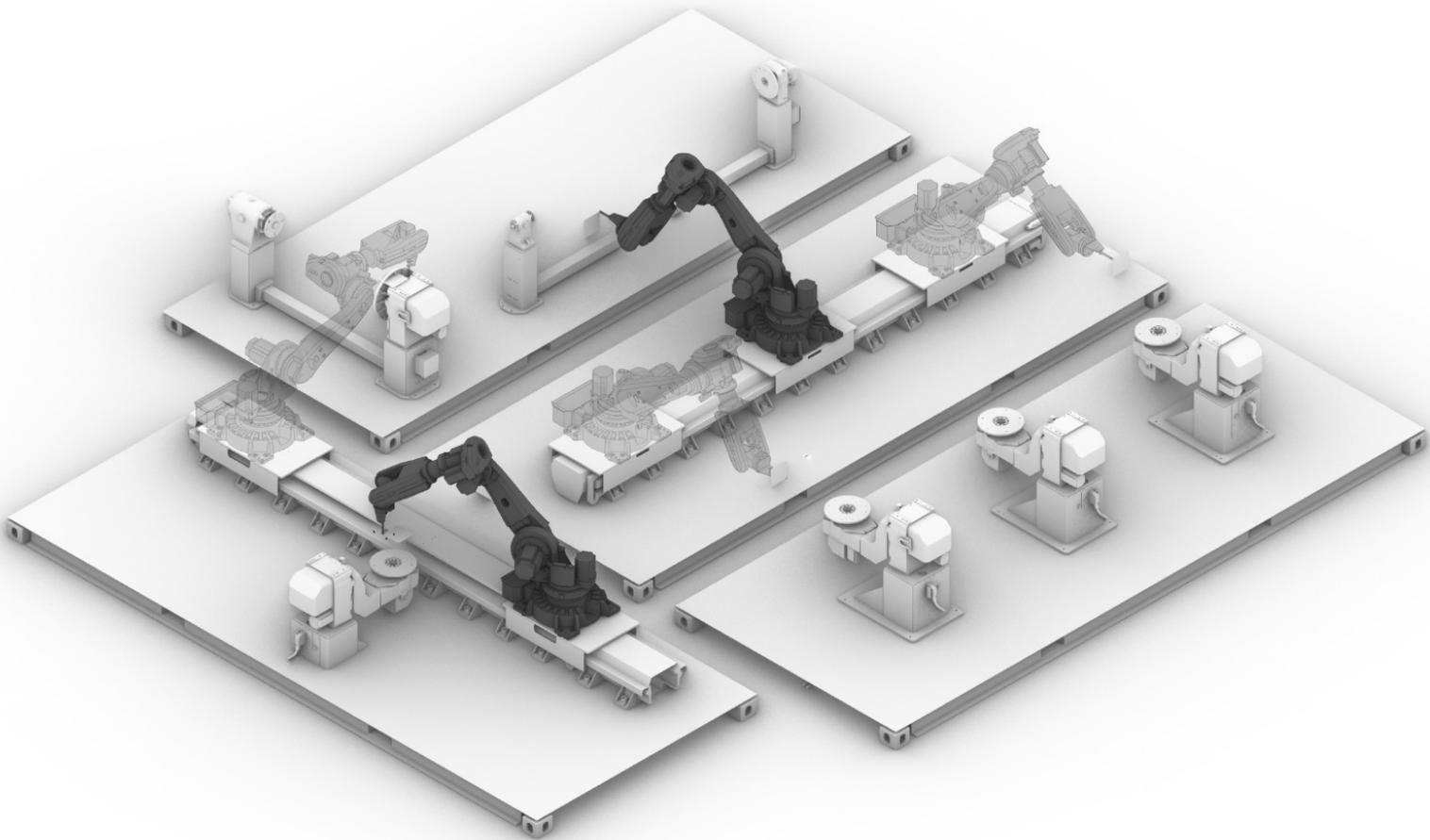


Cell Series ∞





GRADEL

3
1

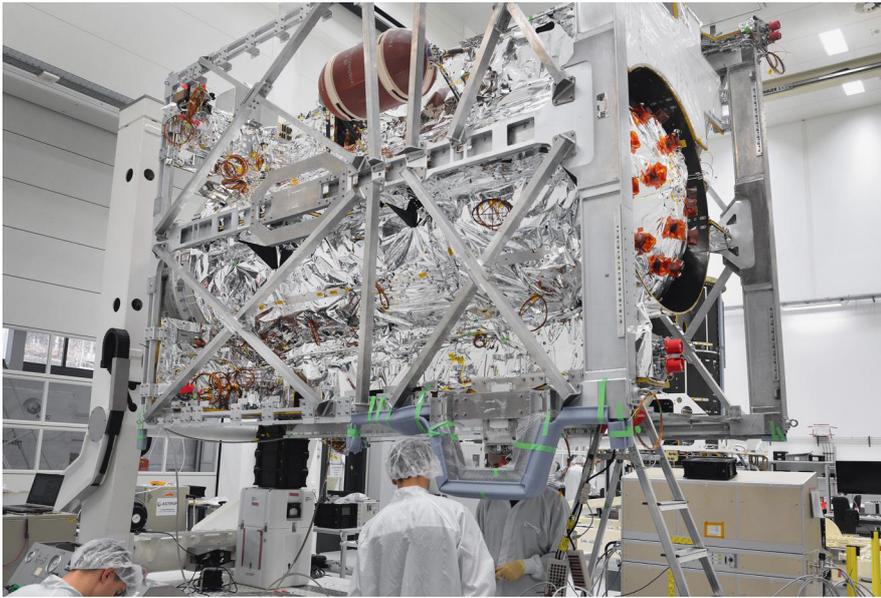
PANUC Robot N-2101G

GRADEL

6
GRADEL

DEMA

DEMA



Gradel Sarl is your partner for the development of special machines for mechanical and electromechanical solutions. Our team will develop optimized solutions by using current modeling technology (e.g. Solidworks) and FEM simulations working together with a state of the art workshop.

