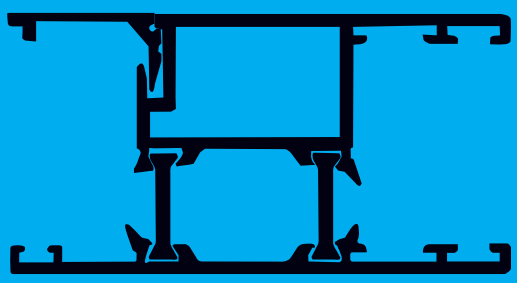
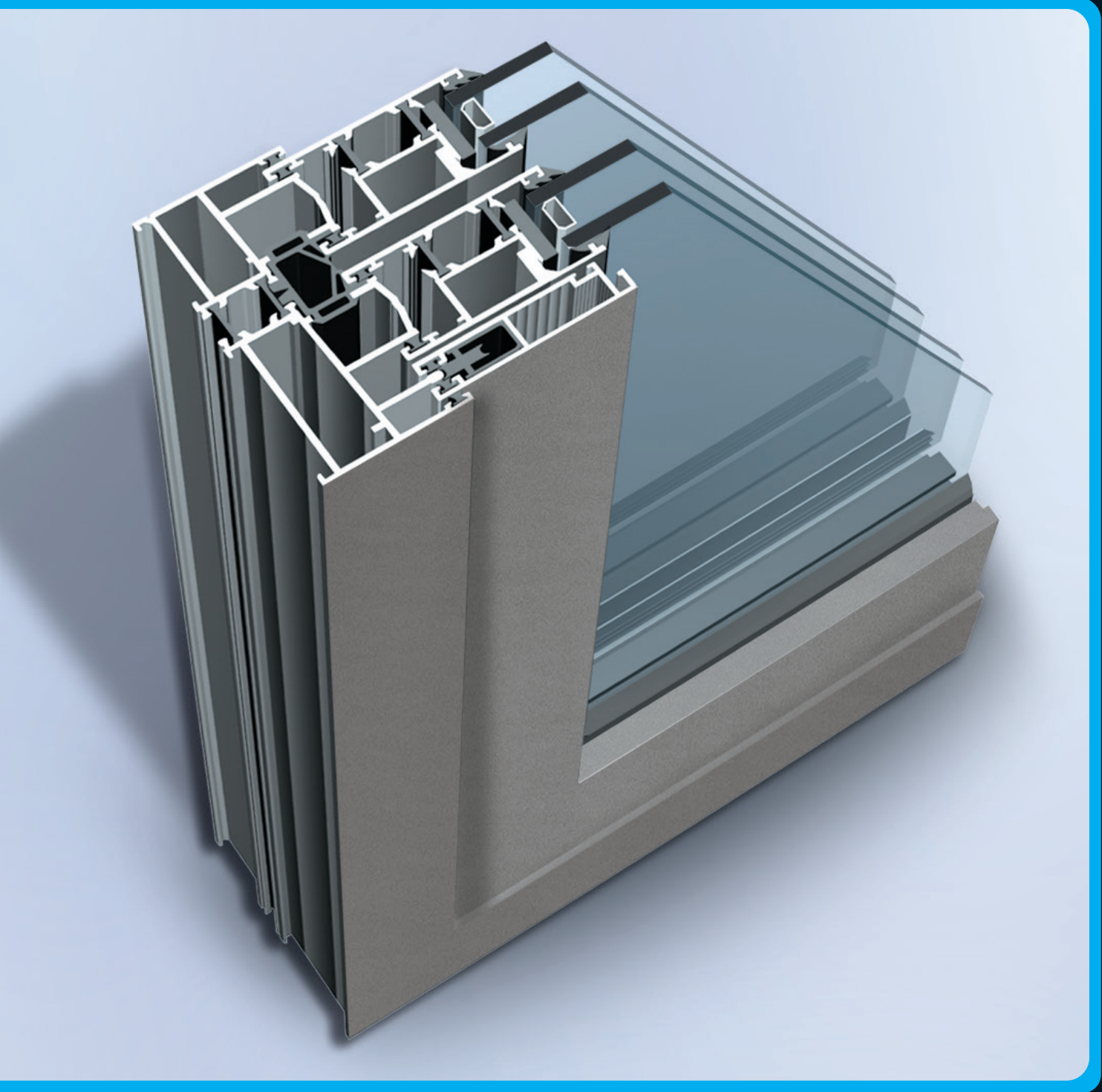


THERMOS 110®

THERMALLY BROKEN SLIDING SERIES



GLAZE TECH

System Solution Providers

INTRODUCTION

Glazing Technology International System (GLAZETECH) are one of the leading aluminium architectural solution providers through innovative system and special component designing.

After the successful launch of Elegant 65® Glazing System, GLAZETECH is now proud to introduce a high performance, high Tech Thermally Broken Sliding System Thermos 110®.

Thermos 110® has superior features and characteristics that will answer to the region's harsh climatic, wind load and pressure challenges.

In this 110 mm. Series, apart from the traditional double sliding tracks for doors and windows, there are options for arches and architraves. There is also an economic option, in which the active panel is slider only in a single track frame and the second panel is of fixlite. The economic option derives savings in accessories and also in aluminium profiles, besides ensuring a better performance on air penetration, water infiltration and energy savings.

The system's high performance is guaranteed as the profiles are extruded at Elite Extrusions, LLC – Ras Al Khaimah, which is equipped with latest all European manufacturing facilities, and is controlled by highly qualified and experienced personnel. On the other hand, the thermal insulation is ensured by using fiber glass reinforced polyamide webs, which are directly imported from the world's leading manufacturers.

The system is designed to be compatible with standard Eurogroove accessories and is carefully tailored to limit the use to optimum numbers of accessories per unit.

Right from the design stage, the ease of fabrication requirements are ensured so that the system can be fabricated within shortest possible lead time. The technical design of the product meets all the statutory and regulatory requirements followed in aluminium and glass fabrications.

Last but not the least, GLAZETECH would be ever happy to render technical assistance to all its clients and customers upon requests.

At GLAZETECH, we firmly believe in building relationship and partnership by constant dialogues and interactions with Architects, Consultants, Contractors, Fabricators and the End Users. We now invite you to derive benefits of Thermos 110® for your profitable, durable and prestigious projects

This is an updated version of the catalogue and supersedes the earlier issue. Customers are requested to refer and order base only on this updated version 2010.

THERMOS 110® SYSTEM

HIGH PERFORMANCE THERMALLY BROKEN SLIDING SYSTEM

CONTENTS

Testing Certificates — Page 01-09

Thermal Analysis of Thermal Break System — Page 10-19

Sharjah Electricity & Water Authority Approval — Page 20-21

Windows and Doors Elevation Cutting List — Page 22-41

Sectional Assembly Details — Page 42-57

Water Drainage Details — Page 58-61

Sections (Profiles) Drawings — Page 62-68

Sections Moment of Inertia Details — Page 69-69

Accessories & EPDM Gaskets — Page 70-72

Certificate of Testing

THOMAS BELL-WRIGHT
INTERNATIONAL CONSULTANTS

Certificate Number: CJC07

Date: 2009 March

Project: Sliding Window Thermos 110 (Thermal Break)

System Supplier: Elite Extrusion
P.O. Box 31291
Ras Al Khaimah, U.A.E.

System: Sliding Window Thermos 110 (Thermal Break)

Tested for:

Air Infiltration Test	Pass
Life Cycle Test	Pass
Repeat Air Infiltration Test	Pass
Static Cyclic Water Penetration Test	Pass
Structural Performance Test, (+/-)	Pass
Repeat Air Infiltration Test	Pass
Repeat Static Water Penetration Test	Pass
Structural Performance Test @ 150%	Pass

Notes: Testing conducted in accordance with ASTM, or industry standards.
This certificate to be read in conjunction with the full report of testing.
Refer to report for performance criteria.

Thomas Bell-Wright International Consultants

Sandy Dweik
Vice President & Chief Consultant

Clarence P. Facun
Senior Testing Engineer

Date: 10 March 2009

P.O. BOX 26385 DUBAI, U.A.E. TEL: (+9714) 333-2692 FAX: (+9714) 333-2693 WEB: www.bell-wright.com

a. Air infiltration test

Air Infiltration Test ASTM E283 - 04 — Project Name: **SLIDING WINDOW THERMO(10 THERMAL BREAK)**

This is the first test in sequence, and the initial running of this test — Client: **ELITE EXTRUSION** — File: **IJ10**

Thomas Bell-Wright International Consultants, Dubai

TEST CRITERIA		
Specimen height	1.40	m
Specimen width	1.30	m
Specimen area	1.82	m²
Length of opening joint	0.00	m
Permitted leakage, area	5.40	m³/hr/m²
Permitted leakage, opening joint	0.00	m³/hr/m

INSTANTANEOUS VALUES		
Ambient Temperature	33.76	°C
Barometric Pressure	993	mb
Relative Humidity	0.0775	
Chamber Pressure	300.37	Pa
Nozzle Pressure	45.92	Pa
Input Data Check	1	

PRESSURE & FLOW		
Test pressure	300	Pa
Total permitted leakage	**9.83**	m³/hr
Required accuracy (5%)	± 0.49	m³/hr

CALCULATED VALUES		
Ambient Air Density	1.13	kg/m³
Standard Air Density	1.20	kg/m³
Reynolds Number	27,263	
Check Value	71.91	m³/hr
Air Flow at ambient conditions	74.49	m³/hr
Adjust to exact Test Pressure	74.44	m³/hr
Uncertainty	± 1.35	m³/hr

INPUT CONNECTION		
Conical Inlet Nozzle Dia.	55.91	mm
Pressure Tdr. Range	500	Pa
Pressure Tdr. Uncertainty	2.8	Pa
Chamber Connection	LDT 2	
Nozzle Connection	LDT 1	

UNCERTAINTY		
Method, from BS848	0.4965	m³/hr
Nozzle pressure	2.2696	m³/hr
Nozzle diameter	0.1492	m³/hr
Barometric pressure	0.1499	m³/hr
Temperature	0.1226	m³/hr
Relative Humidity	0.0227	m³/hr
Total uncertainty	1.3488	m³/hr

MEAN LEAKAGE AT AMBIENT CONDITIONS		
Extraneous leakage at ambient conditions	65.68	m³/hr
Uncertainty of Extraneous Leakage	± 1.51	m³/hr
Total leakage at ambient conditions	74.66	m³/hr
Uncertainty of Total Leakage	± 1.34	m³/hr
Specimen leakage at ambient conditions	8.97	m³/hr

AIR INFILTRATION TEST RESULT		
Specimen Leakage at Standard Conditions	**8.69**	m³/hr
Standard Uncertainty (68% confidence)	± 2.02	m³/hr
Expanded Uncertainty (95% confidence)	± 3.96	m³/hr

After completion of the testing, the data was saved at 14:40, in C:\Documents and Settings\Testing\Clark\Project\2009\SLIDING WINDOW\[IJ10SlidingWindow(Thermos10thermalBreak)MS.xls]Air Inf

Testing Engineer
Joselito Adoan

Date: 9-Mar-09

This sheet will average up to 10 readings of Extraneous Leakage and Total Leakage, and display the mean values below.

MEAN LEAKAGE DATA

	Readings	Temp	Bar	RH	Dia	Chamber	Nozzle	Air Flow	Adjusted	Uncert'y	Time	Date
Extraneous	5	33 °C	993 mb	9%	55.91 mm	300 Pa	36 Pa	65.68 m³/hr	65.68 m³/hr	± 1.51 m³/hr	2:36 PM	9-Mar-09
Total	5	34 °C	993 mb	7%	55.91 mm	300 Pa	46 Pa	74.66 m³/hr	74.66 m³/hr	± 1.34 m³/hr	2:40 PM	9-Mar-09

b. Life cycle test

Life Cycle Testing	Project Name:	SLIDING WINDOW THERMOS (10 THERMAL BREAK)
This is the second test in sequence, and the initial running of this test	Client:	ELITE EXTRUSION
		File No. IC09

Thomas Bell-Wright International Consultants, Dubai

Date: March 09, 2009

Number of Cycles	50
Rate of opening and closing, average cycle per minute	
Visual inspection carried out every after 10 cycles	

Result:

Nothing anusual happen on the sliding window after 50 cyclce. Test recorded as pass.

Finishing time: 2:55 P.M.

Testing Engineer: **Joselito Adoan**

c. Air infiltration test

Air Infiltration Test ASTM E283 - 04 — Project Name: SLIDING WINDOW THERMO(10 THERMAL BREAK)

This is the third test in sequence, and the initial running of this test — Client: ELITE EXTRUSION — File: IJ10

Thomas Bell-Wright International Consultants, Dubai

TEST CRITERIA		
Specimen height	1.40	m
Specimen width	1.30	m
Specimen area	1.82	m²
Length of opening joint	0.00	m
Permitted leakage, area	5.40	m³/hr/m²
Permitted leakage, opening joint	0.00	m³/hr/m

INSTANTANEOUS VALUES		
Ambient Temperature	33.74	°C
Barometric Pressure	993	mb
Relative Humidity	0.0712	
Chamber Pressure	298.11	Pa
Nozzle Pressure	37.78	Pa
Input Data Check	1	

PRESSURE & FLOW		
Test pressure	300	Pa
Total permitted leakage	**9.83**	m³/hr
Required accuracy (5%)	± 0.49	m³/hr

CALCULATED VALUES		
Ambient Air Density	1.13	kg/m³
Standard Air Density	1.20	kg/m³
Reynolds Number	24,716	
Check Value	65.20	m³/hr
Air Flow at ambient conditions	67.53	m³/hr
Adjust to exact Test Pressure	67.75	m³/hr
Uncertainty	± 1.48	m³/hr

INPUT CONNECTION		
Conical Inlet Nozzle Dia.	55.91	mm
Pressure Tdr. Range	500	Pa
Pressure Tdr. Uncertainty	2.8	Pa
Chamber Connection	LDT 2	
Nozzle Connection	LDT 1	

UNCERTAINTY		
Method, from BS848	0.5030	m³/hr
Nozzle pressure	2.5105	m³/hr
Nozzle diameter	0.1358	m³/hr
Barometric pressure	0.1364	m³/hr
Temperature	0.1113	m³/hr
Relative Humidity	0.0206	m³/hr
Total uncertainty	1.4838	m³/hr

MEAN LEAKAGE AT AMBIENT CONDITIONS		
Extraneous leakage at ambient conditions	65.68	m³/hr
Uncertainty of Extraneous Leakage	± 1.51	m³/hr
Total leakage at ambient conditions	71.19	m³/hr
Uncertainty of Total Leakage	± 1.41	m³/hr
Specimen leakage at ambient conditions	5.50	m³/hr

After completion of the testing, the data was saved at 14:57, in C:\Documents and Settings\Testing\Clark\Project\2009\SLIDING WINDOW\[IJ10SlidingWindow(Thermos10thermalBreak)MS.xls]Air Inf

Testing Engineer
Joselito Adoan

Date: **9-Mar-09**

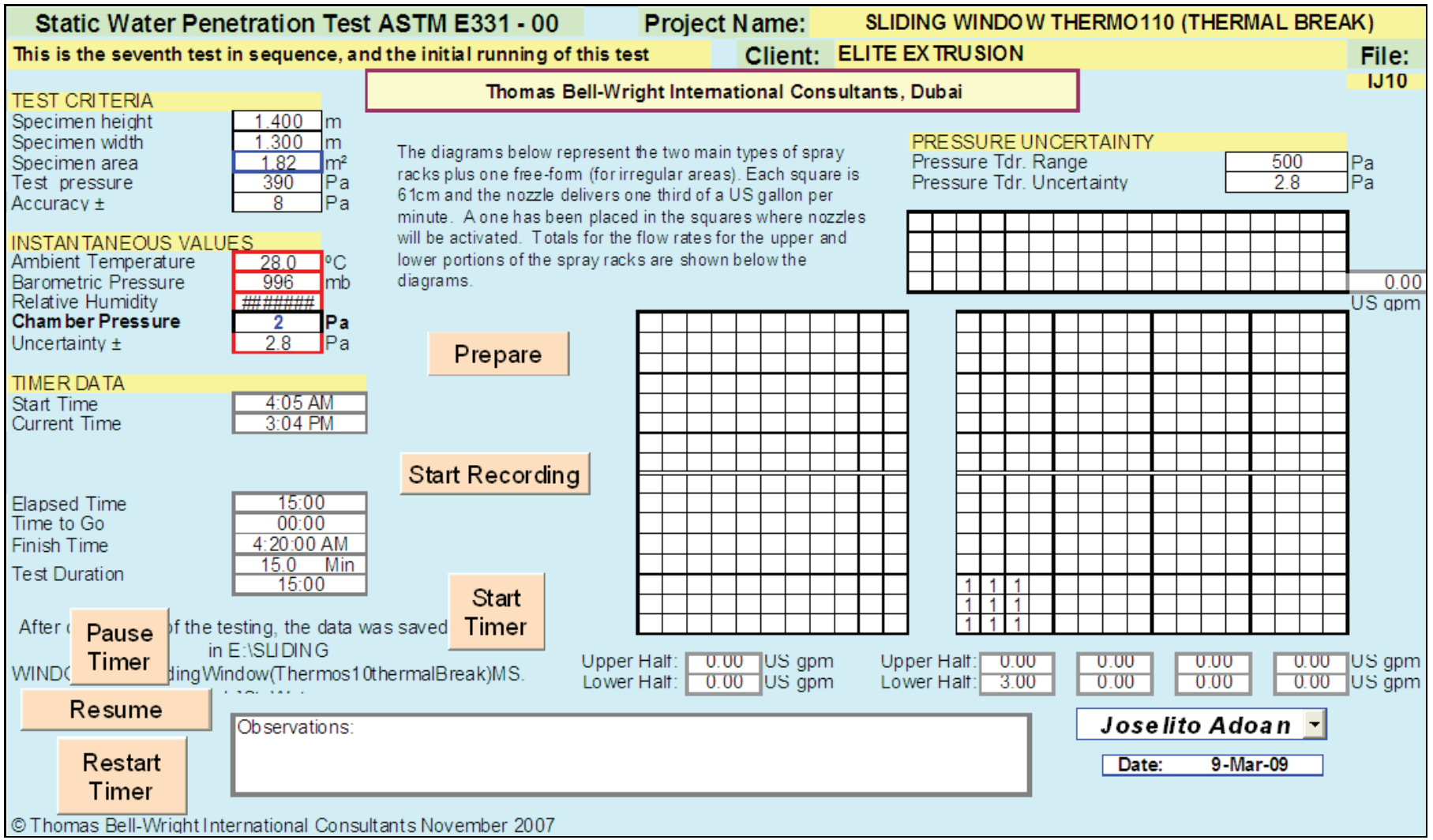
AIR INFILTRATION TEST RESULT		
Specimen Leakage at Standard Conditions	**5.33**	m³/hr
Standard Uncertainty (68% confidence)	± 2.07	m³/hr
Expanded Uncertainty (95% confidence)	± 4.06	m³/hr

This sheet will average up to 10 readings of Extraneous Leakage and Total Leakage, and display the mean values below.

MEAN LEAKAGE DATA

	Readings	Temp	Bar	RH	Dia	Chamber	Nozzle	Air Flow	Adjusted	Uncert'y	Time	Date
Extraneous	5	33 °C	993 mb	9%	55.91 mm	300 Pa	36 Pa	65.68 m³/hr	65.68 m³/hr	± 1.51 m³/hr	2:36 PM	9-Mar-09
Total	5	34 °C	992 mb	7%	55.91 mm	300 Pa	42 Pa	71.19 m³/hr	71.19 m³/hr	± 1.41 m³/hr	2:57 PM	9-Mar-09

g. Post structural - Static water penetration test



Static Water Penetration Test ASTM E331 - 00 | Project Name: SLIDING WINDOW THERMO110 (THERMAL BREAK)

This is the seventh test in sequence, and the initial running of this test | Client: ELITE EXTRUSION | File: IJ10

Thomas Bell-Wright International Consultants, Dubai

TEST CRITERIA

Specimen height	1.400	m
Specimen width	1.300	m
Specimen area	1.82	m²
Test pressure	390	Pa
Accuracy ±	8	Pa

INSTANTANEOUS VALUES

Ambient Temperature	28.0	°C
Barometric Pressure	996	mb
Relative Humidity	######	
Chamber Pressure	2	**Pa**
Uncertainty ±	2.8	Pa

TIMER DATA

Start Time	4:05 AM
Current Time	3:04 PM
Elapsed Time	15:00
Time to Go	00:00
Finish Time	4:20:00 AM
Test Duration	15.0 Min
	15:00

The diagrams below represent the two main types of spray racks plus one free-form (for irregular areas). Each square is 61cm and the nozzle delivers one third of a US gallon per minute. A one has been placed in the squares where nozzles will be activated. Totals for the flow rates for the upper and lower portions of the spray racks are shown below the diagrams.

PRESSURE UNCERTAINTY

Pressure Tdr. Range	500	Pa
Pressure Tdr. Uncertainty	2.8	Pa

0.00 US gpm

Prepare

Start Recording

Start Timer

Pause Timer

Resume

Restart Timer

After ( )f the testing, the data was saved in E:\SLIDING WINDO( )dingWindow(Thermos10thermalBreak)MS.

1 1 1
1 1 1
1 1 1

Upper Half:	0.00	US gpm	Upper Half:	0.00	0.00	0.00	0.00	US gpm
Lower Half:	0.00	US gpm	Lower Half:	3.00	0.00	0.00	0.00	US gpm

Observations:

Joselito Adoan

Date: 9-Mar-09

© Thomas Bell-Wright International Consultants November 2007

e. Structural performance test

Structural Load Test ASTM E330 - 02 | **Project Name:** SLIDING WINDOW THERMO110 (THERMAL BREAK)

This is the fifth test in sequence, and the initial running of this test | **Client:** ELITE EXTRUSION | **File:** IJ10

Thomas Bell-Wright International Consultants, Dubai

TEST CRITERIA		
Mullion Length	1.300	m
Transom Length	0.600	m
Allowable Mull. Deflec'n	7.43	mm
Allowable Trans. Deflec'n	3.43	mm
Design Pressure	1,920	Pa
Accuracy ±	± 38	Pa

PRESSURE UNCERTAINTY		
Pressure Tdr. Range	± 12,000	Pa
Pressure Tdr. Uncertainty	± 75	Pa

INSTANTANEOUS VALUES		
Ambient Temperature	28.0	°C
Barometric Pressure	996	mb
Relative Humidity	5%	
Chamber Pressure	**13,818**	**Pa**
Uncertainty ±	± 75	Pa
Timer (Zero)	00:08	

Current Values

LDT 1: 15.86
LDT 2: 18.54
LDT 3: 31.17
LDT 4: 27.96
LDT 5: 35.24
LDT 6: 32.83
LDT 7: 33.34
LDT 8: 20.77

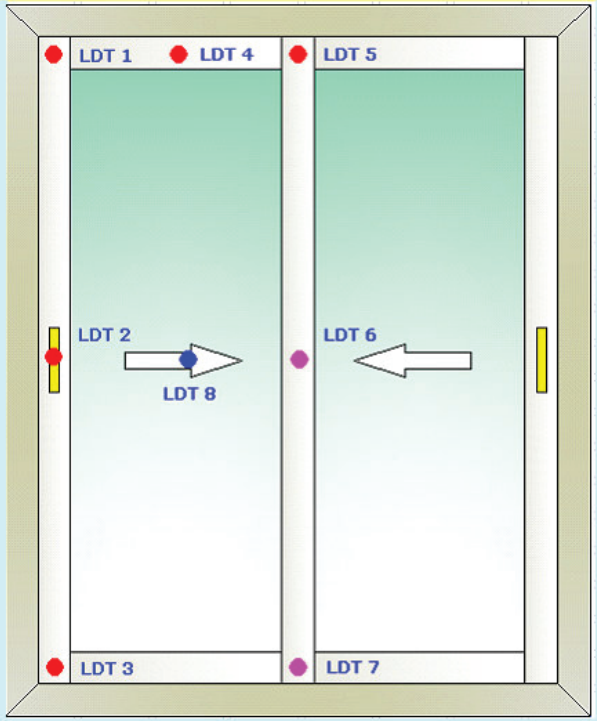
Zero Pressure | Zero LDTs | Start Recorder | Stop Recorder

Residual (-)

Capture Data

Clear

VIEW FROM OUTSIDE — Deflections in mm



Mullion			Transom		
LDT	(+)	(-)	LDT	(+)	(-)
1	1.84	1.55	1	1.84	1.55
2	3.07	3.01	4	2.61	2.37
3	2.01	2.13	5	3.06	2.69
Net	**1.15**	**1.17**	Net	**0.16**	**0.25**

Testing Engineer: Joselito Adoan

Date: March 9, 2009

Finish & Save Data

f. Post structural - Air infiltration test

Air Infiltration Test ASTM E283 - 04 — Project Name: **SLIDING WINDOW THERMO(10 THERMAL BREAK)**

This is the sixth test in sequence, and the initial running of this test — Client: **ELITE EXTRUSION** — File: **IJ10**

Thomas Bell-Wright International Consultants, Dubai

TEST CRITERIA		
Specimen height	1.40	m
Specimen width	1.30	m
Specimen area	1.82	m²
Length of opening joint	0.00	m
Permitted leakage, area	5.40	m³/hr/m²
Permitted leakage, opening joint	0.00	m³/hr/m

INSTANTANEOUS VALUES		
Ambient Temperature	29.85	°C
Barometric Pressure	993	mb
Relative Humidity	0.2194	
Chamber Pressure	298.47	Pa
Nozzle Pressure	47.53	Pa
Input Data Check	1	

PRESSURE & FLOW		
Test pressure	300	Pa
Total permitted leakage	9.83	m³/hr
Required accuracy (5%)	± 0.49	m³/hr

CALCULATED VALUES		
Ambient Air Density	1.14	kg/m³
Standard Air Density	1.20	kg/m³
Reynolds Number	28,341	
Check Value	73.17	m³/hr
Air Flow at ambient conditions	75.37	m³/hr
Adjust to exact Test Pressure	75.56	m³/hr
Uncertainty	± 1.32	m³/hr

INPUT CONNECTION		
Conical Inlet Nozzle Dia.	55.91	mm
Pressure Tdr. Range	500	Pa
Pressure Tdr. Uncertainty	2.8	Pa
Chamber Connection	LDT 2	
Nozzle Connection	LDT 1	

UNCERTAINTY		
Method, from BS848	0.4829	m³/hr
Nozzle pressure	2.2256	m³/hr
Nozzle diameter	0.1514	m³/hr
Barometric pressure	0.1524	m³/hr
Temperature	0.1301	m³/hr
Relative Humidity	0.0185	m³/hr
Total uncertainty	1.3229	m³/hr

MEAN LEAKAGE AT AMBIENT CONDITIONS		
Extraneous leakage at ambient conditions	65.68	m³/hr
Uncertainty of Extraneous Leakage	± 1.51	m³/hr
Total leakage at ambient conditions	74.34	m³/hr
Uncertainty of Total Leakage	± 1.34	m³/hr
Specimen leakage at ambient conditions	8.65	m³/hr

AIR INFILTRATION TEST RESULT		
Specimen Leakage at Standard Conditions	8.44	m³/hr
Standard Uncertainty (68% confidence)	± 2.02	m³/hr
Expanded Uncertainty (95% confidence)	± 3.96	m³/hr

After completion of the testing, the data was saved at 15:57, in C:\Documents and Settings\Testing\Clark\Project\2009\SLIDING WINDOW\[IJ10SlidingWindow(Thermos10thermalBreak)MS.xls]Air Inf

Testing Engineer
Joselito Adoan

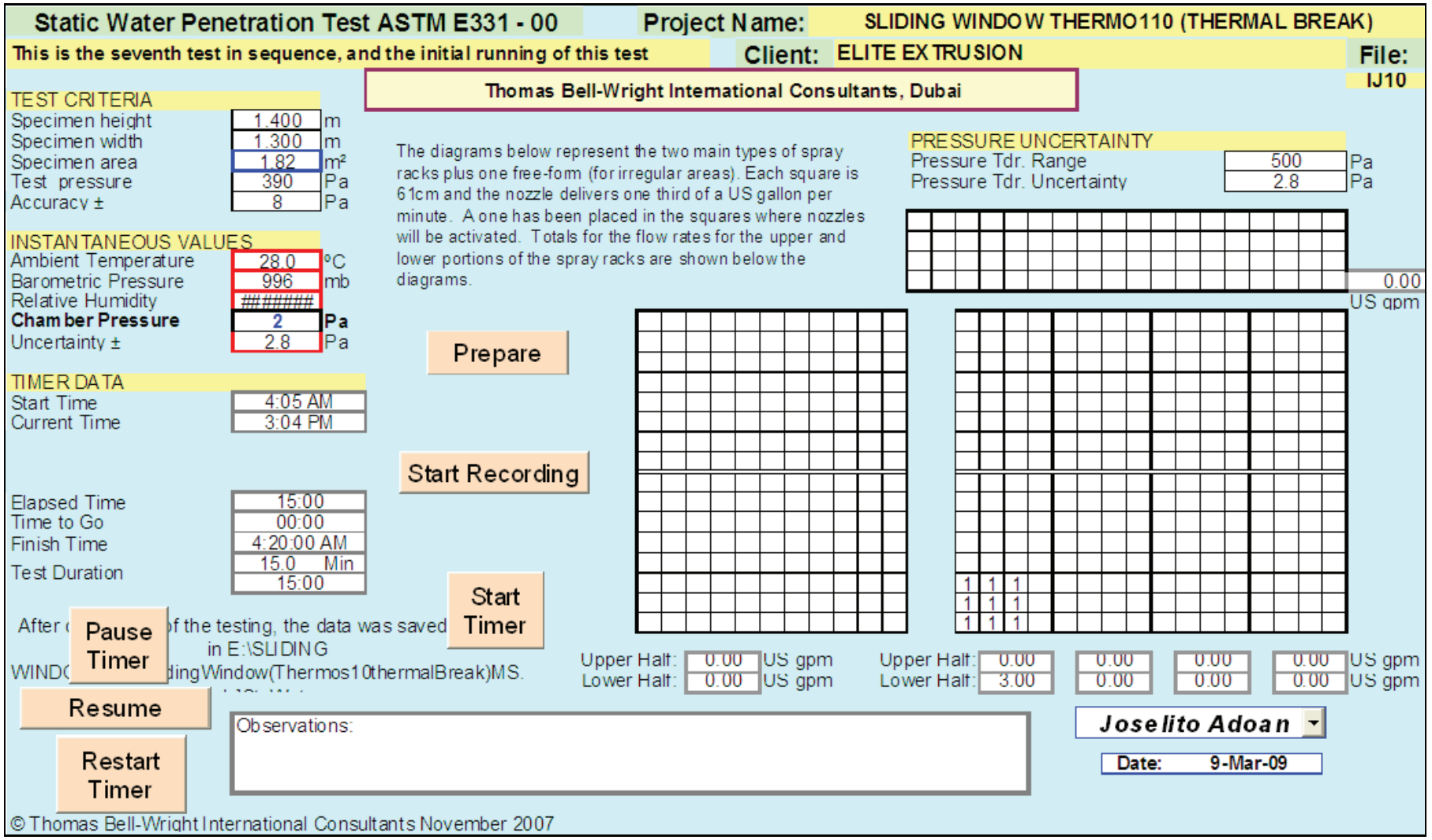
Date: **9-Mar-09**

This sheet will average up to 10 readings of Extraneous Leakage and Total Leakage, and display the mean values below.

MEAN LEAKAGE DATA

	Readings	Temp	Bar	RH	Dia	Chamber	Nozzle	Air Flow	Adjusted	Uncert'y	Time	Date
Extraneous	5	33 °C	993 mb	0.09084	55.91 mm	300 Pa	36 Pa	65.68 m³/hr	65.68 m³/hr	± 1.51 m³/hr	2:36 PM	9-Mar-09
Total	5	30 °C	993 mb	0.2192	55.91 mm	299 Pa	46 Pa	74.34 m³/hr	74.34 m³/hr	± 1.34 m³/hr	3:57 PM	9-Mar-09

g. Post structural - Static water penetration test



Static Water Penetration Test ASTM E331 - 00 | Project Name: SLIDING WINDOW THERMO110 (THERMAL BREAK)

This is the seventh test in sequence, and the initial running of this test | Client: ELITE EXTRUSION | File: IJ10

Thomas Bell-Wright International Consultants, Dubai

TEST CRITERIA

Specimen height	1.400	m
Specimen width	1.300	m
Specimen area	1.82	m²
Test pressure	390	Pa
Accuracy ±	8	Pa

INSTANTANEOUS VALUES

Ambient Temperature	28.0	°C
Barometric Pressure	996	mb
Relative Humidity	######	
Chamber Pressure	2	Pa
Uncertainty ±	2.8	Pa

TIMER DATA

Start Time	4:05 AM
Current Time	3:04 PM
Elapsed Time	15:00
Time to Go	00:00
Finish Time	4:20:00 AM
Test Duration	15.0 Min
	15:00

The diagrams below represent the two main types of spray racks plus one free-form (for irregular areas). Each square is 61cm and the nozzle delivers one third of a US gallon per minute. A one has been placed in the squares where nozzles will be activated. Totals for the flow rates for the upper and lower portions of the spray racks are shown below the diagrams.

PRESSURE UNCERTAINTY

Pressure Tdr. Range	500	Pa
Pressure Tdr. Uncertainty	2.8	Pa

0.00 US gpm

Prepare

Start Recording

Start Timer

Pause Timer

Resume

Restart Timer

After ( )f the testing, the data was saved in E:\SLIDING WIND( )dingWindow(Thermos10thermalBreak)MS.

