ABB Arc Welding Products
New Generation Positioners
4th Generation Positioners

1st Generation
1982
S2/S3

2nd Generation
1995
S3/S4/S4C

3rd Generation
2002
S4C/ IRC 5

4th Generation
2010
IRC 5
Product Improvements

New generation motor & gearbox
- Higher capacity and dynamic response
- Up to 1000 kg payload

Modularized structure
- Easier customization
- Late order changes possible

Reduced loading height K/L/R
- Improved ergonomics
- Load height 950 mm

Prepared for HV-drive system
- Easy to integrate with any ABB robot

Improved Mechanical Design
- Increased life span and robustness
New Generation Positioners
Best-in-class Motion Control

• **TrueMove™**
  “What you program is what you get”

• **QuickMove™**
  “Minimum cycle time without effort or risk”

<table>
<thead>
<tr>
<th>Speed</th>
<th>Time</th>
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<tbody>
<tr>
<td>1 m/s</td>
<td>Traditional</td>
</tr>
<tr>
<td>0.1 m/s</td>
<td>TrueMove™ model</td>
</tr>
<tr>
<td>0.1 m/s - 1 m/s</td>
<td>Cycle time gain</td>
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</tbody>
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Motion Control Example

Normal Motion Control

TrueMove / QuickMove
IRBP Module System

M105
G1

M107
G2

M108
G3

M109
G4

M110
G5

IRBP A-250/500/750

IRBP B-250/500/750

IRBP C-500/1000

IRBP D-600

IRBP L-300/600/1000/2000

IRBP K-300/600/1000

IRBP R-300/600/1000
IRBP A-250/500/750

Changes

- Smaller footprint
- Improved repetition accuracy
  - from ±0.1 to ±0.05
- Faster positioning time axis by axis
- Reduced overall weight
IRBP B-250/500/750
IRBP B-250/500/750
Changes

- Improved maximum load difference between sides 1 and 2
- Improved repetition accuracy
  - from ±0.1 to ±0.05
- Faster positioning time axis by axis
- Faster station interchange time
- Reduced overall weight
IRBP C-500/1000

Changes

- Improved repetition accuracy
  - From ±0.1 to ±0.05
- Faster station interchange time
IRBP D-600
Changes

- Improved load capacity
  - to 600 kg
- Improved repetition accuracy
  - from ±0.1 to ±0.05
- Faster station interchange time
- Faster positioning time axis by axis
- Reduced overall weight
IRBP K-300/600/1000
IRBP K-300/600/1000
Changes

- Improved load capacity to 300, 600 and 1,000 kg
- Improved maximum load difference between sides 1 and 2
- Improved repetition accuracy
  - from ±0.1 to ±0.05
- Faster station interchange and positioning time axis by axis
- Reduced loading height 950 mm
- New vertical weld screens
IRBP R-300/600/1000
IRBP R-300/600/1000

Changes

- Improved load capacity
  - to 300, 600 and 1,000 kg
- Improved maximum load difference between sides 1 and 2
- Improved repetition accuracy
  - from ±0.1 to ±0.05
- Faster station interchange and positioning time axis by axis
- Reduced loading height 950 mm
IRBP L-300/600/1000/2000/5000

Changes

- Improved load capacity
  - to 300, 600 and 1,000 kg (with tailstock)
- Improved repetition accuracy
  - from ±0.1 to ±0.05
- Faster positioning time 90, 180, 360 degrees
- Reduced loading height 950 mm
- Smaller foot print
IRBP L
New order structure

Option 1201-15 to 22
Option 1202-xx
Option 1203-xx
Option 1204-xx
MTD with Dynamic Model

The Dynamic Model gives improved performance

- Better pos-to-pos time
- Better path following

The new MTD-unit can be mounted in all possible directions
MTD-unit
Gears

Benefits
- High position accuracy
- High efficiency
- Low vibration
- Low noise
- High resistance to shock loads
- Easy to add media support for fixture
- Maintenance free

Gear box based on high precision helical gears with special geometry for low backlash

Hollow shaft

Output shaft with tapered roller bearings

Lubricated with oil
MTD-unit
AC-motor

Benefits

- High performance Motion Control
- Low risk of disturbance
- Low motor torques ripple
- Robust design – high MTBF
- Maintenance free
Swivels
Tailstock
For more information ...

… go to www.abb.com