

iCAT mini: Reduced to the max.

The robot mount iCAT mini represents optimum performance in air cooled applications, simple and fast installation, durability, low maintenance effort and a very good price-performance ratio.

ABICOR BINZEL® ROBOTIC SYSTEMS

www.binzel-abicor.com

In detail:
System Overview & Technical Data

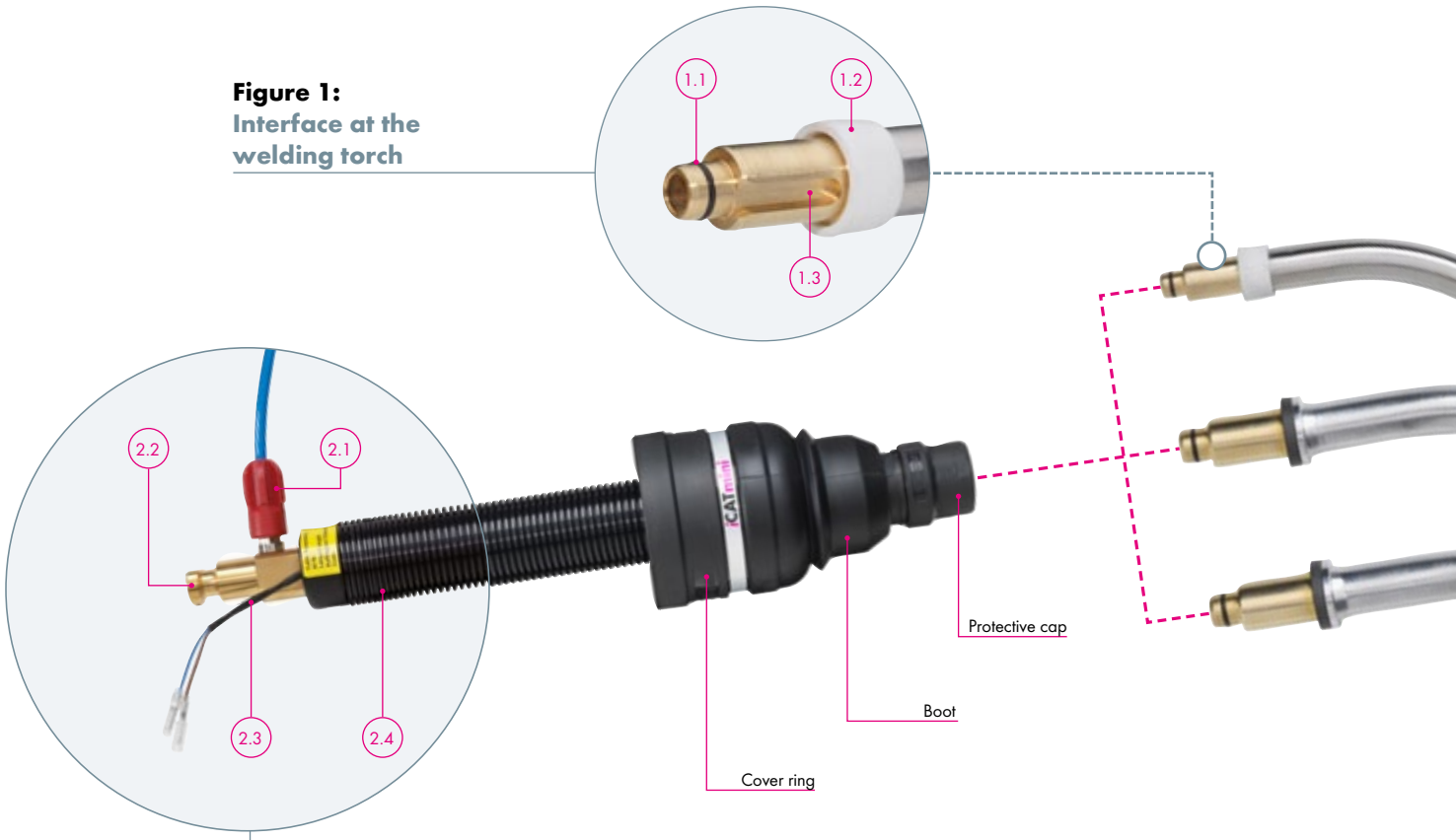


Figure 1:
Interface at the welding torch

Figure 2:
Interface on the machine side

Reduced to the max:
Compact, precise, simple and value-for-money ...

