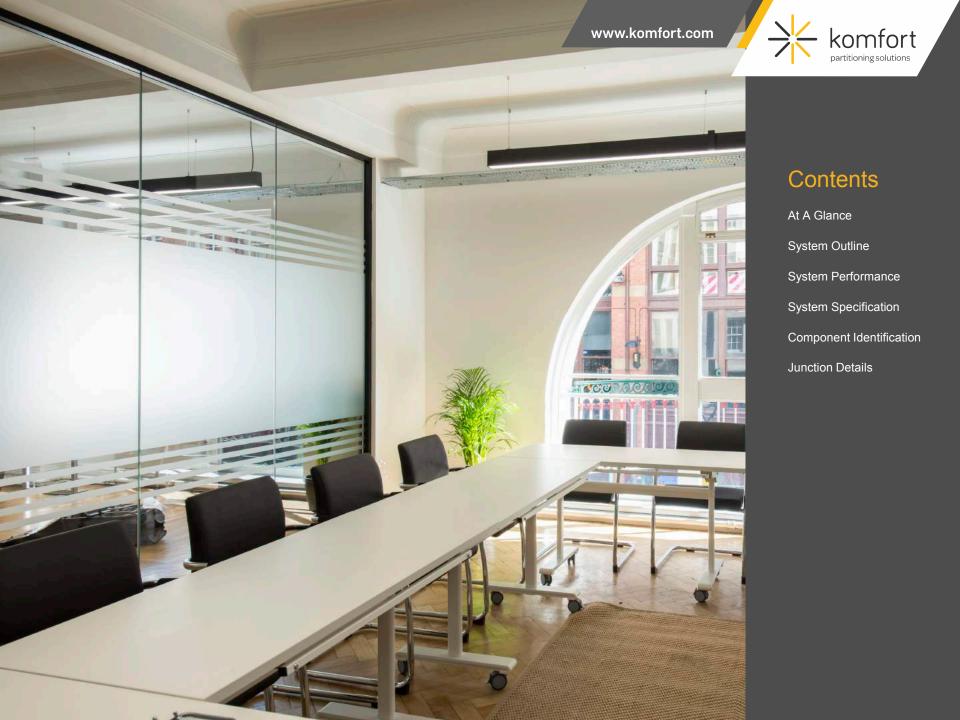




# Polar 54 Design Guide

Revision 2 - 01/10/2019

Think partitioning, think Komfort





Height up to 3000mm Fire ratings: N/A

Acoustics: Up to 47dB (Rw)\* Structure: Up to Severe Duty Deflection head:

+/-25mm

Door options:

Timber doors Single glazed doors

Sonik doors

Glass type options: 10/12mm Toughened 10.8/12.8/14.8mm Acoustic Lam. Weight: 10mm Toughened = 25kg/m<sup>2</sup>

12mm Toughened = 30kg/m<sup>2</sup> 10.8mm Ac. Lam. = 27kg/m<sup>2</sup> 12.8mm Ac. Lam. = 32kg/m<sup>2</sup> 14.8mm Ac. Lam. = 37kg/m<sup>2</sup>

× Blinds

✓ Manifestations

- ✓ Graphics
- SwitchGlass
- ✓ Kross Glaze

#### **Paint/finishes**

Polyester powder coat

× Satin anodised aluminium

✓ Special anodised finish

\*Dependent on system configuration / specification



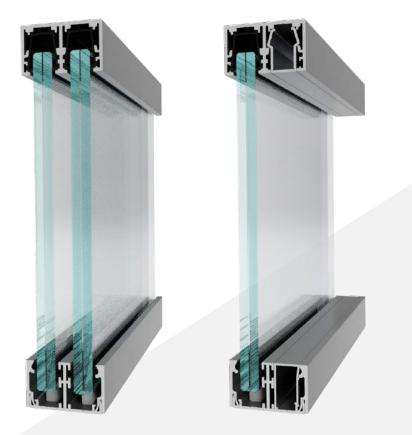


# System Outline



Polar 54 is a design response to the architectural trend for narrow gauge glazed partitioning. This elegant 54mm wide system is available as double or offset single glazed with a range of glass configurations available. The frameless bubble jointed glazing and minimal trackwork provides contemporary aesthetics in any working environment.

This system is compatible with Komfort's Sonik, single glazed and timber door options.





# System Performance

#### Acoustic Performance

Airborne sound insulation testing of glazed partitioning in accordance with BS EN ISO 10140-1:2016 and BS EN ISO 10140-2:2010.

Double Glazed Screens					
Glass Configuration	dB Rating	Certificate No.			
Polar 54 using 12mm and 10mm Toughened with Bubble Joint	Up to 39dB (Rw)	PO S57			
Polar 54 using 12mm Toughened and 10.8mm Acoustic Laminated with Bubble Joint	Up to 40dB (Rw)	PO S58			
Polar 54 using 12.8mm Acoustic Laminated and 10mm Toughened with Bubble Joint	Up to 40dB (Rw)	PO S60			
Polar 54 using 12.8mm Acoustic Laminated and 12mm Toughened with Bubble Joint	Up to 41dB (Rw)	PO S61			
Polar 54 using 12.8mm and 10.8mm Acoustic Laminated with Bubble Joint	Up to 41dB (Rw)	PO S59			
Polar 54 using 12.8mm and 12.8mm Acoustic Laminated with Bubble Joint	Up to 45dB (Rw)	PO S62			
Polar 54 using 14.8mm and 10.8mm Acoustic Laminated with Bubble Joint	Up to 44dB (Rw)	PO S56			
Polar 54 using 14.8mm and 12.8mm Acoustic Laminated with Bubble Joint	Up to 45dB (Rw)	PO S54			
Polar 54 using 14.8mm and 10.8mm Acoustic Laminated with Applied Kross Glaze Bars	Up to 46dB (Rw)	PO S67			
Polar 54 using 14.8mm and 12.8mm Acoustic Laminated with Applied Kross Glaze Bars	Up to 47dB (Rw)	PO S68			

It should be noted that in an on-site acoustic test, a partition or doorset can result in a 3dB to 8dB lesser performance than under laboratory conditions. This can be further affected by ambient noise levels on the receiving side of the test sample and by poorly insulated abutments and voids above and below the partition which will result in a 'flanking' path for audible sound.





# System Performance

#### Acoustic Performance

Airborne sound insulation testing of glazed partitioning in accordance with BS EN ISO 10140-1:2016 and BS EN ISO 10140-2:2010.

Offset Single Glazed Screens					
Glass Configuration	dB Rating	Certificate No.			
Polar 54 using 10mm Toughened with Bubble Joint	Up to 31dB (Rw)	PO S66			
Polar 54 using 12mm Toughened with Bubble Joint	Up to 33dB (Rw)	PO S64			
Polar 54 using 10.8mm Acoustic Laminated with Bubble Joint	Up to 38dB (Rw)	PO S65			
Polar 54 using 12.8mm Acoustic Laminated with Bubble Joint	Up to 39dB (Rw)	PO S63			
Polar 54 using 14.8mm Acoustic Laminated with Bubble Joint	Up to 41dB (Rw)	PO S55			

It should be noted that in an on-site acoustic test, a partition or doorset can result in a 3dB to 8dB lesser performance than under laboratory conditions. This can be further affected by ambient noise levels on the receiving side of the test sample and by poorly insulated abutments and voids above and below the partition which will result in a 'flanking' path for audible sound.



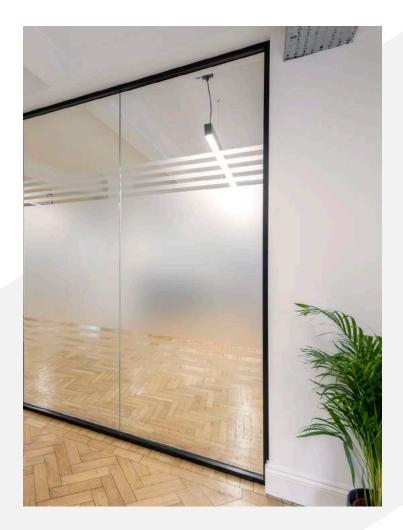


# System Performance

#### Structural Performance

Strength and robustness testing of glazed partitioning in accordance with BS 5234-2:1992 and BS 6180:2011.

