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STORMCHANNEL™

STORMCHANNEL™

THE HEAVY DUTY PRECAST DRAINAGE CHANNEL DESIGNED TO REMOVE SURFACE WATER

CONTENTS

STORMCHANNEL™

INTRODUCING STORMCHANNEL™ FROM FP MCCANN

Heavy-Duty Surface Water Management – Engineered for Performance

FP McCann is proud to introduce StormChannel™ — a robust, precast concrete drainage solution specifically developed to manage surface water in high-demand environments efficiently. From motorways and industrial zones to commercial estates and urban streetscapes, StormChannel™ is the go-to choice for resilient and reliable drainage performance.

StormChannel™ is available in a diverse array of sizes and configurations to meet various project requirements, including standard units, kerb-integrated designs, sump units, and rodding point options. This extensive selection offers exceptional flexibility for both designers and contractors, enabling them to tailor solutions to specific site conditions and regulatory requirements.

The innovative modular design of StormChannel™ ensures that installation is not only quick and straightforward but also minimises disruption to the surrounding environment. Additionally, its materials are selected for their resilience, resulting in low maintenance requirements and long-term cost-effectiveness. This combination of efficiency and durability enables project teams to implement drainage solutions that stand the test of time without sacrificing performance or quality.

StormChannel™	Length (mm)	Height (mm)	Weight (T)	Width (mm)	Drainage Cross Section (m^2)
ED300 Standard	2500	555	1.40	520	0.0707
ED400 Standard	2500	745	1.70	520	0.1262
ED400 Kerb	2500	795	1.70	520	0.1262
ED500 Standard*	2500	805	2.30	700	0.1973
ED600 Standard*	2500	995	2.60	700	0.2828

*only available on request.

KEY BENEFITS:

- Fast Installation with no concrete surround required
- Robust Construction to withstand heavy traffic loads (up to Class F900)
- Watertight System with spigot and socket joints for secure, aligned connections
- Modular & Scalable — suited to any scheme size or complexity
- Integrated Slope promotes efficient water flow towards the slot
- Fully Compliant with BS EN 1433

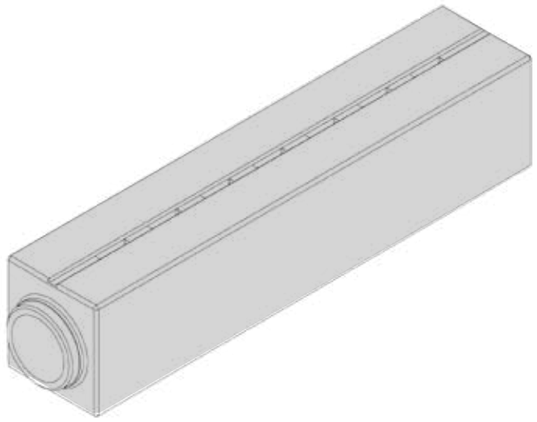
Backed by FP McCann's extensive manufacturing expertise and commitment to innovation, StormChannel™ sets a new standard in precast linear drainage.

FEATURES:

- Resilient up to classes D400, E600 or F900
- ED300 and ED400 Standard StormChannel™ tested to Class F900
- 2% surface slope to the slot
- Spigot and socket end for correct alignment and joining
- Supplied with interrupted slot (170x30mm)
- Rodding points and sump units are availale with inspection grate for cleaning and inspection
- Blanked spigot/socket end units available

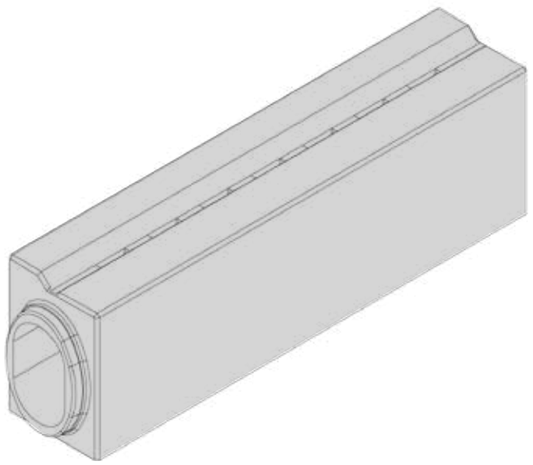
Additional connections can be provided on request. Junction box sump unit also available in all sizes.

STORMCHANNEL™ TYPES & ACCESSORIES



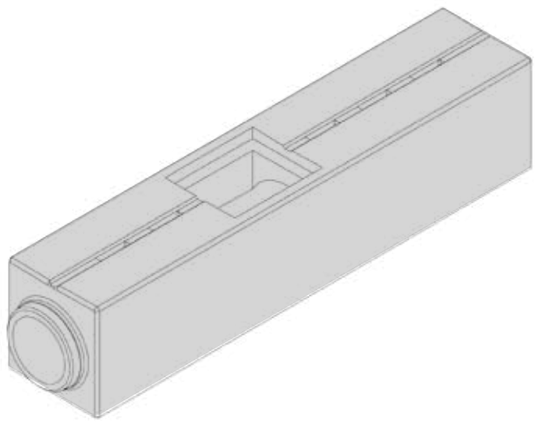
STANDARD

Used for main run
2500mm long
Sizes: 300, 400, 500* & 600*
E600 or F900 loading
End Caps Available



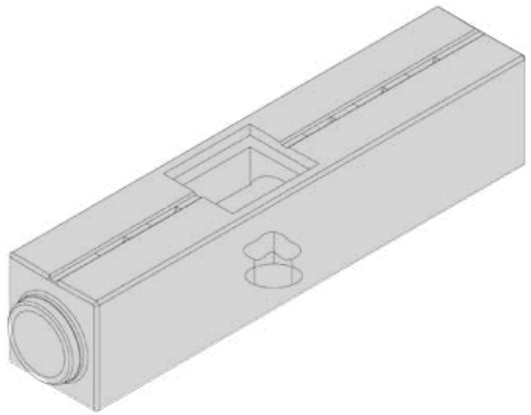
KERB

Used for main run
2500mm long
Sizes: 400
E600 or F900 loading
End Caps Available
Long lead time



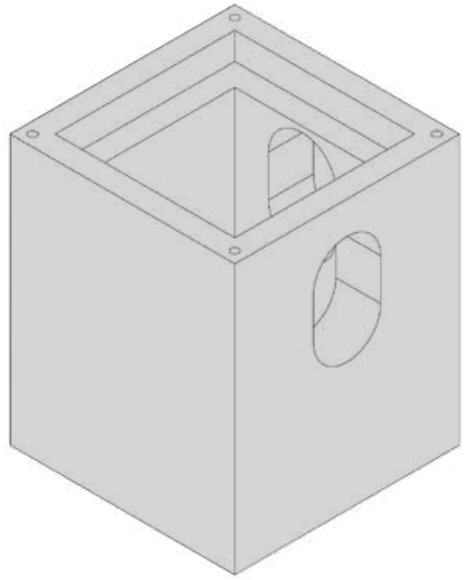
RODDING POINT

Used for cleaning and access
Recessed opening for grate
Installed at start of line and every 30-50m
2500mm long
Sizes: 300, 400, 500* & 600*
E600 or F900 loading
End Caps Available