In the Space domain, our contribution is in mechanical engineering and manufacturing, including Mechanical Ground Support Equipment (MGSE).

Gradel has taken notice to solving weight and strength concerns of its customers in the aerospace and automotive industry...

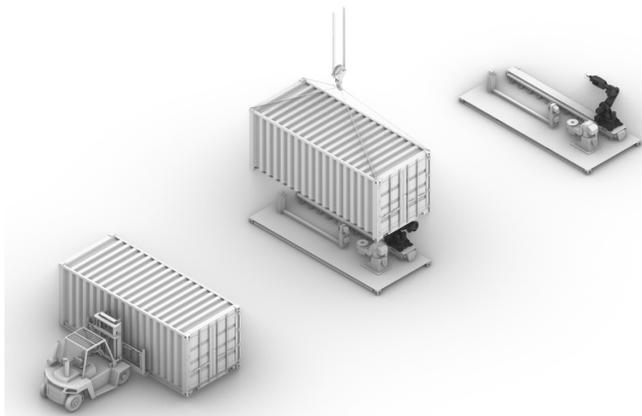


GRADEL

ULTRA LIGHT WEIGHT

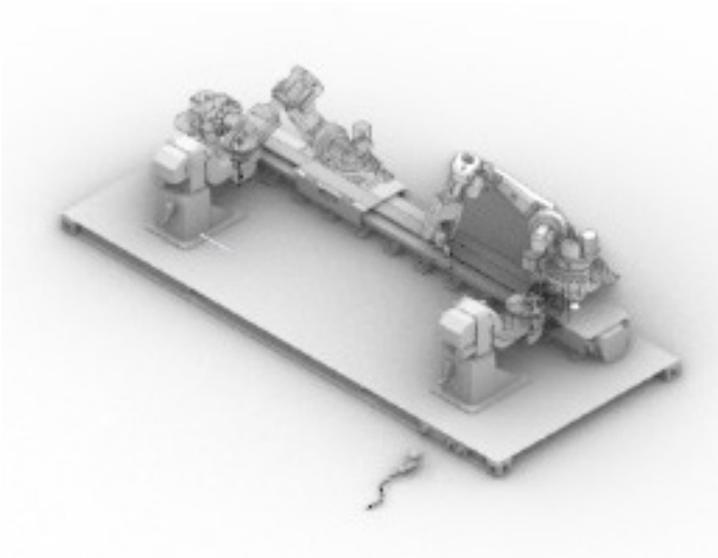
Gradel Ultra Light weight is a fiber winding technology (carbon, glass, Flax, or Basalt) to produce extremely rigid and or flexible parts as required. While traditional rewinding techniques are generally limited to symmetrical rotating parts, this new innovation is predestined for 3D hybrid parts.

When the fibers of composite materials are oriented according to the desired functions and the load cases, intelligent ultra-light structural components can be produced. The advantages of the process are manifold; it makes it possible to absorb forces in all directions of space by optimizing the amount of material used. The highly innovative technology is therefore both a tool for environmental and climate protection, resource conservation and sustainability. is the lightest way to build today.



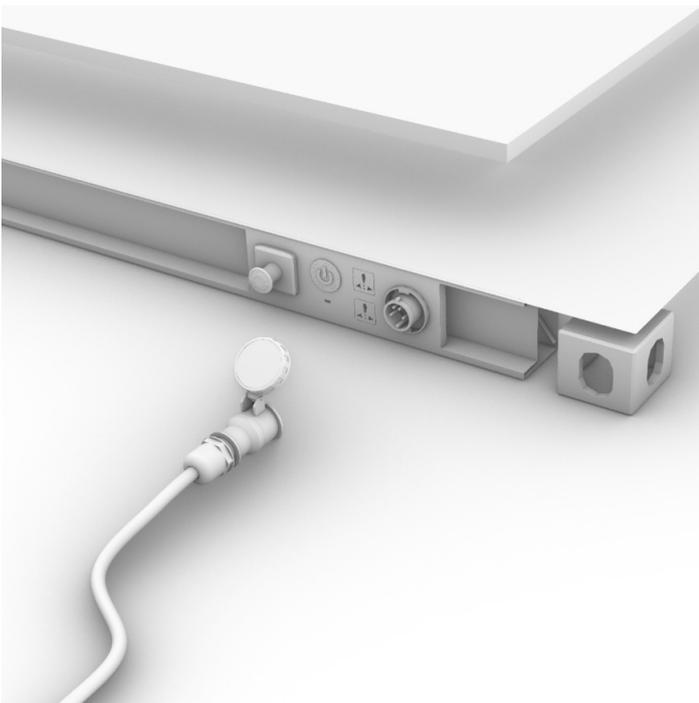
Turn Key Design

Integration and limited series is done at Gradel to ensure quality of the cell that will be delivered in a standard crate for off the shelf solution for the customer. Standard Shipping container dimensions are used.



