

Operating limitations

3 Operating limitations

3.1 Operating time

- Closing time : 0,5s mini
- Opening time : 0,5s mini
- Max. frequency : 22cycles / minute

3.2 Key position

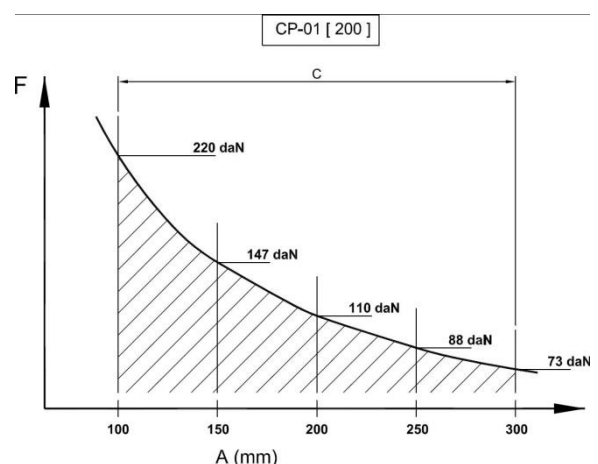
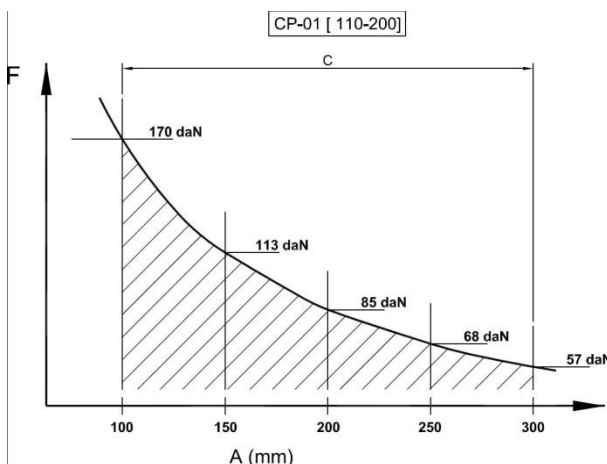
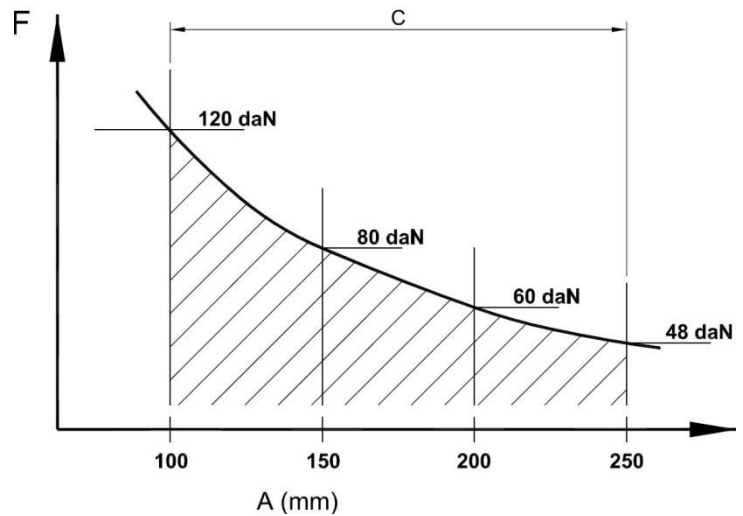
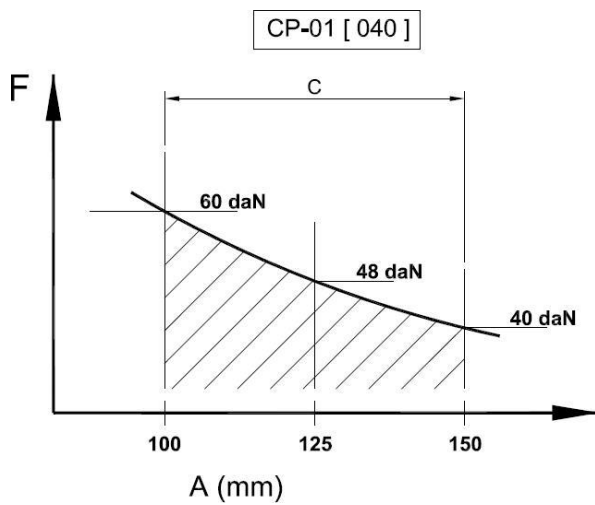
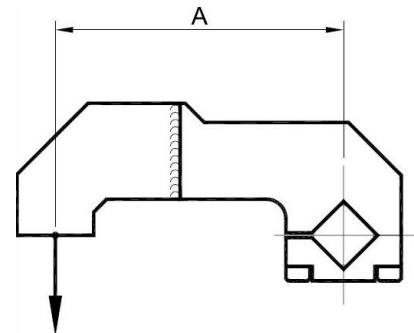
To develop enough effort, the clamp key must be located using area defined by the draft.



