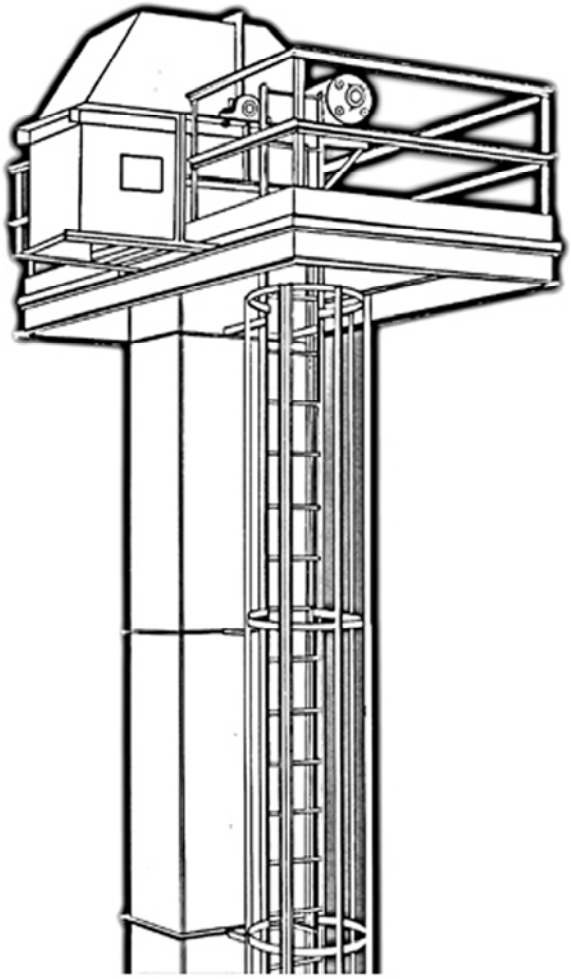
Orthman
CONVEYING SYSTEMS



BUCKET ELEVATOR CATALOG & ENGINEERING MANUAL

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WARNING AND SAFETY REMINDERS FOR SCREW , DRAG , AND BUCKET ELEVATOR CONVEYORS

APPROVED FOR DISTRIBUTION BY THE SCREW CONVEYOR SECTION OF THE CONVEYOR EQUIPMENT MANUFACTURERS ASSOCIATION (CEMA)

It is the responsibility of the contractor, installer, owner and user to install, maintain and operate the conveyor, components and, conveyor assemblies 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 (ANSI) B20.1 Safety Code.

In order to avoid an unsafe or hazardous condition, the assemblies or parts must be installed and operated in accordance with the following minimum provisions.

1. Conveyors shall not be operated unless all covers and/or guards for the conveyor and drive unit are in place. If the conveyor is to be opened for inspection cleaning, maintenance or observation, the electric power to the motor driving the conveyor must be LOCKED OUT in such a manner that the conveyor cannot be restarted by anyone; however remote from the area, until conveyor cover or guards and drive guards have been properly replaced.

2. If the conveyor must have an open housing as a condition of its use and application, the entire conveyor is then to be guarded by a railing or fence in accordance with ANSI standard B20.1.(Request current edition and addenda)

3. Feed openings for shovel, front loaders or other manual or mechanical equipment shall be constructed in such a way that the conveyor opening is covered by a grating. If the nature of the material is such that a grating cannot be used, then the exposed section of the conveyor is to be guarded by a railing or fence and there shall be a warning sign posted.

4. Do not attempt any maintenance or repairs of the conveyor until power has been LOCKED OUT.

5. Always operate conveyor in accordance with these instructions and those contained on the caution labels affixed to the equipment.

6. Do not place hands, feet, or any part of your body, in the conveyor.

7. Never walk on conveyor covers, grating or guards.

8. Do not use conveyor for any purpose other than that for which it was intended.

9. Do not poke or prod material into the conveyor with a bar or stick inserted through the openings.

10. Keep area around conveyor drive and control station free of debris and obstacles.

11. Eliminate all sources of stored energy (materials or devices that could cause conveyor components to move without power applied) before opening the conveyor

12. Do not attempt to clear a jammed conveyor until power has been LOCKED OUT.

13. Do not attempt field modification of conveyor or components.

14. Conveyors are not normally manufactured or designed to handle materials that are hazardous to personnel. These materials which are hazardous include those that are explosive, flammable, toxic or otherwise dangerous to personnel. Conveyors may be designed to handle these materials. Conveyors 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 conveyor is to be subjected to internal or external pressure, manufacturer should be consulted prior to any modifications.

CEMA insists that disconnecting and locking out the power to the motor driving the unit provides the only real protection against injury. Secondary safety devices are available; however, the decision as to their need and the type required must be made by the owner-assembler as we have no information regarding plant wiring, plant environment, the interlocking of the screw conveyor with other equipment, extent of plant automation, etc. Other devices should not be used as a substitute for locking out the power prior to removing guards or covers. We caution that use of the secondary devices may cause employees to develop a false sense of security and fail to lock out power before removing covers or guards. This could result in a serious injury should the secondary device fail or malfunction.

There are many kinds of electrical devices for interlocking of conveyors and conveyor systems such that if one conveyor in a system or process is stopped other equipment feeding it, or following it can also be automatically stopped.

Electrical controls, machinery guards, railings, walkways, arrangement of installation, training of personnel, etc., are necessary ingredients for a safe working place. It is the responsibility of the contractor, installer, owner and user to supplement the materials and services furnished with these necessary items to make the conveyor installation comply with the law and accepted standards.

Conveyor inlet and discharge openings are designed to connect to other equipment or machinery so that the flow of material into and out of the conveyor is completely enclosed.

One or more warning labels should be visible on conveyor housings, conveyor covers and elevator housings. If the labels attached to the equipment become illegible, please order replacement warning labels from the OEM or CEMA.

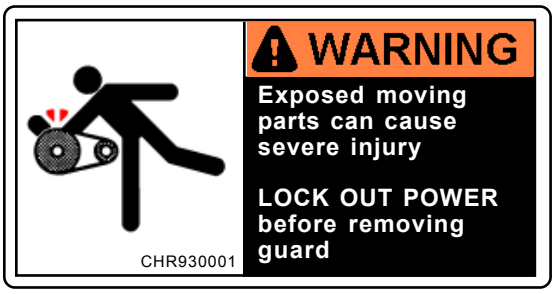
The Conveyor Equipment Manufacturers Association (CEMA) has produced an audio-visual presentation entitled “Safe Operation of Screw Conveyors, Drag Conveyors, and Bucket Elevators.” CEMA encourages acquisition and use of this source of safety information to supplement your safety program.

SEE OTHER SIDE FOR SAFETY LABELS

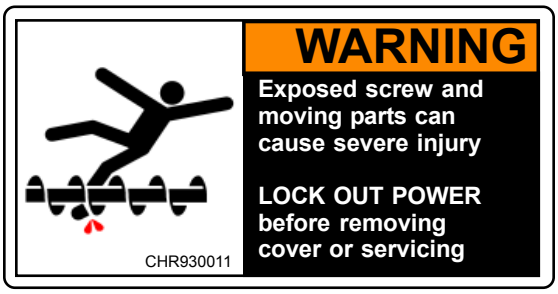
NOTICE: This document is provided by CEMA as a service to the industry in the interest of promoting safety. It is advisory only and it is not a substitute for a thorough safety program. Users should consult with qualified engineers and other safety professionals. CEMA makes no representations or warranties, either expressed or implied, and the users of this document assume full responsibility for the safe design and operation of equipment.

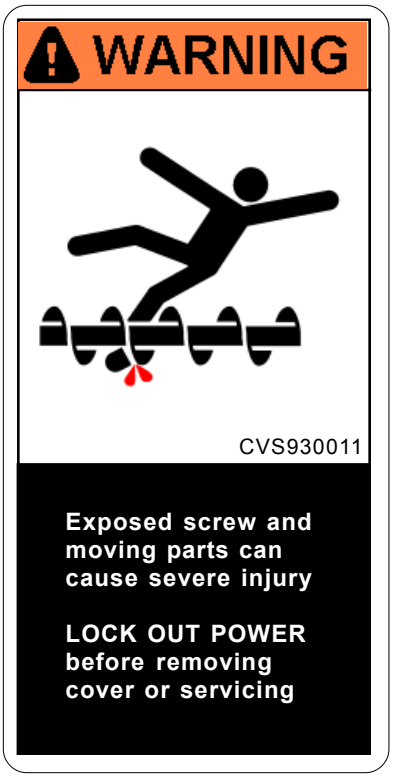
CEMA Safety Labels

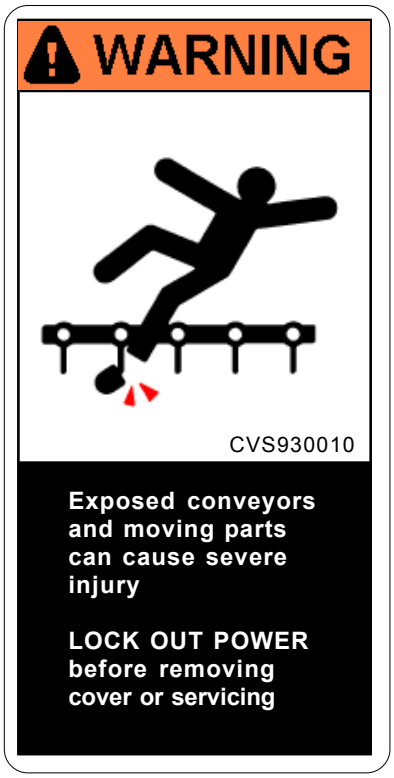
The CEMA safety labels shown below should be used on screw conveyors, drag conveyors, and bucket elevators. Safety labels should be placed on inlets, discharges, troughs, covers, inspection doors & drive guards. See CEMA Safety Label Placement Guidelines on CEMA Web Site: http://www.cemanet.org/safety/guidelines.html

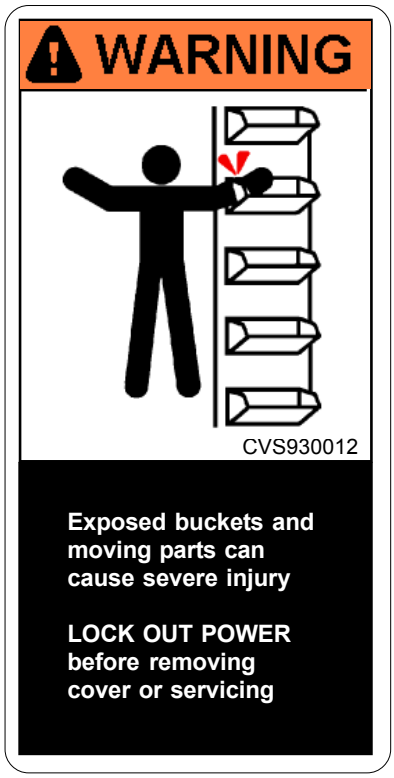












PROMINENTLY DISPLAY THESE SAFETY LABELS ON INSTALLED EQUIPMENT

SEE OTHER SIDE FOR SAFETY REMINDERS

Note: Labels alone do not substitute for a thorough in-plant safety training program centered on the hazards associated with operating your installed equipment.

Contact CEMA or Your Equipment Manufacturer for Replacement Labels

CONVEYOR EQUIPMENT MANUFACTURERS ASSOCIATION
6724 Lone Oak Blvd., Naples, Florida 34109
239-514-3441

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ORTHMAN CONVEYING
INDUSTRIAL BUCKET ELEVATORS

Series 1000
Centrifugal Discharge Using Chain
Series 2000
Centrifugal Discharge Using Belt
Series 3000
Continuous Buckets Using Chain
Series 4000
Continuous Buckets Using Belt
Series 5000
Continuous Buckets Using Dual Chain — High Capacity
Series 6000
Continuous Buckets Using Dual Chain — Maximum Capacity
Series 7000
Centrifugal Discharge Using Chain — High Capacity

INDUSTRIAL BUCKET ELEVATORS

Bucket elevators are designed to move flowing powders or bulk solids vertically. The typical elevator consists of a series of buckets mounted on a chain or belt operating over a sprocket or pulley. Take-ups are provided as a means to compensate for variations in length of chain or belt due to temperature changes, atmospheric conditions, or wear. A steel casing encloses the bucket line. Head sections and boot sections house integral transmission components.

Material is fed into an inlet hopper. Buckets (or cups) dig into the Material, and convey it up to and over the head sprocket/pulley, then throwing the material out the discharge throat. The emptied buckets then continue back down to the boot to continue the cycle.

ORTHMAN CONVEYING'S Industrial Bucket Elevators are made in a variety of shapes, weights and sizes, utilizing centrifugal buckets or continuous buckets.

Centrifugal Bucket Elevators are most commonly used to convey free-flowing, powdered bulk solids such as grains, animal feed, sand, minerals, sugar, aggregates, chemicals and more. They operate at high speeds, which throw the materials out the buckets into discharge throat by centrifugal force.

Industrial type elevators operate at slower speeds than standard duty-type elevators. Generally, Style AA buckets are used, which are widely spaced on a chain or belt and operate at speeds up to 305 FPM for handling the heaviest of industrial materials up to 1213 pounds per cubic foot.

Continuous Bucket Elevators have buckets spaced continuously and operate at slower speeds. The continuous bucket placement allows the force of gravity to discharge their load onto the inverted front of the preceding bucket. The bucket then guides that material into the discharge throat on the descending side of the elevator.

Continuous elevators are used to handle friable, fragile materials because they minimize product damage or are used to handle light, fluffy materials where aeration of the product must be avoided. Speeds average 120 FPM for handling up to 775 tons per hour.

Because every bucket application is unique, **ORTHMAN CONVEYING** offers a broad series of industrial elevator designs. Selection of the proper type elevator depends largely on capacity requirements and the characteristics of the material to be handled.

Selection procedure for industrial bucket elevators

EXAMPLE:

Material…….loose coke
(crushed 50% minus 1")
Weight/ft.^{3}…….23-35 lbs. per cu. ft.
Capacity required……30 tons per hour
Elevator height…….40'0" floor to discharge

Loose coke is shown in the Material chart and classified as a D47QNT material, see page **4**. The recommended type of elevator model is a Series 2010, which designates centrifugal discharge style buckets mounted on belting. For size selection, first convert the required capacity to the equivalent capacity of a 100-lb. Material. (Use the highest figure in the weight range.)

$\frac{30X100}{23}$ = 130.43 or 131 TPH

Referring to the Series 2000 elevator, page B-10, the smallest elevator that can be used is the 2010, which has a rated capacity of 132 TPH. The allowable lump size in this size elevator bucket (16 X 8) is 1 ½ ", see page **10**. This minus 1" material can therefore be handled in this size bucket.

The next step is to convert the height requirement into shaft centers for computation of Horsepower. If shaft centers are known, proceed to next step. Discharge height plus dimension 'H', see page **11**, will give approximate shaft centers.

40'0" + 33¼" = 42'9¼" (use 43' centers)

To determine horsepower requirements, multiply shaft centers by horsepower per foot and add terminal horsepower, see page **12**. Therefore, horsepower for this example is 43x.060 + 1.10 which equals 3.68.

This calculation is based on handling a 100-lb. material. The correction to a 25-35 lb. Material is:

$\frac{3.68 \times 35}{100}$ = 1.29 HP

(Use the heaviest figure in the weight range.)

The total calculated horsepower must be further corrected for power transmission and drive loss. Drive efficiency is usually 85%. Therefore, the minimum required operating horsepower is 1.29 divided by .85 = 1.52 HP. A 2-HP motor is the smallest that can be recommended that will give continued trouble free operation. This calculated horsepower is also dependent on a continuous even flow of material, not exceeding under any conditions, flow rate used in the calculation.

Material Classification Code Chart

	MATERIAL CHARACTERISTICS	CODE
SIZE	Very fine – 100 mesh and under	**A**
	Fine – 1/8 inch and under	**B**
	Granular – Under ½ inch	**C**
	Lumpy – Containing lumps over ½ inch	**D**
	Irregular – Stringy, interlocking, mats together	**E**
FLOW-ABILITY	Very free flowing	1
	Free flowing	2
	Average Flowing	3
	Sluggish	4
ABRASIVENESS	Non-abrasive	5
	Abrasive	6
	Very abrasive	7
MISCELLANEOUS CHARACTERISTICS (SOMETIMES MORE THAN ONE APPLY)	Becomes plastic or tends to soften	K
	Very dusty	L
	Aerates and develops fluid characteristics	M
	Contains explosive dust	N
	Contaminable, affecting use or salability	P
	Degradable, affecting use or salability	Q
	Gives off harmful fumes or dust	R
	Highly corrosive	S
	Mildly corrosive	T
	Hygroscopic	U
	Interlocks or mats	V
	Oils or chemical present – which affect rubber prod.	W
	Packs under pressure	X
	Very light and fluffy – may be wind swept	Y
	Elevated temperature	Z

EXAMPLE: A very fine material that is free-flowing abrasive and contains explosive dust would be designated: Code A26N.

Material Classification Chart For Industrial Bucket Elevators

Material	Wt. Per Cu. Ft., Lbs.	Mat'l. Codes	Series of Elevators
Alfalfa, meal	14-22	B46Y	3
Almonds, broken	27-30	C36	1,3
Almonds, whole	28-30	D36Q	3
Alum, lumpy	50-60	D35U	1,3
Alum, pulverized	45-50	B35U	1,3
Aluminum Chips	7-15	E46V	3
Aluminum Oxide	60-120	A17M	3
Ashes, coal	35-40	C46T	1
Asphalt, crushed	45	C35	1,3
Bakelite, powdered	30-45	B25	3
Baking Powder	40-55	A35	3
Barley, whole	36-48	B25H	2
Bauxite, crushed 3" & <	75-85	D37	1,3
Beans, castor	36	C25W	1,3
Beans, Navy, dry	48	C25	1,3
Bones, crushed	35-50	D46	1,3
Bones, ground – 1/8	50	B36	1,3
Boneblack	20-25	A25Y	3
Bonemeal	50-60	B36	1
Borax, powdered	45-55	B26T	1
Bran	16-20	B35NY	1
Brewers grain spent, dry	14-30	C35	1
Brewers grain spent, wet	55-60	C45T	1
Buckwheat	37-42	B25N	2
Carbon black pelletized*	— —	— —	4
Carbon black powder*	— —	— —	1
Carborundum – 3" & <	100	D27	3
Cast iron boring	130-200	C46	1,3
Cement, Portland	65-85	A26M	1,3,7
Cement, clinker	75-95	D37	1,3,5,6,7
Chalk, crushed	75-95	D26	1,3
Chalk, 100 mesh & under or pulverized	67-75	A26MXY	3
Charcoal	18-28	D46Q	3
Cinders, Coal	40	— —	1,3
Clay, Brick dry, fire	100-120	C37	2
Coal, anthracite 50 mesh to 1/8"	60	D35TY	1,3,7
Coal, bituminous ½" & <	50	D36LNXY	3
Coal, bituminous ½" & >	50	C35QVST	3,5,6,7
Cocoa Beans	30-40	C35Q	1,3
Coffee, green beans	25-32	C35Q	1,3
Coffee, roasted	20-30	B45DQU	1,3
Coke, loose	23-35	D47QVT	2
Coke, petroleum	35-45	D37Y	2
Coke, breeze	25-35	C47Y	2,7
Copra, lumpy	22	D35	1,3
Copra, cake lumpy	25-30	D35	1,3
Copra, cake ground	40-45	B35W	1,3
Copra, meal	40-45	B26	1,3
Cork, fine/ground	5-15	B45MY	3
Corn, cracked	40-50	C35W	3
Corn, shelled	45	C25	2
Corn germs	21	B35W	1
Corn grits	40-45	B35	1
Corn sugar	30-35	B35	1
Cornmeal	32-40	B35W	1
Cottonseed de-linted	22-40	C35W	2
Cottonseed w/lint	18-25	C45W	2
Cottonseed, cake, lumpy	40-45	D35W	1
Cottonseed hulls	12	B45Y	3
Cottonseed meal	35-40	B45Y	1
Cottonseed meats	40	B35W	1
Cullet	80-120	D37	2
Dolomite, crushed	80-100	C36	1,3,5,6,7
Ebonite, crushed ½" & <	65-70	C35	1,3
Feldspar, ground	65-80	B36	1,3
Feldspar, powder	100	A46	3
Flaxseed	43-45	B25NW	2
Flaxseed cake	48-50	D35W	1
Flaxseed meal	25-45	B35W	1,3
Fluorspar, fine	80-100	C46	1,3
Fullers' Earth raw	30-40	D36	2
Fullers' Earth spent	60-65	B37WX	2
Glass Batch	80-100	D37Z	2
Glue, ground 1/8" or <	40	B45U	1
Glue, pearl	40	C35U	1
Grains, distillery	30	E35	1
Granite, broken	95-100	— —	3,5,6
Grass seed	10-12	B25NY	3
Gravel, under 1"	90-100	D36	1,3,5,6,7
Gypsum, calcined	55-60	C36	1,3,5,6,7
Gypsum, crushed 1" or <	70-100	D36	1,3,5,6,7
Gypsum, powder	60-80	A46	1,3,7
Hops, spent, dry	35	E45	1
Hops, spent, wet	50-55	E45T	1
Ice, Crushed	35-45	D15	1,3
Ilmenite ore	140-160	D37	1,3,5,6,7
Lignite, air dry	45-55	D35T	1,3
Lime, ground 1/8" or <	60-65	B45X	1,3,5,6,7
Lime, hydrated	40	B36MX	3,5,6
Lime, pebble	53-56	D45	1,3,4,6,7
Lime, over ½"	53	C25HU	3,5,6,7
Limestone, Agric. 1/8" or <	68	B36	1,3,5,6,7
Limestone, crushed	85-90	D36	3,5,6,7
Linseed (see Flaxseed)			
Linseed meal (see Flaxseed meal)			
Marble, crushed over ½"	80-95	C37	3,5,6,7
Milk, malted	27-30	A45PX	1
Muriate of potash	70	B37	1,3
Oxalic acid crystal	60	B45U	2
Phosphate, acid fertilizer	60	B25T	1
Phosphate, rock	75-85	B36	3,5,6
Phosphate, sand	90-100	B37	2,3
Pumice, ground 1/8" or <	42-48	B47	3
Rice, hulled	45-49	B25	2
Rice, rough	32-36	B35N	2
Rice, bran	20	B35NY	1
Rice, grits	42-45	B35	1
Roofing granules*	— —	— —	1,3,7
Rubber, ground	23-50	C45	1,3
Rye	42-48	B15N	2
Salt, dry, fine	70-80	B36TU	1,3,7
Salt, dry, coarse	45-60	C36TU	1,3,7
Salt, cake coarse	85	B36TU	1,3
Sand, damp bank	110-130	B47	2,7
Sand, dry bank	90-110	B37	2,7
Sand, foundry prep.	90-100	D37Z	2
Sand, foundry shake-out	90-100	D37Z	2
Shale, crushed	85-90	C36	2,7,8
Slag, furnace granular	60-65	C37	3,5,6
Slate, crushed ½" or <	80-90	C36	2,3,5,6
Slate, ground 1/8" or <	82-85	— —	2
Soda ash, light	20-35	A36Y	3
Soda ash, heavy	55-65	B36	1,3
Soybeans, cracked	30-40	C36NW	1
Soybeans, whole	45-50	C26NW	2
Soybean cake, ½" or >	40-43	D35W	1
Soybean flakes, raw	18-26	C35Y	1
Soybean flour	27-30	A35MN	2
Soybean Meal	40	B35	1
Steel chips, crushed	100-150	D47WXZ	3
Sugar beet, dry pulp	12-15	C26	3
Tanbark, ground	55-65	B35PX	1
Timothy Seed	36	B35NY	3
Wood chips	10-30	E45VY	2

