

ARCITEC II

**A powerful
Welding Tool for
your Robotic
production**



ABB

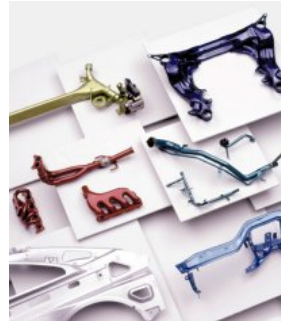
Customer references

GKN Sankey in UK

200 Arcitec systems
- AutoSub Parts



*"Some
references"*



Benteler World-wide

80 Arcitec Systems
- Exhaust and Axles



Triumph Motorcycles in UK

10 Arcitec Welding systems
(4 Aluminium)

Volvo in Belgium

40 Arcitec systems



Customer references

Faurecia World-wide

- 110 Arcitec systems
- Car Seats



"Some references"



Renault in France

- 30 Arcitec systems
- Exhaust and Car body



Arvin Meritor World-wide

- 30 Arcitec systems
- Exhaust Systems

Daimler Chrysler, Vito in Spain

- 22 Arcitec Systems
- Car body
- Doors



ARCITEC II - One welding Power Source, two versions



ARCITEC II - LRB 400

400A/34V at 60% Duty Cycle

315A/30V at 100% Duty Cycle



ARCITEC II HD - LRC 430

430A/37V at 60% Duty Cycle

400A/34V at 100% Duty Cycle



ARCITEC-LRB 400 & LRC 430

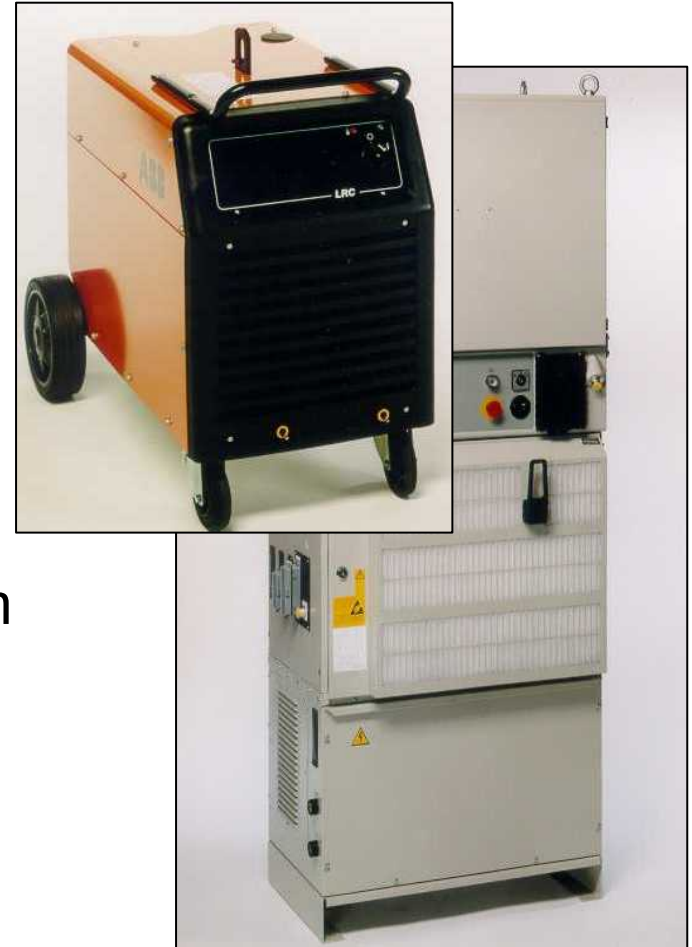
Small footprint to Save Floor space (LRB)

One power drop for controller and welding power source (LRB)

Fully integrated into Robot Controller using can-bus communication

Programming and Welding controlled from robot teach pendant

Higher volume of cooling air gives a higher duty cycle (LRC)



