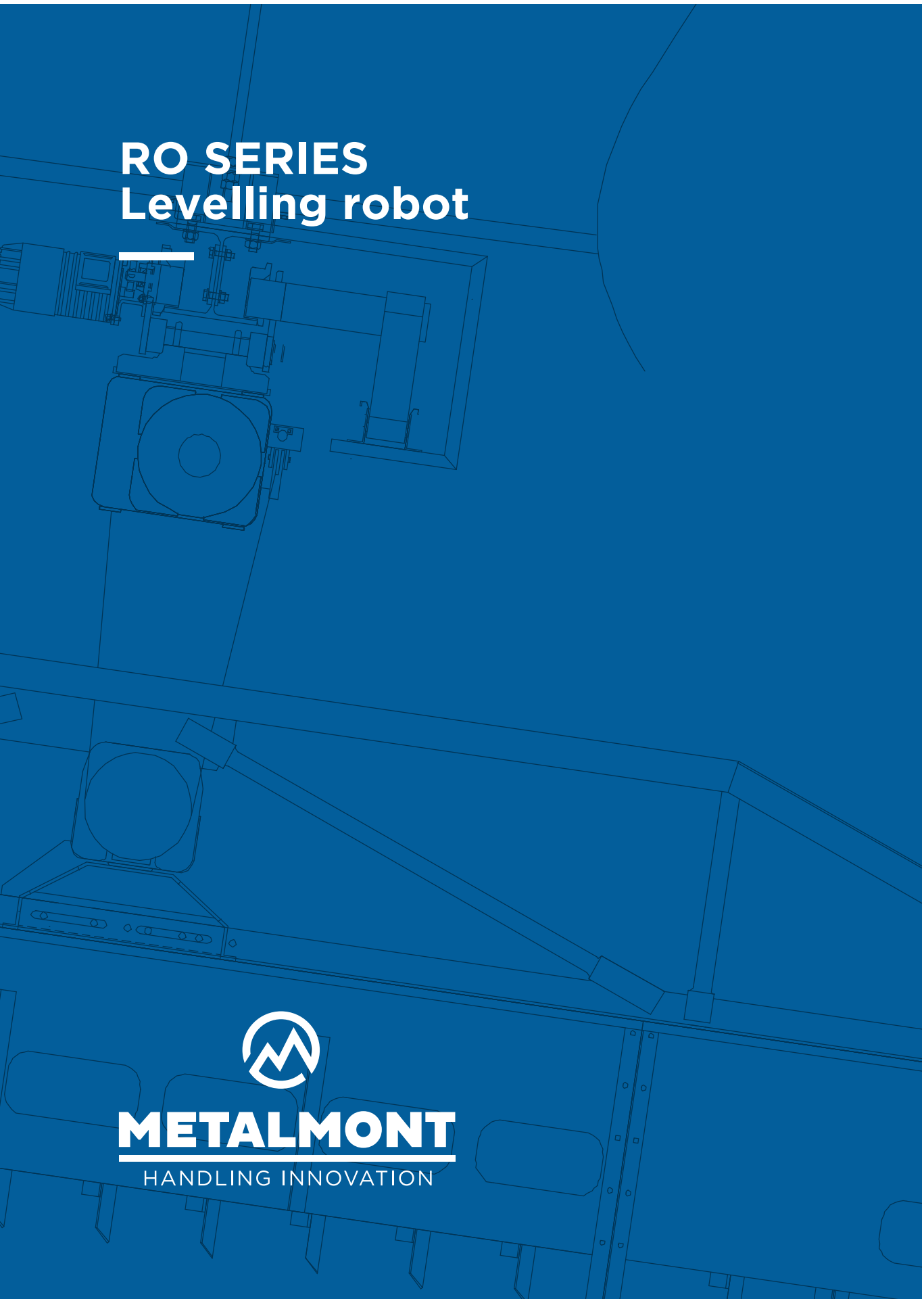
RO SERIES
Levelling robot



METALMONT

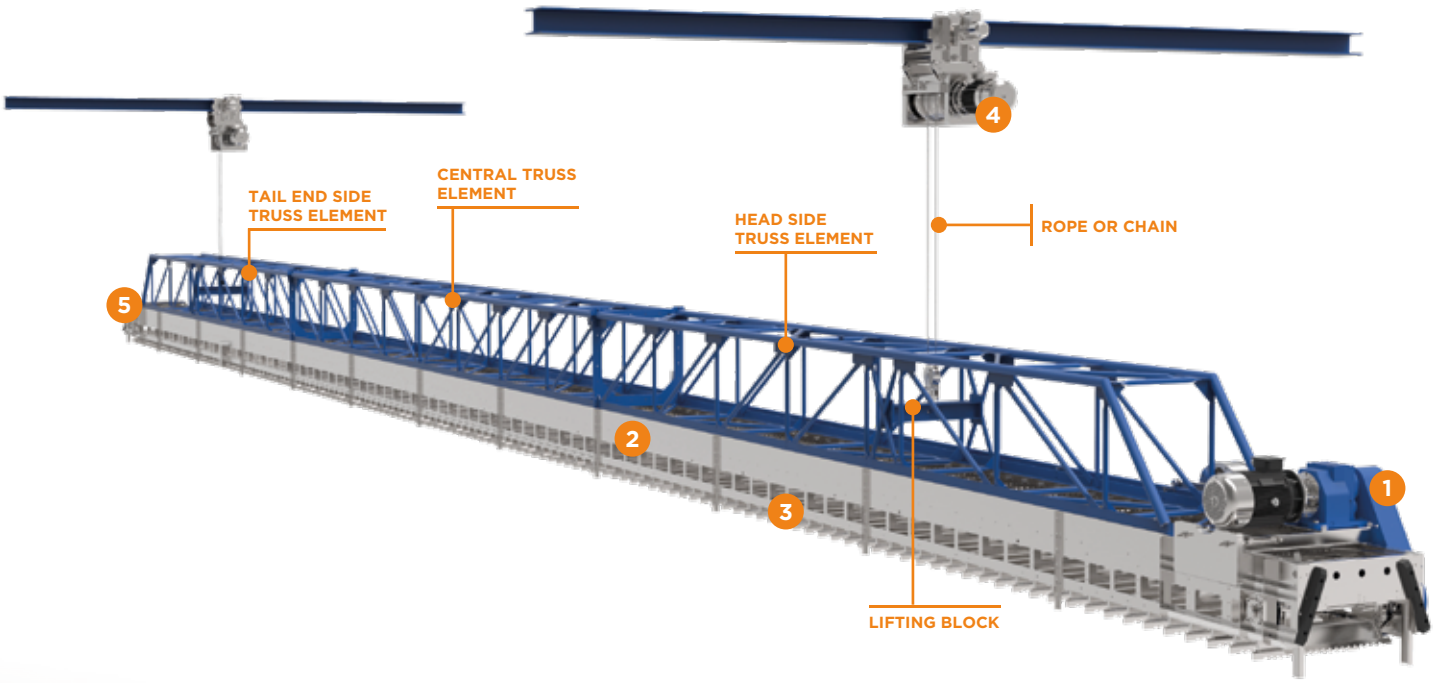
HANDLING INNOVATION

RO SERIES
LEVELLING ROBOT

Reliable performance, construction quality, easy assembly: the perfect solution

The levelling robot is one of the most technological systems for handling cereals, oilseeds and legumes in flat-bottom storages, allowing for their maximum filling (the entire geometric volume), as well as total and automatic emptying at very high flow rates.
The Metalmont RO series levelling robots are designed and built to ensure the best performance even in the most difficult working conditions and to minimise maintenance and total operating costs.

RANGE from 60 to 400 t/h - different flow rates available on request



In order to improve the product and for regulatory compliance, the technical specifications, appearance and equipment described in this document may be subject to change without prior notice.

1 DRIVING ELEMENT (HEAD)

- Two toothed driving wheels
- High resistance steel driving shaft
- Supports with self-aligning ball bearings shielded and lubricated with high-performing grease
- Hollow shaft helical bevel gearmotor with chain transmission
- Anti-clogging sensor
- UHMW polyethylene chain sliding block

2 INTERMEDIATE ELEMENTS

- Case formed by bolted elements, pre-assembled to truss elements
- UHMW polyethylene chain sliding plate (lower and upper)

3 DRAG CHAIN

- Drag chain
- Steel drag blades

4 HOISTS

- 2 motorised hoists mounted on horizontally movable carriages on the runways fixed to the ceiling structure
- Chain or rope hoist

5 IDLER ELEMENT (TAIL END)

- Two idler wheels
- Chain tensioning system with double slides and screws
- High resistance steel idler shaft
