

## SECTION VI

### BUCKET ELEVATORS SECTION VI

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## Centrifugal discharge bucket elevators

Elevators of this design predominate in the bulk handling of free-flowing, fine and loose materials with small to medium size lumps. Buckets, mounted at spaced intervals, are loaded by scooping up material from the boot or by feeding the material into them. Material is discharged by centrifugal action as the buckets pass over the head wheel. These elevators are made in several types and are suitable for many requirements.

**Type BE100** Elevators of this type meet the service requirements of the majority of installations using centrifugal discharge elevators. The head shafts are fixed. The foot shaft takeups are of the screw type. Gravity takeups are available. Buckets are of malleable iron for use on chain or belt. Casings are of steel plate and angle construction.

**Type BE200** These elevators are similar to Type BE100 except that the head shafts are adjustable and the foot shafts are fixed to maintain the relation of buckets to the loading chute and curved bottom plate. They are preferred for handling food products, materials which tend to pack or build up in the bottom of the boot, and for materials having a considerable percentage of lumps.

**Type BE1400** This elevator is designed primarily for cement mill service, but is suited for many other similar abrasive service applications. Their design and rugged construction makes them ideally suited for handling cement, clinker, crushed stone, bauxite, feldspar, gravel, gypsum, roofing granules, sand, shale, etc. They are available in a full range of sizes extending to the very high capacities and lifts.

## Continuous bucket elevators

Elevators of this design are made in a number of types for handling many bulk materials ranging from light to heavy and from fines to large lumps. Buckets are spaced continuously and loaded by direct feeding, except for Type BE800 elevator where material is scooped from the boot. Spillage between buckets is prevented by their close spacing. As buckets discharge, the material flows over the preceding bucket, whose front and projecting sides form a chute, to the discharge spout.

**Type BE700.** This elevator is the most frequently used of the continuous bucket design. The head shafts are fixed. The foot shaft takeups are of the screw type. Gravity takeups are available. Buckets are of steel and spaced continuously on a single strand of chain. Casings are of steel plate and angle construction. Material is fed to the buckets through a loading leg.

**Type BE800** Elevators of this type are used for the handling of fine or crushed materials with lumps not exceeding 1/2 inch. These elevators are similar to Type BE 700, except that head shafts are adjustable and foot shafts are fixed, to maintain the relation of buckets to the loading chute and curved bottom plate. Buckets are loaded by scooping up material from the boot. When modified by the addition of a loading leg and a correspondingly higher inlet spout, this type elevator can also be used for handling lumpy materials.

**Type BE800L** Identical to Type BE800 except with loading leg and stub inlet chute.

**Type BE1000** This elevator is of the super-capacity type and used for handling friable, heavy or abrasive material ranging from fines to large lumps. The head shafts are fixed and the foot takeups are of the screw type. Gravity takeups are available. Continuous buckets are end-mounted between two strands of Class SS bushed roller chain. Material is fed to the buckets through a loading leg. Casings are of steel plate and angle construction.

**Type BE1100** These elevators are similar in design to Type BE 1000, except for greater capacities and centers. Head terminal machinery and driving equipment are carried on independent supports. The foot takeups are of the screw type. Gravity takeups are available.

# Selection



## Recommended casing materials and thickness

Operating Condition	Recommended casing material and thickness other than standard.				
	Standard listed thickness of casing				
	14 ga.	12 ga.	10 ga.	3/16 in.	1/4 in.

## Commercial hot rolled mild steel galvanized or coated

Product contamination Corrosive Exposed to weather Damp or moist	14 ga.	12 ga.	10 ga.	3/16 in.	1/4 in.
	14 ga.	12 ga.	10 ga.	3/16 in.	1/4 in.
	14 ga.	12 ga.	10 ga.	3/16 in.	1/4 in.
			10 ga.	3/16 in.	1/4 in.

## Commercial hot rolled mild steel

Relatively clean Outdoors, sheltered from weather Mildly corrosive Exposed to weather Damp or moist	14 ga.	12 ga.	10 ga.	3/16 in.	1/4 in.
	14 ga.	12 ga.	10 ga.	3/16 in.	1/4 in.
	10 ga.	3/16 in.	3/16 in.	1/4 in.	3/8 in.
	10 ga.	3/16 in.	3/16 in.	1/4 in.	3/8 in.
			1/4 in.	1/4 in.	3/8 in.

## Low alloy steel

Corrosive Exposed to weather Damp or moist	14 ga.	12 ga.	10 ga.	3/16 in.	1/4 in.
	14 ga.	12 ga.	10 ga.	3/16 in.	1/4 in.
			10 ga.	3/16 in.	1/4 in.

## Stainless steel and Monel metal

Product contamination Corrosive fumes Damp or moist	14 ga.	12 ga.	10 ga.	10 ga.	3/16 in.
	14 ga.	12 ga.	10 ga.	10 ga.	3/16 in.
			10 ga.	10 ga.	3/16 in.

## Tenative elevator selection

Elevator Type	Maximum lump size, inches		Cubic feet per hour	Maximum capacity					Maximum centers, feet •					
	Percentage of lumps			Tons per hour					Bushels per Hour	Material Weight (pounds per cubic foot)				
				Material Weight (pounds per cubic foot)						35	50	75	100	125
	100	10		35	50	75	100	125						
BE100	1-1/4	4	2000	35	50	75	100		80	80	80	80		
	1-1/2	4-1/2	3100	55	78	117	156		80	80	80	70		
BE200▼	1-1/4	4	2000	35	50	75	100		80	80	80	80		
	1-1/2	4-1/2	3100	55	78	117	156		80	80	80	70		
BE700	1	3	1300	23	32	49	65		70	70	70	70		
	1-1/4	4	1800	32	45	68	91		80	80	80	80		
	1-1/2	4-1/2	2350	41	58	88	117		80	80	80	70		
BE800▼	1/2	1/2	1300		32	49	65		70	70	70	70		
	1/2	1/2	1800		45	68	91		80	80	80	80		
	1/2	1/2	2350		58	88	117		80	80	80	80		
BE1000	2	6	2400		60	90	120	150		85	70	55	45	
	2	6	2800		70	105	140	175		75	60	50	40	
	2	6	3200		80	120	160	200		75	55	45	35	
	2	6	3600		90	135	180	225		65	50	40	30	
	2	6	4000		100	150	200	250		60	45	35	30	
	3	8	5600		140	210	280	350		75	65	55	45	
	3	8	6800		170	255	340	425		60	55	45	40	
	3	8	8400		210	315	420	525		55	50	40	30	
	3	8	10000		250	375	500	625		50	45	35	30	
3	8	12400		310	465	620	775		40	35	25	20		
BE1100	3	8	5600		140	210	280	350		125	125	125	110	
	3	8	6800		170	255	340	425		125	125	110	95	
	3	8	8400		210	315	420	525		125	110	95	80	
	3	8	10000		250	375	500	625		125	100	85	75	
	3	8	12400		310	465	620	775		100	80	70	60	
BE1400	1-1/2	2	2000		50	75	100	125		80	80	80	70	
	1-1/2	2	2800		70	105	140	175		80	75	80	65	
	1-1/2	2	4200		105	157	210	262		80	80	60	80	
	1-1/2	2-1/2	4600		115	172	230	287		80	80	80	80	
	1-1/2	2-1/2	6900		172	258	345	430		70	60	50	45	
	1-1/2	2-1/2	6350		159	238	317	397		80	80	75	75	
	1-1/2	2-1/2	9500		238	356	475	594		75	65	45	50	
	1-1/2	3	8500		213	319	425	532		80	80	70	60	
1-1/2	3	12750		318	477	635	795		70	55	45	35		

▼ These elevators have fixed boot shafts and curved bottom plates, they are recommended for food handling applications, materials with high percentage of lumps and materials that tend to pack.

• Consult Thomas Conveyor Company for application requiring centers greater than those listed above.

Material	Density Lbs./Cu. Ft.	Material Code	Elevator Series
Alfalfa Meal	17	B46Y	700, 800
Almonds, broken	28-30	C36Q	200, 700, 800
Almonds, whole	28-30	C36Q	700
Alum, fine	45-50	B35	200, 700
Alum, lumpy	50-60	D35	200, 700
Alumina	50-65	B27M	700 BELT
Aluminum chips	7-15	E46Y	700
Aluminum hydrate	18	C35	700
Aluminum ore, crushed (3" minus)	75-85	D37	100, 200, 700
Aluminum oxide	70-120	A17M	700
Aluminum silicate	49	B35S	700
Aluminum sulphate	54	C25	700
Ammonium chloride, crystalline	45-52	B25S	700, 800
Ammonium nitrate	45	C36WUS	700, 800
Ammonium sulphate, granular	45-58	C26S	700, 800
Ashes (dry coal 3" minus)	35-40	D46T	200
Asphalt, crushed (1/2" minus)	45	C35	100, 200, 700, 800
Bakelite, powdered (similar products)	35-45	B25S	700, 800
Baking powder	40-55	A25	700, 800
Barite	180	D36	700, 800, 1000, 1100
Barley	38	B15N	100, 200 BELT
Bauxite, crushed (3" minus)	75-85	D37	100, 200, 700, 1000, 1100
Beans, whole castor	36	C15W	100, 200
Beans, dry navy	48	C15W	700, 800
Bentonite, crude	35-40	D46X	100, 200
Bentonite (100 mesh minus)	50-60	A26XY	700, 800
Bones, crushed (1/2" minus)	34-40	C26W	100, 200, 1400
Bones, granulated or ground (1/8" minus)	50	B26W	100, 200, 1400
Bone meal	55-60	B36	100, 200, 700, 800
Borax, fine	45-55	B26T	100, 200, 700, 800
Borax, screenings (1/2" minus)	55-60	C36	100, 200
Bran	16-20	B35NY	100, 200
Brewers grain, spent wet	55-60	C45T	100, 200
Brewers grain, spent dry	25-30	C45T	100, 200
Calcium oxide	60-65	B45X	100, 200, 700, 800, 1000, 1100, 1400
Carbon black, pelletized	20-25	B15Q	700, 800
Carbon black powder, channel	4-7	A35Y	*CF
Carbon black powder, furnace	4-7	A35Y	*CF
Carborundum (3" minus)	100	D27	700
Cast iron borings	130-200	C46	100, 200
Cement, portland	94	A26M	100, 200, 700, 800
Cement, portland aerated	60-75	A16M	100, 200, 700, 800, 1400
Cement clinker	75-95	D37	200, 700, 1000, 1100, 1400
Chalk, lumpy	75-85	D26	100, 200, 700, 800
Chalk, pulverized (100 mesh minus)	65-75	A46MXY	700, 800
Charcoal	18-25	D36Q	700
Cinders, coal	40	D37T	200, 700
Cinders, blast furnace	57	D37T	200, 700
Clover seed	48	B25N	100, 200

