

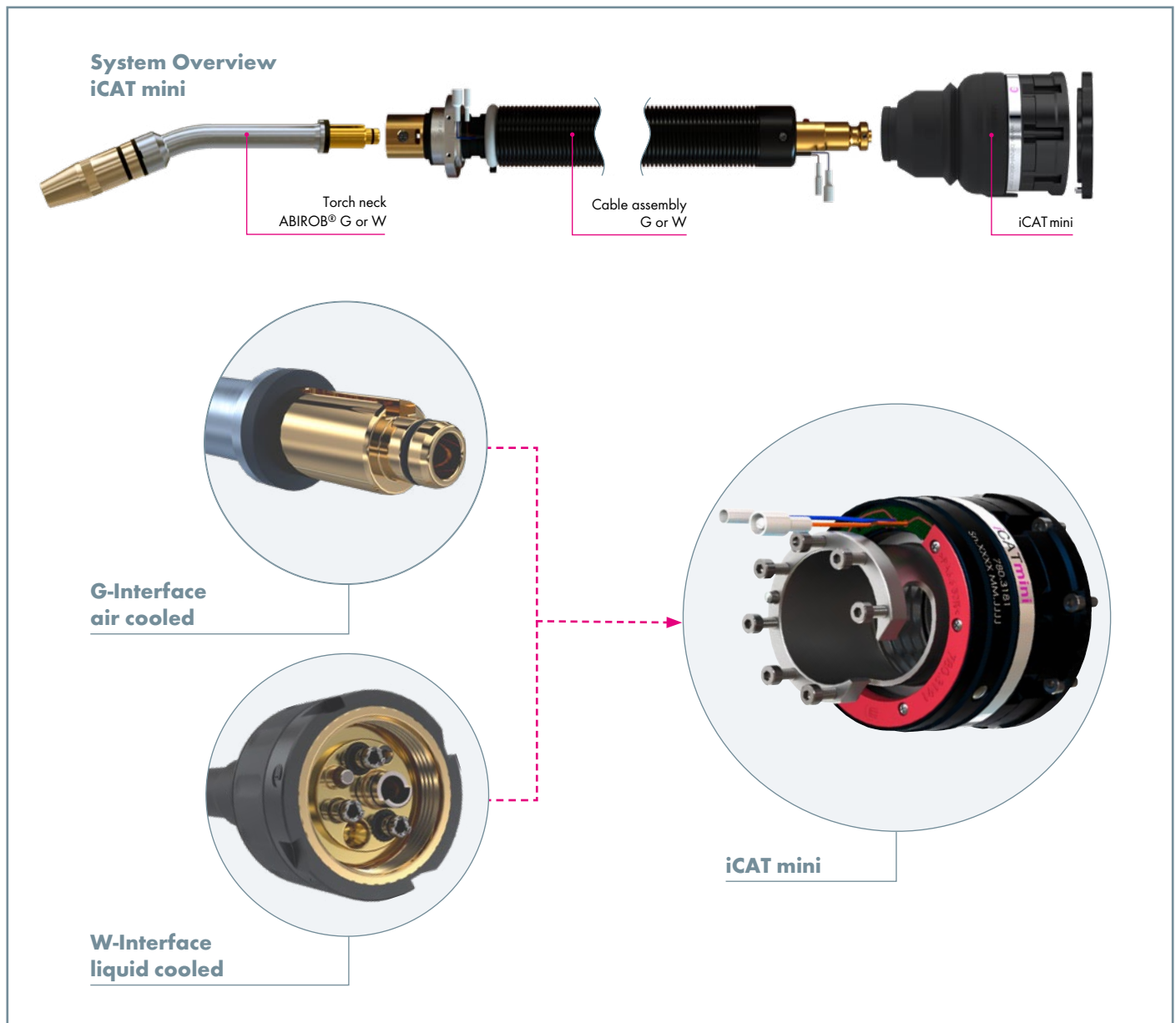
iCAT mini iSTM mini

Powerful robot torch mounts
of the next generation



Robot torch mount iCAT mini

System overview



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

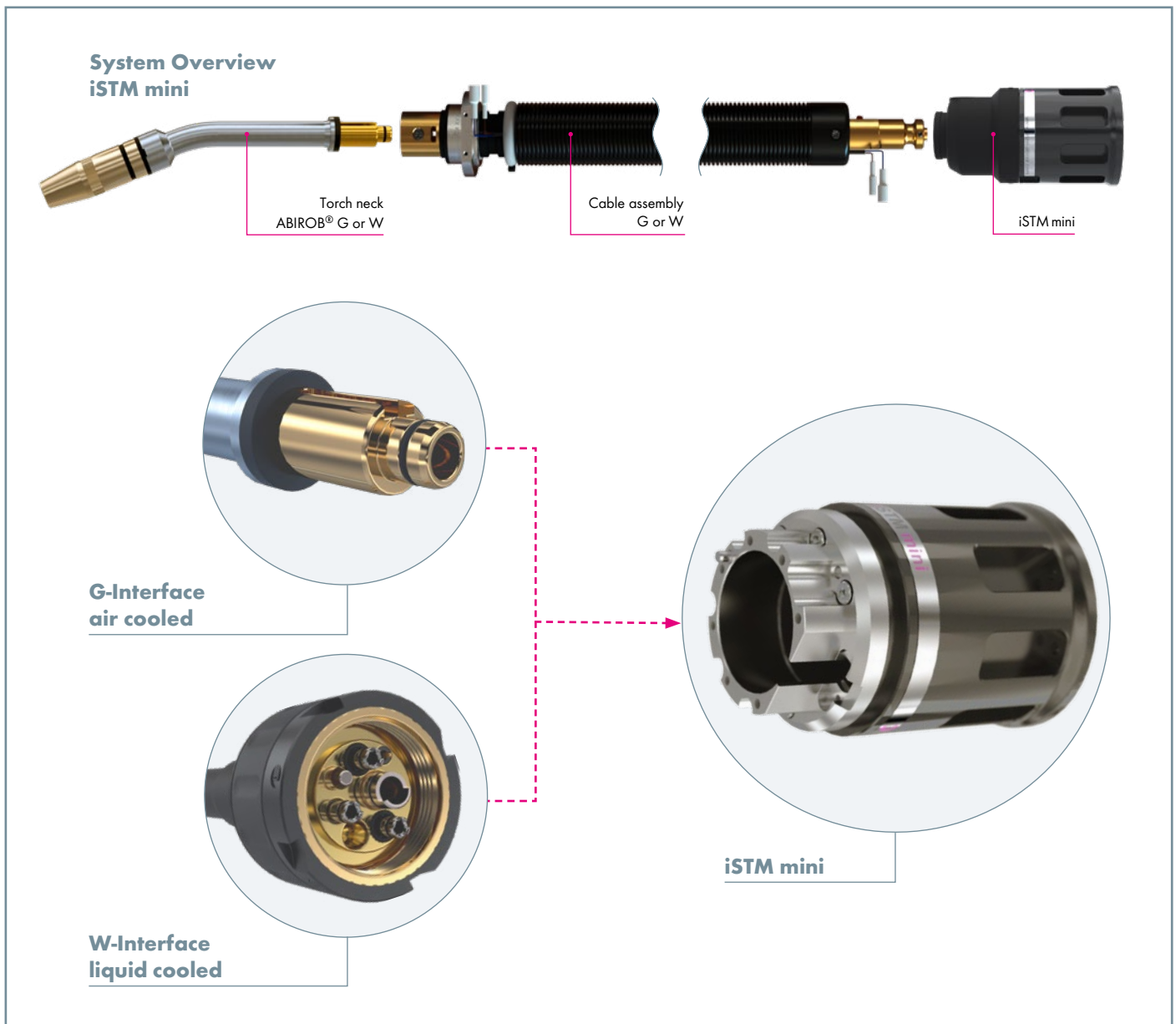
The compact robot mount **iCAT mini** – with integrated cable assembly guide for air cooled and liquid cooled welding applications – was designed for use on hollow wrist robots up to 400 A at automotive suppliers and in general industries. The overall system comprises a welding torch, safety cutoff and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

Arguments that speak for themselves:

- Low purchasing price, fast and simple installation and long service life
- Low weight of approximately 1200 g (including 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

Robot torch mount iSTM mini

System overview



iSTM mini: Flexible and reliable

The compact robot mount **iSTM mini** for welding robots with central media guidance through the sixth axis offers a high degree of safety and flexibility for air and liquid cooled welding torches. The mount was specially developed for hollow shaft robots with integrated collision software and has a total rotation angle of up to 400°.

