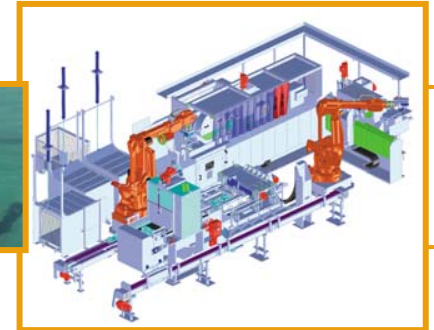


Foundry Plus

FOUNDRY
PLUS



ABB

Foundry Plus protected Robots



Foundry Plus - Background

■ Background

- Robots are often working in very severe environments that require that the robots are tight and withstand penetrating material
- Foundries rank among the toughest environments for a robot
 - A high sealing standard on the robot's joints is vital to withstand coolants and lubricants
 - Airborne aluminum particles
 - Small metal particles mixed with lubricants and coolants makes a mishmash
 - Heat and spits from the different foundry applications
- Robots in a foundry needs to be designed to withstand the harsh environment and also be washable with adequate washing equipment



Foundry Requirements

FOUNDRY
PLUS

- The robot needs to be tight
- Tightness
 - Withstand lubricants and coolants
 - Spec: 100 liters of lubricant / cycle
 - IP67 on the whole manipulator
 - Highest possible dust protection and water tight
 - Corrosion Protected



ABB

Foundry Requirements

- Withstand Aluminum Spits and Flashes
 - Foundries are hot and harsh environments
 - A lot of spits and flashes arise when machining or tending
 - Spits mixed with coolant and lubricant makes a mishmash that is difficult to remove and affect the robot



Foundry Requirements

- Hot Steam Washable Robot
 - High pressure steam is required to wash away dirt and spits form the robots
- Corrosion protected
 - Corrosion protections is required
 - Hot steam washing
 - Coolants and Lubricants
- Wrist totally leak proof



