elevator manufacturer for spacing recommendations.

SEVERE DUTY **URETHANE** ELEVATOR BUCKETS



STYLE SUPER EUROBUCKET

SIZE (Millimeters) Inches Nominal	Dimension-Actual (mm) Inches Tolerance A, B, C ± (3.0mm) G, T ± (0.4mm) Tolerance A, B, C ± 1/8" G, T ± 1/64"				Hole Drilling-Standard (mm) Inches					Capacity (Liters) Cubic Inches Tolerance ± 3%		Spacing (Buckets / Meter ▪) Inches Between Buckets	Weight (Kg) Pounds		
	Length A	Proj. B	Depth C	Thickness T	Center to Center E	No. of Holes	Bolt Dia.	Hole Dia.	Distance Down D	Z2	Z1		Each (Average)	Per Carton (Average)	Number Per Carton
(100-90) **4 X 3-1/2**	(111) 4-3/8	(96) 3-3/4	(72) 2-7/8	(5.5) 7/32	(50) 2	2	(8) 5/16	(9.0) 11/32	(23) 7/8	(.38) 22.9	(.27) 16.5	(14.0) 3	(0.15) 0.34	(3.5) 7.7	20
(130-120) **5 X 4-1/2**	(144) 5-11/16	(127) 5	(95) 3-3/4	(5.5) 7/32	(70) 2-3/4	2	(8) 5/16	(9.0) 11/32	(28) 1-1/8	(.89) 54	(.65) 39.9	(10.5) 4	(0.29) 0.65	(6.4) 14.1	20
(140-120) **5-1/2 X 5**	(154) 6-1/16	(127) 5	(95) 3-3/4	(6.5) 1/4	(70) 2-3/4	2	(8) 5/16	(9.0) 11/32	(28) 1-1/8	(.96) 58.3	(.71) 43.2	(10.5) 4	(0.31) 0.69	(6.9) 15.1	20
(180-140) **7 X 5-1/2**	(195) 7-11/16	(157) 6-3/16	(118) 4-5/8	(6.5) 5/16	(100) 3-15/16	2	(8) 5/16	(9.0) 11/32	(33) 1-5/16	(1.90) 116.2	(1.42) 86.9	(8.6) 5	(0.57) 1.27	(12.6) 27.9	20
(200-140) **8 X 5-1/2**	(216) 8-1/2	(157) 6-3/16	(118) 4-5/8	(7.7) 5/16	(100) 3-15/16	2	(8) 5/16	(9.0) 11/32	(33) 1-5/16	(2.12) 1295	(1.59) 97.1	(8.6) 5	(0.64) 1.40	(11.5) 25.3	20
(230-160) **9 X 6-1/2**	(248) 9-3/4	(168) 6-5/8	(126) 4-15/16	(7.7) 5/16	(120) 4-3/4	2	(10) *3/8	(11.0) 13/32	(35) 1-3/8	(2.82) 172.0	(2.11) 128.9	(8.0) 5	(0.83) 1.83	(17.6) 38.9	20
(280-165) **11 X 6-1/2**	(298) 11-3/4	(172) 6-3/4	(135) 5-5/16	(7.7) 5/16	(80) 3-3/16	3	(10) *3/8	(11.0) 13/32	(40) 1-5/8	(3.86) 235.5	(2.95) 180.2	(7.4) 6	(0.99) 2.18	(21.3) 46.9	20
(300-180) **12 X 7**	(319) 12-9/16	(192) 7-9/16	(144) 5-5/8	(7.7) 5/16	(100) 3-15/16	3	(10) *3/8	(11.0) 13/32	(40) 1-5/8	(4.83) 295.0	(3.63) 221.5	(7.1) 6	(1.33) 2.93	(28.3) 62.3	20
(330-215) **13 X 8-1/2**	(349) 13-5/8	(233) 9-3/16	(175) 6-7/8	(9.5) 3/8	(120) 4-3/4	3	(10) 3/8	(11.0) 13/32	(54) 2-1/8	(7.79) 475.3	(5.84) 356.6	(5.7) 7	(2.09) 4.61	(32.9) 72.6	15
(370-215) **14-1/2X8-1/2**	(390) 15-3/8	(233) 9-3/16	(175) 6-7/8	(9.5) 3/8	(90) 3-9/16	4	(10) 3/8	(11.0) 13/32	(54) 2-1/8	(8.79) 536.2	(6.60) 403.0	(5.7) 7	(2.46) 5.42	(38.9) 85.7	15

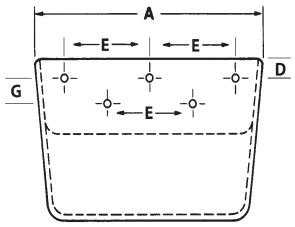
Standard Bolt Holes Drilled on the Z1 (Water Level) Line ± (6.0 mm) ± 1/4"

Super EuroBuckets are designed to replace Super Starco, Jet and other European manufactured elevator buckets. For sizes not shown, we suggest using one of the CC-HD low profile buckets to meet your needs.

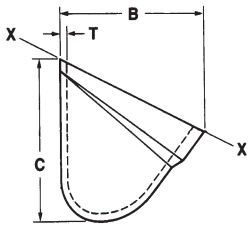
***IMPORTANT:** Buckets can be drilled for 8 mm or 10 mm bolts, please specify. 10 mm is standard.

▪ Spacing at which the maximum number of buckets per meter will physically fit the belt. This does not mean the buckets will fit and discharge perfectly at this spacing under all circumstances. Contact your bucket elevator manufacturer for spacing recommendations.

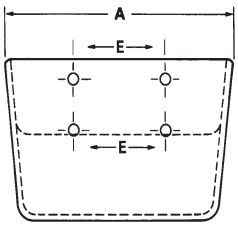
HIGH DENSITY **POLYETHYLENE** ELEVATOR BUCKETS



Back View
Belt Pattern



End View



Back View
Chain Pattern

STYLE AA BUCKETS

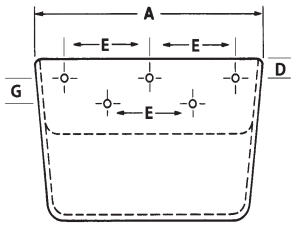
SIZE (Nominal) Millimeter	SIZE (Nominal) Inches	Dimensions-Actual (Inches) Tolerance A, B & C ±1/4" T ±1/32"				Hole Drilling-Standard (Inches) Holes Drilled 1/32" Oversize					Capacity① Tolerance ± 3%				Approx. Weight (Pounds)
											Gross X-X		Usable		
		Length A	Proj. B	Depth C	Thick-ness T	Center to Center E	Number Of Holes	Bolt Diameter	Distance Down D	Between Rows G	Cu. In.	Cu. Ft.	Cu. In.	Cu. Ft.	
120-70	4 X 2-3/4	4-1/4	3	3-1/8	3/16	2-5/16	2	1/4	3/4	--	14.7	.008	11.0	.006	0.22
140- 90	5 X 3-1/2	5-3/8	3-3/4	3-3/4	1/4	3-3/16	2	1/4	1	--	29.0	.017	21.8	.013	0.37
160-120	6 X 4	6-3/8	4-1/4	4-1/2	1/4	4-3/8	2	1/4	1	--	48.6	.028	36.4	.021	0.50
180-120	7 X 4-1/2	7-3/8	4-3/4	5	1/4	2-1/2	3	1/4	1	--	74.8	.043	56.1	.032	0.70
200-140	8 X 5	8-3/8	5-1/4	5-1/2	1/4	3	5	*1/4	7/8	1	101.0	.058	75.8	.044	1.00
260-160	10 X 6	10-1/2	6-1/2	6-5/8	1/4	3-1/2	5	*1/4	7/8	1	191.0	.111	143.2	.083	1.54
300-180	12 X 7	12-1/2	7-5/8	7-3/4	3/8	4-1/2	5	▲5/16	7/8	1	307.5	.178	230.6	.133	2.36
350-180	14 X 7	14-1/2	7-5/8	7-3/4	3/8	4	7	5/16	7/8	1	370.8	.215	278.1	.161	2.70
350-215	14 X 8	14-1/2	8-7/8	8-3/4	1/2	4	7	5/16	7/8	1	475.8	.275	356.8	.206	3.76
400-215	16 X 8	16-1/2	8-7/8	8-3/4	1/2	4-1/2	7	▲5/16	7/8	1	554.5	.321	415.9	.241	4.30
450-215	18 X 8	18-1/2	8-7/8	8-3/4	1/2	5	7	▲5/16	7/8	1	629.1	.364	471.8	.273	4.84
450-260	18 X 10	18-1/2	10-3/4	10-3/4	1/2	5	7	▲5/16	7/8	1	963.1	.557	722.3	.418	7.14

①Tapco recommends using gross x .75, for usable capacity.

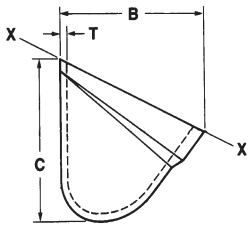
* Buckets can be drilled for 1/4" or 5/16" bolts, please specify. 1/4" is standard.

▲ Buckets can be drilled for 5/16" or 3/8" bolts, please specify. 5/16" is standard.

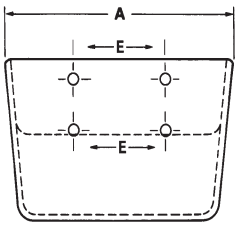
SUPER TOUGH **NYLON** ELEVATOR BUCKETS



Back View
Belt Pattern



End View



Back View
Chain Pattern

STYLE AA BUCKETS

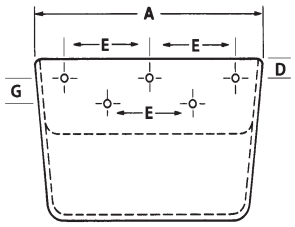
SIZE (Nominal) Millimeter	SIZE (Nominal) Inches	Dimensions-Actual (Inches) Tolerance A, B & C ±1/4" T ± 1/32"				Hole Drilling-Standard (Inches) Holes Drilled 1/32" Oversize					Capacity① Tolerance ± 3%				Approx. Weight (Pounds)
											Gross X-X		Usable		
		Length A	Proj. B	Depth C	Thick-ness T	Center to Center E	Number Of Holes	Bolt Diameter	Distance Down D	Between Rows G	Cu. In.	Cu. Ft.	Cu. In.	Cu. Ft.	
120-70	4 X 2-3/4	4-1/4	3	3-1/8	3/16	2-5/16	2	1/4	3/4	--	15.3	.009	11.5	.007	0.24
140- 90	5 X 3-1/2	5-3/8	3-3/4	3-3/4	1/4	3-3/16	2	1/4	1	--	30.2	.017	22.6	.013	0.44
160-120	6 X 4	6-3/8	4-1/4	4-1/2	1/4	4-3/8	2	1/4	1	--	50.5	.029	37.9	.022	0.60
180-120	7 X 4-1/2	7-3/8	4-3/4	5	1/4	2-1/2	3	1/4	1	--	77.8	.045	58.4	.034	0.83
200-140	8 X 5	8-3/8	5-1/4	5-1/2	1/4	3	5	*1/4	7/8	1	105.0	.061	78.8	.046	1.16
260-160	10 X 6	10-1/2	6-1/2	6-5/8	1/4	3-1/2	5	*1/4	7/8	1	198.5	.115	148.9	.086	1.72
300-180	12 X 7	12-1/2	7-5/8	7-3/4	3/8	4-1/2	5	▲5/16	7/8	1	319.6	.185	239.7	.139	2.69
350-180	14 X 7	14-1/2	7-5/8	7-3/4	3/8	4	7	5/16	7/8	1	385.4	.223	289.1	.167	3.05
350-215	14 X 8	14-1/2	8-7/8	8-3/4	1/2	4	7	5/16	7/8	1	494.6	.286	371.0	.215	4.30
400-215	16 X 8	16-1/2	8-7/8	8-3/4	1/2	4-1/2	7	▲5/16	7/8	1	576.4	.334	432.3	.251	4.89
450-215	18 X 8	18-1/2	8-7/8	8-3/4	1/2	5	7	▲5/16	7/8	1	653.9	.378	490.4	.284	5.46
450-260	18 X 10	18-1/2	10-3/4	10-3/4	1/2	5	7	▲5/16	7/8	1	1001.1	.579	750.8	.434	7.97

①Tapco recommends using gross x .75, for usable capacity.

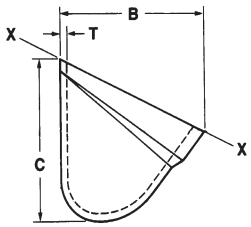
* Buckets can be drilled for 1/4" or 5/16" bolts, please specify. 1/4" is standard.

▲ Buckets can be drilled for 5/16" or 3/8" bolts, please specify. 5/16" is standard.

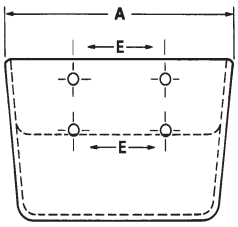
SEVERE DUTY **URETHANE** ELEVATOR BUCKETS



Back View
Belt Pattern



End View



Back View
Chain Pattern

STYLE AA BUCKETS

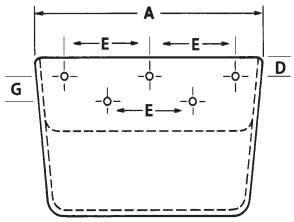
SIZE (Nominal) Millimeter	SIZE (Nominal) Inches	Dimensions-Actual (Inches) Tolerance A, B & C ±1/4" T ± 1/32"				Hole Drilling-Standard (Inches) Holes Drilled 1/32" Oversize					Capacity ① Tolerance ± 3%				Approx. Weight (Pounds)
											Gross X-X		Usable		
		Length A	Proj. B	Depth C	Thick-ness T	Center to Center E	Number Of Holes	Bolt Diameter	Distance Down D	Between Rows G	Cu. In.	Cu. Ft.	Cu. In.	Cu. Ft.	
120-70	4 X 2-3/4	4-5/16	3	3-1/8	3/16	2-5/16	2	1/4	3/4	--	15.3	.009	11.5	.007	0.29
140- 90	5 X 3-1/2	5-1/2	3-3/4	3-3/4	1/4	3-3/16	2	1/4	1	--	30.2	.017	22.6	.013	0.52
160-120	6 X 4	6-1/2	4-1/4	4-1/2	1/4	4-3/8	2	1/4	1	--	50.5	.029	37.9	.022	0.70
180-120	7 X 4-1/2	7-1/2	4-3/4	5	1/4	2-1/2	3	1/4	1	--	77.8	.045	58.4	.034	1.00
200-140	8 X 5	8-1/2	5-1/4	5-1/2	1/4	3	5	*1/4	7/8	1	105.0	.061	78.8	.046	1.23
260-160	10 X 6	10-5/8	6-1/2	6-5/8	5/16	3-1/2	5	*1/4	7/8	1	198.5	.115	148.9	.086	2.10
300-180	12 X 7	12-5/8	7-5/8	7-3/4	3/8	4-1/2	5	▲5/16	7/8	1	319.6	.185	239.7	.139	3.18
350-180	14 X 7	14-5/8	7-5/8	7-3/4	3/8	4	7	5/16	7/8	1	385.4	.223	289.1	.167	3.62
350-215	14 X 8	14-3/4	8-7/8	8-3/4	1/2	4	7	5/16	7/8	1	494.6	.286	371.0	.215	5.10
400-215	16 X 8	16-3/4	8-7/8	8-3/4	1/2	4-1/2	7	▲5/16	7/8	1	576.4	.334	432.3	.251	5.71
450-215	18 X 8	18-3/4	8-7/8	8-3/4	1/2	5	7	▲5/16	7/8	1	653.9	.378	490.4	.284	6.42
450-260	18 X 10	18-3/4	10-7/8	10-7/8	1/2	5	7	▲5/16	7/8	1	1001.1	.579	750.8	.434	9.41

①Tapco recommends using gross x .75, for usable capacity.

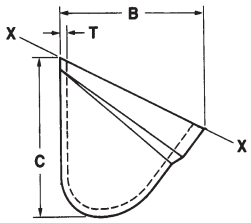
* Buckets can be drilled for 1/4" or 5/16" bolts, please specify. 1/4" is standard.

▲ Buckets can be drilled for 5/16" or 3/8" bolts, please specify. 5/16" is standard.

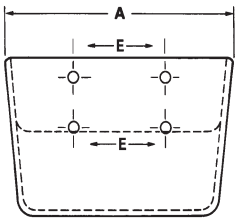
DUCTILE IRON ELEVATOR BUCKETS



Back View
Belt Pattern



End View



Back View
Chain Pattern

STYLE AA BUCKETS

SIZE (Nominal) Millimeter	SIZE (Nominal) Inches	Dimensions-Actual (Inches) Tolerance A, B & C ±1/4" T ±1/32"				Hole Drilling-Standard (Inches) Holes Drilled 1/32" Oversize					Capacity① Tolerance ± 3%				Approx. Weight (Pounds)
		Length A	Proj. B	Depth C	Thick-ness T	Center to Center E	Number Of Holes	Bolt Diameter	Distance Down D	Between Rows G	Gross X-X		Usable		
											Cu. In.	Cu. Ft.	Cu. In.	Cu. Ft.	
120-70	4 X 2-3/4	4	2-15/16	3	5/32	2-5/16	2	1/4	3/4	--	15.3	.009	11.5	.007	1.5
140-90	5 X 3-1/2	5	3-11/16	3-3/4	11/64	3-3/16	2	1/4	3/4, 1	--	30.2	.017	22.6	.013	2.4
160-120	6 X 4	6	4-3/16	4-1/4	3/16	4-3/8	2	1/4	1	--	50.5	.029	37.9	.022	3.3
180-120	7 X 4-1/2	7	4-11/16	4-3/4	3/16	2-1/2	3	1/4	1	--	77.8	.045	58.4	.034	5.1
200-140	8 X 5	8	5-1/4	5-1/2	3/16	3	5	*1/4	7/8	1	105.0	.061	78.8	.046	6.3
300-140	12 X 5	12	5-1/4	5-1/2	13/64	4-1/2	5	▲5/16	7/8	1	166.9	.096	125.2	.072	8.7
370-140	15 X 5	15	5-1/4	5-1/2	7/32	4	7	5/16	7/8	1	209.9	.122	157.4	.092	11.6
480-140	19 X 5	19	5-1/4	5-1/2	7/32	4	9	5/16	7/8	1	276.4	.160	207.3	.120	15.3
230-160	9 X 6	9	6-1/4	6-1/4	13/64	3	5	*1/4	7/8	1	159.9	.093	119.9	.070	8.9
260-160	10 X 6	10	6-1/4	6-1/4	13/64	3-1/2	5	*1/4	7/8	1	198.5	.115	148.9	.086	10.6
280-160	11 X 6	11	6-1/4	6-1/4	7/32	4	5	*1/4	7/8	1	221.8	.128	166.4	.096	10.9
300-160	12 X 6	12	6-1/4	6-1/4	7/32	4-1/2	5	▲5/16	7/8	1	233.1	.135	174.8	.101	11.3
300-180	12 X 7	12	7-5/16	7-1/4	1/4	4-1/2	5	▲5/16	7/8	1	319.6	.185	239.7	.139	13.8
◆ 300-180	12 X 7 *HD*	12	7-5/16	7-1/4	5/16	4-1/2	5	▲5/16	7/8	1	319.6	.185	239.7	.139	16.5
350-180	14 X 7	14	7-5/16	7-1/4	1/4	4	7	5/16	7/8	1	385.4	.223	289.1	.167	18.1
370-180	15 X 7	15	7-5/16	7-1/4	1/4	4	7	5/16	7/8	1	401.5	.232	301.1	.174	19.2
400-180	16 X 7	16	7-5/16	7-1/4	1/4	4-1/2	7	▲5/16	7/8	1	428.1	.248	321.1	.186	19.9
350-215	14 X 8	14	8-7/16	8-1/2	19/64	4	7	5/16	7/8	1	494.6	.286	371.0	.215	25.4
400-215	16 X 8	16	8-7/16	8-1/2	19/64	4-1/2	7	▲5/16	7/8	1	576.4	.334	432.3	.251	26.3
450-215	18 X 8	18	8-7/16	8-1/2	21/64	5	7	▲5/16	7/8	1	653.9	.378	490.4	.284	33.7
500-215	20 X 8	20	8-7/16	8-1/2	21/64	4	9	5/16	7/8	1	757.3	.438	568.0	.329	34.6
600-215	24 X 8	24	8-7/16	8-1/2	11/32	5	9	5/16	7/8	1	901.7	.522	676.3	.392	47.0
450-260	18 X 10	18	10-9/16	10-1/2	11/32	5	7	▲5/16	7/8	1	1001.1	.579	750.8	.434	43.6

◆ The HD bucket has an extra heavy duty front lip for severe applications.
①Tapco recommends using gross x .75, for usable capacity.
* Buckets can be drilled for 1/4" or 5/16" bolts, please specify. 1/4" is standard.
▲ Buckets can be drilled for 5/16" or 3/8" bolts, please specify. 5/16" is standard.

DUCTILE IRON VS. OTHER METALS

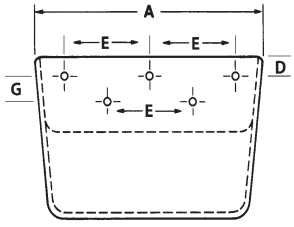
Characteristics	Ductile Iron	Malleable Iron	Gray Iron	0.3% C Cast Steel
Wear Resistance	A	C	B	D
Impact Resistance	B	C	D	A
Corrosion Resistance	A	B	A	D
Strength/Weight	A	C	D	B
Modulus of Elasticity	A	B	C	A
Vibration Damping	B	B	A	D
Surface Hardenability	A	A	A	C
Castability	A	B	A	D

BEST | A | B | C | D | WORST

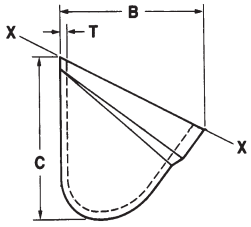
OVERALL, DUCTILE IRON HAS SUPERIOR

- ELASTICITY
- IMPACT RESISTANCE
- CORROSION RESISTANCE
- STRENGTH TO WEIGHT RATIO
- ABRASION RESISTANCE
- BRINELL HARDNESS

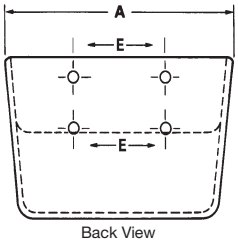
ALUMINUM ELEVATOR BUCKETS



Back View
Belt Pattern



End View



Back View
Chain Pattern

STYLE AA BUCKETS

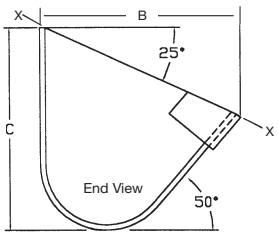
SIZE (Nominal) Millimeter	SIZE (Nominal) Inches	Dimensions-Actual (Inches) Tolerance A, B & C ±1/4" T ±1/32"				Hole Drilling-Standard (Inches) Holes Drilled 1/32" Oversize					Capacity① Tolerance ± 3%				Approx. Weight (Pounds)
		Length A	Proj. B	Depth C	Thick-ness T	Center to Center E	Number Of Holes	Bolt Diameter	Distance Down D	Between Rows G	Gross X-X		Usable		
											Cu. In.	Cu. Ft.	Cu. In.	Cu. Ft.	
120-70	4 X 2-3/4	4	2-15/16	3	5/32	2-5/16	2	1/4	3/4	--	15.3	.009	11.5	.007	0.6
140-90	5 X 3-1/2	5	3-11/16	3-3/4	11/64	3-3/16	2	1/4	3/4,1	--	30.2	.017	22.6	.013	0.9
160-120	6 X 4	6	4-3/16	4-1/4	3/16	4-3/8	2	1/4	1	--	50.5	.029	37.9	.022	1.2
180-120	7 X 4-1/2	7	4-11/16	4-3/4	3/16	2-1/2	3	1/4	1	--	77.8	.045	58.4	.034	1.4
200-140	8 X 5	8	5-1/4	5-1/2	3/16	3	5	*1/4	7/8	1	105.0	.061	78.8	.046	2.6
300-140	12 X 5	12	5-1/4	5-1/2	13/64	4-1/2	5	▲5/16	7/8	1	166.9	.096	125.2	.072	3.3
370-140	15 X 5	15	5-1/4	5-1/2	7/32	4	7	5/16	7/8	1	209.9	.122	157.4	.092	4.4
480-140	19 X 5	19	5-1/4	5-1/2	7/32	4	9	5/16	7/8	1	276.4	.160	207.3	.120	5.8
230-160	9 X 6	9	6-1/4	6-1/4	13/64	3	5	*1/4	7/8	1	159.9	.093	119.9	.070	3.4
260-160	10 X 6	10	6-1/4	6-1/4	13/64	3-1/2	5	*1/4	7/8	1	198.5	.115	148.9	.086	3.9
280-160	11 X 6	11	6-1/4	6-1/4	7/32	4	5	*1/4	7/8	1	221.8	.128	166.4	.096	4.1
300-160	12 X 6	12	6-1/4	6-1/4	7/32	4-1/2	5	▲5/16	7/8	1	233.1	.135	174.8	.101	4.3
300-180	12 X 7	12	7-5/16	7-1/4	1/4	4-1/2	5	▲5/16	7/8	1	319.6	.185	239.7	.139	6.3
350-180	14 X 7	14	7-5/16	7-1/4	1/4	4	7	5/16	7/8	1	385.4	.223	289.1	.167	7.0
370-180	15 X 7	15	7-5/16	7-1/4	1/4	4	7	5/16	7/8	1	401.5	.232	301.1	.174	7.3
400-180	16 X 7	16	7-5/16	7-1/4	1/4	4-1/2	7	▲5/16	7/8	1	428.1	.248	321.1	.186	7.6
350-215	14 X 8	14	8-7/16	8-1/2	19/64	4	7	5/16	7/8	1	494.6	.286	371.0	.215	9.0
400-215	16 X 8	16	8-7/16	8-1/2	19/64	4-1/2	7	▲5/16	7/8	1	576.4	.334	432.3	.251	10.0
450-215	18 X 8	18	8-7/16	8-1/2	21/64	5	7	▲5/16	7/8	1	653.9	.378	490.4	.284	12.2
500-215	20 X 8	20	8-7/16	8-1/2	21/64	4	9	5/16	7/8	1	757.3	.438	568.0	.329	13.0
600-215	24 X 8	24	8-7/16	8-1/2	11/32	5	9	5/16	7/8	1	901.7	.522	676.3	.392	16.3
450-260	18 X 10	18	10-9/16	10-1/2	11/32	5	7	▲5/16	7/8	1	1001.1	.579	750.8	.434	16.6

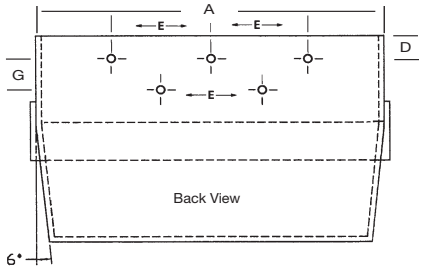
①Tapco recommends using gross x .75, for usable capacity.

* Buckets can be drilled for 1/4" or 5/16" bolts, please specify. 1/4" is standard.

▲ Buckets can be drilled for 5/16" or 3/8" bolts, please specify. 5/16" is standard.

AA FABRICATED STEEL ELEVATOR BUCKETS





STYLE AA BUCKETS

SIZE (Nominal) Millimeter	SIZE (Nominal) Inches	Dimensions-Actual (Inches) Tolerance A, B & C ±1/4"			Hole Drilling-Standard (Inches) Holes Drilled 1/32" Oversize					Capacity ① Tolerance ± 3%				Weight◆ Pounds 3/16" Steel
		Length A	Proj. B	Depth C	Center to Center E	Number Of Holes	Bolt Diameter	Distance Down D	Between Rows G	Gross X-X		Usable		
										Cu. In.	Cu. Ft.	Cu. In.	Cu. Ft.	
120-70	4 X 2-3/4	4	2-3/4	3	2-5/16	2	1/4	3/4	--	15.3	.009	11.5	.007	2.0
140-90	5 X 3-1/2	5	3-1/2	3-3/4	3-3/16	2	1/4	1	--	30.2	.017	22.6	.013	3.2
160-120	6 X 4	6	4	4-1/4	4-3/8	2	1/4	1	--	50.5	.029	37.9	.022	4.0
180-120	7 X 4-1/2	7	4-1/2	4-3/4	2-1/2	3	1/4	1	--	77.8	.045	58.4	.034	5.4
200-140	8 X 5	8	5	5-1/2	3	5	*1/4	7/8	1	105.0	.061	78.8	.046	6.6
300-140	12 X 5	12	5	5-1/2	4-1/2	5	▲5/16	7/8	1	166.9	.096	125.2	.072	9.9
370-140	15 X 5	15	5	5-1/2	4	7	5/16	7/8	1	209.9	.122	157.4	.092	12.4
480-140	19 X 5	19	5	5-1/2	4	9	5/16	7/8	1	276.4	.160	207.3	.120	15.7
230-160	9 X 6	9	6	6-1/4	3	5	*1/4	7/8	1	159.9	.093	119.9	.070	8.6
260-160	10 X 6	10	6	6-1/4	3-1/2	5	*1/4	7/8	1	198.5	.115	148.9	.086	9.8
280-160	11 X 6	11	6	6-1/4	4	5	*1/4	7/8	1	221.8	.128	166.4	.096	10.5
300-160	12 X 6	12	6	6-1/4	4-1/2	5	▲5/16	7/8	1	233.1	.135	174.8	.101	11.3
300-180	12 X 7	12	7	7-1/4	4-1/2	5	▲5/16	7/8	1	319.6	.185	239.7	.139	13.9
350-180	14 X 7	14	7	7-1/4	4	7	5/16	7/8	1	385.4	.223	289.1	.167	15.7
370-180	15 X 7	15	7	7-1/4	4	7	5/16	7/8	1	401.5	.232	301.1	.174	16.6
400-180	16 X 7	16	7	7-1/4	4-1/2	7	▲5/16	7/8	1	428.1	.248	321.1	.186	17.5
350-215	14 X 8	14	8	8-1/2	4	7	5/16	7/8	1	494.6	.286	371.0	.215	18.6
400-215	16 X 8	16	8	8-1/2	4-1/2	7	▲5/16	7/8	1	576.4	.334	432.3	.251	20.6
450-215	18 X 8	18	8	8-1/2	5	7	▲5/16	7/8	1	653.9	.378	490.4	.284	22.7
500-215	20 X 8	20	8	8-1/2	4	9	5/16	7/8	1	757.3	.438	568.0	.329	24.7
600-215	24 X 8	24	8	8-1/2	5	9	5/16	7/8	1	901.7	.522	676.3	.392	28.8
450-260	18 X 10	18	10	10-1/2	5	7	▲5/16	7/8	1	1001.1	.579	750.8	.434	28.9

①Tapco recommends using gross x .75, for usable capacity.
◆Bucket weight is determined by material and gauge. Contact Tapco for specifications.
* Buckets can be drilled for 1/4" or 5/16" bolts, please specify.
▲ Buckets can be drilled for 5/16" or 3/8" bolts, please specify. 5/16" is standard.

INDUSTRIAL STYLE FOR HANDLING:

STONE, FOUNDRY SAND, SAND & GRAVEL, COAL, FERTILIZER, CLAY, SALT, ETC.

FEATURES:

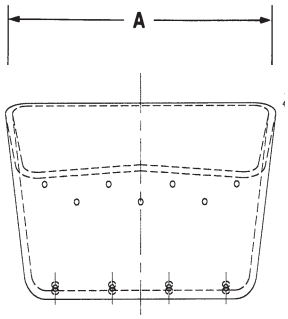
THICK REINFORCED FRONT LIP DESIGNED TO AID IN LONGER BUCKET LIFE TO HANDLE ABRASIVE MATERIALS

TECHNICAL INFORMATION:

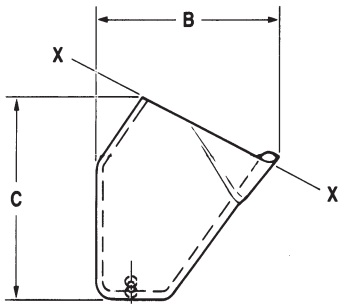
STYLE: AA.
DESIGN: Slow speed centrifugal discharge.
MATERIAL: Carbon Steel, Stainless Steel, Aluminum.
METHOD OF MANUFACTURE: Fabricated.
STANDARD CONSTRUCTION: The AA style bucket utilizes a 4-piece design consisting of two end plates, body, and wearlip with the ends continuously welded to the body. All seams are continuously welded outside and partially inside. ***The bucket will be produced after Tapco supplies a CAD drawing to be approved by customer.***
CONSTRUCTION OPTIONS: AR plate or hard bead welds.
MATERIAL THICKNESS: 12 ga., 10 ga., 7 ga. (3/16"), 1/4", 5/16", 3/8", and 1/2".
DRILLING: No charge for standard belt or chain drillings.
VENTING: Available on request, contact Tapco for recommendations.
USABLE CAPACITY: Tapco recommends using 75% of gross, (100%) capacity.
SPACING: Contact Tapco for recommendations.
INTERCHANGEABILITY: Can be intermixed with existing fabricated and non-metallic AA style buckets. If different weight buckets are mixed in, some care should be taken that the leg does not become too far out of balance. Check elevator for proper clearances. Contact Tapco for recommendations.
INSTALLATION: **On belt:** Fanged elevator bolts and nylon insert lock nuts are recommended for pulleys 6" in diameter and over. No. 3 Eclipse slotted head elevator bolts are recommended for pulleys under 6" in diameter. ***Flat steel washers must be placed inside the bucket under the nuts.***
On chain: Use Grade 5 hex head bolts with hex nuts, flat washers, and lock washers. ***Elevator bolts should not be used on chain attachments.***
CAUTION: Welding and cutting on elevator legs without taking proper precautions is extremely dangerous and can cause a violent explosion.

AVAILABLE THROUGH INDUSTRIAL DISTRIBUTORS, CONTRACTORS, AND ORIGINAL EQUIPMENT MANUFACTURERS

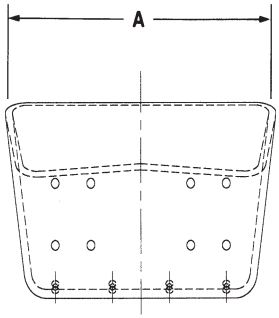
AC DUCTILE IRON ELEVATOR BUCKETS



Back View
Belt Pattern



End View



Back View
Chain Pattern

STYLE AC BUCKETS

SIZE (Nominal) Millimeter	SIZE (Nominal) Inches	Dimensions-Actual (Inches) Tolerance A, B & C ±1/4" T ± 1/32"			Capacity① Tolerance ± 3%				Iron Weight (Pounds)
		Length A	Proj. B	Depth C	Gross X-X		Usable		
					Cu. In.	Cu. Ft.	Cu. In.	Cu. Ft.	
300-215	**12 X 8**	12	8	8-1/2	449.3	.260	337.0	.195	25
400-215	**16 X 8**	16	8	8-1/2	639.4	.370	479.6	.278	35
450-260	**18 X 10**	18	10	10-1/2	1088.6	.630	816.5	.473	52
610-260	**24 X 10**	24	10	10-1/2	1520.6	.880	1140.5	.660	72

①Tapco recommends using gross x .75, for usable capacity.

DUCTILE IRON TECHNICAL INFORMATION:

STYLE: AC.
DESIGN: Centrifugal discharge.
MATERIAL: Ductile iron.
METHOD OF MANUFACTURE: Cast.
COLOR: Gray.
TEMPERATURE RANGE: -60° F to + 800° F. (-51° C to +426° C).
DRILLING: No charge for standard belt or chain drillings when order totals 50 or more pieces of the same size. Contact Tapco for quotation on orders of less than 50 and/or special drill pattern requirements.
VENTING: Standard with four 9/32" diameter holes.
USABLE CAPACITY: Tapco recommends using 75% of gross, (100%) capacity.
SPACING: A common minimum spacing would be nominal projection plus 4", however both closer and greater spacings may be used depending upon the application.

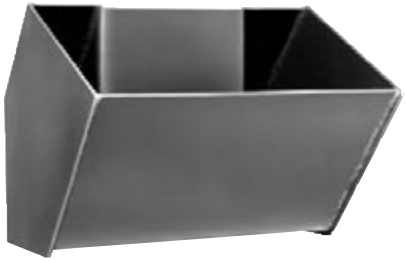
RECOMMENDATIONS: AC ductile iron buckets are ideal for use with foundry sand, gravel, coal, fertilizer, clay, salt, and many other industrial materials.
INTERCHANGEABILITY: Can be intermixed with existing cast iron, fabricated steel, or nonmetallic buckets. Some care should be taken that the leg does not become too far out of balance. Bucket projection varies by manufacturer and material. Check elevator for proper clearances. Contact Tapco for recommendations.
INSTALLATION: **On belt:** Fanged elevator bolts and nylon insert lock nuts are recommended. ***Flat steel washers must be placed inside the bucket under the nuts.***
On chain: Use Grade 5 hex head bolts with hex nuts, flat washers, and lock washers. ***Elevator bolts should not be used on chain attachments.***
CAUTION: Welding and cutting on elevator legs without taking proper precautions is extremely dangerous and can cause a violent explosion.

FABRICATED ELEVATOR BUCKETS

INDUSTRIAL STYLES

Style AA

Style AC



Style ACS

Low Front Continuous

Medium Front Continuous

High Front Continuous

High Front Overlapping Continuous

Special Continuous

Super Capacity Continuous

CUSTOM SIZES AND STYLES AVAILABLE

JUMBO™ CC-S® Ultra Heavy Duty Agricultural & Industrial Buckets

MADE IN THE USA

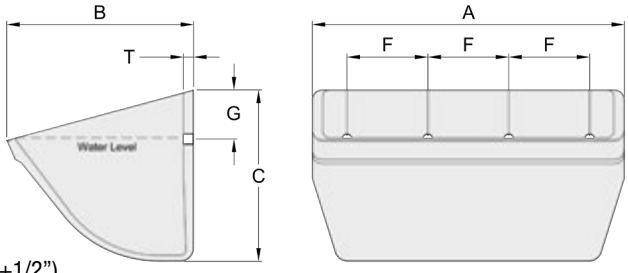
HDPE Shown

The JUMBO™ CC-S® is an ultra heavy duty version of the CC-S heavy duty elevator bucket. It is intended for the most severe applications, including port terminals, ethanol plants and highly abrasive materials. It offers the greatest capacity and thickest front lip, corners and walls available. The unique Iceberg® Edge front face delivers impact resistance and long life. It shares the proven geometry and design features of the CC-S, including the benefit of stackability, which saves on freight costs and storage space. The JUMBO™ CC-S® is molded from virgin HDPE (nylon and urethane also available) for ultra heavy duty strength and durability.

