

Robot peripherals

Robot mount "CAT2" and "CAT2-HL"



"To stop collisions quickly ..."

Faster robots, increasing dynamics, thinner and thinner metals with complex outlines can lead to a collision hazard for torch and workpiece. The robot mounts CAT2 and CAT2-HL protect against collisions with a great deal of precision and optimised resetting accuracy.

The wide range of accessories for the CAT2 and CAT2-HL offers numerous mounts and extensions for setting the required TCP.

Advantages that speak for themselves:

- Variable deflection in all directions
- Immediate stop with safety margin in case of collision
- Optimised resetting accuracy minimises line downtimes
- Precise switching points thanks to innovative switching behaviour
- Especially suitable for precise light gauge sheet metal applications
- Easy to service thanks to visual functional display for fast fault analysis
- Protected attachment screws for quick service replacement

Degree of automation CAT2:

Low	Medium	High
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Degree of automation CAT2-HL:

Low	Medium	High
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Area of application:

Standard welding robot with cable assembly on the outside



Robot mounts "CAT2" and "CAT2-HL"

System overview and technical data

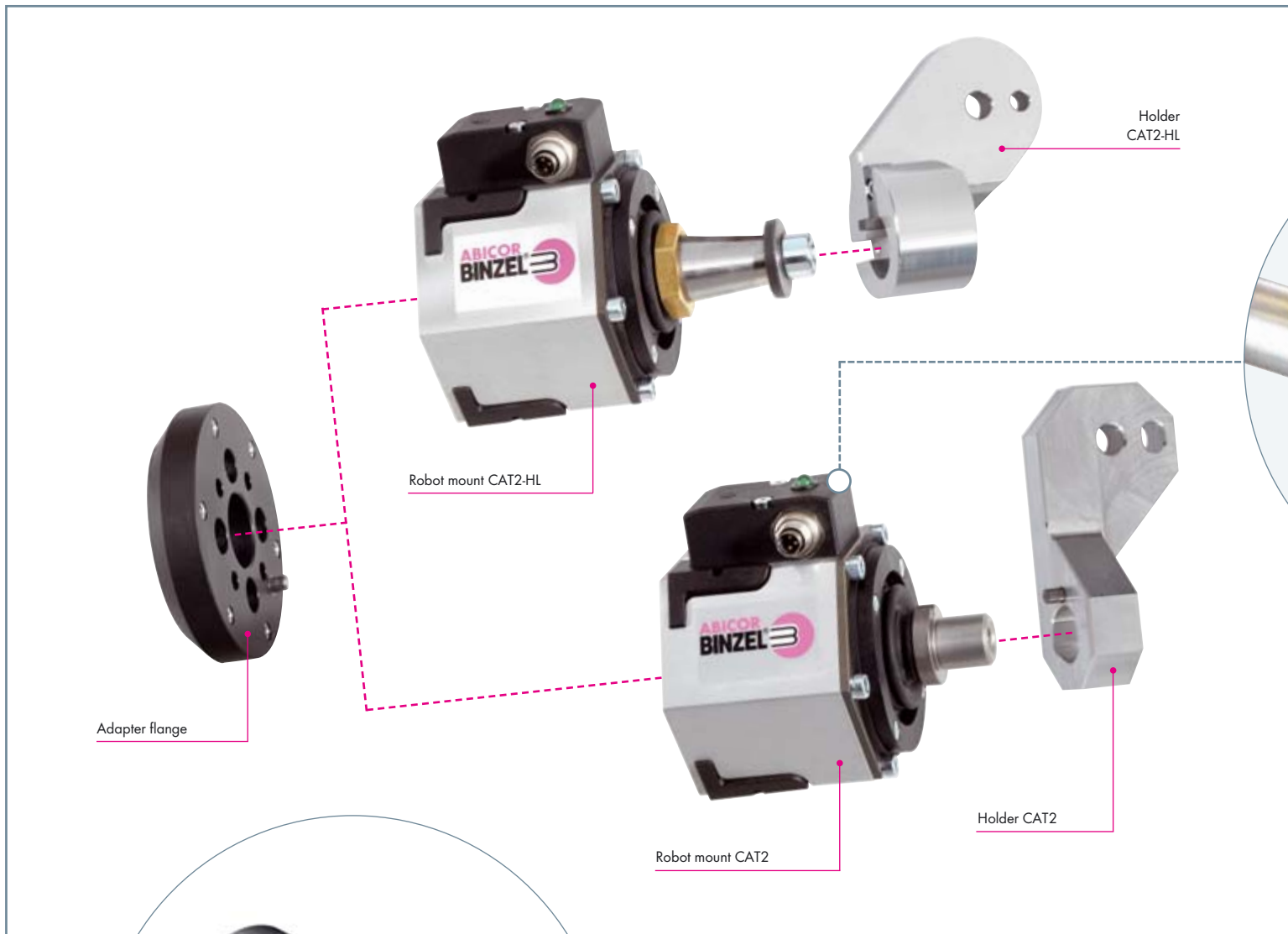


Figure 1:
Deflection

Figure 1:
Deflection of CAT2 and CAT2-HL

- Collision in direction of the X- or Y-axis
- Rotation about the Z-axis
- Collision in direction of the Z-axis

The release torque is defined by the spring types, depending on application and weight of the torch. There are five spring types available – see the following table:

Release force (N)

Spring type	Release force	
	X-, Y-axis (N)	Z-axis (N)
S	46	475
M	80	535
L	85	925
LL	130	1325
XL	150	1540