Any use of recommended using area should be subject of a special dispensation authorization from Genustech's technical department.

A	Length in mm
C	Recommended using area
F	Clamping force daN

Note : The forces values are valid at 5 bars pressure.

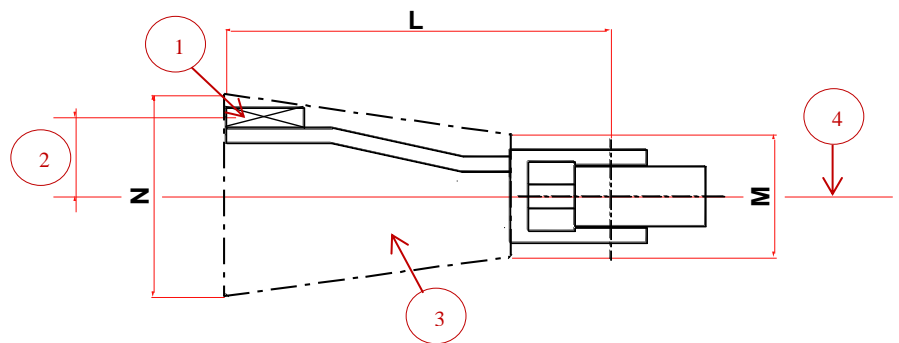
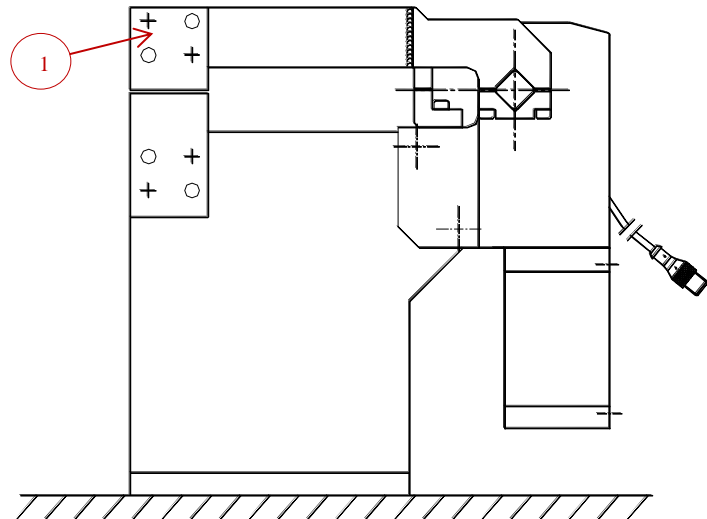


## Operating limitations

### 3.3 Static moment

- The location of the clamp key following the symmetry axis generates forces on the mechanical system.  
Do not exceed the values below.

