

An industrial robot arm, painted in a bright orange color, is shown in the process of welding a metal component. The robot arm is positioned over a blue metal frame. A bright, intense light emanates from the welding point, creating a significant glare. The background is a blurred industrial setting. The word "CLOOS" is visible on the side of the robot's main body.

QIROX

Automated welding and cutting
with system

CLOOS

Weld your way.

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WL series: The all-rounder

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Automated welding and cutting with system

QIROX comprises all solutions for automated welding and cutting. Due to its modular design, the QIROX system allows scalable solutions which can perfectly match your production requirements.

The QIROX system includes the robot technology, positioners, safety technology, software, sensors and the interface to the process technology. It is supplemented by a comprehensive accessories program and matching services.



International top class

The robot is the central element in the QIROX solution package. You benefit in particular from the modular design of the entire mechanics. All components of the robot, from the robot base to the wrist, are perfectly matched to each other. By using different component groups, you get a customised welding robot for every production requirement. With our four robot series for different applications, optimal solutions can be realised for the most diverse welding

processes and production environments. Depending on your requirements, you can choose between a robot with a classic or a hollow shaft wrist. The robot is supplemented by a variety of different positioners. These expand the working area of the robot and bring the workpieces into an optimal processing position.

- **Flexibility:** Modular design for tailor-made systems, perfectly adapted to individual production requirements
- **Quality:** Repeatability, long service life and maintenance intervals
- **Service:** Global dense service network and high availability of consumables and spare parts

WS Series

The entry model:
Easy entry into the world of robot welding



WM Series

The compact solution:
Agile and highly dynamic for short cycle times



WL Series

The all-rounder:
Flexible application possibilities for individual requirements



PL Series

The power pack:
Precise and powerful for high payloads and a wide range of applications



The entry model:

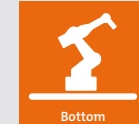
Easy entry into the world of robot welding

The robot models of the **WS series** offer you an easy entry into the world of robot welding. They come with everything a welding robot needs to master simple welding tasks. You benefit from an optimal price-performance ratio.

- Optimum price-performance ratio
- Easy entry into the robot welding technology



Assembly



Processes



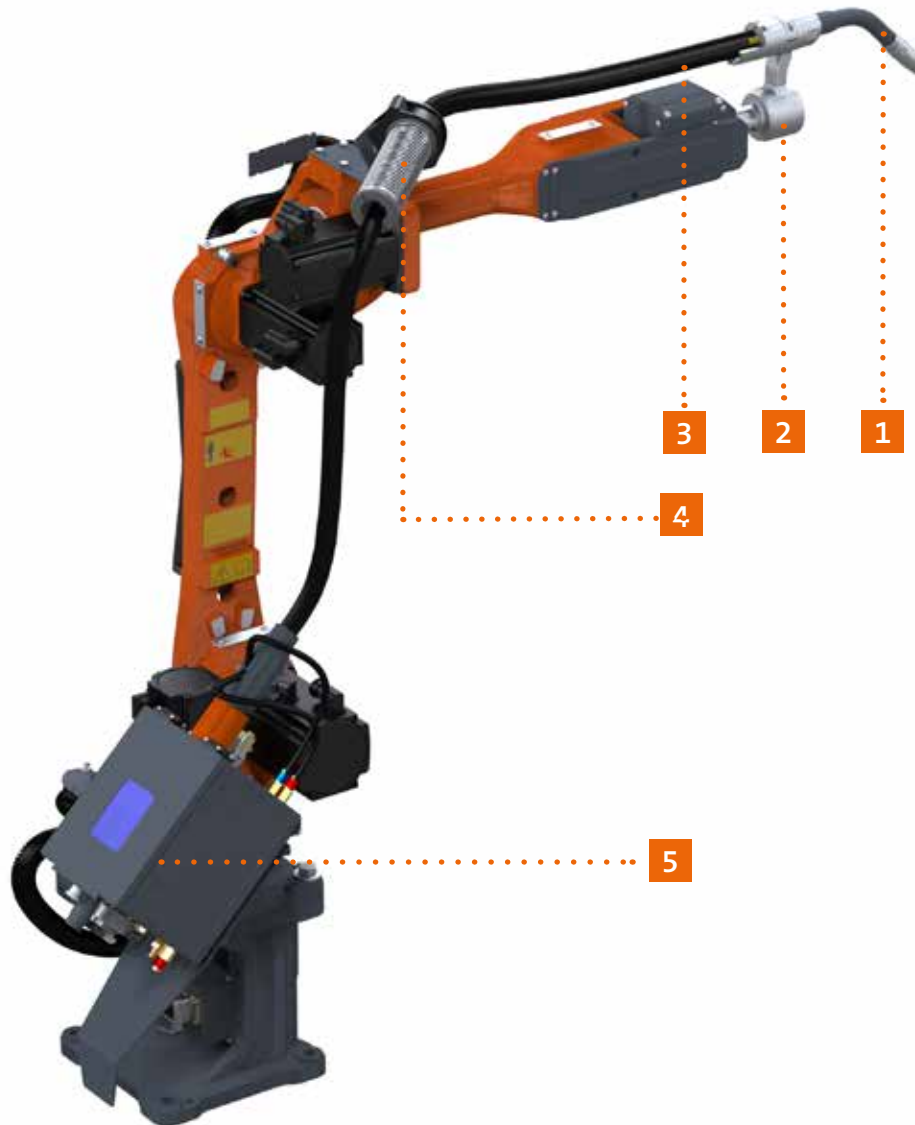
Application range

■ MIG/MAG

■ Sensors



Welding equipment





- 1 Robot welding torches
- 2 Mounting flange with integrated anti-collision sensor
- 3 Torch cable assembly
- 4 Flexible hose guide
- 5 Wire drive QN-WD-AR

