



BUCKET ELEVATOR BROCHURE

Vertical Conveying Solutions
for Bulk Materials

Belt Type | Chain Type Bucket Elevator

Designed for Continuous Bulk Material Handling

PRODUCT OVERVIEW

Efficient Vertical Conveying Solution with a Compact Footprint

EXCT Bucket Elevators provide an efficient solution for continuously lifting bulk materials to elevated process points, storage systems and transfer locations. Designed around material characteristics, required capacity, lifting height and operating conditions, our bucket elevators are available in belt and chain configurations for a wide range of bulk material handling applications.

UP TO
1,637 m³/h
Maximum listed capacity

UP TO
80 m
Belt elevator lifting height

TWO
Traction Options
Belt / Chain

CUSTOM
Engineered Design
Customized to Application Needs

**High Capacity**

**Compact Footprint**

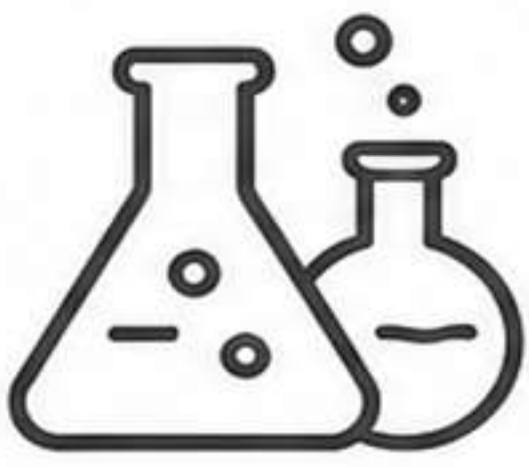
**Heavy-Duty Design**

**Reliable Operation**

**Low Maintenance**

**Custom Configuration**

Application Industries


Chemical


Fertilizer & Granulation

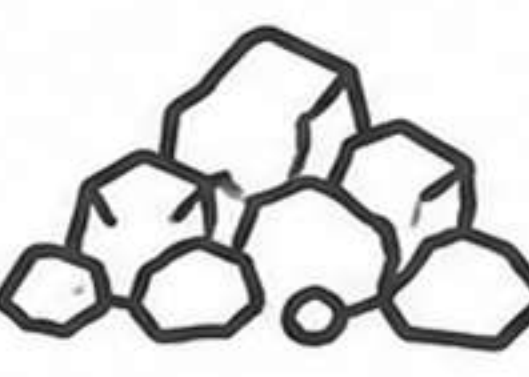

Mining & Minerals


Power Generation

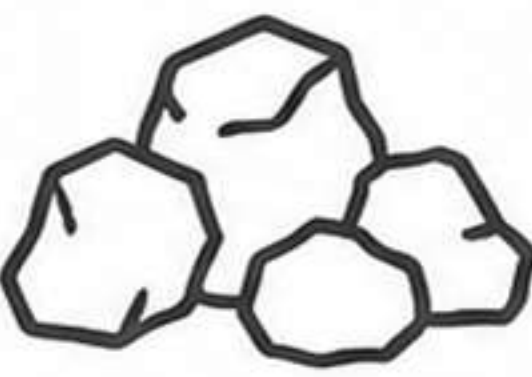

Forest Products

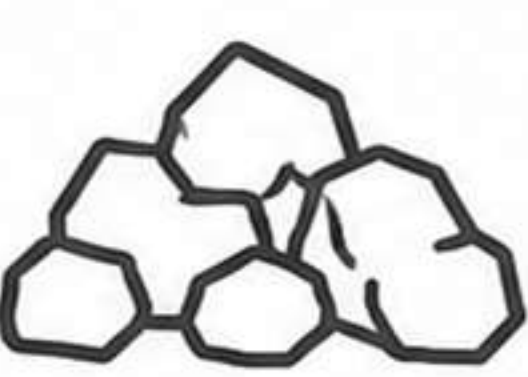

Waste Transformation

Materials

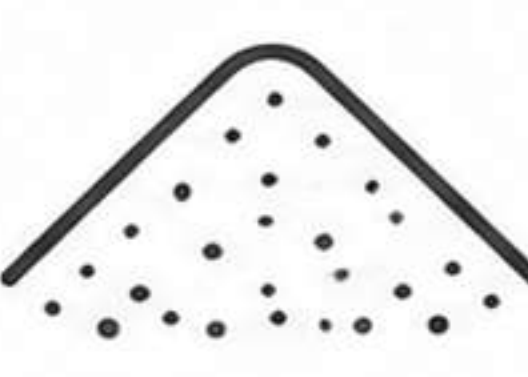

Aggregates

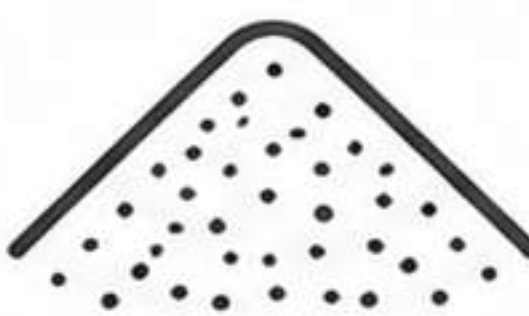

Animal Feeds

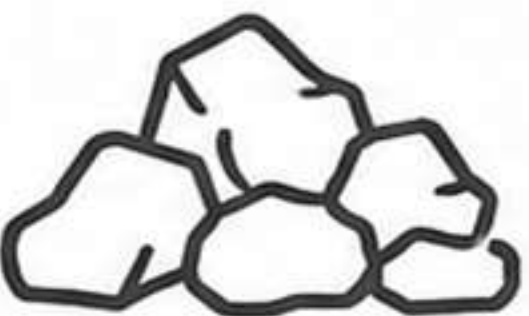

Calcined Coke


Coal


Fertilizer


Fly Ash


Frac Sand


Lime


Minerals


Potash


Woodchips


Sulfur

ADVANTAGES & FEATURES



Vertical Conveying

Efficient vertical lifting of bulk materials with a compact footprint.



High Capacity

Designed for continuous, high-volume material handling across demanding applications.



Heavy-Duty Design

Efficient vertical lifting of bulk materials with a compact footprint.



Low Energy