\* CF = Consult Factory

# Materials Table



Material	Density Lbs./Cu. Ft.	Material Code	Elevator Series
Coal, anthracite sized	55-60	C26	100, 200, 700, 800, 1400
Coal, anthracite, river coal & culm	55-60	B35TY	100, 200, 700, 800, 1400
Coal, bituminous, mined 50 mesh minus	50-54	B45T	700, 800
Coal, bituminous, mined, slack, 1/2" minus	43-50	C45T	100, 200, 700, 1000, 1100, 1400
Coal, bituminous, mined, sized, over 1/2"	45-55	D35T	700, 1000, 1100, 1400
Coal, bituminous, mined, run of mine	45-55	D35T	100, 200, 700, 1000, 1100, 1400
Coal, bituminous, mined, stripping, uncleaned over 1/2"	50-60	D36T	100, 200, 700, 1000, 1100, 1400
Cocoa beans	30-40	C25Q	100, 200, 700
Coffee, green bean	32	C25Q	100, 200, 700, 800
Coffee, roasted bean	22-26	C15W	100, 200, 700, 800
Coke, loose	23-35	D47QVT	200 BELT
Coke, petroleum, calcined	35-45	D36Y	200 BELT
Coke breeze, 1/4" minus	25-35	C37Y	100, 200 BELT
Copra	22	D25	100, 200, 700
Copra Cake, lumpy	25-30	D25W	100, 200, 700
Copra Cake, ground	40-45	B35W	100, 200, 700, 800
Copra meal	40-45	B35W	100, 200, 700, 800
Cork, fine ground	12-15	B45MY	700, 800
Cork, granulated	12-15	C45T	700, 800
Corn, cracked	45-50	C25W	100, 200
Corn, seed	45	B15N	*CF
Corn, shelled	45	D37	*CF
Corn germs	21	B25W	100, 200
Corn grits	40-45	B25W	100, 200
Corn sugar	31	B35	100, 200
Cornmeal	38-40	B35W	100, 200
Cottonseed, dry delinted	35	C25W	100, 200, BELT
Cottonseed, dry with lint	18-25	C35W	100, 200, BELT
Cottonseed, cake, lumpy	40-45	D25W	100, 200
Cottonseed hulls	12	B45Y	700, 800
Cottonseed meal	35-40	B35W	100, 200
Cottonseed meats	40	B35W	100, 200
Cullet	80-120	D37Z	200 BELT
Cracklings, crushed, 3" minus	40-50	D45	100, 200
Dolomite, lumpy	90-100	D26	200, 700, 1000, 1100, 1400
Ebonite, crushed 1/2" minus	65-70	C25	200, 700, 800
Feldspar, ground 1/2" minus	70-85	B36	100, 200, 700
Feldspar, powdered 200 mesh	100	A46	700, 800
Flaxseed cake, expeller	48-50	D35T	200
Flaxseed meal	25	B25W	100, 200
Flour, wheat	35-40	A45PN	100, 200, BELT
Flue dust, boiler house, dry	35-40	A17MTY	700, 800 (select elevator with double the required capacity)
Flourspar, 1/2" screenings	85-105	C46	100, 200, 700
Fuller's Earth, dry	30-35	B26	100, 200 BELT
Fuller's Earth, oily	60-65	B26	100, 200 BELT
Fuller's Earth, burnt, oil filter	40	B26	100, 200 BELT
Fuller's Earth, raw, oil filter	35-40	B26 CF	100, 200 BELT
Glass batch	80-100	D27Z	200 BELT
Glue, ground, 1/8" minus	40	B26	200

Material	Density Lbs./Cu. Ft.	Material Code	Elevator Series
Glue, pearl	40	C25	200
Grains, distillery, spent dry	30	E25WY	100, 200
Granite, 1/2" screenings	80-90	C27	1000, 1100, 1400
Grass seed	10-12	B25NY	700, 800
Gravel, screened	90-100	D36	100, 200, 700, 1000, 1100, 1400
Gypsum, dust, non-aerated	93	A46	100, 200, 700, 1000, 1100, 1400
Gypsum, dust, aerated	60-70	A36Y	100, 200, 700, 1000, 1100, 1400
Gypsum 1/2" screenings	70-80	C36	100, 200, 700, 800, 1400
Gypsum, 1 1/2" to 3" lumps	70-80	D26	1000, 1100, 1400
Hops, spent, dry	35	E35	100, 200
Hops, spent, wet	50-55	E35T	100, 200
Ice, crushed	35-45	D16	200, 700
Ilmenite ore	140-160	B27	100, 200, 700, 1000, 1100, 1400
Lignite, air dried	45-55	D25 *CF	100, 200, 700
Lime, ground, 1/8" minus	60-65	B45X	100, 200, 700, 800, 1000, 1100, 1400
Lime, hydrated, 1/8" minus	40	B35MX	700, 1000, 1100
Lime, pebble	53-56	D35	100, 200, 700, 1000, 1100, 1400
Lime, hydrated, pulverized	32-40	A35MXY	100, 200, 700, 1000, 1100, 1400
Limestone, agricultural, 1/8" minus	68	B26	100, 200, 700, 1000, 1100, 1400
Limestone, crushed	85-90	C26X	700, 1000, 1100, 1400
Limestone, dust	80-85	A46MY	100, 200, 700, 800, 1000, 1100, 1400
Linseed meal	25	B25W	100, 200
Malt, dry ground, 1/8" minus	22	B25NR	100, 200
Malt, dry, whole	27-30	C25N	100, 200
Malt, wet or green	60-65	C45	100, 200
Malt meal	36-40	B25	100, 200
Marble, crushed, 1/2" minus	34-40	C26W	100, 200, 1400
Meat Scrap	50-55	E357W	100, 200
Muriate of potash	77	B27	100, 200, 700
Mustard seed	45	B15N	100, 200
Oats, rolled	19	C25NY	100, 200
Oxalic acid crystals	60	B35SU	100, 200 BELT
Peas, dried	45-50	C15NG	*CF
Peanuts, shelled	35-45	C25Q	*CF
Phosphate rock, broken, dry	75-85	D26	200, 700, 1000, 1100, 1400
Phosphate rock, pulverized	60	B36	100, 700 BELT
Phosphate, triple super	50-55	B45T	700, 800, 1000, 1100, 1400
Phosphate, acid fertilizef	60	B25T	700, 800, 1000, 1100, 1400
Pumice, ground, 1/8" minus	40-45	B47	700
Rice bran	16-20	B35NY	100, 200
Rice grits	42-45	B35	100, 200
Roofing granules	85-95	B27	1400
Rubber, ground	65-70	C25	200, 700, 800
Salt, dry, fine	70-80	D26TUW	200, 700, 800, 1400
Salt, dry, coarse	40-55	C26TU	200, 700, 800, 1400
Salt, cake, dry, coarse	85	B36TW	200, 700, 800, 1400
Salt, cake, dry, pulverized	60-85	B26NT	200, 700, 800, 1400
Sand, damp bank	110-130	B47	100, 200 BELT

\* CF = Consult Factory

# Materials Table



Material	Density Lbs./Cu. Ft.	Material Code	Elevator Series
Sand, dry bank	90-110	B37	100, 200 BELT
Sand, dry silica**	90-100	B27	100, 200 BELT
Sand, foundry, prepared	70-90	B47	100, 200 BELT
Sand, foundry, shakeout	90-100	D37	100, 200 BELT
Sawdust	10-13	B35	1100
Shale, crushed	85-90	C36	100, 200 BELT
Slag, blast furnace, crushed	80-90	A27	700, 1000, 1100
Slag, blast furnace, granulated, dry	60-65	C27	700, 1000, 1100
Slag, blast furnace, granulated, wet	90-100	B47	700, 1000, 1100
Slate, crushed, 1/2" minus	80-90	C26	200 BELT, 700, 1000, 1100
Slate, dust	70-80	A36Y	100, 200 BELT
Soap beads or granules	15-25	B25Q	*CF
Soap flakes	5-15	B35QXY	*CF
Soda ash, light	20-35	A36Y	700, 800
Soda ash, heavy	55-65	B36	100, 200, 700, 800
Soybeans, cracked	30-40	C26NW	100, 200
Soybean cake, over 1/2"	40-43	D35W	200
Soybean flakes, raw	20-26	C25Y	100, 200
Soybean meal, cold	40	B35	100, 200
Soybean meal, hot	40	B35T	100, 200
Steel chips, crushed	100-150	D27WZ	700
Stone, crushed	90-100	D36Q	100, 200, 700, 1000, 1100, 1400
Sugar, powdered	50-60	B235PTY	200, 800L^
Sugar, granulated	50-55	B235PT	200, 800L^
Sugar beet, pulp, dry	12-15	*CF	700, 800
Sugar beet, pulp, wet	55-65	B36TX	700, 800
Sugar, raw, cane	55-65	B36TX	100, 200
Tanbark, ground	55	*CF	100, 200
Timothy seed	36	B25NY	700, 800
Wheat, cracked	40-45	B25N	100, 200
Wheat germ	28	B25W	100, 200
Wood chips	10-30	E45WY	100, 200 BELT
Wood shavings	8-15	E45V	100, 200 BELT
Zinc dust	200	E45V	700, 800, 1000, 1100, 1400
Zinc concentrate	75-80	B26	700, 800, 1000, 1100, 1400
Zinc ore, crushed	160	*CF	700, 800, 1000, 1100, 1400
Zinc ore, roasted	110	C36	700, 800, 1000, 1100, 1400
Zinc oxide, heavy	30-35	A35X	700, 800, 1000, 1100
Zinc oxide, light	10-15	A35XY	700, 800

\* CF = Consult Factory

\*\* If sand is hot, use high temperature belt & insulating pads between buckets and belt.

