



Toren Louvre Windows

- *Open joint concept in weathering*
- *Straight-edge design and clean define looks*

fresAir[™]
Louvre Window Systems

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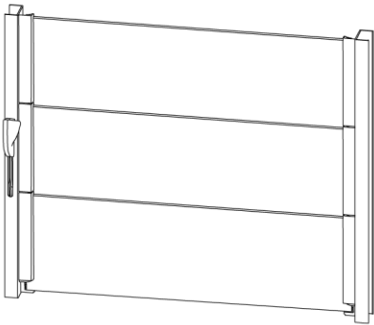
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Height Tables

152 mm Blade Louvre Height

No. of Blades	Height (mm) No Weatherstrip	Height (mm) with Weatherstrip
2	304.8	324.8
3	444.5	464.5
4	584.2	604.2
5	723.9	743.9
6	863.6	883.6
7	1003.3	1023.3
8	1143.0	1163.0
9	1282.7	1302.7
10	1422.4	1442.4
11	1562.1	1582.1
12	1701.8	1721.8
13	1841.5	1861.5
14	1981.2	2001.2
15	2120.9	2140.9
16	2260.6	2280.6
17	2400.3	2420.3
18	2540.0	2560.0
19	2679.7	2699.7
20	2819.4	2839.4
21	2959.1	2979.1

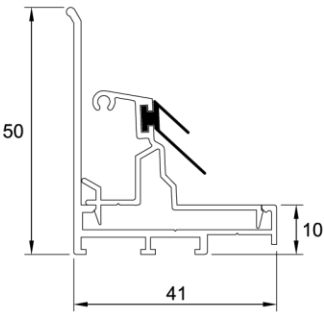


Standard louvre height (ht) for 152 mm blades can be computed as follows:

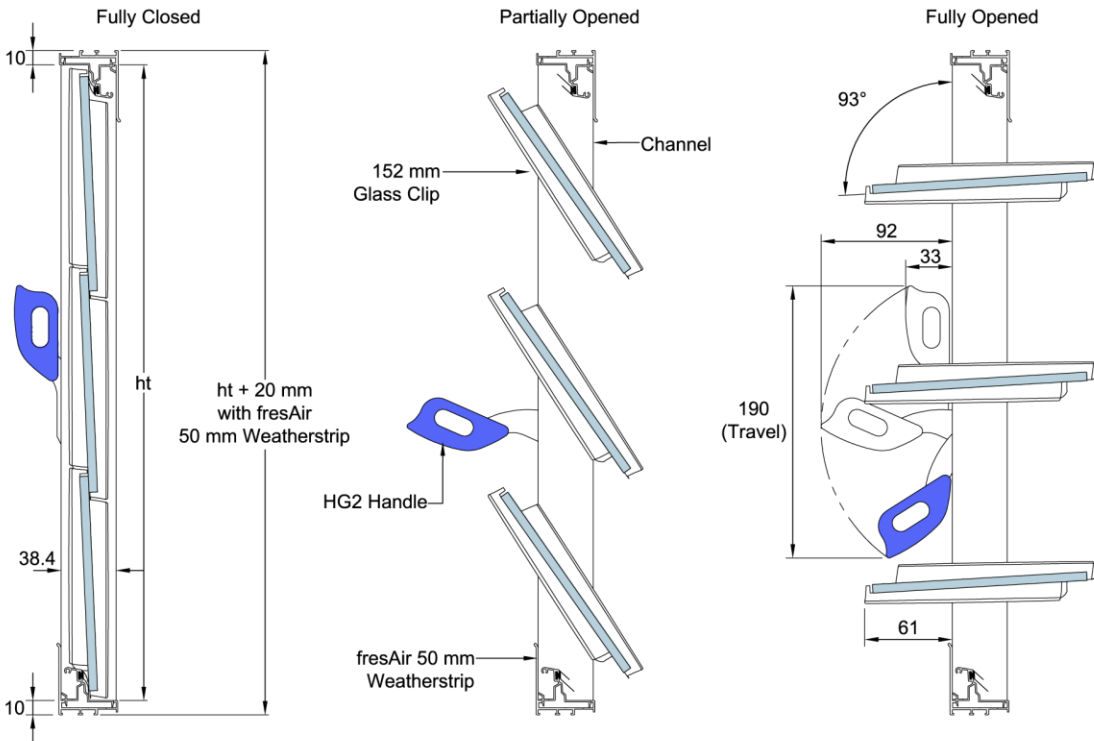
$$ht=(nb \times 139.7) + 25.4$$

where: ht - height of frame nb - number of blades

fresAir 50 mm Weatherstrip

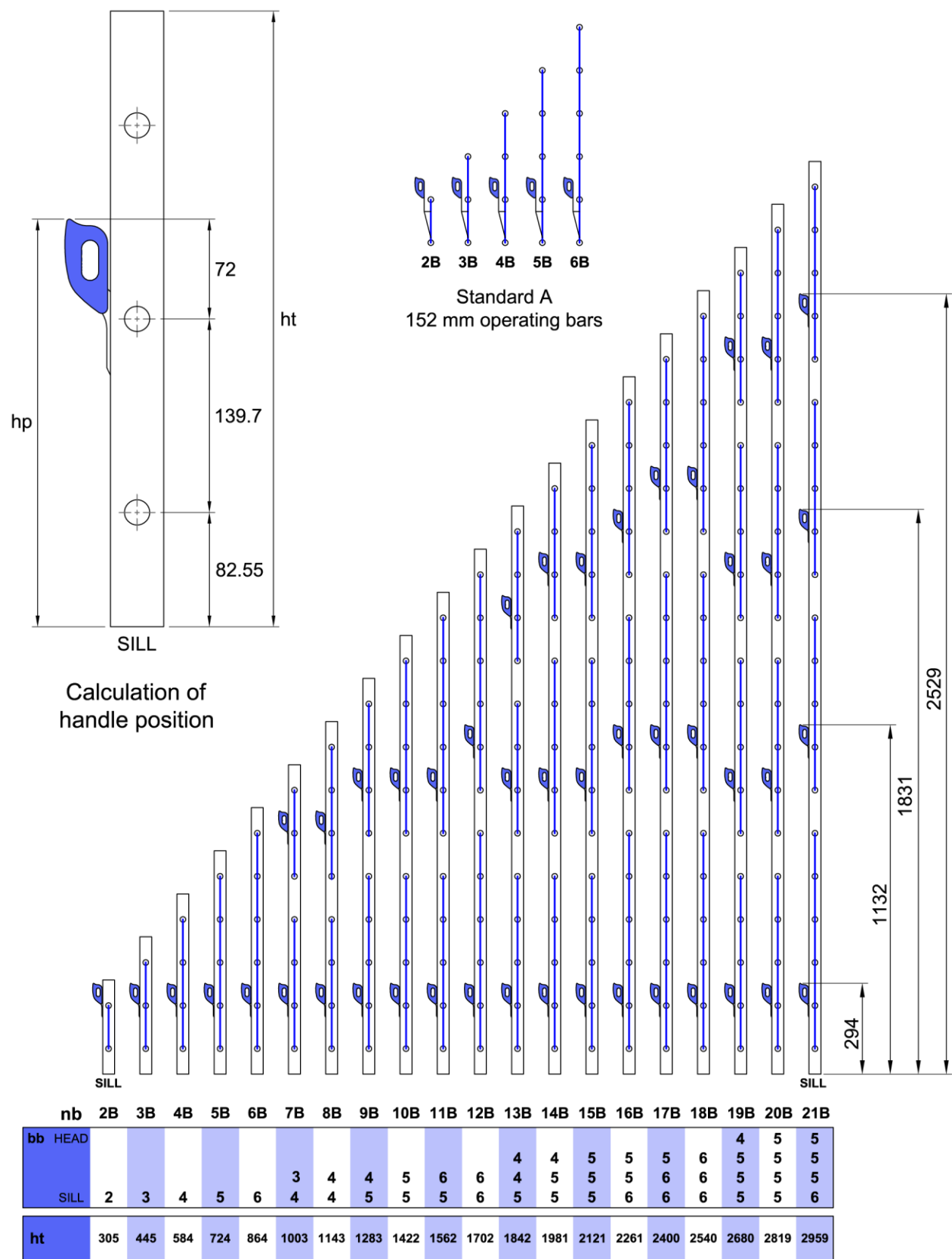


152 mm Louvre Gallery



152 mm Louvre Handle Positions And Controls

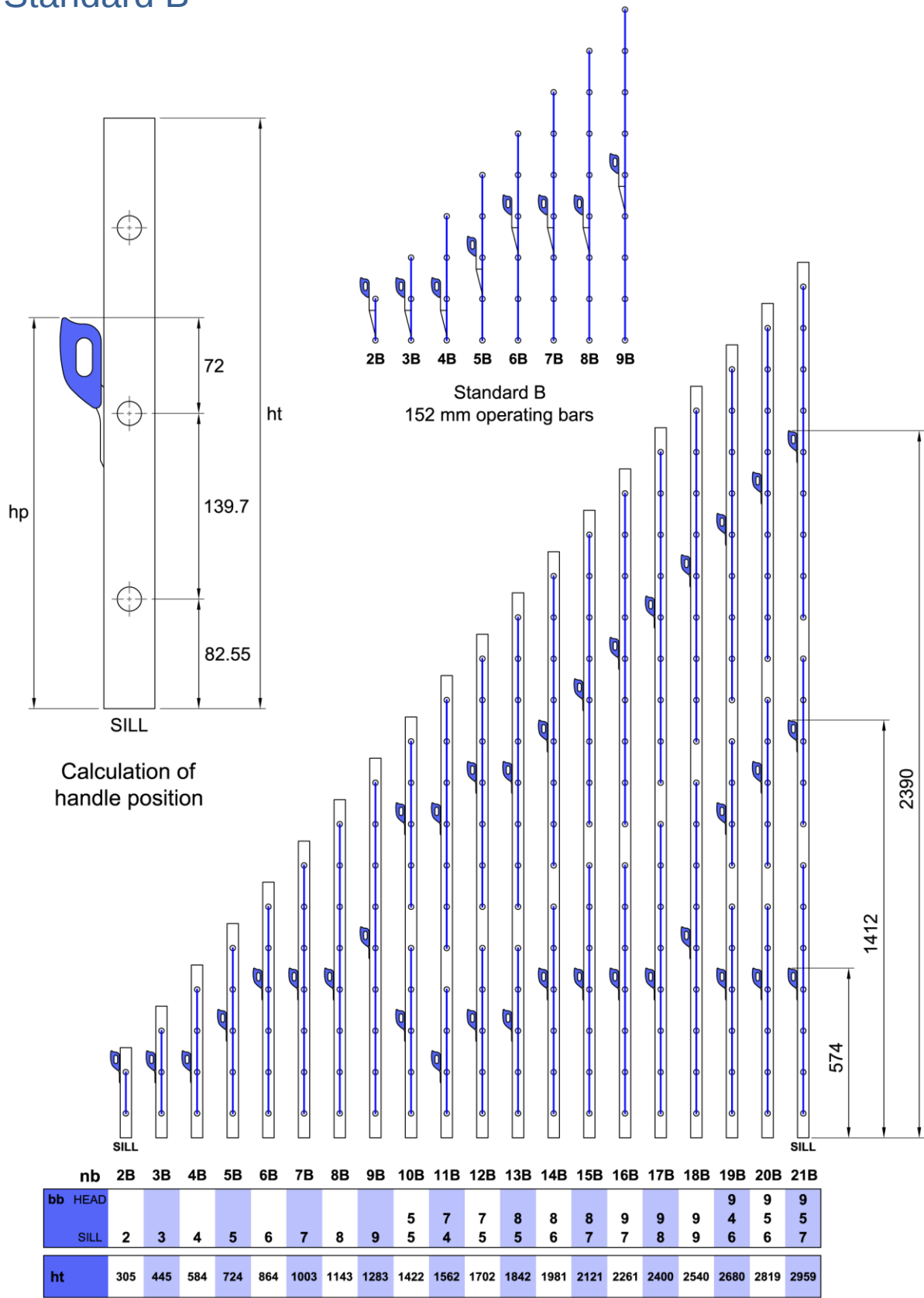
Standard A



Legend:
 nb - number of blades
 hp - handle position
 bb - banks of blades
 ht - height of frame

152 mm Louvre Handle Positions And Controls

Standard B

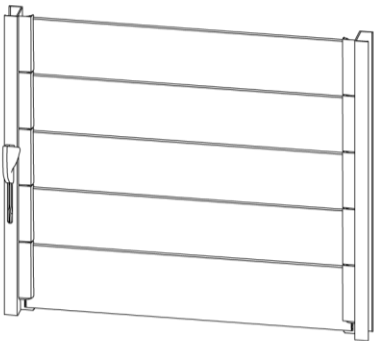


Legend: **nb** - number of blades **hp** - handle position **bb** - banks of blades **ht** - height of frame

Height Tables

102 mm Blade Louvre Height

No. of Blades	Height (mm) No Weatherstrip	Height (mm) with Weatherstrip
3	292.1	312.1
4	381.0	401.0
5	469.9	489.9
6	558.8	578.8
7	647.7	667.7
8	736.6	756.6
9	825.5	845.5
10	914.4	934.4
11	1003.3	1023.3
12	1092.2	1112.2
13	1181.1	1201.1
14	1270.0	1290.0
15	1358.9	1378.9
16	1447.8	1467.8
17	1536.7	1556.7
18	1625.6	1645.6
19	1714.5	1734.5
20	1803.4	1823.4
21	1892.3	1912.3

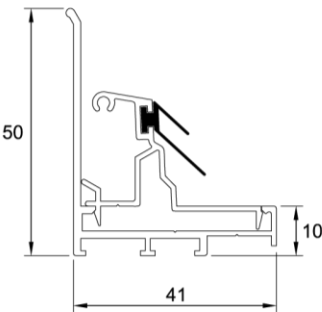


Standard louvre height (ht)
for 102 mm blades can be computed as follows:

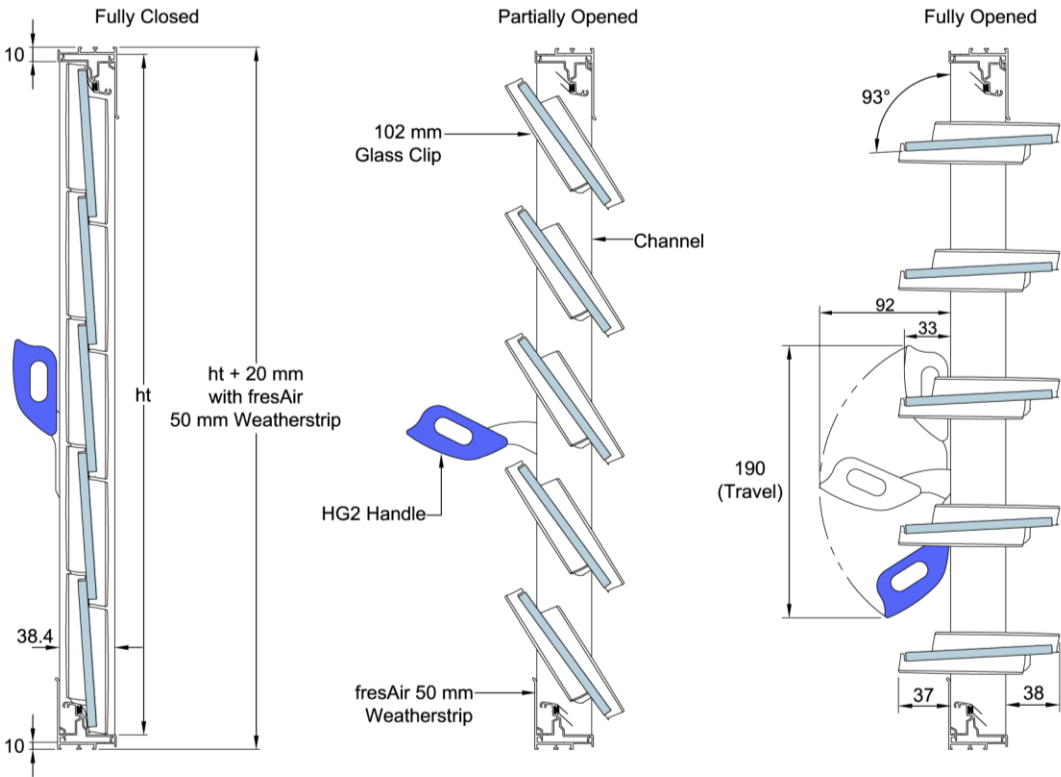
$$ht=(nb \times 88.9) + 25.4$$

where: ht - height of frame nb - number of blades

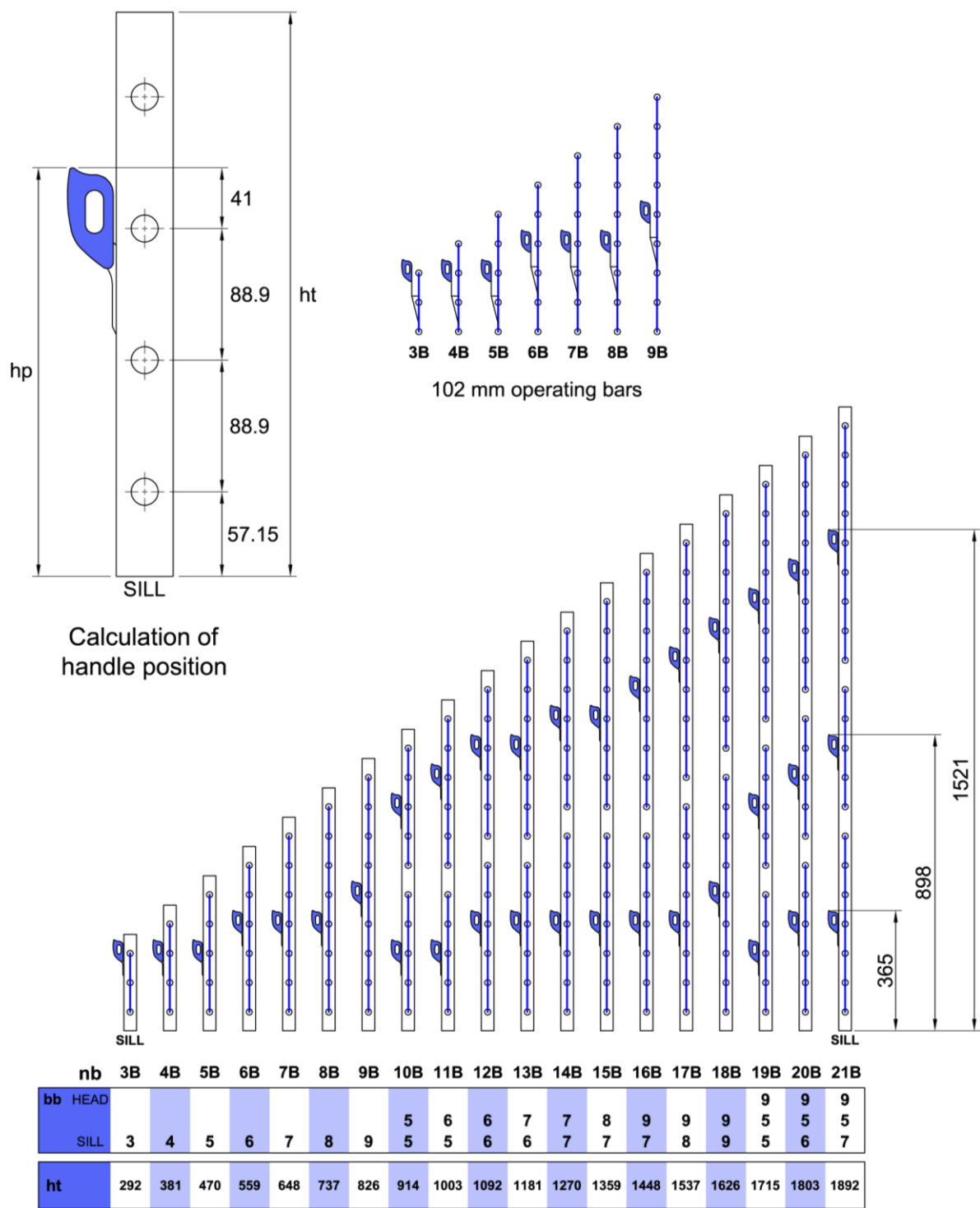
fresAir 50 mm Weatherstrip



102 mm Louvre Gallery



102 mm Louvre Handle Positions And Controls

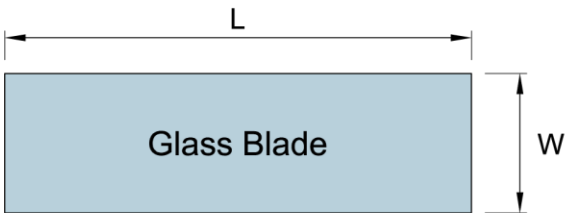


Legend: **nb** - number of blades **hp** - handle position **bb** - banks of blades **ht** - height of frame

Glass Blade Calculations

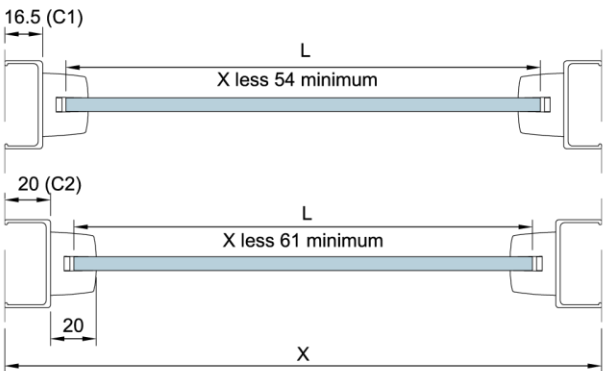