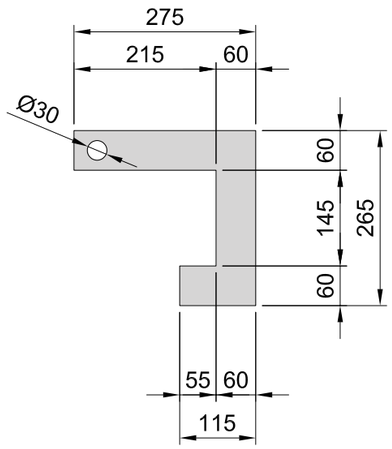
SUMP UNIT

Used as outlet point to lower sump unit
Recessed opening for grate
Installed at end of line
2500mm long
Sizes: 300, 400, 500* & 600*
E600 or F900 loading
End Caps Available



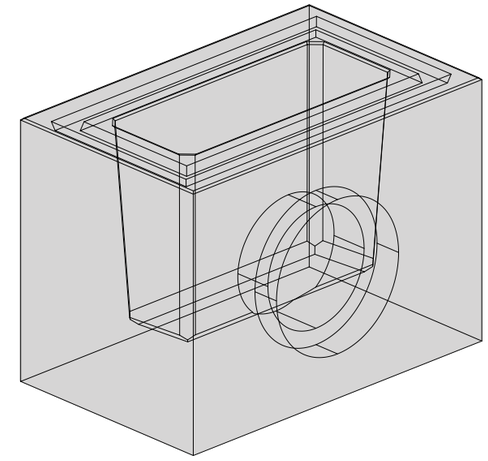
MLSC UNIT

Used for change in direction (90º)
Used for change in StormChannel size
Recessed opening for 600x600mm grate
Butt joint only - made good on site
E600 or F900 loading



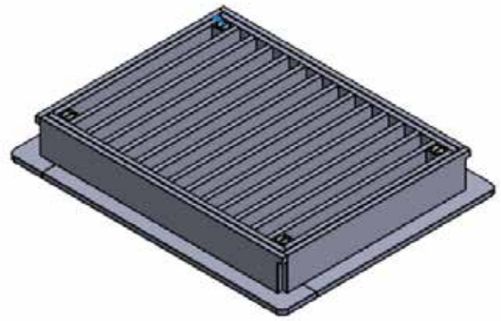
INSTALLATION HOOKS

Used for pulling the channels tight during installation
(Separate winch is required)
15mm plate, 2nr required
Galvanised finish



LOWER SUMP UNIT

Used below sump unit & connects to drainage system
Can supply with hole to suit DN150-DN300 pipes
E600 or F900 loading