ARCITEC-LRB 400 & LRC 430

Good arc Stability in all arc modes

Excellent Short arc, Spray arc,
RapidArc™ and pulsed arc
performance

Synergic lines for easy weld
development

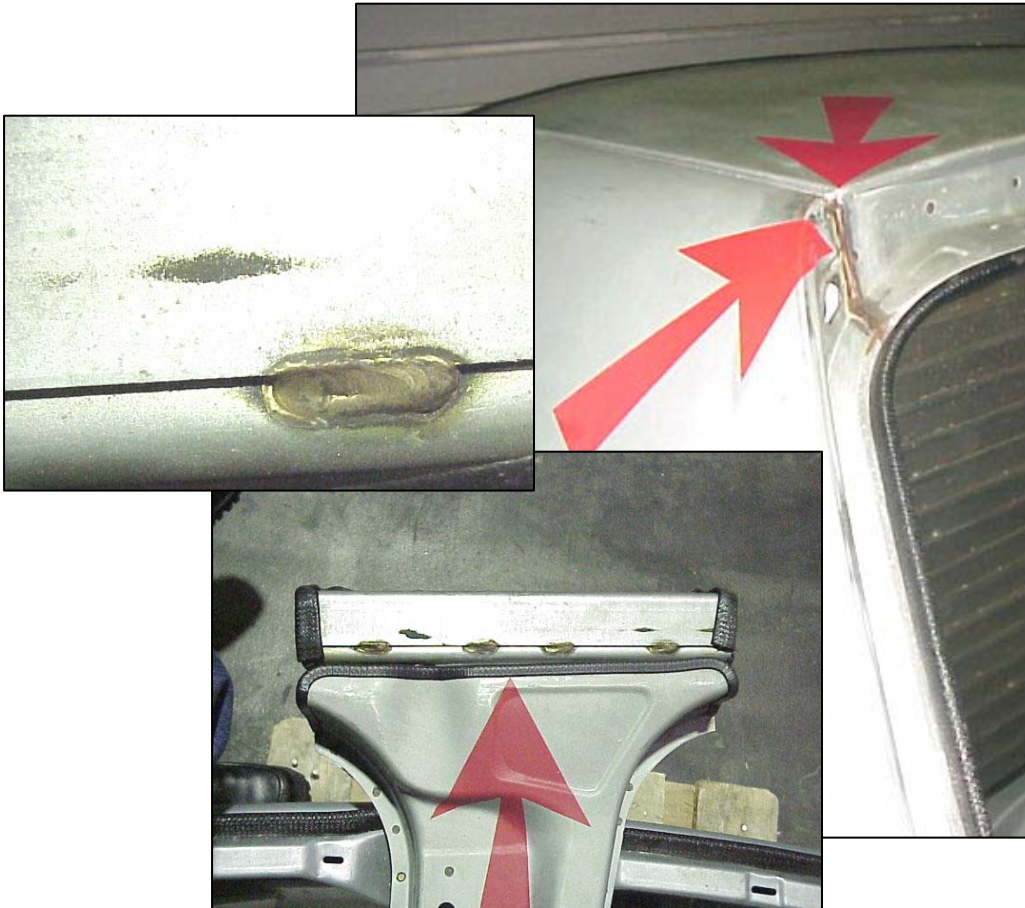
Non synergic capability for the more
demanding applications

