

RSM SOLUTIONS (PTY) LTD

PRODUCT CATALOGUE

High-performance precast concrete solutions engineered for durability, precision, and civil infrastructure excellence.



RSM SOLUTIONS (PTY) LTD

REG NO: 2026 / 502393 / 07

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RSM SOLUTIONS (PTY) LTD

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3370
TEL: 0670998789

CORPORATE PROFILE

REG NO: 2026 / 502393 / 07

RSM SOLUTIONS (PTY) LTD is a supplier of precast concrete products, servicing the civil engineering infrastructural sector, mainly in KZN, Gauteng, Eastern Cape, Polokwane and Mpumalanga Province.

RSM SOLUTIONS (PTY) LTD is a proudly South African Company, black owned and operated, which fully subscribes to the Broad-based Economic Empowerment Act, Section 9 of the broad-based Black Economic Empowerment Act 53 of 2003 and is a level 1 Contributor.

RSM SOLUTIONS (PTY) LTD is a sole owned company and possesses strategic knowledge and expertise to ensure client-focused and solution-oriented service delivery. We aspire to accomplish both technical and social targets, which augment the development of new economic dispensation.

RSM SOLUTIONS (PTY) LTD supplies, meeting the requirements as defined by SANS(SABS) and holds the SABS mark.

Our competencies and experience allow us to offer the most rewarding combination of services to the marketplace. RSM SOLUTIONS (PTY) LTD believes in amalgamating customer readiness with high priority on delivering on promise. RSM SOLUTIONS (PTY) LTD is fully geared to deliver.

OUR FOOTPRINT

Proudly serving civil infrastructural demands across KZN, Gauteng, Eastern Cape, Polokwane, and Mpumalanga.

B-BBEE STATUS

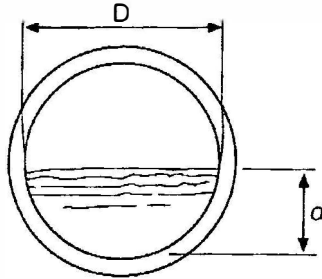
Level 1 Contributor providing verified value and operational excellence.

SMART SOLUTIONS. STRONGER FUTURES.

