



Guidelines for Window Works

Minimum Safety Requirements for Installation/Replacement of New Aluminium Windows

As part of HDB's efforts to enhance the safety of windows installed in HDB flats, HDB has introduced the minimum safety requirements for installation/replacement of new aluminium windows.

Flat owners must engage only BCA approved window contractors registered with HDB to carry out installation/replacement of new aluminium windows in HDB flats.

For repair of existing aluminium windows, please refer to the safety requirements.

Aluminium Casement Windows

(Drawing on Aluminum Casement Windows)

Parts	Requirements
Friction stay	Stainless steel grade 304 or equivalent Minimum thickness not less than 2.5 mm Length not less than 1/2 width of window leaf
Window leaf	Maximum width not exceeding 700 mm
Aluminium section for screw connection	Minimum thickness 2.75 mm
Connection of friction stay to window frame	Stainless steel grade 304 self-tapping screw of minimum size no. 8 (4 mm) If aluminium section is not less than 3mm thick, epoxy coated screws can be used Minimum 4 screws on each side of friction stay
Corner brackets (if used) for corners of window leaf	Zinc casting corner brackets

Aluminium Sliding Windows

(Drawing on Aluminium Sliding Windows)

Parts	Requirements
Safety devices	To install the following: <ul style="list-style-type: none"> a. Polyethylene sliding window self-locking safety device (2 nos. per panel) b. Synthetic resin stoppers at top of window outer frame <ul style="list-style-type: none"> ▪ minimum 2 nos. per panel width and repeat the same along the track ▪ The stopper shall be fastened with stainless steel grade 304 or equivalent rivet/screw of minimum 4 mm diameter c. Aluminium bottom outer frame with fixed angle facing outside Dimension "b" shall be minimum 1.5 times dimension "a" [<u>refer to drawing</u>]
Sliding panel	Maximum width not exceeding 1.2 m

Aluminium Adjustable/Fixed Louvre Vent(Drawing on Adjustable/Fixed Louvre Vent)

Parts	Requirements
Glass louvres	Minimum glass thickness not less than 6 mm Wire-glass type
Glass louvres safety device	Aluminium U-channel cleat at every glass louvre

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Types of Building Work	Need Permit?	Subject to the following Guidelines / Conditions
Placement of non-reflective film over the glass panel of existing windows/balcony doors	No	Not applicable.
Installation of bamboo chicks/venetian blinds/curtain rail internally	No	
Replacement/installation of window on parapet Note : Not applicable for balcony of DBSS projects	Yes	Width of window panel: <ul style="list-style-type: none"> ▪ Casement window: 500mm to 700mm ▪ Sliding window: 500mm to 1200mm ▪ To comply with the minimum safety requirements for

<p>and for flats handed over from 1 Jul 2007 where open balcony and/or pure planter box are provided. For such projects, windows, full height sliding doors/glass panels are not allowed to be installed at balcony and pure planter box.</p>		<p>installation/replacement of windows. View the Window Safety for more information.</p> <p>For flats handed over from 1 July 2007 onwards</p> <ul style="list-style-type: none"> ▪ Windows installed/replaced must be of similar colour scheme, proportion and type (i.e. sliding to sliding, casement to casement) with that of the original windows provided by HDB.
<p>Installation of grilles at service yard/balcony parapet (if any)</p>	<p>Yes</p>	<p>For flats handed over from 1 July 2007 onwards</p> <ul style="list-style-type: none"> ▪ Window grilles installed must be of HDB approved designs. Flats owners may refer to the renovation factsheet given during the booking of flat/collection of keys for the approved design. [see sample renovation fact sheet] ▪ Flat owners can view the specific renovation guidelines including approved grilles designs e.g. for service yard/open balcony by logging on to "My HDBPage".
<p>Installation/replacement of internal metal grilles of any design at window and balcony parapet</p>	<p>No</p>	<p>* Applicable to developments handed over before 1 July 2007</p> <ul style="list-style-type: none"> ▪ Metal grilles must be fixed internally and cannot protrude from the building façade.
<p>Installation of internal metal grilles of any design at double-storey balcony of executive maisonette</p>	<p>No</p>	
<p>Installation of metal grilles at double storey corridor end balcony of executive maisonette</p>	<p>No</p>	
<p>Installation of metal grilles of any design at interaction balcony</p>	<p>No</p>	<ul style="list-style-type: none"> ▪ Height of metal grilles must not exceed height of unit. ▪ Shall not store any combustible material at the balcony area.
<p>Replacement/removal of mild steel/stainless steel railing on top of balcony parapet wall</p>	<p>No</p>	<ul style="list-style-type: none"> ▪ This is applicable only to mild steel/stainless steel railing on top of reinforced concrete parapet. ▪ The height of the balcony parapet wall from finished floor level must be at least 1000 mm. ▪ To apply two coats of the rust inhibitor

		to the surface of exposed steel bars (where the steel bars were anchored into) before any finishing work is done to prevent rusting.
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Renovation Guidelines For Replacement Of Full height Windows (including 3/4 height and bay windows)

Replacement of full height windows is strictly not allowed, unless with valid reasons, such as badly damaged frame which require a total change of windows.

Examples of full height windows (including 3/4 height and bay windows).

If replacement is necessary, flat owners need to engage a BCA-approved window contractor to submit an application for renovation permit to HDB electronically. The replacement must comply with the colour scheme, proportion and type [ie casement to casement, sliding to sliding] with that of the original windows provided by HDB, in addition to existing requirement to engage a Qualified Person (QP) to certify the lateral loading.

Under the Building Control Regulations, the QP is required to submit structural calculations and drawings to Building and Construction Authority (BCA) for regulatory approval via CORENET (CONstruction and Real Estate NETwork). Once the approval is given by BCA, the BCA-approved window contractor is to submit the BCA's "Permit to Commence Structural Work" and approved drawings to HDB for the issuance of the renovation permit.

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