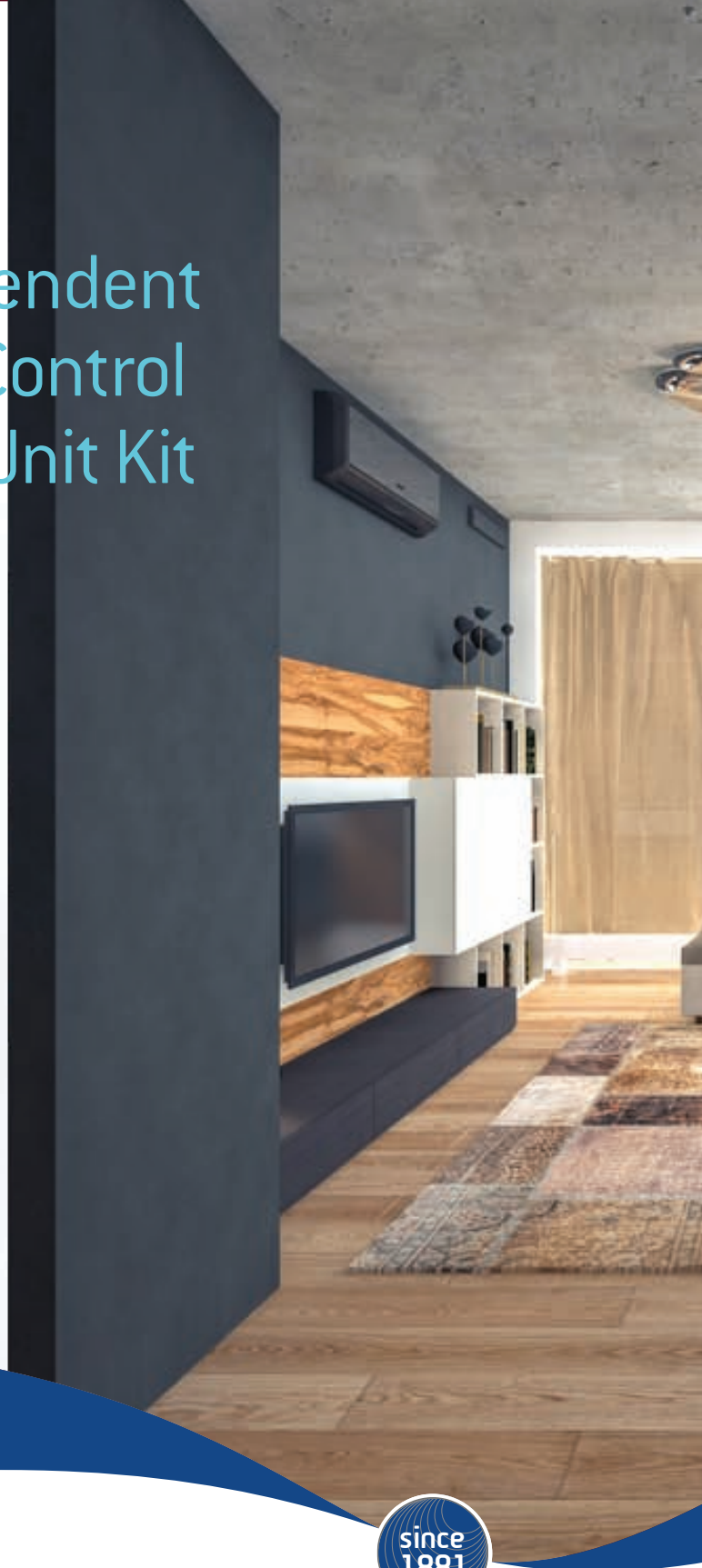
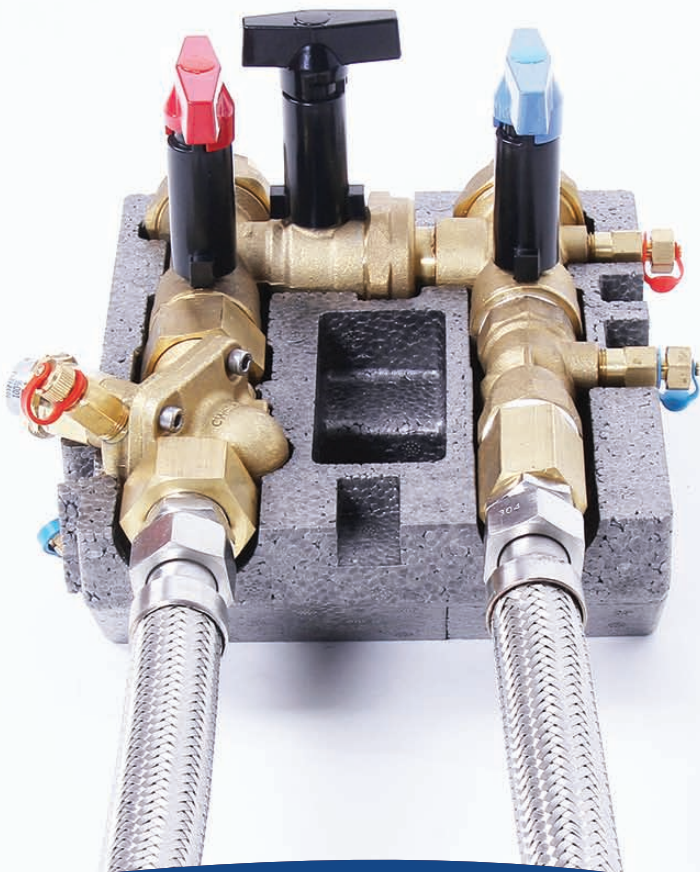