- Supports with self-aligning ball bearings shielded and lubricated with high-performing grease
- UHMW polyethylene chain sliding plate

TECHNICAL DATA SHEET

MODEL	U.M.	RO-060	RO-100	RO-200
Flow rate*	t/h	60	100	200
Approx. chain speed	m/s	0,54	0,54	0,4 - 0,54
Approx. driving element length (Head)	mm	3.000	3.000	3.000
Approx. idler element length (Tail end)	mm	3.000	3.000	3.000
Approx. case internal width	mm	530	630	900
Intermediate element length	mm	500 / 1.000 / 1.500 / 2.000 / 2.500 / 3.000		
Chain sliding plate material	mm	UHMW polyethylene		
Hoist		with rope or chain		
- moving motor power		according to the warehouse dimensions		
- lifting motor power		according to the total weight of the robot		

*Values referred to wheat s.w. 0.78 t/m^3; RH 15%; impurities: 2%. Theoretical work capacity.

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ACCESSORIES AND DEVICES

MODEL	RO-060	RO-100	RO-200
Anti-clogging sensor on head and tail end	●	●	●
Product presence external sensor	●	●	●
Product presence internal sensor	●	●	●
Inclination sensor	●	●	●
Carriage shift limit switch	●	●	●
Carriage synchronisation system	●	●	●
Carriage position detection device	●	●	●
Ropes/chains loosening sensor	●	●	●
Speed control sensor on tail end	●	●	●
Temperature bearings sensor on head and tail end	○	○	○
Hot-dip galvanising of the intermediate elements	○[1]	○[1]	○[1]
Hot-dip galvanising of head and tail end	●	●	●
Suitable for use in ATEX 22, according to the customer classification	○	○	○
Hot-dip galvanised truss	○[2]	○[2]	○[2]
Siren with flashing light	●	●	●

● - *Standard*
○ - *Optional*

○[1] - Standard surface finish: pre-galvanised sheet steel Z275
○[2] - Standard surface finish on truss: painted

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