Brackett Green® - CF100® and CF200® Band Screens

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Advanced water screening

Key Features and Benefits:

- High performance 2 dimensional screening
- Patented Propapanel® technology prevents hair pinning removes drinking straws, cotton swabs and needles
- Zero carry over
- High debris removal capacity
- Single motor design reduces running, ancillary and electrical costs
- Supplied as a free standing single unit for ease of installation
- Low pressure jet cleaning prevents blinding and need for brushing or manual cleaning
- Excellent pre-treatment for MBR

How we create value:

- Reduces maintenance costs and downtime because of increased capture ratio which increases efficiency of treatment plant
- Reduced Installation costs by supply as a pre packaged unit
- Reduces whole life costs because of longer life by use of robust design and corrosion resistant materials
- Reduces running costs by fully automatic operation which requires minimal operator attention

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Experience

Utilizing Brackett Green's decades of experience, Jacopa is the world leader in screening technology. Whether your requirement is for new treatment works or to optimize an outdated screen, we can provide the right solution for you.

Brackett Green® screens have been tested at the National Screen Evaluation Facility in the UK, with excellent results. The Brackett Green CF200® and CF100® band screens proved capture rates of 80%, and in some cases with small apertures 93%, with virtually no wear after an extensive testing period. Brackett Green screens are fully W.I.M.E.S compliant. All Brackett Green band screen products are manufactured to ISO9001 standards and are subjected to rigorous internal quality audits, ensuring that only the best quality screens are delivered to our clients.

The Brackett Green screens are just one of a line of successful proprietary products in Jacopa's range.

Advantages:

- Center flow band screens offer the greatest available screening protection
- Highest efficiency (rated No.1 by professional independent study)
- Patented design eliminates hair-pinning, reducing maintenance costs
- Patented seals offer industry leading "carry over" reduction
- Patented mesh panels offer industry leading screenings capture
- Simple retrofit replaces outdated step, rake and straight-through screens with the more efficient central flow screen
- Reduces downstream design loading
- Cost savings through reduced plant power consumption

Applications:

- Sewage treatment plants
- Water reclamation facilities
- Wastewater treatment plants
- Combined storm water overflows
- Potable water treatment plants
- MBR pre-treatment

CF200® Band Screen partially assembled

CF100® Band Screen

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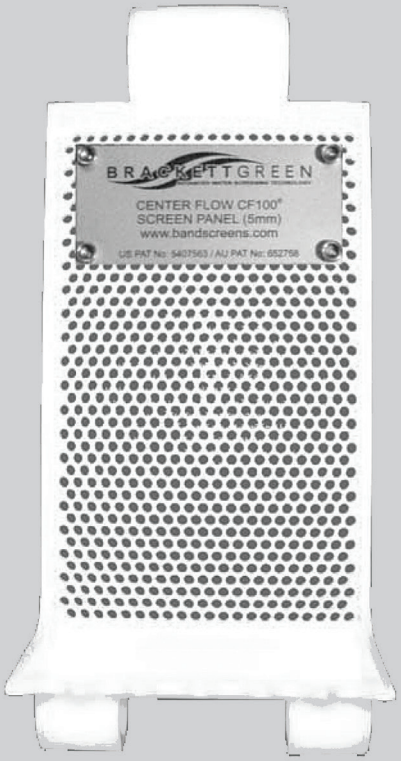
Features

The CF100 Screen range is suitable for flows from 20-1500 l/sec, requiring minimum channel widths of 700-1500mm and channel from 1m to 6m. The CF200 Screen range is suitable for flows from 500-5000 l/sec, up to sump depths of 15m and channel width of 1.0m and above.

The Center Flow units are available in two dimensional mesh apertures between 2-6mm. A similar patented mesh is used on the Brackett Green sewage drum screen design.

