IRB 1520ID
The Lean Arc Welder
Introduction

ABB – the pioneer in robotic arc welding

- ABB sold the world’s first arc welding robot in 1975
- ABB has since delivered over 25,000 arc welding robots
- The ABB offer:
  - Easy to achieve top welding quality
  - Highest possible reliability
Introduction
IRB 1520ID - The lean arc welder

- The IRB 1520ID is a new arc welding robot with an incredibly lean design
- Arc welding process interface on FlexPendant
  - Available for Kemppi, Esab and Fronius, more to come
  - Single point of programming
- Designed for single wire MIG/MAG welding with air or water cooling
Introduction
The lean arc welder – 7 key values

1. Simple installation and commissioning → robot up and running in hours
2. The compact arc welding robot requires a minimum of workshop floor area
3. Integrated hose package and welding cablings plus outstanding motion control result in increased welding quality
4. Easy access to narrow spaces with slim upper arm design
5. Higher production uptime and lower maintenance costs thanks to closely integrated hose package and welding cablings along the whole manipulator
6. Outstanding welding reliability thanks to fast restart after weld stop, optional automatic collision detection and BullsEye torch calibration
7. Energy efficient thanks to ABB’s unique motion control and low manipulator weight
Key value 1
Up and running in hours

- Easy-to-use FlexPendant
  - Touch screen and familiar PC interface
  - Intuitive joystick for easy jogging and adjustments
  - Easy program backing-up

- Easy programming
  - Access to all functionality of the power source from the FlexPendant
  - Powerful programming with RobotWare Arc and RobotStudio Arc Welding PowerPac
  - Predictable welding results with VirtualArc
  - “What you program is what you get” with TrueMove
  - Improved motion predictability without swinging cables

- Fast definition of TCP by using BullsEye
Key value 2
Requires a minimum of workshop floor space

- Compact swing base enables a robot position near the workpiece, reducing floor space and cycle times
- Cabling is well integrated along the upper and lower arm → allowing higher robot density
- Inverted mounting possible releasing floor space
Key value 3
Increased welding quality

- Welding cabling is well integrated along the upper and lower arms → less swinging affecting the weld
- Superior motion control with TrueMove
- Accurate definition of TCP by using BullsEye
Key value 4
Easy access to narrow spaces

- Compact design of upper arm and well integrated hose package enable welding in tight spaces
Key value 5.1
Higher production uptime, lower maintenance costs

**Upper arm**
- The hose packages include a one year warranty when supplied by Binzel
- The hose package is well integrated with the upper arm and is well protected from wear and weld spatter
- The wrist design optimizes the bending radius for a long life expectancy
Key value 5.2
Higher production uptime, lower maintenance costs

Lower arm and base

- Fully integrated welding cabling* along the lower arm and base for a more compact, protected and reliable solution

*) Included with the RPC process equipment package
Key value 6
Outstanding welding reliability

- The hose package will never interfere with the fixture, the workpiece or other objects
- Fast restart after weld stop thanks to powerful error recovery (RobotWare Arc)
- Built-in automatic collision detection (software option)
- Automatic BullsEye torch calibration (option)
Key value 7
Energy efficient

- Approx. 0.5 - 1 kW less power consumption compared to competitor robots
  - ABB's 2nd generation unique motion control with QuickMove and TrueMove
  - Low manipulator weight
Load diagram with additional armloads (10 kg)
Up to 4 kg
Working range at center of 5th axis

- Reach forward: 1500 mm
- Reach below the base: 808 mm
- Reach above the base: 1793 mm
- Horizontal stroke: 2680 mm
Easy to integrate
Mechanical mounting interfaces

M6 (x4)
M6 (x4)
M6 (x3)
M6 (x3)
M8 (x6)