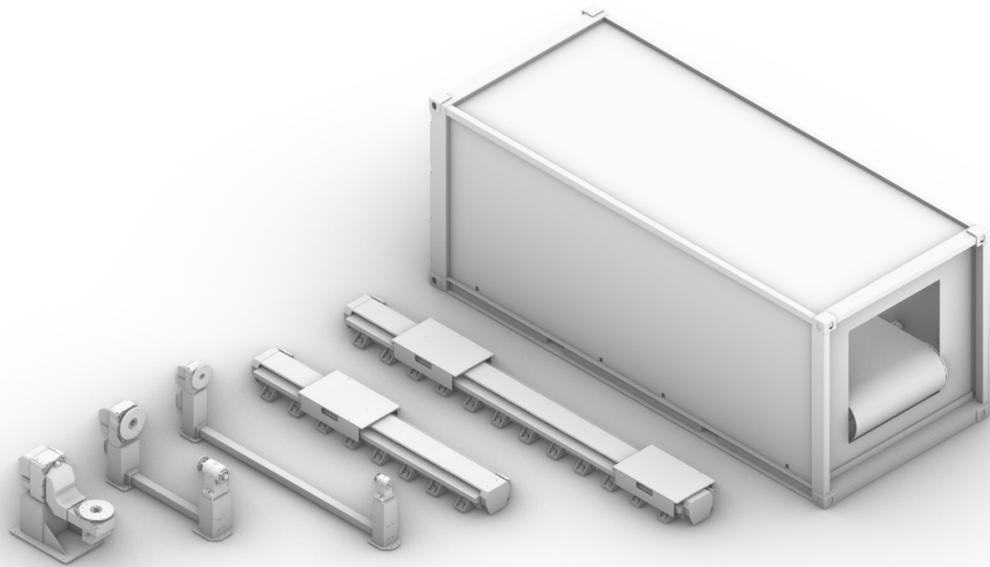
Pre Packed Integration

The robot cell is plug 'N play ready with all components requested by the customer to produce the parts that must be produced. Gradel specialists work with the client to ensure uninterrupted process. From limited production in house to final delivery and integration.



Plug In Play Cells

With diversity in mind, Gradel ULW provides production flexibility to add as you go approach and reconfigured options for the customer. The Plug 'n Play approach creates more flexibility and down time to transition there production for more capacity.