Material Virgin HDPE, nylon or urethane

Temp. Range
HDPE: -60 °F to 180 °F
Nylon: -60 °F to 300 °F
Urethane: -60 °F to 180 °F

Features
- Maximum capacity
- Ultra tough and flexible
- Thickest front lip, walls and corners for long life
- Stackable design for efficient shipping and storage
- Tapered bottom for closer vertical spacing (projection +1/2")

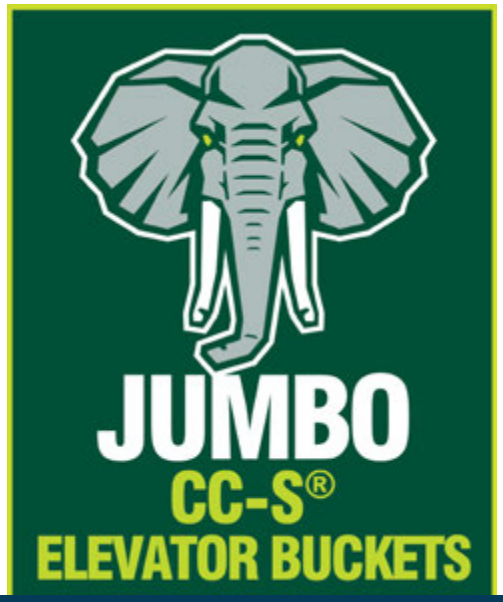


U.S. Patent D496-052

Applications Free flowing agro-industrial materials such as grains, feeds, fertilizer and pellets. Also suited for rough and abrasive materials including frac sand, cement and aggregates.

		Dimensions (in.)				Standard Punching (in.)				Capacity (cu. in.)			Weight (lb.)			
Nominal Size (in.)	Part #	Length A	Projection B	Back Depth C	Back Wall Thickness T	# Holes	Bolt Size	Hole Center F	Dist. Down G	Water Level	Water Level +10%	Minimum Spacing (in.)	HDPE Weight	Nylon Weight	Urethane Weight	Package Quantity
14 x 8	JCC-S148	14-7/8	9-1/4	8-5/16	0.51	5	5/16	3	2-3/8	451	496	8-1/2	4.80	5.52	6.48	9
16 x 8	JCC-S168	17	9-1/4	8-5/16	0.51	6	5/16	2-7/8	2-3/8	522	574	8-1/2	5.40	6.21	7.29	9
18 x 8	JCC-S188	19	9-1/4	8-5/16	0.51	6	5/16	3-1/8	2-3/8	594	653	8-1/2	6.00	6.90	8.10	9
20 x 8	JCC-S208	21	9-1/4	8-5/16	0.51	6	5/16	3-1/2	2-3/8	662	728	8-1/2	6.40	7.36	8.64	9
22 x 8	JCC-S228	23	9-1/4	8-5/16	0.53	6	5/16	4	2-3/8	726	799	8-1/2	7.20	8.28	9.72	9
24 x 8	JCC-S248	25	9-1/4	8-5/16	0.53	7	5/16	3-1/2	2-3/8	791	870	8-1/2	7.75	8.91	10.46	9

- Actual dimensions may vary slightly dependin on specified raw material
- For nylon and urethane industrial buckets, see page 24



Unique Iceberg® Edge front lip offers superior material thickness for the ultimate in wear resistance and long life. The triangular base creates a stiffening ridge across the front face of the bucket, preventing bowing and ensuring a consistent discharge over the life of the bucket.

JUMBO™ CC-S® Ultra Heavy Duty Low Profile Agricultural & Industrial Buckets

MADE IN THE USA

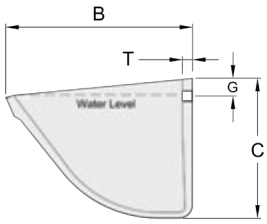
Like the standard JUMBO™ CC-S®, the low profile version has the greatest capacity and thickest front lip, corners and walls available. These buckets are designed for vertical spacing of nominal projection less "one inch" for increased capacity. 4B conservatively uses water level to calculate usable capacity on our low profile buckets.

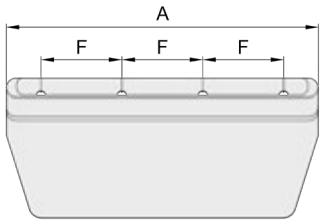
Unique to the industry, 4B manufactures the JUMBO™ CC-S® low profile style as a one piece molded unit, not a cut-down version of the standard elevator bucket. The molded design ensures consistent and accurate bucket dimensions.

Material Virgin HDPE, nylon or urethane

Temp. Range
HDPE: -60 °F to 180 °F
Nylon: -60 °F to 300 °F
Urethane: -60 °F to 180 °F

Features
- Maximum capacity
- Ultra tough and flexible
- Thickest front lip, walls and corners for long life
- Stackable design for efficient shipping and storage
- Lower back height for closer vertical spacing





U.S. Patent D496-052

Applications Free flowing agro-industrial materials such as grains, feeds, fertilizer and pellets. Also suited for rough and abrasive materials including frac sand, cement and aggregates.

		Dimensions (in.)				Standard Punching (in.)						Weight (lb.)			
Nominal Size (in.)	Part #	Length A	Projection B	Back Depth C	Back Wall Thickness T	# Holes	Bolt Size	Hole Center F	Dist. Down G	Water Level (cu. in.)	Minimum Spacing (in.)	HDPE Weight	Nylon Weight	Urethane Weight	Package Quantity
14 x 8	JCC-S148/LP	14-7/8	9-1/4	6-3/4	0.51	5	5/16	3	1-1/2	451	7	4.32	4.97	5.84	12
16 x 8	JCC-S168/LP	17	9-1/4	6-3/4	0.51	6	5/16	2-7/8	1-1/2	522	7	4.96	5.70	6.70	12
18 x 8	JCC-S188/LP	19	9-1/4	6-3/4	0.51	6	5/16	3-1/8	1-1/2	594	7	5.58	6.41	7.54	12
20 x 8	JCC-S208/LP	21	9-1/4	6-3/4	0.51	6	5/16	3-1/2	1-1/2	662	7	5.95	6.84	8.04	12
22 x 8	JCC-S228/LP	23	9-1/4	6-3/4	0.53	6	5/16	4	1-1/2	726	7	6.70	7.70	9.05	12
24 x 8	JCC-S248/LP	25	9-1/4	6-3/4	0.53	7	5/16	3-1/2	1-1/2	791	7	7.20	8.28	9.73	12

- Actual dimensions may vary slightly depending on specified raw material
- For nylon and urethane industrial buckets, see page 24

CC-S® Heavy Duty Agricultural Buckets

MADE IN THE USA

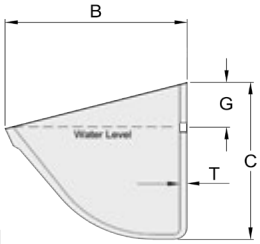
A range of heavy-duty CC style elevator buckets designed to outperform other agricultural buckets by offering greater capacities, longer life, and cleaner discharges. Unique Iceberg® Edge design with stronger front lip and maximum material thickness. With the CC-S® series stackable design, there is the added benefit of substantial freight and storage space savings. The complete CC-S® range of 35 different sizes are molded from premium virgin white HDPE (nylon and urethane available) for ultimate strength and durability.

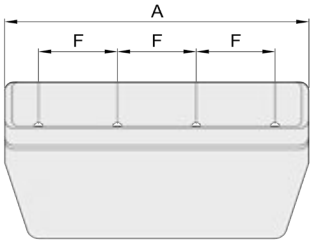
Material Virgin HDPE, nylon or urethane

Temp. Range
HDPE: -60 °F to 180 °F
Nylon: -60 °F to 300 °F
Urethane: -60 °F to 180 °F

Features
- Light weight, tough and flexible
- Reinforced front lip, walls and corners
- Stackable design for shipping and storage
- Wingless profile for closer spacing & greater capacities

Applications Free-flowing granular materials such as grain, feed, seed, food products and fertilizer.





U.S. Patent D496-052

		Dimensions (in.)				Standard Punching (in.)				Capacity (cu. in.)				
Nominal Size (in.)	Part #	Length A	Projection B	Back Depth C	Thickness T	# Holes	Bolt Size	Hole Center F	Dist. Down G	Water Level	Water Level +10%	Minimum Spacing (in.)	HDPE Weight (lb.)	Package Quantity
3 x 2	CC-S032	3-5/16	2-1/2	2-1/16	3/16	2	1/4	1-3/4	7/8	6	7	2-1/2	0.20	48
4 x 3	CC-S043	4-5/16	3-1/2	3-1/16	3/16	2	1/4	2-1/2	7/8	17	19	3-1/2	0.25	24
5 x 4	CC-S054	5-1/4	4-1/2	4-1/16	1/4	2	1/4	3-3/16	1-1/4	37	41	4-1/2	0.45	18
6 x 4*	CC-S064	6-1/4	4-1/2	4-1/16	1/4	2	1/4	4-3/8	1-1/4	45	50	4-1/2	0.52	18
7 x 4	CC-S074	7-1/4	4-1/2	4-1/16	1/4	3	1/4	2-11/16	1-1/4	53	58	4-1/2	0.58	18
6 x 5	CC-S065	6-3/8	5-1/2	5-5/32	1/4	2	1/4	4-3/8	1-7/8	70	77	5-1/2	0.82	15
7 x 5	CC-S075	7-3/8	5-1/2	5-5/32	1/4	3	1/4	2-11/16	1-7/8	83	91	5-1/2	0.91	15
8 x 5	CC-S085	8-3/8	5-1/2	5-5/32	1/4	3	1/4	3-1/16	1-7/8	95	105	5-1/2	0.99	15
9 x 5	CC-S095	9-3/8	5-1/2	5-5/32	1/4	3	1/4	3-5/8	1-7/8	107	118	5-1/2	1.10	15
10 x 5	CC-S105	10-3/8	5-1/2	5-5/32	1/4	3	1/4	4-1/8	1-7/8	120	132	5-1/2	1.20	15
11 x 5	CC-S115	11-3/8	5-1/2	5-5/32	1/4	4	1/4	3	1-7/8	132	145	5-1/2	1.30	15
12 x 5	CC-S125	12-3/8	5-1/2	5-5/32	1/4	4	1/4	3-3/8	1-7/8	145	160	5-1/2	1.37	15
8 x 6	CC-S086	8-3/8	6-5/8	6-1/16	9/32	3	1/4	3-1/16	2	136	150	6-1/2	1.24	15
9 x 6	CC-S096	9-3/8	6-5/8	6-1/16	9/32	3	1/4	3-5/8	2	154	169	6-1/2	1.37	15
10 x 6	CC-S106	10-3/8	6-5/8	6-1/16	9/32	3	1/4	4-1/8	2	172	190	6-1/2	1.50	15
11 x 6	CC-S116	11-3/8	6-5/8	6-1/16	9/32	4	1/4	3	2	190	209	6-1/2	1.58	15
12 x 6	CC-S126	12-3/8	6-5/8	6-1/16	9/32	4	1/4	3-3/8	2	209	230	6-1/2	1.72	15
13 x 6	CC-S136	13-3/8	6-5/8	6-1/16	9/32	4	1/4	3-5/8	2	227	250	6-1/2	1.85	15
14 x 6	CC-S146	14-3/8	6-5/8	6-1/16	9/32	5	1/4	3	2	240	264	6-1/2	1.96	15
10 x 7	CC-S107	10-3/4	7-7/8	7-1/16	5/16	3	5/16	4-1/8	2	241	266	7-1/2	2.30	12
11 x 7	CC-S117	11-3/4	7-7/8	7-1/16	5/16	4	5/16	3	2	267	293	7-1/2	2.43	12
12 x 7	CC-S127	12-3/4	7-7/8	7-1/16	5/16	4	5/16	3-3/8	2	292	321	7-1/2	2.65	12
13 x 7	CC-S137	13-3/4	7-7/8	7-1/16	5/16	4	5/16	3-5/8	2	317	349	7-1/2	2.82	12
14 x 7	CC-S147	14-3/4	7-7/8	7-1/16	5/16	5	5/16	3	2	343	377	7-1/2	3.02	12
15 x 7	CC-S157	15-3/4	7-7/8	7-1/16	5/16	5	5/16	3-1/4	2	368	405	7-1/2	3.20	12
16 x 7	CC-S167	16-3/4	7-7/8	7-1/16	5/16	6	5/16	2-7/8	2	393	432	7-1/2	3.37	12
10 x 8	CC-S108	10-13/16	8-15/16	8-1/4	13/32	3	5/16	4-1/8	2-3/8	316	348	8-1/2	3.17	9
11 x 8	CC-S118	11-13/16	8-15/16	8-1/4	13/32	4	5/16	3	2-3/8	349	384	8-1/2	3.42	9
12 x 8	CC-S128	12-13/16	8-15/16	8-1/4	13/32	4	5/16	3-3/8	2-3/8	384	422	8-1/2	3.65	9
13 x 8	CC-S138	13-13/16	8-15/16	8-1/4	13/32	4	5/16	3-5/8	2-3/8	417	459	8-1/2	3.88	9
14 x 8	CC-S148	14-13/16	8-15/16	8-1/4	13/32	5	5/16	3	2-3/8	451	496	8-1/2	4.15	9
15 x 8	CC-S158	15-13/16	8-15/16	8-1/4	13/32	5	5/16	3-1/4	2-3/8	484	533	8-1/2	4.35	9
16 x 8	CC-S168	16-13/16	8-15/16	8-1/4	13/32	6	5/16	2-7/8	2-3/8	517	569	8-1/2	4.52	9
18 x 8	CC-S188	18-13/16	8-15/16	8-1/4	13/32	6	5/16	3-1/8	2-3/8	586	645	8-1/2	5.07	9
20 x 8	CC-S208	20-13/16	8-15/16	8-1/4	13/32	6	5/16	3-1/2	2-3/8	652	718	8-1/2	5.51	9

* Not intended for use with Universal Industries elevator legs
- HDPE information listed in chart above, actual dimensions may vary slightly depending on specified raw material

CC-S® Heavy Duty Agricultural Buckets

CC-S Unique Design Features

Unique Iceberg® Edge heavy duty front lip with maximum material thickness and a tapered leading edge for a longer wear life. The triangular rigid design prevents bowing for a consistent discharge over the life of the bucket.

Developed as "the world's first stackable CC-style elevator bucket." CC-S® buckets nest inside one another for reduced storage and shipping space. Freight cost savings are realized as the increased shipping density offers a lower freight classification.

Shrink Wrapped Bucket Sleeves

CC-S® buckets are group bundled in individual plastic sleeves for easy transportation and storage.

Plastic sleeves are weather resistant, lightweight and recyclable.

Product Testing

Rigorous product testing on all of our material handling components is conducted at 4B's own in-house testing facilities. This ensures that we provide our customers with the best products in quality, durability and performance.

CC-S Discharge Video:
Scan the QR code or visit
www.go4b.com/cc-s

Pictured on Right -
4B's Testing Elevator #2

CC-S® Heavy Duty Low Profile Agricultural Buckets

MADE IN THE USA

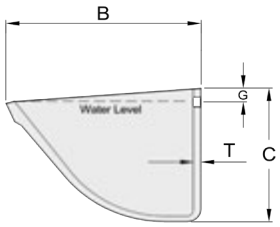
Material Virgin HDPE, nylon or urethane

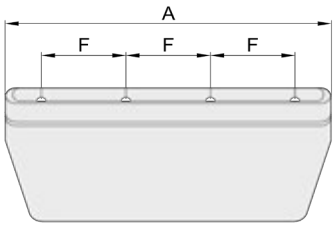
Temp. Range
HDPE: -60 °F to 180 °F
Nylon: -60 °F to 300 °F
Urethane: -60 °F to 180 °F

Features
- Lower back height for closer vertical spacing
- Light weight, tough and flexible
- Reinforced front lip, walls and corners
- Stackable design for shipping and storage

Applications Free-flowing granular materials such as grain, feed, seed, food products and fertilizer.

A range of heavy-duty low profile CC style elevator buckets designed to outperform other agricultural buckets. Just like the standard CC style, the low profile has the unique Iceberg® Edge design with stronger front lip and maximum material thickness for greater strength and longer life. These buckets are designed for vertical spacing of nominal projection less "one inch" for increased capacity. 4B conservatively uses water level to calculate usable capacity on our low profile buckets.





U.S. Patent D496-052

		Dimensions (in.)				Standard Punching (in.)							
Nominal Size (in.)	Part #	Length A	Projection B	Back Depth C	Thickness T	# Holes	Bolt Size	Hole Center F	Dist. Down G	Water Level (cu. in.)	Minimum Spacing (in.)	HDPE Weight (lb.)	Package Quantity
3 x 2	CC-S032/LP	3-5/16	2-1/2	2	3/16	2	1/4	1-3/4	1/2	6	2	0.18	48
4 x 3	CC-S043/LP	4-5/16	3-1/2	2-1/2	3/16	2	1/4	2-1/2	1/2	17	2-3/4	0.22	24
5 x 4	CC-S054/LP	5-1/4	4-1/2	3	1/4	2	1/4	3-3/16	5/8	37	3	0.41	18
6 x 4*	CC-S064/LP	6-1/4	4-1/2	3	1/4	2	1/4	4-3/8	5/8	45	3	0.48	18
7 x 4	CC-S074/LP	7-1/4	4-1/2	3	1/4	3	1/4	2-11/16	5/8	53	3	0.54	18
6 x 5	CC-S065/LP	6-3/8	5-1/2	3-3/4	1/4	2	1/4	4-3/8	1	70	4	0.78	16
7 x 5	CC-S075/LP	7-3/8	5-1/2	3-3/4	1/4	3	1/4	2-11/16	1	83	4	0.86	16
8 x 5	CC-S085/LP	8-3/8	5-1/2	3-3/4	1/4	3	1/4	3-1/16	1	95	4	0.93	16
9 x 5	CC-S095/LP	9-3/8	5-1/2	3-3/4	1/4	3	1/4	3-5/8	1	107	4	1.04	16
10 x 5	CC-S105/LP	10-3/8	5-1/2	3-3/4	1/4	3	1/4	4-1/8	1	120	4	1.12	16
11 x 5	CC-S115/LP	11-3/8	5-1/2	3-3/4	1/4	4	1/4	3	1	132	4	1.22	16
12 x 5	CC-S125/LP	12-3/8	5-1/2	3-3/4	1/4	4	1/4	3-3/8	1	145	4	1.28	16
8 x 6	CC-S086/LP	8-3/8	6-5/8	4-3/4	9/32	3	1/4	3-1/16	1	136	5	1.14	16
9 x 6	CC-S096/LP	9-3/8	6-5/8	4-3/4	9/32	3	1/4	3-5/8	1	154	5	1.28	16
10 x 6	CC-S106/LP	10-3/8	6-5/8	4-3/4	9/32	3	1/4	4-1/8	1	172	5	1.40	16
11 x 6	CC-S116/LP	11-3/8	6-5/8	4-3/4	9/32	4	1/4	3	1	190	5	1.48	16
12 x 6	CC-S126/LP	12-3/8	6-5/8	4-3/4	9/32	4	1/4	3-3/8	1	209	5	1.62	16
13 x 6	CC-S136/LP	13-3/8	6-5/8	4-3/4	9/32	4	1/4	3-5/8	1	227	5	1.70	16
14 x 6	CC-S146/LP	14-3/8	6-5/8	4-3/4	9/32	5	1/4	3	1	240	5	1.80	16
10 x 7	CC-S107/LP	10-3/4	7-7/8	5-3/4	5/16	3	5/16	4-1/8	1-1/4	241	6	2.05	15
11 x 7	CC-S117/LP	11-3/4	7-7/8	5-3/4	5/16	4	5/16	3	1-1/4	267	6	2.16	15
12 x 7	CC-S127/LP	12-3/4	7-7/8	5-3/4	5/16	4	5/16	3-3/8	1-1/4	292	6	2.40	15
13 x 7	CC-S137/LP	13-3/4	7-7/8	5-3/4	5/16	4	5/16	3-5/8	1-1/4	317	6	2.57	15
14 x 7	CC-S147/LP	14-3/4	7-7/8	5-3/4	5/16	5	5/16	3	1-1/4	343	6	2.75	15
15 x 7	CC-S157/LP	15-3/4	7-7/8	5-3/4	5/16	5	5/16	3-1/4	1-1/4	368	6	2.92	15
16 x 7	CC-S167/LP	16-3/4	7-7/8	5-3/4	5/16	6	5/16	2-7/8	1-1/4	393	6	3.08	15
10 x 8	CC-S108/LP	10-13/16	8-15/16	6-3/4	13/32	3	5/16	4-1/8	1-1/2	316	7	2.88	12
11 x 8	CC-S118/LP	11-13/16	8-15/16	6-3/4	13/32	4	5/16	3	1-1/2	349	7	3.12	12
12 x 8	CC-S128/LP	12-13/16	8-15/16	6-3/4	13/32	4	5/16	3-3/8	1-1/2	384	7	3.35	12
13 x 8	CC-S138/LP	13-13/16	8-15/16	6-3/4	13/32	4	5/16	3-5/8	1-1/2	417	7	3.56	12
14 x 8	CC-S148/LP	14-13/16	8-15/16	6-3/4	13/32	5	5/16	3	1-1/2	451	7	3.80	12
15 x 8	CC-S158/LP	15-13/16	8-15/16	6-3/4	13/32	5	5/16	3-1/4	1-1/2	484	7	4.05	12
16 x 8	CC-S168/LP	16-13/16	8-15/16	6-3/4	13/32	6	5/16	2-7/8	1-1/2	517	7	4.17	12
18 x 8	CC-S188/LP	18-13/16	8-15/16	6-3/4	13/32	6	5/16	3-1/8	1-1/2	586	7	4.70	12
20 x 8	CC-S208/LP	20-13/16	8-15/16	6-3/4	13/32	6	5/16	3-1/2	1-1/2	652	7	5.10	12

* Not intended for use with Universal Industries elevator legs
- HDPE information listed in chart above, actual dimensions may vary slightly depending on specified raw material

Big J Steel - CC StyleAgricultural Buckets

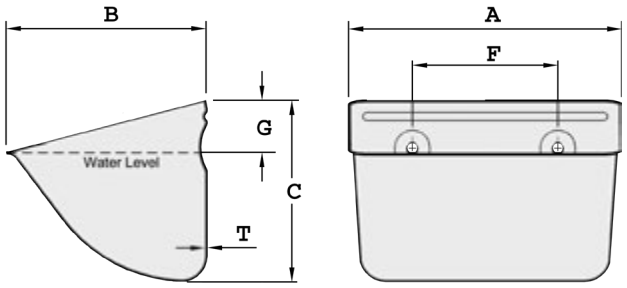
A North American grain CC style bucket made from deep drawn solid steel without any welds. The wingless design delivers lighter weight than fabricated equivalents with closer vertical spacing possible.

Material Seamless steel or stainless steel

Temp. Range Contact 4B

Features
- Pressed steel - no seams to hold residue
- Interchangeable with CC style buckets
- Compound curve delivers smooth discharge
- Wingless design allows for closer spacing

Applications Grain, feed, seeds, pellets, powders, chemicals and other granular products.



		Dimensions (in.)				Standard Punching (in.)				Capacity (cu. in.)			
Nominal Size (in.)	Part #	Length A	Projection B	Back Depth C	Thickness (Gauge) T	# Holes	Bolt Size	Hole Center F	Dist. Down G	Water Level	Water Level +10%	Minimum Spacing (in.)	Weight (lb.)
6 x 4	J64/1.2/P+R	6-1/4	4-1/4	3-7/8	18	2	1/4	4-3/8 - 4-1/2*	1-1/4	47	52	4-1/2	1.00
7 x 5	J75/1.5/P+R	7-1/4	5-3/8	4-3/4	16	3	1/4	2-11/16	1-1/2	76	83	5-1/2	1.50
8 x 5	J85/1.5/P+R	8-1/4	5-3/8	4-3/4	16	3	1/4	3-1/16	1-1/2	97	107	5-1/2	1.80
9 x 5	J95/1.5/P+R	9-1/4	5-3/8	4-3/4	16	3	1/4	3-1/2 - 3-5/8*	1-1/2	99	109	5-1/2	2.25
9 x 6	J96/2.0/P+R	9-1/4	6-3/8	6-1/16	14	3	5/16	3-1/2 - 3-5/8*	1-7/8	137	151	6-1/2	3.25
10 x 6	J106/2.0/P+R	10-5/16	6-3/8	6-1/16	14	3	5/16	4 - 4-1/8*	1-7/8	159	173	6-1/2	3.65
11 x 6	J116/2.0/P+R	11-5/16	6-3/8	6-1/16	14	4	5/16	3 - 3-1/8*	1-7/8	180	198	6-1/2	4.00
12 x 6	J126/2.0/P+R	12-5/16	6-3/8	6-1/16	14	4	5/16	3-3/8	1-7/8	191	210	6-1/2	4.50
11 x 7	J117/2.0/P+R	11-7/16	7-1/2	6-3/4	14	4	5/16	3 - 3-1/8*	2	244	268	7-1/2	4.65
12 x 7	J127/2.0/P+R	12-7/16	7-1/2	6-3/4	14	4	5/16	3-3/8	2	265	292	7-1/2	5.00
14 x 7	J147/2.0/P+R	14-7/16	7-1/2	6-3/4	14	4 or 5	3/8	4@4 - 5@3**	2	303	333	7-1/2	5.50
16 x 7	J167/2.0/P+R	16-7/16	7-1/2	6-3/4	14	6	5/16	2-7/8	2	346	381	7-1/2	6.25
14 x 8	J148/2.0/P+R	14-1/4	8-1/4	8	14	4 or 5	5/16	4@4 - 5@3**	2-1/4	388	427	8-1/2	6.40
16 x 8	J168/2.0/P+R	16-1/4	8-1/4	8	14	6	5/16	2-7/8	2-1/4	443	487	8-1/2	7.50

- All sizes have recessed bolt holes, dome washers recommended (pg 49)
* Slotted holes
** Punched bolt patterns

Starco™ Low Profile Agricultural Buckets

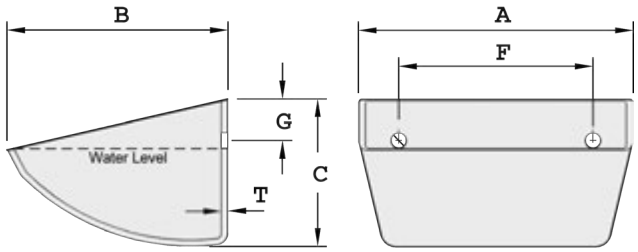
Starco™ elevator buckets are engineered for higher throughput elevator legs. Their shallow design, tapered sides and low back height ensure maximum bucket fill at high speeds on smaller pulley diameters. The unique front profile guarantees clean discharge over a wider range of operating speeds than conventional or other low profile buckets.

Material Virgin HDPE, nylon or urethane

Temp. Range
HDPE: -60 °F to 180 °F
Nylon: -60 °F to 300 °F
Urethane: -60 °F to 180 °F

Features
- Super low profile
- Belt Speeds up to 895 ft./min.
- Compound curve delivers smooth discharge
- Wingless design allows for closer spacing

Applications Free-flowing granular materials such as grain, feed, seed, food products and fertilizer.



		Dimensions (in.)				Standard Punching (in.)				Capacity (cu. in.)			
Nominal Size (in.)	Part #	Length A	Projection B	Back Depth C	Thickness T	# Holes	Bolt Size	Hole Center F	Dist. Down G	Water Level	Gross	Minimum Spacing (in.)	HDPE Weight (lb.)
4 x 3-1/2	S100-090/HDP	4-5/16	3-5/8	2-7/16	5/32	2	5/16	2	11/16	13	17	2-3/4	0.13
5 x 4-1/2	S130-120/HDP	5-1/2	4-3/4	3-3/16	3/16	2	5/16	2-3/4	7/8	28	38	3-9/16	0.28
6 x 4	S150-110/HDP	6-1/4	4-7/16	3-1/16	13/64	2	5/16	3-1/2	15/16	30	44	3-5/16	0.38
7 x 5-1/2	S180-140/HDP	7-1/2	5-3/4	3-11/16	1/4	2	5/16	3-15/16	1-3/16	51	74	3-3/4	0.63
9 x 5	S225-140/HDP	9-1/4	5-1/2	3-11/16	5/16	2	5/16	4-3/4	1-3/16	76	100	3-3/4	0.75
9 x 6-1/2	S230-170/HDP/11/32	9-7/16	6-13/16	4-7/16	9/32	2	5/16	4-3/4	1-1/2	109	145	4-3/8	0.95
9 x 6-1/2	S230-170/HDP/13/32	9-7/16	6-13/16	4-7/16	9/32	2	3/8	4-3/4	1-1/2	109	145	4-3/8	0.95
11 x 6-1/2	S280-170/HDP/11/32	11-7/16	6-13/16	4-7/16	1/4	3	5/16	3-3/16	1-1/2	123	176	4-3/8	1.10
11 x 6-1/2	S280-170/HDP/13/32	11-7/16	6-13/16	4-7/16	1/4	3	3/8	3-3/16	1-1/2	123	176	4-3/8	1.10
12 x 7	S300-180/HDP	12-3/8	7-1/8	4-7/8	1/4	3	5/16	4	1-3/8	165	235	4-13/16	1.28
13 x 8-1/2	S330-215/HDP	13-3/8	8-3/4	4-7/8	9/32	3	3/8	4-3/4	1-1/2	239	336	5-1/2	1.68
14 x 7	S350-180/HDP	14-7/16	7-1/8	4-7/8	9/32	4	5/16	3-9/16	1-3/8	201	275	4-13/16	1.75
15 x 8-1/2	S370-215/HDP	15	8-9/16	5-9/16	9/32	4	3/8	3-9/16	1-1/2	269	380	5-1/2	2.45

- HDPE information listed in chart above, actual dimensions may vary slightly depending on specified raw material

Starco™ Low Profile Steel Agricultural Buckets

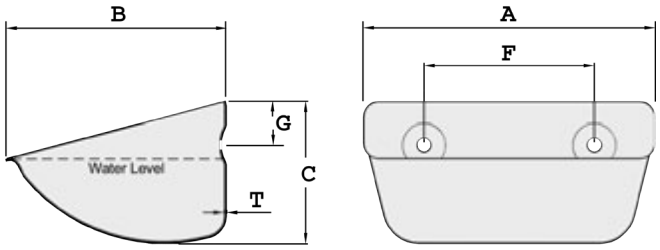
Starco™ elevator buckets are engineered for higher throughput elevator legs. Their shallow design, tapered sides and low back height ensure maximum bucket fill at high speeds on smaller pulley diameters. The unique front profile guarantees clean discharge over a wider range of operating speeds than conventional or other low profile buckets.

Material Seamless steel or stainless steel

Temp. Range Contact 4B

Features
- Super low profile
- Belt speeds up to 895 ft./min.
- Pressed seamless steel
- Front lip wear bands available

Applications Grain, grain by products, feed, seed, pellets, powders, chemicals and other industrial granular products.



		Dimensions (in.)				Standard Punching (in.)				Capacity (cu. in.)			
Nominal Size (in.)	Part #	Length A	Projection B	Back Depth C	Thickness (Gauge) T	# Holes	Bolt Size	Hole Center F	Dist. Down G	Water Level	Gross	Minimum Spacing (in.)	Weight (lb.)
5 x 4-1/2	S130-120/1.5	5-1/2	4-1/2	3-1/16	16	2	5/16	2-3/4	7/8	31	42	3-7/16	0.78
7 x 5-1/2	S180-140/1.5	7-1/4	5-1/2	3-5/8	16	2	5/16	3-15/16	1	55	79	3-3/4	1.16
9 x 6-1/2	S230-165/2.0	9-3/8	6-1/2	4-1/4	14	2	3/8	4-3/4	1-5/16	112	151	4-3/8	2.66
11 x 6-1/2	S280-165/2.0	11-3/8	6-1/2	4-1/4	14	3	3/8	3-3/16	1-5/16	140	186	4-3/8	2.90
12 x 7	S300-180/2.0	12-1/8	7-3/16	4-5/8	14	3	5/16	4	1-5/16	150	223	4-13/16	3.15
12 x 8	S300-215/2.0	12-1/4	8-1/2	5-1/2	14	3	3/8	4	1-1/2	250	342	5-1/4	4.52
13 x 8-1/2	S330-215/2.0	13-3/8	8-7/16	5-1/8	14 or 12	3	3/8	4-3/4	1-1/2	239	336	5-1/2	4.60 - 5.91
15 x 8-1/2	S370-215/2.0	15	8-7/16	5-1/8	14 or 12	4	3/8	3-9/16	1-1/2	255	377	5-1/2	5.25 - 6.57
18 x 8-1/2	S450-215/2.5	18-1/4	8-7/16	5-1/8	12	5	3/8	3-1/2	1-1/2	341	488	5-1/2	7.50

- All sizes have recessed bolt holes, dome washers recommended (pg 49)
- Custom drilled holes / thicknesses / wear bands available

Super Starco™ Low Profile Agricultural Buckets

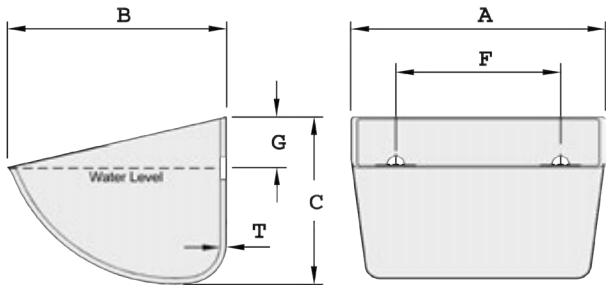
The deep low profile design of the Super Starco™ is the result of intensive research to achieve the maximum individual bucket capacity. Additional capacity has been engineered into the bucket while still maintaining the perfect fill and discharge characteristics of the original Starco™ bucket.

Material Virgin HDPE, nylon or urethane

Temp. Range
HDPE: -60 °F to 180 °F
Nylon: -60 °F to 300 °F
Urethane: -60 °F to 180 °F

Features
- Engineered for ultra capacity
- Improved Starco™ design
- Perfect fill and discharge
- Prime virgin materials

Applications Free-flowing granular materials: grain, feed, seed, fertilizers or wood fiber by-products.



		Dimensions (in.)				Standard Punching (in.)				Capacity (cu. in.)			
Nominal Size (in.)	Part #	Length A	Projection B	Back Depth C	Thickness T	# Holes	Bolt Size	Hole Center F	Dist. Down G	Water Level	Gross	Minimum Spacing (in.)	HDPE Weight (lb.)
3 x 3	SPS080-080/HDP	3-9/16	3-3/8	2-1/2	5/32	2	5/16	1-11/16	3/4	11	15	2-1/2	0.13
4 x 3-1/2	SPS100-090/HDP	4-5/16	3-1/2	2-5/8	7/32	2	5/16	2	3/4	18	23	2-3/4	0.20
5 x 4	SPS120-100/HDP	5-1/16	4-5/16	3-3/16	7/32	2	5/16	2-5/8	1	28	36	3-1/4	0.29
5 x 4-1/2	SPS130-120/HDP	5-5/16	4-3/4	3-3/8	7/32	2	5/16	2-3/4	1	32	43	3-3/4	0.40
6 x 5	SPS140-120/HDP	5-3/4	4-3/4	3-9/16	7/32	2	5/16	2-3/4	1	37	49	3-3/4	0.37
6 x 5	SPS130-130/HDP	5-3/4	5-1/8	3-9/16	7/32	2	5/16	2-3/4	1	40	53	3-3/4	0.46
6 x 5-1/2	SPS160-140/HDP	6-3/4	5-1/2	4-7/16	1/4	2	5/16	3-15/16	1-3/16	74	96	4-1/2	0.66
7 x 5-1/2	SPS180-140/HDP	7-3/8	5-7/8	4-7/16	1/4	2	5/16	3-15/16	1-3/16	82	108	4-1/2	0.70
8 x 5-1/2	SPS200-150/HDP	8-1/16	5-7/8	4-7/16	1/4	2	5/16	3-15/16	1-1/4	85	111	4-1/2	0.77
8 x 6	SPS200-160/HDP	8-1/4	6-1/4	4-1/2	9/32	2	5/16	3-15/16	1-1/4	98	128	4-1/2	0.86
9 x 6-1/2	SPS230-170/HDP	9-7/16	6-7/8	5-7/16	1/4	2	3/8	4-3/4	1-3/8	146	187	5-3/4	1.35
9 x 6-1/2	SPS240-165/HDP	9-7/8	6-11/16	5-3/16	9/32	2	3/8	4-3/4	1-3/8	143	189	5-1/2	1.32
11 x 6-1/2	SPS280-165/HDP	11-7/16	6-11/16	5-3/16	9/32	3	3/8	3-1/8	1-3/8	171	220	5-1/2	1.52
11 x 6-1/2	SPS280-170/HDP	11-1/8	6-7/8	5-7/16	1/4	3	3/8	3-1/8	1-3/8	181	229	5-3/4	1.48
11 x 7	SPS280-180/HDP	11-7/16	7-1/4	5-1/2	9/32	3	3/8	3-1/8	1-3/8	201	256	5-3/4	1.87
12 x 7	SPS300-180/HDP	12-7/16	7-1/4	5-1/2	5/16	3	3/8	3-15/16	1-3/8	220	281	5-3/4	2.03
13 x 7	SPS330-180/HDP	13-11/16	7-1/4	5-1/2	5/16	3	3/8	4-5/16 - 4-3/4	1-1/2	244	305	5-3/4	2.20
14 x 7	SPS350-180/HDP	14-7/16	7-1/4	5-1/2	11/32	3	3/8	4-3/4	1-1/2	250	320	5-3/4	2.47
12 x 8	SPS300-215/HDP	12-1/2	8-11/16	6-5/8	11/32	3	3/8	3-15/16	2	317	403	6-3/4	2.82
13 x 8	SPS330-215/HDP	13-1/2	8-11/16	6-5/8	11/32	3	3/8	4-3/4	2	345	438	6-3/4	3.02
14 x 8	SPS350-215/HDP	14-1/2	8-11/16	6-5/8	11/32	3 or 4	3/8	4-3/4 - 3-9/16	2	373	473	6-3/4	3.20
15 x 8	SPS370-215/HDP	15-3/8	8-11/16	6-5/8	11/32	4	3/8	3-9/16	2	398	503	6-3/4	3.35
16 x 8	SPS400-215/HDP	16-1/2	8-11/16	6-5/8	11/32	4	3/8	3-15/16	2	427	537	6-3/4	3.40
18 x 8	SPS450-215/HDP	18-1/2	8-11/16	6-1/2	11/32	5	3/8	3-9/16	2	470	580	6-3/4	3.53
20 x 8	SPS500-215/HDP	20-11/16	8-11/16	6-5/8	11/32	5	3/8	3-15/16	2	549	680	6-3/4	4.32

- HDPE information listed in chart above, actual dimensions may vary slightly depending on specified raw material

GB Spidex™
Agricultural & Industrial Buckets

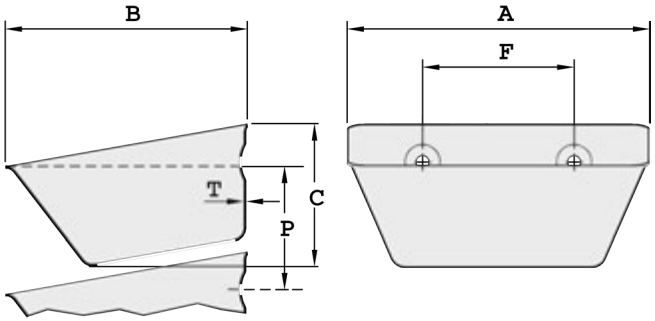
GB Spidex™ is a pressed steel bottomless bucket system that can double your existing elevator capacity and handle your troublesome materials. This unique bucket system lifts material in a continuous column, so the carrying space between conventional buckets is fully utilized by material to achieve much greater capacity.

