CCA CENTRIC ELEMENT, SELF-ADJUSTING

HYDROBLOCK

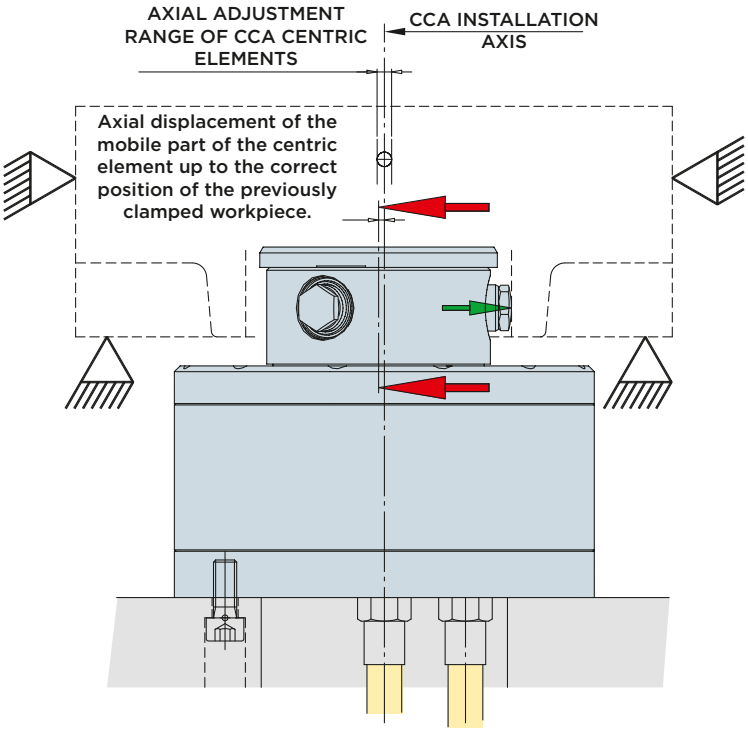
CLAMPING SEQUENCE OF THE SELF-ADJUSTING CENTRIC ELEMENT IN THE BORE (EXAMPLE)

USE OF CCA SELF-ADJUSTING CENTRIC ELEMENTS:
Centric elements are used for axial clamping of workpieces that are already radially fixed by other positioning/clamping devices.

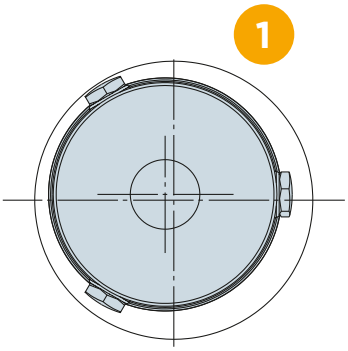
The CCA element can adapt itself to the workpiece diameter (raw or machined), so that it rests on the workpiece without transmitting any undesired forces.

Once in the correct position in the bore, the CCA centric element is blocked in axial direction, which ensures centred clamping on the workpiece to be machined.

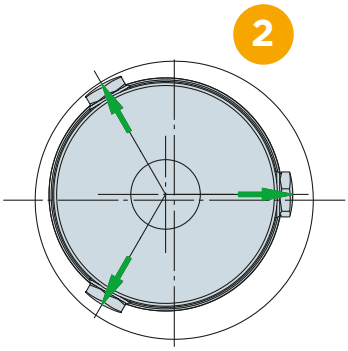
This solution enables precise and high-quality machining of hydraulic motors, frames, cylinder blocks and similar parts.



