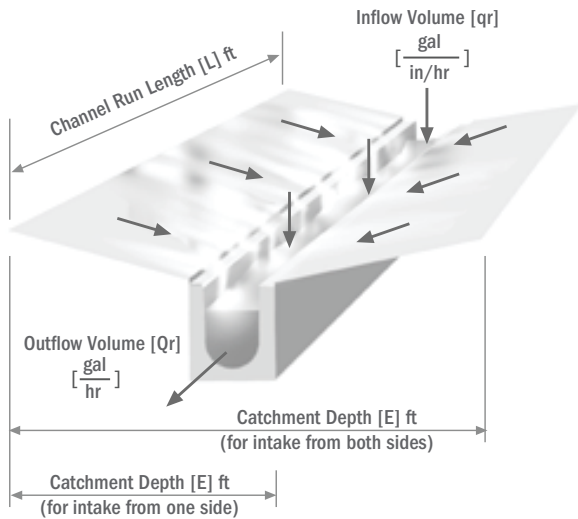


# TRENCH DRAIN HYDRAULIC CALCULATION

## DETERMINE THE MAXIMUM LENGTH [L] OF A CHANNEL RUN



### Example 1:

Suppose the catchment depth [E] is 90 ft and the rainfall intensity is given as 2"/hr.

The Inflow Volume [qr] is found in the table as 9.3 [gal/inch·h]. The result is indicated on the y-axis of the diagram below.

A corresponding maximum run length [L] of 76.1 ft can be found on the x-axis of the diagram for the HydroTec Maxi 100.

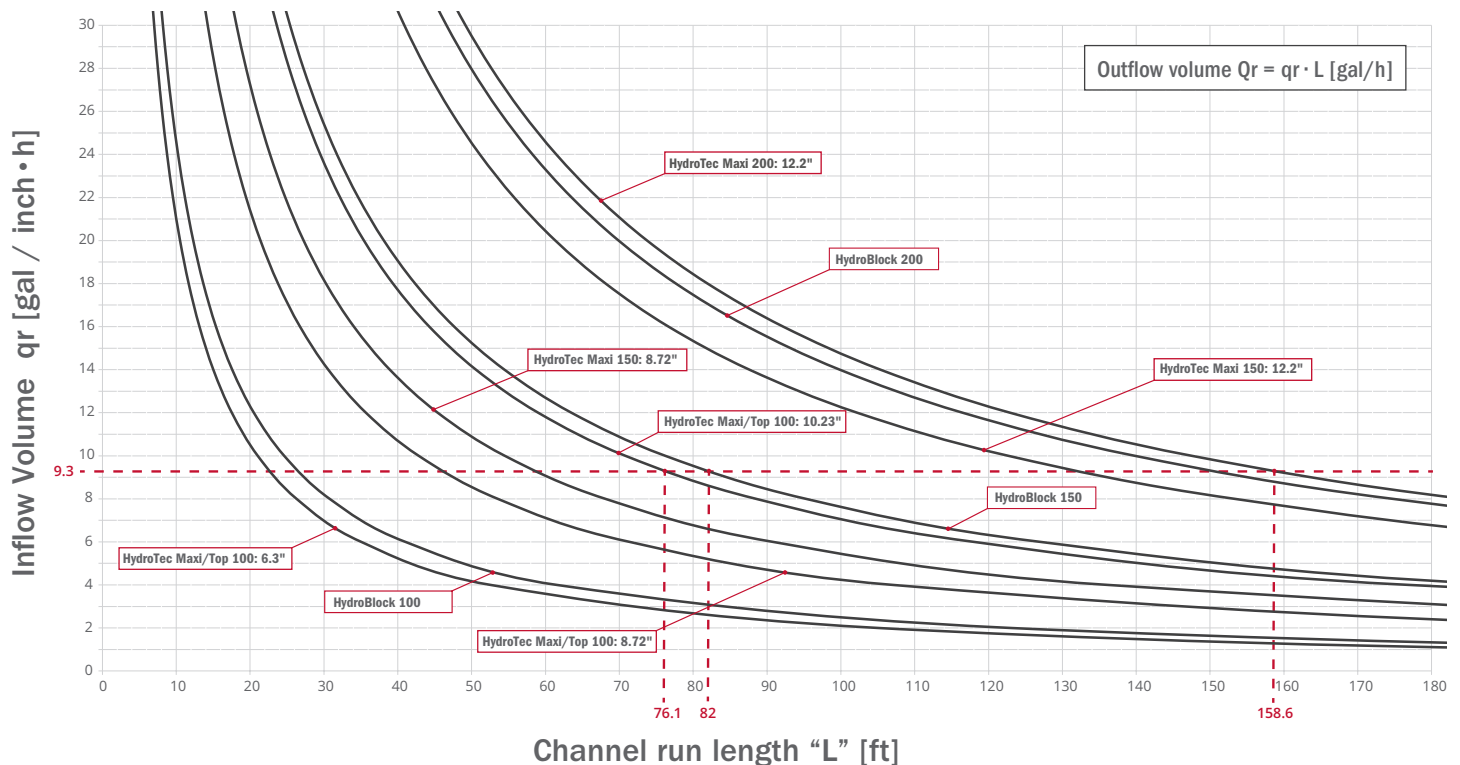
If the installed length of the Maxi 100 channel exceeded 76.1 ft, it would be unable to properly drain the inflow of water. In that case, a greater effective channel height or nominal width should be selected, or more frequent outlet locations should be used.