L^ = Loading leg

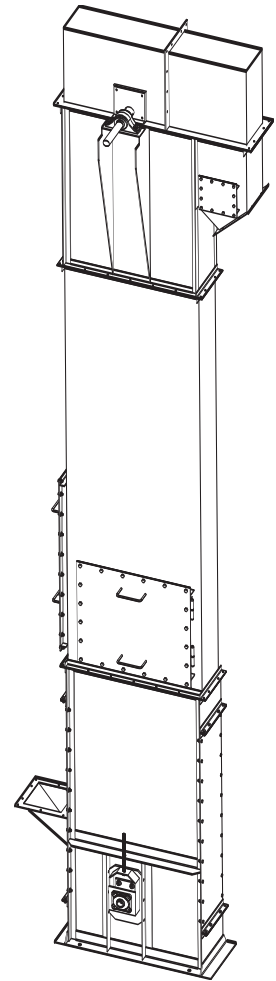
## 100 & 200 Series Chain Type Centrifugal Bucket Elevator Data

### FEATURES

1. Split removable hood for accessibility.
2. Head shaft mounted in fixed ball or roller bearing pillow blocks.
3. Discharge spout positioned for clean discharge of product.  
Style 1 shown. Style 2, with horizontal flange is optional.
4. Rigid, strong dust and/or weather tight casings.
5. Style AA malleable iron buckets are standard. Other materials such as plastic, nylon and fabricated steel are available.
6. C-class combination chain is standard. SS class chain is available for heavy duty applications and is standard on some sizes.
7. Bolted or hinged access doors are provided for installing and servicing the elevator buckets.
8. Removable bolted side panels in the boot for cleanout and service.
9. Screw type boot take-ups with ball or roller bearings are standard. Internal and external gravity type take-ups are available.
10. Hopper type intake is standard.
11. Curved bottom plate.
12. Shaft mount drive is standard. Other drives available on request.

NOTE: The 200 series chain type elevator is standard with screw type head take-ups with ball or roller bearing pillow blocks. The boot shaft is fixed and mounted in ball or roller bearing pillow blocks.

Discharge



Elevator Number	Max. Capacity	Speed	Buckets	Chain Number	Head Sprocket	Boot Sprocket	Casing Dim's.	Boot Shaft
		FPM@RPM	L X W X Spacing		Tooth X PD	Tooth X PD		
BE102	280	225 @ 43	6 X 4 X 13	C188	24 X 20.0	18 X 15	9 3/4 X 35	1 1/2
BE104	540	230 @ 43	8 X 5 X 16	C102B	16 X 20.5	10 X 13	11 3/4 X 39	1 1/2
BE107	612	260 @ 41	8 X 5 X 16	C102B	19 X 24.25	14 X 18	11 3/4 X 42	2
BE110	936	230 @ 43	10 X 6 X 16	C102B	16 X 20.5	12 X 15.5	13 3/4 X 42	2
BE112	960	268 @ 41	10 X 6 X 18	C110	13 X 25	12 X 21.25	13 3/4 X 48	2
BE116	1048	260 @ 41	10 X 6 X 16	C102B	19 X 24.25	12 X 20.5	13 3/4 X 48	2
BE117	1536	268 @ 41	12 X 7 X 18	SS110	13 X 25	9 X 17.5	15 3/4 X 48	2
BE119	1668	260 @ 41	12 X 7 X 16	C102B	19 X 24.25	14 X 18	15 3/4 X 48	2
BE120	1744	306 @ 38	12 X 7 X 18	SS110	16 X 30.75	12 X 23.25	15 3/4 X 48	2 7/16
BE122	1948	304 @ 38	12 X 7 X 16	C102B	24 X 30.5	19 X 24.25	15 3/4 X 48	2 7/16
BE123	1700	260 @ 41	14 X 7 X 19	C111	16 X 24.25	12 X 18.25	17 3/4 X 48	2 7/16
BE124	1848	268 @ 41	14 X 7 X 18	SS110	13 X 25	9 X 17.5	17 3/4 X 48	2 7/16
BE126	2016	260 @ 41	14 X 7 X 16	C102B	19 X 24.25	14 X 18	17 3/4 X 48	2 7/16
BE127	1988	304 @ 38	14 X 7 X 19	C111	20 X 30.5	16 X 24.25	17 3/4 X 54	2 7/16
BE128	2112	306 @ 38	14 X 7 X 18	SS110	16 X 30.75	12 X 23.25	17 3/4 X 54	2 7/16
BE130	2360	304 @ 38	14 X 7 X 16	C102B	24 X 30.5	19 X 24.25	17 3/4 X 54	2 7/16
BE131	2540	262 @ 41	16 X 8 X 19	C111	16 X 24.25	11 X 17	19 3/4 X 48	2 7/16
BE132	2540	248 @ 41	16 X 8 X 18	SS110	12 X 23	8 X 15.75	19 3/4 X 48	2 7/16
BE133	2940	304 @ 38	16 X 8 X 19	C111	20 X 30.5	14 X 21.25	19 3/4 X 54	2 7/16
BE134	3120	306 @ 38	16 X 8 X 18	SS110	16 X 30.75	11 X 21.25	19 3/4 X 54	2 7/16

# 100 & 200 Series Belt Type

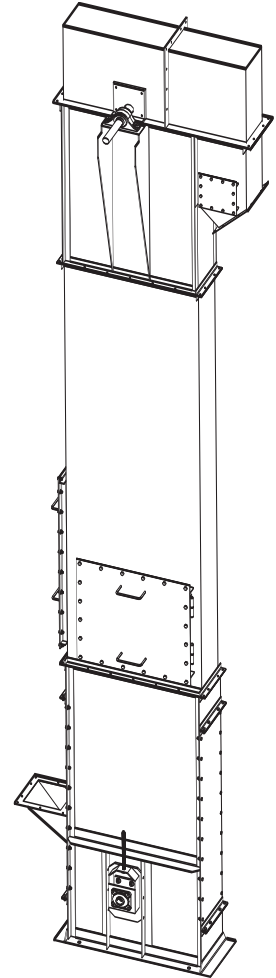


## 100 & 200 Series Belt Type Centrifugal Discharge Bucket Elevator Data

### FEATURES

1. Split removable hood for accessibility.
2. Head shaft mounted in fixed ball or roller bearing pillow blocks.
3. Discharge spout positioned for clean discharge of product.  
Style 1 shown. Style 2, with horizontal flange is optional.
4. Rigid, strong dust and/or weather tight casings.
5. Style AA malleable iron buckets are standard. Other materials such as plastic, nylon and fabricated steel are available.
6. Rubber and/or PVC belts are standard. Other materials are available to suit your application.
7. Bolted or hinged access doors are provided for installing and servicing the elevator buckets.
8. Removable bolted side panels in the boot for cleanout and service.
9. Screw type boot take-ups with ball or roller bearings are standard. Internal and external gravity type take-ups are available.
10. Hopper type intake is standard.
11. Curved bottom plate.
12. Shaft mount drive is standard. Other drives available on request.available.

NOTE: The 200 series belt type elevator is standard with screw type head take-ups with ball or roller bearing pillow blocks. The boot shaft is fixed and mounted in ball or roller bearing pillow blocks.



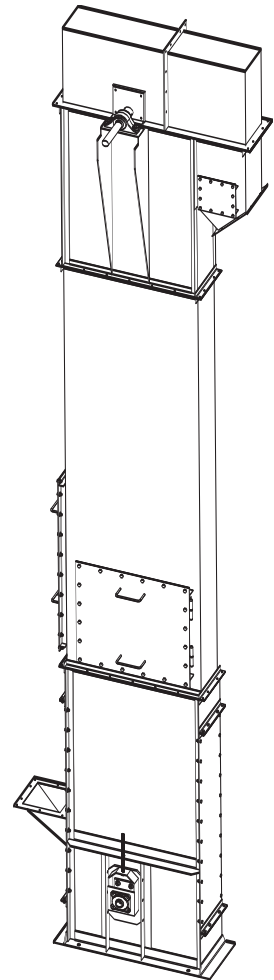
Elevator Number	Max. Capacity	Speed	Buckets	Belt	Head Pulley	Boot Pulley	Casing Dim's.	Boot Shaft
		FPM@RPM	L X W X Spacing	Width X Min. PIW	Dia. X Width	Dia. X Width		
BE141	280	225 @ 43	6 X 4 X 13	7 X 120	20 X 9	16 X 9	11 3/4 X 35	1 1/2
BE142	534	225 @ 43	8 X 5 X 16	9 X 120	20 X 11	14 X 11	13 3/4 X 39	1 1/2
BE143	608	258 @ 41	8 X 5 X 16	9 X 150	24 X 11	18 X 11	13 3/4 X 42	2
BE144	910	225 @ 43	10 X 6 X 16	11 X 150	20 X 13	16 X 13	15 3/4 X 42	2
BE145	1046	258 @ 41	10 X 6 X 16	11 X 200	24 X 13	20 X 13	15 3/4 X 48	2
BE146	1464	258 @ 41	12 X 7 X 18	13 X 200	24 X 15	20 X 15	17 3/4 X 48	2 7/16
BE147	1696	298 @ 38	12 X 7 X 18	13 X 200	30 X 15	24 X 15	17 3/4 X 54	2 7/16
BE148	1776	258 @ 41	14 X 7 X 18	15 X 200	24 X 17	20 X 17	19 3/4 X 48	2 7/16
BE149	2060	298 @ 38	14 X 7 X 18	15 X 200	30 X 17	24 X 17	19 3/4 X 54	2 7/16
BE152	3040	298 @ 38	16 X 8 X 18	18 X 200	30 X 20	22 X 20	22 3/4 X 54	2 7/16