Efficient conveying design helps reduce power consumption and operating costs.



Reliable Operation

Proven drive, bucket and conveying systems ensure stable long-term performance.



Easy Maintenance

Accessible components and practical design simplify inspection, servicing and replacement.



BUCKET ELEVATOR TYPE

Two Traction Systems. Multiple Configurations.

Belt Bucket Elevator

High-Capacity Vertical Conveying

Belt traction provides an efficient solution for continuous vertical conveying where moderate material temperature, particle size and duty conditions are suitable.



Key Features

1 High Capacity

Up to 1,541 m³/h based on the current EXCT standard table.

2 Long Lifting Height

Standard listed models are available up to 80 m.

3 Enclosed Conveying

Helps contain material and control dust.

4 Automatic Take-Up

Gravity take-up maintains appropriate belt tension.

5 Replaceable Pulley Lining

Segmented friction lining can be replaced without removing the belt.

6 Flexible Drive

Geared motor or motor + fluid coupling + gearbox arrangements.

Chain Bucket Elevator

Heavy-Duty Vertical Conveying

Chain traction is suited to demanding applications involving coarse, abrasive or higher-temperature bulk materials, subject to the selected chain, bucket and elevator configuration.



Key Features

1 Heavy-Duty Traction

High-strength chain assemblies are designed for demanding service.

2 Gravity Discharge

Suitable for continuous, low-speed material discharge in the standard EXCT configuration.

3 Wear-Resistant Chain

Designed to withstand repeated loading and operating cycles.

4 Guided Chain Movement

Internal guide components help control chain movement during operation.

5 Automatic Take-Up

Gravity take-up maintains appropriate chain tension.

6 Replaceable Sprocket Ring

The split-ring design can simplify sprocket maintenance.