Suitable for welding all materials that
can be welded today



Application example - Brazing

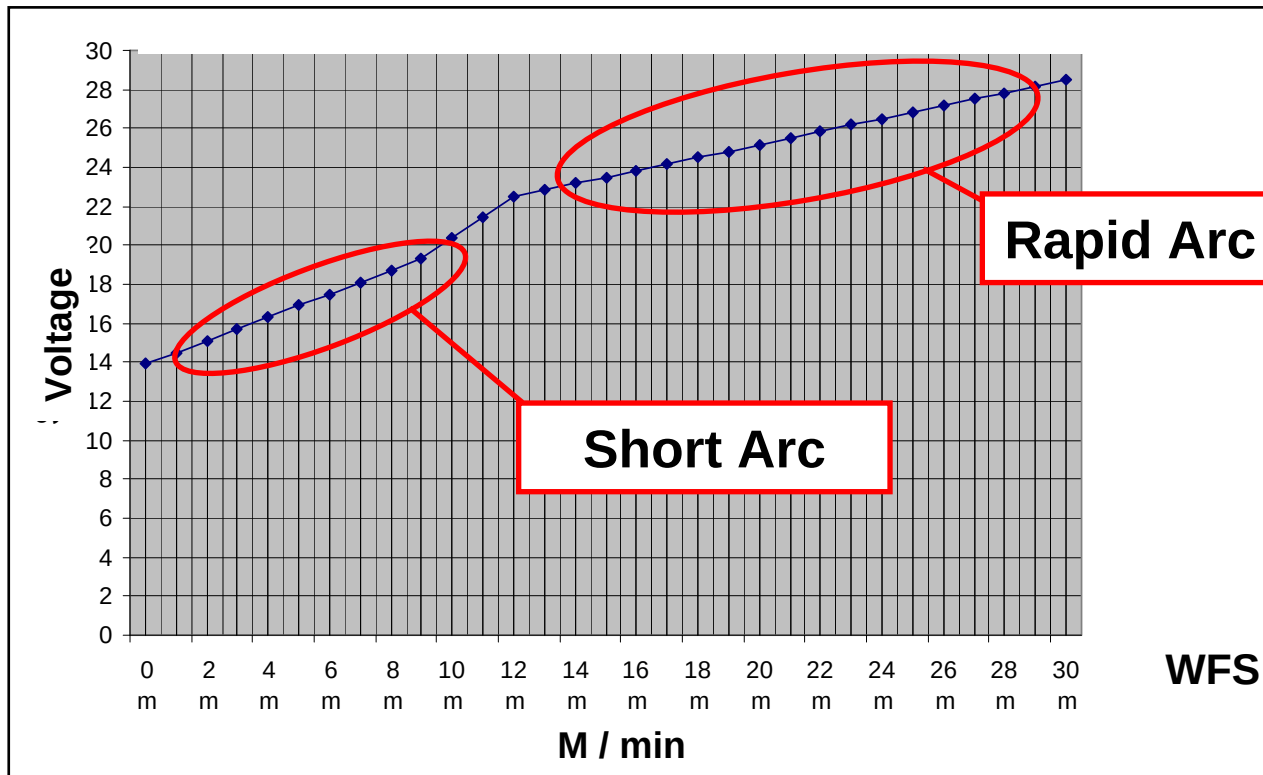
Car body MIG/MAG Brazing



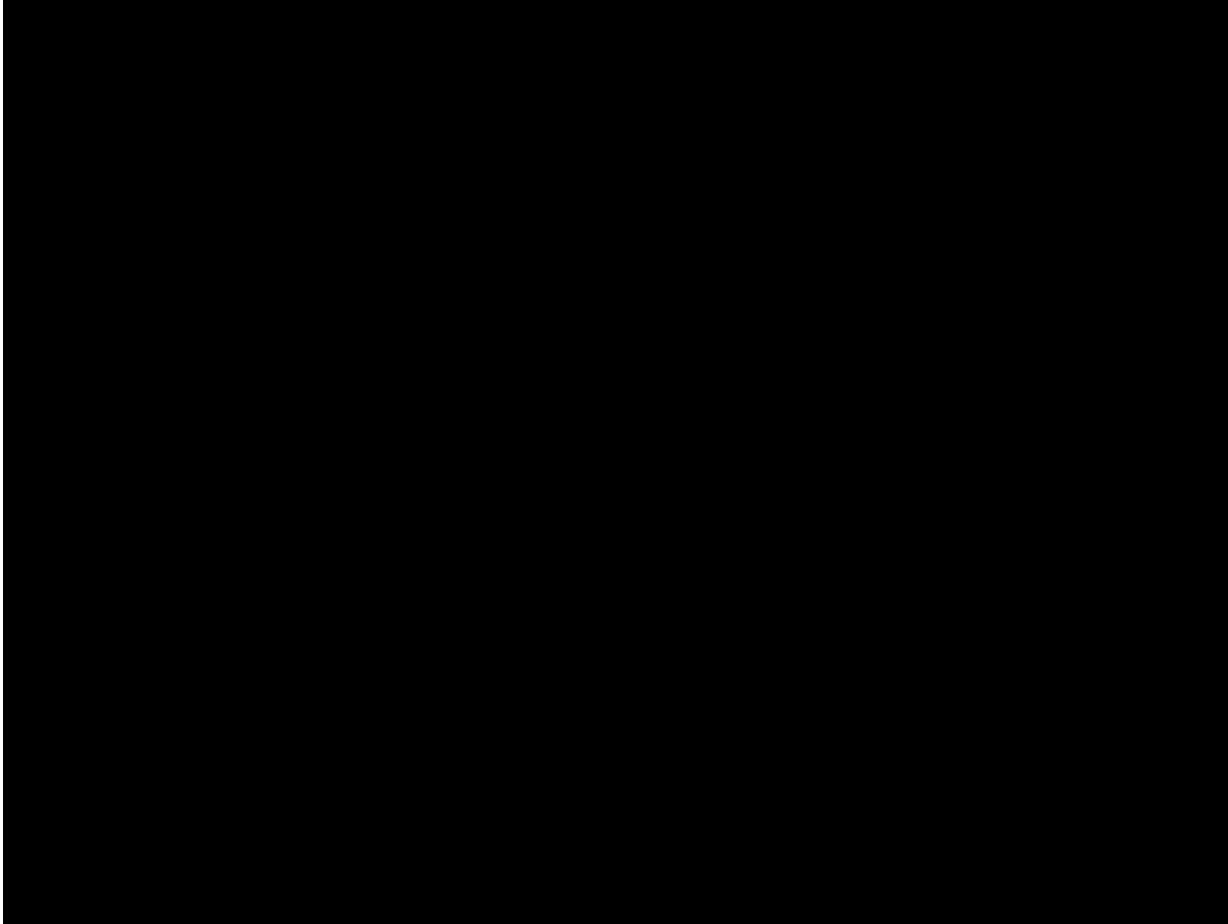
ARCITEC II



ARCITEC II - Short Arc Synergic lines for Robotic welding



Arcitec “Rapid Arc” example



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)

