

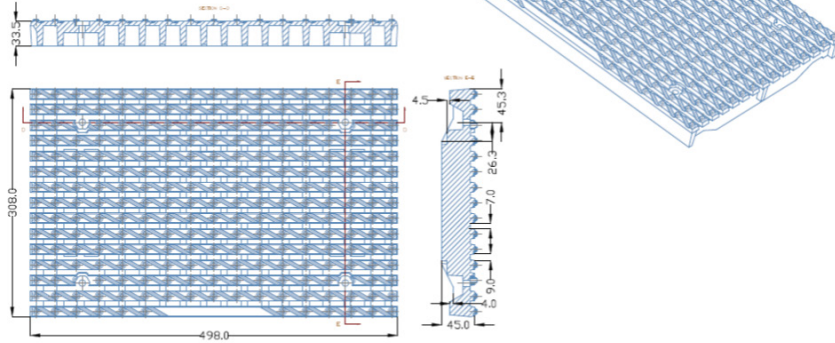
HEAVY DUTY 300 SERIES									
SECTION ID	SECTION MEASUREMENT				SECTION POSITION		SECTION HYDRAULICS <sup>3</sup>		
<b>River (R) - Variable Built-in-Fall</b>									
Sections	Weight Excl. Grate (Kg's)	Length (Metres) <sup>5</sup>	Start Invert (mm)	End Invert (mm)	Previous Upstream Section	Next Downstream Section	Built-in-Fall (%)	Max Design Velocity (M/s)	Max Design Flow Rate (L/s) <sup>1</sup>
HD300 R1-0.5	4.8	0.5	203	210	-	R2 or T2 <sup>4</sup>	1.50%	-	-
HD300 R1-1.0	10.8	1.0	195	210	-	R2 or T2 <sup>4</sup>	1.50%	-	-
HD300 R1-1.5	15.6	1.5	188	210	-	R2 or T2 <sup>4</sup>	1.50%	-	-
HD300 R1-2.0	20.4	2.0	180	210	-	R2 or T2 <sup>4</sup>	1.50%	-	-
HD300 R1-2.5	26.4	2.5	173	210	-	R2 or T2 <sup>4</sup>	1.50%	-	-
HD300 R1-3.0	31.2	3.0	165	210	-	R2 or T2 <sup>4</sup>	1.50%	-	50
HD300 R2-3.0	31.8	3.0	210	242	R1	R3	1.00%	1.5	55
HD300 R3-3.0	32.4	3.0	242	267	R2	R4	0.75%	1.4	60
HD300 R4-3.0	33.0	3.0	267	287	R3	R5 or T5 <sup>8</sup>	0.63%	1.3	70
HD300 R5-3.0	33.6	3.0	287	307	R4 or T2 <sup>4</sup>	R6	0.60%	1.3	75
HD300 R6-3.0	38.4	3.0	307	327	R5	R7	0.58%	1.3	80
HD300 R7-3.0	39.6	3.0	327	345	R6	R8	0.56%	1.3	90
<b>(Z8) Zero Fall Section Length Extender can be inserted here<sup>2</sup></b>									
HD300 R8-3.0	40.2	3.0	345	364	R7	R9 or T9 <sup>13</sup>	0.55%	1.3	95
HD300 R9-3.0	40.8	3.0	364	382	R8 or T5 <sup>8</sup>	R10	0.54%	1.3	105
HD300 R10-3.0	41.4	3.0	382	400	R9	R11	0.53%	1.3	110
HD300 R11-3.0	42.0	3.0	400	418	R10	R12	0.52%	1.3	115
HD300 R12-3.0	42.6	3.0	418	435	R11	R13	0.51%	1.3	120
HD300 R13-3.0	43.2	3.0	435	452	R12	R14	0.50%	1.3	125
HD300 R14-3.0	46.8	3.0	452	469	R13 or T9 <sup>13</sup>	R15	0.50%	1.3	135
HD300 R15-3.0	48.0	3.0	469	486	R14	R16	0.50%	1.3	140
HD300 R16-3.0	49.2	3.0	486	503	R15	-	0.50%	1.4	145
<b>Torrent (T) Self Cleansing - Super Steep Built-in-Fall</b>									
Sections	Weight Excl. Grate (Kg's)	Length (Metres)	Start Invert (mm)	End Invert (mm)	Previous Upstream Section	Next Downstream Section	Built-in-Fall (%)	Max Design Velocity (M/s)	Max Design Flow Rate (L/s) <sup>1</sup>
HD300 T2 <sup>5</sup> -3.0	32.4	3.0	210	287	R1	T5 <sup>8</sup> or R5	2.51%	2.4	85
HD300 T5 <sup>8</sup> -3.0	38.0	3.0	287	364	T2 <sup>4</sup> or R4	T9 <sup>13</sup> or R9	2.49%	2.6	145
HD300 T8 <sup>13</sup> -3.0	42.0	3.0	364	452	T5 <sup>8</sup> or R8	R14	2.87%	3.0	230
<b>Zero Fall/Neutral (Z8) - Section Length Extender, 345mm Invert</b>									
Sections	Weight Excl. Grate (Kg's)	Length (Metres)	Start Invert (mm)	End Invert (mm)	Previous Upstream Section	Next Downstream Section	Built-in-Fall (%)	Max Design Velocity (M/s)	Max Design Flow Rate (L/s) <sup>1</sup>
HD300 Z8-0.5	7.2	0.5	345	345	R7	T8 <sup>13</sup> or R8	0.00%	-	-
HD300 Z8-1.0	14.4	1.0	345	345	R7	T8 <sup>13</sup> or R8	0.00%	-	-
HD300 Z8-1.5	13.5	1.5	345	345	R7	T8 <sup>13</sup> or R8	0.00%	-	-
HD300 Z8-2.0	26.4	2.0	345	345	R7	T8 <sup>13</sup> or R8	0.00%	-	-
HD300 Z8-2.5	22.5	2.5	345	345	R7	T8 <sup>13</sup> or R8	0.00%	-	-
HD300 Z8-3.0	40.0	3.0	345	345	R7	T8 <sup>13</sup> or R8	0.00%	-	-