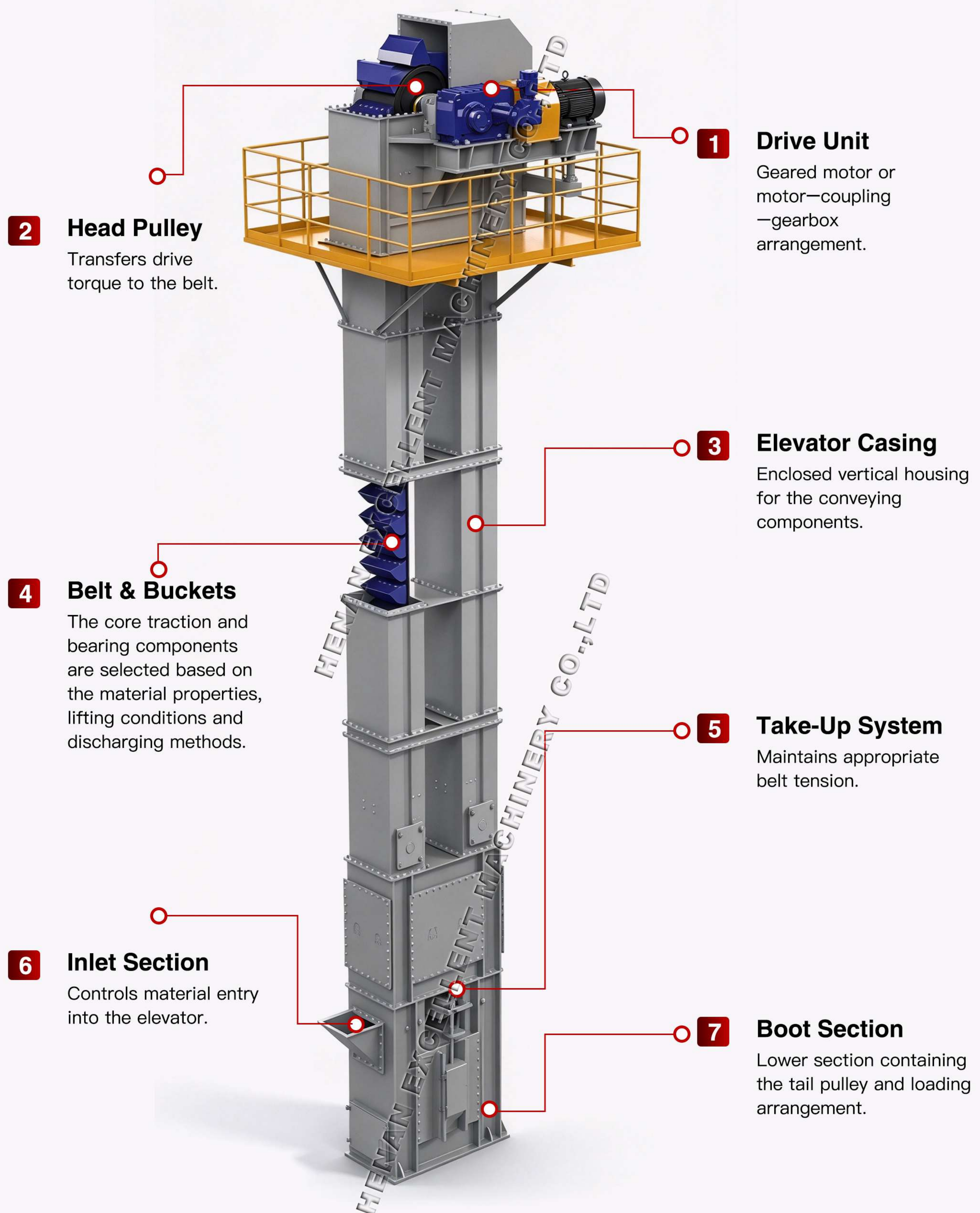
BELT VS CHAIN

Choose the traction system according to the material and duty.