Arguments that speak for themselves:

- Extremely torsion-resistant cable assembly: total rotation angle of up to 400° (+/- 200°)
- High flexibility and optimum component accessibility
- Highest reliability due to comprehensive protection against dust and welding spatter

- Additional feature: Optional blow-out function through the cable assembly
- Optional wire brake for air- and liquid-cooled cable assemblies

In addition to both systems are the torch neck versions ABIROB® G 300, G 350, G 360 and G 500, which are equipped with the new G-interface, as well as ABIROB® W 300, W 500 and W 600. These versions are characterized by high stability and repeatability - for excellent and reproducible welding results.

The torch neck types of the G series are available in various TCP versions and are based on the proven wear part concept of the ABIROB® A and GC series.

iCAT mini and iSTM mini

Technical data

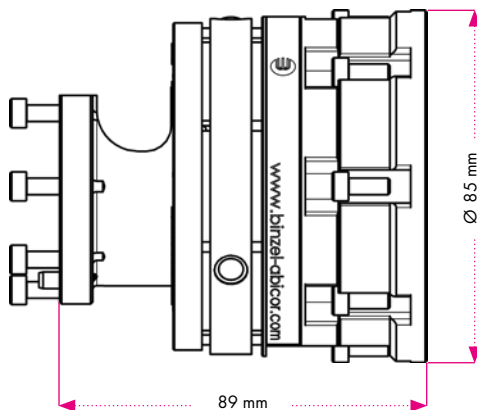
Overview

iCAT mini/iSTM mini

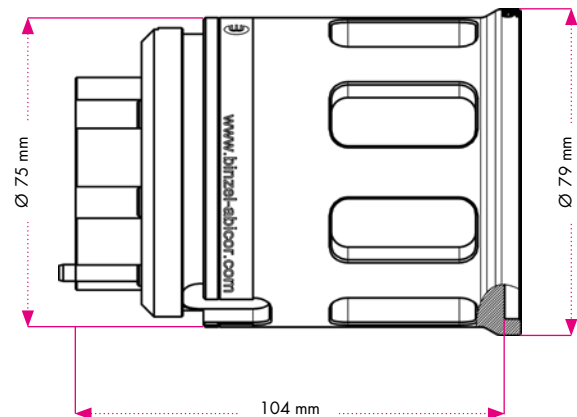
	iCAT mini G	iCAT mini W	iSTM mini G	iSTM mini W
ABIROB® G torch necks	•		•	
ABIROB® W torch necks		•		•
Power-/Water cable		•		•
BIKOX® T50S	•		•	
Wire Brake Option	•	•	•	•
Nozzle Sensing Option		•		•
Compressed air option	•	• ¹	•	• ¹
Connector				
LINCOLN®	•	•	•	•
PANASONIC® / RPC	•	•	•	•
OTC®	•	•	•	•
FRONIUS® PAP	•	•	•	•

¹ Separate compressed-air hose
Other connectors on request

Torch mount iCAT mini



Torch mount iSTM mini



Technical Data:

Torch mount iCAT mini

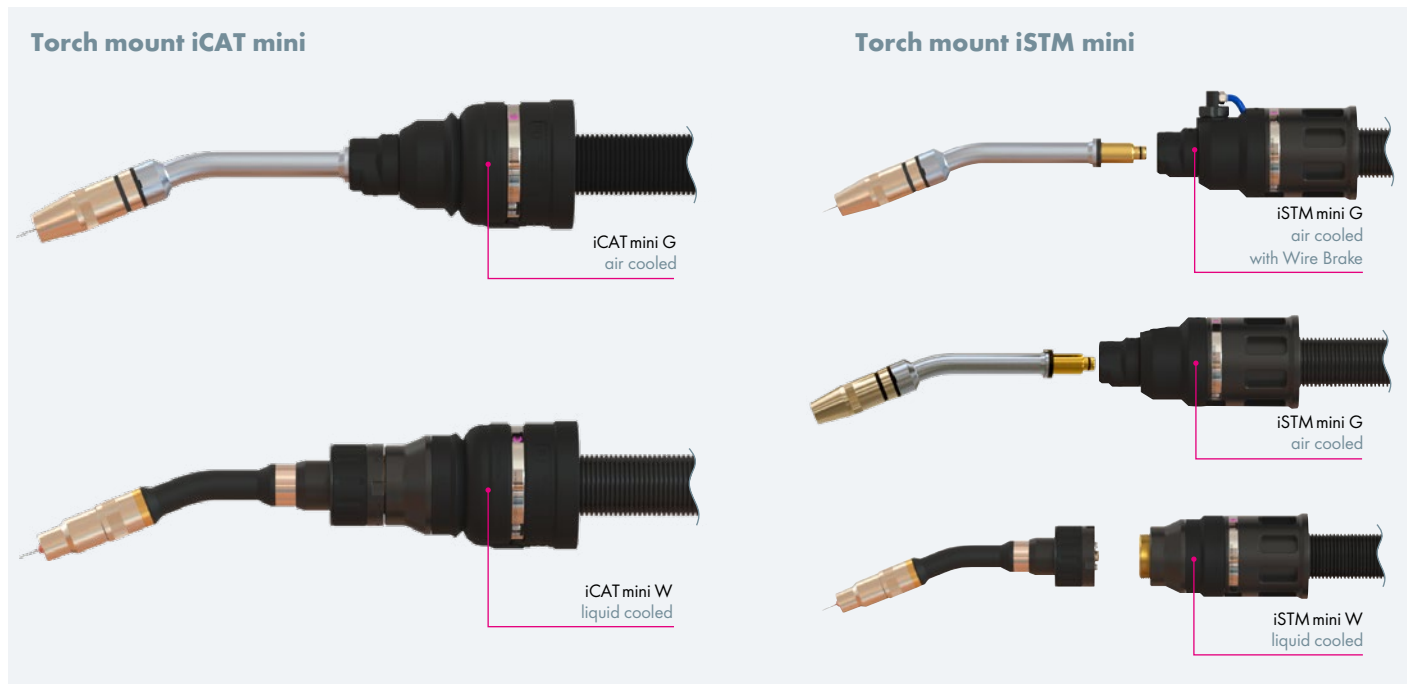
Dimensions:	Length 89 mm (without adapter flange) Ø 88 mm (with adapter flange)
Weight:	ca. 850 g (without adapter flange and cable assembly)
Release force:	24 N ± 3 N (at a distance of 400 mm to the robot flange)
Maximum deflection:	Deflection in X- and Y-axis: approx. 11° Deflection in Z-axis: approx. 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

Technical Data:

Torch mount iSTM mini

Dimensions:	Length 104 mm Ø 79 mm
Weight:	350 g (without cable assembly)

iCAT mini and iSTM mini Cable assemblies



Cable assembly iCAT mini G and W

Description	Wire Brake	Robot type	Electrical connection	Type of cooling	Order no.
iCAT mini G		YASKAWA® MA 1440	PANASONIC®	air cooled	980.2343.1
iCAT mini G		YASKAWA® MA 2010	PANASONIC®	air cooled	980.2406.1
iCAT mini G		YASKAWA® MA 1440	LINCOLN	air cooled	980.2424.1
iCAT mini G		YASKAWA® EA 1400	PANASONIC®	air cooled	980.2428.1
iCAT mini G		OTC® AX-V4	OTC®	air cooled	980.2429.1
iCAT mini G		FANUC® AM 100iC	LINCOLN®	air cooled	980.2431.1
iCAT mini G		YASKAWA® EA 1400	OTC®	air cooled	980.2443.1
iCAT mini G	•	YASKAWA® MA 1440	PANASONIC®	air cooled	980.2457.1
iCAT mini G	•	YASKAWA® MA 2010	PANASONIC®	air cooled	980.2465.1
iCAT mini G	•	KUKA® KR5-2HW	FRONIUS® PAP	air cooled	980.2488.1
iCAT mini G		YASKAWA® MA 1440	MILLER®	air cooled	980.2500.1
iCAT mini G	•	KUKA® KR5-2HW	EURO	air cooled	980.2503.1
iCAT mini G		KAWASAKI® BA 006N	PANASONIC®	air cooled	980.2522.1
iCAT mini W		YASKAWA® MA 1400	PANASONIC®	liquid cooled	980.2565.1