Series 1000 Bucket Elevator •

1. Head section completely factory assembled. Split head insures easy access or removal for maintenance. Spherical roller bearings are engineered for maximum load requirements which reduce friction, and insure smooth operation. Head shafts are fixed. External mount head shaft extension.

2. Discharge spout has 90° flange and convenient inspection door furnished as standard. 45° discharge spout available as an option.

3. Elevators of this design are ideal for the bulk handling of free flowing, fine and loose materials with small to medium size lumps. The centrifugal style discharge meets a majority of service requirements for industrial applications.

   Style AA malleable iron cups are bolted onto heavy-duty single strand chain.

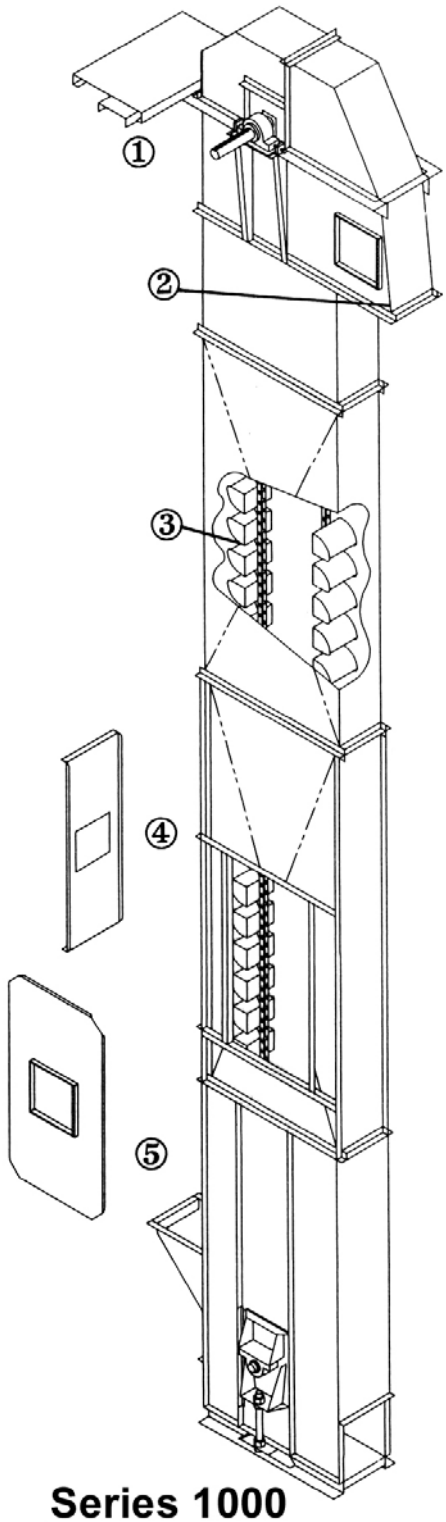
4. "X" braced casing embossments on our inspection sections provide exceptional strength, and dimensional stability. Inspection sections of continuous seam weldments. Quick clamped inspection doors provide easy access for inspection and maintenance of buckets and chain.

5. Boot sections are completely factory assembled. Heavy-duty ball bearing pillow blocks are mounted on acme thread take-ups and adjusted for secure tension on the chain. Both sides of boot are bolted to provide easy access inside. Screw take-ups are standard. Gravity take-ups (Internal and External), are available as an option.

6. The **OTHMAN CONVEYING** Series 1000 industrial elevators feature 3/16" plate boots and discharge spout as standard; head and casings of 10 gauge, and hood of 12 gauge. Guy wires not included.

7. Stainless steel construction of housing, shafts, buckets, bucket bolts, pulleys and other fabricated parts is available for special applications.

Centrifugal Discharge Using Chain



Series 1000
Industrial Bucket Elevator

Series 1000 Bucket Elevators
Elevator Specifications

Centrifugal Discharge Using Chain

TABLE 1

Elevator Number ►	Bucket ■		Chain Speed FPM ◊	Maximum lump Size, inches		Capacity ▼				
				Percentage of lumps			Tons per hour			
	Size Inches	Spacing Inches		100	10	Cubic Feet Per hour	Material weight, Pounds per cubic foot			
							35 ◊	50	75	100
1001	6x4	13	225	½	2 ½	280	5	7	11	14
1002	8x5	16	230	¾	3	543	10	14	20	27
1003	8x5	16	260	¾	3	614	11	15	23	31
1004	10x6	16	230	1	3 ½	931	16	23	35	47
1005	10x6	18	268	1	3 ½	970	17	24	36	48
1006	12x7	16	260	1 ¼	4	1718	30	43	64	86
1007	12x7	18	306	1 ¼	4	1752	31	44	66	87
1008	14x7	18	268	1 ¼	4	1858	33	46	70	93
1009	14x7	18	306	1 ¼	4	2122	37	53	80	106
1010	16x8	18	248	1 ½	4 ½	2552	45	64	96	128
1011	16x8	18	306	1 ½	4 ½	3137	55	78	110	157

TABLE 2

Elevator Number ▲	Chain Number	Casing size, Inside, inches	Gauge of Steel Casing				Approximate Weights Pounds ●	
			Hood	Head & Intermediate Sections	Boot Section (Inches)	Discharge Spout	Terminals	Casings, Buckets & Chain per ft. centers
1001	6188M-K-2	9 ¾ X 35	12	10	$^{3}/_{16}$	10	686	58
1002	6102BM-K-2	11 ¾ X 39	12	10	$^{3}/_{16}$	10	801	74
1003	6102BM-K-2	11 ¾ X 42	12	10	$^{3}/_{16}$	10	906	82
1004	6102BM-K-2	13 ¾ X 42	12	10	$^{3}/_{16}$	10	891	88
1005	6110MB-K-2	13 ¾ X 48	12	10	$^{3}/_{16}$	10	1035	91
1006	6102BM-K-2	15 ¾ X 48	12	10	$^{3}/_{16}$	10	1062	100
1007	6110BM-K-2	15 ¾ X 54	12	10	$^{3}/_{16}$	10	1352	105
1008	6110MB-K-2	17 ¾ X 48	12	10	$^{3}/_{16}$	10	1329	102
1009	6110MB-K-2	17 ¾ X 54	12	10	$^{3}/_{16}$	10	1525	107
1010	6110MB-K-2	19 ¾ X 48	12	10	$^{3}/_{16}$	10	1454	120
1011	6110MB-K-2	19 ¾ X 54	12	10	$^{3}/_{16}$	10	1734	120

► Elevators regularly include head shaft machinery, boot shaft machinery, chain, buckets, and casings with discharge spouts, Specify elevator number, discharge height or shaft centers. Ball and roller bearing pillow blocks and takeups, internal or external gravity takeups, buckets, drives, feed hoppers, backstops, service platforms and ladders can be furnished.

■ Style AA malleable iron buckets.

▼ Based on buckets filled to 75% of theoretical capacity. Capacity directly proportional to volume and weight of material carried in buckets and chain speed. Free-flowing material cannot be carried as high in the buckets as heavier or less fluffy materials.

◊ Lightweight, fluffy or pulverized materials required 15% to 20% lower chain speeds than those shown for proper discharge.

● Terminal weight based on average size head shaft. Weight adjustment necessary if gauge of casing is other than listed above. Terminal weight includes discharge spout but not feed hopper.

Series 1000 Bucket Elevators

Centrifugal Discharge Using Chain

Elevator Specifications

TABLE 3

Elevator Number ▲	Horsepower at head shaft[1]								Head Shaft[2]		Boot Shaft	
	Material weight, pounds per cubic foot								Pitch		Pitch	
	35		50		75		100		Dia. Of sprocket Wheel, Inches	Speed RPM	Dia. Of sprocket Wheel, Inches	Shaft Size
	Terminals	Per Foot Centers	Terminals	Per Foot Centers	Terminals	Per Foot Centers	Terminals	Per Foot Centers				
1001	.12	.007	.16	.010	.24	.014	.32	.019	20	43	15	$1\,^{7}/_{16}$
1002	.20	.013	.27	.019	.41	.028	.56	.037	20 ½	43	13	$1\,^{7}/_{16}$
1003	.30	.015	.43	.021	.64	.031	.86	.041	24 ¼	41	18	$1^{15}/_{16}$
1004	.40	.022	.57	.032	.85	.047	1.13	.063	20 ½	43	16 ¾	$1^{15}/_{16}$
1005	.55	.023	.79	.033	1.18	.049	1.58	.065	25	41	21 ¼	$1^{15}/_{16}$
1006	.82	.040	1.18	.057	1.77	.085	2.36	.113	24 ¼	41	18	$1^{15}/_{16}$
1007	1.11	.041	1.81	.059	2.72	.089	3.62	.118	30 ¾	38	23 ¼	$2\,^{3}/_{16}$
1008	.88	.044	1.25	.063	2.00	.094	2.50	.125	25	41	17 ½	$2\,^{3}/_{16}$
1009	1.35	.050	1.92	.072	2.88	.107	3.84	.143	30 ¾	38	23 ¼	$2\,^{3}/_{16}$
1010	1.10	.060	1.57	.086	2.35	.128	3.14	.171	23	41	15 ¾	$2\,^{3}/_{16}$
1011	1.81	.074	2.62	.106	3.93	.158	5.24	.211	30 ¾	38	23 ¼	$2\,^{3}/_{16}$

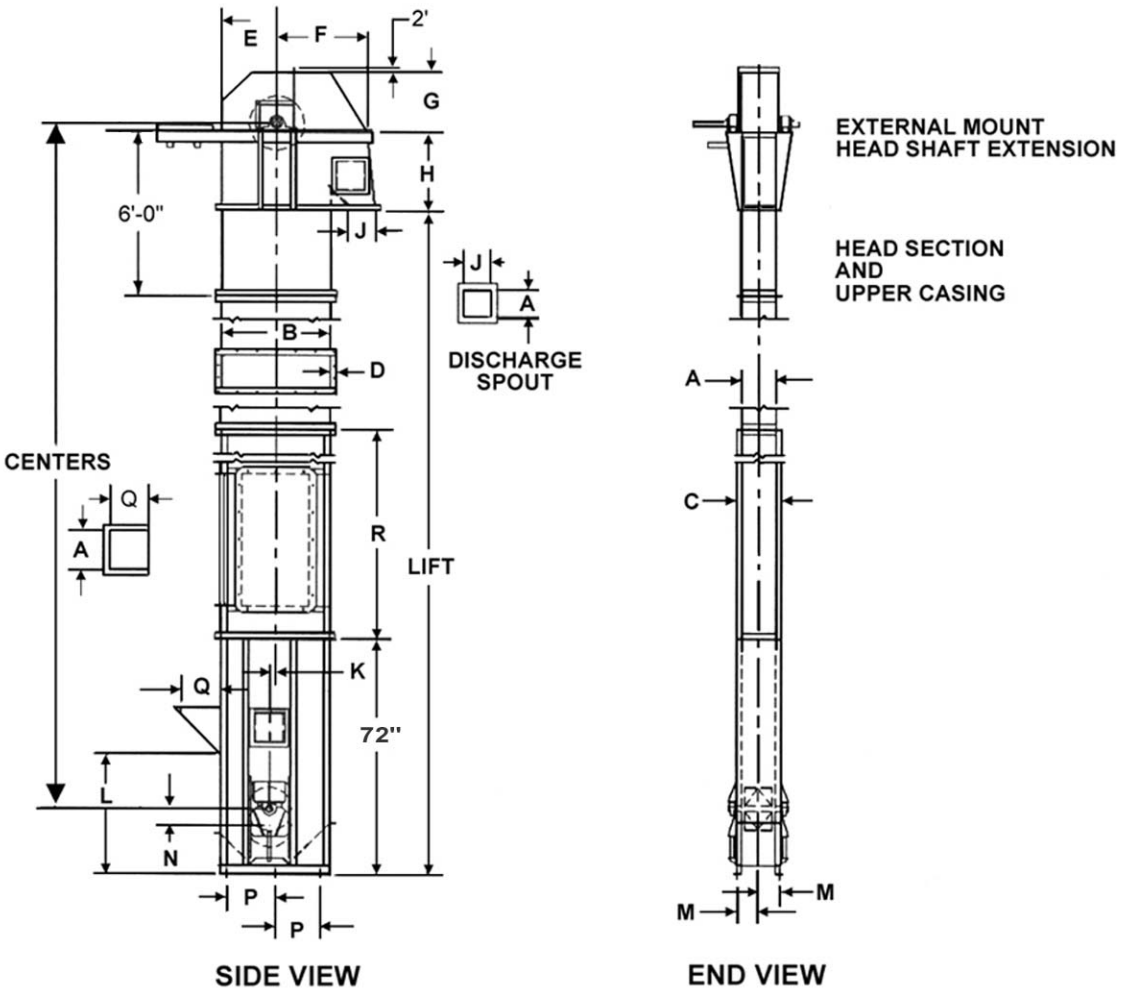
TABLE 4

Elevator Number ▲	Maximum elevator centers in feet for various size head shafts													
	Material weight, pounds per cubic foot													
	35			50				75				100			
	Head shaft diameter, inches													
	$1^{15}/_{16}$	$2^{7}/_{16}$	$2\,^{15}/_{16}$	$1^{15}/_{16}$	$2\,^{7}/_{16}$	$2\,^{15}/_{16}$	$3\,^{7}/_{16}$	$1\,^{15}/_{16}$	$2\,^{7}/_{16}$	$2\,^{15}/_{16}$	$3\,^{7}/_{16}$	$1\,^{15}/_{16}$	$2\,^{7}/_{16}$	$2\,^{15}/_{16}$	$3\,^{7}/_{16}$
1001	60	…	…	60	…	…	…	60	…	…	…	60	…	…	…
1002	60	…	…	60	…	…	…	60	…	…	…	60	…	…	…
1003	60	…	…	60	…	…	…	60	…	…	…	60	…	…	…
1004	60	…	…	55	60	…	…	50	60	…	…	40	60	…	…
1005	60	…	…	60	…	…	…	50	60	…	…	40	60	…	…
1006	40	60	…	35	60	…	…	25	60	…	…	20	50	…	…
1007	…	80	…	…	70	80	…	…	55	80	…	…	45	80	…
1008	…	70	80	…	65	80	…	…	50	80	…	…	40	80	…
1009	…	65	80	…	55	80	…	…	40	80	…	…	30	70	…
1010	…	…	80	…	…	75	80	…	…	60	…	…	…	45	…
1011	…	…	80	…	…	70	75	…	…	50	60	…	…	40	45

►Elevators regularly include head shaft machinery, boot shaft machinery, chain, buckets, and casings with discharge spouts. Specify elevator number, discharge height or shaft centers. Ball and roller bearing pillow blocks and take-ups, internal or external gravity take-ups, welded steel buckets, drives, feed hoppers, backstops, service platforms and ladders can be furnished.

[1] Based on buckets filled to 100% of theoretical capacity. Horsepower directly proportional to volume and weight of material carried in buckets and chain speed.

[2] Head shaft for Series 1000 elevator provided with pillow block spherical roller bearings.



Series 1000 Bucket Elevators ● Centrifugal Discharge Using Chain

TABLE 5

No.	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R
	INCHES															
1001	9 ¾	35	13 1/8	1 ½	17 ½	30 ½	19 ½	27 ¼	10	2 ½	24 ½	6 ¾	6	14 ½	9 ¾	120
1002	11 ¾	39	15 1/8	1 ½	19 ½	32 ½	21 ½	29	10	3	24 ½	7 ¾	6	16 ½	11 ¾	120
1003	11 ¾	42	16 1/8	2	21	36 ¼	24	30 ¼	13	3	28 ½	7 ¾	8	18	11 ¾	120
1004	13 ¾	42	18 1/8	2	21	36 ¼	24	30 ¼	13	3	28 ½	8 ¾	8	18	13 ¾	120
1005	13 ¾	48	18 1/8	2	24	40 5/8	27 ½	33 ¼	15	3	31	8 ¾	8	21	13 ¾	120
1006	15 ¾	48	20 1/8	2	24	40 5/8	27 ½	33 ¼	15	3	31	9 ¾	8	21	15 ¾	120
1007	15 ¾	54	20 1/8	2	27	45	31	35 ¾	17	4	35 ½	9 ¾	10	24	15 ¾	120
1008	17 ¾	48	22 1/8	2	24	40 5/8	27 ½	33 ¼	15	3	33	10 ¾	10	21	17 ¾	120
1009	17 ¾	54	22 1/8	2	27	45	31	35 ¾	17	4	36 ½	10 ¾	10	24	17 ¾	120
1010	19 ¾	48	24 1/8	2	24	40 5/8	27 ½	33 ¼	15	3	33	11 ¾	10	21	19 ¾	120
1011	19 ¾	54	24 1/8	2	27	45	31	35 ¾	17	4	36 ½	11 ¾	10	24	19 ¾	120

Have dimensions certified for installation purposes.

Series 2000 Bucket Elevator •

1. Factory assembled head section insures trouble free installation. Split head provides easy access for removal and maintenance. Spherical roller bearings are engineered for maximum load requirements which reduce friction and insure smooth operation. Hood contoured to minimize corrosion and material packing in corners.

2. Discharge spout has 90° flange and convenient inspection door furnished as standard. 45° discharge spout available as an option.

3. The **ORTHMAN CONVEYING** Series 2000 industrial elevators are similar to the **ORTHMAN CONVEYING** Series 1000 except belting is used instead of chain. These are ideal for handling all types of free flowing powdered bulk solids. They operate at high speeds, which throw the materials out of the buckets into the discharge throats by centrifugal force. Style AA malleable iron cups are bolted onto belting.