Material Seamless steel or stainless steel

Temp. Range Contact 4B

Features
- Double existing capacity
- Self cleaning, vented system
- Handles sticky, dense or extremely light materials
- Free design service

Applications Increase elevator capacity or handle difficult materials: flour, pellets, prills, sugar, sawdust or molasses based feeds.



		Dimensions (in.)				Standard Punching (in.)					Weight (lb.)	
Nominal Size (in.)	Part #	Length A	Projection B	Back Depth C	Thickness (Gauge) T	# Holes	Bolt Size	Hole Center F	Actual Capacity (cu. in.)	Bucket Spacing P (in.)	Open Cup	Closed Cup
4 x 3-1/2*	GB100-90	4-3/16	3-1/2	1-3/4	18	2	5/16	1-15/16	14	1-15/16	0.22	0.26
5 x 4	GB130-110	5-3/8	4-1/2	2	16	2	5/16	2-3/4	30	2-1/4	0.70	0.80
7 x 5	GB180-140	7-1/4	5-1/2	2-1/2	16	2	5/16	3-15/16	72	2-13/16	1.00	1.20
8-1/2 x 3-5/8*	GB215-95	8-21/32	3-21/32	2-1/2	16	2	5/16	5	58	2-11/16	0.90	1.10
9 x 6	GB230-165	9-3/8	6-1/2	2-7/8	14	2	5/16	4-3/4	128	3-3/16	1.90	2.50
11 x 6-1/2*	GB280-165	11-7/16	6-1/2	3-5/32	14	3	3/8	3-9/16	163	3-7/16	2.20	2.90
12 x 6	GB300-165	12	6-1/2	3-1/8	14	3	3/8	3-9/16	168	3-7/16	2.40	3.00
13 x 7-1/2*	GB325-190	13-3/16	7-1/2	3-15/32	14	3	3/8	3-15/16	220	3-15/16	2.90	3.75
13-1/2 x 7-1/2*	GB330-190	13-3/8	7-1/2	3-29/32	11	3	3/8	3-15/16	275	4-5/32	4.50	6.25
14 x 8	GB350-200	14	7-7/8	4	12	4	3/8	3-9/16	290	4-3/8	4.30	5.50
15 x 6*	GB380-165	14-7/8	6-1/2	4-3/16	12	4	5/16	3 x 5 x 3	214	3-7/16	3.75	4.75
16 x 8*	GB430-200	16-15/16	8-5/8	3-3/4	11	4	3/8	3-11/16	339	4-5/32	3.90	5.07
16 x 8	GB400-220	16-1/8	8-5/8	4-1/2	11	4	3/8	3-15/16	422	4-15/16	5.00	6.50

* Non-stocking size - special order
- All sizes have recessed bolt holes, dome washers recommended (pg 49)
- NOTE: Part numbers for open cups will end with -B, closed cups will end with +B

GB Spidex™ Agricultural & Industrial Buckets

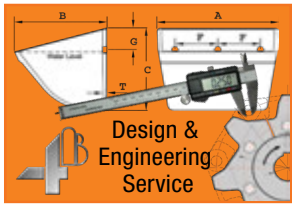
GB Spidex™ Unique Design Features

With the GB system, buckets are centered at very close spacing with a series of buckets without bottoms followed by a closed bottom bucket. The material is lifted in a continuous column, so the carrying space between conventional buckets is fully utilized by material to achieve much greater capacity. The buckets "fan out" as they pass over the head and tail pulleys to facilitate pick up or discharge.

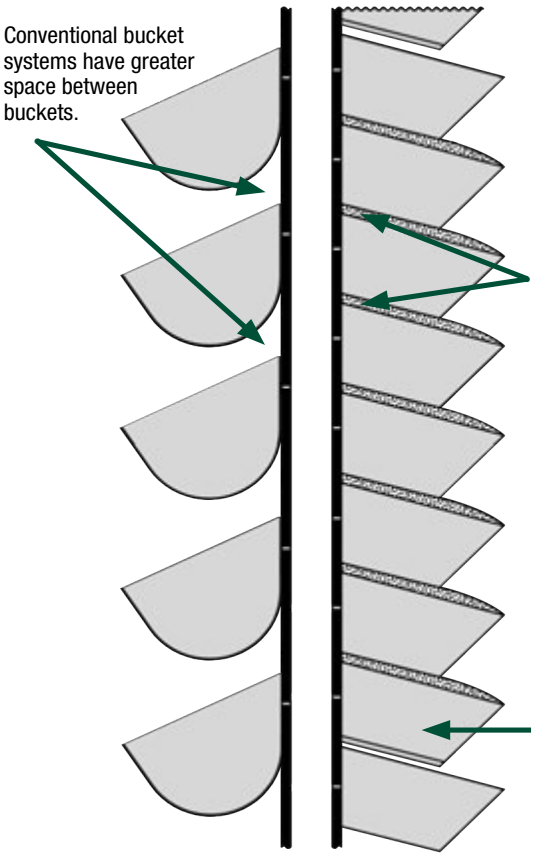
The system increases capacity of an existing elevator leg at a much lower cost than the purchase of a new bucket elevator. The GB system can also be used in new elevators to give the same capacity as larger elevators using traditional buckets, saving manufacturing costs and plant space.

GB Spidex™ buckets are particularly useful with sticky products which can clog up the bottoms of conventional buckets reducing capacity and increasing maintenance. With GB buckets, only the bucket with the bottom can become clogged, and capacity can be rated to allow for this. The remaining buckets, being bottomless, are self cleaning. Dense or extremly light materials are also handled easily as GB buckets have the ultimate vented design.

Whether your leg is handling grain, feed, meals, fertilizer, or industrial materials such as free flowing cement, 4B can design a GB Spidex™ bucket system to deliver the capacity you require.



4B offers a FREE bucket elevator design service, and all you have to do is complete one of our elevator leg questionnaires, then fax or email it back to 4B. Our engineering staff will provide you with a comprehensive review and quote for what your elevator leg can achieve in capacity.



Sample Capacity Between GB Spidex™ and CC Style Buckets:

- GB 12 x 6: 3-7/16" Spacing, 630 ft/min Belt at Actual Working Capacity = 12,600 CFH
- CC-HD 12 x 6: 8" Spacing, 630 ft/min Belt at Water Level +10% = 6,694 CFH

Super Starco™ Low Profile Steel Industrial Buckets

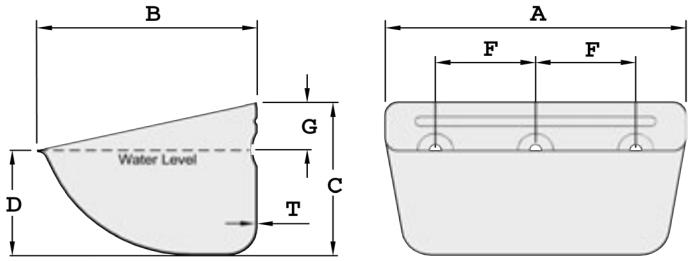
The deep low profile design of the Super Starco™ is the result of intensive research to achieve the maximum individual bucket capacity. Additional capacity has been engineered into the bucket while still maintaining the perfect fill and discharge characteristics of the original Starco™ bucket.

Material Seamless steel or stainless steel

Te□ □□Ran□e Contact 4B

□eatures
- Engineered for ultra capacity and long life
- Perfect fill and discharge
- Pressed seamless steel, no welds or joints that can hold residue

A□□lications Grain, feed, pellets, sticky materials, chemicals and light to medium industrial granular or powdered products.



		Dimensions (in.)				Standard Punching (in.)				Capacity (cu. in.)			
Nominal Size (in.)	Part #	Length A	Projection B	Back Depth C	Thickness (Gauge) T	# Holes	Bolt Size	Hole Center F	Dist. Down G	Water Level	Gross	Minimum Spacing (in.)	Weight (lb.)
3 x 3	SPS80-080	3-5/16	3-1/8	2-5/16	20	2	5/16	1-11/16	3/4	11	13	2-3/4	0.24
4 x 3-1/2	SPS100-090	4-3/16	3-1/2	2-5/8	20 or 16	2	5/16	2	3/4	15	20	3	0.26 - 0.40
4 x 4	SPS100-100	4-3/16	3-13/16	3-1/16	20	2	5/16	2	1	18	26	3-1/4	0.40
5 x 4	SPS120-100	4-15/16	4-1/8	3-1/16	20 or 16	2	5/16	2-5/8	1	27	35	3-1/4	0.49 - 0 .73
5 x 4-1/2	SPS130-120	5-7/16	4-3/4	3-9/16	18 or 16	2	5/16	2-3/4	1	39	50	3-3/4	0.66 - 0 .84
6 x 4-1/2	SPS140-110	5-3/4	4-7/16	3-9/16	16	2	5/16	2-3/4	1	25	46	3-3/4	0.95
6 x 5	SPS140-120	5-3/4	4-3/4	3-9/16	16 or 11	2	5/16	2-3/4 - 3-3/8*	1	40	53	3-3/4	0.88 - 1.76
7 x 5-1/2	SPS180-140	7-3/8	5-3/4	4-3/8	16 or 11	2	5/16	3-15/16	1-1/4	84	108	4-1/2	1.34 - 2.69
6 x 6	SPS160-140	6-1/2	5-3/4	4-3/8	16 or 11	2	5/16	3-15/16	1-1/4	73	96	4-1/2	1.21 - 2.43
8 x 6	SPS200-150	8-1/16	5-7/8	4-3/8	16 or 11	2	5/16	3-15/16 - 4*	1-1/4	93	122	4-1/2	1.70 - 3.4
9 x 6	SPS230-160/A	9-3/16	6-5/16	4-13/16	16, 14 or 11	3	5/16	2-3/4	1-1/4	131	165	5	1.90 - 2.54 - 3.79
9 x 6	SPS230-160/B	9-3/16	6-5/16	4-13/16	16, 14 or 11	2	3/8	4-3/4	1-1/4	131	165	5	1.90 - 2.54 - 3.79
9 x 6	SPS230-170	9-1/4	6-11/16	5-3/16	11	2	3/8	4-3/4	1-3/8	146	189	5-3/4	3.09
10 x 6	SPS260-165	10-1/4	6-1/2	5-3/16	14 or 11	3	3/8	3 - 3-1/8*	1-3/8	156	200	5-1/2	3.04 - 4.63
12 x 6	SPS300-165/A	12-1/8	6-1/2	5-5/16	14 or 11	3	5/16	3-15/16 - 4-1/16*	1-3/8	177	237	5-1/2	3.64 - 5.51
12 x 6	SPS300-165/B	12-1/8	6-1/2	5-5/16	14 or 11	3	3/8	3-15/16	1-3/8	177	237	5-1/2	3.64 - 5.51
13 x 6	SPS330-165	13-3/8	6-1/2	5-5/16	14 or 11	3	3/8	4-5/16 - 4-3/4*	1-1/2	214	269	5-1/2	4.19 - 6.28
14 x 6	SPS350-165/A	14-3/16	6-1/2	5-5/16	14 or 11	4	5/16	3-1/2	1-1/2	223	275	5-1/2	4.67 - 7.05
14 x 6	SPS350-165/B	14-3/16	6-1/2	5-5/16	14 or 11	3	3/8	4-3/4	1-1/2	223	275	5-1/2	4.67 - 7.05
9 x 6-1/2	SPS240-160/A	9-3/4	6-1/2	5-3/16	14 or 11	3	3/8	2-3/4 - 3*	1-3/8	146	188	5-1/2	2.98 - 4.40
9 x 6-1/2	SPS240-160/B	9-3/4	6-1/2	5-3/16	14 or 11	2	3/8	5-1/2	1-3/8	146	188	5-1/2	2.98 - 4.40
9 x 6-1/2	SPS240-160/C	9-3/4	6-1/2	5-3/16	14 or 11	2	3/8	4-3/4	1-3/8	146	188	5-1/2	2.98 - 4.40
11 x 6-1/2	SPS280-165	11-5/16	6-1/2	5-3/16	14 or 11	3	3/8	3-1/8	1-1/2	172	220	5-1/2	3.42 - 5.11
8 x 7	SPS200-180	8	7-3/16	5-1/2	14	2	3/8	4-5/16	1-3/4	132	173	5-3/4	2.82
10 x 7	SPS260-180	10-5/8	7-7/16	5-1/2	14	3	3/8	3-1/8	1-3/4	195	250	5-3/4	4.40
11 x 7	SPS280-180	11-7/16	7-5/16	5-1/2	14 or 11	3	3/8	3-1/8	1-1/2	201	267	5-3/4	3.75 - 5.62
12 x 7	SPS300-180/A	12-1/8	7-3/16	5-1/2	14 or 11	3	5/16	3-15/16 - 4-1/16*	1-3/8	214	275	5-3/4	3.97 - 5.95
12 x 7	SPS300-180/B	12-1/8	7-3/16	5-1/2	14 or 11	3	3/8	3-15/16	1-3/8	214	275	5-3/4	3.97 - 5.95
13 x 7	SPS330-180	13-3/8	7-3/16	5-1/2	14	3	3/8	4-5/16 - 4-3/4*	1-1/2	244	317	5-3/4	4.40
14 x 7	SPS350-180	14-1/4	7-3/16	5-1/2	14 or 11	3	3/8	4-3/4	1-1/2	256	330	5-3/4	4.63 - 6.94
15 x 7-1/2	SPS370-180	15-3/16	7-11/16	5-1/2	12	4	3/8	3-1/2	1-1/2	299	391	5-3/4	6.17
10 x 8	SPS250-215	10-1/8	8-7/16	6-3/8	14	3	3/8	3-5/16	2	250	323	6-3/4	4.10
11 x 8	SPS280-215	11-1/2	8-7/16	6-3/8	14, 13 or 12	3	3/8	3-1/8	2	287	367	6-3/4	4.81 - 5.11 - 6.30
12 x 8	SPS300-215	12-3/16	8-11/16	6-3/8	14 or 12	3	3/8	3-15/16	2	317	409	6-3/4	5.11 - 7.67
13 x 8	SPS330-215	13-3/8	8-7/16	6-3/8	12	3	3/8	4-3/4	2	345	439	6-3/4	6.55
14 x 8	SPS350-215	14-1/4	8-7/16	6-3/8	12	3	3/8	4-3/4	2	358	464	6-3/4	7.12
15 x 8	SPS370-215	15	8-7/16	6-3/8	12 or 11	4	3/8	3-1/2	2	384	494	6-3/4	7.31 - 8.82
16 x 8	SPS440-215	17-3/4	8-7/8	6-1/2	12 or 11	4	3/8	4-5/16	2	454	600	6-3/4	8.64 - 10.32
18 x 8	SPS450-215	18-1/4	8-7/16	6-3/8	12 or 11	5	3/8	3-7/16 - 3-1/2*	2	470	616	6-3/4	8.82 - 10.58
19 x 8	SPS470-215	18-15/16	8-7/8	6-3/8	12 or 11	4	3/8	4-3/4	2	492	644	6-3/4	9.13 - 10.91
20 x 8	SPS500-215	20-1/4	8-7/16	6-3/8	12 or 11	5	3/8	3-15/16	2	537	687	6-3/4	9.42 - 11.31
24 x 8	SPS630-215	24-13/16	8-11/16	6-7/16	11	7	3/8	3-1/2	2	666	872	6-3/4	16.31

- A, B & C part #'s designate different hole patterns

* Slotted bolt holes for alternate hole centers

*All sizes have recessed bolt holes, dome washers recommended (pg 49)

Starco™ Jumbo (SJ) Low Profile Industrial Buckets

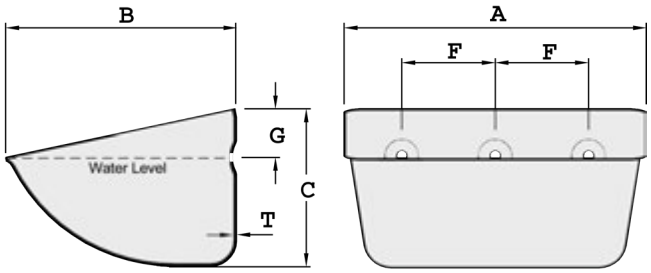
Deep drawn, high capacity pressed steel elevator bucket. For use with both standard rubber and steel core web belting. Designed to replace large fabricated buckets on industrial elevators, particularly cement and sand.

Material Seamless steel

Temp. Range Contact 4B

Features
- Pressed seamless steel, no welds or joints
- Increased capacity
- High temperature applications
- Clean discharge

Applications Agricultural and food products, light to heavy industrial granules and powders, especially cement.



		Dimensions (in.)				Standard Punching (in.)				Capacity (cu. in.)			
Nominal Size (in.)	Part #	Length A	Projection B	Back Depth C	Thickness (Gauge) T	# Holes	Hole Size	Hole Center F	Dist. Down G	Water Level	Gross	Minimum Spacing (in.)	Weight (lb.)
13 x 10	SJ330-250/3.0	13-3/8	10-1/4	7-1/2	11	3	9/16	3-1/8	2-1/8	439	586	7-7/8	9.92
13 x 10	SJ330-250/4.0	13-3/8	10-1/4	7-1/2	8	3	9/16	3-1/8	2-1/8	439	586	7-7/8	13.23
15 x 10	SJ370-250/3.0	15	10-1/4	7-1/2	11	4	9/16	3-1/8	2-1/8	507	659	7-7/8	11.24
15 x 10	SJ370-250/4.0	15	10-1/4	7-1/2	8	4	9/16	3-1/8	2-1/8	507	659	7-7/8	13.45
18 x 10	SJ470-250/3.0	18-7/8	10-1/4	7-1/2	11	5	9/16	3-1/8	2-1/8	641	854	7-7/8	14.38
18 x 10	SJ470-250/4.0	18-7/8	10-1/4	7-1/2	8	5	9/16	3-1/8	2-1/8	641	854	7-7/8	18.96

- All sizes have recessed bolt holes, dome washers recommended

Starco™ Jumbo & 4B Polysur® Steel Core Web Belting High Capacity System

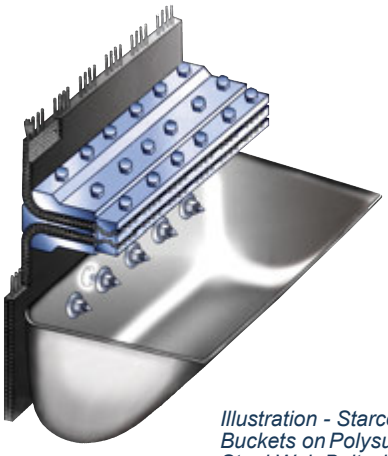


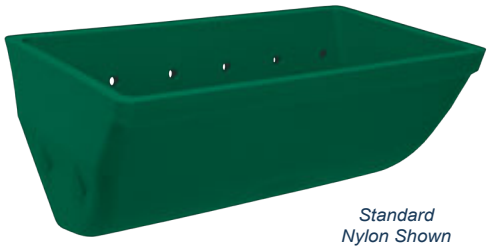
Illustration - Starco™ Jumbo Buckets on Polysur® Steel Web Belt with BC Series Fastener

Compared to traditional chain, belt and bucket elevators, Polysur® Steel Web Core Belting fitted with Starco™ Jumbo buckets offer you:

- Lower capital investment
- Save up to 33% on component costs
- Increase capacity and efficiency
- Throughputs up to 1,000 TPH plus
- Belt strength up to 2,280 PIW
- Virtually no belt stretching
- No belt misalignment
- Lower maintenance costs
- Longer trouble-free life
- High temperature applications

JUMBO™ CC-S® Ultra Heavy Duty Industrial & Agricultural Buckets

MADE IN THE USA



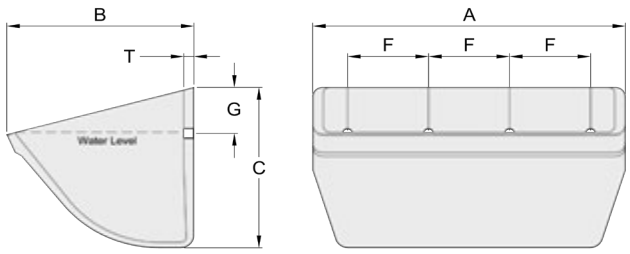
Standard Nylon Shown

The JUMBO™ CC-S® is an ultra heavy duty version of the CC-S heavy duty elevator bucket. It is intended for the most severe environments such as frac sand, cement, fertilizer and applications with high temperature materials. It offers the greatest capacity and thickest front lip, corners and walls available. The unique Iceberg® Edge front face delivers impact resistance and long life. It shares the proven geometry and design features of the CC-S, including the benefit of stackability, which saves on freight costs and storage space. The JUMBO™ CC-S is molded from virgin nylon and urethane (HDPE also available) for ultra heavy duty strength and durability.

Material Virgin nylon, urethane or HDPE

Temp. Range
Nylon: -60 °F to 300 °F
Urethane: -60 °F to 180 °F
HDPE: -60 °F to 180 °F

Features
- Maximum capacity
- Ultra tough and flexible
- Thickest front lip, walls and corners for long life
- Stackable design for efficient shipping and storage



U.S. Patent D496-052
Other Patents Pending

Applications Severe environments handling rough and abrasive materials such as frac sand, cement and fertilizer.

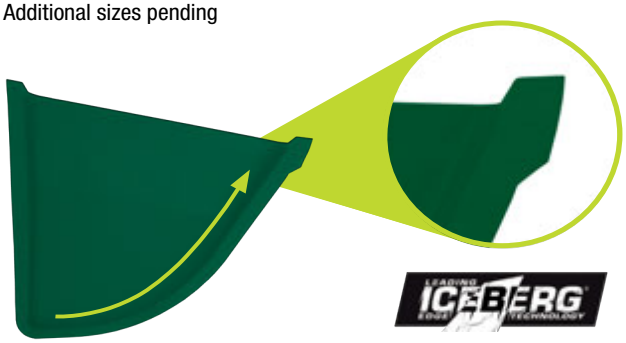
Standard Sizes

		Dimensions (in.)				Standard Punching (in.)				Capacity (cu. in.)						
Nominal Size (in.)	Part #	Length A	Projection B	Back Depth C	Back Wall Thickness T	# Holes	Bolt Size	Hole Center F	Dist. Down G	Water Level	Water Level +10%	Minimum Spacing (in.)	Nylon Weight (lb.)	Urethane Weight (lb.)	HDPE Weight (lb.)	Package Quantity
14 x 8	JCC-S148/*	14-7/8	9-1/4	8-5/16	0.51	5	5/16	3	2-3/8	451	496	8-1/2	5.52	6.48	4.80	9
16 x 8	JCC-S168/*	17	9-1/4	8-5/16	0.51	6	5/16	2-7/8	2-3/8	522	574	8-1/2	6.21	7.29	5.40	9
18 x 8	JCC-S188/*	19	9-1/4	8-5/16	0.51	6	5/16	3-1/8	2-3/8	594	653	8-1/2	6.90	8.10	6.00	9
20 x 8	JCC-S208/*	21	9-1/4	8-5/16	0.51	6	5/16	3-1/2	2-3/8	662	728	8-1/2	7.36	8.64	6.40	9
22 x 8	JCC-S228/*	23	9-1/4	8-5/16	0.53	6	5/16	4	2-3/8	726	799	8-1/2	8.28	9.72	7.20	9
24 x 8	JCC-S248/*	25	9-1/4	8-5/16	0.53	7	5/16	3-1/2	2-3/8	791	870	8-1/2	8.91	10.46	7.75	9

Low Profile Sizes

		Dimensions (in.)				Standard Punching (in.)				Capacity (cu. in.)						
Nominal Size (in.)	Part #	Length A	Projection B	Back Depth C	Back Wall Thickness T	# Holes	Bolt Size	Hole Center F	Dist. Down G	Water Level	Water Level +10%	Minimum Spacing (in.)	Nylon Weight (lb.)	Urethane Weight (lb.)	HDPE Weight (lb.)	Package Quantity
14 x 8	JCC-S148/LP/*	14-7/8	9-1/4	6-3/4	0.51	5	5/16	3	1-1/2	451	7	8-1/2	4.97	5.83	4.32	12
16 x 8	JCC-S168/LP/*	17	9-1/4	6-3/4	0.51	6	5/16	2-7/8	1-1/2	522	7	8-1/2	5.70	6.70	4.96	12
18 x 8	JCC-S188/LP/*	19	9-1/4	6-3/4	0.51	6	5/16	3-1/8	1-1/2	594	7	8-1/2	6.42	7.53	5.58	12
20 x 8	JCC-S208/LP/*	21	9-1/4	6-3/4	0.51	6	5/16	3-1/2	1-1/2	662	7	8-1/2	6.84	8.03	5.95	12
22 x 8	JCC-S228/LP/*	23	9-1/4	6-3/4	0.53	6	5/16	4	1-1/2	726	7	8-1/2	7.71	9.05	6.70	12
24 x 8	JCC-S248/LP/*	25	9-1/4	6-3/4	0.53	7	5/16	3-1/2	1-1/2	791	7	8-1/2	8.28	9.72	7.20	12

* To specify material type, use 'N' for nylon or 'PU' for urethane at the end of the part number (example: 14 x 8 nylon = JCC-S148/N)
- Actual dimensions may vary slightly depending on specified raw material
- Additional sizes pending



Unique Iceberg® Edge front lip offers superior material thickness for the ultimate in wear resistance and long life. The triangular base creates a stiffening ridge across the front face of the bucket, preventing bowing and ensuring a consistent discharge over the life of the bucket.

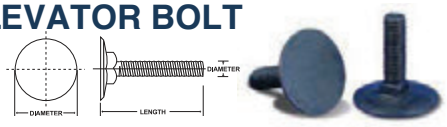
JUMBO CC-S® ELEVATOR BUCKETS

ELEVATOR BOLTS & ACCESSORIES

ELEVATOR BOLTS

STANDARD ELEVATOR BOLT

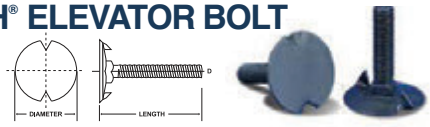
Standard #1 Norway
- Carbon
- 302 Stainless Steel
- Zinc Plated



STANDARD ELEVATOR BOLT			
SIZE, INCHES	WEIGHT / 100 PCS., LBS.	CASE QTY	KEG BULK QTY
1/4 x 3/4	2.94	1200	2000
1/4 x 1 *	3.24	1200	1700
1/4 x 1-1/4 *	3.43	1200	1500
1/4 x 1-1/2 *	3.73	1200	1300
1/4 x 1-3/4	3.98	1200	1200
1/4 x 2	4.29	1200	1000
1/4 x 2-1/4	4.88	600	900
1/4 x 2-1/2	4.92	600	800
5/16 x 3/4	4.76	1200	1200
5/16 x 1 *	5.05	1200	1000
5/16 x 1-1/4 *	5.55	1200	900
5/16 x 1-1/2 *	6.38	600	800
5/16 x 1-3/4	6.50	600	700
5/16 x 2 *	7.12	600	600
5/16 x 2-1/4	7.43	600	550
5/16 x 2-1/2	7.78	600	500
3/8 x 1-1/4	6.54	600	750
3/8 x 1-1/2	7.10	600	700
3/8 x 1-3/4	7.66	600	600
3/8 x 2 *	8.31	600	500
3/8 x 2-1/4	9.35	600	450
3/8 x 2-1/2	9.83	600	400
3/8 x 3	10.79	600	300

SABRE-TOOTH® ELEVATOR BOLT

Sabre-Tooth®
- Carbon
- 302 Stainless Steel
- Zinc Plated



SABRE-TOOTH ELEVATOR BOLT			
SIZE, INCHES	WEIGHT / 100 PCS., LBS.	CASE QTY	KEG BULK QTY
1/4 x 3/4	2.94	1200	2000
1/4 x 1 *	3.24	1200	1700
1/4 x 1-1/4 *	3.43	1200	1500
1/4 x 1-1/2 *	3.73	1200	1300
1/4 x 1-3/4	3.98	1200	1200
1/4 x 2 *	4.29	1200	1000
1/4 x 2-1/4	4.88	600	900
1/4 x 2-1/2	4.92	600	800
5/16 x 3/4	4.76	1200	1200
5/16 x 1 *	5.05	1200	1000
5/16 x 1-1/4 *	5.55	1200	900
5/16 x 1-1/2 *	6.38	600	800
5/16 x 1-3/4 *	6.50	600	700
5/16 x 2 *	7.12	600	600
5/16 x 2-1/4	7.43	600	550
5/16 x 2-1/2	7.78	600	500
3/8 x 1-1/4	6.54	600	750
3/8 x 1-1/2	7.10	600	700
3/8 x 1-3/4	7.66	600	600
3/8 x 2 *	8.31	600	500
3/8 x 2-1/4	9.35	600	450
3/8 x 2-1/2	9.83	600	400
3/8 x 3	10.79	600	300

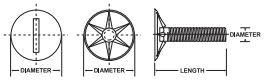
SABRE-TOOTH® BOLT (POINTED)

Sabre-Tooth®
- Carbon Steel

SABRE-TOOTH ELEVATOR BOLT			
SIZE, INCHES	WEIGHT / 100 PCS., LBS.	CASE QTY	KEG BULK QTY
1/4 x 1-1/4	2.52	1800	2100
1/4 x 1-1/2	2.78	1300	1800
5/16 X 1-1/4	4.60	900	1200
5/16 X 1-1/2	4.15	1000	1500

RELIANCE ELEVATOR BOLT

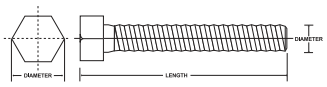
#3 Slotted Head
- Carbon Steel
- Zinc Plated



RELIANCE ELEVATOR BOLT			
SIZE, INCHES	WEIGHT / 100 PCS., LBS.	CASE QTY	KEG BULK QTY
1/4 x 3/4	2.7	1200	2400
1/4 x 1	1.9	1800	2500
1/4 x 1-1/4	3.0	1200	1800
1/4 x 1-1/2	3.5	1200	1800
5/16 x 1-1/4	4.9	1200	1200

HEX HEAD BOLT

- Zinc Plated • Grade 5
- Used with Chain Attachments



HEX-HEAD ELEVATOR BOLT			
SIZE, INCHES	WEIGHT / 100 PCS., LBS.	CASE QTY	KEG BULK QTY
1/2 X 1	8.50	1200	1700
1/2 x 1-1/4	9.45	1200	1500
1/2 x 1-1/2	10.70	1200	1300
3/8 x 1	4.15	1200	1700
3/8 x 1-1/4	4.80	1200	1500
3/8 x 1-1/2	5.65	1200	1300

*Available in 302 Stainless Steel

Continually applies metallography tests to our fasteners to ensure the finest quality parts are upheld. ASTM certificates are on file and available upon request.

MAXI-LIFT BELT SPLICES

Elevator Belt Fastening Systems

MAXI-SPLICE SUPER & ULTRA

The **MAXI-SPLICE SUPER** and **ULTRA** are the next generation of elevator belt splices. The unique design embraces our Maxi-Splice three piece construction, with the addition of an NBR rubber wedge to protect against belt wear for long life. Each is designed with a larger radius for improved belt life. The smaller **ULTRA** features a single bolt design. The larger **SUPER** has two bolts for additional clamping force and plate friction.

MAXI-SPLICE SUPER

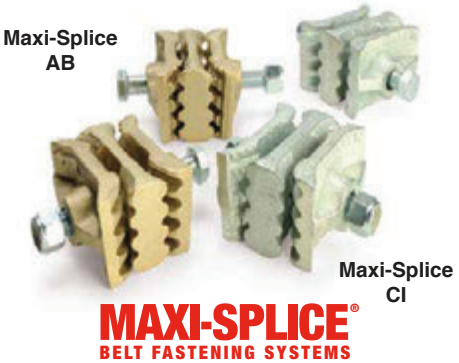
- **High Grade, Lightweight Aluminum Construction**
- **NBR Rubber Wedge Protects Backside of Belt**
- **Weight: 4.8 lbs. each**
- **Two Bolt Design**
- **3/4" x 5" and 3/4" x 5-1/2"Hex Head Bolts**
- **Usable on Belts Rated 800-1200 PIW tensile.**

MAXI-SPICE ULTRA

- **High Grade, Lightweight Aluminum Construction**
- **NBR Rubber Wedge Protects Backside of Belt**
- **Weight: 1.93 lbs. each**
- **One Bolt Design**
- **5/8" x 4-1/2" Hex Head Bolt**
- **Rated for belts up to 800 PIW**

MAXI-SPLICE® AB & CI

- The MAXI-SPLICE is a mechanical clamping device with a simple 3-piece construction. The design is for use on PVC and rubber belting.
- Maximum operating temperatures: AB: 500°F, CI: 600°F.
- Each splice set accommodates two inches of belt width.
- It is tested and approved by leading manufacturers of PVC and rubber belting.



MAXI-SPLICE AB

- **9/16" Diameter Grade 5 Bolt**
- **9/16" x 5" Hex Head Bolts**
- **Non-Ferrous Metal of Very High Tensile Strength**
- **Usable On Belts of up to 800 PIW Tensile**
- **Non-Sparking, Non-Corroding & Non-Rusting**
- **Bronze Color**
- **Weight: 2.9 Lbs. Each**

MAXI-SPLICE CI

- **Ferrous Metal of Moderately High Tensile Strength**
- **1/2" x 5" Hex Head Bolts**
- **Usable on Belts of Up to 600 PIW Tensile**
- **Silver Color**
- **Weight: 2.6 Lbs. Each**

WARNING: DO NOT USE MAXI-SPLICE ON MANLIFTS!

Please read all instructions before installing any Maxi-Splice product. Instructions can be found at www.maxilift.com. Failure to follow installation instructions may result in splice failure. As with any belt splice, continuous, regular inspections are required or failure can occur.

Never mix Maxi-Splice products on a single installation. Reduced or uneven clamping pressure may occur compromising splice integrity and could result in splice failure.

Maxi-Lift neither solicits nor recommends the use of any Maxi-Splice belt clamp for splicing man-lift belts. Maxi-Splices were neither designed for nor tested for this purpose. Any installation of a Maxi-Splice product for this purpose may result in splice failure causing serious bodily harm or even death. Do not use on steel cable belts.

Do not re-use nylon insert lock nuts when reinstalling Maxi-Splices. Please use new nylock nuts for reinstallation. Replacements are available from Maxi-Lift.

For applications exceeding 250° F, nylon insert lock nuts may not be used, as this temperature range exceeds the manufacturer's threshold for nylon integrity. Compression locking nuts should be utilized instead.

While the AB and CI Maxi-Splice may be used on wing pulleys, they may contribute to wear on the backside of the belt at the splice. It is the user's responsibility to inspect the splice at regular maintenance intervals to prevent failure. Noise may also be heard as the splice contacts the wings of the pulley.

DISCLAIMER: The information provided in this catalog may include inaccuracies or typographical errors. Changes are periodically made to the information contained in this catalog. Updated information / changes can be made at any time. Specific questions about the information contained in this catalog can be confirmed with

*All Engineering and technical data provided by Maxi-Lift or Maxi-Lift employees is for general reference only and does not guarantee perfect discharge, or required throughput capacities (bushels per hour, tons per hour, etc) for all bucket elevators including all range of speeds shown within the speed range. We also do not guarantee any impact on material damage as material is moved through a bucket elevator.

Tolerances: Thermal plastic molded products will vary slightly in size, capacity and weight.

Manufacturer recommends storing plastic buckets away from exposure to the sun, as its UV rays and other general weather conditions will diminish the life the product. Exposure to outside weather elements voids all warranties.

MAXI-LIFT BELT SPLICES

Splice Comparison

BELT SPLICE TECHNICAL DATA SHEET

Maxi-Lift Inc.® ELEVATOR SPLICES


MAXI-SPLICE®


MAXI-SPLICE®


MAXI-SPLICE® ULTRA


MAXI-SPLICE® SUPER


TITAN THE ULTIMATE BELT SPLICE

PART DETAILS	Product	MAXI-SPLICE	MAXI-SPLICE	MAXI-SPLICE	MAXI-SPLICE	MAXI-SPLICE
	Brand	CI	AB	ULTRA	SUPER	TITAN
	Part No.	CI5	AB5	ULTRA5	SUPER5	TITAN
SPLICE CONSTRUCTION	Color	Silver	Manganese Bronze	Silver	Silver	Silver
	Construction	3 Piece Mechanical Clamping Device	3 Piece Mechanical Clamping Device	3 Piece Mechanical Clamping Device with NBR (Nitrile) Rubber Wedge	3 Piece Mechanical Clamping Device with NBR (Nitrile) Rubber Wedge	3 Piece Mechanical Clamping Device with HNBR Rubber Wedge
	Metal Material	Galvanized Cast Iron	Manganese Bronze	Aluminum	Aluminum	Aluminum
	Metal Description	Ferrous Cast Iron	Non-Ferrous Bronze	High Grade, Lightweight Aluminum	High Grade, Lightweight Aluminum	High Grade, Lightweight Aluminum
	Rubber Material	None	None	Replaceable NBR Rubber Wedge	Replaceable NBR Rubber Wedge	Replaceable HNBR Rubber Wedge
SPLICE SPECIFICATIONS	Weight (lbs.)	2.60	2.90	1.93	4.80	Per Application
	Length	3"	3"	4-1/2"	6-1/4"	6"
	Width	2"	2"	2-1/2"	3"	Per Application
	PIW Rated	Up to 600 PIW Tensile	Up to 800 PIW Tensile	Up to 800 PIW Tensile	800-1200 PIW Tensile	Over 1200 PIW
	Recommended Belt Thickness	1/4" to 5/8"	1/4" to 5/8"	1/4" to 5/8"	3/8" to 3/4"	Per Application
BOLT SPECIFICATIONS	No of Bolts	1	1	1	2	Per Application
	Bolt Grade	Grade 5 Hex Head Bolt	Grade 5 Hex Head Bolt	Grade 5 Hex Head Bolt	Grade 5 Hex Head Bolt	M16 10.9 Hex Head Bolt
	Bolt Diameter (Inches)	1/2"	9/16"	5/8"	3/4"	Per Application
	Bolt Length (Inches)	5"	5"	4-1/2"	5" and 5-1/2"	Per Application
	Washers	Yes	Yes	Yes	Yes	Yes
	Nuts	Nylock	Nylock	Nylock	Nylock	Oval Lock Nut
	Recommended Torque *	75 ft./lbs.	100 ft./lbs.	125 ft./lbs.	150 ft./lbs.	Per Application
	Template Tape Included	Yes	Yes	Yes	Yes	Requires Special Template
SHIMS	Required Shims Per Belt Thickness	N/A	N/A	Under 5/16" - No Shims 5/16" to 3/8" - 1 Shim 3/8" to 5/8" - 2 Shims	Under 1/2" - No Shims 1/2" to 5/8" - 1 Shim 5/8" to 3/4" - 2 Shims	N/A
TEMPERATURE RATINGS	Max. Operating Temps	600° F / 350° C	500° F / 260° C	200° F / 93° C (NBR Rubber Wedge Limiting Factor) - Alternative Wedges Available for Higher Temperatures	200° F / 93° C (NBR Rubber Wedge Limiting Factor) - Alternative Wedges Available for Higher Temperatures	320° F / 160° C (HNBR Hydrogenated Nitrile Butadiene Rubber Wedge Limiting Factor)
	Nylock Nut Max. Temp	250° F	250° F	250° F	250° F	320° F
MINIMUM HEAD PULLEY	Agricultural (High Speed) **	12"	12"	24"	30"	48"
	Industrial (Centrifugal/Gravity)	12"	12"	20"	36"	48"
BUCKET PROJECTION	Minimum Recommended	4"	4"	5"	7"	8"
FEATURES/ BENEFITS		Strong, Standard, Mechanical Splice	Non-Sparking, Non-Corroding, Non-Rusting	Non-Sparking, Non-Corroding, Non-Rusting, Longer Belt Life	Non-Sparking, Non-Corroding, Non-Rusting, Longer Belt Life	Non-Sparking, Non-Corroding, Non-Rusting, Longer Belt Life

* When torquing splice bolts, do not use impact wrench as over-torquing will cause both belt and splice failure. In addition, under torquing could lead to insufficient clamp pressure and could create splice failure, and tracking issues. ** On smaller pulleys, the metal shims must be installed correctly, or the rubber wedge could fail.