Upper Half:	0.00	US gpm	Upper Half:	0.00	0.00	0.00	0.00 US gpm
Lower Half:	0.00	US gpm	Lower Half:	3.00	0.00	0.00	0.00 US gpm

Observations:

Joselito Adoan

Date: 9-Mar-09

© Thomas Bell-Wright International Consultants November 2007

h. Structural performance @ 1.5x design load test

Structural Load Test ASTM E330 - 02 | **Project Name:** SLIDING WINDOW THERMO110 (THERMAL BREAK)

This is the eighth test in sequence, and the initial running of this test | **Client:** ELITE EXTRUSION | **File:** IJ10

Thomas Bell-Wright International Consultants, Dubai

TEST CRITERIA		
Mullion Length	1.300	m
Transom Length	0.600	m
Allowable Mull. Deflec'n		mm
Allowable Trans. Deflec'n		mm
Design Pressure	2,880	Pa
Accuracy ±	± 58	Pa

PRESSURE UNCERTAINTY		
Pressure Tdr. Range	± 12,000	Pa
Pressure Tdr. Uncertainty	± 75	Pa

INSTANTANEOUS VALUES		
Ambient Temperature	28.0	°C
Barometric Pressure	996	mb
Relative Humidity	5%	
Chamber Pressure	**13,818**	**Pa**
Uncertainty ±	± 75	Pa
Timer (Zero)	00:11	

Zero Pressure | Zero LDTs | Start Recorder | Stop Recorder

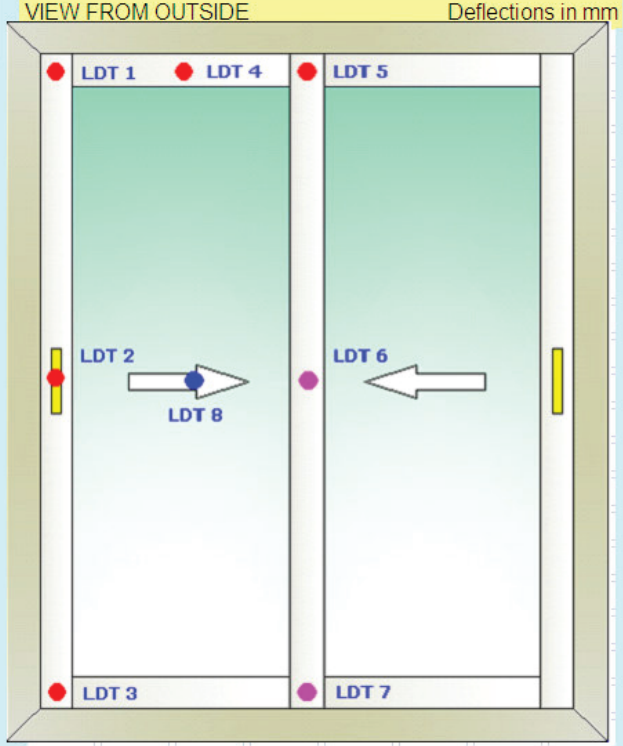
Residual (-) | Capture Data

Clear

Current Values

LDT 1: 15.86
LDT 2: 18.54
LDT 3: 31.17
LDT 4: 27.96
LDT 5: 35.24
LDT 6: 32.83
LDT 7: 33.34
LDT 8: 20.77

VIEW FROM OUTSIDE — Deflections in mm



Mullion			Transom		
LDT	(+)	(-)	LDT	(+)	(-)
1	3.03	2.82	1	3.03	2.82
2	5.09	5.21	4	4.07	3.53
3	3.48	3.38	5	4.80	4.21
Net	**1.84**	**2.11**	Net	**0.16**	**0.02**

Testing Engineer: Joselito Adoan

Date: March 9, 2009

Finish & Save Data

THERMOS 110® SYSTEM

HIGH PERFORMANCE THERMALLY BROKEN SLIDING SYSTEM

THERMAL TRANSMITTANCE ACCORDING TO EN ISO 10077-2

Theory

The thermal transmittance of a frame according to EN ISO 10077-2:

POWERED BY TECHNOFORM BAUTEC

$$U_f \cdot \frac{L_{2D} \cdot U_p * l_p}{l_f} \quad \text{and} \quad L_{2D} \cdot \frac{q_{l,tot}}{\bullet\bullet}$$

with:

U_f : thermal transmittance of the window frame [W/m²K]
U_p : thermal transmittance of the flanking panel [W/m²K]
l_p : projected width of the flanking panel [m]
l_f : projected width of the window frame [m]
L_{2D} : two-dimensional coupling coefficient [W/mK]
$q_{l,tot}$: total heat flow through the window frame and the flanking panel [W/m]
$\bullet\bullet$: temperature difference between inside ($\bullet$ i) and outside ($\bullet$ e) [K]

Calculation Item: 11 bisco

input data:	$q_{l,tot}$ =	12,699	W/m	R_{se} =	0,04	m²K/W
	$\bullet_e$ =	0,0	°C	R_{si} =	0,13	m²K/W
	$\bullet_i$ =	20,0	°C			
	d_p =	0,0240	m			
	$\bullet_p$ =	0,035	W/m*K			
	U_p =	1,054	W/m²K			
	l_p =	0,189	m			
				calculation results: L_{2D} =	0,63	W/mK
	l_f =	0,1142	m	U_f =	**3,81**	**W/m²K**

$q_{l,tot}$: alphanumeric output
heat losses per boundary condition

$\bullet\bullet$: input data, surface boundary conditions:
inside temperature minus outside temperature

U_p : calculation, using the following formula:

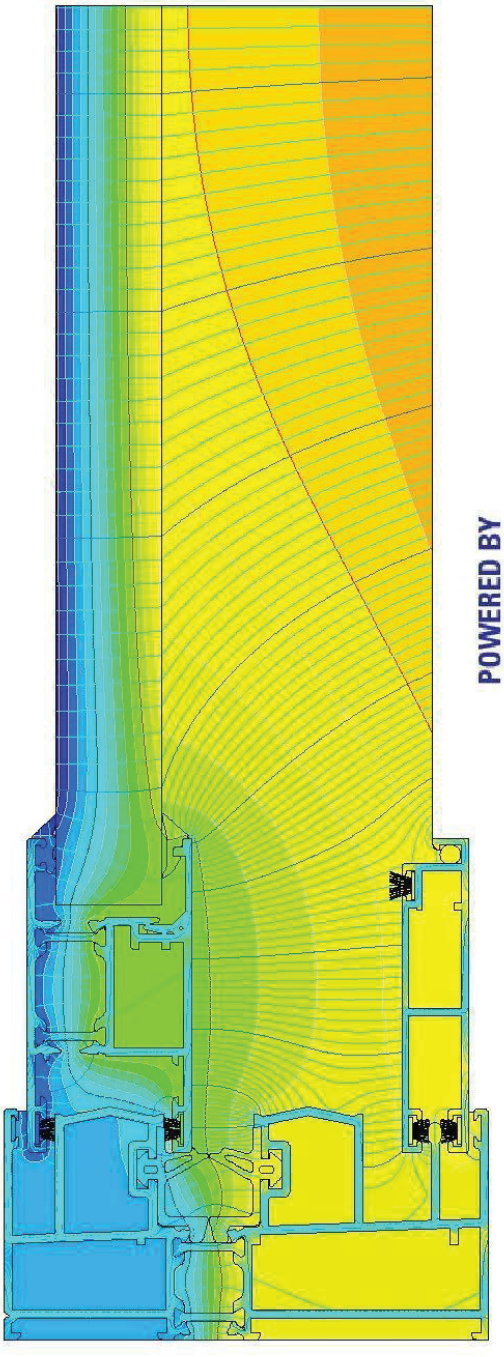
$$U_p \cdot \left(\frac{1}{h_e} \cdot \bullet \quad \frac{d_p}{\bullet_p} \cdot \frac{1}{h_i} \right)^{-1}$$

with:
h_e / h_i ext./int. surface heat transfer coeff. [W/m²K]
d_p thickness of panel p [m]
$\bullet_p$ thermal conductivity of panel p [W/mK]

l_p / l_f : input data: dimensions of the item

THERMOS 110® SYSTEM

HIGH PERFORMANCE THERMALLY BROKEN SLIDING SYSTEM



Uf = 3.813 W/(m².K)

POWERED BY TECHNOFORM BAUTEC

THERMOS 110® SYSTEM

HIGH PERFORMANCE THERMALLY BROKEN SLIDING SYSTEM

THERMAL TRANSMITTANCE ACCORDING TO EN ISO 10077-2

Theory

The thermal transmittance of a frame according to EN ISO 10077-2:

POWERED BY TECHNOFORM BAUTEC

$$U_f \cdot \frac{L_{2D} \cdot U_p * l_p}{l_f} \quad \text{and} \quad L_{2D} \cdot \frac{q_{l,tot}}{\cdot\,\cdot}$$

with:

U_f : thermal transmittance of the window frame [W/m²K]
U_p : thermal transmittance of the flanking panel [W/m²K]
l_p : projected width of the flanking panel [m]
l_f : projected width of the window frame [m]
L_{2D} : two-dimensional coupling coefficient [W/mK]
$q_{l,tot}$: total heat flow through the window frame and the flanking panel [W/m]
$\cdot\,\cdot$: temperature difference between inside ($\cdot$ i) and outside ($\cdot$ e) [K]

Calculation Item: 33 bisco

input data:	$q_{l,tot}$ =	17,127	W/m	R_{se} =	0,04	m²K/W
	$\cdot_e$ =	0,0	°C	R_{si} =	0,13	m²K/W
	$\cdot_i$ =	20,0	°C			
	d_p =	0,0240	m			
	$\cdot_p$ =	0,035	W/m*K			
	U_p =	1,166	W/m²K			
	l_p =	0,380	m			
				calculation results: L_{2D} =	0,86	W/mK
	l_f =	0,0757	m	U_f =	5,46	W/m²K

$q_{l,tot}$: alphanumeric output
heat losses per boundary condition

$\cdot\,\cdot$: input data, surface boundary conditions:
inside temperature minus outside temperature

U_p : calculation, using the following formula:

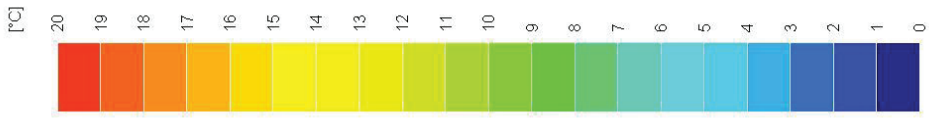
$$U_p \cdot \left(\frac{1}{h_e} \cdot \cdot \frac{d_p}{\cdot_p} \cdot \frac{1}{h_i} \right)^{\cdot 1}$$

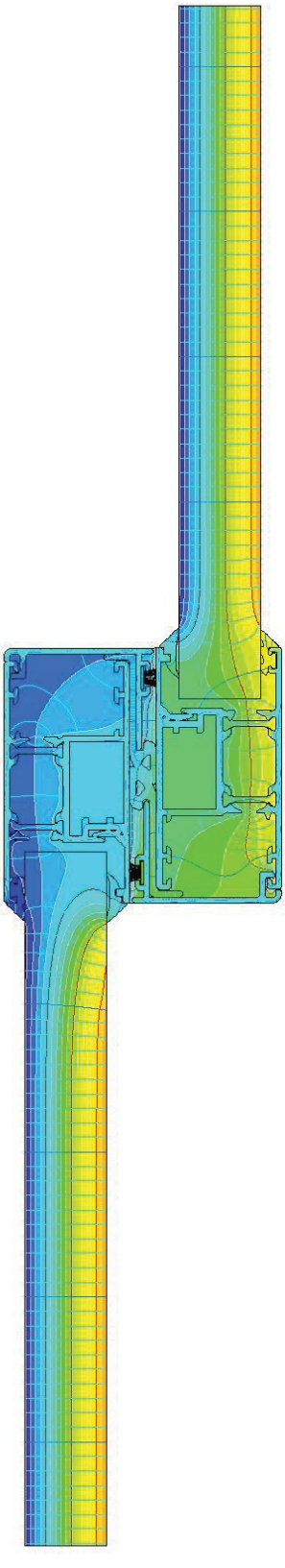
with:
h_e / h_i ext./int. surface heat transfer coeff. [W/m²K]
d_p thickness of panel p [m]
$\cdot_p$ thermal conductivity of panel p [W/mK]

l_p / l_f : input data: dimensions of the item

THERMOS 110® SYSTEM

HIGH PERFORMANCE THERMALLY BROKEN SLIDING SYSTEM





Uf = 5.460 W/(m².K)

POWERED BY TECHNOFORM BAUTEC

Thermal Analysis of Thermal Break System

THERMOS 110® SYSTEM

HIGH PERFORMANCE THERMALLY BROKEN SLIDING SYSTEM

THERMAL TRANSMITTANCE ACCORDING TO EN ISO 10077-2

Theory

The thermal transmittance of a frame according to EN ISO 10077-2:

POWERED BY TECHNOFORM BAUTEC

$$U_f \cdot \frac{L_{2D} \cdot U_p * l_p}{l_f} \quad \text{and} \quad L_{2D} \cdot \frac{q_{l,tot}}{\cdot\,\cdot}$$

with:

U_f : thermal transmittance of the window frame [W/m²K]
U_p : thermal transmittance of the flanking panel [W/m²K]
l_p : projected width of the flanking panel [m]
l_f : projected width of the window frame [m]
L_{2D} : two-dimensional coupling coefficient [W/mK]
$q_{l,tot}$: total heat flow through the window frame and the flanking panel [W/m]
$\cdot\,\cdot$: temperature difference between inside ($\cdot$ i) and outside ($\cdot$ e) [K]

Calculation Item: 33 bisco

input data:	$q_{l,tot}$ =	12,398	W/m	R_{se} =	0,04	m²K/W
	$\cdot_e$ =	0,0	°C	R_{si} =	0,13	m²K/W
	$\cdot_i$ =	20,0	°C			
	d_p =	0,0240	m			
	$\cdot_p$ =	0,035	W/m*K			
	U_p =	1,169	W/m²K			
	l_p =	0,191	m			
				calculation results: L_{2D} =	0,62	W/mK
	l_f =	0,1141	m	U_f =	**3,48**	**W/m²K**

$q_{l,tot}$: alphanumeric output
heat losses per boundary condition

$\cdot\,\cdot$: input data, surface boundary conditions:
inside temperature minus outside temperature

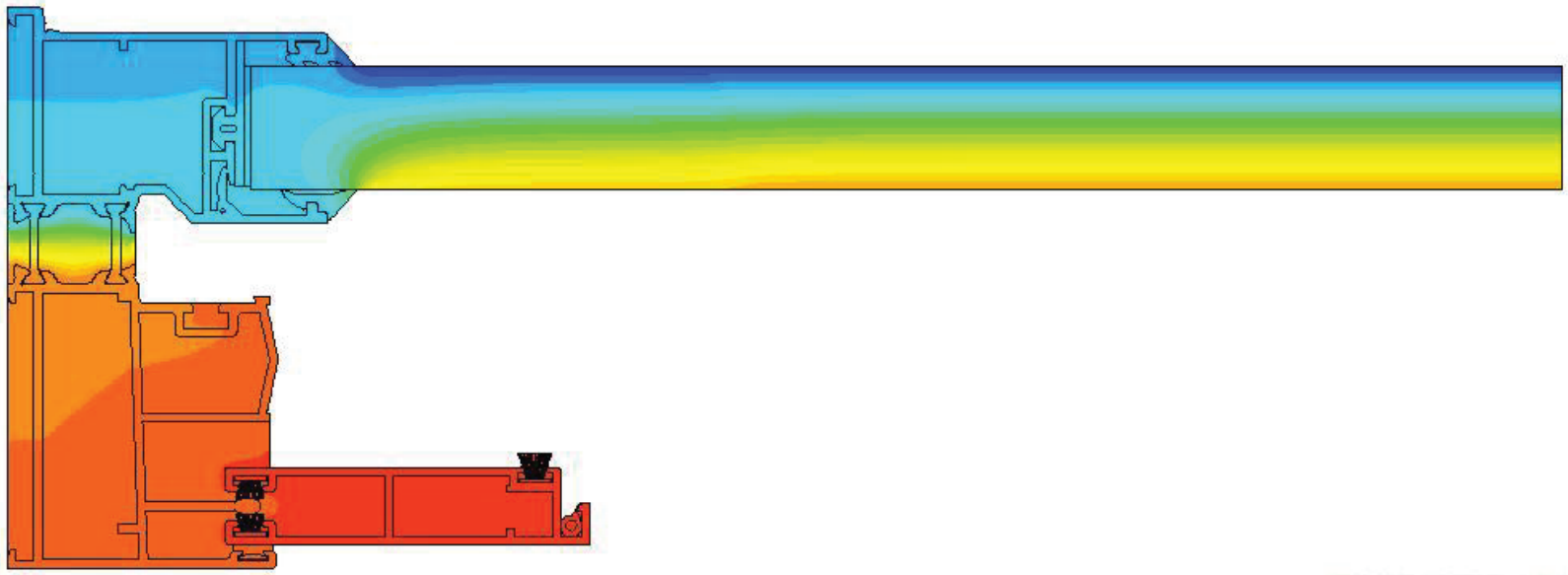
U_p : calculation, using the following formula:

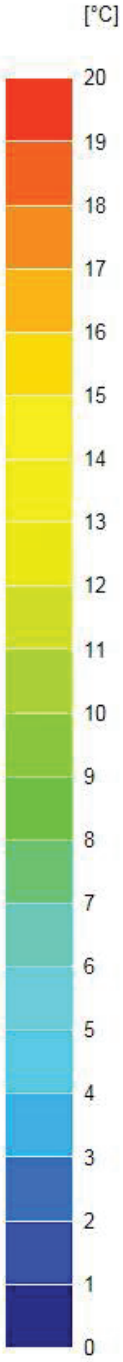
$$U_p \cdot \left(\frac{1}{h_e} \cdot \cdot \frac{d_p}{\cdot_p} \cdot \frac{1}{h_i} \right)^{\cdot 1}$$

with:
h_e / h_i ext./int. surface heat transfer coeff. [W/m²K]
d_p thickness of panel p [m]
$\cdot_p$ thermal conductivity of panel p [W/mK]

l_p / l_f : input data: dimensions of the item

Uf = 3.487 W/(m².K)





POWERED BY

TECHNOFORM BAUTEC

THERMOS 110® SYSTEM

HIGH PERFORMANCE THERMALLY BROKEN SLIDING SYSTEM

THERMOS 110® SYSTEM

HIGH PERFORMANCE THERMALLY BROKEN SLIDING SYSTEM

THERMAL TRANSMITTANCE ACCORDING TO EN ISO 10077-2

Theory

The thermal transmittance of a frame according to EN ISO 10077-2:

POWERED BY TECHNOFORM BAUTEC

$$U_f \cdot \frac{L_{2D} \cdot U_p * l_p}{l_f} \quad \text{and} \quad L_{2D} \cdot \frac{q_{l,tot}}{\bullet\bullet}$$

with:

U_f : thermal transmittance of the window frame [W/m²K]
U_p : thermal transmittance of the flanking panel [W/m²K]
l_p : projected width of the flanking panel [m]
l_f : projected width of the window frame [m]
L_{2D} : two-dimensional coupling coefficient [W/mK]
$q_{l,tot}$: total heat flow through the window frame and the flanking panel [W/m]
$\bullet\bullet$: temperature difference between inside ($\bullet$ i) and outside ($\bullet$ e) [K]

Calculation Item: 33 bisco

input data:	$q_{l,tot}$ =	13,735 W/m		R_{se} =	0,04 m²K/W
	$\bullet_e$ =	0,0 °C		R_{si} =	0,13 m²K/W
	$\bullet_i$ =	20,0 °C			
	d_p =	0,0240 m			
	$\bullet_p$ =	0,035 W/m*K			
	U_p =	1,166 W/m²K			
	l_p =	0,190 m			
			calculation results:	L_{2D} =	0,69 W/mK
	l_f =	0,1136 m		U_f =	**4,096 W/m²K**

$q_{l,tot}$: alphanumeric output
heat losses per boundary condition

$\bullet\bullet$: input data, surface boundary conditions:
inside temperature minus outside temperature

U_p : calculation, using the following formula:

$$U_p \cdot \left(\frac{1}{h_e} \cdot \bullet \frac{d_p}{\bullet_p} \cdot \frac{1}{h_i} \right)^{\cdot 1}$$

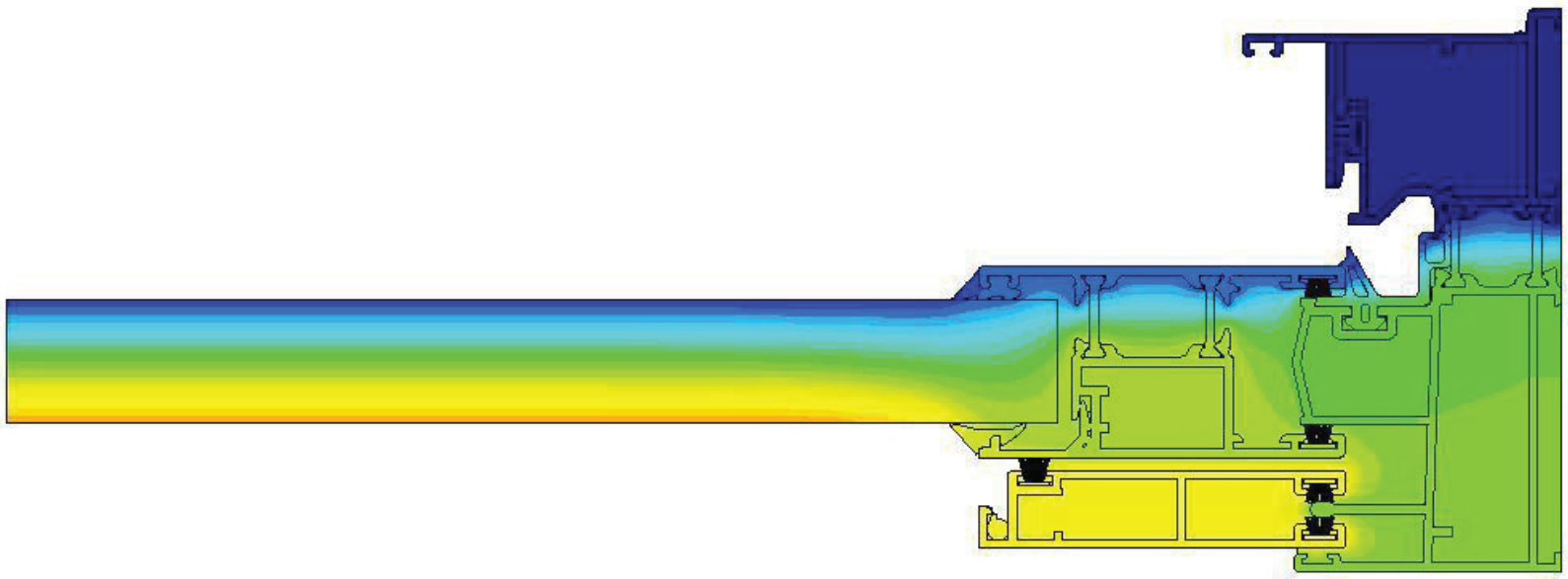
with:
h_e / h_i ext./int. surface heat transfer coeff. [W/m²K]
d_p thickness of panel p [m]
$\bullet_p$ thermal conductivity of panel p [W/mK]

l_p / l_f : input data: dimensions of the item

THERMOS 110® SYSTEM

HIGH PERFORMANCE THERMALLY BROKEN SLIDING SYSTEM

Uf = 4.096 W/(m².K)



POWERED BY

TECHNOFORM BAUTEC

THERMOS 110® SYSTEM

HIGH PERFORMANCE THERMALLY BROKEN SLIDING SYSTEM

THERMAL TRANSMITTANCE ACCORDING TO EN ISO 10077-2

Theory

The thermal transmittance of a frame according to EN ISO 10077-2:

POWERED BY TECHNOFORM BAUTEC

$$U_f \cdot \frac{L_{2D} \cdot U_p * l_p}{l_f} \quad \text{and} \quad L_{2D} \cdot \frac{q_{l,tot}}{\bullet\bullet}$$

with:

U_f : thermal transmittance of the window frame [W/m²K]
U_p : thermal transmittance of the flanking panel [W/m²K]
l_p : projected width of the flanking panel [m]
l_f : projected width of the window frame [m]
L_{2D} : two-dimensional coupling coefficient [W/mK]
$q_{l,tot}$: total heat flow through the window frame and the flanking panel [W/m]
$\bullet\bullet$: temperature difference between inside ($\bullet$ i) and outside ($\bullet$ e) [K]

Calculation Item: 33 bisco

input data:	$q_{l,tot}$ =	16,610	W/m	R_{se} =	0,04	m²K/W
	$\bullet_e$ =	0,0	°C	R_{si} =	0,13	m²K/W
	$\bullet_i$ =	20,0	°C			
	d_p =	0,0240	m			
	$\bullet_p$ =	0,035	W/m*K			
	U_p =	1,166	W/m²K			
	l_p =	0,380	m			
				calculation results: L_{2D} =	0,83	W/mK
	l_f =	0,0757	m	U_f =	**5,12**	**W/m²K**

$q_{l,tot}$: alphanumeric output
heat losses per boundary condition

$\bullet\bullet$: input data, surface boundary conditions:
inside temperature minus outside temperature

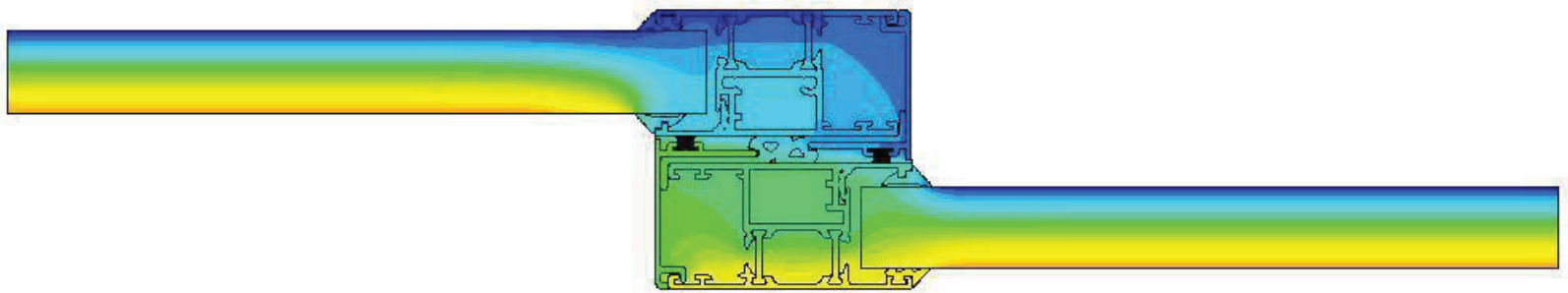
U_p : calculation, using the following formula:

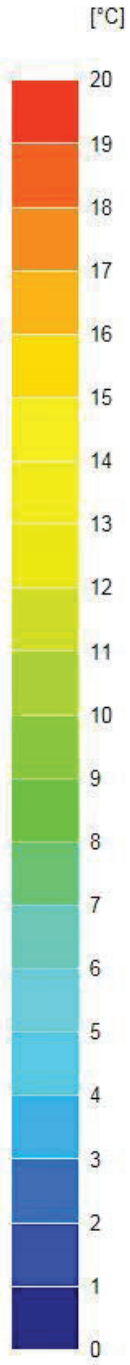
$$U_p \cdot \left[\frac{1}{h_e} \cdot \bullet \quad \frac{d_p}{\bullet_p} \cdot \frac{1}{h_i} \right]^{-1}$$

with:
h_e / h_i ext./int. surface heat transfer coeff. [W/m²K]
d_p thickness of panel p [m]
$\bullet_p$ thermal conductivity of panel p [W/mK]

l_p / l_f : input data: dimensions of the item

Uf = 5.125 W/(m².K)





POWERED BY

TECHNOFORM BAUTEC

HIGH PERFORMANCE THERMALLY BROKEN SLIDING SYSTEM

THERMOS 110® SYSTEM

Sharjah Electricity & Water Authority
Civil Projects Section
Telephone 06 – 5431297
Fax 06 – 5431297

هيئة كهرباء ومياه الشارقة
قسم المشروعات المدنية
تليفون 06 - 5431297
فاكس 06 - 5431297

Date: 26/04/2009 .
Ref :(CPS/ALUM.SYS/THER-BR.110/01/09)

TO :- **M/s. Elite Extrusion L.L.C ,**

Mr./ R. Hari Kumar , (Group General Manager).

Subject:- Technical Submittals for: New High-Tech "Thermos 110", Thermally Broken Sliding System.

Dear Sir:

With reference to your letter (Ref.:- AHE/MSD/079/4-09 , Dated:9/4/2009) , and Attached "Technical Submittals" for the above mentioned system , and having Reviewed the " Products Catalogue" and "Testing and Performance Requirements" carried by M/s. **" THOMAS BELL-WRIGHT International Consultants"** ,where the following test procedures and parameters have been Carried out :-

1) Sliding Window / Door Informations:-

1/1)Alum. Extrusion:- Alum. Profile – Thermal Break.

1/2)Glass Thickness:- 24 m.m

1/3)Specimen size:- 1400 m.m (h.) x 1300 m.m (w).

1/4)Flat / Curve:- Flat and Vertical.

2) Parameters:-

2/1) Test 1 :- Air Infiltration Test.....ASTM E 283.
2/2) Test 2 :- Life Cycle Test.....AAMA 910.
2/3) Test 3 :- Air Infiltration Test.....ASTM E 283.
2/4) Test 4 :- Static Water Penetration Test.....ASTM E 331.
2/5) Test 5 :- Structural Performance Test.....ASTM E 330.
2/6) Test 6 :- Air Infiltration Test.....ASTM E 283.
2/7) Test 7 :- Static Water Penetration Test.....ASTM E 331.

Sharjah Electricity & Water Authority
Civil Projects Section
Telephone : 06 – 5431297
Fax 06 – 5431297

هيئة كهرباء ومياه الشارقة
قسم المشروعات المدنية
تليفون 06 5431297
فاكس 06 – 5431297

2/8) Test 8 :- Structural Performance Test @ 1.5x.....ASTM E 330.

3) Test Results :-

3/1) Air Infiltration Test :-.....PASSED.
3/2) Life Cycle Test.....PASSED.
3/3) Air Infiltration Test.....PASSED.
3/4) Static Water Penetration Test.....PASSED.
3/5) Structural Performance Test.....PASSED.
3/6) Post Structural Air Infiltration Test.....PASSED.
3/7) Post Structural Static Water Test.....PASSED.
3/8) Structural Performance @ 1.5 Times.....PASSED.

4) CONCLUSIONS:-

4/1) The specified tests were performed in accordance with the " Method Statement" (described in the " Final Report" dated :- March , 10 , 2009, submitted by M/s. " THOMAS BELL-WRIGHT International Consultants"). The tested specimens were found to be in conformance With the project requirements provided.

4/2) Taking into consideration " SHARJAH MUNICIPALITY" and SHARJAH ELEC. & WATER AUTHORITY (SEWA) Tech. Requirements of "THERMAL REGULATIONS" (which are being Restrictly carried out in all types of buildings in SHARJAH); the High-Tech " THERMOS 110" thermally broken sliding system is Considered to be proven .

Best regards,

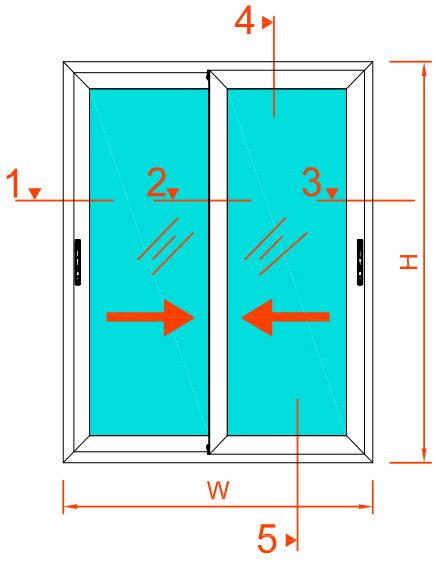
Consult. Arch.Eng:

M. Hany AL-Ashmawy. 26/4/09

THERMOS 110® SYSTEM

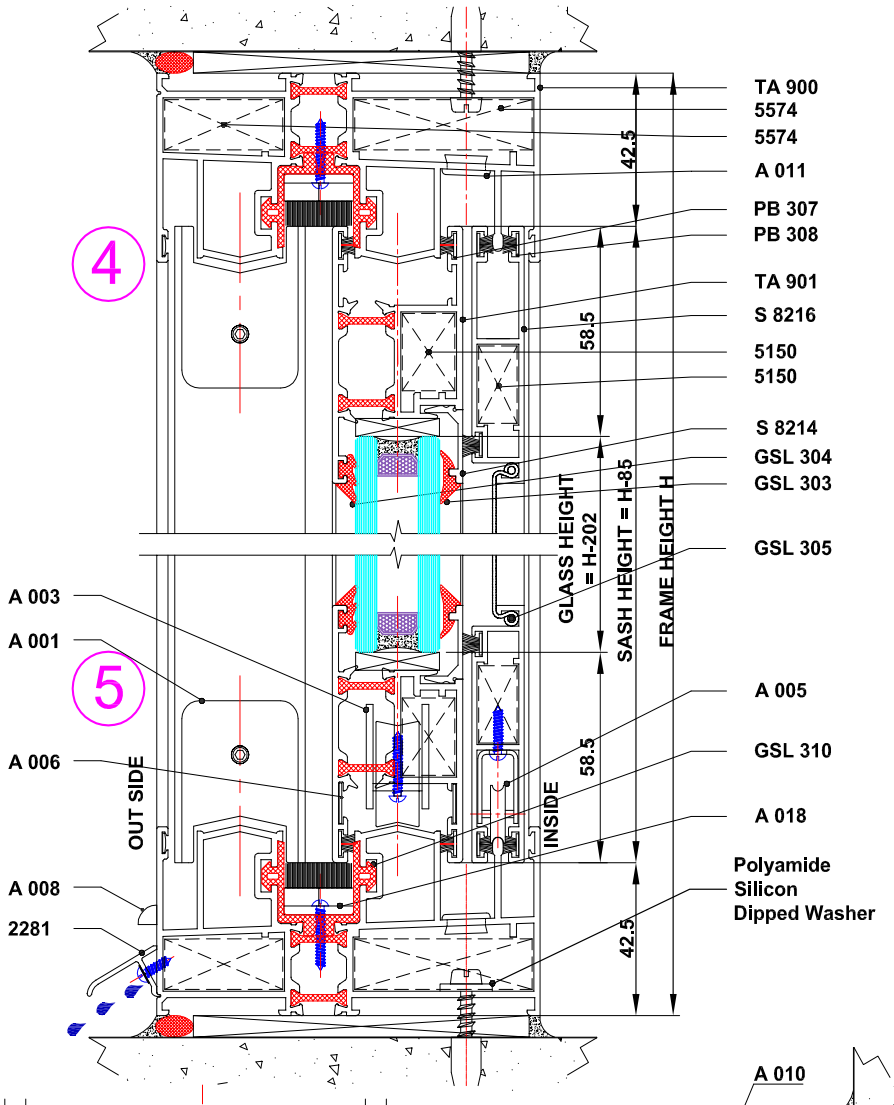
HIGH PERFORMANCE THERMAL BREAK SLIDING 110 SERIES

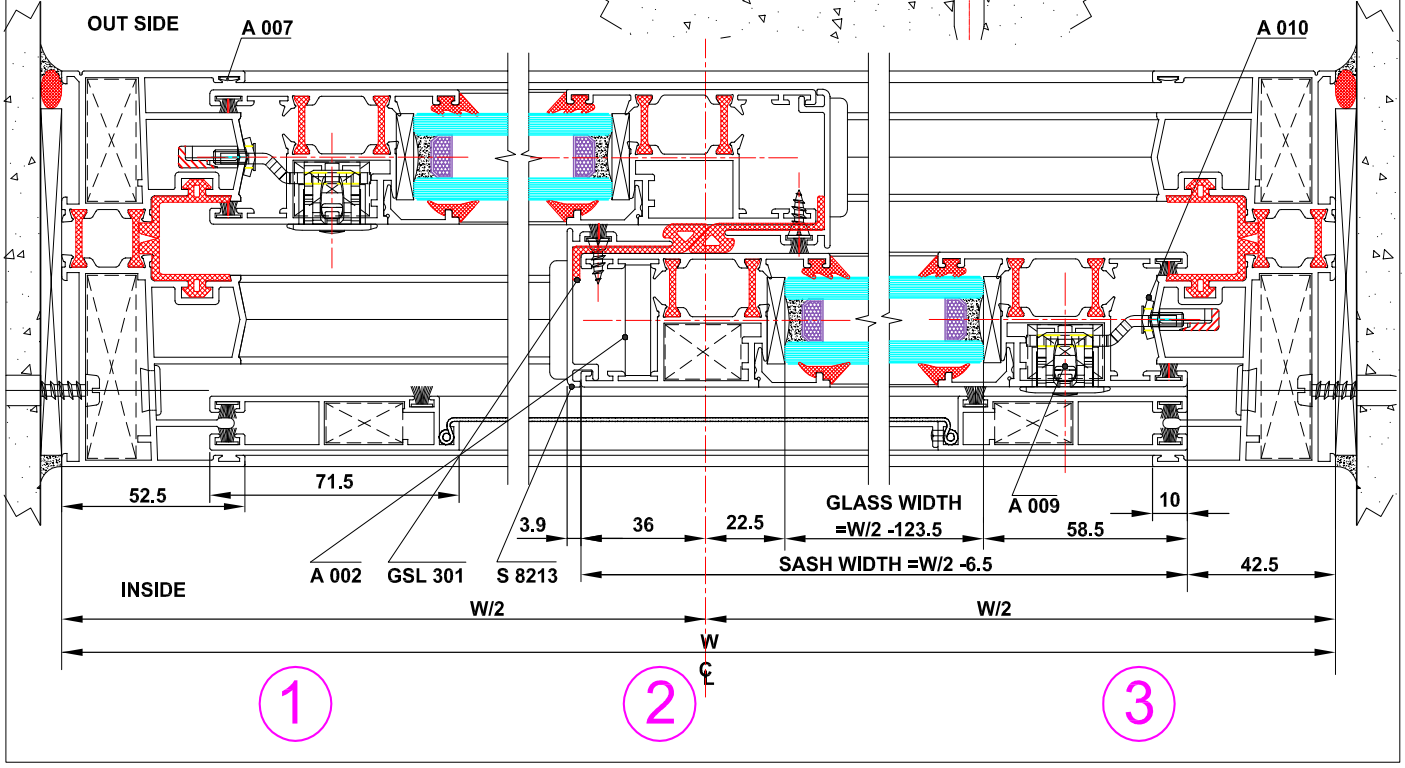
THERMAL BREAK DOUBLE TRACK 2 PANEL SLIDING WINDOW



ELEVATION

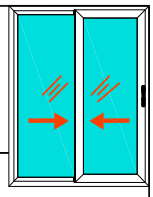
(VIEWED FROM INSIDE)





THERMOS 110® SYSTEM

HIGH PERFORMANCE THERMAL BREAK SLIDING 110 SERIES



THERMAL BREAK DOUBLE TRACK 2 PANEL SLIDING WINDOW

PROFILE CUTTING LIST FOR SLIDING WINDOW

ITEM No.	DESCRIPTION & SECTION SHAPE	PROFILE No.	PROFILE CUTTING ANGLE	CUTTING SIZE	No. OF PIECES	REMARKS
1.	FRAME WIDTH	TA 900	45°	W	02	
2.	FRAME HEIGHT	TA 900	45°	H	02	
3.	SASH WIDTH	TA 901	45°	W/2 - 6.5	04	W/2 - 6.5
4.	SASH HEIGHT	TA 901	45°	H - 85	04	H - 85
5.	INTER LOCK	S 8213		H - 85	02	
6.	FLY SCREEN WIDTH	S 8216	45°	W/2 - 6.5	02	
7.	FLY SCREEN HEIGHT	S 8216	45°	H - 85	02	
8.	GL BEAD SASH WIDTH	S 8214		W/2 - 108.5	04	W/2 - 108.5
9.	GL BEAD SASH HEIGHT	S 8214		H - 228	04	
10.	CORNER CLEAT FOR FRAME	5574		51.5	04	
11.	CORNER CLEAT FOR FRAME	5574		34.5	04	M.F
12.	CORNER CLEAT FOR SASH	5150		15.5	08	M.F
13.	CORNER CLEAT FOR FLY SCREEN	5150		11.5	04	M.F
14.	HANDLE FOR FLY SCREEN	S 8215		80	01	
15.	DRAINAGE COVER	2281		W	01	

NOTE:- SCREW, ALUMINIUM MESH, SILICON & GLASS ARE NOT INCLUDED IN THE CUTTING LIST.

