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Design Bureau

TROX® **TECHNIK**





Design Bureau



The Trox Design Bureau has a reputation for developing solutions to satisfy the most challenging Architectural and Building Service applications around the globe.

The Bureau draws on over 50 years of experience within construction, offering professionals the opportunity to complement their project with optimised solutions.

The Design Bureau service has been successfully employed for:

Chilled Beams

Integrated Ceiling Units

System Engineering

Architectural Air Distribution

Decentralised Ventilation





Collaborative Design Process

1) Outline Proposals

Key criteria are established with consideration given to:

- Performance requirements*
- Aesthetic options*
- Budget and programme limitations*

2) Conceptual Design

Through consultation concepts are developed that combine:

- Aesthetics*
- Service components*
- Material specifications*
- Air distribution requirements*
- Functionality*
- Flexibility*

3) Detailed Design

Latest technology is harnessed to produce engineered solutions complemented with computer-generated models to provide:

- Value engineering*
- Co-ordinated services*
- Future flexibility*
- Buildability and functionality*
- Expedient production*

4) Testing and Refinement

Thorough testing is conducted to optimise performance. Laboratory tests provide comprehensive performance definition for all aspects:

- Thermal*
- Photometric (Lighting)*
- Aerodynamic*
- Acoustic*

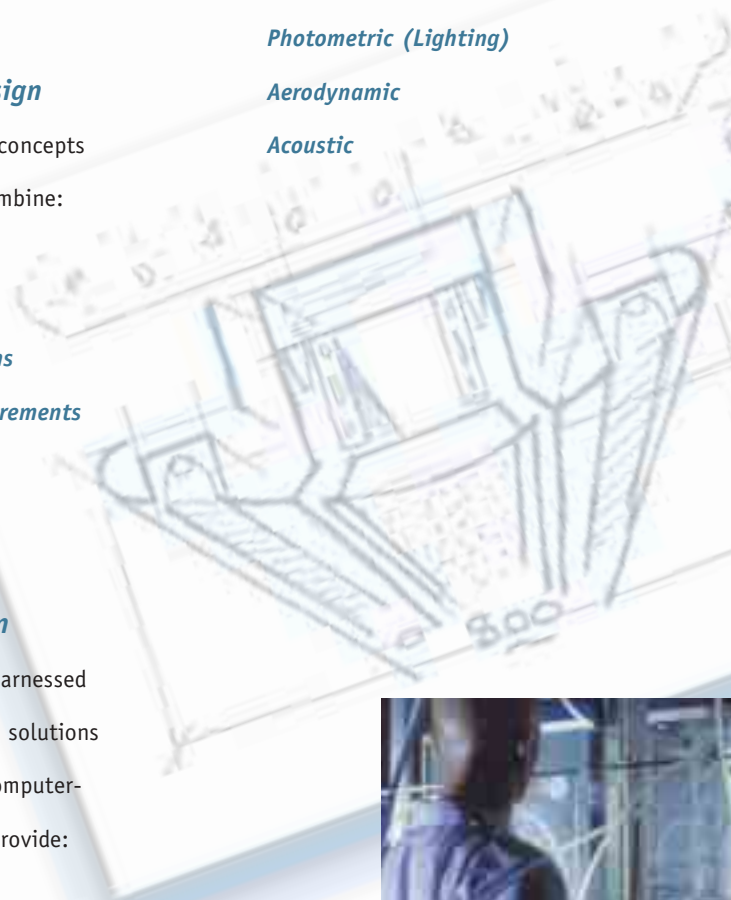
5) Approval of Design, Function and Co-ordination

Client inspection of a pre-production model satisfies:

- Aesthetic on-site mock-ups*
- Installation and buildability assessment*

6) Contract Implementation

Implementation and control to stringent manufacturing and delivery schedules guarantee that program and cost certainty are realised for the client.