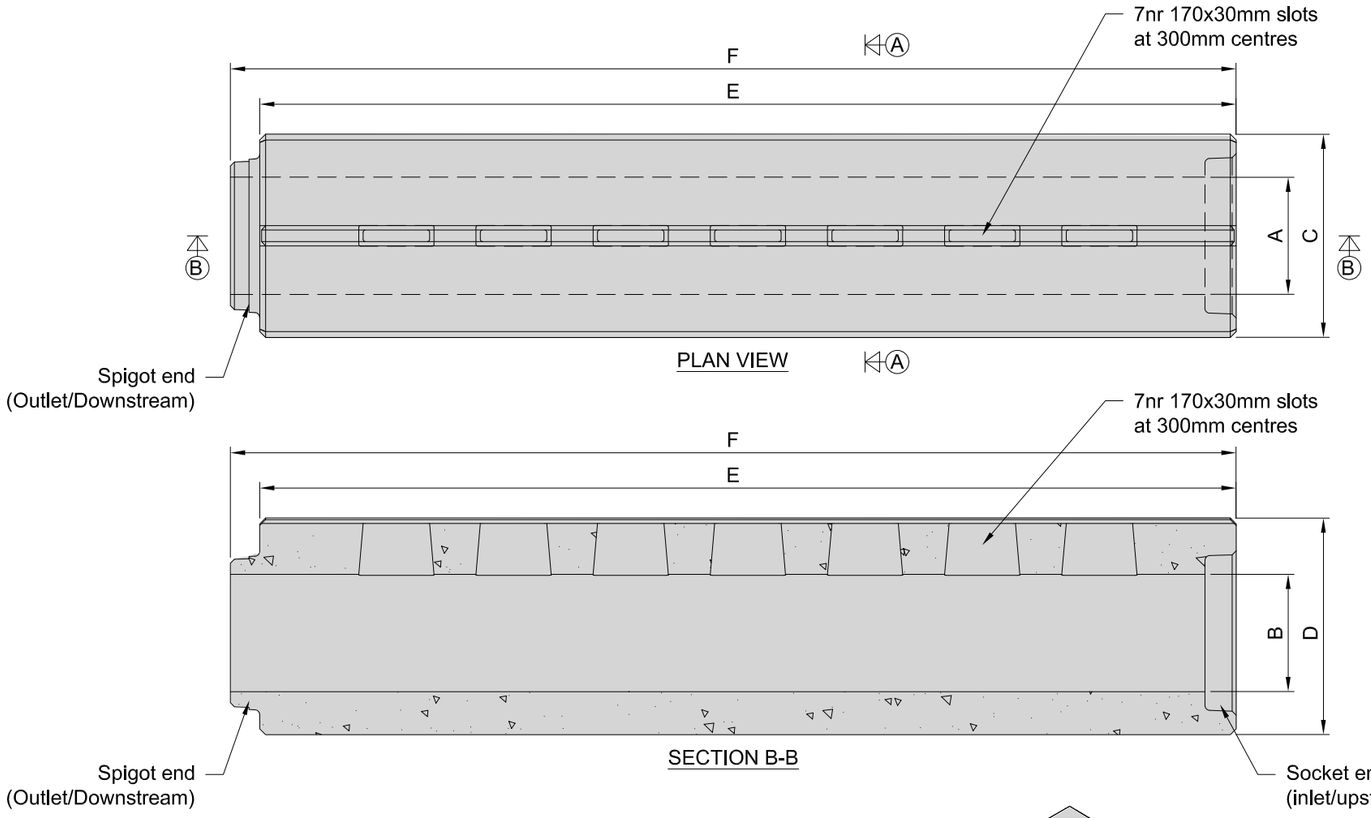


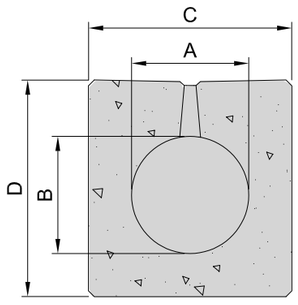
GRATE

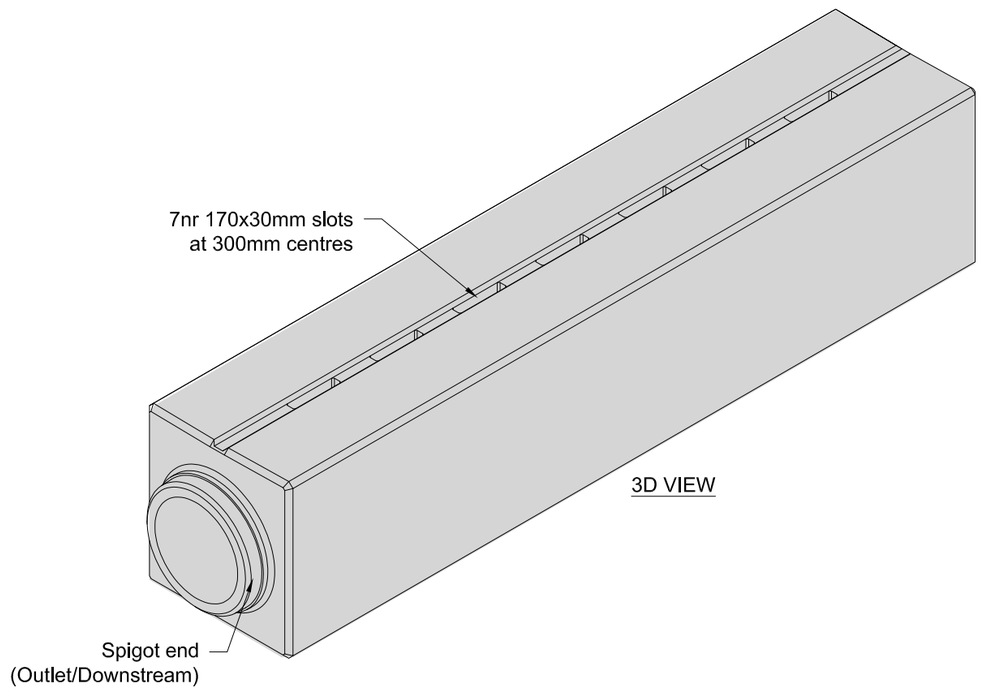
Lockable grate 400x300mm
Supplied loose
Stainless Steel finish