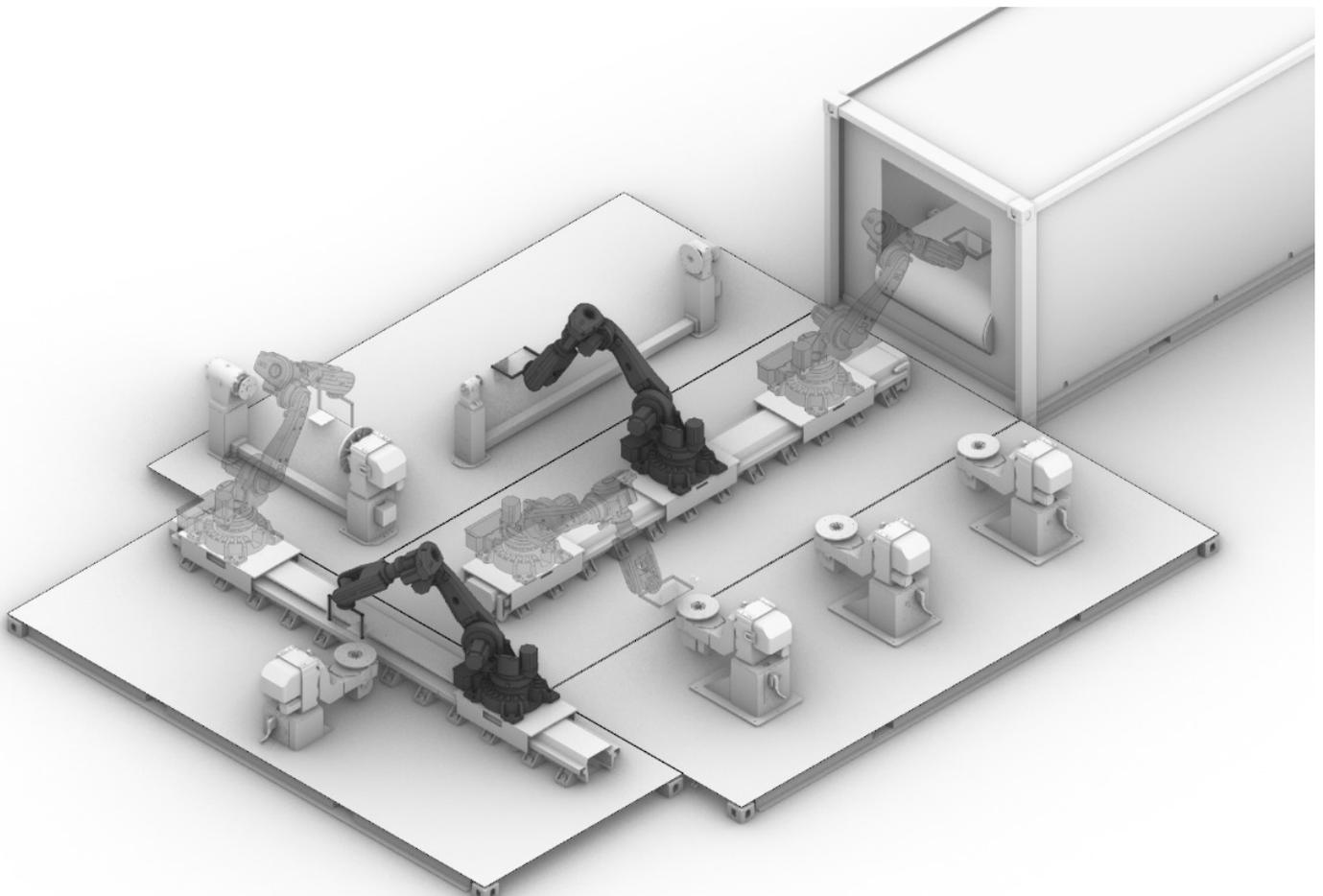
Turntable

Lathe

Linear Rail

Oven [coming soon]

Custom Options



Possible Cell Placement

Series Name: Rook

This Cell contains a robot for small parts in a 1.4 meter reach. Recommended for smaller tows from 6k to 12k range.
Cargo length: 20 feet Cargo Depth : 10 Feet

Rook A.8.1

Robot: IRB 1300 (1 Thus)

Payload: Gradel ULW Sigma Resin Bath

Price Euro: On Request

Rook H.8.1

Robot: IRB 1300 (2 Thus)

Payload: Gradel ULW Sigma Resin Bath

Pawn R1:: IRBT 2005

Price Euro: On Request

Rook A.8.2

Robot: IRB 1300 (2 Thus)

Payload: Gradel ULW Sigma Resin Bath

Pawn R2: IRBP A

Pawn R3: IRBP L

Price Euro: On Request

Rook H.8.2

Robot: IRB 1300 (2 Thus)

Payload: Gradel ULW Sigma Resin Bath

Pawn R1: IRBT 2005

Pawn R2: IRBP A

Pawn R3: IRBP L

Price Euro: On Request

Series Name: Rook Pawns

Optional parts and accessories for the robot cell to add and integrate into your package

Rook

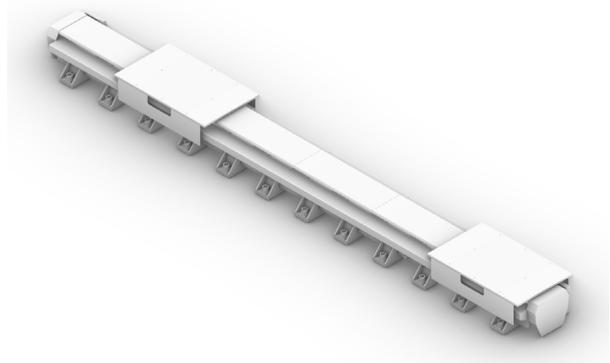
Robot: IRB 1300 (1 Thus)
Payload Weight: 7-11 kg
Payload: Gradel ULW Sigma Resin Bath
Reach: 0.9-1.4 m reach



Price Euro: On Request

Pawn R1

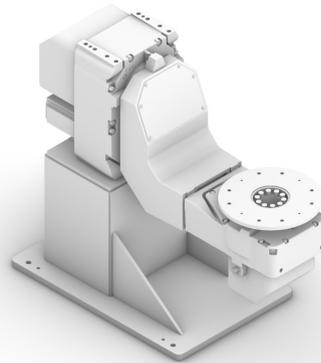
Linear Access: IRBT 2005
Max Weight: 1200 kg
Length: 1000+ mm



Price Euro: On Request

Pawn R2

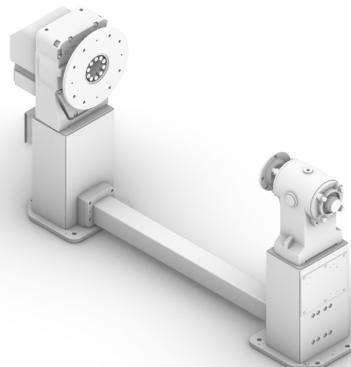
Turn Table: IRBP A
Max Weight: 250 kg



Price Euro: On Request

Pawn R3

Linear Access: IRBP L
Max Weight: 1000 kg
Length: 4000 mm



Price Euro: On Request

Series Name: Knight

This Cell contains a robot for medium parts in a 2 meter reach. Recommended for larger tows from 12k to 24k range.
Cargo length: 20 feet Cargo Depth : 10 Feet

Knight B.8.1

Robot: IRB 4600 (1 Thus)

Payload: Gradel ULW Sigma Resin Bath

Price Euro: On Request

Knight G.8.1

Robot: IRB 4600 (2 Thus)

Payload: Gradel ULW Sigma Resin Bath

Price Euro: On Request

Knight B.8.2

Robot: IIRB 4600 (1 Thus)