Inflow Volume qr = [gal/inch·h]		Catchment Depth [E] ft					
		30.00	60.00	90.00	120.00	150.00	180.00
Rainfall Intensity [inch/hr]	1.50	2.3	4.7	7.0	9.3	11.7	14.0
	2.00	3.1	6.2	9.3	12.4	15.5	18.6
	2.50	3.9	7.8	11.7	15.5	19.4	23.3
	3.00	4.7	9.3	14.0	18.6	23.3	28.0

Further, in the same scenario, the maximum run length [L] would be:

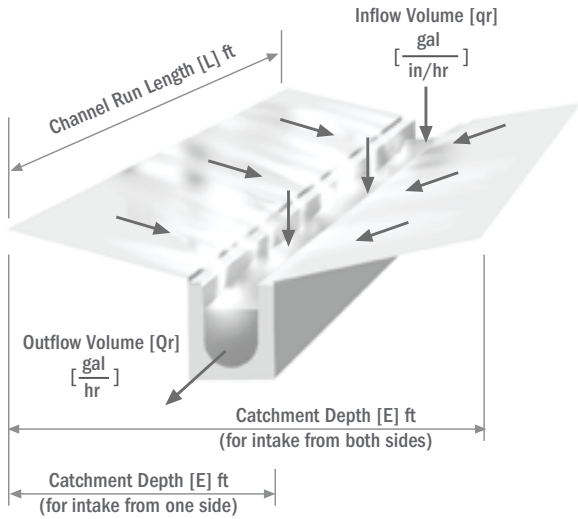
L = 82 ft for HydroBlock 150

L = 158.6 ft for HydroTec Maxi 200



# TRENCH DRAIN HYDRAULIC CALCULATION

## DETERMINE THE MAXIMUM LENGTH [L] OF A CHANNEL RUN



### Example 2:

Suppose the catchment depth [E] is 150 ft and the rainfall intensity is given as 3"/hr.

The Inflow Volume [qr] is found in the table as 23.3 [gal/inch-h]. The result is indicated on the y-axis of the diagram below.

A corresponding maximum run length [L] of 164 ft can be found on the x-axis of the diagram for the HydroBlock 300.

If the installed length of the HydroBlock 300 channel exceeded 164 ft, it would be unable to properly drain the inflow of water. In that case, a greater effective channel height or nominal width should be selected, or more frequent outlet locations should be used.

Inflow Volume qr = [gal/inch-h]		Catchment Depth [E] ft					
		30.00	60.00	90.00	120.00	150.00	180.00
Rainfall Intensity [inch/hr]	1.50	2.3	4.7	7.0	9.3	11.7	14.0
	2.00	3.1	6.2	9.3	12.4	15.5	18.6
	2.50	3.9	7.8	11.7	15.5	19.4	23.3
	3.00	4.7	9.3	14.0	18.6	23.3	28.0

Further, in the same scenario, the maximum run length [L] would be:

L = 167 ft for HydroTec Maxi 300

L = 274 ft for HydroTec Maxi 400