Power source:

ARCITEC, LRB 400



Subframe welding with Rapid Arc

Material: Low Carbon Steel

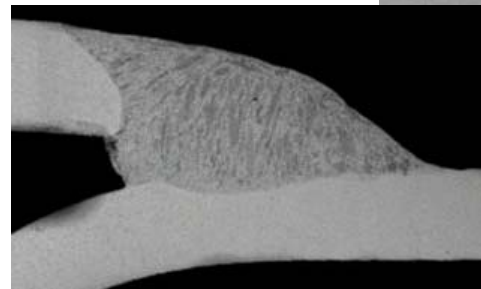
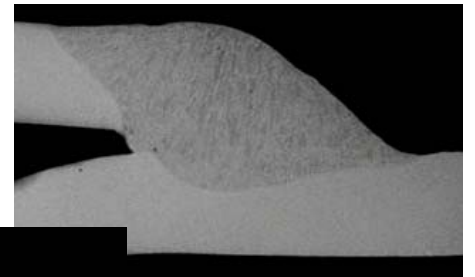
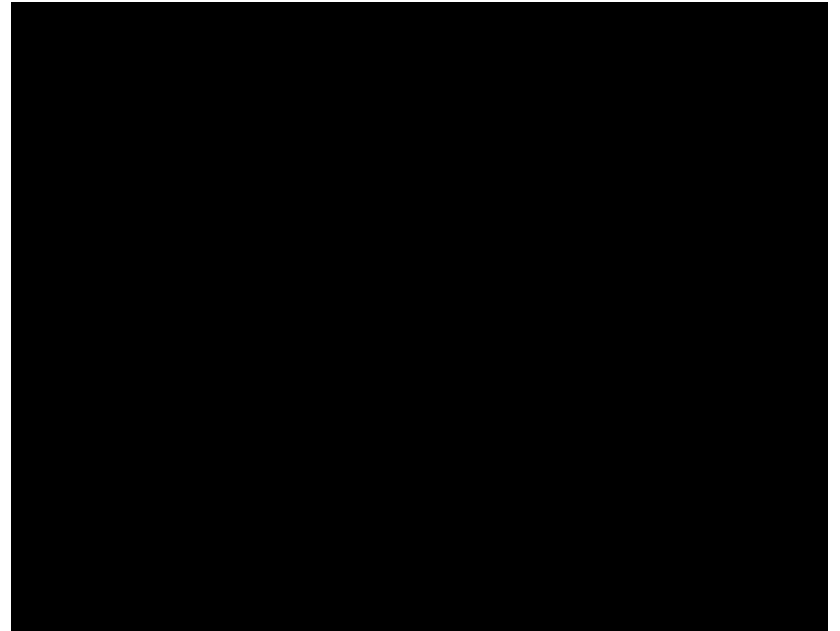
Wire Type: Solid SG2 1mm Ø