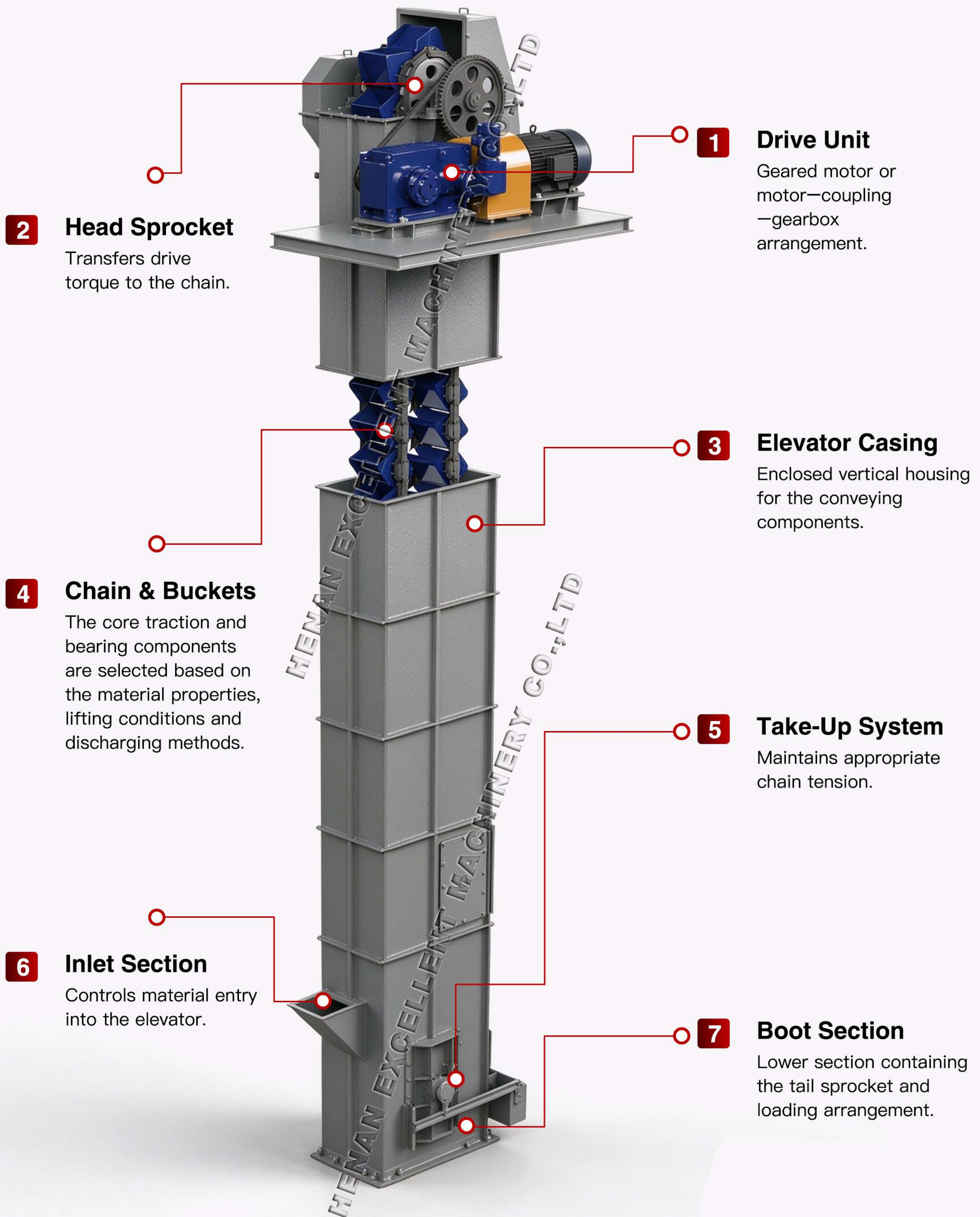
Selection Factor	Belt	Chain
General Bulk Materials	✓	✓
High Conveying Speed	✓	✗
High Capacity	✓	✓
Coarse Material	✗	✓
Abrasive Material	✗	✓
Elevated Material Temperature	Limited By Belt	Better Suited
Long Lifting Height	✓	Application Dependent
Low Noise	✓	✗
Heavy-Duty Service	✗	✓

The final selection should be based on material temperature, particle size, bulk density, abrasiveness, capacity, lifting height, loading method and operating conditions.

BELT TYPE BUCKET ELEVATOR STRUCTURE



CHAIN TYPE BUCKET ELEVATOR STRUCTURE



2 Head Sprocket

Transfers drive torque to the chain.

1 Drive Unit

Geared motor or motor—coupling—gearbox arrangement.

3 Elevator Casing

Enclosed vertical housing for the conveying components.

4 Chain & Buckets

The core traction and bearing components are selected based on the material properties, lifting conditions and discharging methods.

5 Take-Up System

Maintains appropriate chain tension.

6 Inlet Section

Controls material entry into the elevator.

7 Boot Section

Lower section containing the tail sprocket and loading arrangement.

BUCKET TYPE

Centrifugal Buckets

Designed for higher-speed operation and centrifugal discharge.



Continuous Buckets

Designed for closely spaced arrangement and controlled gravity discharge.