Foundry Plus Design

- Special sealing for gears and bearings
- Flange sealing
- Protection plugs

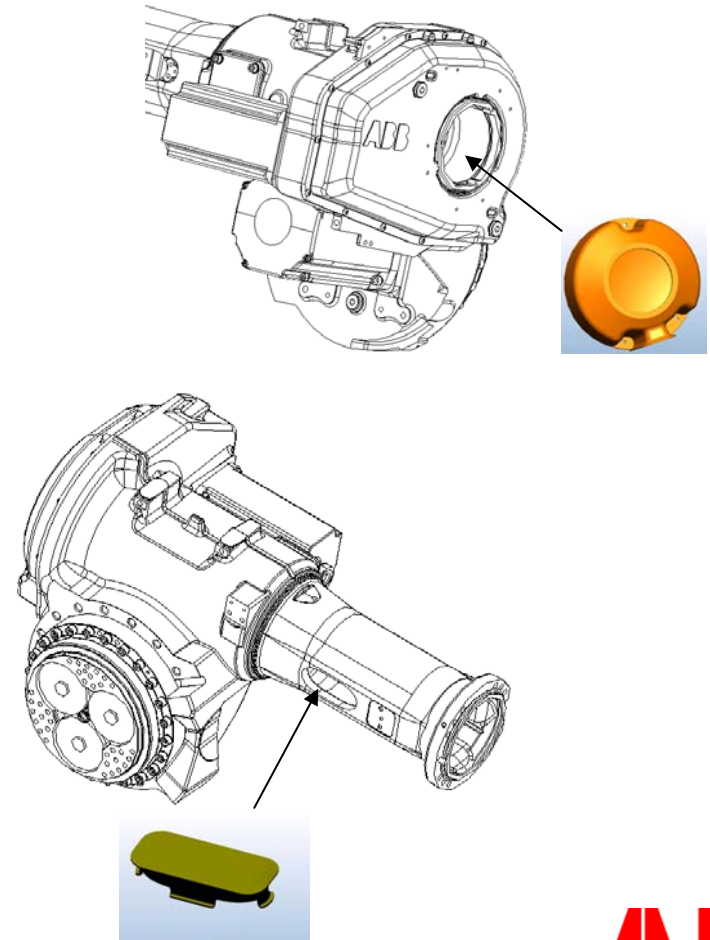


Foundry Plus Design

- Sealed Motors

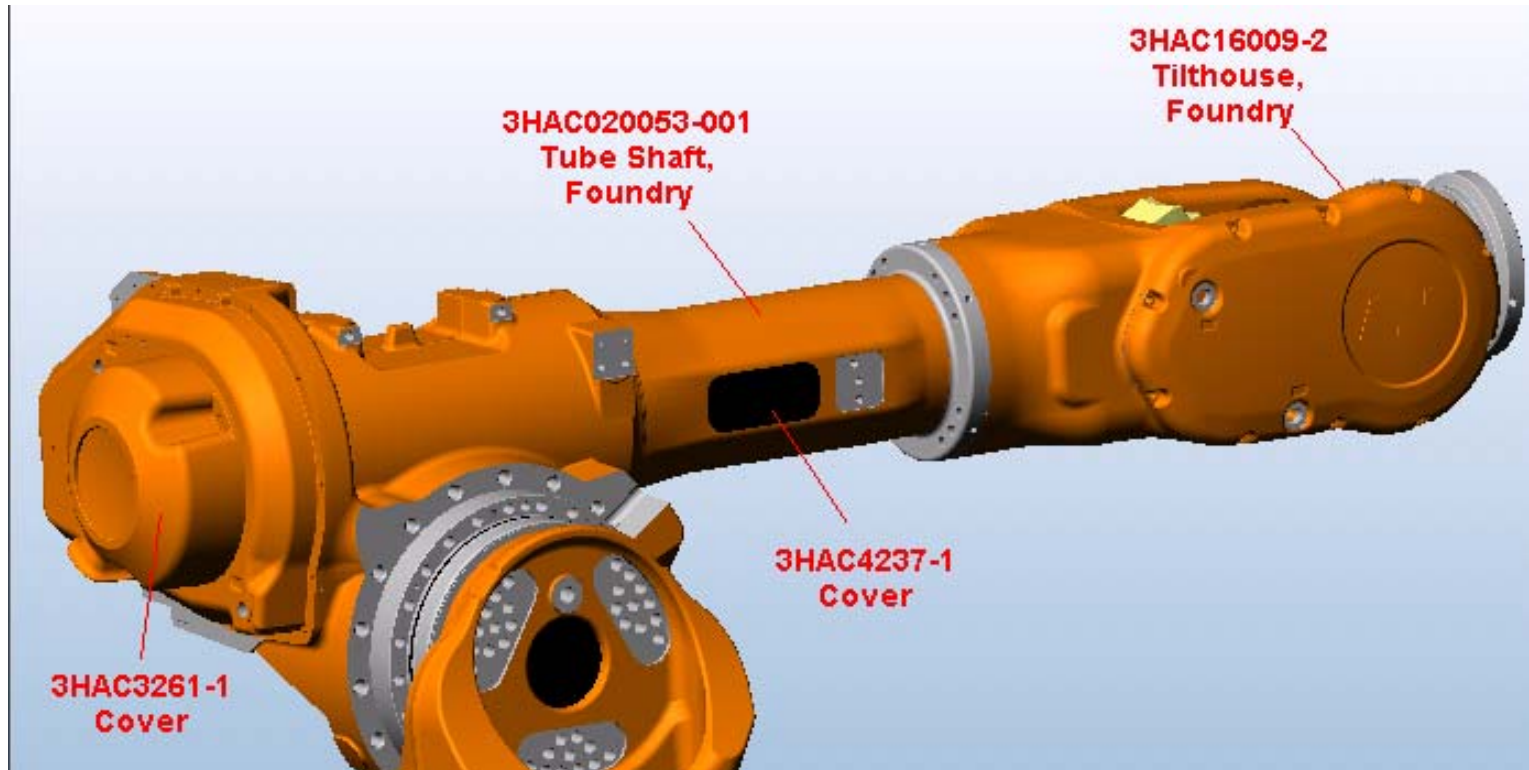


- Extra covers



Foundry Plus Design

- Upper arm IRB 6640

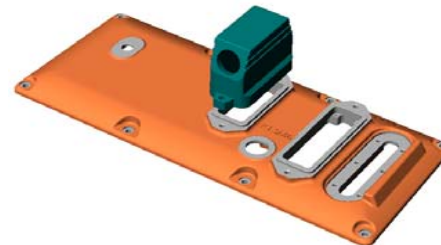


Foundry Plus Design

- Connectors for Difficult Environment
 - IP 67
- Cabling and electronics protected