Shielding gas: 92%Ar/8%CO₂

Joint Type: lap 1.5 to 1.5 mm

Welding speed: 26–28 mm/sec

Power source: Arcitec LRB400



Arcitec II - Features

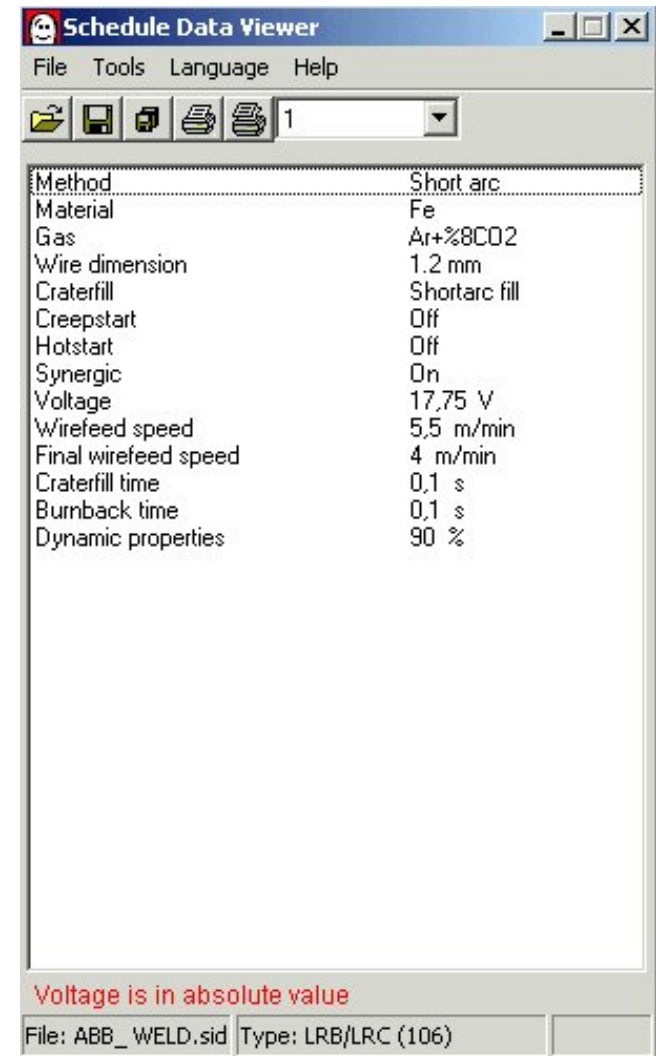
Arcitec Schedule Data Viewer

Delivered with Power Source

PC based tool for viewing welding parameters offline

Excellent documentation tool

Essential Quality Assurance tool



Arcitec II - Features

Weld data monitoring (WDM Rapid)

Integrated solution – no external sensors or additional equipment

Uses measured wire feed speed, plus voltage and current measured internally at the output terminals of power source

Actual voltage, current and wire feed speed displayed on the teach pendant



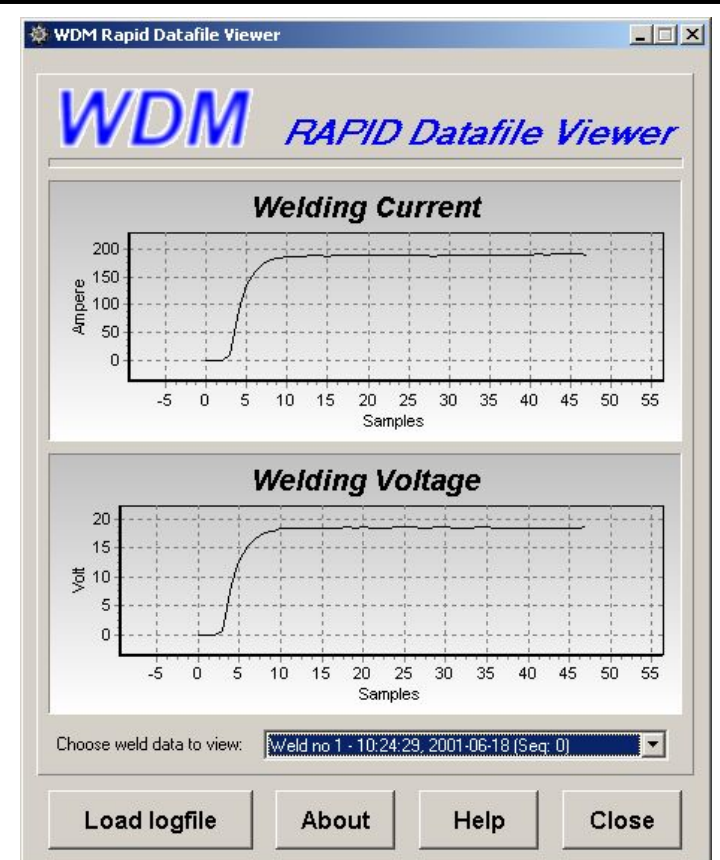
Arcitec II - Features

Weld data monitoring (WDM Rapid)
continued

PC Application for Viewing,
Recording and documentation

Parameter recording with time, date
and weld number

WDM Rapid is set up to supervise Hi-Lo limits, alarms,
process stop or other action