### 700 & 800 Series Chain Type Continuous Discharge Bucket Elevator Data

#### FEATURES

1. Split removable hood for accessibility.
2. Head shaft mounted in fixed ball or roller bearing pillow blocks.
3. Discharge spout positioned for clean discharge of product. Style 1 shown. Style 2, with horizontal flange is optional.
4. Rigid, strong dust and/or weather tight casings.
5. Style MF medium front buckets are standard. Other styles such as HF high front or LF low front are available.
6. C-class combination chain is standard SS-class chain is available for heavy-duty applications and is standard on some sizes.
7. Bolted or hinged access doors are provided for installing and servicing the elevator buckets.
8. Removable bolted side panels in the boot for cleanout and service.
9. Screw type boot takeups with ball or roller bearings are standard. Internal and external gravity type takeups are available.
10. Hopper type intake is standard.
11. Curved bottom plate.
12. Shaft mount drive is standard. Other drives available on request.
13. Loading legs are standard on 700 series elevators and optional on 800 series elevators.

**NOTE:** The 800 series belt type elevator is standard with screw type head takeups with ball or roller bearing pillow blocks. The boot shaft is fixed and mounted in ball or roller bearing pillow blocks.



Elevator Number	Max. Capacity	Speed	Buckets	Chain Number	Head Sprocket	Boot Sprocket	Casing Dim's.	Boot Shaft
		FPM@RPM	L X W X Spacing		Tooth X PD	Tooth X PD		
BE766	590	125 @ 23.4	8 X 5 X 8	C102B	16 X 20.5	11 X 14.25	11 3/4 X 39	1 1/2
BE768	750	125 @ 23.4	10 X 5 X 8	C102B	16 X 20.5	11 X 14.25	13 3/4 X 39	1 1/2
BE770	1010	125 @ 19.1	10 X 7 X 12	C110	13 X 25	10 X 19.5	13 3/4 X 48	2
BE772	1230	125 @ 19.1	12 X 7 X 12	C110	13 X 25	10 X 19.5	15 3/4 X 48	2
BE774	1420	125 @ 19.1	14 X 7 X 12	C110	13 X 25	10 X 19.5	17 3/4 X 48	2
BE776	1550	125 @ 19.1	12 X 8 X 12	C110	13 X 25	9 X 17.5	15 3/4 X 48	2 7/16
BE778	1830	125 @ 19.1	14 X 8 X 12	C110	13 X 25	9 X 17.5	17 3/4 X 48	2 7/16
BE780	2090	125 @ 19.1	16 X 8 X 12	C132	13 X 25	9 X 17.75	19 3/4 X 48	2 7/16
BE782	2340	125 @ 19.1	18 X 8 X 12	C132	13 X 25	9 X 17.75	21 3/4 X 48	2 7/16

# 700 & 800 Series Belt Type

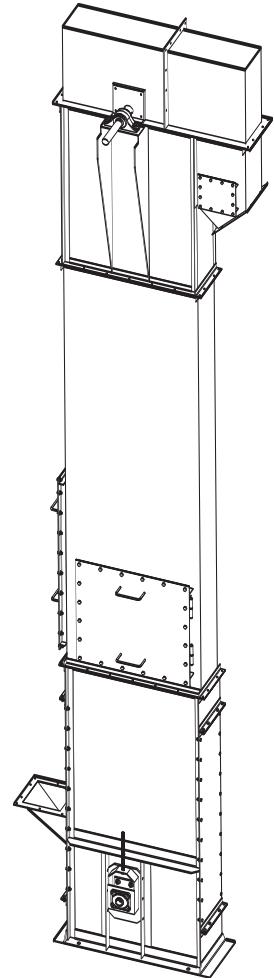


## 700 & 800 Series Belt Type Continuous Discharge Bucket Elevator Data

### FEATURES

1. Split removable hood for accessibility.
2. Head shaft mounted in fixed ball or roller bearing pillow blocks.
3. Discharge spout positioned for clean discharge of product. Style 1 shown. Style 2, with horizontal flange is optional.
4. Rigid, strong dust and/or weather tight casings.
5. Style MF medium front buckets are standard. Other styles such as HF high front or LF low front are available.
6. Rubber and/or PVC belts are standard. Other belt materials are available to suit your application.
7. Bolted or hinged access doors are provided for installing and servicing the elevator buckets.
8. Removable bolted side panels in the boot for cleanout and service.
9. Screw type boot takeups with ball or roller bearings are standard. Internal and external gravity type takeups are available.
10. Hopper type intake is standard.
11. Curved bottom plate.
12. Shaft mount drive is standard. Other drives available on request.
13. Loading legs are standard on 700 series elevators and optional on 800 series elevators.

NOTE: The 800 series belt type elevator is standard with screw type head takeups with ball or roller bearing pillow blocks. The boot shaft is fixed and mounted in ball or roller bearing pillow blocks.

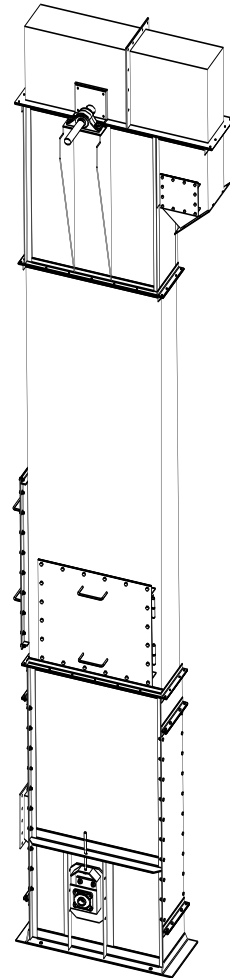


Elevator Number	Max. Capacity	Speed	Buckets	Belt	Head Pulley	Boot Pulley	Casing Dim's.	Boot Shaft
		FPM@RPM	L X W X Spacing	Width X Min PIW	Dia. X Width	Dia. X Width		
BE766B	590	125 @ 24	8 x 5 x 8	9 x 150	20 x 11	14 x 11	13 3/4 x 39	1 1/2
BE768B	750	125 @ 24	10 x 5 x 8	11 x 150	20 x 13	14 x 13	15 3/4 x 39	1 1/2
BE770B	1010	125 @ 20	10 x 7 x 12	11 x 150	24 x 13	20 x 13	15 3/4 x 48	2
BE772B	1230	125 @ 20	12 x 7 x 12	13 x 200	24 x 15	20 x 15	17 3/4 x 48	2
BE774B	1420	125 @ 20	14 x 7 x 12	15 x 200	24 x 17	20 x 17	19 3/4 x 48	2
BE776B	1550	125 @ 20	12 x 8 x 12	13 x 200	24 x 15	18 x 15	17 3/4 x 48	2 7/16
BE778B	1830	125 @ 20	14 x 8 x 12	15 x 200	24 x 17	18 x 17	19 3/4 x 48	2 7/16
BE780B	2090	125 @ 20	16 x 8 x 12	17 x 200	24 x 19	18 x 19	21 3/4 x 48	2 7/16
BE782B	2340	125 @ 20	18 x 8 x 12	19 x 200	24 x 21	18 x 21	23 3/4 x 48	2 7/16

## 1000 Series Super Capacity Chain Type Continuous Discharge Bucket Elevator Data

### FEATURES

1. Split removable hood for accessibility.
2. Head shaft mounted in fixed ball or roller bearing pillow blocks.  
External backstops can be mounted directly to the head shaft.
3. Discharge spout positioned for clean discharge of product.  
Style 1 shown. Style 2, with horizontal flange is optional.
4. Rigid, strong dust and/or weather tight casings.
5. Style SC super capacity continuous buckets are standard and are mounted between two strands of steel roller chain. Internal angles guide chain.
7. Bolted or hinged access doors are provided for installing and servicing the elevator buckets.
8. Removable bolted side panels are provided in the boot for cleanout and service.
9. Screw type boot take-ups with ball or roller bearings are standard.  
Internal and external gravity type take-ups are available.
10. Stub type intake with loading leg is standard. Hopper type inlets can be provided
11. Curved bottom plate.
12. Shaft mount drive is standard. Other drives available to meet specific requirements.



