



# Chromatics

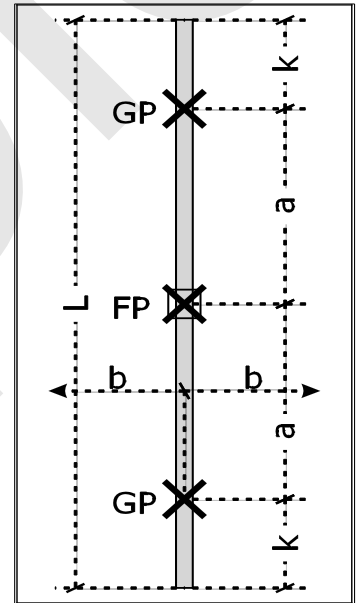
Chromatics RS ~ 6mm appr. 15,0kg/m<sup>2</sup>  
EuroFOX System MTK-v-100, MacFOX 60

LF. 1

## 1. OBJECT DATA

Facade height	h	12.00	m
Length of profile	L	2.85	m
MacFOX-Bracket Type	Typ	60	mm
Distance between primary fixings	a	1.01	m
Distance bracket to end of profile (Max.)	k	0.41	m
Vertical spacing between profiles	b	0.60	m

Indicative frame layout: **General Areas (Zone B)**



## 2. ASSUMED LOADS

Facade weight	g	0.15	kN/m <sup>2</sup>
Dynamic pressure	q	1.17	kN/m <sup>2</sup>
Windload (1,15.q)	wd	1.35	kN/m <sup>2</sup>
Wind suction (1,0.q)	ws	1.17	kN/m <sup>2</sup>
Primary fixing strength (steel studs) FP	Dzul	1.20	kN
Secondary fixing strength (steel studs) GP	Dzul	1.20	kN

## 3. FIXED POINT BRACKETS (FP)

Assembly at fixed point brackets	MacFOX-M-60/2x6,5	Load: Weight + Windpressure
Facade weight	2 screws (round holes), 2 primary fixings per bracket	
Windpressure (horizontal)	$G = (g \cdot b \cdot L) =$	<b>0.26</b> kN
Strength coefficient	$H = wd \cdot b \cdot a =$	<b>0.82</b> kN
	$\alpha = H/G =$	3.18
	$G_{zul,4} =$	0.37 kN
	$G_{zul,H} =$	0.37 kN
	$G_N =$	0.48 kN
	$G_D =$	0.47 kN

## 4. FLEXIBLE POINT BRACKETS (GP)

Assembly at flexible point brackets	MacFOX -M-60/2x6,5	Load: Windsuction only
Windsuction (horizontal)	2 screws (elongated holes), 2 primary fixings	
	$H = ws \cdot b \cdot ((a/2)+k) =$	<b>0.65</b> kN
		$< H_{zul} =$ 1.25
		$H_{zul} =$ 1.25 kN

## 5. L-Profile 40/60/2,2

From data sheet	L-Profile 40/60/2,2 (simplified calculation)	
Moment of support	$M_x \text{ zul} =$ 0.17 kNm	$E \cdot I_x =$ 4.98 kNm <sup>2</sup>
Moment of field	$M_S =$ <b>0.08</b> kNm	$< M \text{ zul} =$ 0.17
Curvature of profile	$M_F =$ <b>0.04</b> kNm	$< M \text{ zul} =$ 0.17
	$f =$ <b>0.06</b> cm	$< a/300 =$ 0.34

## 6. Thermal expansion of profile

	Expansion over range of 70° Temp. difference (+10 to+80)	
$\Delta l = L/2 \cdot 70 \cdot 0,0023 =$	<b>0.23</b> cm	$< \Delta l_{zul} =$ 0.5 (Tol.)

