

Four Wheel Bridge Crane

Water Flow | Sediment Sampling

General Description

The type A four wheel bridge crane 4WBC is a collapsible unit intended for stream discharge measurement or for stream sediment sampling from a bridge. The 4WBC can deploy Columbus weights and sediment samplers up to 70 kg.

The crane is made from structural aluminum and stainless-steel material. It includes a winch mount to accommodate the WS250 or WS400 single drum winch (optional, see flipside) as well as the USGS type A reel. It is easily assembled and folds down into a compact sized package for transit.

The bridge crane consists of two maneuverable wheels with a manual brake and two fixed wheels fitted to the base, as well as all the necessary supporting chassis components. When in use, the crane is set up in a fully open position with the boom arm extending out over the stream. The 22 kg counter weights (four supplied) are used as a cantilever to provide stability when the crane is deployed.

Applications

The 4WBC is typically used to deploy current meters (see flipside), sediment samplers (see flipside) or an ADCP from a bridge.

- Discharge Measurement
- Sediment Sampling

Features

- Robust construction
- Easy to install and use
- Operates in a narrow space
- Collapsible crane for transport purposes
- Used with weights up to 70 kg
- Light-weight (approximately 45 kg without the winch)
- Provided with four counterweights (each 22 kg)



Technical Specifications

Load Capacity	Maximum load: 70 kg
Material	<ul style="list-style-type: none"> – Robust construction in aluminum, stainless steel and delrin materials – Wheels: rubber tyres
Counter Weights	4 x 22 kg counter weights included within scope of delivery. Additional weights 4WBC04-01 can be purchased separately.
Folding	– Scissor action
Wheels	<ul style="list-style-type: none"> – 2 wheels move in a lateral left or right position, parallel to the bridge rail with manual brake – 2 wheels for support purposes
Operating Dimensions	1800 mm long x 750 mm wide x 1800 mm arm depth (6' long x 2.5' wide x 6' arm depth)
Storage Dimensions	1800 mm long x 750 mm wide x 200 mm deep (6' long x 2.5' wide x 0.7' deep)

Accessories



Winches (WS250, WS400): KISTERS' stream gauging winches are hand

operated single drum winches capable of handling Columbus gauging weights up to 70 kg using the 4WBC. The winches are designed for ease of operation and service ability in the field: compact, portable, light-weight, and handled easily and safely by one person.



Counter Weights:
22 kg zinc plated steel counter-weight (4 x included within scope of delivery)



Current Meter OSSB1:

The universal current meter OSSB1 is used for point measurements of a flow velocity range from 0.025 to 10 m/s.

Deployment: mounted on wading rod, from a bridge/boat using a winch and SAN22SS winch board or bridge crane; on a cableway (e.g. Hornet Plus)



Gauging Weights:

(Columbus and Nose Mounted Ground Feeler

models): Protects current meter against heavy debris damage, streamlined shape reduces resistance to flowing water.



Sediment sampler D49:

The easy-to-use sediment sampler D49 is used to take sus-

pended-sediment samples in streams not greater than 10 m in depth. The instrument is mounted on a hanger bar and attached to the suspension cable on a gauging winch for lowering and raising.



Bed Load Sampler BLS:

KISTERS' bed load sampler models BLS30 and BLS48

are deployed by winches. They are designed to sample silt, gravel or rock debris carried by a stream on or immediately above its bed.

[Please ask for details.](#)