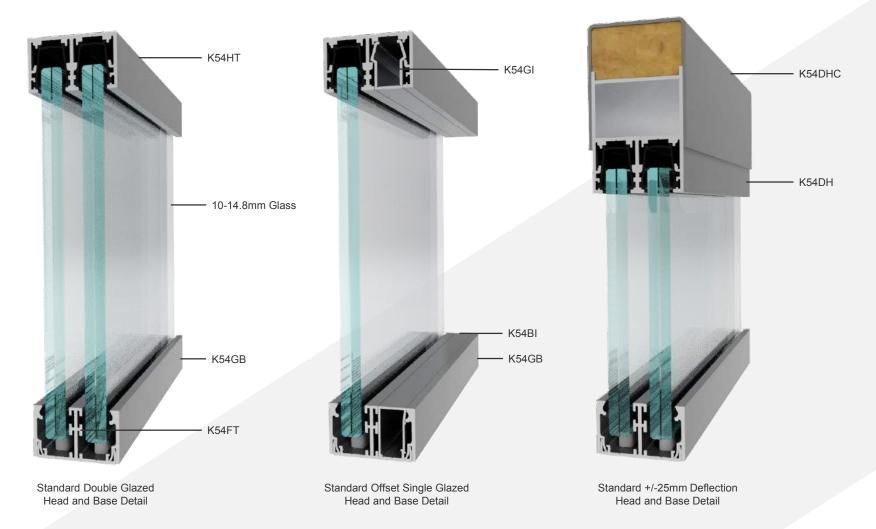
Strength & Robustness					
Test Description	Result	Certificate No.			
Polar 54 Double Glazed using 12mm	Severe Duty				
Toughened + 12.8mm Acoustic Laminated Glass with Full Height Timber Door	0.74kN	PO STR15			
Polar 54 Offset Single Glazed using 12mm	Severe Duty	PO STR16			
Toughened Glass with Full Height Timber Door	0.74kN	PUSIRIO			







Standard details of double and offset single glazed head, base and +/-25mm deflection components.





Standard details of double and offset single glazed into wall abutments and tape and joint adaptor into 100mm drywall.



Double Glazed into K54HT as Wall Abutment



Offset Single Glazed into K54HT as Wall Abutment



Tape & Joint Adaptor into 100mm Drywall

www.komfort.com



Standard details of double and offset single glazed Kross Glaze applied bars and full height door frame.



Double Glazed Kross Glaze Applied Bars Detail



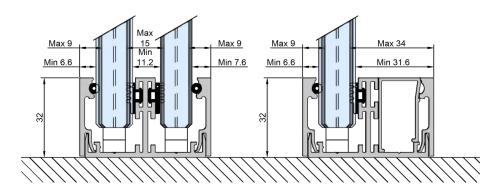


Full Height Door Frame Detail

Offset Single Glazed Kross Glaze Applied Bars Detail



The system can accommodate 10-14.8mm glass, the diagram below shows the typical dimensions for glazing configurations.



Aluminium components for the screen and door will be powder coated, our standard colour options are shown below. All special colour options can be manufactured to any RAL or BS colour code, please ask for availability.



If a specialist finish is required on the aluminium please contact your local project specification manager or our technical department





ALUMINIUM EXTRUSIONS					
CODE	I.D	DESCRIPTION	CODE	I.D	DESCRIPTION
K54HT		Head Track	K54FT		Floor Track
K54DF		Door Frame	K54GB	<b>K</b>	32mm Glazing Bead
K54GI		Glazing Infill	K54BI		Base Infill
K54DH		Deflection Head	K54TJ100		100mm Tape & Joint Adaptor Post
K54KGB		1-1/4" x 3/8" Kross Glaze Bar	109		32mm x 3mm Flat

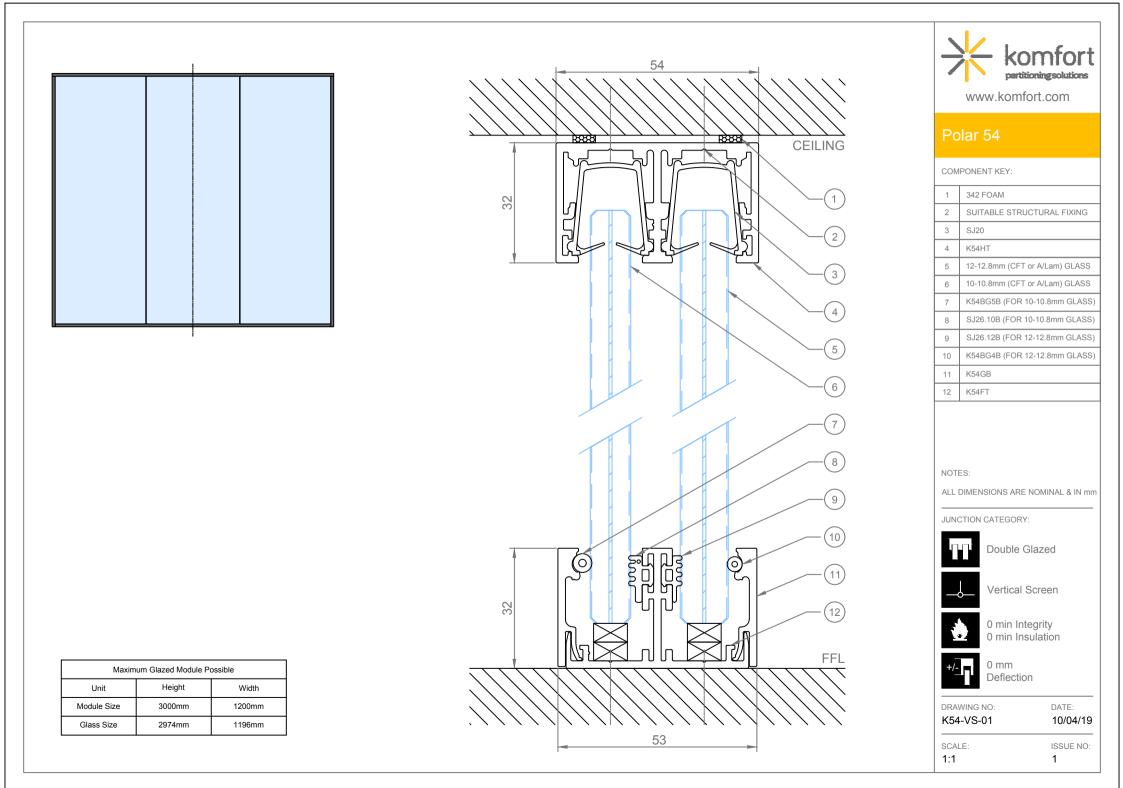
	PLASTIC EXTRUSIONS				
CODE	I.D	DESCRIPTION	CODE	I.D	DESCRIPTION
SJ20	$\Box$	Glazing Channel Gasket for 10- 14.8mm Glass	K54DS		Door Frame Buffer Seal
K54BG4B	0	4mm Dia. Hollow Base Gasket	K54BG5B	0	5mm Dia. Hollow Base Gasket
SJ26.10B	₽	E Gasket for 10-10.8mm Glass	SJ26.12B	₽	E Gasket for 12-12.8mm Glass
SJ34	0	Bubble Dry Joint			