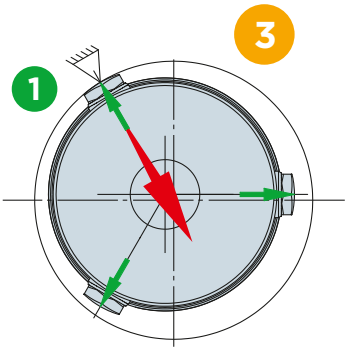
Tool positioning (OFF AXIS)



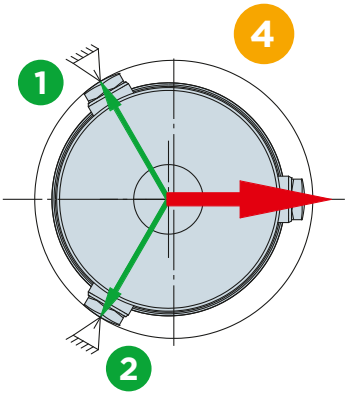
Hydraulic actuation (START OF BOLT EXTENSION)



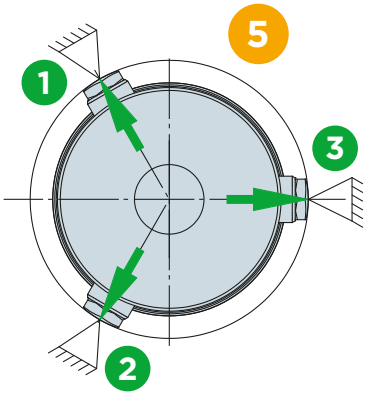
First workpiece contact (AGAINST CLAMPING POINT 2)



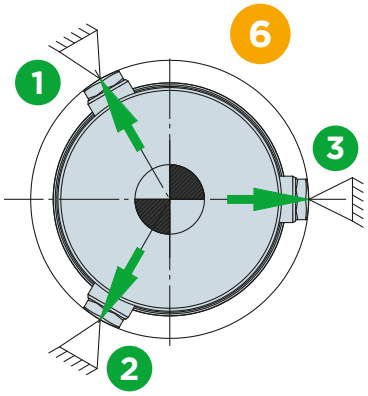
Extension up to the second contact (AGAINST CLAMPING POINT 3)



Extension up to the third contact (FIXING ON WORKPIECE)