The entry model:

Easy entry into the world of robot welding

Assembly

Process

		Floor	Slope	Wall	Ceiling	MIG/MAG	MIG/MAG QN-RF-Duo*	MIG/MAG Tandem	MIG/MAG Tandem QN-RF-Duo**	TIG	TIG QN-WD-RF-Mono*	Plasma and oxyacetylene cutting	Laser cutting	Laser welding	Laser hybrid welding	Grinding and polishing	Handling	
QIROX QRC-210 6-axis robot mechanics with classic wrist and 2,100 mm working envelope 		X				X												
QIROX QRC-290 6-axis robot mechanics with classic wrist and 2,900 mm working envelope 		X				X												

X Series

O Option

* Additional wire drive, mounted on the robot wrist

** Wire drive, mounted on the robot wrist

The compact solution:

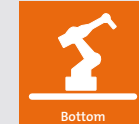
Agile and highly dynamic for short cycle times

The models of the **WM series** are designed for standard welding processes. They are characterised by a compact design and act highly dynamically. Therefore, they are ideally suited for use in our compact cells and systems.

- Highly dynamic, agile and efficient
- Small floor space due to compact design



Assembly



Processes



Application range Classic wrist

■ **MIG/MAG** DuoDrive Standard



■ **TIG**



■ **Sensors**



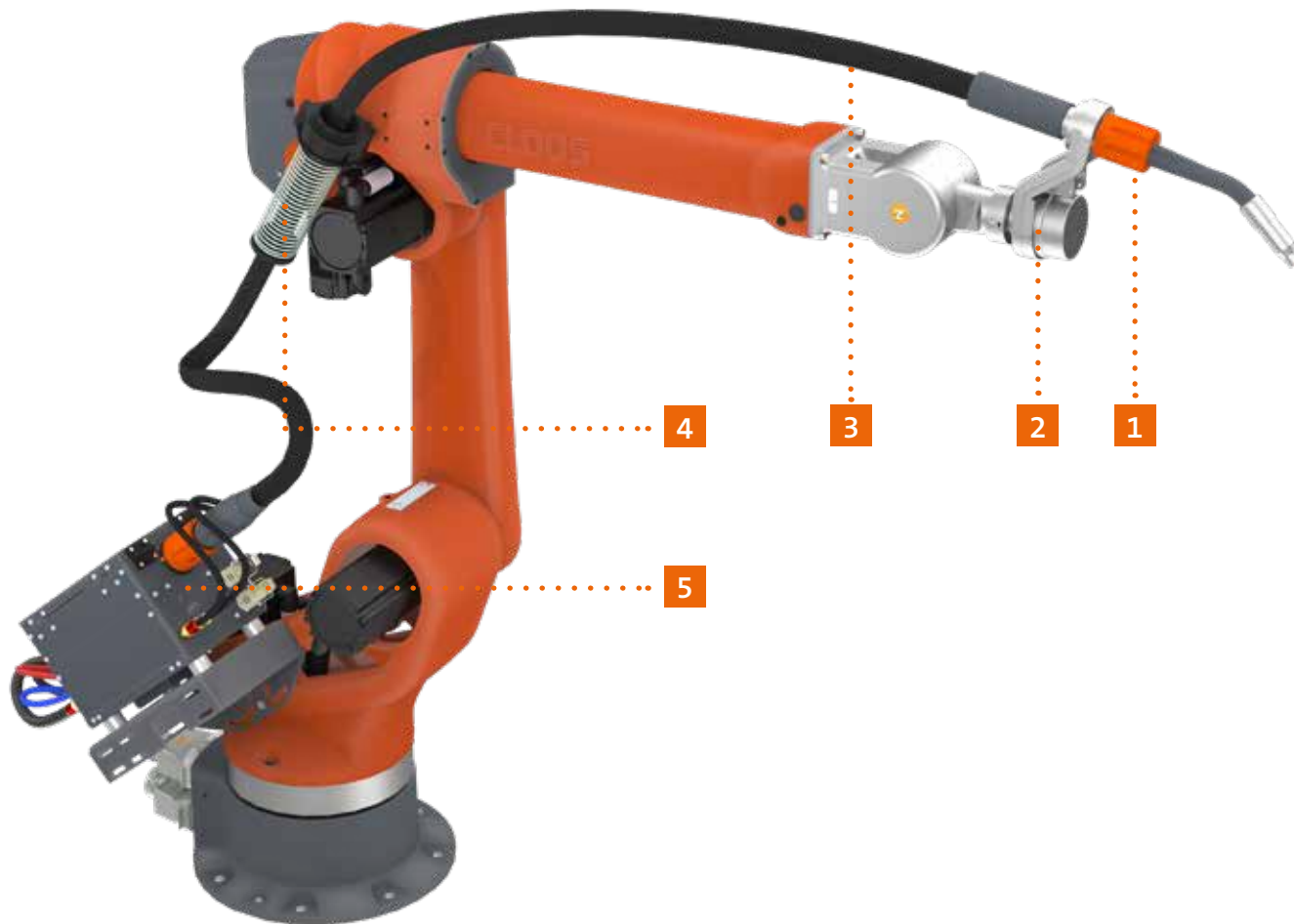
Application range Hollow wrist

■ MIG/MAG DuoDrive Standard

■ Sensors

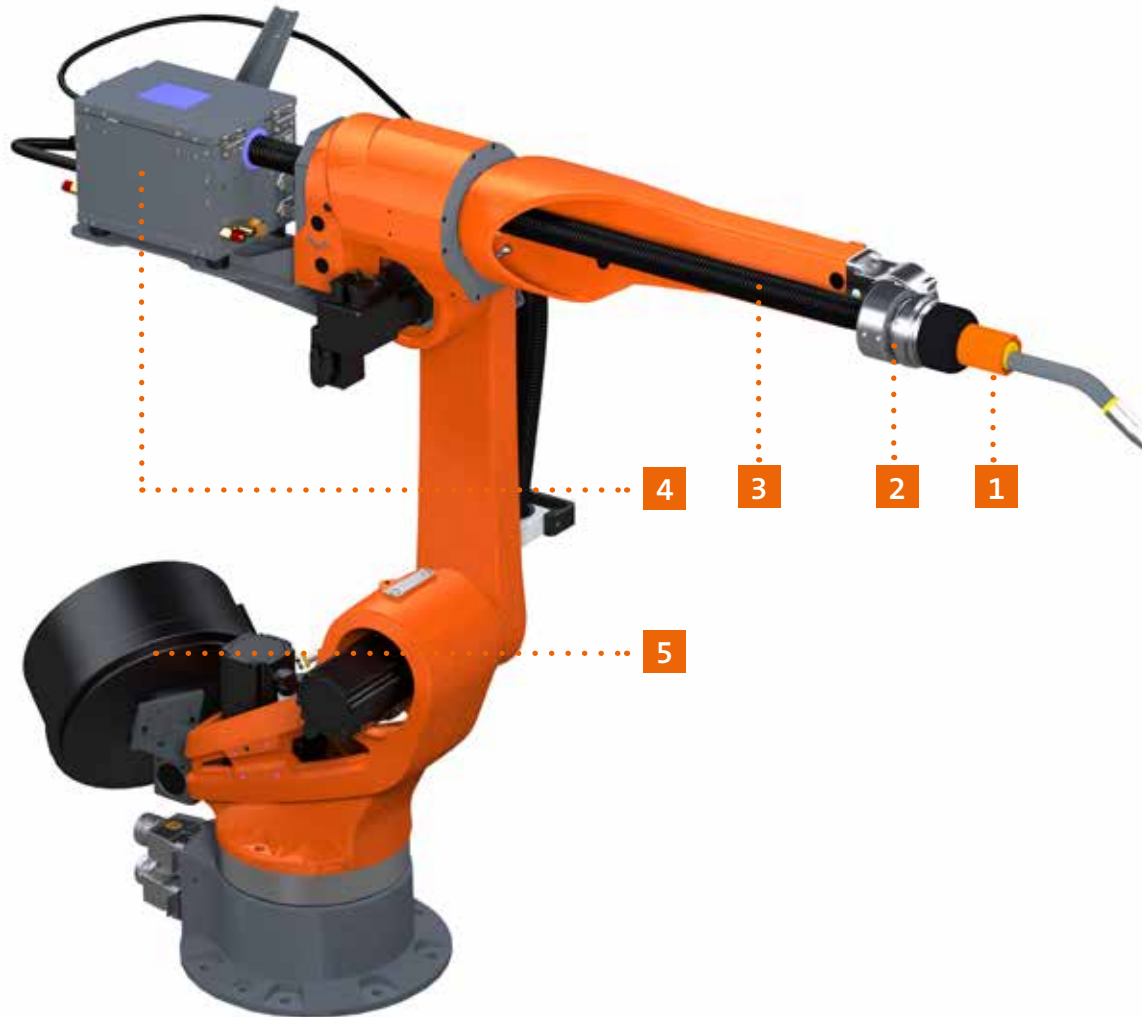


Welding equipment Classic wrist



- 1** Robot welding torches
- 2** Mounting flange with integrated anti-collision sensor
- 3** Torch cable assembly
- 4** Flexible hose guide
- 5** Wire drive QN-WD-AR

Welding equipment Hollow wrist






- 1** Robot welding torches
