

TROX UK Ltd

Caxton Way, Thetford, Norfolk, IP24 3SQ

Tel: +44 (0)1842 754545

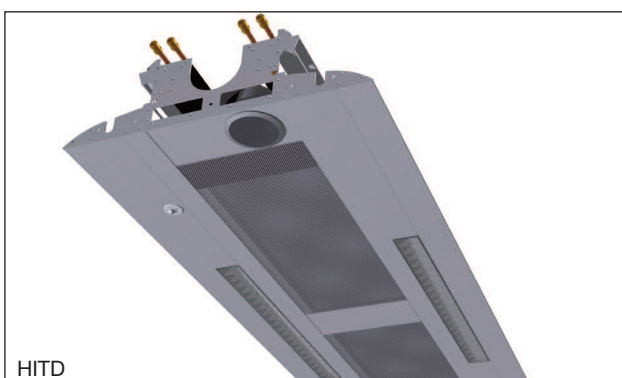
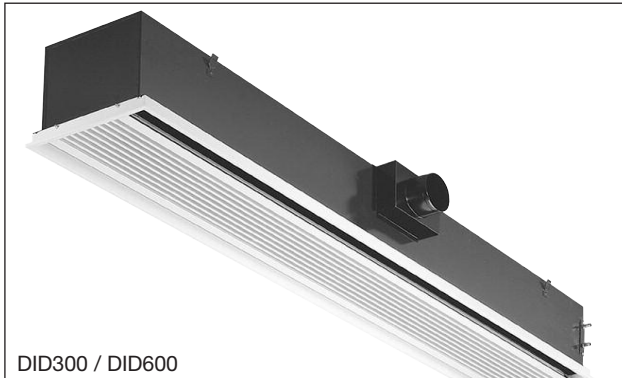
Fax: +44 (0)1842 763051

trox@troxuk.co.uk

www.troxuk.co.uk

## Air-side commissioning instructions for active chilled beams

Type DID300 / DID600 / DID632 / DID300B  
/ DID600B / HITD



TROX UK active chilled beams type DID are used in air-water air conditioning systems. They combine the aerodynamic properties of ceiling diffusers with the energy benefits of load dissipation using water.

### Function

Active chilled beams provide conditioned fresh air (primary air) to the space. The primary air is discharged from a plenum into the beam mixing chamber via nozzles. As a result secondary air is induced via an inlet grille passing through a horizontal heat exchanger into the mixing chamber. The total supply air is then discharged horizontally through integral slot diffusers or at high level in the case of the HITD.

### Note

Only trained expert personnel may install and make appropriate services connections  
All legal regulations for site work must be complied with.

### Installation

- check the beam for transport damage
- check the handing of water connections and location of the primary air spigot are correct

The beam should be installed using the beam hanging brackets/casing holes provided and a suitable suspension system. All air and water connections should be made.

### Before commissioning

- visually inspect chilled beam to ensure that all nozzle holes are complete with nozzle or nozzle caps
- check primary air and water flow and return connections and on the waterside that adequate venting and drain facilities are provided
- commissioning sets and air flow control dampers must be accessible

### Air side commissioning

The primary air to the beam can be adjusted in different ways

- using a constant self powered flow rate controller (i.e. TROX type RN, VFC or VFL) please refer to appropriate product leaflets
- by measuring the flow rate in a straight section of duct upstream of the beam using a pitot static tube or other induct flow measuring systems, then adjusting the manual upstream damper to provide the required flow rate. When measuring flow rate induct, standard commissioning procedures are applicable
- by measuring the beam plenum chamber static pressure and using the upstream damper to set the required static pressure

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Figure 1: Commissioning a chilled beam by means of measuring the static pressure

Only the method of commissioning the beam by measuring static pressure will be described below.

Commissioning using plenum static pressure  
TROX UK provides a schedule of plenum static pressures required for the design flow rates for each specific beam. Further static pressure characteristics for specific beam types and nozzle combinations are available on request.

### Instrumentation required

- commercially available, calibrated manometer
- tubing to connect to the manometer
- plug on the end of the manometer tube to insert into the nozzle for all beams except the HITD

### Method

- locate a nozzle at approximately 1/3rd of the beam length
- insert the plug into the nozzle ensuring there is no leakage between the nozzle and the plug
- read the static pressure
- adjust upstream damper to give the scheduled static pressure to provide the required flow rate

In the case of the type HITD beam it is not necessary to use a nozzle as there is a static pressure tapping at the end of the plenum next to the primary air spigot.

- remove the tapping cap
- connect manometer tube to the tapping
- follow the procedure above
- after completion refit the tapping cap