➤ T&C LINK  
Pressure Independent  
Balancing and Control  
Valve Terminal Unit Kit



**T&C** TROUVAY  
GROUP & CAUVIN

Channelling energy

# T&C LINK

T&C LINK is a dedicated valve package designed specifically for the connection of the Fan Coil Unit to Chilled/Hot Water piping networks of Buildings. It would give end users a 100% error free and easy installation.

T&C LINK is an assembly of the isolation ball valves, strainers, flexible hoses and a PIBCV (Pressure independent balancing and control valve) Model: AB-QM manufactured by DANFOSS along with a thermal insulation manufactured exclusively for the kit. It is also supplied with DANFOSS actuators depending on the site requirement of the end user.



## FEATURES

- Available in 15mm, 20mm, 25mm and 32mm sizes
- Union joints with O-rings for leak free connections
- Full bore isolation ball valves with extended stem for insulation purpose
- Strainers integrated Drain cock
- Flexible hoses for minor offset and easy connections
- P/T plugs provided to check the flow rate and temperature



## BENEFITS

- Improved design
- Compact solution
- Accessibility to all the valves from single access door
- Zero installation error
- Easy installation
- Performance guaranteed for the entire assembly
- Warranty of 5 years for complete valve package

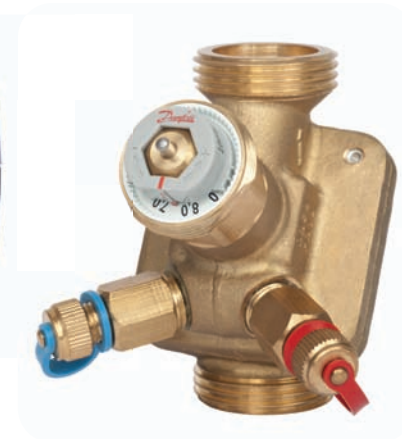
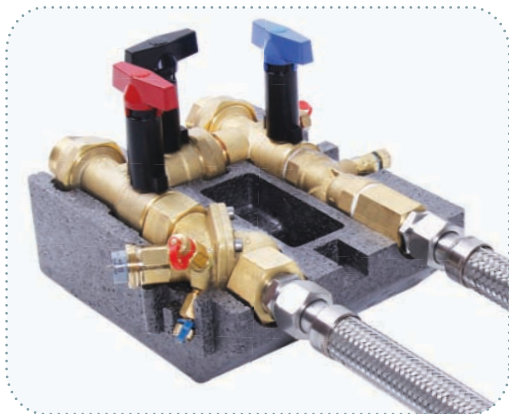


Pressure Rating	: 25 Bar
Temperature Range	: 0 - 100°C
End Connections	: BSPT
Working Medium	: Chilled / hot water
Body Material	: DZR Brass
Hose	: SS 304 Braided



Pressure Rating	: 20 Bar
Temperature Range	: 0 - 100°C
End Connections	: BSPT
Working Medium	: Chilled / hot water
Body Material	: DZR Brass
Hose	: SS 304 Corrugated

