

# MAXIMUM ROOF LENGTHS FOR DRAINAGE

### RAINWATER RUN-OFF

The drainage or run-off capacity of roof sheeting is a limitation on the total length of a sheet run that must be considered in roof design and construction.

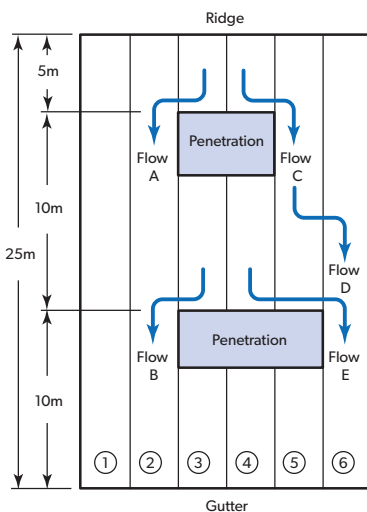
As a guide, Table 3.1 lists the maximum recommended length of roof run for various LYSAGHT® sheet profiles at the roof slopes and rainfall intensities shown. These are based on CSIRO research and Lysaght calculation of the behaviour of roofing profiles under peak rainfall conditions.

The roof run is the total length of roof sheeting drainage rainwater in one direction, including any end laps, expansion joints or steps that may be present in the roof.

#### Figure 3.1

Example of calculating effective roof lengths where penetrations alter the flow of water on a roof.

Note: A suitably qualified engineer is recommended for calculating/checking roof design and flow design.



Valley	Effective Length
1	25m (Base Length)
2	Base Length + A + B 25 + 5 + 10 = 40m
6	Base Length + C + D + E 25 + 5 + 15 + 10 = 55m (Worst case used for design)

**Table 3.1**

Maximum roof lengths for drainage measured from ridge to gutter (m) Penetrations alter the flow of water on a roof. Thus, for design, you need to use an effective roof length.

	Peak Rainfall Intensity	Roof Slope						
		1 in 50 (1°)	1 in 30 (2°)	1 in 20 (3°)	1 in 12 (5°)	1 in 7.5 (7.5°)	1 in 6 (10°)	
CUSTOM ORB®	100				29	34	38	
	150				20	23	25	
	CUSTOM BLUE ORB®	200				15	17	19
		250				12	14	15
		300				10	11	13
		400				7	8	10
500				6	7	8		
CUSTOM ORB ACCENT® 21	100			38	46	53	60	
	150			25	31	35	40	
	200			19	23	27	30	
	250			15	18	21	24	
	300			13	15	18	20	
	400			10	11	13	15	
500			8	9	11	12		
CUSTOM ORB ACCENT® 35	100		90	103	124	143	161	
	150		60	69	82	95	107	
	200		45	51	62	72	80	
	250		36	41	49	57	64	
	300		30	34	41	48	54	
	400		23	26	31	36	40	
500		18	21	25	29	32		
INTEGRITY® 820	100	329	410	480	598	713	820	
	150	220	273	320	399	476	547	
	SPANRIB®	200	165	205	240	299	357	410
		250	132	164	192	239	285	328
		300	110	137	160	199	238	273
		400	82	102	120	150	178	205
500	66	82	96	120	143	164		
KLIP-LOK® 406	100	375	467	548	682	813	934	
	150	250	311	365	454	542	623	
	200	188	234	274	341	406	467	
	250	150	187	219	273	325	374	
	300	125	156	183	227	271	311	
	400	94	117	137	170	203	234	
500	75	93	110	136	163	187		

**Table 3.1 (Continued)**

	Peak Rainfall Intensity	Roof Slope					
		1 in 50 (1°)	1 in 30 (2°)	1 in 20 (3°)	1 in 12 (5°)	1 in 7.5 (7.5°)	1 in 6 (10°)
KLIP-LOK 700 HI-STRENGTH®	100	344	428	502	624	745	856
	150	229	285	334	416	496	571
	200	172	214	251	312	372	428
	250	137	171	201	250	298	342
	300	115	143	167	208	248	285
	400	86	107	125	156	186	214
	500	69	86	100	125	149	171
	KLIP-LOK CLASSIC® 700	100	247	308	361	449	536
150		165	205	241	300	357	411
200		124	154	181	225	268	308
250		99	123	144	180	214	246
300		82	103	120	150	179	205
400		74	93	108	135	161	185
500		49	62	72	90	107	123
LONGLINE 305® (Not Tapered)		100	219	273	320	397	475
	150	146	182	213	265	317	364
	200	110	136	160	199	237	273
	250	88	109	128	159	190	218
	300	73	91	107	133	158	182
	400	55	68	80	100	119	136
SPANDEK®	100		97	111	133	154	173
	150		65	74	89	103	115
	200		49	55	67	77	86
	250		39	44	53	62	69
	300		32	37	44	51	58
	400		24	28	33	39	43
TRIMDEK®	100		220	257	320	382	439
	150		146	172	214	255	293
	200		110	129	160	191	220
	250		88	103	128	153	176
	300		73	86	107	127	146
	400		55	64	80	96	110
	500		44	51	64	76	88

**Notes:**

- Some lengths in this table may exceed the maximum allowable transport length.
- Data are based on work of CSIRO and LYSAGHT®.
- For peak rainfall intensities in your locality, see Chapter 6, LYSAGHT® Roofing & Walling Installation Manual unless noted otherwise.
- FLATDEK® and FLATDEK® II are recommended for home improvement use only (carports/verandahs) where weathertightness is not of primary importance. Drainage figures are therefore not supplied.
- SPANDEK® with slope of 2° (1 in 30) is below the minimum recommended however is available subject to enquiry. Please refer to Section 2.5, LYSAGHT® Roofing & Walling Installation Manual.
- CUSTOM ORB ACCENT® data are based on proprietary design.

LYSAGHT® Roofing & Walling Installation Manual available at [www.lysaght.com/installation/roofing-and-walling](http://www.lysaght.com/installation/roofing-and-walling)

**WWW.LYSAGHT.COM**

**Technical enquiries:**  
**steeldirect@bluescopesteel.com or call 1800 641 417**

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