Cable assembly iSTM mini G and W

Description	Wire Brake	Robot type	Electrical connection	Type of cooling	Order no.
iSTM mini G	•	FANUC® AM 100iD	LINCOLN®	air cooled	980.2533.1
iSTM mini G		FANUC® AM 100iD	OTC®	air cooled	980.2542.1
iSTM mini G		FANUC® AM 100iD	PANASONIC®	air cooled	980.2547.1
iSTM mini G		FANUC® AM 100iD	LINCOLN®	air cooled	980.2549.1
iSTM mini G		FANUC® AM 100iD 10L	LINCOLN®	air cooled	980.2551.1
iSTM mini G		FANUC® AM 100iD 10L	OTC®	air cooled	980.2553.1
iSTM mini W		FANUC® AM 100iD 10L	PANASONIC®	liquid cooled	980.2557.1
iSTM mini W		FANUC® AM 100iD	LINCOLN®	liquid cooled	980.2598.1
iSTM mini W		FANUC® AM 100iD 10L	LINCOLN®	liquid cooled	980.2599.1
iSTM mini W		FANUC® AM 100iD	OTC®	liquid cooled	980.2596.1
iSTM mini W		FANUC® AM 100iD 10L	OTC®	liquid cooled	980.2597.1

iCAT mini and iSTM mini Torch necks



Technical data

Torch performance data (Welding performance)

Torch type	Type of cooling	CO ₂	Mixed gases M21 ¹	Duty cycle	Wire Ø	Torch geometry
ABIROB® G 300	air	300 A CO ₂	250 A	100 %	0.8 - 1.4 mm	45°
ABIROB® G 350	air	350 A CO ₂	290 A	100 %	0.8 - 1.4 mm	30°/35°/45°
ABIROB® G 360	air	360 A CO ₂	290 A	100 %	0.8 - 1.6 mm	22°/35°/45°
ABIROB® G 500	air	500 A CO ₂	400 A	100 %	0.8 - 1.6 mm	22°/35°/45°
ABIROB® W 300	liquid	330 A CO ₂	300 A	100 %	0.8 - 1.2 mm	22°/35°/45°
ABIROB® W 500	liquid	550 A CO ₂	500 A	100 %	0.8 - 1.6 mm	22°/35°/45°
ABIROB® W 600	liquid	600 A CO ₂	550 A	100 %	0.8 - 1.6 mm	22°/35°/45°

¹Mixed gases M21 as per DIN EN ISO 14175

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

Torch necks

Torch type	Order no.				
	0°	22°	30°	35°	45°
ABIROB® G 300					980.0243.1
ABIROB® G 350			980.0190.1	980.0185.1	980.0203.1
ABIROB® G 360		980.0294.1		980.0222.1	980.0295.1
ABIROB® G 500		980.0208.1		980.0223.1	980.0209.1
ABIROB® W 300		782.0110.1			782.0111.1
ABIROB® W 500	782.0080.1	782.0076.1		782.0077.1	782.0078.1
ABIROB® W 500 (+100)	782.0106.1	782.0107.1		782.0108.1	782.0109.1
ABIROB® W 600	782.0190.1	782.0191.1		782.0192.1	782.0193.1
ABIROB® W 600 (+100)	782.0219.1	782.0220.1		782.0221.1	782.0222.1

Liners



For connectors	Type	Wire Ø	Up to 2 m length
OTC®, FANUC®, LINCOLN®, FRONIUS®, MILLER®	steel	Ø 1.0 - 1.2	124.0165
EURO	steel	Ø 1.0 - 1.2	124.0181

iCAT mini and iSTM mini

Torch mount, electrical connection and neckliner

Torch mount iSTM mini cpl.