BUCKET MATERIALS



Carbon Steel



Stainless Steel



Wear-Resistant Steel



Engineered Plastics

APPLICATIONS & MATERIALS



Mining & Minerals

Ore | Limestone | Aggregate
| Phosphate | Potash | Gravel



Cement & Building Materials

Clinker | Cement | Gypsum |
Slag | Raw Meal



Coal & Power

Coal | Fly Ash | Coal Ash



Fertilizer & Chemicals

Fertilizer | Urea | Salt |
Chemical Powders



Agriculture & Food

Grain | Rice | Beans | Animal
Feed



Biomass & Other Bulk Solids

Wood Chips | Calcined Coke
| Other Process Materials

TECHNICAL SPECIFICATIONS

Belt Type Bucket Elevator

Model	Capacity (m3/h)	Bucket Volume (L)	Bucket Pitch (mm)	Belt & Bucket Weight (kg/m)	Speed (m/s)	Max Lift Height (m)
TDG250	72	6.5	325	33	1.34	80
TDG315	101	10	360	33.2	1.34	80
TDG400	158	16	420	42.2	1.5	80
TDG500	220	25	460	62.3	1.5	80
TDG630	348	40	520	78.53	1.68	80
TDG800	492	64	580	106	1.65	80
TDG1000	788	102	650	145	1.86	80
TDG1250	1220	161	720	155.5	1.86	80
TDG1600	1541	255	820	223	1.836	80

Chain Type Bucket Elevator

Model	Capacity (m3/h)	Speed (m/s)	Spindle Speed (r/min)	Bucket Volume (L)	Bucket Width (mm)	Bucket Pitch (mm)	Operation Part Quality (kg/m)
NE15	15	0.5	15.54	2.5	250	203	27.5
NE30	32	0.5	16.45	7.8	300	305	35
NE50	60	0.5	16.45	15.7	300	305	64
NE100	110	0.5	14.13	35	400	400	89
NE150	170	0.5	14.13	52.2	600	400	112.3
NE200	210	0.5	10.9	84.6	600	500	134
NE300	320	0.5	10.9	127.5	600	500	188
NE400	380	0.5	8.3	182.5	700	600	205
NE500	470	0.5	7.1	260.9	700	700	223
NE600	600	0.5	7.1	330.2	700	700	274
NE800	800	0.5	6.2	501.8	800	800	313

ENGINEERING & CUSTOMIZATION

01 Material Analysis

Material type, bulk density, particle size, moisture, abrasiveness and temperature.



02 Capacity Calculation

Required conveying capacity and operating conditions.



