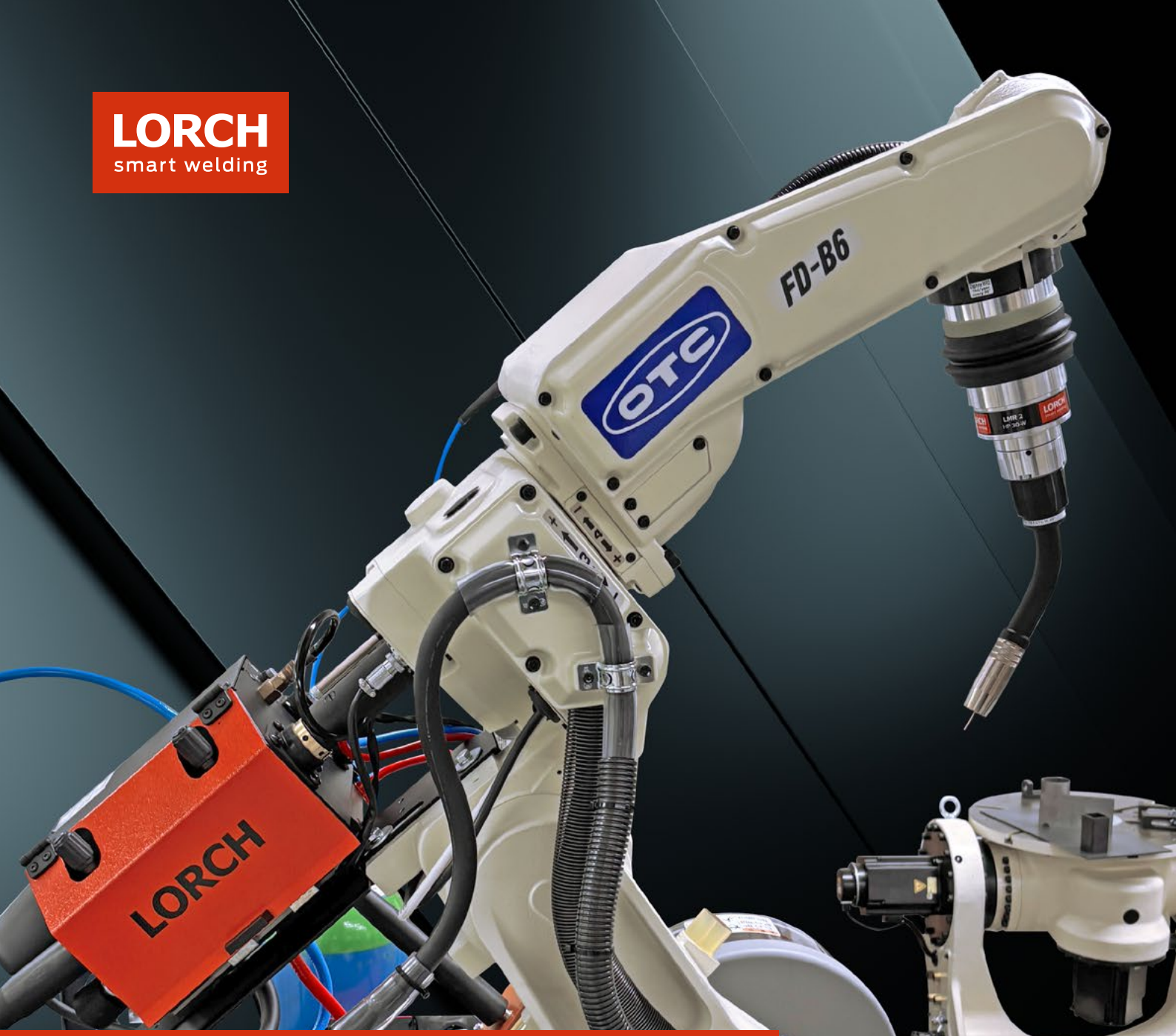
LORCH
smart welding



CUBE
SOLUTIONS.

Precise. Efficient. Simple.
Your entry into welding automation.

www.lorch.eu

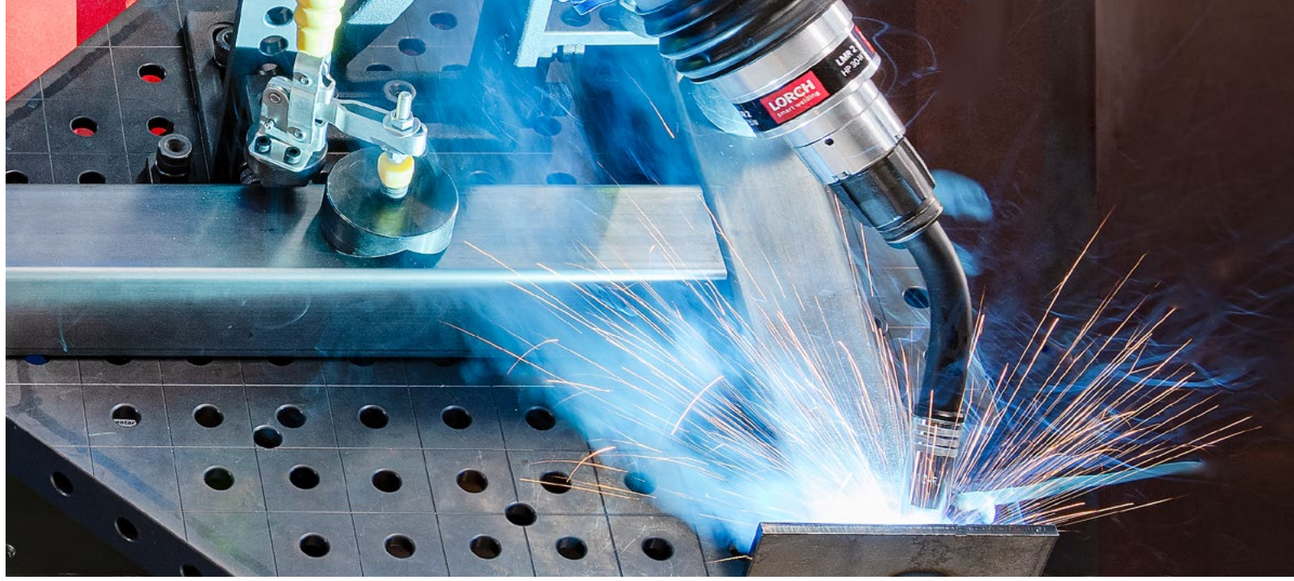
CUBE robot welding cells powered by Lorch.

Series production in industrial standard.

Since our foundation, we at Lorch have specialised in developing high-quality welding machines. Together with our sister company OTC Daihen Europe GmbH, we are expanding our innovative welding solutions to include robot and automation systems. The new systems meet the highest industrial standards, enabling our customers to make their manufacturing processes even more efficient, safer and cost-effective.

Our CUBE robot cells are high-end standard systems available in five different versions with a wide range of positioning units. The CUBEs are characterised by their exceptional performance, precision and reliability and offer tailor-made solutions for a wide range of applications.

Improve your production targets with CUBE compact cells and see for yourself the quality and reliability of the latest automated welding solutions from Lorch. Schweißtechnik GmbH.



Your perfect entry into welding automation.

Each of the five variants is ideal for getting started with automated welding production and enables maximum efficiency thanks to its cycle operation. The robot stations are designed to save space and are delivered ready for operation.

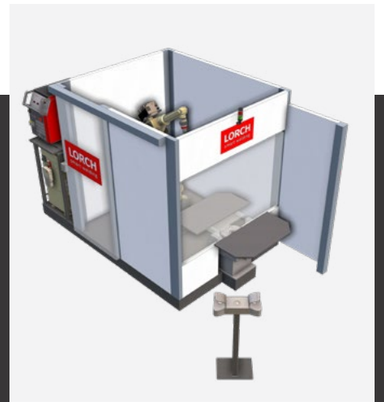
Thanks to their compact design, all CUBE versions can be easily transported by truck and quickly put into operation without additional installation work.

The five versions.