SCAN THE QR CODE TO WATCH OUR STORMCHANNEL INSTALLATION VIDEO

STORMCHANNEL™
STANDARD

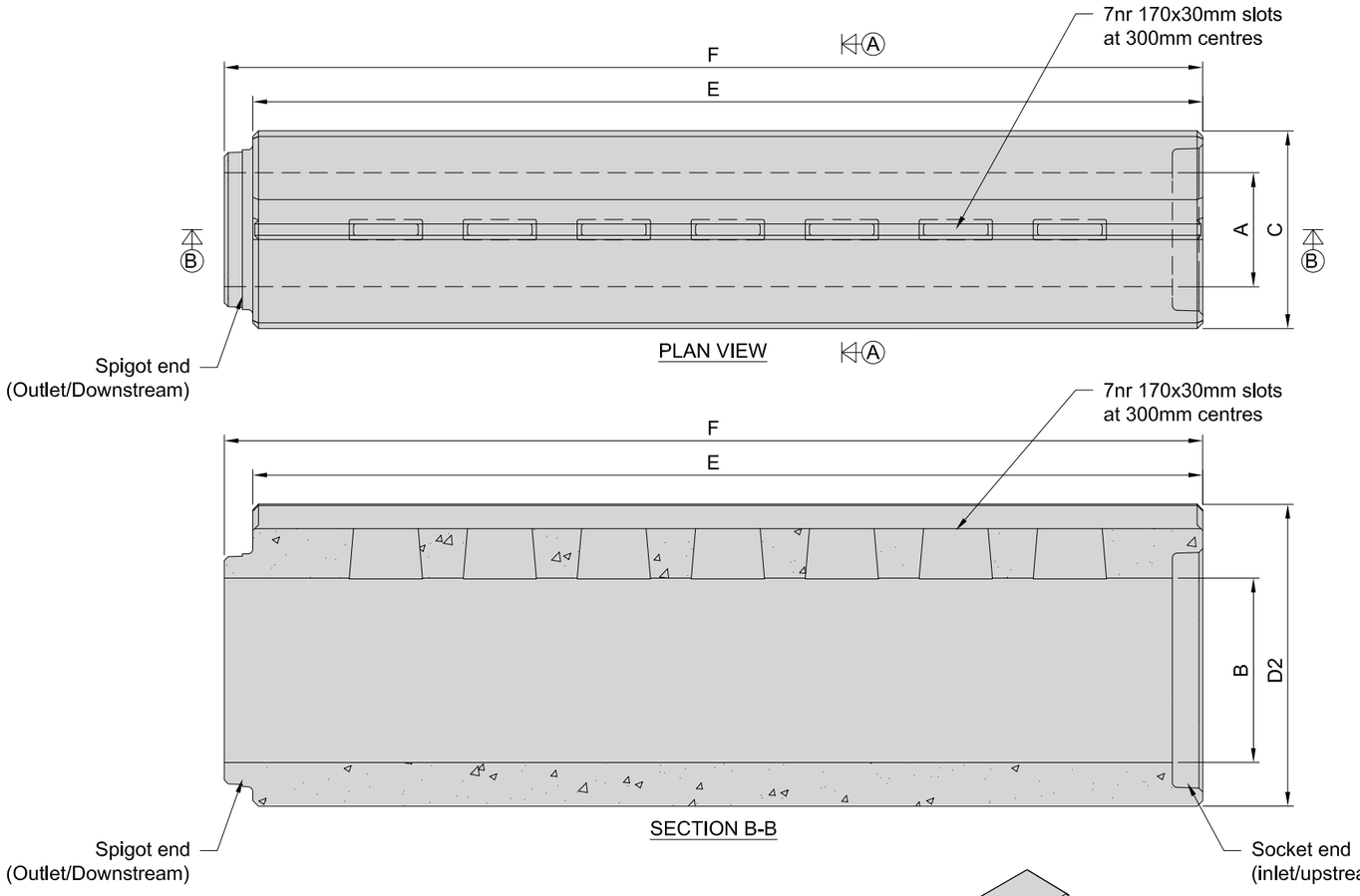


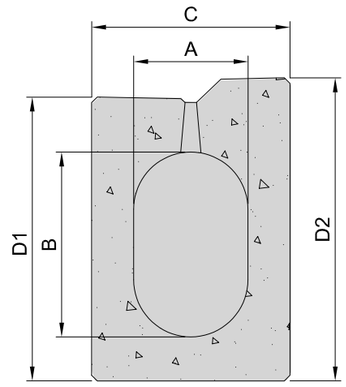


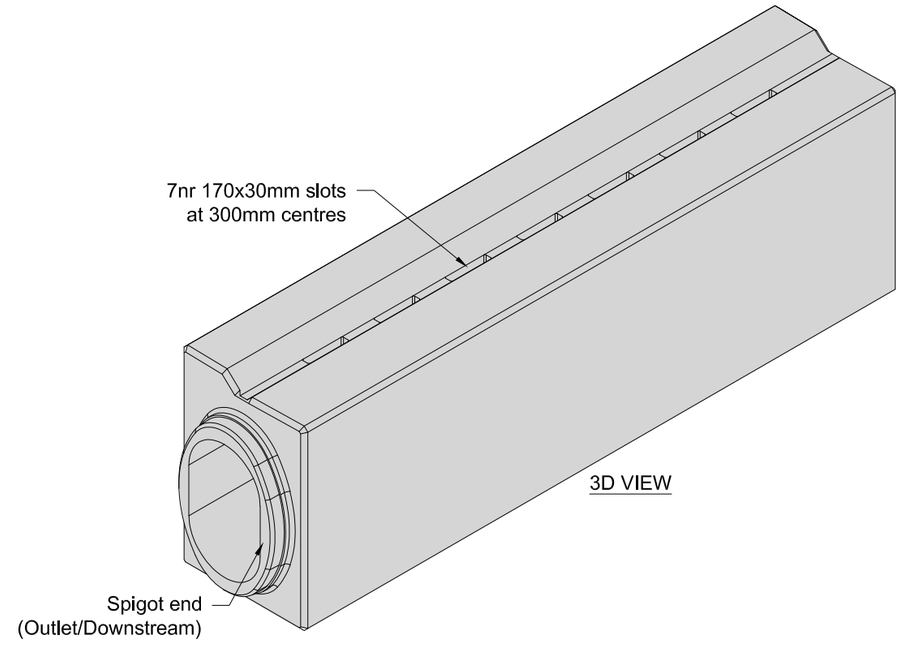


Size	Dimensions (mm)						Weight (T)	Available loading	Drainage Cross Section (m²)
	A	B	C	D	E	F			
ED300	300	300	520	555	2500	2575	1.40	E600 & F900	0.0707
ED400	300	485	520	745	2500	2575	1.70	E600 & F900	0.1262
ED500	450	535	700	805	2500	2575	2.30	E600 & F900	0.1973
ED600	450	725	700	995	2500	2575	2.60	E600 & F900	0.2828

