

BULK CONVEYING

Material handling



Turnkey-solutions for safe and reliable bulk conveying in various industries.



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The roots of Alpine Metal Tech Germany GmbH lie within the transport technology.

With this history, and its brand AMAKON, Alpine Metal Tech Germany is a notable turnkey-specialist in material handling systems and a reliable partner for various industries. From planning and designing to the delivery and commissioning of complete conveyor systems or plant components, Alpine Metal Tech Germany is able to supply fully integrated solutions. Our individual solutions can be found in numerous industries like cement- and building industry, steel industry, power plants, waste processing, water treatment, wood industry, feed industry or chemical and fertilizer industry.

OUR PRODUCTS

- » Drag chain conveyor
- » Screw conveyor
- » Bucket elevator
- » Belt conveyor
- » Apron conveyor

DRAG CHAIN CONVEYOR

AMAKON drag chain conveyors convince with its solid technology and innovative design.

The combination of proven technology and the application of modern materials and production technology guarantee our customers high efficiency and maximum reliability. The modular design allows specific adaptions of each AMAKON conveyor to the individual requirements of our customers. The designs range from standard solutions from our modular design system over conveyors for special applications such as wet slag conveyors and dischargers to special applications like pressure shock resistant mill feeders or cooling conveyors for high temperature applications. Alpine Metal Tech Germany has the suitable tailor made solution for each conveyor applications. With our optional upgrade-modules your plant will always be kept up to date – ready for industry 4.0.

- » Dust free and odourless transport
- » Fine to coarse grains as well as pasty bulk materials
- » Conveying length up to 75 m
- » Capacities up to 1000 m³/h
- » Horizontal, inclined and vertical transportation
- » Variable alignment
- » Suitable for ATEX applications
- » Easy maintenance
- » Designs with drop-forged link chains, plate link chains or round link chains available





DESIGNS

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Horizontal conveyors

Horizontal conveyors are used for horizontal or straight ascending transport. The conveyor always has a final discharge at the drive section. It is possible to add inlets or outlets anywhere along the conveyor.

Vertical conveyors

Wherever bulk material has to be conveyed in a vertical direction, the vertical or Z conveyor is utilized. These conveyors allow an inclination of up to 90° .



Bunker discharge conveyors

AMAKON Bunker Discharge Conveyors are particularly sturdy drag chain conveyors specially designed for bunker removal. The discharge height is variably adjustable. Also, additional spouts can be placed next to the end spout on the tensioning section.

Filter discharge conveyors

Filter discharge conveyors are always dustproof and are used to collect dust or fly ash below filter systems. Due to particularly slow chain speeds, long service lives can be achieved.

Wet slag conveyors

The AMAKON wet slag conveyors and wet ash conveyors are a proven discharge system for ash or slag. A water bath is used to reliably seal off the boiler and to cool down the transported material.







WEAR PROTECTION

Alpine Metal Tech Germany offers a wide range of wear materials for our conveyor systems. Due to our decade-long material handling experience in in various industries, we are able to support you in finding the most suitable and economical wear protection for your application. We offer repairs and retrofits with a large variety of wear protection materials. Please find some examples below:

Model	Corrosion resistance	Weight	Friction	Tempera- ture	Sliding wear	Impact wear
Basalt	++		+	+	++	
Oxide Ceramics	++	+	+	++	++	-
Plastic	++	++	+		+	++
Chrom-Nickel-Steel	+	-	++	+	-	0
Wear resistant steel	-	-	-	0	0	-
Hardfaced	0	-	-	+	++	
composite plates						



CONVEYOR CHAINS

Forged link chains

Chain pitch Version Operating temperature Characteristics 142, 200, 260 mm single- / double strand up to 800 °C average to heavy applications, highly wear resistant and robust, universally applicable



Round link chains

Chain pitch Version Operating temperature Characteristics

10 x 38 to 38 x 144 mm double strand up to 150 °C universally applicable in light to heavy duty applications, highly wear resistant versions also available



Bush conveyor chains

Chain pitch Version Operating temperatures Characteristics 125, 160, 200 mm single / double strand up to 250 °C cost effective for light applications such as wood or recycling





AUTOMATION/MONITORING

It does not matter if individual machines are of high quality, a production line only runs smoothly if all elements work perfectly together. Alpine Metal Tech Germany Electrical Engineers and Software Specialists transfer electronic components into intelligent systems. From data collection to communication with

Our service spectrum

- » Project planning
- » Automation and drive technology
- » Visualisation
- » Process analysis
- » Commissioning and training
- » Plant modernization
- » Condition monitoring
- » Industry 4.0: integrated networking, latest business technology, cloud-based data exchange and latest security technology

high level plant control systems, Alpine Metal Tech Germany offers complete software solutions from a single source. Based on our experience we are able implement complex control functions in such a way that hardware and software work perfectly together.

Your advantages

- » Customized solutions created exactly according to production requirements
- » Seamless transitions between the interfaces
- » Clear project responsibilities
- » Reliable technology and worldwide services
- » Interdisciplinary cooperation

TECHNICAL DATA

	Horizontal conveyors	Vertical conveyors		
L	up to 75 m	up to 10 m		
L1	-	up to 40 m		
L2	-	up to 15 m		
Н	200 - 1000	200 - 1000		
ТВ	300 - 1600	300 - 1600		
Tilt	up to 30°	up to 90°		

SPARE/WEAR PARTS & SERVICE

Short delivery times and a wide range of high quality spare parts offer our customers maximum flexibility and a constantly high plant availability. Through individual support and our experience as plant constructors Alpine Metal Tech Germany helps you to reduce the maintenance intervals of your conveyor systems and operating costs.