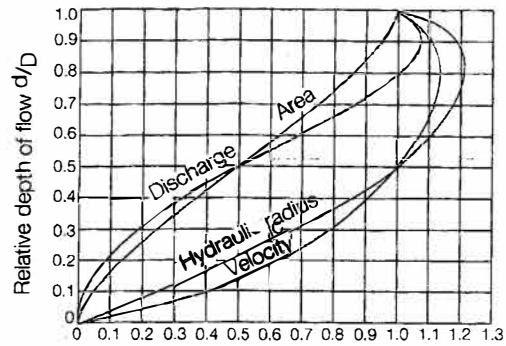
FLOW CHART FOR CIRCULAR PIPES

BASED ON MANNING'S FORMULA

Relative flow properties
of a concrete pipe

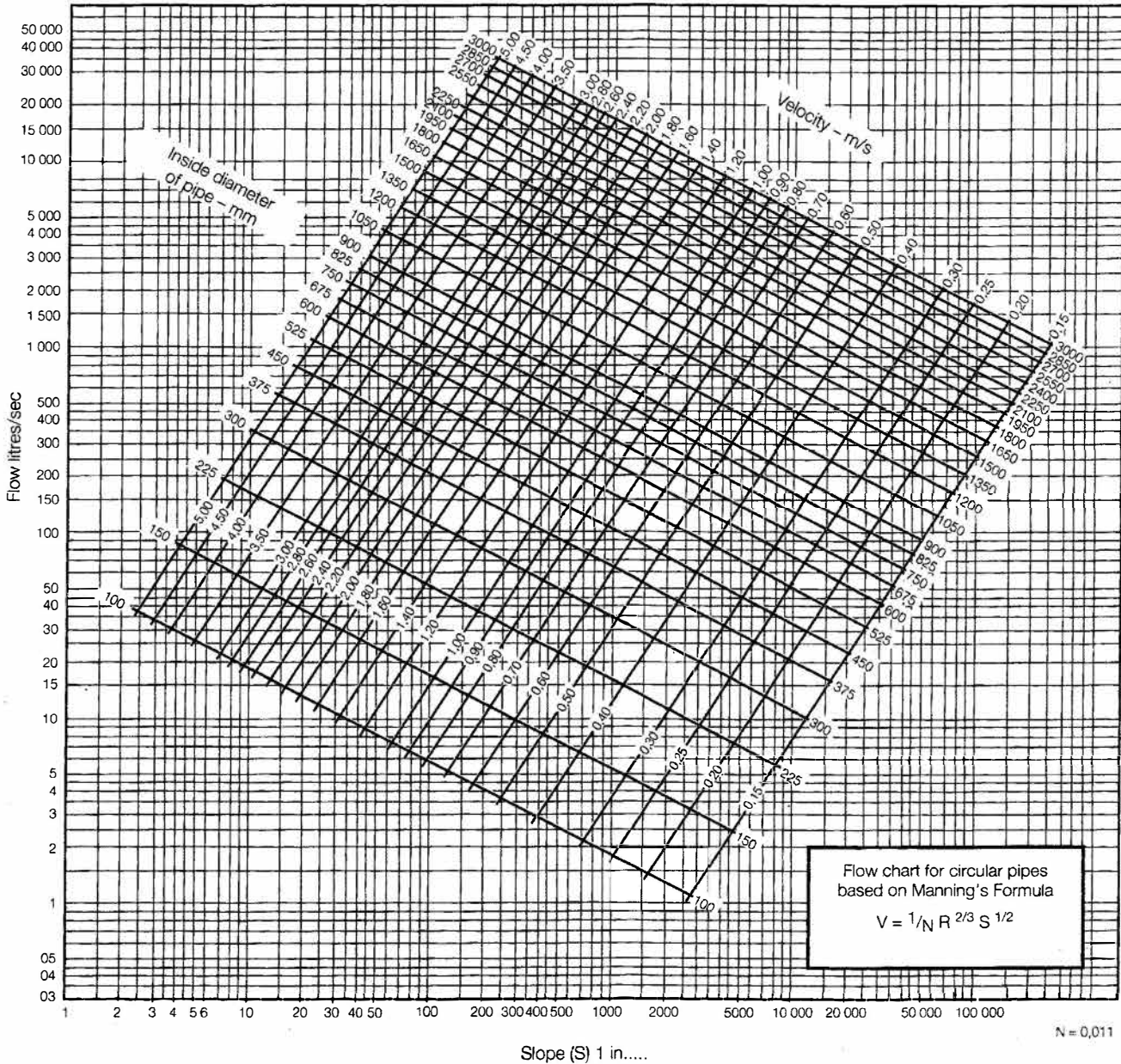


Relative flow properties of a concrete pipe



Hydraulic elements in terms of hydraulic
elements for full section

$V/V_{full} \cdot Q/Q_{full} \cdot A/A_{full}$ and R/R_{full}



INSERTED JOINT (I J) PIPES

SABS - 677

Nominal Diameter	Pipe Class	Internal Diameter	Outside Diameter	Wall Thickness	Length (m)	Mass per Meter	Mass per Unit
300	50D	295	364	35	2.50	0.116	0.290
300	75D	295	364	35	2.50	0.116	0.290
300	100D	295	364	35	2.50	0.116	0.290
375	50D	375	445	38	2.50	0.166	0.415
375	75D	375	445	38	2.50	0.166	0.415
375	100D	375	445	38	2.50	0.166	0.365
450	50D	450	532	41	2.50	0.184	0.460
450	75D	450	532	41	2.50	0.184	0.460
450	100D	450	532	41	2.50	0.196	0.490
525	50D	517	607	45	2.50	0.229	0.573
525	75D	517	607	45	2.50	0.284	0.710
525	100D	493	607	57	2.50	0.284	0.710
600	50D					0.241	0.603
600	75D					0.260	0.650
600	100D					0.260	0.650
675	50D	660	775	57	2.50	0.359	0.898
675	75D	660	775	57	2.50	0.359	0.898
675	100D	660	775	57	2.50	0.359	0.898
750	50D	738	858	60	2.50	0.394	0.985
750	75D					0.450	1.125
750	100D					0.450	1.125
825	50D					0.480	1.200
825	75D	755	945	95	2.50	0.650	1.625
825	100D	755	945	95	2.50	0.650	1.625
900	50D	890	1030	70	2.50	0.495	1.238
900	75D	890	1030	70	2.50	0.564	1.410
900	100D	878	1030	76	2.50	0.564	1.410
1050	50D	1025	1195	75	2.50	0.780	1.950
1050	75D	1195	1375	90	2.50	0.780	1.950
1050	100D	1195	1375	90	2.50	0.780	1.950
1200	50D	1195	1375	90	2.50	0.980	2.450
1200	75D	1195	1375	90	2.50	0.976	2.440
1200	100D	1135	1375	120	2.50	0.976	2.440
1350	50D	1340	1540	100	2.50	1.360	3.400
1350	75D	1300	1540	120	2.50	1.360	3.400
1350	100D	1300	1540	120	2.50	1.382	3.455
1500	50D	1455	1695	120	2.44	1.480	3.700
1500	75D	1420	1695	137	2.44	1.660	4.150
1500	100D	1420	1695	137	2.44	1.660	4.150

To determine the "Proof Load" that the pipe will withstand, use the following:

$$D \text{ being the pipe diameter expressed in metres } \times \text{ CLASS being the "D" load} \\ = \text{ KN}$$

The pipe will withstand a further 25% load before collapsing.

ie 600mm Diam. 50D Performance will be:

$$\begin{array}{llll} \text{Proof Load} & 0.6 \times 50 & = & 30\text{KN/m} \\ \text{Ultimate Load} & 30 \times 1.25 & = & 37.5\text{KN/m} \end{array}$$

SPIGOT AND SOCKET CONCRETE PIPES

Spigot and Socket Concrete Pipes - SABS 677 with rubber ring rolling joint and no lubricants needed

Nominal Diameter	Pipe Class	Outside diameter Barrel mm	Actual Diameter mm	wall Thickness mm	Outside Diameter Socket mm	Depth of Socket mm	Effective Length mm	Mass per Meter	Mass per Unit
300	50D	0.362	298	32	447	114	2500	0.108	0.270
300	75D	0.362	298	32	447	114	2500	0.129	0.323
300	100D	0.362	298	32	447	114	2500	0.129	0.323
375	50D	433	357	38	529	127	2500	0.159	0.398
375	75D	433	357	38	529	127	2500	0.151	0.378
375	100D	433	357	38	529	127	2500	0.151	0.378
450	50D	521	433	44	629	127	2500	0.212	0.530
450	50D	521	433	44	629	127	2500	0.207	0.518
450	50D	521	433	44	629	127	2500	0.207	0.518
525	50D							0.225	0.563
525	75D							0.259	0.648
525	100D							0.225	0.648
600	50D	1194	1034	85	1352	202	2500	0.269	0.673
600	75D	1194	1034	85	1352	202	2500	0.375	0.938
600	100D	1194	1034	85	1352	202	2500	0.375	0.938
750	50D	868	760	54	1014	139	2475	0.413	1.033
750	75D	868	728	70	1014	139	2475	0.542	1.355
750	100D	868	728	70	1014	139	2475	0.542	1.355
900	50D	1029	903	63	1169	179	2500	0.581	1.453
900	75D	1029	873	78	1169	179	2500	0.685	1.713
900	100D	1029	873	78	1169	179	2500	0.685	1.713
1050	50D	1194	1034	85	1352	202	2500	0.819	2.048
1050	75D	1194	1034	85	1352	202	2500	1.015	2.538
1050	100D	1194	1034	85	1352	202	2500	1.015	2.538
1200	50D	1365	1185	90	1675	202	2500	1.052	2.630
1200	75D	1365	1125	120	1675	202	2500	1.052	2.630
1200	100D	1365	1125	120	1675	202	2500	1.146	2.865

To determine the "Proof Load" that the pipe will withstand, use the following:

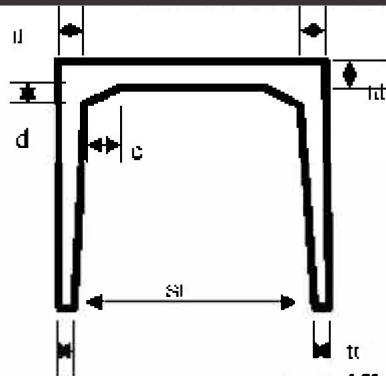
$$D \text{ being the pipe diameter expressed in metres } \times \text{ CLASS being the "D" load} \\ = \text{ KN}$$

The pipe will withstand a further 25% load before collapsing.

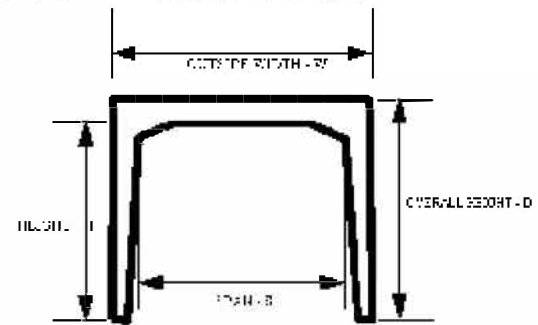
ie 600mm Diam. 50D Performance will be:

$$\begin{array}{llll} \text{Proof Load} & 0.6 \times 50 & = & 30\text{KN/m} \\ \text{Ultimate Load} & 30 \times 1.25 & = & 37.5\text{KN/m} \end{array}$$