STORMCHANNEL™
KERB

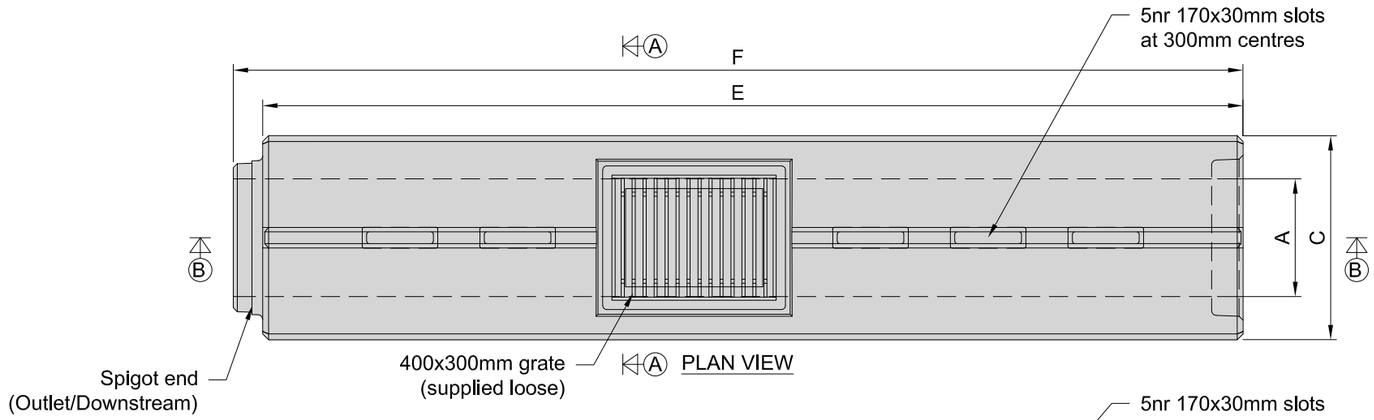


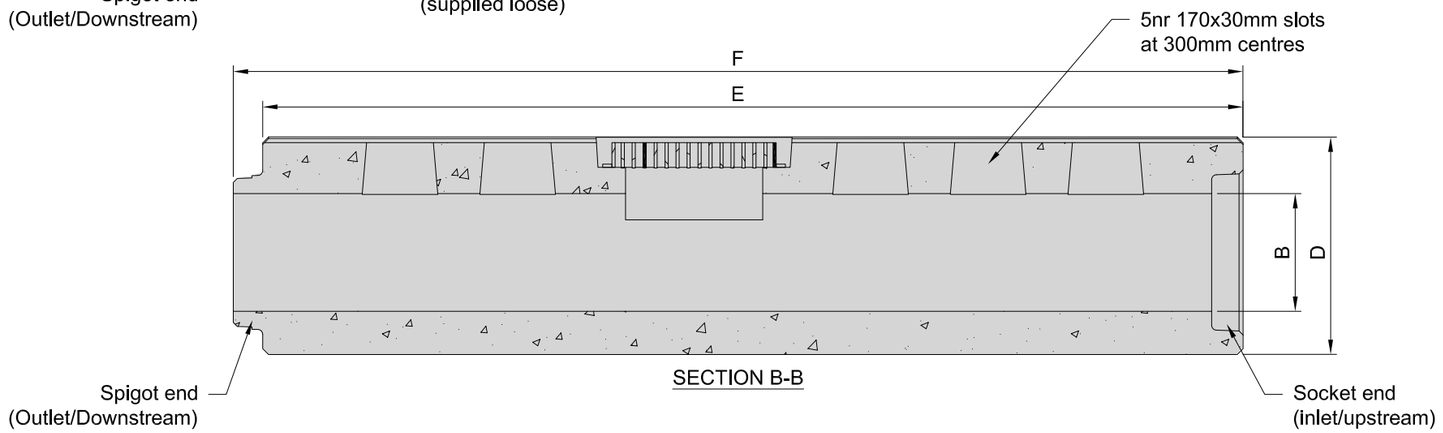


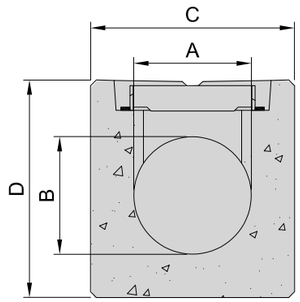


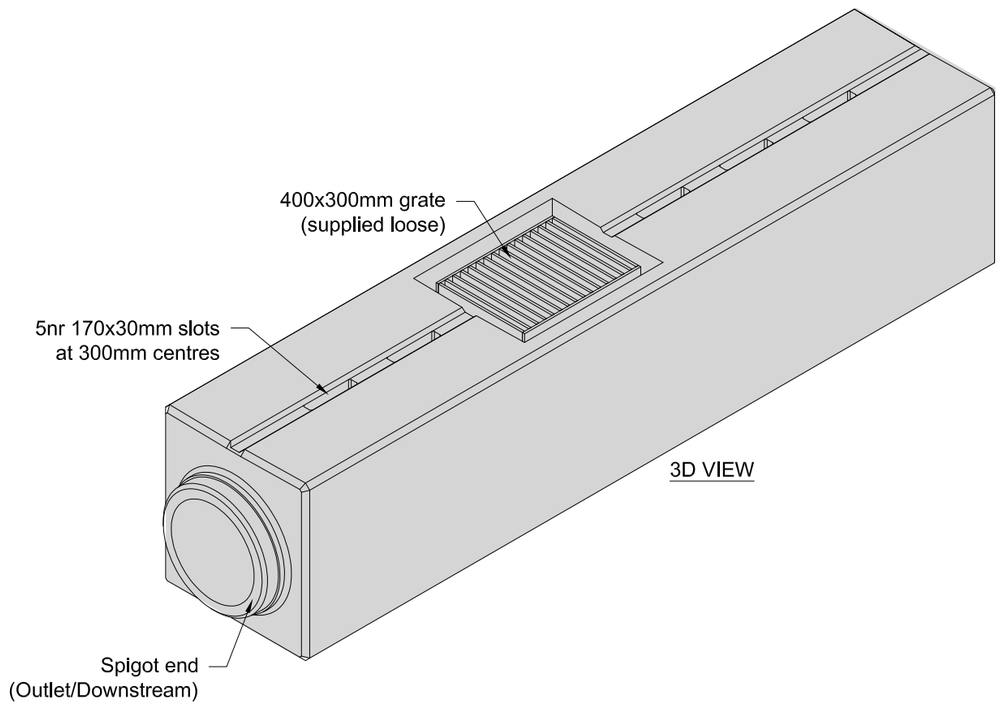
Size	Dimensions (mm)							Weight (T)	Available loading	Drainage Cross Section (m²)
	A	B	C	D1	D2	E	F			
ED400	300	485	520	745	795	2500	2575	1.70	E600 & F900	0.1262

STORMCHANNEL™
RODDING POINT & GRATE



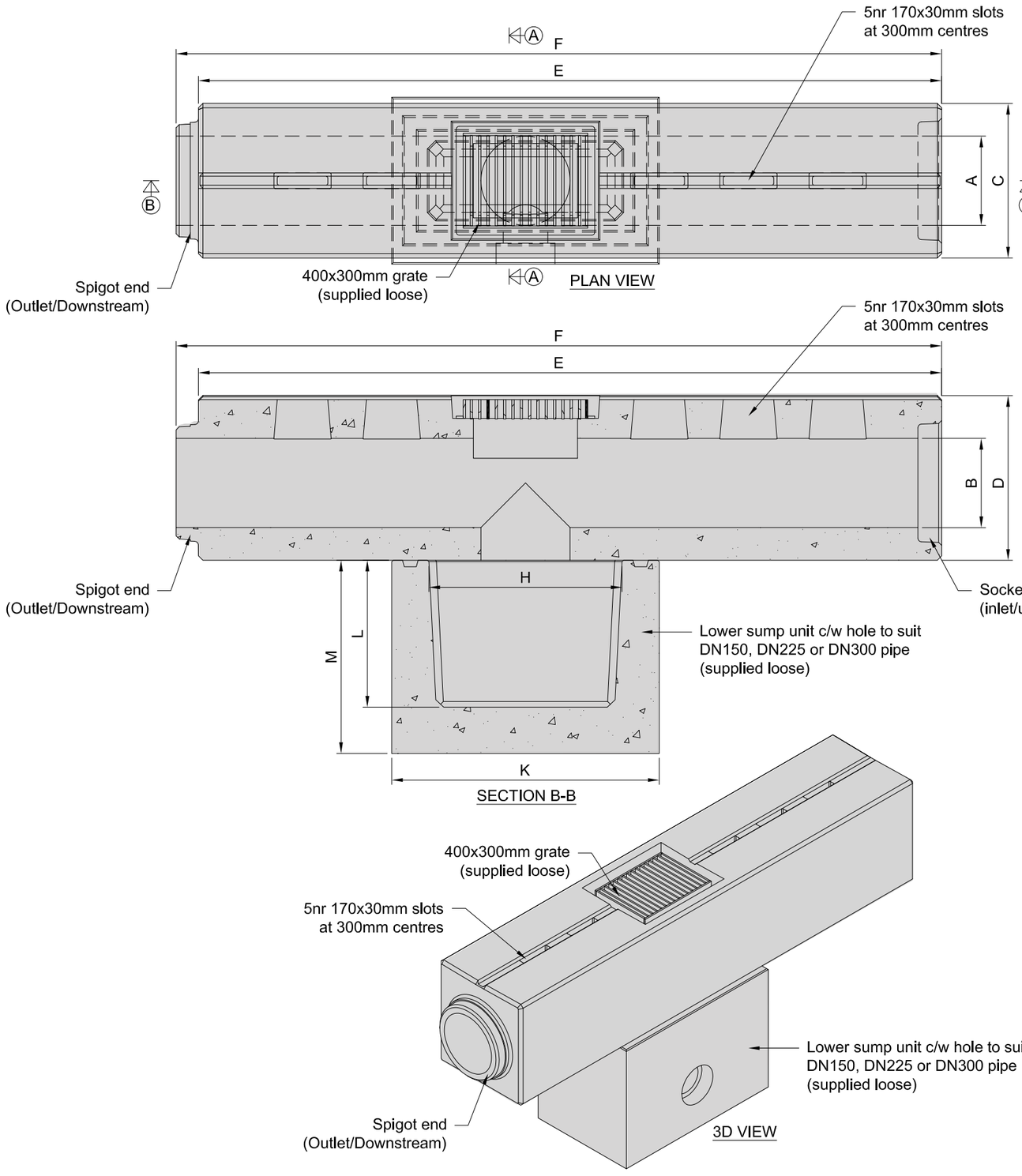




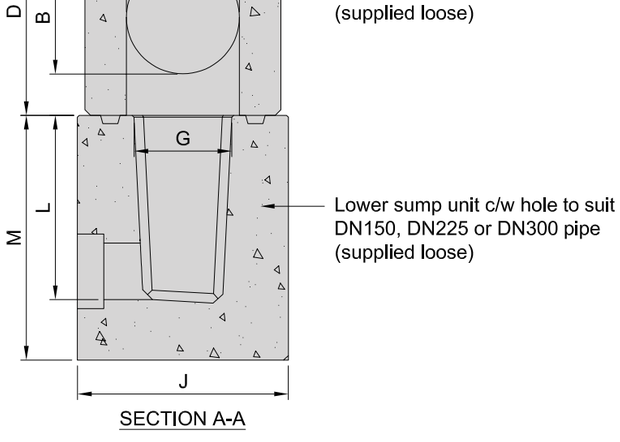


Size	Dimensions (mm)						Weight (T)	Available loading	Drainage Cross Section (m^2)
	A	B	C	D	E	F			
ED300	300	300	520	555	2500	2575	1.40	E600 & F900	0.0707
ED400	300	485	520	745	2500	2575	1.70	E600 & F900	0.1262
ED500	450	535	700	806	2500	2575	2.30	E600 & F900	0.1973
ED600	450	725	700	996	2500	2575	2.60	E600 & F900	0.2828