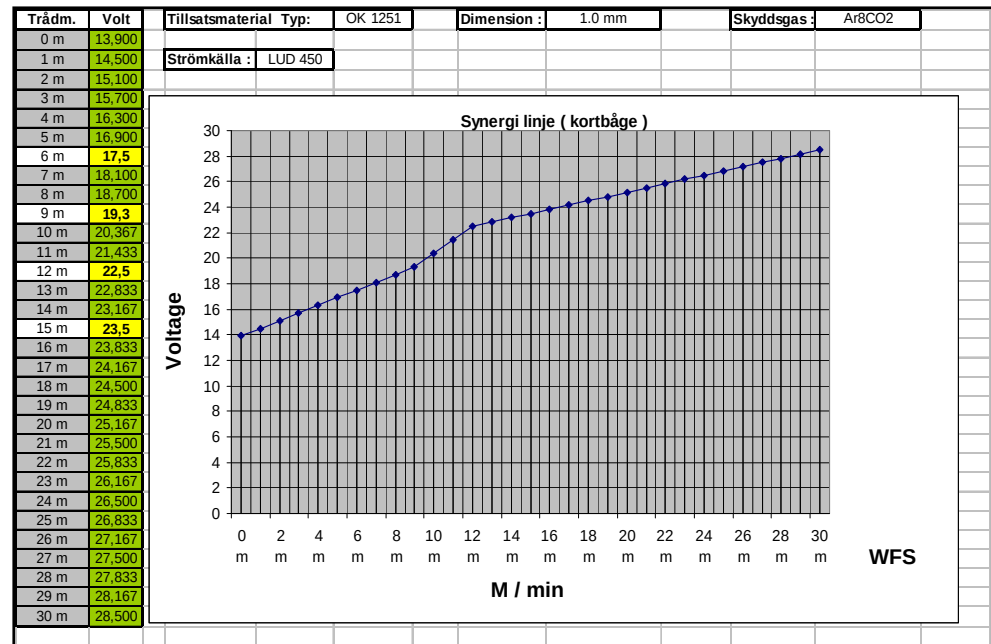
Arcitec II – New Features

Customer Specific Synergic line development

Gives the possibility for each installation to have its own application related Synergic Line

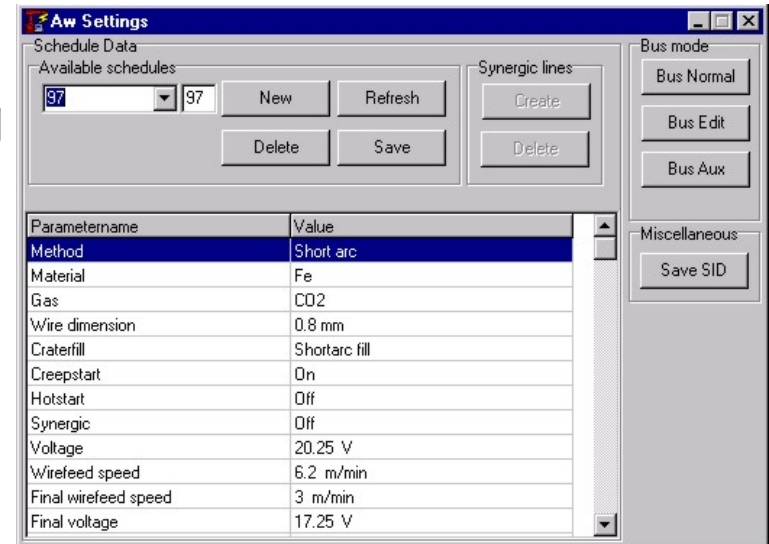
Arcitec II is prepared for Customised synergic line development

PC tool called Can-Assist for transfer of Synergic- settings, see next page



Arcitec Feature - CanAssist

CanAssist is a service tool for logging CAN-bus traffic between the robot, power source and PIB (Process Interface Board) in an ARCITEC station and for enabling control of the power source and PIB without the robot



Time	Timestamp	ID	Data[1-8]	ObjNr	MacID
09:52:48	0000000000	4F5	00 00 00 00 00 00 00 00	0	30
09:52:53	0000000000	4F5	00 00 00 00 00 00 00 00	0	30
09:52:58	0000000000	4F5	00 00 00 00 00 00 00 00	0	30
09:53:08	0000000000	220	00 00 00 00 00 00 00 00	0	32

Custom made Synergic Lines for special welding cases can also be created and downloaded to an ARCITEC power source



