

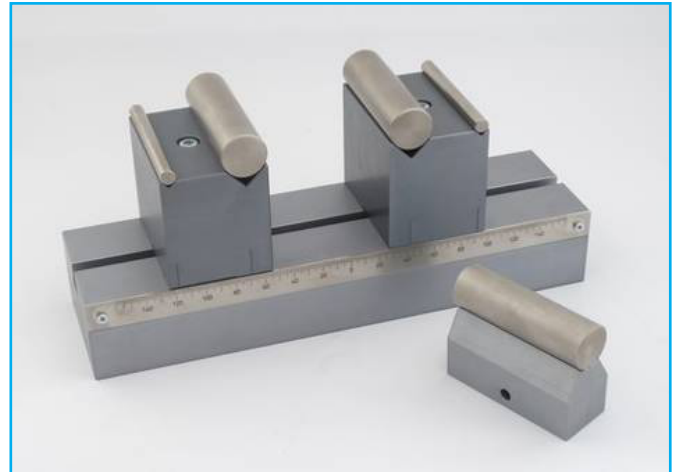
50 kN Bend Jig (Aluminium), QC fitting

Mec22 - aluminium

A 50 kN Bend Jig in steel having a bending span up to 330 mm and beam width of 100 mm.

A comprehensive selection of Mec22 anvil types and sizes are available to allow you to configure for 3-point or 4-point flexure bend testing.

'Upper' anvils and the 'lower' bending beam are supplied fitted with a bore hole to allow connection to either QC-20 or QC-32 fixing posts ... please specify which size when ordering. When used with the QC-20 fixing post, the maximum rated capacity is 25 kN.

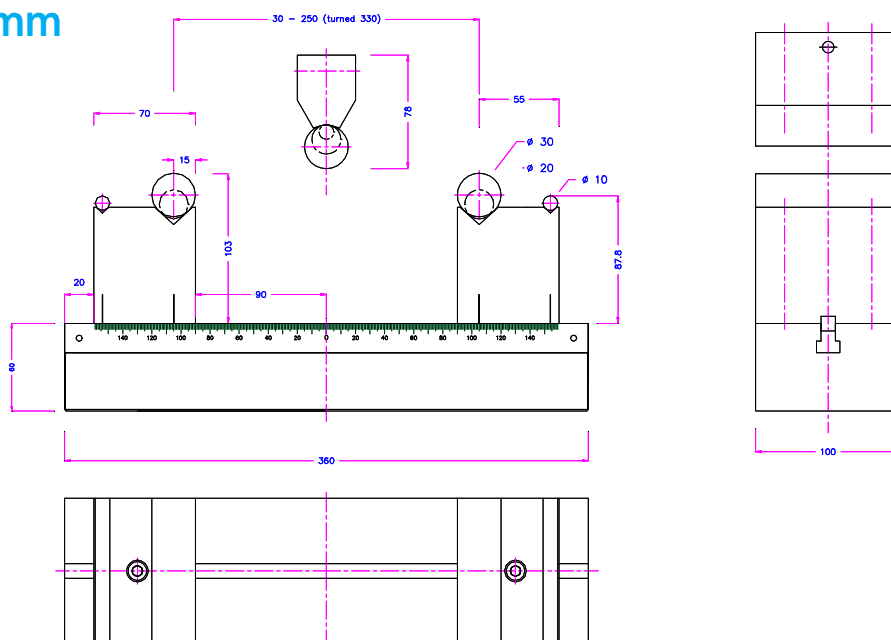


Below you will see an example configuration showing:

- 'Lower' anvils Type AX = 'dual' roller bearings in a v-notch having diameters of 10mm and 30mm
- 'Upper' anvil Type OX = roller bearing in a v-notch having diameter of 30mm
- 'Lower' bending beam (B) of 360mm length with QC-32 bore hole

This generates a combined part number of : Mec22-AX30_10-OX30-B330-QC32

Dimensions mm



The illustrations overleaf are selected examples of the component parts and assemblies to build precisely the bending jig you require. You choose:

- Bending beam length (lower)
- Bending beam length (upper) ... only applicable if you wish to perform 4-point flexure bend testing
- 'Lower' and 'Upper' anvil type (roller or milled-edge) and their dimensions
- Special requirements (eg. Wide anvils for large specimens, tall anvils for folding tests, movement in anvils for increased accuracy)

Please refer to the outline at the back of this datasheet for how to identify and specify the components you require.

