Summary - ValkPro+ L10° South

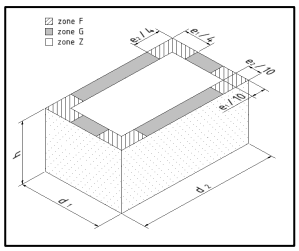
UNITED KINGDOM

Customer				Mitie Ltd	
Project				UCLH	
Date				03/12/2021	
System type				ValkPro+ L10° South	
Wind deflectors				Closed system	
Foundation type	72.96.22			Rubber tile carrier (click) ValkPro+	
Foundation setup				Normal setup	
Number of coupled system frames				≥ 9	pcs
Dimensions solar panel			1038 x	1755	mm
Pitch of the rows				1500	mm
System load by own weight *(frame and panel)*		F_{syst}		274	N
Wind area on the system per frame		A_{wind}		1,822	m²
System surface on the roof per frame		A_{syst}		2,648	m²
Contact surface per foundation		A_{found}		0,01875	m²

Location -

Wind area				22	m/s
Terrain categorie				Country	
Altitude above mean sea level		A		26	m
Distance upwind to shoreline		$d_{shoreline}$		70	km
Exceedance probability		p	1 /	25	jr.
Wind pressure (incl. c_{prob})		$q_{p(z)}$		938	N/m²
				combined	
Net pressure coefficient (by wind tunnel research)	*middle* (exposed)	$c_{p,net(Z1:Z4)}$		-0,14	
	middle (shielded)	$c_{p,net(Z5)}$		-0,09	
	edge	$c_{p,net(G)}$		-0,17	
	corner	$c_{p,net(F)}$		-0,17	
Snow zone		Z		3	
Snow load		s		267	N/m²
Shape coefficent		μ_1		0,800	
Consequences classes				CC2	
Reliability factor		K_{FI}		1	
Reduction factor unfavorable load		ξ		0,925	
Factor unfavorable permanent load		γ_{-G}		1,35	
Factor favorable permanent load		γ_{+G}		1	
Factor unfavorable variable load		γ_{-Q}		1,5	
Factor favorable variable load		γ_{+Q}		0	
Combination factor *(snow)*		$\Psi_{0,s}$		0,5	
Combination factor *(wind)*		$\Psi_{0,w}$		0,5	

Building -

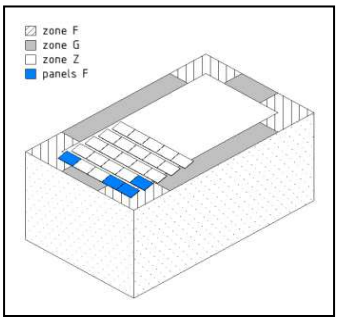


Building height	h	40	m
Longest side	d_2	-	m
Width roofzone strip F and G	$e_2 / 10$	8	m
Length roofzone F	$e_2 / 4$	20	m
Roofing type		Concrete	
Coefficient of friction	f	0,6	

NOTE 2 Value e is the smallest value of 2 x h or d.

NOTE 3 The zone dimensions are different for each edge. The can be filled in separately.

Zone F - Corner -



Extra ballast per peak	$G_{combi\ (F)}$	45 kg
Surface load per peak	$P_{syst\ (F)}$	270 N/m²
Number of foundations	$n_{found\ (F)}$	1 pcs
Point load per foundation	$P_{point\ (F)}$	38 kPa

ATTENTION Systems in zone F has to be installed with Mass carriers.
ATTENTION Contact the supplier, building height is above 25 m.
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*NOTE The surface and point load is **not** provide with wind and snow pressure*