

IRB 580-12

Top Model Functions - Compact Design



Precision - Our Commitment to Quality

Precision is our primary goal and the common denominator of our globally renowned paint robots. The highly flexible, cost-effective and accurate paint robot IRB 580, is a result of combining the advanced functions of the IRB 5400 series within a compact design.

Increased productivity and cost-effectiveness

IRB 580 comes pre-configured, ready to install with its integrated paint process equipment and interface for PLC's. Just start adding the robot paint commands in the powerful RAPID programming language and you're quickly up and running.

Energy consumption is 50-70% of other robot systems, achieved by well-balanced robot arms and an optimized drive-train design. Motor and drives are the same modern type as in our top of the line IRB 5400 robots giving high speed and precision.

140° unsurpassed flexibility

The ABB Hollow Wrist can rotate 140° in any direction. This unsurpassed flexibility makes IRB 580 one of the

most versatile and easy to program paint robots in its class. 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.

Fast and Accurate

ABB's unique Integrated Process System (IPS) features closed loop regulation and high speed control for paint and airflow adjustment. The system helps ensure a uniform film build, within a specified thickness, over the entire object. This assures a high finish quality and optimum use of paint material.

Global Controller Platform

The S4P+ Controller is modular and designed to the highest level of operational reliability. Because of ABB's Global Controller Platform training, service and engineering costs can be significantly reduced.



TECHNICAL DATA, IRB 580-12

SPECIFICATIONS

Handling capacity	10 kg	
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	0.3 mm	
Path accuracy	+/- 3 mm	

ELECTRICAL CONNECTION

Supply voltage	3 phase, 200-600 V, 50/60 Hz
Power consumption	Stand by <300W
	During production ≈1000W
	Peak 5000W
Electrical Safety	According to international standards

PHYSICAL

Robot unit mounting	Floor, inverted
Dimensions:	
Robot Footprint	660 X 750 mm
Vertical arm	L 1000 mm
Horizontal arm	L 1220 / 1620 mm
Robot Controller	H 1280, W 800, D 550 mm
Weight:	
Robot Unit 1220 mm	627 kg
Robot Unit 1620 mm	630 kg
Robot Controller	240 kg

ENVIRONMENT

Explosion protection:	
North America	Class 1, Division 1, Group C&D
Japan	IIGT4
Europe	IIBT4
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 IEG 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 key-board
	Display 16 lines x 40 characters
	Graphical 240 x 320 pixels
	Distributed intelligence
	Configurable on screen menus
Safety	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 128/128
Serial Channels	RS-232, RS-422, RS-485
Network	Ethernet NFS/FTP
	Robot Application Protocol (RAP)
	Factory Ware interface
	Real Time data logger
	High speed IPS link
	DDE Server
Diskette drive	3.5" MS-DOS format

BASEWARE

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 conveyors in any direction.

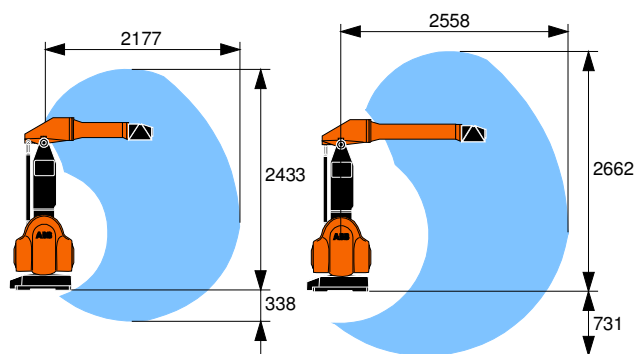
PROCESSWARE

IPS	Integrated Process System. Unique system for closed loop regulation and high speed control for paint and air flow adjustments. Based on open, flexible and adjustable architecture philosophy.
-----	--

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. Graphical programming and tuning of color change sequences.
RobView	Monitoring of robots and process in production. Easy design of user screens.

WORKING AREA



Data and dimensions may be changed without notice.