The compact robot mount iCAT mini – with integrated cable assembly guide for air cooled welding applications – was designed for use on hollow wrist robots up to 400 A at automotive suppliers and in general industries. The overall system comprises a welding torch, safety cutoff and cable assembly with a heavy-duty and torsion-resistant coaxial cable for a long service life.

The torch neck versions ABIROB® G350, G360 and G500, which are equipped with the new G-interface, are available to complement the compact iCAT mini system. Their outstanding features include stability and repeat accuracy – for excellent and reproducible welding results.

The torch neck types of the G-series are available in various TCP versions and can fall back on the tried-and-trusted wearing part concept of the ABIROB® A and GC series.

Arguments that speak for themselves:

- Low purchasing price, fast and simple installation and long service life
- Low weight of approx. 1200 g (incl. welding torch)
- Reduced design size for access in tight and complex jigs or components
- Extremely good reset precision – combined with large deflection for the optimum protection of robot and welding torch
- Extensive range of welding torches with different performance classes
- Can be used with all standard hollow wrist welding robots



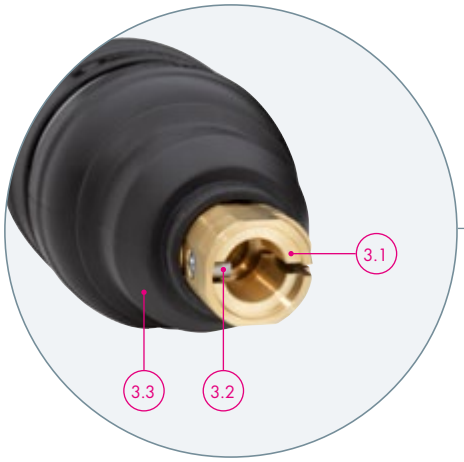


Figure 3:
Cable assembly interface on the torch side

Figure 4:
iCAT mini in detail

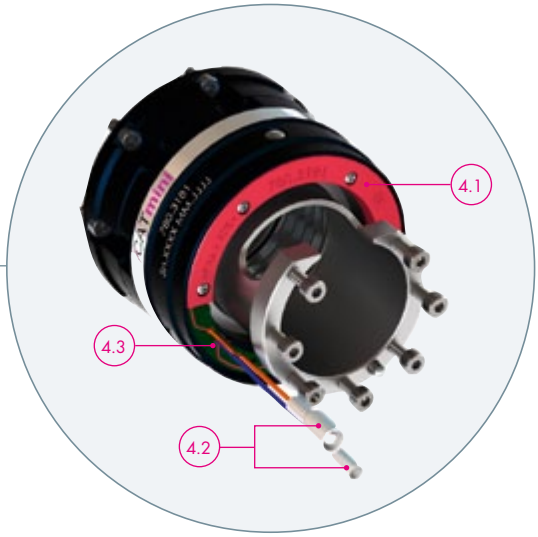


Figure 1:
Interface at the welding torch

1.1 O-ring seal guarantees the safe and gas-tight connection to the welding torch interface at the cable assembly
1.2 Insulating ring for additional insulation protection
1.3 Groove for positioning the welding torch for fast and simple changing of the torch neck

Figure 2:
Interface on the machine side

2.1 Connection for inert gas
2.2 Welding current connectors available for all standard wire feeds
2.3 Signal cable for transmitting the emergency-stop signal
2.4 Cable assembly – with heavy-duty, torsion-resistant coaxial cable for high reliability and long service life

Figure 3:
Cable assembly interface on the torch side

3.1 Welding torch interface
3.2 Feather key positioning for precise positioning of the welding torch
3.3 Boot as protection against welding splatter and soiling

Figure 4:
iCAT mini in detail

4.1 Protective ring cover to protect the signal board from soiling
4.2 Signal cables with ports for connection to the cable assembly
4.3 Integrated signal board









Technical data (EN 60 974-7):

ABIROB® G350

Type of cooling:	air cooled
Rating:	350 A CO_2
	300 A Mixed gases M21[1]
Duty cycle:	100 %
Wire-Ø:	0.8 – 1.4 mm
Torch geometries:	30°/35°/45°

ABIROB® G360

Type of cooling:	air cooled
Rating:	360 A CO_2
	290 A Mixed gases M21[1]
Duty cycle:	100 %
Wire-Ø:	0.8 – 1.6 mm
Torch geometries:	22°/35°/45°

ABIROB® G500[2]

Type of cooling:	air cooled
Rating:	500 A CO_2
	400 A Mixed gases M21[1]
Duty cycle:	100 %
Wire-Ø:	0.8 – 1.6 mm
Torch geometries:	22°/35°/45°

[1] Mixed gases M21as per DIN EN ISO 14175

[2] **Note:** The maximum performance data of the cable assembly are 360 A CO2 and 350 A Mixed gases M21 (DIN EN ISO 14175).