Capacity Requirement



Operating Conditions



Calculation & Analysis

03 Elevator Selection

Belt / Chain
Centrifugal / Continuous



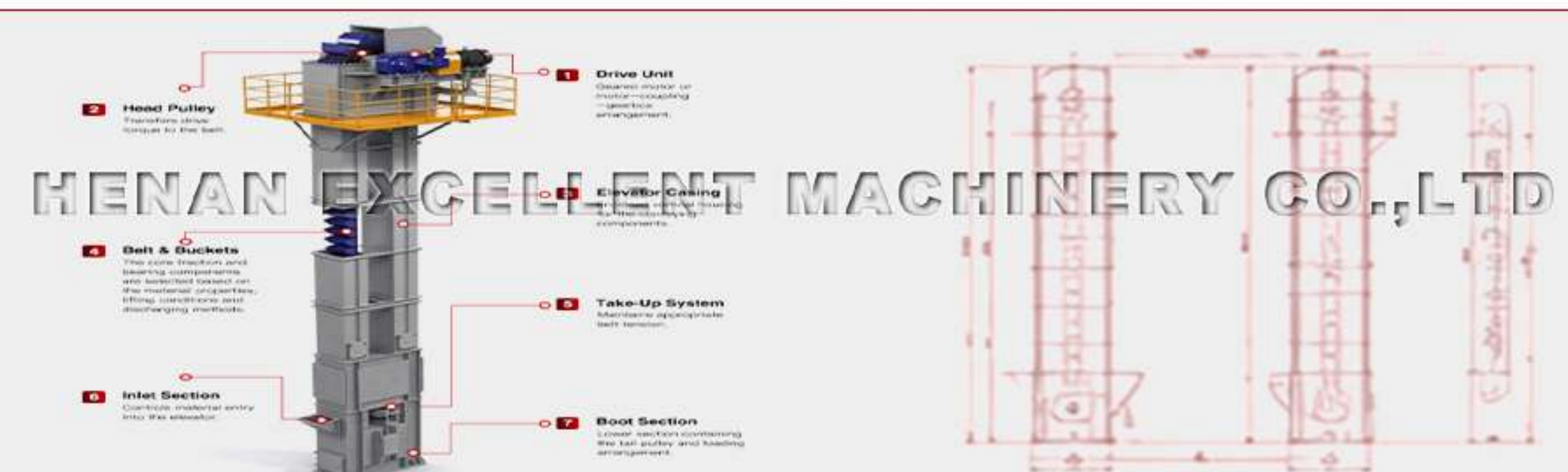
04 Component Selection

Bucket, belt / chain, pulley / sprocket, drive and take-up.



05 Structural Design

Head, boot, casing, platforms, access and maintenance arrangement.



06 Manufacturing & Assembly

Precision fabrication, component assembly and quality inspection.



Precision
Fabrication



Component
Assembly



Quality
Inspection

07 Installation & Commissioning

Site installation support and commissioning assistance.



Site Installation
Support



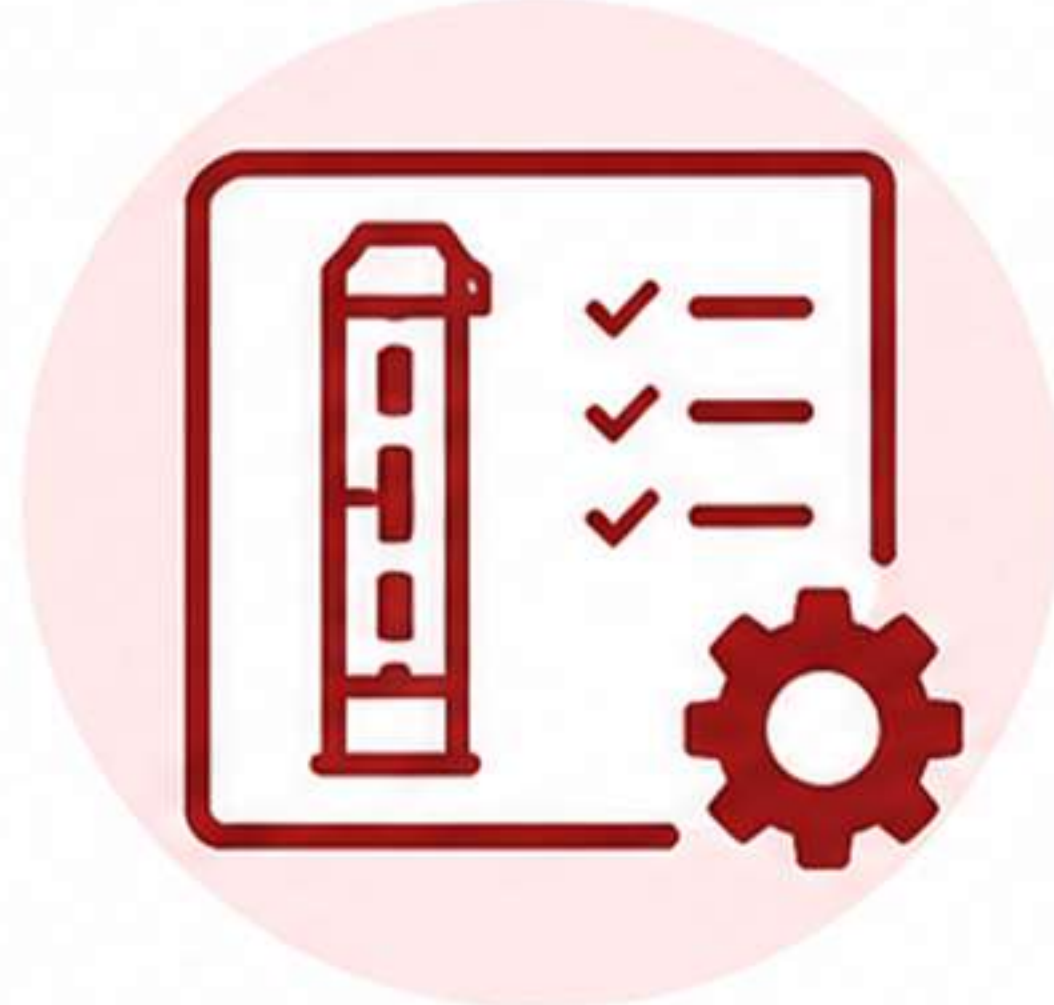
Commissioning
Assistance

WHY EXCT BUCKET ELEVATORS?