Customer is responsible for checking the splices on a consistent basis for correct torque during splice operation. Do not reuse hardware (bolts, nylock or oval nuts) when reinstalling splices. Please always read Maxi-Lift Installation Instructions and apply template tape when installing splices for correct installation. See website for more details.

Do not use Maxi-Lift splices on any type of belt manlifts.

U.S. Utility Patent: "U.S. Pat. 9,605,730 B2. U.S. Design Patent: "U.S. Des. Pat. D724,289 S. European Patent Application No. 15154390.7

ELEVATOR BELTS

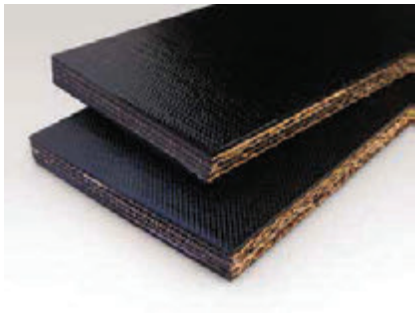
GRAIN & FOOD BELTING

RUBBER GRAIN & PVC BELTING

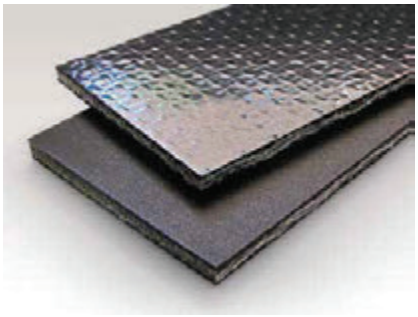
PATHFINDER PLUS SUPREME - MSHA 2G / OSHA 284 - Premium rubber grain belt with the highest oil resistance and lowest stretch, designed for the grain industry where oily grains and controlled mineral or vegetable oil dust suppressive sprays come in contact with the belt.

SOR-SC-FR - MSHA 2G / OSHA ISO 284 - Superior Oil Resistant, Static Conductive and Flame Resistant grain rubber belt ideal for handling crushed grains, rice, fertilizers, animal feeds and oil treated grains.

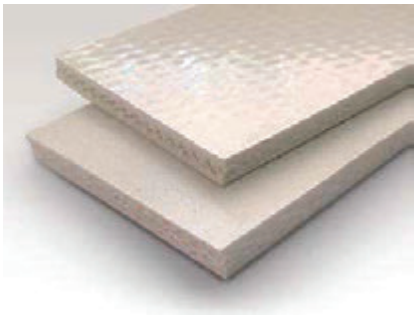
PVC, BLACK & WHITE - MSHA 2G / OSHA 284 - General purpose solid woven PVC cover x cover belt, with FDA and PVGE options, that is ideal for handling whole grains, rice, fertilizers, refined sugars and animal feeds.



RUBBER (Premium) 3/375, 4/500, 3/600, 4/800
(Standard) 220, 330, 440, 600, 800



PVC (Standard) 200, 250, 350, 450, 600



PVC (Food & Grain) 200, 350, 400
White & Black. Also available in FDA White

RUBBER GRAIN & PVC BELTING (STANDARD STOCK)**

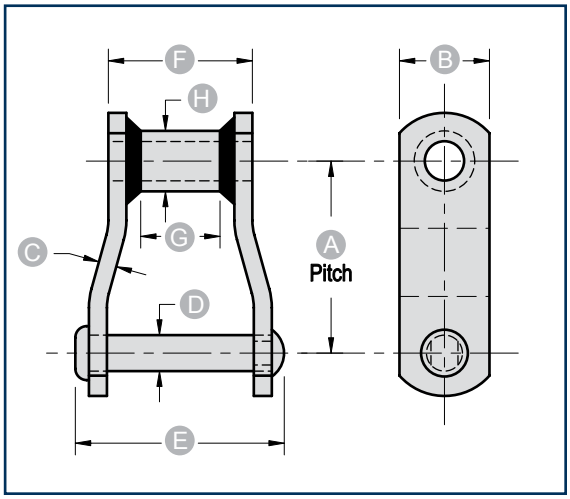
Application	Style	Material	Grade	Rated Working Tension (lbs/in)	Rated Working Tension (N/mm)	Nominal Overall Gauge (in)	Nominal Overall Gauge (mm)	Nominal Weight (PIW)	Nominal Weight (kg/sq. m)	Suggested Minimum Pulley (in)	Suggested Minimum Pulley (mm)	Maximum Bucket Projection (in)	Maximum Bucket Projection (mm)
Grain	PF 3 / 375	Rubber	Premium	375	650	0.303	7.70	0.175	10.25	16	400	9	229
	PF 4 / 500	Rubber	Premium	500	875	0.354	8.99	0.2	11.71	20	500	11	279
	PF 3 / 600	Rubber	Premium	600	1050	0.376	9.55	0.205	12.00	18	450	11	279
	PF 4 / 800	Rubber	Premium	800	1400	0.465	11.81	0.24	14.05	20	500	12	305
	2 / 220	Rubber	Standard	220	400	0.25	6.35	0.145	8.49	14	350	6	152
	3 / 330	Rubber	Standard	330	600	0.3	7.62	0.34	19.91	16	400	8	203
	4 / 440	Rubber	Standard	440	800	0.351	8.92	0.2	11.71	20	500	10	254
	3 / 600	Rubber	Standard	600	1050	0.365	9.27	0.205	12.00	20	500	10	254
	4 / 800	Rubber	Standard	800	1400	0.435	11.05	0.46	26.94	30	750	11	279
	PVC 200	PVC / PVGE	Standard	200	350	0.24	6.10	0.133	7.79	4	100	5	127
	PVC 250	PVC / PVGE	Standard	250	430	0.26	6.6	0.146	8.54	6	150	6	150
	PVC 350	PVC / PVGE	Standard	350	600	0.3	7.62	0.167	9.78	8	200	8	203
	PVC 450	PVC / PVGE	Standard	450	800	0.36	9.14	0.2	11.71	10	250	9	229
	PVC 600	PVC / PVGE	Standard	600	1050	0.375	9.53	0.23	13.47	12	300	10	254
Food / Grain	PVC 200	PVC	White	200	350	0.24	6.10	0.133	7.79	4	100	5	127
	PVC 350	PVC	White	350	600	0.3	7.62	0.167	9.78	8	200	8	203
	PVC 450	PVC	White	450	800	0.36	9.14	0.2	11.71	10	250	9	229

*Belt tables are for general use only, specific manufacturer's data is available upon request.
**** Items above are standard stock. Other belts may be in stock.**

WELDED STEEL CHAIN

Welded Steel Mill Chains (Offset Sidebars) are recommended for most conveying and elevating applications in which a high strength steel rollerless chain is required. A complete line on attachments and optional heat treatment make them easily adaptable to a wide variety of applications.

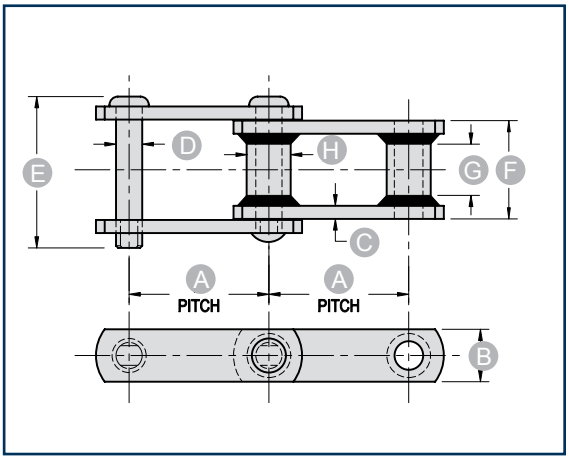
- All pins are through-hardened
- 1" & larger pins are further induction hardened
- Pre-Greased Rivets available upon request on all sizes



Part Number	A AVG Pitch	Average Ultimate Strength (pounds)	WH* Average Ultimate Strength (pounds)	B Sidebar Height	C Sidebar Thickness	D Rivet Diameter	E Overall Width	F Length of Bearing	G Max. Sprocket Thickness	H Barrel O.D.	Links per Foot	AVG Weight per Foot (pounds)
WS78**	2.609	29,800	34,000	1 ¼	¼	½	2 7/16	1 5/8	¾	0.84	4.6	3.9
WR78	2.609	29,800	34,000	1 ¼	¼	½	3	2	1	0.84	4.6	4.1
WR78XHD	2.640	32,700	38,500	1 ¼	⅜	9/16	3 9/32	2	1	1.05	4.5	6.3
WR78-4	4.000	29,800	34,000	1 ¼	¼	½	3	2	1	0.84	3	3.4
WR82	3.075	32,780	39,000	1 ¼	¼	9/16	3 5/16	2 ¼	1 ⅜	1.05	3.9	4.7
WR82XHD	3.075	50,400	60,000	1 ½	⅜	¾	3 13/16	2 ⅜	1 ⅛	1.25	3.9	8.4
WR124	4.000	50,400	60,000	1 ½	⅜	¾	4 ¼	2 13/16	1 ½	1.25	3	8
WR124XHD	4.050	85,500	121,500	2	½	1	4 ⅞	3	1 ½	1.66	3	14.5
WR111	4.760	50,400	60,000	1 ¾	⅜	¾	4 13/16	3 ⅜	2 ¼	1.25	2.5	8.6
WR106	6.000	50,400	60,000	1 ½	⅜	¾	4 ¼	2 13/16	1 ½	1.25	2	6.5
WR106XHD	6.050	85,500	121,500	2	½	1	4 ⅞	3	1 ½	1.66	2	11.5
WR132	6.050	85,500	121,500	2	½	1	6 ¼	4 7/16	3 ⅛	1.66	2	13.5
WR132XHD	6.050	118,500	142,000	2	⅝	1	6 ¾	4 11/16	3 ⅛	1.66	2	15.9
WR150	6.050	120,000	144,000	2 ½	½	1	6 ¼	4 7/16	2 ¾	1.66	2	15.5

"C-type" straight sidebar chain has the same general characteristics as offset sidebar construction. It is recommended for reversable conveyors and allows for the easiest in-field attachment welding.

- All pins are through-hardened
- 1" & larger pins are further induction hardened
- Pre-Greased Rivets available upon request on all sizes



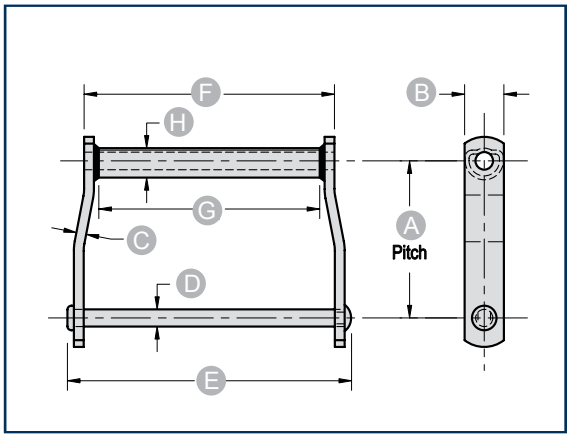
Part Number	A AVG Pitch	Average Ultimate Strength (pounds)	WHC* Average Ultimate Strength (pounds)	B Sidebar Height	C Sidebar Thickness	D Rivet Diameter	E Overall Width	F Length of Bearing	G Max. Sprocket Thickness	H Barrel O.D.	Links per Foot	AVG Weight per Foot (pounds)
WRC131	3.075	50,400	57,000	1 ½	⅜	¾	3 9/16	2 ⅛	1 ⅛	1.25	3.9	8.4
WRC124	4.000	50,400	57,000	1 ½	⅜	¾	4 ¼	2 13/16	1 ½	1.25	3	8
WRC124XHD	4.050	85,500	122,700	2	½	1	4 ⅞	3	1 ½	1.66	3	14.5
WRC111	4.760	50,400	57,000	1 ¾	⅜	¾	4 13/16	3 ⅜	2	1.25	2.5	8.6
WRC110	6.000	50,400	57,000	1 ½	⅜	¾	4 ¼	2 13/16	1 ½	1.25	2	6.4
WRC110XHD	6.050	85,500	122,000	2	½	1	4 ⅞	3	1 ½	1.66	2	11.5
WRC132	6.050	85,500	122,000	2	½	1	6 ¼	4 7/16	3 ⅛	1.66	2	13
WRC132XHD	6.050	118,500	142,000	2	⅝	1	6 ¾	4 11/16	3 ⅛	1.66	2	15.9
WRC150	6.050	120,000	144,000	2 ½	½	1	6 ¼	4 7/16	3 ⅛	1.66	2	15.5
WRC150XHD	6.050	122,500	148,000	2 ½	⅝	1	6 ¾	4 11/16	3 ⅛	1.66	2	18

All dimensions shown in inches unless noted otherwise

*WHC denotes Heat-Treated

Using select grade alloy steels these heavy duty chains are manufactured in North America to high standards. Our unique barrel forming process ensures consistent quality, reducing potential rivet wear and providing high strength and long service life. All heat treating and attachment options are available, as well as reverse barrel design.

- Standard zone induction-hardened rivets for ¾" and ⅞" diameters
- Standard through-hardened rivets for 1" diameters



Part Number	A AVG Pitch	Average Ultimate Strength (pounds)	WHC* Average Ultimate Strength (pounds)	B Sidebar Height	C Sidebar Thickness	D Rivet Diameter	E Overall Width	F Length of Bearing	G Max. Sprocket Thickness	Links per Foot	AVG Weight per Foot (pounds)
WD102	5.000	51,000	61,000	1 ½	⅜	¾	9 ¼	7 ¾	6 ⅜	2.4	12
WD104	6.000	51,000	61,000	1 ½	⅜	¾	6 ¾	5 ⅜	4 ⅛	2	8.6
WD110	6.000	51,000	61,000	1 ½	⅜	¾	11 ¾	10 ¼	9	2	12
WD112	8.000	51,000	61,000	1 ½	⅜	¾	11 ¾	10 ¼	9	1.5	10
WD116	8.000	55,000	69,000	1 ¾	⅜	¾	15 ½	14 ⅛	13	1.5	12.9
WD118	8.000	85,000	102,000	2	½	⅞ or 1	16 ⅝	14 ⅞	13 ¼	1.5	18
WD118XHD	8.000	122,000	146,000	2	⅝	1	17 ⅜	15 ⅛	13 ¼	1.5	21
WD120	6.000	85,000	102,000	2	½	⅞ or 1	12	10 ¼	8 ¾	2	18
WD120XHD	6.000	122,000	146,000	2	⅝	1	12 ¾	10 ½	8 ¾	2	21
WD122	8.000	85,000	102,000	2	½	⅞ or 1	12	10 ¼	8 ¾	1.5	15
WD122XHD	8.000	125,000	150,000	2	⅝	1	12 ¾	10 ½	8 ¾	1.5	17.6
WD480	8.000	85,000	102,000	2	½	⅞ or 1	14 ½	12 ¾	11	1.5	16.9
WD480XHD	8.000	122,000	146,000	2	⅝	1	15 ¼	13	11	1.5	19.5

All dimensions shown in inches unless noted otherwise.

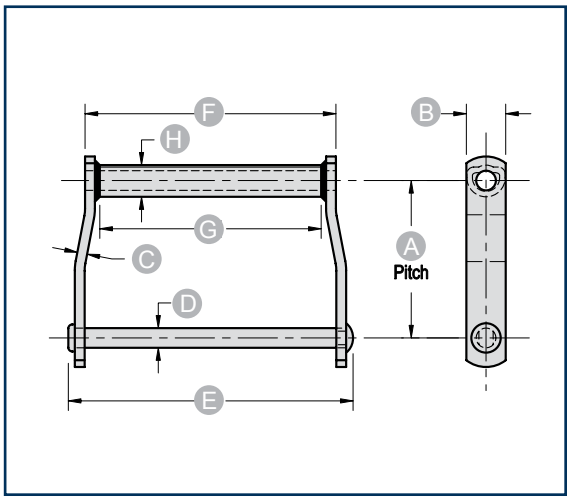
*WDH denotes Heat-Treated

"Super" Drag Chain

Using select grade alloy steels these heavy duty chains are manufactured in North America to high standards. Our unique barrel forming process ensures consistent quality, reducing potential rivet wear and providing high strength and long service life.

The Super series chain features a formed barrel of heavy wall tubing for severe applications, ideal for extra heavy loads associated with hog conveyors or "Load" chip dumping.

All heat treating and attachment options are available, as well as reverse barrel design.



Part Number	A AVG Pitch	Ultimate Strength (pounds)	WHC* Average Ultimate Strength (pounds)	B Sidebar Height	C Sidebar Thickness	D Rivet Diameter	E Overall Width	F Length of Bearing	G Max. Sprocket Thickness	Links per Foot	AVG Weight per Foot (pounds)
WD118SM	8.000	85,000	120,000	2	½	1	16 ⅝	14 ⅞	13 ¼	1.5	20.8
WD118XHDSM	8.000	125,000	150,000	2	⅝	1	17 ⅜	15 ⅛	13 ¼	1.5	24
WD120SM	6.000	85,000	120,000	2	½	1	12	10 ¼	8 ¾	2	19.5
WD120XHDSM	6.000	125,000	150,000	2	⅝	1	12 ¾	10 ½	8 ¾	2	24
WD122SM	8.000	85,000	120,000	2	½	1	12	10 ¼	8 ¾	1.5	17.5
WD122XHDSM	8.000	125,000	150,000	2	⅝	1	12 ¾	10 ½	8 ¾	1.5	20
WD480SM	8.000	85,000	120,000	2	½	1	14 ½	12 ¾	11	1.5	20
WD480XHDSM	8.000	125,000	150,000	2	⅝	1	15 ¼	13	11	1.5	23

All dimensions shown in inches unless noted otherwise.

*WDH denotes Heat-Treated

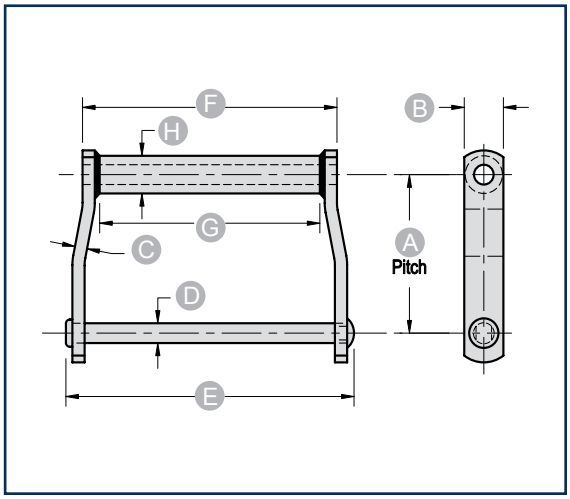
"Mega" Drag Chain

Using select grade alloy steels, these heavy duty chains are manufactured in North America to high standards.

The Mega series chain features a extra heavy .400" round barrel for the most severe applications. Ideal for extra heavy loads, large logs or any application prone to high impact leading to crushed barrels.

All heat treating and attachment options are available.

- Standard through-hardened rivets
- Available with additional induction hardened rivets



Part Number	A AVG Pitch	Ultimate Strength (pounds)	WDH* Ultimate Strength (pounds)	B Sidebar Height	C Sidebar Thickness	D Rivet Diameter	E Overall Width	F Length of Bearing	G Max. Sprocket Thickness	Links per Foot	AVG Weight per Foot (pounds)
WD118MM	8.000	85,000	120,000	2	½	1	16 ⅝	14 ⅞	13 ¼	1.5	23
WD118XHDMM	8.000	125,000	150,000	2	⅝	1	17 ⅜	15 ⅛	13 ¼	1.5	26
WD120MM	6.000	85,000	120,000	2	½	1	12	10 ¼	8 ¾	2	24
WD120XHDMM	6.000	125,000	150,000	2	⅝	1	12 ¾	10 ½	8 ¾	2	27
WD122MM	8.000	85,000	120,000	2	½	1	12	10 ¼	8 ¾	1.5	20
WD122XHDMM	8.000	125,000	150,000	2	⅝	1	12 ¾	10 ½	8 ¾	1.5	22
WD480MM	8.000	85,000	120,000	2	½	1	14 ½	12 ¾	11	1.5	22.5
WD480XHDMM	8.000	125,000	150,000	2	⅝	1	15 ¼	13	11	1.5	25

All dimensions shown in inches unless noted otherwise.

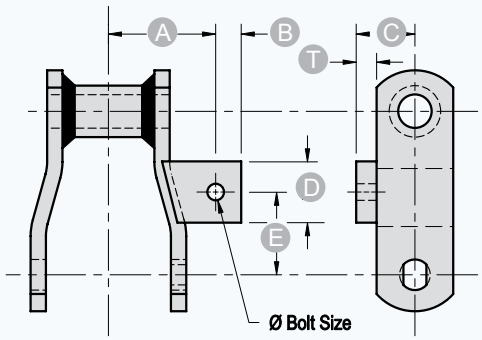
*WDH denotes Heat-Treated

WELDED STEEL CHAIN ATTACHMENTS

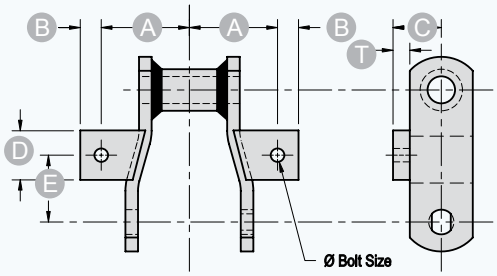
A1 + K1

Welded Steel Chain Attachments are recommended for most conveying and elevating applications in which a high strength steel rollerless chain is required. Optional heat treatment make them easily adaptable to a wide variety of applications.

A1 ATTACHMENT



K1 ATTACHMENT

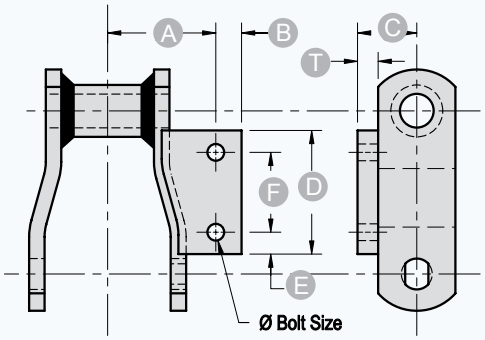


Part Number	For Chain Number	A	B	C	D	E	T	0 Bolt Size
A1-WR78 K1-WR78	WR78	2	½	⅞	1 ¼	1 ¼	¼	⅜
A1-WR78XHD K1-WR78XHD	WR78XHD	2	½	⅞	1 ¼	1 ¼	¼	⅜
A1-WR82 K1-WR82	WR82	2 ⅛	⅝	⅞	1 ¼	1 ½	¼	⅜
A1-WR82XHD K1-WR82XHD	WR82XHD	2 ⅜	⅝	1 ⅛	1 ¼	1 ½	⅜	⅜
A1-WR124 K1-WR124	WR124	2 ⅝	⅝	1 ⅛	1 ½	2	⅜	⅜
A1-WR124XHD K1-WR124XHD	WR124XHD	2 ⅝	¾	1 ½	1 ½	2	½	½
A1-WR111 K1-WR111	WR111	3 ⅛	⅝	1 ¼	1 ¾	2 ⅛	⅜	⅜
A1-WR132 K1-WR132	WR132	3 ¾	⅞	1 ½	2	3	½	½
A1-WR132XHD K1-WR132XHD	WR132XHD	3 ¾	⅞	1 ½	2	3	½	½

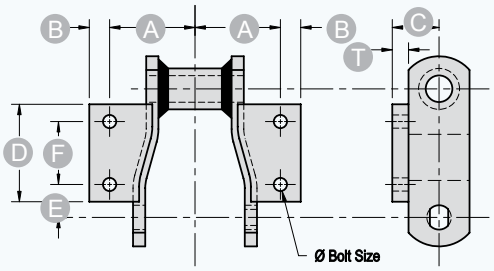
All dimensions shown in inches unless noted otherwise.

A2 + K2

A2 ATTACHMENT



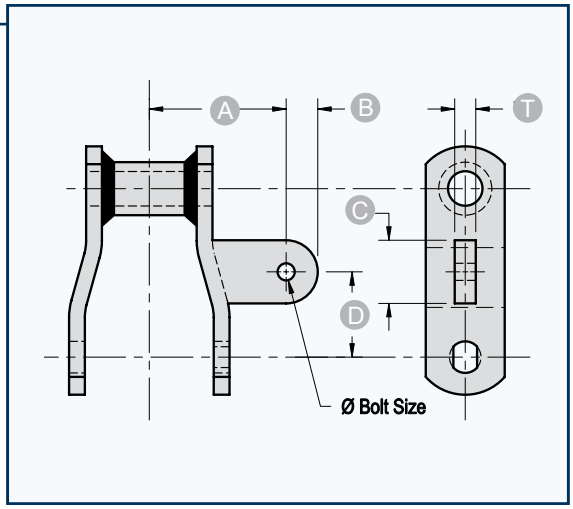
K2 ATTACHMENT



Part Number	For Chain Number	A	B	C	D	E	F	T	0 Bolt Size
A2-WR78 K2-WR78	WR78	2	½	⅞	2	13/16	1 ⅛	¼	⅜
A2-WR78XHD K2-WR78XHD	WR78XHD	2	½	⅞	2	13/16	1 ⅛	¼	⅜
A2-WR82 K2-WR82	WR82	2 ⅛	⅝	⅞	2 ¼	½	1 ¼	¼	⅜
A2-WR82XHD K2-WR82XHD	WR82XHD	2 ⅜	⅝	1 ⅛	2 ¼	½	1 ¼	⅜	⅜
A2-WR124 K2-WR124	WR124	2 ⅝	⅝	1 ⅛	3	1	1 15/16	⅜	⅜
A2-WR124XHD K2-WR124XHD	WR124XHD	2 ⅝	¾	1 ½	3	1	1 15/16	½	½
A2-WR111 K2-WR111	WR111	3 ⅛	⅝	1 ¼	3 ½	13/16	2 5/16	⅜	⅜
A2-WR132 K2-WR132	WR132	3 ¾	13/16	1 ½	4	1 ⅝	2 ¾	½	½
A2-WR132XHD K2-WR132XHD	WR132XHD	3 ¾	13/16	1 ½	4	1 ⅝	2 ¾	½	½
A2-WR150 A2-WR150	WR150	3 ¾	13/16	1 ¾	4	1 ⅝	2 ¾	½	½
A2-WR157 A2-WR157	WR157	3 ¾	13/16	1 ¾	4	1 ⅝	2 ¾	½	½

All dimensions shown in inches unless noted otherwise.

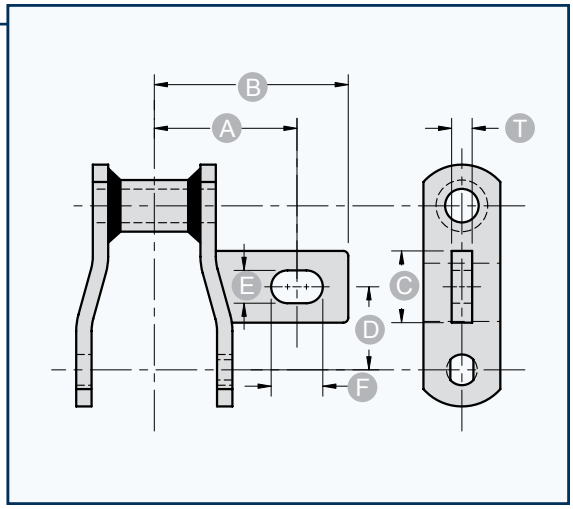
A22



Part Number	For Chain Number	A	B	C	D	T	0 Bolt Size
A22-WR78	WR78	2	⅝	1 ¼	1 ¼	¼	⅜
A22-WR82	WR82	2 ½	⅝	1 ¼	1 ½	¼	⅜
A22-WR124	WR124	3	⅞	1 ¾	2	⅜	½
A22-WR111	WR111	3 ½	⅞	1 ¾	2 ⅜	⅜	½
A22-WR106	WR106	2 ¾	⅞	2	3	⅜	½
A22-WR132	WR132	4 ¼	1	2	3	½	¾

All dimensions shown in inches unless noted otherwise.

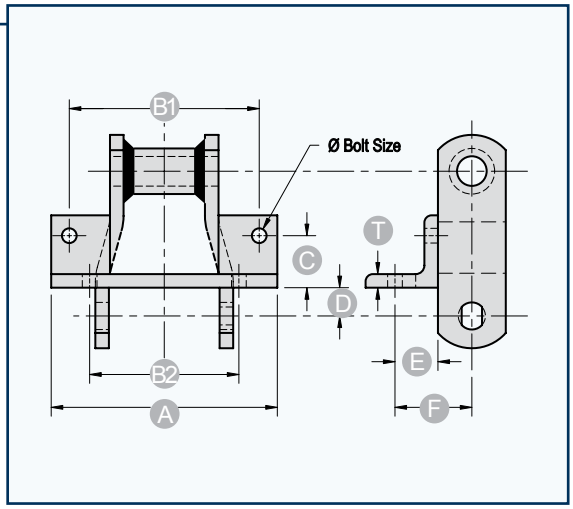
Slotted A22



Part Number	For Chain Number	A	B	C	D	E	F	T
Slotted A22-WR82	WR82	2 ½	3 ½	1 ½	1 ½	9/16	1 ¼	3/8
Slotted A22-WR124	WR124	4	5 5/16	2	1 ¾	13/16	1 ½	½
Slotted A22-WR144	WR144	4	5 5/16	2	1 ¾	13/16	1 ½	½
Slotted A22-WR106	WR106	4	5 5/16	3	3	13/16	1 ½	½
Slotted A22-WR106XHD	WR106XHD	4	5 5/16	3	3	13/16	1 ½	½
Slotted A22-WR166	WR166	4	5 5/16	3	3	13/16	1 ½	½
Slotted A22-WR132	WR132	4 ½	6 ¼	3	3	13/16	1 ½	½
Slotted A22-WR132XHD	WR132XHD	4 ¾	6 ½	3	3	13/16	1 ½	½

All dimensions shown in inches unless noted otherwise.

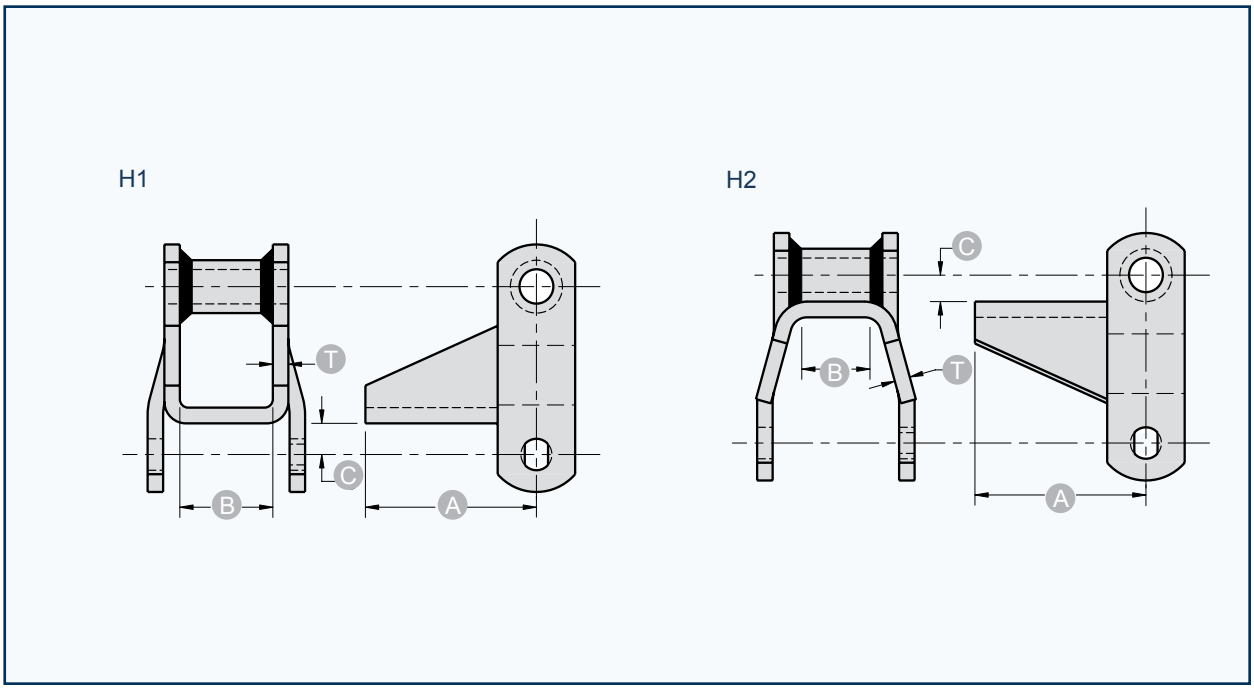
F2/F4



Part Number	For Chain Number	A	B1	B2	C	D	E	F	T	0 Bolt Size
F2-WR78 F4-WR78	WR78	5 ½	4 ½	3 ¾	1 ¼	¾	1 ⅛	1 ¾	¼	⅜
F2-WR78XHD F4-WR78XHD	WR78XHD	5 ½	4 ½	3 ¾	1 ¼	¾	1 ⅛	1 ¾	¼	⅜
F2-WR82 F4-WR82	WR82	5 ⅞	5	4 ⅛	1 ¼	⅝	1 ⅛	1 ¾	¼	⅜
F2-WR82XHD F4-WR82XHD	WR82XHD	5 ⅞	5	4 ⅛	1 ½	⅞	1 ⅛	1 ¾	⅜	⅜
F2-WR124 F4-WR124	WR124	6 ¼	5 ¼	4 ⅜	1 ½	1	1 ⅜	2 ⅜	⅜	⅜

All dimensions shown in inches unless noted otherwise.

H1/H2

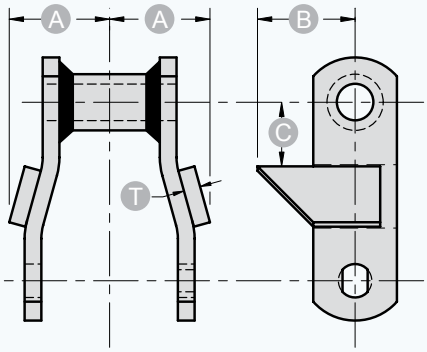


Part Number	For Chain Number	A	B	C	T
H1-WR78 H2-WR78	WR78	3 5/8	1 1/2	1/2	1/4
H1-WR78XHD H2-WR78XHD	WR78XHD	3 5/8	1 1/2	1/2	3/8
H1-WR82 H2-WR82	WR82	3 5/8	1 3/4	5/8	1/4
H1-WR82XHD H1-WR82XHD	WR82XHD	3 5/8	1 3/4	5/8	3/8

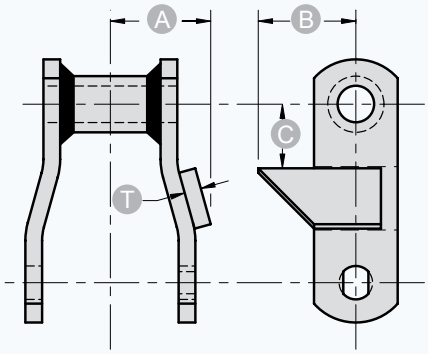
All dimensions shown in inches unless noted otherwise.

RR1 + R1

RR1



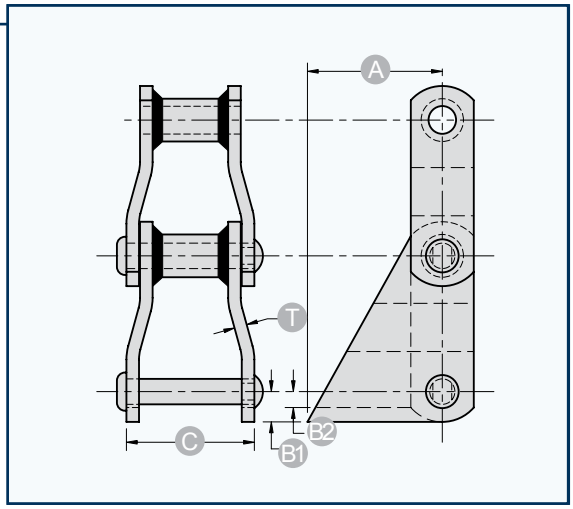
R1



Part Number	For Chain Number	A	B	C	T
RR1-WR78 R1-WR78	WR78	1 ½	1 9/16	5/8	¼
RR1-WR78XHD R1-WR78XHD	WR78XHD	1 ¾	1 9/16	5/8	¼
RR1-WR82 R1-WR82	WR82	1 5/8	1 ¾	13/16	¼
RR1-WR82XHD R1-WR82XHD	WR82XHD	1 15/16	2 1/16	13/16	⅜
RR1-WR124 R1-WR124	WR124	2 5/32	1 ⅞	1 ½	⅜
RR1-WR132 R1-WR132	WR132	3 3/32	2 ½	1 ½	½

All dimensions shown in inches unless noted otherwise.

S1/S2

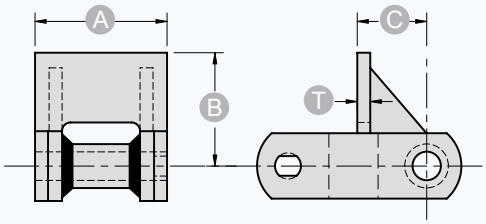


Part Number	For Chain Number	A	B1	B2	C	T
S1-WR124 S2-WR124	WR124	3 ¾	⅞	11⁄16	3 ⅝	⅜
S1-WR124XHD S2-WR124XHD	WR124XHD	3 ¾	1 ⅛	⅞	4 ⅛	½
S1-WR111 S2-WR111	WR111	4	1	1	4 3⁄16	⅜
S1-WR106 S2-WR106	WR106	3 ¾	⅞	11⁄16	3 ⅝	⅜
S1-WR132 S2-WR132	WR132	5	1 ⅛	⅞	5 7⁄16	½
S1-WR150 S2-WR150	WR150	5 ½	⅞	½	5 7⁄16	½

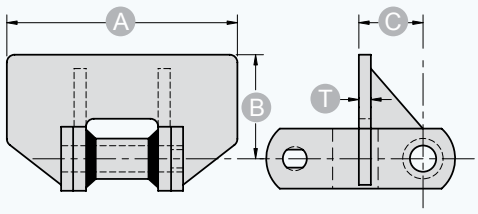
All dimensions shown in inches unless noted otherwise.