- 2** Mounting flange with integrated anti-collision sensor
- 3** Torch cable assembly
- 4** Wire drive QN-WD-AR
- 5** Wire storage

The compact solution:

Agile and highly dynamic for short cycle times

Assembly

Process

	Floor	Slope	Wall	Ceiling	MIG/MAG	MIG/MAG QN-RF-Duo*	MIG/MAG Tandem	MIG/MAG Tandem QN-RF-Duo**	TIG	TIG QN-WD-RF-Mono*	Plasma and oxyacetylene cutting	Laser cutting	Laser welding	Laser hybrid welding	Grinding and polishing	Handling
QIROX QRC-230 	X	O	O	X	X	X	X	X	X	X						
QIROX QRC-300 	X			X	X	X	X		X	X						
QIROX QRH-280 	X			X	X	X										

X Series

O Option

* Additional wire drive, mounted on the robot wrist

** Wire drive, mounted on the robot wrist

Accessories



Wire feed distance

Safe wire feed for perfect welding results

- Powerful 4 roller drive
- Slip- and abrasion-free wire feed
- Maintenance-friendly



Welding torch

with anti-collision sensor

Powerful welding torch for robot application

- Liquid cooled
- Very high capacity class 550 A at 100% duty cycle
- Robust and compact design



Sensors

Quality assurance through precise welding processes

- Considerably improved weld quality
- Reduction of manual effort
- Minimum rework

The all-rounder:

Flexible application possibilities for individual requirements

Wherever flexible applications are required and a large working area with medium payloads is necessary, the all-rounders of the **WL series** are ideal. Welding, cutting, handling and guiding sensors are part of the wide range of applications of the WL robot series. Equipped with a tool changing system, the robot takes over various tasks and thus increases the availability of the system.

