ARCITEC – IRC5

A powerful Welding Tool for your Robotic production
ARCITEC – a power full welding tool

To be able to two metal sheets together you need a welding equipment
ARCITEC – a power full welding tool

GKN Sankey in UK
200 Arcitec systems
  - AutoSub Parts

“Some references”

Isringhausen in Italy
40 Arcitec systems
  - Seats for heavy vehicles

Benteler World-wide
115 Arcitec Systems
  - AutoSub Parts

Volvo in Belgium
40 Arcitec systems

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Faurecia World-wide
119 Arcitec systems
- Car Seats

“Some references”

Renault in France
35 Arcitec systems
- Exhaust and
  Car body

Arvin Meritor World-wide
40 Arcitec systems
- Exhaust Systems

Daimler Chrysler, Vito in Spain
22 Arcitec Systems
- Car body
- Doors
ARCITEC – IRC5 a powerful welding tool

ARCITEC for IRC5

ARCITEC II HD - LRC 430
430A/37V at 60% Duty Cycle
400A/34V at 100% Duty Cycle
ARCITEC – IRC5 a powerfull welding tool

**ARCITEC- LRC 430**

- All programming and Welding controlled from robot FlexPendant
- Good arc Stability in all arc modes
- Excellent Short arc, Spray arc, RapidArc™ and pulsed arc performance
- Synergic lines for easy weld development
- Suitable for welding all materials that can be welded today
ARCITEC – IRC5 a power full welding tool

ARCITEC - LRC 430

Application example: Car body MIG/MAG Brazing

α - Brass (light)

Steel  |  Overlap joint
Material:
Low Carbon Steel

Consumable:
Solid Wire, SG2

Shielding gas:
92 % Ar / 8 % CO2

Throat thickness:
2,5 mm

Welding speed:
30 mm/sec (1,8 m/min)
Sub-frame welding with Rapid arc

**Material:** Low Carbon Steel

**Wire Type:** Solid SG2 1mm Ø

**Shielding gas:** 92%Ar/8%CO2

**Joint Type:** lap 1.5 to 1.5 mm

**Welding speed:** 26–28 mm/sec
ARCITEC – IRC5 a power full welding tool

ARCITEC - Features

- Arcitec Schedule Data Viewer
- Delivered with Power Source
- PC based tool for viewing welding parameters offline
- Excellent documentation tool
- Essential Quality Assurance tool
ARCITEC – IRC5 a power full welding tool

ARCITEC - Features

Off-line tuning of welding parameters

Off-line prediction of weld shape & penetration

Off-line prediction of weld quality

Off-line prediction of welding defects

VirtualArc

Predicted Weld Profile  Real Weld Profile
ARCITEC – IRC5 a power full welding tool

Aluminium Function Package

Push-push wire feeder specifically designed for Aluminium wires

Master feeder in welding gun

Available in three versions:

- 7 kg bobbin mounted on the robot
- 40kg bobbin in humidity controlled cabinet and bulk pack
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Aluminium Specific Functionality

Schedule Pulsing

Circular Weaving

Inline Weaving

Syncro Pulsing

Rapid Aluminium Welding

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Application Examples: Motorcycle frame welding

Aluminium Welding with,

ARCITEC Aluminium Function Package

The weld is part of the design
Aluminium Welding

Material: Aluminium (6xxx)

Wire Type: AlSi (4043A)

Shielding gas: Ar100 %

Throat thickness: 2.5 mm

Welding speed: 8 mm/sec
ARCITEC – IRC5 a power full welding tool

Material:
Aluminium

Consumable:
AlMg 5356

Shielding gas:
100 % Ar

Throat thickness:
3,0 mm

Welding speed:
45 mm/sec (2,7 m/min)

ARCITEC “Rapid-Alu”
ARCITEC – IRC5 a power full welding tool

ARCITEC included in Laser-Hybrid application

Welding Speed 3.6 m/min

Box welding in China
ARCITEC – IRC5 a powerful welding tool

IRC5 Cabinet
Stand alone Power source
ARCITEC - LRC 430

“High Level” User Interface

New Feature

Included in Product Price list for IRC5
New Feature: User Interfaces - ARCITEC - IRC5

“High Level” User Interface

- Wirefeed speed: 11.0 m/min
- Voltage: 40.00 V
- Pulse current: 512 A
- Pulse time: 2.2 ms
- Background current: 112 A
- Frequency: 198 Hz

New Feature
New Feature: User Interfaces - ARCITEC - IRC5

Easy to find ARCITEC in IRC5

New Feature
New Feature: User Interfaces - ARCITEC - IRC5

Intuitive selection of Schedules, Synergic lines, Advanced functions, Back & Restore
New Feature: User Interfaces - ARCITEC - IRC5

Intuitive selection of Creepstart, Hotstart, Crater fill & Synergic On or Of
New Feature: User Interfaces - ARCITEC - IRC5

Intuitive selection of method, Material, Gas & Wire size
New Feature: User Interfaces - ARCITEC - IRC5

Graphical presentation of User defined Synergic lines

File | Create | User defined synergic lines | Close
--- | --- | --- | ---
| Arc Dialog | Arcitec IRC5 | | |
New Feature: User Interfaces - ARCITEC - IRC5

<table>
<thead>
<tr>
<th>Id</th>
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<tbody>
<tr>
<td>21</td>
<td>Wirefeed speed</td>
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<tr>
<td>20</td>
<td>Voltage/Arc length control</td>
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<tr>
<td>26</td>
<td>Hotstart wire speed</td>
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<tr>
<td>27</td>
<td>Hotstart voltage/Hotstart arc length control</td>
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<td>Hotstart time</td>
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<td>Dynamic properties</td>
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<td>32</td>
<td>Pulse current</td>
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<tr>
<td>33</td>
<td>Pulse time</td>
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</table>

Guard Stop: Stopped (Speed 100%)
New Feature: User Interfaces - ARCITEC - IRC5

Process tuning

Weld tuning

Running mode: Once
Blocked:
Welddata: "w1"

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Tuning</th>
<th>Present</th>
<th>Origin</th>
<th>Unit</th>
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<tr>
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<td>V</td>
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<tr>
<td>Wirefeed speed</td>
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<td>25</td>
<td>25</td>
<td>m/min</td>
</tr>
</tbody>
</table>

Revert Meas. values
New Feature: User Interfaces - ARCITEC - IRC5

Voltage: 15.00
Current: 200
Heat input: 0.30
Summing up of user benefits

Excellent weld quality performance in all materials

All programming from Flex Pendant with high level and intuitive programming views

Very high welding productivity thanks to integrated Rapid arc technology

Off-line weld tuning thanks to optional VirtualArc software tool

The Arcitec power source system can be used in Laser-Hybrid applications