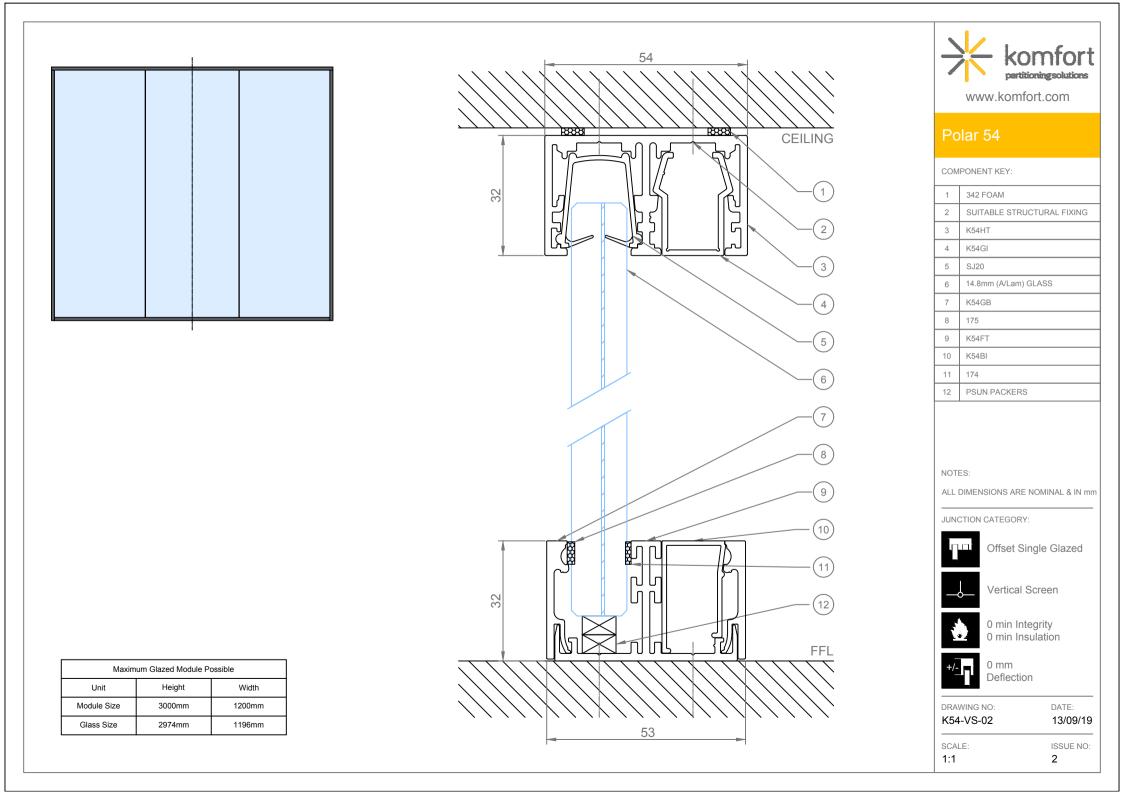


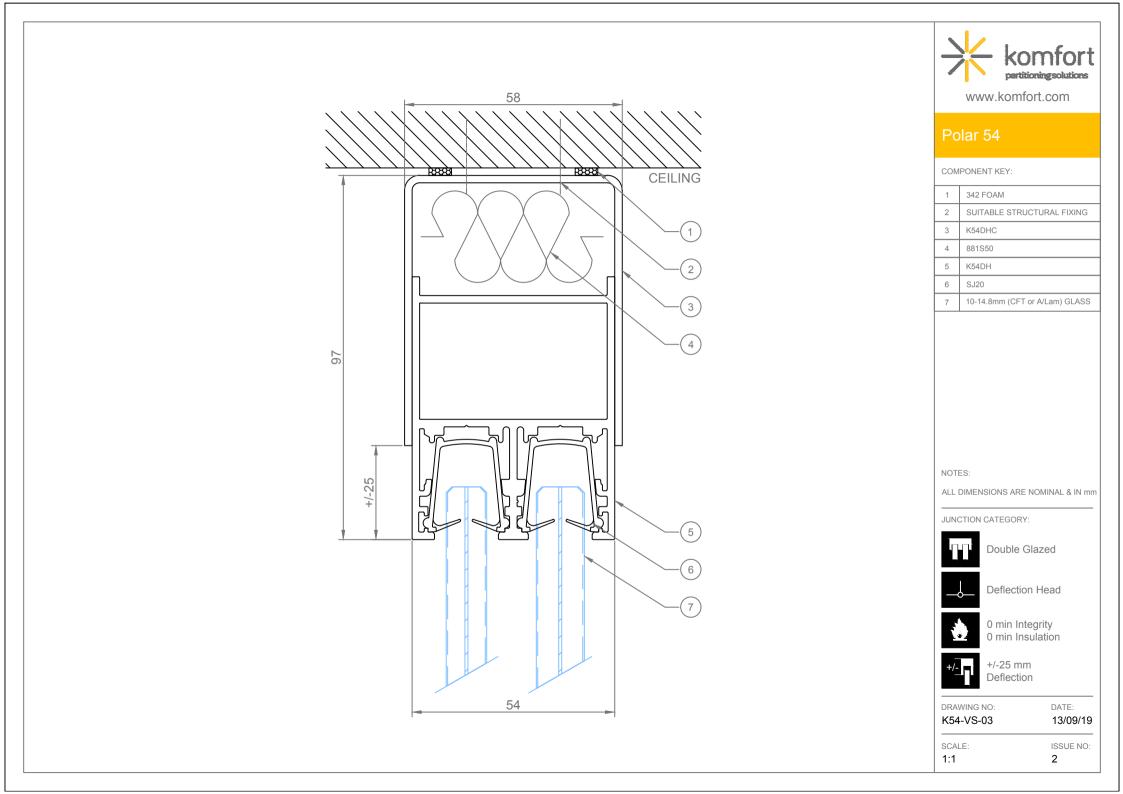
OTHER COMPONENTS, BRACKETS & CLEATS					
CODE	I.D	DESCRIPTION	CODE	I.D	DESCRIPTION
K54SC	a construction of the second s	Narrow Stealth Cleat	K54DFB		Door Frame Floor Bracket
K54C180	/	Inline Track Cleat	K54C90		90° Track Cleat
K54C135		135° Track Cleat	K54DHC		Deflection Head Channel

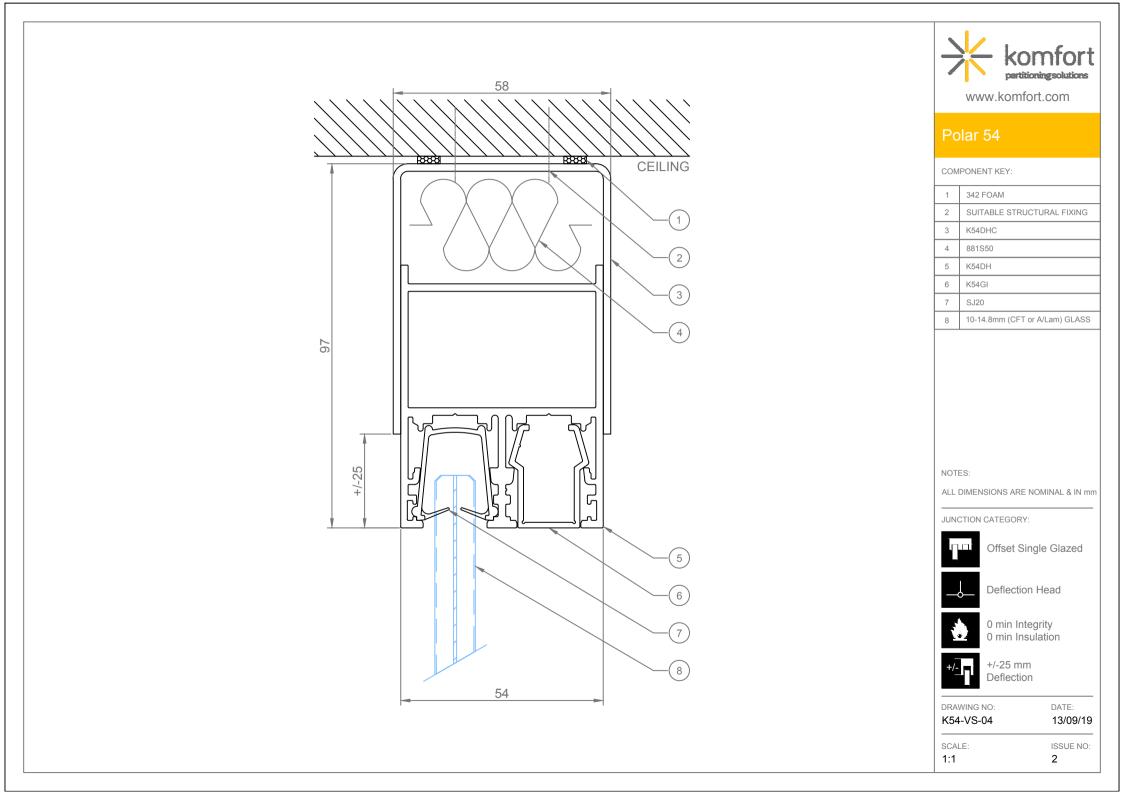
	FIXINGS				
CODE	I.D	DESCRIPTION	CODE	I.D	DESCRIPTION
311	Sector Sector	38mm x No8 CSK Doorframe Screw	381		M5 x 10lg Taptite Screw CSK
DFHS.75	/	Self-Drilling Drywall Screw 4.2 x 75mm	DF16042	/	42mm Drywall Screw

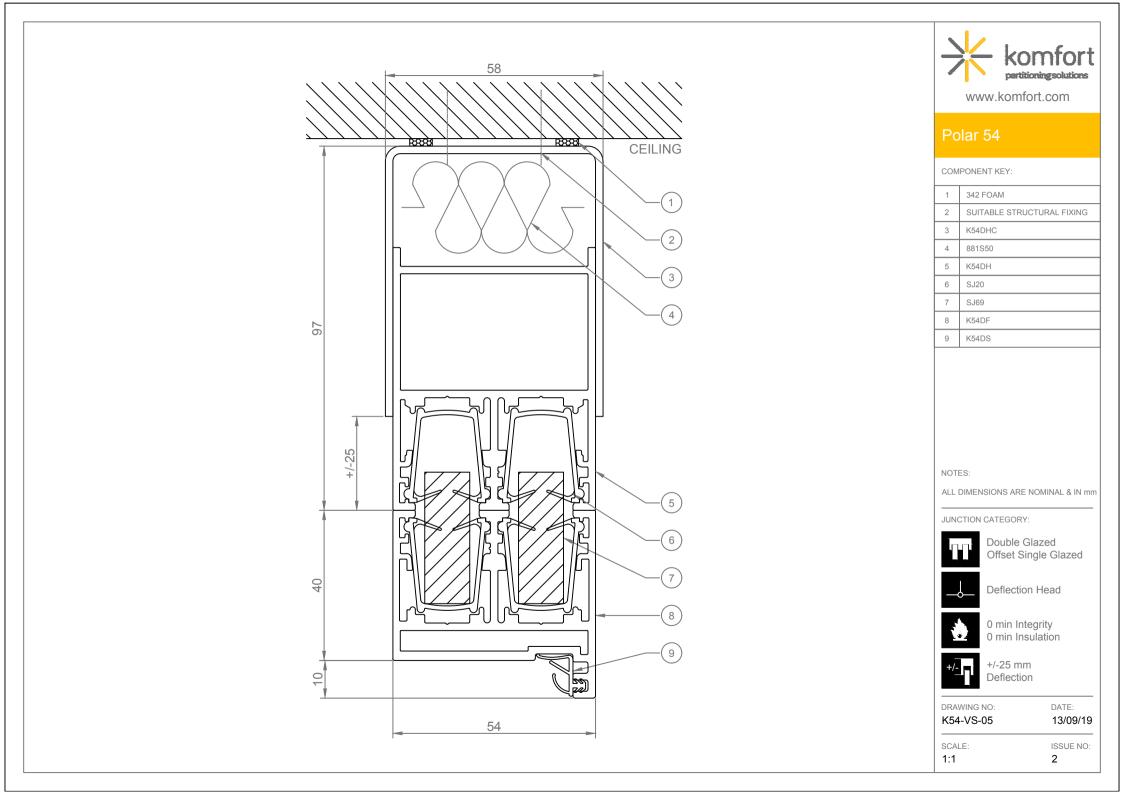
	FOAMS					
CODE	I.D	DESCRIPTION	CODE	I.D	DESCRIPTION	
174		6mm x 1mm Foam for 14.8mm Glass	175		6mm x 2mm Foam for 14.8mm Glass	
342		12mm x 6mm Foam Rubber				