RECTANGULAR CULVERTS



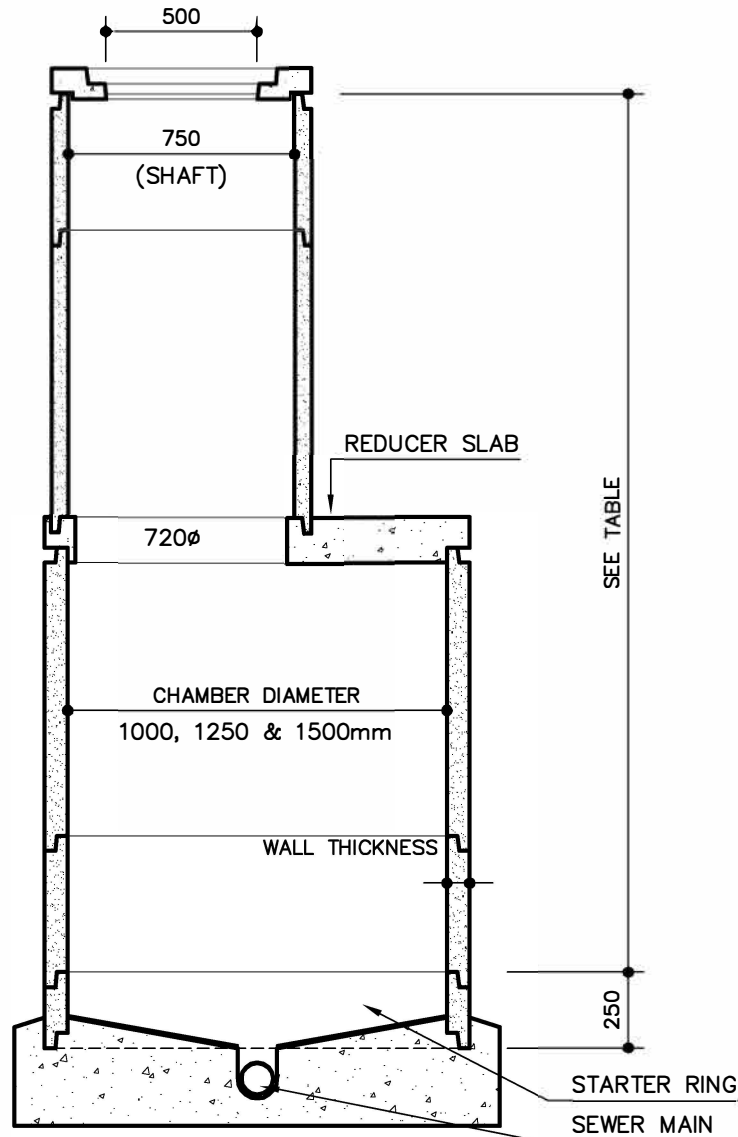
Span	Class
600	200 S
750	175 S
900	175 S
1200	150 S
1500	100 S
1800	75 S
2100	75 S
2400	75 S
3000	75 S
3600	75 S



All Culverts are 1,250m long

Nominal Size			Dimensions								Water way area m ²	Approximate Mass	
S	X	H	W	D	St	td	tl	tt	c	d		per m kg/m	per unit kg/unit
mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm			
600	x	300	780	390	620	90	90	80	100	33	0.180	0.311	0.389
	x	450	780	540	630	90	90	75	100	33	0.273	0.369	0.461
	x	600	780	690	640	90	90	70	100	33	0.369	0.424	0.530
750	x	300	950	400	770	100	100	90	125	42	0.223	0.393	0.491
	x	450	950	550	780	100	100	85	125	42	0.339	0.459	0.574
	x	600	950	700	790	100	100	80	125	42	0.457	0.521	0.651
900	x	300	1110	400	920	105	105	95	150	50	0.266	0.460	0.575
	x	450	1110	550	930	105	105	90	150	50	0.404	0.530	0.663
	x	600	1110	700	940	105	105	85	150	50	0.543	0.595	0.744
1200	x	300	1440	570	1230	120	120	105	200	67	0.533	0.718	0.898
	x	450	1440	720	1240	120	120	100	200	67	0.719	0.795	0.994
	x	600	1440	870	1250	120	120	90	200	67	1.090	0.938	1.173
1500	x	300	1770	570	1530	135	135	120	250	83	0.661	0.870	1.088
	x	450	1770	720	1540	135	135	115	250	83	0.801	1.024	1.280
	x	600	1770	870	1550	135	135	105	250	83	1.356	1.189	1.466
1800	x	300	2100	570	1860	150	150	135	300	100	1.227	1.339	1.674
	x	450	2100	720	1870	150	150	125	300	100	1.827	1.474	1.843
	x	600	2100	870	1880	150	150	115	300	100	2.304	1.474	1.843
2100	x	300	2430	705	2140	165	165	145	350	117	1.062	1.283	1.604
	x	450	2430	855	2150	165	165	135	350	117	1.617	1.470	1.838
	x	600	2430	1005	2160	165	165	125	350	117	2.178	1.643	2.054
2400	x	300	2760	840	2470	180	180	160	400	133	2.745	1.800	2.250
	x	450	2760	990	2480	180	180	150	400	133	3.318	1.943	2.429
	x	600	2760	1140	2490	180	180	140	400	133	3.891	2.086	2.603
3000	x	1200	3420	1410	3080	210	210	170	500	167	4.516	2.469	3.086
	x	1500	3420	1710	3100	210	210	160	500	167	5.899	3.055	3.819
	x	1800	3420	2010	3120	210	210	150	500	167	7.309	4.044	5.055
3600	x	1200	4080	1440	3680	240	240	200	600	200	9.217	4.404	5.505
	x	1500	4080	1740	3700	240	240	190	600	200	11.712	5.148	6.435
	x	1800	4080	2040	3720	240	240	180	600	200	14.280	5.598	6.998

PRECAST CONCRETE MANHOLES



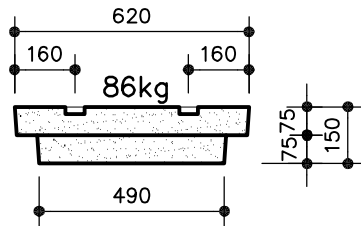
CHAMBER AND SHAFT SECTION					
TYPE OF SECTION	NOMINAL DIA. (mm)	STANDARD LENGTH (mm)		WALL THICKNESS (mm)	APPROX MASS/METRE
SHAFT	750	250	500	55	340
		750	1000		
SHAFT CHAMBER	1000	250	500	65	560
		750	1000		
SHAFT CHAMBER	1250	250	500	75	900
		750	1000		
CHAMBER	1500	1200	2440	85	1200

NON-STANDARD MANHOLE SHAFTS 0,900 & 1,350 DIAMETER ARE NON-STANDARD ITEMS AND ARE MANUFACTURED BY ARRANGEMENT ONLY.