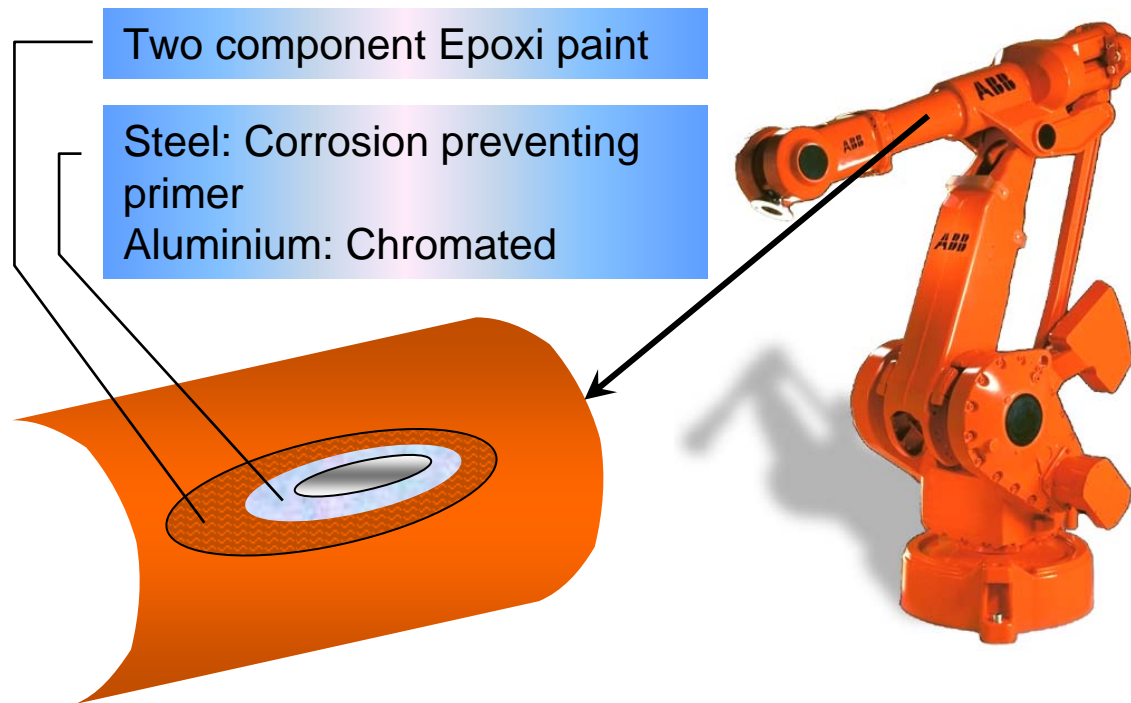


- Special Casted Covers



Foundry Plus Design

- The complete robot is painted with two component Epoxi



Foundry Plus parts

- Special sealings
 - Parallel bracket
 - Balacing spring joint
 - Bearing in lower arm
- Special sealings and covers
 - Joint upper and lower arm
 - Axis 1 bearing protected
 - Connectors on motors
 - Motors
- Special connectors and gaskets
 - Connectors for control cables
 - Push buttons for brake release