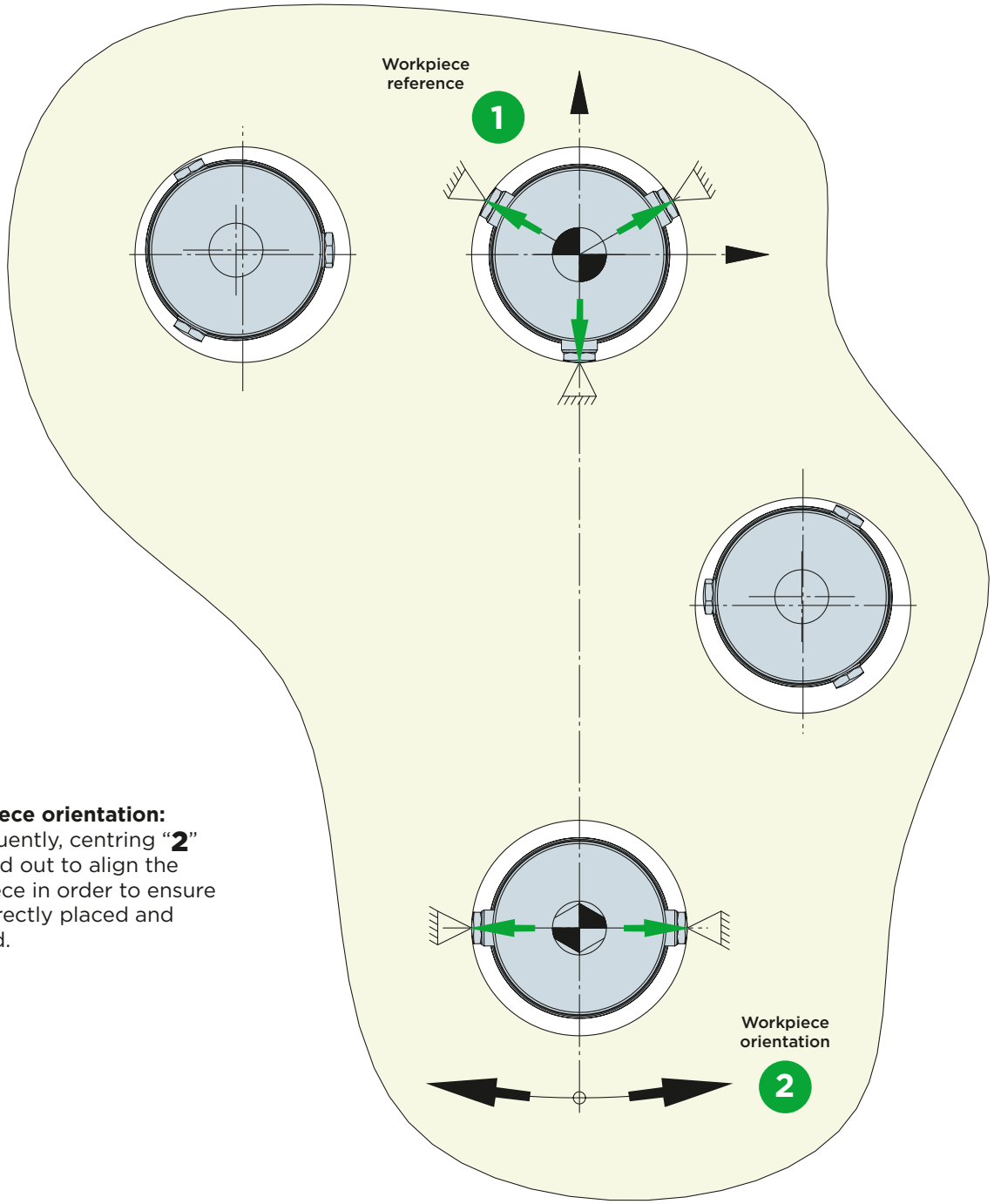


Blocking in the adjusted position (FIXING ON WORKPIECE)



CLAMPING SEQUENCE OF THE SELF-ADJUSTING CENTRIC ELEMENT IN SEVERAL BORES OF ALREADY CLAMPED WORKPIECES (EXAMPLE)