Arcitec II - Features

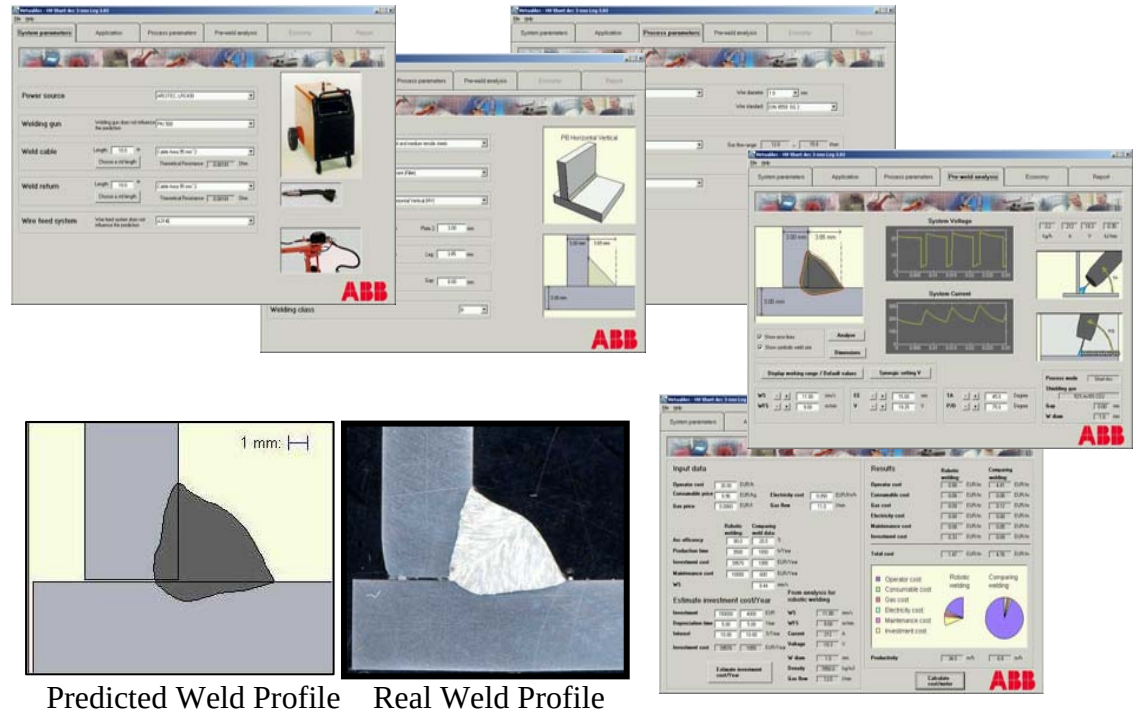
VirtualArc

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



Aluminium Function Package with Arcitec II

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



Aluminium Specific Functionality



Schedule Pulsing

Circular Weaving



Inline Weaving

Syncro Pulsing

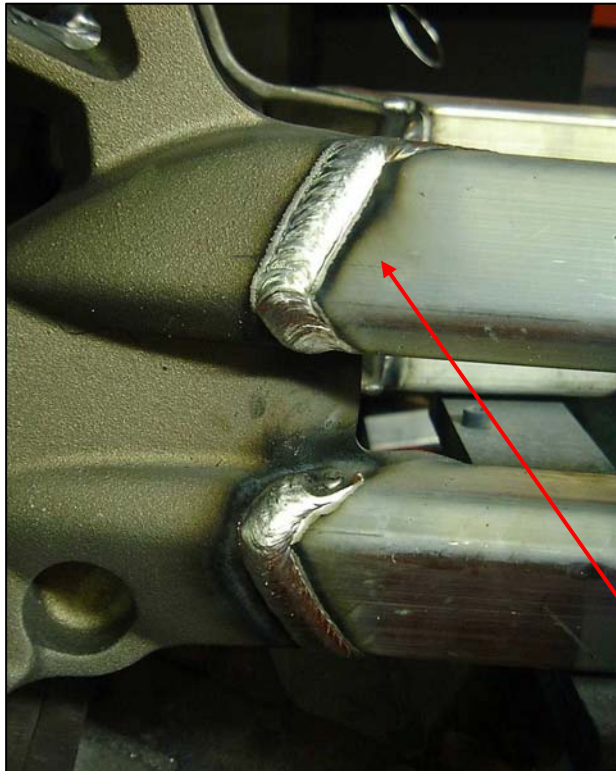


Rapid Aluminium Welding



Application Examples: Motorcycle frame welding

Aluminium Welding with,
ARCITEC Aluminium Function Package



The weld is part of the design



Aluminium Welding – “TIG Look a like”

Material: Aluminium (6xxx)

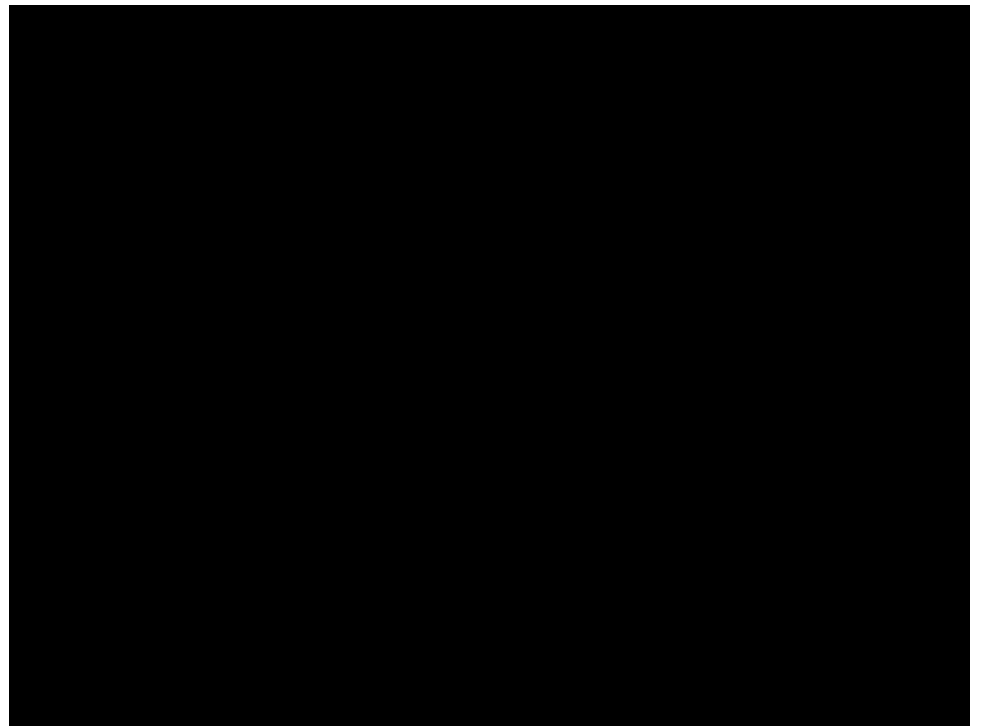
Wire Type: AlSi (4043A)