30+ Years of Engineering Experience

Over three decades of experience in bulk material handling equipment design and manufacturing.



Application-Based Design

Elevator configuration is developed around material properties, capacity and operating conditions.



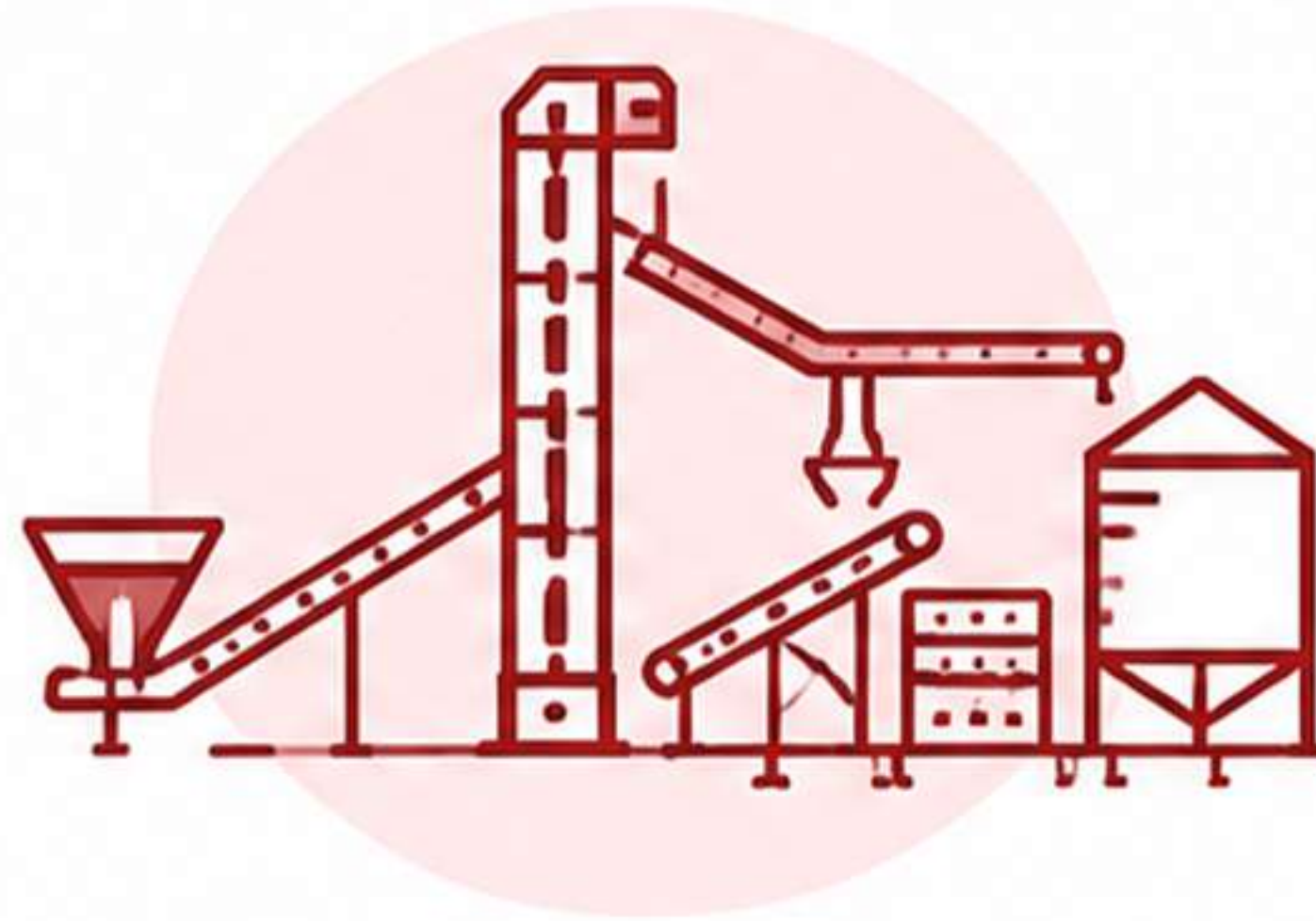
Belt & Chain Solutions

Flexible traction systems for different material handling requirements.