ACCESSORIES FOR SLIDING WINDOW

ITEM No.	ACCESSORIES CODE NO.	DESCRIPTION & SECTION SHAPE	QTY	REMARKS
1.	A 001	BUMP RUBBER GUIDE	04	
2.	A 002	ANTI THEFT COVER	04	
3.	A 003	ROLLER FOR SASH (FOR WINDOWS)	04	
4.	A 005	ROLLER FOR FLY SCREEN	02	
5.	A 006	SASH ALIGNMENT CORNER	16	
6.	A 007	FRAME ALIGNMENT CORNER	08	GIESSE 00365
7.	A 008	WATER SLOTS COVER	03	GIESSE 02314
8.	A 009	SLIDING HANDLE	02	GIESSE 02983
9.	A 010	KEEPER & C.PLATE NIBS (KIT)	02	GIESSE E213 & 04897
10.	A 011	COVER CAP 11.5mm Ø	12	LOCALLY AVAILABLE
11.	A 013	4.2X16 PAN HEAD SELFTAPPING ST. SCREWS	04	LOCALLY AVAILABLE
12.	A 014	3.9X13 C'SUNK HEAD SELFTAPPING ST.SCREWS	16	LOCALLY AVAILABLE
13.	A 018	DUST PLUG 20mm	02	TO BE USED WITH S 8217

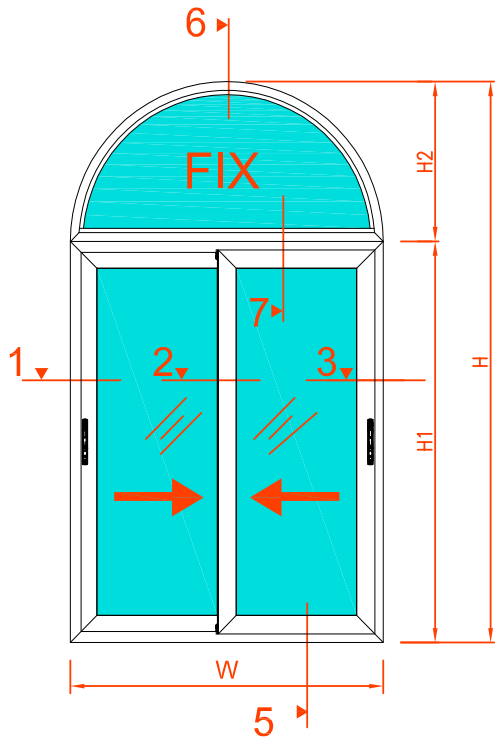
GASKET - E.P.D.M.

ITEM No.	ACCESSORIES CODE NO.	DESCRIPTION & GASKET SHAPE	QTY. LINER METER	REMARKS
1.	GSL 304	EXTERNAL GASKET	2W + 4H	
2.	GSL 303	INTERNAL GASKET	2W + 4H	
3.	GSL 301	INTER LOCK GASKET	2H	
4.	GSL 310	GASKET FOR FRAME	4W + 4H	
5.	GSL 305	Fly Screen Gasket 4 Ø	1W + 2H	LOCALLY AVAILABLE
6.	PB 307	FIN SEAL BRUSH FOR SASH PB69.600 FP FOR SASH	4W + 6H	LOCALLY AVAILABLE
7.	PB 308	POLY BOND PB 4.8.550 3P FOR FLY SCREEN	3W + 6H	LOCALLY AVAILABLE

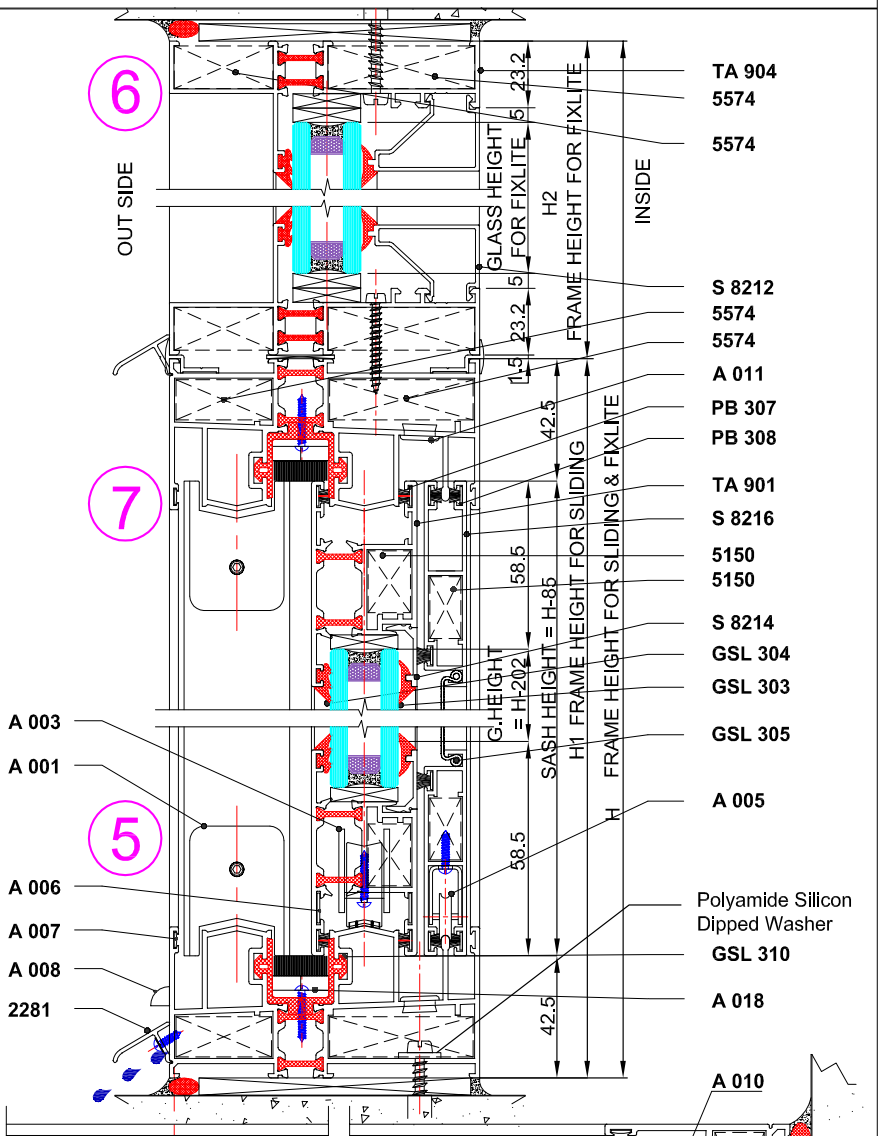
THERMOS 110® SYSTEM

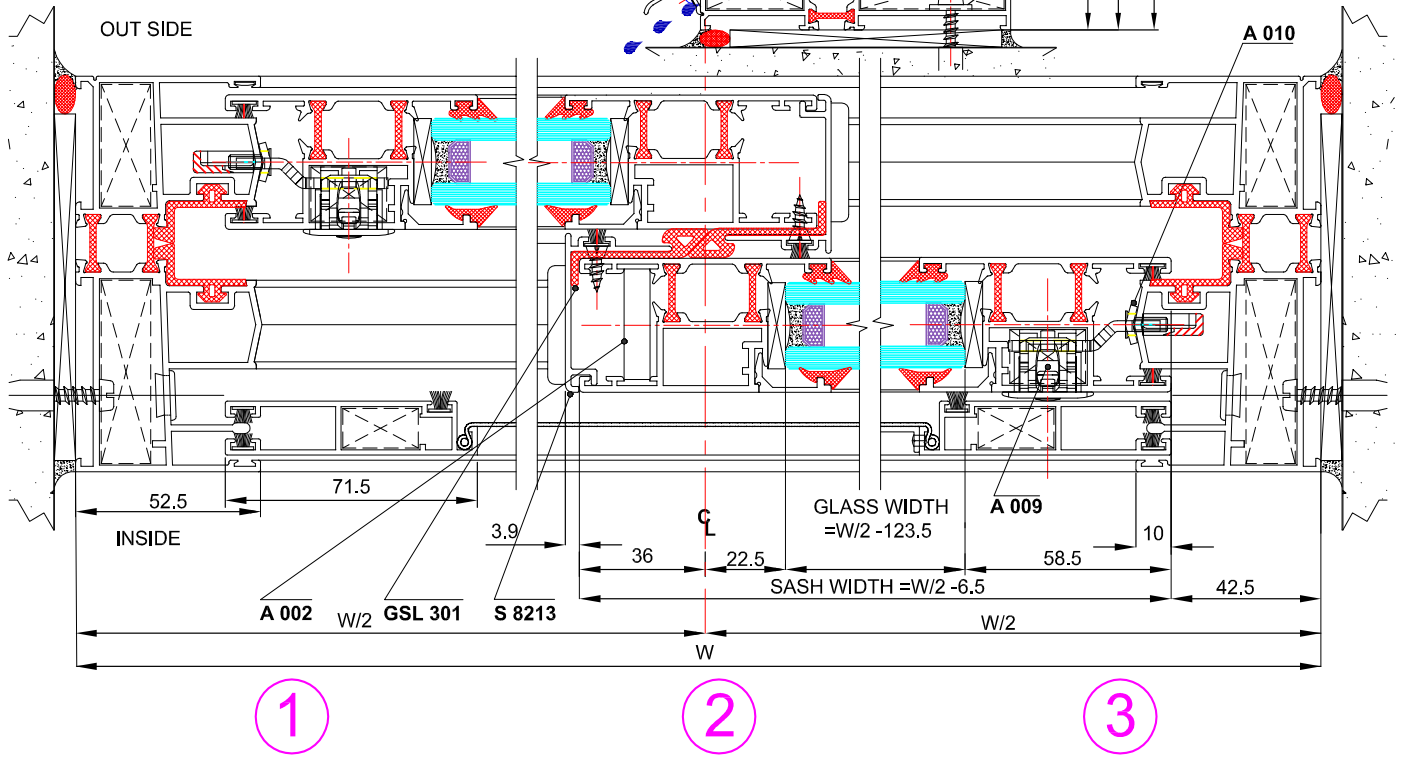
HIGH PERFORMANCE THERMAL BREAK SLIDING 110 SERIES

THERMAL BREAK DOUBLE TRACK SLIDING WINDOW TOP FIXLITE (ARCH)



ELEVATION
(VIEWED FROM INSIDE)

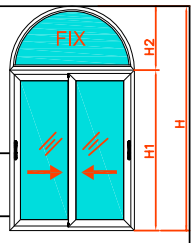




THERMOS 110® SYSTEM

HIGH PERFORMANCE THERMAL BREAK SLIDING 110 SERIES

THERMAL BREAK DOUBLE TRACK SLIDING WINDOW TOP FIXLITE (ARCH)



PROFILE CUTTING LIST FOR SLIDING WINDOW

ITEM No.	DESCRIPTION & SECTION SHAPE	PROFILE No.	PROFILE CUTTING ANGLE	CUTTING SIZE	No. OF PIECES	REMARKS
1.	FRAME WIDTH	TA 900	45°	W	02	
2.	FRAME HEIGHT	TA 900	45°	H1	02	
3.	SASH WIDTH	TA 901	45°	W/2 - 6.5	02	W/2 - 6.5
4.	SASH HEIGHT	TA 901	45°	H - 85	02	H - 85
5.	INTER LOCK	S 8213		H - 85	02	
6.	FLY SCREEN WIDTH	S 8216	45°	W/2 - 6.5	02	
7.	FLY SCREEN HEIGHT	S 8216	45°	H - 85	02	
8.	GLAZING BEAD WIDTH	S 8214		W/2 - 108.5	04	W/2 - 108.5
9.	GLAZING BEAD HEIGHT	S 8214		H1 - 228	04	
10.	CORNER CLEAT FOR FRAME	5574		51.5	06	M.F
11.	CORNER CLEAT FOR FRAME	5574		34.5	04	M.F
12.	CORNER CLEAT FOR SASH	5150		15.5	08	M.F
13.	CORNER CLEAT FOR FLY SCREEN	5150		11.5	04	M.F
14.	CORNER CLEAT FOR FRAME	5574		52	02	M.F
15.	CORNER CLEAT FOR FRAME	5574		34.5	02	M.F
16.	HANDLE FOR FLY SCREEN	S 8215		80	01	
17.	ADOPTER	2253		W	02	
18.	FIX LITE FRAME WIDTH	TA 904	45°	W	01	
19.	FIX LITE FRAME HEIGHT	TA 904 (T4)	45°	H2-1.5	01	(3.14XD) / 2
20.	GLAZING BEAD WIDTH	S 8212		W-46	02	
21.	GLAZING BEAD HEIGHT	S 8212 (T4)	45°	H2-89.5	02	(3.14XD) / 2

NOTE:- SCREW, ALUMINIUM MESH, SILICON & GLASS ARE NOT INCLUDED IN THE CUTTING LIST.

ACCESSORIES FOR SLIDING WINDOW

ITEM No.	ACCESSORIES CODE NO.	DESCRIPTION & SECTION SHAPE	QTY	REMARKS
1.	A 001	BUMP RUBBER GUIDE	04	
2.	A 002	ANTI THEFT COVER	04	
3.	A 003	ROLLER FOR SASH (FOR WINDOWS)	04	
4.	A 005	ROLLER FOR FLY SCREEN	02	
5.	A 006	SASH ALIGNMENT CORNER	16	
6.	A 007	FRAME ALIGNMENT CORNER	08	GIESSE 00365
7.	A 008	WATER SLOTS COVER	06	GIESSE 02314
8.	A 009	SLIDING HANDLE	02	GIESSE 02983
9.	A 010	KEEPER & C.PLATE NIBS (KIT)	02	GIESSE E213 & 04897
10.	A 011	COVER CAP 11.5mmØ	12	LOCALLY AVAILABLE
11.	A 013	4.2X16 PAN HEAD SELFTAPPING ST. SCREWS	08	LOCALLY AVAILABLE
12.	A 014	3.9X13 C'SUNK HEAD SELFTAPPING ST.SCREWS	16	LOCALLY AVAILABLE
13.	A 018	DUST PLUG 20mm	02	TO BE USED WITH S 8217

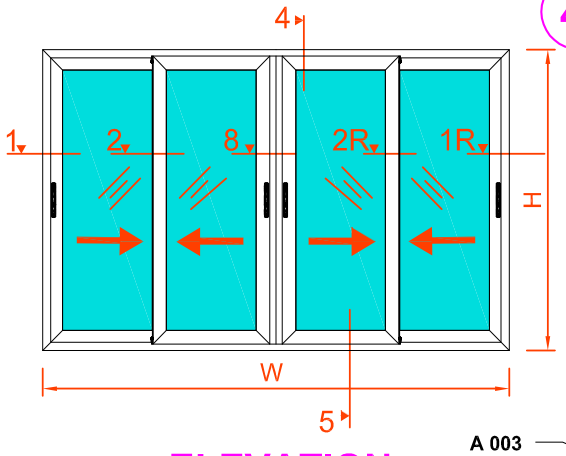
GASKET - E.P.D.M.

ITEM No.	ACCESSORIES CODE NO.	DESCRIPTION & GASKET SHAPE	QTY. LINER METER	REMARKS
1.	GSL 304	EXTERNAL GASKET	6W + 7H	
2.	GSL 303	INTERNAL GASKET	6W + 7H	
3.	GSL 301	INTER LOCK GASKET	2H	
4.	GSL 310	GASKET FOR FRAME	4W + 4H	
5.	GSL 305	Fly Screen Gasket 4 Ø	1W + 2H	LOCALLY AVAILABLE
6.	PB 307	FIN SEAL BRUSH FOR SASH PB69.600 FP FOR SASH	4W + 6H	LOCALLY AVAILABLE
7.	PB 308	POLY BOND PB 4.8.550 3P FOR FLY SCREEN	3W + 6H	LOCALLY AVAILABLE

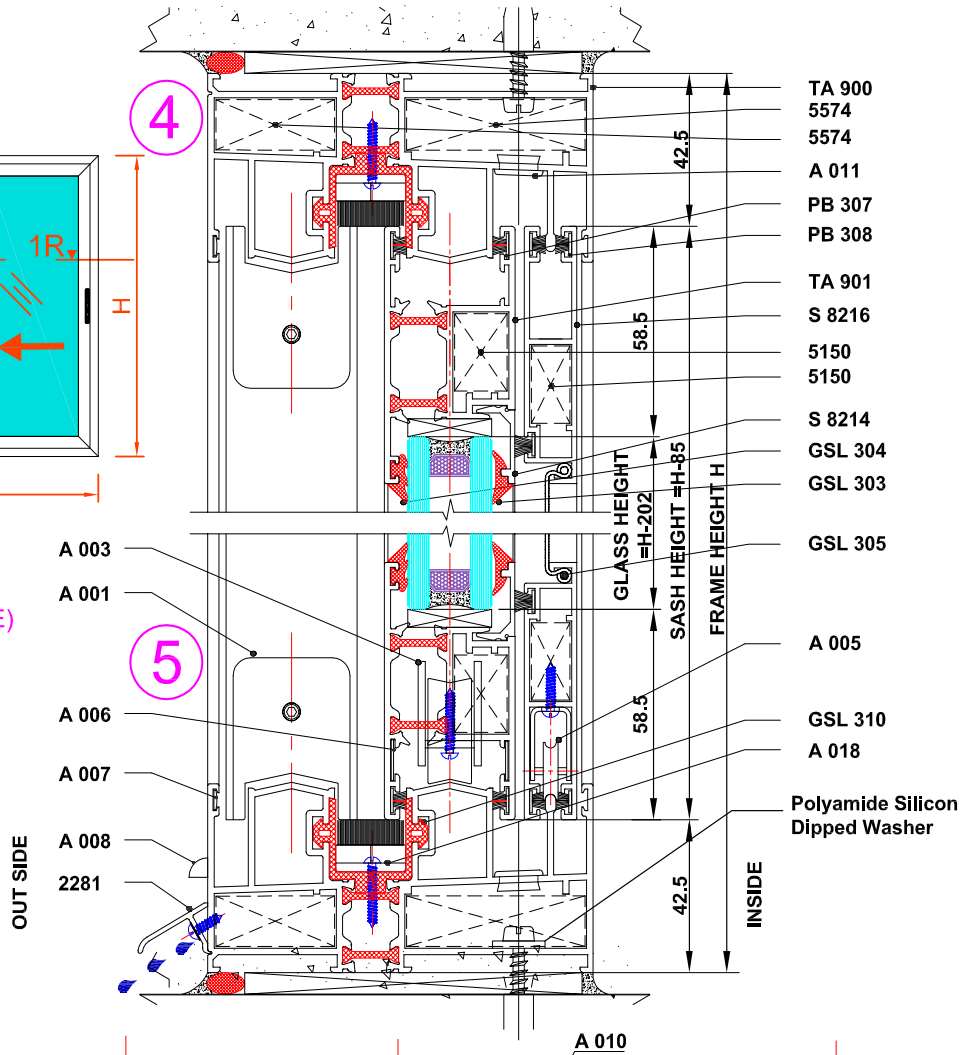
THERMOS 110® SYSTEM

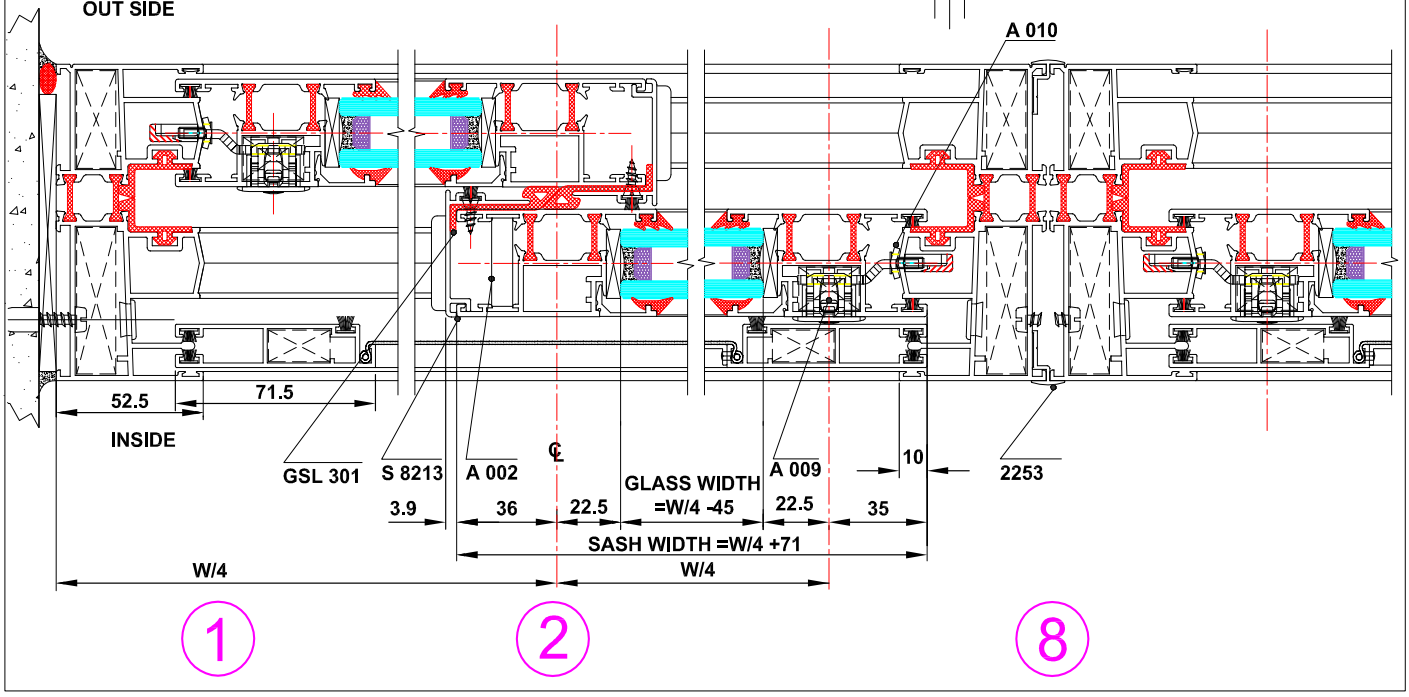
HIGH PERFORMANCE THERMAL BREAK SLIDING 110 SERIES

THERMAL BREAK DOUBLE TRACK 4 PANEL SLIDING WINDOW



ELEVATION
(VIEWED FROM INSIDE)

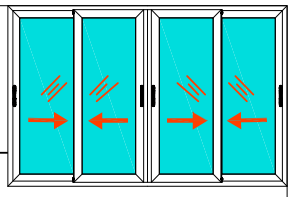




THERMOS 110® SYSTEM

HIGH PERFORMANCE THERMAL BREAK SLIDING 110 SERIES

THERMAL BREAK DOUBLE TRACK 4 PANEL SLIDING WINDOW



PROFILE CUTTING LIST FOR SLIDING WINDOW

ITEM No.	DESCRIPTION & SECTION SHAPE	PROFILE No.	PROFILE CUTTING ANGLE	CUTTING SIZE	No. OF PIECES	REMARKS
1.	FRAME WIDTH	TA 900	45°	W	04	
2.	FRAME HEIGHT	TA 900	45°	H	04	
3.	SASH WIDTH	TA 901	45°	W/2 - 6.5	08	W/2 - 6.5
4.	SASH HEIGHT	TA 901	45°	H - 85	08	H - 85
5.	INTER LOCK	S 8213		H - 85	04	
6.	FLY SCREEN WIDTH	S 8216	45°	W/2 - 6.5	04	
7.	FLY SCREEN HEIGHT	S 8216	45°	H - 85	04	
8.	CORNER CLEAT FOR FRAME	5574		51.5	08	M.F
9.	CORNER CLEAT FOR FRAME	5574		34.5	08	M.F
10.	CORNER CLEAT FOR SASH	5150		15.5	16	M.F
11.	CORNER CLEAT FOR FLY SCREEN	5150		11.5	08	M.F
12.	HANDLE FOR FLY SCREEN	S 8215		80	02	
13.	ADOPTER	2253		w	02	
14.	GLAZING BEAD WIDTH	S 8214		W/2 -108.5	08	
15.	GLAZING BEAD HEIGHT	S 8214		H-228	08	
16.	DRAINAGE COVER	2281		W	01	

NOTE:- SCREW, ALUMINIUM MESH, SILICON & GLASS ARE NOT INCLUDED IN THE CUTTING LIST.

ACCESSORIES FOR SLIDING WINDOW

ITEM No.	ACCESSORIES CODE NO.	DESCRIPTION & SECTION SHAPE	QTY	REMARKS
1.	A 001	BUMP RUBBER GUIDE	08	
2.	A 002	ANTI THEFT COVER	08	
3.	A 003	ROLLER FOR SASH (FOR WINDOWS)	08	
4.	A 005	ROLLER FOR FLY SCREEN	04	
5.	A 006	SASH ALIGNMENT CORNER	32	
6.	A 007	FRAME ALIGNMENT CORNER	16	GIESSE 00365
7.	A 008	WATER SLOTS COVER	06	GIESSE 02314
8.	A 009	SLIDING HANDLE	04	GIESSE 02983
9.	A 010	KEEPER & C.PLATE NIBS (KIT)	04	GIESSE E213 & 04897
10.	A 011	COVER CAP 11.5mmØ	24	LOCALLY AVAILABLE
11.	A 013	4.2X16 PAN HEAD SELFTAPPING ST. SCREWS	08	LOCALLY AVAILABLE
12.	A 014	3.9X13 C'SUNK HEAD SELFTAPPING ST.SCREWS	32	LOCALLY AVAILABLE
13.	A 018	DUST PLUG 20mm	02	TO BE USED WITH S 8217

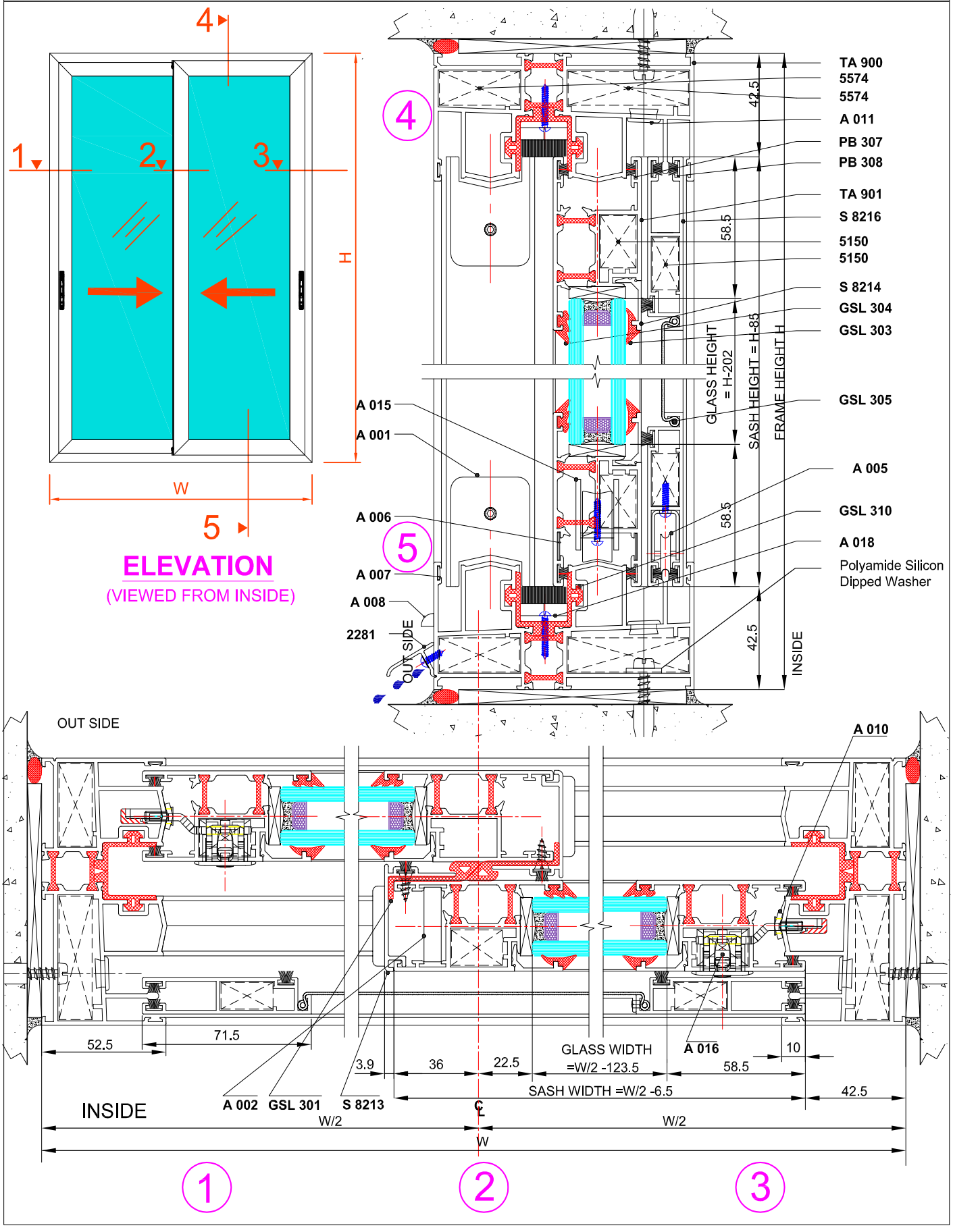
GASKET - E.P.D.M.

ITEM No.	ACCESSORIES CODE NO.	DESCRIPTION & GASKET SHAPE	QTY. LINER METER	REMARKS
1.	GSL 304	EXTERNAL GASKET	2W + 8H	
2.	GSL 303	INTERNAL GASKET	4W + 8H	
3.	GSL 301	INTER LOCK GASKET	4H	
4.	GSL 310	GASKET FOR FRAME	8W + 8H	
5.	GSL 305	Fly Screen Gasket 4 Ø	2W + 4H	LOCALLY AVAILABLE
6.	PB 307	FIN SEAL BRUSH FOR SASH PB69.600 FP FOR SASH	8W + 12H	LOCALLY AVAILABLE
7.	PB 308	POLY BOND PB 4.8.550 3P FOR FLY SCREEN	6W + 12H	LOCALLY AVAILABLE

THERMOS 110® SYSTEM

HIGH PERFORMANCE THERMAL BREAK SLIDING 110 SERIES

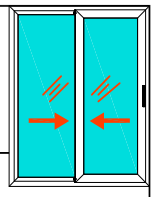
THERMAL BREAK DOUBLE TRACK SLIDING DOOR



THERMOS 110® SYSTEM

HIGH PERFORMANCE THERMAL BREAK SLIDING 110 SERIES

THERMAL BREAK DOUBLE TRACK 2 PANEL SLIDING DOOR



PROFILE CUTTING LIST FOR SLIDING DOOR

ITEM No.	DESCRIPTION & SECTION SHAPE	PROFILE No.	PROFILE CUTTING ANGLE	CUTTING SIZE	No. OF PIECES	REMARKS
1.	FRAME WIDTH	TA 900	45°	W	02	
2.	FRAME HEIGHT	TA 900	45°	H	02	
3.	SASH WIDTH	TA 901	45°	W/2 - 6.5	04	W/2 - 6.5
4.	SASH HEIGHT	TA 901	45°	H - 85	04	H - 85
5.	INTER LOCK	S 8213		H - 85	02	
6.	FLY SCREEN WIDTH	S 8216	45°	W/2 - 6.5	02	
7.	FLY SCREEN HEIGHT	S 8216	45°	H - 85	02	
8.	GL BEAD SASH WIDTH	S 8214		W/2 - 108.5	04	W/2 - 108.5
9.	GL BEAD SASH HEIGHT	S 8214		H - 228	04	
10.	CORNER CLEAT FOR FRAME	5574		51.5	04	
11.	CORNER CLEAT FOR FRAME	5574		34.5	04	M.F
12.	CORNER CLEAT FOR SASH	5150		15.5	08	M.F
13.	CORNER CLEAT FOR FLY SCREEN	5150		11.5	04	M.F
14.	HANDLE FOR FLY SCREEN	S 8215		80	01	
15.	DRAINAGE COVER	2281		W	01	

NOTE:- SCREW, ALUMINIUM MESH, SILICON & GLASS ARE NOT INCLUDED IN THE CUTTING LIST.

ACCESSORIES FOR SLIDING DOOR

ITEM No.	ACCESSORIES CODE NO.	DESCRIPTION & SECTION SHAPE	QTY	REMARKS
1.	A 001	BUMP RUBBER GUIDE	04	
2.	A 002	ANTI THEFT COVER	04	
3.	A 015	ROLLER FOR SASH (FOR DOOR)	04	
4.	A 005	ROLLER FOR FLY SCREEN	02	
5.	A 006	SASH ALIGNMENT CORNER	16	
6.	A 007	FRAME ALIGNMENT CORNER	08	GIESSE 00365
7.	A 008	WATER SLOTS COVER	03	GIESSE 02314
8.	A 016	SLIDING HANDLE (FOR DOOR)	02	GIESSE 03353
9.	A 017	PULLING HANDLE (FOR DOOR)	02	GIESSE 03055
10.	A 010	KEEPER & C.PLATE NIBS (KIT)	02	GIESSE E213 & 04897
11.	A 011	COVER CAP 11.5mmØ	12	LOCALLY AVAILABLE
12.	A 013	4.2X16 PAN HEAD SELFTAPPING ST. SCREWS	04	LOCALLY AVAILABLE
13.	A 014	3.9X13 C'SUNK HEAD SELFTAPPING ST.SCREWS	16	LOCALLY AVAILABLE
14.	A 018	DUST PLUG 20mm	04	TO BE USED WITH S 8217

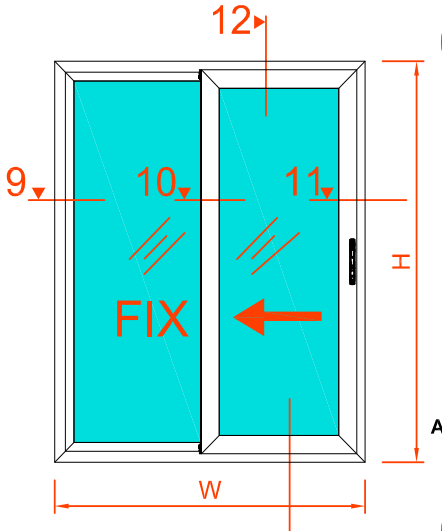
GASKET - E.P.D.M.