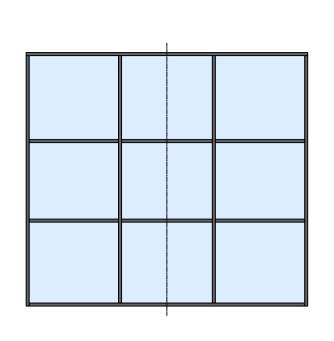


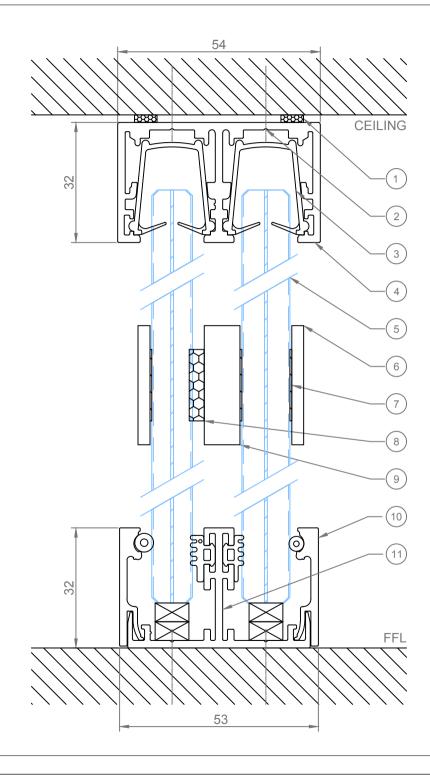






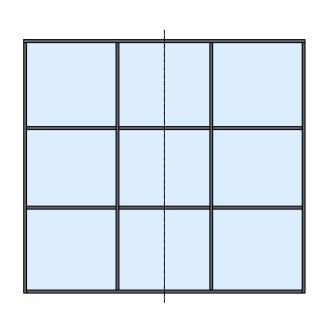


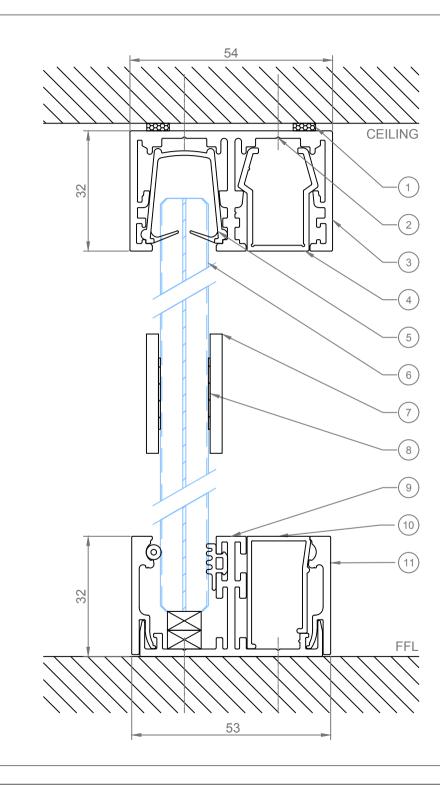




		- komfort pertitioning solutions		
Po	olar			
CON	1PONE	NT KEY:		
1	342	FOAM		
2	SUIT	ABLE STRUCTURAL FIXING		
3	SJ20	)		
4	K54F	ΗT		
5	10-14	4.8mm (CFT or A/Lam) GLASS		
6	109			
7	TAPI	E19.1C		
8	K54k	(GF		
9	K54k	(GB		
10	K540	ЭВ		
11	K54F	T		
	DIMEN	SIONS ARE NOMINAL & IN mm CATEGORY:		
		Double Glazed		
	Vertical Kross Glaze			
	0 min Integrity 0 min Insulation			
+/-		0 mm Deflection		
	WING I 1-VS-(			
SCA 1:1	LE:	ISSUE NO: 1		

Maximum Glazed Module Possible					
Unit Height Width					
Module Size 3000mm		1200mm			
Glass Size	2974mm	1196mm			

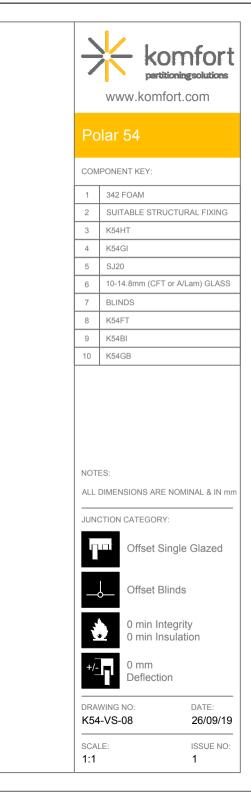




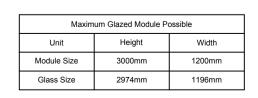
$\left  \right\rangle$	partitio	mfort ningsolutions
	www.komfo	rt.com
Pc	lar 54	
COM	IPONENT KEY:	
1	342 FOAM	
2	SUITABLE STRUC	TURAL FIXING
3	K54HT	
4	K54GI	
5	SJ20	
6	10-14.8mm (CFT or	A/Lam) GLASS
7	109	
8	TAPE19.1C	
9	K54FT	
10	K54BI	
11	K54GB	
	ES: DIMENSIONS ARE NO CTION CATEGORY: Offset Sing Vertical Kr	gle Glazed
+/-	0 min Integ 0 min Insu 0 mm Deflection	
	WING NO: I-VS-07	DATE: 13/09/19
SCA 1:1	LE:	ISSUE NO: 1

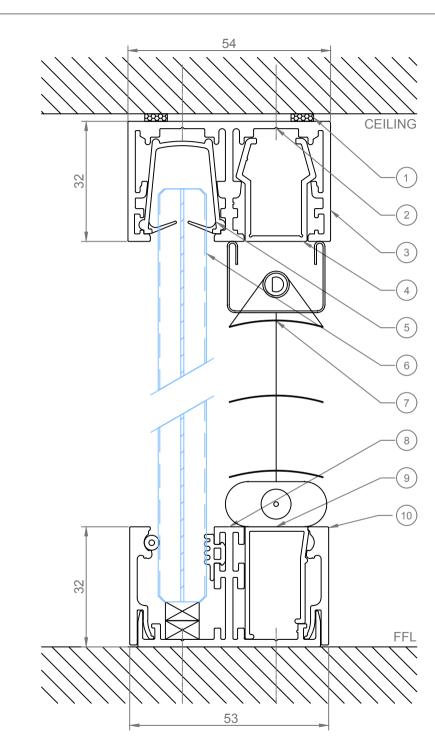
.....

Maximum Glazed Module Possible				
Unit Height Width				
Module Size 3000mm		1200mm		
Glass Size	2974mm	1196mm		