RF2 + RF12

RF2 ATTACHMENT



RF12 ATTACHMENT

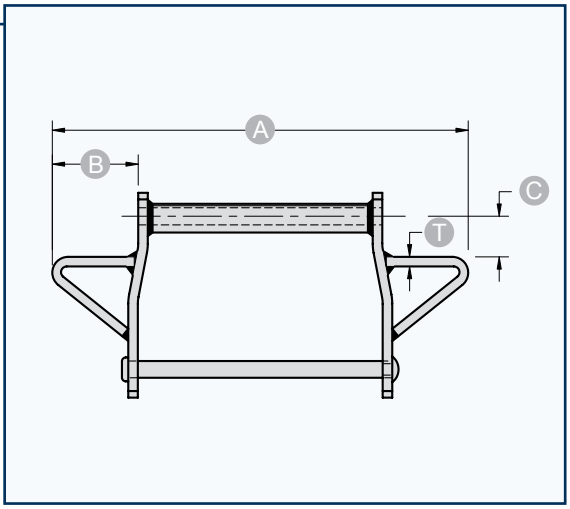


Part Number	For Chain Number	A	B	C	T
RF2-WR78 RF12-WR78	WR78	3	2 11/16	5/8	1/4
RF2-WR78XHD RF12-WR78XHD	WR78XHD	3	2 11/16	5/8	3/8
RF2-WR82XHD RF12-WR82XHD	WR82XHD	3 1/4	2 3/4	13/16	3/8
RF2-WR124 RF12-WR124	WR124	4 1/4	3 1/4	13/16	3/8
RF2-WR131 RF12-WR131	WR131	6 1/2	3 1/4	1 1/2	1/2
RF2-WR111 RF2-WRC111 RF12-WR111 RF12-WRC111	WR111 WRC111	7 3/4	3 1/4	1 1/2	1/2
RF2-WR132 RF2-WRC132 RF12-WR132 RF12-WRC132	WR132 WRC132	9	3 1/2	1 1/2	3/4
RF2-WR150 RF2-WRC150 RF12-WR150 RF12-WRC150	WR150 WRC150	9	3 1/2	1 1/2	3/4

All dimensions shown in inches unless noted otherwise.

DRAG
CHAIN ATTACHMENTS

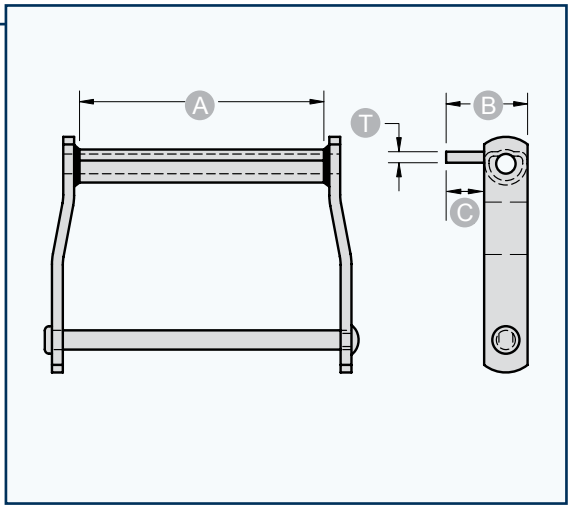
Standard Wing Attachment



Part Number	For Chain Number	A	B	C	T
Standard Wing WD102	WD102	14 ¼	1 ½	1 ½	⅜
Standard Wing WD104	WD104	11 ½	3	1 ¾	⅜
Standard Wing WD110	WD110	17	3 ⅜	1 ¾	⅜
Standard Wing WD112	WD112	17	3 ⅜	1 ¾	⅜
Standard Wing WD116	WD116	22	3 15/16	2 ½	⅜
Standard Wing WD118	WD118	22	3 9/16	2 ½	½
Standard Wing WD118XHD	WD118XHD	22 ¼	3 9/16	2 ½	½
Standard Wing WD120	WD120	17 ½	3 ⅜	1 ¾	½
Standard Wing WD120XHD	WD120XHD	17 ¾	3 ⅜	1 ¾	½
Standard Wing WD122	WD122	17 ½	3 ⅜	2 ½	½
Standard Wing WD480	WD480	22	4 ⅝	2 ½	½
Standard Wing WD480XHD	WD480XHD	22 ¼	4 ⅝	2 ½	½

All dimensions shown in inches unless noted otherwise.

"C" Attachments



For Chain Number	A	B C1/2*	B C1	C C1	B C3	C C3	B C4	C C4	T
WD102	6 ½	1 ½	3	1 ½	3 ½	2	4 ½	3	⅜
WD104	4 ⅛	1 ½	3	1 ½	3 ½	2	4 ½	3	⅜
WD110	9	1 ½	3	1 ½	3 ½	2	4 ½	3	⅜
WD112	9	1 ½	3	1 ½	3 ½	2	4 ½	3	⅜
WD116	12 ⅞	1 ¾	3 ¼	1 ½	3 ¾	2	4 ¾	3	⅜
WD118	13 ⅜	2	3 ¾	1 ¾	4	2	6	4	½
WD118XHD	13 ⅜	2	3 ¾	1 ¾	4	2	6	4	½
WD120	8 ¾	2	3 ¾	1 ¾	4	2	6	4	½
WD120XHD	8 ¾	2	3 ¾	1 ¾	4	2	6	4	½
WD122	8 ¾	2	3 ¾	1 ¾	4	2	6	4	½
WD480	11 ¼	2	3 ¾	1 ¾	4	2	6	4	½
WD480XHD	11 ¼	2	3 ¾	1 ¾	4	2	6	4	½

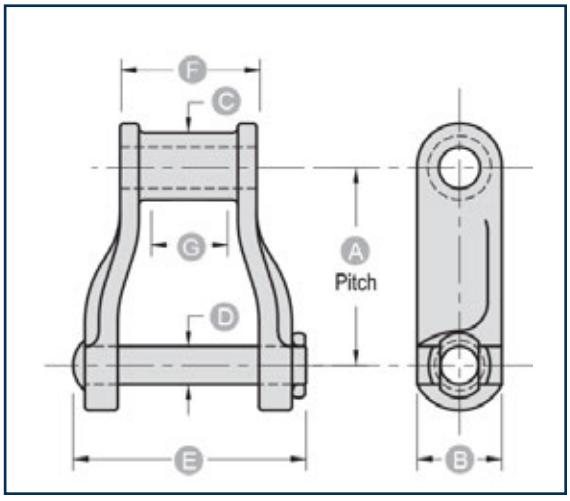
All dimensions shown in inches unless noted otherwise.

C1/2 attachment is welded to front of barrel. All others are welded on top of barrel.

MALLEABLE CHAIN

Malleable Cast Steel Chain

Malleable Iron Chains are designed for demanding applications such as transfer and conveying purposes. The pin joint permits operation in a moderately dusty or abrasive atmosphere.



Part Number	A AVG Pitch	Ultimate Strength (pounds)	B Sidebar Height	C Barrel O.D.	D Rivet Diameter	E Overall Width	F Length of Bearing	G Max Sprocket Thickness
H60	2.308	7,000	¾	¾	5/16	2 17/32	1 ½	¾
H74	2.609	10,000	1	⅞	⅜	2 ⅞	1 21/32	1
H78	2.609	16,000	1 ⅛	⅞	½	3 13/16	1 ⅞	1
H82	3.075	20,000	1 ¼	1 7/32	9/16	3 ⅞	2 ⅛	1 ¼

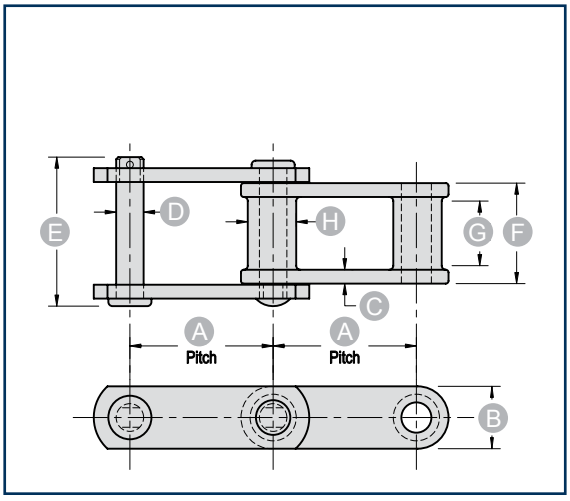
All dimensions shown in inches unless noted otherwise.

Part Number	Links per Foot	AVG Weight per Foot (pounds)
H60	5.2	2.1
H74	4.6	3
H78	4.6	4.2
H82	3.9	5.5

All dimensions shown in inches unless noted otherwise.

Steel + Malleable Combination Chain

Combination Chain consists of malleable block links alternated with steel sidebars, which are ideal for welding on steel attachments.



Part Number	A AVG Pitch	Ultimate Strength (pounds)	B Sidebar Height	C Sidebar Thickness	D Rivet Diameter	E Overall Width	F Length of Bearing	G Max. Sprocket Thickness	H Barrel O.D.	Links per Foot	AVG Weight per Foot (pounds)
C55	1.631	9,000	¾	3/16	⅜	2	1 3/16	¾	23/32	7.4	2.1
C77*	2.308	11,000	⅞	3/16	7/16	2 ⅛	1 ¼	¾	¾	5.2	3
C188*	2.609	14,000	1 ⅛	¼	½	2 ⅝	1 9/16	⅞	⅞	4.6	4.2
C131	3.075	24,000	1 ½	⅜	⅝	3 5/16	2	1 ⅛	1 7/32	3.9	5.5
C102B	4.000	24,000	1 ½	⅜	⅝	4 9/16	2 25/32	1 ¾	31/32	3	4.2

All dimensions shown in inches unless noted otherwise.

*Available with Stainless Steel Rivets and Cotters

CHAIN RIVETS AND SPROCKETS

Mill Chain Rivets

- All Mill Chain Rivets are through heat treated as standard.
- All Super and Mega Chain Rivets 1" diameter and larger are supplied through and induction hardened as standard
- All Trimmer Chain Rivets are supplied Heat Treated as standard
- Other Induction Hardening & Heat Treating options are available on request, as are zinc plating and galvanizing.

Style 1 Style 2 Style 3

	Chain Number	Rivet Style	Rivet Size Dia. x Length Under Head	Approx. Weight per 100 Rivets
Trimmer Chain	SO-578	3	3/8 x 1 15/16"	10
	MS-88	3	7/16 x 2 1/4"	16
	81-X, 3939	3	7/16 x 1 59/64"	12
	MO-88	3	7/16 x 2 1/4"	16
	LXS-882	3	7/16 x 2 3/8"	15
Malleable Chain	C102-B	3	5/8 x 4	50
	C-131	1	5/8 x 3 1/4"	48
	C-188	3	1/2 x 2 1/2"	16
	H-78, H-130, H-138	2	1/2 x 3 1/16"	18
	H-82	2	9/16 x 3 5/8"	28
Mill Chain	WR-78, 78-4, 130, 138, 78 Rolltop	1	1/2 x 2 13/16"	17
	WR-78 (5") XHD	1	9/16 x 3 1/2"	26
	WR-78 XHD	1	9/16 x 3 3/32"	26
	WR-82	1	9/16 x 3 1/8"	26
	WR-82XHD/WR-720S	1	3/4 x 3 9/16"	52
	WR-124, WR-106	1	3/4 x 4"	58
	WR-111	1	3/4 x 4 5/8"	64
	WR-144	1	1 x 4 1/8"	97
	WR-124XHD/WR-106XHD	1	1 x 4 5/8"	101
	WR-150, WR-WRC-132	1	1 x 6"	138
	WR-WRC-132XHD	1	1 x 6 1/2"	155
	WR-WRC-157, WR-155	1	1 1/8 x 6 9/16"	188
	WHX-157XHD, WR-159	3	1 1/4 x 6.54"	200
	WRC-131	1	3/4 x 3 1/4"	52
Drag Chain	WD-102	1	3/4 x 8 7/8"	119
	WD-104	1	3/4 x 6 11/16"	88.4
	WD-110, WD-112	1	3/4 x 11 17/32"	150
	WD-116	1	3/4 x 15 13/32"	198
	WD-113	1	7/8 x 11 15/16"	210
	WD-118	1	7/8 x 16 9/16"	290
	WD-118-1	1	1" x 16.57"	372
	WD-118XHD	1	1" x 17"	380
	WD-120, WD-122	1	7/8 x 11 15/16"	210
	WD-120XHD	1	1" x 12 15/16"	278
	WD-480	1	7/8 x 14 7/16"	258
	WD-480XHD	1	1 x 14 15/16"	344
	WD-480-1	1	7/8 x 14 3/16"	334

Tabular dimensions and weights are approximate and non-binding. Design improvements may result in variations to published figures. Verification is recommended.

FABRICATED STEEL SPROCKETS are normally made of mild steel plate. Heat treated plate sprockets with hardnesses from 360 to 500 BHN are available. Unless otherwise requested, O.D. of hubs will be sufficient to accommodate bore and keyway desired.

Keys are not supplied with these items unless requested or unless mounted on shafts. Split sprockets provide an economical means of mounting sprockets on shafts where it is prohibitive to dismount the shaft assembly. Many sizes of sprockets are stocked with bores, keyways, and set screws already provided. Plates or partially finished sprockets are also stocked. In the case of long link sprockets and idlers, please specify the size of chain that will be used. Bronze and urethane bushing material is stocked for immediate insertion.

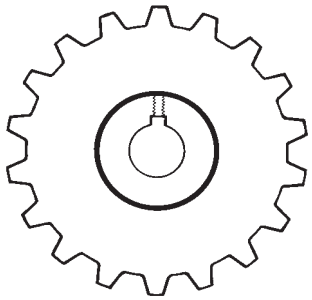
Chain Number	Number of Teeth	Pitch Dia.	Max. Bore	Tooth Face
WR-78, H-78	7	6.01	2 3/16	1
MOH-578*	8	6.82	2 7/16	1
SS-578*	9	7.63	2 11/16	1
MS-88*	10	8.44	2 15/16	1
MO-88*	11	9.26	3 7/16	1
LXS-882*	12	10.08	3 7/16	1
81-X*	13	10.90	3 15/16	1
C-188*	14	11 72	4 15/16	1
PITCH=2.609"	15	12.55	4 15/16	1
	16	13.37	4 15/16	1
	17	14.20	4 15/16	1
	18	15.02	4 15/16	1
	19	15.85	4 15/16	1
	20	16.88	5 15/16	1

* Tooth face is 7/8" Most flame cut sprockets supplied from stock.

Chain Number	Number of Teeth	Pitch Dia.	Max. Bore	Tooth Face
WR-78XHD	7	6.01	2 3/16	1
PITCH=2.609"	8	6.82	2 7/16	1
	9	7.63	2 11/16	1
	10	8.44	2 15/16	1
	11	9.26	3 7/16	1
	12	10.08	3 7/16	1
	13	10.90	3 15/16	1
	14	11 72	4 15/16	1
	15	12.55	4 15/16	1
	16	13.37	4 15/16	1
	17	14.20	4 15/16	1
	18	15.02	4 15/16	1
	19	15.85	4 15/16	1
	20	16.88	5 15/16	1

Chain Number	Number of Teeth	Pitch Dia.	Max. Bore	Tooth Face
WR-82	7	7.09	2 7/16	1 1/8
PITCH=3.075"	8	8.04	3 15/16	1 1/8
	9	8.99	4 15/16	1 1/8
	10	9.95	5 7/16	1 1/8
	11	10.91	5 15/16	1 1/8
	12	11.88	5 15/16	1 1/8
	13	12.85	5 15/16	1 1/8
	14	13.82	5 15/16	1 1/8
	15	14.79	5 15/16	1 1/8
	16	15.76	5 15/16	1 1/8
	17	16.73	5 15/16	1 1/8
	18	17.71	5 15/16	1 1/8
	20	19.66	5 15/16	1 1/8
WR-82XHD	7	7.09	2 7/16	1 1/8
WRC-131*	8	8.04	3 15/16	1 1/8
C-131	9	8.99	4 15/16	1 1/8
PITCH 3.075	10	9.95	5 7/16	1 1/8
	11	10.91	5 15/16	1 1/8
	12	11.88	5 15/16	1 1/8
	13	12.85	5 15/16	1 1/8
	14	13.82	5 15/16	1 1/8
	15	14.79	5 15/16	1 1/8
	16	15.76	5 15/16	1 1/8
	17	16.73	5 15/16	1 1/8
	18	17.71	5 15/16	1 1/8
	20	19.66	5 15/16	1 1/8

Sprockets

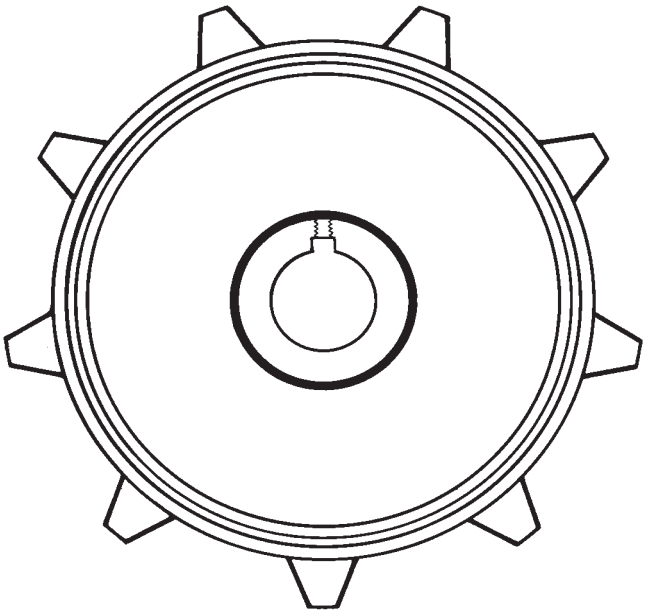


Chain Number	Number of Teeth	Pitch Dia.	Max. Bore	Tooth Face
H-130/138	6	8.00	2 7/16	1
WR-78-4	7	9.22	3 7/16	1
PITCH=4.000"	8	10.45	4 15/16	1
	9	11.70	5 15/16	1
	10	12.94	5 15/16	1
	11	14.20	5 15/16	1
	12	15.45	5 15/16	1
	16	20.50	5 15/16	1
WR-124	6	8.00	2 7/16	1 1/2
C-102B	7	9.22	2 15/16	1 1/2
PITCH=4.000"	8	10.45	3 7/16	1 1/2
	9	11.66	3 15/16	1 1/2
	10	12.94	4 15/16	1 1/2
	11	14.20	4 15/16	1 1/2
	12	15.46	4 15/16	1 1/2
	13	16.72	5 15/16	1 1/2
	14	17.98	5 15/16	1 1/2
	15	19.23	5 15/16	1 1/2
	16	20.50	5 15/16	1 1/2
	18	23.04	5 15/16	1 1/2
	20	25.57	5 15/16	1 1/2
WR-106	6	12.00	4 15/16	1 1/2
PITCH=6.000	8	15.68	4 15/16	1 1/2
	9	17.54	5 15/16	1 1/2
	10	19.42	5 15/16	1 1/2
	11	21.30	5 15/16	1 1/2
	12	23.18	5 15/16	1 1/2
	13	25.07	5 15/16	1 1/2
WR-106XHD	6	12.00	4 15/16	1 1/2
PITCH=6.050	8	15.68	4 15/16	1 1/2
	9	17.54	5 15/16	1 1/2
	10	19.42	5 15/16	1 1/2
	11	21.30	5 15/16	1 1/2
	12	23.18	5 15/16	1 1/2
	13	25.07	5 15/16	1 1/2

Most flame cut sprockets, finished bore K+S.S. or T.K. are supplied from stock. Hardened sprockets also available.

Chain Number	Number of Teeth	Pitch Dia.	Max. Bore	Tooth Face
WR-124HD	7	9.36	2 7/16	1 1/2
WR-124XHD	8	10.62	3 15/16	1 1/2
PITCH=4.063"	9	11.88	4 15/16	1 1/2
	10	13.15	5 7/16	1 1/2
	11	14.42	5 15/16	1 1/2
	12	15.70	5 15/16	1 1/2
	13	16.98	5 15/16	1 1/2
	14	18.26	5 15/16	1 1/2
	15	19.54	5 15/16	1 1/2
	16	20.83	5 15/16	1 1/2
	17	22.11	5 15/16	1 1/2
	18	23.40	5 15/16	1 1/2
	20	25.97	5 15/16	1 1/2
WR-111	8	12.44	4 15/16	2
PITCH=4.760"	9	13.91	4 15/16	2
	10	15.40	4 15/16	2
	11	16.90	5 15/16	2
	12	18.39	5 15/16	2
	13	19.89	5 15/16	2
	14	21.39	5 15/16	2
	16	24.40	5 15/16	2
	17	25.90	5 15/16	2
	18	27.41	5 15/16	2
	20	30.43	5 15/16	2
	24	36.47	5 15/16	2
	26	39.49	5 15/16	2
	28	42.51	5 15/16	2
WR-132	8	15.81	5 15/16	2 3/4
WRC-132	9	17.69	6 15/16	2 3/4
WR-132XHD	10	19.58	6 15/16	2 3/4
WRC-132XHD	11	21.47	6 15/16	2 3/4
WR/WH-157	12	23.38	6 15/16	2 3/4
WH-200	13	25.28	6 15/16	2 3/4
WR-150	14	27.19	6 15/16	2 3/4
WR-155	15	29.10	6 15/16	2 3/4
WR-159	16	31.01	6 15/16	2 3/4
PITCH=6.050"	18	34.84	6 15/16	2 3/4

Drag Chain Sprockets



FABRICATED DRUM C/W CAST STEEL "LONG LIFE" TEETH

Chain Number	Number of Teeth	Pitch Dia.	Max. Bore	Tooth Face
WD-102	6	10.00	3 15/16	6 3/8
	8	13.07	5 15/16	6 3/8
PITCH=5.000"	9	14.62	5 15/16	6 3/8
	10	16.18	5 15/16	6 3/8
	12	19.32	5 15/16	6 3/8
	13	20.89	5 15/16	6 3/8
WD-104	8	15.68	4 15/16	4 1/8
	9	17.54	5 15/16	4 1/8
PITCH=6.000"	10	19.42	5 15/16	4 1/8
	11	21.30	5 15/16	4 1/8
WD-110	6	12.00	4 7/16	9
WD-113	8	15.68	5 15/16	9
	9	17.54	5 15/16	9
PITCH=6.000"	10	19.42	5 15/16	9
	11	21.30	5 15/16	9
WD-112	7	18.44	4 15/16	9
	8	20.90	5 15/16	9
PITCH=8.000"	9	23.39	5 15/16	9

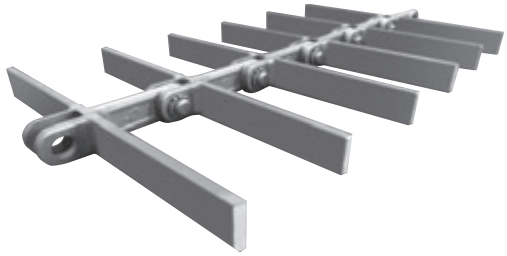
Chain Number	Number of Teeth	Pitch Dia.	Max. Bore	Tooth Face
WD-116	7	18.44	5 7/16	13
PITCH=8.000"	8	20.90	5 15/16	13
	9	23.39	5 15/16	13
WD-118	7	18.44	5 7/16	13
PITCH=8.000"	8	20.90	5 15/16	13
	9	23.39	5 15/16	13
WD-120	6	12.00	5 15/16	8 3/4
PITCH=6.000"	8	15.68	5 15/16	8 3/4
	11	21.30	5 15/16	8 3/4
WD-122	6	16.00	5 7/16	8 3/4
PITCH=8.000"	7	18.44	5 7/16	8 3/4
	9	23.39	5 15/16	8 3/4
WD-480	6	16.00	5 7/16	11
PITCH=8.000"	7	18.44	5 7/16	11
	8	20.90	5 15/16	11
	9	23.39	5 15/16	11
	11	28.40	5 15/16	11

Drag chain sprockets are recommended with a full width tooth to extend chain life. Specify flange width, as the sprockets and idlers are only as wide as the tooth face.

FORGED CHAINS

Drop Forged Chain

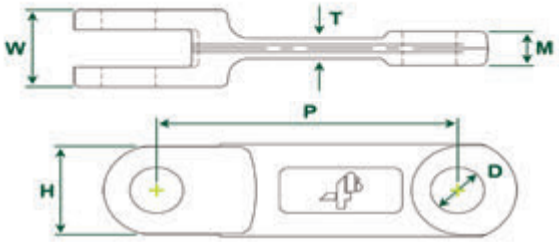
Drop forged chain is made of special heat treated alloy steel, case hardened to rockwell C57-C62 with a ductile core hardness of rockwell C40. Superior heat treatment technique provides the optimum chain link with a more resilient ductile core for shock resistance, and an extremely hard exterior surface for superior wear resistance. Uniking is backed by an international network of companies with over 150 years of experience, and a global team of engineers and sales professionals that can provide you with practical solutions for all your material handling applications.



STANDARD LINK

BOLT 'N' GO LINK

Links and pins are available in stainless steel



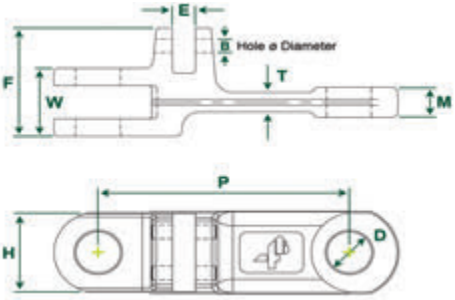
Standard Link

Chain Link	Min Breaking Load (kN)	Case Hardness	Case Depth (mm)	Core Hardness	Weight (Per Link) (kg)	Bolt 'N' Go Compatible	Dimensions					
							P (mm)	H (mm)	T (mm)	W (mm)	M (mm)	D (mm)
102LA	150	Rockwell C57-C62	0.5	Rockwell C40	0.36	No	102	36	6	25	8	14
102NA	180	Rockwell C57-C62	0.5	Rockwell C40	0.38	Yes	102	36	7	28	12	14
125NA	200	Rockwell C57-C62	0.6	Rockwell C40	0.70	Yes	125	35	10	36	15	16
142LA	250	Rockwell C57-C62	0.7	Rockwell C40	0.66	No	142	40	10	31	14	18.2
142NA	300	Rockwell C57-C62	0.7	Rockwell C40	1.08	Yes	142	50	12	42	18.7	25
142HA	450	Rockwell C57-C62	0.7	Rockwell C40	1.76	Yes	142	50	16.5	62	28.5	25
150NA	300	Rockwell C57-C62	0.7	Rockwell C40	1.20	Yes	150	49	13	36	15	25
160NA	350	Rockwell C57-C62	0.8	Rockwell C40	1.30	Yes	160	44.5	13	42	19.5	20
175NA	520	Rockwell C57-C62	1.0	Rockwell C40	2.73	No	175	60	16	72	22	30
200NA	600	Rockwell C57-C62	1.0	Rockwell C40	2.85	No	200	60	18	68	30	30
216NA	600	Rockwell C57-C62	1.0	Rockwell C40	3.66	No	216	75	19	59	26	35
250NA	700	Rockwell C57-C62	1.0	Rockwell C40	4.26	No	250	75	18	70	32	32
260NA	700	Rockwell C57-C62	1.0	Rockwell C40	5.38	No	260	75	21	71	31	32

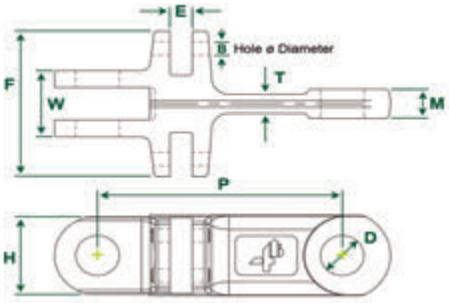
DOUBLE & TRIPLE LINKS

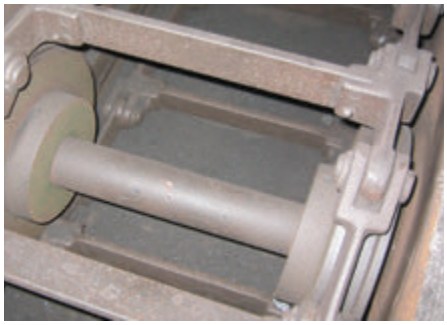
Double and triple links are forged with the same quality, strength and durability as our standard links.

DOUBLE LINK



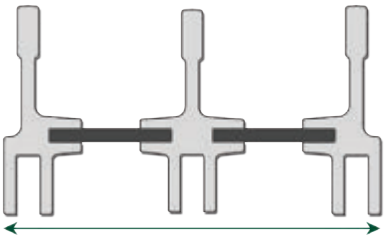
TRIPLE LINK





Typical Double Strand Chain Application

Triple Configuration



Widths to 3.7m

Chain Link	Min Breaking Load (kN)	Case Hardness	Case Depth (mm)	Core Hardness	Weight (Per Link) (kg)	Bolt 'N' Go Compatible	Dimensions								
							P (mm)	H (mm)	T (mm)	W (mm)	M (mm)	D (mm)	F (mm)	E (mm)	B (mm)
142DNA	300	Rockwell C57-C62	0.7	Rockwell C40	1.37	No	142	50	12	42	18.7	25	67	13	8.5
142DHA	450	Rockwell C57-C62	0.7	Rockwell C40	2.00	No	142	50	16	62	28	25	87	13	8.5
142TNA	300	Rockwell C57-C62	0.7	Rockwell C40	1.67	No	142	50	12	42	18.7	25	92	13	8.5
142THA	450	Rockwell C57-C62	0.7	Rockwell C40	2.32	No	142	49	16	62	28.5	25	112	13	8.5

Other sizes available on request.

Typical Welded Flight Attachments

Square Bar Flight

Flat Bar Flight

Paddle Flight

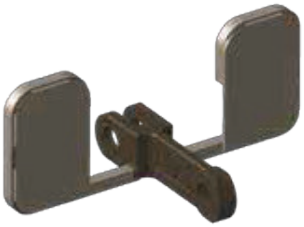
U Flight

Closed U Flight

Closed U Flights with Filler Plates

00 Flight

Return Cups



00 Flight with Filler Plates

Note: Custom flights are available, based on customer specifications.

Standard Pin Options

Forged Head Pin Collar and Roll Pin

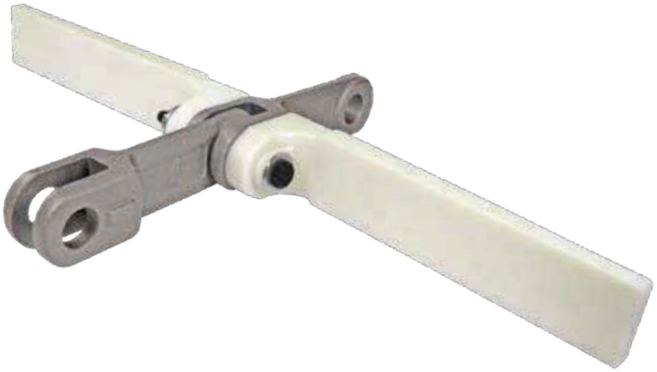
Forged Head Pin and One Clamp

Plain Pin and Two Clamps

Bolt 'N' Go Hollow Pin, Bolt, Washers and Nut

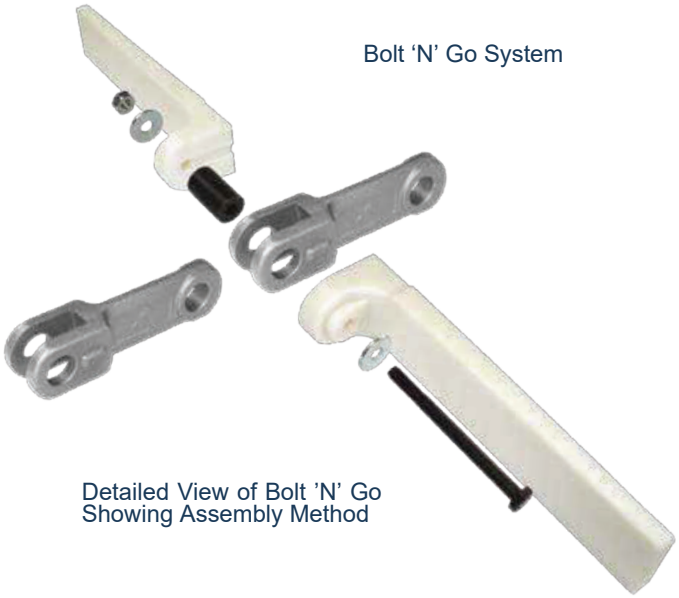
Bolt ‘N’ Go

Bolt ‘N’ Go flight system is a revolutionary assembly method for drop forged. Link and flight assembly is made easy by using a standard bolt and mechanical lock nut with a high strength hollow pin. There are no circlips and no intricate assembly required. There is no welding of flights, no need to remove chain from the conveyor for installation, and no issues with strength. Just bolt the links and the flights together. It’s easy, simple and reliable!



Bolt ’N’ Go Link

Bolt ‘N’ Go System



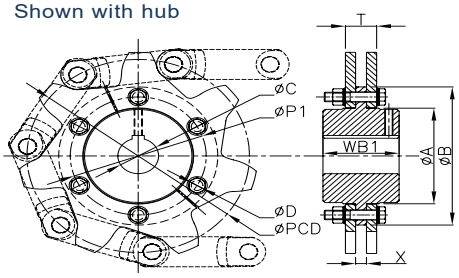
Detailed View of Bolt ’N’ Go Showing Assembly Method

US Pat. 7,080,728
Canadian Pat. 2,548,660
Mexican Pat. 272,056
Other Patents Pending

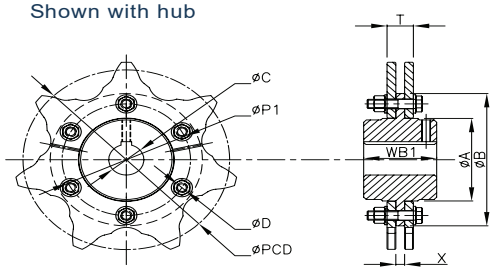
Sprockets

Sprockets and trailers are manufactured from high grade heat treated steel to a minimum hardness of 5 HRC. Each piece is machined to size with appropriate bore and keyway specific to each customer s application. Most sizes are in stock and ready to ship from inventory.

Standard Sprocket
Shown with hub

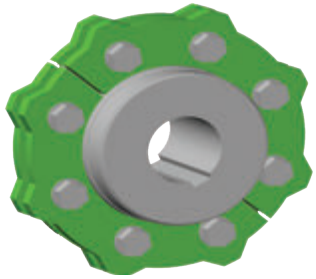


Wear Reversible Sprocket
Shown with hub



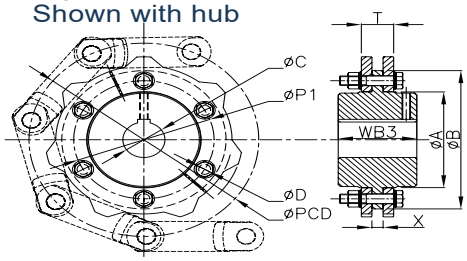
Chain Link	No. of Teeth	Pitch Circle Dia ØPCD (mm)	ØP1 (mm)	ØA (mm)	ØB (mm)	ØC max, Sprocket/ Stub Trailer (mm)	ØD (mm)	No. of Bolts	T (mm)	X (mm)	WB1 (mm)
4B102NA	6	204.0	-	105.0	135.0	70	–	–	30	10	83
	7	235.1	146.0	108.0	173.0	70	M12	6	30	10	83
	8	266.5	170.0	144.0	196.0	85	M12	6	30	10	83
	9	298.2	200.0	174.0	232.0	105	M12	6	30	10	83
	10	330.1	241.3	179.0	264.0	105	M12	8	30	10	83
4B142NA	6	284.0	168.3	136.5	190.5	85	M12	6	46	16	112
	7	327.3	200.0	162.0	234.0	105	M16	6	46	16	112
	8	371.1	241.3	187.3	282.0	115	M20	8	46	16	127
	9	415.2	285.8	240.0	330.0	150	M20	8	46	16	127
	10	459.5	285.8	240.0	330.0	150	M20	8	46	16	127
	11	504.0	368.3	310.0	419.0	170	M20	8	46	16	150
	12	548.6	415.0	345.0	465.0	170	M20	8	46	16	150
	13	593.4	450.0	380.0	521.0	170	M20	8	46	16	150
	14	638.1	470.0	380.0	546.0	170	M20	10	46	16	150
4B142HA	7	327.3	200.0	162.0	234.0	105	M16	6	69	19	127
	8	371.1	241.3	187.3	282.0	115	M20	8	69	19	150
	9	415.2	285.8	240.0	330.0	150	M20	8	69	19	150
	10	459.5	285.8	240.0	330.0	150	M20	8	69	19	150
	11	504.0	368.3	310.0	419.0	170	M20	8	69	19	150
	12	548.6	415.0	345.0	465.0	170	M20	8	69	19	150
	13	593.4	450.0	380.0	520.0	170	M20	8	69	19	180
	14	638.1	470.0	380.0	546.0	170	M20	10	69	19	180

Bore and keyway to customer specification. Sprockets and trailers available for all chain sizes. Contact Uniking for more information.

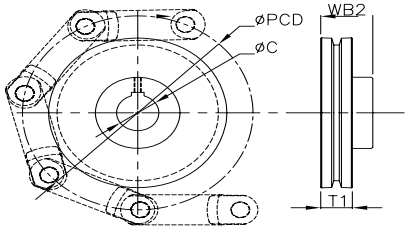


Trailers

Segmental Stub Trailer Shown with hub



Asymmetric Smooth Trailer



Chain Link	ØC max Smooth Trailer (mm)	Pitch Circle Dia. ØPCD (mm)	Hub Width* (mm)		Rim Width T1 (mm)
			Smooth WB2	Segmental WB3	
4B102NA	65	204.0	57	83	35
	65	235.1	57	83	35
	65	266.5	57	83	35
	65	298.2	57	83	35
	65	330.1	57	83	35
4B142NA	85	284.0	74	112	45
	85	327.3	74	112	45
	85	371.1	77	127	45
	115	415.2	77	127	45
	115	459.5	77	127	45
	115	504.0	105	150	45
	115	548.6	105	150	45
	115	593.4	120	150	45
	115	638.1	120	150	45
4B142HA	115	327.3	110	127	75
	115	371.1	110	150	75
	115	415.2	110	150	75
	115	459.5	120	150	75
	140	504.0	120	150	75
	140	548.6	120	150	75
	140	593.4	120	150	75
	140	638.1	140	150	75

* Smooth and segmental trailers have different hub widths as noted (WB2 & WB3).
** Symmetric smooth trailers on demand.

Additional Recommendation

1. Sprocket cleaners and chain wipers help maintain the sprocket clear of buildup for the chain to engage.

2. Conveyor inlet screens ensure that particle size does not e ceed conveyor design parameters and help prevent tramp material from entering the conveyor.

