
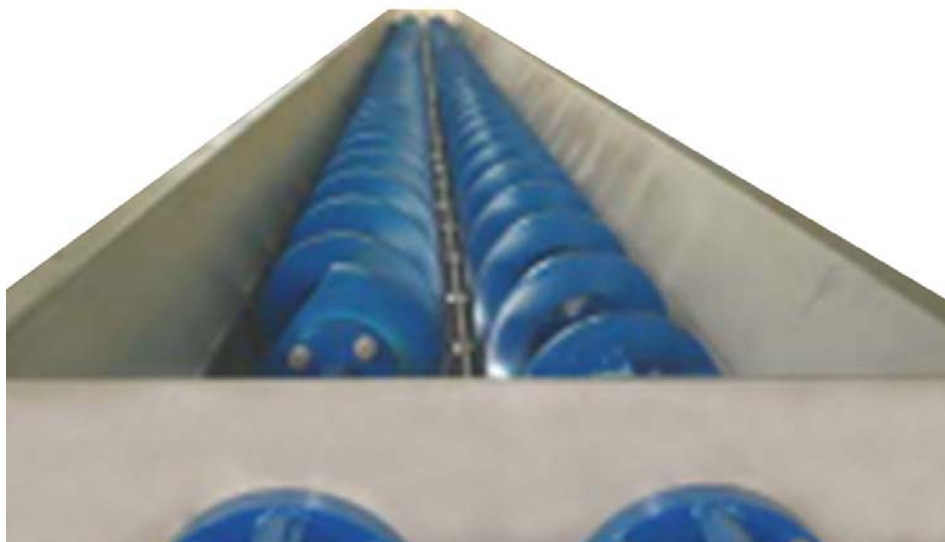


# MND Screw Conveyors

-  *Solids Conveying, Recovery & Processing*
-  *Industrial & Commercial Solids Handling*
-  *Water and Waste Water Treatment Works*



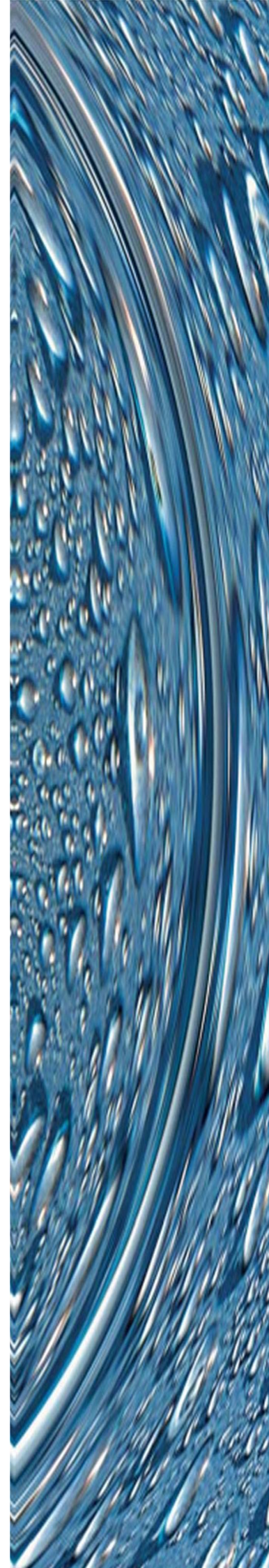
Vertical Screw Conveyors



Horizontal Screw Conveyors



Pivoting Screw Conveyors



## **M.A.IND**

With over 4,000 installations around the world, M.A.IND has developed a good reputation with a philosophy of offering high quality at low cost. This has served to provide equipment to smaller industries or applications where previously it was considered unviable and offers a lower purchasing cost for larger applications.

### **MND Screw Conveyors**

MND Screw Conveyors provide a cost-effective solution for bulk solids handling. They can be applied to numerous industrial or commercial applications including paper mills, abattoirs, food production, refineries, etc, for either recovery or removal purposes, or to waste flows to convey separated screened solids. Single units can be supplied over 40 metres long and can be supplemented with additional screw conveyors allowing extended transfer capabilities. This could be over undulated areas and include vertical elevation if necessary.