ITEM No.	ACCESSORIES CODE NO.	DESCRIPTION & GASKET SHAPE	QTY. LINER METER	REMARKS
1.	GSL 304	EXTERNAL GASKET	2W + 4H	
2.	GSL 303	INTERNAL GASKET	2W + 4H	
3.	GSL 301	INTER LOCK GASKET	2H	
4.	GSL 310	GASKET FOR FRAME	4W + 4H	
5.	GSL 305	Fly Screen Gasket 4 Ø	1W + 2H	LOCALLY AVAILABLE
6.	PB 307	FIN SEAL BRUSH FOR SASH PB69.600 FP FOR SASH	4W + 6H	LOCALLY AVAILABLE
7.	PB 308	POLY BOND PB 4.8.550 3P FOR FLY SCREEN	3W + 6H	LOCALLY AVAILABLE

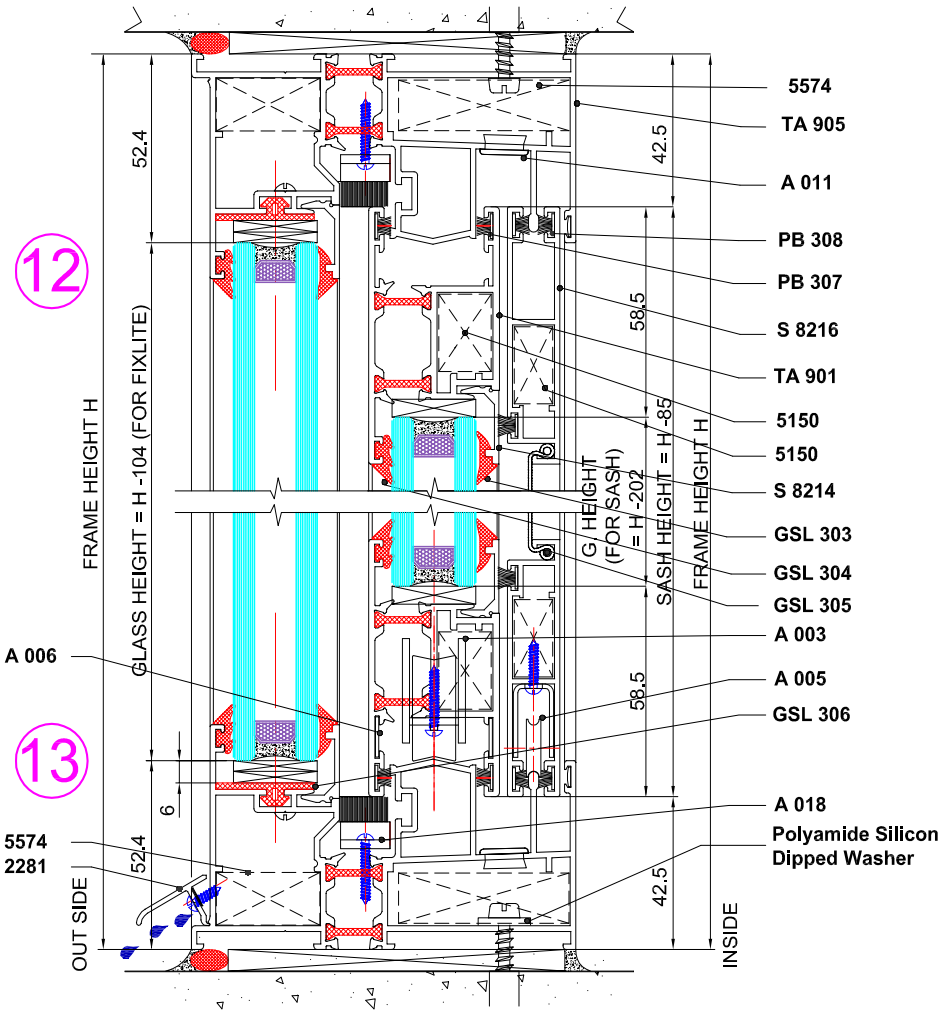
THERMOS 110® SYSTEM

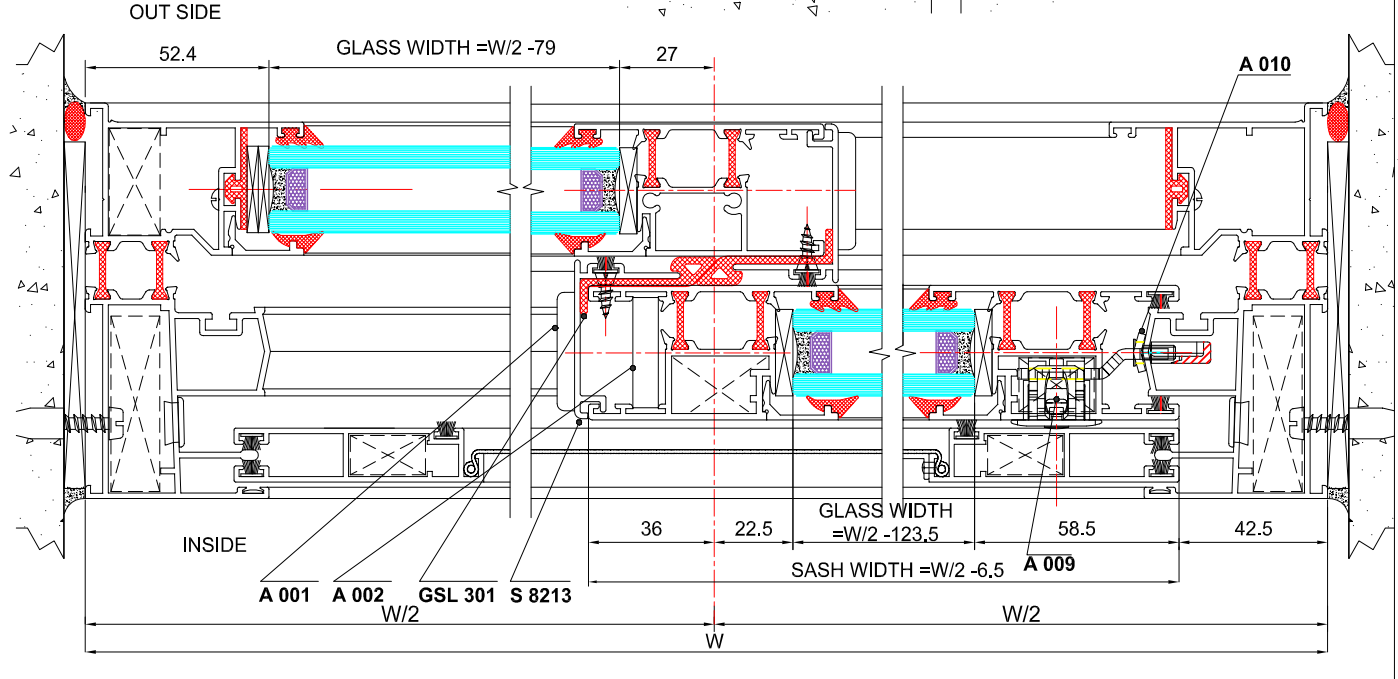
HIGH PERFORMANCE THERMAL BREAK SLIDING 110 SERIES

THERMAL BREAK SINGLE TRACK 1 PANEL SLIDING 1 PANEL FIXLITE WINDOW



ELEVATION
(VIEWED FROM INSIDE)

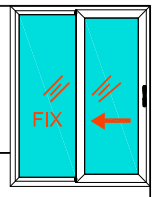




9 10 11

THERMOS 110® SYSTEM

HIGH PERFORMANCE THERMAL BREAK SLIDING 110 SERIES



THERMAL BREAK SINGLE TRACK 1 PANEL SLIDING 1 PANEL FIXLITE WINDOW

PROFILE CUTTING LIST FOR SLIDING WINDOW

ITEM No.	DESCRIPTION & SECTION SHAPE	PROFILE No.	PROFILE CUTTING ANGLE	CUTTING SIZE	No. OF PIECES	REMARKS
1.	FRAME WIDTH	TA 905	45°	W	02	
2.	FRAME HEIGHT	TA 905	45°	H	02	
3.	SASH WIDTH	TA 901	45°	W/2 - 6.5	02	W/2 - 6.5
4.	SASH HEIGHT	TA 901	45°	H - 85	02	H - 85
5.	INTER LOCK	S 8213		H - 85	01	
6.	INTER LOCK (FOR FIX LITE)	S 8213		H - 84	01	
7.	MULLION SECTION HEIGHT	T 903		H - 84	01	
8.	FLY SCREEN WIDTH	S 8216	45°	W/2 - 6.5	02	
9.	FLY SCREEN HEIGHT	S 8216	45°	H - 85	02	
10.	GL BEAD SASH WIDTH	S 8214		W/2 - 108.5	02	W/2 - 108.5
11.	GL BEAD SASH HEIGHT	S 8214		H - 228	02	
12.	GLAZING BEAD WIDTH	S 8214		W/2 - 61.5	02	W/2 - 61.5
13.	GLAZING BEAD HEIGHT	S 8214		H - 125	02	
14.	CORNER CLEAT FOR FRAME	5574		51.5	04	M.F
15.	CORNER CLEAT FOR FRAME	5574		29.5	04	M.F
16.	CORNER CLEAT FOR SASH	5150		15.5	04	M.F
17.	CORNER CLEAT FOR FLY SCREEN	5150		11.5	04	M.F
18.	HANDLE FOR FLY SCREEN	S 8215		80	01	
19.	DRAINAGE COVER	2281		W	01	

NOTE:- SCREW, ALUMINIUM MESH, SILICON & GLASS ARE NOT INCLUDED IN THE CUTTING LIST.

ACCESSORIES FOR SLIDING WINDOW

ITEM No.	ACCESSORIES CODE NO.	DESCRIPTION & SECTION SHAPE	QTY	REMARKS
1.	A 001	BUMP RUBBER GUIDE	02	
2.	A 002	ANTI THEFT COVER	02	
3.	A 003	ROLLER FOR SASH (FOR WINDOWS)	02	
4.	A 005	ROLLER FOR FLY SCREEN	02	
5.	A 006	SASH ALIGNMENT CORNER	08	
6.	A 007	FRAME ALIGNMENT CORNER	04	GIESSE 00365
7.	A 009	SLIDING HANDLE	01	GIESSE 02983
8.	A 010	KEEPER & C.PLATE NIBS (KIT)	01	GIESSE E213 & 04897
09.	A 011	COVER CAP 11.5mmØ	12	LOCALLY AVAILABLE
10.	A 012	4.8X32 PAN HEAD SELFTAPPING ST. SCREWS	04	LOCALLY AVAILABLE
11.	A 013	4.2X16 PAN HEAD SELFTAPPING ST. SCREWS	08	LOCALLY AVAILABLE
12.	A 014	3.9X13 C'SUNK HEAD SELFTAPPING ST.SCREWS	16	LOCALLY AVAILABLE
13.	A 018	DUST PLUG 14mm	02	TO BE USED WITH S 8217

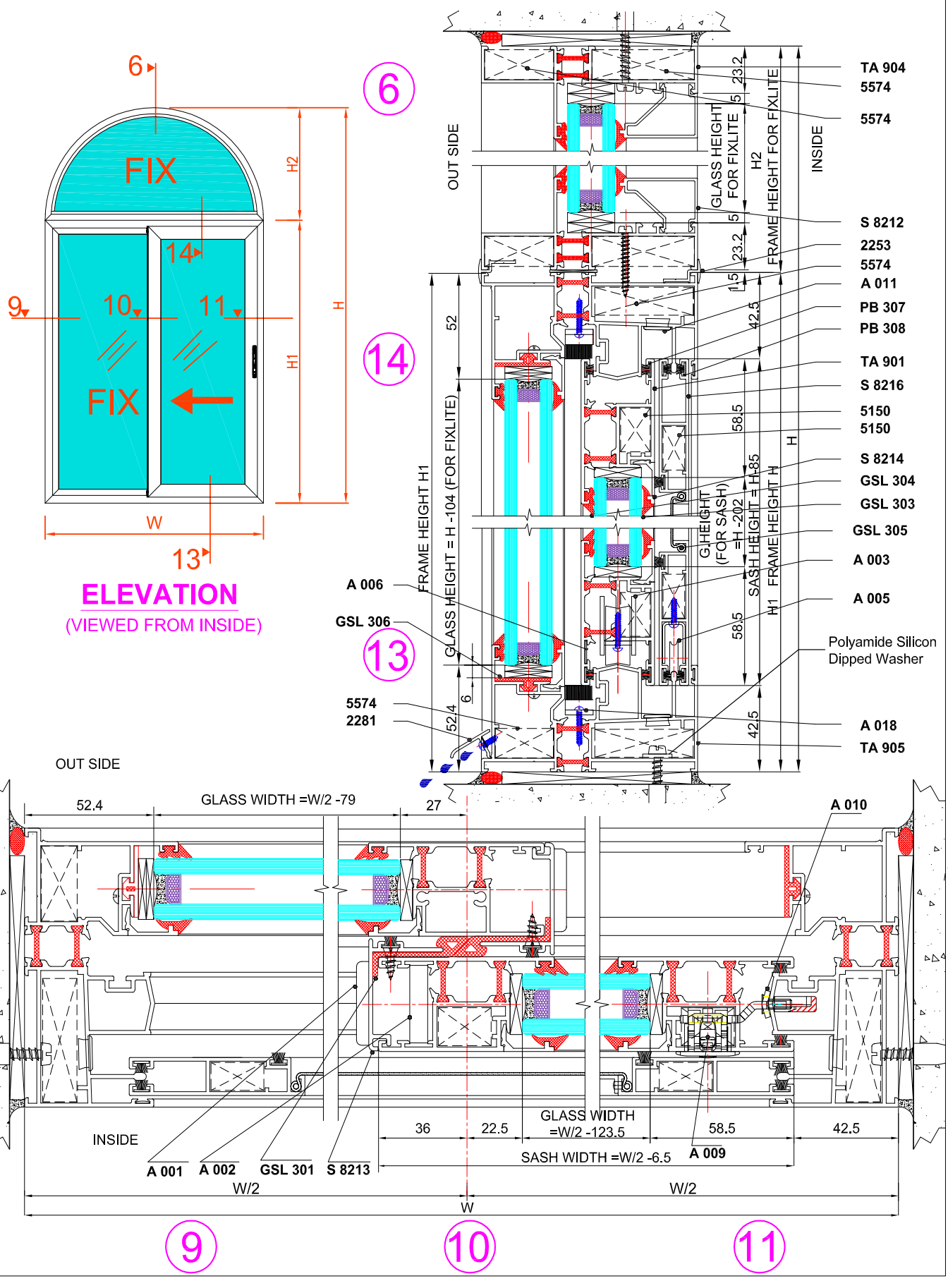
GASKET - E.P.D.M.

ITEM No.	ACCESSORIES CODE NO.	DESCRIPTION & GASKET SHAPE	QTY. LINER METER	REMARKS
1.	GSL 304	EXTERNAL GASKET	2W + 4H	
2.	GSL 303	INTERNAL GASKET	2W + 4H	
3.	GSL 301	INTER LOCK GASKET	2H	
4.	GSL 305	Fly Screen Gasket 4 Ø	1W + 2H	LOCALLY AVAILABLE
5.	GSL 306	GASKET FOR THERMAL BREAK	2W + 2H	
6.	PB 307	FIN SEAL BRUSH FOR SASH PB69.600 FP FOR SASH	2W + 3H	LOCALLY AVAILABLE
7.	PB 308	POLY BOND PB 4.8.550 3P FOR FLY SCREEN	3W + 6H	LOCALLY AVAILABLE

THERMOS 110® SYSTEM

HIGH PERFORMANCE THERMAL BREAK SLIDING 110 SERIES

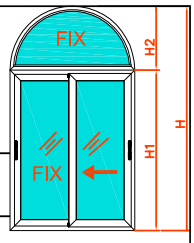
THERMAL BREAK SINGLE TRACK 1 PANEL SLIDING 2 PANEL FIXLITE WINDOW TOP (ARCH)



THERMOS 110® SYSTEM

HIGH PERFORMANCE THERMAL BREAK SLIDING 110 SERIES

THERMAL BREAK SINGLE TRACK 1 PANEL SLIDING WINDOW TOP FIXLITE (ARCH)



PROFILE CUTTING LIST FOR SLIDING WINDOW

ITEM No.	DESCRIPTION & SECTION SHAPE	PROFILE No.	PROFILE CUTTING ANGLE	CUTTING SIZE	No. OF PIECES	REMARKS
1.	FRAME WIDTH	TA 905	45°	W	02	
2.	FRAME HEIGHT	TA 905	45°	H	02	
3.	SASH WIDTH	TA 901	45°	W/2 - 6.5	02	W/2 - 6.5
4.	SASH HEIGHT	TA 901	45°	H - 85	02	H - 85
5.	INTER LOCK	S 8213		H - 85	01	
6.	INTER LOCK (FOR FIX LITE)	S 8213		H - 84	01	
7.	MULLION SECTION HEIGHT	T 903		H - 84	01	
8.	FLY SCREEN WIDTH	S 8216	45°	W/2 - 6.5	02	
9.	FLY SCREEN HEIGHT	S 8216	45°	H - 85	02	
10.	GL BEAD SASH WIDTH	S 8214		W/2 - 108.5	02	W/2 - 108.5
11.	GL BEAD SASH HEIGHT	S 8214		H - 228	02	
12.	GLAZING BEAD WIDTH	S 8214		W/2 - 61.5	02	W/2 - 61.5
13.	GLAZING BEAD HEIGHT	S 8214		H - 125	02	
14.	CORNER CLEAT FOR FRAME	5574		51.5	06	M.F
15.	CORNER CLEAT FOR SASH	5150		15.5	04	M.F
16.	CORNER CLEAT FOR FLY SCREEN	5150		11.5	04	M.F
17.	CORNER CLEAT FOR FRAME	5574		34.5	02	M.F (FIXLITE)
18.	CORNER CLEAT FOR FRAME	5574		29.5	04	M.F
19.	HANDLE FOR FLY SCREEN	S 8215		80	01	
20.	ADOPTER	2253		W	02	
21.	FIX LITE FRAME WIDTH	TA 904	45°	W	01	
22.	FIX LITE FRAME HEIGHT	TA 904 (T4)	45°	H-1.5	01	(3.14XD) / 2
23.	GLAZING BEAD WIDTH	S 8212		W-44	02	
24.	GLAZING BEAD HEIGHT	S 8212 (T4)	45°	H-89.5	02	(3.14XD) / 2
25.	DRAINAGE COVER	2281		W	01	

ACCESSORIES FOR SLIDING WINDOW

ITEM No.	ACCESSORIES CODE NO.	DESCRIPTION & SECTION SHAPE	QTY	REMARKS
1.	A 001	BUMP RUBBER GUIDE	02	
2.	A 002	ANTI THEFT COVER	02	
3.	A 003	ROLLER FOR SASH (FOR WINDOWS)	02	
4.	A 005	ROLLER FOR FLY SCREEN	02	
5.	A 006	SASH ALIGNMENT CORNER	08	
6.	A 007	FRAME ALIGNMENT CORNER	04	GIESSE 00365
7.	A 009	SLIDING HANDLE	01	GIESSE 02983
8.	A 010	KEEPER & C.PLATE NIBS (KIT)	01	GIESSE E213 & 04897
9.	A 011	COVER CAP 11.5mmØ	12	LOCALLY AVAILABLE
10.	A 012	4.8X32 PAN HEAD SELFTAPPING ST. SCREWS	04	LOCALLY AVAILABLE
11.	A 013	4.2X16 PAN HEAD SELFTAPPING ST. SCREWS	08	LOCALLY AVAILABLE
12.	A 014	3.9X13 C'SUNK HEAD SELFTAPPING ST.SCREWS	16	LOCALLY AVAILABLE
13.	A 018	DUST PLUG 14mm	02	TO BE USED WITH S 8217

GASKET - E.P.D.M.

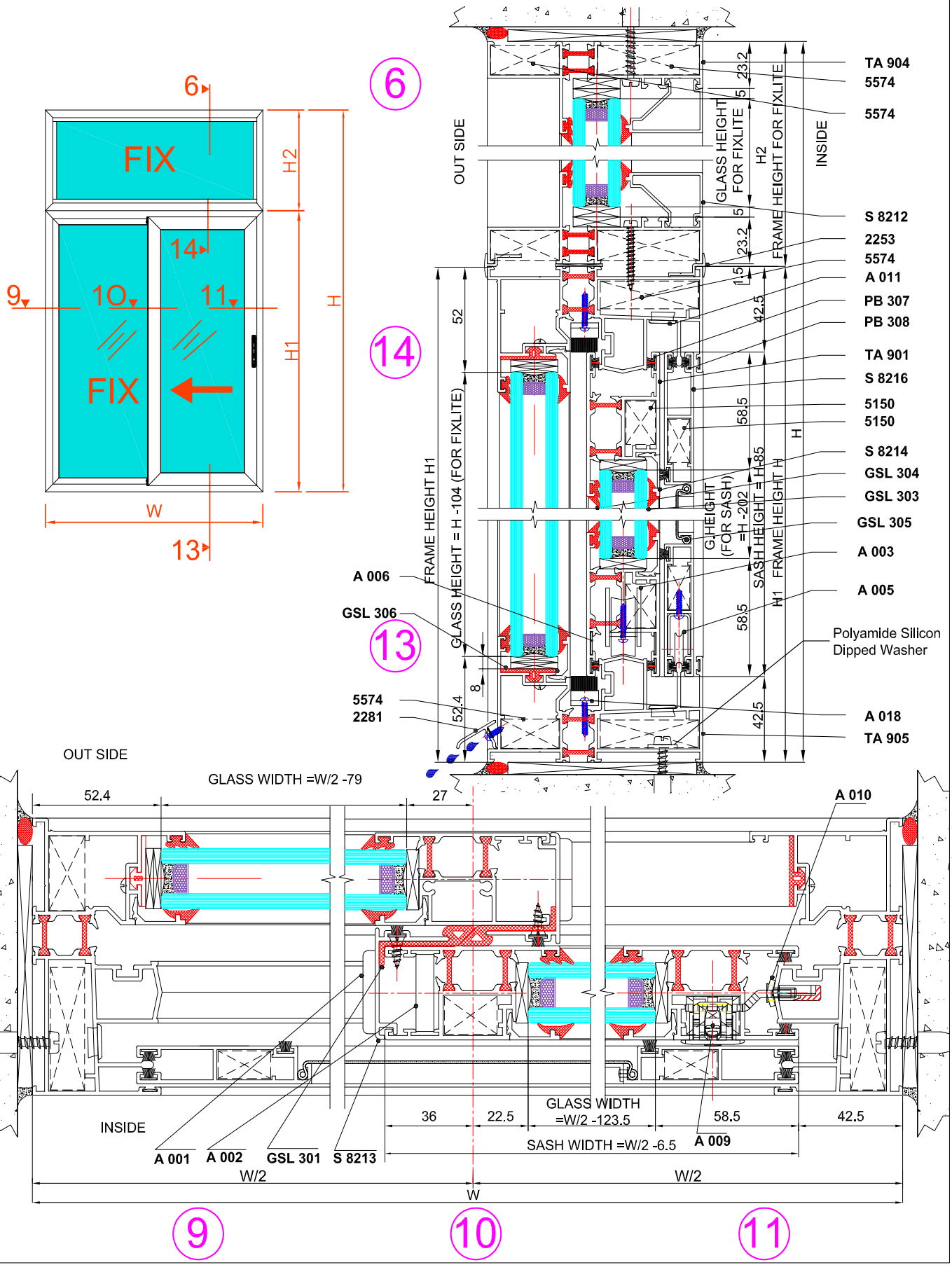
ITEM No.	ACCESSORIES CODE NO.	DESCRIPTION & GASKET SHAPE	QTY. LINER METER	REMARKS
1.	GSL 304	EXTERNAL GASKET	5W + 6H	
2.	GSL 303	INTERNAL GASKET	5W + 6H	
3.	GSL 301	INTER LOCK GASKET	2H	
4.	GSL 305	Fly Screen Gasket 4 Ø	1W + 2H	LOCALLY AVAILABLE
5.	GSL 306	GASKET FOR THERMAL BREAK	2W + 2H	
6.	PB 307	FIN SEAL BRUSH FOR SASH PB69.600 FP FOR SASH	2W + 3H	LOCALLY AVAILABLE
7.	PB 308	POLY BOND PB 4.8.550 3P FOR FLY SCREEN	3W + 6H	LOCALLY AVAILABLE

NOTE:- SCREW, ALUMINIUM MESH, SILICON & GLASS ARE NOT INCLUDED IN THE CUTTING LIST.

THERMOS 110® SYSTEM

HIGH PERFORMANCE THERMAL BREAK SLIDING 110 SERIES

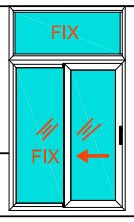
THERMAL BREAK SINGLE TRACK 1 PANEL SLIDING 2 PANEL & TOP FIXLITE WINDOW



THERMOS 110® SYSTEM

HIGH PERFORMANCE THERMAL BREAK SLIDING 110 SERIES

THERMAL BREAK SINGLE TRACK 1 PANEL SLIDING 2 PANEL & TOP FIXLITE WINDOW



PROFILE CUTTING LIST FOR SLIDING WINDOW

ITEM No.	DESCRIPTION & SECTION SHAPE	PROFILE No.	PROFILE CUTTING ANGLE	CUTTING SIZE	No. OF PIECES	REMARKS
1.	FRAME WIDTH	TA 905	45°	W	02	
2.	FRAME HEIGHT	TA 905	45°	H1	02	
3.	SASH WIDTH	TA 901	45°	W/2 - 6.5	02	W/2 - 6.5
4.	SASH HEIGHT	TA 901	45°	H1 - 85	02	H - 85
5.	INTER LOCK	S 8213		H - 85	01	
6.	INTER LOCK (FOR FIX LITE)	S 8213		H - 84	01	
7.	MULLION SECTION HEIGHT	T 903		H - 84	01	
8.	FLY SCREEN WIDTH	S 8216	45°	W/2 - 6.5	02	
9.	FLY SCREEN HEIGHT	S 8216	45°	H - 85	02	
10.	GL BEAD SASH WIDTH	S 8214		W/2 - 108.5	02	W/2 - 108.5
11.	GL BEAD SASH HEIGHT	S 8214		H - 228	02	
12.	GLAZING BEAD WIDTH	S 8214		W/2 - 61.5	02	W/2 - 61.5
13.	GLAZING BEAD HEIGHT	S 8214		H - 125	02	
14.	CORNER CLEAT FOR FRAME	5574		51.5	08	M.F
15.	CORNER CLEAT FOR FRAME	5574		29.5	04	M.F
16.	CORNER CLEAT FOR SASH	5150		15.5	04	M.F
17.	CORNER CLEAT FOR FLY SCREEN	5150		11.5	04	M.F
18.	CORNER CLEAT FOR FRAME	5574		51.5	04	M.F
19.	CORNER CLEAT FOR FRAME	5574		34.5	04	M.F
20.	HANDLE FOR FLY SCREEN	S 8215		80	01	
21.	ADOPTER	2253		W	02	
22.	FIX LITE FRAME WIDTH	TA 904	45°	W	02	
23.	FIX LITE FRAME HEIGHT	TA 904	45°	H2-1.5	02	
24.	GLAZING BEAD WIDTH	S 8212		W-46	02	
25.	GLAZING BEAD HEIGHT	S 8212		H2-89.5	02	

ACCESSORIES FOR SLIDING WINDOW

ITEM No.	ACCESSORIES CODE NO.	DESCRIPTION & SECTION SHAPE	QTY	REMARKS
1.	A 001	BUMP RUBBER GUIDE	02	
2.	A 002	ANTI THEFT COVER	02	
3.	A 003	ROLLER FOR SASH (FOR WINDOWS)	02	
4.	A 005	ROLLER FOR FLY SCREEN	02	
5.	A 006	SASH ALIGNMENT CORNER	08	
6.	A 007	FRAME ALIGNMENT CORNER	04	GIESSE 00365
7.	A 009	SLIDING HANDLE	01	GIESSE 02983
8.	A 010	KEEPER & C.PLATE NIBS (KIT)	01	GIESSE E213 & 04897
9.	A 011	COVER CAP 11.5mmØ	12	LOCALLY AVAILABLE
10.	A 012	4.8X32 PAN HEAD SELFTAPPING ST. SCREWS	04	LOCALLY AVAILABLE
11.	A 013	4.2X16 PAN HEAD SELFTAPPING ST. SCREWS	04	LOCALLY AVAILABLE
12.	A 014	3.9X13 C'SUNK HEAD SELFTAPPING ST.SCREWS	16	LOCALLY AVAILABLE
13.	A 018	DUST PLUG 14mm	02	TO BE USED WITH S 8217

GASKET - E.P.D.M.

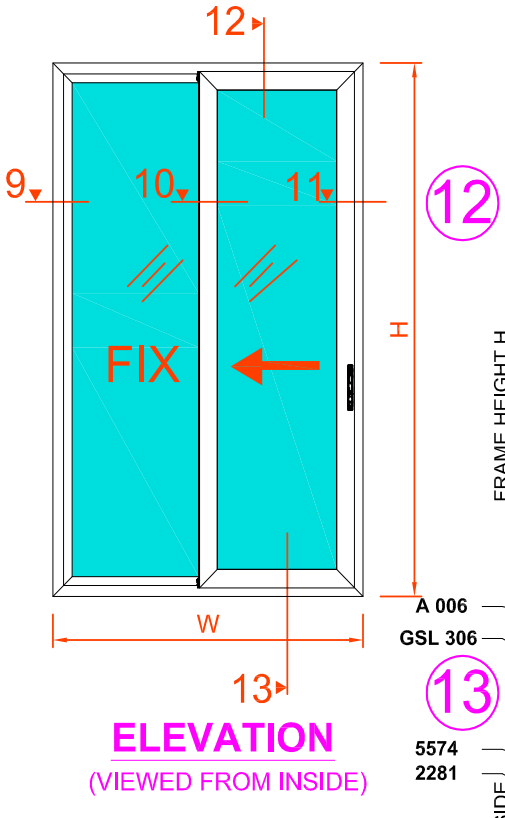
ITEM No.	ACCESSORIES CODE NO.	DESCRIPTION & GASKET SHAPE	QTY. LINER METER	REMARKS
1.	GSL 304	EXTERNAL GASKET	4W + 5H	
2.	GSL 303	INTERNAL GASKET	4W + 5H	
3.	GSL 301	INTER LOCK GASKET	2H	
4.	GSL 305	Fly Screen Gasket 4 Ø	1W + 2H	LOCALLY AVAILABLE
5.	GSL 306	GASKET FOR THERMAL BREAK	2W + 2H	
6.	PB 307	FIN SEAL BRUSH FOR SASH PB69.600 FP FOR SASH	2W + 3H	LOCALLY AVAILABLE
7.	PB 308	POLY BOND PB 4.8.550 3P FOR FLY SCREEN	3W + 6H	LOCALLY AVAILABLE

NOTE:- SCREW, ALUMINIUM MESH, SILICON & GLASS ARE NOT INCLUDED IN THE CUTTING LIST.

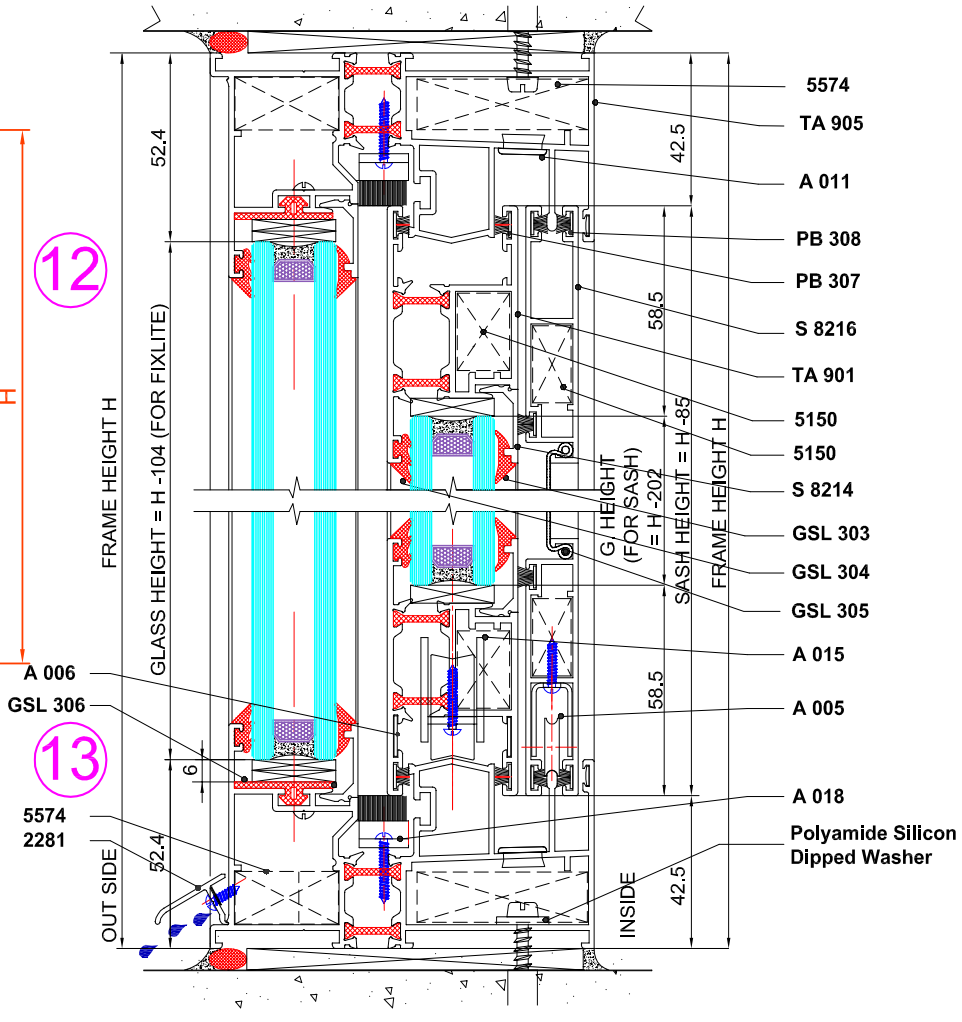
THERMOS 110® SYSTEM

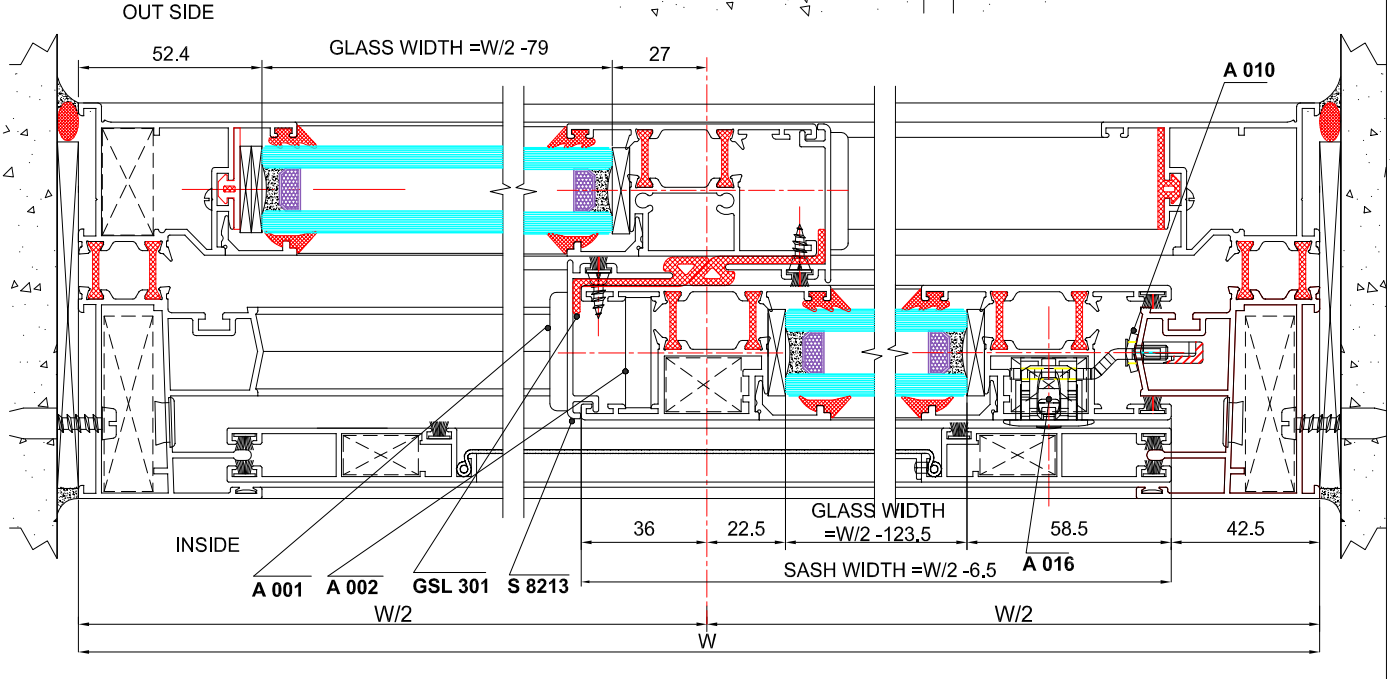
HIGH PERFORMANCE THERMAL BREAK SLIDING 110 SERIES

THERMAL BREAK SINGLE TRACK 1 PANEL SLIDING 1 PANEL FIXLITE DOOR



ELEVATION
(VIEWED FROM INSIDE)



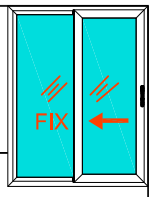


9 10 11

THERMOS 110® SYSTEM

HIGH PERFORMANCE THERMAL BREAK SLIDING 110 SERIES

THERMAL BREAK SINGLE TRACK 1 PANEL SLIDING 1 PANEL FIXLITE DOOR



PROFILE CUTTING LIST FOR SLIDING DOOR

ITEM No.	DESCRIPTION & SECTION SHAPE	PROFILE No.	PROFILE CUTTING ANGLE	CUTTING SIZE	No. OF PIECES	REMARKS
1.	FRAME WIDTH	TA 905	45°	W	02	
2.	FRAME HEIGHT	TA 905	45°	H	02	
3.	SASH WIDTH	TA 901	45°	W/2 - 6.5	02	W/2 - 6.5
4.	SASH HEIGHT	TA 901	45°	H - 85	02	H - 85
5.	INTER LOCK	S 8213		H - 85	01	
6.	INTER LOCK (FOR FIX LITE)	S 8213		H - 84	01	
7.	MULLION SECTION HEIGHT	T 903		H - 84	01	
8.	FLY SCREEN WIDTH	S 8216	45°	W/2 - 6.5	02	
9.	FLY SCREEN HEIGHT	S 8216	45°	H - 85	02	
10.	GL BEAD SASH WIDTH	S 8214		W/2 - 108.5	02	W/2 - 108.5
11.	GL BEAD SASH HEIGHT	S 8214		H - 228	02	
12.	GLAZING BEAD WIDTH	S 8214		W/2 - 61.5	02	W/2 - 61.5
13.	GLAZING BEAD HEIGHT	S 8214		H - 125	02	
14.	CORNER CLEAT FOR FRAME	5574		51.5	04	M.F
15.	CORNER CLEAT FOR FRAME	5574		29.5	04	M.F
16.	CORNER CLEAT FOR SASH	5150		15.5	04	M.F
17.	CORNER CLEAT FOR FLY SCREEN	5150		11.5	04	M.F
18.	HANDLE FOR FLY SCREEN	S 8215		80	01	
19.	DRAINAGE COVER	2281		W	01	

NOTE:- SCREW, ALUMINIUM MESH, SILICON & GLASS ARE NOT INCLUDED IN THE CUTTING LIST.

ACCESSORIES FOR SLIDING DOOR

ITEM No.	ACCESSORIES CODE NO.	DESCRIPTION & SECTION SHAPE	QTY	REMARKS
1.	A 001	BUMP RUBBER GUIDE	02	
2.	A 002	ANTI THEFT COVER	02	
3.	A 015	ROLLER FOR SASH (FOR DOORS)	02	
4.	A 005	ROLLER FOR FLY SCREEN	02	
5.	A 006	SASH ALIGNMENT CORNER	08	
6.	A 007	FRAME ALIGNMENT CORNER	04	GIESSE 00365
7.	A 016	SLIDING HANDLE (FOR DOOR)	01	GIESSE 03353
8.	A 017	PULLING HANDLE (FOR DOOR)	01	GIESSE 03055
9.	A 010	KEEPER & C.PLATE NIBS (KIT)	01	GIESSE E213 & 04897
10.	A 011	COVER CAP 11.5mmϕ	12	LOCALLY AVAILABLE
11.	A 012	4.8X32 PAN HEAD SELFTAPPING ST. SCREWS	04	LOCALLY AVAILABLE
12.	A 013	4.2X16 PAN HEAD SELFTAPPING ST. SCREWS	04	LOCALLY AVAILABLE
13.	A 014	3.9X13 C'SUNK HEAD SELFTAPPING ST.SCREWS	16	LOCALLY AVAILABLE
14.	A 018	DUST PLUG 14mm	02	TO BE USED WITH S 8217

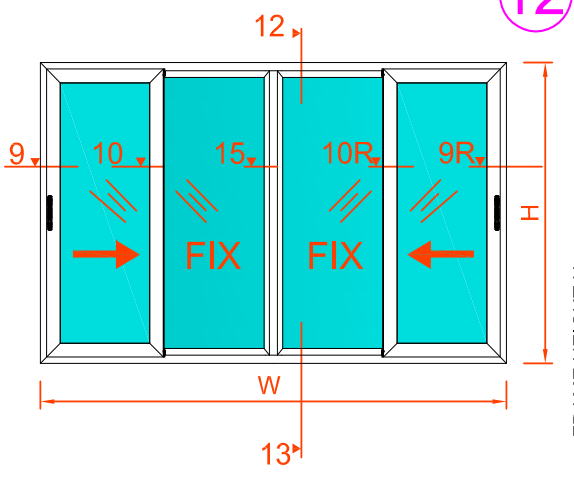
GASKET - E.P.D.M.