## PRESSURE INDEPENDENT BALANCING AND CONTROL VALVE BY DANFOSS

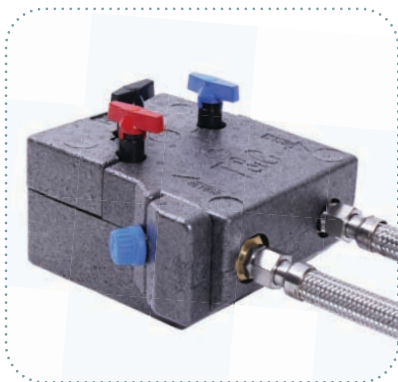


T&C LINK is integrated with one of the best in class pressure independent balancing and control valves (PIBCV) Model: **AB-QM manufactured by DANFOSS**. The T&C LINK is supplied with **DANFOSS actuators** depending on the requirement of the end user.

Using a Model: **AB-QM Pressure Independent Balancing and Control Valve** with **DANFOSS actuator** will give an enormous amount of savings:

- Efficient energy and minimal pumping costs since there are no overflows at partial loads because of the exact pressure independent flow limitation
- Smaller pump investments and lower energy consumption as the pump head needed is lower than the traditional setup.
- Reduced movements of the actuators since the built in differential pressure controller ensures the pressure fluctuations do not influence the room temperature
- Achieving a stable temperature in a room leading to a lower average temperature at the same comfort level
- Minimal flow complaints as the valve performs as designed
- Minimal blockage complains as the membrane designs makes AB-QM less susceptible to blockage than a cartridge type
- Trouble free segmentation of the building project. When sections of a project are finished they can normally not be handed over to the customer with a fully functional HVAC installation. However the AB-QM with a DANFOSS actuator will automatically control the flow even when other parts of the installation are still unfinished. It is not needed to adjust the AB-QM after finalisation of the project
- Commissioning cost: - The cost is close to Zero because of a convenient setting procedure without the need for flow charts calculation or measuring equipment. The AB-QM valves can be set to precise design value even when the system is up and running
- Halved mounting costs as the AB-QM valve covers two functions, balancing & control

## THERMAL INSULATION



T&C LINK are supplied with an insulation material made of Expanded Polypropylene (EPP). The EPP foam is moulded into the same profile of the complete valves to give improved thermal insulation and to avoid any condensation to the valve kit.

### BENEFITS

- Specifically made for the T&C LINK
- Material: Expanded Polypropylene (EPP Beads)
- Designed to accommodate the same profile of the valves
- Condensation minimised
- Impermeable to moisture
- High compressive strength
- Good rigidity
- High energy savings
- Supplied with every valve package
- Easy Installation

### PROPERTIES

Description	Values	Test Method
Temperature Range	0°C to 80°C	
Density (kg/m <sup>3</sup> )	60	
Thermal conductivity W/(m-K)	0.035	
Tensile Strength kPa	771	
Compressive Strength @ 50% Strain (kPa)	11% 475	
Flexural Strength ( kPa)	720	
Resistance To Fungi	GOOD	
Resistance To Bacteria	GOOD	