4. "X" braced casing embossments on our inspection sections provide exceptional strength, and dimensional stability. Inspection sections of continuous seam weldments. Quick clamped inspection doors provide easy access for inspection and maintenance of buckets and belting.

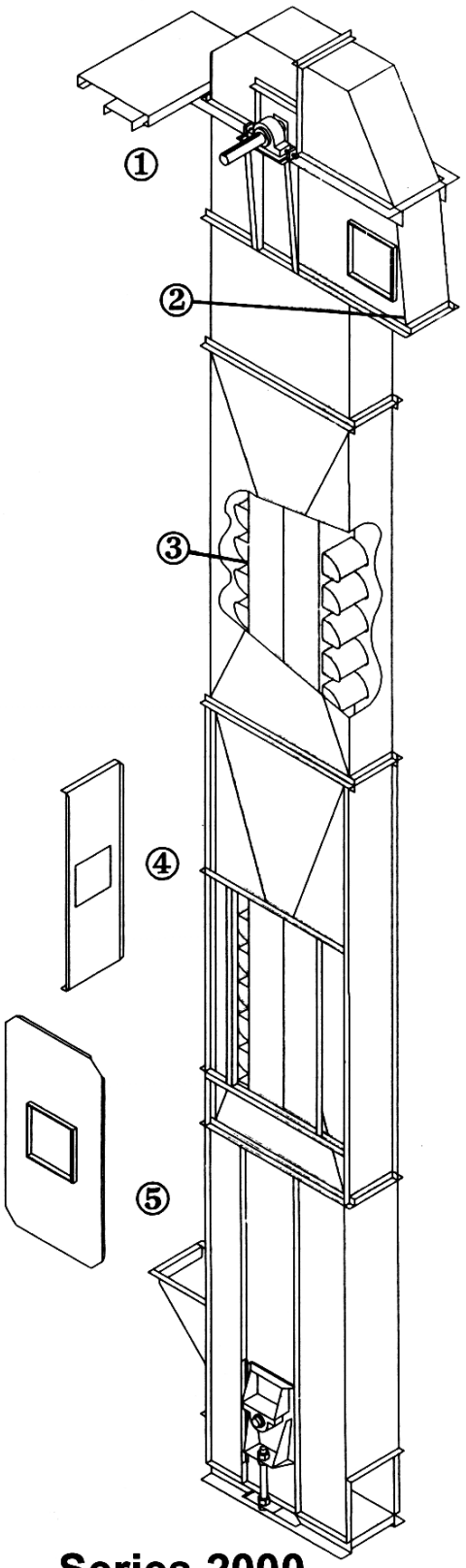
5. Boot sections are completely factory assembled. Heavy-duty ball bearing pillow blocks are mounted on acme thread take-ups and adjusted for secure tension on the belt. Both sides of boot are bolted to provide easy access inside. Screw take-ups are standard. Gravity take-ups (Internal and External) are available as an option.

   Drum pulleys for elevator boots are standard with options for wing pulleys with replaceable wear strips.

6. The **ORTHMAN CONVEYING** Series 2000 industrial elevators feature 3/16" plate boots and discharge spout as standard; head and casings of 10 gauge, and hood of 12 gauge. Guy wires not included.

7. Stainless steel construction of housing, shafts, buckets, bucket bolts, pulleys and other fabricated parts is available for special applications.

Centrifugal Discharge Using Belt



Series 2000
Industrial Bucket Elevator

Elevator Specifications

TABLE 1

Elevator Number ►	Bucket ■		Chain Speed FPM ◊	Maximum lump Size, inches		Capacity ▼				
				Percentage of lumps		Cubic Feet Per hour	Tons per hour			
							Material weight, Pounds per cubic foot			
	Size Inches	Spacing Inches		100	10		35 ◊	50	75	100
2001	6x4	13	225	½	2 ½	280	5	7	11	14
2002	8x5	16	225	¾	3	543	10	14	20	27
2003	8x5	16	258	¾	3	614	11	15	23	31
2004	10x6	16	225	1	3 ½	931	16	23	35	47
2005	10x6	18	258	1	3 ½	970	17	24	36	48
2006	12x7	16	258	1 ¼	4	1718	30	43	64	86
2007	12x7	18	298	1 ¼	4	1752	31	44	66	87
2008	14x7	18	258	1 ¼	4	1858	33	46	70	93
2009	14x7	18	298	1 ¼	4	2122	37	53	80	106
2010	16x8	18	258	1 ½	4 ½	2552	45	64	96	128
2011	16x8	18	298	1 ½	4 ½	3137	55	78	110	157

TABLE 2

Elevator Number ►	Belt Width Inches	Casing size, Inside, inches	Gauge of Steel Casing				Approximate Weights Pounds ●	
			Hood	Head & Intermediate Sections	Boot Section (Inches)	Discharge Spout	Terminals	Casings, Buckets & Belt per ft. centers
2001	7	9 ¾ X 35	12	10	3/16	3/16	926	72
2002	9	11 ¾ X 39	12	10	3/16	3/16	1096	91
2003	9	11 ¾ X 42	12	10	3/16	3/16	1223	102
2004	11	13 ¾ X 42	12	10	3/16	3/16	1203	110
2005	11	13 ¾ X 48	12	10	3/16	3/16	1397	113
2006	13	15 ¾ X 48	12	10	3/16	3/16	1434	125
2007	13	15 ¾ X 54	12	10	3/16	3/16	1959	130
2008	15	17 ¾ X 48	12	10	3/16	3/16	1794	127
2009	15	17 ¾ X 54	12	10	3/16	3/16	2058	133
2010	17	19 ¾ X 48	12	10	3/16	3/16	1963	150
2011	17	19 ¾ X 54	12	10	3/16	3/16	2341	150

► Elevators regularly include head shaft machinery, boot shaft machinery, belt, buckets, and casings with discharge spouts, Specify elevator number, discharge height or shaft centers. Ball and roller bearing pillow blocks and internal or external gravity takeups, buckets, feed hoppers, backstops, service platforms and ladders can be furnished.

■ Style AA malleable iron buckets. Style C malleable iron buckets recommended for wet or sticky material. Capacity and horsepower using Style C buckets directly proportional to volume and weight of material carried in buckets.

▼ Based on buckets filled to 75% of theoretical capacity. Capacity directly proportional to volume and weight of material carried in buckets and belt speed. Free-flowing material cannot be carried as high in the buckets as heavier or less fluffy materials.

◊ Lightweight, fluffy or pulverized materials required 15% to 20% lower chain speeds than those shown for proper discharge.

● Terminal weight is based on average size head shaft. Weight adjustment necessary if gauge of casing is other than listed above. Terminal weight includes discharge spout but not feed hopper.

Elevator Specifications

TABLE 3

Elevator Number ▲	Horsepower at head shaft[1]								Head Shaft[2]		Boot Shaft	
	Material weight, pounds per cubic foot											
	35		50		75		100		Diameter Of Pulley, Inches	Speed RPM	Diameter Of Pulley, Inches	Shaft Size Inches
	Terminals	Per Foot Centers	Terminals	Per Foot Centers	Terminals	Per Foot Centers	Terminals	Per Foot Centers				
2001	.12	.007	.16	.010	.24	.014	.32	.019	20	43	16	1 7/16
2002	.20	.013	.27	.019	.41	.028	.56	.037	20	43	16	1 7/16
2003	.30	.015	.43	.021	.64	.031	.86	.041	24	41	20	1 13/14
2004	.40	.022	.57	.032	.85	.047	1.13	.063	20	43	16	1 15/16
2005	.55	.023	.79	.033	1.18	.049	1.58	.065	24	41	20	1 15/16
2006	.82	.040	1.18	.057	1.77	.085	2.36	.113	24	41	20	1 15/16
2007	1.11	.041	1.81	.059	2.72	.089	3.62	.118	30	38	24	2 3/16
2008	.88	.044	1.25	.063	2.00	.094	2.50	.125	24	41	20	2 3/16
2009	1.35	.050	1.92	.072	2.88	.107	3.84	.143	30	38	24	2 3/16
2010	1.10	.060	1.57	.086	2.35	.128	3.14	.171	24	41	20	2 3/16
2011	1.81	.074	2.62	.106	3.93	.158	5.24	.211	30	38	24	2 3/16

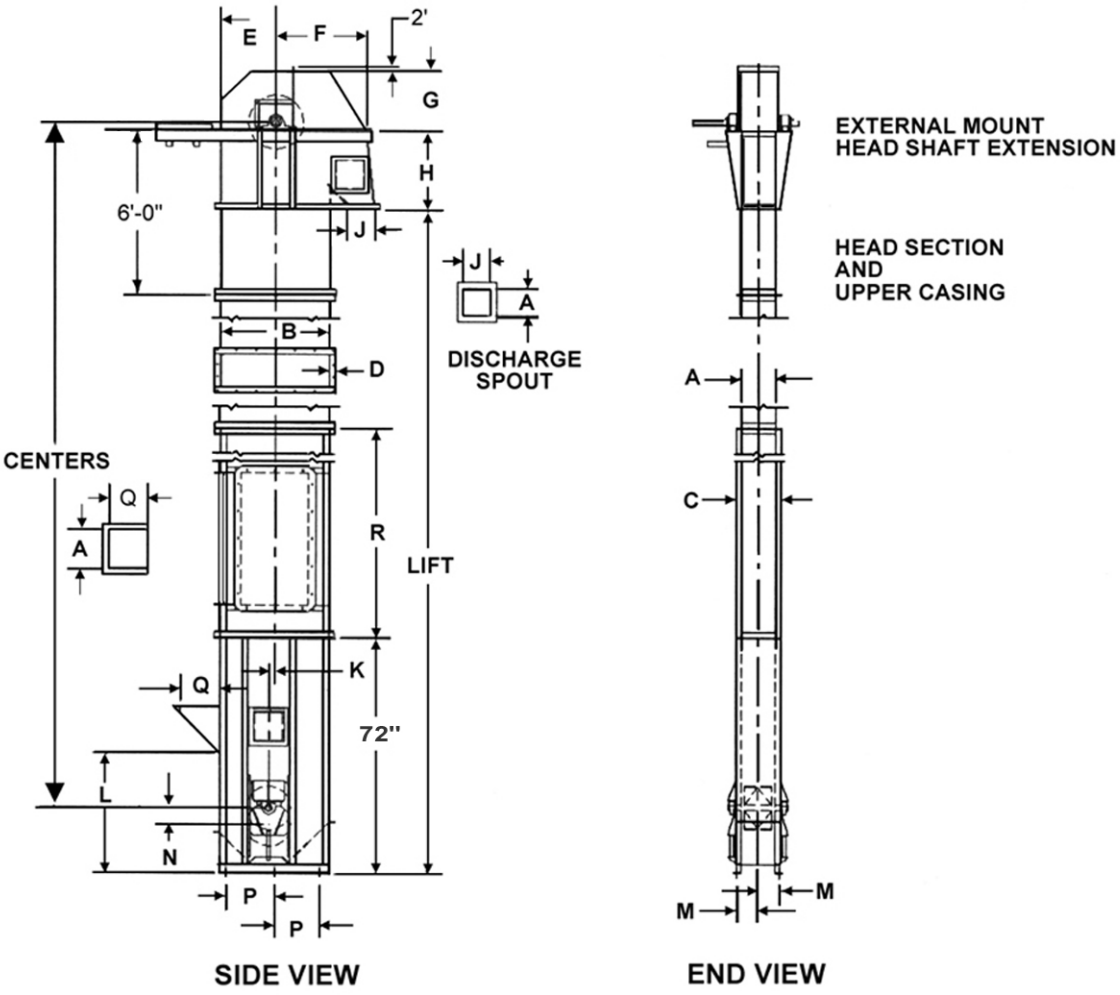
TABLE 4

Elevator Number ▲	Maximum elevator centers in feet for various size head shafts													
	Material weight, pounds per cubic foot													
	35			50				75				100			
	Head shaft diameter, inches													
	1 15/16	2 7/16	2 15/16	1 15/16	2 7/16	2 15/16	3 7/16	1 15/16	2 7/16	2 15/16	3 7/16	1 15/16	2 7/16	2 15/16	3 7/16
2001	60	…	…	60	…	…	…	60	…	…	…	60	…	…	…
2002	60	…	…	60	…	…	…	60	…	…	…	60	…	…	…
2003	60	…	…	60	…	…	…	60	…	…	…	60	…	…	…
2004	60	…	…	55	60	…	…	50	60	…	…	40	60	…	…
2005	60	…	…	60	…	…	…	50	60	…	…	40	60	…	…
2006	40	60	…	35	60	…	…	25	60	…	…	20	50	…	…
2007	...	80	…	…	70	80	…	…	55	80	…	…	45	80	…
2008	...	70	80	...	65	80	…	…	50	80	…	…	40	80	…
2009	...	65	80	…	55	80	…	…	40	80	…	…	30	70	…
2010	...	…	80	…	…	75	80	…	…	60	…	…	…	45	…
2011	…	…	80	…	…	70	75	…	…	50	60	…	…	40	45

►Elevators regularly include head shaft machinery, boot shaft machinery, belt, buckets, and casings with discharge spouts. Specify elevator number, discharge height or shaft centers. Ball and roller bearing pillow blocks and take-ups, internal or external gravity take-ups, buckets, drives, feed hoppers, backstops, service platforms and ladders can be furnished.

[1] Based on buckets filled to 100% of theoretical capacity. Horsepower directly proportional to volume and weight of material carried in buckets and belt speed.

[2] Head shaft for Series 2000 elevator provided with pillow block spherical roller bearings.



Series 2000 Bucket Elevators ● Centrifugal Discharge Using Belt

TABLE 5 — Elevator Specifications

No.	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R
	INCHES															
2001	11 ¾	35	13 1/8	1 ½	17 ½	30 ½	19 ½	27 ¼	10	…	24 ½	6 ¾	6	14 ½	9 ¾	120
2002	13 ¾	39	15 1/8	1 ½	19 ½	32 ½	21 ½	29	10	…	24 ½	7 ¾	6	16 ½	11 ¾	120
2003	13 ¾	42	16 1/8	2	21	36 ¼	24	30 ¼	13	…	28 ½	7 ¾	8	18	11 ¾	120
2004	15 ¾	42	18 1/8	2	21	36 ¼	24	30 ¼	13	3	28 ½	8 ¾	8	18	13 ¾	120
2005	15 ¾	48	18 1/8	2	24	40 5/8	27 ½	33 ¼	15	…	31	8 ¾	8	21	13 ¾	120
2006	17 ¾	48	20 1/8	2	24	40 5/8	27 ½	33 ¼	15	3	31	9 ¾	8	21	15 ¾	120
2007	17 ¾	54	20 1/8	2	27	45	31	35 ¾	17	…	35 ½	9 ¾	10	24	15 ¾	120
2008	19 ¾	48	22 1/8	2	24	40 5/8	27 ½	33 ¼	15	3	31	10 ¾	10	21	17 ¾	120
2009	19 ¾	54	22 1/8	2	27	45	31	35 ¾	17	3	36 ½	10 ¾	10	24	17 ¾	120
2010	21 ¾	48	24 1/8	2	24	40 5/8	27 ½	33 ¼	15	3	33	11 ¾	10	21	19 ¾	120
2011	21 ¾	54	24 1/8	2	27	45	31	35 ¾	17	3	36 ½	11 ¾	10	24	19 ¾	120

Have dimensions certified for installation purposes.

Series 3000 Bucket Elevator •

1. Factory assembled head section insures trouble free installation. Split head provides easy access for removal and maintenance. Spherical roller bearings are engineered for maximum load requirements that reduce friction and insure smooth operation. Hood contoured to minimize corrosion and material packing in corners.

2. Standard discharge spout has 90° flange and convenient inspection door, 45° discharge spout available as an option.

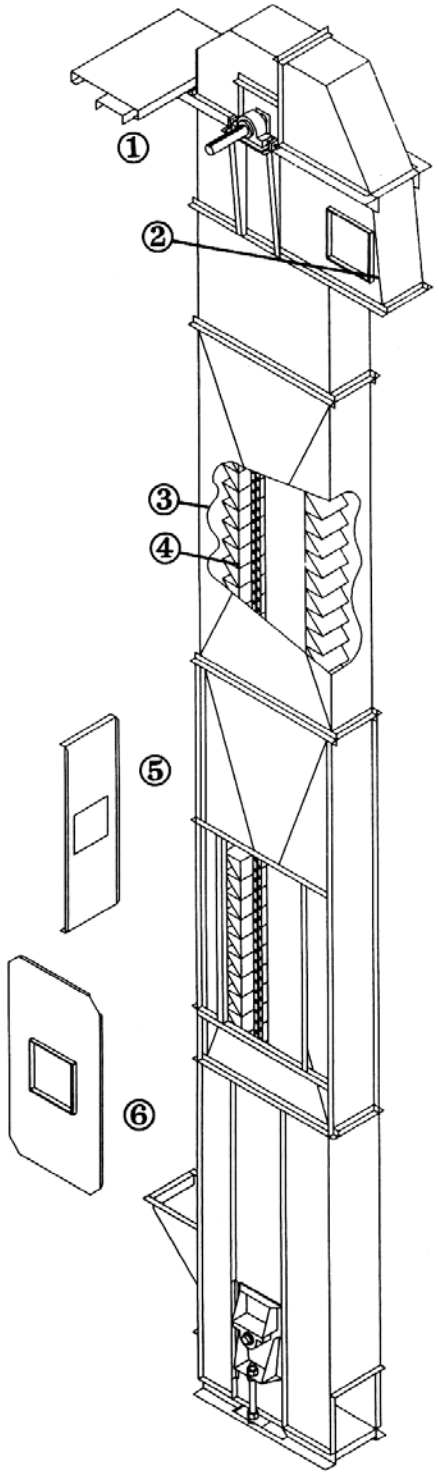
3. Elevators of this design are ideal for the bulk handling of materials ranging from light to heavy and from fine to large lumps. Buckets are spaced continuously and loaded by directed feeding. Their close spacing prevents spillage between cups and as the bucket discharges the material over the preceding bucket front and side, which form a chute into the discharge spout.

4. "X" braced casing embossments on our inspection sections provide exceptional strength, and dimensional stability. Inspection sections of continuous seam weldments. Quick clamped inspection doors provide easy access for inspection and maintenance of buckets and chain.

5. Boot sections are completely factory assembled. Heavy-duty ball bearing pillow blocks are mounted on acme square thread take-ups and adjusted for secure tension on the chain. Both sides of boot are bolted to provide easy access inside. Screw take-ups are standard. Gravity take-ups (Internal and External), available as an option.

6. The **ORTHMAN CONVEYING** Series 3000 industrial elevators feature 3/16" plate for the boot and discharge spout; head section and casings 10 gauge, and hood of 12 gauge. Guy wires not included.

7. Stainless steel construction of housing, shafts, buckets, bucket bolts, pulleys and other fabricated parts available for special applications.



Series 3000
Industrial Bucket Elevator

Continuous Buckets Using Chain

Elevator Specifications

TABLE 1

Elevator Number ►	Bucket ■			Chain Speed FPM ◊	Maximum lump Size, inches		Capacity ▼				
					Percentage of Lumps		Cubic Feet Per Hour	Tons per hour			
								Material weight, Pounds per cubic foot			
	Size Inches	Gauge Of Steel	Spacing Inches		100	10		35 ◊	50	75	100
3001	8 x 5 x 7 ¾	12	8	125	¾	2 ½	675	12	17	25	34
3002	10 x 5 x 7 ¾	12	8	125	¾	2 ½	843	15	21	32	42
3003	10 x 7 x 11 5/8	12	12	125	1	3	1080	19	27	41	54
3004	12 x 7 x 11 5/8	10	12	125	1	3	1293	23	32	48	65
3005	14 x 7 x 11 5/8	10	12	125	1	3	1518	27	38	57	76
3006	14 x 8 x 11 5/8	10	12	125	1 ¼	4	1816	32	45	68	91
3007	16 x 8 x 11 5/8	10	12	125	1 ½	4 ½	2081	36	52	78	104
3008	18 x 8 x 11 5/8	10	12	125	1 ½	4 ½	2334	41	58	88	117

TABLE 2

Elevator Number ►	Chain Number	Casing size, Inside, Inches	Gauge of Steel Casing				Approximate Weights Pounds ●	
			Hood	Head & Intermediate Sections	Boot Section (Inches)	Discharge Spout	Terminals	Casings, Buckets & Chain per ft. centers
3001	6102BM-K-2	11 ¾ X 39	12	10	3/16	3/16	1172	104
3002	6102BM-K-2	13 ¾ X 39	12	10	3/16	3/16	1118	117
3003	6110MB-K-2	13 ¾ X 48	12	10	3/16	3/16	1528	124
3004	6110MB-K-2	15 ¾ X 48	12	10	3/16	3/16	1609	142
3005	6110MB-K-2	17 ¾ X 48	12	10	3/16	3/16	1702	148
3006	6110MB-K-2	17 ¾ X 48	12	10	3/16	3/16	1891	150
3007	6110MB-K-2	19 ¾ X 48	12	10	3/16	3/16	2253	177
3008	6110MB-K-2	21 ¾ X 48	12	10	3/16	3/16	2295	185

► Elevators regularly include head shaft machinery, boot shaft machinery, chain, buckets, and casings with discharge spouts, Specify elevator number, discharge height or shaft centers. Ball and roller bearing pillow blocks and take-ups, drives, feed hoppers, backstops, service platforms and ladders can be furnished.