Example configurations

3-point bend jig, 600 mm beam with AX type lower dual v-notch rollers of diameters 30mm and 10mm. Roller width 160 mm

Upper OX type v-notch roller of 30 mm diameter



4-point bend jig, 1000mm lower beam, 'lower' anvil type C of radius 10mm & height of 200 mm.

'Upper' beam 600mm, 'upper' anvils OWX rollers diameter 20 mm,



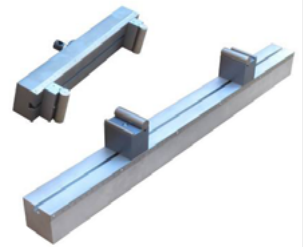
3-point bend jig, 360 mm beam with CW type 'lower' carrier roller of diameter 15mm. Rollers are articulated to provide an adjustable angle for maintaining parallelism during test



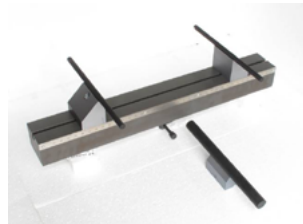
4-point bend jig 1200 mm lower beam

'lower' anvil type CX rollers of 20mm.

'Upper' beam 600mm, 'upper' anvils OX rollers diameter 20 mm



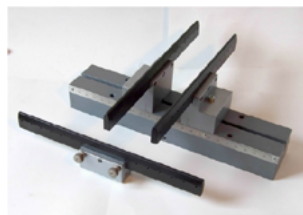
3-point bend jig, 800 mm beam with CX type 'lower' v-notch rollers of diameter 15 mm, width 350 mm. 'Upper' OX roller diameter 30 mm, width 350mm.



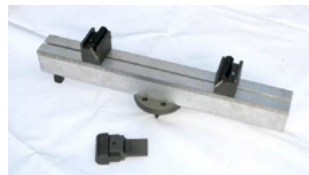
4-point bend jig, 1200 mm beam illustrating CWX carrier roller anvils with special articulation on half- bearings to allow sideways movement



3-point bend jig, 500mm beam with CW type 'lower' anvil of milled edge radius 5mm 'Upper' O type anvil also of milled edge radius 5mm. Anvils width 420mm



3-point bend jig, 900 mm beam with CWN 'lower' anvils of dia. 30mm rolling to end-stop, 'upper' anvil OWX with articulated roller



3-point bend jig 1310 mm beam with handles, 'lower' AX v-notch rollers of diameters 10mm & 20mm. 'Upper' type OX v-notch roller of 20mm diameter.



Anvils

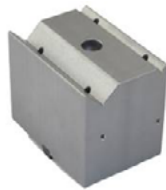
Type C anvil. Nickel-plated hardened steel, milled radius of 2 mm



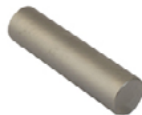
Type C Nickel-plated hardened steel, milled radius of 5 mm for 4-point bend jig upper beam



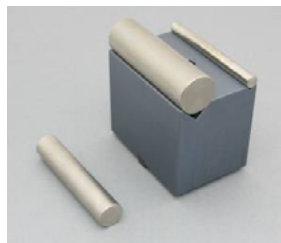
Type AX v-notch lower anvil for interchangeable rollers of diameter 8 mm to 35 mm



Nickel-plated hardened steel diameter 30 mm rollers for v-notch anvils



Lower Type AX aluminium v-notch anvils with rollers of diameter 10 mm, 20 mm, and 30 mm



Lower anvil type CL, captive roller diameter 10 mm, height 150 mm



V-notch anvil type CX with roller diameter 50 mm



Lower anvil type CL, captive roller diameter 10 mm, height 200 mm



Articulated carrier anvils

Lower articulated carrier for removable inserts, aluminium to 50 kN



Upper articulated carrier for removable inserts,



Insert for articulated carrier, width 100 mm, available radii: 2; 5; 10; 15 and 20 mm