Elevator Number	Max. Capacity	Speed	Buckets	Chain Number	Head Sprocket	Boot Sprocket	Casing Dim's.	Boot Shaft
		FPM@RPM	L X W X Spacing		Tooth X PD	Tooth X PD		
BE1001	2400	100 @ 12.5	12 X 8 3/4 X 12	SS4850	8 X 31.4	8 X 31.4	26 x 54	2 7/16"
BE1002	2800	100 @ 12.5	14 X 8 3/4 X 12	SS4850	8 X 31.4	8 X 31.4	28 x 54	2 7/16"
BE1003	3200	100 @ 12.5	16 X 8 3/4 X 12	SS4850	8 X 31.4	8 X 31.4	30 x 54	2 7/16"
BE1004	3600	100 @ 12.5	18 X 8 3/4 X 12	SS4850	8 X 31.4	8 X 31.4	32 x 54	2 7/16"
BE1005	4000	100 @ 12.5	20 X 8 3/4 X 12	SS4850	8 X 31.4	8 X 31.4	34 x 54	2 7/16"
BE1006	5600	120 @ 16	16 X 12 5/8 X 18	SS4851	10 X 29.12	10 X 29.12	30 x 60	3"
BE1007	6800	120 @ 16	20 X 12 5/8 X 18	SS4851	10 X 29.12	10 X 29.12	34 x 60	3"
BE1008	8400	120 @ 16	24 X 12 5/8 X 18	SS4851	10 X 29.12	10 X 29.12	38 x 60	3"
BE1009	10000	120 @ 16	30 X 12 5/8 X 18	SS4851	10 X 29.12	10 X 29.12	44 x 60	3"
BE1010	12400	120 @ 16	36 X 12 5/8 X 18	SS4851	10 X 29.12	10 X 29.12	50 x 60	3"

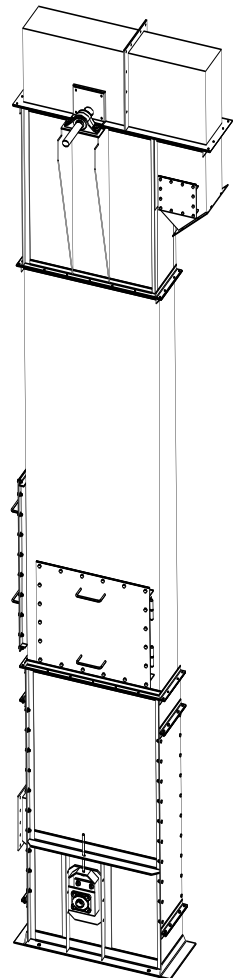
# 1100 Series Super Capacity



## 1100 Series Super Capacity Chain Type Continuous Discharge Bucket Elevator Data

### FEATURES

1. Split removable hood for accessibility.
2. Head shaft mounted in fixed ball or roller bearing pillow blocks.  
External backstops can be mounted directly to the head shaft.
3. Discharge spout positioned for clean discharge of product.  
Style 1 shown. Style 2, with horizontal flange is optional.
4. Rigid, strong dust and/or weather tight casings.
5. Style SC super capacity continuous buckets are standard and are mounted between two strands of steel roller chain. Internal guide chain.
7. Bolted or hinged access doors are provided for installing and servicing the elevator buckets.
8. Removable bolted side panels are provided in the boot for cleanout and service
9. Screw type boot take-ups with ball or roller bearings are standard. Internal and external gravity type take-ups are available.
10. Stub type intake with loading leg is standard. Hopper type inlets can be provided
11. Curved bottom plate.
12. Shaft mount drive is standard. Other drives available to meet specific requirements.

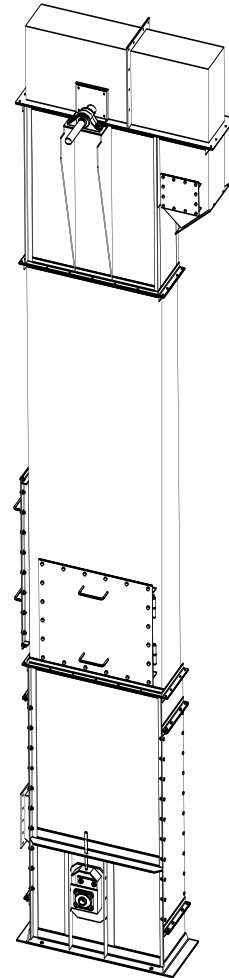


Elevator Number	Max. Capacity	Speed	Buckets	Chain Number	Head Sprocket	Boot Sprocket	Casing Dim's.	Boot Shaft
		FPM@RPM	L X W X Spacing		Tooth X PD	Tooth X PD		
BE1101	5600	120 @ 16	16 X 12 5/8 X 18	SS4851	10 X 29.12	10 X 29.12	30 x 60	3"
BE1102	6800	120 @ 16	20 X 12 5/8 X 18	SS4851	10 X 29.12	10 X 29.12	34 x 60	3"
BE1103	8400	120 @ 16	24 X 12 5/8 X 18	SS4851	10 X 29.12	10 X 29.12	38 x 60	3"
BE1104	10000	120 @ 16	30 X 12 5/8 X 18	SS4851	10 X 29.12	10 X 29.12	44 x 60	3"
BE1105	12400	120 @ 16	36 X 12 5/8 X 18	SS4851	10 X 29.12	10 X 29.12	50 x 60	3"
BE1106	5600	120 @ 16	16 X 12 5/8 X 18	SS4852	10 X 29.12	10 X 29.12	31 1/2 x 60	3"
BE1107	6800	120 @ 16	20 X 12 5/8 X 18	SS4852	10 X 29.12	10 X 29.12	35 1/2 x 60	3"
BE1108	8400	120 @ 16	24 X 12 5/8 X 18	SS4852	10 X 29.12	10 X 29.12	39 1/2 x 60	3"
BE1109	10000	120 @ 16	30 X 12 5/8 X 18	SS4852	10 X 29.12	10 X 29.12	45 1/2 x 60	3"
BE1110	12400	120 @ 16	36 X 12 5/8 X 18	SS4852	10 X 29.12	10 X 29.12	51 1/2 x 60	3"

## 1400 Series Cement Mill Chain Type Centrifugal Discharge Bucket Elevator Data

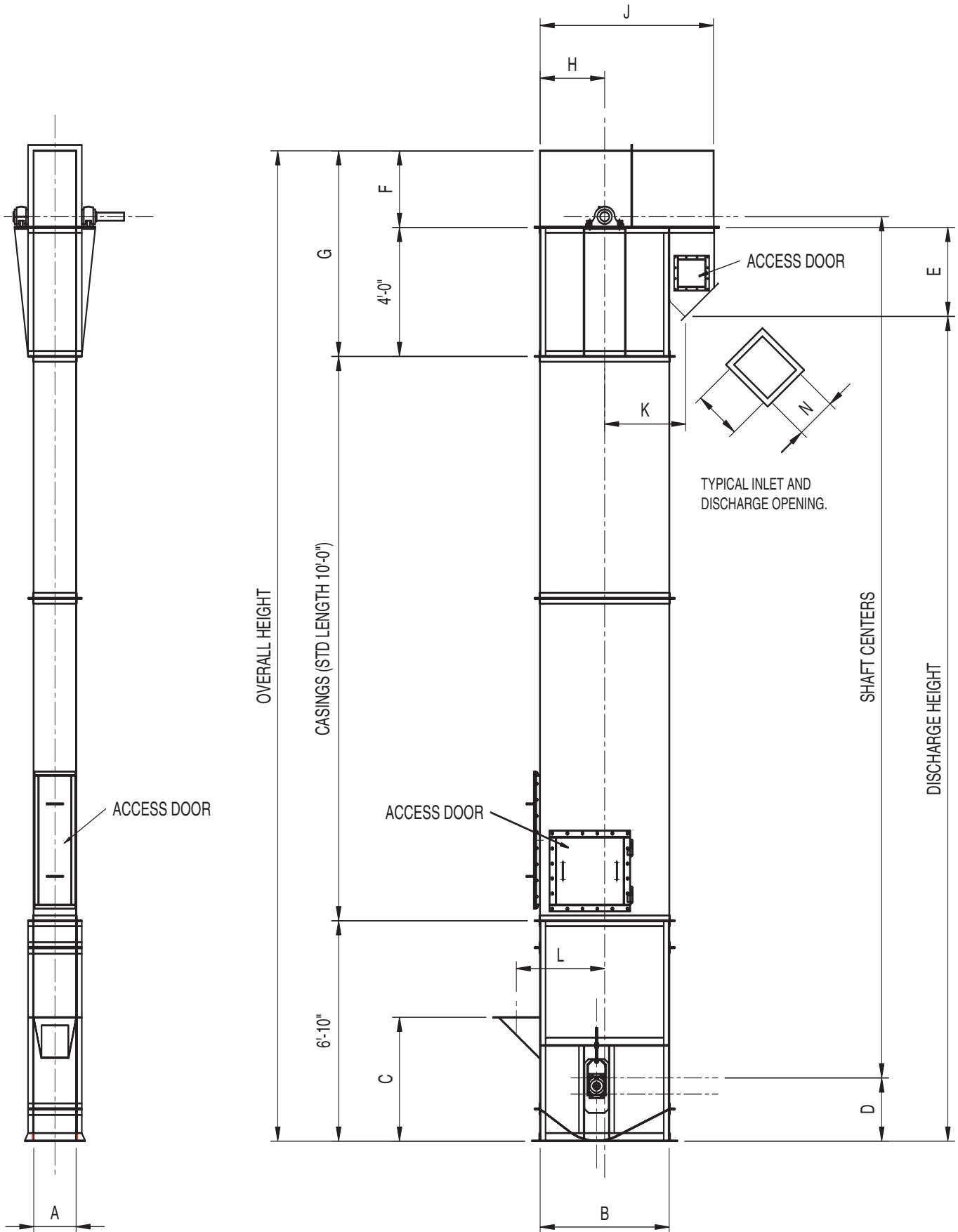
### FEATURES

1. Split removable hood for accessibility.
2. Segmental rim hardened tooth head sprocket or traction wheel.
3. Roller bearing pillow block mounted head shaft with fabricated shaft seals. Shaft mounted external backstop available.
4. Style 1 discharge furnished as standard. Style 2 discharge furnished if specified.
5. Style AC high capacity buckets mounted on single strand SS style chain furnished as standard.
6. Bolted or hinged access doors are provided for installing and servicing the elevator buckets.
7. Rigid, strong dust and/or weather tight self supporting casings.
8. Stub inlet is standard. Hopper type intake contoured to feed product directly into the buckets available if specified.
9. Removable bolted side panels are provided in the boot section for maintenance and cleanout.
10. Internal gravity take-up is provided as standard. The boot shaft is hardened in the bearing area and is mounted in hard iron bearing blocks.
11. Boot sprocket is a reversible type segmental rim traction wheel.