ITEM No.	ACCESSORIES CODE NO.	DESCRIPTION & GASKET SHAPE	QTY. LINER METER	REMARKS
1.	GSL 304	EXTERNAL GASKET	2W + 4H	
2.	GSL 303	INTERNAL GASKET	2W + 4H	
3.	GSL 301	INTER LOCK GASKET	2H	
4.	GSL 305	Fly Screen Gasket 4 Ø	1W + 2H	LOCALLY AVAILABLE
5.	GSL 306	GASKET FOR THERMAL BREAK	2W + 2H	
6.	PB 307	FIN SEAL BRUSH FOR SASH PB69.600 FP FOR SASH	2W + 3H	LOCALLY AVAILABLE
7.	PB 308	POLY BOND PB 4.8.550 3P FOR FLY SCREEN	3W + 6H	LOCALLY AVAILABLE

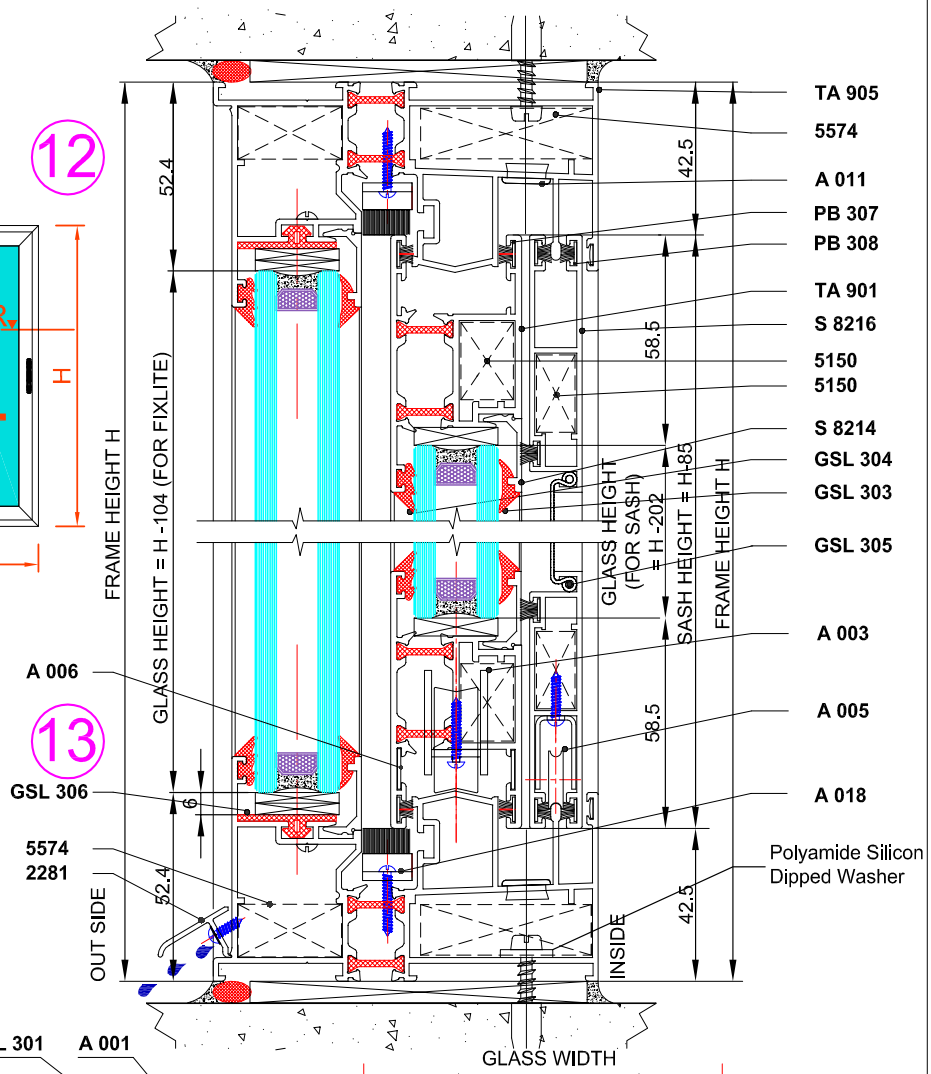
THERMOS 110® SYSTEM

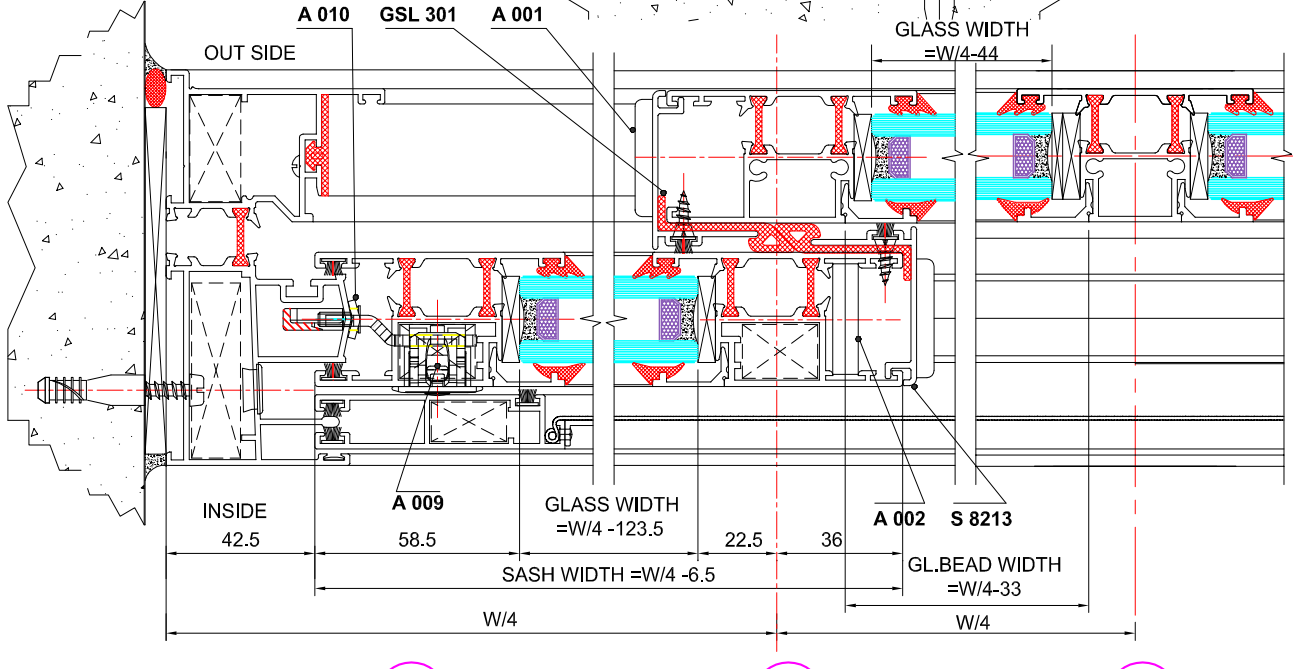
HIGH PERFORMANCE THERMAL BREAK SLIDING 110 SERIES

THERMAL BREAK SINGLE TRACK CENTER 2 FIXLITE SIDES 2 SLIDING SASH WINDOW/DOORS



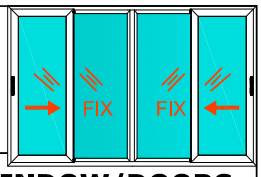
ELEVATION
(VIEWED FROM INSIDE)





THERMOS 110® SYSTEM

HIGH PERFORMANCE THERMAL BREAK SLIDING 110 SERIES



THERMAL BREAK SINGLE TRACK CENTER 2 FIXLITE SIDES 2 SLIDING SASH WINDOW/DOORS

PROFILE CUTTING LIST FOR SLIDING WINDOW

ITEM No.	DESCRIPTION & SECTION SHAPE	PROFILE No.	PROFILE CUTTING ANGLE	CUTTING SIZE	No. OF PIECES	REMARKS
1.	FRAME WIDTH	TA 905	45°	W	02	
2.	FRAME HEIGHT	TA 905	45°	H	02	
3.	SASH WIDTH	TA 901	45°	W/4 - 6.5	04	W/2 - 6.5
4.	SASH HEIGHT	TA 901	45°	H - 85	04	H - 85
5.	INTER LOCK	S 8213		H - 85	02	
6.	INTER LOCK (FOR FIX LITE)	S 8213		H - 84	02	
7.	MULLION SECTION HEIGHT	T 903		H - 84	02	
8.	FLY SCREEN WIDTH	S 8216	45°	W/2 - 6.5	04	
9.	FLY SCREEN HEIGHT	S 8216	45°	H - 85	04	
10.	GL BEAD SASH WIDTH	S 8214		W/2 - 108.5	02	W/2 - 108.5
11.	GL BEAD SASH HEIGHT	S 8214		H - 228	02	
12.	GLAZING BEAD WIDTH	S 8214		W/2 - 61.5	04	W/2 - 61.5
13.	GLAZING BEAD HEIGHT	S 8214		H - 125	04	
14.	CORNER CLEAT FOR FRAME	5574		51.5	04	M.F
15.	CORNER CLEAT FOR FRAME	5574		29.5	04	M.F
16.	CORNER CLEAT FOR SASH	5150		15.5	08	M.F
17.	CORNER CLEAT FOR FLY SCREEN	5150		11.5	08	M.F
18.	HANDLE FOR FLY SCREEN	S 8215		80	02	
19.	MULLION	TA 902		H - 84	01	
20.	GLAZING BEAD	S 8214		W/4-32.5	04	FOR FIXLITE
21.	GLAZING BEAD	S 8214		H-124	04	FOR FIXLITE
22.	DRAINAGE COVER	2281		W	01	

NOTE:- SCREW, ALUMINIUM MESH, SILICON & GLASS ARE NOT INCLUDED IN THE CUTTING LIST.

ACCESSORIES FOR SLIDING WINDOW

ITEM No.	ACCESSORIES CODE NO.	DESCRIPTION & SECTION SHAPE	QTY	REMARKS
1.	A 001	BUMP RUBBER GUIDE	04	
2.	A 002	ANTI THEFT COVER	04	
3.	A 003	ROLLER FOR SASH (FOR WINDOWS)	04	
4.	A 005	ROLLER FOR FLY SCREEN	04	
5.	A 006	SASH ALIGNMENT CORNER	16	
6.	A 007	FRAME ALIGNMENT CORNER	08	GIESSE 00365
7.	A 009	SLIDING HANDLE	02	GIESSE 02983
8.	A 010	KEEPER & C.PLATE NIBS (KIT)	02	GIESSE E213 & 04897
9.	A 011	COVER CAP 11.5mmØ	18	LOCALLY AVAILABLE
10.	A 012	4.8X32 PAN HEAD SELFTAPPING ST. SCREWS	08	LOCALLY AVAILABLE
11.	A 013	4.2X16 PAN HEAD SELFTAPPING ST. SCREWS	12	LOCALLY AVAILABLE
12.	A 014	3.9X13 C'SUNK HEAD SELFTAPPING ST.SCREWS	32	LOCALLY AVAILABLE
13.	A 018	DUST PLUG 14mm	04	TO BE USED WITH S 8217

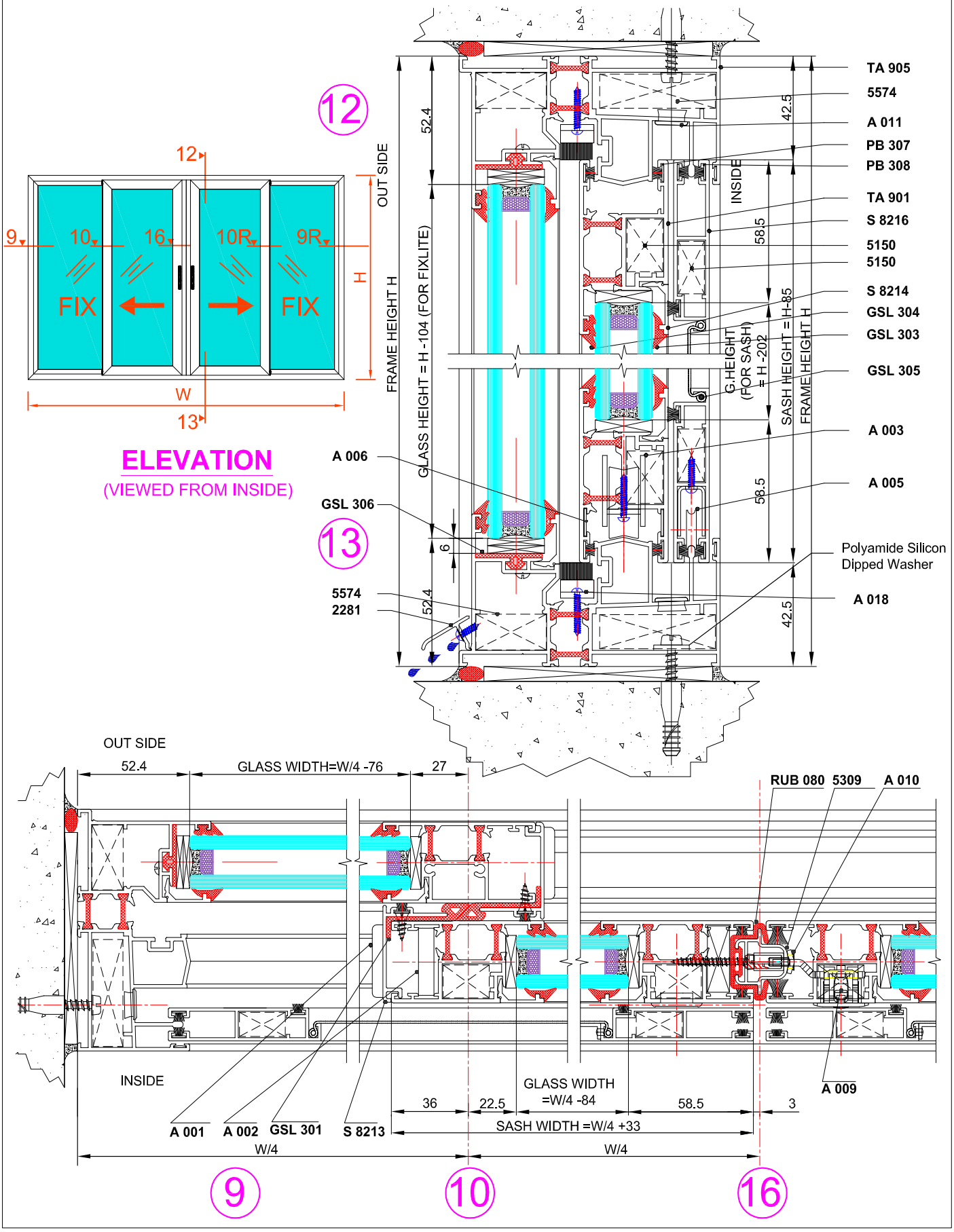
GASKET - E.P.D.M.

ITEM No.	ACCESSORIES CODE NO.	DESCRIPTION & GASKET SHAPE	QTY. LINER METER	REMARKS
1.	GSL 304	EXTERNAL GASKET	2W + 8H	
2.	GSL 303	INTERNAL GASKET	2W + 8H	
3.	GSL 301	INTER LOCK GASKET	4H	
4.	GSL 305	Fly Screen Gasket 4 Ø	2W + 4H	LOCALLY AVAILABLE
5.	GSL 306	GASKET FOR THERMAL BREAK	2W + 2H	
6.	PB 307	FIN SEAL BRUSH FOR SASH PB69.600 FP FOR SASH	4W + 6H	LOCALLY AVAILABLE
7.	PB 308	POLY BOND PB 4.8.550 3P FOR FLY SCREEN	6W + 12H	LOCALLY AVAILABLE

THERMOS 110® SYSTEM

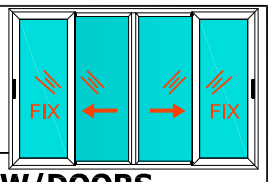
HIGH PERFORMANCE THERMAL BREAK SLIDING 110 SERIES

THERMAL BREAK SINGLE TRACK CENTER 2 SLIDING SASH 2 FIXLITE WINDOW/DOORS



THERMOS 110® SYSTEM

HIGH PERFORMANCE THERMAL BREAK SLIDING 110 SERIES



THERMAL BREAK SINGLE TRACK CENTER 2 SLIDING SASH 2 FIXLITE WINDOW/DOORS

PROFILE CUTTING LIST FOR SLIDING WINDOW

ITEM No.	DESCRIPTION & SECTION SHAPE	PROFILE No.	PROFILE CUTTING ANGLE	CUTTING SIZE	No. OF PIECES	REMARKS
1.	FRAME WIDTH	TA 905	45°	W	02	
2.	FRAME HEIGHT	TA 905	45°	H	02	
3.	SASH WIDTH	TA 901	45°	W/4 + 33	04	W/4 + 33
4.	SASH HEIGHT	TA 901	45°	H - 85	04	H - 85
5.	INTER LOCK	S 8213		H - 85	02	
6.	INTER LOCK (FOR FIX LITE)	S 8213		H - 84	02	
7.	MULLION SECTION HEIGHT	T 903		H - 84	02	
8.	FLY SCREEN WIDTH	S 8216	45°	W/4 + 33	04	
9.	FLY SCREEN HEIGHT	S 8216	45°	H - 85	04	
10.	GL BEAD SASH WIDTH	S 8214		W/4 - 69	04	W/4 - 69
11.	GL BEAD SASH HEIGHT	S 8214		H - 228	04	
12.	GLAZING BEAD	S 8214		W/4-55.5	04	FOR FIXLITE
13.	GLAZING BEAD	S 8214		H-125	04	FOR FIXLITE
14.	CORNER CLEAT FOR FRAME	5574		51.5	04	M.F
15.	CORNER CLEAT FOR FRAME	5574		29.5	04	M.F
16.	CORNER CLEAT FOR SASH	5150		15.5	08	M.F
17.	CORNER CLEAT FOR FLY SCREEN	5150		11.5	08	M.F
18.	DUST PLUG PROFILE	S 8217		14	04	BLACK COLOR
19.	HANDLE FOR FLY SCREEN	S 8215		80	02	
20.	ADOPTER	5309		H - 85	01	
21.	DRAINAGE COVER	2281		W	01	

NOTE:- SCREW, ALUMINIUM MESH, SILICON & GLASS ARE NOT INCLUDED IN THE CUTTING LIST.

ACCESSORIES FOR SLIDING WINDOW

ITEM No.	ACCESSORIES CODE NO.	DESCRIPTION & SECTION SHAPE	QTY	REMARKS
1.	A 001	BUMP RUBBER GUIDE	04	
2.	A 002	ANTI THEFT COVER	04	
3.	A 003	ROLLER FOR SASH (FOR WINDOWS)	04	
4.	A 005	ROLLER FOR FLY SCREEN	04	
5.	A 006	SASH ALIGNMENT CORNER	16	
6.	A 007	FRAME ALIGNMENT CORNER	08	GIESSE 00365
7.	A 009	SLIDING HANDLE	02	GIESSE 02983
8.	A 010	KEEPER & C.PLATE NIBS (KIT)	01	GIESSE E213 & 04897
9.	A 011	COVER CAP 11.5mmØ	18	LOCALLY AVAILABLE
10.	A 012	4.8X32 PAN HEAD SELFTAPPING ST. SCREWS	08	LOCALLY AVAILABLE
11.	A 013	4.2X16 PAN HEAD SELFTAPPING ST. SCREWS	12	LOCALLY AVAILABLE
12.	A 014	3.9X13 C'SUNK HEAD SELFTAPPING ST.SCREWS	40	LOCALLY AVAILABLE
13.	A 018	DUST PLUG 14mm	04	TO BE USED WITH S 8217

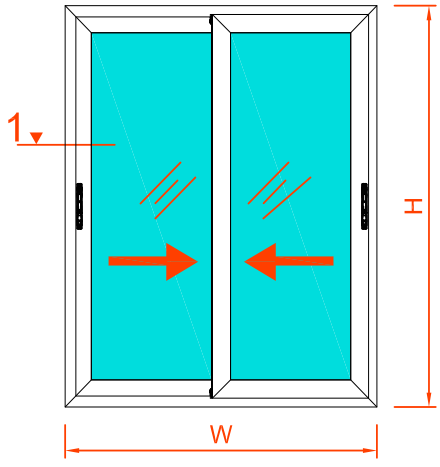
GASKET - E.P.D.M.

ITEM No.	ACCESSORIES CODE NO.	DESCRIPTION & GASKET SHAPE	QTY. LINER METER	REMARKS
1.	GSL 304	EXTERNAL GASKET	2W + 8H	
2.	GSL 303	INTERNAL GASKET	2W + 8H	
3.	GSL 301	INTER LOCK GASKET	4H	
4.	GSL 305	Fly Screen Gasket 4 Ø	2W + 4H	LOCALLY AVAILABLE
5.	GSL 306	GASKET FOR THERMAL BREAK	2W + 2H	
6.	PB 307	FIN SEAL BRUSH FOR SASH PB69.600 FP FOR SASH	4W + 6H	LOCALLY AVAILABLE
7.	PB 308	POLY BOND PB 4.8.550 3P FOR FLY SCREEN	6W + 12H	LOCALLY AVAILABLE
8.	RUB 080	GASKET FOR ADOPTER	1H	

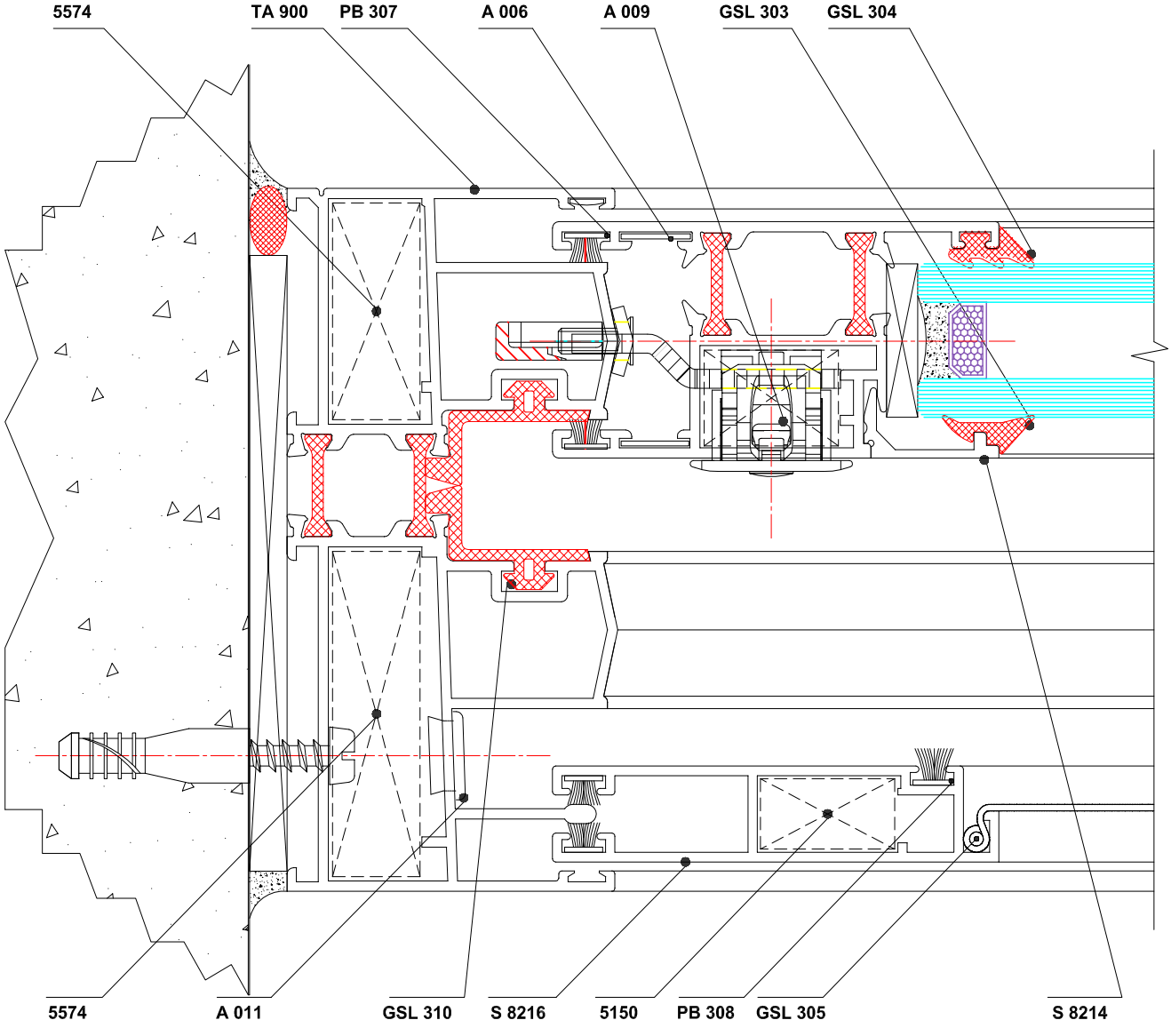
THERMOS 110® SYSTEM

HIGH PERFORMANCE THERMAL BREAK SLIDING 110 SERIES

THERMAL BREAK DOUBLE TRACK SLIDING WINDOW



ELEVATION
(VIEWED FROM INSIDE)

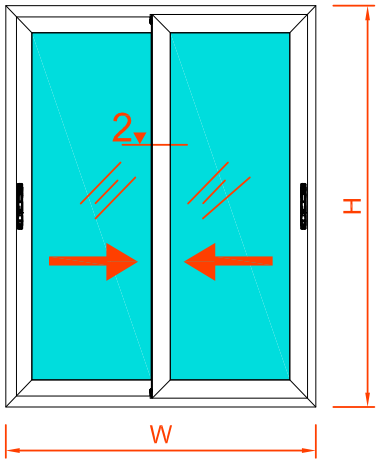


SECTION AT:1

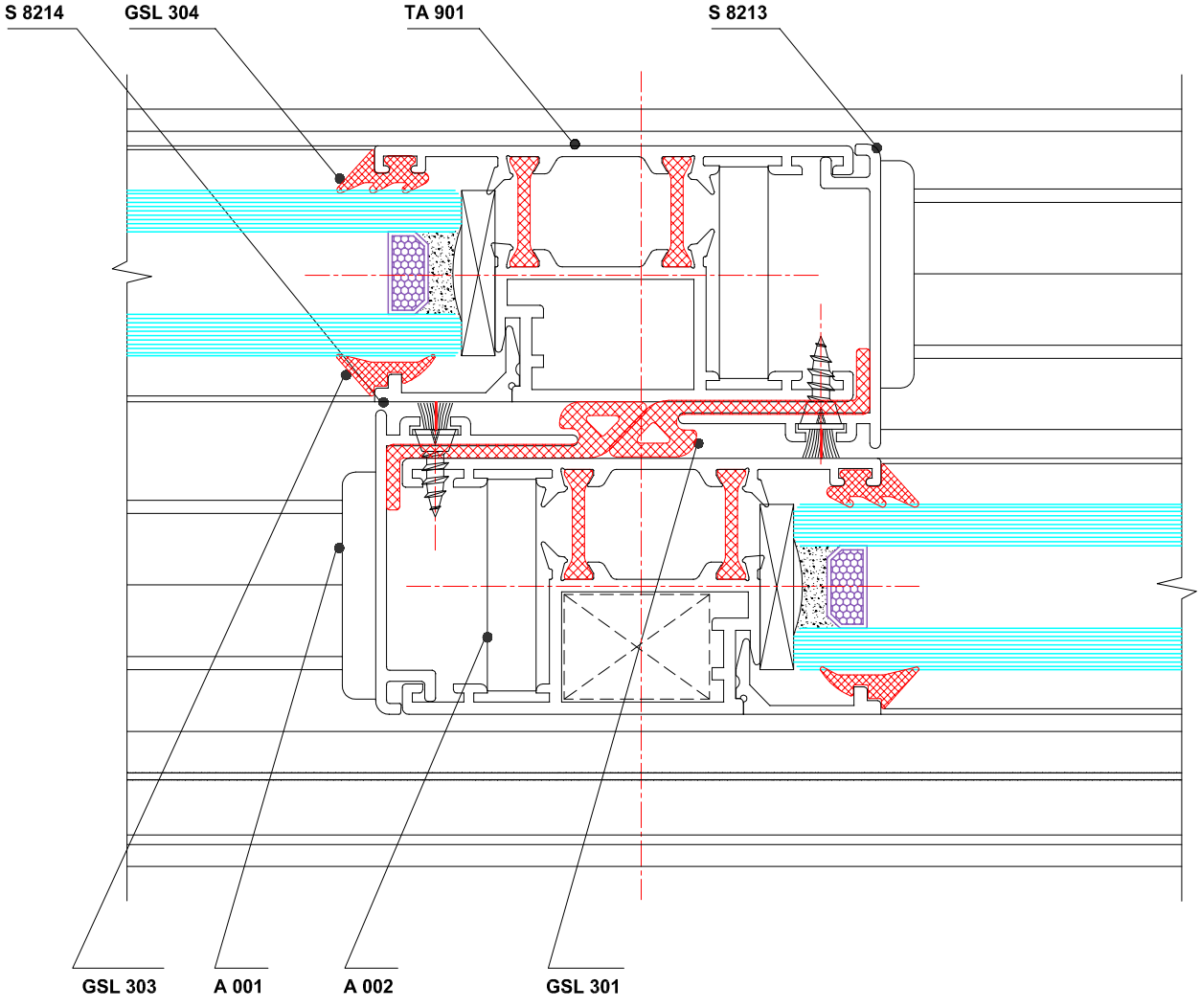
THERMOS 110® SYSTEM

HIGH PERFORMANCE THERMAL BREAK SLIDING 110 SERIES

THERMAL BREAK DOUBLE TRACK SLIDING WINDOW



ELEVATION
(VIEWED FROM INSIDE)

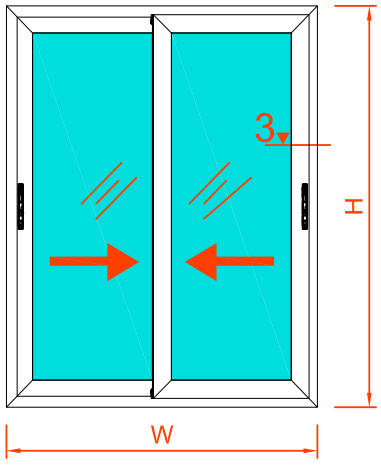


SECTION AT:2

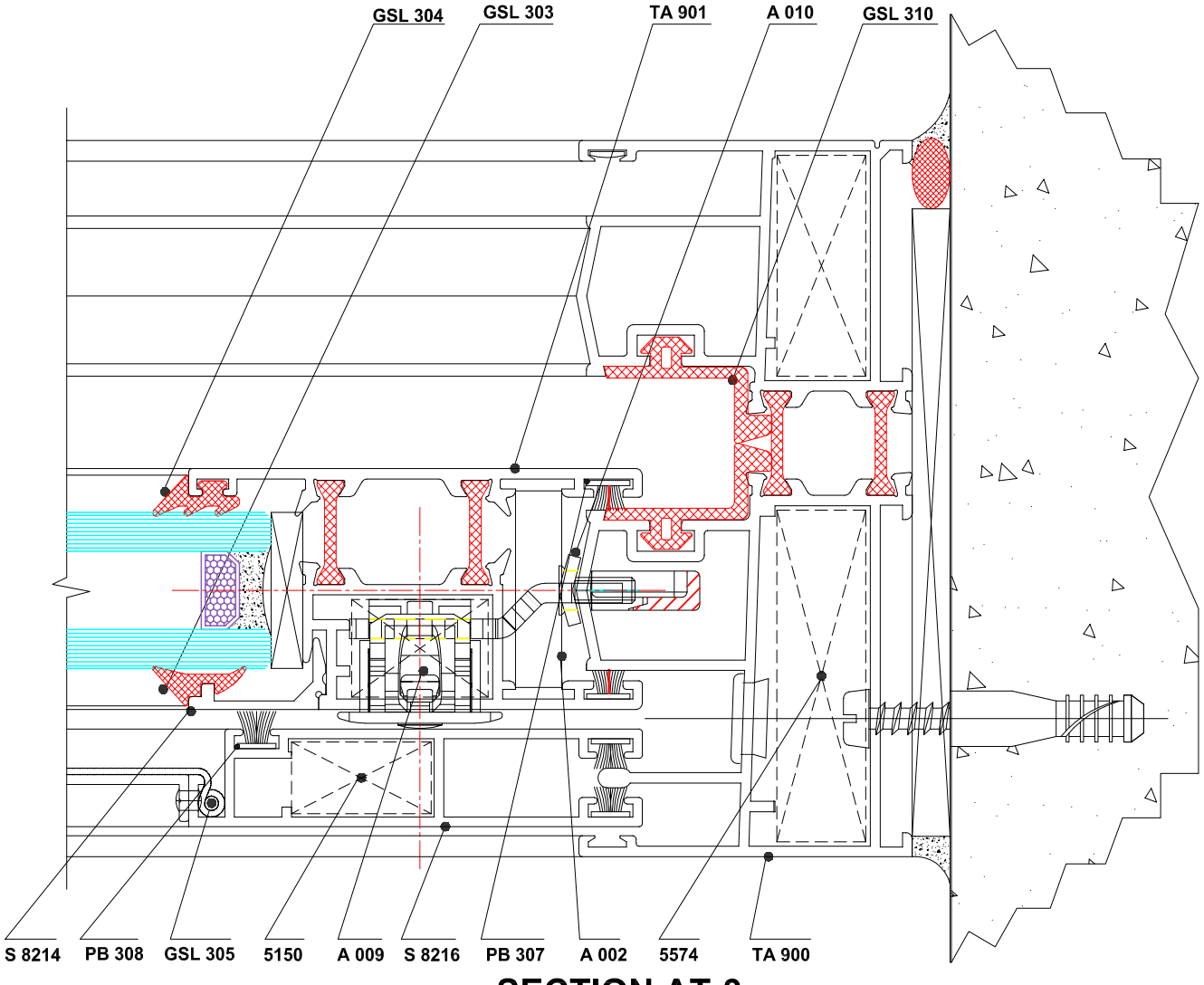
THERMOS 110® SYSTEM

HIGH PERFORMANCE THERMAL BREAK SLIDING 110 SERIES

THERMAL BREAK DOUBLE TRACK SLIDING WINDOW



ELEVATION
(VIEWED FROM INSIDE)

