

IRB 58 Small

Compact and accurate



Compact design

The IRB 58 is a compact six-axes robot with the unique ABB Hollow Wrist. It is based on the standard IRB 580 robot, though using a horizontal arm of 1220 mm, a vertical arm of 700 mm and a narrow base.

It delivers high finish quality and reduced overspray - in a small space.

Accurate

The main benefit of ABB's Hollow Wrist Technology is that all paint and air supply hoses are encapsulated in the arm and wrist. This prevents damage to the hoses, and the straight design eliminates wear and tear thus increasing overall reliability and reducing maintenance.

Flexible

The high precision hollow wrist provides accurate positioning of atomizers. With its unsurpassed working envelope it can rotate +/- 140 degrees in any direction, and enables the robot to cover the most complicated shapes and areas, even at the back of the object.

It is ideal where floor space is limited. It uses state of the art motor, motor drive and transmission technology, giving it high speed and acceleration.

Global Controller platform

The controller is modular and designed to the highest level of operational reliability.

Paint application

- Built in triggervelues in the vertical arm
- Process/regulation equipment controlled from the ABB Robot controller
- Painting speed up to 1372 mm/sec

Dynamic modelling

With full dynamic modelling, the IRB 58 robot will always work at optimal acceleration and speed to reduce the cycle time and increase the robot lifetime.

The dynamic model with its enhanced software uses the identified loads to optimize motion performance.

TECHNICAL DATA

TECHNICAL MODEL NO: IRB 580-12S

SPECIFICATIONS

Handling capacity HW 10 kg (500mm COG offset)
 Number of axes 6

Axis movements:

Axis	Working range	Max. speed
1. Rotation	300°	112 %/s
2. Vertical arm	145°	112 %/s
3. Horizontal arm	95°	112 %/s
4. Inner Wrist	indefinite	415 %/s
5. Wrist Bend	indefinite	400 %/s
6. Outer Wrist	920°	560 %/s
Pose accuracy	+/- 0,15 mm	
Path accuracy	3 mm	

ELECTRICAL CONNECTION

Supply voltage 3 ph, 200-600 V, 50/60 Hz
 Power consumption Stand by <300W
 During production <700W
 Electrical Safety According to international standards

PHYSICAL

Robot Footprint 660 X 750 mm
 Vertical arm L 700 mm
 Horizontal arm L 1220 mm
 Robot Controller H 1280, W 800, D 550 mm
 Total height 1620 mm
 Weight:
 Robot Unit 542 kg
 Robot Controller 240 kg

ENVIRONMENT

Explosion protection:
 North America Class I&II, Division 1, Group C,D&G, 135 °C
 Japan II 2G,D (T65°C) II B T4 (Zone 1)
 Europe II 2G,D (T65°C) II B T4 (Zone 1)
 EMC Electro Magnetic Compatibility certificate
 Ambient temperature
 Robot Unit 5-45 °C
 Robot Controller 5-52 °C
 Relative humidity Non condensing max. 95%
 Degree of protection Protection Standards IEC 529
 Robot Unit IP 67
 Wrist IP 54
 Robot Controller IP 54

USER INTERFACES

Operator panel In cabinet or external
 Programming unit EExi protected. Portable, joystick and keyboard
 Safety Configurable on screen menus
 EMY stop, Enable device, General mode stop, Auto mode stop, Test mode stop, Cabin interlock

MACHINE INTERFACES

Digital inputs/outputs 512/512
 Analog inputs/outputs 16/12
 Remote I/O Interbus-S 64/64
 Allen Bradley RIO 128/128
 ProfiBus DP 128/128
 CC Link
 Network Ethernet NFS/FTP
 FactoryWare interface
 DDE server
 Diskette drive 3.5" MS-DOS format

ROBOTWARE PAINT

BaseWare OS Robot Operating System, multitasking capability.
 RAPID Powerful application programming language.
 Conveyor Tracking Accurate synchronization of robotic motion, paint process regulation and the moving part for both linear and circular tracking in any direction.

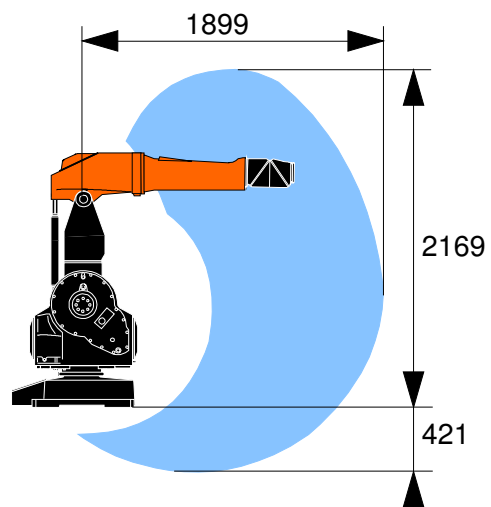
IPS

Regulation of atomizer, fluid and air. High speed control for paint and air flow adjustments with the unique ABB Brush concept.

PC TOOLS

CAP A Computer Aided Painting package containing ShopFloor Editor and RobView.
 ShopFloor Editor Off-Line editing of programs using 3D graphics for path and process tuning.
 RobView Monitoring of robots and process in production. Easy design of user screens.
 RobotStudio

WORKING AREA



Data and dimensions may be changed without notice.