



# Window Control System

# *fresAir*<sup>™</sup> Window Control System

Ventilation in building is essential and wherever out of reach windows are incorporated in high level position, there is a requirement for a control mechanism to operate these windows.

*fresAir* Window control systems is a simple, push-pull tensioned flexible cable ,transmitting rotary or linear motion from a manually operated winder.

Each winder is rated at 80kg working force and is capable of opening up to 10 sashes depending on the sashes layout and weight.

## **Torque Rod System**

Functional yet powerful . This system transmits force from the winder gear box to a damper unit comprising of universal joint, fork end, sliding end and draglink which in turn drives the torque rod, sash arms and the sash links.

The flexible conduit comprising of compression spring and tensioned cable within the aluminum tube allows flexibility for bends.

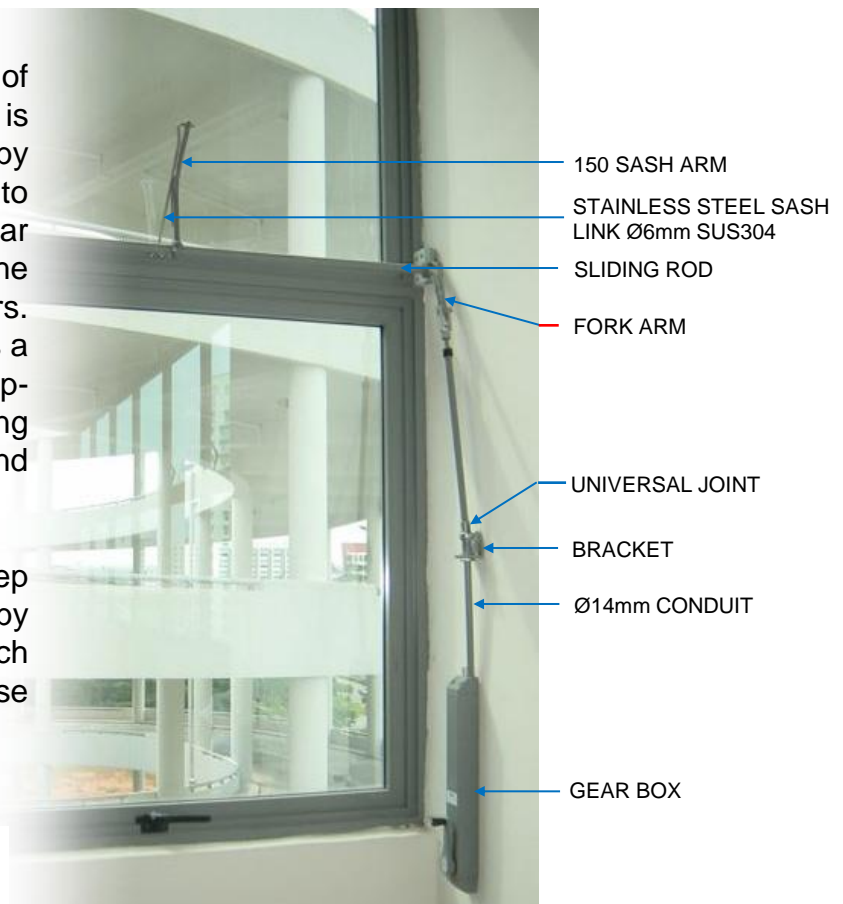
## **Window Gear Box**

The winder is capable of transmitting powerful force and is yet “failsafe” against abuse by incorporating nylon bevel gear to metal alloy corresponding gear and will be first to “fail” when the abuse of over-winding occurs. However, replacement of gear is a simple step of removing the Snap-on front cover without dismantling the entire assembly and installation.

Driving screw shaft is a twin-step screw and is manufactured by cold roll formed process which guarantee strength and precise tolerances.

## **Universal Joint**

Ball joint type of construction for strong connection.



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- NYLON BEARING ( 2 parts )
- Ø20mm TORQUE ROD
- 125 DRAG LINK
- STAINLESS STEEL SASH LINK  
Ø 6mm SUS304
- STAINLESS STEEL VENT BRACKET
- 150 SASH ARM
- SLIDING ROD

## Sash Arms & Draglinks

Cast aluminum and heat treated for strength.

## Sash Links

SUS 304 stainless steel 6mm diameter rod, bent to “Z” ends for connection to sash arms and set by M6 set screws at vent trunnions.

## Vent Trunnions

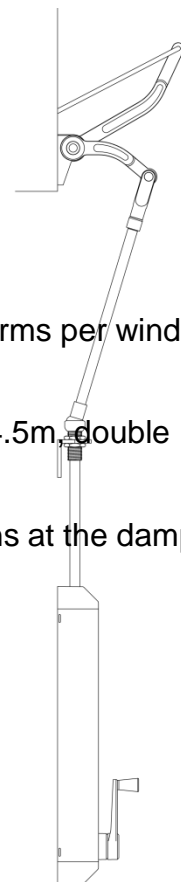
Stainless steel vent trunnions with “quick release” function for easy cleaning of windows.

## Bearings

In two parts, Nylon 6 injection mouldings for ease of installation and tough demands from the rotating torque rod.

## Applications

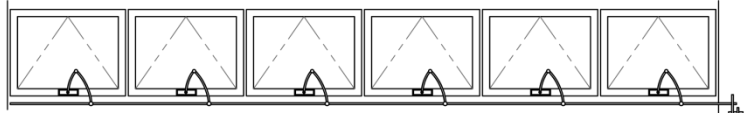
- Specify longer sash arms for wider window openings. Sash arms are available in 150mm, 200mm and 250mm.
- Always specify freely hinged windows or friction free stays
- Wider window exceeding 1000mm width would require two sash arms per window for balance opening, without twisting.
- For connection to more than 8 sashes and row length exceeding 4.5m, double conduits from one single winder are recommended.
- Always minimize number of bends and analyze push or pull options at the damper unit for maximum efficiency.



## Illustrations:

### TOP HUNG WINDOWS

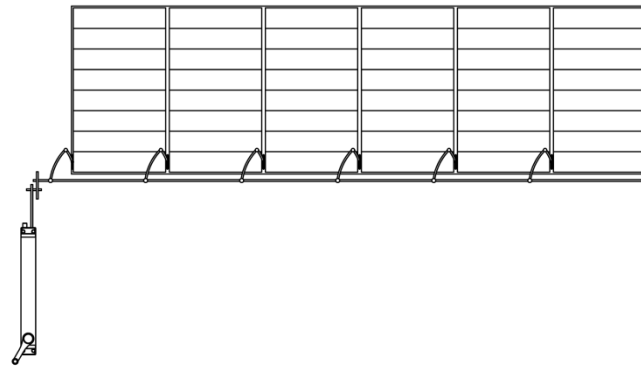
#### Horizontal Bay



#### Vertical Bay



### ADJUSTABLE LOUVRES



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