■ Style MF, medium front, continuous steel buckets.

▼ To provide greater capacity when handling lightweight, fluffy or pulverized materials, chain speeds may be increased to 160 to 175 FPM according to the fluffy nature of the material.

◊ Based on buckets filled to 75% of theoretical capacity. Capacity directly proportional to volume and weight of material carried in buckets and chain speed. Free-flowing materials cannot be carried as high in the buckets as heavier or less fluffy materials.

● Terminal weight is based on average size head shaft. Weight adjustment necessary if casing thickness is other than listed above. Terminal weight includes discharge spout and loading leg but not feed hopper.

Elevator Specifications

TABLE 3

Elevator Number ▲	Horsepower at head shaft[1]								Head Shaft[2]		Boot Shaft	
	Material weight, pounds per cubic foot											
	35		50		75		100		Pitch Diameter Of Sprocket (Inches)	Speed RPM	Pitch Diameter Of Sprocket (Inches)	Shaft Size, Inches
	Terminals	Per Foot Centers	Terminals	Per Foot Centers	Terminals	Per Foot Centers	Terminals	Per Foot Centers				
3001	.226	.014	.275	.020	.357	.030	.439	.040	20 ½	23.4	14 ¼	$1\ ^{7}/_{16}$
3002	.269	.018	.332	.026	.438	.038	.541	.051	20 ½	23.4	14 ¼	$1\ ^{7}/_{16}$
3003	.384	.024	.500	.034	.685	.051	.875	.068	25	19.1	19 ½	$1^{15}/_{16}$
3004	.469	.029	.605	.041	.833	.062	1.058	.083	25	19.1	19 ½	$1^{15}/_{16}$
3005	.529	.034	.686	.048	.954	.072	1.212	.096	25	19.1	19 ½	$1^{15}/_{16}$
3006	.609	.043	.790	.062	1.098	.093	1.400	.1231	25	19.1	$19\ ^{7}/_{16}$	$2\ ^{3}/_{16}$
3007	.749	.049	.959	.070	1.313	.1055	1.669	.1406	25	19.1	$19\ ^{7}/_{16}$	$2\ ^{3}/_{16}$
3008	.821	.055	1.055	.078	1.450	.1180	1.848	.1570	25	19.1	$19\ ^{7}/_{16}$	$2\ ^{3}/_{16}$

TABLE 4

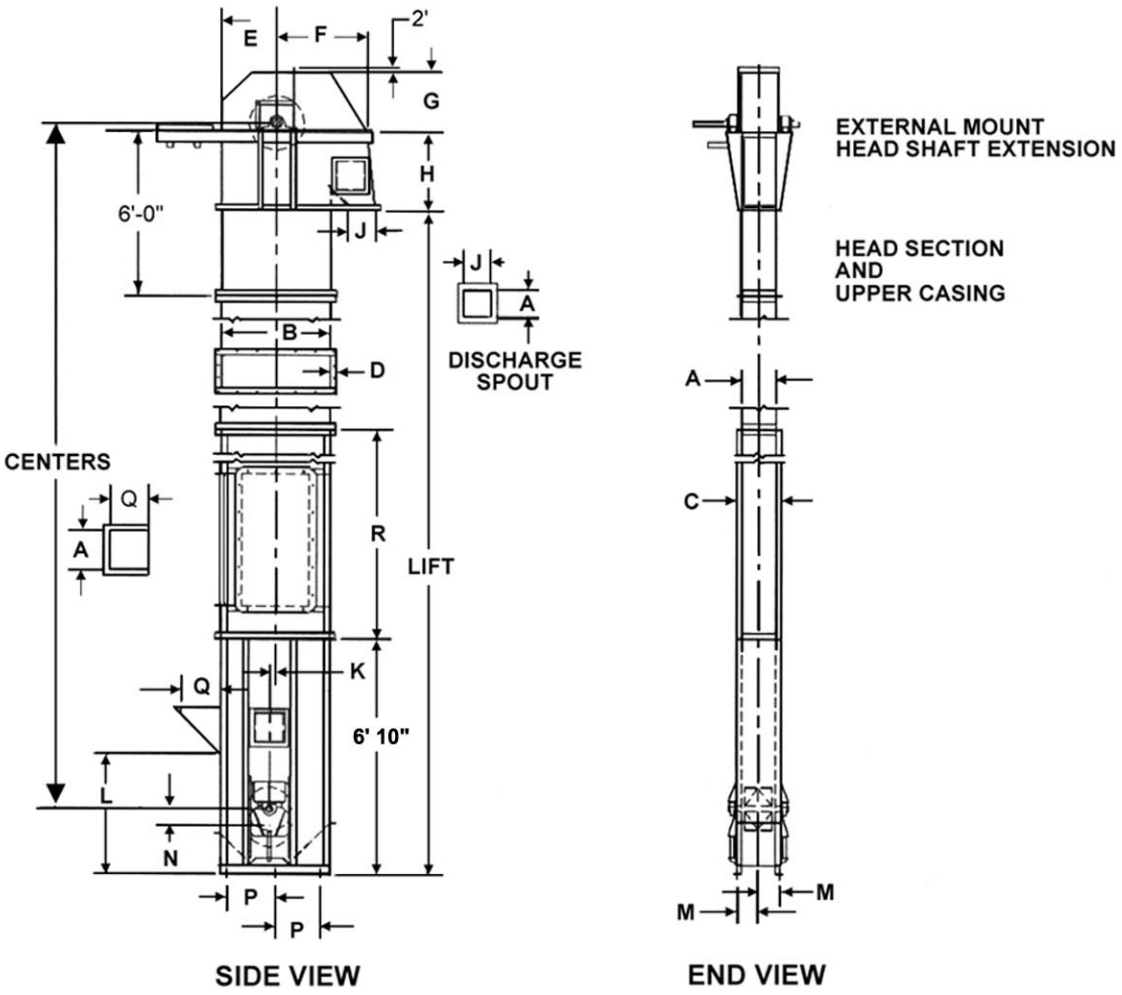
Elevator Number ▲	Maximum elevator centers in feet for various size head shafts														
	Material weight, pounds per cubic foot														
	35					50					75				
	Head shaft diameter, inches														
	$1^{15}/_{16}$	$2^{7}/_{16}$	$2^{15}/_{16}$	$3^{7}/_{16}$	$3^{15}/_{16}$	$1^{15}/_{16}$	$2^{7}/_{16}$	$2^{15}/_{16}$	$3^{7}/_{16}$	$3^{15}/_{16}$	$1^{15}/_{16}$	$2^{7}/_{16}$	$2^{15}/_{16}$	$3^{7}/_{16}$	$3^{15}/_{16}$
3001	45	60	…	…	…	45	60	…	…	…	40	60	…	…	…
3002	35	60	…	…	…	35	60	…	…	…	30	60	…	…	…
3003	35	60	…	…	…	30	55	60	…	…	25	50	60	…	…
3004	25	45	60	…	…	20	40	60	…	…	20	35	60	…	…
3005	20	40	60	…	…	20	35	55	…	…	…	30	45	…	…
3006	…	35	55	…	…	…	30	45	…	…	…	25	40	…	…
3007	…	25	40	60	…	…	20	35	55	60	…	20	30	50	60
3008	…	20	35	55	60	…	20	30	50	60	…	…	30	45	60

Elevator Number ▲	Maximum elevator centers in feet for various size head shafts				
	Material weight, pounds per cubic foot				
	100				
	Head shaft diameter, inches				
	$1^{15}/_{16}$	$2^{7}/_{16}$	$2^{15}/_{16}$	$3^{7}/_{16}$	$3^{15}/_{16}$
3001	35	60	…	…	…
3002	30	55	60	…	…
3003	20	40	60	…	…
3004	…	30	45	…	…
3005	…	25	40	…	…
3006	…	20	30	…	…
3007	…	…	30	45	55
3008	…	…	25	40	50
3001	35	60	…	…	…

►Elevators regularly include head shaft machinery, boot shaft machinery, chain, buckets, and casings with discharge spouts. Specify elevator number, discharge height or shaft centers. Ball and roller bearing pillow blocks, internal or external gravity take-ups, drives, feed hoppers, backstops, service platforms and ladders can be furnished.

[1] Based on buckets filled to 100% of theoretical capacity. Horsepower directly proportional to volume and weight of material carried in buckets and chain speed.

[2] Head shaft for Series 3000 elevator provided with pillow block spherical roller bearings.



Series 3000 Bucket Elevators ● Continuous Buckets Using Chain

TABLE 5 — Elevator Specifications

No.	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R
	INCHES															
3001	11 ¾	39	15 1/8	1 ½	19 ½	32 ½	21 ½	29	10	3	37 ½	7 ¾	6	16 ½	12	120
3002	13 ¾	39	17 1/8	1 ½	19 ½	32 ½	21 ½	29	10	3	37 ½	8 ¾	8	16 ½	12	120
3003	13 ¾	48	18 1/8	2	24	40 5/8	27 ½	33 ¼	15	3	49 ½	8 ¾	8	21	15	120
3004	15 ¾	48	20 1/8	2	24	40 5/8	27 ½	33 ¼	15	3	49 ½	9 ¾	10	21	15	120
3005	17 ¾	48	22 1/8	2	24	40 5/8	27 ½	33 ¼	15	3	49 ½	10 ¾	12	21	15	120
3006	17 ¾	48	22 1/8	2	24	40 5/8	27 ½	33 ¼	15	3	49 ½	10 ¾	12	21	15	120
3007	19 ¾	48	24 1/8	2	24	40 5/8	27 ½	33 ¼	15	3	51 ½	11 ¾	14	21	15	120
3008	21 ¾	48	26 1/8	2	24	40 5/8	27 ½	33 ¼	15	3	51 ½	12 ¾	16	21	15	120

Have dimensions certified for installation purposes.

Series 4000 Bucket Elevator•

1. Head section completely factory assembled for trouble free installation. Split head insures easy access or removal for maintenance. Spherical roller bearings are engineered for maximum load requirements that reduce friction and insure smooth operation. Hood contoured to minimize corrosion and material packing in corners.

2. Discharge spout has 90° flange and convenient inspection door furnished as standard. 45° discharge spout available as an option.

3. The **ORTHMAN CONVEYING** Series 4000 elevators are ideal for the handling of fine or crushed materials with lumps not exceeding ½". The **ORTHMAN CONVEYING** Series 4000 is similar to the **ORTHMAN CONVEYING** Series 3000 except belting is used instead of chain – ideal for fine or crushed particles. Medium-front continuous steel buckets are bolted continuously on belting.

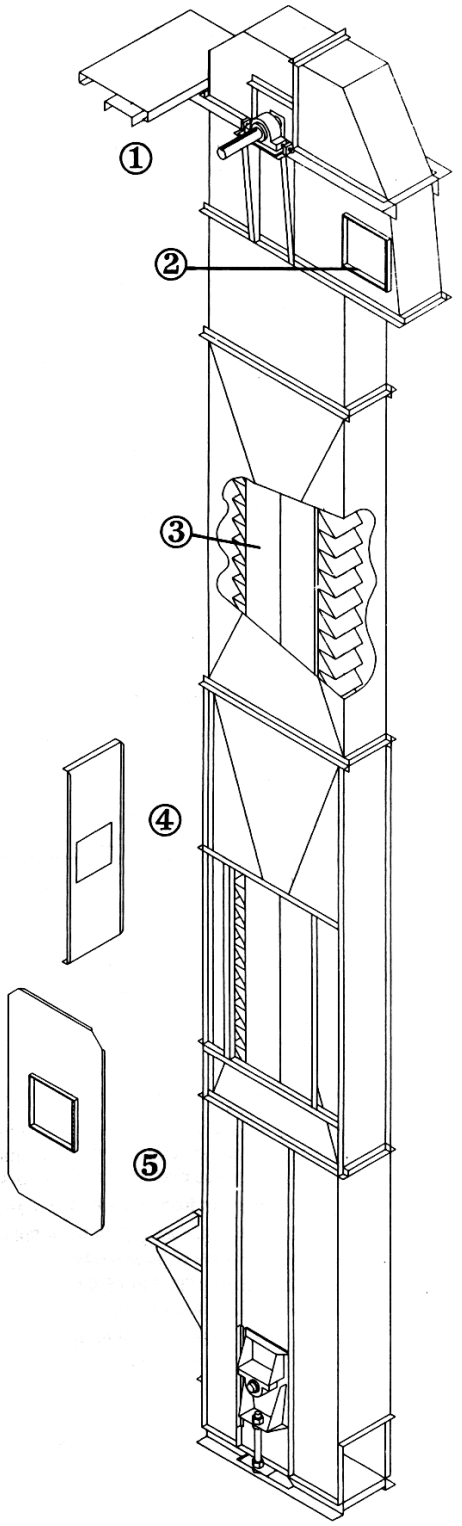
4. "X" braced casing embossments on our inspection sections provide exceptional strength, and dimensional stability. Inspection sections of continuous seam weldments. Quick clamped inspection doors provide easy access for inspection and maintenance of belting and buckets.

5. Boot sections are completely factory assembled. Heavy-duty ball bearing pillow blocks are mounted on acme square thread take-ups and adjusted for secure tension on the belting. Both sides of boot are bolted to provide easy access inside. Screw take-ups are standard. Gravity take-ups (Internal and External), available as an option.

   Drum pulleys for elevator boots are standard with options for wing pulleys with replaceable wear strips.

6. The **ORTHMAN CONVEYING** Series 4000 industrial elevators feature standard construction of 3/16" plate steel boots and discharge spout; head section and casings of 10 gauge, and hood of 12 gauge. Guy wires not included.

7. Stainless steel construction of housing, shafts, buckets, bucket bolts, pulleys and other fabricated parts available for special applications.



Series 4000
Industrial Bucket Elevator

Elevator Specifications

TABLE 1

Elevator Number ►	Bucket ■			Chain Speed FPM ◊	Maximum lump Size, inches		Capacity ▼				
					Percentage of Lumps		Cubic Feet Per Hour	Tons per hour			
								Material weight, Pounds per cubic foot			
	Size Inches	Gauge Of Steel	Spacing Inches		100	10		35 ◊	50	75	100
4001	8 x 5 x 7 ¾	12	8	125	¾	2 ½	675	12	17	25	34
4002	10 x 5 x 7 ¾	12	8	125	¾	2 ½	843	15	21	32	42
4003	10 x 7 x 11 5/8	12	12	125	1	3	1080	19	27	41	54
4004	12 x 7 x 11 5/8	10	12	125	1	3	1293	23	32	48	65
4005	14 x 7 x 11 5/8	10	12	125	1	3	1518	27	38	57	76
4006	14 x 8 x 11 5/8	10	12	125	1 ¼	4	1816	32	45	68	91
4007	16 x 8 x 11 5/8	10	12	125	1 ½	4 ½	2081	36	52	78	104
4008	18 x 8 x 11 5/8	10	12	125	1 ½	4 ½	2334	41	58	88	117

TABLE 2

Elevator Number ►	Belt Width Inches	Casing size, Inside, Inches	Gauge of Steel Casing				Approximate Weights Pounds ●	
			Hood	Head & Intermediate Sections	Boot Section (Inches)	Discharge Spout	Terminals	Casings, Buckets & Chain per ft. centers
4001	9	11 ¾ X 39	12	10	3/16	3/16	1172	104
4002	11	13 ¾ X 39	12	10	3/16	3/16	1118	117
4003	11	13 ¾ X 48	12	10	3/16	3/16	1528	124
4004	13	15 ¾ X 48	12	10	3/16	3/16	1609	142
4005	15	17 ¾ X 48	12	10	3/16	3/16	1702	148
4006	15	17 ¾ X 48	12	10	3/16	3/16	1891	150
4007	17	19 ¾ X 48	12	10	3/16	3/16	2253	177
4008	19	21 ¾ X 48	12	10	3/16	3/16	2295	185

► Elevators regularly include head shaft machinery, boot shaft machinery, belt, buckets, and casings with discharge spouts, Specify elevator number, discharge height or shaft centers. Ball and roller bearing pillow blocks and take-ups, drives, feed hoppers, backstops, service platforms and ladders can be furnished.

■ Style MF, medium front, continuous steel buckets.

▼ To provide greater capacity when handling lightweight, fluffy or pulverized materials, chain speeds may be increased to 160 to 175 FPM according to the fluffy nature of the material.

◊ Based on buckets filled to 75% of theoretical capacity. Capacity directly proportional to volume and weight of material carried in buckets and belt speed. Free-flowing materials cannot be carried as high in the buckets as heavier or less fluffy materials.

● Terminal weight is based on average size head shaft. Weight adjustment necessary if casing thickness is other than listed above. Terminal weight includes discharge spout and loading leg but not feed hopper.

Elevator Specifications

TABLE 3

Elevator Number ▲	Horsepower at head shaft[1]								Head Shaft[2]		Boot Shaft	
	Material weight, pounds per cubic foot											
	35		50		75		100					
	Terminals	Per Foot Centers	Terminals	Per Foot Centers	Terminals	Per Foot Centers	Terminals	Per Foot Centers	Diameter Of Pulley (Inches)	Speed RPM	Diameter Of Pulley (Inches)	Shaft Size Dia. Inches
4001	.226	.014	.275	.020	.357	.030	.439	.040	20	24	16	$1\,^{7}/_{16}$
4002	.269	.018	.332	.026	.438	.038	.541	.051	20	24	16	$1\,^{7}/_{16}$
4003	.384	.024	.500	.034	.685	.051	.875	.068	24	20	20	$1\,^{15}/_{16}$
4004	.469	.029	.605	.041	.833	.062	1.058	.083	24	20	20	$1\,^{15}/_{16}$
4005	.529	.034	.686	.048	.954	.072	1.212	.096	24	20	20	$1\,^{15}/_{16}$
4006	.609	.043	.790	.062	1.098	.093	1.400	.1231	24	20	20	$2\,^{3}/_{16}$
4007	.749	.049	.959	.070	1.313	.1055	1.669	.1406	24	20	20	$2\,^{3}/_{16}$
4008	.821	.055	1.055	.078	1.450	.1180	1.848	.1570	24	20	20	$2\,^{3}/_{16}$