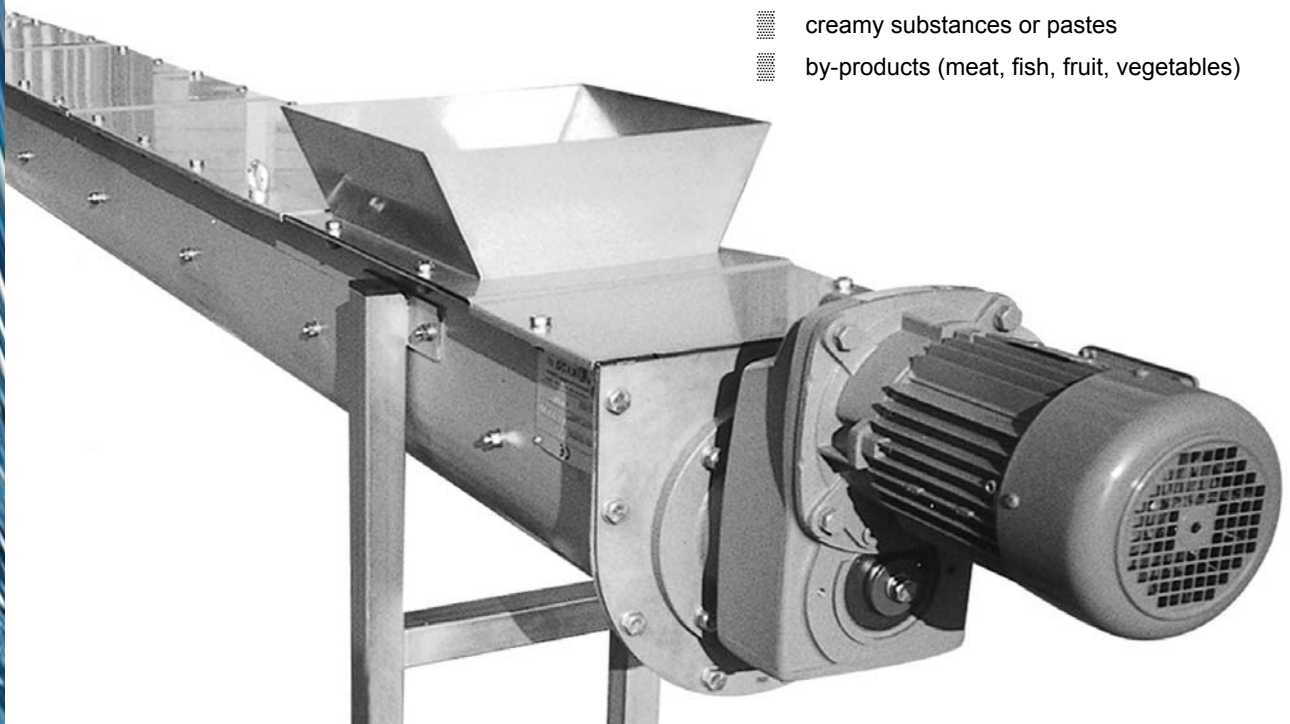
Solids are conveyed by a heavy-duty shaft-less screw spiral that rotates between wear resistant liners without any intermediate bearings. This method imparts high throughput without entanglement or clogging and significantly reduces and simplifies maintenance requirements. The spirals are highly resistant to wear and provide great durability for long periods of operation. Conveyors are available with single or dual screw spirals.

Where requirements dictate, screw shafts are also available and can be supplied as an alternative option to shaft-less screw spirals. Liners are supplied in various materials including high molecular plastics or stainless steel to suit the characteristics of the solids to be conveyed.

Research carried out by M.A.IND in cooperation with Nord Getriebe ensures exceptionally high levels of motor and gearbox reliability with conveyor systems as well as all other products supplied by M.A.IND requiring drive systems. In addition, MND Screw Conveyors are manufactured with the same philosophy applied to all M.A.IND equipment comprising of bolted sections to grant far superior inspection and maintenance access, which in turn will increase longevity and overall asset life besides imparting easy access for cleaning and hygiene demands, in particular for food processing applications.