STORMCHANNEL™ SUMP UNIT, LOWER SUMP UNIT & GRATE

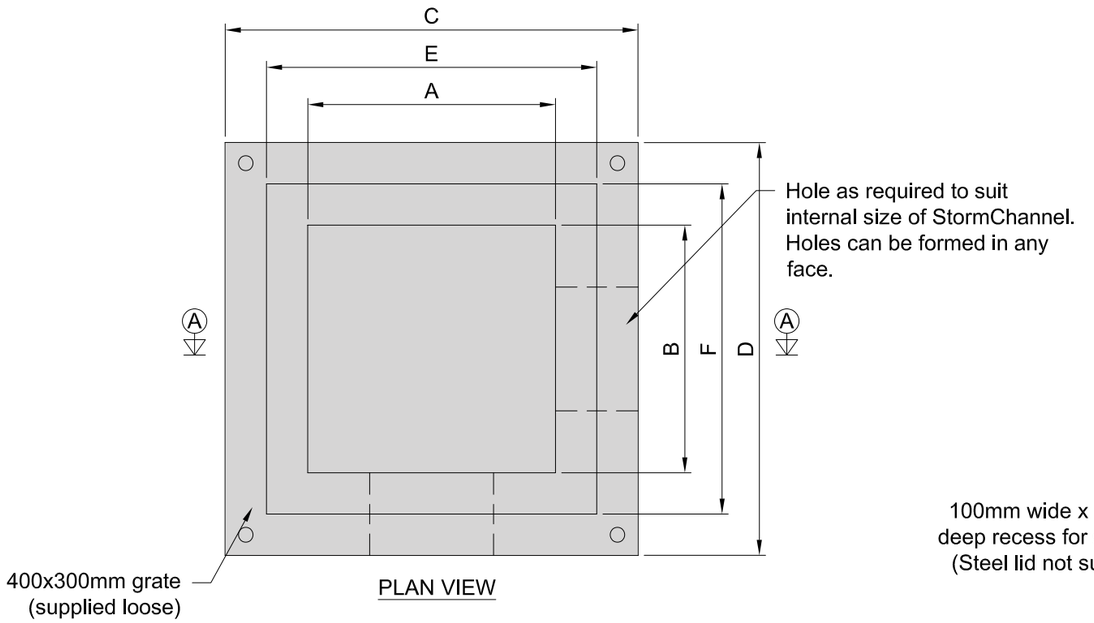


Size	Dimensions (mm)						Weight (T)	Available loading	Drainage Cross Section (m^2)
	A	B	C	D	E	F			
ED300	300	300	520	555	2500	2575	1.40	E600 & F900	0.0707
ED400	300	485	520	745	2500	2575	1.70	E600 & F900	0.1262
ED500	450	535	700	806	2500	2575	2.30	E600 & F900	0.1973
ED600	450	725	700	996	2500	2575	2.60	E600 & F900	0.2828



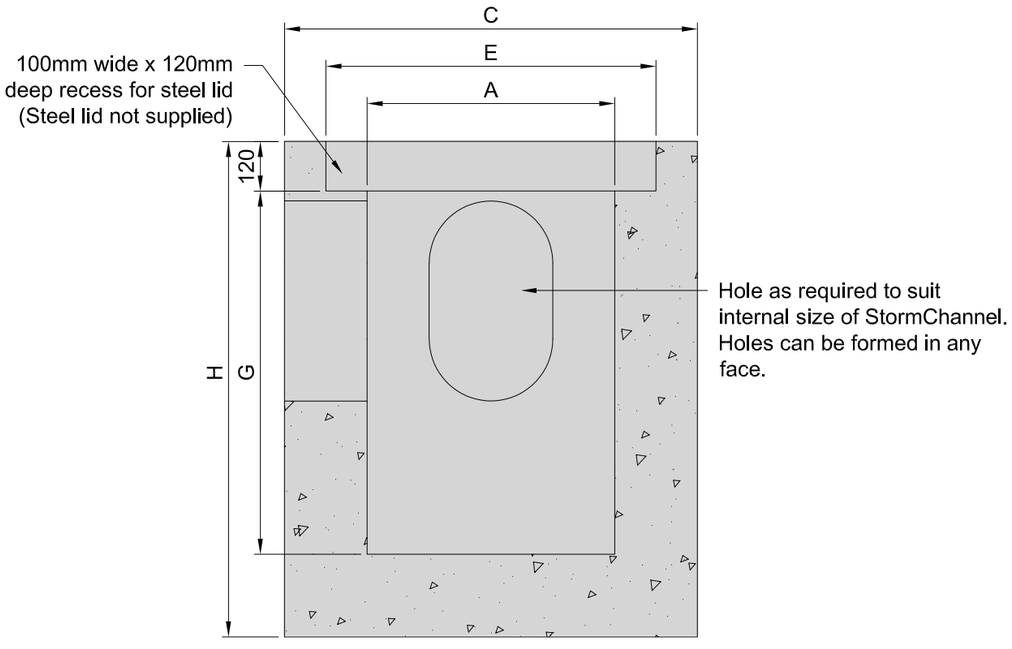
Size	Dimensions (mm)						Weight (T)	Available loading
	G	H	J	K	L	M		
LSU	260	650	560	900	500	650	0.65	E600
LSU	260	650	860	1200	500	650	1.00	F900

STORMCHANNEL™
MLSC

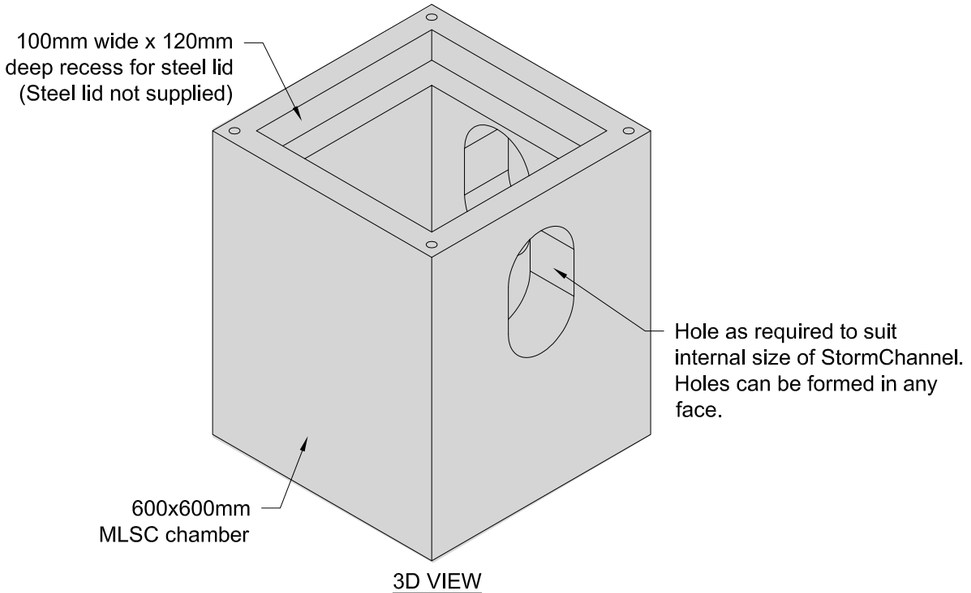


PLAN VIEW

Size	Dimensions (mm)								Weight (T)	Available loading
	A	B	C	D	E	F	G	H		
MLSC	600	600	1000	1000	800	800	880	1200	1.89	E600 & F900