Blade Width (W)

- 152 mm Clips : 150 mm - 151 mm (MAX)
- 102 mm Clips : 101 mm - 102 mm (MAX)



Blade Length (L)

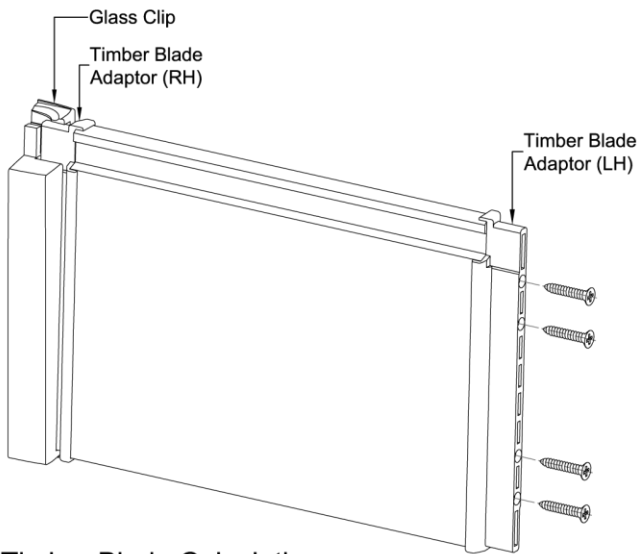
- C1 Channel (16.5 mm height)
- $L = X \text{ less } 54 \text{ mm}$



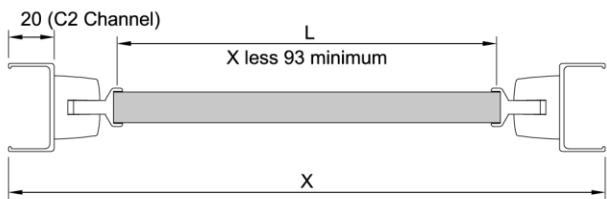
- where: L = Glass Blade Length
 - X = Jamb to Jamb
- Caution : Allowable Tolerance: $\pm 0.7 \text{ mm}$, oversized blades will bow the clips and result in stiff operations.