Elevator Number	Max. Capacity	Speed	Buckets	Chain Number	Head Sprocket	Boot Sprocket	Casing Dim's.	Boot Shaft
		FPM@RPM	L X W X Spacing		Tooth X PD	Tooth X PD		
BE1405	2000	255 X 36	12 X 8 X 19	SS111-K2	18 X 27.41	16 X 24.4	19 3/4 X 55 1/2	2 7/16
BE1408	2800	255 X 36	16 X 8 X 18	SS856-K35	14 X 26.96	13 X 25.07	23 3/4 X 55 1/2	3"
BE1409	4200	255 X 36	16 X 8 X 12	SS856-K35	14 X 26.96	13 X 25.07	23 3/4 X 55 1/2	3"
BE1412	4600	250 X 34	18 X 10 X 18	SS2859-K44	15 X 28.86	13 X 25.07	32 3/4 X 64	3"
BE1413	6900	250 X 34	18 X 10 X 12	SS2859-K44	15 X 28.86	13 X 25.07	32 3/4 X 64	3"
BE1415	6350	250 X 34	24 X 10 X 18	SS2859-K44	15 X 28.86	13 X 25.07	32 3/4 X 64	3"
BE1416	9500	250 X 34	24 X 10 X 12	SS2859-K44	15 X 28.86	13 X 25.07	32 3/4 X 64	3"
BE1417	8500	250 X 33	27 X 12 X 21	SS2864-K44	13 X 29.16	11 X 24.76	35 3/4 X 68	3"
BE1418	12750	250 X 33	27 X 12 X 14	SS2864-K44	13 X 29.16	11 X 24.76	35 3/4 X 68	3"

# Diagram



## BE-100 Dimension Schedule

Model No.	A	B	C	D	E	F	G	H	J	K	L	M	N
102	9 3/4	35	36 3/4	20 1/2	27 1/4	22	70	17 1/2	48	23 1/2	29 3/4	9 3/4	10
141	11 3/4	35	36 3/4	20 1/2	27 1/4	22	70	17 1/2	48	23 1/2	29 3/4	11 3/4	10
104 & 105	11 3/4	39	36 3/4	20 1/2	29	24	72	19 1/2	52	25 1/2	31 3/4	11 3/4	10
107 & 108	11 3/4	42	43 3/4	24 1/2	30 1/4	25 1/2	73 1/2	21	57 1/4	27	36 1/4	11 3/4	13
142	13 3/4	39	36 3/4	20 1/2	29	24	72	19 1/2	52	25 1/2	31 3/4	13 3/4	10
110, 111, & 143	13 3/4	42	43 3/4	24 1/2	30 1/4	25 1/2	73 1/2	21	57 1/4	27	36 1/4	13 3/4	13
112, 113, & 116	13 3/4	48	48 1/4	24 1/2	33 1/4	28 1/2	76 1/2	24	64 5/8	29	41 1/4	13 3/4	15
144	15 3/4	42	43 3/4	24 1/2	30 1/4	25 1/2	73 1/2	21	57 1/4	27	36 1/4	15 3/4	13
117, 119, & 145	15 3/4	48	48 1/4	24 1/2	33 1/4	28 1/2	76 1/2	24	64 5/8	29	41 1/4	15 3/4	15
120 & 122	15 3/4	54	54 3/4	31 1/2	35 3/4	31 1/2	79 1/2	27	72	33	46 1/4	15 3/4	17
123, 124, 126, & 146	17 3/4	48	50 1/4	29	33 1/4	28 1/2	76 1/2	24	64 5/8	29	41 1/4	17 3/4	15
127, 128, 130, & 147	17 3/4	54	54 3/4	31 1/2	35 3/4	31 1/2	79 1/2	27	72	33	46 1/4	17 3/4	17
131, 132, & 148	19 3/4	48	50 1/4	29	33 1/4	28 1/2	76 1/2	24	64 5/8	29	41 1/4	19 3/4	15
133, 134, & 149	19 3/4	54	54 3/4	31 1/2	35 3/4	31 1/2	79 1/2	27	72	33	46 1/4	19 3/4	17
152	22 3/4	54	54 3/4	31 1/2	35 3/4	31 1/2	79 1/2	27	72	33	46 1/4	22 3/4	17

## BE-700 Dimension Schedule

Model No.	A	B	C	D	E	F	G	H	J	K	L	M	N
766 & 767	11 3/4	39	49 3/4	20 1/2	29	24	72	19 1/2	52	25 1/2	31 3/4	11 3/4	10
766B, 767B, 768 & 769	13 3/4	39	49 3/4	20 1/2	29	24	72	19 1/2	52	25 1/2	31 3/4	13 3/4	10
770 & 771	13 3/4	48	66 3/4	27	33 1/4	28 1/2	76 1/2	24	64 5/8	30	41 1/4	13 3/4	15
768B & 769B	15 3/4	39	49 3/4	20 1/2	29	24	72	19 1/2	52	25 1/2	31 3/4	15 3/4	13
770B, 771B, 772, 773, 776 & 777	15 3/4	48	66 3/4	27	33 1/4	28 1/2	76 1/2	24	64 5/8	30	41 1/4	15 3/4	15
772B, 773B, 774, 775, 776B, 777B, 778 & 779	17 3/4	48	66 3/4	27	33 1/4	28 1/2	76 1/2	24	64 5/8	30	41 1/4	17 3/4	15
774B, 775B, 778 & 779	19 3/4	48	66 3/4	27	33 1/4	28 1/2	76 1/2	24	64 5/8	30	41 1/4	19 3/4	15
780 & 781	19 3/4	48	68 3/4	29	33 1/4	28 1/2	76 1/2	24	64 5/8	30	41 1/4	19 3/4	15
782 & 783	21 3/4	48	68 3/4	29	33 1/4	28 1/2	76 1/2	24	64 5/8	30	41 1/4	21 3/4	15
780B & 781B	22 3/4	48	68 3/4	29	33 1/4	28 1/2	76 1/2	24	64 5/8	30	41 1/4	22 3/4	15
782B & 783B	24 3/4	48	68 3/4	29	33 1/4	28 1/2	76 1/2	24	64 5/8	30	41 1/4	24 3/4	15

Note: All dimensions are for reference only.  
Certified dimensional drawings will be provided with each order.

NOTE: 700B indicates a belt type elevator.

Safety must be considered a basic factor in machinery operation at all times. Most accidents are the result of carelessness or negligence. The following safety instructions are basic guidelines and should be considered as minimum provisions. Additional information shall be obtained by the purchaser from other sources, including the American Society of Mechanical Engineers, Standard ANSI B20.1, Standard ANSI B15.1, Standard ANSI Z244.

It is the responsibility of the contractor, installer, owner and user to install, maintain and operate the bucket elevator and elevator assemblies manufactured and supplied by **Thomas**, in such a manner as to comply with the Williams-Steiger Occupational Safety and Health Act and with all state and local laws and ordinances and the American National Standards Institute Safety Code.

## Precautions:

1. Maintain a safety training and safety equipment operation/maintenance program for all employees.
2. Bucket elevators **shall not be operated** unless the elevator housing completely encloses the elevator moving elements and power transmission guards are in place. **If the elevator is to be opened for inspection, cleaning or observation, the motor driving the conveyor is to be locked out electrically in such a manner that it cannot be restarted by anyone, however remote from the area, unless the elevator housing has been closed and all other guards are in place.**
3. If the elevator must have an open housing as a condition of its use and application, the entire elevator is then to be guarded by a railing or fence.
4. RUGGED gratings may be used where necessary. If the distance between the grating moving elements is less than 4 inches, the grating opening must not exceed ½ inch by 2 inches. In all cases the openings shall be restrictive to keep any part of the body or clothing from coming in contact with moving parts of the equipment. SOLID COVERS should be used at all points and must be designed and installed so that personnel will not be exposed to accidental contact with any moving parts of the equipment.
5. All rotating equipment such as guards, drives, gears, shafts and couplings must be guarded by the purchaser/owner as required by applicable laws, standards and good practice.
6. SAFETY DEVICES AND CONTROLS must be purchased and provided by the purchaser/owner as required by applicable laws, standards and good practices.
7. Practice good housekeeping at all times and maintain good lighting around all equipment.
8. Keep all operating personnel advised of the location and operation of all emergency controls and devices. Clear access to these controls and devices must be maintained.
9. Frequent inspections of these controls and devices, covers, guards and equipment to ensure proper working order and correct positioning.
10. Do not walk on elevator covers, gratings or guards.
11. Do not poke or prod material in the elevator.
12. Do not place hands, feet or any part of the body or clothing in the elevator or opening.
13. Do not overload elevator or attempt to use it for other than its intended use.
14. Inlet and discharge openings shall be connected to other equipment in order to completely enclose the moving elements of the elevator.
15. Before power is connected to the drive a pre-start up check shall be performed to ensure the equipment and area are safe for operation and all guards are in place and secure.
16. Bucket Elevators are not manufactured or designed to handle materials that are hazardous to personnel unless specially designed. These materials which are hazardous include those that are explosive, flammable, toxic or otherwise dangerous to personnel. Elevators may be designed to handle these materials. Elevators are not manufactured or designed to comply with local, state or federal codes for unfired pressure vessels. If hazardous materials are to be conveyed or if the elevator is to be subjected to internal or external pressure, **Thomas** should be consulted prior to any modifications.
17. Removal of backstop may cause unexpected machine movement. Remove or block all external loads before servicing unit. Failure to observe these precautions could result in bodily injury.