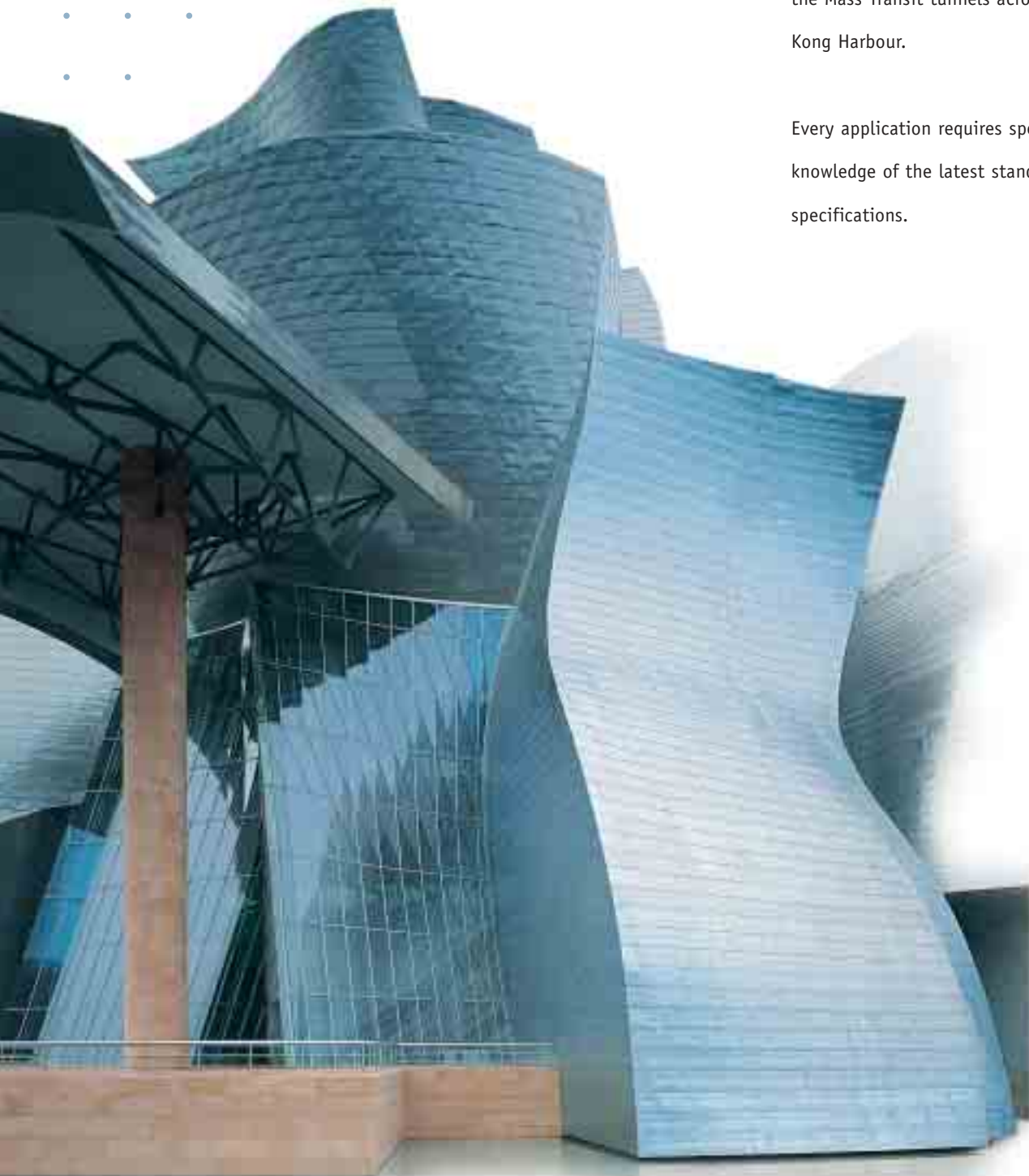


Design Bureau Applications



The Design Bureau has experience in all areas of construction, ranging from the Twin Towers in Kuala Lumpur to the Mass Transit tunnels across Hong Kong Harbour.

Every application requires specialist knowledge of the latest standards and specifications.





▶ Canary Wharf - London



▶ Jumeirah Beach Hotel

Projects Worldwide

Each sector presents fresh challenges to the design team, of which the Trox Design Bureau has become an integral part.

Design Bureau Applications:

Commercial Offices

Hotels

Major Shopping Centres

Industrial

Airport Terminals

Sports Arenas

Leisure Centres

Exhibition Halls

Laboratories



▶ Bluewater Retail Park



▶ Torness Power Station



▶ Schiphol Airport



Multi-Service Chilled Beams





Attractive Economic Alternative

The Design Bureau offers customised Multi-Service Chilled Beams that are fitted directly to the exposed structure without a suspended ceiling.

Now low height existing structures can be recycled with a modern air conditioning system.

All services elements are pre-fabricated within the MSCB to deliver reduced capital and whole life costs while also accelerating the on-site program.



► Airbus UK - Filton

Integrated Ceiling Design

▶ British Library



▶ Disney Land - Paris



▶ HSBC



▶ 280 Bishopgate - London



▶ GLA Building - London



Co-ordinated Design

Simplicity and elegance describe the integrated fittings, which house all services components, and successfully co-ordinate with all suspended ceiling systems:

Square Lay-in

Plank

Mega Panels and Tartan Grid

Plaster Solutions

The Design Bureau will combine 'chilled beam water cooling technology' or conventional 'all air systems' and satisfy the internal environment.

The prefabricated services solution will deliver program and cost certainty for the client, and can incorporate:

Lighting

Cooling

Sprinklers

Public Address System

Motion Detectors



► Merrill Lynch



Image courtesy of Luxonic



Air Distribution





Architectural Solutions

In harmony with architects worldwide, the Trox Design Bureau has built its reputation on delivering discreet aesthetic solutions.