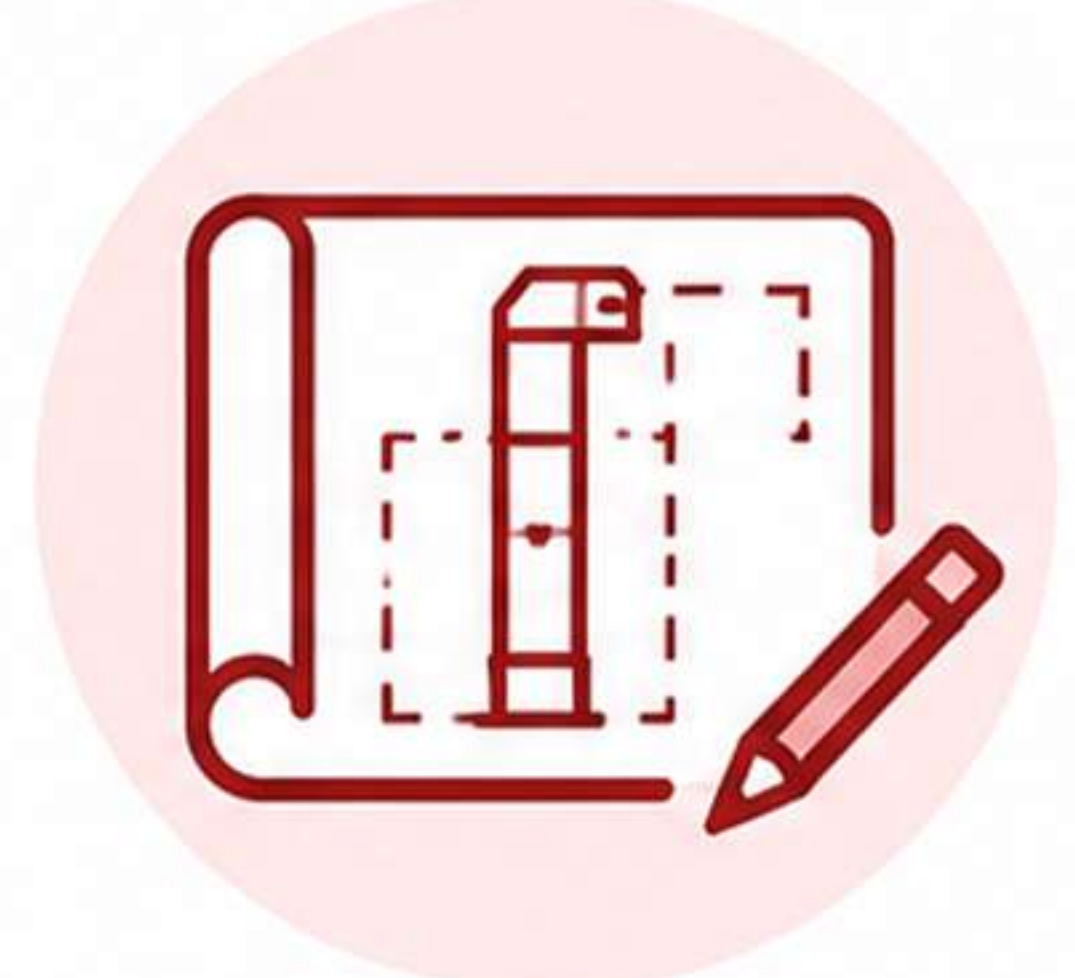
Integrated Manufacturing

Engineering, fabrication, assembly and quality inspection under one manufacturing system.



Complete Bulk Material Handling Portfolio

Bucket elevators can be integrated with feeders, conveyors, crushers, screens and storage systems.



Project-Based Engineering

Equipment can be engineered for individual plant layouts, capacities and process requirements.





From engineering consultation and process design to equipment manufacturing, installation and commissioning, after-sales service, and plant upgrading, EXCT delivers integrated turnkey solutions throughout the project lifecycle. We combine engineering expertise, manufacturing capability, and lifecycle support to provide reliable and application-specific bulk material handling solutions—from concept to operation.

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Engineering
Consultation



Process
Design



Manufacturing



Installation &
Commissioning



After-Sales
Service



Plant
Upgrading