Payload: Gradel ULW Sigma Resin Bath

Pawn K2: IRBP A

Pawn K3: IRBP L

Price Euro: On Request

Knight G.8.2

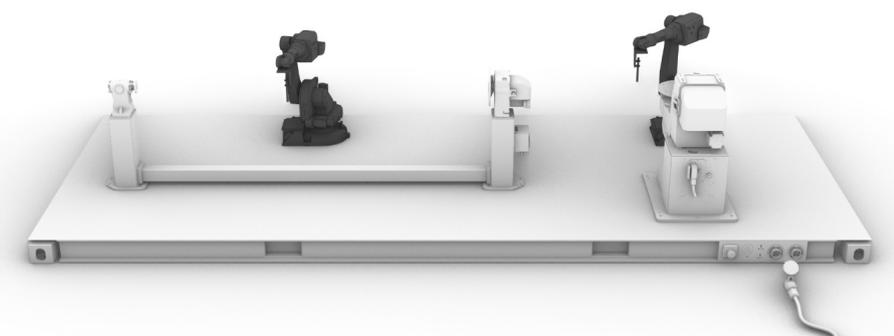
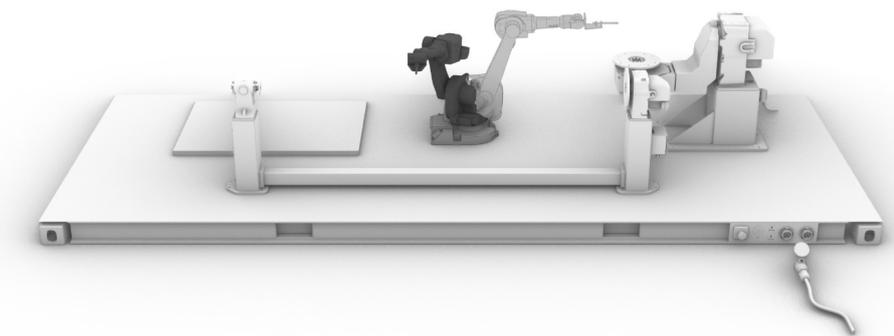
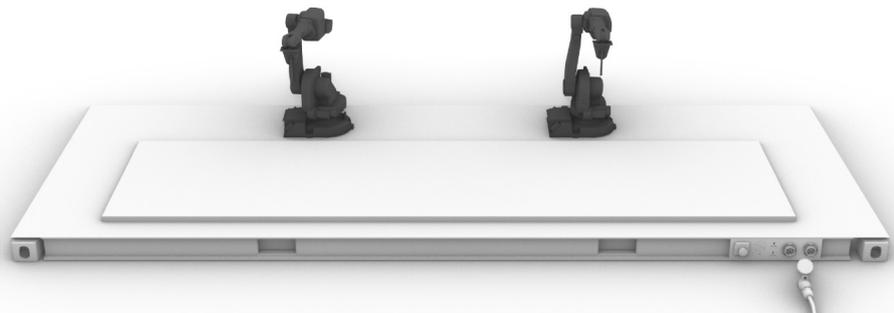
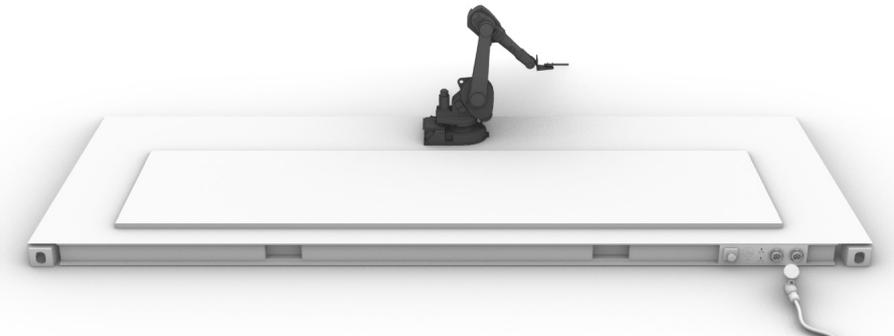
Robot: IRB 4600 (2 Thus)

Payload: Gradel ULW Sigma Resin Bath

Pawn K2: IRBP A

Pawn K3: IRBP L

Price Euro: On Request



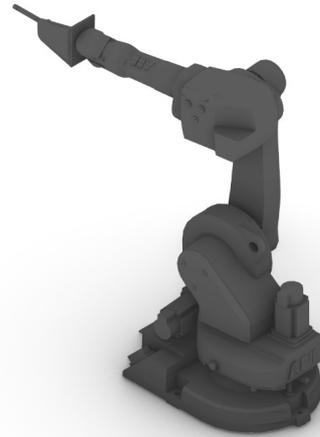
Series Name: Knight Pawns

Optional parts and accessories for the robot cell to add and integrate into your package

Knight

Robot: IRB 4600 (1 Thus)
Payload Weight: 20-60 kg
Payload: Gradel ULW Sigma Resin Bath
Reach: 2.05-2.55 m reach