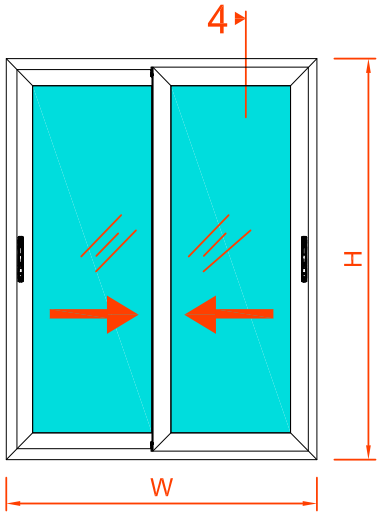


SECTION AT:3

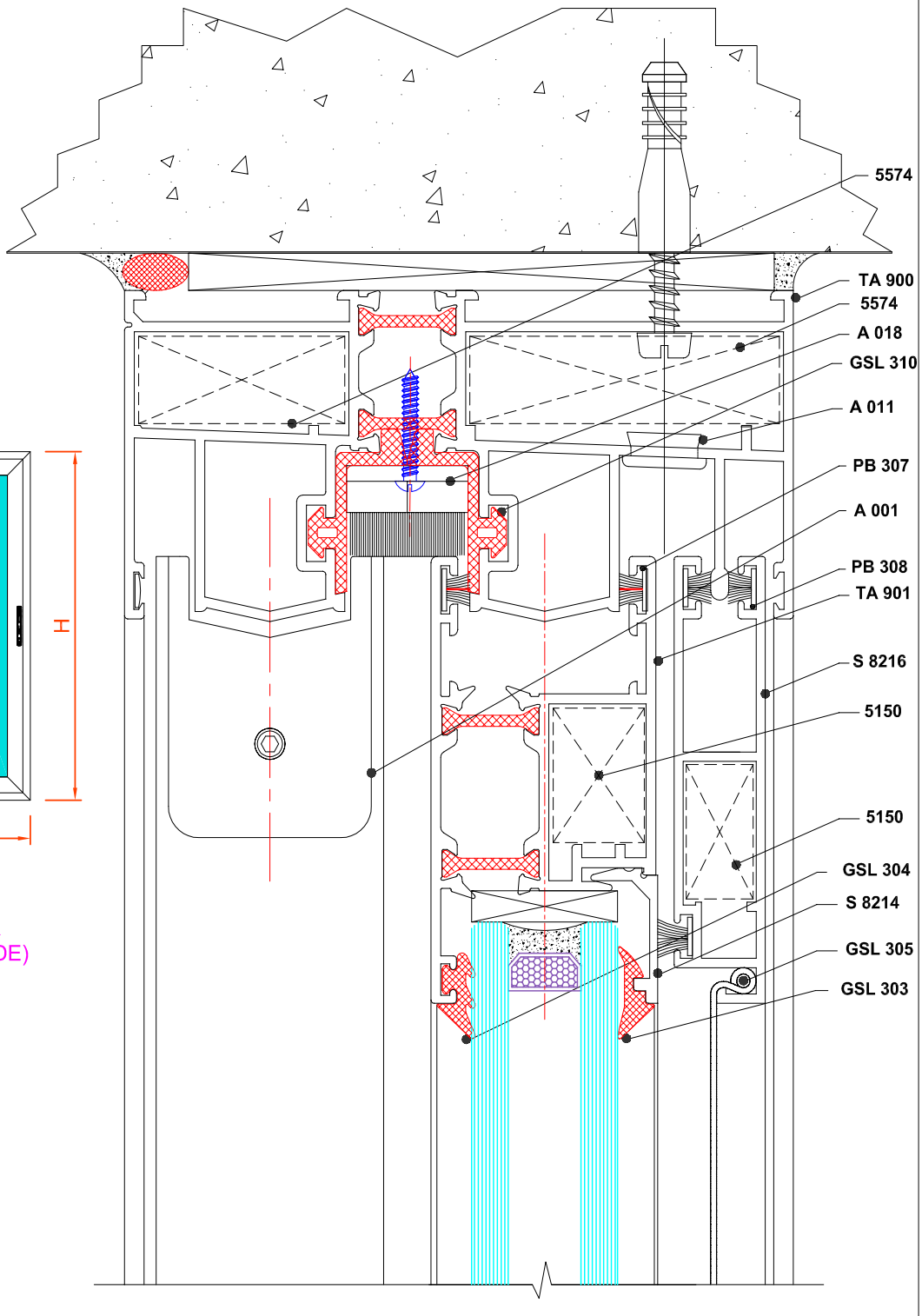
THERMOS 110® SYSTEM

HIGH PERFORMANCE THERMAL BREAK SLIDING 110 SERIES

THERMAL BREAK DOUBLE TRACK SLIDING WINDOW



ELEVATION
(VIEWED FROM INSIDE)

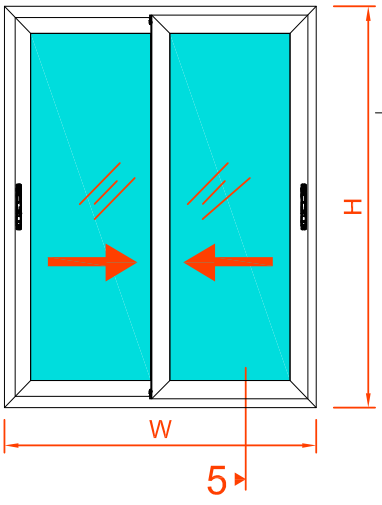


SECTION AT:4

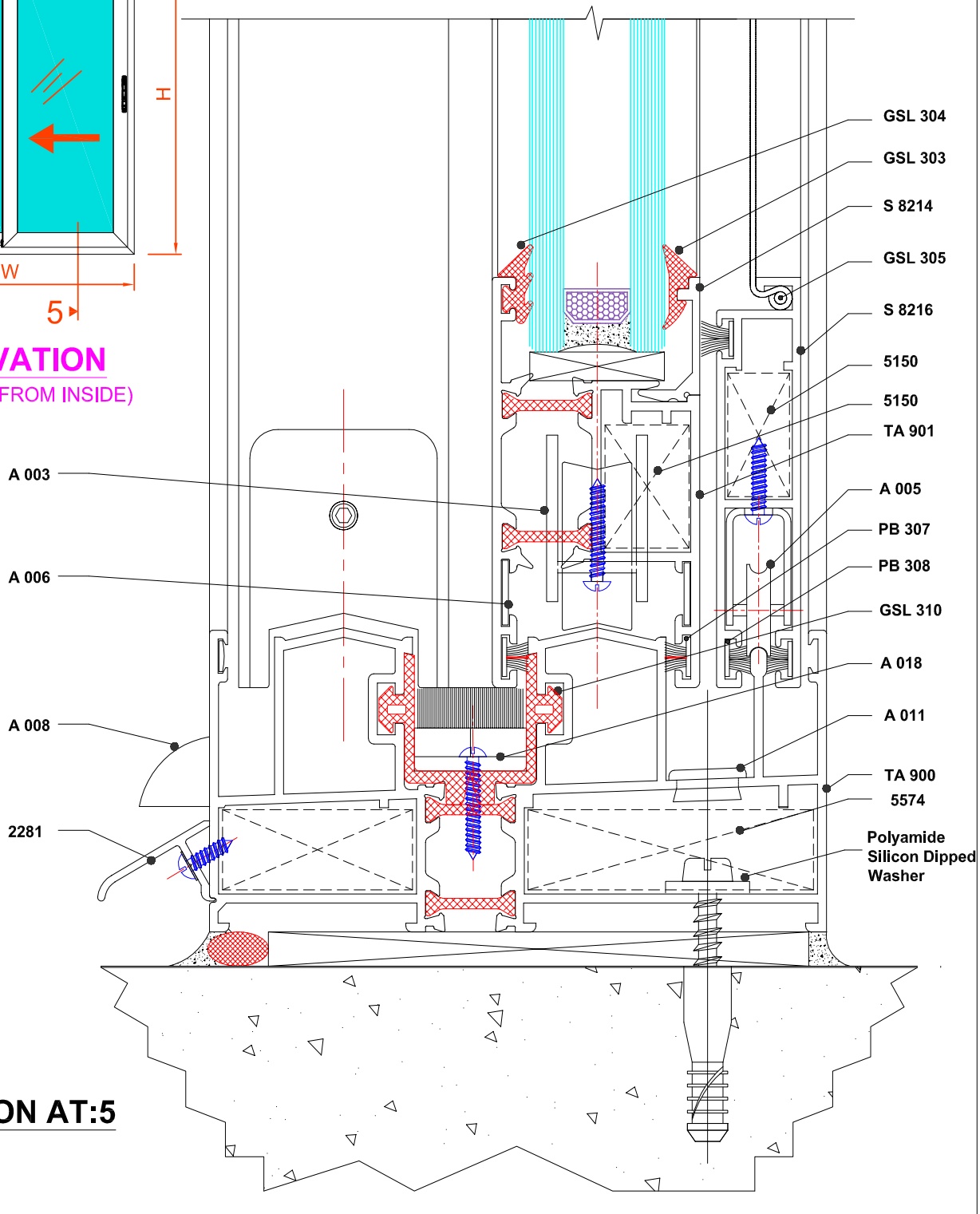
THERMOS 110® SYSTEM

HIGH PERFORMANCE THERMAL BREAK SLIDING 110 SERIES

THERMAL BREAK DOUBLE TRACK SLIDING WINDOW



ELEVATION
(VIEWED FROM INSIDE)

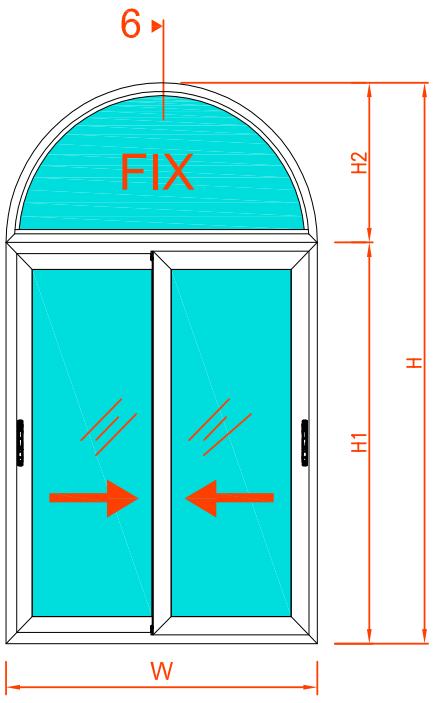


SECTION AT:5

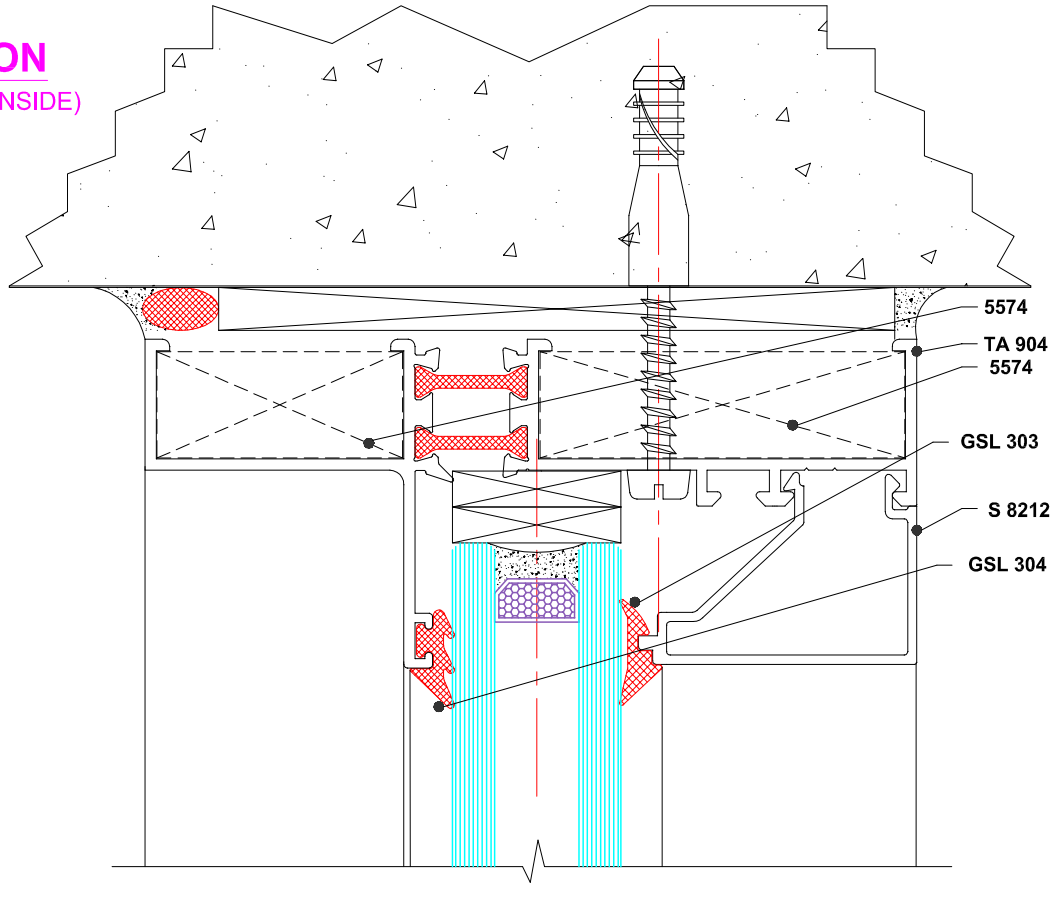
THERMOS 110® SYSTEM

HIGH PERFORMANCE THERMAL BREAK SLIDING 110 SERIES

THERMAL BREAK DOUBLE TRACK SLIDING WINDOW TOP FIXLITE (ARCH)



ELEVATION
(VIEWED FROM INSIDE)

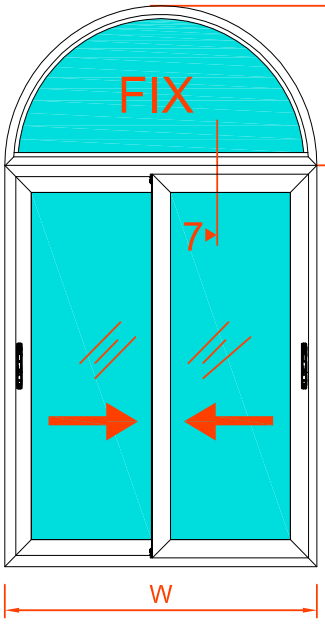


SECTION AT:6

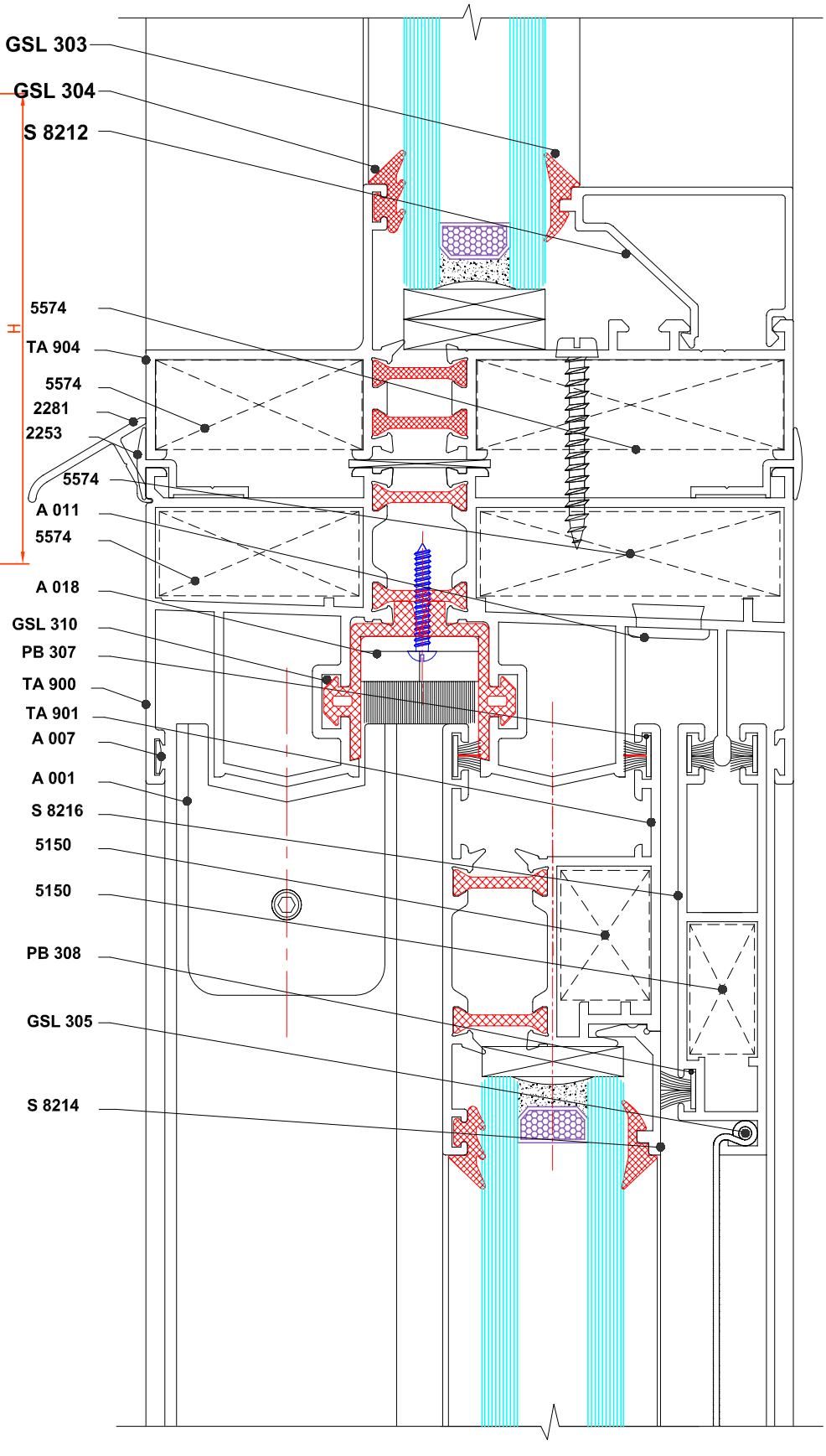
THERMOS 110® SYSTEM

HIGH PERFORMANCE THERMAL BREAK SLIDING 110 SERIES

THERMAL BREAK DOUBLE TRACK SLIDING WINDOW TOP FIXLITE (ARCH)



ELEVATION
(VIEWED FROM INSIDE)

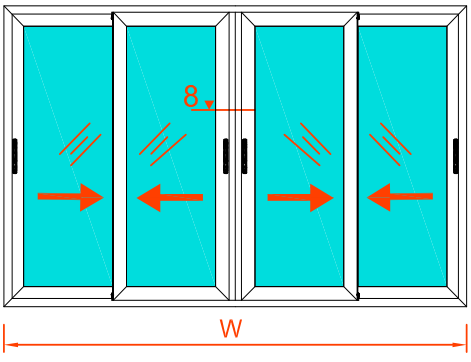


SECTION AT:7

THERMOS 110® SYSTEM

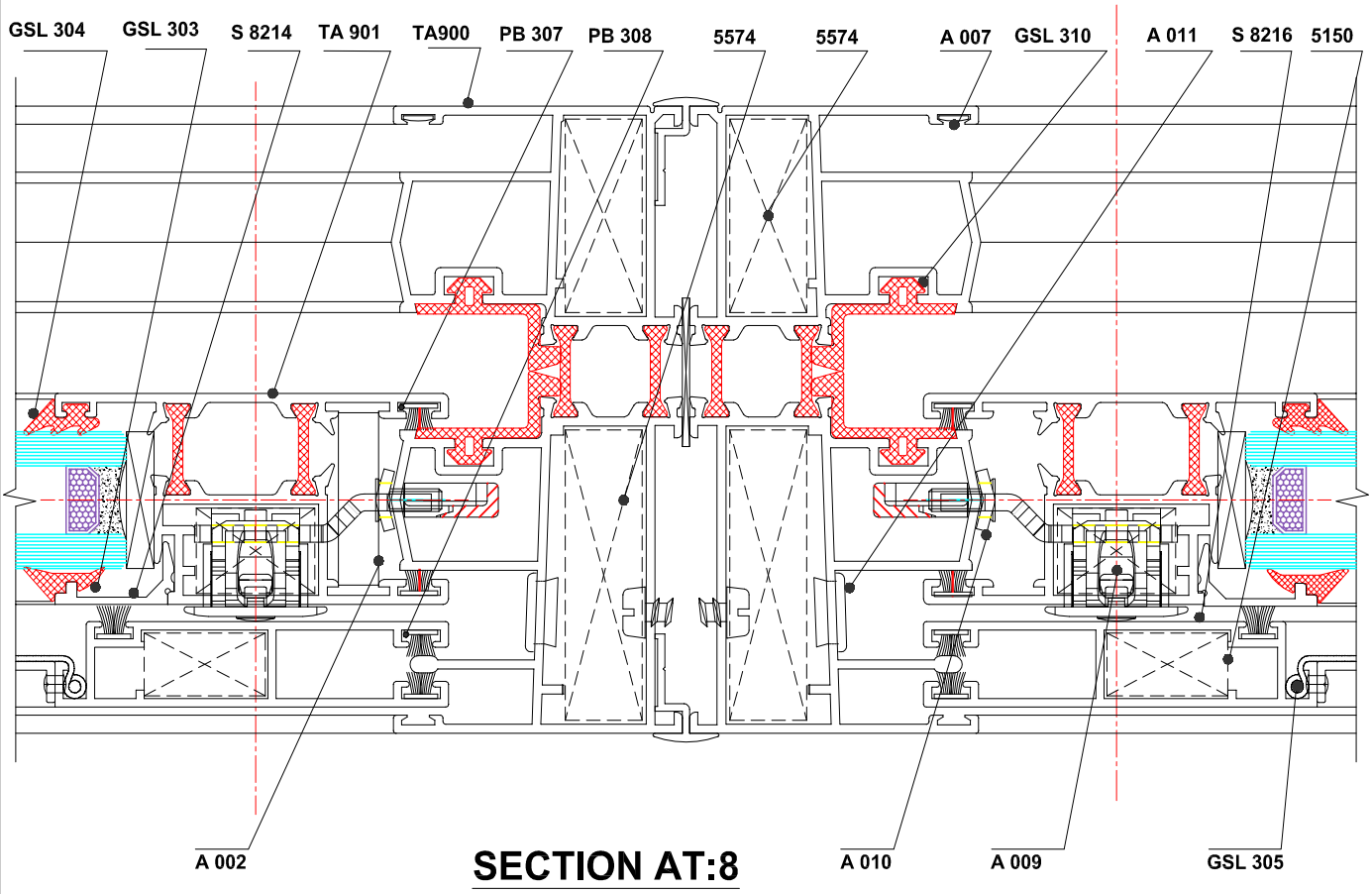
HIGH PERFORMANCE THERMAL BREAK SLIDING 110 SERIES

THERMAL BREAK DOUBLE TRACK 4 PANEL SLIDING WINDOW



ELEVATION

(VIEWED FROM INSIDE)

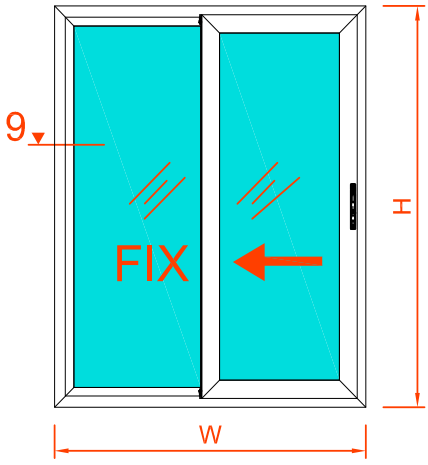


SECTION AT:8

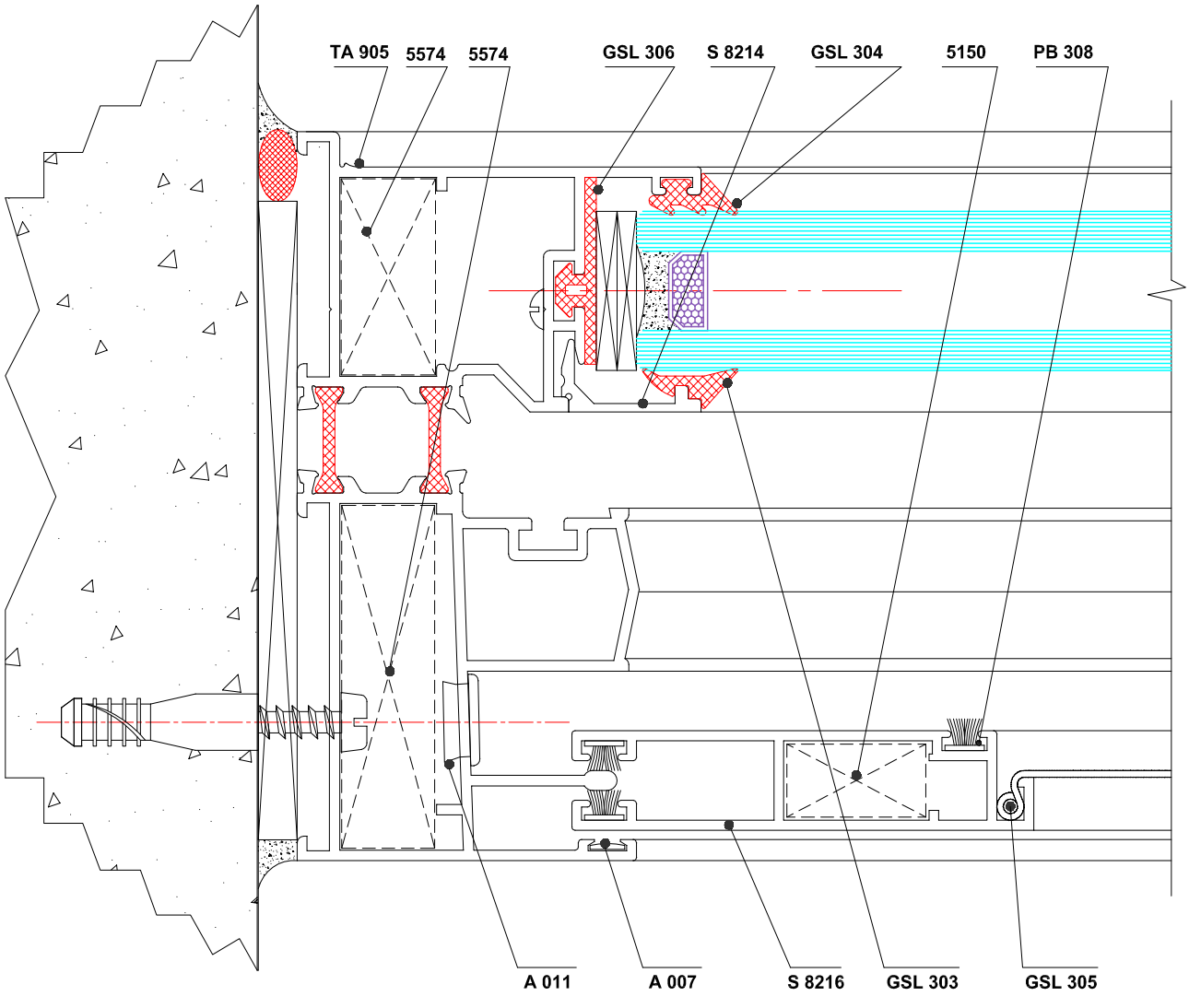
THERMOS 110® SYSTEM

HIGH PERFORMANCE THERMAL BREAK SLIDING 110 SERIES

THERMAL BREAK SINGLE TRACK SLIDING WINDOW



ELEVATION
(VIEWED FROM INSIDE)

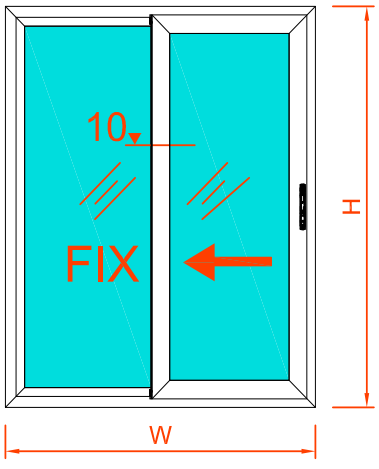


SECTION AT:9

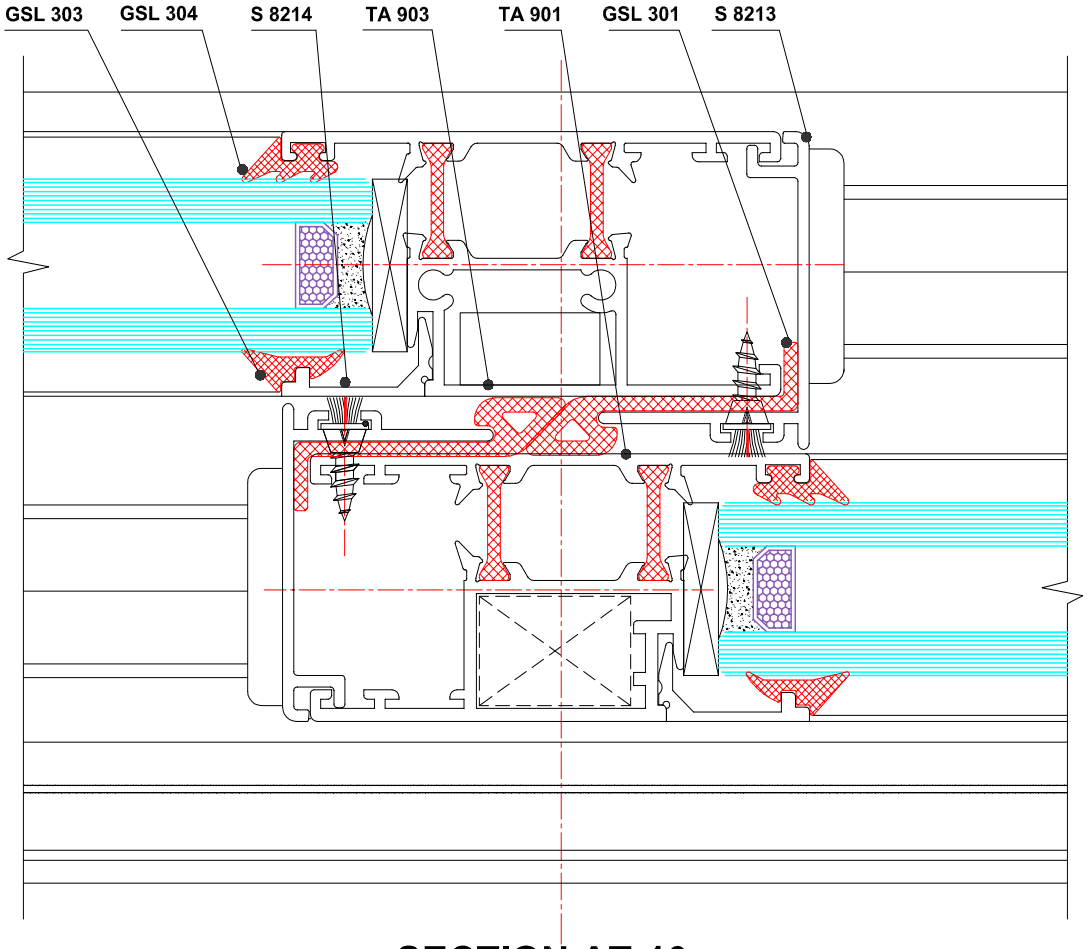
THERMOS 110® SYSTEM

HIGH PERFORMANCE THERMAL BREAK SLIDING 110 SERIES

THERMAL BREAK SINGLE TRACK SLIDING WINDOW



ELEVATION
(VIEWED FROM INSIDE)

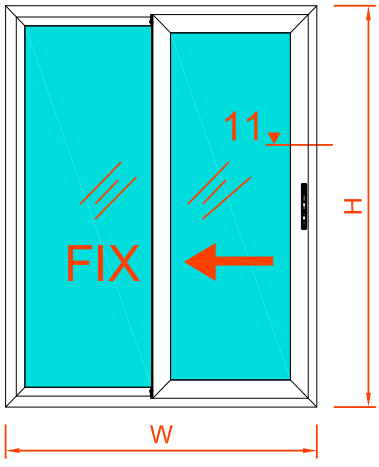


SECTION AT:10

THERMOS 110® SYSTEM

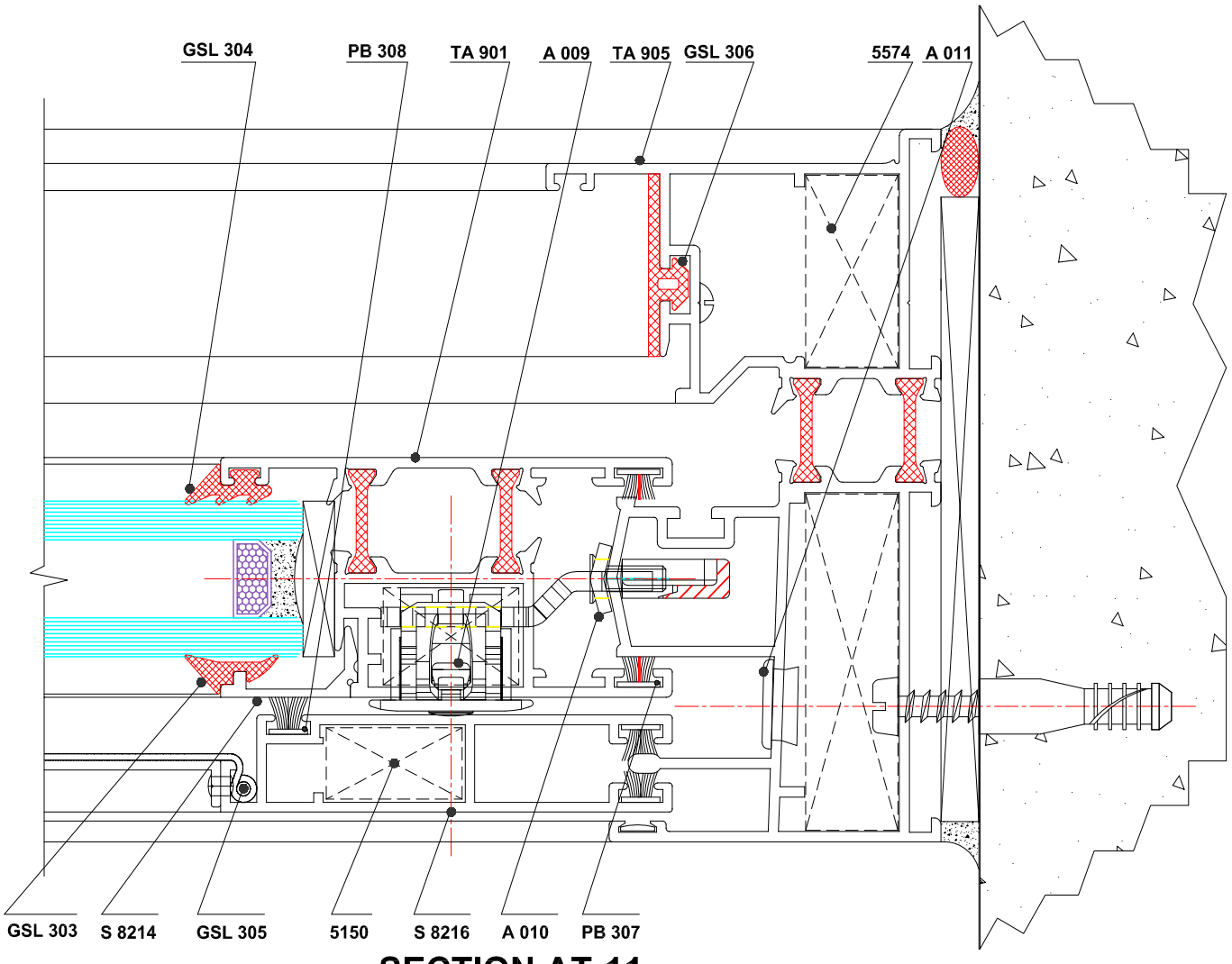
HIGH PERFORMANCE THERMAL BREAK SLIDING 110 SERIES

THERMAL BREAK SINGLE TRACK SLIDING WINDOW



ELEVATION

(VIEWED FROM INSIDE)

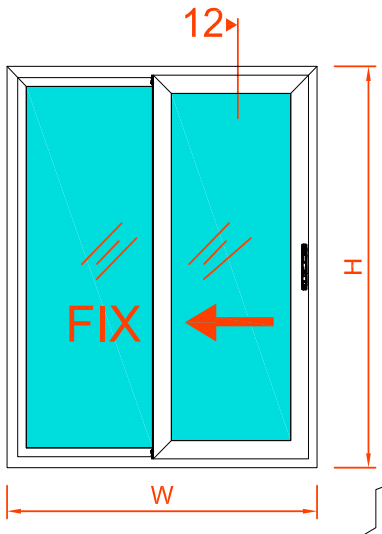


SECTION AT:11

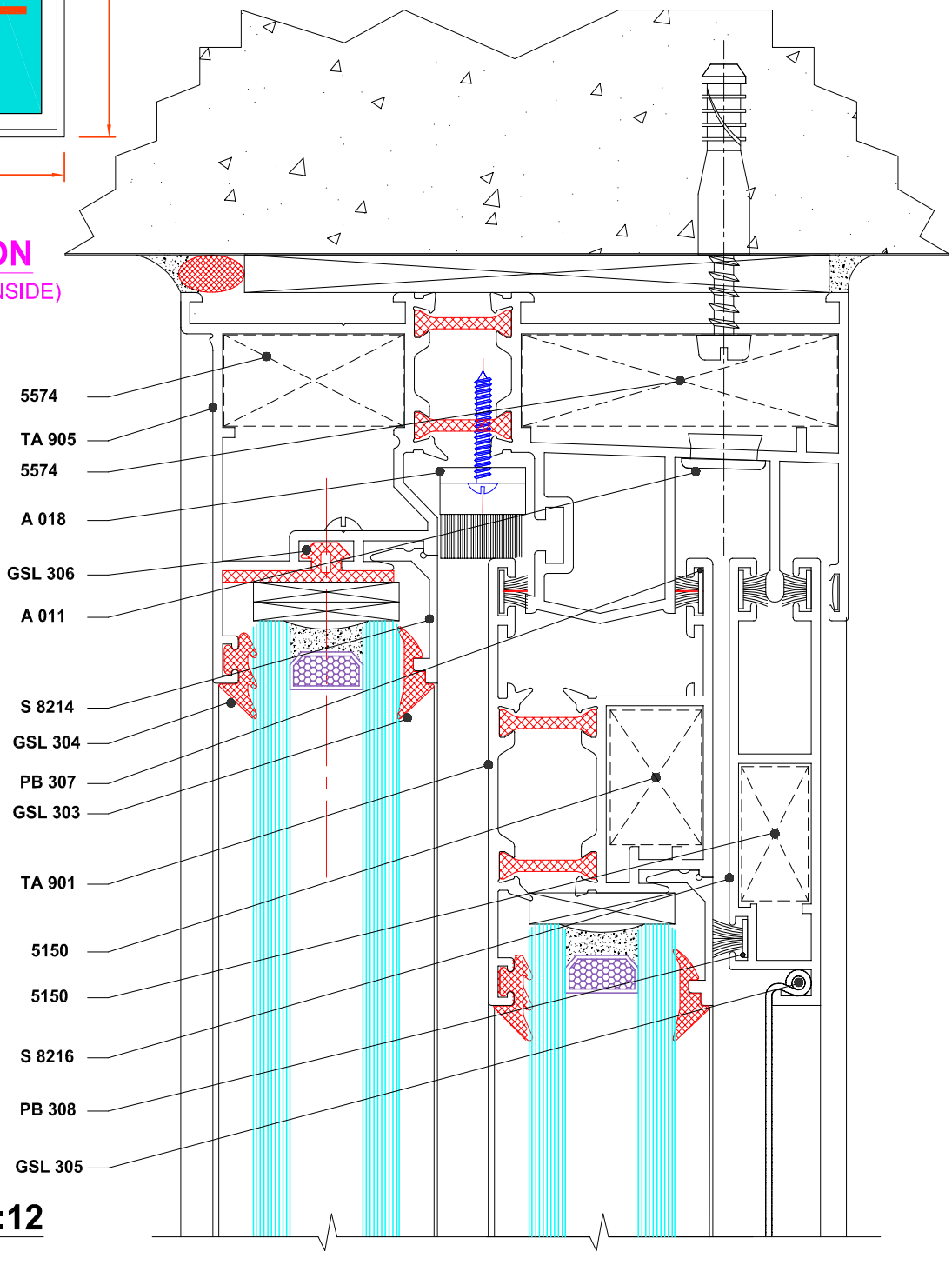
THERMOS 110® SYSTEM

HIGH PERFORMANCE THERMAL BREAK SLIDING 110 SERIES

THERMAL BREAK SINGLE TRACK SLIDING WINDOW



ELEVATION
(VIEWED FROM INSIDE)