Foundry Plus Robots – Small and Medium Size

IRB 140



IRB 1600



IRB 2400



IRB 4400



IRB 4450S



Foundry Plus Robots – Large

IRB 6400RF



IRB 6620



IRB 6640



IRB 7600



IRB 6660



IRB 6650S



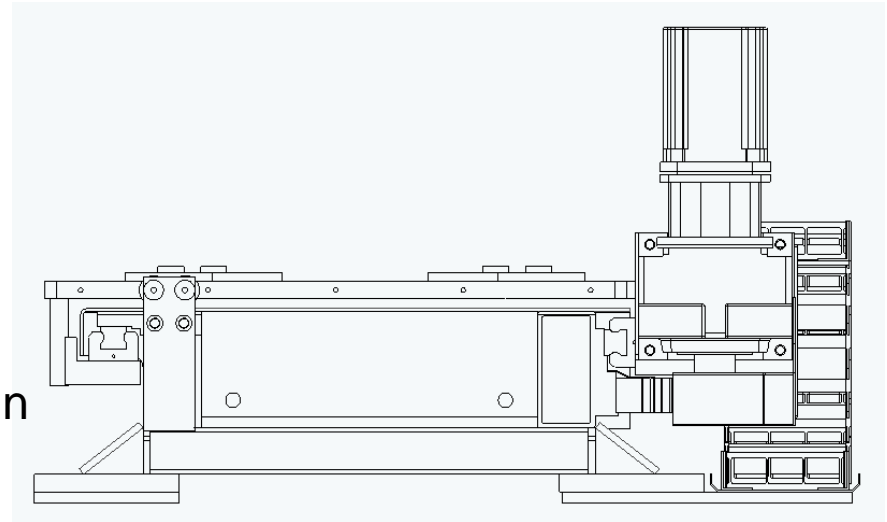
Foundry protected Track Motion



Foundry Track Motion

ABB Foundry Plus products

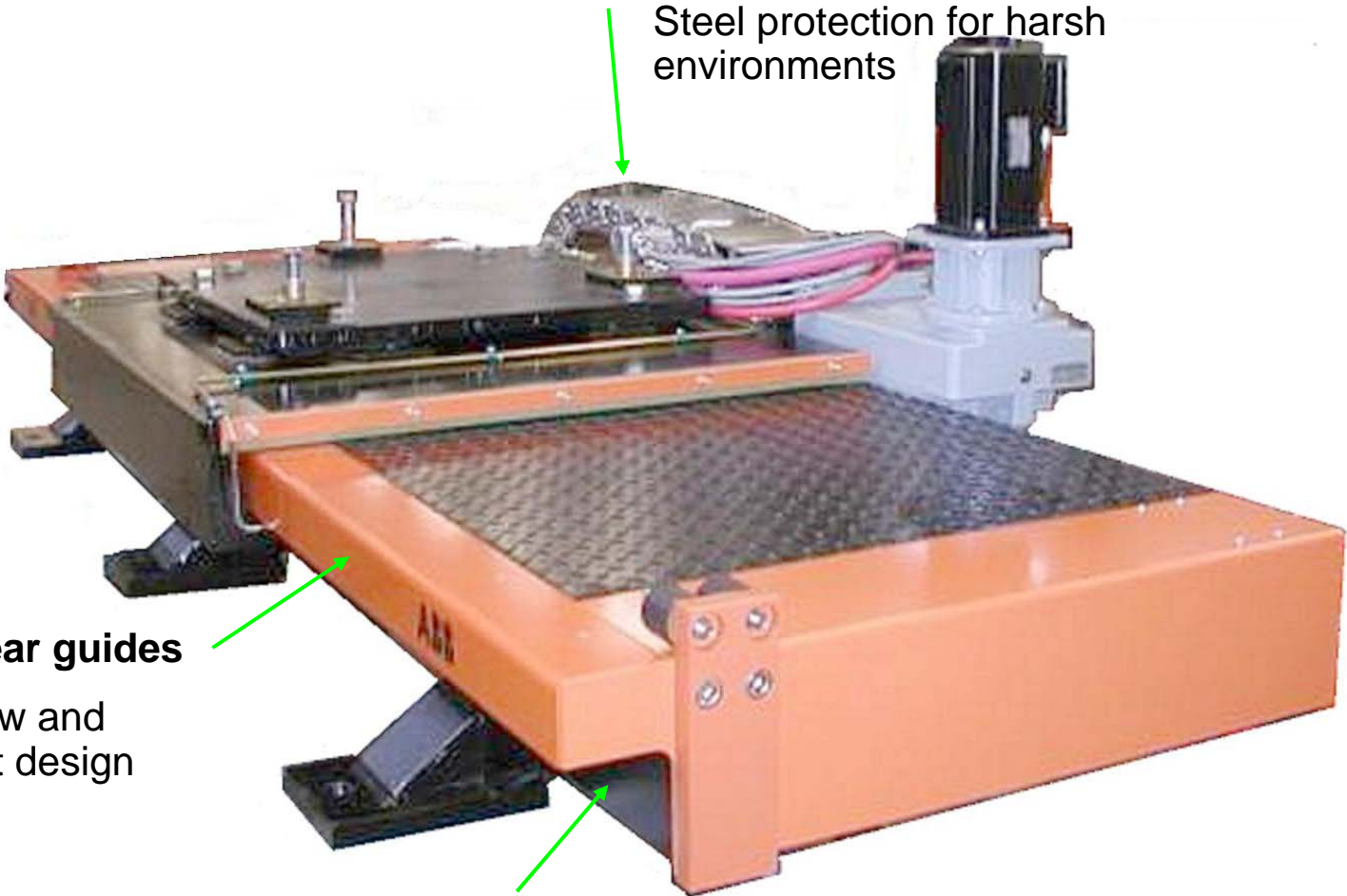
- Protected against harsh environments
- IP67
- Two layer epoxy paint
- Covered linear guides
 - Gives low and compact design