	1	

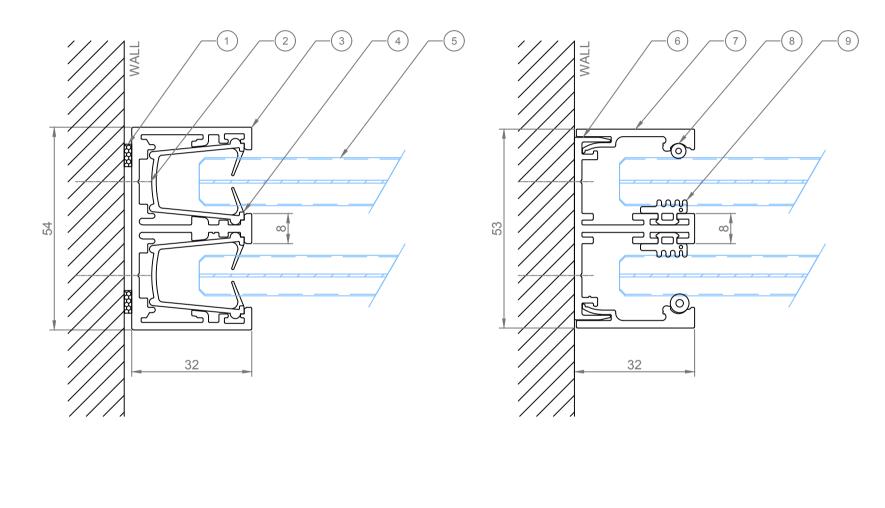






www.komfort.com

#### Polar 5

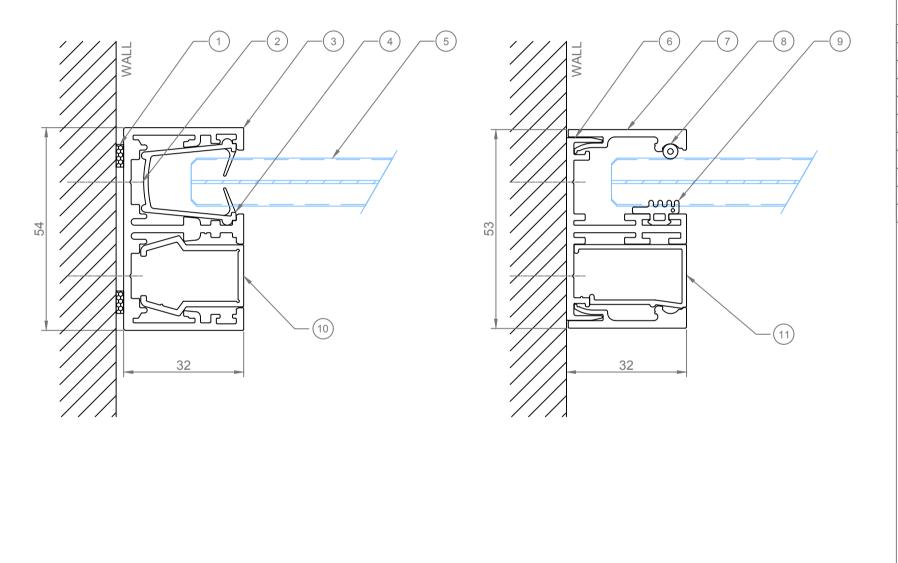


COMPONENT KEY: 342 FOAM 1 2 SUITABLE STRUCTURAL FIXING 3 K54HT 4 SJ20 10-14.8mm (CFT or A/Lam) GLASS 5 6 K54FT 7 K54GB K54BG5B or K54BG4B or 175 8 9 SJ26.10B or SJ26.12B or 174 NOTES: ALL DIMENSIONS ARE NOMINAL & IN mm JUNCTION CATEGORY: Double Glazed Horizontal Screen 0 min Integrity 0 min Insulation 0 mm Deflection DRAWING NO: DATE: K54-HS-01 13/09/19 SCALE: ISSUE NO: 1:1 2