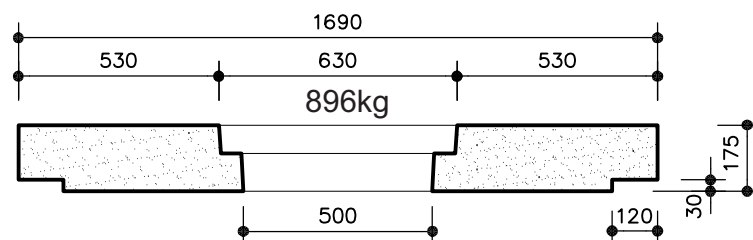
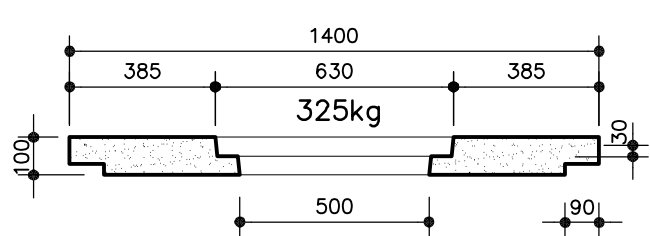
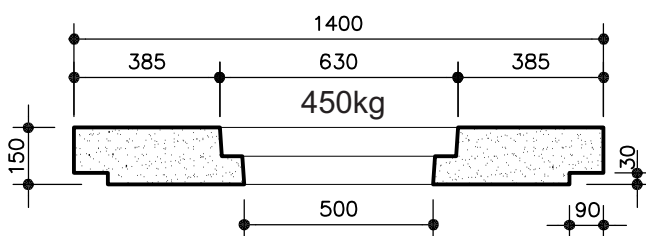
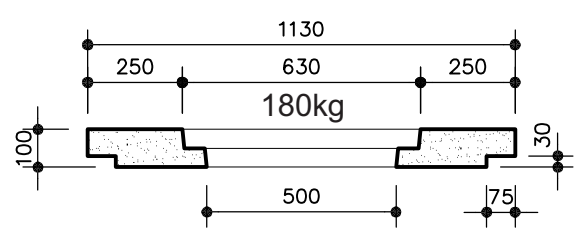
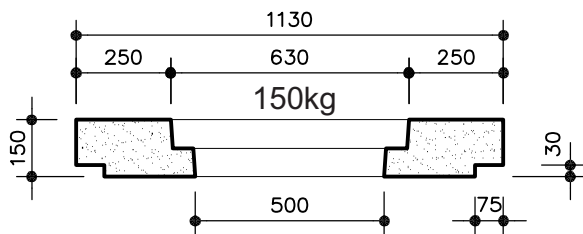
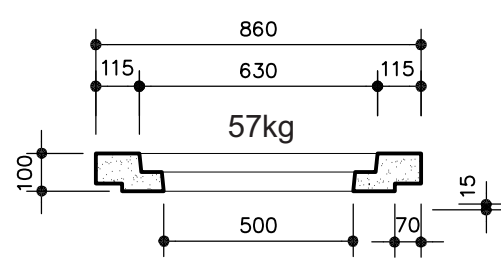
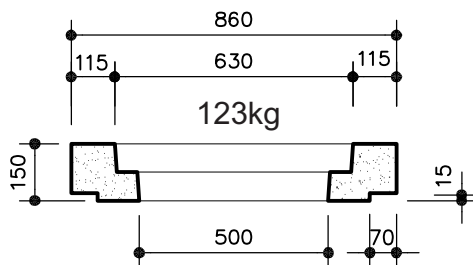
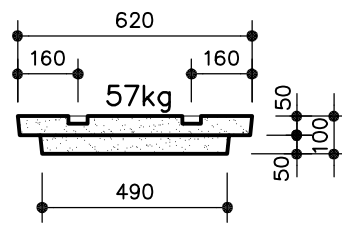
NOTE: STEPS IF NEED BE WILL BE AT 250mm VERTICAL INTERVALS AND HORIZONTAL DISTANCE BETWEEN CENTRES WILL BE 150mm FROM THE CENTRES OF BOTH STEPS

CIRCULAR MANHOLE COVERS AND LIDS

HEAVY DUTY



LIGHT DUTY



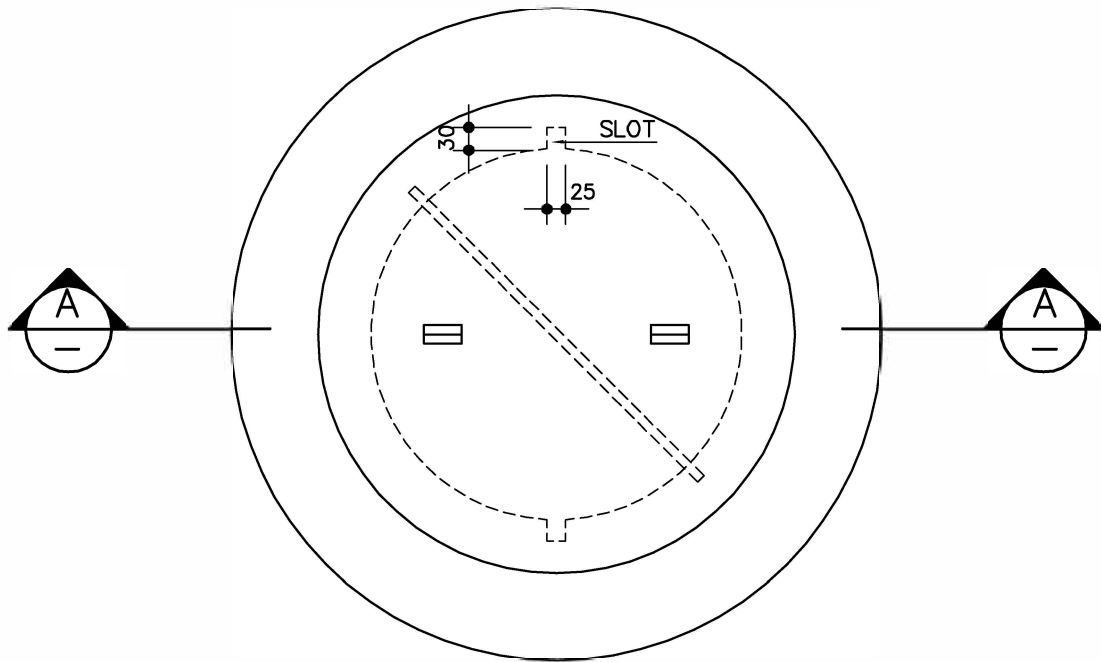
NOTES:

OPENINGS SHOWN ABOVE ARE TO SUIT CONCRETE LIDS AS SHOWN, OTHER OPENINGS AVAILABLE TO SUIT CAST IRON OR OTHER FRAMES.

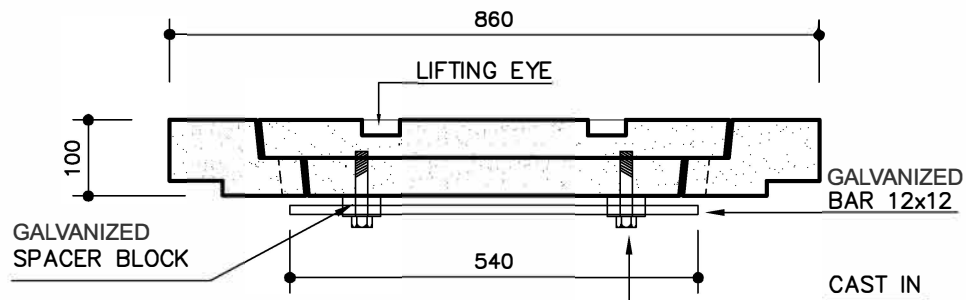
REDUCER SLABS ARE AS HEAVY DUTY SLABS FOR 1000, 1250 & 1500mm, BUT HAVE 720mm ACCESS OPENINGS AND ARE REINFORCED ACCORDINGLY.