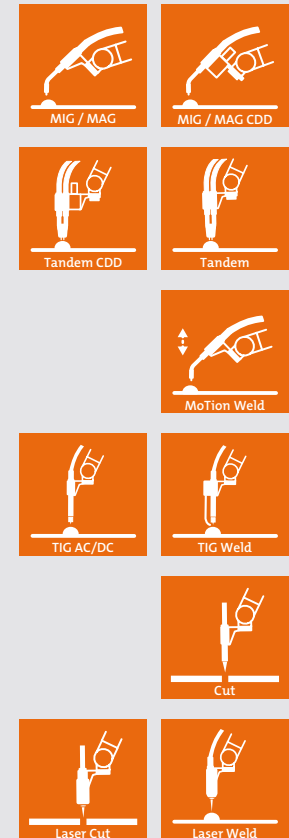
- For almost all processes
- Multiple tasks and processes with one robot thanks to tool changing system
- Extension of range by seventh robot axis (option)



Assembly



Processes



Many variants from one construction kit

The most dynamic feature of the QIROX robot is the modular design of all the mechanics. All components of the welding robot – from the robot base to the axis tube – are perfectly matched to each other. By using different components, a customised welding robot can be generated for every production requirement.

1 Arm tubes

- Design depending on the working range

2 Wrist

- Classic
- Hollow shaft

3 Shoulder joint

4 Pivot arm

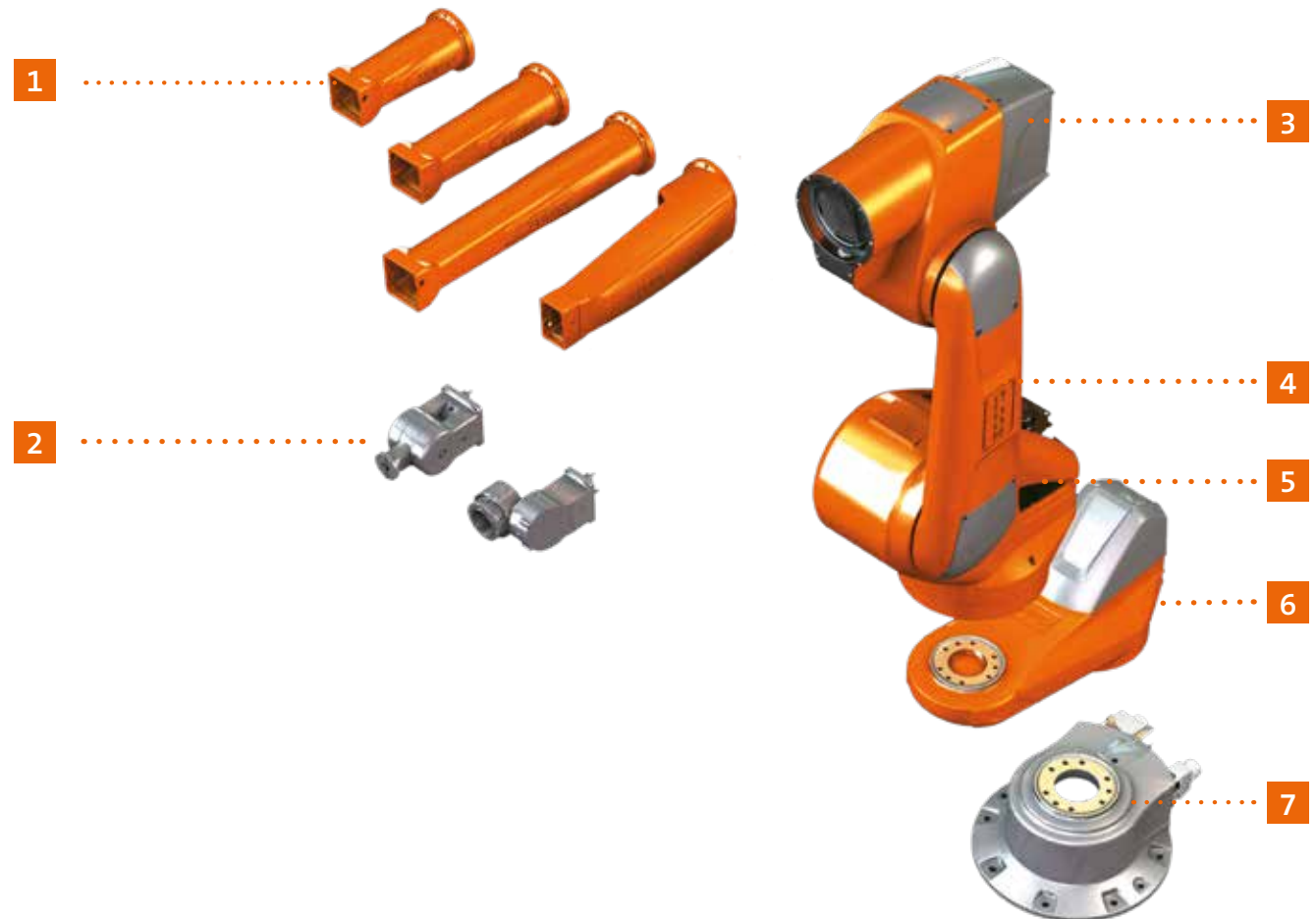
5 Angular base

6 7th axis

- Enlarged working envelope

7 Robot base

- Standard for upright and overhead mounting
- High for upright mounting



Application range Classic wrist

■ MIG/MAG DuoDrive Standard



Single wire



Tandem



■ TIG



■ Enhancement of the application range due to a tool changing system



■ Sensors



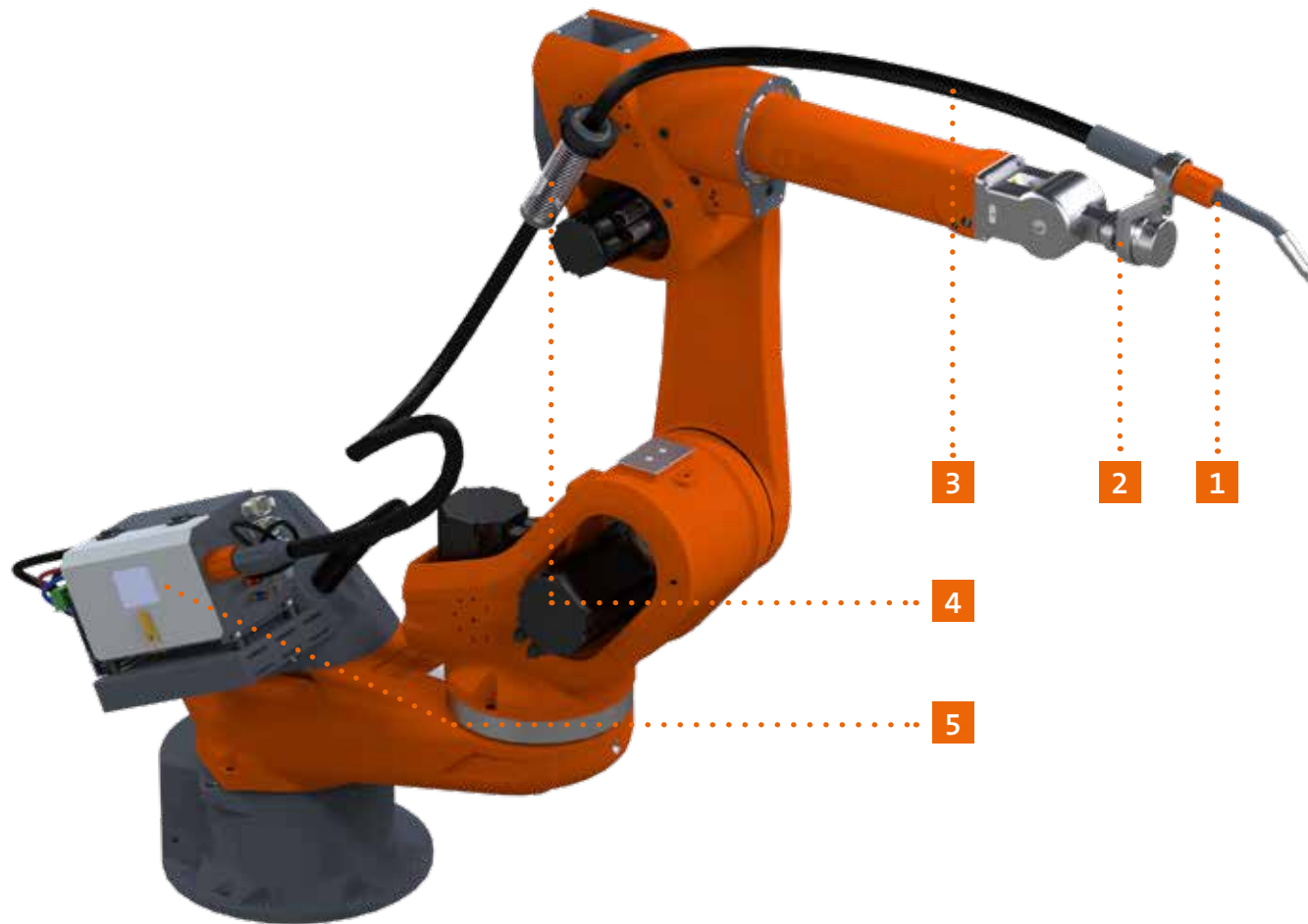
Application range Hollow wrist

■ MIG/MAG DuoDrive Standard

■ Sensors