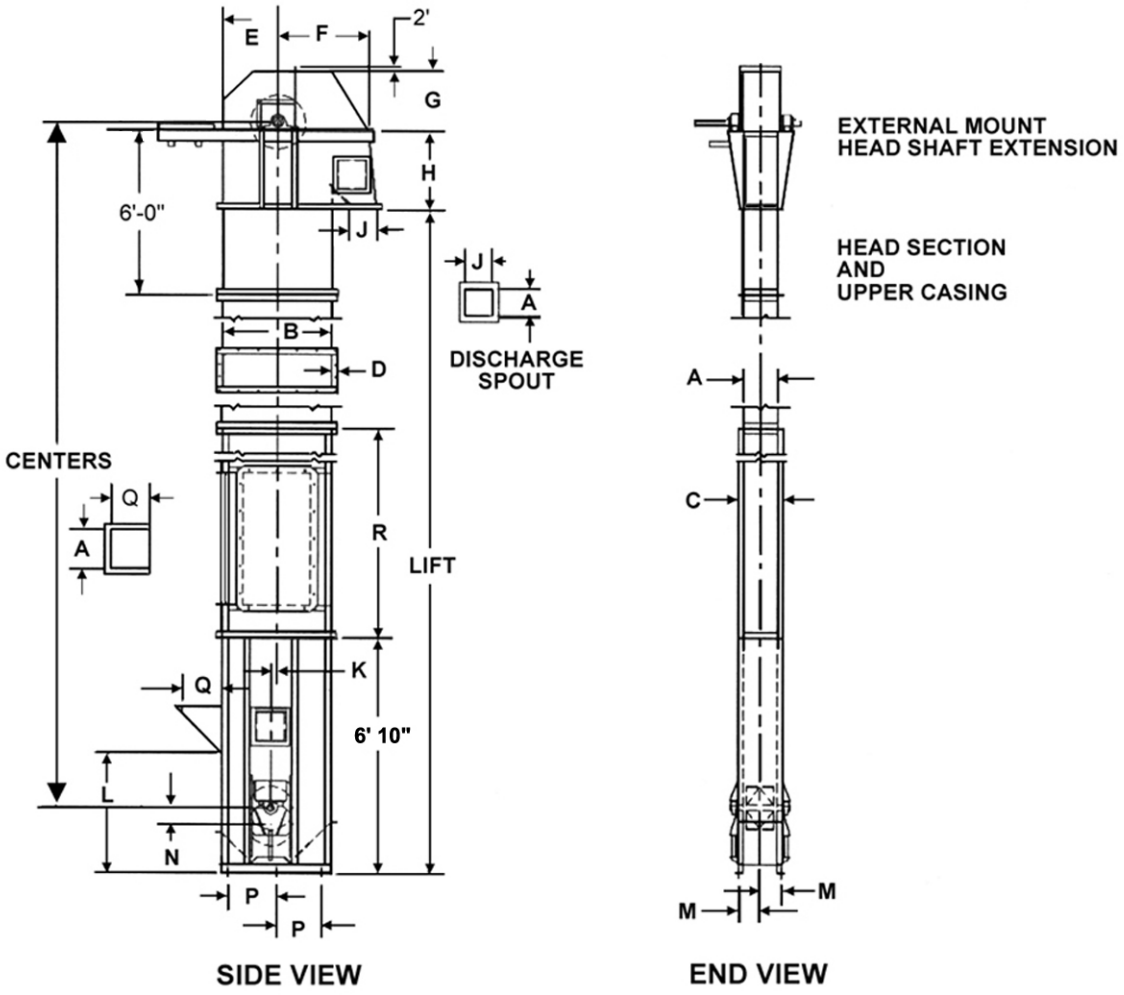
TABLE 4

Elevator Number ▲	Maximum elevator centers in feet for various size head shafts																			
	Material weight, pounds per cubic foot																			
	35					50					75					100				
	Head shaft diameter, inches																			
	$1\,^{15}/_{16}$	$2\,^{7}/_{16}$	$2\,^{15}/_{16}$	$3\,^{7}/_{16}$	$3\,^{15}/_{16}$	$1\,^{15}/_{16}$	$2\,^{7}/_{16}$	$2\,^{15}/_{16}$	$3\,^{7}/_{16}$	$3\,^{15}/_{16}$	$1\,^{15}/_{16}$	$2\,^{7}/_{16}$	$2\,^{15}/_{16}$	$3\,^{7}/_{16}$	$3\,^{15}/_{16}$	$1\,^{15}/_{16}$	$2\,^{7}/_{16}$	$2\,^{15}/_{16}$	$3\,^{7}/_{16}$	$3\,^{15}/_{16}$
4001	45	60	…	…	…	45	60	…	…	…	40	60	…	…	…	35	60	…	…	…
4002	35	60	…	…	…	35	60	…	…	…	30	60	…	…	…	30	55	60	…	…
4003	35	60	…	…	…	30	55	60	…	…	25	50	60	…	…	20	40	60	…	…
4004	25	45	60	…	…	20	40	60	…	…	20	35	60	…	…	…	30	45	…	…
4005	20	40	60	…	…	20	35	55	…	…	…	30	45	…	…	…	25	40	…	…
4006	…	35	55	…	…	…	30	45	…	…	…	25	40	…	…	…	20	30	…	…
4007	...	25	40	60	…	…	20	35	55	60	…	20	30	50	60	…	…	30	45	55
4008	...	20	35	55	60	...	20	30	50	60	…	…	30	45	60	…	…	25	40	50

►Elevators regularly include head shaft machinery, boot shaft machinery, belt, buckets, and casings with discharge spouts. Specify elevator number, discharge height or shaft centers. Ball and roller bearing pillow blocks, internal or external gravity take-ups, drives, feed hoppers, backstops, service platforms and ladders can be furnished.

[1] Based on buckets filled to 100% of theoretical capacity. Horsepower directly proportional to volume and weight of material carried in buckets and belt speed.

[2] Head shaft for Series 4000 elevator provided with pillow block spherical roller bearings.



Series 4000 Bucket Elevators ● Continuous Buckets Using Belt

TABLE 5 — Elevator Specifications

No.	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R
	INCHES															
4001	13 ¾	39	15 1/8	1 ½	19 ½	32 ½	21 ½	29	10	3	37 ½	7 ¾	6	16 ½	12	120
4002	15 ¾	39	17 1/8	1 ½	19 ½	32 ½	21 ½	29	10	3	37 ½	8 ¾	8	16 ½	12	120
4003	15 ¾	48	18 1/8	2	24	40 5/8	27 ½	33 ¼	15	3	49 ½	8 ¾	8	21	15	120
4004	17 ¾	48	20 1/8	2	24	40 5/8	27 ½	33 ¼	15	3	49 ½	9 ¾	10	21	15	120
4005	19 ¾	48	22 1/8	2	24	40 5/8	27 ½	33 ¼	15	3	49 ½	10 ¾	12	21	15	120
4006	19 ¾	48	22 1/8	2	24	40 5/8	27 ½	33 ¼	15	3	49 ½	10 ¾	12	21	15	120
4007	21 ¾	48	24 1/8	2	24	40 5/8	27 ½	33 ¼	15	3	51 ½	11 ¾	14	21	15	120
4008	23 ¾	48	26 1/8	2	24	40 5/8	27 ½	33 ¼	15	3	51 ½	12 ¾	16	21	15	120

Have dimensions certified for installation purposes.

Series 5000 Bucket Elevator •

1. Head section completely factory assembled. Split head insures easy access or removal for maintenance. Spherical roller bearings are engineered for maximum load requirements, which reduce friction and insure smooth operation. Head shafts are fixed.

2. Discharge spout, 90° flange and convenient inspection door are furnished as standard. 45° discharge spout available as an option.

3. **ORTHMAN CONVEYING** Series 5000 furnished with continuous buckets discharge using dual chain – ideal for handling friable, heavy, or abrasive materials, ranging from fines to large lumps. Continuous buckets are end-mounted between dual strands of steel roller chain to combine maximum capacity and long life. Steel loading legs guide material into buckets.

4. Buckets available are made of super-capacity steel for the continuous discharge elevators, providing maximum longevity.

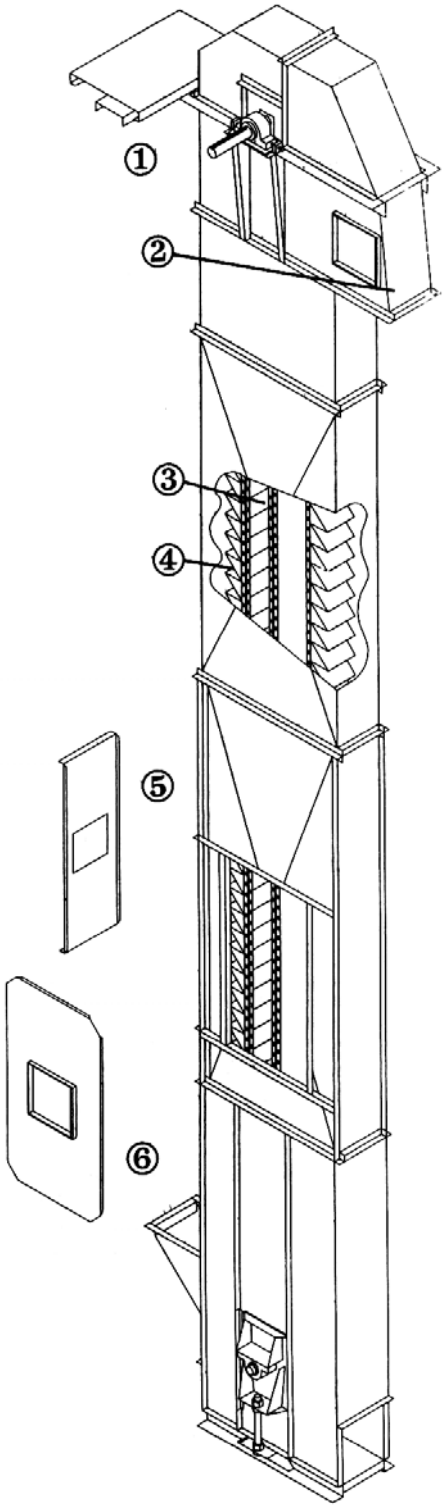
5. "X" braced casing embossments on our inspection sections provide exceptional strength, and dimensional stability. Inspection sections of continuous seam weldments. Two large inspection doors provide easy access for maintenance.

6. Boot section is completely factory assembled. Heavy-duty ball bearing pillow blocks are mounted on acme square thread take-ups and adjusted for secure tension in chain. Both sides of boot are bolted to provide easy access inside. Screw take-ups are standard. Gravity take-ups (Internal or External), available as an option.

7. The **ORTHMAN CONVEYING** Series 5000 industrial elevator for high capacities feature standard construction of 3/16" plate for the boot and casing. Head section is made of 10 gauge; discharge spout of 10 gauge and hood section of 12 gauge. Guy wires not included.

8. Stainless steel construction of housing, shafts, buckets, bucket bolts, pulleys and other fabricated parts available for special applications.

Continuous Discharge Using Dual Chain – High Capacity



Series 5000
Industrial Bucket elevator

TABLE 1

Elevator Number ►	Bucket ■			Chain Speed FPM ◊	Maximum Lump Size, Inches○	Capacity Δ				
	Size Inches	Thickness Of Steel	Spacing Inches			Cubic Feet Per Hour	Tons per hour Material weight, Pounds per cubic foot			
							50	75	100	125
5001	12 x 8 ¾ x 11 5/8	12	12	100	6	2400	60	90	120	150
5002	14 x 8 ¾ x 11 5/8	12	12	100	6	2800	70	105	140	175
5003	16 x 8 ¾ x 11 5/8	12	12	100	6	3200	80	120	160	200
5004	18 x 8 ¾ x 11 5/8	10	12	100	6	3600	90	135	180	225
5005	20 x 8 ¾ x 11 5/8	10	12	100	6	4000	100	150	200	250
5006	16 x 12 5/8 x 17 5/8	3/16	18	120	8	5600	140	210	280	350
5007	20 x 12 5/8 x 17 5/8	3/16	18	120	8	6800	170	255	340	425
5008	24 x 12 5/8 x 17 5/8	3/16	18	120	8	8400	210	315	420	525
5009	30 x 12 5/8 x 17 5/8	3/16	18	120	8	10000	250	375	500	625
5010	36 x 12 5/8 x 17 5/8	3/16	18	120	8	12400	310	465	620	775

TABLE 2

Elevator Number ►	Boot Shaft		[1]Chain Number	Casing Size Inside (in.)	Gauge of Steel Casing				Approximate Weights Lbs. [2]	
	Pitch Dia. Of Sprocket Inches	Dia, Inches			Hood	Head & Inter-Sections	Boot Section	Discharge Spout	Terminal	Casings Buckets & Chain per foot centers
5001	31.36	2 7/16	**RS122P**	26x54	12	10	3/16	3/16	2874	250
5002	31.36	2 7/16	**RS122P**	28x54	12	10	3/16	3/16	2922	254
5003	31.36	2 7/16	**RS122P**	30x54	12	10	3/16	3/16	2982	260
5004	31.36	2 7/16	**RS122P**	32x54	12	10	3/16	3/16	3038	265
5005	31.36	2 7/16	**RS122P**	34x54	12	10	3/16	3/16	3039	271
5006	29.12	2 15/16	**RS933P**	31x60	12	10	¼	3/16	3179	289
5007	29.12	2 15/16	**RS933P**	35x60	12	10	¼	3/16	3316	301
5008	29.12	2 15/16	**RS933P**	39x60	12	10	¼	3/16	3443	311
5009	29.12	2 15/16	**RS933P**	45x60	12	10	¼	3/16	3637	330
5010	29.12	2 15/16	**RS933P**	51x60	12	10	¼	3/16	3826	346

► Elevators regularly include head shaft machinery, boot shaft machinery, chain, buckets, and casings with loading legs, guide angles, and discharge spouts. Specify elevator number and shaft centers. Ball and roller bearing pillow blocks and take-ups, gravity take-ups, drives, feed hoppers, service platforms and ladders can be furnished.

■ Super capacity continuous steel buckets.

◊ Based on handling mildly abrasive materials. Recommended speed 10% higher for nonabrasive materials and 10% lower for very abrasive materials.

○ Maximum size lumps not to exceed 10% of the total volume and at least 75% of the total volume to be less than one-half of the maximum lump size. For handling materials containing higher percentages of lumps and for sharp, wedge-shaped and shale-like materials, inclined boots are recommended.

Δ Based on buckets filled to 75% of theoretical capacity. Capacity directly proportional to volume and weight of material carried in buckets and chain speed. Free-flowing materials cannot be carried as high in the buckets as heavier or less fluffy materials.

[1] In handling extremely abrasive or corrosive materials, consult **ORTHMAN CONVEYING** for chain recommendations.

[2] Terminal weight based on average size head shaft. Weight adjustments necessary if thickness of casing is other than listed above. Terminal weight includes loading leg, discharge spout and backstop, but not feed hopper.

TABLE 3

Elevator Number ▲	Horsepower at head shaft Φ								Head Shaft▫	
	Material weight, pounds per cubic foot									
	50		75		100		125			
	Terminals	Per Foot Centers	Terminals	Per Foot Centers	Terminals	Per Foot Centers	Terminals	Per Foot Centers	Pitch Diameter Of Sprocket (Inches)	Speed RPM
5001	2.04	.08	2.65	.12	3.27	.16	3.91	.20	31.36	12.5
5002	2.23	.09	2.96	.14	3.69	.19	4.46	.24	31.36	12.5
5003	2.46	.11	3.28	.16	4.14	.22	4.98	.27	31.36	12.5
5004	2.65	.12	3.61	.18	4.55	.24	5.51	.30	31.36	12.5
5005	2.87	.13	3.92	.20	5.03	.27	6.07	.34	31.36	12.5
5006	4.00	.19	5.30	.28	6.75	.38	8.14	.47	29.12	16.0
5007	4.83	.23	6.22	.34	7.91	.46	9.65	.57	29.12	16.0
5008	5.30	.28	7.45	.42	9.59	.57	11.74	.71	29.12	16.0
5009	6.38	.34	8.67	.51	11.20	.67	13.78	.84	29.12	16.0
5010	7.30	.42	10.39	.63	13.61	.83	16.75	1.05	29.12	16.0

TABLE 4

Elevator Number▲	Maximum elevator centers in feet for various size head shafts													
	Material weight, pounds per cubic foot													
	50				75				100			125		
	Head shaft diameter, inches													
	$2^{15}/_{16}$	$3^{7}/_{16}$	$3^{15}/_{16}$	$4^{7}/_{16}$	$2^{15}/_{16}$	$3^{7}/_{16}$	$3^{15}/_{16}$	$4^{7}/_{16}$	$3^{7}/_{16}$	$3^{15}/_{16}$	$4^{7}/_{16}$	$3^{7}/_{16}$	$3^{15}/_{16}$	$4^{7}/_{16}$
5001	25	40	55	80	20	35	50	70	30	45	60	25	35	50
5002	25	35	55	75	20	30	45	60	25	40	55	20	35	45
5003	20	35	50	70	…	30	40	60	25	35	50	20	30	45
5004	20	30	45	65	…	25	40	55	20	30	45	20	25	40
5005	20	30	45	60	…	25	35	50	20	30	40	…	25	35
5006	…	25	40	55	…	20	30	45	…	25	35	…	20	30
5007	…	20	35	45	…	…	25	35	…	20	30	…	20	25
5008	…	20	30	40	…	…	25	30	…	20	25	…	…	20
5009	…	…	25	35	…	…	20	25	…	20	20	…	…	20
5010	…	…	20	30	…	…	…	25	…	…	…	…	…	…

►Elevators regularly include head shaft machinery, boot shaft machinery, chain, buckets, casings with loading legs, guide angles, and discharge spouts. Specify elevator number, and shaft centers. Ball and roller bearing pillow blocks and take-ups, gravity take-ups, drives, feed hoppers, service platforms
and ladders can be furnished.

Φ Based on buckets filled to 100% of theoretical capacity. Horsepower directly propor-tional to volume and weight of material carried in buckets and chain speed.

▫ Head shaft for Series 5000 elevator provided with pillow block spherical roller bearings.

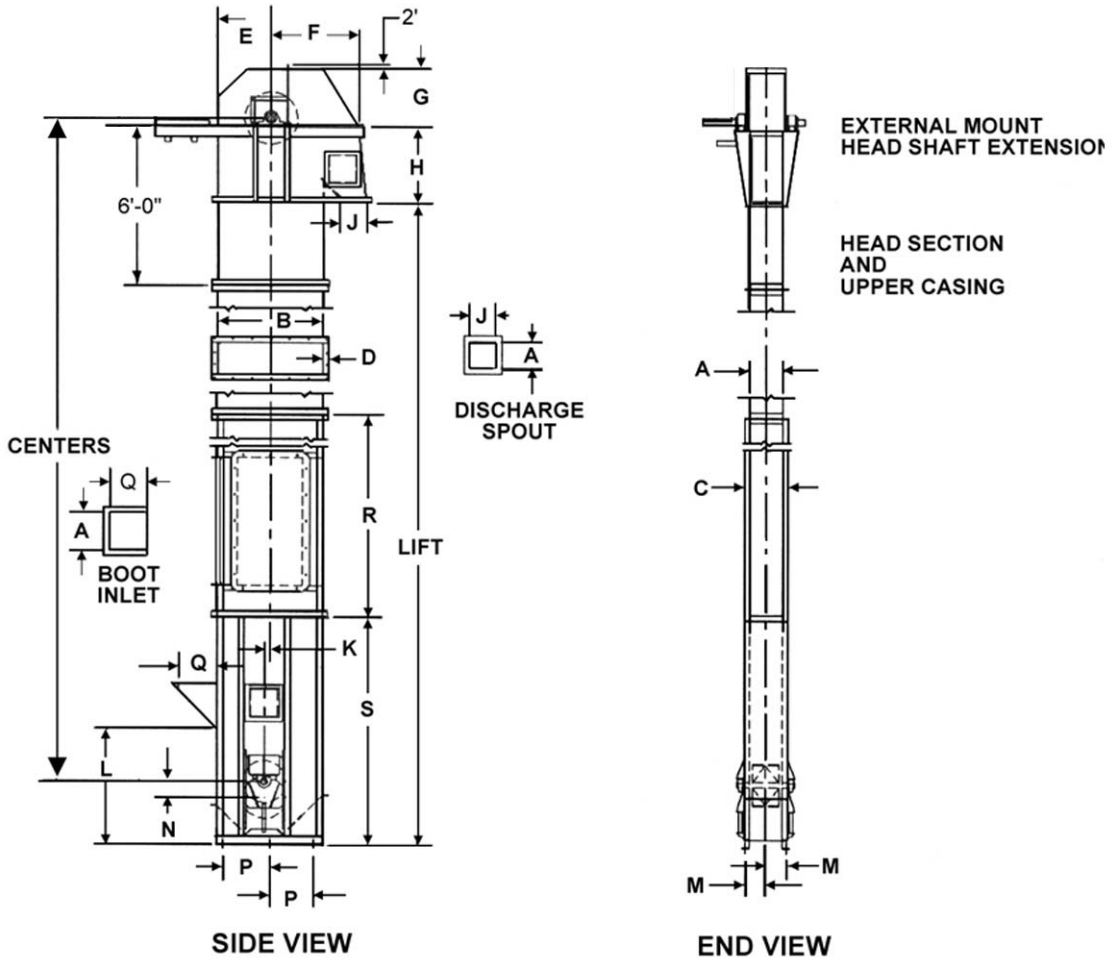


TABLE 5 — Elevator Specifications

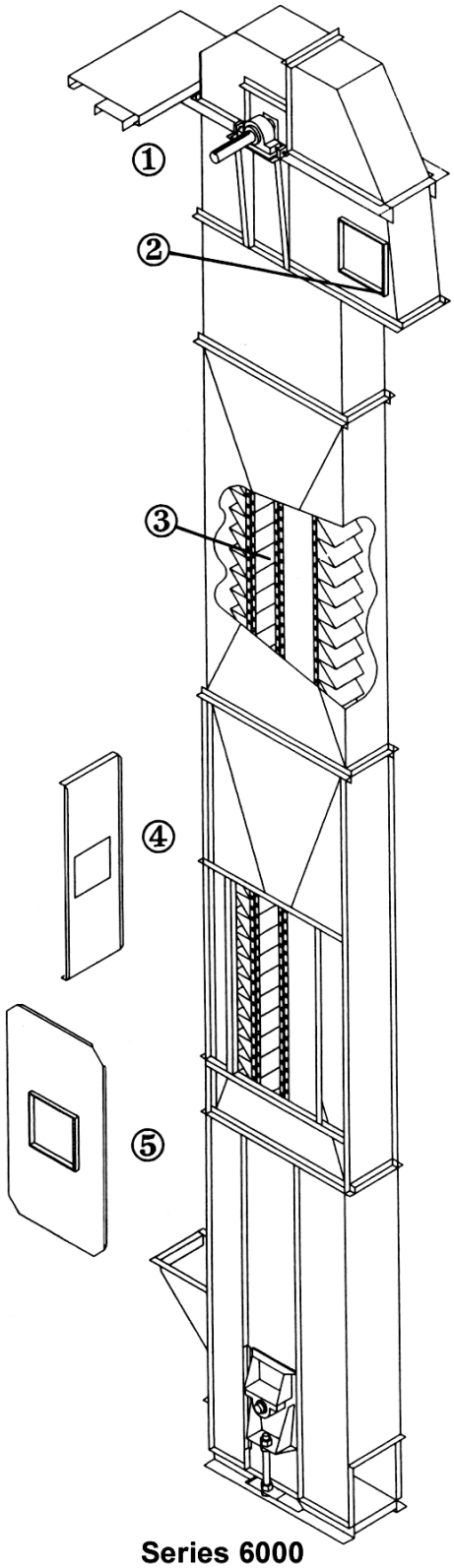
No.	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S
	INCHES																
5001	26	54	30 3/8	2	27	45 ¾	31	35 ¾	18	0	57	14 7/8	9	24	18	120	96
5002	28	54	32 3/8	2	27	45 ¾	31	35 ¾	18	0	57	15 7/8	9	24	18	120	96
5003	30	54	34 3/8	2	27	45 ¾	31	35 ¾	18	0	57	16 7/8	9	24	18	120	96
5004	32	54	36 3/8	2	27	45 ¾	31	35 ¾	18	0	57	17 7/8	9	24	18	120	96
5005	34	54	38 3/8	2	27	45 ¾	31	35 ¾	18	0	57	18 7/8	9	24	18	120	96
5006	31	60	36 ½	2 ½	30	48 ¾	34	39 ½	18	0	78	17 3/8	12	27	18	120	114
5007	35	60	40 ½	2 ½	30	48 ¾	34	39 ½	18	0	78	19 3/8	12	27	18	120	114
5008	39	60	44 ½	2 ½	30	48 ¾	34	39 ½	18	0	78	21 3/8	12	27	18	120	114
5009	45	60	50 ½	2 ½	30	48 ¾	34	39 ½	18	0	78	24 3/8	12	27	18	120	114
5010	51	60	56 ½	2 ½	30	48 ¾	34	39 ½	18	0	78	27 3/8	12	27	18	120	114

Have dimensions certified for installation purposes.