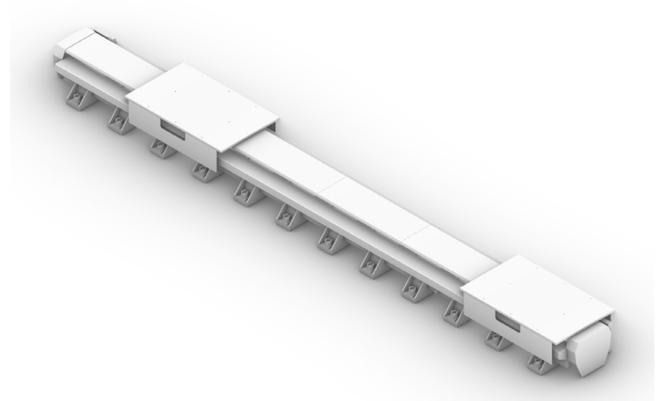
Price Euro: On Request



Pawn K1

Linear Access: IRBT 2005
Max Weight: 1200 kg
Length: 1000+ mm

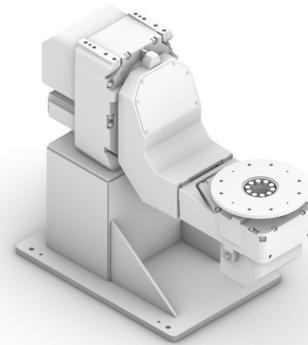
Price Euro: On Request



Pawn K2

Turn Table: IRBP A
Max Weight: 250 kg

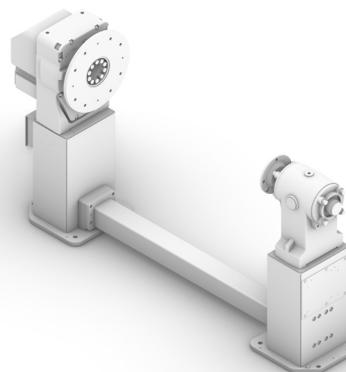
Price Euro: On Request



Pawn K3

Linear Access: IRBP L
Max Weight: 1000 kg
Length: 4000 mm

Price Euro: On Request



Series Name: Bishop

This Cell contains a robot for medium parts in a 3 meter reach. Recommended for larger tows from 12k to 24k range.
Cargo length: 20 feet Cargo Depth : 10 Feet

Bishop C.8.1

Robot: IRB 6700 (1 Thus)

Payload: Gradel ULW Sigma Resin Bath

Price Euro: On Request

Bishop F.8.1

Robot: IRB 6700 (2 Thus)

Payload: Gradel ULW Sigma Resin Bath

Price Euro: On Request

Bishop C.8.2

Robot: IRB 6700 (1 Thus)

Payload: Gradel ULW Sigma Resin Bath

Pawn B2: IRBP A

Price Euro: On Request

Bishop F.8.2

Robot: IRB 6700 (2 Thus)

Payload: Gradel ULW Sigma Resin Bath

Pawn K1: IRBP A

Pawn K2: IRBP L

Price Euro: On Request

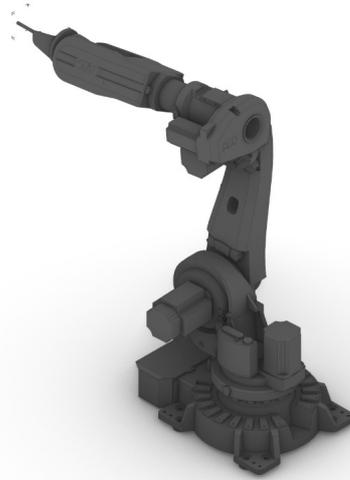
Series Name: Bishop Pawns

Optional parts and accessories for the robot cell to add and integrate into your package

Bishop

Robot: IRB 6700 (1 Thus)
Payload Weight: 150-300 kg
Payload: Gradel ULW Sigma Resin Bath
Reach: 2.60-3.20 m reach