Timber Blade Adaptors

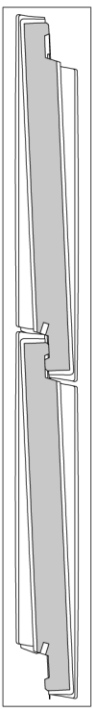
Available for 102 mm and 152 mm timber blades



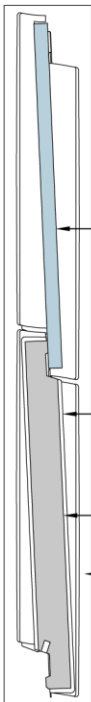
Timber Blade Calculation (with timber adaptors)



where: L = Timber Blade Length X = Jamb to Jamb



Timber Blade to Timber Blade

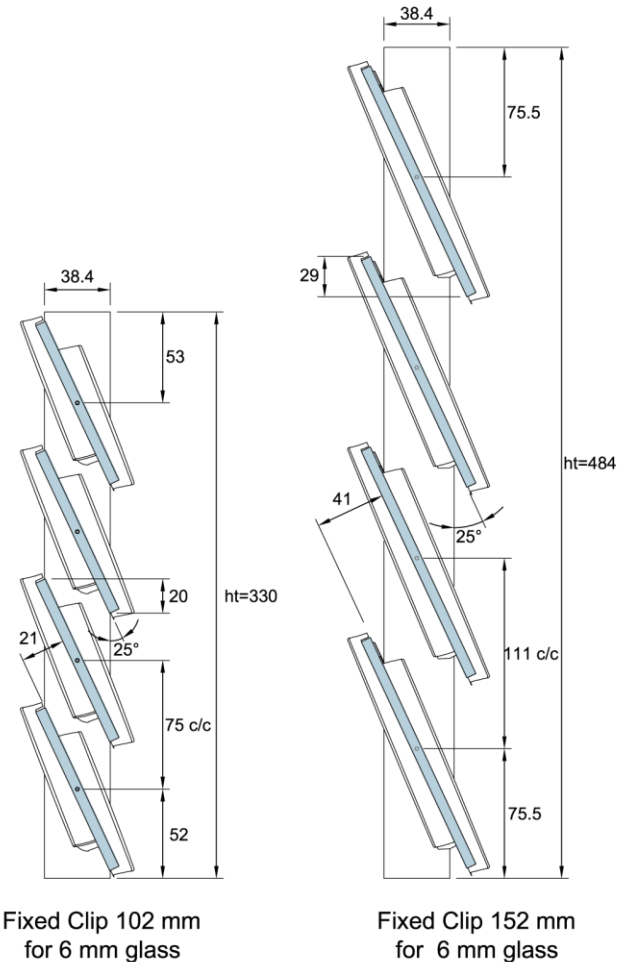


Timber Blade to Glass Blade

Fixed Clip Louvres

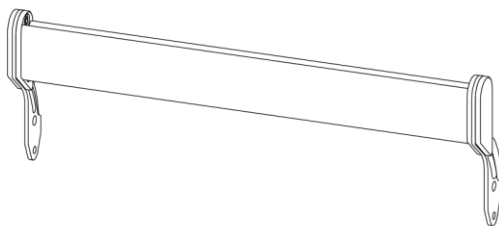
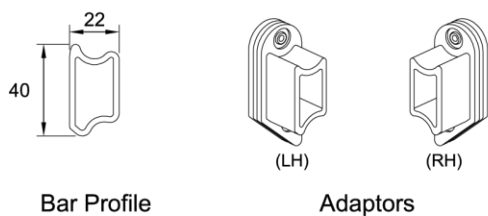
Height Table for Fixed Clips

No. of Blades	152 mm	102mm
2	262.1	-
3	373.1	255
4	484.1	330
5	595.1	405
6	706.1	480
7	817.1	555
8	928.1	630
9	1039.1	705
10	1150.1	780
11	1261.1	855
12	1372.1	930
13	1483.1	1005
14	1594.1	1080
15	1705.1	1155
16	1816.1	1230
17	1927.1	1305
18	2038.1	1380
19	2149.1	1455
20	2260.1	1530
21	2371.1	1605