MND Screw Conveyors have been especially designed to convey difficult and diverse, irregular solids including:

- granular substances
- waste solids
- thickened or dewatered sludge
- floating screenings
- tinned food
- creamy substances or pastes
- by-products (meat, fish, fruit, vegetables)



### MND/V – Vertical Screw Conveyors

Vertical screw conveyors are connected to a horizontal screw feeder normally set at waist height above the ground. The screw feeder can either be supplied with a feed hopper or may be supplemented by further screw conveyors to facilitate extended transfer capabilities. This could be over undulated areas and include further vertical elevation if necessary.

Solids are conveyed and discharged by a vertical shaft-less screw and the discharge arm allows extension to openings such as hatch covers situated on top of covered tanks or silos. Vertical screw conveyors can also feed into other processing devices if required.



Again, as with the standard horizontal or inclined range of M.A.IND screw conveyors, screw shafts are also available and can be supplied as an alternative option to shaft-less screw spirals. Liners are supplied in various materials including high molecular plastics or stainless steel to suit the characteristics of the solids to be conveyed

A range of vertical screw conveyor diameters matching the MND Screw Conveyor Range Charts within this leaflet are available offering a good choice of throughput rates.



In comparison to other solid elevator systems, vertical screw conveyors offer the following benefits:

- Very low footprint
- Easy maintenance
- Few spare parts required
- Exceptional performance ratio

The standard maximum lift height is 10 metres. Greater heights can be obtained with supplementary plant.

### MND/P – Pivoting Screw Conveyors

M.A.IND pivoting screw conveyors add further scope to the transfer of solids allowing a simple method of alternating or diverting flows to suite processing requirements.



## MND Screw Conveyor Range Charts

Please note the charts below are generalized and only intended to provide an estimate of requirements. Advice should be sought to ensure the conveyor will be appropriate for the application.

### Screenings or Granular Solids Chart

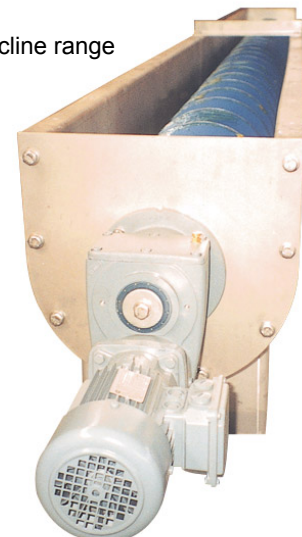
Diameter (mm)	Incline Range	Spiral Type	Length (m)	Capacity (m <sup>3</sup> /h)	Motor (kW)	Rotation (RPM)
150	0°-15°	standard	0-20	0.5	0.37	15
150	15°-30°	reinforced	0-20	0.3	0.55	15
200	0°-15°	standard	0-20	1.0	0.55	15
200	15°-30°	reinforced	0-20	0.6	0.55	15
250	0°-15°	standard	0-20	2.4	0.75	15
250	15°-30°	reinforced	0-20	1.1	1.10	15
300	0°-15°	standard	0-25	3.8	1.50	15
300	15°-30°	reinforced	0-25	1.8	1.50	15
400	0°-15°	standard	0-30	8.0	2.20	15
400	15°-30°	reinforced	0-30	3.8	2.20	15
500	0°-15°	standard	0-36	17.0	3.00	15
500	15°-30°	reinforced	0-36	8.0	3.00	15

Capacities of MND/V Vertical Screw Conveyors are analogous to the 15°- 30° incline range