Customer satisfaction is our ultimate goal. Alpine Metal Tech Germany offers a wide range of individual services:

- » Inspections
- » Maintenance and repair
- » Service contracts
- » Plant upgrading and modernisation
- » Training
- » Technical assistance
- » Research and studies



SCREW CONVEYOR

AMAKON screw conveyors are used to sparingly transport dusty or pasty bulk materials.

The maintenance friendly design and the use of high quality materials, individually tailored to the respective application guarantees high system availability. Amongst available designs are transport - and discharge screw conveyors as well as pipe screw conveyors and screw heat exchangers.

Transport screw conveyor

The modular design of the AMAKON transport screw conveyor enables to meet the individual requirements of each customer with proven and tested standard components. Whether as a trough or pipe screw conveyor – AMAKON transport screw conveyors are being used in a wide variety of industries. Depending on the given application the materials for the worm shaft, the housing and the optional wear linings are chosen to maximize service life.

- » Modular design system with diameters from 100 to 1200 mm
- » Proven and tested design based on DIN standards
- » Flow rates up to 1000 m³/h
- » Available as single or double shaft screw as well as trough or pipe screw conveyor

Discharge screw conveyor

As a screw bottom with several screws in a common compact trough, discharge screw conveyors are utilized in truck unloading stations, feeding hoppers and storage containers for discharging and metering bulk materials. The individual control of the single drives effectively prevents bridging and offers a broad amplitude of the discharge capacity. The sophisticated design allows easy removal of the individual worm shafts for maintenance and repair.

- » Discharge capacities from 10 to 300 m³/h
- » Easy maintenance/repair due to individually removable screw shafts
- » High functional reliability through individually controlled drives and automated discharge cycles









TECHNICAL DATA

Frame size d1 mm	Clear width b2 mm	a mm	b1 (max.) mm	h mm
100	112	63	200	140
125	140	75	250	160
160	180	90	300	180
200	220	112	350	200
250	270	140	400	250
315	336	180	500	280
400	426	224	600	355
500	526	280	700	400
630	656	355	900	500
800	826	450	1.100	630
1.000	1.040	560	1.300	710
1.250	1.290	710	1.600	800

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BUCKET ELEVATOR

AMAKON chain and belt bucket elevators are the most efficient conveyor systems for the continuous vertical transport of dustlike, grainy and abrasive bulk materials.

Due to the individual design, high conveying capacities and heights can be achieved. With their self-supporting construction, AMAKON bucket elevators are always an excellent and space-saving solution to transport bulk material over long and elevating distances.

Chain bucket conveyor

AMAKON chain bucket elevators are optimized for harsh environmental conditions and coarse bulk materials. The robust and reliable design is based on the former DIN 15251. High quality round link chains in accordance with DIN 764 are used as pulling devices. The buckets in accordance with DIN 15231-15235 can be attached to the chains in multiple ways depending on the application or customer request. For extremely high product temperatures up to 800 °C AMAKON offers also a special system with forged link chains.

- » For harsh operation and rough bulk materials
- » Also suitable for high production temperatures
- » Reliable and proven design based on DIN standards
- » As low-speed machine with gravity discharge for light bulk material
- » As high-speed machine with centrifugal discharge for high flow rates

Belt bucket conveyor

AMAKON belt bucket elevators offer high flow rates and considerable operating smoothness. The reduced weight and high tensile strength of the conveyor belt allow high delivery heights while providing excellent reliability and low maintenance. AMAKON belt bucket elevators are usually equipped with buckets according to DIN 15233 or 15234 standards.

- » For high-flow rates and high delivery heights
- » Suitable for material temperatures up to 150 °C
- » High efficiency
- » Low maintenance and wear
- » As high speed rotor with centrifugal discharge





TECHNICAL DATA

Bucket width	В	С	D	E	F	G	Н	I
BW mm	mm	mm	mm	mm	mm	mm	mm	mm
160	355	900	500	1400	400	400	1600	1000
200	400	950	530	1440	400	400	1600	1080
250	450	1090	640	1795	450	450	1800	1280
315	540	1125	675	2000	450	450	1800	1350
400	640	1300	750	2225	550	550	2100	150
500	750	1470	825	2525	645	645	2300	1650
630	900	1600	925	2850	675	675	2400	1850
800	1100	1865	1050	3250	815	815	2500	2100
1000	1300	2065	1250	3500	815	815	2600	2500
1250	1550	2205	1300	3500	905	905	2600	2600

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BELT CONVEYOR

Troughed-belt conveyors, air-supported belt conveyors and sliding-belt conveyors by AMAKON transport large quantities of the most diverse bulk materials over long distances.

The product-protecting and energy-efficient transport is especially requested where high conveying capacities are needed to be realized.

- » Product-protecting, silent and engergy-efficient transport
- » Low maintenance and economical operation
- » High capacities and small belt widths
- » Lengths up to 200m
- » Widths up to 1200mm
- » Capacities up to 1000m3/h
- » Steel structure and walkways
- » Open or closed and dust-free design
- » Special designs such as shuttle conveyors or telescopic, slewable and inclinable conveyors





APRON CONVEYOR

AMAKON apron and surface feeders are used in various industries to discharge, transport and dose coarse to chunky and hot bulk materials. Through their robust and low-maintenance design, they are in particular suited for the continuous transport of heavily abrasive materials and for operation under adverse conditions.

- » Coarse to chunky and pasty materials, light to heavy fractions
- » High flexibility
- » Maintenance-friendly design
- » Spare and wear parts on stock





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