Description	Robot type	Order no.
iSTM mini d = 64 mm	FANUC® AM 100iD	780.3315.1
iSTM mini d = 55 mm	ABB® IRB 1660/2600iD	780.3355.1
iSTM mini d = 56 mm	YASKAWA® MA1440/2010	780.3356.1
iSTM mini d = 56 mm	FANUC® AM 100iC	780.3356.1

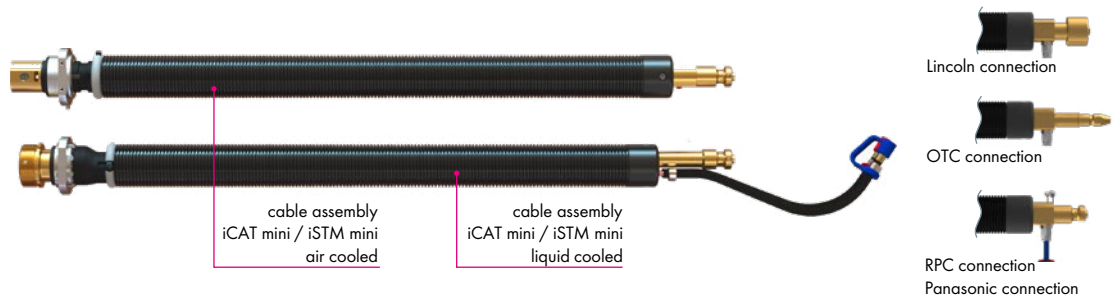
Torch mount iCAT mini



iCAT mini	Order no.
Robot mount iCAT mini for all torch types incl. fixing material and protective covers (without robot flange)	780.3181.1

Available electrical connections

(Further power connections on request)

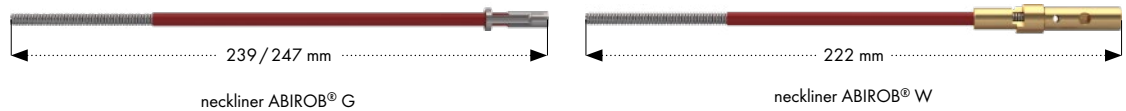


Intermediate flanges for iCAT mini



Description	Robot type	Order no.
Intermediate flanges iCAT mini d= 56 mm	YASKAWA® MA 1440/2010	780.3509.1
Intermediate flanges iCAT mini d= 56 mm	FANUC® 100/120iC	780.3509.1
Intermediate flanges iCAT mini d= 63 mm	ABB IRB® 1520/1600iD	780.3515.1
Intermediate flanges iCAT mini d= 56 mm	YASKAWA® MA1400/1900	780.3516.1
Intermediate flanges iCAT mini d= 60 mm	PANASONIC® TM1400/1800	780.3519.1
Intermediate flanges iCAT mini d= 60 mm	OTC® Almega AX V4(L)AP	780.3522.1
Intermediate flanges iCAT mini d= 80 mm	ABB® IRB 1660/2600iD L=24	780.3523.1
Intermediate flanges iCAT mini d= 56 mm	KAWASAKI® BA006N / BA006L	780.3524.1
Intermediate flanges iCAT mini d= 58 mm	KUKA® KR5arc HW	780.3526.1
Intermediate flanges iCAT mini d= 63 mm	ESTUN ER6	780.3527.1
Intermediate flanges iCAT mini d= 64 mm	FANUC® AM 100iD	780.3531.1
Intermediate flanges iCAT mini d= 68 mm	QJR H4-1	780.3533.1
Intermediate flanges iCAT mini d= 57 mm	OTC® FD-B4/L=25	780.3625.1