1	Clamp key
2	Max. offset permitted
3	Permitted clamp key using area
4	Symmetry axis



Série CP-01 type :		040	110	110-200	200
Positioning limits the key	L :	150 mm	200 mm	250 mm	300 mm
	M :	80 mm	100 mm	150 mm	150 mm
	N :	100 mm	200 mm	200 mm	250 mm

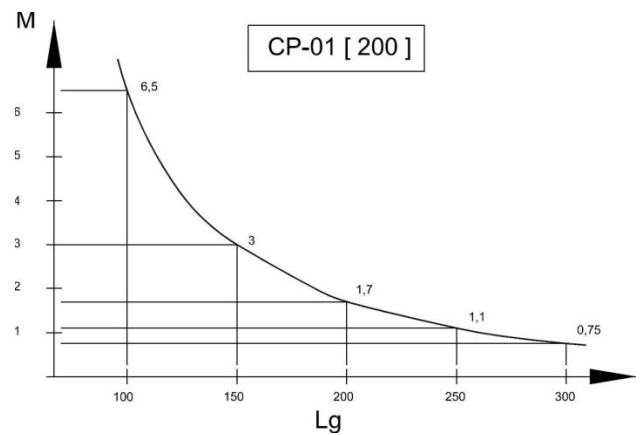
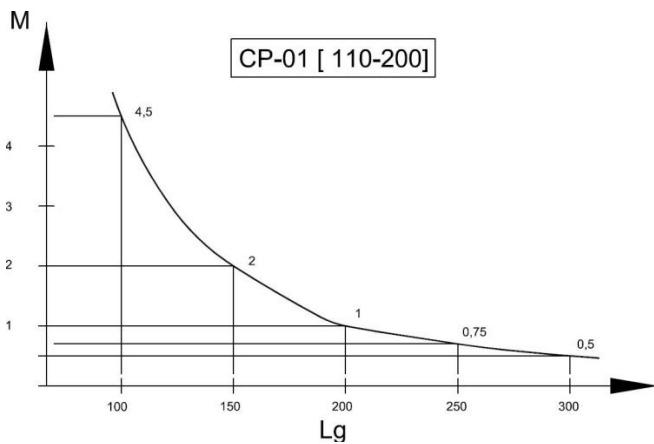
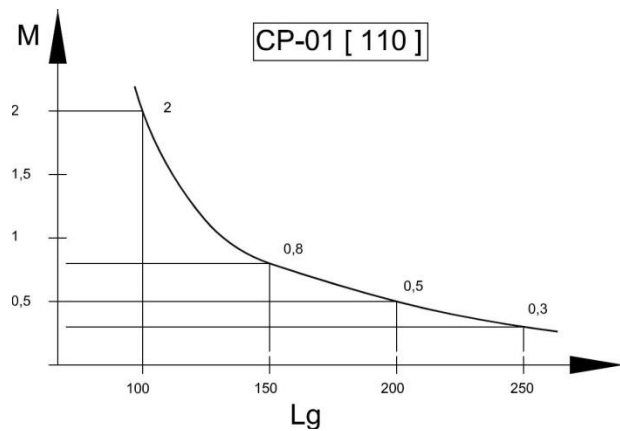
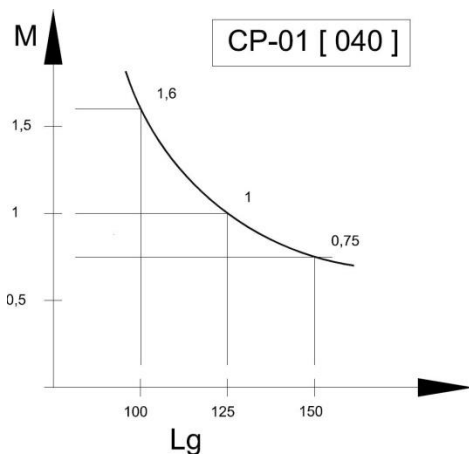
Operating limitations

3.4 Dynamic forces

- At the opening or at closing, the arm inertia (wishbone arm + extension + detail) generate forces that could damage the clamp and the sheet metal.
- Keeping acceptable clamp inertia (following clamp type) the loaded mass is determined by the relation between the arm and rotating axis.
- Use the graph below to determinate the center of gravity position of the series extension + detail follow.