### Sludge or Slurry Chart

Diameter (mm)	Incline Range	Spiral Type	Length (m)	Capacity (m <sup>3</sup> /h)	Motor (kW)	Rotation (RPM)
150	0°-15°	standard	0-20	1.5	0.55	29
150	15°-30°	reinforced	0-20	0.8	0.75	29
200	0°-15°	standard	0-20	3.0	0.75	29
200	15°-30°	reinforced	0-20	1.7	0.75	29
250	0°-15°	standard	0-20	7.0	1.50	29
250	15°-30°	reinforced	0-20	3.9	1.50	29
300	0°-15°	standard	0-25	11.0	2.20	29
300	15°-30°	reinforced	0-25	6.0	2.20	29
400	0°-15°	standard	0-30	23.0	3.00	29
400	15°-30°	reinforced	0-30	13.0	3.00	29
500	0°-15°	standard	0-36	45.0	5.50	29
500	15°-30°	reinforced	0-36	26.0	5.50	29

Capacities of MND/V Vertical Screw Conveyors are analogous to the 15°- 30° incline range



## Typical Applications

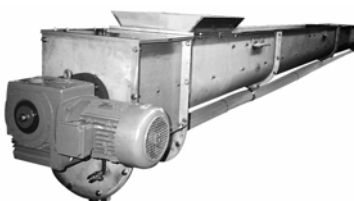
A synopsis of typical applications for MND screw conveyors include:	
Food processing	sugar beat, granules and pulp grain mixtures malt and barley residues of dry, semi-solid and viscous produce pastes, creams, preserves meat and sausage waste
Agriculture	flesh fruit, potatoes, kernels, peelings and cores fruit and vegetable waste peat and other gardening solids
Abattoirs	entrails, hair or fur waste, bones, hooves, claws
Pharmaceutical and Chemical industry	granular materials, pills and powders fertilizers, plastic materials
Paper Industry	paper pulp, paper strips
Utilities	screenings, de-watered, thickened sludge chemical refill systems - granules or powder refuse reception, incineration plants, ashes

MND Screw Conveyors impart the following benefits:

- ▣ efficient handling of difficult solids
- ▣ requires less space than other conveying systems
- ▣ hygienic operation
- ▣ easy access for cleaning
- ▣ effectively high throughput efficiencies
- ▣ very low maintenance requirements
- ▣ modular system for various applications

Supplementary M.A.IND products include:

Screw Compactors



High Solids Screens



Grit & Sand Separators



## MND Screw Conveyors

MND Screw Conveyors can be applied to industrial or commercial applications including paper mills, abattoirs, food production, refineries, waste reception centres, or to waste flows to convey separated screened solids.

### Specifications

#### Capacities

Up to 50 m<sup>3</sup>/h depending upon solids conveyed

#### Fabrication

Stainless steel: 304 (BS EN 10088 1.4301)

Stainless steel: 316 (BS EN 10088 1.4401)

Spiral: Mild steel or Stainless steel, 304 or 316

#### Nominal diameter

150, 200, 250, 300, 400, 500, 600 mm diameter

#### Variants

Horizontal, inclined, vertical and pivotal

#### Single unit maximum length

Up to 40 m

#### The Benefits

- high quality and reliability at low costs
- quick and easy installation
- retrofit capability into existing channels
- stainless steel fabrication
- reliable and automatic self cleaning operation

#### Typical Applications

- Abattoirs, fish and other food processing plant
- Chemical industry, refineries
- Industrial processing
- Municipal waste water treatment works
- Thickened or dewatered sludge
- Refuse reception, incineration, ashes
- Commercial outlets

#### Other products from M.A.IND include:

- ⇒ Sand & Grit Separation, Grit Classifiers
- ⇒ Screw Compactors
- ⇒ SLUDGLESS Sludge Thickening & Dewatering

Contact M.A.IND for further information regarding other products or screen variants

We reserve the right to amend any detail without notice. Please ensure you have the latest information.  
Issue Conveyor MND Range 04-08 (en)

## M.A.IND Screening Systems



M Range Screens; available for channel mount or supplied in stainless steel tank, ≤ 300 l/s



MID/V Vertical screens for pump station etc, ≤ 300 l/s



TOP Range Screen, Grit & Grease Removal, ≤ 200 l/s



M Range Tanker reception screens with Bauer connection



GSR Range Sludge reception - Rapid tanker emptying



MINYSCREEN probably the smallest low cost screw screen available on today's market

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