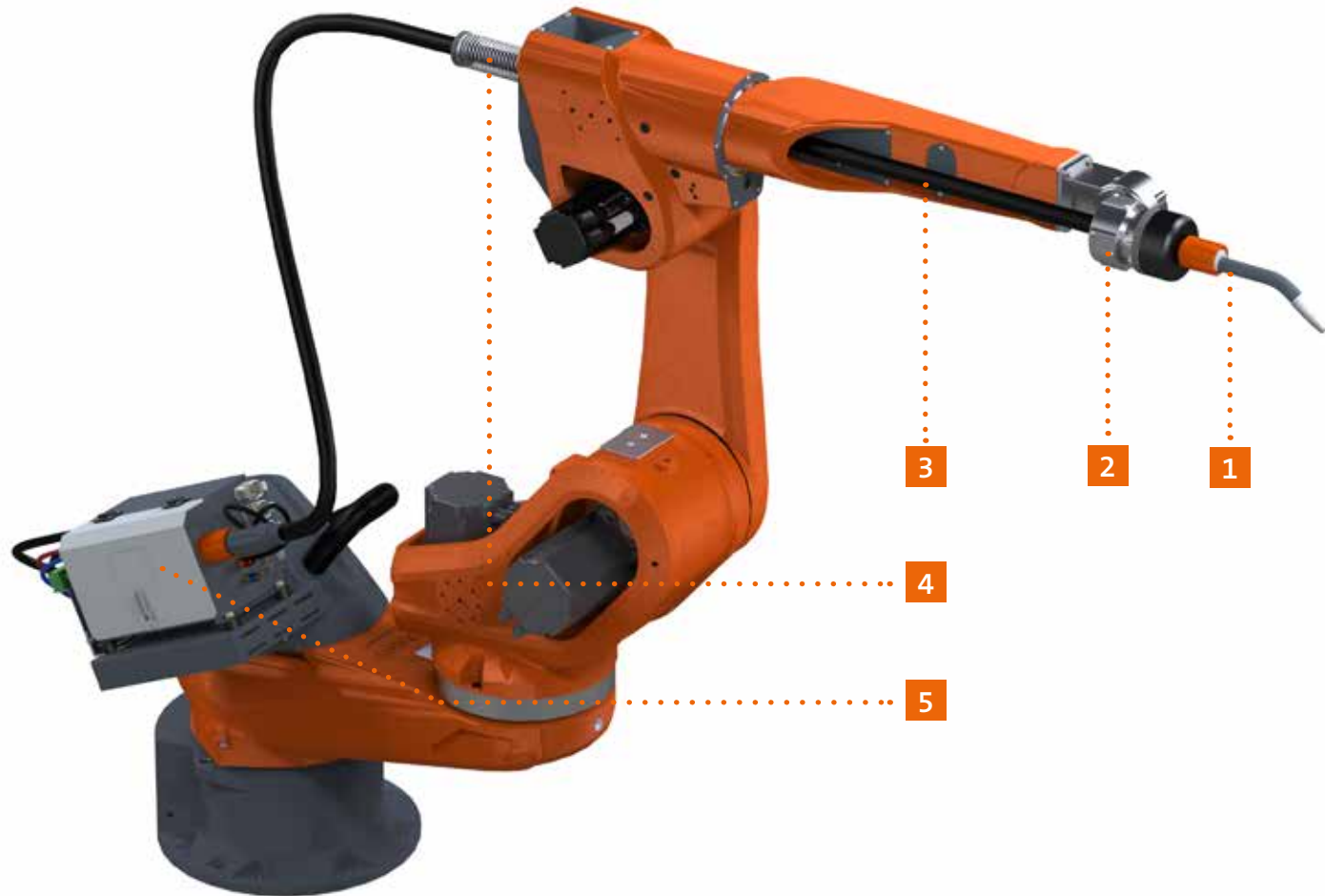


Welding equipment Classic wrist



- 1 Robot welding torches
- 2 Mounting flange with integrated anti-collision sensor
- 3 Torch cable assembly
- 4 Flexible hose guide
- 5 Wire drive QN-WD-AR

Welding equipment Hollow wrist



- 1 Robot welding torches
- 2 Mounting flange with integrated anti-collision sensor
- 3 Torch cable assembly
- 4 Flexible hose guide
- 5 Wire drive QN-WD-AR

Application examples

2x QRC-360

Linde MH



QRC-410

Bieber Industrie SAS



QRC-320

Atmos



QRH-390

Caldera HEATING GROUP



The all-rounder:

Flexible application possibilities for individual requirements

Assembly

Process

	Floor	Slope	Wall	Ceiling	MIG/MAG	MIG/MAG QN-RF-Duo*	MIG/MAG Tandem	MIG/MAG Tandem QN-RF-Duo**	TIG	TIG QN-WD-RF-Mono*	Plasma and oxyacetylene cutting	Laser cutting	Laser welding	Laser hybrid welding	Grinding and polishing	Handling
QIROX QRC-320 6-axis robot mechanics with classic wrist and 3,200 mm working envelope	X	O	O	X	X	X	X	X	X	X	X	X	X			
QIROX QRC-320-H 6-axis robot mechanics with hollow shaft wrist, 3,500 mm working envelope and a high base for floor mounting	X			X	X	X	X	X	X	X	X	X	X			
QIROX QRC-350 6-axis robot mechanics with classic wrist and 3,500 mm working envelope	X			X	X	X	X	X	X	X	X	X	X			