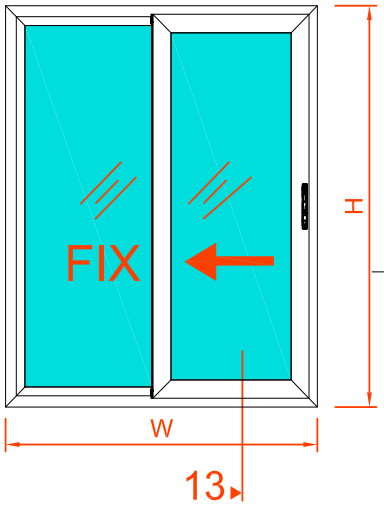


SECTION AT:12

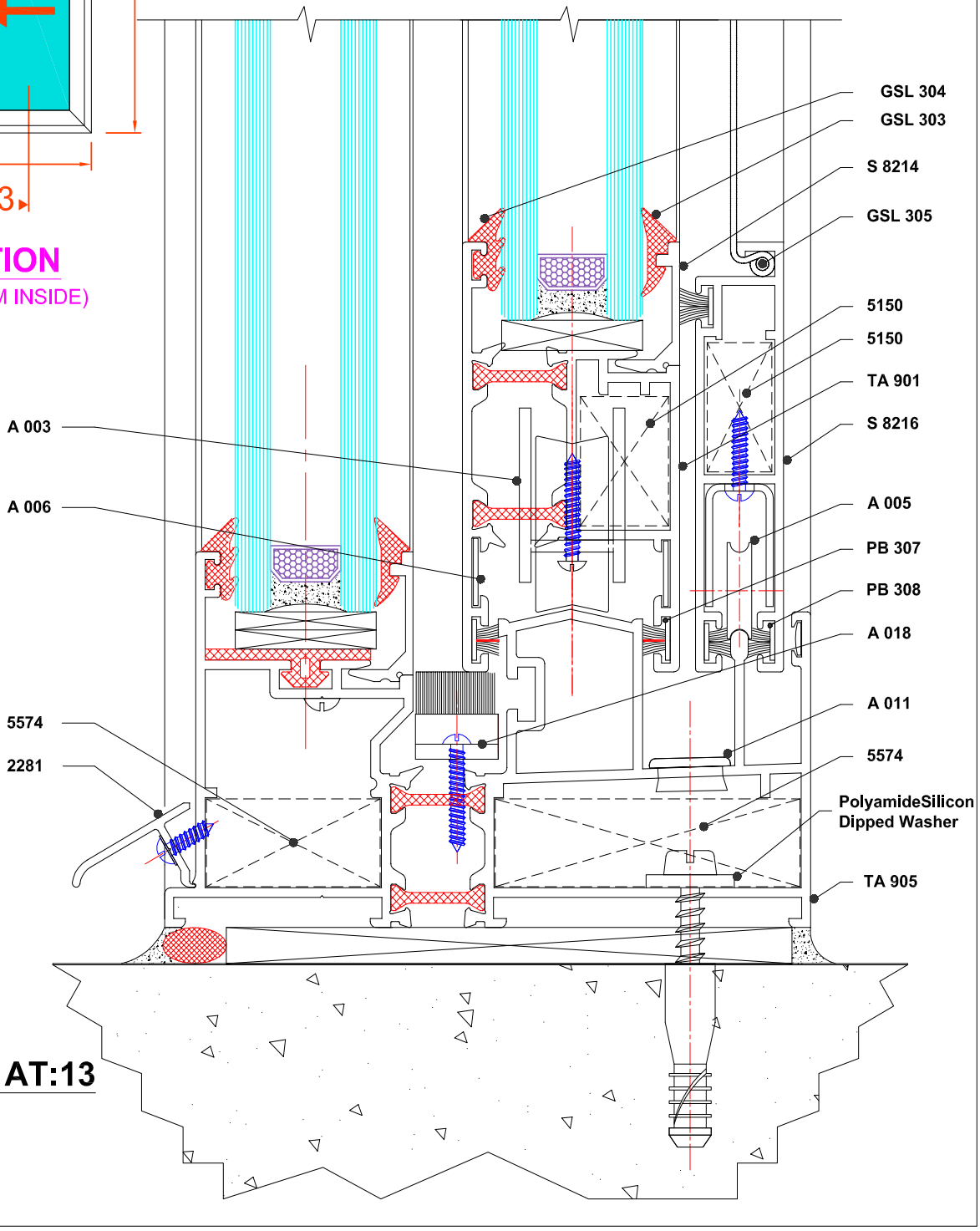
THERMOS 110® SYSTEM

HIGH PERFORMANCE THERMAL BREAK SLIDING 110 SERIES

THERMAL BREAK SINGLE TRACK SLIDING WINDOW



ELEVATION
(VIEWED FROM INSIDE)

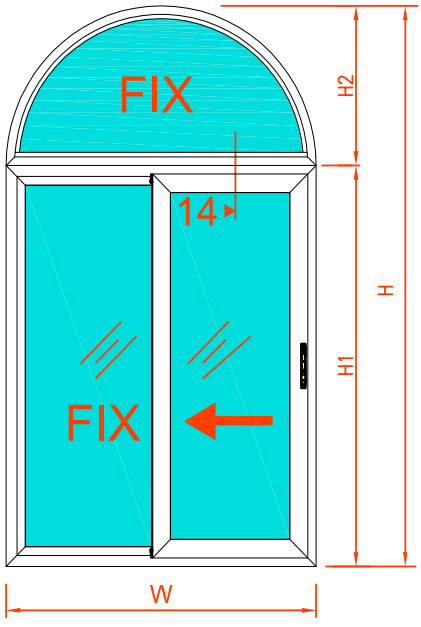


SECTION AT:13

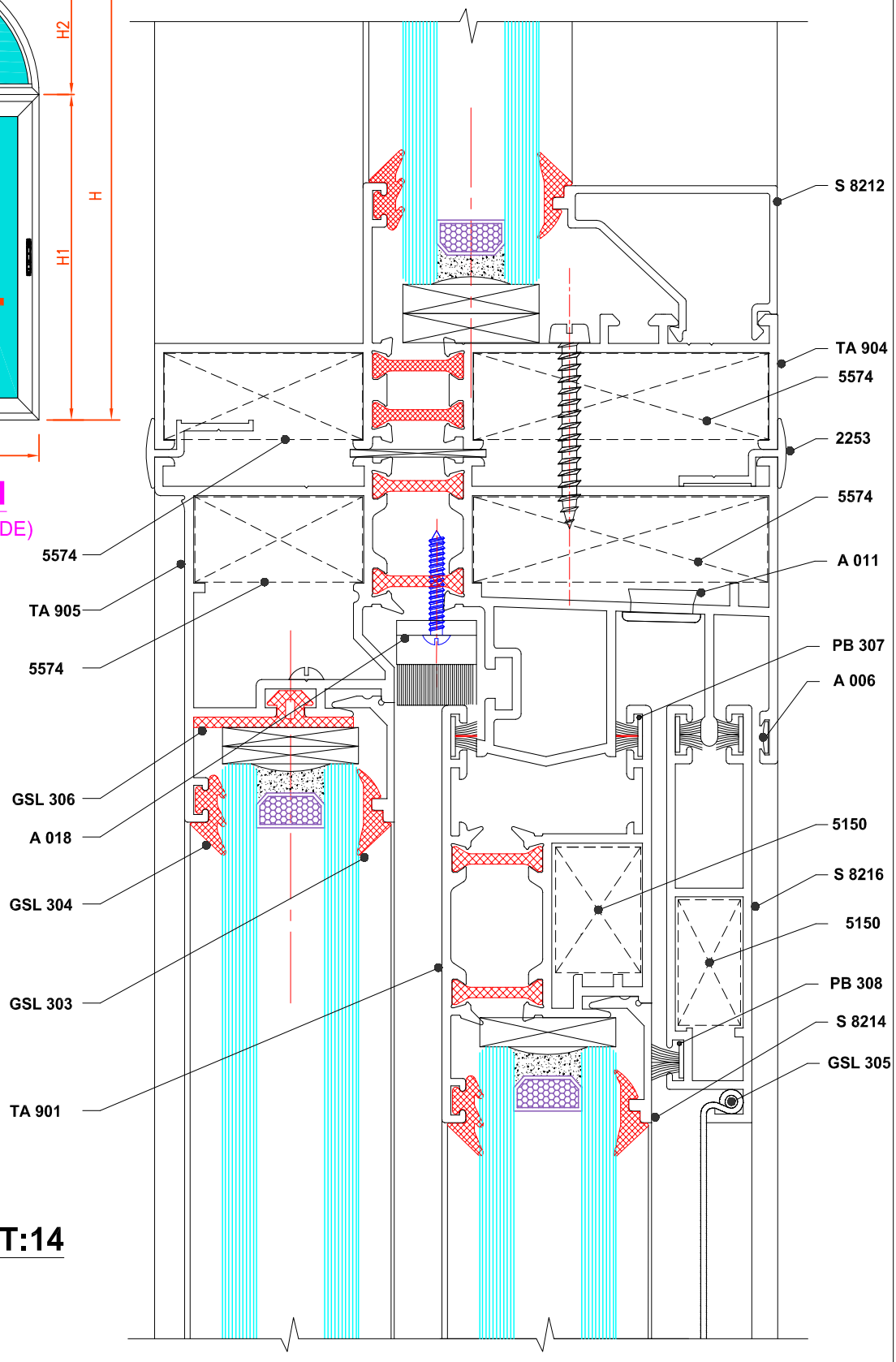
THERMOS 110® SYSTEM

HIGH PERFORMANCE THERMAL BREAK SLIDING 110 SERIES

THERMAL BREAK SINGLE TRACK SLIDING WINDOW TOP FIXLITE (ARCH)



ELEVATION
(VIEWED FROM INSIDE)

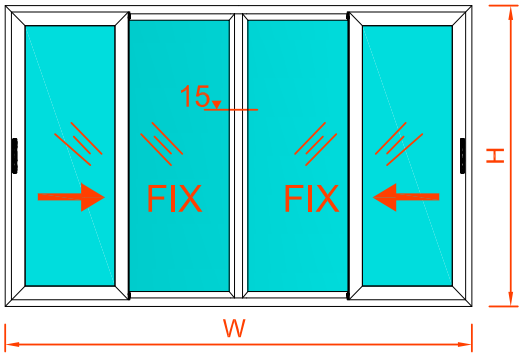


SECTION AT:14

THERMOS 110® SYSTEM

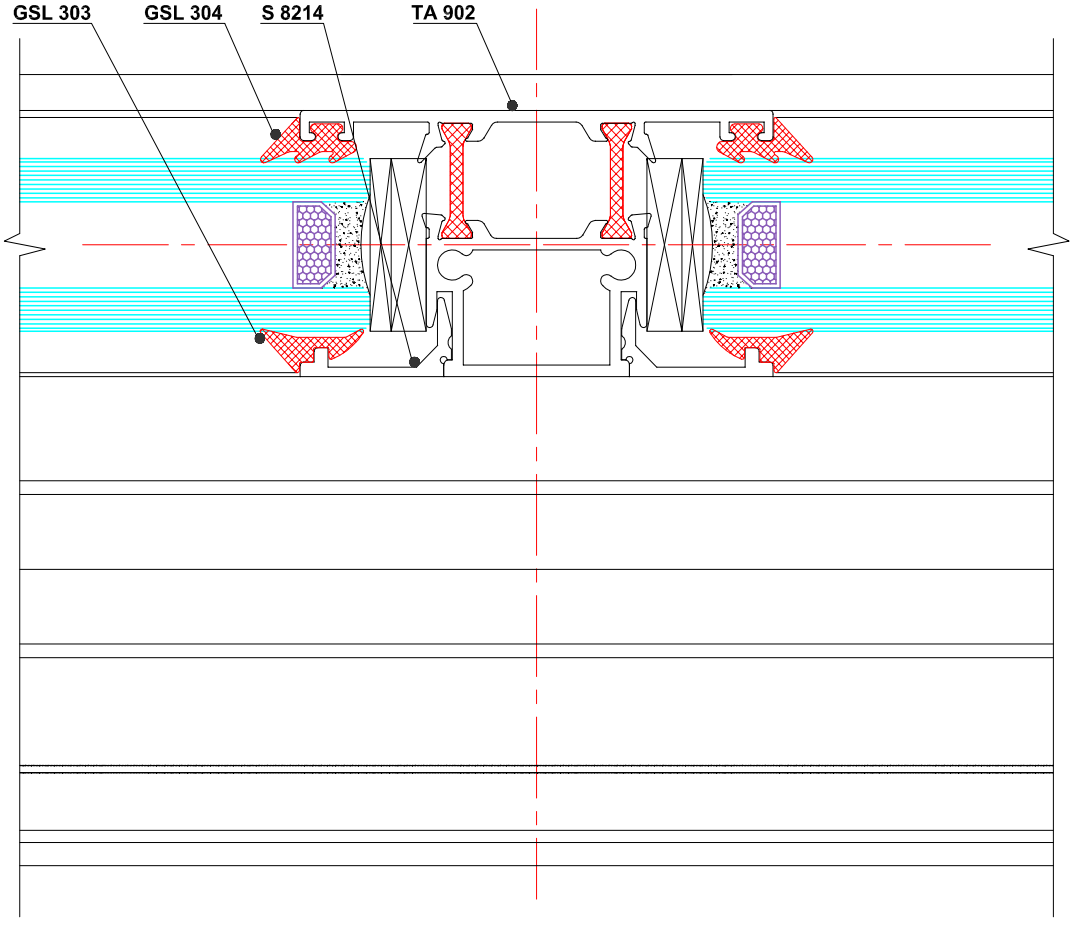
HIGH PERFORMANCE THERMAL BREAK SLIDING 110 SERIES

THERMAL BREAK SINGLE TRACK CENTER 2 FIXLITE SIDES 2 SLIDING SASH WINDOW/DOORS



ELEVATION

(VIEWED FROM INSIDE)

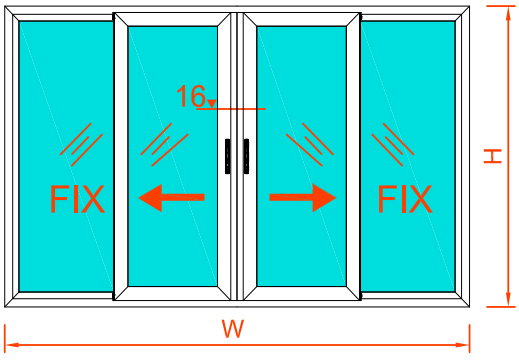


SECTION AT:15

THERMOS 110® SYSTEM

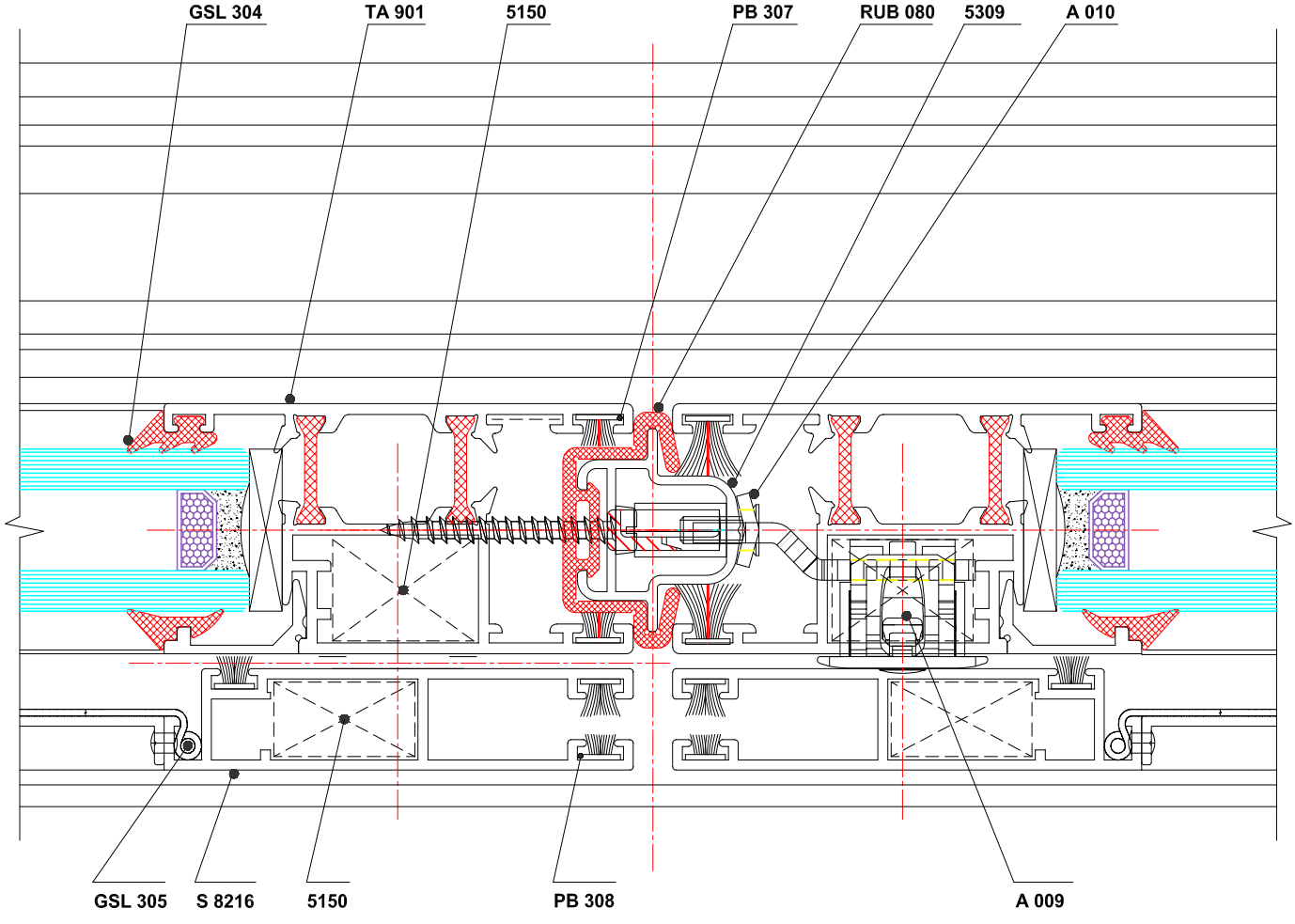
HIGH PERFORMANCE THERMAL BREAK SLIDING 110 SERIES

THERMAL BREAK SINGLE TRACK CENTER 2 SLIDING SASH 2 FIXLITE WINDOW/DOORS



ELEVATION

(VIEWED FROM INSIDE)



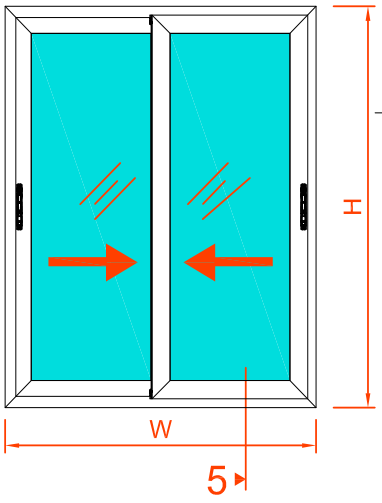
SECTION AT:16

THERMOS 110® SYSTEM

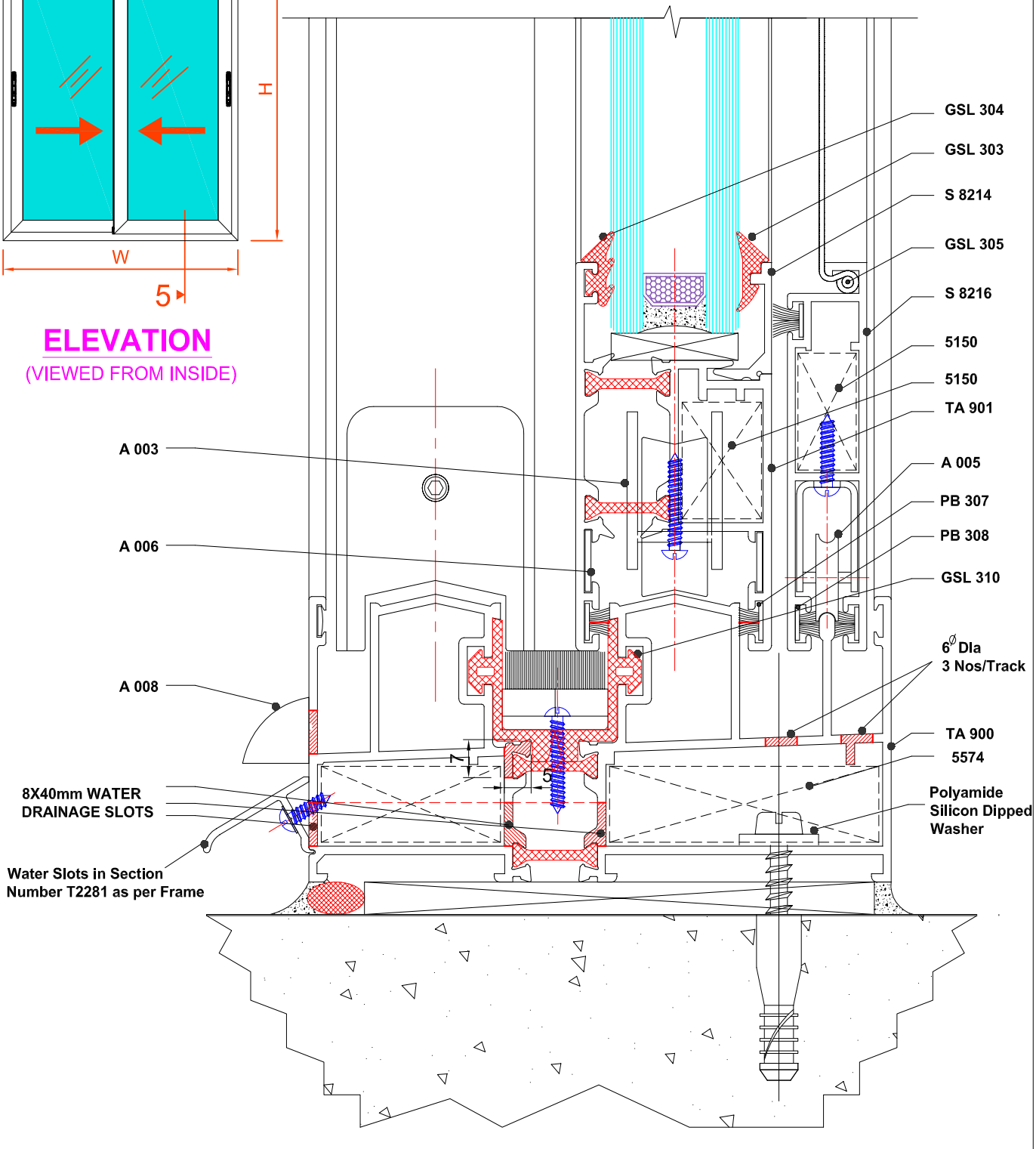
HIGH PERFORMANCE THERMAL BREAK SLIDING 110 SERIES

THERMAL BREAK DOUBLE TRACK SLIDING WINDOW

WATER DRAINAGE SLOTS DETAILS



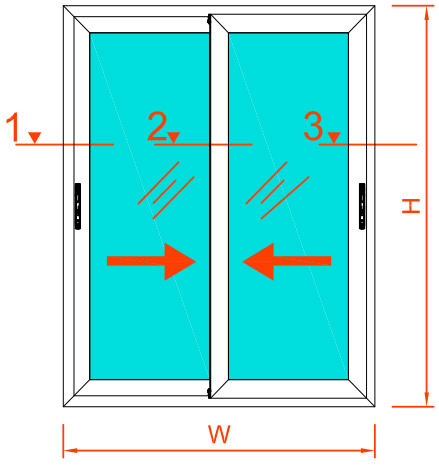
ELEVATION
(VIEWED FROM INSIDE)

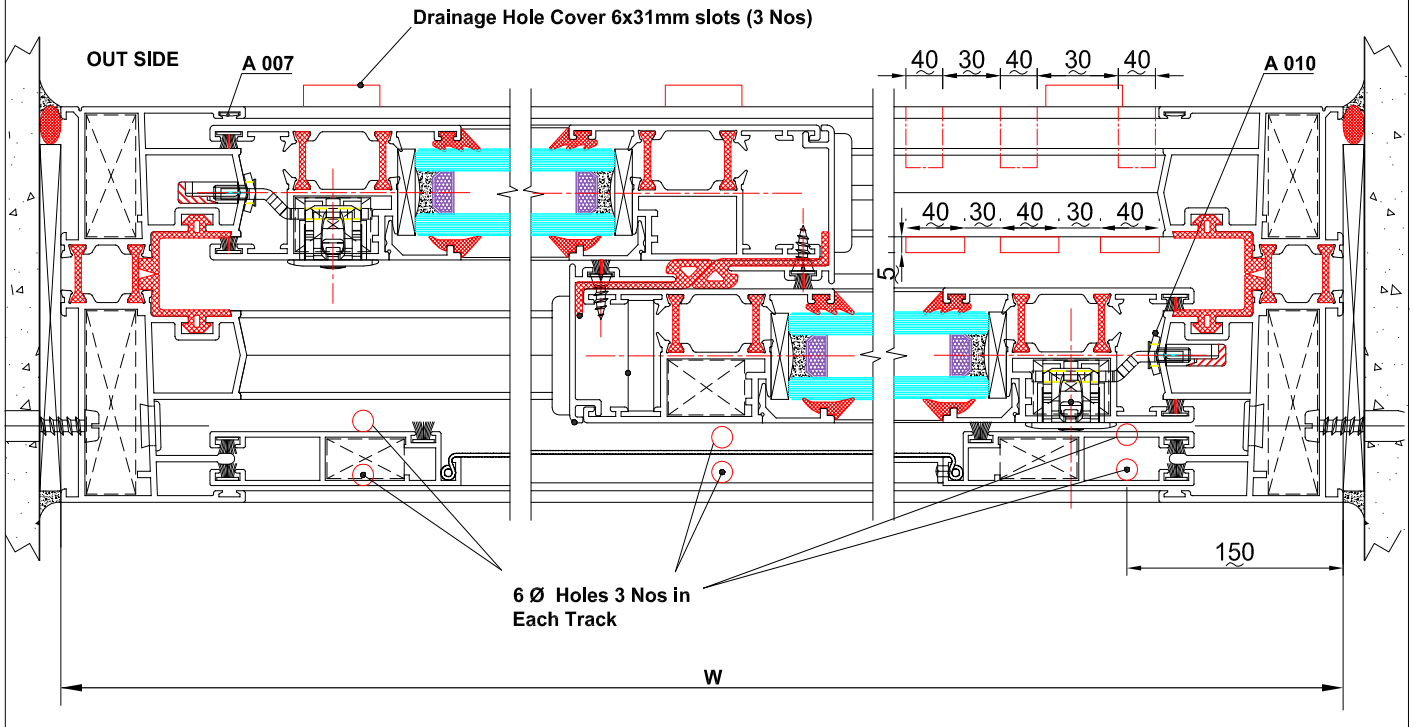


THERMOS 110® SYSTEM

HIGH PERFORMANCE THERMAL BREAK SLIDING 110 SERIES

THERMAL BREAK DOUBLE TRACK 2 PANEL SLIDING WINDOW





1 2 3

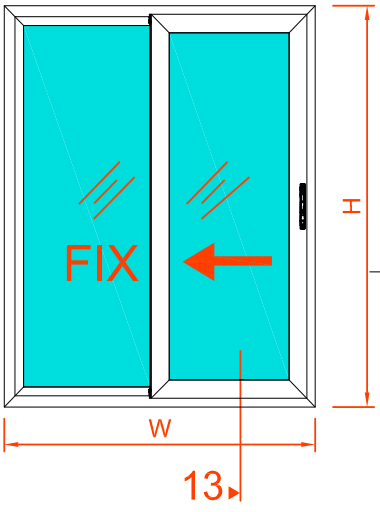
WATER DRAINAGE SLOTS DETAILS

THERMOS 110® SYSTEM

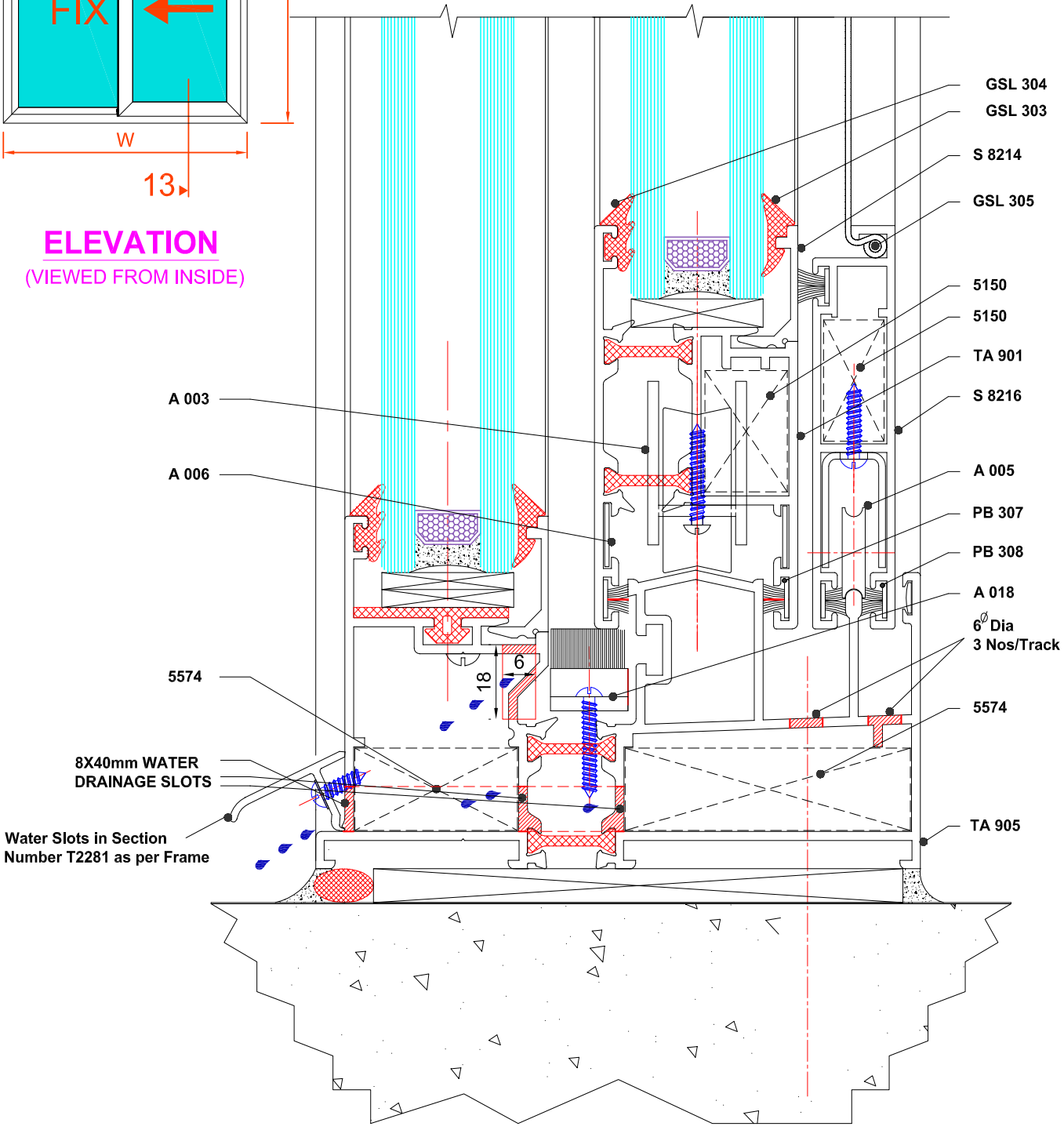
HIGH PERFORMANCE THERMAL BREAK SLIDING 110 SERIES

THERMAL BREAK SINGLE TRACK SLIDING WINDOW

WATER DRAINAGE SLOTS DETAILS



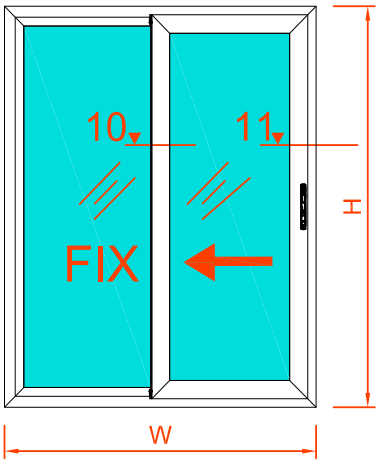
ELEVATION
(VIEWED FROM INSIDE)



THERMOS 110® SYSTEM

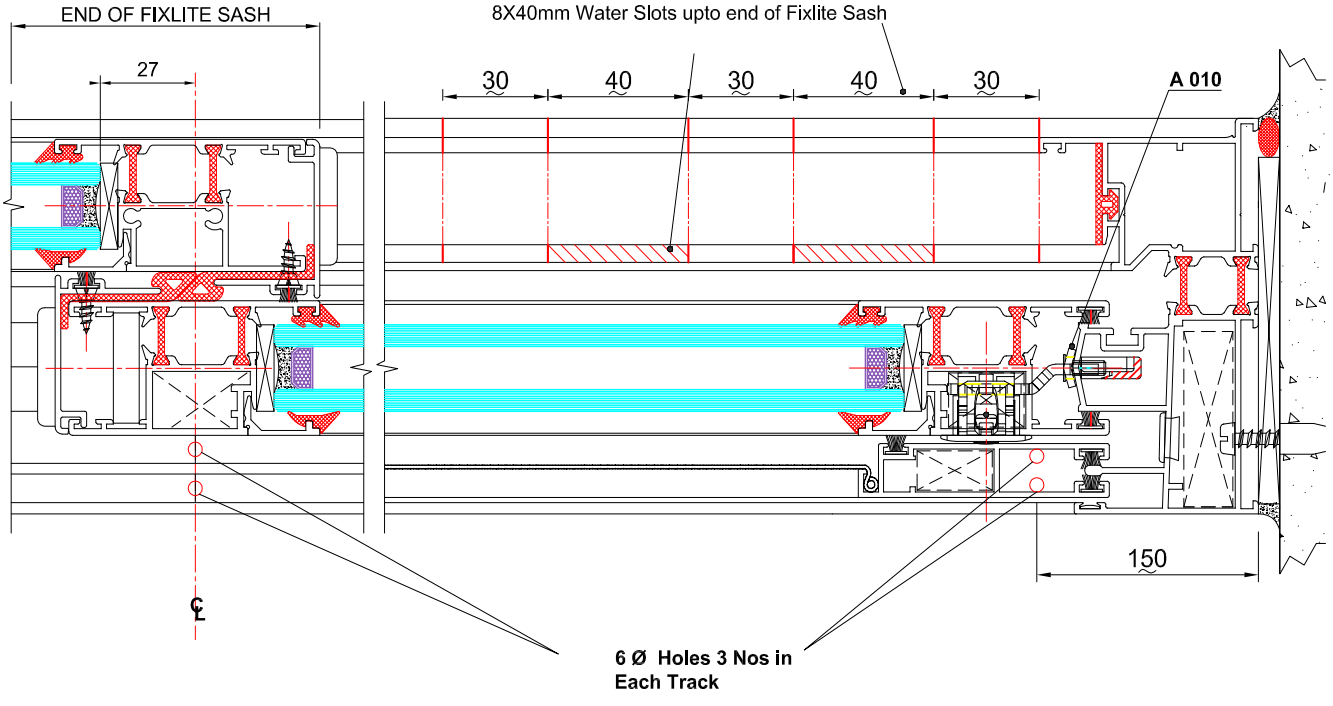
HIGH PERFORMANCE THERMAL BREAK SLIDING 110 SERIES

THERMAL BREAK SINGLE TRACK 1 PANEL SLIDING 1 PANEL FIXLITE WINDOW



ELEVATION

(VIEWED FROM INSIDE)