Brackett Green® CF100® and CF200® Features:

- Rigid frame construction
- Enclosed head section with access panels
- Shaft-mounted drive
- Anti-friction bearings
- Patented panels eliminate the need for brush gear
- Panels are cleaned by low pressure jets
- Rubbish elevators on each panel for absolute unit efficiency
- Patented thick panel technology
- High efficiency two dimensional screening (perforation)
- Tapered perforations completely eliminate hair-pinning
- Flat panels are easily washed and maintained
- Patented sealing arrangement eliminates carry over
- Debris elevation or gross solids removal
- High strength, long life polymer panels



CF100® Center Flow Screen Panel

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Operation

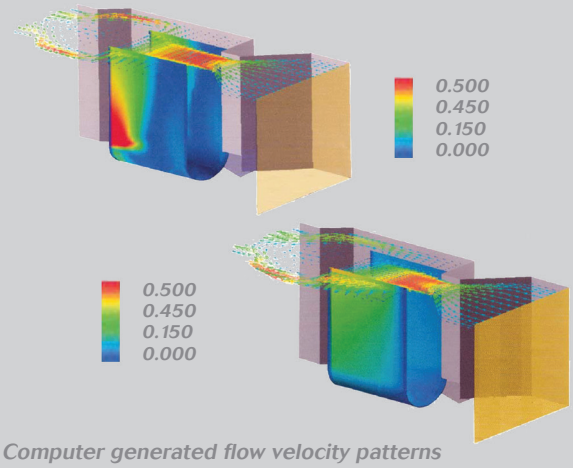
CF200 and CF100 screens adopt a central flow pattern, i.e. water enters the center of the screen first. Jacopa's research has proved that the central flow pattern is the most efficient means of removing suspended solids for wastewater applications. This pattern also eliminates the problem of "carry over" found in more traditional straight-though and step type screens.

Wastewater enters through the center of the fine screen and flows outwards through a moving band of polymer mesh panels to the outside of the screen chamber. Screenings are retained on the inside of the screen panels, and are discharged by low pressure water jets at deck level during the cleaning cycle.

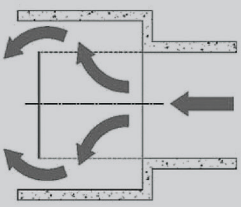
Water jets are mounted onto a jet pipe inside the screen head section. During the cleaning cycle these jets continuously clean the panels as they pass the discharge point above the debris hopper. A removable end cap is fitted to the jet pipe for flushing. If wash water is unavailable, a pressure switch prevents screen operation. On many sites the Brackett Brieden™ automatic strainer increases the screen's efficiency by reusing screened effluent as the screen wash water supply.

Brackett Green CF200 and CF100 band screens are fitted with patented tapered hole thick polymer mesh panels. Unlike steel or other metallic mesh and plates, the panels actively discourage hair-pinning. These highly effective screens do not require brush cleaners, removing a source of constant problems found on alternative machines.

For some special applications the flow can be reversed, with water flowing from the outside to the center. This flow pattern, like the central flow pattern, totally eliminates "carry over" and ensures effective and efficient screening.

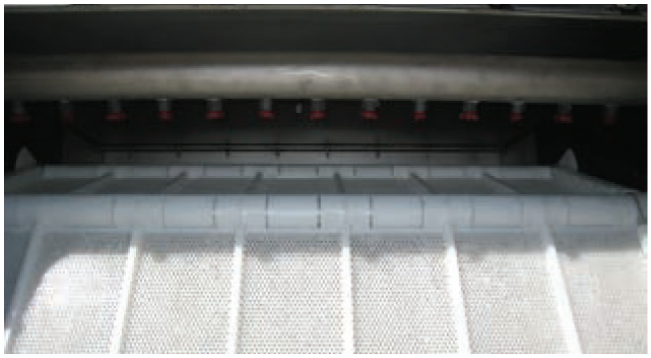


Computer generated flow velocity patterns



Central flow pattern

Low pressure water jets for effective cleaning



Patented mesh panels eliminate the problem of hairpining and blinding found with other band screens

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Construction and Installation

Construction

Brackett Green CF200 and CF100 band screens are housed within a durable, freestanding stainless steel framework. This design reduces civil works and eliminates the need for built-in chain guides to be accurately aligned in the civil work.

The screening band is carried on either UHWMPe tracks (CF100) or main chains (CF200) that are supported by above-deck sprockets. The frames are fitted with replaceable roller tracks and locating strips, which protect the integrity of the frame. The shaft-mounted combined motor and reduction gear unit drives the screen band. A power-monitoring device prevents torque overload.