LOCKING ARRANGEMENT FOR CONCRETE COVER

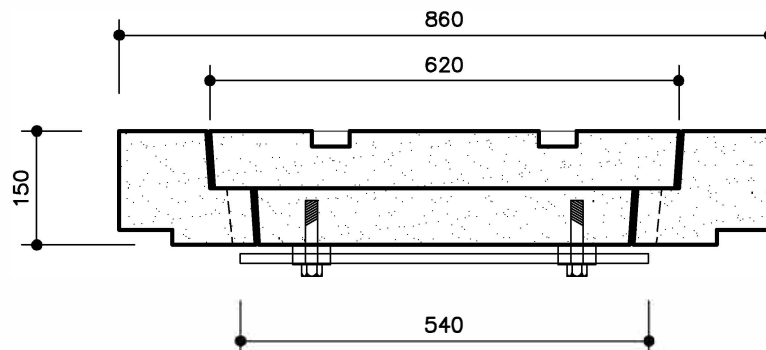
LOCKING ARRANGEMENT FOR CONCRETE COVER TO SUIT DURBAN METRO STANDARD PRODUCT



PLAN VIEW

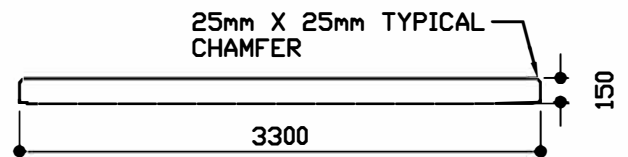
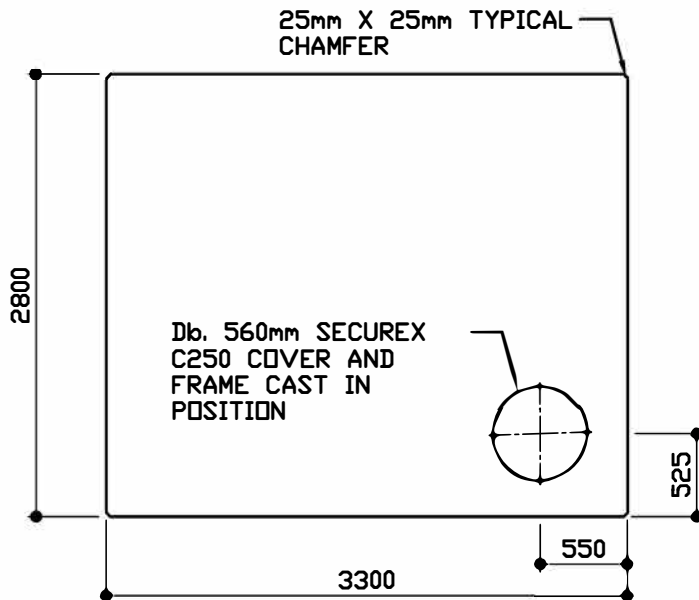


SECTION A-A
LIGHT DUTY

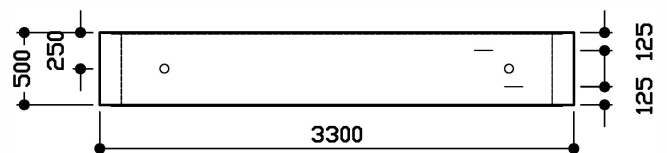
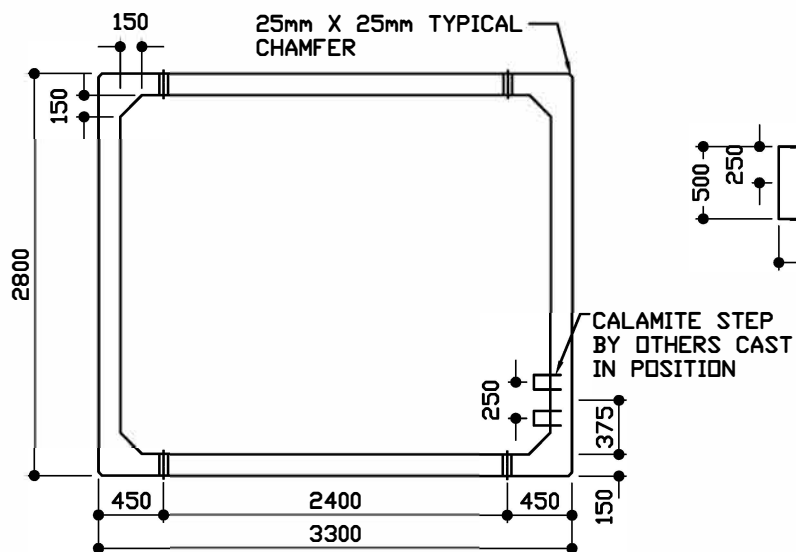


SECTION A-A
HEAVY DUTY

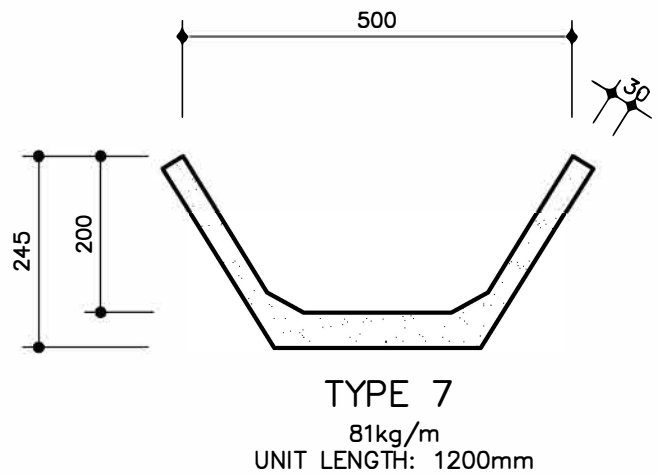
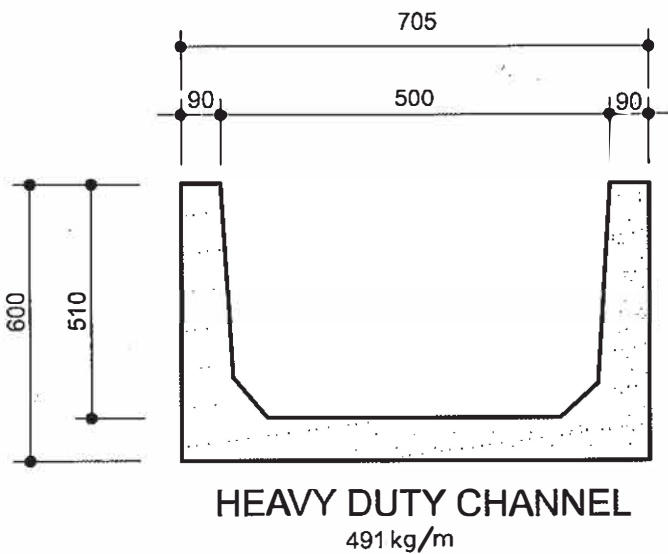
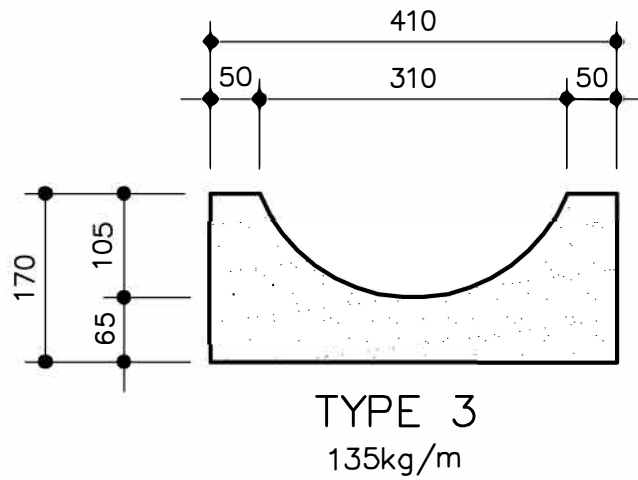
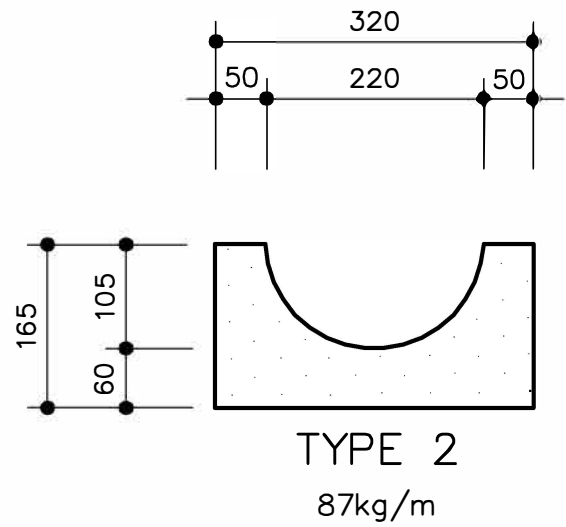
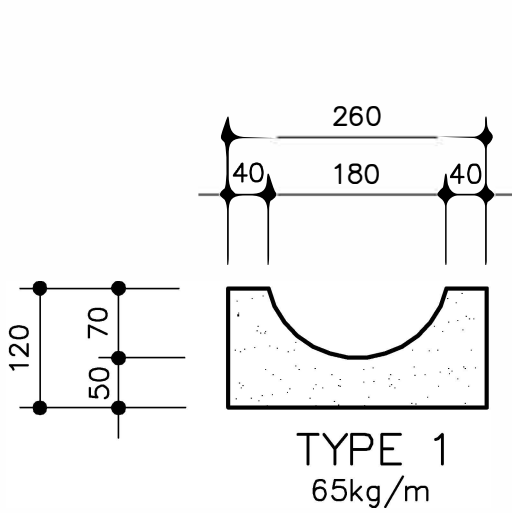
VALVE CHAMBER A