1. Maximum design flow rate is calculated using the Mannings n = 0.012 with 30mm freeboard below grating  
 2. Zero Fall Sections are used where there is surface slope or to extend overall length of "River" sections  
 3. Channel sections can be custom designed (% fall, length) to suit site specific conditions  
 4. R1 Sections (0.5 L/m multiples) are used to vary overall length  
 5. Overall drain length can be cut to size to less than 0.5m multiples if required, extra charges will apply.

**POWERED COATED DUCTILE IRON GRATING (300 SGG)**

Shoe-guard Grating – Heel Guard Compliant

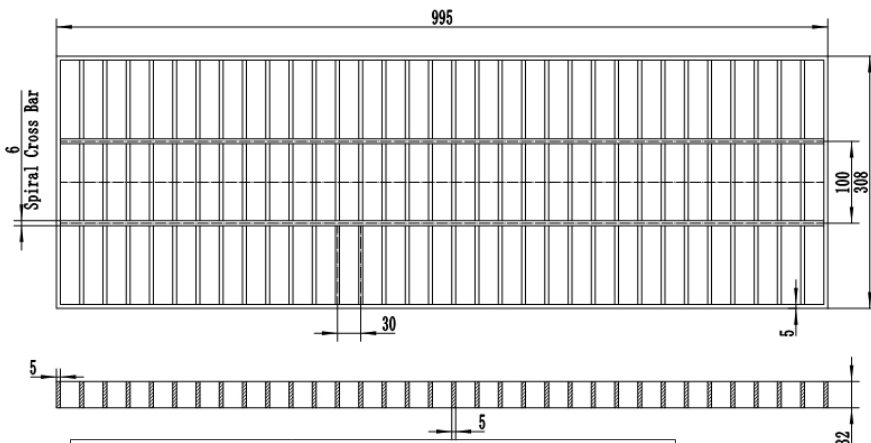
Length 500mm, 8mm Slot



<b>RATED E400 (AS3996) – TESTED BY OPUS LABORATORIES N.Z.</b>	
<b>MAX FLOW RATE</b>	One side 11.5 L/m/s
	Two sides 23.0 L/m/s

**GALVANISED MESH GRATING (300 GMG)**

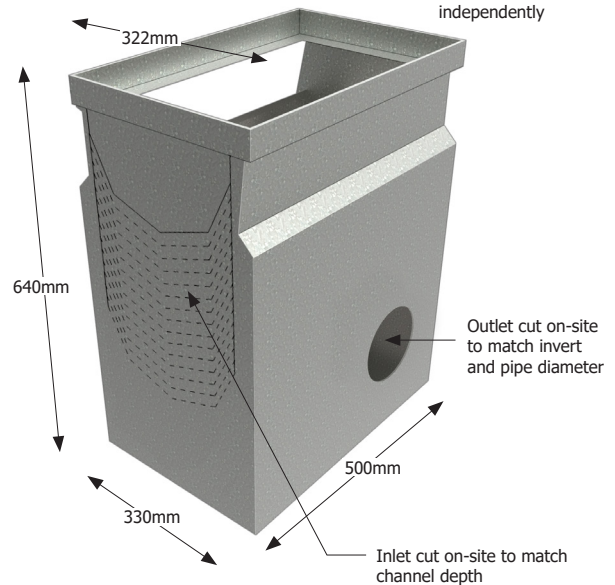
Hi-Flo Grating - High Flow Rate



<b>RATED D210 (AS3996) – TESTED BY OPUS LABORATORIES</b>	
<b>MAX FLOW RATE</b>	One side 22.5 L/s/m
	Two sides 39.0 L/m/s

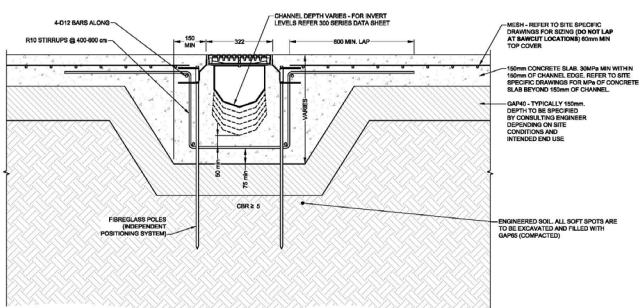
**INLINE SUMP (300 ILS)**

The Inline sump can also be used independently

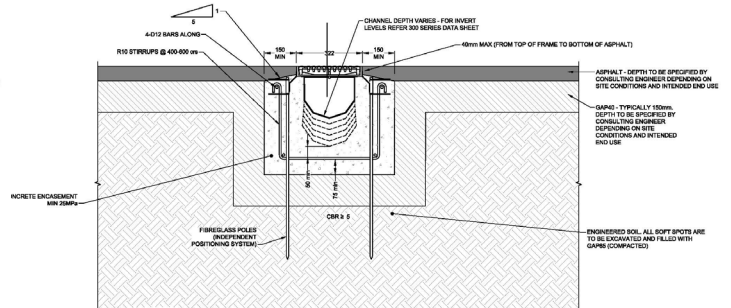


**INSTALLATION GUIDE**

**CONCRETE BOTH SIDES**



**ASPHALT BOTH SIDES**



The Installation Guides can be downloaded from website - [www.thundaflo.com/downloads](http://www.thundaflo.com/downloads)