Shielding gas: Ar100 %

Throat thickness: 2.5 mm

Welding speed: 8 mm/sec

Power source: Arcitec LRB400 with Schedule Pulsing



Arcitec “Rapid-Alu” – High speed welding

Material:
Aluminium

Consumable:
AlMg 5356

Shielding gas:
100 % Ar

Throat thickness:
3,0 mm

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

Power source:
ARCITEC, LRB 400



ARCITEC II included in Laser-Hybrid application

Customer reference

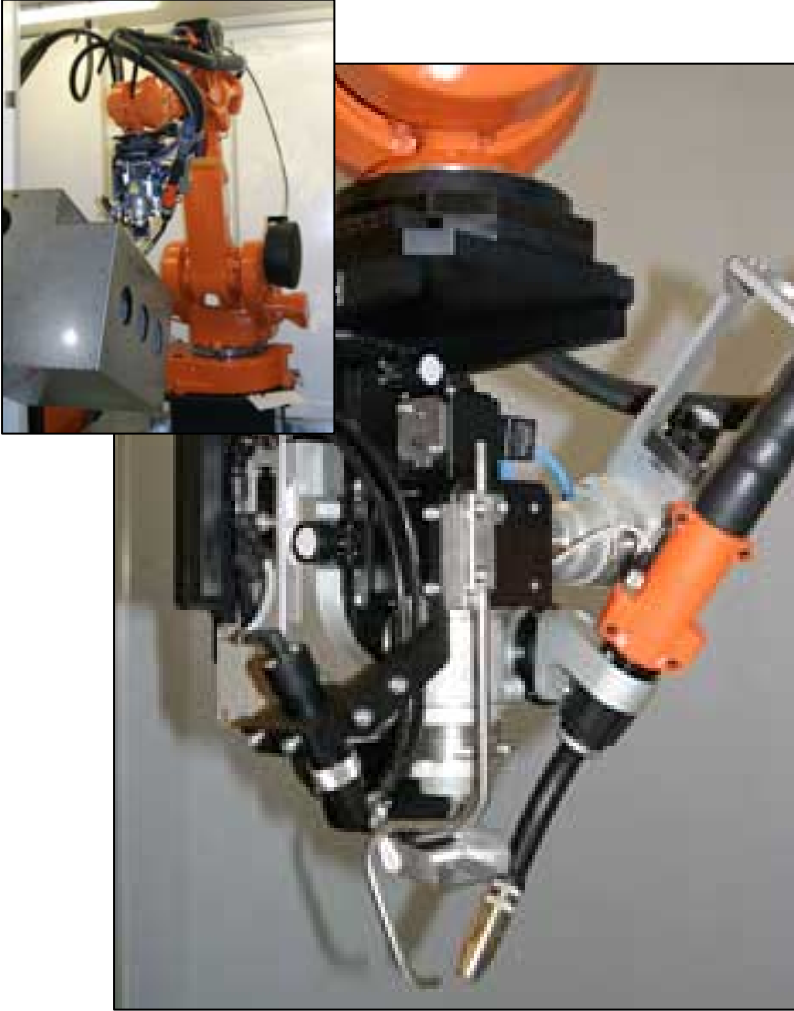


ABB Xiamen Switchgear Co. Ltd in China



Summing up of user benefits

Excellent weld quality performance in all materials

Very high welding productivity thanks to integrated Rapid arc technology

Tailor made process solutions thanks to Custom Synergic capabilities & optional CanAssist service tool

Off-line weld tuning thanks to optional VirtualArc software tool

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



ABB