All CUBEs come with the following standard features:

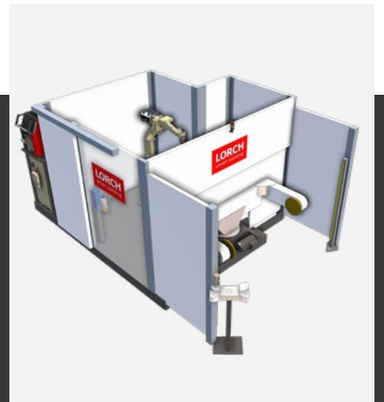
- Industrial robots
- Welding power source
- Welding equipment
- Positioning technology
- Control cabinet
- CE-certified safety technology

CUBE 01
Two welding tables for holding clamping tools.



CUBE 02
Motorized reversing 180° cycle welding table ready for clamping tools.

CUBE 03
2 x horizontal rotary positioners in different payload classes (250 and 500 kg) incl. counter bearing unit. Center distance: 900 mm
Interference radius: 400 mm



CUBE 04
2-station horizontal rotary positioner in different payload classes (250 and 500 kg).
Center distance: 1.500 mm
Interference radius: 500 mm

CUBE 05
2 x 2-axis turn/tilt positioner in different payload classes (300 and 500 kg).

All configuration options are project-dependent and can be adapted to individual requirements within the scope of the selectable options.

CUBE **01**

Welds efficiently in cycle time.

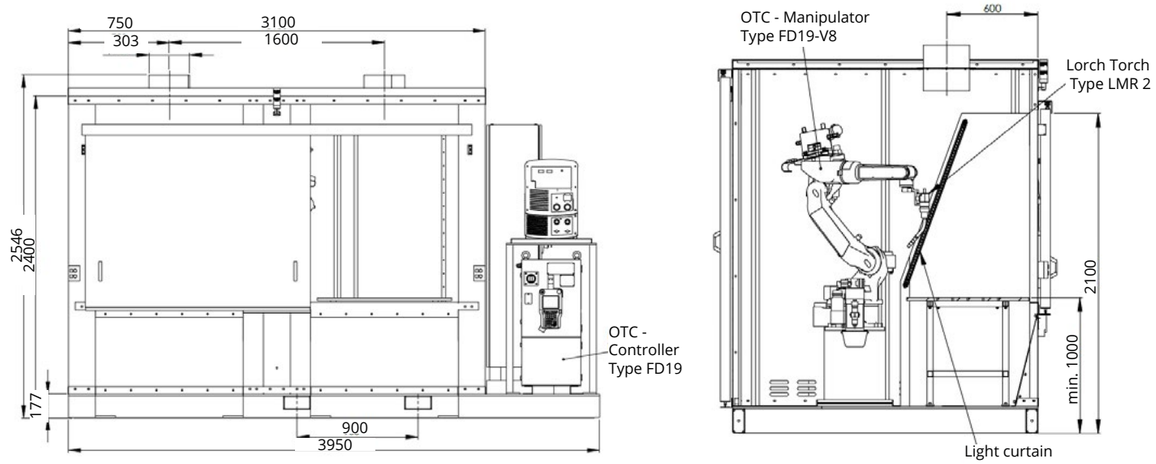
Equipped with a high-precision OTC welding robot and two welding worktables, it enables efficient serial production in a cycle-based system with optimized cycle times.

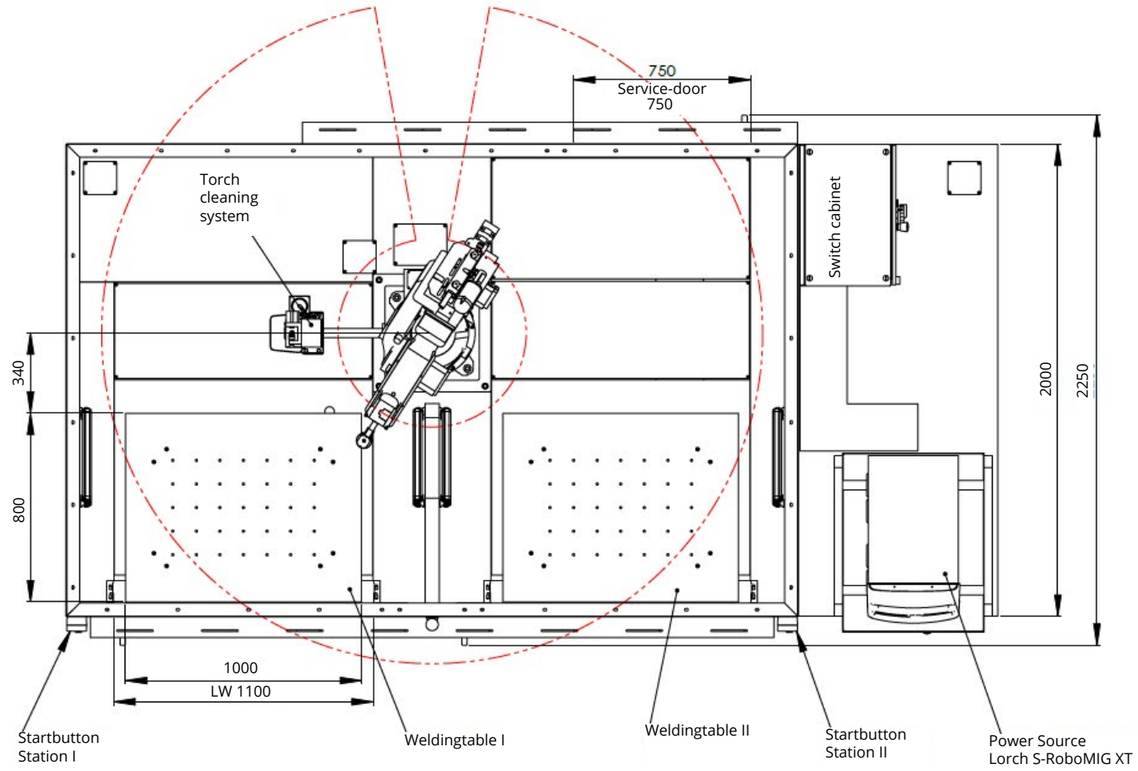
- Turnkey robotic automation system
- CE conformity according to the Machinery Directive 2006/42/EC

Standard equipment **CUBE 01**

Robot	FD19-V8 - 6 axes conventional
Welding equipment	Lorch S-RoboMIG XT series, SpeedPulse version
Welding processes	MIG-MAG-Synergie, MIG-MAG-Pulse, TwinPulse, TwinPulse XT, SpeedPulse, SpeedPulse XT, SpeedArc XT
Positioner	2 x fixed table 1000 x 800 mm
Safety enclosure	▪ Enclosed design ▪ 2-station-sliding-door ▪ Service door ▪ Roof fume nozzle ▪ Robot monitoring unit (RMU) ▪ LED-lights ▪ Signaltower
Additional equipment	▪ Torch cleaning unit ▪ Start/Stop box ▪ 220 V outlet ▪ Air supply connection

Footprint 3950 x 2250 mm





CUBE 01 | **OPTIONS**

Robot – optional

Robot	FD19-B6 - 6 axes

Safety equipment – optional

Change to 2 automatic shutter doors	Special shutter doors to protect against heat, sparks and fumes

Welding equipment (MIG-MAG) – configurable

Lorch S-RoboMIG XT, SpeedPulse version, gas- or water-cooled	Configurable in the power levels 320 amps, 400 amps, 500 amps
Optional special processes	SpeedRoot, SpeedUp, SpeedCold
Lorch robotic torch technology „LMR2“	LMR 2 programme in the performance levels (100 % ED) 350 amps, 450 amps, 500 amps
Touch Sensor	FD19 - WD
Arc sensor	FD19 - AR

Welding equipment (TIG) – optional

TIG welding equipment, water-cooled	Lorch V-RoboTIG configurable in the power level 400 amps
TIG cold wire equipment	TIG filler control unit, wire feeder unit, torch and bracket
High frequency protection kit	Equipment for protection against high-frequency currents
TIG Touch Sensor for height detection	TIG Arc Sensor FD19-TR

Media kit – optional

Centrally on the flange plate of the tilt and turn positioner (2 x) **Control of signals via robot PLC with visualisation on the teach box (I/O signals)**	Cable 18 x 0.5 mm² ▪ 16 I/O connections for controlling valves on the device, for evaluating signals ▪ 1 x voltage power supply (18 V) ▪ 1 x ground - negative power supply Compressed air hose (PUN 8) uncontrolled No connection plug

Software – optional

Offline programming (OLP) system	OTC Advanced
Digital twin for OLP	Digital twin calibration on site
Process monitoring and quality management system	Q-Sys

Services and training – optional

On-site commissioning (1 working day)	▪ On-site assembly ▪ Worker instruction
Additional training	▪ Basics robot ▪ Welding parameters ▪ Sensoric ▪ Production support

On request

+ Advanced PLC system control
+ Custom welding technology software
+ Alternative standard robots, welding technology, positioner, and system sizes
+ Extended training

CUBE **02**

Has mastered the art of welding.