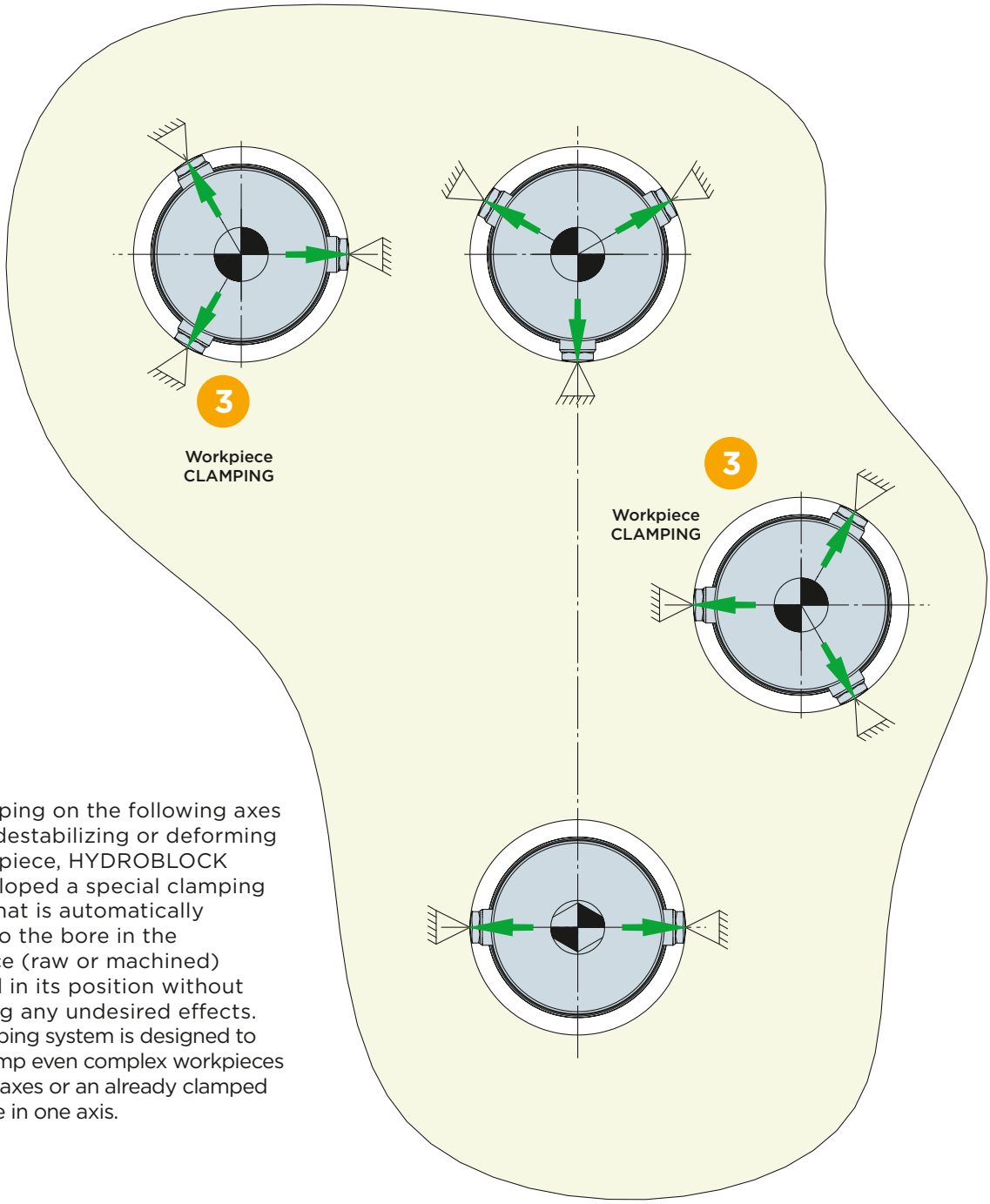
1) Workpiece positioning:
The workpiece is placed at the reference points of the fixture, the first axial centring "**1**" is performed to fix the reference axis of the workpiece in "0.0" position.



2) Workpiece orientation:
Subsequently, centring "**2**" is carried out to align the workpiece in order to ensure it is correctly placed and oriented.

CLAMPING SEQUENCE OF THE SELF-ADJUSTING CENTRIC ELEMENT IN SEVERAL BORES OF ALREADY CLAMPED WORKPIECES (EXAMPLE)

3) Workpiece clamping:
The workpiece is now clamped in the fixture and each additional clamping element of conventional design would affect the machining quality and tolerances by deformation and destabilization.



For clamping on the following axes without destabilizing or deforming the workpiece, HYDROBLOCK has developed a special clamping system that is automatically aligned to the bore in the workpiece (raw or machined) and fixed in its position without producing any undesired effects. This clamping system is designed to firmly clamp even complex workpieces in several axes or an already clamped workpiece in one axis.

AVAILABLE CENTRIC ELEMENTS

WORKING STROKE [mm]	CLAMPING FORCE		ORDER NUMBER
	100 bar [KN]	250 bar [KN]	
36 - 40	4	10	CCA3640-3
39 - 43	4	10	CCA3943-3
42 - 46	4	10	CCA4246-3
45 - 49	4	10	CCA4549-3
48 - 52	4	10	CCA4852-3
51 - 55	4	10	CCA5155-3
54 - 59	3	7	CCA5459-3
58 - 63	3	7	CCA5863-3
62 - 67	3	7	CCA6267-3
67 - 72	3	7	CCA6772-3
71 - 76	3	7	CCA7176-3
76 - 84	7	17	CCA7684-3
83 - 91	7	17	CCA8391-3
90 - 98	7	17	CCA9098-3
98 - 109	11	28	CCA98109-3
109 - 120	11	28	CCA109120-3
119 - 130	11	28	CCA119130-3

Please contact HYDROBLOCK for more detailed information on mounting dimensions and seats.