All equipment shall be checked for damage immediately upon arrival. **Do not attempt to install a damaged item or elevator.**

All bucket elevators are shop assembled by **Thomas**, have warning labels affixed in many easily seen locations. If the equipment exterior is painted, coated or altered in any way or if the material conveyed is in excess of 175°F or if a change in the original intended use of the equipment is considered, the factory shall be consulted before modifications are made. Additional stickers are available upon request.

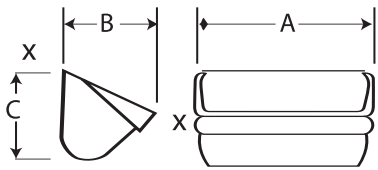
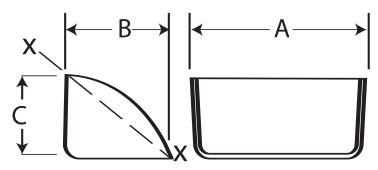
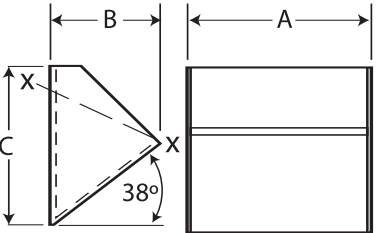
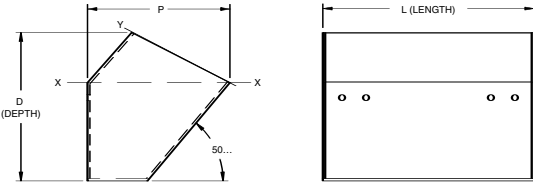
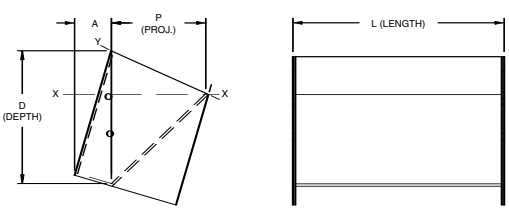


CHR930001  
CHS930001  
(5" Wide x 2 1/2" High)

**Prominently  
Display  
In Work Areas**

CVS930012  
(3" Wide x 6" High)

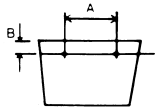


Style AA		Bucket Size			Weight Lbs.	Capacity cu. ft. X — X					
		A	B	C							
<p>Ductile iron buckets for general use with most types of relatively free flowing material in centrifugal discharge elevators. Can be mounted on chain or belt and furnished in steel, ductile iron, and various plastic materials.</p>		4	2 $\frac{3}{4}$	3	1.0	.01					
		6	4	4 $\frac{1}{4}$	2.7	.03					
		8	5	5 $\frac{1}{2}$	4.8	.07					
		10	6	6 $\frac{1}{4}$	7.7	.12					
		12	7	7 $\frac{1}{4}$	12.0	.19					
		14	7	7 $\frac{1}{4}$	13.9	.23					
		16	8	8 $\frac{1}{2}$	21.8	.34					
Style C		Bucket Size			Weight Lbs.	Capacity cu. ft. X — X					
		A	B	C							
<p>Fabricated buckets are used in centrifugal discharge elevators to handle materials that tend to pack or stick, such as sugar, clay, salt or wet grains.</p>		6	4 $\frac{1}{2}$	4	2.0	.026					
		8	4 $\frac{1}{2}$	4	2.8	.035					
		10	5	4	4.0	.052					
		12	5	4	4.8	.061					
		14	7	5 $\frac{1}{2}$	8.5	.138					
		16	7	5 $\frac{1}{2}$	10.5	.158					
MF Continuous		Bucket Size			Weight Lbs.		Capacity cu. ft. X — X				
		A	B	C	12 Ga.	10 Ga.		$\frac{3}{8}$ "	$\frac{1}{2}$ "		
<p>Medium front non-overlapping fabricated steel buckets are used in continuous discharge elevators for general service. Heavier gauges should be used when handling abrasive materials. Available fabricated from various materials. High front continuous buckets are available also. Plastic buckets available in most sizes.</p>		8	5	7 $\frac{3}{4}$	5.1	6.3	8.7	—	.070		
		10	5	7 $\frac{3}{4}$	5.9	7.4	10.2	—	.090		
		10	7	11 $\frac{1}{8}$	9.3	11.9	16.5	—	.180		
		12	7	11 $\frac{1}{8}$	10.4	13.4	18.6	—	.218		
		14	7	11 $\frac{1}{8}$	11.6	14.9	20.7	—	.253		
		12	8	11 $\frac{1}{8}$	11.2	14.4	20.0	26.1	.275		
		14	8	11 $\frac{1}{8}$	12.4	16.0	22.2	29.1	.325		
		16	8	11 $\frac{1}{8}$	13.7	17.6	24.5	32.0	.375		
		18	8	11 $\frac{1}{8}$	14.9	19.2	26.7	35.0	.420		
		AC Welded Steel		Bucket Size, Inches			Weight		Cap. Cu. Feet*		
L Length	P Proj.			D Depth	3/16" Steel	1/4" Steel	Filled to Line X-X	Filled to Line X-Y			
<p>High front for greater capacity. Hooded back for closer spacing. Typical in cement, gypsum powder or other powdery materials. Venting available for clean filling and discharge. Mounted on chain or belt.</p> <p>*Weights do not include bolt reinforcing plates. Bolt reinforcing plates are recommended if less than 8 bolts are used. Vent holes in bottom are optional in style "AC" buckets.</p>		12	8	8 $\frac{1}{2}$	18.25	24.30	.231	.303			
		14	8	8 $\frac{1}{2}$	20.30	27.00	.271	.356			
		16	8	8 $\frac{1}{2}$	22.48	29.98	.311	.408			
		18	10	10 $\frac{1}{2}$	31.15	38.95	.488	.691			
		20	10	10 $\frac{1}{2}$	33.68	42.10	.542	.768			
		24	10	10 $\frac{1}{2}$	39.67	52.69	.651	.921			
		27	12	12 $\frac{1}{2}$	53.84	71.46	1.072	1.474			
		SC Welded Steel		Bucket Size, Inches				Weight			
L Length	P Proj.			D Depth	A Inches	10 Gauge Steel	3/16" Steel	1/4" Steel	5/16" Steel	Filled to Line X-X	Filled to Line X-Y
<p>Mounted between two strands of chain. Suitable for the heaviest materials. Designed for super capacity elevators. Typical in asphalt and concrete applications. Design offers increased capacity.</p> <p>*Note: Actual capacity depends on angle of repose of material handled and inclination of elevator.</p>		12	8 $\frac{3}{4}$	11 $\frac{1}{8}$	4 $\frac{9}{16}$	22	29	39	49	.35	.54
		14	8 $\frac{3}{4}$	11 $\frac{1}{8}$	4 $\frac{9}{16}$	23	31	41	51	.41	.63
		16	8 $\frac{3}{4}$	11 $\frac{1}{8}$	4 $\frac{9}{16}$	25	34	45	56	.46	.72
		16	12	17 $\frac{3}{8}$	6 $\frac{1}{2}$	43	58	76	95	1.11	1.55
		18	8 $\frac{3}{4}$	11 $\frac{1}{8}$	4 $\frac{9}{16}$	27	36	48	60	.52	.81
		20	8 $\frac{3}{4}$	11 $\frac{1}{8}$	4 $\frac{9}{16}$	29	39	52	65	.58	.90
		20	12	17 $\frac{3}{8}$	6 $\frac{1}{2}$	49	67	88	110	1.40	1.94
		24	12	17 $\frac{3}{8}$	6 $\frac{1}{2}$	55	75	104	130	1.68	2.33
		30	12	17 $\frac{3}{8}$	6 $\frac{1}{2}$	65	88	117	146	2.11	2.91
		36	12	17 $\frac{3}{8}$	6 $\frac{1}{2}$	73	99	132	165	2.53	3.49

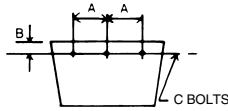
NOTE: All dimensions are inside to inside of bucket. Consult **Thomas** for other chains.