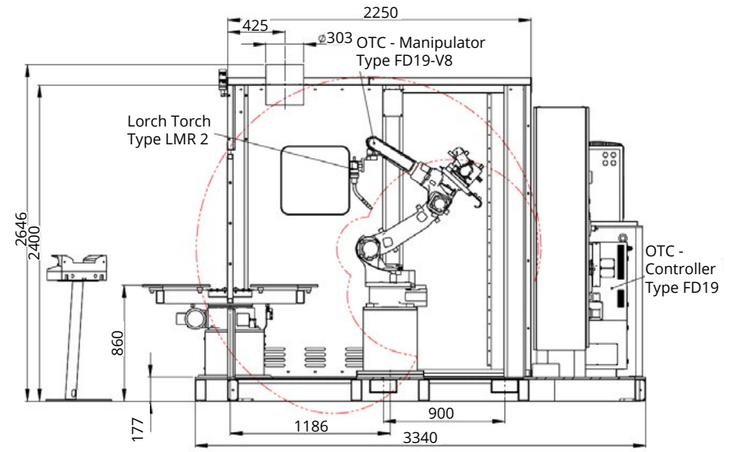
In the CUBE 02 version, the precise OTC welding robot works in conjunction with a motorised 180° rotary indexing table..

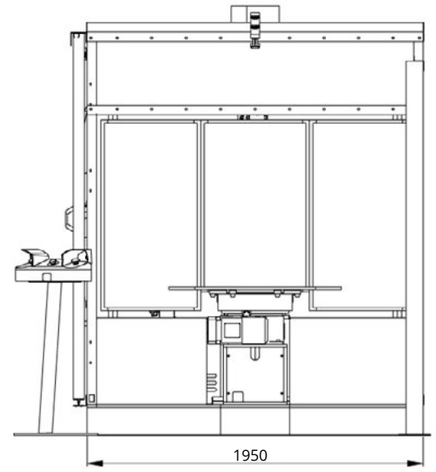
- Turnkey robotic automation system
- CE conformity according to the Machinery Directive 2006/42/EC

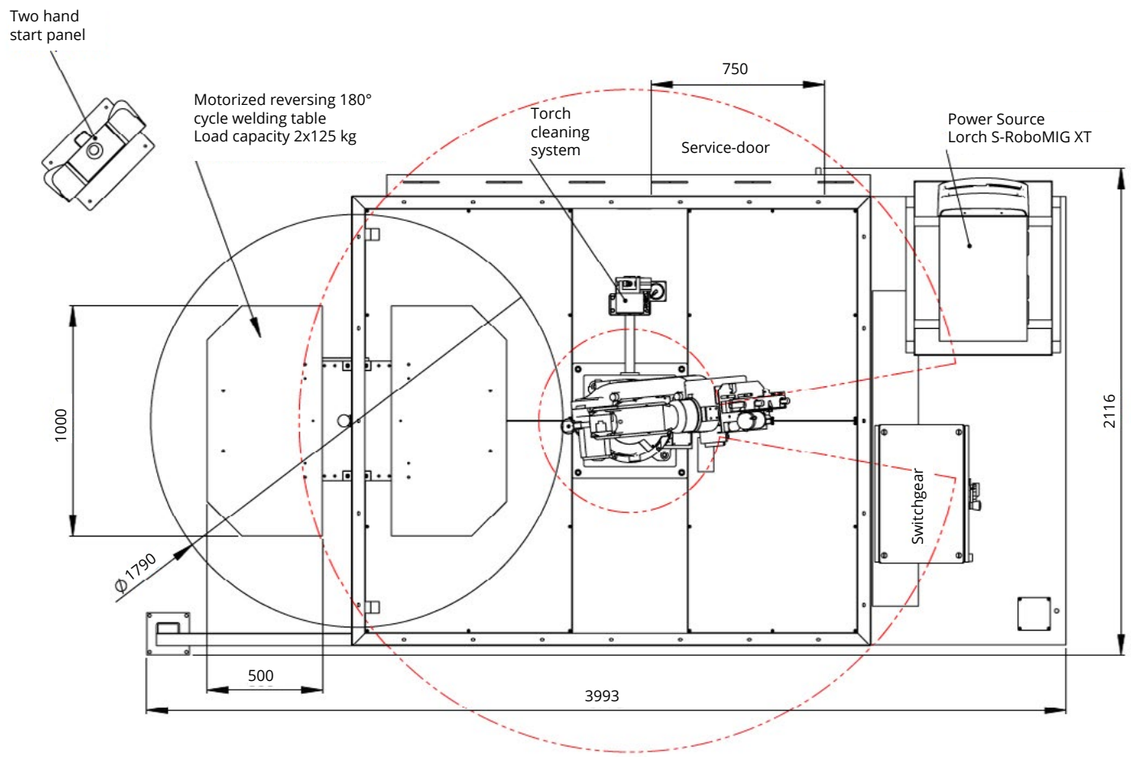
Standard equipment **CUBE 02**

Robot	FD19-V8 - 6 Achsen
Welding equipment	Lorch S-RoboMIG XT series, SpeedPulse version
Welding processes	MIG-MAG-Synergie, MIG-MAG-Pulse, TwinPulse, TwinPulse XT, SpeedPulse, SpeedPulse XT, SpeedArc XT
Positioner	Rotary indexing table - RST 250 Dimensions: 1000 x 500 mm, payload: 125 kg per side
Safety enclosure	▪ Enclosed design ▪ Service door ▪ Roof fume nozzle ▪ Robot monitoring unit (RMU) ▪ LED-lights ▪ Signaltower
Additional equipment	▪ Torch cleaning unit ▪ 2-hand start/stop box ▪ 220 V outlet ▪ Air supply connection

Footprint 3993 x 2116 mm







CUBE 02 | **OPTIONS**

Robot – optional	
Robot	FD19-B6 - 6 axes

Safety equipment – optional	
Extended loading area	Loading area secured with light barrier and start/stop control panel

Positioner – optional	
Increased payload	Rotary indexing table (Series RST) - RST 500, Dimensions: 1000 x 500 mm, 250 kg per side

Welding equipment (MIG-MAG) – configurable	
Lorch S-RoboMIG XT, SpeedPulse version, gas- or water-cooled	Configurable in the power levels 320 amps, 400 amps, 500 amps
Optional special processes	SpeedRoot, SpeedUp, SpeedCold
Lorch robotic torch technology „LMR2“	LMR 2 programme in the performance levels (100 % ED) 350 amps, 450 amps, 500 amps
Touch Sensor	FD19 - WD
Arc sensor	FD19 - AR

Welding equipment (TIG) – optional	
TIG welding equipment, water-cooled	Lorch V-RoboTIG configurable in the power level 400 amps
TIG cold wire equipment	TIG filler control unit, wire feeder unit, torch and bracket
High frequency protection kit	Equipment for protection against high-frequency currents
TIG Touch Sensor for height detection	TIG Arc Sensor FD19-TR

Media kit – optional	
Centrally on the flange plate of the tilt and turn positioner (2 x) **Control of signals via robot PLC with visualisation on the teach box (I/O signals)**	Cable 18 x 0.5 mm² ▪ 16 I/O connections for controlling valves on the device, for evaluating signals ▪ 1 x voltage power supply (18 V) ▪ 1 x ground - negative power supply Compressed air hose (PUN 8) uncontrolled No connection plug

Software – optional	
Offline programming (OLP) system	OTC Advanced
Digital twin for OLP	Digital twin calibration on site
Process monitoring and quality management system	Q-Sys

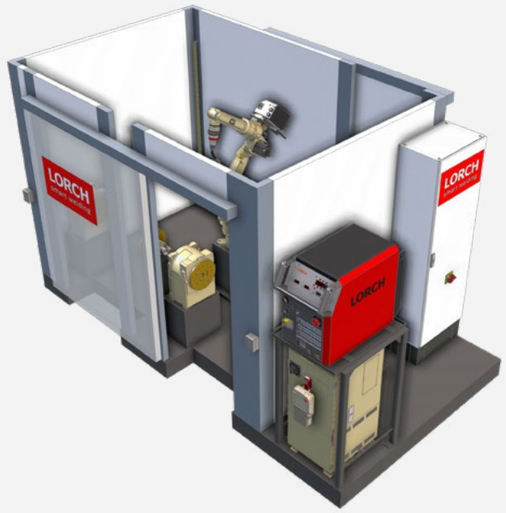
Services and training – optional	
On-site commissioning (1 working day)	▪ On-site assembly ▪ Worker instruction
Additional training	▪ Basics robot ▪ Welding parameters ▪ Sensoric ▪ Production support

On request

+ Advanced PLC system control
+ Custom welding technology software
+ Alternative standard robots, welding technology, positioner, and system sizes
+ Extended training

CUBE **03**

Round parts perfectly welded.