The graph values are approximate and validated for operating time for closing > 0,5 second.  
Any use out of the using area must be validated by a special dispensation authorization from Genustech's technical department.



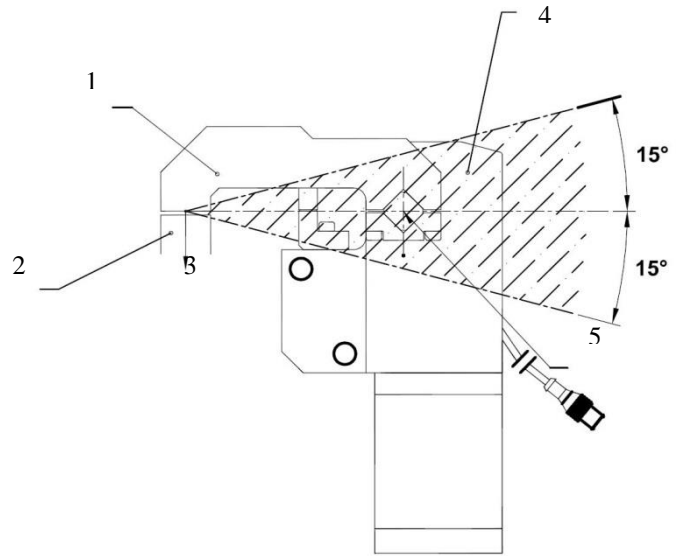
<b>Lg</b>	Gravity center location of the set (extension + clamp key) in mm.
<b>M</b>	Load mass without wishbone arm in kg

## Operating limitations

### 3.5 Rotating axis position

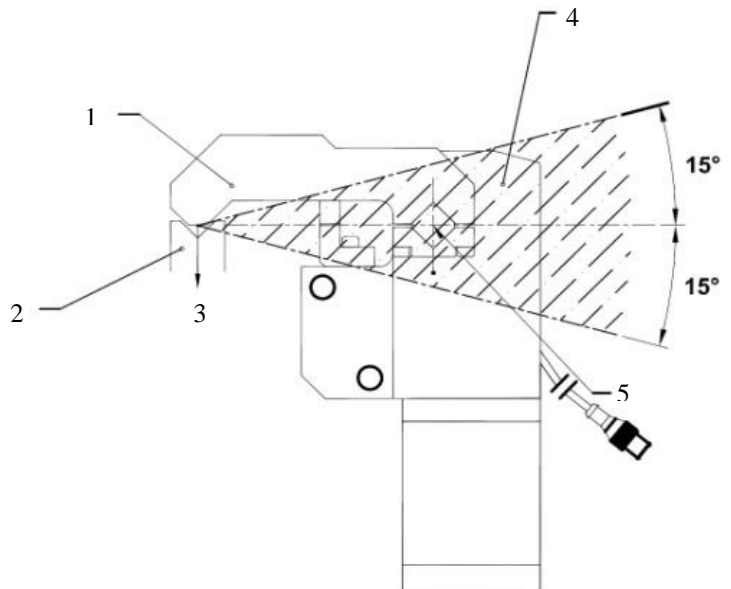
- Case for 1 degree of freedom.
  - Arm rotating axis must be absolutely in about  $\pm$ .

1	Clamp key
2	Reference
3	Clamping force
4	Available position area from the rotating axis
5	Best position of the rotating axis



- Case for 2 degrees of freedom.
  - Arm rotating axis must be absolutely in about  $\pm 15^\circ$  area from the clamping force perpendicular axis.

1	Clamp key
2	Reference
3	Clamping force
4	Available position area from the rotating axis
5	Best position of the rotating axis



### 3.6 Incidence angle

- The clamp is executed perpendicularly at the sheet but an angle of  $15^\circ$  incidence max. is allowed.

1	Wihbone arm moving area
2	Reference
3	Metal sheet
4	Clamp key

