

**特佳建築工程私人有限公司**  
**MERDEKA CONSTRUCTION CO. PTE. LTD.**

45, YISHUN INDUSTRIAL PARK A, SINGAPORE 768723.

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Company Reg. No. 198001267R GST Reg. No. M2-0038393-1

## **POLLEN COLLECTION**

### **Operation & Maintenance Manual For Top Hung Window / Sliding Door / Sliding Window**

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**MAINTENANCE OF ALUMINIUM & GLAZING WORKS**

**1. Aluminium Finish - Powder Coating**

- a) Powder coating surfaces require routine cleaning (approximately once every 6 months) to remove dirt and grime.
- b) In industrial and coastal environments cleaning should be carry out more frequently, paying particular attention to areas not normally washed by rain.
- c) Powder coating surfaces shall be washed and clean by using soft cloth or sponge with a solution of warm water and mild detergent.
- d) Surfaces should be thoroughly rinsed with fresh water after cleaning to remove all residues.
- e) Avoid direct contact to high temperature in access of 70° C as this can cause damage to the powder coating surface.
- f) Avoid direct contacts to strong salt, alkalize and acidic substances as this can cause damage to the powder coating surface.

**Note:** Aggressive cleaning material and techniques will damage the powder coating surfaces. Do not use strong solvents such as lacquer thinners, alkalize and acidic base solutions as they will damage the powder coating surfaces.

Any knocks from heavy, hard or sharp objects on the window frame or glass panel will leave indentations, scratches, cracks and other form of damage.

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## 1.1. Maintenance Tips

- a) Clean and remove dirt from movable parts such as the sliding shoes, pivot points and track as after as necessary.
- b) Lubricate or grease the movable parts, and the hinges, screws and pivot points at least every six months.
- c) Check the glass panels for cracks and ensure that the panels are not loose.
- d) Tighten loose screws or replace missing or corroded screws.

## 2. CLEANING INSTRUCTIONS FOR GLASS

Normal maintenance should be carried out regularly in order to maintain the aesthetic aspect of the glass.

- **For normal cleaning**

Use ordinary detergents sold in shops for this purpose. Rinse the glazing thoroughly and dry.

Fingerprints and grease or mastic stains can be removed with solvents such as acetone, methyl ethylcetone (MEC) or ammonia, provided that these products do not attack the seals and penetrate into rebate.

No abrasive products may be used and acid solutions must be avoided, especially those containing chlorine, fluorine or alkalis.

- **For difficult cleaning**

In cases of persistent pollution, fuel emissions or for glasses which have not been cleaned regularly or which are still soiled after being cleaned, the following can be used:-

A solution of clean water and cerium oxide in a concentration varying between 50 and 160 g/litre. Wash with a soft cloth soaked in the solution and apply very slightly pressure to the glass (hard pressure can be deteriorate the glass since cerium oxide then becomes abrasive).

Repeat the operation if necessary, i.e. if the glass is still dirty. Remember to rinse the glazing thoroughly after treatment.

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### **3. Top Hung Window / Sliding Door / Sliding Window**

#### **OPERATION & MAINTENANCE**

The operation of top hung Window / Sliding Door / Sliding Door is depending on the correct fastening of the fittings to the window / door. The strength and position of the screws in the aluminium profile should be checked. In case screws are loose or damaged, they should be fixed or replaced.

- 3.1. Top Hung Window operate with friction stay arm mechanism set into top and bottom frame. The stay arm may become more difficult to operate at some point. If this happens, do not force the window open. First, clean the frames and make sure nothing is blocking the operators stays or the sash itself. Try to open the casement window and see if there's still some resistance.

Apply silicone-based spray lubricant onto the operator hinges, locking mechanisms, and other moving parts. Wait a few minutes, then try it again. Ideally, it should work smoothly at this point. If it is still difficult to operate, or if you are hearing grinding sounds, call your window contractor for repairs.

- 3.2. Sliding door / Sliding Window operates with rollers set into bottom frame. The rollers may become more difficult to slide at some point if this happens, do not force to slide the door. First, clean the bottom rail with wet cloth and make sure nothing is blocking the operator's rollers. If it is still difficult to operate or if you are hearing grinding sound, call your door contractor for repair.

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## **Recommend regular inspection by every 12 months:**

- Sign of damage in the window / door frame and glass.
- Condition of the weatherstripping.
- Presence seal between window / door frame and wall.
- Operation ease and mechanical connections.
- Condition of locking mechanism.
- Condition of friction stay and fixing screw.

## **Recommend regular maintenance by every 6 months:**

- Cleaning of frame and glass by mild detergent with soft cloth or sponge (avoid the use of abrasive materials).
- Apply spray lubricant on the operator arms, friction stay, locking mechanisms and rollers.
- Tightening of any loosen screws on mechanical connection or friction stay.

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