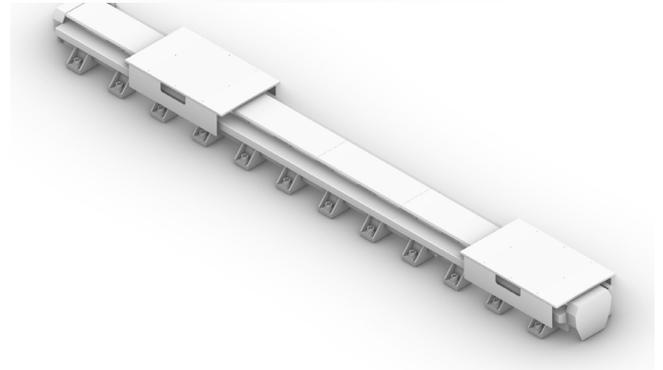
Price Euro: On Request



Pawn B1

Linear Access: IRBT 2005
Max Weight: 1200 kg
Length: 1000+ mm

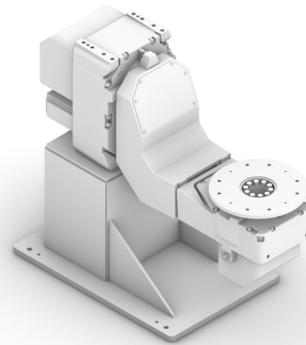
Price Euro: On Request



Pawn B2

Turn Table: IRBP A
Max Weight: 250 kg

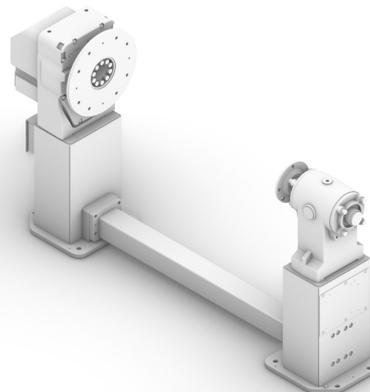
Price Euro: On Request



Pawn B3

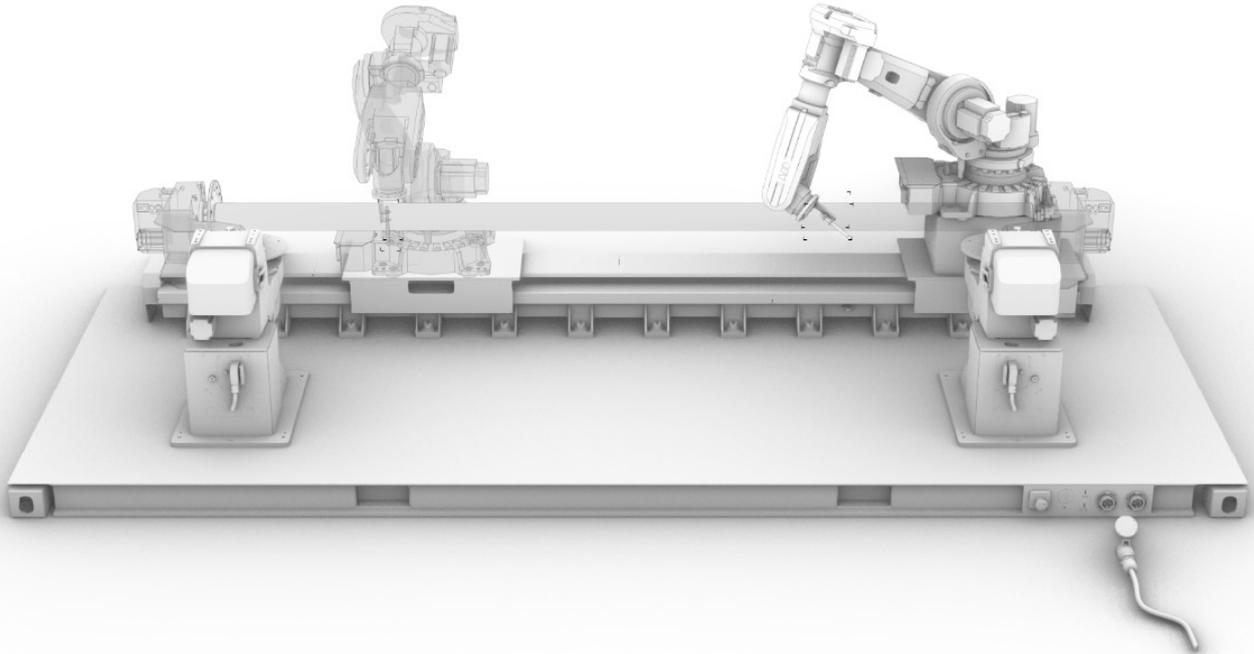
Linear Access: IRBP L
Max Weight: 1000 kg
Length: 4000 mm

Price Euro: On Request



Series Name: Queen (Aerospace) Limited Series

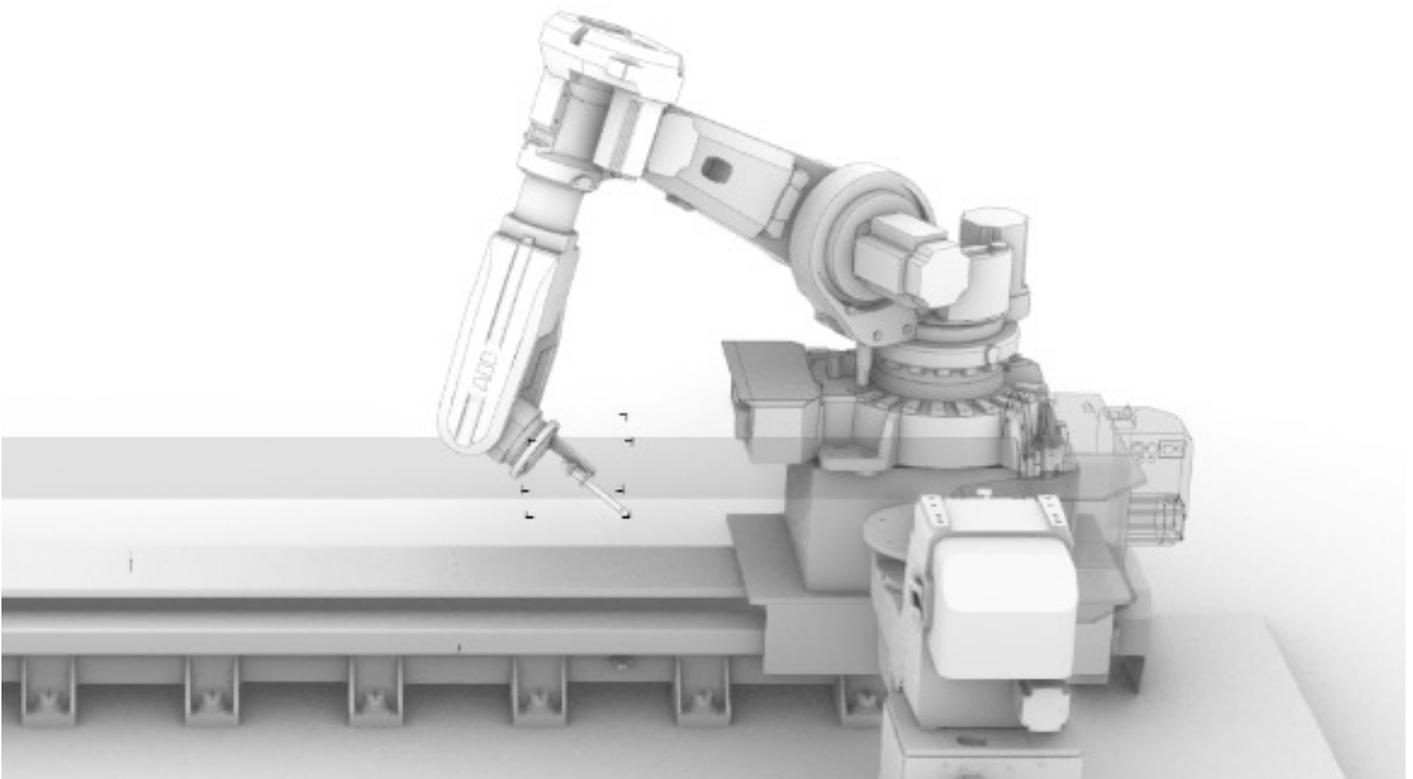
The queen is testing her capabilities in a research lab in Luxembourg under aerospace requirements.
Data is to be released after trial.