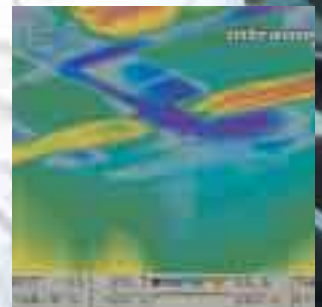
The Bureau will craft individual customised solutions or supply architectural products from its standard range.

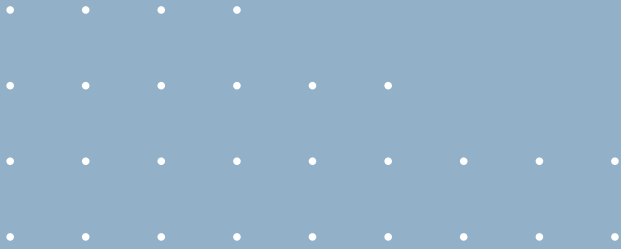
Diffusers are available in a range of finishes to suit the application from subtle white to polished stainless steel.





System Engineering





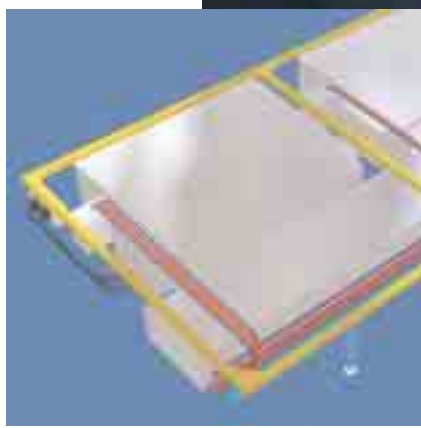
Complete Solution

The diversity of system knowledge that the Design Bureau has amassed through its extensive laboratory testing facilities ensures optimised solutions every time.

System selections offer sole responsibility for comfort and acoustics and can achieve considerable cost savings:

- Fan Coil Units and Diffusers*
- VAV Terminal Boxes and Diffusers*
- Passive Chilled Beams and Under-Floor Supply Air*

Pre-plumbed and wired Fan Coil Units accelerate on site installation programs.



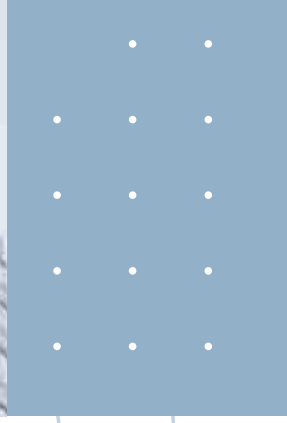
Fan Coil Unit + Diffuser Schedule TNOF

Unit No.	Fan Coil Unit	Control	Flow Rate	Capacity	Fan Power	Vol. Flow	Supply Air	Return Air	Supply Air	Return Air
FCU001	VAV	4	300	3.00	0.25	3.00	40	100	40	100
FCU002	VAV	4	300	3.00	0.25	3.00	40	100	40	100
FCU003	VAV	4	300	3.00	0.25	3.00	40	100	40	100
FCU004	VAV	4	300	3.00	0.25	3.00	40	100	40	100
FCU005	VAV	4	300	3.00	0.25	3.00	40	100	40	100
FCU006	VAV	4	300	3.00	0.25	3.00	40	100	40	100
FCU007	VAV	4	300	3.00	0.25	3.00	40	100	40	100
FCU008	VAV	4	300	3.00	0.25	3.00	40	100	40	100
FCU009	VAV	4	300	3.00	0.25	3.00	40	100	40	100
FCU010	VAV	4	300	3.00	0.25	3.00	40	100	40	100
FCU011	VAV	4	300	3.00	0.25	3.00	40	100	40	100
FCU012	VAV	4	300	3.00	0.25	3.00	40	100	40	100
FCU013	VAV	4	300	3.00	0.25	3.00	40	100	40	100
FCU014	VAV	4	300	3.00	0.25	3.00	40	100	40	100
FCU015	VAV	4	300	3.00	0.25	3.00	40	100	40	100
FCU016	VAV	4	300	3.00	0.25	3.00	40	100	40	100
FCU017	VAV	4	300	3.00	0.25	3.00	40	100	40	100
FCU018	VAV	4	300	3.00	0.25	3.00	40	100	40	100
FCU019	VAV	4	300	3.00	0.25	3.00	40	100	40	100
FCU020	VAV	4	300	3.00	0.25	3.00	40	100	40	100



Decentralised Ventilation





Integrated Façade

Fresh-air supply through the facade directly into the space offers an alternative to low height structures.

Under-floor options provide a greater 'gross to nett floor area' ratio when combined with dry risers.

Heating and cooling is available, with optional heat recovery achieved through integration with the glazing and façade.





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