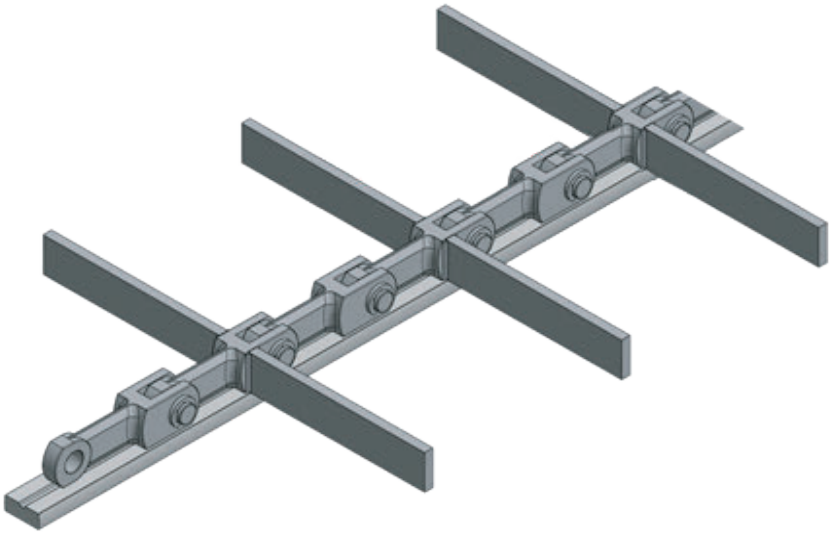
3. Conveyor inlet magnets help prevent the introduction of tramp material.

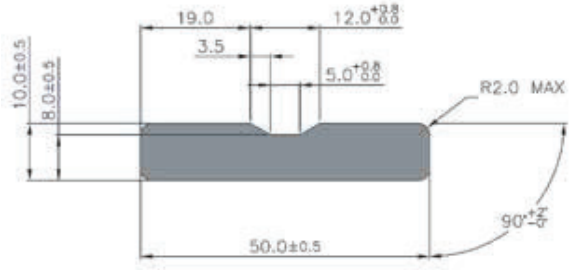
. Central rails made from Hadfield manganese steel will ma imize chain life and help prevent fatigue on welded flights Image E .

5. Wear bushings, AR steel flights, and hard weld coatings are available for e tremely abrasive applications.

6. For installation assistance or any application questions, call Uniking Canada.

IMAGE E
Manganese Rail
to Support Chain



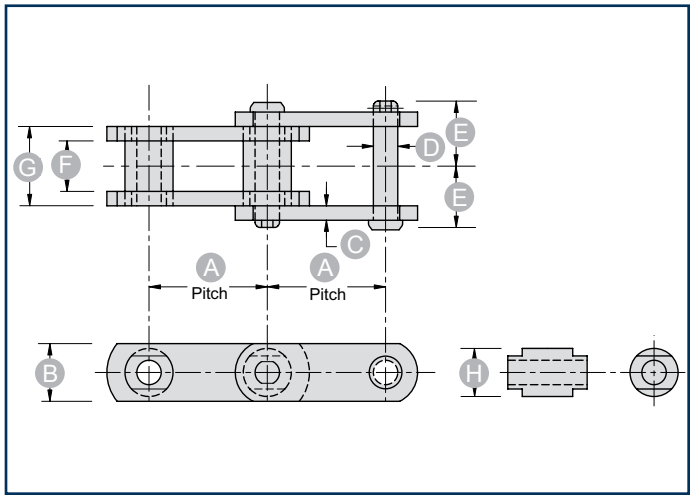


Rail Design for 1 2NA Chain

ENGINEERED CLASS CHAIN

Steel Bushed

Engineering Class Chains are designed to withstand rigorous operating conditions across a range of applications.

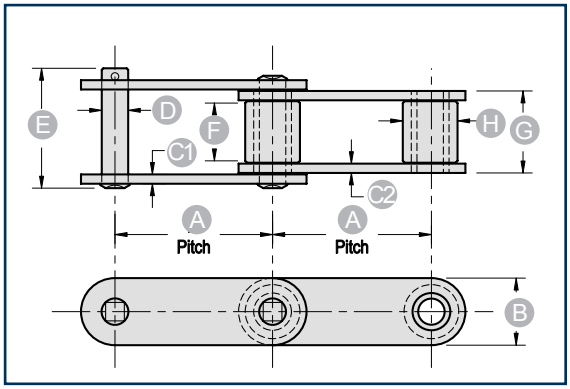


Part Number	A AVG Pitch	Ultimate Strength (pounds)	B Sidebar Height	C1 Outer Sidebar Thickness	C2 Inner Sidebar Thickness	D Rivet Diameter	E Overall Width	F Max. Sprocket Thickness	G Length of Bearing	H Bushing Diameter	Links per Foot	AVG Weight per Foot (pounds)
MS188	2.609	25,000	1 ⅛	¼	¼	½	2 11/16	1	1 9/16	⅞	4.6	3.8
MS131	3.075	40,000	1 ½	⅜	⅜	⅝	3 9/16	1 ⅛	2	1 ¼	3.9	8.3
MS102B	4.000	40,000	1 ½	⅜	⅜	⅝	4 11/32	2	2 ⅞	1	3.0	6.9
MS110	6.000	40,000	1 ½	⅜	⅜	⅝	4 11/32	2	2 ⅞	1 ¼	2.0	6.3

All dimensions shown in inches unless noted otherwise.

Steel, Bushed, Roller - Straight Sidebar

- Fully heat-treated superior alloy steel
- Solid bushings and rollers
- Quad staked rivet design

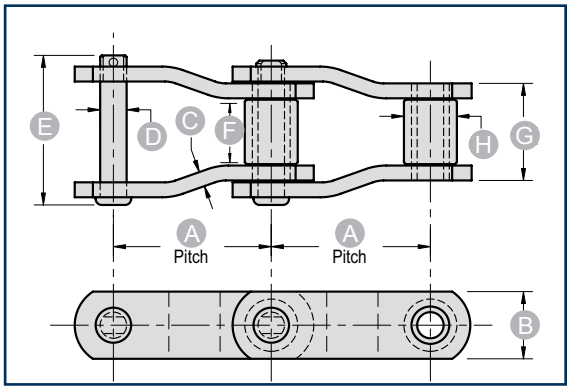


Part Number	A AVG Pitch	Ultimate Strength (pounds)	B Sidebar Height	C1 Outer Sidebar Thickness	C2 Inner Sidebar Thickness	D Rivet Diameter	E Overall Width	F Max. Sprocket Thickness	G Length of Bearing	H Roller Diameter	Links per Foot	AVG Weight per Foot (pounds)
81X	2.609	24,000	1 ⅛	5/32	5/32	7/16	2 ⅛	⅞	1 ⅜	29/32	4.6	2.6
81X-HD	2.609	42,800	1 ¼	7/32	5/16	7/16	2 9/16	⅞	1 11/16	29/32	4.6	4.0
81X-XHD	2.609	42,800	1 ¼	5/16	5/16	7/16	2 ¾	⅞	1 ⅞	29/32	4.6	4.5

All dimensions shown in inches unless noted otherwise.

Steel, Bushed, Roller - Offset Sidebar

- Fully heat-treated superior alloy steel
- Solid bushings and rollers
- Quad staked rivet design



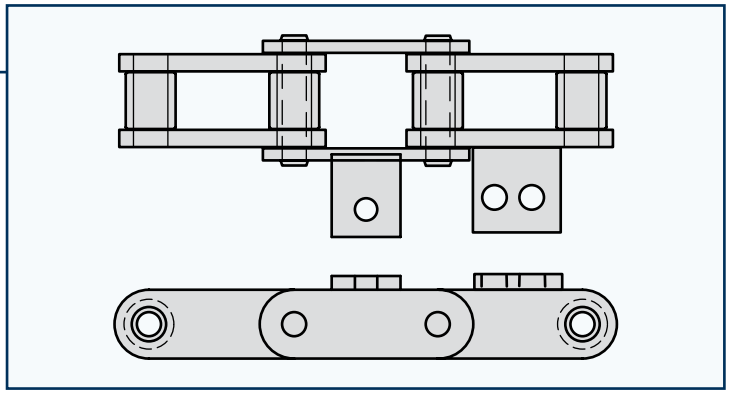
Part Number	A AVG Pitch	Ultimate Strength (pounds)	B Sidebar Height	C Sidebar Thickness	D Rivet Diameter	E Overall Width	F Max. Sprocket Thickness	G Length of Bearing	H Roller Diameter	Links per Foot	AVG Weight per Foot (pounds)
LXS882	2.609	29,000	1 ⅛	¼	7/16	2 ½	⅞	1 21/32	⅞	4.6	3.6

All dimensions shown in inches unless noted otherwise.

BUSHED ENGINEERED CLASS CHAIN ATTACHMENTS

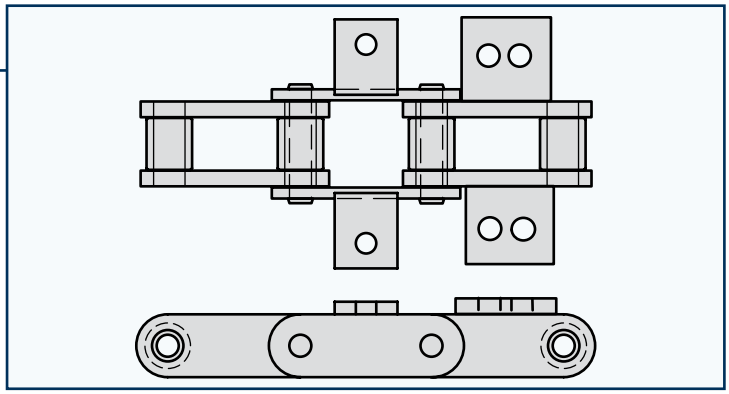
A1 + A2 Attachments

- Lug One Side
- A1: One Hole
- A2: Two Holes
- For Chain Numbers: MS188, MS131, MS102B, MS110



K1 + K2 Attachments

- Lugs Both Sides
- K1: One Hole
- K2: Two Holes
- For Chain Numbers: MS188, MS131, MS102B, MS110



STEEL PINTLE CHAIN

Pintle Chain

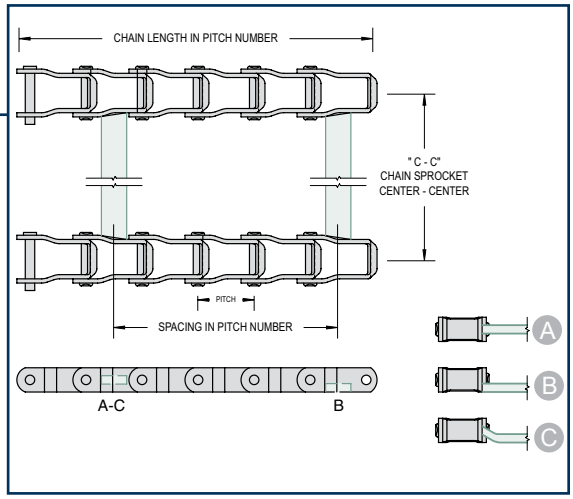
Steel Pintle Chain (open barrel design) are recommended for a wide range of applications such as spreaders, feeder systems, hay handling equipment and spray box applications.

- One-piece fully heat-treated steel link
- Quad-Staked pin construction
- Open barrel design will eliminate chain freezing
- A full line of custom attachments and sprockets are available

Part Number	A AVG Pitch	Ultimate Strength (pounds)	B Sidebar Height	C Sidebar Thickness	D Rivet Diameter	E Overall Width	F Max. Sprocket Thickness	Links per Foot	AVG Weight per Foot (pounds)
M662	1.664	11,000	.720	.125	.281	1.720	.750	7.2	1.05
M667X	2.250	21,000	.938	.170	.437	2.156	.875	5.3	1.86
M667H	2.313	12,500	.875	.125	.312	1.906	.875	5.2	1.65
M667KC	2.250	30,000	1.062	.200	.437	2.359	.875	5.30	2.56
M667XH	2.250	28,000	1.05	.225	.465	2.414	.875	5.30	2.8
M88K	2.609	24,500	1.063	.200	.437	2.315	1	4.6	2.3
M88C	2.609	38,000	1.125	.250	.500	2.842	1	4.6	3.3
M308C	3.075	50,000	1.500	.312	.625	2.859	1.125	3.9	5.63

All dimensions shown in inches unless noted otherwise.

Sander Chain



Steel Pintle Chain (open barrel design) is ideal for salting and sanding applications. The open barrel design virtually eliminates freeze-up due to corrosion. The open barrel design allows easy access for lubrication and wear inspection. Our factormanufactures, ready-to-use, completely customized assemblies for any truck within a few days.

Part Number	A AVG Pitch	Ultimate Strength (pounds)	B Sidebar Height	C Sidebar Thickness	D Rivet Diameter	E Overall Width	F Max. Sprocket Thickness	Links per Foot	AVG Weight per Foot (pounds)
M662-A	1.664	11,000	.720	.125	.281	1.720	.750	7.2	1.4
M667X-A	2.250	21,000	.938	.170	.437	2.156	.875	5.33	1.92
M667H-A	2.313	12,500	.875	.125	.312	1.906	.875	5.2	1.65
M667K-A	2.250	24,500	1.062	.200	.437	2.359	1	5.33	2.56
M667KC-A	2.250	30,000	1.062	.200	.437	2.359	1	5.33	2.56
M667XH-A	2.250	28,000	1.05	.225	.465	2.414	1	5.33	2.8
C77SS	2.308	11,000	.875	.1875	.4375	2.125	.750	4.6	3

All dimensions shown in inches unless noted otherwise.

HAZARD MONITORING SYSTEM

HAZARD MONITORING & EXPLOSION PREVENTION

Preventative maintenance can help reduce the risk of equipment failure and consequent downtimes. When it comes to monitoring your bucket elevators and belt conveyors, 4B can recommend you the ideal combination of sensors and monitoring systems to suit your requirements and budget.

4B provides an extensive range of their own ATEX / IECEx / CSA / CCC / EAC approved hazard monitoring systems, misalignment switches and bearing temperature monitors and level controls. We can offer you anything from a replacement sensor to a fully integrated hazard monitoring system which can be operated either as a stand-alone system or connected to your PLC.

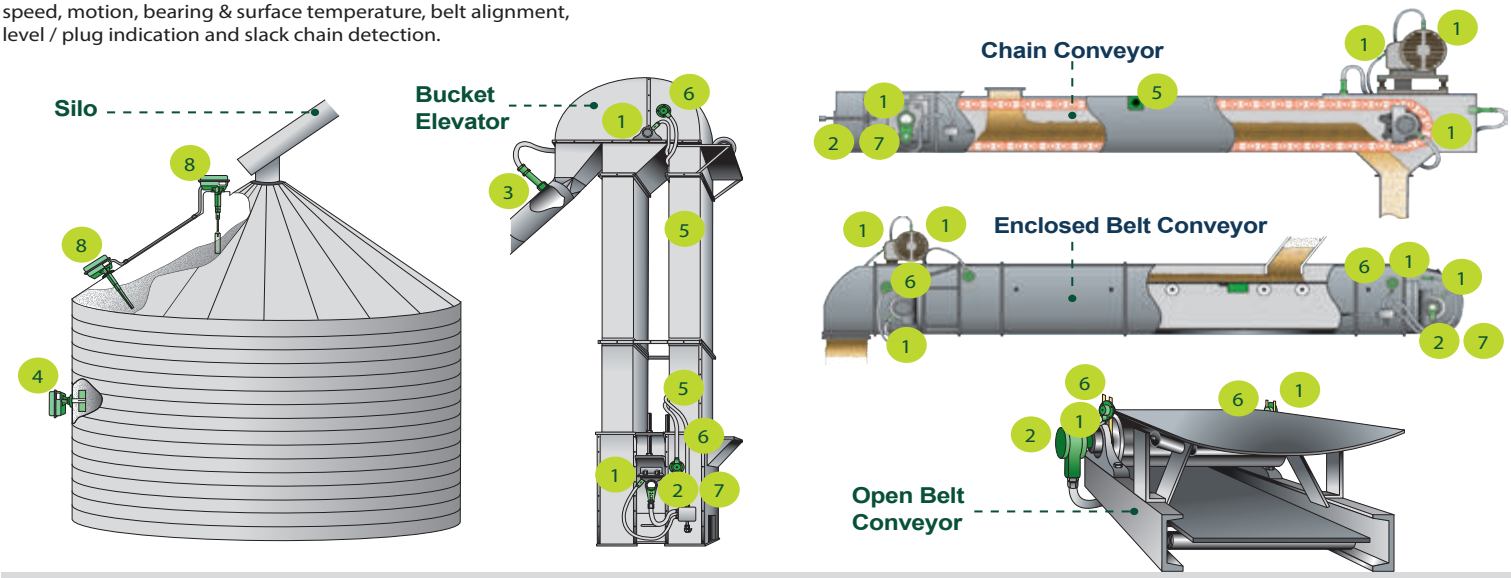
We can offer you a scalable solution starting with correctly chosen equipment and systems that can be expanded at a later date to encompass other machines in the plant.

4B provides installation service and after-sales technical support to help you overcome any technical problems with your monitoring equipment.

CONTENTS

SENSOR APPLICATIONS

These illustrations show typical sensor placements for monitoring: speed, motion, bearing & surface temperature, belt alignment, level / plug indication and slack chain detection.



SENSORS

1 BEARING TEMPERATURE SENSORS

The ADB, MDB, and WDB Series bearing temperature sensors are designed to screw directly into an existing grease zerk fitting on a bearing housing. Each sensor is fitted with a grease nipple to allow lubrication of the bearing without the need for removal of the sensor. Most series are available with either a PTC thermistor with various factory set trip points, or a NTC thermistor with a user adjustable trip point, or as a Pt100 RTD version.

2 SPEED SWITCHES

Monitors rotating machinery for dangerous underspeed conditions. An inductive sensing device located in the nose of the enclosure will detect a metal target. Set to the normal machine RPM, 4B Speedswitches provide alarm and shutdown signals underspeed and stopped motion.

3 BINSWITCH

The Binswitch detects level or plug conditions for bulk granular solids in tanks, bins, or silos and can be used as a plug or choke detector in chutes, conveyors and elevator legs.

4 ROTO LEVEL SERIES

The Roto Level Series are rotary paddle switches designed to detect high and low levels of bulk granular solids in bins, tanks, silos, and as blockage detectors in spouts.

5 WDA 3

The WDA Series are non-contacting extended range magnetic sensors used to detect ferrous targets at a distance of up to 75mm from the sensor. They can be used on chain conveyors to detect slack or broken chain. They can also be used on bucket elevators where they can detect bucket bolts and steel buckets to monitor belt misalignment.

6 TOUCHSWITCH

The Touchswitch is an electro-mechanical limit-switch style sensor with no moving parts. It is designed to detect belt tracking and misalignment problems on bucket elevators and conveyors. Unlike a rub block that utilises friction (heat) to activate, the Touchswitch is pressure sensitive for safer and more reliable monitoring.

7 INDUCTIVE SENSORS

4B inductive proximity sensors are designed to detect shaft speed, shaft position, gate position, or object presence. No contact is made between the sensor and the target being monitored.

8 AUTOSET SERIES

The Autoset Series are self-contained point level monitors with digital displays for high, intermediate, or low-level detection of liquids, powders or free-flowing granular solids. The Autoset Series incorporates simple push-button calibration with microprocessor enable/disable switch for total protection of stored values. Once the unit is calibrated for a specific application, it never has to be re-calibrated.

ELEVATOR / CONVEYOR MONITORING SYSTEMS

COMBINED MONITORING SYSTEMS

PRODUCT	WATCHDOG SUPER ELITE™	T500 ELITE - HOTBUS™	IE-NODE
			
Bearing temperature	✓ (continuous) max. 6 sensors + 2 ambient temp. sensors	✓ (continuous) max. 256 inputs*	8 dual use inputs (contact or NTC temperature)
Belt speed	✓ (continuous) max. 2 inputs – Differential speed monitoring	✓ (continuous) max. 256 inputs*	2 pulse or 4-20mA
Belt alignment	✓ Pulses / Contact / Rub* Blocks 4 inputs	✓ max. 256 sensors*	8 dual use inputs (contact or NTC temperature)
Plugged condition	✓	✓	✓
Pulley alignment	✓	✓	✓
Communication interfaces	Ethernet with Modbus TCP protocol	All major industrial protocols supported via F500 Gateway	Ethernet IP, Profinet, Modbus TCP
Test function	✓	✓	✖
Alarm & shutdown function	✓	✓	✖
Applications	Single elevator or conveyor	Multiple elevators & conveyors; remote monitoring across site	Bucket elevators & conveyors, plant-wide monitoring
Hazardmon.com (Cloud based hazard monitoring)	✓ (Ethernet onboard)	✓ (via F500)	✓ (Ethernet onboard)
Certifications	UKEx / EAC / ATEX / CSA / IECEx / InMetro / Nepsi / CCC	UKEx / ATEX / CSA / IECEx / InMetro / Nepsi / CCC	UKEx / ATEX / CSA / IECEx / InMetro / Nepsi / CCC

* total number of inputs / sensors, all sensors combined.

SPECIALISED MONITORING SYSTEMS

PRODUCT	T400N ELITE	T400 ELITE	A400 ELITE	B400 ELITE
				
Bearing temperature	✓ (continuous) max. 8 sensors	✓ (discreet PTC) max. 16 sensors	✖	✖
Belt speed	✖	✖	✓	✖
Belt alignment	✖	✖	✓	✓
Plugged condition	✖	✖	✖	✓
Pulley alignment	✖	✖	✖	✓
Communication interfaces	Modbus RTU (RS-485)	✖	✖	✖
Test function	✓	✓	✓	✓
Alarm & shutdown function	✓	✓	✓	✓
Applications	Elevator & conveyors	Elevator & conveyors	Elevators	Elevator & conveyors
Hazardmon.com (Cloud based hazard monitoring)	✖	✖	✖	✖
Certifications	UKEx / ATEX / CSA / IECEx / InMetro / Nepsi / CCC	UKEx / ATEX / CSA / IECEx / InMetro / Nepsi / CCC	UKEx / ATEX / CSA / IECEx / InMetro / Nepsi / CCC	UKEx / ATEX / CSA / IECEx / InMetro / Nepsi / CCC

HAZARD MONITORING SYSTEMS

COMBINED MONITORING SYSTEMS

WATCHDOG SUPER ELITE™

WATCH DOG™ Super Elite

Combined belt speed, belt alignment, continuous bearing temperature, pulley alignment and plugged condition monitoring system

The Watchdog Super Elite™ is a complete elevator and conveyor monitoring system with inputs for most of the types of sensors standard in the industry. Offers top-of-the-class flexibility and approvals. Unprecedented user friendliness via a 3.5" full colour bespoke design graphics screen. Controller settings can be set up either directly on the unit or via a PC application and transferred between the WDC4s and PC via a SD card. In-built Ethernet port with full support for the Hazardmon.com cloud based monitoring service. WDC4 has multi-lingual support. MODBUS/TCP Support with the application notes for Rockwell, Siemens and Mitsubishi PLCs is available.

Powered by HazardMon.com

Features

- Be lt speed monitoring (single and differential speed)
- Belt alignment monitoring (contact, pulsed and rub blocks)
- Bearing temperature monitoring
- Pulley alignment monitoring
- Plug condition monitoring
- Acceleration monitoring
- Jog prevention
- 3.5" Colour graphics LCD display
- SD card for settings save / restore and firmware updates
- Ethernet RJ45 port
- Multi-lingual display
- Hazardmon.com support for real-time remote monitoring and historical ana lysis

Input supply voltage

- 100 to 2 40 VAC
- 24 VDC (u niversal supply)

Sensor supply

- 24 VDC

Sensor options

- AD B, MDB, and WDB: bearing temperature
- WDA Series: motion alignment
- Touchswitch: belt alignment
- Inductive Proximity Sensors: speed (P1003V34AI / P3003V34AI)
- Binswitch: plu gswitch

Approvals

- UK - UKEx
- Euro pe – ATEX
- USA, Canada – CSA
- Brazil - InMetro
- China - Nepsi / CCC
- Russia - EAC
- Worldwide – IECEx

H x W x D

- 308 x 241 x 137mm

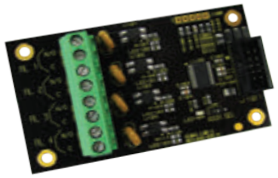
Applications

- Buc ket elevators and con veyors

WATCHDOG EXPANSION CARDS

The Watchdog Super Elite comes with standard 15 sensor inputs. However, it can be extended to up to 27 via the use of expansion cards. Cards can be pre-installed at the factory when ordering a new Watchdog WDC4, or installed into existing control units already in the field.

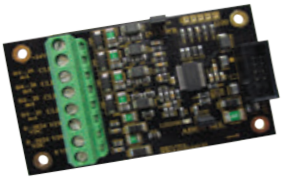
WDC4-AUXO-SSR



4 x solid state alarm relay outputs for the following conditions:

- Speed
- Temperature
- Misalignment
- Auxiliary Inputs

WDC4-AUXI-6AN



Additional analogue inputs:

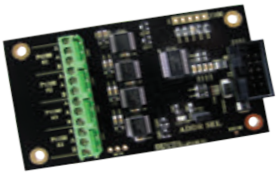
- 4 x 4-20mA current loop inputs (0-20mA range supported)
- 2 x 0-10VDC analogue inputs
- Individually enabled and configured in WDC4

WDC4-AUXI-6NTC

Additional NTC type temperature inputs:

- 6 x NTC inputs
- 2 x Sensor power supply (+24VDC)
- Individually enabled and configured in WDC4

WDC4-AUXI-4PT100



Additional Pt-100 type temperature inputs:

- 4 x Pt-100 inputs
- Temperature range: -200 to 535 degrees C
- Three-wire configuration
- Individually enabled and configured in WDC

COMBINED MONITORING SYSTEMS

IE-NODE (INDUSTRIAL ETHERNET-NODE)

Remote Sensor Monitoring for PLC's & Automation Systems

The Industrial Ethernet Node (IE-NODE) is a remote monitoring interface designed to provide sensor data to PLC's or other automation and control systems. The IE-NODE is available in two versions, both with a total of 10 sensor inputs. Version 1 has 8 contact or NTC temperature inputs, and 2 pulse or 4-20 mA (current loop) inputs. Version 2 has 10 inputs for 4-20 mA (current loop) sensors. Both units can be expanded to 16 sensor inputs with the installation of optional expansion boards. The IE-NODE operates by reading its sensor inputs and sending processed data when requested by another system (e.g. PLC). The units are equipped with RJ45 Ethernet sockets and support PROFINET, EtherNet/IP and Modbus TCP/IP protocols for easy integration with Siemens, Allen-Bradley Rockwell, Delta V, Modicon and other PLC's or automation devices.

Features

- Sensor Interface for PLC's & Automation Systems
- Supports PROFINET, EtherNet/IP and Modbus TCP/IP
- Up to 16 Total Sensor Inputs with Available
- Expansion Boards
- Configuration Software for Easy Network
- Set Up and Visual Overview of All Devices

Input supply voltage

- 100 to 2 40 VAC
- 24 VDC (u niversal supply)

Sensor supply

- 24 VDC

Sensor options

- Temperature (Bearing & Surface) - ADB Series (NTC Type) & Milli-Temp Series (4-20 mA)
- Belt Misalignment - Touchswitch (Contact) or Rub Block (NTC Type)
- Belt Speed & Slip - Milli-Speed Switch (4-20 mA), P300 Proximity Sensor (Pulse), P800 Proximity Sensor (Pulse), M800 Elite Speed Switch (Pulse)
- Level Indication: Auto-Set™ or Rotary Paddle Series
- Plug or Level Indication: Binswitch Elite or Auto-Set™

Approvals

- UK - UKEx
- Europe – ATEX
- USA, Canada – CSA
- Brazil - InMetro
- China - Nepsi, CCC
- Worldwide – IECEx

H x W x D

- 248 x 188 x 133mm

Applications

- Buc ket elevators and con veyors, plant-wide monitoring

IE-NODE EXPANSION CARDS

The IE-NODE comes with standard 10 sensor inputs. However, it can be extended to up to 16 via the use of expansion cards. Cards can be pre-installed at the factory when ordering a new IE-Node, or installed into existing control units already in the field.

ETH-NODE-AUXSW-4P

Expansion board for use with 4B's IE-Node Monitors:

- Allows an additional 4 Ethernet Ports to be added to the IE-Node
- Enables flexible cable routing for reduced material costs and installation time

ETH-NODE-AUXI-6AN

Additional analogue inputs:

- Supports 6 extra 4-20 mA CLI (Current Loop Input) sensors
- RS485 Modbus RTU connection capability

ETH-NODE-AUXI-6NTC

Additional NTC type temperature inputs:

- 6 extra NTC temperature sensors or 6 contact sensors, or any combination of 6
- RS485 Modbus RTU connection capability

ETH-SWITCH1V4C-5P (IE-SWITCH)

An unmanaged switch with 5x RJ45 Ethernet sockets for 10/100 Mbps Ethernet Communications. Designed to work with 4B's IE-Nodes or any other devices requiring 10/100 Mbps Ethernet communications.

COMBINED MONITORING SYSTEMS

T500 ELITE - HOTBUS

Serial network system for continuous monitoring of bearing temperature, belt misalignment, and more

The T500 Elite - Hotbus™ is a serial communication system specially designed to monitor up to 256 sensors, including continuous bearing temperature and belt misalignment. With automatic machine shutdown capability and PLC/PC compatibility this advanced microprocessor based system offers low cost installation, versatility and easy system expansion.

Features

- Contin uous bearing temperature monitoring with user adjustable trip points
- RS485 serial communication
- Monitors up to 256 sensors
- 4 second scan time with 256 sensors installed
- Works with many types of sensors
- Enter your own sensor/location names for easy identification
- Alarm and shutdown features
- Gateways available for various PLC connections
- HazardMon.com® cloud based hazard monitoring compatibl e

Sensor options

- ADB, MD B, and WDB: bearing temperature
- Touchswitch: belt alignment
- P3003V34AI + SN2 Node: speed
- Autoset Series: level indicator
- Roto-Level Series: level indicator
- Binswitch: level and plug indicator

Input supply voltage

- 100 to 240 VAC
- 24 VDC (unive rsal supply)

Sensor supply

- Use external 24 VDC supply

Approvals

- UK - UKEx
- Euro pe – ATEX
- USA, Canada – CSA
- Brazil - InMetro
- China - Nepsi, CCC
- Worldwid e – IECEx

H x W x D

- 246 x 188 x 102mm

Applications

- Bucket elevators and conveyors

ACCESSORIES

HazardMon.com®

HazardMon.com® is a secure cloud based hazard monitoring solution providing status notifications and data logging for bucket elevators and conveyors. Live system status, graphs and historical data can be viewed on any web-enabled device (smartphone, tablet PC, desktop or laptop computer). Emails can be sent to notify users whenever a change in the system's health is detected. An automated maintenance feature allows site operators to verify that all sensors on the system are operational and working correctly.

F500 Elite Fieldbus Gateway

The F500 is a communications gateway that allows for single point access to a maximum of four T500 Elite Hotbus™ systems via Fieldbus protocol. Fieldbus communication protocols supported include: Ethernet IP, Modbus TCP, Modbus RTU, DeviceNet, Profibus and others.

R500 Elite Alarm Relay Interface

The R500 is a microprocessor-controlled unit, which accepts signals from the T500 Elite Hotbus™ monitor, and is able to cause alarm or shutdown of equipment when a sensor exceeds its programmed alarm tolerance.

Hotbox Node – TN4 (Input Node)

The TN4 is a four input sensor node, powered by 24 VDC. Each input can be an NTC thermistor, PTC thermistor or Volt-Free Contact input; the types may be interchanged on a single node. The Node has a unique 4 digit address which is used to communicate to the T500 via a two wire serial RS485 connection. The TN4 Node processes information from electrical inputs into network data inputs for ADB, WDB , Binswitch or Touchswitch.

Hotbox Node – SN2 (Speed Node)

The SN2 is a two input speed node, powered by 24 VDC. The node is able to monitor two independent pulse (speed) sources for dangerous under speed conditions. The SN2 will support pulses which are PNP or sourced. The Node has a unique 4 digit address which is used to communicate to the T500 via a two wire RS485 connection. The SN2 processes information from electrical inputs into network data.

Hotbus™ Node Tester

The Hotbus Node Tester is a portable testing unit that can be used in the field to determine the operational status of any Hotbus communications node and network to quickly identify wiring or node issues.

Simply plug the network connection cable directly to the node. A digital display on the tester will show the status of the node which can determine if the node is operating correctly.

CLOUD-BASED HAZARD MONITORING

HAZARDMON

HazardMon.com ® is a secure cloud based hazard monitoring solution providing status notifications and data logging for bucket elevators and conveyors. Live system status, graphs and historical data can be viewed on any web-enabled device (smartphone, tablet PC, desktop or laptop computer). Emails can be sent to notify users whenever a change in the system's health is detected. An automated maintenance feature allows site operators to verify that all sensors on the system are operational and working correctly.

Features

- Secure Cloud Based Hazard Monitoring
- Works with T500 Elite Hotbus™ & Watchdog Super Elite
- Data Logged Automatically
- Real Time System Status & Alert Email Notifications
- Automated Maintenance
- View on Any Web-Enabled Device

HazardMon.com ® enables the WDC4 and T500 systems to become Industry 4.0 enabled. It offers real-time visualization and notifications for connected users anywhere in the world. All the data is collected with a two second latency and everything is saved for historical analysis.

Live View

Real-time remote view of your factory from anywhere in the world. Support mobile and desktop views. Data is dynamically updated and presented in most efficient view for operators and managers to understand.

Data Chartin g

Any sensor data can be charted in a matter of two clicks. Time range is selectable between 1h and 30 days. There is also a live chart function for real-time maintenance of site.

Data Analysis

Comprehensive reports for the management to make quick data-driven decisions. With the help of Hazardmon analytics factory management can make maintenance budgeting decisions in matter of minutes. All the Hazardmon reports are exportable and can be easily incorporated into internal health and safety and performance reports.

Automated Maintenance

Completely automated sensor testing process, which allows factory maintenance staff and management to comply with the annual or bi-annual test schedule. Just click on a sensor which needs testing, cause and alarm and clear the alarm. All of the conditions are logged along with the sensor location, name, operator full name, date and time, as well as the test outcome. The maintenance report can then be easily generated and exported in .CSV format.

Continuous Improvements

Hazardmon is updated several times a year with feedback from existing and new customers driving the changes. There is a constant flux of new industry-leading features.

Hazardmon together with the innovative sensing solutions allows 4B Group to stay a technology and solutions leader in the industry and at the forefront of Industry 4.0 and IoT research.

TEMPERATURE MONITORING

T400N ELITE HOTSWITCH

Bearing temperature monitor

The T400N Elite Hotswitch is a microprocessor controlled temperature monitor, which works in conjunction with NTC temperature sensors to monitor up to 8 bearings and can provide an alarm and automatic shutdown when a high bearing temperature condition is detected.

Features

- Monitors up to 8 NTC bearing sensors
- Includes 2 separate alarm and 2 separate stop relays (2 machines monitored).
- Short circuit / open circuit fail-safe detection
- Status LEDs provide quick location of the hot bearing condition
- A range of alarms temperatures available from 45°C to 80°C
- Alarm mute with automatic time delayed reactivation
- PLC board (optional)

Sensor options

- ADB, MDB, and WDB Series: bearing temperature
- Extensive range of sensors available from 50 - 100°C
- Continuous temperature sensors
- Modbus RTU connection

Input supply voltage

- 100 to 240 VAC
- 24 VDC (universal supply)

Sensor supply

- 24 VDC

Approvals

- UK - UKEx
- Europe – ATEX
- USA, Canada – CSA
- Brazil - InMetro
- China - Nepsi, CCC
- Worldwide – IECEx

H x W x D

- 246 x 188 x 102mm

Applications

- Bucket elevators and conveyors

T400 ELITE HOTSWITCH

Bearing temperature monitor

The T400 Elite Hotswitch is a microprocessor controlled temperature monitor, which works in conjunction with PTC temperature sensors to monitor up to 48 bearings and can provide an alarm and automatic shutdown when a high bearing temperature condition is detected.

Features

- Monitors 8 zones with up to 6 PTC sensors in each zone (48 total)
- Status LEDs provide quick location of the hot bearing condition
- Sensors are positively mounted grease through
- Alarm mute
- PLC board with 8 contact outputs (optional)
- Cold / hot status only

Sensor options

- ADB-MDB-WDB Series: bearing temperature
- Extensive range of sensors available from 50 - 100°C
- PTC type - step sensors

Input supply voltage

- 100 to 240 VAC
- 24 VDC (universal supply)

Sensor supply

- 24 VDC

Approvals

- UK - UKEx
- Europe – ATEX
- USA, Canada – CSA
- Brazil - InMetro
- China - Nepsi, CCC
- Worldwide – IECEx

H x W x D

- 246 x 188 x 102mm

Applications

- Bucket elevators and conveyors

BELT ALIGNMENT MONITORING

B400 ELITE

Conveyor or bucket elevator belt alignment monitoring system

The B400 Elite is a microprocessor based control unit which uses sensors to detect belt misalignment by pressure (Touchswitch) from one or two elevators/conveyors. The unit is able to provide an alarm and automatic shutdown of the elevator/conveyor when a belt misalignment condition is detected.

Features

- Uses u p to 4 touch sensors
- Monitors alignment of belts in two separate machines or top and bottom alignment in one machine
- Includes 2 separate alarm and 2 separate stop relays
- Simple, reliable, consistent
- Fully functional test via push button on front panel for general testing

Sensor options

- Touchswitch: force activated

Input supply voltage

- 100 to 240 VAC
- 24 VDC (univ ersal supply)

Sensor supply

- 24 VDC

Approvals

- UK - UKEx
- Europe – ATEX
- USA, Canada – CSA
- Brazil - InMetro
- China - Nepsi, CCC
- Worldwide – IECEx

H x W x D

- 246 x 188 x 102mm

Applications

- Belt bucket elevators and conveyors

A400 ELITE

Bucket elevator belt alignment monitoring system

The A400 Elite is a microprocessor based control unit which uses high power magnetic sensors that detect moving metallic buckets or bolts from either one or two bucket elevators. The unit is able to provide an alarm and automatic shutdown of the elevator when a belt misalignment/ underspeed condition is detected.

Features

- Use s up to 4 magnetic (reluctance) alignment sensors
- Monitors alignment of belts in two separate elevators or top and bottom alignment in one elevator
- Includes 2 separate alarm and 2 separate stop relays
- Simple, reliable, consistent
- Fully functional test via push button on front pan el

Sensor options

- WD A Series: motion alignment
- BAP Series: motion align ment

Input supply voltage

- 100 to 240 VAC
- 24 VDC (u niversal supply)

Sensor supply

- 24 VDC

Approvals

- UK - UKEx
- Europe – ATEX
- USA, Canada – CSA
- Brazil - InMetro
- China - Nepsi, CCC
- Worldwide – IECEx

H x W x D

- 246 x 188 x 102mm

Applications

- Belt bucket elevators

BELT MISALIGNMENT MONITORS

TOUCHSWITCH

Touchswitch
Belt/pulley misalignment sensor

The Touchswitch is an electro-mechanical limit switch with no moving parts, that detects the misalignment of both pulleys and belts in conveyors and bucket elevators. The sensor detects the lateral force of the belt or pulley and activates a volt-free solid state relay. Sensor output can be used to activate an alarm or shutdown the machine. The sensors are normally installed in pairs on opposite sides of the belt/pulley.