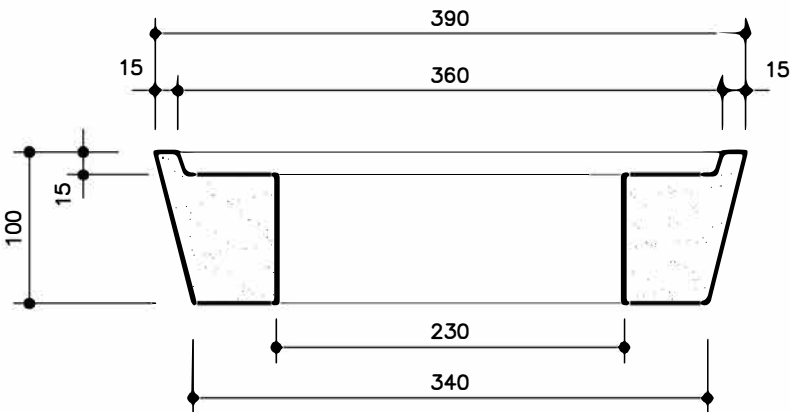
VALVE CHAMBER B



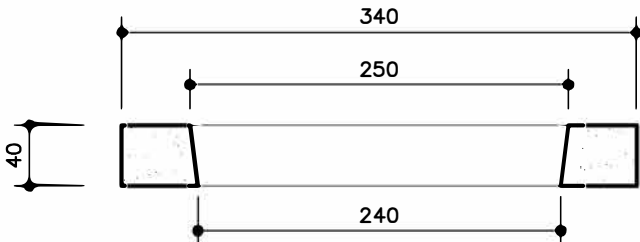
SURFACE WATER CHANNELS



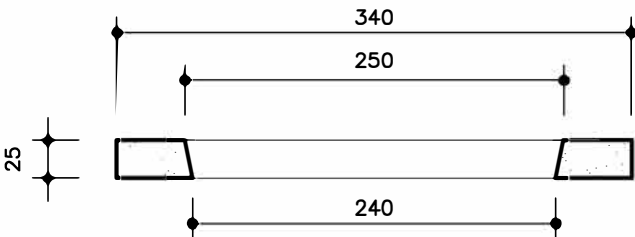
CIRCULAR SPACER RINGS



STANDARD SPACER RING
11kg/m

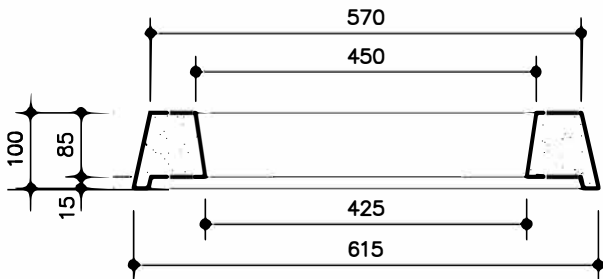
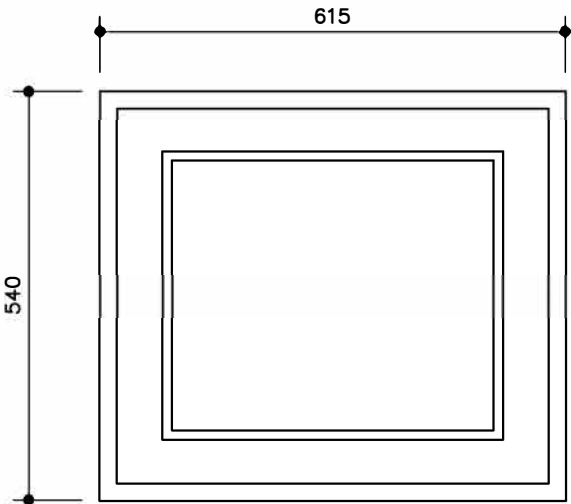