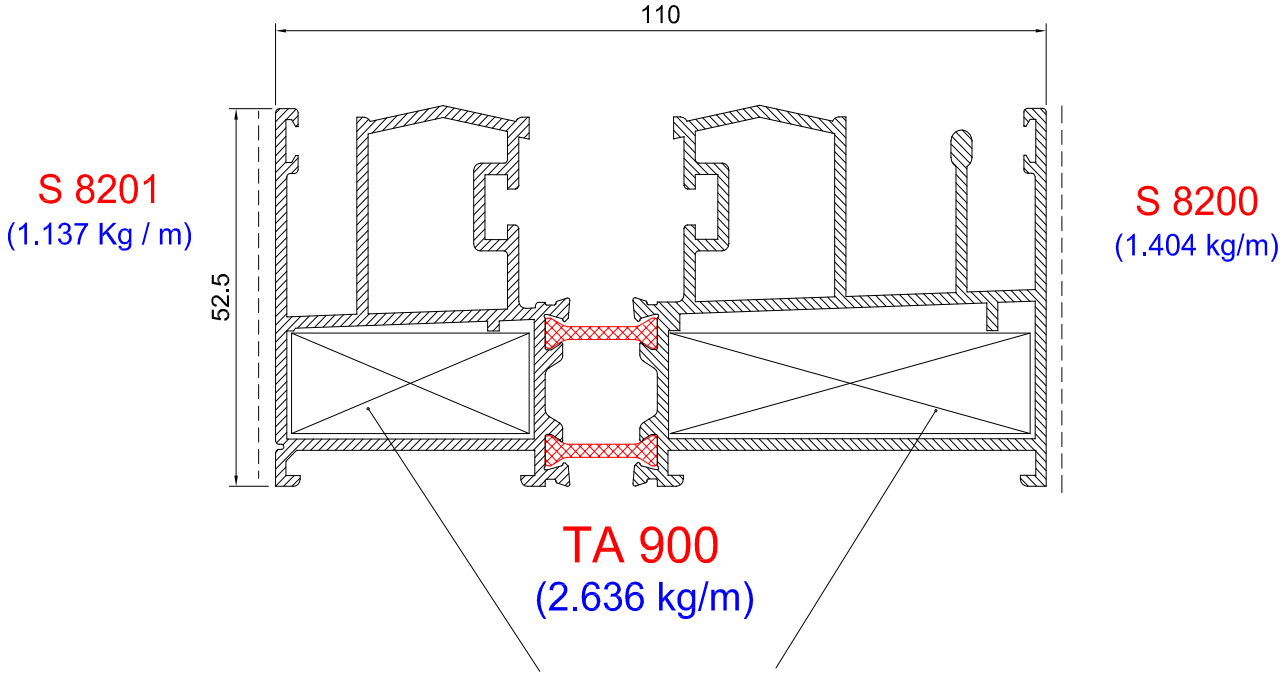


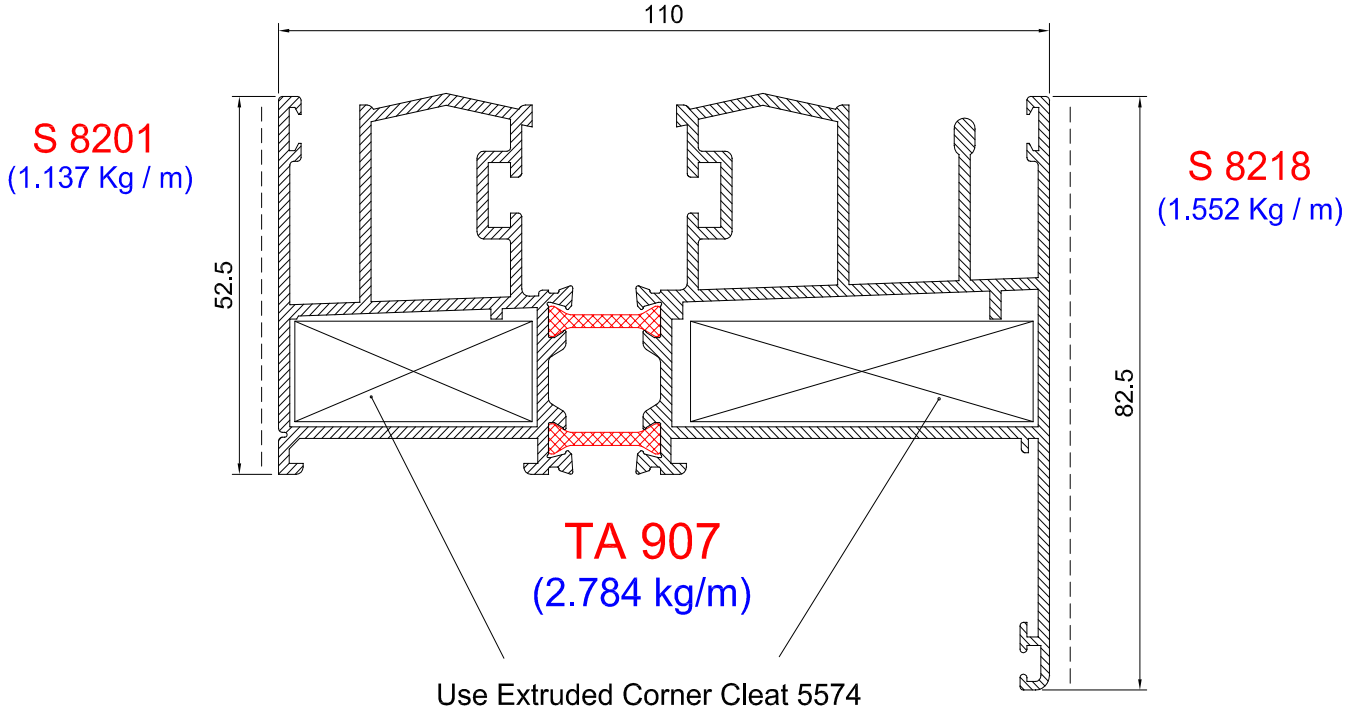
10 11

WATER DRAINAGE SLOTS DETAILS

THERMOS 110® SYSTEM

HIGH PERFORMANCE THERMAL BREAK SLIDING 110 SERIES

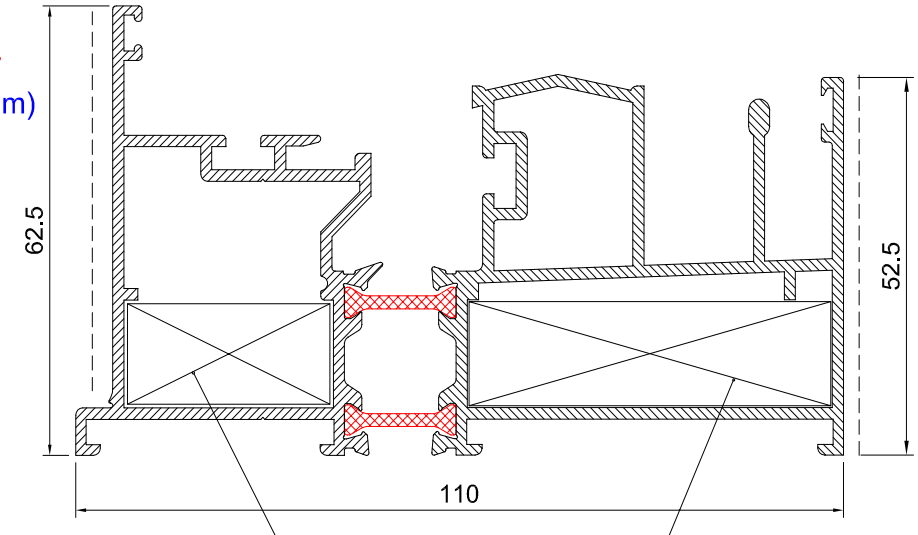




THERMOS 110® SYSTEM

HIGH PERFORMANCE THERMAL BREAK SLIDING 110 SERIES

S 8204
(0.977 Kg / m)

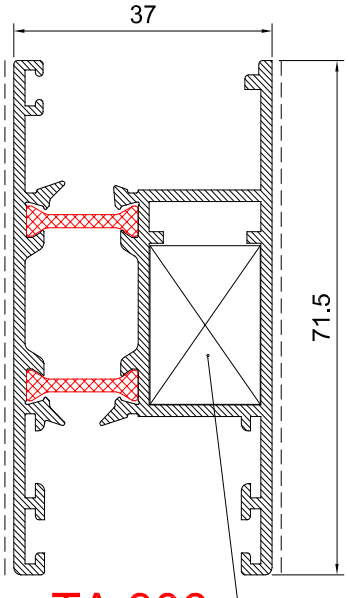


S 8200
(1.404 Kg / m)

TA 905
(2.476 kg/m)

Use Extruded Corner Cleat 5574

S 8206
(0.471 kg/m)



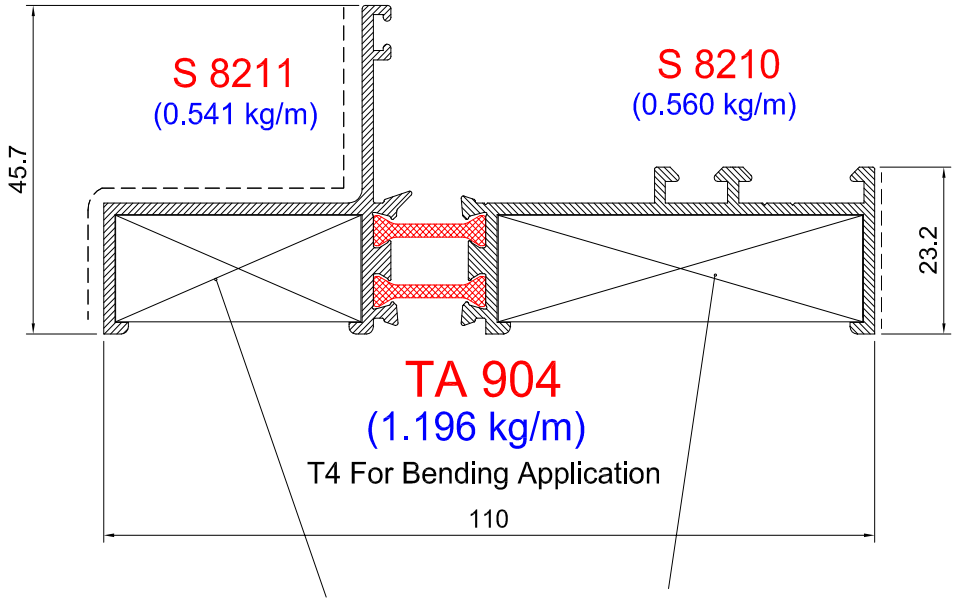
S 8203
(0.738 Kg / m)

TA 906
(1.304 kg/m)

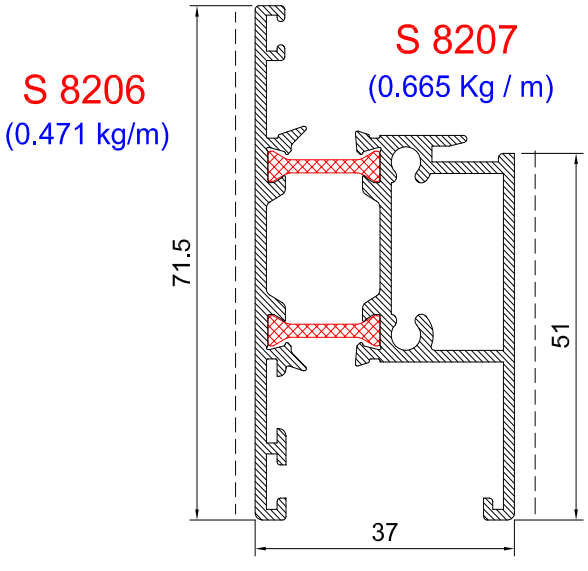
Use Extruded Corner Cleat 5150

THERMOS 110® SYSTEM

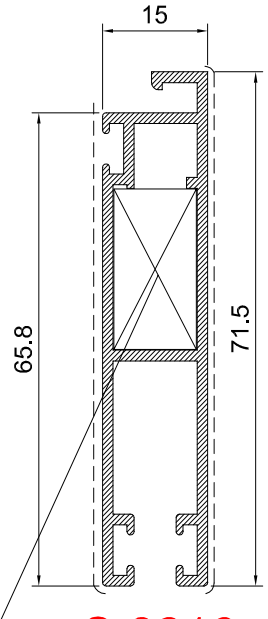
HIGH PERFORMANCE THERMAL BREAK SLIDING 110 SERIES



Use Extruded Corner Cleat 5574



TA 903
(1.231 kg/m)

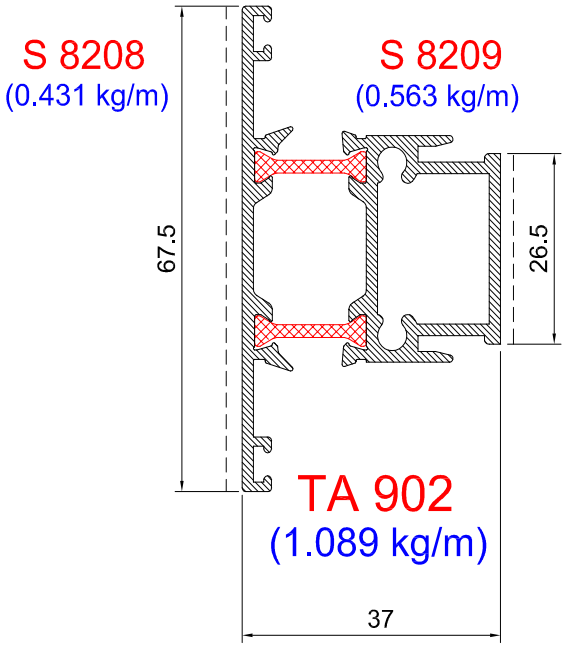


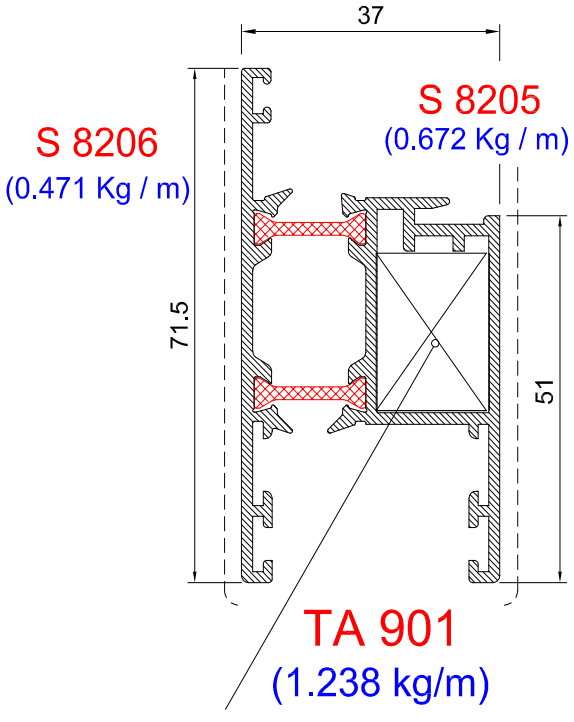
S 8216
(0.771 Kg / m)

Use Extruded Corner Cleat 5150

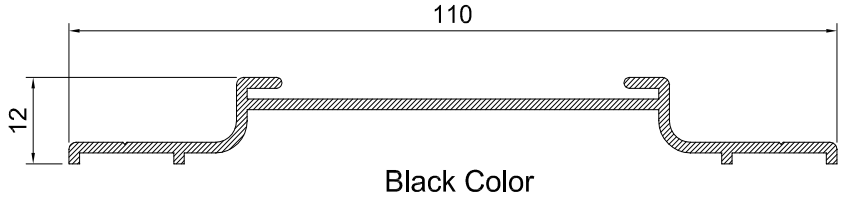
THERMOS 110® SYSTEM

HIGH PERFORMANCE THERMAL BREAK SLIDING 110 SERIES





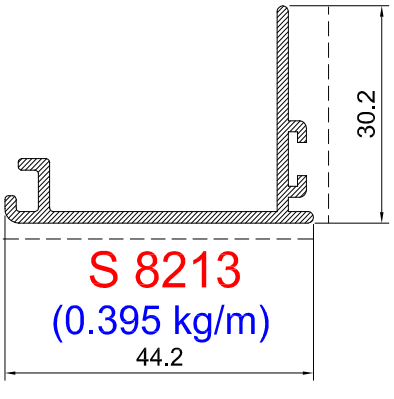
Use Extruded Corner Cleat 5150

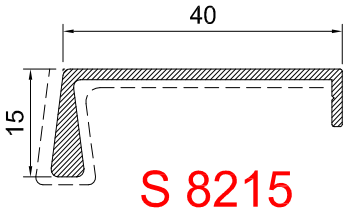


Black Color

S 8217

(0.566 kg/m)





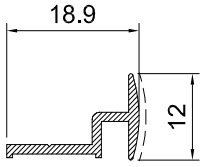
S 8215

(0.303 kg/m)

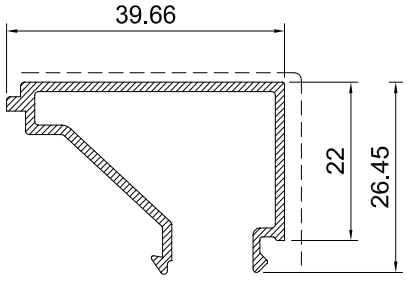
Fly Screen Handle

THERMOS 110® SYSTEM

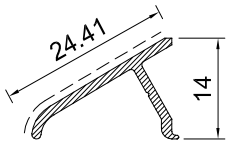
HIGH PERFORMANCE THERMAL BREAK SLIDING 110 SERIES



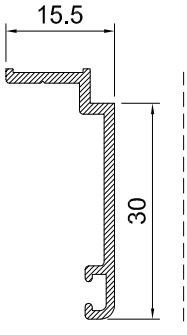
2253
(0.116 kg/m)



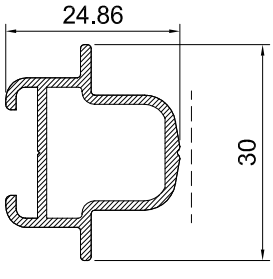
S 8212
(0.380 kg/m)
T4 For Bending Application



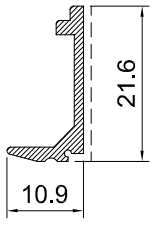
2281
(0.127 kg/m)



3109
(0.214 kg/m)



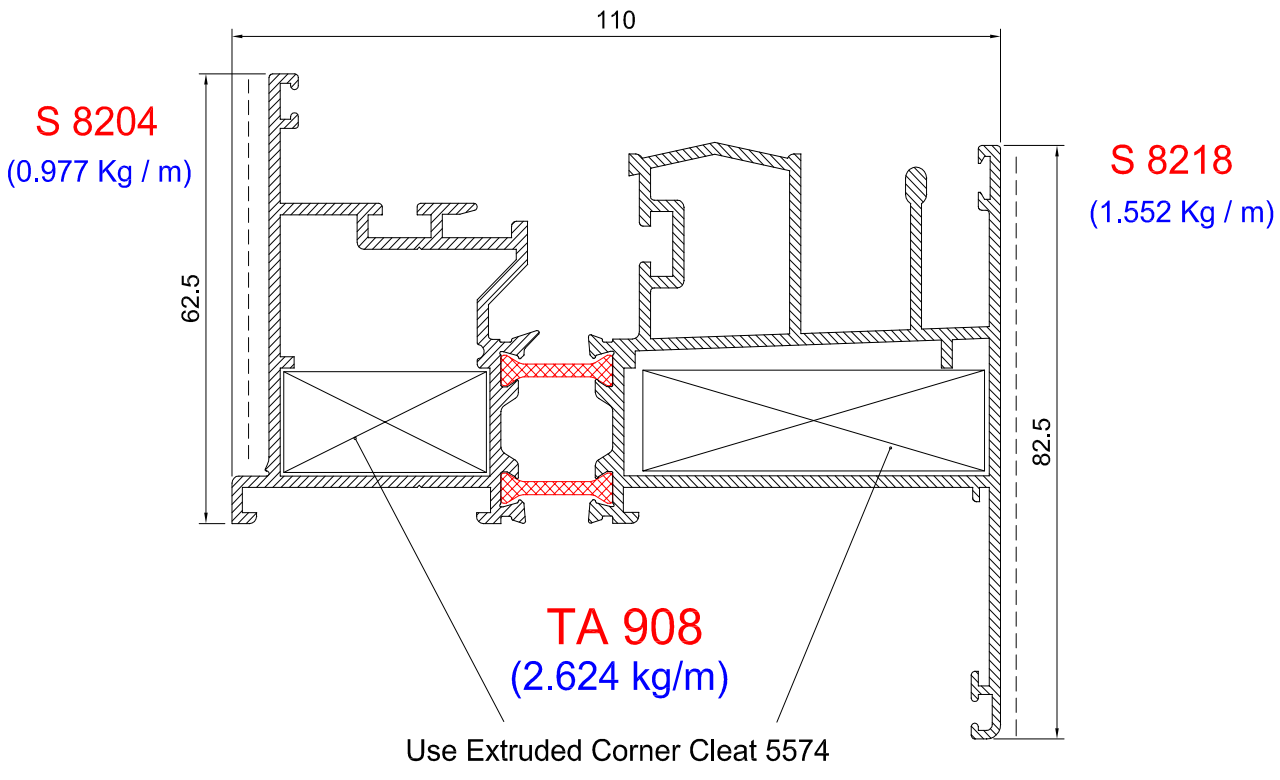
5309
(0.351 kg/m)

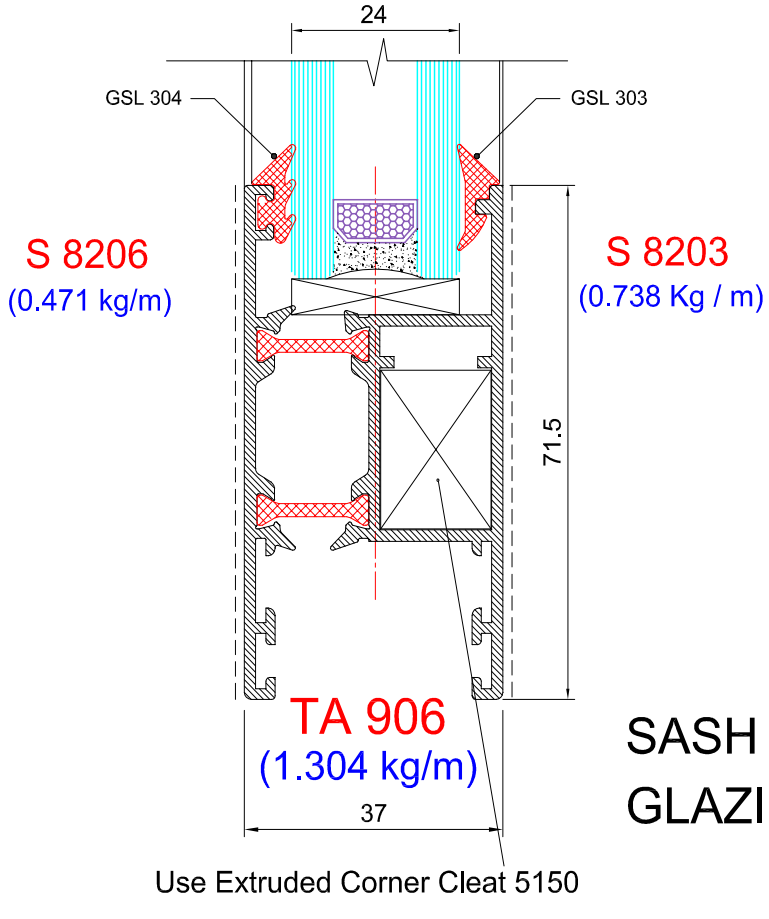


S 8214
(0.139 kg/m)

THERMOS 110® SYSTEM

HIGH PERFORMANCE THERMAL BREAK SLIDING 110 SERIES

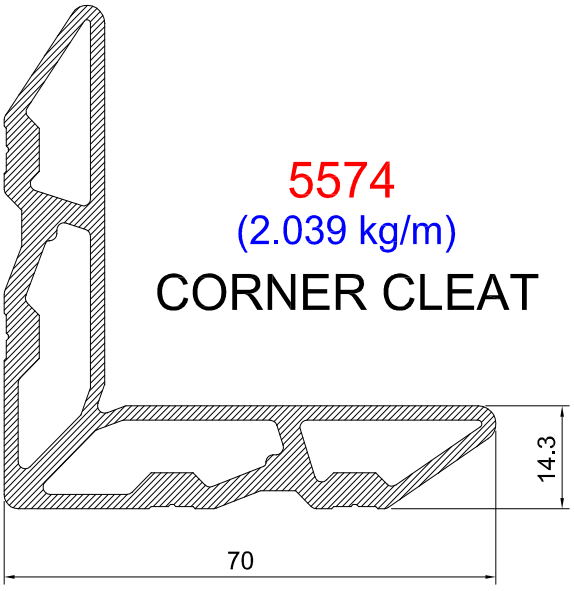




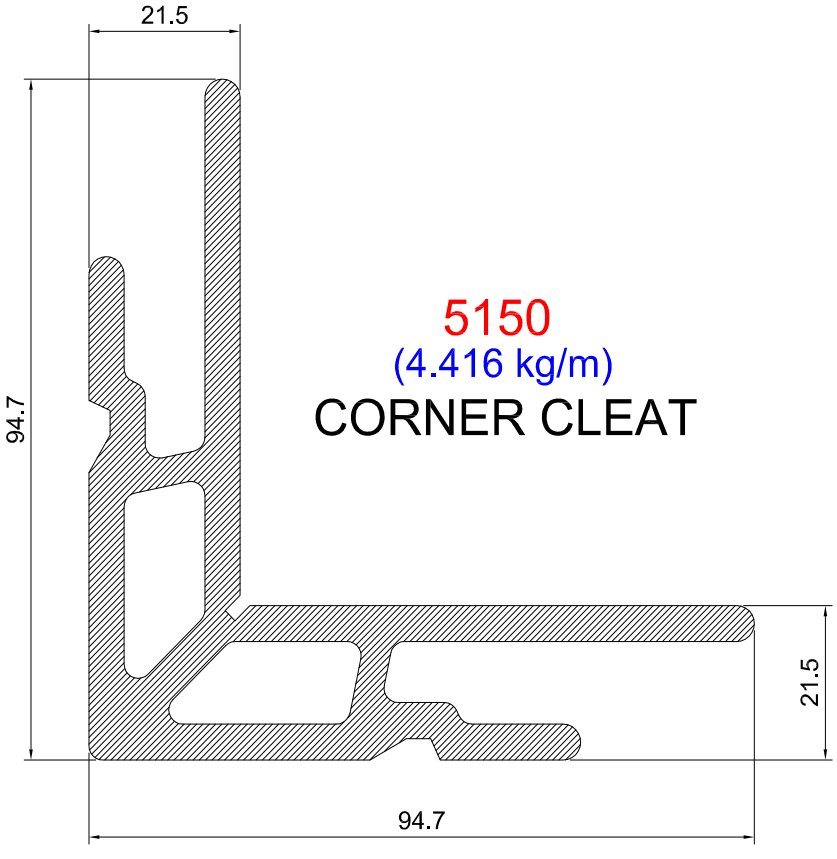
SASH BUILT WITH GLAZING CLIP

THERMOS 110® SYSTEM

HIGH PERFORMANCE THERMAL BREAK SLIDING 110 SERIES



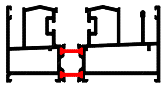
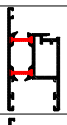
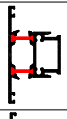
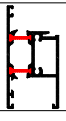
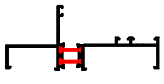
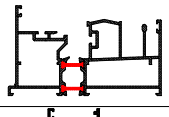
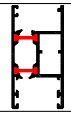
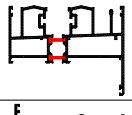
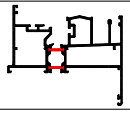
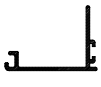
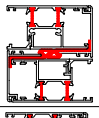
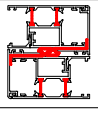
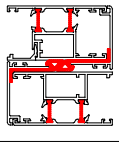
5574
(2.039 kg/m)
CORNER CLEAT



5150
(4.416 kg/m)
CORNER CLEAT

THERMOS 110® SYSTEM

HIGH PERFORMANCE THERMAL BREAK SLIDING 110 SERIES

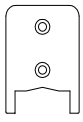
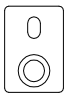
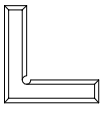
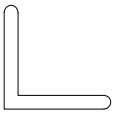
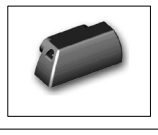
Y / X X' / Y'	Sec. No.	Ixx' (CM⁴)	Iyy' (CM⁴)	Ixx'/V (CM³)	Iyy'/V (CM³)	Y / X X' / Y'	Sec. No.	Ixx' (CM)⁴	Iyy' (CM)⁴	Ixx'/V (CM³)	Iyy'/V (CM³)
	TA 900	115.81	25.42	28.17	09.22						
	TA 901	115.41	08.32	03.47	01.86						
	TA 902	06.56	09.70	00.66	02.43						
	TA 903	14.78	08.13	01.47	01.92						
	TA 904	43.61	03.89	05.16	01.12						
	TA 905	103.24	25.48	18.63	10.11						
	TA 906	17.46	10.31	09.97	03.20						
	TA 907	113.04	33.55	22.66	15.01						
	TA 908	119.16	33.34	52.03	11.82						
	S 8213	03.55	00.70	00.63	00.23						
	S 8216	13.78	10.25	02.72	03.54						
	TA 903 TA 901	98.24	71.95	41.27	28.03						
	TA 901	100.11	72.35	41.27	28.03						
	TA 901 TA 906	98.91	71.15	41.21	32.93						

MOMENT OF INERTIA

THERMOS 110® SYSTEM

HIGH PERFORMANCE THERMAL BREAK SLIDING 110 SERIES

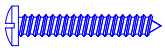
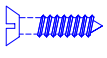
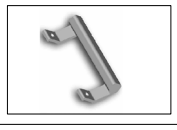
ACCESSORIES

SL. No.	ACCESSORIES CODE No.	SHAPE	DESCRIPTION	REMARKS
1.	A OO1		BUMP RUBBER GUIDE	
2.	A OO2		ANTI THEFT COVER	
3.	A OO3		ROLLER FOR SASH (FOR WINDOWS)	
4.	A OO4		DOUBLE ROLLER FOR SASH	
5.	A OO5		ROLLER FOR FLY SCREEN	
6.	A OO6		SASH ALIGNMENT CORNER	
7.	A OO7		FRAME ALIGNMENT CORNER	GIESSE 00365
8.	A OO8		WATER SLOTS COVER	GIESSE 02314
9.	A OO9		SLIDING HANDLE (FOR WINDOW)	GIESSE 02983
10.	A O10		KEEPER & C.PLATE NIBS (KIT)	GIESSE E213 & 04897
11.	A O11		COVER CAP 11.5mm ⌀	LOCALLY AVAILABLE

THERMOS 110® SYSTEM

HIGH PERFORMANCE THERMAL BREAK SLIDING 110 SERIES

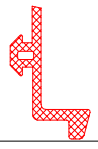
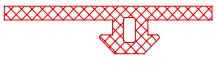
ACCESSORIES

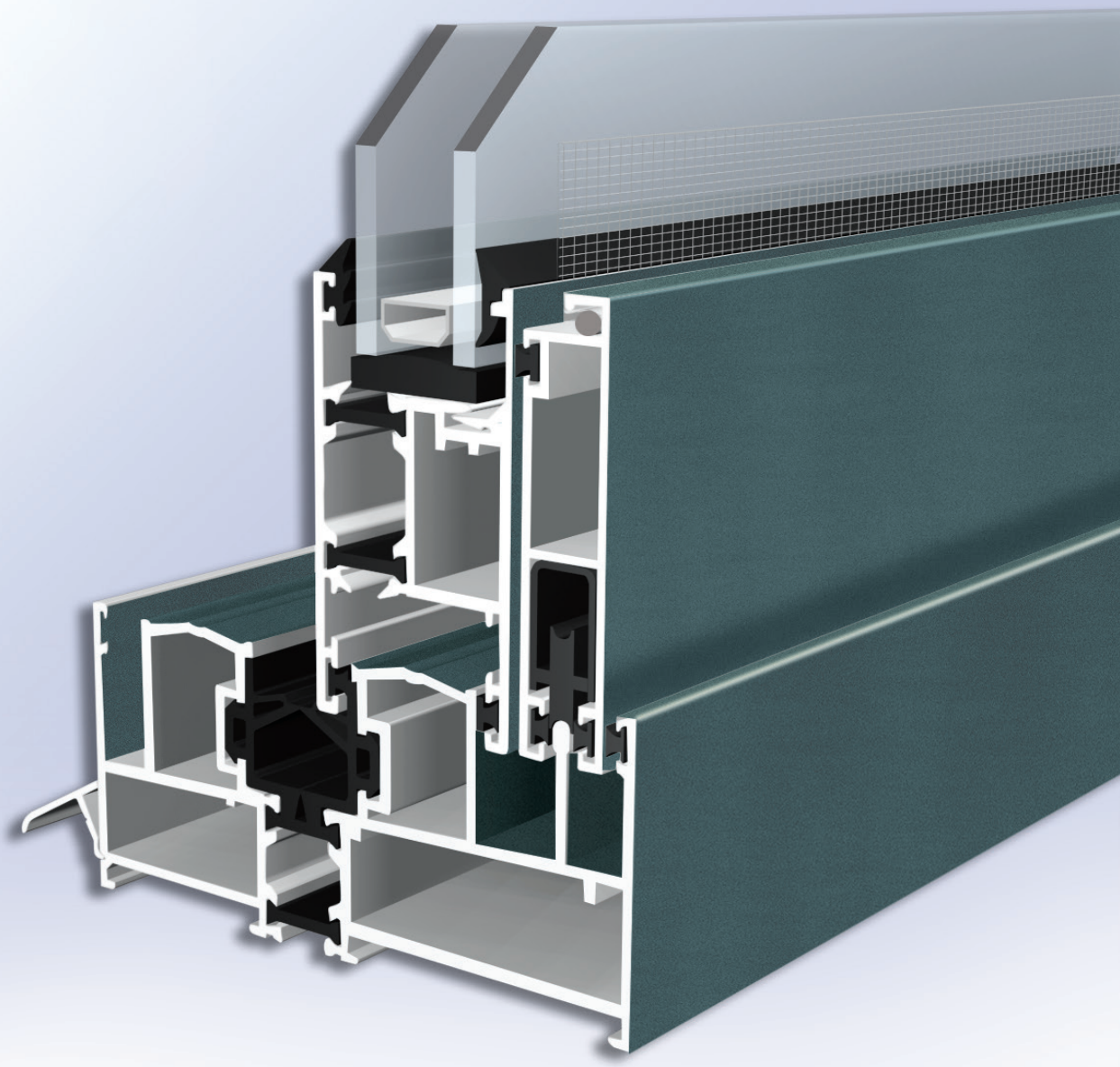
SL. No.	ACCESSORIES CODE No.	SHAPE	DESCRIPTION	REMARKS
12.	A O12		4.8X32 PAN HEAD SELFTAPPING ST. SCREWS	LOCALLY AVAILABLE
13.	A O13		4.2X16 PAN HEAD SELFTAPPING ST. SCREWS	LOCALLY AVAILABLE
14.	A O14		3.9X13 C'SUNK HEAD SELFTAPPING ST.SCREWS	LOCALLY AVAILABLE
15.	A O15		ROLLER FOR SASH (FOR DOORS)	
16.	A O16		SLIDING HANDLE (FOR DOOR)	GIESSE 03353
17.	A O17		PULLING HANDLE (FOR DOOR)	GIESSE 03055
18.	A 018		DUST PLUG	TO BE USED WITH S 8217

THERMOS 110® SYSTEM

HIGH PERFORMANCE THERMAL BREAK SLIDING 110 SERIES

EPDM GASKET LIST

SL. No.	GASKET CODE No.	GASKET SHAPE	DESCRIPTION	REMARKS
1.	GSL 310		GASKET FOR FRAME	
2.	GSL 301		INTER LOCK GASKET	
3.	GSL 304		EXTERNAL GASKET	
4.	GSL 303		INTERNAL GASKET	
5.	GSL 305		FLY SCREEN GASKET	LOCALLY AVAILABLE
6.	GSL 306		GASKET FOR FRAME	
7.	PB 307		FIN SEAL BRUSH FOR SASH PB69.600 FP FOR SASH	LOCALLY AVAILABLE
8.	PB 308		POLY BOND PB 4.8.550 3P FOR FLY SCREEN	LOCALLY AVAILABLE
9.	RUB 080		GASKET FOR ADOPTER	



Authorised Extruders In UAE.

M/s. Elite Extrusion LLC

P.O.Box : 86025
Ras Al Khaimah, U A E
Tel.: 00971-7-244 7668
Fax : 00971-7-244 7669
E-mail : eliteext@eim.ae

M/s. Al Hamad Industrial Co. (Extrusion Division)

P.O.Box : 5841
Sharjah, U A E
Tel. No. : 00971-6-5349550
Fax No. : 00971-6-5349551
E-mail: clex@emirates.net.ae

M/s. National Aluminium Extrusion LLC

Dubai Investment Park-Dubai, P.O. Box: 22588
Tel: 00971-4-8858101, Fax: 00971-4-8858705
E-mail: nalexco@nalexco-uae.com, www.nalexco.com

GLAZE TECH
System Solution Providers
P.O.Box : 5841, Sharjah, U A E