Features

- Hardened stainless steel face
- External test wheel for quick and simple sensor/system testing
- Not affected by dust or material build up
- No calibration or sensitivity adjustment needed
- No calibration needed
- No moving parts
- Food Grade (TS2V34AI-FG) type available.

Supply voltage

- 12-24 VDC

Compatible 4B control unit

- Watchdog
- T500
- B400

Approvals

- UK - UKEx
- Europe – ATEX
- USA, Canada – CSA
- Brazil - InMetro
- China - Nepsi, CCC
- Russia - EAC (all TS except TS2V34AI)
- Worldwide – IECEx

Applications

- Belt/pulley misalignment on elevators and conveyors

WDA HIGH POWER SENSOR

WDA
Belt alignment/ speed and chain break monitor.

High temperature version

The WDA sensor detects moving ferrous material and is designed for use with bucket elevators to detect buckets, for measurement of speed and alignment. WDA is a non-contact sensor, detecting metallic targets at up to 100mm range. It can also detect ferrous bolts where plastic or 316 stainless buckets are used. The sensor is used in conjunction with a PLC or with a Watchdog or A400 Elite control unit.

Features

- Long ran ge magnetic sensor unaffected by material build up
- Continuously monitors the moving elevator, with visual indication by an LED
- 25-75mm range depending on the size of the target, easily adjusted from the sensor itself or from the optional independent control unit
- Mounting bracket included
- Stainless steel construction
- High temperature version available (not ATEX approved)

Supply voltage

- 24 VDC

Compatible 4B control unit

- Watchdog

Approvals

- UK - UKEx
- Europe – ATEX (standard version)
- USA, Canada – CSA
- Brazil - InMetro
- China - Nepsi
- Worldwide – IECEx

Applications

- Belt alignment
- Belt speed (when used with Watchdog)
- Chain slack / break monitor (page 21)

BAP

BAP
Belt alignment/ speed monitor

The BAP detects moving ferrous material and is designed for use with bucket elevators to detect belt misalignment condition. It can also detect ferrous bolts where plastic or 316 stainless buckets are used . The sensor is used in conjunction with a PLC or with a Watchdog or A400 Elite control unit.

Features

- Mag netic sensor unaffected by material build up
- Continuously monitors the moving elevator, with visual indication by an LED
- 12-50mm range depending on the size of the target, easily adjusted from the sensor itself or from the optional independen t control unit

Supply voltage

- 12/24 VDC

Compatible 4B control unit

- Watchdog

Approvals

- UK - UKEx
- Europe – ATEX
- USA, Canada – CSA
- Brazil - InMetro
- China - Nepsi, CCC
- Russia - EAC
- Worldwide – IECEx

Applications

- Belt alignment sensor

BELT ALIGNMENT & RIP DETECTORS

BULLDOG

Bulldog
Belt Alignment
& Rip Detection
Switch

The Bulldog alignment and rip detection switch is an electro-mechanical system designed to detect dangerous belt misalignment and belt tear damage on open belt conveyors. The switch will detect misalignment of belts when contact is made with the roller; the roller arm will be forced to pivot by the belt activating a switch at 20° to trigger an alarm, and 35° to trigger a shut down. The sensors are usually installed in pairs on opposite sides of the belt. A flexible wire is set below the running conveyor belt attached by a rare earth magnet at each end. If the belt is ripped or damaged the wire is pulled away releasing the magnet connection which in turn will activate a switch to trigger an alarm or shut down.

Features

- E asy installation without calibration
- Solid construction
- Triggers an alarm at 20° and a shutdown of the machine at 35°
- Wire rope for optional belt rip detectio n

Supply voltage

- 110-240 VAC

Compatible 4B control unit

- Watchdog
- T500
- B400

Approvals

- UK - UKEx
- Europ e – ATEX
- China - CCC
- Worldw ide – IECEx

Applications

- Op en belt conveyor alignment monitoring
- Belt rip detection

CONVEYOR SAFETY STOP SWITCH

PULLSWITCH

Pullswitch
Conveyor Safety Stop Switch

The Pullswitch is a failsafe taut wire emergency pull cord stop switch for open conveyors. PVC coated steel pull wires and pigtails connect between the switches to provide easy installation and continuous emergency stop access along the length of the entire conveyor. Pullswitches can be installed at 60m intervals, reducing overall system cost. Quick location of a tripped switch is provided by a flag marker or optional reflector, and the tripped signal can be wired back to a PLC or one of 4B's controllers.

Features

- Pullwi re safety switch provides a safe and reliable means of stopping conveyors
- Double ended pull mechanism as standard
- Slack or taut wire operation
- Tough UV stabilised lightweight polycarbonate enclosure
- Designed for arduous environments e.g. quarries, open cast mines

Approvals

- UK - UKEx
- Euro pe – ATEX
- USA, C anada – CSA

Applications

- Safety stop switch for open belt conveyors

Pullswitch installed on open belt conveyor

SPEED SWITCHES

M100 STOPSWITCH

Stopped motion monitor

The Stopswitch is a straightforward shaft speed monitoring device. The 2-wire technology saves you time and makes installation hassle-free. If the shaft stops rotating, the Stopswitch will provide an output. It requires no calibration to operate and is a great tool for process control, motion verification and stopped shaft indication.

Features

- Small 1 8mm diameter
- Totally sealed
- 3m cable
- Status LED's

Style

- 18mm cylindrical

Supply voltage

- 24 to 240 VAC/VDC

Output

- Stopped motion detection

Approvals

- UK - UKEx
- Europe - ATEX
- Brazil - InMetro
- Russia - EAC
- China - Nepsi, CCC
- Worldwide – IECEx

Applications

- Proc ess control
- Provides a signal when the shaft has stopped rotating

M300 SLIPSWITCH 2 OR 5-WIRE

Intelligent underspeed switch 2 or 5-wire version available

User friendly and easy to install, the Slipswitch is a simple shaft speed monitoring device. Available in 2-wire and 5-wire models, the Slipswitch is self-calibrating and provides a 20% underspeed output to protect against dangerous belt slip and underspeed conditions.

Features

- Totally sealed
- Auto calibration
- 2 or 5-wire connection
- 3m cable
- Status LED's

Style

- 30mm cylindrical

Supply voltage

- 24 to 240 VAC/VDC

Output

- 20% underspeed detection

Approvals

- UK - UKEx
- Europe - ATEX
- Brazil - InMetro
- Russia - EAC
- China - Nepsi, CCC
- Worldwide – IECEx

Applications

- Convey ors, bucket elevators, any speed sensitive shaft for automatic 20% underspeed detection

M800 SPEEDSWITCH

Intelligent underspeed switch with three outputs

A solid state unit with no moving parts, the M800 is maintenance free. The unit operates using an inductive sensing device and requires no contact with the monitored machine. The M800 is calibrated to the machine's normal RPM. If the shaft speed falls by 10%, the M800 will alarm, and by 20% it will shut the machine down.

Features

- Totally sealed
- Auto calibration
- 1/2-inch conduit entry with 2m cable
- Status LE D's

Style

- DIN (40mm x 40mm)

Supply voltage

- 24 - 240 VAC/VDC

Output

- 1 x 10% underspeed relay
- 1 x 20% underspeed relay
- 1 x opto-isolated pulse (All 3 outputs in 1 unit)

Approvals

- USA, Canada - CSA

Applications

- Conveyors, bucket elevators, any speed sensitive shaft for automatic underspeed detection with 10% alarm and 20% shutdown and pulsed output.

All 4B speed and inductive sensors are compatible with the Whirligig universal shaft sensor mount.

SPEED SWITCHES

MILLISPEED - EU

Intelligent underspeed switch with three outputs

The Milli-Speed Switch with 4 - 20 mA output is designed to detect belt slip, belt underspeed, stop motion, and zero speed on bucket elevators, conveyors, airlocks, mixers, fans, grinders and many other rotating machines. Totally sealed and simple to calibrate.

Features

- 4 - 20 mA output
- Normalised output
- Simple magnetic calibration
- Loop powered (2 wire)
- Totally sealed construction: submersible
- Easy installation with Whirligig® mount
- SpeedMaster™ compatible for accurate testing

Style

- 30mm cylindrical

Supply voltage

- 24 to 240 VAC
- 17-30 VDC

Output

- Over s peed 20 mA (of calibrated speed)
- Calibrated speed 17 mA (100%)
- Zero speed 4 mA (0 - 10% of calibrated speed)

Approvals

- UK - UKEx
- Europe - ATEX
- Brazil - InMetro
- Russia - EAC
- China - Nepsi, CCC
- Worldwide – IECEx

Applications

- Conveyors, elevators, any speed sensitive shaft for automatic underspeed detection with 10% alarm and 20% shutdown

MILLISPEED - US

Monitors Rotating Machinery for Dangerous Underspeed Conditions

The Milli-Speed Switch with 4 - 20 mA output is designed to detect belt slip, belt underspeed, stop motion, and zero speed on bucket elevators, conveyors, airlocks, mixers, fans, grinders and many other rotating machines. Totally sealed and simple to calibrate.

Features

- 4 - 20 mA output
- Normalised output
- Simple magnetic calibration
- Loop powered (2 wire)
- Totally sealed construction: submersible
- Built in conduit adaptor (1/2" NPT)
- Easy installation with Whirligig® mount
- SpeedMaster™ compatible for accurate testing

Style

- DIN (40mm x 40mm)

Supply voltage

- 17 - 30 VDC

Output

- Over speed 20 mA (123% or more of calibrated speed)
- Calibrated speed 17 mA (100%)
- Zero speed 4 mA (0 - 10% of calibrated speed)

Approvals

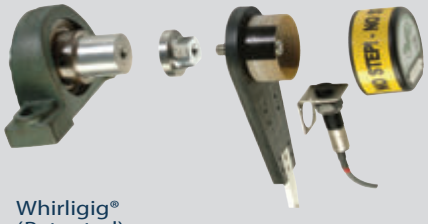
- USA, Canada - CSA

Applications

- Conveyors, elevators, any speed sensitive shaft for automatic underspeed detection with 10% alarm and 20% shutdown

ACCESSORIES

WHIRLIGIG



Whirligig® (Patented)

The Whirligig is the new standard for shaft speed monitoring. It is a three-in-one universal shaft sensor mount that makes installation simple and more reliable for all inductive shaft speed sensors.

Your sensor mounts to the Whirligig and the complete assembly bolts to the machine's shaft. Machine and shaft vibration does not affect the performance of the sensor, as the whole assembly moves with the shaft. Personal safety is also improved since the rotating target is completely enclosed behind a tough plastic cover.

- Fully Guarded Target for Easy Mounting of Motion Sensors
- For DIN Style and Standard Cylindrical Inductive Sensors
- Easy Installation – Only Requires M12 Tapped Hole in the Machines Shaft or Use a Mag-Con™ for Magnetic Connection
- Available with 1, 2 or 4 Targets
- Imperial version available
- ATEX, UKEx, EAC

MagCon™ Magnetic Connector (Patented)

50mm diameter magnetic coupler with 150 lb/660N of pulling force for connecting M12 thread to rotating shaft. Saves on drilling and tapping.

>Imperial version available

TEST TOOLS

SpeedMaster™ Speed Switch Tester

The Speedmaster is a calibration and testing device that accurately tests the calibration of a speed switch, and allows testing of the 10% alarm and 20% shutdown features of the sensor while installed on the machine shaft.

INDUCTIVE SENSORS

P100 INDUCTIVE SENSOR

Inductive Proximity Sensor

Inductive proximity sensors used to signal the position of equipment in conveyors, elevators and other mechanical assemblies. Also used as pulse generators for speed detection.

Features

- IP 65
- Watchdog and PLC compatible
- Visual indication of output state by LED

Style

- 18mm cylindrical

Supply voltage

- 24 to 240 VAC/VDC
- 10-30VDC

Output

- FET transistor output
- PNP or NPN output

Approvals

- UK - UKEx
- Europe – ATEX
- USA, Canada – CSA
- Brazil - InMetro
- China - Nepsi, CCC
- Russia - EAC
- Worldwide – IECEx

Applications

- Conveyors, elevators and other mechanical assemblies, and other proximity detection and speed applications.

P300 INDUCTIVE SENSOR

Inductive Proximity Sensor

Inductive proximity sensors used to signal the position of equipment in conveyors, elevators and other mechanical assemblies. Also used as pulse generators for speed detection.

Features

- IP 65
- Watchdog and PLC compatible
- Visual indication of output state by LED

Style

- 30mm cylindrical
- 2 and 4 wire

Supply voltage

- 24 to 240 VAC/VDC
- 10-30VDC

Output

- FET transistor output
- PNP or NPN output

Approvals

- UK - UKEx
- Europe – ATEX
- USA, Canada – CSA
- Brazil - InMetro
- China - Nepsi, CCC
- Russia - EAC
- Worldwide – IECEx

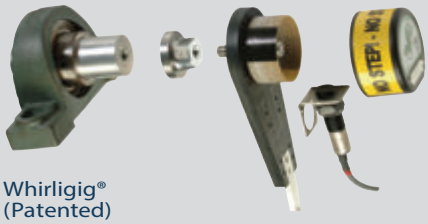
Applications

- Conveyors, elevators and other mechanical assemblies, and other proximity detection and speed applications.

Compatible with the Whirligig speed sensor mount

ACCESSORIES

WHIRLIGIG



Whirligig® (Patented)

The Whirligig is the new standard for shaft speed monitoring. It is a three-in-one universal shaft sensor mount that makes installation simple and more reliable for all inductive shaft speed sensors.

Your sensor mounts to the Whirligig and the complete assembly bolts to the machine's shaft. Machine and shaft vibration does not affect the performance of the sensor, as the whole assembly moves with the shaft. Personal safety is also improved since the rotating target is completely enclosed behind a tough plastic cover.

- Fully Guarded Target for Easy Mounting of Motion Sensors
- For DIN Style and Standard Cylindrical Inductive Sensors
- Easy Installation – Only Requires M12 Tapped Hole in the Machines Shaft or Use a Mag-Con™ for Magnetic Connection
- Available with 1, 2 or 4Targets
- Imperial version available
- ATEX, UKEx, EACEx

MagCon™ Magnetic Connector (Patented)

50mm diameter magnetic coupler with 150 lb/660N of pulling force for connecting M12 thread to rotating shaft. Saves on drilling and tapping.

- Imperial version available

TEST TOOLS

SpeedMaster™ Speed Switch Tester

The Speedmaster is a calibration and testing device that accurately tests the calibration of a speed switch, and allows testing of the 10% alarm and 20% shutdown features of the sensor while installed on the machine shaft.

ROTECH ENCODERS

The 4B heavy duty Rotech rotary shaft encoders are used primarily for protecting equipment and personnel from dangerous underspeed/belt slip conditions in extreme environments. Other applications include accurate speed control, direction of rotation detection, gate position indication and counting the number of revolutions of the shaft.

POLYPROPYLENE SHAFT ENCODER

Features
- Heavy duty design
- 1 to 1,000 PPR
- Multiple outputs
- Intrinsically safe option available
- IP66

Style
- Polypropylene (reinforced with 30% glass)
- Totally self-contained (no guards required)

Supply voltage
Model dependent:
- 10-30Vdc
- 20-240VAC

Output
Model dependent:
- Intrinsically safe
- NPN
- PNP
- Quadrature

Approvals
- UK - UKEx
- Europe - ATEX
- Worldwide - IECEx
- USA & Canada - CSA

Applications
- Conveyors, bucket elevators or any shaft speed measurement

ALUMINIUM SHAFT ENCODER

Features
- Ultra heavy duty
- 1 to 1,000 PPR
- Multiple outputs
- Intrinsically safe option available
- IP67

Style
- Cast aluminium construction
- Totally self-contained (no guards required)

Supply voltage
Model dependent:
- 8.2Vdc for intrinsically safe version
- 10-30Vdc
- 20-240VAC

Output
Model dependent:
- Intrinsically safe
- NPN
- PNP
- Quadrature

Approvals
- UK - UKEx
- Europe - ATEX
- Worldwide - IECEx
- USA & Cana da - CSA

Applications
- Conveyors, bucket elevators or any shaft speed measurement

STAINLESS STEEL ENCODER

Features
- Ultra heavy duty
- 1 to 1,000 PPR
- Multiple outputs
- Intrinsically safe option available
- IP67

Style
- 304 or 316 stainless steel
- Totally self-contained (no guards required)

Supply voltage
Model dependent:
- 8.2Vdc for intrinsically safe version
- 10-30Vdc
- 20-240VAC

Output
Model dependent:
- Intrinsically safe
- NPN
- PNP
- Quadrature

Approvals
- UK - UKEx
- Europe - ATEX
- Worldwide - IECEx
- USA & C anada - CSA

Applications
- Conveyors, bucket elevators or any shaft speed measurement

WHEEL ENCODER

Features
- Heavy duty design
- 1 to 1,000 PPR
- Multiple outputs
- Intrinsically safe option available
- IP67

Style
- Trailing arm and wheel

Supply voltage
Model dependent:
- 8.2Vdc for intrinsically safe version
- 10-30Vdc
- 20-240VAC

Output
Model dependent:
- Intrinsically safe
- NPN
- PNP
- Quadrature

Approvals
- UK - UKEx
- Europe - ATEX
- Worldwide - IECEx
- USA & Canada - CSA

Applications
- Belt speed monitoring applications

ACCESSORIES

MAGCON

MagCon™ Magnetic Connector (Patented)

50mm diameter magnetic coupler with 150 lb/660N of pulling force for connecting M12 thread to rotating shaft. Saves on drilling and tapping.

- Imperial version available

SPEED RELAY

DIN rail mounted speed relay can be used with any PNP or NPN pulsed output sensor for providing a user adjustable underspeed relay contact output to alarm or shutdown machinery.

TACHO DISPLAY

Bright 25mm high 4-digit LED display unit for connection to any PNP or NPN transistor output sensor to indicate shaft speed. The unit incorporates a user-adjustable under speed relay contact output. Quadrature display also available.

ACCESSORIES

The ADB Sensor Tester has been designed to test 4B adjustable depth bearing (ADB) temperature sensors in the field. This hand held test unit features an integrated heating block specifically designed to have a 4B ADB sensor directly inserted. With integral controls and temperature display, the unit heats the sensor to the desired trip point, and allows quick and easy real life testing of the sensor and temperature monitoring system.

During planned maintenance or periodic testing, the ADB Sensor Tester can be used as a diagnostic tool to verify the alarm and shutdown sequences of the control unit are functioning as expected. To test, the heater block should be set above the control units alarm operating temperature. Remove the ADB bearing sensor probe from the housing and insert it into the heater block. As the heater block reaches the alarm temperature, the ADB sensor will relay this data to the control unit, allowing you to verify that the alarm and shutdown sequences run as expected.

Features

- ADB Bearing Sensor Tester
- Hand Held Portable Unit
- Exact Alarm Point Testing
- Exact Shutdown Point Testing
- Easy To Read Display

ADB WRENCH

Used to loosen and tighten the ADB bearing temperature probe for proper depth adjustment.

ADB Sensor Installed on Conveyor Bearing

BEARING TEMPERATURE SENSORS

ADB

The ADB series have been designed toallow the depth of the sensor to be adjustable depending on your application. Three standard versions are available with probe lengths of 50, 100 and 200mm (other lengths available for special order). The sensors screw directly into a bearing housing through the existing grease zerk thread. Each sensor is fitted with a grease zerk to allow lubrication of the bearing without the need for removal of the sensor. The ADB style sensors are available with a standard NTC thermistor for 4B's Hotbus and Watchdog systems, or a Pt100 - RTD type for PLC and DCS systems.

Features

- Screw in positive mount installation
- Grease zerk for bearing lubrication
- Adjustable depth (50, 100, 200mm probes)
- 1/4" NPT (brass body)
- NTC or Pt100 RTD versions – continuous temperature

Sensor options

- NTC Thermistor
- Pt-100 4-wire RTD
- Selectable probe length: 50, 100 and 200 mm

Input supply voltage

- 12/24 VDC (current limited)

Compatible 4B control unit

- Watchdog
- T500
- T400
- IE-NODE

Approvals

- UK - UKEx
- Europe – ATEX
- USA, Canada – CSA
- China - CCC
- Russia - EAC
- Worldwide – IECEx

Applications

- Bearing temperature control
- Temperature measurement

MILLITEMP

The Milli-Temp is a loop powered analog sensor with a 4-20 mA linear output that is scaled across a temperature range for continuous temperature monitoring. The sensor has been designed to allow the depth of the probe to be adjustable depending on your application. The sensor screws directly into a bearing housing through the existing grease zerk thread. Each sensor is fitted with a zerk to allow lubrication of the bearing without the need for removal of the sensor.

Features

- 4-20 mA output
- Screw in positive mount installation
- Grease zerk for bearing lubrication
- Lug style adaptor (surface temp.)
- 1/2" NPT conduit entry
- 304 stainless steel body

Sensor options

- Selectable probe length: 50, 100 and 200mm
- 4-20 mA loop

Input supply voltage

- 15-28 VDC (24VDC nominal)

Compatible 4B control unit

- Watchdog
- IE-NODE

Approvals

- UK - UKEx
- Europe – ATEX
- USA, Canada – CSA
- China - CCC
- Worldwide – IECEx

Applications

- Bearing temperature control
- Temperature measurement

BEARING TEMPERATURE SENSORS

WDB7 LUG STYLE

The WDB7 series is a lug style NTC, Pt-100 or PTC thermistor type for surface temperature monitoring and has been designed to bolt directly onto a bearing housing, motor, gearbox, or machine casing. The mounting hole is 8mm from the factory, but can be drilled up to 13mm if needed. The sensor can be connected to a PLC or to a hazard monitoring system, such as 4B's T500 Hotbus Elite, Watchdog Elite, or T400 Elite. The connections are not polarity sensitive therefore special connections requirements are eliminated.

Features

- Surface mount installation
- 8mm to 13mm bolt entry
- 1/2" NPT conduit entry
- Continuous temperature monitoring

Sensor options

- NTC Thermistor
- Pt-100 4-wire RTD
- PTC (trip temperature selected at time of purchase)

Input supply voltage

- 12/24 VDC (current limited)

Compatible 4B control unit

- Watchdog
- T500
- T400
- IE-NODE

Approvals

- UK - UKEx
- Europe – ATEX
- USA, Canada – CSA
- Worldw ide – IECEx

Applications

- Surface temperature measurement and control

MDB

The MDB series is a range of bearing sensors manufactured to screw directly into a bearing housing through the existing 1/4" BSP threaded grease zerk (can be installed in 1/8" NPT grease zerk fitting with an adapter). Each sensor is fitted with a grease zerk to allow lubrication of the bearing without the need for removal of the sensor. The sensor is fitted with a M12 connector for use with a separately supplied cable and socket assembly which can be connected directly to a PLC or to a hazard monitoring system, such as 4B's T500 Hotbus Elite, Watchdog Elite, or T400 Elite. The connections are not polarity sensitive therefore special connection requirements are eliminated.

Features

- Screw in installation
- Grease zerk for bearing lubrication
- Wiring connector

Sensor options

- NTC Thermistor
- Pt-100 4-wire RTD
- PTC (trip temperature selected at time of purchase)

Input supply voltage

- 12/24 VDC (current limited)

Compatible 4B control unit

- Watchdog
- T500
- T400

Approvals

- UK - UKEx
- Euro pe – ATEX

Applications

- Bearing temperature control
- Temperature measurement

WDB8

The WDB8 series is a range of bearing temperature sensors designed to screw directly into an existing 1/4" BSP grease zerk fitting on a bearing housing. Each sensor is fitted with a grease nipple to allow lubrication of the bearing without the need for removal of the sensor. The WDB Series is available with either a PTC thermistor with various factory set trip points or an NTC thermistor with a user adjustable trip point.

Features

- Screw in positive mount installation
- Grease zerk for bearing lubrication
- 1/4" BSP (brass body)
- Cable with protective anti-bend cover

Sensor options

- NTC Thermistor
- PTC (trip temperature selected at time of purchase)

Input supply voltage

- 12/24 VDC (current limited)

Compatible 4B control unit

- Watchdog
- T500
- T400
- IE-NODE

Approvals

- UK - UKEx
- Europe – ATEX
- USA, Canada – CSA
- Worldwide – IECEx

Applications

- Bearin g temperat ure control

LEVEL INDICATORS

AUTO-SET™

A user friendly, reliable point level indicator for bulk granular solids, powders and liquids. Digital display, push-button calibration and material build-up compensator make this unit the elite point level sensor.

A selection of screw-on stainless steel probes to suit your application.

AUTO-SET™ REMOTE

A user friendly, reliable point level indicator for bulk granular solids or powders where there is high vibration and/or temperature involved. Remote electronic display/control unit allows for remote calibration/set-up away from vibration or heat.

ATS8

ATS8
RF capacitance point level indicator

Features
- Push button calibration
- Digital display
- Internal timer
- Automatic material build-up compensator
- Attachable SS probes

Style
- 1 inch BSP

Supply voltage
- 120/240 VAC 24 VDC (universal supply)

Output
- 1 set of voltage-free changeover relay contacts

Approvals
- UK - UKEx
- Europe - ATEX
- USA, Canada - CSA

Applications
- Material point level indication in silos, bins and other vessels.

ATS8 & EXTENDED POWER SHIELD

ATS8 with Extended Power Shield
RF capacitance point level indicator for thick-walled silos

Features
- Push button calibration
- Digital display
- Internal timer
- Automatic material build-up compensator, 12 or 16 inches long
- Attachable SS probes

Style
- 1 inch BSP

Supply voltage
- 120/240 VAC 24 VDC (universal supply)

Output
- 1 set of voltage-free changeover relay contacts

Approvals
- UK - UKEx
- Europe - ATEX
- USA, Canada - CSA

Applications
- Material point level indication in thick-walled concrete silos.

ATS8 FLUSH PROBE

ATS8 Flush Probe
RF capacitance heavy-duty plugswitch

Features
- Push button calibration
- Digital display
- Internal timer
- Automatic material build-up compensator
- No moving parts

Style
- 100mm dia. probe with integral mount

Supply voltage
- 120/240 VAC 24 VDC (universal supply)

Output
- 1 set of voltage-free changeover relay contacts

Approvals
- UK - UKEx
- Europe - ATEX
- USA, Canada - CSA
- Worldwide - IECEx

Applications
- Plug condition in chutes, discharges and pipes.

AUTO-SET™ REMOTE PROBE

Auto-Set™ Remote Probe
Polyprop probe - 120°C
PEEK probe - 250°C
Ceramic probe - 600°C

Features
- No moving parts
- No electronic components
- Automatic material build-up compensator
- Attachable SS probes
- High temp available

Style
- 1 inch BSP

Supply voltage
- From control unit

Output
- To control unit

Approvals
- Not approved

Applications
- Material point level indication in surge bins, vibratory feeders and high temperature processes.

AUTO-SET™ REMOTE CONTROL

Auto-Set™ Remote Control
Remote control unit with digital display and calibration push buttons

Features
- Push button calibration
- Digital display
- Internal timer
- DIN rail mountable

Style
- DIN rail mountable enclosure processes

Supply voltage
- 120/240 VAC 24 VDC (universal supply)

Output
- 1 set of voltage-free changeover relay contacts

Approvals
- Not approved

Applications
- Material point level indication in surge bins, vibratory feeders and high temperature processes.

LEVEL INDICATORS

BINSWITCH

The Binswitch is a capacitive sensor for the detection of blockages in chute, discharges and pipes. Available in 2-wire and 5-wire models. Simple semi-automated calibration process using magnets.

Features

- Capacitance probe
- Detects presence or absence of liquids & free-flowing bulk granular materials
- Easy installation & self-containing
- Magnet calibration

Style

- 30mm cylindrical
- 2 or 5 wire options

Supply voltage

- 24 to 240 VAC/VDC

Output

- Programmable high or low level detection

Approvals

- UK - UKEx
- Europe - ATEX
- China - CCC
- Russia - EAC
- Worldwide – IECEx

Applications

- Plug condition in chutes, discharges and pipes.

RLI

The RLI is designed to signal the presence or absence of bulk materials such as: chemical products, wood chips, grain, granules and powders. It is ideal for use as a point level indicator in tanks and silos as well as a blockage detector in conveyor chutes.

Features

- High or low level indication
- Automatic power shut off
- Limit switch contact output
- 14 foot vertical extensions (maximum)

Style

- Rotary level indicator with 1 1/4-inch NPT mounting thread
- Glass-fibre reinforced nylon housing

Supply voltage

- 24 VDC
- 110VAC
- 240VAC

Output

- 1 set of voltage-free changeover relay contacts

Approvals

- No explosive environment approvals

Applications

- Material point level indication in surge bins, vibratory feeders and high temperature processes

RG SERIES

The RG Level Sensors series is designed to indicate the presence or absence of bulk materials such as grains, pellets, chemicals, wood chips and other powders.If material impedes the rotation of the paddle, the motor topples of its axis and triggers an alarm. The RG has a variety of compatible paddles which offer the ability to detect a wide range of products.

Features

- Can be top and side mounted
- Easy installation
- Wide range of paddles available
- Optional extensions and shard guards for more challenging applications

Style

- Rotary level indicator

Supply voltage

- 10/240 VAC
- 24 VDC

Output

- 1 set of voltage-free changeover relay contacts

Approvals

- UK - UKEx
- Europe - ATEX
- Worldwide - IECEx

Applications

- Material point level indication in surge bins, vibratory feeders and high temperature processes

ACCESSORIES

BINSWITCH ACCESSORIES

BAS3 Abrasion Shield

Polyethylene abrasion shield for ATEX Binswitch.

Mounting Plate

Powder-coated mild steel mounting plates with 11/4-inch NPT or 1 inch BSP, half or full coupling. Use with Autoset, Roto-Level / RG Series Indicators and Binswitches with adapters. (Also available in stainless steel.)

PADDLE SWITCH ACCESSORIES

Rotary Level Paddles

Complete range of stainless steel paddles for Roto-Level Indicators.

Binswitch Installed on Bucket Elevator Spouting (with SMP, BAS & conduit adapter)

Auto-Set™ Flush Probe Installed on Belt Conveyor Discharge

Auto-Set™ Flush Probe Installed on Screw Conveyor Discharge

4B COMMISSIONING SERVICE

After 4B products have been installed by a qualified electrician, 4B's commissioning service is available to inspect and certify proper installation of our sensors and control units prior to operation. A brief overview of the service is listed below -

Features

- All rigid and flexible conduits inspected for: cracks, breaks, tightness of connections, and suitability for purpose.
- All wiring inspected for: ground faults, shorts, suitability for purpose.
- All sensors and controls inspected for correct installation and wiring.
- All sensors and controls inspected for any signs of damage, and tested to insure proper working order.
- Detailed written inspection and testing report with any recommendations given to client.

Belt & Pulley Alignment Sensors

- Sensors are removed from their location to ensure that they were centered on the belt.
- Each sensor is physically inspected for damage and wear.
- Sensor LED and alarm contacts are tested.
- Wire terminations are inspected.

Temperature Sensors

- All sensors are inspected and resistance is checked.
- Sensors are also checked for correct identification, location and sensor type.
- Sensors are checked for proper temperature alarm and shutdown trip points using 4B's ADB Tester.
- Wire terminations are inspected.

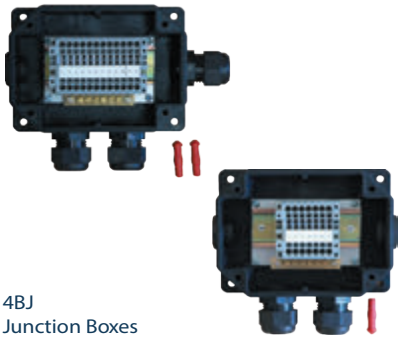
Speed Switches

- All speed switches are checked for proper installation.
- Sensors are checked for proper underspeed alarm and shutdown set points using 4B's SpeedMaster™.
- Wire terminations are inspected.

Warning: 4B recommends that all sensors are wired to provide automatic shutdown of monitored equipment, when a hazardous condition is detected.

JUNCTION BOXES

4BJ JUNCTION BOXES



4BJ
Junction Boxes

4B Atex approved junction boxes allow for the easy installation of sensors in potentially explosive dust hazard environments.

Features

- Rob ust glass reinforced nylon casing
- Up to 4 gland inputs
- Dust and water tight seal
- Detachable cover for easy terminal access

Terminal springs

- 6 x 2.5mm ^{2} or 12 x 2.5mm ^{2}

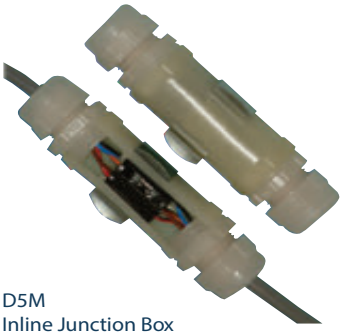
Approvals

- UK - UKEx
- Europe – ATEX
- Worldwide – IECEx

Applications

- Electrical installations in dust – explosive environments

D5M INLINE JUNCTION BOX



D5M
Inline Junction Box

The D5M's unique moulded body with Atex approved glands and mounting clip/ bracket allows for in-line connection closer to the sensors simplifying connections and reducing the time of intervention during maintenance operations or repairs.

Features

- Ideal for extending sensor cables within Atex hazard areas
- Complete with Atex glands and mounting bracket

Terminal springs

- 5 x 2.5mm ^{2}

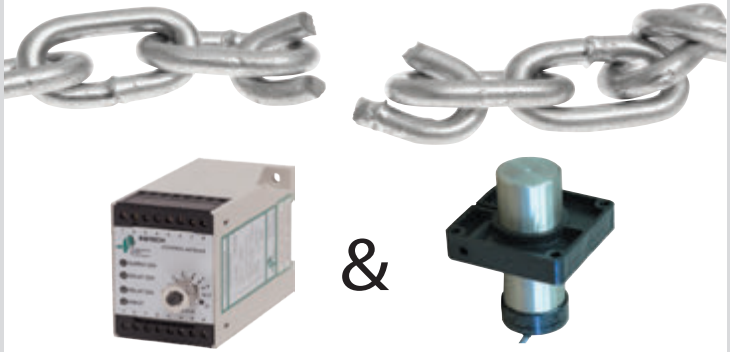
Approvals

Applications

- Electrical installations in dust – explosive environments

BROKEN OR SLACK CHAIN

MONITORING FOR DRAG CHAIN CONVEYORS



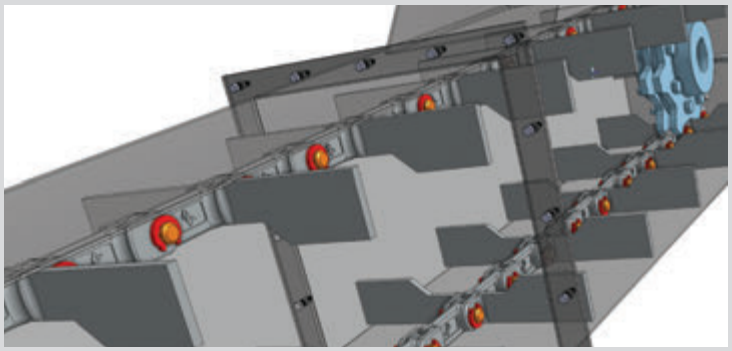
Speed Relay & WDA Sensor

By using a WDA sensor in combination with a speed relay, ferrous steel flights or bolts on plastic paddles are used to monitor for broken or slack chain issues on drag conveyors.

The WDA is a non-contacting extended range magnetic proximity sensor, not affected by dust or material build up, used to detect moving ferrous material up to 75mm away from the sensor. The speed relay is used to monitor the speed of a rotating shaft and detect if it rises or falls below a preset safety level.

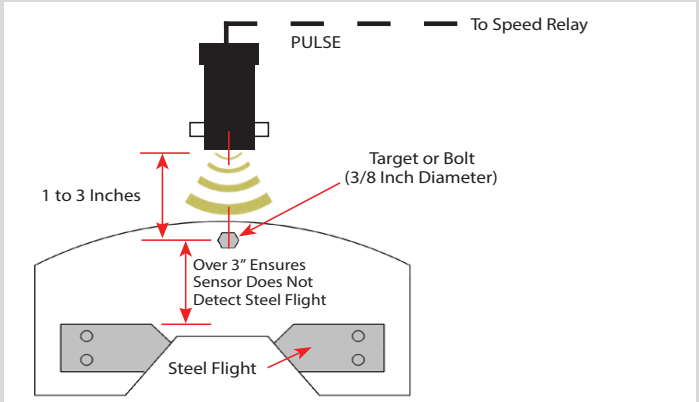
Features

- Solutio n for drag chain conveyors
- Monitor for chain slack or breakage
- Detects movement of steel flights or bolts on plastic paddles
- Prevent costly equipment damage and downtime
- Simple sensor and speed relay solution



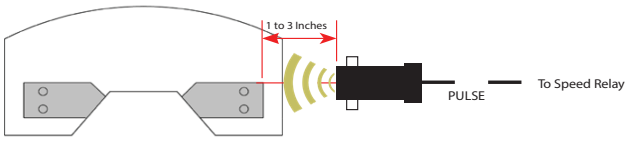
OPTION 1 > Sensor Detecting Bolt Installed on the Paddle

Under normal running conditions, the target bolt passes through the sensor's field and a pulse is sent to the speed relay. If the chain becomes slack, the target bolt will drop below the field and the pulses will stop, causing the relay contact to change state.



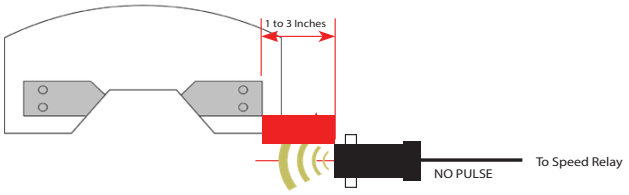
OPTION 2 > Sensor Detecting Steel Flight

Under normal running conditions, the steel flight passes through the sensor's field and a pulse is sent to the speed relay. If the chain becomes slack, the steel flight will drop below the field and the pulses will stop, causing the relay contact to change state.



OPTION 3 > Sensor Waiting to Detect Steel Flight

Under normal running conditions, the steel flight is out of the sensor's field, so no pulses are sent to the speed relay. If the chain becomes slack, the steel flight comes into the sensor's field and a pulse is sent to the speed relay, causing it to change state.



Warning: - Make sure that there is no ferrous steel (such as the machine's frame) within the sensing field.

TECHNICAL INFORMATION

BUCKETS, BELTS & ACCESSORIES

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 60 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:

BUSHELS: 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 =	_____

BUSHELS 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.

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

*All Engineering and technical data provided by Maxi-Lift or Maxi-Lift employees is for general reference only and does not guarantee perfect discharge, or required throughput capacities (bushels per hour, tons per hour, etc) for all bucket elevators including all range of speeds shown within the speed range. We also do not guarantee any impact on material damage as material is moved through a bucket elevator.