40mm SPACER RING
4kg/m



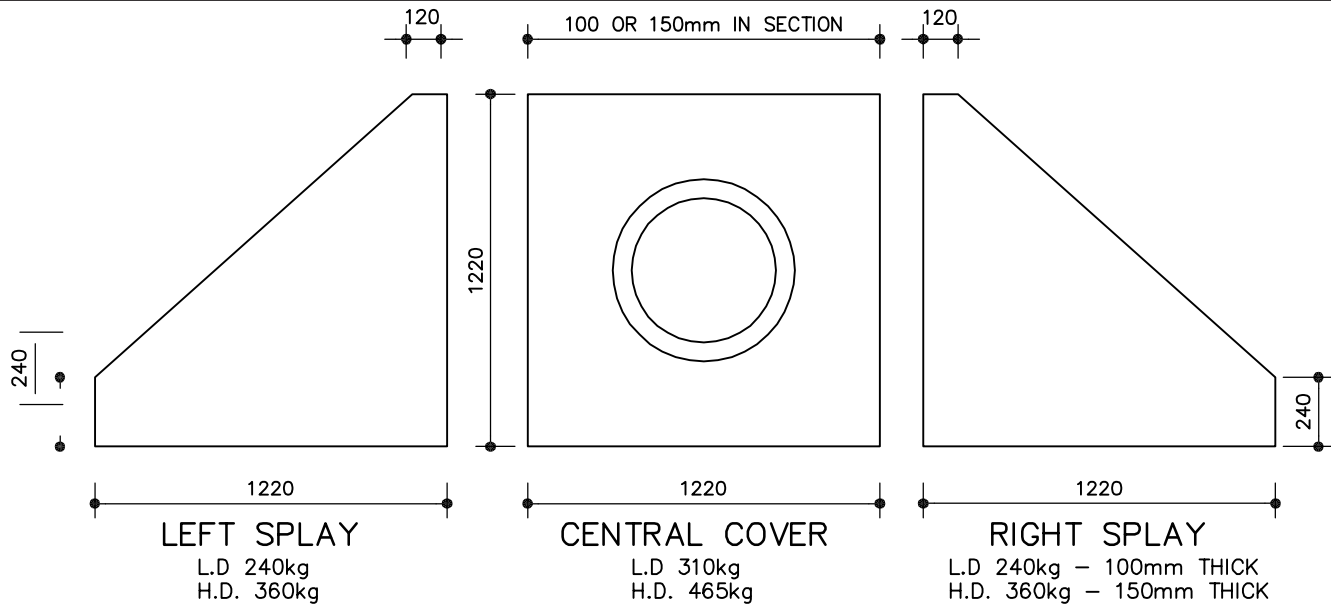
25mm SPACER RING
3kg/m

INTER LOCKING RECTANGULAR SPACER RINGS

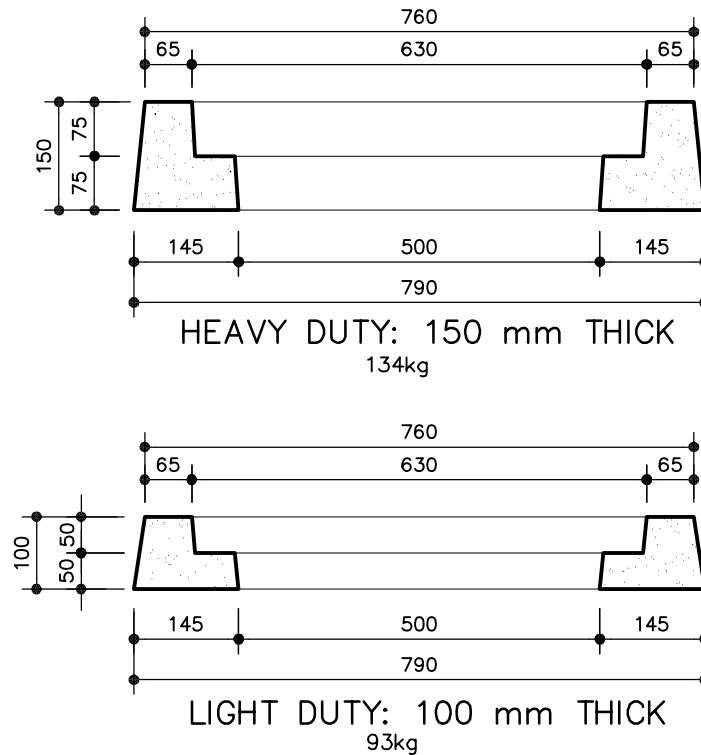


37kg

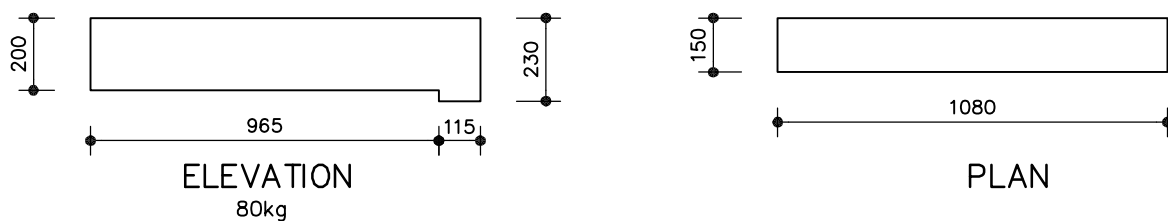
CATCH PIT COMPONENTS



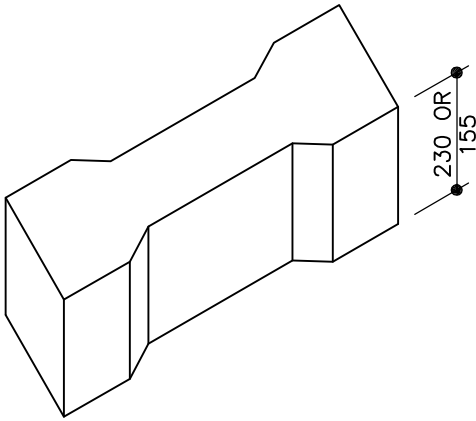
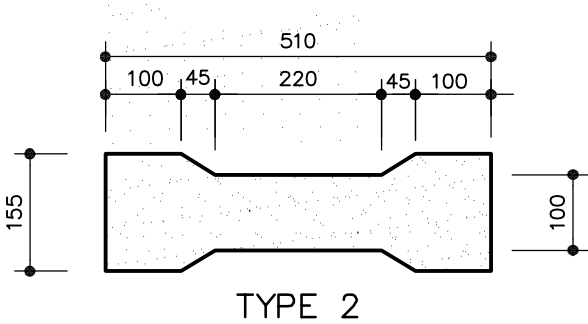
PAVEMENT COVERS



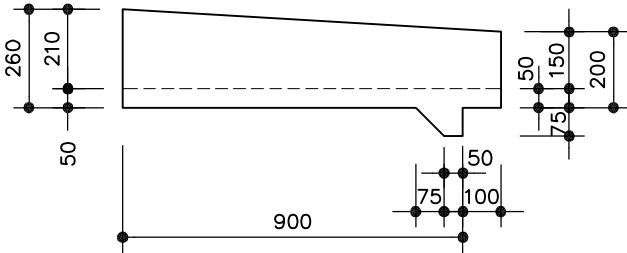
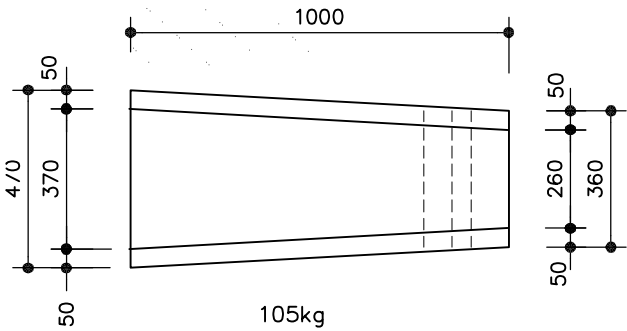
CATCH PIT SUPPORT BEAM