Continuous Buckets Using Dual Chain — Maximum Capacity

● Series 6000 Bucket Elevator

1. Head section completely factory assembled. Split head insures easy access or removal for maintenance. Spherical roller bearings are engineered for maximum load requirements that reduce friction and insure smooth operation. Head shafts are fixed.
2. Discharge spout has 90º flange and convenient inspection door furnished as standard. 45º discharge spout available as an option.
3. The **ORTHMAN CONVEYING** Series 6000 elevators are similar to the **ORTHMAN CONVEYING** Series 5000 design, except the **ORTHMAN CONVEYING** Series 6000 handles greater capacities and have larger centers — for heavy, abrasive products. Super-capacity cast iron buckets are mounted on dual strands of steel roller chain. Internal angles guide chain.
4. "X" braced casing embossments on our inspection sections provide exceptional strength, and dimensional stability. Inspection sections of continuous seam weldments. Two large inspection doors provide easy access for maintenance of chains and buckets.
5. Boot section is completely factory assembled. Heavy-duty ball bearing pillow blocks are mounted on acme square thread take-ups and adjusted for secure tension in chain. Both sides of boot are bolted to provide easy access inside. Screw take-ups are standard. Gravity take-ups (internal or external) are available as an option.
6. The **ORTHMAN CONVEYING** Series 6000 industrial bucket elevators feature 3/16" plate boots; discharge spout of ¼" plate; head section and casings of 10 gauge steel; and hood of 12 gauge. Guy wires not included.
7. Stainless steel construction of housing, shafts, buckets, bucket bolts, pulleys, and other fabricated parts available for special applications.



Series 6000
Industrial Bucket Elevator

Series 6000 Bucket Elevators
Elevator Specifications

Continuous Buckets Using Dual Chain
Maximum Capacity

TABLE 1

Elevator Number ►	Bucket ■ Size Inches	Bucket ■ Thickness Of Steel	Bucket ■ Spacing Inches	Chain Speed FPM ◊	Maximum Lump Size, Inches○	Capacity Δ Cubic Feet Per Hour	Capacity Δ Tons per hour, Material weight, Pounds / cubic foot 50	75	100	125
6001	16 x 12 5/8 x 17 5/8	3/16	18	120	8	5600	140	210	280	350
6002	20 x 12 5/8 x 17 5/8	3/16	18	120	8	6800	170	255	340	425
6003	24 x 12 5/8 x 17 5/8	3/16	18	120	8	8400	210	315	420	525
6004	30 x 12 5/8 x 17 5/8	3/16	18	120	8	10000	250	375	500	625
6005	36 x 12 5/8 x 17 5/8	3/16	18	120	8	12400	310	465	620	775
6006	16 x 12 5/8 x 17 5/8	3/16	18	120	8	5600	140	210	280	350
6007	20 x 12 5/8 x 17 5/8	3/16	18	120	8	6800	170	255	340	425
6008	24 x 12 5/8 x 17 5/8	3/16	18	120	8	8400	210	315	420	525
6009	30 x 12 5/8 x 17 5/8	3/16	18	120	8	10000	250	375	500	625
6010	36 x 12 5/8 x 17 5/8	3/16	18	120	8	12400	310	465	620	775

TABLE 2

Elevator Number ►	Boot Shaft: Pitch Dia. Of Sprocket Inches	Boot Shaft: Dia, Inches	[1]Chain Number	Casing Size Inside (in.)	Gauge of Steel Casing: Hood	Head & Inter-Sections	Boot Section	Discharge Spout	Approximate Weights Lbs. [2]: Terminal	Casings Buckets & Chain per foot centers
6001	29.12	2 15/16	**RS122P**	31x60	12	10	3/16	¼	3602	289
6002	29.12	2 15/16	**RS122P**	35x60	12	10	3/16	¼	3735	301
6003	29.12	2 15/16	**RS122P**	39x60	12	10	3/16	¼	3875	311
6004	29.12	2 15/16	**RS122P**	45x60	12	10	3/16	¼	4075	330
6005	29.12	2 15/16	**RS122P**	51x60	12	10	3/16	¼	4271	346
6006	29.12	2 15/16	**S4004**	32 ½ x 60	12	10	3/16	¼	4194	346
6007	29.12	2 15/16	**S4004**	36 ½ x 60	12	10	3/16	¼	4392	356
6008	29.12	2 15/16	**S4004**	40 ½ x 60	12	10	3/16	¼	4478	366
6009	29.12	2 15/16	**S4004**	46 ½ x 60	12	10	3/16	¼	4618	386
6010	29.12	2 15/16	**S4004**	52 ½ x 60	12	10	3/16	¼	4784	407

► Elevators regularly include head shaft machinery, boot shaft machinery, chain, buckets, and casings with loading legs, guide angles, and discharge spouts. Specify elevator number and shaft centers. Ball and roller bearing pillow blocks and take-ups, gravity take-ups, drives, feed hoppers, service platforms and ladders can be furnished.

■ Super capacity continuous steel buckets.

◊ Based on handling mildly abrasive materials. Recommended speed 10% higher for nonabrasive materials and 10% lower for very abrasive materials.

○ Maximum size lumps not to exceed 10% of the total volume and at least 75% of the total volume to be less than one-half of the maximum lump size.

Δ Based on buckets filled to 75% of theoretical capacity. Capacity directly proportional to volume and weight of material carried in buckets and chain speed. Free-flowing materials cannot be carried as high in the buckets as heavier or less fluffy materials.

[1] In handling extremely abrasive or corrosive materials, consult **ORTHMAN CONVEYING** for chain recommendations.

[2] Terminal weight based on average size head shaft. Weight adjustments necessary if thickness of casing is other than listed above. Terminal weight includes loading leg, discharge spout and backstop, but not feed hopper.

TABLE 3

Elevator Number ▲	Horsepower at head shaft Φ								Head Shaft¤	
	Material weight, pounds per cubic foot								Pitch Diameter Of Sprocket (Inches)	Speed RPM
	50		75		100		125			
	Terminals	Per Foot Centers	Terminals	Per Foot Centers	Terminals	Per Foot Centers	Terminals	Per Foot Centers		
6001	4.54	.19	6.18	.28	7.50	.38	8.85	.47	29.12	16.0
6002	5.36	.23	6.98	.34	8.64	.46	10.32	.57	29.12	16.0
6003	6.22	.28	8.18	.42	10.27	.57	12.31	.71	29.12	16.0
6004	7.04	.34	9.50	.51	11.91	.67	14.27	.84	29.12	16.0
6005	8.17	.42	11.18	.63	14.20	.83	17.35	1.05	29.12	16.0
6006	4.91	.19	6.57	.28	8.22	.38	9.59	.47	29.12	16.0
6007	5.74	.23	7.79	.34	9.43	.46	11.12	.57	29.12	16.0
6008	6.77	.28	9.04	.42	11.01	.57	14.99	.71	29.12	16.0
6009	7.88	.34	10.26	.51	12.71	.67	15.14	.84	29.12	16.0
6010	8.95	.42	11.92	.63	14.99	.83	18.04	1.05	29.12	16.0

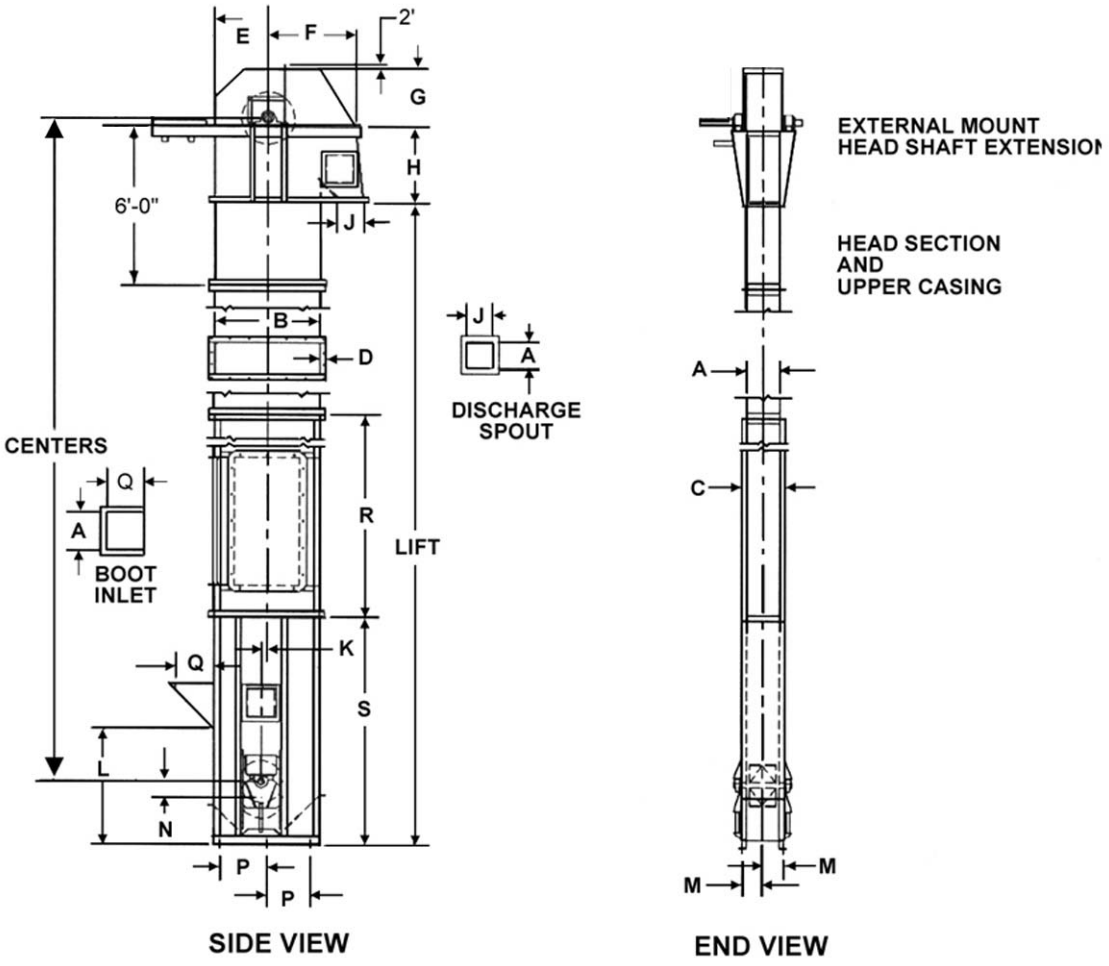
TABLE 4

Elevator Number▲	Maximum elevator centers in feet for various size head shafts																			
	Material weight, pounds per cubic foot																			
	50					75					100					125				
	Head shaft diameter, inches																			
	$4\,^{15}/_{16}$	$5\,^{7}/_{16}$	$5\,^{15}/_{16}$	6 ½	7	$4\,^{15}/_{16}$	$5\,^{7}/_{16}$	$5\,^{15}/_{16}$	6 ½	7	$4\,^{15}/_{16}$	$5\,^{7}/_{16}$	$5\,^{15}/_{16}$	6 ½	7	$4\,^{15}/_{16}$	$5\,^{7}/_{16}$	$5\,^{15}/_{16}$	6 ½	7
6001	55	70	90	...	...	45	60	80	...	...	40	50	70	...	...	35	45	60	...	...
6002	45	60	90	...	...	40	50	70	...	...	35	45	60	...	...	30	40	50	...	...
6003	40	55	75	...	...	35	45	60	...	...	30	40	50	...	...	25	30	40	...	...
6004	35	50	65	...	...	30	40	50	...	...	25	30	45	...	...	20	30	35	...	...
6005	30	40	55	...	...	25	35	45	...	...	20	30	35	...	...	20	25	30	...	...
6006	45	60	80	100	120	40	55	70	80	95	35	45	60	80	95	30	40	55	70	85
6007	40	55	70	90	115	35	45	60	65	85	30	40	50	65	85	25	35	45	60	70
6008	35	50	65	85	105	30	40	55	60	70	25	35	45	60	70	20	30	40	50	60
6009	30	45	55	70	90	25	35	45	50	60	20	30	40	50	60	20	25	35	45	50
6010	30	40	50	65	80	25	30	40	45	50	20	25	35	45	50	...	20	30	40	45

►Elevators regularly include head shaft machinery, boot shaft machinery, chain, buckets, casings with loading legs, guide angles, and discharge spouts. Specify elevator number, and shaft centers. Ball and roller bearing pillow blocks and take-ups, gravity take-ups, drives, feed hoppers, service platforms and ladders can be furnished.

Φ Based on buckets filled to 100% of theoretical capacity. Horsepower directly proportional to volume and weight of material carried in buckets and chain speed.

¤ Head shaft for Series 5000 elevator provided with pillow block spherical roller bearings.



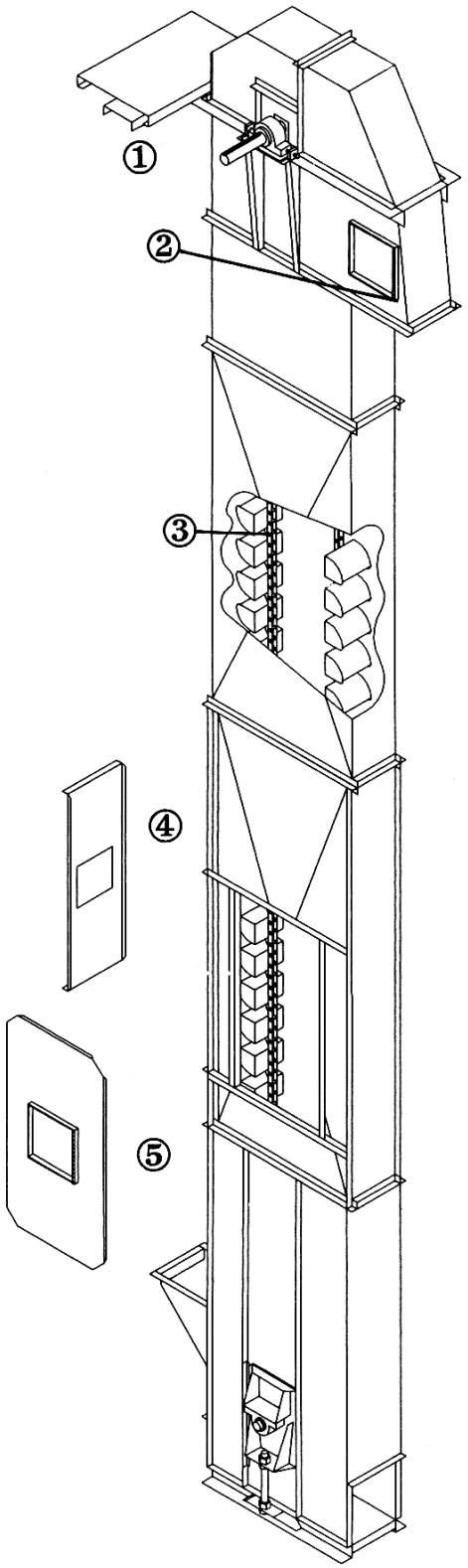
Series 6000 Bucket Elevators ● Continuous Buckets Using Dual Chain
TABLE 5 — Elevator Specifications Maximum Capacity

No.	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S
	INCHES																
6001	31	60	36 ½	2 ½	30	48 ¾	38	37 ½	18	0	78	17 3/8	12	27	18	120	114
6002	35	60	40 ½	2 ½	30	48 ¾	38	37 ½	18	0	78	19 3/8	12	27	18	120	114
6003	39	60	44 ½	2 ½	30	48 ¾	38	37 ½	18	0	78	21 3/8	12	27	18	120	114
6004	45	60	50 ½	2 ½	30	48 ¾	38	37 ½	18	0	78	24 3/8	12	27	18	120	114
6005	51	60	56 ½	2 ½	30	48 ¾	38	37 ½	18	0	78	27 3/8	12	27	18	120	114
6006	32 ½	60	38	2 ½	30	48 ¾	38	37 ½	18	0	78	18 1/8	12	27	18	120	114
6007	36 ½	60	42	2 ½	30	48 ¾	38	37 ½	18	0	78	20 1/8	12	27	18	120	114
6008	40 ½	60	46	2 ½	30	48 ¾	38	37 ½	18	0	78	22 1/8	12	27	18	120	114
6009	46 ½	60	52	2 ½	30	48 ¾	38	37 ½	18	0	78	25 1/8	12	27	18	120	114
6010	52 ½	60	58	2 ½	30	48 ¾	38	37 ½	18	0	78	28 1/8	14	27	18	120	114

● Series 7000 Bucket Elevator

1. Head section completely factory assembled. Split head insures easy access or removal for maintenance. Spherical roller bearings are engineered for maximum load requirements that reduce friction and insure smooth operation. Head shafts are fixed.
2. Discharge spout has 90º flange and convenient inspection door furnished as standard. 45º discharge spout available as an option.
3. The **ORTHMAN CONVEYING** Series 7000 — cement mill duty — has discharge. Style AC buckets with hooded design are used. The super-capacity steel buckets are welded at spaced intervals on single strand SS bushed steel chain for maximum strength and life.
4. "X" braced casing embossments on our inspection sections provide exceptional strength, and dimensional stability. Inspection sections of continuous seam weldments. Two large inspection doors provide easy access for cleaning and maintenance of chains and buckets.
5. Boot section is completely factory assembled. Heavy-duty ball bearing pillow blocks are mounted on acme square thread take-ups and adjusted for secure tension in chain. Both sides of boot are bolted to provide easy access inside. Screw take-ups are standard. Gravity take-ups (internal or external) are available as an option.
6. The **ORTHMAN CONVEYING** Series 7000 industrial elevators with high capacities (ideal for cement mills) feature standard construction of ¼" plate boots and discharge spout; head section and casings of 10 gauge steel; and hood of 12 gauge. Guy wires not included.
7. Stainless steel construction of housing, shafts, buckets, bucket bolts, pulleys, and other fabricated parts available for special applications.