Technical data:

Robot mount iCAT mini

Dimensions:	Length 92 mm (without adapter flange) Ø 88 mm
Weight:	approx. 850 g (without adapter flange and cable assembly)
Release force:	24 N ± 3 N (at a distance of 400 mm to the robot flange)
Maximum deflection:	Deflection in X- and Y-axis: approx. 11° Deflection in Z-axis: approx. 8 mm
Triggering of the emergency-off switch:	– Deflection in the X- and Y-plane: approx. 0.5 – 1° – Deflection in the Z-plane: approx. 0.5 – 1 mm
Resetting accuracy:	< ± 0.1 mm (at 400 mm distance to the robot flange)
Load capacity of safety cut-out:	24 V DC, max. 100 mA

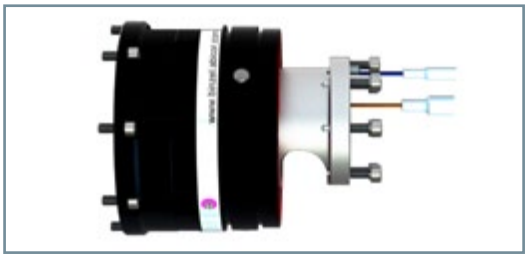
iCAT mini & Co.
Order numbers & technical details

Torch necks

Torch type	Part-No. 22°	30°	35°	45°
ABIROB® G350	–	980.0190.1	980.0185.1	980.0203.1
ABIROB® G360	980.0215.1	–	980.0222.1	980.0216.1
ABIROB® G500	980.0208.1	–	980.0223.1	980.0209.1

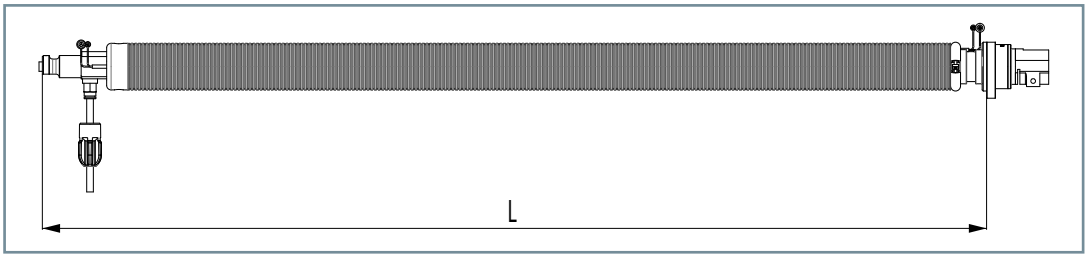
Please note: The respective wearing parts can be found in the current ROBO catalogue. Further torch necks on request.

Robot mount iCAT mini



Description	Part-No.
Robot mount iCAT mini for all torch types incl. fixing materials and protective covers (without robot flange)	780.3181.1

Cable assemblies



Cable assembly cpl. (with RPC or PANASONIC® connection)[1]

Description	Feed type	Length[2]	Part-No.
MOTOMAN® MA1440 T50	MOTOWELD®	L=0.84 m	980.2412.1
MOTOMAN® MA2010 T50	MOTOWELD®	L=1.26 m	980.2413.1

Configuration	Cooling	Rating (at 100% DC)	suitable for torch type ABIROB® G350	G360	G500	optionally wire brake available
BIKOX® T50	air cooled	360 A CO_2 340 A Mixed gases M21[3]	✓	✓	✓	yes

Adapter flanges, liners and spare parts



Adapter flanges (shown on the left)[4]

Type	Description	Part-No.
Adapter flange for YASKAWA®	MA1440 / 2010	780.3509.1
Adapter flange for YASKAWA®	MA1400 / 1900	780.3516.1
Adapter flange for ABB®	IRB 1520iD	780.3515.1
Adapter flange for FANUC®	100 / 120 iC	780.3509.1