Neckliner for applications with wire brake



Cable assemblies with wire brake option require the following neckliner*

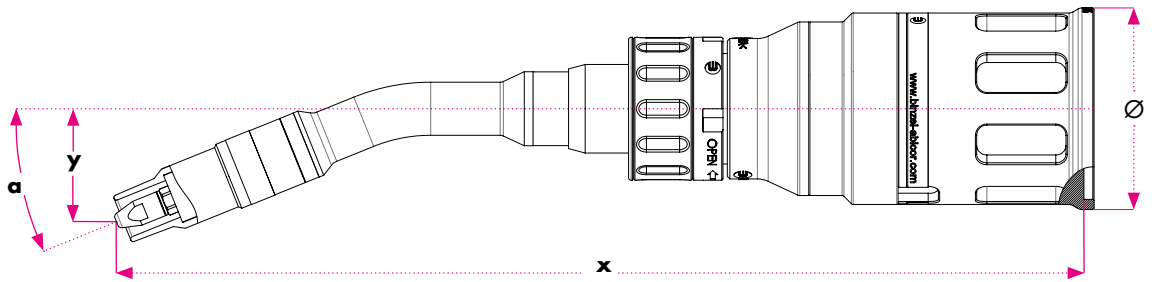
*Packages without wire brake option do not require neckliner

Typ	Torch type	Torch neck	Wire type	Wire Ø	Length	Order no.
Neckliner G	ABIROB® G	980.0287.1	steel	0.8 - 1.2 mm	239 mm	149.0487.5
		980.0223.1				
		980.0288.1				
Neckliner G	ABIROB® G	980.0190.1	steel	0.8 - 1.2 mm	247 mm	149.0434.5
		980.0185.1				
		980.0203.1				
		980.0190.1				
Neckliner W	ABIROB® W	782.0076.1	steel	0.8 - 1.2 mm	222 mm	149.0287.5
		782.0077.1				
		782.0078.1				
		782.0080.1				
Neckliner W	ABIROB® W	782.0076.1	steel	1.4 - 1.6 mm	222 mm	149.0289.5
		782.0077.1				
		782.0078.1				
		782.0080.1				

Other neckliner on request

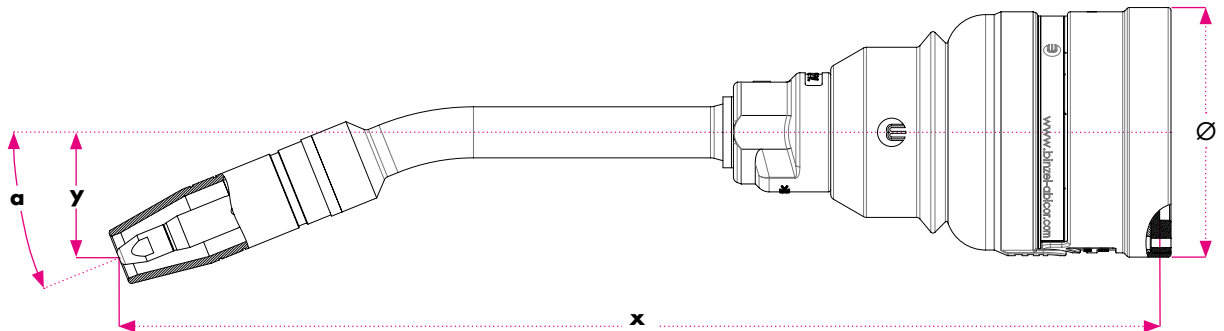
TCP overview

Torch mount iSTM mini



Robot type	Torch neck	x (mm)	y (mm)	a	Ø (mm)
ABB® 1600/2600iD	G 500	379	44.2	22°	100
FANUC® AM100iD	G 500	379	44.2	22°	79
YASKAWA® MA1440/2010	G 500	363.6	44.2	22°	79
FANUC® AM100iD	G 500	363.6	44.2	22°	79
ABB® 1600/2600iD	W 500	379	44.2	22°	100
ABB® 1600/2600iD	W 500(+100 mm)	479	44.2	22°	100
FANUC® AM100iD	W 500	379	44.2	22°	79
FANUC® AM100iD	W 500(+100 mm)	479	44.2	22°	79
YASKAWA® MA1440/2010	W 500	363.6	44.2	22°	79
FANUC® AM100iD	W 500	363.6	44.2	22°	79
YASKAWA® MA1440/2010	W 500(+100 mm)	479	44.2	22°	79
FANUC® AM100iD	W 500(+100 mm)	479	44.2	22°	79

Torch mount iCAT mini



Robot type	Torch neck	x (mm)	y (mm)	a	Ø (mm)
YASKAWA® MA1440/2010	G 500	367	44.2	22°	88
YASKAWA® MA1440/2010	W 500	367	44.2	22°	88



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