Queen E.1 (WHITE)

Robot: CONFIDENTIAL (1 Thus)
Payload: GRADEL ULW VELOCIRAPTER SYSTEM
Pawn Q1: CONFIDENTIAL (1 Thus)
Pawn Q2: CONFIDENTIAL (2 Thus)

Price Euro: Not On Market



Series Name: Queen Pawns

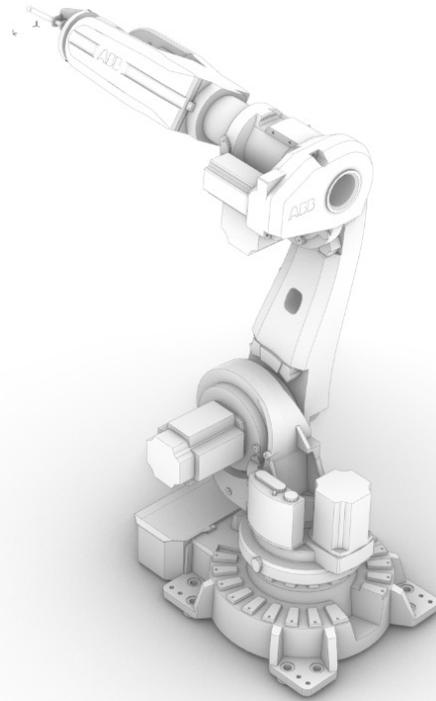
Optional parts and accessories for the robot cell to add and integrate into your package
Cargo length: 20 feet Cargo Length : 10 Feet

Queen (WHITE)

Robot: CONFIDENTIAL

Payload: GRADEL ULW VELOCIRAPTER SYSTEM

Price Euro: Not On Market



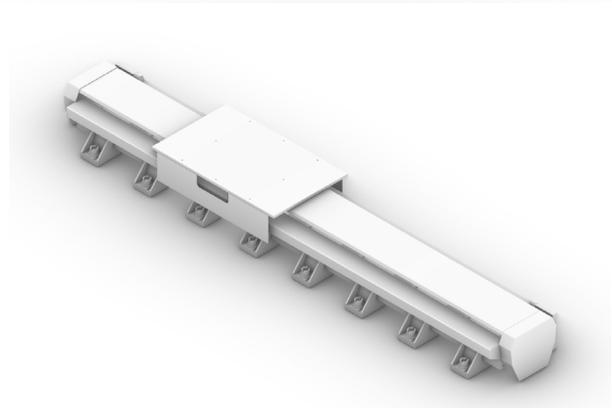
Pawn Q1

Linear Access: CONFIDENTIAL

Max Weight: 1200 kg

Length: 4000+ mm

Price Euro: Not On Market

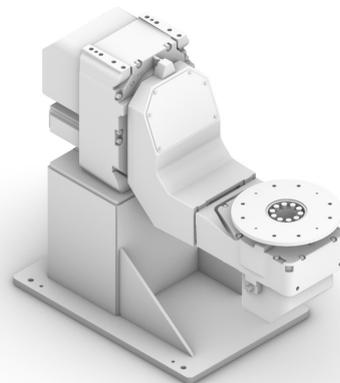


Pawn Q2

Turn Table: CONFIDENTIAL

Max Weight: 750 kg

Price Euro: Not On Market



CURRENTLY UNDER LAB
QUALIFICATION FOR AEROSPACE
TESTING FINALIZED FALL 2022.

Cell Series 



Dr. Eng. David Macieira
[Business Development Manager](#)

Tel : (+352) 39 00 44 21
Mobile: (+352) 671 155 105
Mail : d.macieira@gradel.lu

Brad Elsbury M.Sc LEED AP+
[Director of Research & Development](#)
Tel : (+352) 39 00 44 31
Mail : b.elsbury@gradel.lu

Cell Series Issue 1

GRADEL ULW SARL
6, Z.A.E. Triangle Vert
L-5691 Ellange , Luxembourg
Tel.: (+352) 39 00 44 - 1
Fax: (+ 352) 39 88 57
Internet: gradel.lu

Cell Series