Foundry Track Motion

Covered cable chain

Steel protection for harsh environments



Covered linear guides

Gives low and compact design

Rust resistant linear guides well covered

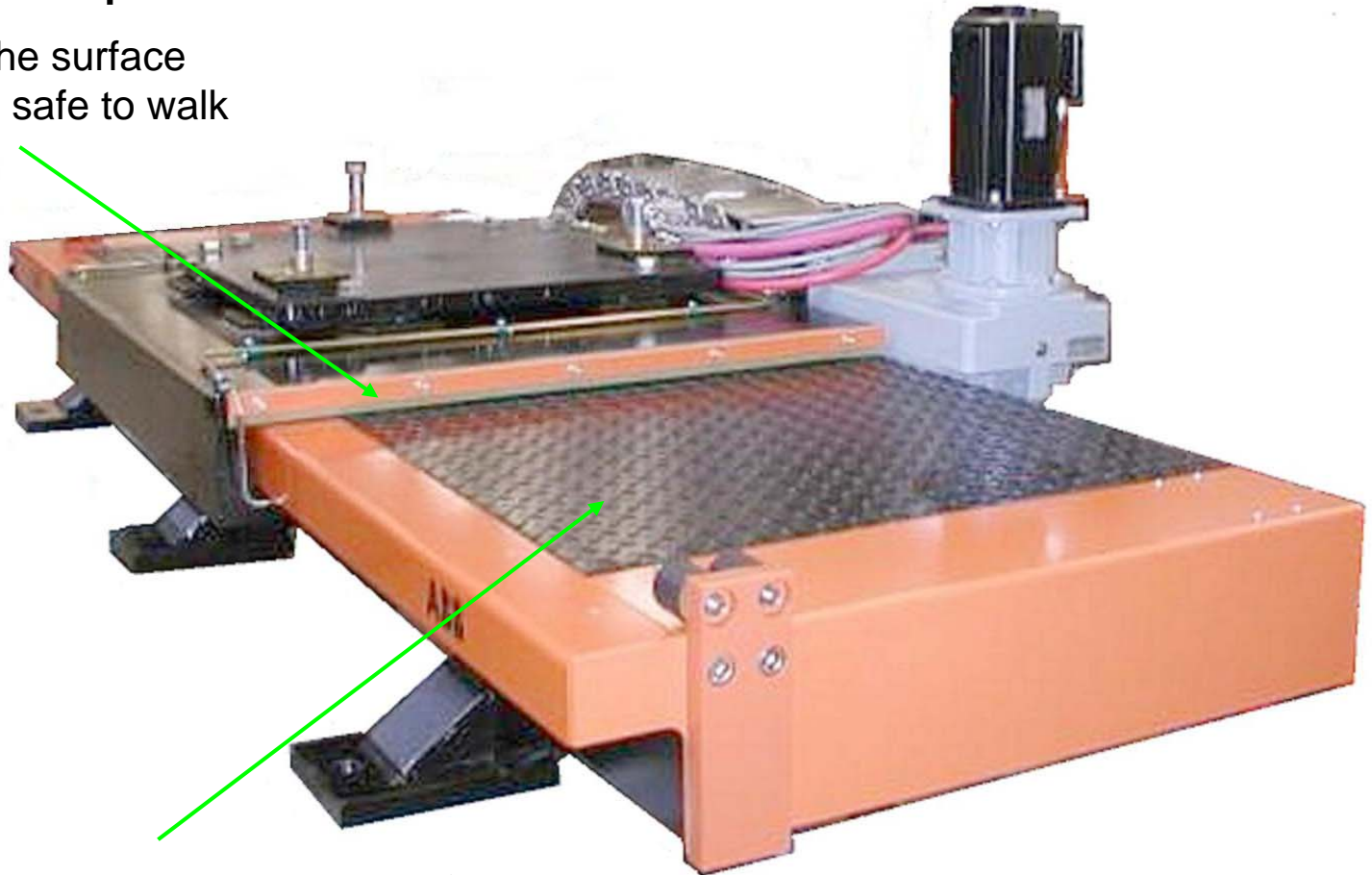
To withstand humid, wet and corrosive environments