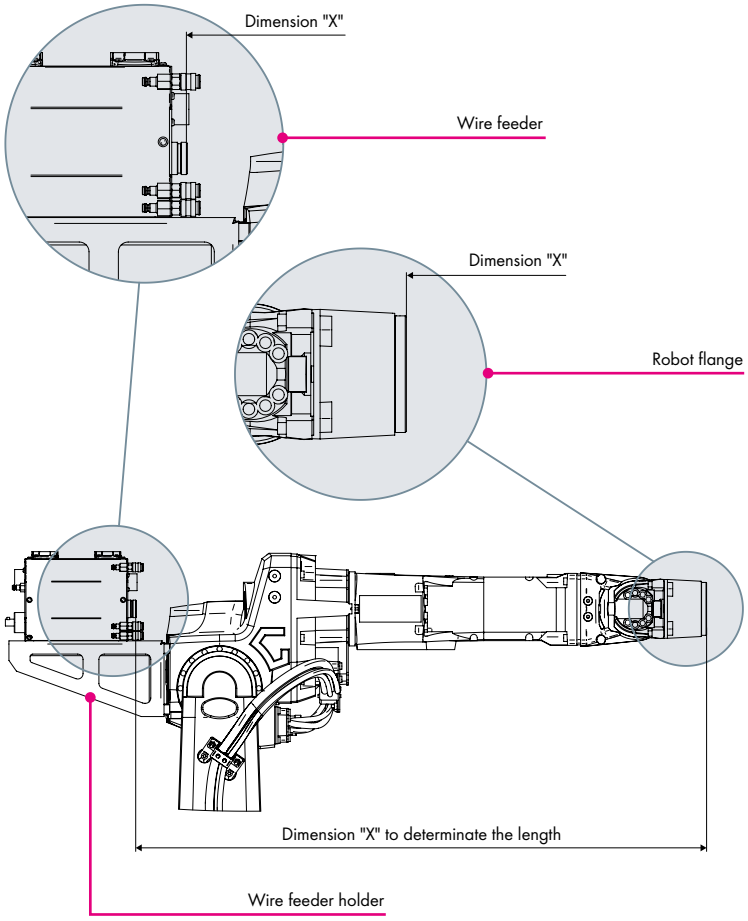
Liners and spare parts (not shown)

Type	Part-No.
Liner	124.0165
Protective cap	780.3185.1
Boot	780.3183.1
Cover ring	780.3184.1
Sealing ring	780.3182.1
Signal board set cpl. (comprising signal board, control cable, cover ring and attachment screws)	780.3190.1

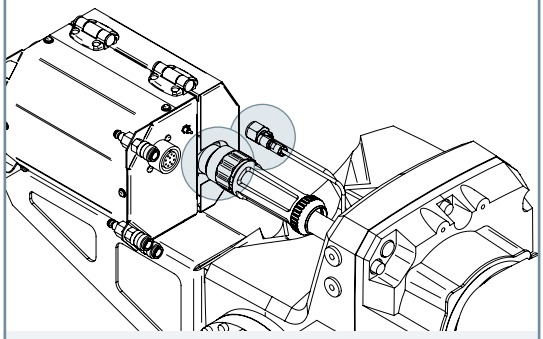
[1] **Note:** The passage of the sixth axis on the hollow-shaft robot must be at least 45 mm.
[2] Further lengths on request.
[3] Mixed gases M21 as per DIN EN ISO 14175
[4] Adapter flanges for other welding robots on request. Please indicate the robot type.

How to order
a Hollow Wrist Cable Assembly

Length determination of cable assemblies

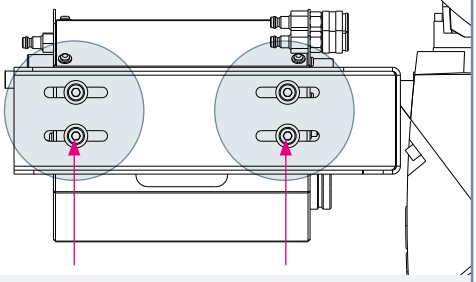


View of machine side connection



Hint:
Important for the configuration of the cable assembly is the correct indication of connections such as control line connectors, blowing out and so on.

View of wire feeder holder
(View from below)



Hint:
For the length determination of the wire feeder it should be positioned in the middle of the elongate holes so that the length of the cable assembly has sufficient flexibility.

Important information for ordering hollow wrist cable assemblies (please fill in):

Type and manufacturer of the robot:

Type and manufacturer of the wire feeder:

Welding torch system (e.g. ABIROB® A):

Control lines connector (e.g. Amphenol, open, etc. ...):

Size „X" cable assembly (see above)

Other information:

Desired additional functions:

☐ Wire brake

Las- & Gastechniek bvba
Aarschotsebaan 312 • 2590 Berlaar

T 03 482 43 65 • F 03 482 35 72
sales@lgtechniek.be

www.lgtechniek.be

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