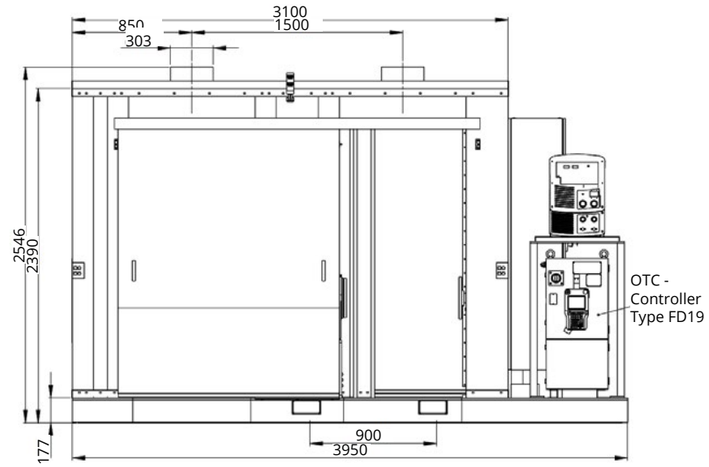
The CUBE 03 is equipped with a high-precision OTC welding robot and two horizontal rotary positioners including counter bearings. These enable synchronous reorientation of the component during the welding process, allowing round components or components in hard-to-reach welding positions to be welded. Its two-station cycle principle ensures efficient production with optimised cycle times.

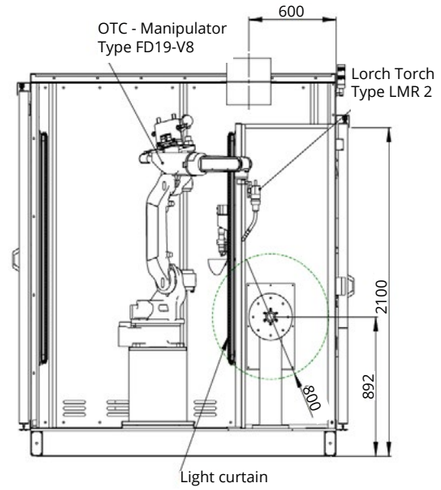
+ Turnkey robotic automation system
+ CE conformity according to the Machinery Directive 2006/42/EC

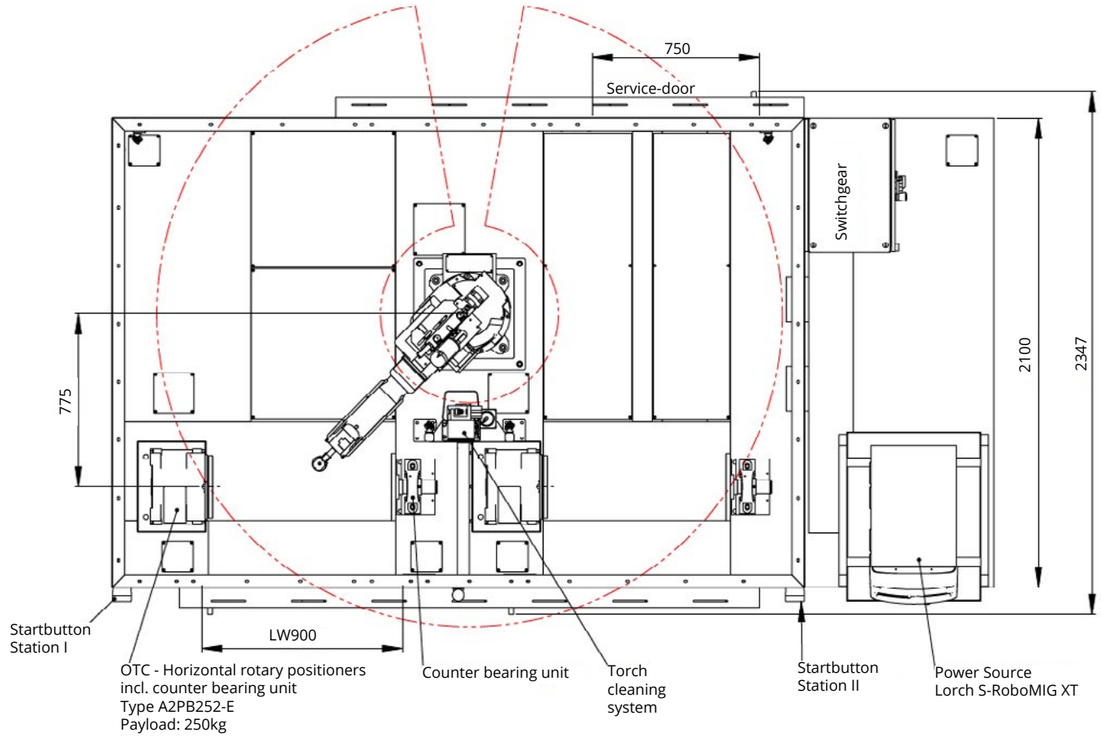
Standard equipment **CUBE 03**

Robot	FD19-V8 - 6 Achsen + Synchromotion für zwei externe Achsen
Welding equipment	Lorch S-RoboMIG XT series, SpeedPulse version
Welding processes	MIG-MAG-Synergie, MIG-MAG-Pulse, TwinPulse XT, SpeedPulse, SpeedPulse XT, SpeedArc XT
Positioner	2 x head-stock positioner with counter bearing unit A2PB252-E Payload: 250 kg per unit
Safety enclosure	▪ Enclosed design ▪ 2-station-sliding-door ▪ Service door ▪ Roof fume nozzle ▪ Robot monitoring unit (RMU) ▪ LED-lights ▪ Signaltower
Additional equipment	▪ Torch cleaning unit ▪ 2-hand start/stop box ▪ 220 V outlet ▪ Air supply connection

Footprint 3950 x 2347 mm







CUBE 03 | **OPTIONS**

Robot – optional	
Robot	FD19-B6 - 6 axes

Safety equipment – optional	
Change to 2 automatic shutter doors	Special shutter doors to protect against heat, sparks and fumes

Positioner – optional	
Increased payload	2 x head-stock positioner with counter bearing unit (PB-Series) - A2PB502-E, payload 500 kg per unit

Welding equipment (MIG-MAG) – configurable	
Lorch S-RoboMIG XT, SpeedPulse version, gas- or water-cooled	Configurable in the power levels 320 amps, 400 amps, 500 amps
Optional special processes	SpeedRoot, SpeedUp, SpeedCold
Lorch robotic torch technology „LMR2“	LMR 2 programme in the performance levels (100 % ED) 350 amps, 450 amps, 500 amps
Touch Sensor	FD19 - WD
Arc sensor	FD19 - AR

Welding equipment (TIG) – optional	
TIG welding equipment, water-cooled	Lorch V-RoboTIG configurable in the power level 400 amps
TIG cold wire equipment	TIG filler control unit, wire feeder unit, torch and bracket
High frequency protection kit	Equipment for protection against high-frequency currents
TIG Touch Sensor for height detection	TIG Arc Sensor FD19-TR

Media kit – optional	
Centrally on the flange plate of the tilt and turn positioner (2 x) **Control of signals via robot PLC with visualisation on the teach box (I/O signals)**	Cable 18 x 0.5 mm² ▪ 16 I/O connections for controlling valves on the device, for evaluating signals ▪ 1 x voltage power supply (18 V) ▪ 1 x ground - negative power supply Compressed air hose (PUN 8) uncontrolled No connection plug

Software – optional	
Offline programming (OLP) system	OTC Advanced
Digital twin for OLP	Digital twin calibration on site
Process monitoring and quality management system	Q-Sys

Services and training – optional	
On-site commissioning (1 working day)	▪ On-site assembly ▪ Worker instruction
Additional training	▪ Basics robot ▪ Welding parameters ▪ Sensoric ▪ Production support

On request

+ Advanced PLC system control
+ Custom welding technology software
+ Alternative standard robots, welding technology, positioner, and system sizes
+ Extended training

CUBE **04**

The all-rounder for every welding position.