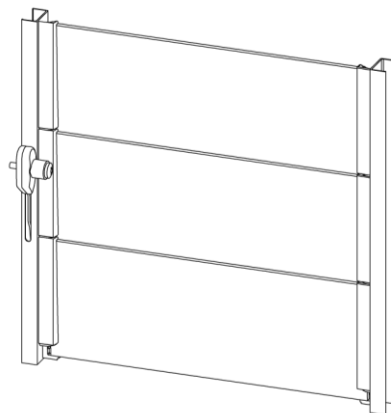
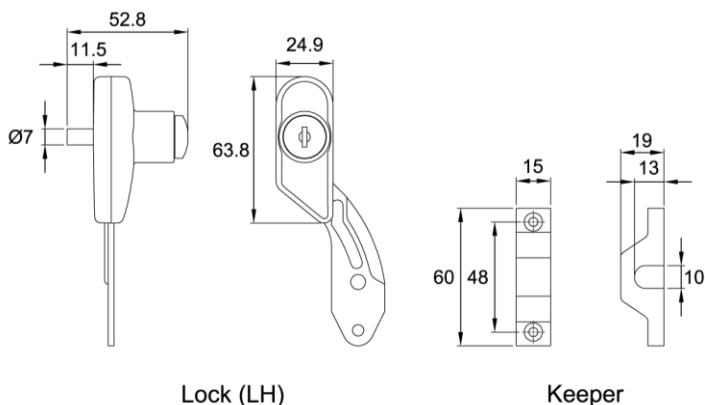


Torsion Bar and Adaptors

For large span louvre windows

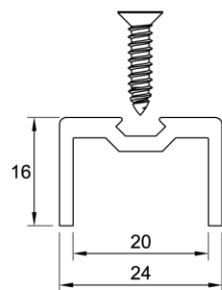


Handle Locks and Keepers

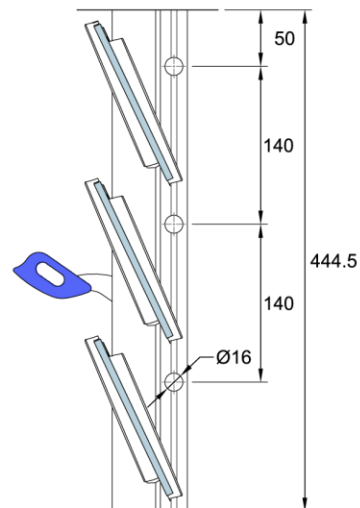
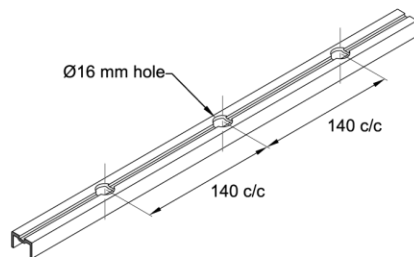


Security Bar Holder

In extruded aluminium with Ø16 mm holes at 140 mm centre to centre



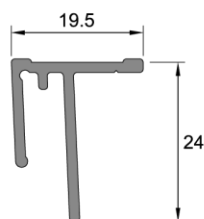
Holder Profile
Art Nr: E3688



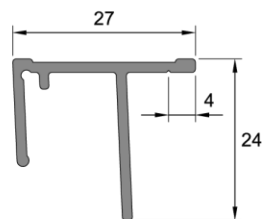
Blade Retainers in Extruded Aluminium Profile

Applications

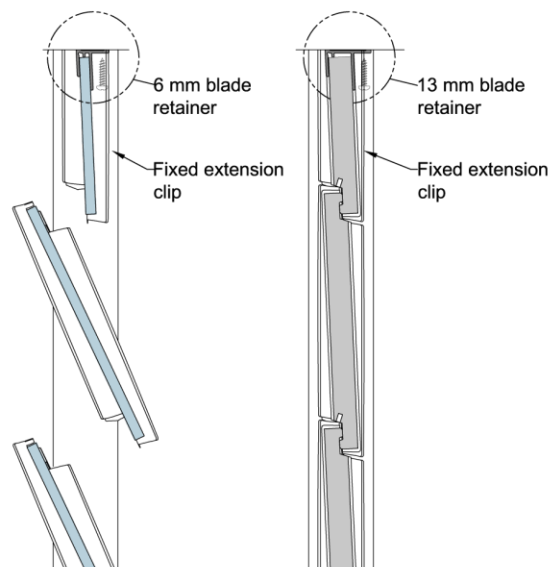
- Off standard height louvres
- Strengthen narrow width blades in extension clips



6 mm Blade Retainer
Art Nr: E3725



13 mm Blade Retainer
Art Nr: E3814



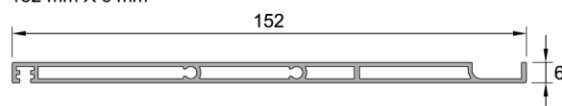
Off standard height
louvres for glass blade