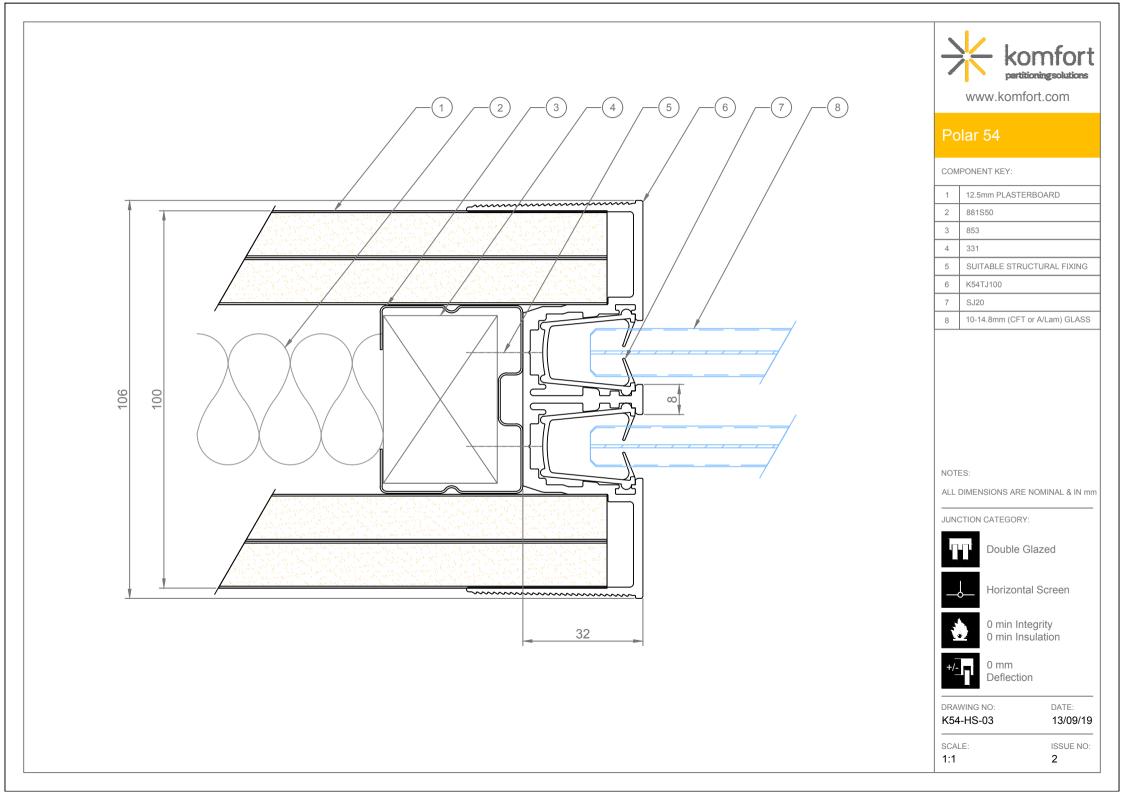


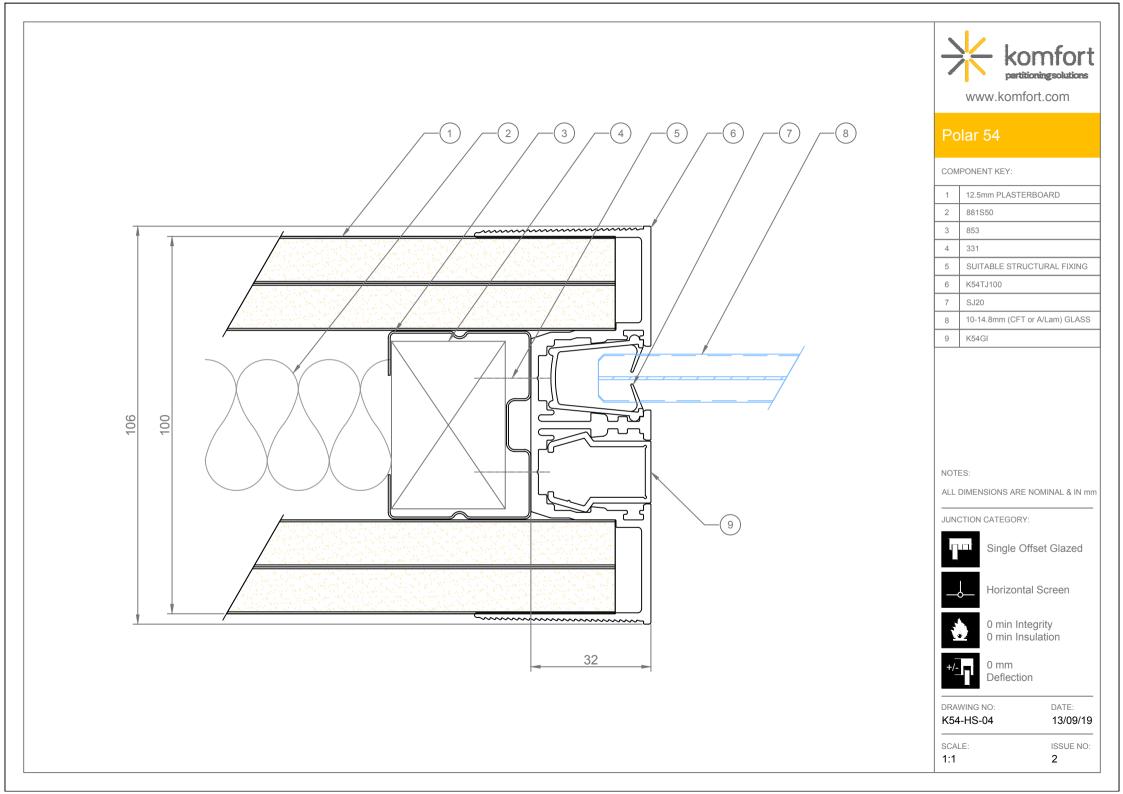
www.komfort.com

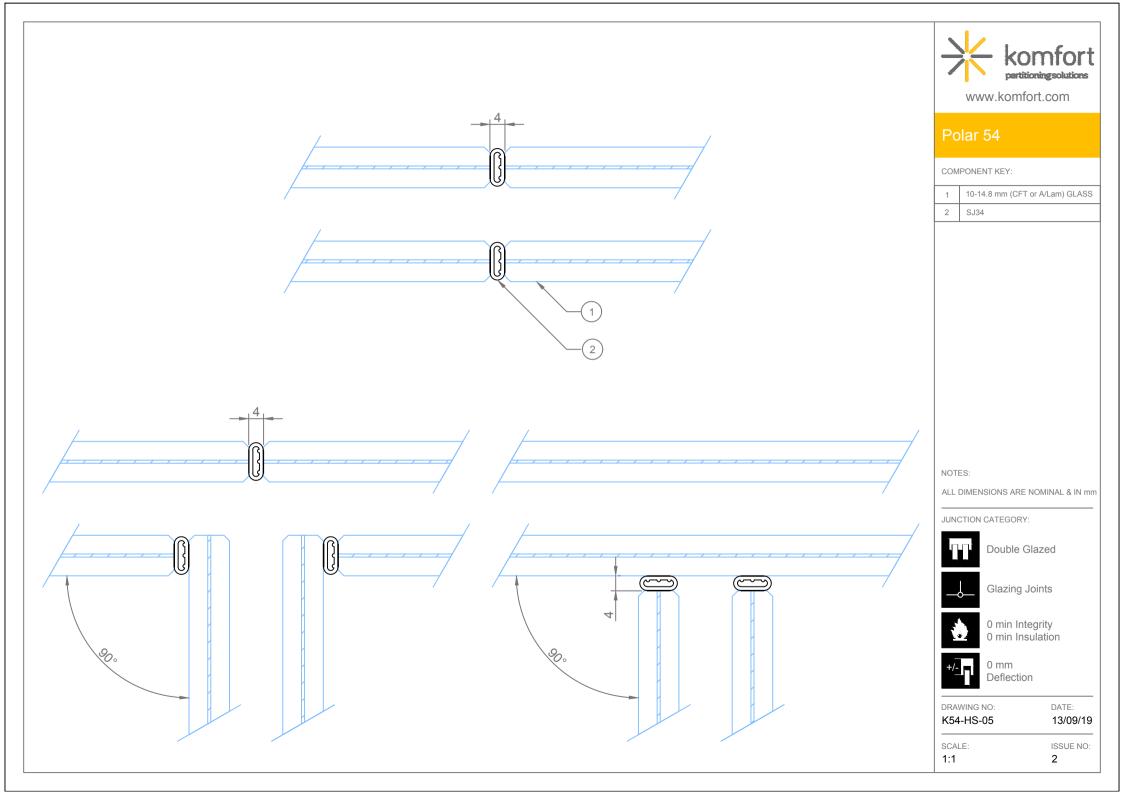
#### Polar 5

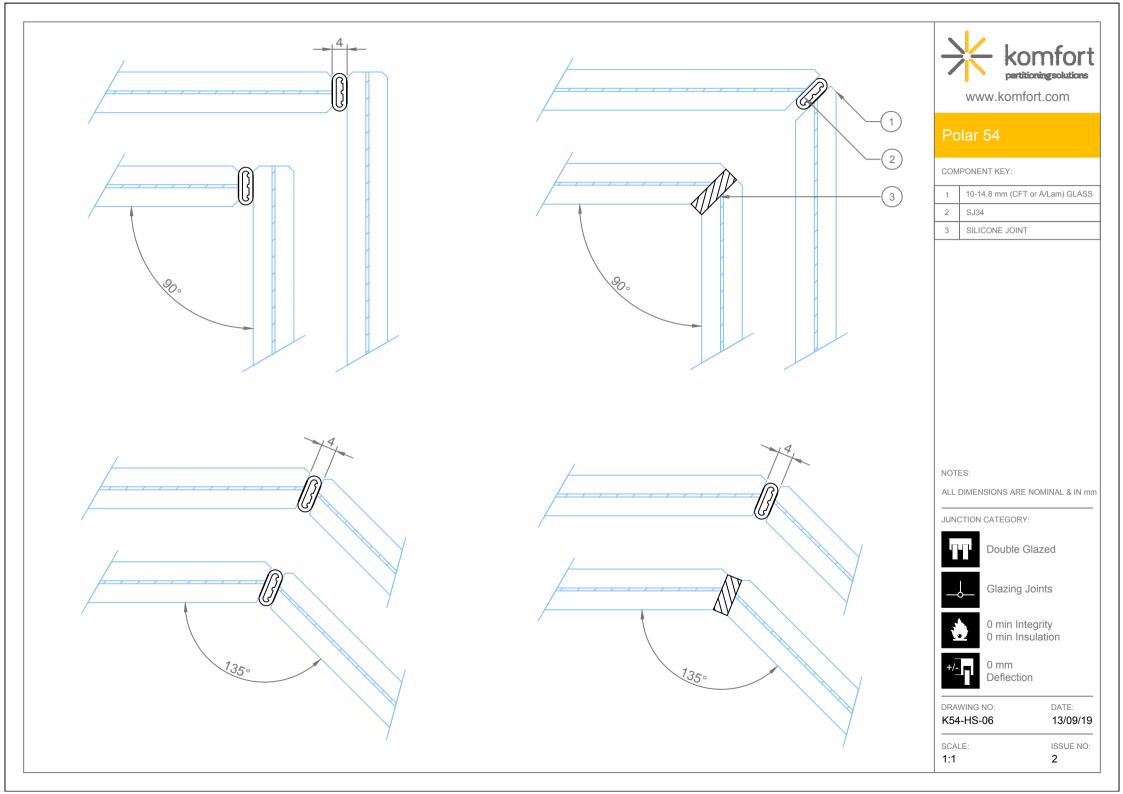


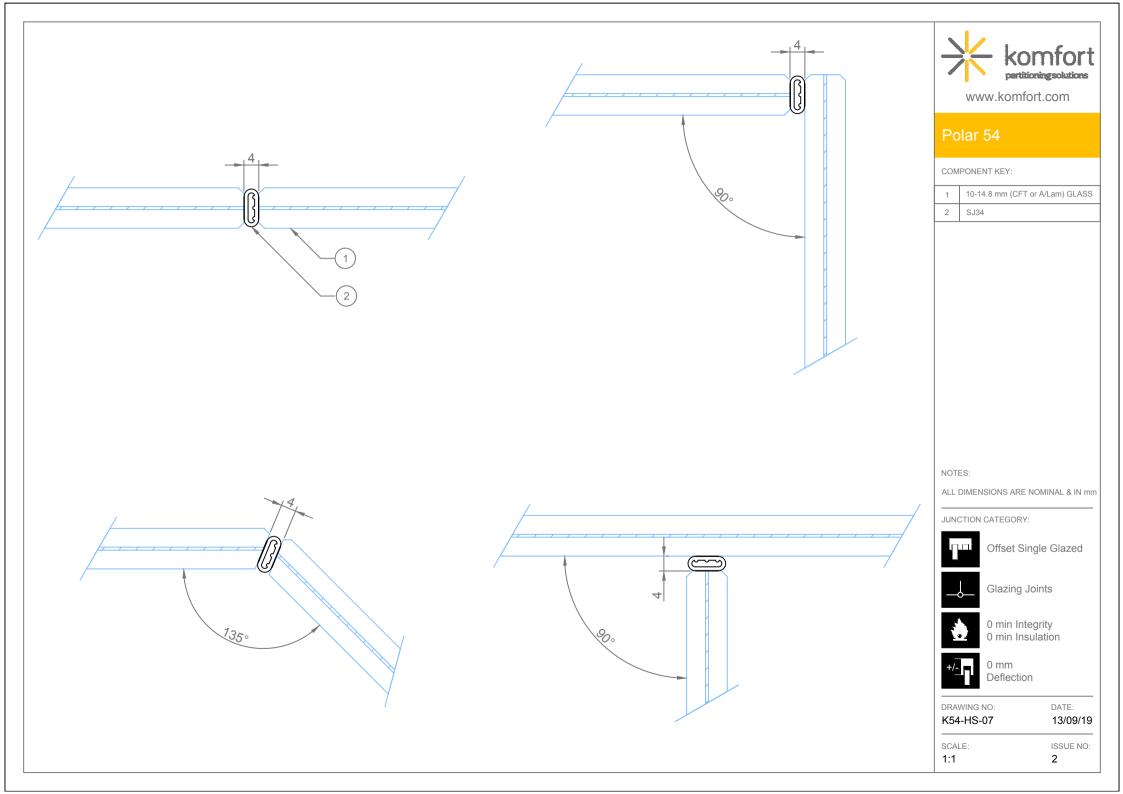
COMPONENT KEY:						
1	342 FOAM					
2	SUITABLE STRUCTU	RAL FIXING				
3	K54HT					
4	SJ20					
5	10-14.8mm (CFT or A/Lam) GLASS					
6	K54FT					
7	K54GB					
8	K54BG5B or K54BG4E	3 or 175				
9	SJ26.10B or SJ26.12B	or 174				
10	K54GI					
11	K54BI					
	ALL DIMENSIONS ARE NOMINAL & IN mm JUNCTION CATEGORY: Offset Single Glazed					
	Horizontal S					
O min Integrity     O min Insulation      O mm     Deflection						
	WING NO: - <b>-HS-02</b>	DATE: 13/09/19 ISSUE NO:				
1:1	-E.	2				