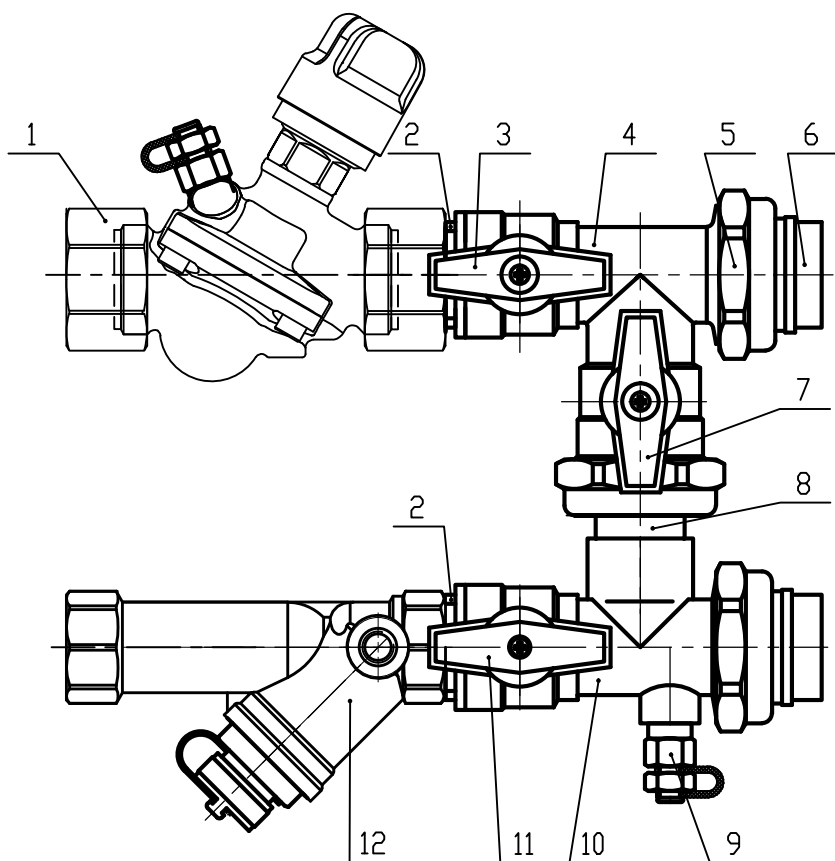
### PROPERTIES

## FLEXIBLE HOSES

T&C LINK are supplied with flexible hoses which help in vibration isolation from the terminal units and enables offsetting to connect to the terminal from the piping network.

- Pressure rating: PN 25 / PN 20
- Temperature Range: 0- 100°C
- End Connections: BSPT
- Working Medium: Chilled/ Hot Water
- Body Material : SS 304 (PN25 in braided, PN20 in corrugated)
- Lengths Available: 200mm, 300mm, 600mm
- Maximum Angular Deflection Allowed: 90°

## CONSTRUCTION MATERIAL



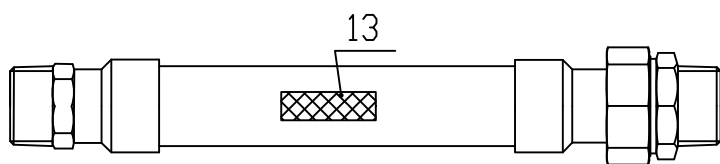
Part No	Item	Material
1	Bush	CW602N
2	Gasket	PTFE
3	Handle (Blue)	Aluminium
4	Ball valve	CW602N
5	Nut	CW602N
6	Female Nipple	CW602N
7	Handle (Black)	Aluminium
8	Connection Piece	CW602N
9	Test Points	CW602N
10	Ball valve	CW602N
11	Handle (Red)	Aluminium
12	Strainer Y-Type	CW602N
13	Flexible Hose	SS304

### Ball Valve Specification:

Construction	: Double Piece
Design Standard	: EN13828
Body Material	: CW602N
Seat Material	: PTFE
Stem Material	: CW602N
Ball Material	: CW602N

### Y-Strainer Specification:

Strainer Screen Dia (DN15-DN32):	0.09cm
Strainer Mesh Material:	SS304



## TYPICAL SPECIFICATION TC LINK – SERIES 1520

1. FCU valve package shall be of DZR Brass material construction and shall include 3 ball valves for isolation of the supply, return and flushing line. The ball valves should be full port type, double piece, DZR Brass Ball, PTFE Seat with extended stem. The handles of the ball valves shall be quarter turn type with colour coded T handles.
2. Y type strainer with a stainless steel mesh also to be provided as an integral to the FCU Valve package at the supply side of the FCU valve package. The strainer shall also include an integral drain cock with caps to enable draining of water from the coils during the flushing and the caps should be tied to the strainer using a rubber tie to prevent the loss of the caps during the flushing process.
3. Pressure and temperature measurement ports shall be provided in the FCU valve package along with 10 mm orifice plate.
4. 2pcs of stainless steel corrugated flexible hoses shall be provided with each FCU valve package with male ends to connect to the inlet and outlet of the FCU connection.
5. Pressure rating for the entire FCU valve package shall be rated at 20 Bar. All the threaded end connections to be connected to the FCU and the return-supply of chilled water lines shall be in accordance to project specifications.
6. A warranty of 5 years should be provided for the FCU valves.

## PRODUCT COMPARISON



### T&C LINK

Compact / Small in size: 20 x 20 cm access hatch required.

Fewer numbers of threads and connections which reduces the chances of errors and leaks in the T&C LINK.