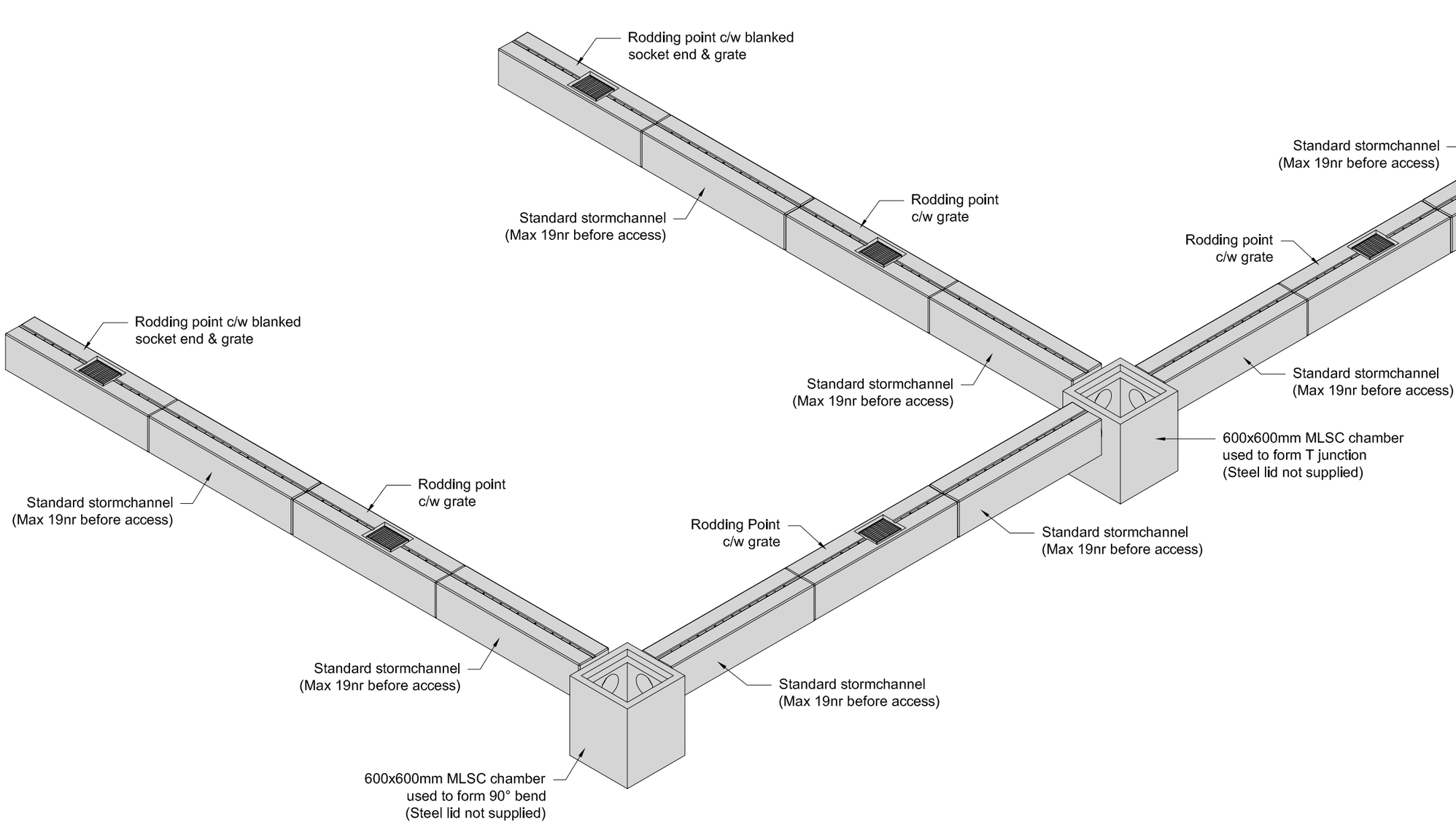


SECTION A-A

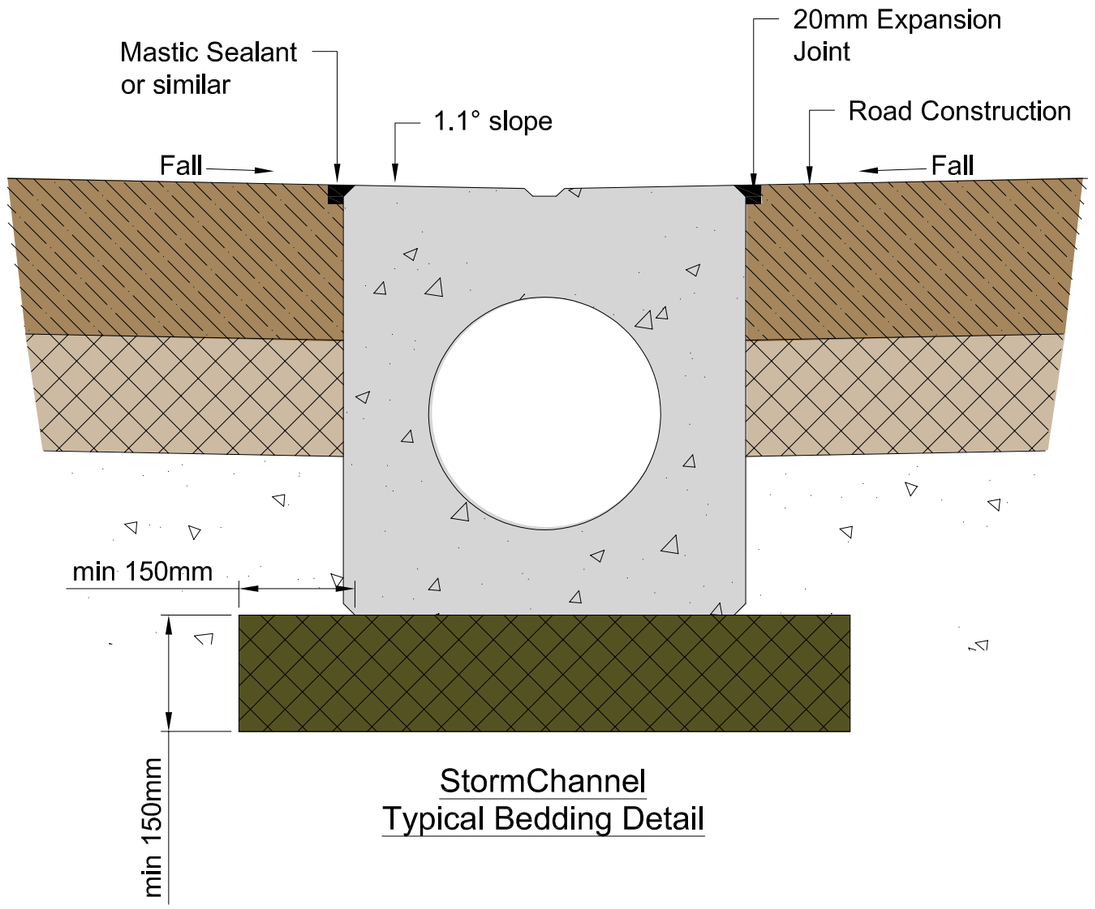


3D VIEW

STORMCHANNEL™
TYPICAL ARRANGEMENT



STORMCHANNEL™
BEDDING DETAIL



STORMCHANNEL™
HYDRAULIC CALCULATIONS

STEADY NON-UNIFORM FLOW

When water is conveyed through a channel while simultaneously receiving continuous inflow through lateral intakes distributed along its length, it can often be characterised as steady non-uniform flow.