Off standard height
louvres for timber blade

Blade Options

Extruded Aluminium Blade

152 mm X 6 mm



102 mm X 6 mm

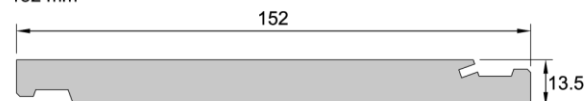


152 mm X 13 mm



Timber Blade

152 mm



102 mm

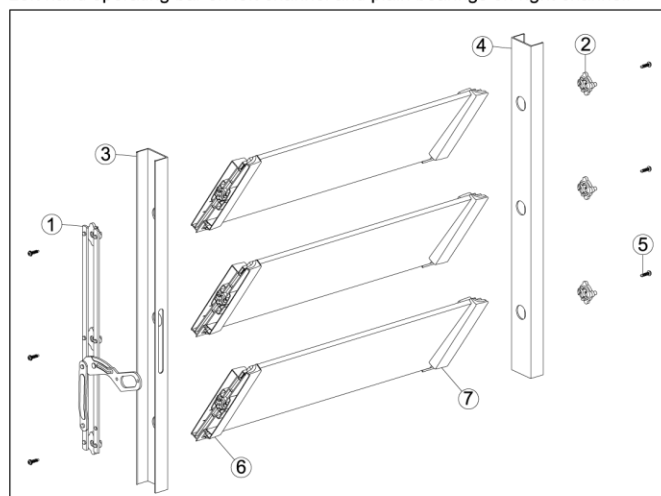


Configuration and Construction Options

A louvre window comprising of a left hand and right hand channels with corresponding mounting blade holders or clip, activate to rotation by a handle attached to an operating bar mechanism and bearings on either side channels.

Ⓐ STANDARD

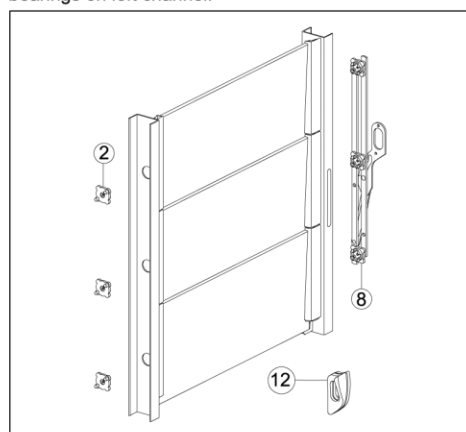
Left hand operating bar on left channel and plain bearings on right channel.



- ① Left Hand Operating Bar
- ② Plain Bearing
- ③ Left Channel
- ④ Right Channel
- ⑤ Hi-Low Screw
- ⑥ Left Clip
- ⑦ Right Clip
- ⑧ Right Hand Operating Bar
- ⑨ Left Linkage Bar
- ⑩ Right Linkage Bar
- ⑪ Left Handle Grip
- ⑫ Right Handle Grip

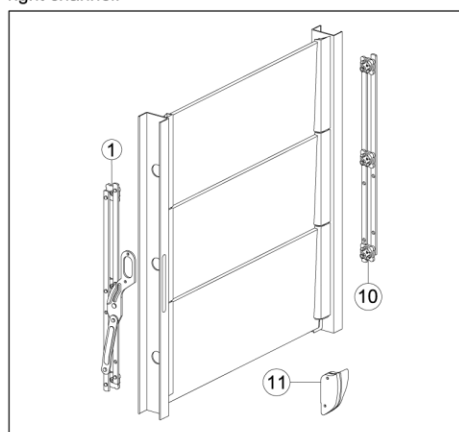
Ⓑ RIGHT HAND CONTROL

Right hand operating bar on right channel and plain bearings on left channel.



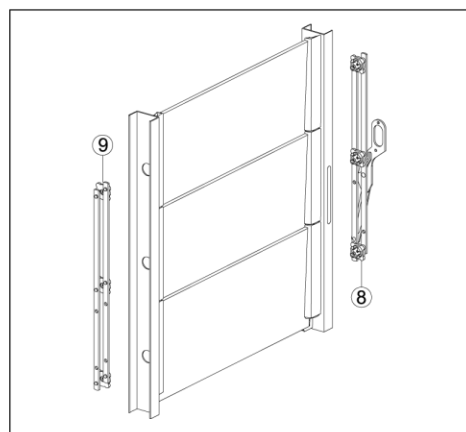
Ⓒ LEFT HAND CONTROL WITH LINKAGE BAR

Left hand operating bar on left channel and linkage bar on right channel.



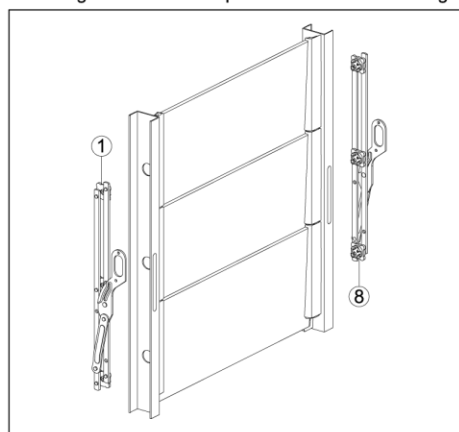
Ⓓ RIGHT HAND CONTROL WITH LINKAGE BAR

Right hand operating bar on right channel and linkage bar on left channel.



Ⓔ LEFT AND RIGHT HAND CONTROL

Left hand operating bar on left channel and right hand operating bar on right channel and option to receive connecting torsion bar.



**All illustrations are viewed from INSIDE*

fresAir™

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