Centrifugal Discharge Using Chain — High Capacity



Series 7000
Industrial Bucket Elevator

TABLE 1

Elevator Number ►	Type AC Buckets: Dimensions Inches	Type AC Buckets: Spacing Inches	Chain Speed FPM	Maximum Lump Size, Inches: Percentage Of lumps 100	Maximum Lump Size, Inches: Percentage Of lumps 10	Capacity Δ: Cubic Feet Per Hour	Capacity Δ: Tons per hour, Material weight, Pounds / cubic foot 50	75	100	125
7001	12 X 8	19	255	1 ½	2	2000	50	75	100	125
7002	16 X 8	18	255	1 ½	2	2800	70	105	140	175
7003	16 X 8	12	255	1 ½	2	4200	105	157	210	262
7004	18 X 10	18	250	1 ½	2 ½	4600	115	172	230	287
7005	18 X 10	18	250	1 ½	2 ½	4600	225	172	230	287
7006	18 X 10	12	250	1 ½	2 ½	6900	272	258	345	430
7007	18 X 10	12	250	1 ½	2 ½	6900	172	258	345	430
7008	24 X 10	18	250	1 ½	2 ½	6350	159	238	317	397
7009	24 X 10	12	250	1 ½	2 ½	9500	238	356	475	594
7010	27 X 12	21	250	1 ½	3	8500	213	319	425	532
7011	27 X 12	14	250	1 ½	3	12750	318	477	635	795

TABLE 2

Elevator No.	Boot Shaft: Diameter, Inches	Boot Shaft: Sprocket: Number of Teeth	Boot Shaft: Sprocket: P. D. Inches	Boot Shaft: Traction wheel: Outside Diameter, Inches	Boot Shaft: Traction wheel: P.D. Inches	Chain and Attachment Number	Casing Size, Inches	Gauge of steel casing: Hood	Gauge of steel casing: Head and Intermediate	Gauge of steel casing: Boot, Inches	Gauge of steel casing: Discharge Spout, Inches	App. weight, LBS◊: Terminals	App. weight, LBS◊: Casing, Buckets & Chain per ft. centers, feet
7001	2 7/16	16	24.4	22	23.5	6111M-K2	19 ¾ X 55 ½	12	10	¼	¼	3015	156
7002	2 15/16	13	25.07	22	23.75	6856M-K3	23 ¾ X 55 ½	12	10	¼	¼	3325	188
7003	2 15/16	13	25.07	22	23.75	6856M-K3	23 ¾ X 55 ½	12	10	¼	¼	3390	217
7004	2 15/16	13	25.07	22	23.75	6856M-K3	25 ¾ X 64	12	10	¼	¼	4065	230
7005	2 15/16	13	25.07	22	24.38	6869R-K44	25 ¾ X 64	12	10	¼	¼	4255	278
7006	2 15/16	13	25.07	22	23.75	6867R-K44	25 ¾ X 64	12	10	¼	¼	4455	292
7007	2 15/16	13	25.07	22	24.38	6869R-K44	32 ¾ X 64	12	10	¼	¼	4630	329
7008	2 15/16	13	25.07	22	24.38	6869R-K44	32 ¾ X 64	12	10	¼	¼	4880	315
7009	2 15/16	13	25.07	22	24.38	6869R-K44	32 ¾ X 64	12	10	¼	¼	5105	380
7010	2 15/16	11	24.76	22	24.38	6864R-K44	35 ¾ X 68	12	10	¼	¼	5340	318
7011	2 15/16	11	24.76	22	24.38	6864R-K44	35 ¾ X 68	12	10	¼	¼	5875	382

► Elevators regularly include head shaft machinery with sprocket, boot shaft machinery with traction wheel, gravity take-up, chain, buckets, and casing with discharge spout. Specify elevator number, discharge height or shaft centers. Drives, feed hoppers, backstops, service platforms and ladders can be furnished.

Δ Capacity based on buckets filled to 75% of theoretical capacity. Horsepower based on buckets filled to 100% of theoretical capacity. Capacity and horsepower directly proportional to volume and weight of material carried in buckets and chain speed.

◊ Terminal weight based on an average size head shaft. Weight adjustment necessary if thickness of casing is other than listed above. Terminal weight includes loading leg, discharge spout and backstop, but not feed hopper.

TABLE 3

Elevator Number▶	Horsepower at Head Shaft∆ Material weight, pounds per cubic foot								Head Shaft					
	50		75		100		125		Sprocket			Traction Wheel		
	Terminal	Per ft. Centers	Terminal	Per Ft. Centers	Terminal	Per Ft. Centers	Terminal	Per Ft. Centers	# of Teeth	P.D., Inches	RPM	Outside Diameter, Inches	P.D., Inches	RPM
7001	2.07	.068	2.95	.103	3.82	.137	4.69	.171	18	27.41	36	26	27.50	36
7002	3.04	.098	4.32	.147	5.61	.196	6.91	.245	14	26.96	36	26	27.75	35
7003	4.45	.147	6.38	.220	8.32	.294	10.23	.367	14	26.96	36	26	27.75	35
7004	4.69	.157	6.76	.235	8.83	.313	10.90	.392	15	28.86	34	26	27.75	35
7005	4.92	.157	6.97	.235	9.05	.313	11.12	.392	15	28.86	34	26	28.38	34
7006	7.02	.235	10.13	.352	13.25	.469	16.13	.579	15	28.86	34	26	27.75	35
7007	7.18	.235	10.30	.352	13.40	.469	16.30	.579	15	28.86	34	26	28.38	34
7008	6.56	.215	9.40	.322	12.23	.430	15.03	.536	15	28.86	34	26	28.38	34
7009	9.68	.322	13.93	.483	18.20	.644	22.40	.805	15	28.86	34	26	28.38	34
7010	8.85	.306	12.83	.458	16.65	.610	20.75	.765	13	29.16	33	26	28.38	34
7011	13.10	.459	19.05	.687	25.00	.918	31.00	1.148	13	29.16	33	26	28.38	34

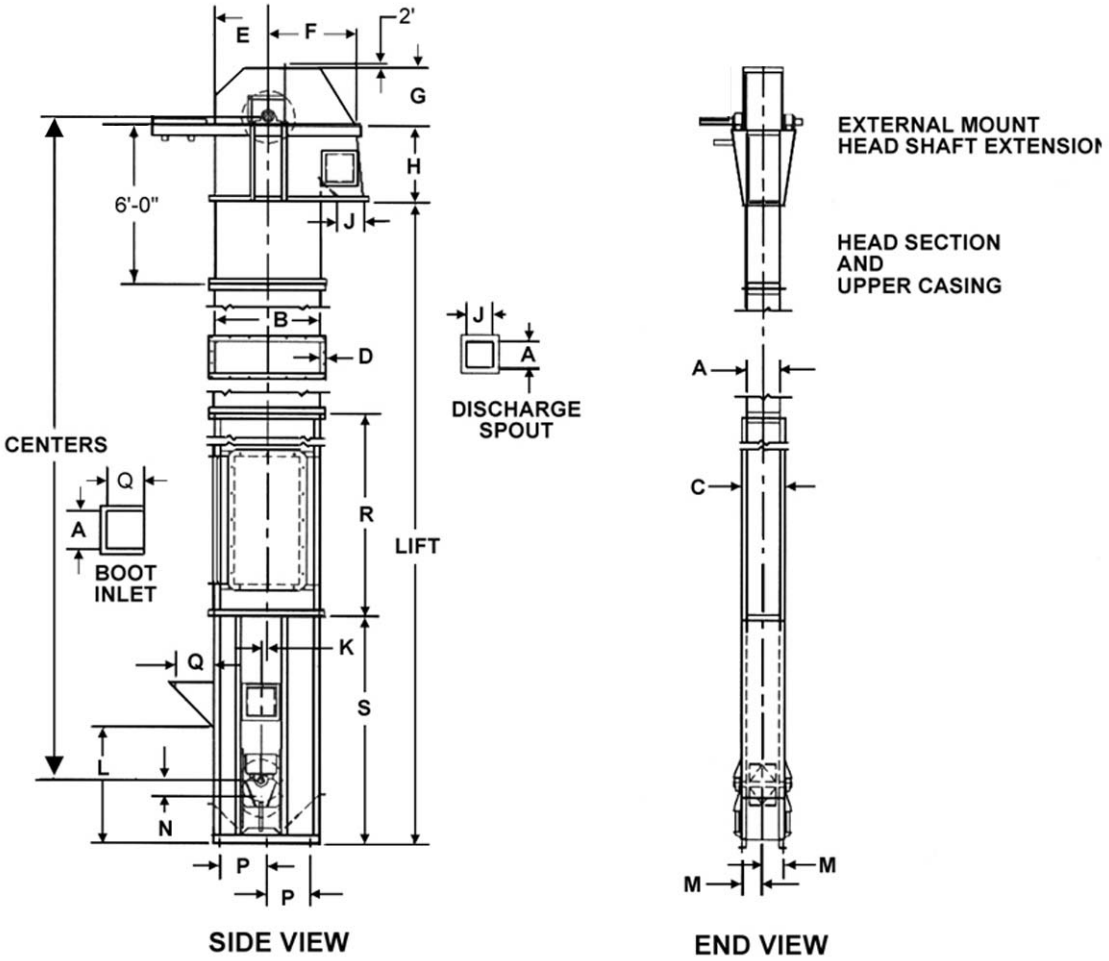
TABLE 4

Elevator Number▶	Maximum elevator centers in feet for various size head shafts — Material weight, pounds per cubic foot																					
	50						75						100						125			
	2 7/16	2 15/16	3 7/16	3 15/16	4 7/16		2 7/16	2 15/16	3 7/16	3 15/16	4 7/16		2 7/16	2 15/16	3 7/16	3 15/16	4 7/16		2 7/16	2 15/16	3 7/16	3 15/16	4 7/16
7001	35	60	80	…	…		30	55	80	…	…		25	45	75	80	…		25	45	70	….	…
7002	…	…	60	80	…		…	…	50	75	80		…	…	50	70	80		…	…	45	65	80
7003	…	…	40	60	80		…	…	35	55	70		…	…	35	50	60		…	…	30	45	55
	3 15/16	4 7/16	4 15/16	5 7/16	5 15/16	6 ½	3 15/16	4 7/16	4 15/16	5 7/16	5 15/16	6 ½	3 15/16	4 7/16	4 15/16	5 7/16	5 15/16	6 ½	3 15/16	4 7/16	4 15/16	5 7/16	5 15/16	6 ½
7004	55	80	…	…	…	…	50	70	…	…	…	…	45	60	…	…	…	…	45	50	…	…	…	…
7005	45	60	80	…	…	…	40	55	70	80	…	…	35	50	65	80	…	…	35	50	60	70	80	…
7006	35	55	65	70	…	…	30	50	60	…	…	…	30	45	50	…	…	…	30	40	45	…	…	…
7007	35	45	60	80	…	…	30	40	55	70	80	…	25	40	50	60	75	…	25	35	45	50	65	65
7008	…	40	55	70	80	…	…	40	50	65	80	…	…	35	45	60	75	80	…	35	45	55	70	75
7009	…	30	40	55	70	75	…	30	35	50	60	65	…	25	30	45	55	…	…	25	30	40	45	50
7010	…	35	40	65	80	…	…	35	45	55	70	80	…	30	40	50	60	70	…	25	35	40	50	60
7011	…	25	35	45	60	70	…	25	30	40	50	55	…	…	25	35	35	45	…	20	25	30	35	…

▶ Elevators regularly include head shaft machinery with sprockets, boot shaft machinery with traction wheel. Gravity take-up, chain, buckets and casing with discharge spout. Specify elevator number, discharge height or shaft centers. Drive, feed hoppers, backstops, service platforms and ladders can be furnished.

∆ Capacity based on buckets filled to 75% of theoretical capacity. Horsepower based on buckets filled to 100% of theoretical capacity. Capacity and horsepower directly proportional to volume and weight of material carried in buckets and chain speed.

1 / 2 Chains have been selected on basis of minimum composite service factor of: 1 = 2 and 2 = 1.5.



Series 7000 Bucket Elevators ● Centrifugal Discharge Using Chain
High Capacity

TABLE 5 — Elevator Specifications

No.	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S
	INCHES																
7001	19 ¾	55 ½	24 ¾	2 ½	28	46	36	45	17	1	53	11 1/8	12	27	18	120	114
7002	23 ¾	55 ½	28 ¾	2 ½	28	46	36	45	17	1	53	13 1/8	12	27	18	120	114
7003	23 ¾	55 ½	28 ¾	2 ½	28	46	36	45	17	1	53	13 1/8	12	27	18	120	114
7004	25 ¾	64	31 ¾	3	32 ¼	51	40	49	17	2	60	14 3/8	12	27	18	120	114
7005	25 ¾	64	31 ¾	3	32 ¼	51	40	49	18	2	60	14 3/8	12	27	18	120	114
7006	25 ¾	64	31 ¾	3	32 ¼	51	40	49	18	2	60	14 3/8	12	27	18	120	114
7007	25 ¾	64	31 ¾	3	32 ¼	51	40	49	18	2	60	14 3/8	12	27	18	120	114
7008	32 ¾	64	38 ¾	3	32 ¼	51	40	49	18	2	60	17 7/8	12	27	18	120	114
7009	32 ¾	64	38 ¾	3	32 ¼	51	40	49	18	2	60	17 7/8	12	27	18	120	114
7010	35 ¾	68	41 ¾	3	34 ¼	53	41 ½	50	18	2	60	19 3/8	14	27	18	120	114
7011	35 ¾	68	41 ¾	3	34 ¼	53	41 ½	50	18	2	60	19 3/8	14	27	18	120	114

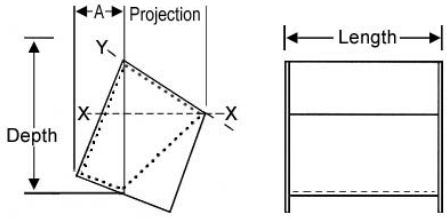
Have dimensions certified for installation purposes.

INDUSTRIAL DUTY ELEVATOR BUCKETS

SC WELDED STEEL

- 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
- Options: carbon, plated, stainless steel, AR plate, wear lips, hardened surfaces and hard bead weld



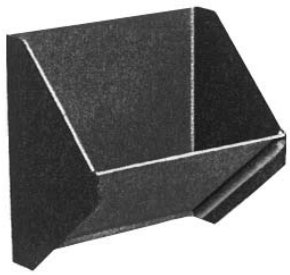


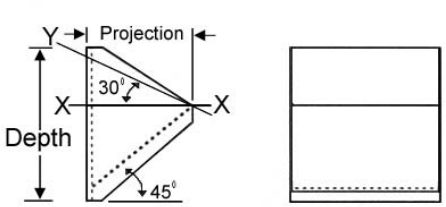
FOR 6000 AND 7000 ELEVATORS

Bucket Size (In)			Inches	Weight, LBS				Cap. Cu. Feet Δ	
Length	Proj.	Depth		10 ga Steel	3/16" Steel	1/4" Steel	5/16" Steel	Filled to Line X-X	Filled to Line X-Y
L	P	D	A						
12	8 3/4	11 5/8	4 9/16	22	29	39	49	.35	.54
14	8 3/4	11 5/8	4 9/16	23	31	41	51	.41	.63
16	8 3/4	11 5/8	4 9/16	25	34	45	56	.46	.72
16	12	17 5/8	6 1/2	43	58	76	95	1.11	1.55
18	8 3/4	11 5/8	4 9/16	27	36	48	60	.52	.81
20	8 3/4	11 5/8	4 9/16	29	39	52	65	.58	.90
20	12	17 5/8	6 1/2	49	67	88	110	1.40	1.94
24	12	17 5/8	6 1/2	55	75	104	130	1.68	2.33
30	12	17 5/8	6 1/2	65	88	117	146	2.11	2.91
36	12	17 5/8	6 1/2	73	99	132	165	2.53	3.49

MF WELDED STEEL

- Continuous discharge for gentler handling
- Mounted on chain or belt
- Suitable for fluffy and free-flowing materials or materials requiring gentler handling
- Options: carbon, plated, stainless steel, AR plate, wear lips, hardened surfaces and hard bead weld



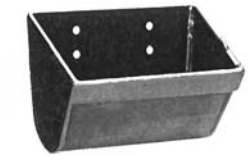


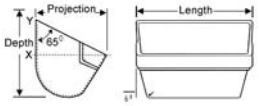
Bucket Size (In)			Inches	Weight, LBS				Cap. Cu. Feet Δ	
Length	Proj.	Depth		10 ga Steel	3/16" Steel	1/4" Steel	5/16" Steel	Filled to Line X-X	Filled to Line X-Y
L	P	D	A						
12	8 3/4	11 5/8	4 9/16	22	29	39	49	.35	.54
14	8 3/4	11 5/8	4 9/16	23	31	41	51	.41	.63
16	8 3/4	11 5/8	4 9/16	25	34	45	56	.46	.72
16	12	17 5/8	6 1/2	43	58	76	95	1.11	1.55
18	8 3/4	11 5/8	4 9/16	27	36	48	60	.52	.81
20	8 3/4	11 5/8	4 9/16	29	39	52	65	.58	.90
20	12	17 5/8	6 1/2	49	67	88	110	1.40	1.94
24	12	17 5/8	6 1/2	55	75	104	130	1.68	2.33
30	12	17 5/8	6 1/2	65	88	117	146	2.11	2.91
36	12	17 5/8	6 1/2	73	99	132	165	2.53	3.49

FOR 3000 AND 4000 ELEVATORS

AA WELDED STEEL

- Thick reinforced lip for superior abrasion resistance.
- Resistant to distortion from scooping heavy or packed materials
- Typical in sand, glass or gravel.
- Mounted on chain or belt.
- Options: carbon, plated, stainless steel, AR plate, wear lips, hardened surfaces and hard bead weld.





Style A also available (w/o reinforced lip)

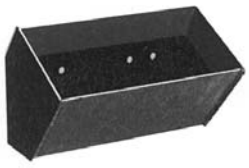
FOR 1000 AND 2000 ELEVATORS

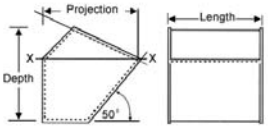
Bucket Size, (In)			Weight, LBS			Cap. Cu. Feet Δ		
Length	Proj.	Depth	12 Ga. Steel	10 Ga. Steel	3/16" Steel	¼" Steel	Filled to Line X-X	Filled to Line X-Y
L	P	D						
4	2 ¾	3	1.15	1.48	1.95	…	.006	.009
5	3 ½	3 ¾	1.81	2.33	3.15	…	.013	.022
6	4	4 ¼	2.35	3.02	3.96	5.27	.020	.032
7	4 ½	5	3.17	4.08	5.35	7.12	.034	.051
8	5	5 ½	4.15	5.33	7.06	9.39	.047	.072
10	6	6 ¼	5.73	7.37	9.79	13.02	.076	.120
11	6	6 ¼	6.16	7.93	10.46	13.91	.084	.133
12	6	6 ¼	6.60	8.49	11.29	15.02	.091	.145
12	7	7 ¼	8.11	10.42	13.93	18.53	.124	.199
14	7	7 ¼	…	11.72	15.70	20.88	.145	.232
14	8	8 ½	…	13.90	18.64	24.80	.202	.316
15	7	7 ¼	…	12.37	16.58	22.05	.155	.248
16	7	7 ¼	…	13.03	17.47	23.24	.165	.265
16	8	8 ½	…	15.41	20.67	27.49	.231	.362
18	8	8 ½	…	16.92	22.70	30.19	.260	.407
18	10	10 ½	…	21.48	28.88	38.41	.336	.632
20	8	8 ½	…	18.42	24.74	32.90	.289	.452
24	8	8 ½	…	21.43	28.91	38.32	.347	.543

AC WELDED STEEL

- 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
- Options: carbon, plated, stainless steel, AR plate, wear lips, hardened surfaces and hard bead weld.

Weights do not include bolt reinforcing plates.
Bolt reinforcing plates are recommended if less than 8 bolts are used.