QIROX QRC-350-H 6-axis robot mechanics with classic wrist, 3,500 mm working envelope and a high base for floor mounting					X	X	X	X	X	X	X	X	X			

X Series

O Option

* Additional wire drive, mounted on the robot wrist

** Wire drive, mounted on the robot wrist

The all-rounder:

Flexible application possibilities for individual requirements

Assembly

Process

	Floor	Slope	Wall	Ceiling	MIG/MAG	MIG/MAG QN-RF-Duo*	MIG/MAG Tandem	MIG/MAG Tandem QN-RF-Duo**	TIG	TIG QN-WD-RF-Mono*	Plasma and oxyacetylene cutting	Laser cutting	Laser welding	Laser hybrid welding	Grinding and polishing	Handling
QIROX QRC-350-E 6-axis robot mechanics with classic wrist, 3,500 mm working envelope and extended range by seventh robot axis	X			X	X	X	X	X	X	X	X	X	X			
QIROX QRH-360 6-axis robot mechanics with hollow shaft wrist and 3,600 mm working envelope	X			X	X	X										
QIROX QRH-360-H 6-axis robot mechanics with hollow shaft wrist, 3,600 mm working envelope and a high base for floor mounting	X				X	X										
QIROX QRH-360-E 6-axis robot mechanics with hollow shaft wrist, 3,600 mm working envelope and extended range by seventh robot axis	X			X	X	X										