Cladding Solutions. Calculation - BS 6399-2



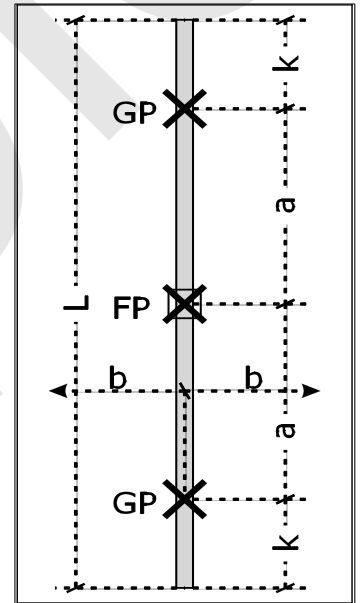
Chromatics RS ~ 6mm appr. 15,0kg/m<sup>2</sup>  
EuroFOX System MTK-v-100, MacFOX 60

LF. 2

### 1. OBJECT DATA

Facade height	h	12.00	m
Length of profile	L	2.85	m
MacFOX-Bracket Type	Typ	60	mm
Distance between primary fixings	a	1.01	m
Distance bracket to end of profile (Max.)	k	0.41	m
Vertical spacing between profiles	b	0.60	m

Indicative frame layout: **Corner Areas (Zone A)**



### 2. ASSUMED LOADS

Facade weight	g	0.15	kN/m <sup>2</sup>
Dynamic pressure	q	1.17	kN/m <sup>2</sup>
Windload (1,15.q)	wd	1.35	kN/m <sup>2</sup>
Wind suction (1,8.q)	ws	2.11	kN/m <sup>2</sup>
Primary fixing strength (steel studs) FP	Dzul	1.20	kN
Secondary fixing strength (steel studs) GP	Dzul	1.20	kN

windloads and factors acc. BS 6399-2

### 3. FIXED POINT BRACKETS (FP)

Assembly at fixed point brackets

Facade weight

Windsuction(horizontal)

Strength coefficient

MacFOX-M-60/2x6,5

2 screws (round holes), 2 primary fixings per bracket

$$G = (g \cdot b \cdot L) = \mathbf{0.26} \text{ kN}$$

$$H = wd \cdot b \cdot a = \mathbf{1.28} \text{ kN}$$

$$\alpha = H/G = 4.98$$

$$G_{zul,4} = 0.37 \text{ kN}$$

$$G_{zul,H} = 0.37 \text{ kN}$$

Load: Weight + Windsuction

$$< G_{zul} = 0.29$$

$$< H_{zul} = 1.43$$

$$G_N = 0.36 \text{ kN}$$

$$G_D = 0.29 \text{ kN}$$

### 4. FLEXIBLE POINT BRACKETS (GP)

Assembly at flexible point brackets

Windsuction (horizontal)

MacFOX -M-60/2x6,5

2 screws (elongated holes), 2 primary fixings

$$H = ws \cdot b \cdot ((a/2)+k) = \mathbf{1.16} \text{ kN}$$

$$< H_{zul} = 1.25$$

$$H_{zul} = 1.25 \text{ kN}$$

Load: Windsuction only

### 5. L-Profile 40/60/2,2

From data sheet

Moment of support

Moment of field

Curvature of profile

L-Profile 40/60/2,2 (simplified calculation)

$$M_x \text{ zul} = 0.17 \text{ kNm}$$

$$E \cdot I_x = 4.98 \text{ kNm}^2$$

$$M_s = \mathbf{0.12} \text{ kNm} \quad < M_{zul} = 0.17$$

$$M_f = \mathbf{0.06} \text{ kNm} \quad < M_{zul} = 0.17$$

$$f = \mathbf{0.09} \text{ cm} \quad < a/300 = 0.34$$

### 6. Thermal expansion of profile

Expansion over range of 70° Temp. difference (+10 to+80)

$$\Delta l = L/2 \cdot 70 \cdot 0,0023 = \mathbf{0.23} \text{ cm}$$

$$< \Delta l_{zul} = 0.5 \text{ (Tol.)}$$