Articulated carrier with radius 5 mm insert



Rubber-faced sprung roller insert for articulated carrier, roller radius 30 mm, width 100 mm



V-notch upper anvil for interchangeable rollers available in aluminium or steel



Spring-retained roller on flat bed with end-stops. Type CWN



Upper beam to convert Mec22 3-point bend jig to 4-point bend



Anvil Support with integral roller, diameter 50 mm, width 50 mm



Upper v-notch carrier for interchangeable rollers for 4-point bending



Upper anvil, nickel-plated hardened steel, milled radius 5 mm



Upper beam hardened steel roller, radius 30 mm, width 100 mm, spring-retained on flat bed, recommended for glass testing



Upper anvil, milled radius 25 mm



Upper beam articulated anvil support.



V-notch upper anvil for interchangeable rollers, diameters: 32, 36, 40, 50 and 60 mm



Special accessories

For holder with large adapter size



V-notch adapters for smallest or largest-radius rollers



V-notch diameter reducer



T-nut for mounting anvils on beams, 10 mm x 40 mm



Bend jigs to your own specification

Bend jigs can be assembled to user specification to meet test requirements:

- load rating
- anvil edge type
- anvil height
- individual positioning of anvils, or by centric gearing using a leadscrew / handle.
- bending span width
- anvil movement type
- 3 or 4-point bend capability
- anvil mount type
- anvil width

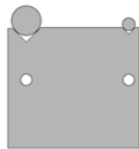
Certain anvil types allow a rocking movement, adjustable angle (articulated), or flat sideways movement. For sharp angle bending (e.g. to 160°) long-fin anvils are available, along with other specialised anvils. Standard anvil types are shown below. (Roller size is denoted by diameter, milled edges are denoted by radius.)

Lower Anvils

Type A: dual-radius



A: milled edge

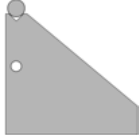


AX: v-notch roller bearings

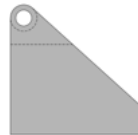
Type C: single radius



C: milled edge



CX: v-notch roller



CL: captive roller



CM: roller free to traverse

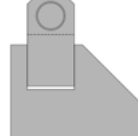
Type CW, carrier style



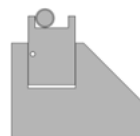
CW: milled edge



CWX: v-notch roller



CWL: captive roller



CWN: roller traverses to stop

Upper Anvils

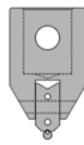
Type O



O: milled edge



OX: v-notch roller bearing



OWX: carrier-style v-notch

How to specify your particular bend jig requirement

Let us know your requirement by:

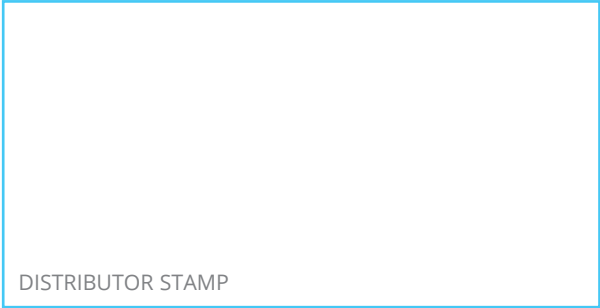
- beam model: Mec238, Mec103, Mec22 and length (long versions available)
- aluminium or steel, and finish (where available)
- anvil mount type as above (A, C, CW, O, with extra designation of W, X, L, M or N where appropriate)
- the upper and lower anvil radii type (milled or rollers) with dimensions
- any special requirements such as anvil height or width, or movement
- if you require centric gearing (Mec103 only)
- if you require an upper support for two anvils for 4-point testing
- the QC coupling size (20 mm or 32 mm)

For full details and examples, refer to the datasheets for the three base models: Mec238, Mec103 and Mec22.

For more information on QC fittings, refer to datasheet 431-354 Adapters for QC range of grips.



FS 58553



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