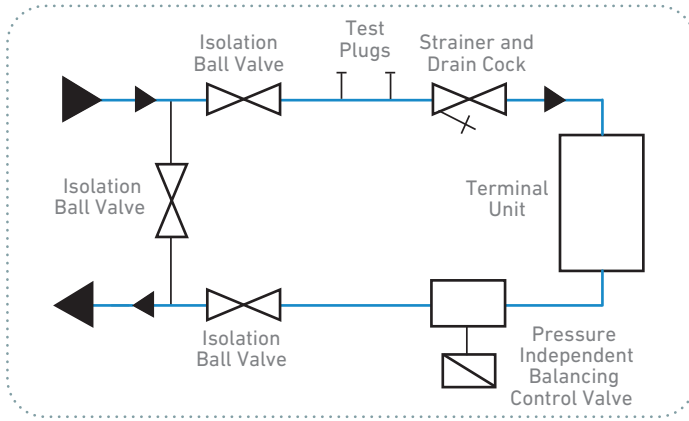
### CONVENTIONAL VALVES

Needs a space of at least 1m x 1m space access hatch.

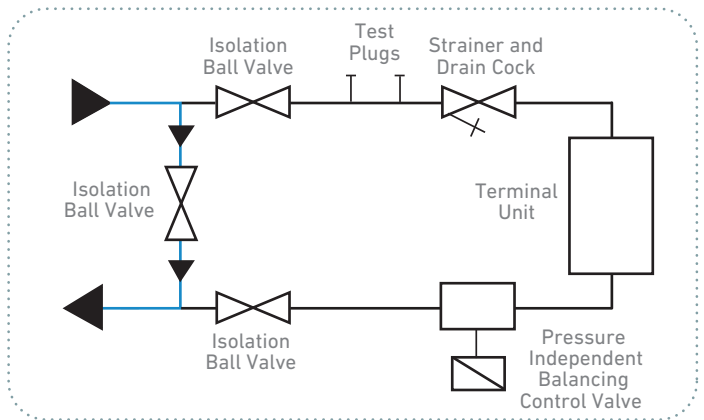
Huge numbers of connections which make the system more prone to errors and leaks.

# OPERATIONS

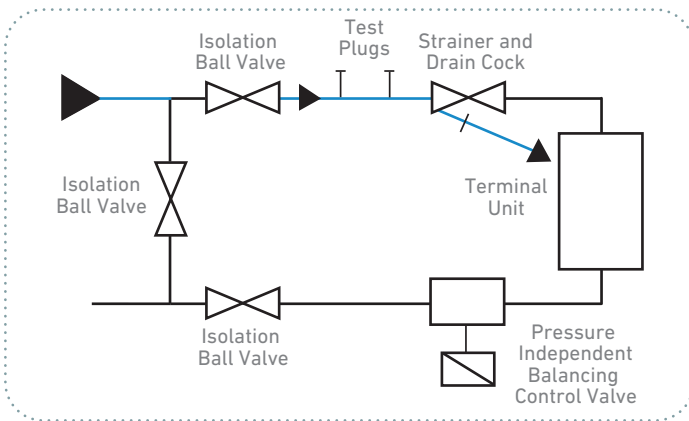
## NORMAL FLUSHING



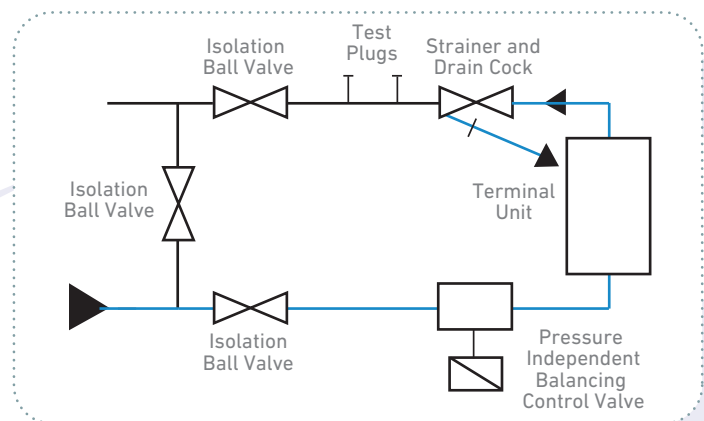
## BYPASS FLUSHING



## FORWARD FLUSHING



## BACKWARD FLUSHING





**TROUVAY & CAUVIN OFFICE, DUBAI, U.A.E**



**ITALY FACILITY**



**VISUAL INSPECTION**



**TEST BENCH**



**ASSEMBLED VALVES**



**LEAK TEST**



**PACKED AND READY FOR DISPATCH**



**QUALITY CHECK**

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