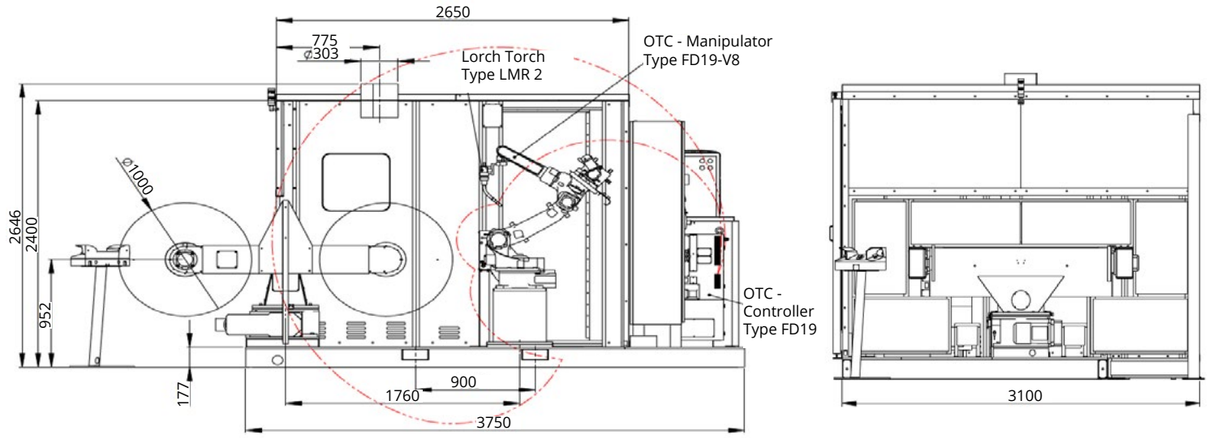
The CUBE 04 is a true all-rounder. Whether large or small components, round or angular.
The 180° horizontal positioner with its 2-station cycle principle brings your components into the correct welding position. OTC welding robots and positioners work together synchronously during the welding process, enabling them to handle even the most complex welding tasks.

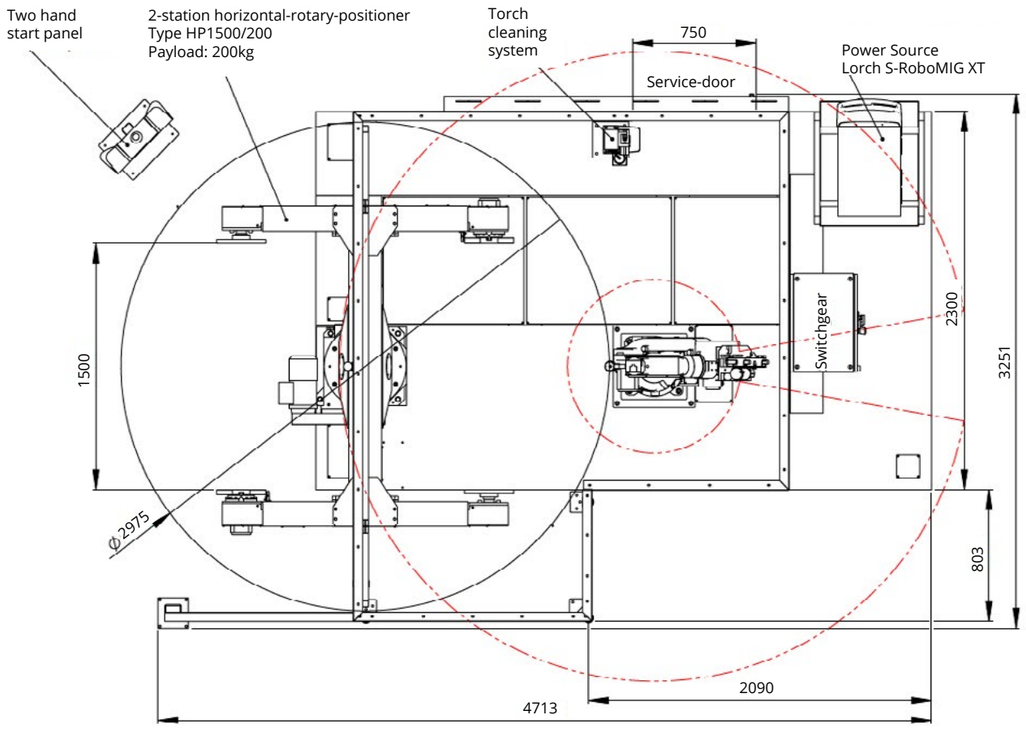
- Turnkey robotic automation system
- CE conformity according to the Machinery Directive 2006/42/EC

Standard equipment **CUBE 04**

Robot	FD19-V8 - 6 Achsen + Synchromotion für zwei externe Achsen
Welding equipment	Lorch S-RoboMIG XT series, SpeedPulse version
Welding processes	MIG-MAG-Synergie, MIG-MAG-Pulse, TwinPulse, TwinPulse XT, SpeedPulse, SpeedPulse XT, SpeedArc XT
Positioner	Positioner with two horizontal rotary axes, HP1500/200, Centerdistance: 1500 mm, payload: 200 kg per side
Safety enclosure	▪ Enclosed design ▪ Service door ▪ Roof fume nozzle ▪ Robot monitoring unit (RMU) ▪ LED-lights ▪ Signaltower
Additional equipment	▪ Torch cleaning unit ▪ 2-hand start/stop box ▪ 220 V outlet ▪ Air supply connection

Footprint 4713 x 3251 mm





CUBE 04 | **OPTIONS**

Robot – optional	
Robot	FD19-B6 - 6 axes

Safety equipment – optional	
Extended loading area	Loading area secured with light barrier and start/stop control panel

Positioner – optional	
Increased payload	Positioner with two horizontal rotary axes, HP1500/500, Centerdistance: 1500 mm, Payload: 500 kg per side

Welding equipment (MIG-MAG) – configurable	
Lorch S-RoboMIG XT, SpeedPulse version, gas- or water-cooled	Configurable in the power levels 320 amps, 400 amps, 500 amps
Optional special processes	SpeedRoot, SpeedUp, SpeedCold
Lorch robotic torch technology „LMR2“	LMR 2 programme in the performance levels (100 % ED) 350 amps, 450 amps, 500 amps
Touch Sensor	FD19 - WD
Arc sensor	FD19 - AR

Welding equipment (TIG) – optional	
TIG welding equipment, water-cooled	Lorch V-RoboTIG configurable in the power level 400 amps
TIG cold wire equipment	TIG filler control unit, wire feeder unit, torch and bracket
High frequency protection kit	Equipment for protection against high-frequency currents
TIG Touch Sensor for height detection	TIG Arc Sensor FD19-TR

Media kit – optional	
Centrally on the flange plate of the tilt and turn positioner (2 x) **Control of signals via robot PLC with visualisation on the teach box (I/O signals)**	Cable 18 x 0.5 mm² ▪ 16 I/O connections for controlling valves on the device, for evaluating signals ▪ 1 x voltage power supply (18 V) ▪ 1 x ground - negative power supply Compressed air hose (PUN 8) uncontrolled No connection plug

Software – optional	
Offline programming (OLP) system	OTC Advanced
Digital twin for OLP	Digital twin calibration on site
Process monitoring and quality management system	Q-Sys

Services and training – optional	
On-site commissioning (1 working day)	▪ On-site assembly ▪ Worker instruction
Additional training	▪ Basics robot ▪ Welding parameters ▪ Sensoric ▪ Production support

On request

+ Advanced PLC system control
+ Custom welding technology software
+ Alternative standard robots, welding technology, positioner, and system sizes
+ Extended training

CUBE **05**

Perfect teamwork in all positions.