AGRICULTURAL ELEVATOR BUCKET SPEED CHART

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


TIGER-TUFF


TIGER-TUFF LOW PRO


HD-MAX


HD-MAX LOW PROFILE

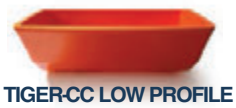

HD-STAX


HD-STAX LOW PROFILE

MINIMUM AND OPTIMUM PULLEY SPEEDS																	
ELEVATOR BUCKET NOMINAL PROJ. (INCHES)		PULLEY DIAMETER (INCHES) / PULLEY CIRCUMFERENCE (FEET)															
		4"	5"	6"	8"	10"	12"	14"	16"	20"	24"	30"	36"	42"	48"	60"	72"	84"
		1.05'	1.31'	1.57'	2.07'	2.62'	3.14'	3.67'	4.19'	5.24'	6.28'	7.85'	9.42'	11.00'	12.57'	15.70'	18.90'	22.00'
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	20
	Optimum:	-	-	-	-	-	-	-	-	80	78	73	65	59	55	50	45	40
8"	Minimum:	-	-	-	-	-	-	-	-	-	-	33	32	30	30	27	25	23
	Optimum:	-	-	-	-	-	-	-	-	-	-	60	58	57	56	47	43	40
10"	Minimum:	-	-	-	-	-	-	-	-	-	-	-	-	-	30	25	20	20
	Optimum:	-	-	-	-	-	-	-	-	-	-	-	-	-	52	45	42	40

TIGER-CC®, CC-MAX® TABLE OF SPEEDS


TIGER-CC


TIGER-CC LOW PROFILE


CC-MAX


CC-MAX LOW PROFILE


CC STEEL

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.

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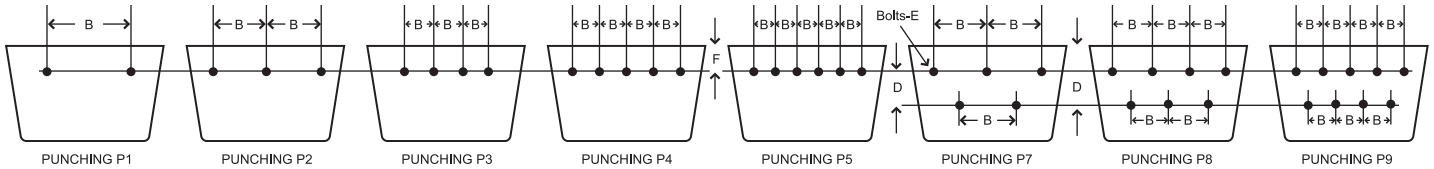
BUCKET PUNCHING: BELTS



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).

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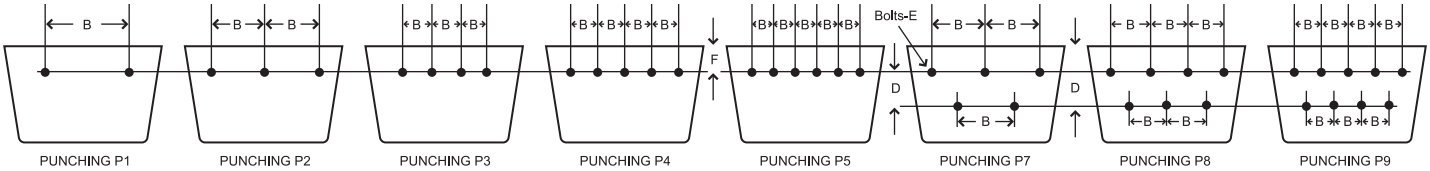
BUCKET PUNCHING: BELTS



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	19	4-1/2	1	5/16	1
18	P8	20	5	1	5/16	1
19	P9	21	4	1	5/16	1
20	P9	22	4	1	5/16	1
21	P9	23	4-1/2	1	5/16	1
22	P9	24	4-1/2	1	5/16	1
23	P9	25	5	1	5/16	1
24	P9	26	5	1	5/16	1
28	P9	31	5-1/8	1	3/8	1

Other Belt Punches Available. Verify Bucket Punching Before Ordering.

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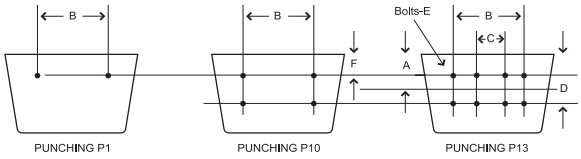
BUCKET PUNCHING: CHAINS

PUNCHING: CENTRIFUGAL DISCHARGE ELEVATOR BUCKETS ON "K" ATTACHMENTS

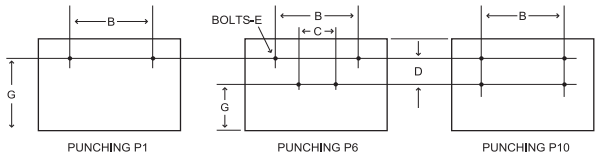


CENTRIFUGAL DISCHARGE ELEVATOR BUCKETS ON "K" ATTACHMENTS

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.

PUNCHING: CONTINUOUS ELEVATOR BUCKETS ON "K" ATTACHMENTS



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.

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CHAINS

AVAILABLE OPTIONS

1

Through Heat Treating. Where not standard through heat treated sidebars barrels or rivets are an excellent option to increase chain life.

2

Induction Hardening. Where not standard induction hardening can be added to specific components to greatly increase chain life.

3

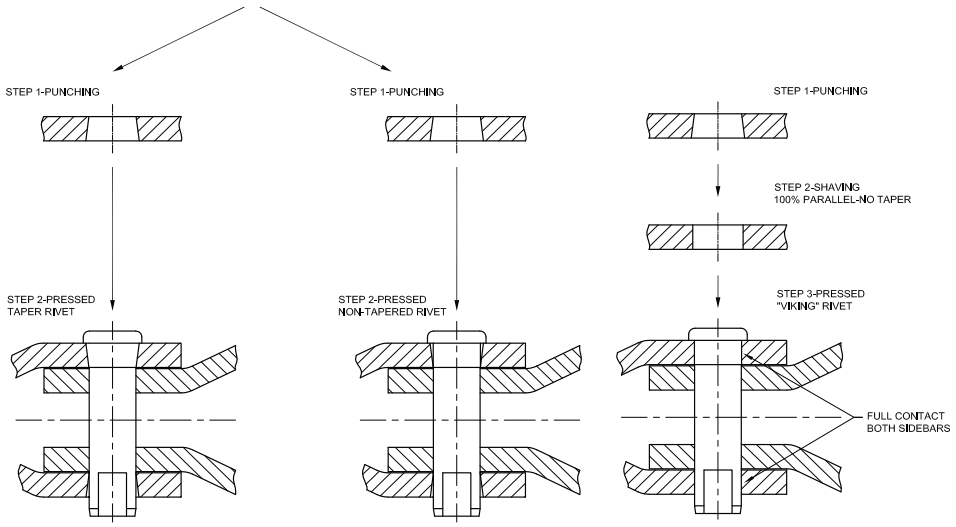
Pregreasing. Factory pregreasing with premium polymer grease is an excellent way to extend the life of welded steel chain. Pregreasing will greatly reduce initial break in wear increasing overall chain life by 25% or more.

4

Double-Locking. Double locking rivets is the process of welding the rivet head and rivet end to the sidebars locking the rivet in place. This reduces possible rivet and sidebar hole wear that can lead to chain elongation in heavy load or severe applications.

5

Punched and Shaved Rivet holes. Welded steel chains can also be supplied with punched and shaved rivet holes for 100% contact between the rivets and sidebars resulting in reduced elongation due to better stress dissipation around the rivets.



Chain Designation

WR - Welded Steel Chain c/w Heat-Treated rivets
WH - Welded Steel Chain fully Heat-Treated
WD - Welded Steel Drag Chain
WDH - Welded Steel Heat-Treated Drag Chain
XHD - Extra heavy duty

Heat-treated + Induction-hardened Chain

For maximum chain life in severe applications including heavy impact loading and high-speed applications or abrasive conditions specific heat treating may be required.

Induction-hardened Pins

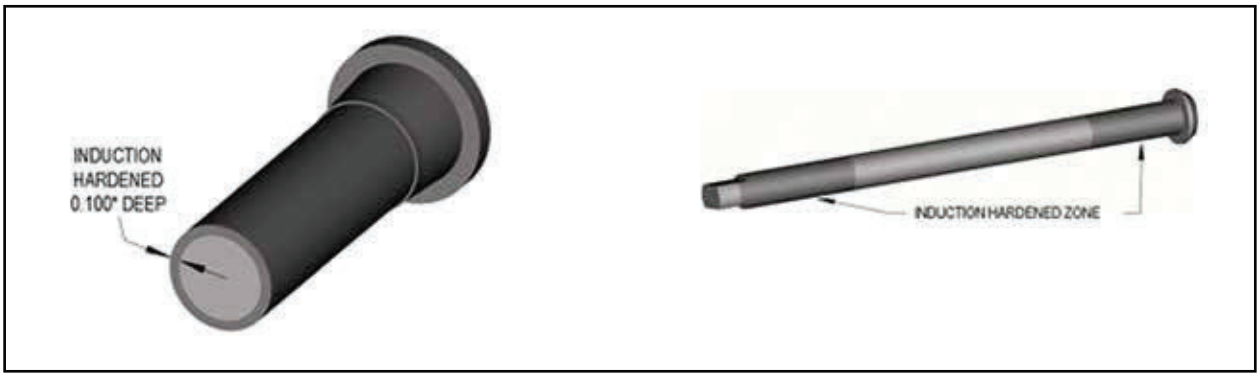
Mill chain come available with through Heat-Treated rivets. Mill chain with a 1" rivet diameter and larger can come with an additional induction hardening.Drag Chain with a ¾" and 7/8" diameter rivet can come with zone induction hardening. Drag Chain with a 1" diameter rivet can come standard with through heat treating.

Precision Taper-fit Pins

All Mill Chain with a ¾" – 1 1/8" diameter rivet are constructed with Precision Taper Fit Rivets. These rivets are superior in design compared with conventional rivets. When the PTF rivet is pressed into the link, it provides 100% contact between the rivet and the sidebar, reducing wear and increasing chain life.

Through Heat-treating and Induction-hardening

SIDEBAR Heat-Treated 32-36 Rc
BARRELS Heat-Treated 32-36Rc or Induction Hardened 44-50 Rc
RIVETS Heat-Treated 32-36Rc or Induction Hardened 44-50 Rc



Wear

In a non-abrasive environment Heat-Treated and/or Induction Hardened chain may have a greater working life expectancy up to 50 % longer than non heat-treated.

Impact and Strength

Through Heat-Treated chain will improve impact resistance strength and ultimate strength.

ENGINEERING FORMULA + HELPFUL TABLES

Horsepower

Horsepower equals 33,000 foot pounds per minute, or 550 pounds per second, In terms of chain load and speed.

$$HP = \frac{\text{Working Load x Ft. Per Min}}{33{,}000}$$

or

$$HP = \frac{\text{Working Load x T x P x R.P.M.}}{396{,}000}$$

T = *number of sprocket teeth*; P = *chain pitch*

Chain working load

When the horsepower input is known and the chain working load is desired, this can be calculated as follows:

$$\text{Working Load} = \frac{\text{HP x 33,000}}{\text{Ft. Per Min.}} \quad \text{or} \quad \text{Working Load} = \frac{\text{HP x 396,000}}{\text{T x P x R.P.M.}}$$

Factor of safety

Factor of Safety is determined as follows:

$$F.S. = \frac{\text{Chain Ultimate Strength}}{\text{Chain Working Load}}$$

Chain speed

Chain Speed can be determined from the following formula:

$$\text{Chain Speed (Ft. Per Min.)} = \frac{\text{T x R.P.M.}}{K}$$

T = n*umber of sprocket teeth*; K = *pitches of chain per foot*

Chain lengths in pitches (approx)

$$\text{Chain Length} = \frac{S}{2} + 2C =$$

S = *sum of teeth, both sprockets*; C = *center of distance in pitches*

Chain approx workload

$$\text{Divide} = \frac{\text{Ultimate Strength in lbs.}}{6\ (\text{safety factor})}$$

Example:

$$\text{WR 132} = \frac{85{,}000\#}{6} = 14{,}167\#$$

Theoretical weights of steel

1) $\frac{\text{cubic inches of steel}}{\text{x 0.28334}} = \text{Pounds}$

2) $\frac{\text{cubic feet of steel}}{\text{x 489.6}} = \text{Pounds}$

Approx. Weights of Wood in Lbs./Cu Ft.

species	green	airdry
Alder, *red*	46	28
Ash, *black*	52	34
Ash, *commercial white*	48	41
Ash, *Oregon*	46	38
Aspen	43	26
Basswood	42	26
Beech	54	45
Birch	57	44
Birch, *paper*	50	38
Cedar, *Alaska*	36	31
Cedar, *eastern red*	37	33
Cedar, *northern white*	28	22
Cedar, *southern white*	26	23
Cedar, *western red*	27	23
Cherry, *black*	45	35
Chestnut	55	30
Cottonwood, *eastern*	49	28
Cottonwood, *northern black*	46	24
Cypress, *southern*	41	32
Douglas Fir, *coast region*	38	34
Douglas Fir, *Rocky Mtn. Region*	35	30
Elm, *American*	54	35
Elm, *rock*	53	44
Elm, *Slippery*	56	37
Fir, *balsam*	45	25
Fir, *commercial white*	46	27
Gum, *black*	45	35
Gum, *red*	50	34
Hemlock, *eastern*	50	28
Hemlock, *western*	41	29
Hickory, *pecan*	62	45
Hickory, *true*	63	51
Honeylocust	61	..
Larch, *western*	48	36
Locust, *black*	58	48
Maple, *bigleaf*	47	34
Maple, *black*	54	40
Maple, *red*	50	38
Maple, *silver*	45	44
Maple, *sugar*	56	44
Oak, *red*	..	44
Oak, *white*	63	47
Pine, *lodgepole*	39	29
Pine, *northern white*	36	25
Pine, *Norway*	42	34
Pine, *Ponderosa*	45	28
Pines, *southern yellow:*		
Pine, *lobolly*	53	36
Pine, *longleaf*	55	41
Pine, *shortleaf*	52	36
Pine, *sugar*	52	25
Pine, *western white*	35	27
Poplar, *yellow*	38	28
Redwood	50	28

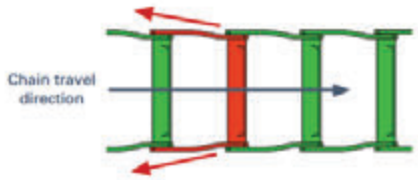
CHAIN CARE & TROUBLESHOOTING

Problem	Possible Causes	What To Do
Excessive noise	■ Misalignment of sprocket ■ Loose casings or bearings ■ Too little or too much slack ■ Chain and/or sprocket wear ■ Inadequate lubrication or no lubrication ■ Chain pitch size too large	■ Realign sprockets and shafts ■ Tighten set-bolts ■ Adjust center or idler take-up ■ Replace chain and/or sprocket ■ Lubricate properly ■ Check chain drive recommendation
Chain vibration	■ Resonance to the vibration cycle of machine to be installed ■ High load fluctuation	■ Change vibration cycle of chain or machine ■ Use torque converter or fluid coupling
Wear on inside of link plate and one side of sprocket teeth	■ Misalignment	■ Realign sprockets and shafts
Chain climbs sprockets	■ Excessive chain slack ■ Heavy overload	■ Adjust center or idler take-up ■ Reduce load or install stronger chain
Broken pins, bushings or rollers	■ Chain speed too high for pitch and sprocket size ■ Heavy shock or suddenly applied loads ■ Material build-up in sprocket tooth pockets ■ Inadequate lubrication ■ Chain or sprocket corrosion	■ Use shorter pitch chain or install larger diameter sprockets ■ Reduce shock load or install stronger chain ■ Remove material build-up or install side gashed sprockets ■ Lubricate properly ■ Install anti-corrosive chain or sprockets
Chain clings to sprocket	■ Center distance too big or high load fluctuation ■ Excessive chain slack	■ Adjust the center distance or install idler take-up ■ Same as above
Chain gets stiff	■ Misalignment ■ Inadequate lubrication ■ Corrosion ■ Excessive load ■ Material build-up in chain joint ■ Peening of link plate edges	■ Realign sprockets and shafts ■ Lubricate properly ■ Replace with anti-corrosive chain ■ Reduce load or replace with chain of suitable strength ■ Shield drive from foreign matter ■ Check for chain interference
Breakage of link plate	■ Subjected to shock load ■ Vibration ■ Moment of load inertia is too big	■ Reduce shock (e.g., install a shock absorber) ■ Install a device to absorb vibration (e.g., tightener, idler wheel) ■ Chain section should be checked (increase number of strands or select next larger size chain)

DIRECTION OF CHAIN TRAVEL

Narrow End Forward

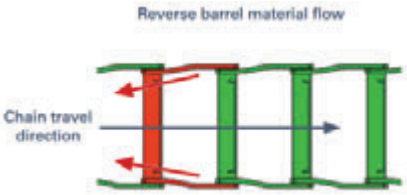
When the narrow end of the offset link faces the sprocket (whether entering or leaving) the sliding that produces wear mostly takes place between the barrel O.D. and the sprocket tooth face. Articulation between the rivet and barrel bore also occurs, but the load quickly decreases between these parts as articulation starts and the full load between the sprocket tooth and the tight side strand is transferred from sprocket tooth face, to barrel O.D. Therefore narrow end forward will produce more wear on the sprocket tooth.



SHORT RUN CONVEYOR- - -NARROW END FORWARD

Wide End Forward

When the wide end or pin end of the link faces the sprocket tooth (entering or leaving) the articulation is entirely between rivet and barrel bore.Wear between rivet and barrel bore causes the chain to elongate in pitch. This elongation is probably the major factor for chain replacement. Thus the direction of travel which gives the least amount of wear between rivet and barrel bore, should be the correct direction for the chain to travel.



LONG RUN CONVEYOR- WIDE END FORWARD

ELONGATION FORMULA

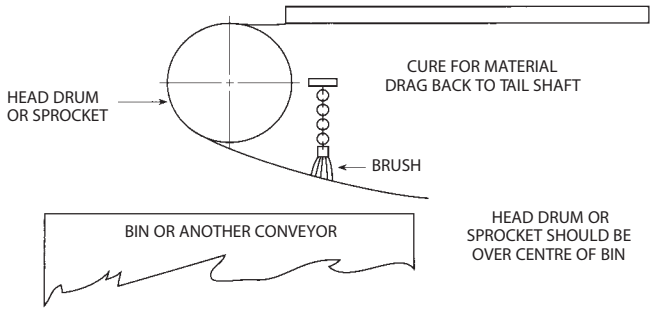
1.Measure section of 20 pitches on the conveyor.
2.Take result - ex: WR132 = 126"
3.Length on new chain - ex: WR132 = 121"
4.Divide result by new chain length -

ex 128' + 121" = 1.0413

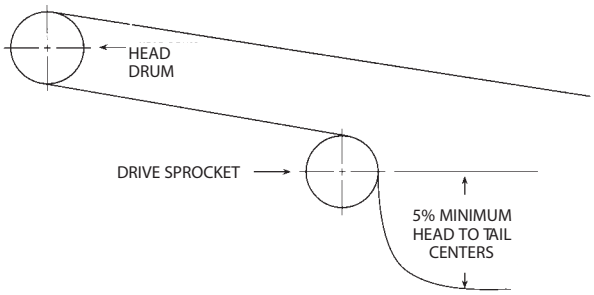
Elongation result = 4.13%

The maximum elongation for a chain is between 5% and 6%. Past this point the chain tries to skip the teeth of the sprocket.

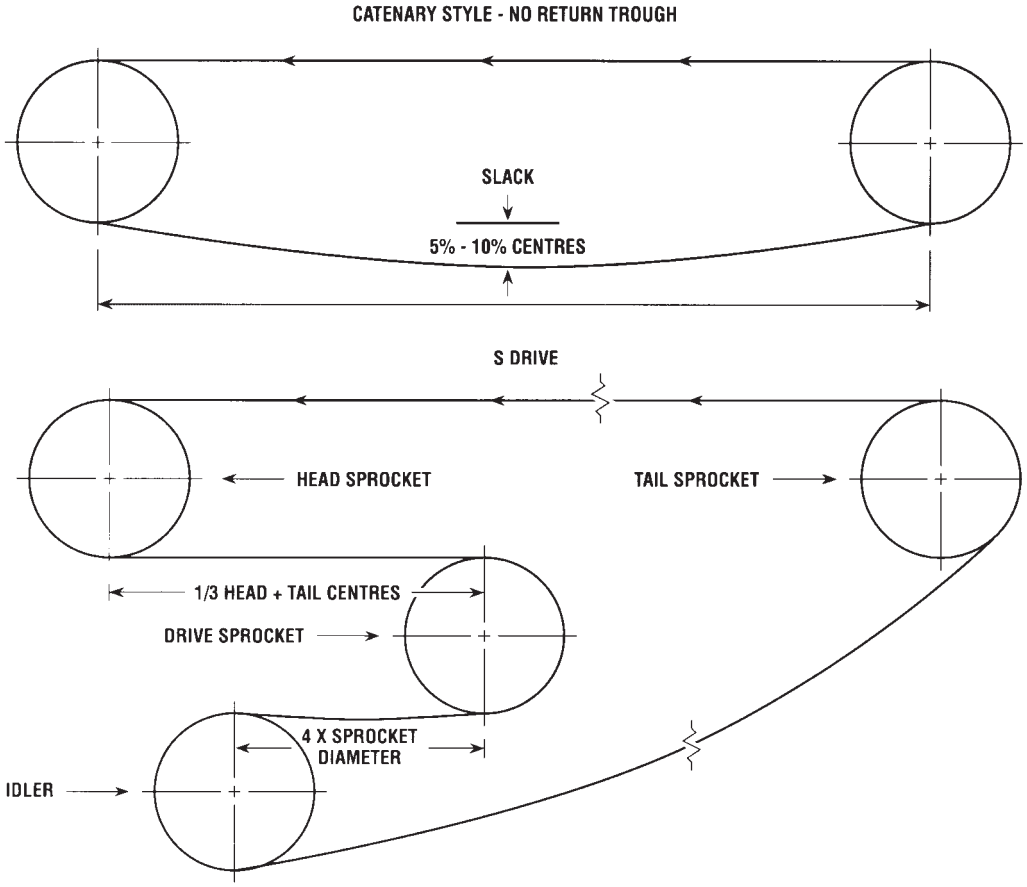
HEAD END DRIVE FOR CHAIN CONVEYORS



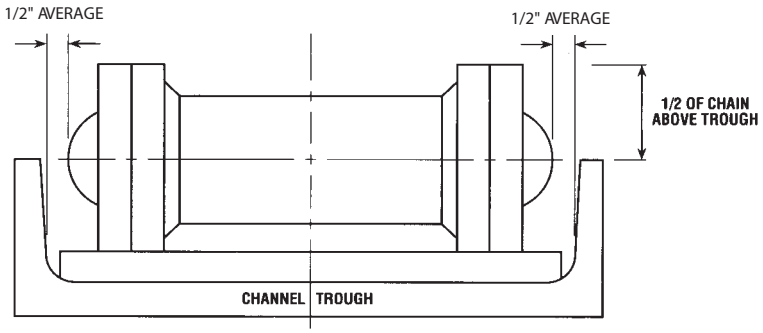
"WATERFALL" DRIVE FOR CHAIN CONVEYORS



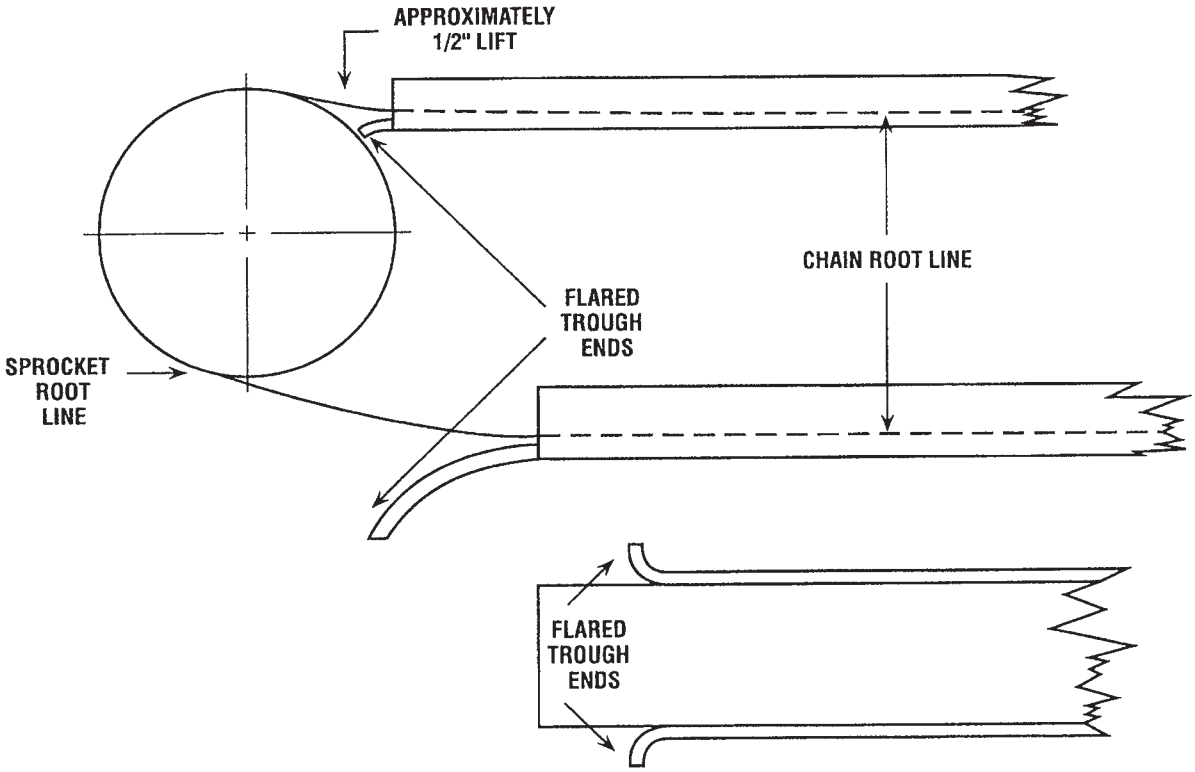
TYPICAL MILL CHAIN DRIVE ARRANGEMENTS



MILL CHAIN FIT IN TROUGH



SPROCKET TO TROUGH ALIGNMENT



PREVENTATIVE MAINTENANCE CHECKLIST

Chain and sprockets should be inspected after **three** months service and **six month** intervals thereafter. These mostly visual inspections will uncover potential problem areas before they become more serious. Always correct apparent problems as they are uncovered to assure all steps are taken to guarantee long life and trouble free service.

INSPECTION CHECK LIST

☐ 1. Wash chain and sprockets with a heavy stream of clean water or steam to remove excess material buildup which can cause improper seating on the sprockets resulting in accelerated wear. Direct the water spray to flush out the joints that could clog and prevent the entry of lubricants, or cause tight joints through a buildup of corrosion.

☐ 2. Inspect the sprockets for usual or excessive wear, or an uneven wear pattern on the sprocket teeth, deep grooves in the pockets, a hooking wear pattern on the teeth, or for any other indications of misalignment. Inspect for cracked welds, and retighten set screws or other ring bolts if you are using segmental sprockets.

☐ 3. Check the inner face of the sidebars of the chain for a shiny surface which could signal a misalignment problem, especially if the wear is more prevalent on one side than the other. Misalignment problems should be corrected as soon as possible. The chain should run freely and without interference with the sprocket teeth. (note: We frequently see poor sprocket / chain interaction because the sprockets are not properly matched to the chain). It is a good idea to purchase chain and sprockets from the same source and to have the chain wrap checked prior to shipment.

☐ 4. Check for loose, cracked, or unseated or rotating pins. Any of these conditions indicate a danger signal that can lead to chain breaks, work stoppages, and lost productivity. Check for signs of corrosion, or corrosive buildup which can lead to tight joints, and fatigue breaks. If a bad situation is present, the condition may require some special action to reduce the corrosion causing conditions, or possibly special pin treatment to reduce the damaging effects of corrosion. Corrosive conditions are one of the leading causes of pin

breakage in Welded Steel Chains. (Note: See appendix for an in depth discussion of the effects of corrosion on pin life with some suggestions for corrective actions.)

☐ 5. Check bushings for signs of uneven or excessive wear, cracks, or broken welds. These conditions usually indicate sprocket scrubbing, misalignment, overload, or improper tooth design. The conditions can sometimes be corrected by adjusting the take-ups, and by paying more attention to the amount of chain sag, but usually trial and error, or just plain good judgment are all that it takes once there is understanding that chain sag is necessary for good chain performance.

☐ 6. Check the chain joints for signs of "wallowing out", which is excessive wear of the sidebars at the pin location. This condition can cause chain stretch, jumping of sprocket teeth, a conveyor surge, early pin breakage, and also create a dangerous situation. When a condition like this is noticed, the link should be removed and replaced. If there are several links with this problem, the chain should be replaced. Wallowing out usually occurs because of a poor press fit of the pin in the sidebars. This could occur because of poor control of the pin diameter, or more likely improper piercing of the sidebars.

Frequently maintenance personnel replace pins in chain, to increase chain life. Because of the difficulty in maintaining a press fit, some grind or turn the pin to get an easier replacement. This, of course, reduces the life of the chain and the loose pins begin turning, which then leads to the wallowing out process.

☐ 7. Lubricate the chain immediately. To be effective, the lubricant should be directed into the chain joint area where it is most effective. Adequate lubrication is the most important element in long chain life, so care should be taken to insure the lubricant seeps between the pin and bushing, and between the pins and the sidebars. The extra time it takes to do a complete job pays very big dividends in trouble free operation.

If possible, some type of oiling system should be installed to keep the joints in contact with some type of lubricant. Because clean water has some lubricating qualities, some run a stream of water over the joints with enough force to remove buildup, and to keep the joints clean. A petroleum based lubricant is better, but clean water can also be used effectively.

☐ 8. Run the chain to seat the joints and to check for any signs of pulsing, or surging. The chain should run smoothly over the sprockets and along the tracks. Tight joints will not articulate over the sprockets and can be readily observed and

immediately replaced or repaired. Usually surging chain indicates a potential problem and the need for corrective action. Some possible causes of surging:

A. Take-up tension is too tight or too loose. Best solution is to try to adjust the take-up until the chain runs smoothly without jerks or surges.

B. Improper sprocket design or number of teeth. As a general rule, use sprockets with as many teeth as practical, and use a sprocket with a diameter of 3-4 times the chain pitch.

C. If the conveyor is running at a very slow speed, try increasing the speed to overcome the frictional forces that could cause the surges.

D. Check sprockets for excessive wear patterns. Worn sprockets can cause chain to jump teeth or catch in the pockets.

E. Check the loading of the chain and try to eliminate very rough loading onto the chain. Dropping heavy logs onto the chain is very destructive. A better method is to slide the load onto the chain without the impact of a high drop. Chains were not designed to accept a rough loading that causes the chain to jump or bounce.

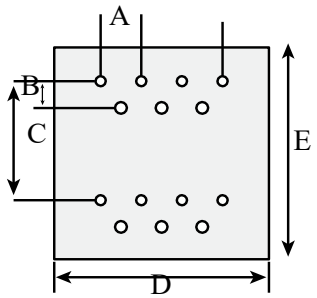
☐ 9. Check all the attachments for cracked welds, tighten bolts, and look for signs of inappropriate wear. Loose attachments are particularly dangerous so make sure they are properly welded. Because most chain sidebars are heat treated, the welding of attachments becomes more critical. Use a low hydrogen rod, pre-heat the parts to be welded, and then slow cool. A good method is to toss a heavy blanket or canvass over the new weld until it cools naturally in this controlled atmosphere. Rapid cooling will cause stress cracks with will lead to premature fatigue failures.

☐ 10. Remember the importance of the **three** and **six** month inspections, and remember to keep the chains well lubricated. These rules are guidelines that are sure to increase chain life, reduce failures, and improve the productivity of your operation.

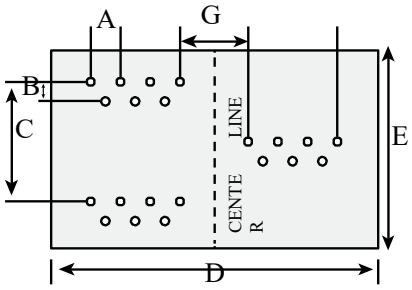
ORDERING GUIDES

ELEVATOR BELT PUNCHING DIAGRAM WORKSHEET

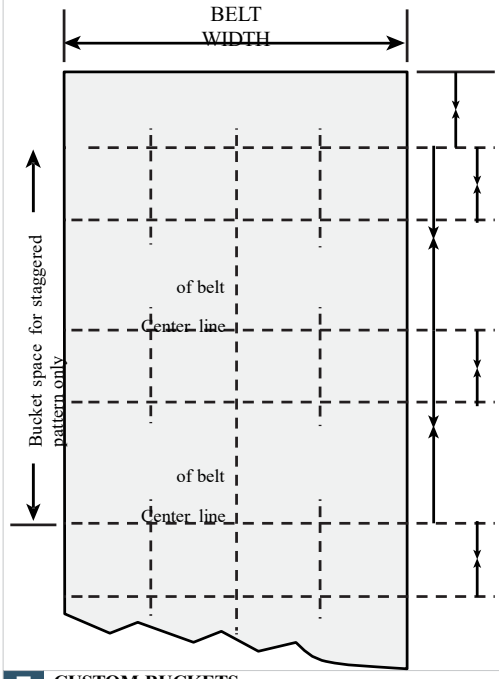
Here's what we need from you.



☐	CENTERED BUCKETS
▸	Distance from end of belt to first row of buckets (mm/in):
▸	Hole Diameter (mm/in):
▸	Punch pattern (see below):
A	Center distance between hole (mm/in):
B	Row centers (mm/in): or N/A?
C	Bucket centers (mm/in):
D	Belt width:
E	Belt length:
▸	Special Instructions:

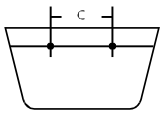
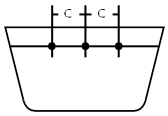
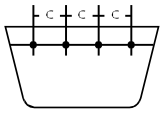
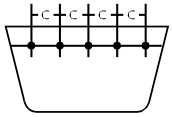
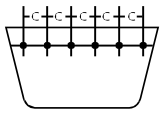
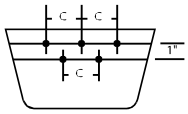
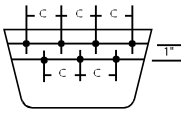
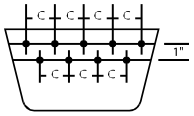


☐	STAGGERED BUCKETS
▸	Diameter of holes to be punched (mm/in):
▸	Punch pattern (see below):
A	Center distance between holes (mm/in):
B	Row centers (mm/in): or N/A?
C	Bucket centers (mm/in):
D	Belt width (mm/in):
E	Belt length (mm/in):
G	Center to center outside holes (mm/in):
▸	Special Instructions:

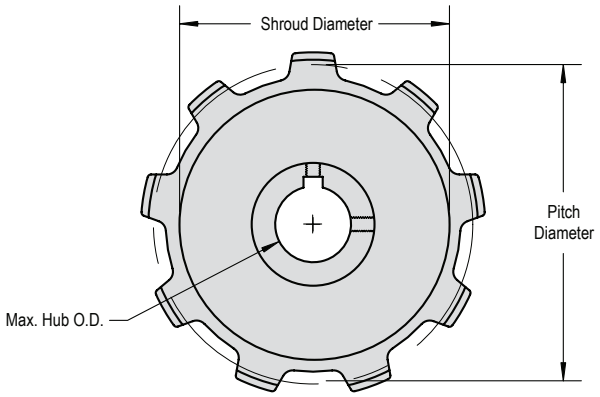


☐	CUSTOM BUCKETS
☐	Belt width (mm/in):
☐	Bucket centers (mm/in):
☐	Distance from end of belt to first row of buckets (mm/in):
☐	Distance between first row and second row of holes (mm/in):
☐	Diameter of holes to be punched (mm/in):
☐	SPACING OF HOLES
	▸ First Row:
	▸ Second Row:
☐	NUMBER OF HOLES
	▸ First Row:
	▸ Second Row:
☐	BUCKET SIZE

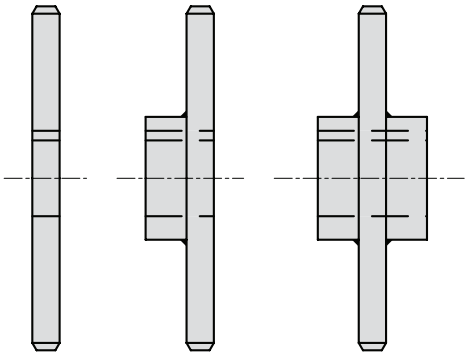
BELT PUNCHING DIAGRAM

P-1			P-2
P-3			P-4
P-5			P-7
P-8			P-9

MILL CHAIN SPROCKET ORDERING GUIDE



FLAME CUT

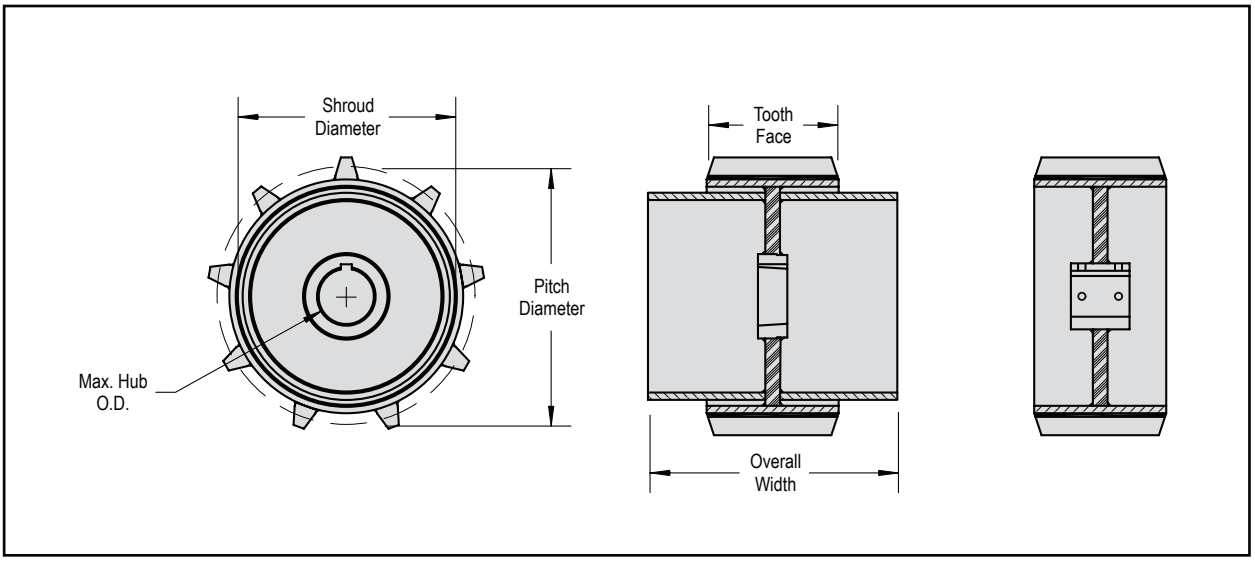


(A) (B) (C)

Quantity	Chain Number	# of Teeth	Material	P.D.	O.D.	Profile	Standard	Split to Bolt

Hub Type	Bore Size	Hub O.D.	L.T.B.	Keyed or Bushed	Comments

DRAG CHAIN SPROCKET ORDERING GUIDE



Quantity	Chain Number	# of Teeth	Material	P.D.	O.D.	Profile	Standard	Split to Bolt

Hub Type	Bore Size	Hub O.D.	L.T.B.	Keyed or Bushed	Comments

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