X Series

O Option

* Additional wire drive, mounted on the robot wrist

** Wire drive, mounted on the robot wrist

The all-rounder:

Flexible application possibilities for individual requirements

Assembly

Process

	Floor	Slope	Wall	Ceiling	MIG/MAG	MIG/MAG QN-RF-Duo*	MIG/MAG Tandem	MIG/MAG Tandem QN-RF-Duo**	TIG	TIG QN-WD-RF-Mono*	Plasma and oxyacetylene cutting	Laser cutting	Laser welding	Laser hybrid welding	Grinding and polishing	Handling
QIROX QRH-390 6-axis robot mechanics with hollow shaft wrist and 3,900 mm working envelope	X			X	X	X										
QIROX QRH-390-H 6-axis robot mechanics with hollow shaft wrist, 3,900 mm working envelope and a high base for floor mounting	X				X	X										
QIROX QRH-390-E 6-axis robot mechanics with hollow shaft wrist, 3,900 mm working envelope and extended range by seventh robot axis	X			X	X	X										

X Series

O Option

* Additional wire drive, mounted on the robot wrist

** Wire drive, mounted on the robot wrist

The all-rounder:

Flexible application possibilities for individual requirements

Assembly

Process

Assembly				Process											
Floor	Slope	Wall	Ceiling	MIG/MAG	MIG/MAG QN-RF-Duo*	MIG/MAG Tandem	MIG/MAG Tandem QN-RF-Duo**	TIG	TIG QN-WD-RF-Mono*	Plasma and oxyacetylene cutting	Laser cutting	Laser welding	Laser hybrid welding	Grinding and polishing	Handling
X			X	X	X	X	X	X	X	X	X				
X				X	X	X	X	X	X	X	X				
X			X	X	X	X	X	X	X	X	X				

X Series

O Option

* Additional wire drive, mounted on the robot wrist

** Wire drive, mounted on the robot wrist

QIROX QRC-410

6-axis robot mechanics with classic wrist and 4,100 mm working envelope



QIROX QRC-410-H

6-axis robot mechanics with classic wrist, 4,100 mm working envelope and a high base for floor mounting



QIROX QRC-410-E

6-axis robot mechanics with classic wrist, 4,100 mm working envelope and extended range by seventh robot axis



Accessories



- Wire feed distance
- Safe wire feed for perfect welding results
- Powerful 4 roller drive
- Slip- and abrasion-free wire feed
- Maintenance-friendly



- Tool changing system
- Combination of different processes
- MIG/MAG
- TIG
- Tandem Weld
- Handling
- Cutting



- Welding torch
- with anti-collision sensor
- Powerful welding torch for robot application
- Liquid cooled
- Very high capacity class 550 A at 100% duty cycle
- Robust and compact design



- Handling tasks
- Loading and unloading of tools
- Provision of tack parts



- Sensors
- Quality assurance through precise welding processes
- Considerably improved weld quality
- Reduction of manual effort
- Minimum rework

The power pack:

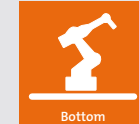
Precise and powerful for high payloads and a wide range of applications

The power packs of the **PL series** are true all-round talents. The robot precisely guides a laser or laser hybrid head. In addition, it takes over handling tasks such as loading the welding robot systems. Grinding and polishing of work-pieces are also among the diverse fields of application of the robots from the PL series.

- Powerful and precise
- A wide variety of application possibilities
- Laser welding, handling, grinding and more