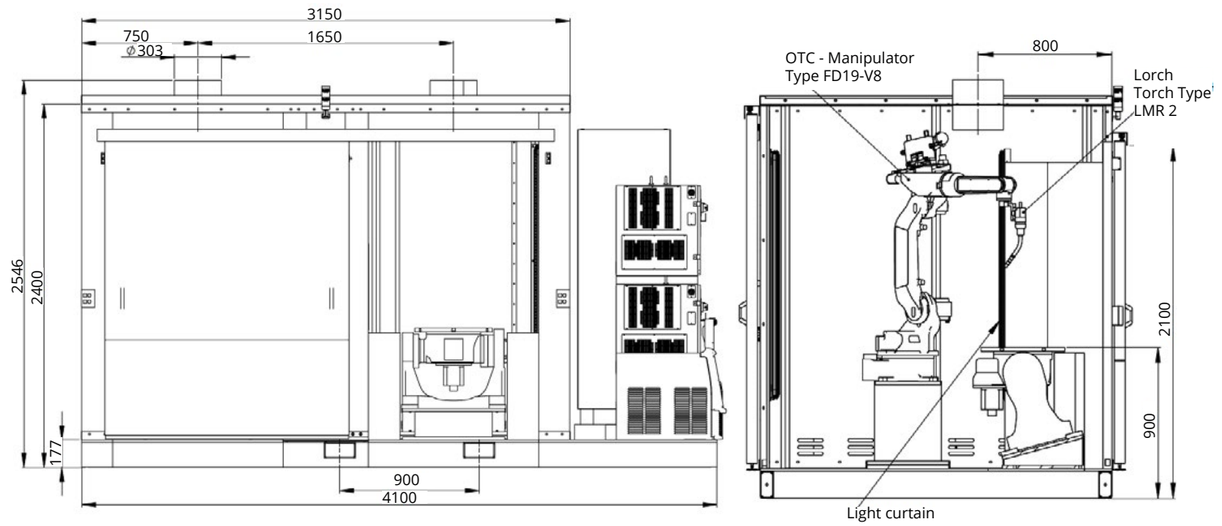
The CUBE 5 features two rotary/tilting positioners which, working synchronously with the OTC welding robot, master a wide variety of welding tasks to perfection. This makes finding the best welding position child's play. The CUBE 05 rounds off our portfolio of flexible and efficient robot cells from Lorch.

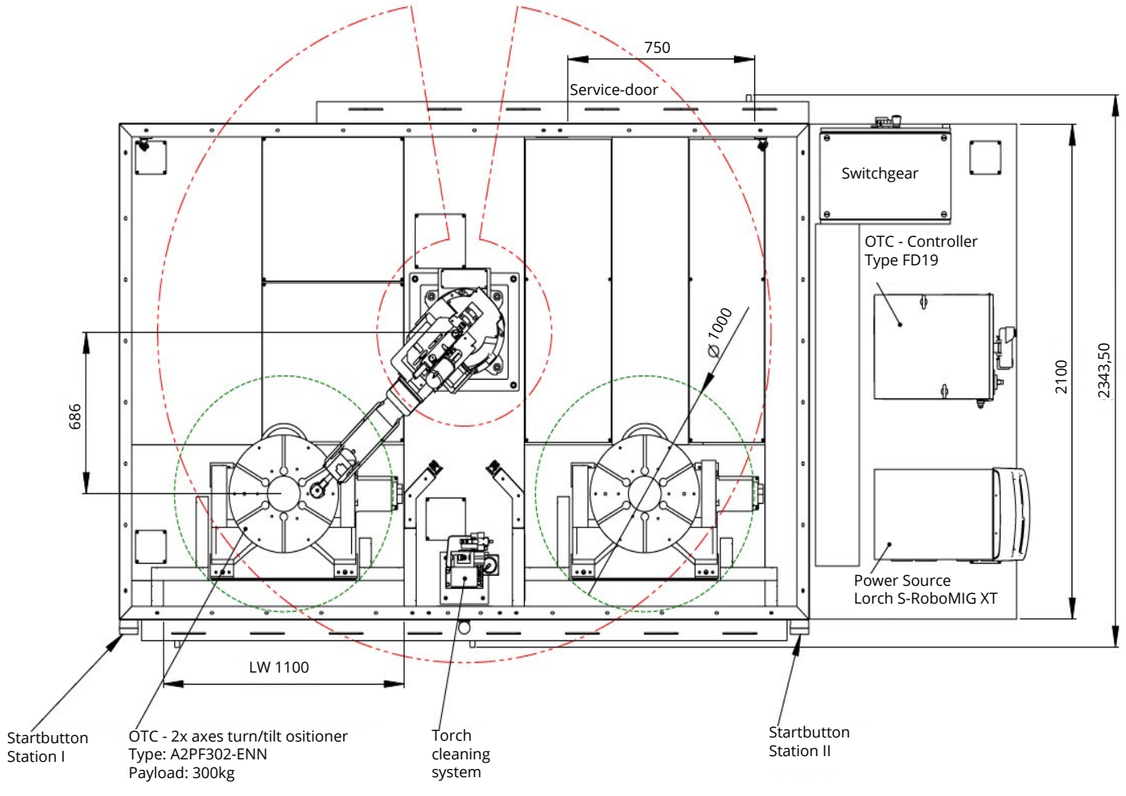
- Turnkey robotic automation system
- CE conformity according to the Machinery Directive 2006/42/EC

Standard equipment **CUBE 05**

Robot	FD19-V8 - 6 Achsen + Synchromotion für vier externe Achsen
Welding equipment	Lorch S-RoboMIG XT series, SpeedPulse version
Welding processes	MIG-MAG-Synergie, MIG-MAG-Pulse, TwinPulse, TwinPulse XT, SpeedPulse, SpeedPulse XT, SpeedArc XT
Positioner	2 x axes tilt-rotate positioner A2PF302-ENN, Payload: 300 kg per unit
Safety enclosure	▪ Enclosed design ▪ 2-station-sliding-door ▪ Service door ▪ Roof fume nozzle ▪ Robot monitoring unit (RMU) ▪ LED-lights ▪ Signaltower
Additional equipment	▪ Torch cleaning unit ▪ 2-hand start/stop box ▪ 220 V outlet ▪ Air supply connection

Footprint 4100 x 2343,50 mm





CUBE 05 | **OPTIONS**

Robot – optional	
Robot	FD19-B6 - 6 axes

Safety equipment – optional	
Change to 2 automatic shutter doors	Special shutter doors to protect against heat, sparks and fumes

Positioner – optional	
Increased payload	2 x axes tilt-rotate positioner A2PF501-ENN, Payload: 500 kg per unit

Welding equipment (MIG-MAG) – configurable	
Lorch S-RoboMIG XT, SpeedPulse version, gas- or water-cooled	Configurable in the power levels 320 amps, 400 amps, 500 amps
Optional special processes	SpeedRoot, SpeedUp, SpeedCold
Lorch robotic torch technology „LMR2“	LMR 2 programme in the performance levels (100 % ED) 350 amps, 450 amps, 500 amps
Touch Sensor	FD19 - WD
Arc sensor	FD19 - AR

Welding equipment (TIG) – optional	
TIG welding equipment, water-cooled	Lorch V-RoboTIG configurable in the power level 400 amps
TIG cold wire equipment	TIG filler control unit, wire feeder unit, torch and bracket
High frequency protection kit	Equipment for protection against high-frequency currents
TIG Touch Sensor for height detection	TIG Arc Sensor FD19-TR

Media kit – optional	
Centrally on the flange plate of the tilt and turn positioner (2 x) **Control of signals via robot PLC with visualisation on the teach box (I/O signals)**	Cable 18 x 0.5 mm² ▪ 16 I/O connections for controlling valves on the device, for evaluating signals ▪ 1 x voltage power supply (18 V) ▪ 1 x ground - negative power supply Compressed air hose (PUN 8) uncontrolled No connection plug