This progressive accumulation increases the volume of water within the channel, thereby making the total run length a critical factor in determining the hydraulic capacity of the system.

A key characteristic of steady non-uniform flow is the variation in both velocity and depth at successive cross-sections along the channel.

If this variation is gradual, it is called gradually varied flow, which is used in the calculations below.

- Tables below show the maximum hydraulic capacities of StormChannel™
- Q (l/s) – is the maximum flow at hydraulic capacity
- q (l/s/m) – is the maximum possible lateral inflow
- A (m^2) – is the maximum area that can be drained considering a rainfall intensity of 50mm/hr

ED300 (rainfall intensity = 50 mm/hr)												
Slope	0%			0.2%			0.5%			1%		
Length to the outlet	Q(l/s)	q(l/s/m)	A(m^2)	Q(l/s)	q(l/s/m)	A(m^2)	Q(l/s)	q(l/s/m)	A(m^2)	Q(l/s)	q(l/s/m)	A(m^2)
25	45.54	1.82	3277	54.2	2.17	3899	63.63	2.55	4578	75.96	3.04	5439
50	42.12	0.84	3031	55.5	1.11	3993	68.67	1.37	4940	84.69	1.69	6093
75	39.33	0.52	2830	55.9	0.75	4022	71.10	0.95	5115	89.46	1.19	6436
100	37.17	0.37	2675	55.9	0.56	4022	72.45	0.72	5212	92.25	0.92	6637

ED400 (rainfall intensity = 50 mm/hr)												
Slope	0%			0.2%			0.5%			1%		
Length to the outlet	Q(l/s)	q(l/s/m)	A(m^2)	Q(l/s)	q(l/s/m)	A(m^2)	Q(l/s)	q(l/s/m)	A(m^2)	Q(l/s)	q(l/s/m)	A(m^2)
25	96.10	3.84	6914	110.61	4.42	7958	127.44	5.10	9168	149.67	5.99	10768
50	90.60	1.81	6518	114.39	2.29	8229	138.87	2.78	9991	169.47	3.39	12192
75	86.22	1.15	6202	116.28	1.55	8365	145.26	1.94	10450	180.72	2.41	13001
100	82.30	0.82	5921	117.63	1.18	8463	149.22	1.49	10735	188.01	1.88	13526

STORMCHANNEL™ HYDRAULIC CALCULATIONS

ED500 (rainfall intensity = 50 mm/hr)												
Slope	0%			0.2%			0.5%			1%		
Length to the outlet	Q(l/s)	q(l/s/m)	A(m²)	Q(l/s)	q(l/s/m)	A(m²)	Q(l/s)	q(l/s/m)	A(m²)	Q(l/s)	q(l/s/m)	A(m²)
25	170.73	6.83	12283	191.97	7.68	13811	217.62	8.70	15656	252.18	10.09	18142
50	163.17	3.26	11739	199.35	3.99	14342	238.14	4.76	17132	287.37	5.75	20674
75	156.69	2.09	11273	203.58	2.71	14646	250.65	3.34	18032	308.97	4.12	22206
100	150.84	1.51	10852	206.19	2.06	14833	259.02	2.59	18635	323.55	3.24	23277

ED600 (rainfall intensity = 50 mm/hr)												
Slope	0%			0.2%			0.5%			1%		
Length to the outlet	Q(l/s)	q(l/s/m)	A(m²)	Q(l/s)	q(l/s/m)	A(m²)	Q(l/s)	q(l/s/m)	A(m²)	Q(l/s)	q(l/s/m)	A(m²)
25	272.07	10.88	19573	300.96	12.04	21652	336.78	13.47	24229	385.74	15.43	27751
50	262.53	5.25	18887	312.84	6.26	22506	368.82	7.38	26534	440.64	8.81	31701
75	253.71	3.38	18253	320.49	4.27	23057	389.70	5.20	28036	476.19	6.35	34258
100	245.79	2.46	17683	325.62	3.26	23426	404.28	4.04	29085	501.21	5.01	36058

FREQUENTLY ASKED QUESTIONS

• Can StormChannels be manufactured to special lengths?
No, units are currently only manufactured to the standard lengths.

• Can you manufacture curved line or bends?
Currently we have no way of manufacturing curved units. For bends the only angle we can currently achieve is 90° using our 600x600mm MLSC chamber however this may change in the future.

• Can you use multiple StormChannel sizes on the same line?
You can use different StormChannel sizes on the same line however they will not connect to each other so our 600x600mm MLSC chamber needs to be used to interface between the different sizes.

• What is the recommended spacing between access gratings?
We recommend a rodding point every 30-50 meters however this is down to the overall scheme designer to determine. Frequency of sump units to convey water to the downstream drainage system also to be determined by overall scheme designer.

• Can grating be positioned anywhere on rodding points or sump units?
No, grating can only be positioned as shown on FP McCann product drawing.

• Can we purchase blanked ends or end caps separately?
No, currently the blanked ends are formed during the casting process so you need to purchase a specific blanked end product. Typically a blanked socket end rodding point would be used on the inlet/upstream side and a blanked spigot end sump unit would be used on the outlet/downstream side.

• If I am using a kerb version of the StormChannels is there a LH & RH dropper kerb option also available?
No, currently there are no dropper kerbs so you need to use the standard version of the StormChannel™ for the lower section of the kerb. The difference in elevation between the two units needs to be made good on site. Note that the kerb version may be on a significantly longer lead time.

• How are stormchannels unloaded & handled on site?
Stormchannels are all loaded onto trailers using timber skids so they can be offloaded with a grab or forklift toes. They will then need lifted into position using grab or slings. The grab device in the stormchannel video can be sourced from Essener lifting equipment, Coagh, NI https://www.essener.co.uk/probst however as it is not supplied by FP McCann it can be sourced from any other supplier.

• How many StormChannels fit on each 28T artic load?
ED300 = 22nr ED400 = 16nr ED500 = 12nr ED600 = 10nr

• What is the drainage capacity of the StormChannels?
This will depend on the gradient that the StormChannels are to be laid, please refer to hydraulic calculations.

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THINKING PRECAST?
THINK FP MCCANN

WWW.FPMCCANN.CO.UK/DRAINAGE

STORMCHANNEL ™