Assembly



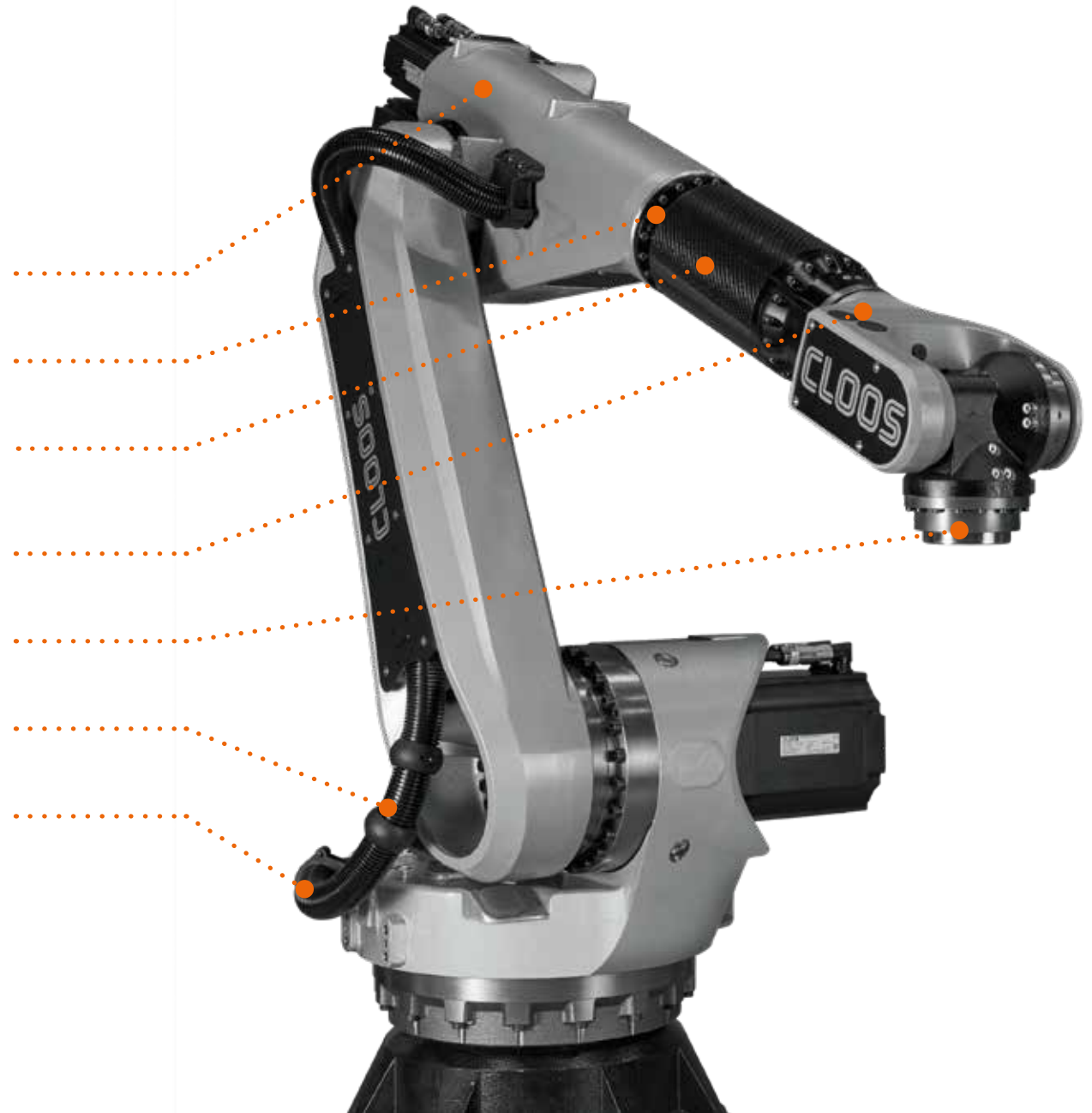
Processes



Advantages: QIROX QRC-30/45/60-PL robot

Overview of all benefits

- **Mechanical interface on axis body 3:**
Attachment of tools, media boxes, wire drive units up to 40 kg
- **Modular design:**
Retrofits possible at any time
- **Use of carbon components:**
Maximum dynamics with low weight and high stiffness
- **Manual axes free from backlash:**
Very high repeatability independent of the payload
- **Standard flange at the robot wrist:**
Use with all common tools
- **Externally guided cable loom:**
Quick repair in case of service by means of Plug & Play
- **Integrated media supply system:**
Compressed air, signal and data lines



Enhancement of the application range

due to a tool changing system



Tandem Weld with DuoDrive, sensors and tool changing system



Laser Hybrid Weld



Laser cutting



Automated grinding and polishing



Versatile handling tasks



Application examples

QRC-PL-60

Grinding and polishing of battery covers at Kohl & Sohn



QRC-PL-30

Grinding of cabins for construction machines



QRC-PL-30

Laser Hybrid Weld Battery box






The power pack:

Precise and powerful for high payloads and a wide range of applications

Assembly

Process

		Floor	Slope	Wall	Ceiling	MIG/MAG	MIG/MAG QN-RF-Duo*	MIG/MAG Tandem	MIG/MAG Tandem QN-RF-Duo**	TIG	TIG QN-WD-RF-Mono*	Plasma and oxyacetylene cutting	Laser cutting	Laser welding	Laser hybrid welding	Grinding and polishing	Handling
QIROX QRC-30-PL		X			X								X	X	X	X	X
QIROX QRC-45-PL		X			X								X	X	X	X	X
QIROX QRC-60-PL		X			X								X	X	X	X	X

X Series

O Option

* Additional wire drive, mounted on the robot wrist

** Wire drive, mounted on the robot wrist

Standard equipment / options

QRC-30/45/60-PL standard design



Forklift pockets with crane eyes

Transport the robot mechanics safely and easily!



Integrated media supply system

Achieve maximum service life with the wear-resistant media supply system through the robot body!



Media box

Benefit from the close-to-tool interface of the internal media supply system in the third axis body!

QRC-30/45/60-PL options



Changing tool

Combine different processes on one robot!



Standard gripper

Equip the robot with a standard gripper for various applications!



Protective shell

Protect the robot mechanics from dust and aggressive influences in the application environment!

The way ...

Consulting

With this comprehensive “pre-service”, we take care of your project from the beginning and transfer our integrated process expertise to your component..

Planning

We elaborate a solution which perfectly meets your individual requirements.

Design

Due to the modular design of our product series we develop customised solutions which meet all your production requirements.

Production

Welding machine and robot technology is our strength - including our core competence: the arc.

Commissioning

Our specialists carry out the installation step-by-step in your production hall and test your system for faultless functionality.

Training

We train your employees and service technicians in programming, operation and maintenance in our modern training centre.

Service

Our competence team advises you on any extensions, modifications and retrofits of your existing robot and welding systems.

... to your success.

With CLOOS you weld and cut ...



... all types of metal!



... and profit from many
additional services!



... all material thicknesses
from 0.5 to 300 mm!



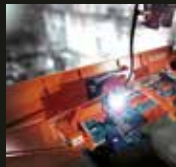
... in all industries!



... with innovative
processes!



... all over the world!



... manually or automated,
just as you need it!



... to your utter
satisfaction!



... efficiently and
individually!



... and benefit from more
than 100 years of welding
experience!



...Single source supply!

All over the world

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QR4024-QIROX_Roboter katalog-EN
Subject to technical alterations.

CLOOS

Weld your way.