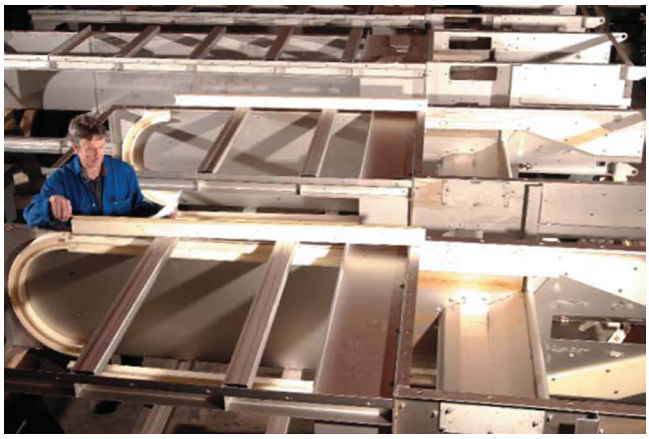
Sealing between the moving band of mesh panels and the screen frame is achieved by a patented neoprene seal, in contact with a low friction plastic sealing face. CF200 and CF100 screens feature a debris elevator attached to the trailing edge of each panel. The channel immediately in front of the screen is sealed by deflector plates fitted to the screens framework – at this juncture between screen and civil work a static seal is also used.

One-Piece Installation

CF200 and CF100 band screens are usually delivered in one piece – this allows for ease of installation and enables the screens to be lifted into position fully assembled.

The CF band screen head sections are fitted with removable access panels. These can incorporate inspection windows and splash guards specially designed to reduce aerosol from the spray jets to an absolute minimum.

Jacopa designs, manufactures and installs CF100 band screen inlet structures fabricated in stainless steel, reducing civil works requirements to a minimum.



Band Screens under construction

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Engineering

Computer-aided-design and engineering

Jacopa's engineers have previous experience of computer-aided-design processes, and Jacopa continues to make extensive investment in this area. Advanced 3D graphics and modelling packages allow screens and their associated equipment to be modelled together and compared to site conditions.

Advanced design and state-of-the-art manufacturing procedures are standard at Jacopa, enabling every CAD generated design to be precision engineered.

Install, Commission and Maintain

Jacopa's service engineers will install, commission and maintain all machines. Our team of international engineers will visit sites around the world to advise on all aspects of our products.

We are able to provide long-term agreements covering spares and maintenance, relieving you of costly overheads by providing trained personnel.

Spare parts

Jacopa retain comprehensive records of all the machines we have built. The records can be accessed quickly on our spare parts database. The spares supplied are genuine, guaranteed and backed by our detailed knowledge of all the subsequent modifications, or upgrades, which may have occurred since the machines were supplied.

Our spares managers are available for advice at any time. We recommend suitable spare parts, for both holding on site as strategic spares and your long term needs for planned maintenance shut downs. Spares are ex-works, and are delivered to site for installation.

Training

As a supplier of engineered capital equipment, it is natural for us to offer our end users on-site or in-house training courses. Skilled instructors are available, and we can train your team in all aspects of equipment use, including detailed instructions for replacement of parts, adjustment and monitoring.

The training courses are for individuals on a one-on-one basis or for groups of up to eight, either on-site or in our worldwide offices.

Most efficient fine screens available, the CF100® and CF200® screens have become the preferred screen worldwide

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Sizing

CF100® Series		
Model	**CF 100/300**	**CF 100/600**
Band Inlet Width	300mm	600mm
Flow capacity minimum	20l/s	50l/s
Flow capacity maximum	500l/s	1500l/s
Perforation size	2, 3, 5mm	3, 5, 8, 10mm
Minimum Channel Width	700mm	1200mm
Screening Discharge Height	Site-specific	Site-specific
Channel Depth	500-3000mm	500-6000mm

CF200® Series			
Model	**CF 200/500**	**CF 200/1000**	**CF 200/1500**
Band Inlet Width	500mm	1000mm	1500mm
Flow capacity minimum	300l/s	800l/s	1200l/s
Flow capacity maximum	3000l/s	4000l/s	5000l/s
Perforation size	2, 3, 5, 6, 10mm	2, 3, 5, 6, 10mm	2, 3, 5, 6, 10mm
Minimum Channel Width	1000mm	1500mm	3200mm
Screening Discharge Height	Site-specific	Site-specific	Site-specific
Channel Depth	1200-7000mm	1500-7000mm	1500-7000mm

Notes:
The head loss is generally 250-400mm. The CF200® range is also available with band widths of 2000 and 3000mm. Consult Jacopa for details.

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