Foundry Track Motion

Scrapers for cover plate

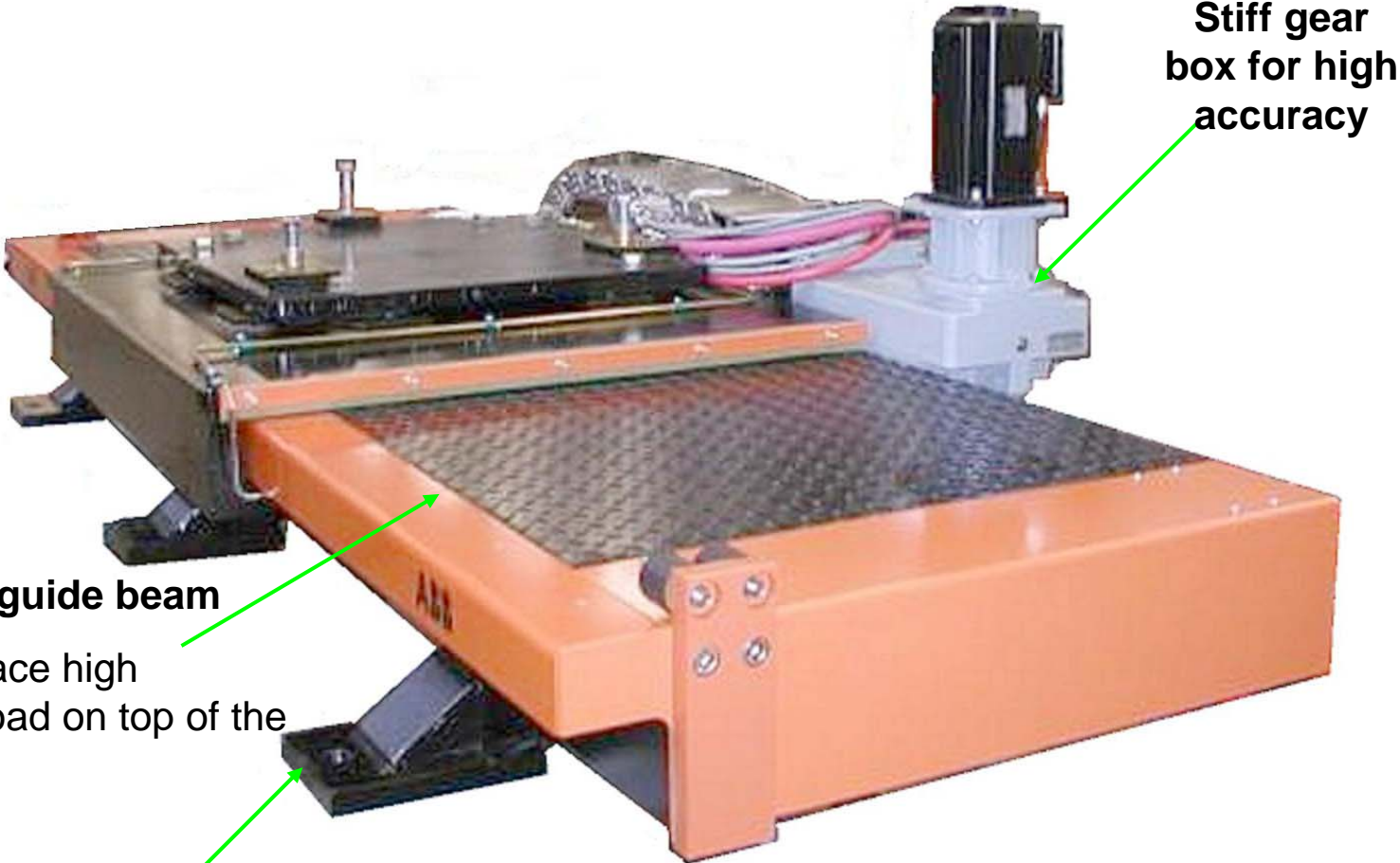
To keep the surface clean and safe to walk on



Completely covered surface

Easy to clean and safe to walk on

Foundry Track Motion



Stiff gear box for high accuracy

Lowered linear guide beam

Ability to place high additional load on top of the track

Centred levelling bolts

For easier levelling





Power and productivity
for a better world™