# Bucket Punching (Belt)

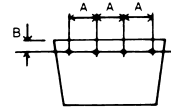
CEMA Standard (Formerly P1 thru P9)



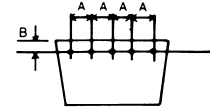
B1



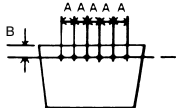
B2



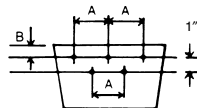
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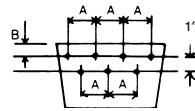
B4



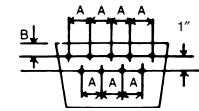
B5



B6



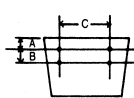
B7



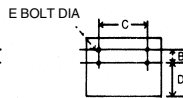
B8

Bucket Length	M.I. & Steel Buckets Style A, AA, AA-RB, B, C, etc.				Continuous Buckets			
	Punch	A	B	C	Punch	A	B	C
6	B-1	4- <sup>3</sup> / <sub>8</sub>	1	<sup>1</sup> / <sub>4</sub>	—	—	—	—
8	B-6	3	<sup>7</sup> / <sub>8</sub>	<sup>1</sup> / <sub>4</sub> - <sup>5</sup> / <sub>16</sub>	B-6	3	B = DEPTH - 1 2	<sup>1</sup> / <sub>4</sub> - <sup>5</sup> / <sub>16</sub>
10	B-6	3 <sup>1</sup> / <sub>2</sub>	<sup>7</sup> / <sub>8</sub>	<sup>1</sup> / <sub>4</sub> - <sup>5</sup> / <sub>16</sub>	B-6	3 <sup>1</sup> / <sub>2</sub>		<sup>1</sup> / <sub>4</sub> - <sup>5</sup> / <sub>16</sub>
12	B-6	4 <sup>1</sup> / <sub>2</sub>	<sup>7</sup> / <sub>8</sub>	<sup>1</sup> / <sub>4</sub> - <sup>5</sup> / <sub>16</sub>	B-6	4 <sup>1</sup> / <sub>2</sub>		<sup>1</sup> / <sub>4</sub> - <sup>5</sup> / <sub>16</sub>
14	B-7	4	<sup>7</sup> / <sub>8</sub>	<sup>5</sup> / <sub>16</sub>	B-7	4		<sup>5</sup> / <sub>16</sub>
16	B-7	4 <sup>1</sup> / <sub>2</sub>	<sup>7</sup> / <sub>8</sub>	<sup>5</sup> / <sub>16</sub>	B-7	4 <sup>1</sup> / <sub>2</sub>		<sup>5</sup> / <sub>16</sub>
18	—	—	—	—	B-7	5		<sup>5</sup> / <sub>16</sub>

## Bucket Punching — Chain

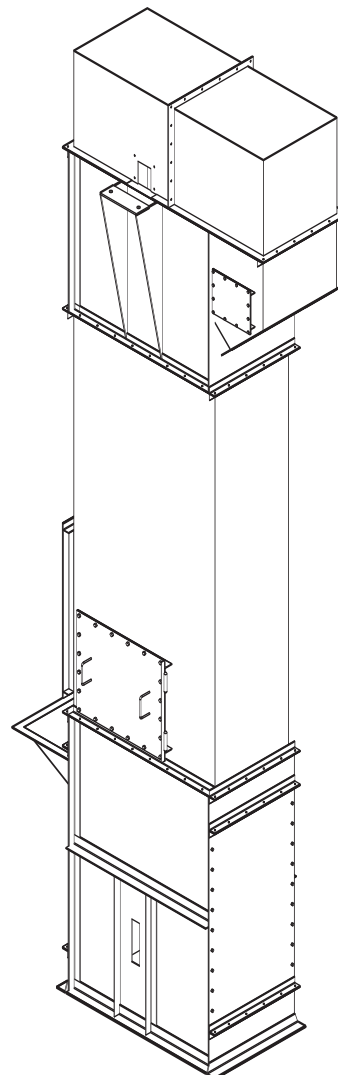


Style AA, C, SC, etc.



Continuous

Chain Number	Attachment Number	A	B	C	D	E
C-188	K-2	1	1 <sup>1</sup> / <sub>4</sub>	4 <sup>7</sup> / <sub>16</sub>	2 <sup>3</sup> / <sub>4</sub>	<sup>3</sup> / <sub>8</sub>
C-102B	K-2	<sup>3</sup> / <sub>4</sub>	1 <sup>1</sup> / <sub>4</sub>	5 <sup>5</sup> / <sub>16</sub>	2	<sup>3</sup> / <sub>8</sub>
C-110	K-2	<sup>7</sup> / <sub>8</sub>	1 <sup>1</sup> / <sub>4</sub>	5 <sup>5</sup> / <sub>16</sub>	3 <sup>3</sup> / <sub>8</sub>	<sup>3</sup> / <sub>8</sub>
C-111	K-2	<sup>3</sup> / <sub>4</sub>	2 <sup>5</sup> / <sub>16</sub>	6 <sup>1</sup> / <sub>4</sub>	2 <sup>1</sup> / <sub>8</sub>	<sup>3</sup> / <sub>8</sub>
SS-102B	K-2	<sup>3</sup> / <sub>4</sub>	1 <sup>1</sup> / <sub>4</sub>	5 <sup>5</sup> / <sub>16</sub>	2	<sup>3</sup> / <sub>8</sub>
SS-110	K-2	<sup>7</sup> / <sub>8</sub>	1 <sup>1</sup> / <sub>4</sub>	5 <sup>5</sup> / <sub>16</sub>	3 <sup>3</sup> / <sub>8</sub>	<sup>3</sup> / <sub>8</sub>



### Platforms

Head section service platforms are of structural steel, angle hand rails and heavy non-skid grating. The platform mounts securely to the elevator head section. Various sizes and configurations are available. Rest platforms are also available and required at 30' intervals.

### Ladders/Safety Cages

Ladders with safety cages are available. They are constructed of heavy gauge steel and sized to provide easy access to platforms. Ladders with safety cage are easily bolted to the elevator casings.

Problem	Cause	Correction
Bucket bolts pull through belt or belt tears at bolt hole.	Bucket bolts not tight.	Bucket bolts should be inspected frequently and kept tight.
	Inadequate belt construction for bolt-holding.	Proper belt recommendation should consider minimum plies for bolt-holding.
	Obstruction in casing or insufficient clearance.	Check terminal pulleys for proper alignment to ensure straight-running belt. Redesign elevator if necessary.
	Jammed boot.	Install controlled feed to help eliminate jams and turbulence in boot.
	Too-small pulleys or incorrect splice strains bolts as belt flexes.	Install larger head pulley if possible. Use correct splice. Check belt construction for possibility of thinner belt.
	Service conditions changed. Lump size or weight in buckets increased from original design.	For larger lumps, change feed or boot design to handle them. For heavier material, change belt construction to proper construction.
Belt cover wearing excessively on bucket side.	Bucket not completely discharging material. Material downlegging and getting between bucket and belt.	Change speed to effect better discharge.
	Fine abrasive material between bucket and belt cover.	Use rubber washers or bucket pad between bucket and cover.
	Too light a cover gauge or improper belt quality.	On replacement belt, increase cover thickness or upgrade belt, or both.
Excessive wear on pulley side of cover.	Abrasive material dropping between belt and boot pulley.	Use slotted or self-cleaning type of pulley.
	Belt slips at drive pulley.	Lag head pulley. If necessary, increase tension at terminal pulley.
	Too light a cover gauge or improper belt quality.	On replacement belt, increase cover thickness or upgrade belt, or both.
Belt carcass breaks.	Lump material dropping between belt and boot pulley.	Some type of slotted or self-cleaning pulley should be used.
	Operating tension is higher than maximum allowable working tension of belt.	Calculate belt tension and install belt with correct strength design.
Separation of rubber cover from carcass.	Severe service conditions	Improve cover adhesion by using breaker between carcass and cover.

# Troubleshooting Guide – Chain



Problem	Cause	Correction
Excessive noise	Misalignment. Too little or too much slack. Improper lubrication. Loose casing or sprockets Worn chain or sprockets	Check alignment and correct. Adjust take-up. Lubricate properly (follow instructions in lubrication section.) Draw up all bolts... brace housings if necessary Replace chain and sprocket.
Wear on chain side bars and sides of sprocket teeth.	Misalignment. Obstruction in guides, ways or casing.	Correct alignment of sprockets and shafts Remove obstruction...repair or replace damaged guides, ways or casing.
Chain climbs sprockets.	Poorly fitting sprockets. Chain worn long in pitch... or worn out. Insufficient chain wrap or excessive slack. Material build-up in sprocket tooth pockets. Loose or broken buckets.	Replace sprockets...and chain if necessary Replace chain. Increase chain wrap with idler or adjust center for proper slack. Remove material build-up. Tighten, repair or replace buckets.
Broken pins and rollers.	Elevator speed too high for chain. Shock or suddenly applied loads. Inadequate lubrication. Material build-up in sprocket tooth pockets. Bucket striking casing.	Use chain of shorter pitch or sprocket with more teeth. Reduce shock loads...easy starts give long life. Lubricate properly (follow instructions in lubrication section.) Remove material build-up. Check bucket clearance with casing or tighten loose buckets.
Pulsation	Chain tension too low. Chain speed too slow. Obstruction. Heavy or tacky lubricants. Sprockets with too few number of teeth, resulting in a large amount of chordal action.	Adjust take-ups to restore proper tension Increase size of sprocket or increase elevator speed. Remove obstruction and be sure lower strand is not striking foreign obstruction, ways or casing. Lubricate correctly. Replace with sprockets having correct number of teeth.
Chain gets stiff joints.	Misalignment. Material in chain joint. Improper lubrication. Corrosion. Peening of side bars. Excessive overloads.	Check sprocket and shaft alignment, and correct...replace damaged chain if necessary. Remove foreign material. Lubricate properly. Protect chain from corrosion with cases...clean and lubricate more often. Check for interference between chains and another member. Correct as needed. Review chain size.
Broken sprocket teeth.	Excessive shock loads. Objects wedged between chain and sprocket. Chain climbing sprocket teeth.	Avoid shocks...easy starts give long life. Remove and protect from foreign objects...alter trough at discharge point to prevent dropping off objects onto sprocket teeth. See "Chain climbs sprockets".
Rapid wear on troughs, ways or casings.	Abrasive material or obstruction in casing, ways or casings. Bent or damaged buckets, attachments or links. Insufficient casing lubrication.	Remove obstructions and try to avoid accumulation of abrasive material. Replace or repair damaged buckets attachments and links. Lubricate properly where lubrication is permitted.
Damage to conveyed articles.	Bent or damaged buckets, attachments or links. Obstruction in ways or casings. Improper timing.	Repair or replace damaged parts. Remove obstruction. Check timing sequence, chain elongation, chain selection.
Chain clings to sprockets	Incorrect or badly worn sprockets. Heavy or tacky lubricants. Material build-up in drive sprocket tooth pockets.	Replace chain and sprockets. Clean and lubricate properly. Remove material build-up...protect from contact with foreign material, or use sprockets with md relief, pitch line clearance.