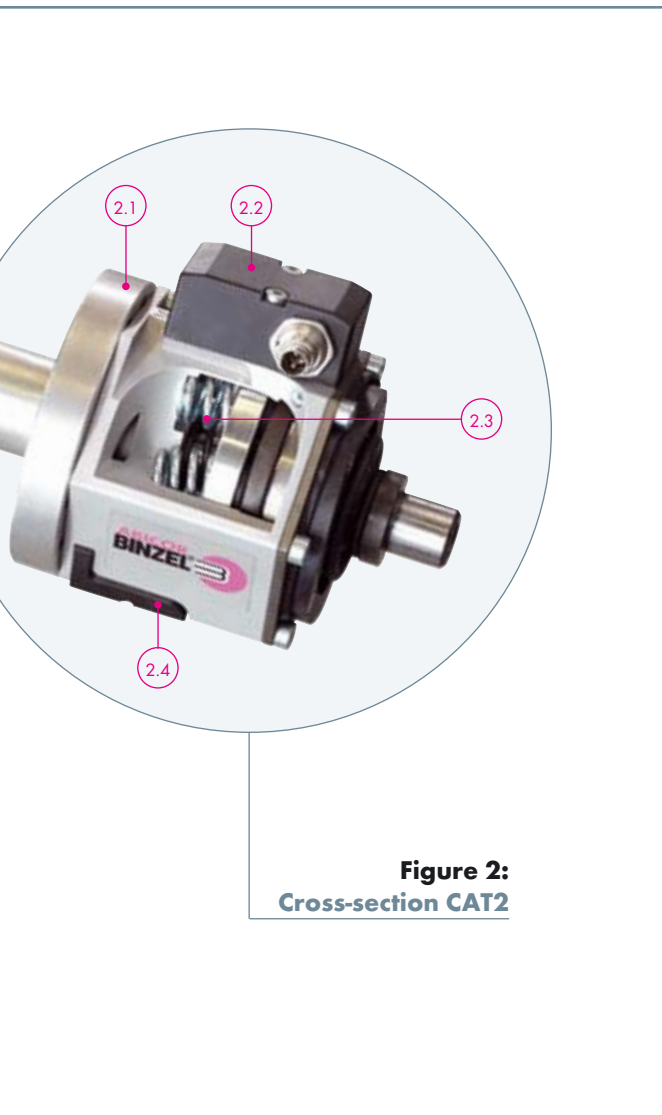


Figure 2:
Cross-section CAT2

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Cross-section CAT2

- 2.1 Adapter flange for attachment to all standard robot types
- 2.2 Switch unit with green LED as visual function display for fast fault analysis
- 2.3 Compression spring, available in different spring types for different torches or weights
- 2.4 Attachment screws, protected for fast service replacement



Technical data:

Robot mounts CAT2 and CAT2-HL

Dimensions:	Corner width 75 mm; width across flats 65 mm; height 87 mm (robot flange to release flange)
Weight:	approx. 630 g approx. 850 g (inc. holder and flange)
Release force:	see deflection diagram (Fig. 1)
Maximum deflection:	– Deflection in the X and Y plane 10-14° depending on spring – Deflection in the Z plane 4-8 mm depending on spring
Triggering of the emergency switch:	– Rotation about the Z-axis 0.5° - 1° – Deflection in the X and Y plane approx. 1.5° – Deflection in the Z plane approx. 0.5-1 mm
Resetting accuracy:	< +/- 0.04 mm (at 300 mm distance to the robot flange)
Load capacity safety cut-out:	24 V DC, max. 100 mA

Note on the technical data:

Rating data were determined under normal conditions at low to medium reflected heat, free air circulation and at 28°C ambient temperature. When used under more difficult conditions, the rating data must be reduced by 10 - 20 %. The rating data are reduced by up to 35 % for pulse arc welding.

Robot mount "CAT2" and "CAT2-HL"

Robot mount, holder & adapter flange

Robot mount CAT2-HL and CAT2



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Description	Part-No.
1 Robot mount CAT2-HL (M)	780.2042
Robot mount CAT2-HL (L)	780.2041
Robot mount CAT2-HL (XL)	780.2040
2 Robot mount CAT2 (S) cpl. ¹	780.2131
Robot mount CAT2 (M) cpl. ¹	780.2100
Robot mount CAT2 (L) cpl. ¹	780.2121
Robot mount CAT2 (LL) cpl. ¹	780.2118
Robot mount CAT2 (XL) cpl. ¹	780.2132
Robot mount CAT2 (S)	780.2031
Robot mount CAT2 (M)	780.2001
Robot mount CAT2 (L)	780.2021
Robot mount CAT2 (LL)	780.2038
Robot mount CAT2 (XL)	780.2032

¹ cpl. with holder (780.0202) and liner (780.0201)

Holders & accessories



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Description	Part-No.
3 Holder CAT2-HL	780.0323
4 Holder CAT2	780.0202
not ill. Connector cable cpl.	780.0201
not ill. Universal TCP check tool for CAT2	780.0204
not ill. Protective sleeve CAT2	780.0261
not ill. Torch holder (see respective torch chapter)	

Adapter flanges



Description	Version Plastic	Version Aluminium
	Part-No.	Part-No.
ISO 9409-1-A31.5	780.0632	780.0532
ISO 9409-1-A40	780.0604	780.0504
ISO 9409-1-A50	780.0603	780.0503
ISO 9409-1-A63	780.0614	780.0514
ISO 9409-1-A80	780.0607	780.0507
ISO 9409-1-A100	780.0649	780.0549
ISO 9409-1-A125	780.0630	780.0530

Adapter flanges can be delivered for all standard welding robots.
Please indicate the robot type.

Caution! For insulation reasons, always use a plastic adapter flange when using MIG/MAG welding torches of the ABIROB® A series.