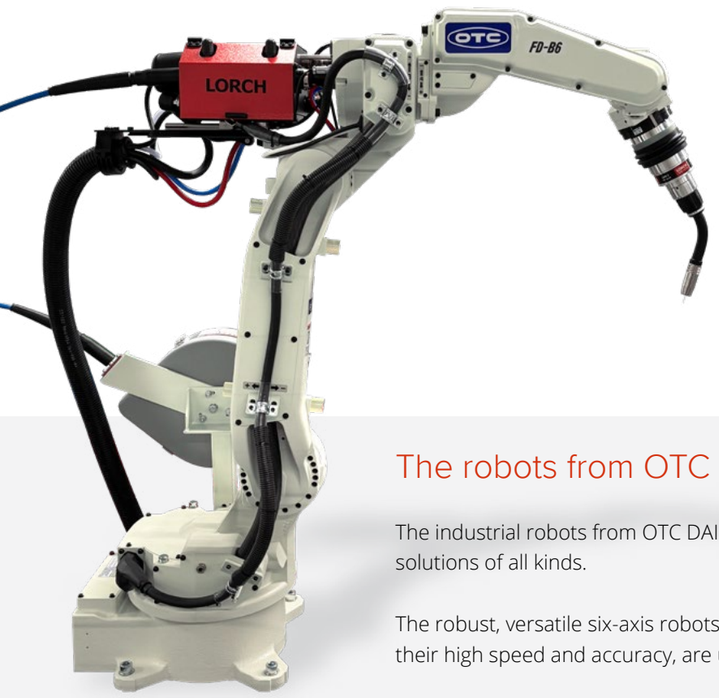
Software – optional	
Offline programming (OLP) system	OTC Advanced
Digital twin for OLP	Digital twin calibration on site
Process monitoring and quality management system	Q-Sys

Services and training – optional	
On-site commissioning (1 working day)	▪ On-site assembly ▪ Worker instruction
Additional training	▪ Basics robot ▪ Welding parameters ▪ Sensoric ▪ Production support

On request

+ Advanced PLC system control
+ Custom welding technology software
+ Alternative standard robots, welding technology, positioner, and system sizes
+ Extended training

Fast execution, **precision** and full **repeatability.**

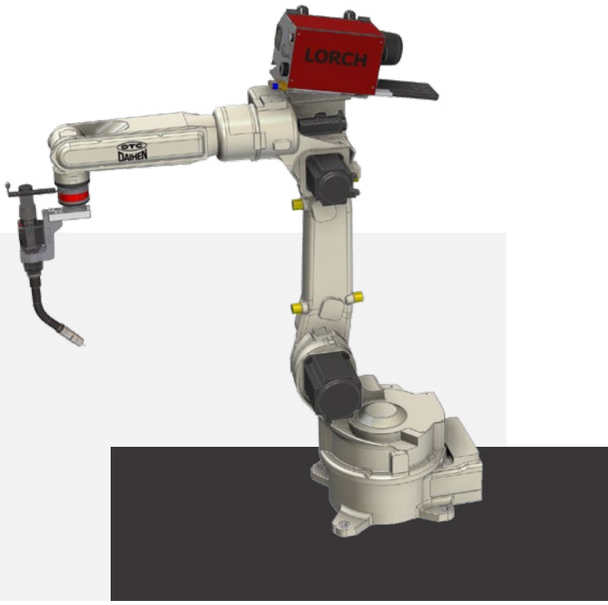


The robots from OTC DAIHEN.

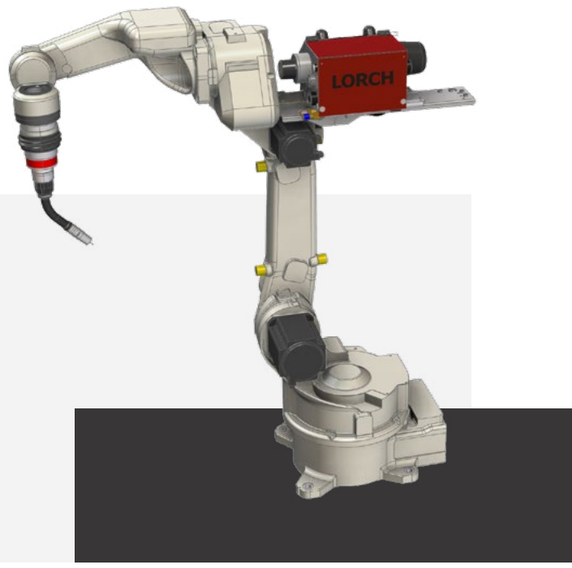
The industrial robots from OTC DAIHEN offer flexible and scalable automation solutions of all kinds.

The robust, versatile six-axis robots of the FD19 generation, which impress with their high speed and accuracy, are used as standard in the cube cells.

FD19-V8	
Number of axes	6
Working range (P-Point)	R 1437 mm
Max. payload capacity	8 kg
Additional payload axis 3	10 kg
Installation type	F, W, C
Weight	140 kg



FD19-B6	
Number of axes	6
Working range (P-Point)	R 1445 mm
Max. payload capacity	6 kg
Additional payload axis 3	10 kg
Installation type	F, W, C
Weight	145 kg



Wire feeder
RF-06

S-RoboMIG XT

Further information on the S-RoboMIG XT

For maximum performance: S-RoboMIG XT.

MIG-MAG welding at the highest level.

The powerful S-RoboMIG XT, in its ‘Speed Pulse’ version and with its lightning-fast control technology, enables you to weld almost anything you want to weld – with maximum efficiency.

State-of-the-art processor technology ensures optimal interaction between all parameters and components involved in the welding process, resulting in maximum arc performance.

This generates peak values in arc control and reproducible optimal welding results for all materials..

Best arc characteristics: V-RoboTIG.

Heavy-duty TIG welding for professionals.

TIG welding with outstanding performance – and that with a high duty cycle and power output – these are the core characteristics of the V-RoboTIG. With DC and AC/DC variants, there is a suitable power source for every robot application.

The contactless HF ignition guarantees increased arc stability and optimised material transfer. Thanks to its excellent ignition properties, this system is perfectly suited for automated operation. The integrated fast pulse technology also ensures maximum efficiency in TIG welding automation. The outstanding TIG technology and proven inverter technology from Lorch contribute to optimum practicality and productivity in automated welding.

Further information on the V-RoboTIG series

SpeedPulse XT – in every CUBE welding cell.

The innovative welding processes by Lorch.

Jede Cube-Roboterzelle wird mit dem vorinstallierten Lorch Prozess-Paket „SpeedPulse“ ausgeliefert.
Das Paket **beinhaltet den** MIG-MAG-Synergie- und MIG-MAG-Pulse-Prozess, TwinPulse und TwinPulse XT, SpeedPulse und SpeedPulse XT sowie SpeedArc XT.

Speed, quality, penetration, and weld appearance pose high demands to the welding process to produce a perfect weld seam in a vast variety of welding positions.
Our engineers have developed outstanding MIG-MAG-process innovations for you based on experience from industry practice as well as the wishes of many users. .

This has led to Lorch Speed processes that significantly increase your welding speed, noticeably simplify the process, and enable unparalleled productivity.

SPEEDPULSE XT

Extra fast. Extra low-spatter.
Extra proficient handling.

SPEEDARC XT

Deeply impressive. SpeedArc XT sets itself apart by its highly focused and stable arc..

TWINPULSE XT

Looks really fantastic. Picture-perfect seams at maximum speed.

Video to the Lorch Speed processes
https://youtu.be/lx4m2DugkFg

Overview of the advantages

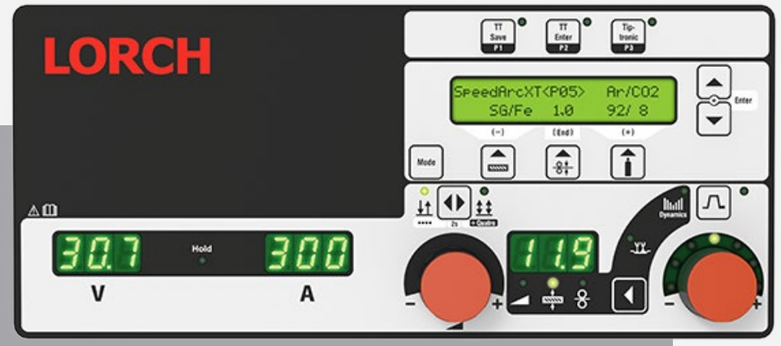
- Higher speed
- Better weld seam quality
- Higher penetration
- Better look of the weld seams
- Lower welding fume emissions
- Quieter work
- Higher result security due to improved process control

No compromises in operation.