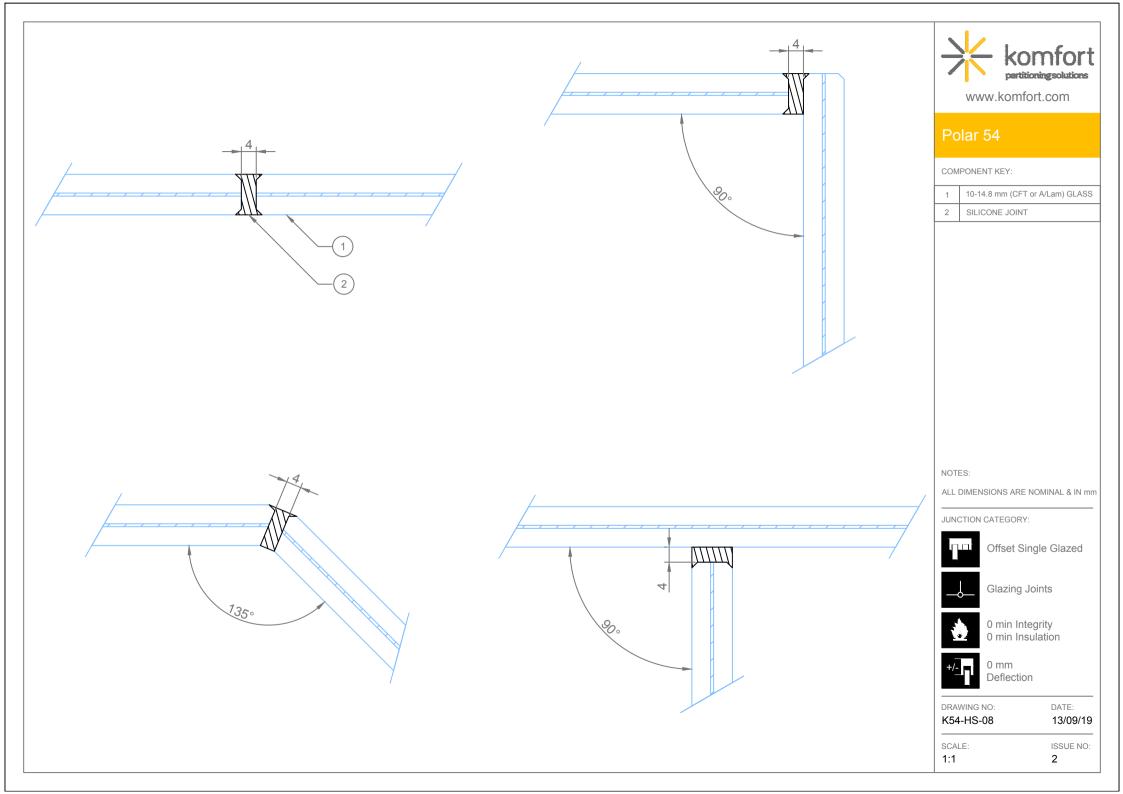


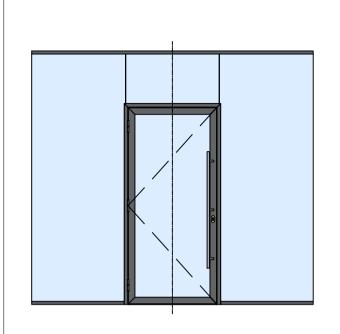




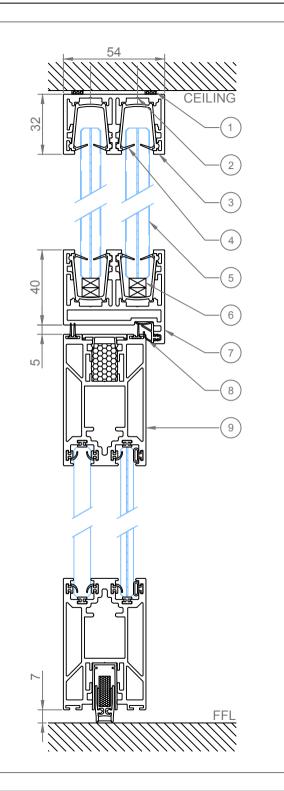


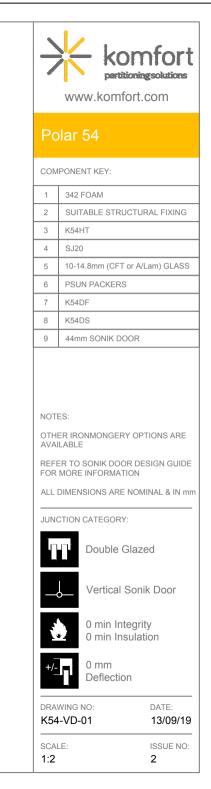


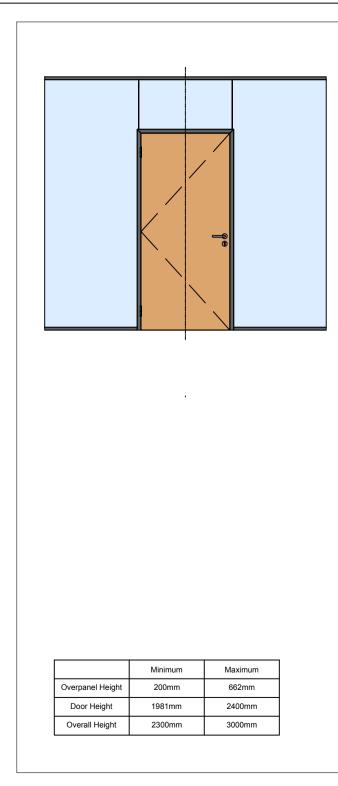


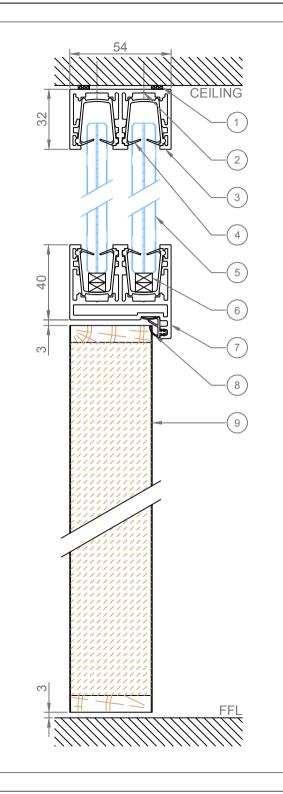


Maximum overpanel height is based on it being no more than 25% of the actual door height.					
Minimum Maximum					
Overpanel Height	200mm	600mm			
Door Height	1981mm	2400mm			
Overall Height 2300mm 3000mm					

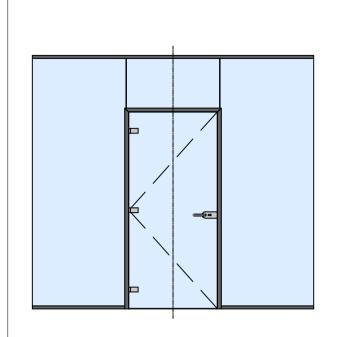




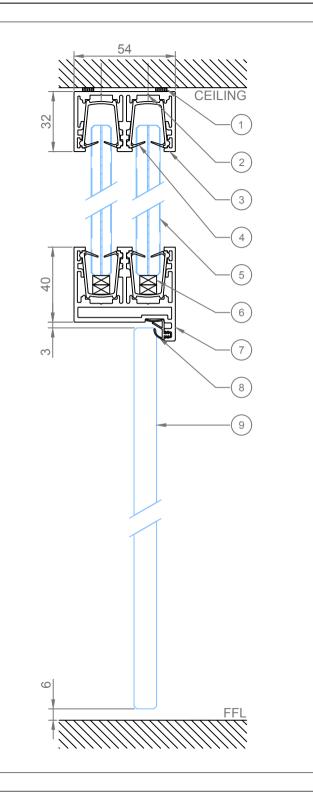




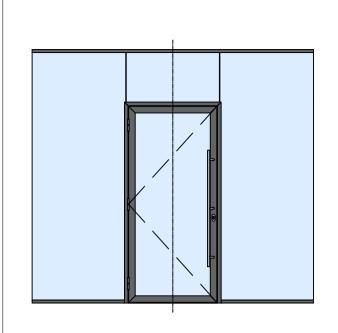
>	WW		nfort nesolutions .com
Po	lar	54	
СОМ	PONE	NT KEY:	
1	342	FOAM	
2	SUIT	ABLE STRUCTU	JRAL FIXING
3	K541	ЧТ	
4	SJ20	)	
5	10-14	4.8mm (CFT or A	/Lam) GLASS
6	PSU	N PACKERS	
7	K54[	DF	
8	K54[	DS	
9	44m	m TIMBER DOOI	२
AVAI	ER IRC LABLE	DNMONGERY OF E ISIONS ARE NOT	
JUNC	CTION	CATEGORY:	
		Double Glaz	zed
_	<u> </u>	Vertical Tim	ber Door
	$\mathbf{b}$	0 min Integr 0 min Insula	
+/-		0 mm Deflection	
	VING I		DATE: 13/09/19
SCAI 1:2	E:		ISSUE NO: 2