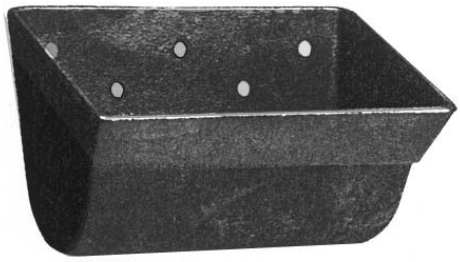


FOR 7000 ELEVATORS

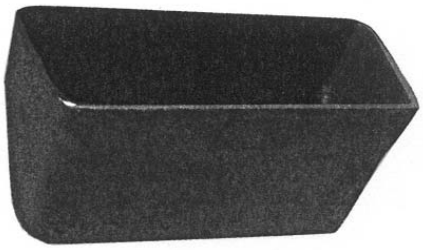
Bucket Size, (In)			Weight		Cap. Cu. Feet Δ	
Length	Proj.	Depth	3/16" Steel	¼" Steel	Filled to line X-X	Filled to Line X-Y
L	P	D				
12	8	8 ½	18.25	24.30	.231	.303
14	8	8 ½	20.30	27.00	.271	.356
16	8	8 ½	22.48	29.98	.311	.408
18	10	10 ½	31.15	38.95	.488	.691
20	10	10 ½	33.69	42.10	.542	.768
24	10	10 ½	39.67	52.69	.651	.921
27	12	12 ½	53.84	71.46	1.072	1.474

Vent holes in bottom are option in Style AC buckets.

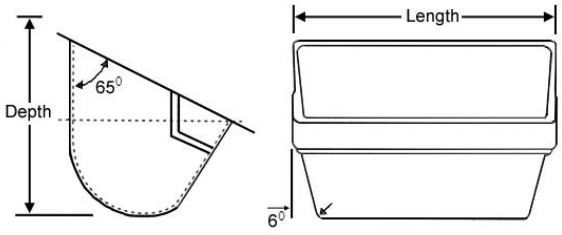
INDUSTRIAL DUTY CAST IRON ELEVATOR BUCKETS

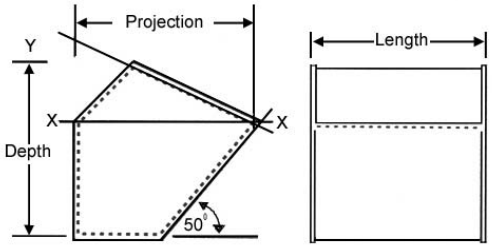


AA CAST IRON



AC CAST IRON





FEATURES:

- Mill duty, thick walls and reinforced corners.
- Wear and high impact resistant
- Uniform wall thickness
- Application up to 600 degrees
- Available in heat treated for more durability
- Vent holes in bottom of bucket releases trapped air for better filling and discharging (on request)
- Designed to handle sand, glass cullet, stone, shot blast, rock, concrete, and other abrasive products

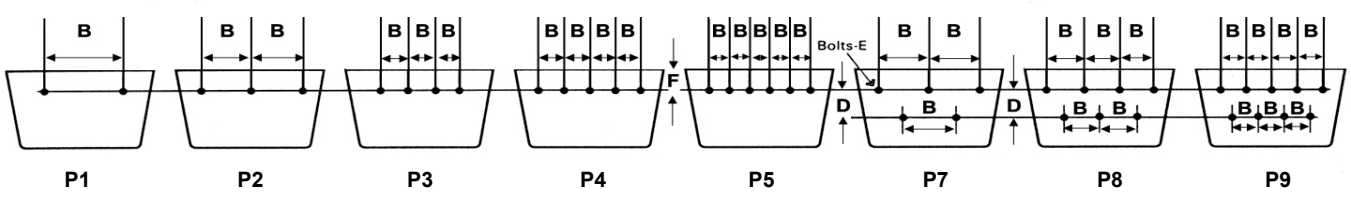
BENEFITS:

- Long wearing digging edge
- Stronger than steel of the same gauge
- Smooth surface to ensure proper filling
- Strong impact and abrasion resistance for long life.

M-L ITEM #	L LENGTH	P PROJ.	D DEPTH	• WALL THICK.	WT LBS	CAPACITY CUBIC FEET		MAXIMUM LUMP SIZE (INCHES DIAMETER) WHEN % OF LUMP IS:		
						H_2O X-X	GROSS X-Y	UNDER 10%	10% — 75%	75% & OVER
4 X 3 AA	4	2 ¾	3	5/64	2	.006	.01	1 ¾	1	1 ½
6 X 4 AA	6	4	4 ¼	3/32	3	.018	.03	2 ½	2	2
8 X 5 AA	8	5	5 ½	3/32	6	.042	.07	3	2 ½	1 ¼
10 X 6 AA	10	6	6 ¼	7/64	10	.072	.12	3 ½	3	1 ½
12 X 7 AA	12	7	7 ¼	9/64	13	.114	.19	4	3 ½	1 ¾
12 X 8 AC	12	8	8 ½	7/16	28	.210	.28	—	—	—
14 X 7 AA	14	7	7 ¼	9/64	18	.138	.23	4	3 ½	1 ¾
14 X 8 AA	14	8	8 ½	11/64	23	.180	.30	4 ½	4	2
16 X 8 AA	16	8	8 ½	11/64	25	.204	.34	4 ½	4	2
16 X 8 AC	16	8	8 ½	7/16	34	.280	.38	—	—	—
18 X 8 AA	18	8	8 ½	3/16	30	.234	.39	4 ½	4	2
18 X 8 AC	18	10	10 ½	½	52	.490	.62	—	—	—
18 X 10 AA	18	10	10 ½	13/64	39	.366	.61	5	4 ½	2 ¼

• AC wall thickness on front lip; actual thickness may vary slightly

BUCKET PUNCHING FOR BELTS



TYPES HFO & MLF CONTINUOUS ELEVATOR BUCKETS

BUCKET SIZE, IN.			PUNCHING	BELT WIDTH (INCHES)	INCHES			
LENGTH L	PROJ. P	DEPTH D			B	D	E	F
8	5	7 ¾	P7	9-10	3	1	¼	3 3/8
8	5	8 ½	P7	9-10	3	1	¼	3 ¾
9	6	9 ¼	P7	10	3	1	¼	4 1/8
10	5	7 ¾	P7	11-12	3 ½	1	5/16	3 3/8
10	5	8 ½	P7	11-12	3 ½	1	5/16	3 ¾
10	6	9 ¼	P7	11-12	3 ½	1	5/16	4 1/8
10	6	10	P7	11-12	3 ½	1	5/16	4 ½
10	7	11 5/8	P7	11-12	3 ½	1	5/16	5 5/16
10	7	12 ½	P7	11-12	3 ½	1	5/16	4 1/8
10	8	11 5/8	P7	11-12	3 ½	1	5/16	5 5/16
11	6	9 ¼	P7	12	4	1	5/16	4 1/8
12	5	7 ¾	P7	13-14	4 ½	1	5/16	3 3/8
12	6	9 ¼	P7	13-14	4 ½	1	5/16	4 1/8
12	6	10	P7	13-14	4 ½	1	5/16	4 ½
12	7	11 5/8	P7	13-14	4 ½	1	5/16	5 5/16
12	7	11 ¾	P7	13-14	4 ½	1	5/16	5 3/8
12	7	12 ½	P7	13-14	4 ½	1	5/16	5 ¾
12	8	11 5/8	P7	13-14	4 ½	1	5/16	5 5/16
12	8	12 ½	P7	13-14	4 ½	1	5/16	5 ¾
14	7	11 5/8	P8	15-16	4	1	5/16	5 5/16
14	7	12 ½	P8	15-16	4	1	5/16	5 ¾
14	8	11 5/8	P8	15-16	4	1	5/16	5 5/16
14	8	11 ¾	P8	15-16	4	1	5/16	5 3/8
14	8	12 ½	P8	15-16	4	1	5/16	5 ¾
16	7	11 ¾	P8	18	4 ½	1	5/16	5 3/8
16	8	11 5/8	P8	18	4 ½	1	5/16	5 5/16
16	8	12 ½	P8	18	4 ½	1	5/16	5 ¾
16	12	17 5/8	P8	18	4 ½	1	5/16	8 5/16
16	12	18 5/8	P8	18	4 ½	1	5/16	8 13/16
18	8	11 5/8	P8	20	5	1	5/16	5 5/16
18	10	15	P9	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	5 13/16

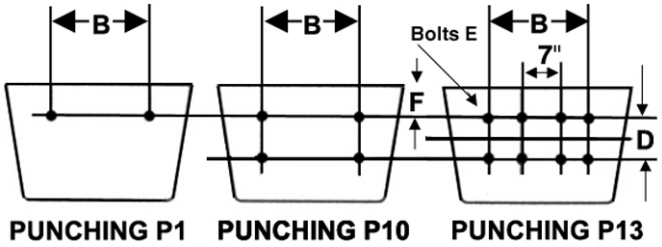
Have dimensions certified for installation purposes.

TYPES AA, & AA-RB DISCHARGE ELEVATOR BUCKETS

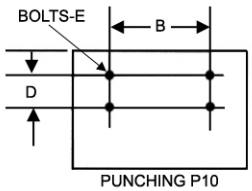
NOMINAL BUCKET LENGTH, INCHES	PUNCHING	BELT WIDTH, INCHES	B	D	E	F
3	P1	4	1 3/8	—	¼	¾
4	P1	5	2 5/16	—	¼	¾
5	P1	6	3 3/16	—	¼	1
6	P1	7-8	4 3/8	—	¼	1
7	P2	8	2 ½	—	¼	1
8	P7	9-10	3	1	¼	7/8
9	P7	10	3	1	¼	7/8
10	P7	11-12	3 ½	1	5/16	7/8
11	P7	12	4	1	5/16	7/8
12	P7	13-14	4 ½	1	5/16	7/8
13	P8	14	3 ½	1	5/16	7/8
14	P8	15-16	4	1	5/16	7/8
15	P8	16	4	1	5/16	7/8
16	P8	18	4 ½	1	5/16	7/8
17	P8	18	4 ½	1	5/16	7/8
18	P8	20	5	1	5/16	7/8
19	P9	20	4	1	5/16	7/8
20	P9	22	4	1	5/16	7/8
21	P9	22	4 ½	1	5/16	7/8
22	P9	24	4 ½	1	5/16	7/8
23	P9	24	5	1	5/16	7/8
24	P9	26	5	1	5/16	7/8

Have dimensions certified for installation purposes.

BUCKET PUNCHING FOR CHAINS

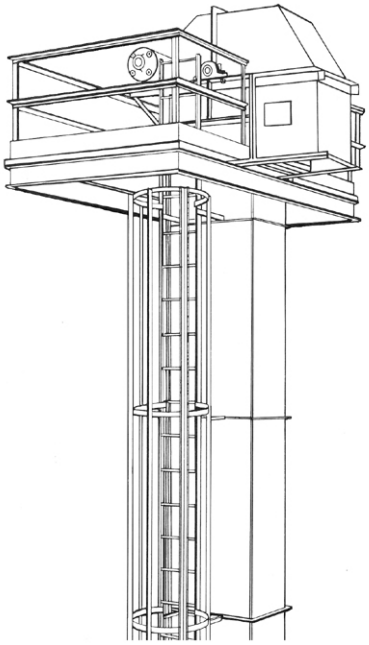


CENTRIFUGAL DISCHARGE ELEVATOR BUCKETS ON K ATTACHMENTS											
CHAIN ATTACH. #	NOMINAL BUCKET SIZE, INCHES						PUNCHING	B	D	E	F
	TYPES AA, AA-RB		TYPE AC		TYPE SC						
	MIN.	MAX.	MIN	MAX	MIN.	MAX.		INCHES			
77-K1	6 x 4	10 x 6	—	—	8 x 6	10 x 8	P1	3	—	1/4	1
77-K2	6 x 4	10 x 6	—	—	8 x 6	10 x 8	P10	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	3/4
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	5/8
C 102B-K2	8 x 5	16 x 7	—	—	8 x 6	16 x 8	P10	5 5/16	1 3/4	3/8	3/4
SS102B-K2	7 x 4 1/2	16 x 7	—	—	8 x 6	16 x 8	P10	5 5/16	1 3/4	3/8	3/4
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	3/4
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	3/4
C110-K2	8 x 5	16 x 8	—	—	8 x 6	16 x 8	P10	5 5/16	1 3/4	3/8	7/8
SS110-K2	8 x 5	16 x 8	—	—	8 x 6	16 x 8	P10	5 5/16	1 3/4	3/8	3/4
C 111-K2	9 x 6	18 x 8	—	—	8 x 6	16 x 8	P10	6 1/4	2 5/16	1/2	3/4
SS 111-K2	10 x 6	18 x 8	—	—	10 x 8	16 x 8	P10	6 1/4	2 5/16	1/2	3/4
C 132-K2	12 x 6	20 x 8	—	—	10 x 8	16 x 8	P10	7 1/2	2 3/4	1/2	1
188-K1	6 x 4	12 x 6	—	—	12 x 8	16 x 8	P1	3 3/4	—	3/8	1
C 188-K2	6 x 4	14 x 7	—	—	8 x 6	12 x 8	P10	4 3/16	1 1/4	3/16	3/4
SS 188-K1	6 x 4	12 x 6	—	—	8 x 6	14 x 8	P1	3 3/4	—	3/8	1
SS 188-K2	8 x 5	14 x 7	—	—	8 x 6	12 x 8	P10	4 3/16	1 1/4	5/16	3/4
SS 856-K2	10 x 6	18 x 10	—	—	10 x 8	14 x 8	P10	6 5/16	2 1/4	1/2	1
SS 856-K24	—	—	18 x 10	24 x 10	—	16 x 8	P10	7 1/4	2 1/2	3/8	5 1/4
SS2857-K44	—	—	18 x 10	24 x 10	—		P13	12	3 1/2	1/2	1 3/8



CONTINUOUS ELEVATOR BUCKETS ON K ATTACHMENTS					
CHAIN ATTACH #	PUNCHING	B	D	E	G
C102B – K2	P10	5 5/16	1 3/4	3/8	1 7/8
SS 102B – K2	P10	5 5/16	1 3/4	3/8	1 7/8
C 102 1/2 – K2	P10	5 5/16	1 3/4	1/2	1 7/8
SS 102 1/2 – K2	P10	5 5/16	1 3/4	1/2	1 7/8
C 110 – K2	P10	5 5/16	1 3/4	3/8	3 3/8
SS 110 – K2	P10	5 5/16	1 3/4	3/8	3 3/8
C 111 – K2	P10	6 1/4	2 5/16	1/2	2 3/32
SS 111 – K2	P10	6 1/4	2 5/16	1/2	2 3/32
C 132 – K2	P10	7 1/2	2 3/4	1/2	2 7/8
SS 150PLUS – K2	P10	7 1/2	2 3/4	1/2	2 7/8
SS 856 – K2	P10	6 5/16	2 1/4	3/8	3 1/8

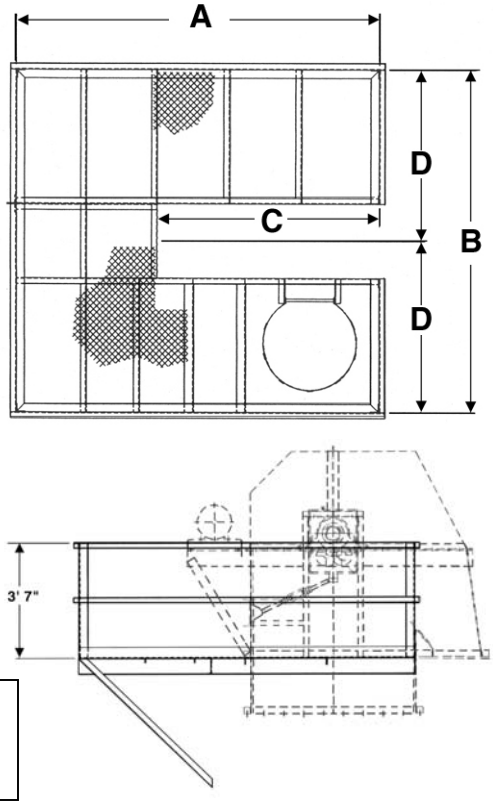
Service Platforms – Ladders and safety cages



Standard service platforms with ladders and safety cages are available for all of the bucket elevators in this book. Platforms provide ready access to drives and head terminals for inspection, lubrication and servicing.

Each platform is made to suit your installation. It is supported by the elevator casing and extends around three sides of the elevator. Flooring for the platform may be either steel grating, safety steel plate, or wood.

Safety cages are recommended for all ladders. Ladders and cages are made to conform to local safety codes.



Note: Ladder opening can be located opposite to that shown.

▲Elevator Casing size Inside: Inches	Ave. Wt. Lbs.	A	B	C	D
		INCHES			
9 ¾ x 35	430	68	76	35 ¼	38
11 ¾ x 35	435	68	76	35 ¼	38
11 ¾ x 39	440	72	76	39 ¼	38
11 ¾ x 42	450	75	76	42 ¼	38
13 ¾ x 39	445	72	78	39 ¼	39
13 ¾ x 42	455	75	78	42 ¼	39
13 ¾ x 48	480	81	80	48 ¼	40
15 ¾ x 42	480	82	82	42 ¼	41
15 ¾ x 48	485	81	82	48 ¼	41
15 ¾ x 54	490	87	82	54 ¼	41
17 ¾ x 48	487	81	84	48 ¼	42
17 ¾ x 54	505	87	84	54 ¼	42
19 ¾ x 48	495	81	86	48 ¼	43
19 ¾ x 54	515	87	86	54 ¼	43
20 ½ x 30	450	63	86 ¾	30 ¼	43 3/8
21 ¾ x 48	505	81	88	48 ¼	44
22 ½ x 30	460	63	88 ¾	30 ¼	44 3/8
22 ¾ x 54	540	87	89 ¼	54 ¼	44 5/8
24 ½ x 30	470	63	90	30 ¼	45
28 ½ x 42	520	82	94	42 ¼	47
30 ½ x 42	530	82	96	42 ¼	48
32 ½ x 42	540	82	98	42 ¼	49
34 ½ x 42	550	82	100	42 ¼	50
38 ½ x 42	590	82	104	42 ¼	52

NOTES:

▲Platforms for other than listed sizes can be furnished.

Have dimensions certified for installation purposes.

Platforms are regularly furnished with steel frames and handrails. Flooring, toe plates, ladders and safety cages can be furnished.

DATA REQUIREMENTS:

Date _____

Name _____

Address _____

Destination _____

ELEVATOR REQUIREMENTS:

Material Handled_____

Wt. Lbs. Per Cu. Ft. _____

Temperature Degrees F. _____

Max. Lump Size, In. _____

Ave. Capacity or Feed Rate TPH _____

Surge Capacity or Feed Rate TPH _____

Material Characteristics (Sticky, Free-flowing, Etc.) _____

How Will Elevator Be Fed? _____

Operating Conditions (8, 12, 24 Hr., Etc.) ____

ELEVATOR SPECIFICATIONS:

Elevator Number _____

Chain or Belt _____

Location of Take-up ☐ Head ☐ Boot

Style of Discharge ☐ Type 1 ☐ Type 2

Lift Ft. and In. _____

Shaft Center Distance in Ft. and In. _____

Head Shaft Diameter _____

Type of Bearings _____

Inspection Door: ☐ Near Side or ☐ Far Side

Drive Support : ☐ Yes ☐ No

ELEVATOR DRIVE (Motor data not req. if furnished by: _____

Gear Motor ☐ O-Shaft Mount Reducer ☐

Size Gear Motor ☐ or Shaft Mount Reducer☐

Motor Horsepower _____

Motor Frame Number _____

V-Belt Size _____

Roller Chain & Sprocket Size _____

Guard ☐ or Casing ☐

Casing Type _____

Service (8, 12, 24 Hr.) _____

☐ R. H. or ☐ L.H. Drive Assembly Looking At Discharge

Motor By Customer ☐ or ☐ _____

Hold-Back If Req.: ☐ Integral ☐ External

OPTIONAL EQUIPMENT

Dust-Tight ☐ or Weather-Tight Casing ☐

Galvanized ☐ Stainless Steel Casing ☐ Type_____

Galvanized ☐ Stainless Steel ☐ Buckets, Type:

Standard ☐ or Special ☐ Inlet. Furnish Sketch

Service Platform ☐ or Checkered Plate ☐ Floor Ladder Length, Ft. & In,: _____

(Ladder should extend 3 Ft. above platform)

Safety Cage Ft. & In. _____

(Safety cage starts 7 Ft. above ladder base.)

Internal Gravity Take-up ☐ with Access Door in Boot ☐ or Intermediate Section ☐

Ft. and In. Above Bottom _____

External Gravity Take-Up ☐

Additional Inspection Doors ☐ # Req. _____

Specific Location _____

Curved Boot Plate ☐ Head Take-Up Furnished as Standard

Extra Heavy Gauge: Specify: _____

Head Traction Wheel ☐

Segmental Rim Wheel ☐ Head ☐ Foot Clean Up Hopper ☐ Give Location _____

Air Vents Drilled in Buckets ☐

Slat Wing Pulley ☐

Other Type Buckets ☐ : Specify type _____

_____

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