All functions for high-end applications.

As a premium product, the S-RoboMIG XT series contains best control and operation, including all functions needed for high-end applications.

The display-controlled user guidance facilitates operation and enables simple process and characteristic curve selection. The control panel is unobstructed, and the user interface clearly structured to start welding on the system right away.



- “3 steps and weld” operating concept
- Stepless current adjustment
- Digital Volt-Amperage-display
- Simple process and welding programme selection
- Dynamic control (at Synergic, SpeedArcXT, SpeedPulse XT)
- Tiptronic job memory for 100 welding tasks

Available as a remote version. Individual selection of the operating option. In the power source, as a remote control control panel or both on demand.

Lorch **Q-Sys.**

Automated high-end quality monitoring and documentation.

The **Lorch Q-Sys** is a stand-alone solution for welding data recording and quality control, serving as your automated welding process monitor.

Automated quality monitoring controls the welding parameters in order to find faulty weld seams based on up to eight parameters defined per system and analysed for you by Lorch's Q-Sys 2020. Even complex welding tasks with fluctuating main parameters become easy this way.

The system warrants defect-free series production from the starting point to the end crater by detecting any errors and enabling automatic intervention in the process.

Overview of the advantages of the Lorch Q-Sys.

The Lorch Q-Sys Lorch automatically monitors weld seam quality for you to eliminate even the smallest defects and produce **higher quality at lower waste.**

Precision monitoring.
With to 8 selectable parameters, the Lorch Q-Sys monitors complex welding tasks **very accurately** as well as flexibly. Choose the parameters to be actively monitored and those to only be documented per welding task.

Welding data documentation.
The integrated documentation database of the Q-Sys ensures complete recording of the welding data to warrant **tracking of all work steps** and welded parts..

Calibrated sensors on board.
Your chosen welding data will be transmitted to Q-Sys directly via the smart process technology at the power source. Data transfer uses the LorchNet cable that connects the welding system and Q-Sys easily. The enclosed, pre-calibrated measuring sensor technology allows the Q-Sys to make do without any additional costly sensor technology, **saving annual calibration costs on your end.**

Intuitive operator guidance by touch display.

Operate the Lorch Q-Sys easily via the integrated touch display for simple and quick selection of the parameters you need.

- Large 10.1 inch multi-touch display
- Intuitive menu control and well-structured user interfaces
- Simple and individual setting of the welding parameters to be checked
- Flexible specification of limits and tolerances of weld seams

Precise welding data monitoring.
Highest quality.

OFFLINE PROGRAMMING

The advantages of our offline programming tool over online teaching.

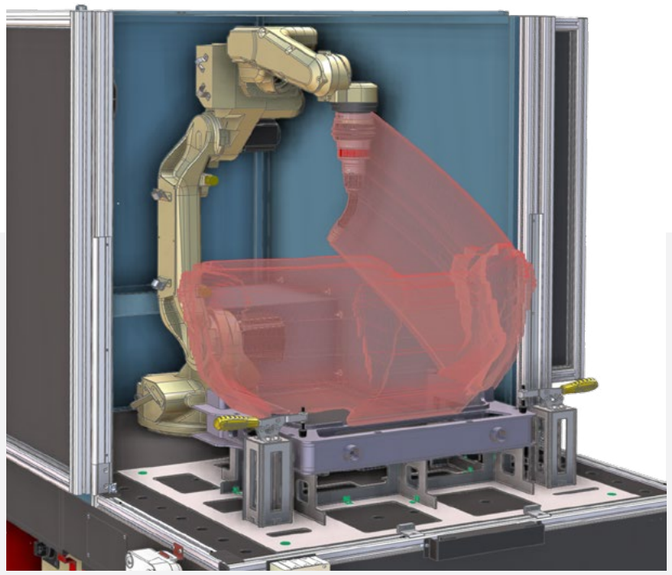
- **Optimize Layouts Efficiently:**
  Conduct comprehensive reachability and feasibility studies to ensure your robot's optimal performance within any layout.

- **Fixture Design:**
  Easily create and design welding fixtures tailored to your specific needs, enhancing the precision and reliability of your operations..

- **Program creation:**
  Develop and test robot programs in a virtual environment, then upload them directly to the production line without causing any interruptions.

- **Automated Weld Optimization:**
  Rely on OTC Advanced to automatically optimize weld settings, ensuring your programs are accurate and free from errors.

- **User-Friendly Interface:**
  Simplify the programming process, allowing users without advanced robotics or programming expertise to create effective robot programs with ease.



Advanced Package.

Configured to suit your requirements.

- **Fixture Builder:**
  Design and customize fixtures with precision using a powerful, intuitive fixture builder.

- **Swept Volume Analysis:**
  Optimize your robot's movements and workspace with advanced swept volume analysis, ensuring efficient and collision-free operations.

- **Twin Robot Cells:**
  Maximize productivity with twin robot cells, allowing for synchronized or parallel operations with multiple robots.

- **Versatile Technology Integration:**
  Expand your capabilities with seamless access to additional technology packages, including spot welding, sealing, laser cutting, laser welding, deburring, painting, and more.

Welding robotics with **Lorch** and **OTC DAIHEN.**

That's strong: Automated welding systems show off their advantages when it counts. They help to overcome the shortage of skilled workers and always deliver consistently high quality. Regardless of whether it's a recurring task or a one-off production: An automated system from OTC and Lorch optimizes your production and, despite the common belief, does not involve high investment costs and time.
On the contrary: **We make the automation of your production easy.**

Five reasons for automation.

1 **Overcoming the shortage of skilled workers:**
Skilled workers can contribute their services elsewhere, because the handling requires less pratice and expertise.

2 **Ensure feasibility & quality:**
Continuous weld seams result in lower heat input while maintaining high quality visual results.

3 **Enable increased replicability:**
Quality always remains at a high level, regardless of the welder. This also results in fewer wastage.

4 **Realize savings potential:**
Labor costs are reduced through fast parameterization and shortened lead time.

5 **Creating attractive jobs:**
Automation is the future and makes your production a modern and attractive workplace for young skilled workers.

Automatically better: OTC DAIHEN powered by Lorch

Automation expertise with OTC:
- Large portfolio of robots
- Market leader in robot welding
- Highest quality
- Application-specific welding robots

+

Arc expertise with Lorch:
- State-of-the-art manufacturing of welding machines
- Local and familiar contact persons
- Fast welding engineering service
- Coordinated delivery & commissioning

Benefit from the perfect synergy of experience and quality in robotics and welding technology from the market leaders in robotics and cobot welding.

Robots vs. **Cobots.**

What suits my business better?

Parts

Robots	Cobots
Material thicknesses mainly between ☐ **0.5 and 3 mm** or ☐ **< 15 mm**	Material thicknesses mainly between ☐ **1 and 15 mm** (Aluminium off 2 mm)
☐ Weld seam length **> 1,500 mm**	☐ Weld seam lengthe **< 1,500 mm**

Production characteristics

Robots	Cobots
☐ **large and very large batch sizes**	☐ **small and medium batch sizes**
☐ **low component variance**	☐ **high component variance**
☐ **occasional or no workpiece changes**	☐ **frequent workpiece changes**

Space capacities

Robots	Cobots
☐ available	☐ limited

Experience in operating and programming robots

Robots	Cobots
☐ already available in the company	☐ not available

Cost focus on

Robots	Cobots
☐ low manufacturing unit costs (minimum cycle times)	☐ low set-up costs (minimum setup times)

Willingness to invest

Robots	Cobots
☐ > 100,000 EUR	☐ < 100,000 EUR
Yes, to a robotic solution.	**Yes, to a cobot solution.**

No matter what conclusion you come to, Lorch is always the right partner for your automation task.

Your **reliable partner** for **innovative welding solutions** and **automation technologies.**

Your local Lorch partner:

For further information, see
www.lorch.eu

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smart welding