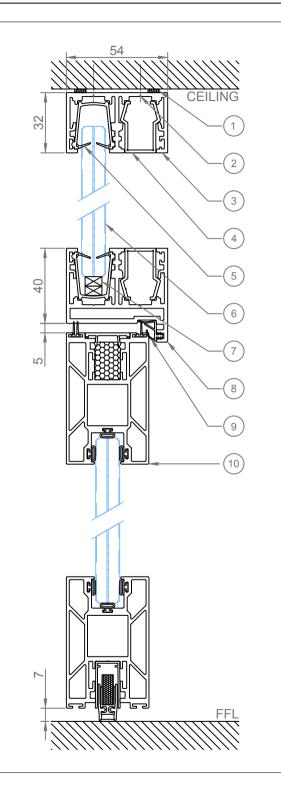
	Minimum	Maximum
Overpanel Height	200mm	662mm
Door Height	1981mm	2400mm
Overall Height	2300mm	3000mm



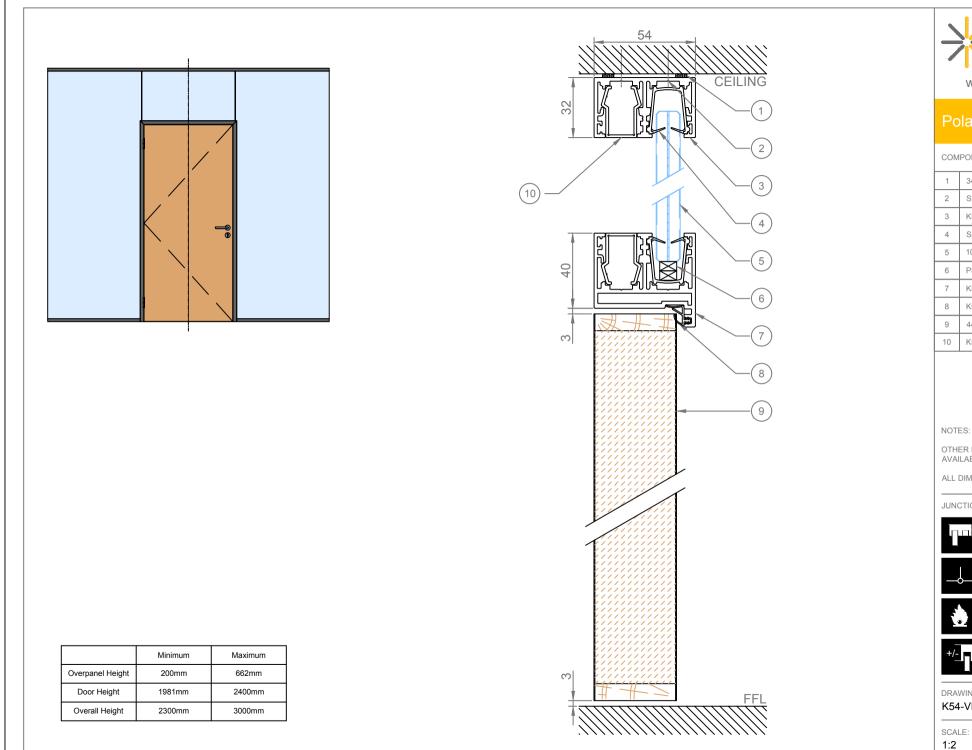
$\rightarrow$	WV			princ	<b>fort</b> solutions	
Pc	lar	54				
COM	PONE	ENT KE	EY:			
1	342	FOAM				
2	SUI	TABLE	STRUC	CTUF	RAL FIXING	
3	K54	HT				
4	SJ2	20				
5	10-1	14.8mm	n (CFT c	or A/L	.am) GLASS	
6	PSL	JN PAC	CKERS			
7	K54	DF				
8	K54	DS				
9	10-1	12mm (	CFT GLA	ASS	DOOR	-
AVAI	ER IR LABL DIMEI	E NSION:			TIONS ARE INAL & IN mm	٦
		Dou	ıble G	laze	ed	
_	ļ	Ver	tical G	Blas	s Door	
Ę.			in Inte in Insi			
+/-		0 m Def	m lectior	1		
	wing				DATE: 13/09/19	
SCAI 1:2	_E:				ISSUE NO: 2	



Maximum overpanel height is based on it being no more than 25% of the actual door height.				
Minimum Maximum				
Overpanel Height	200mm	600mm		
Door Height	1981mm	2400mm		
Overall Height	3000mm			



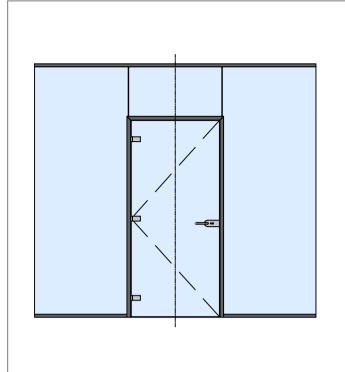
		kor partition	ingsolutions
Pc	olar 5	4	
CON	IPONENT	KEY:	
1	342 FO	AM	
2	SUITAE	BLE STRUCT	URAL FIXING
3	K54HT		
4	K54GI		
5	SJ20		
6	10-14.8	mm (CFT or A	VLam) GLASS
7	PSUN F	PACKERS	
8	K54DF		
9	K54DS		
10	44mm \$	SONIK DOOR	
AVA REFI FOR	ER IRONI ILABLE ER TO SC MORE IN	NIK DOOR E FORMATION	PTIONS ARE DESIGN GUIDE MINAL & IN mm
JUN	CTION CA	TEGORY:	
Ŀ	C	ffset Sing	le Glazed
	<u> </u>	ertical So	nik Door
ť.		min Integ min Insula	
+/-		mm eflection	
	WING NO		DATE: 13/09/19
SCA 1:2	LE:		ISSUE NO: 2



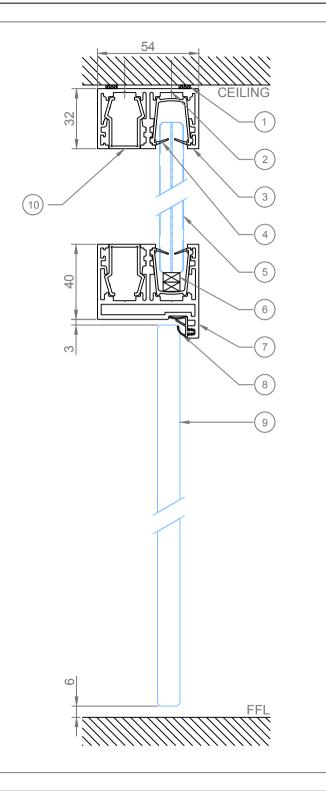
	partitioningsolution			
	www.komfort.com			
Polar 54				
COMPONENT KEY:				
1	342 FOAM			
2	SUITABLE STRUCTURAL FIXIN			
3	K54HT			
4	SJ20			
5	10-14.8mm (CFT or A/Lam) GLAS			
6	PSUN PACKERS			
7	K54DF			
8	K54DS			
9	44mm TIMBER DOOR			
NOT	ES:			
OTH	ER IRONMONGERY OPTIONS AR			
OTH AVA	ER IRONMONGERY OPTIONS AR ILABLE			
OTH AVA	ER IRONMONGERY OPTIONS AR			
OTH AVA ALL	ER IRONMONGERY OPTIONS AR ILABLE			
OTH AVA ALL	ER IRONMONGERY OPTIONS AR ILABLE DIMENSIONS ARE NOMINAL & IN			
OTH AVA ALL	ER IRONMONGERY OPTIONS AR ILABLE DIMENSIONS ARE NOMINAL & IN CTION CATEGORY:			
OTH AVA ALL	ER IRONMONGERY OPTIONS AR ILABLE DIMENSIONS ARE NOMINAL & IN CTION CATEGORY:			
OTH AVA ALL	ER IRONMONGERY OPTIONS AR LIABLE DIMENSIONS ARE NOMINAL & IN CTION CATEGORY: Offset Single Glazed Vertical Timber Door 0 min Integrity			

ISSUE NO:

2







	WWV		<b>offort</b> geolutions com
Pc	olar 5	64	
CON	IPONEN	ΓKEY:	
1	342 FC	DAM	
2	SUITA	BLE STRUCTU	RAL FIXING
3	K54HT		
4	SJ20		
5	10-14.8	3mm (CFT or A/	Lam) GLASS
6	PSUN	PACKERS	
7	K54DF		
8	K54DS	5	
9	10-12m	nm CFT GLASS	DOOR
10	K54GI		
NOTES: OTHER IRONMONGERY OPTIONS ARE AVAILABLE			TIONS ARE
		IONS ARE NOM	1INAL & IN mm
JUN	CTION C	ATEGORY:	
		Offset Single	e Glazed
	<u> </u>	/ertical Glas	s Door
		) min Integri ) min Insulat	
+/-		) mm Deflection	
	WING NO		DATE: 13/09/19
SCA	LE:		ISSUE NO:

1:2

2