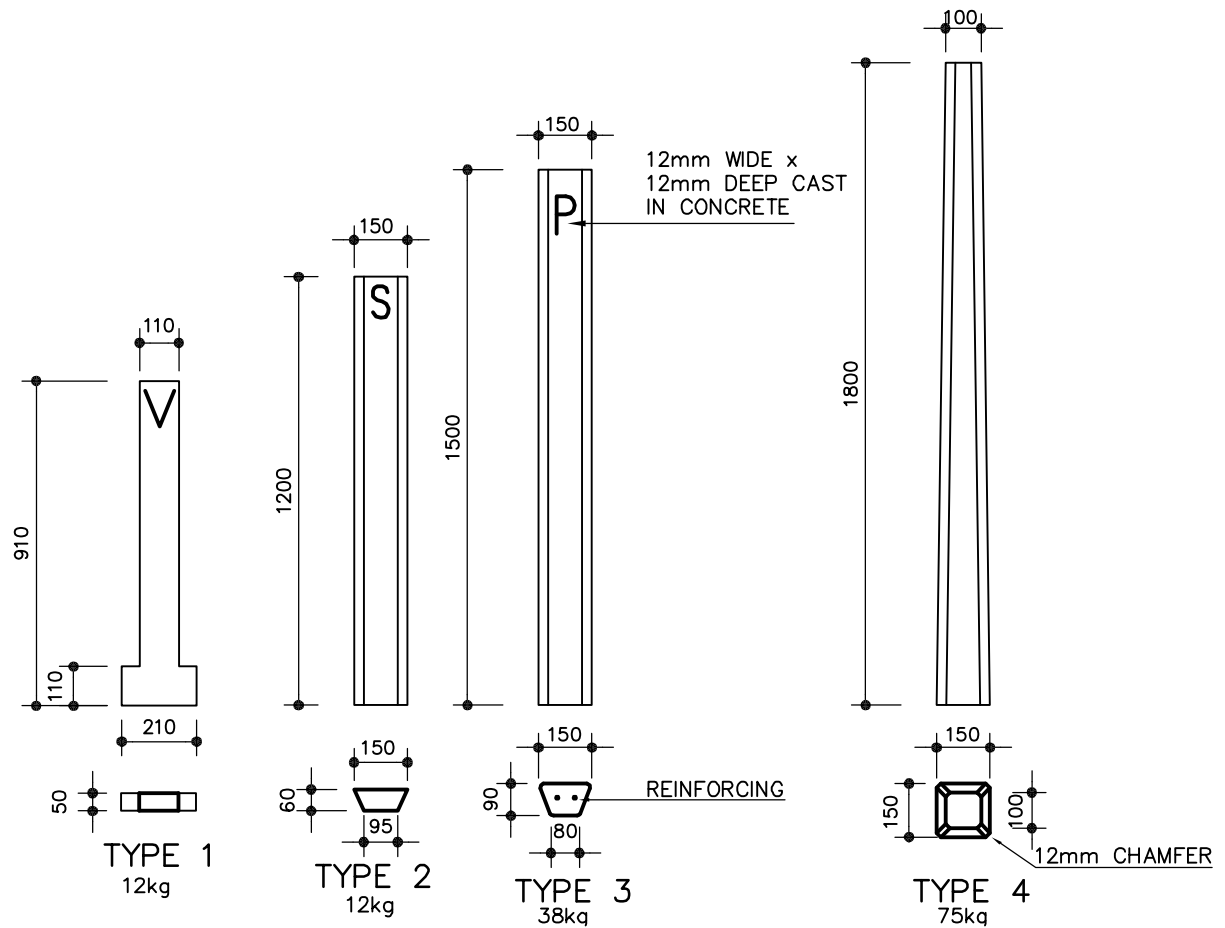
BAR DRAIN COVERS



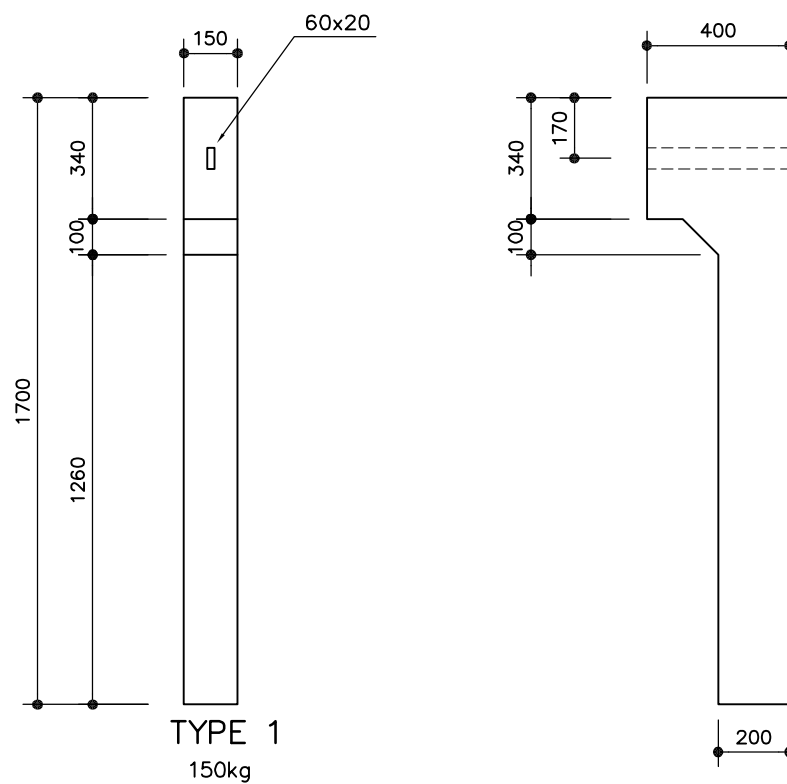
N.T.C. CHUTE



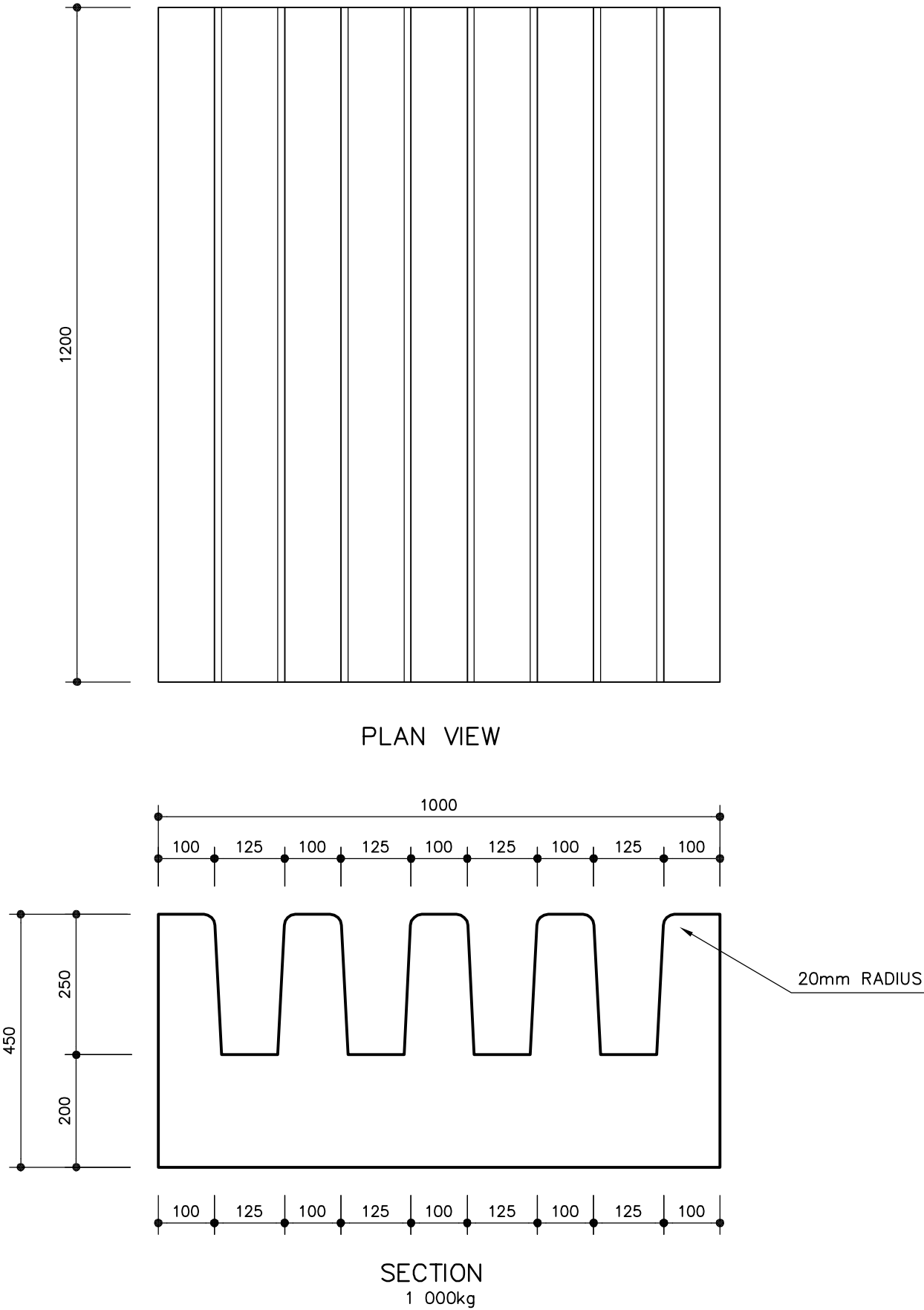
MARKERS



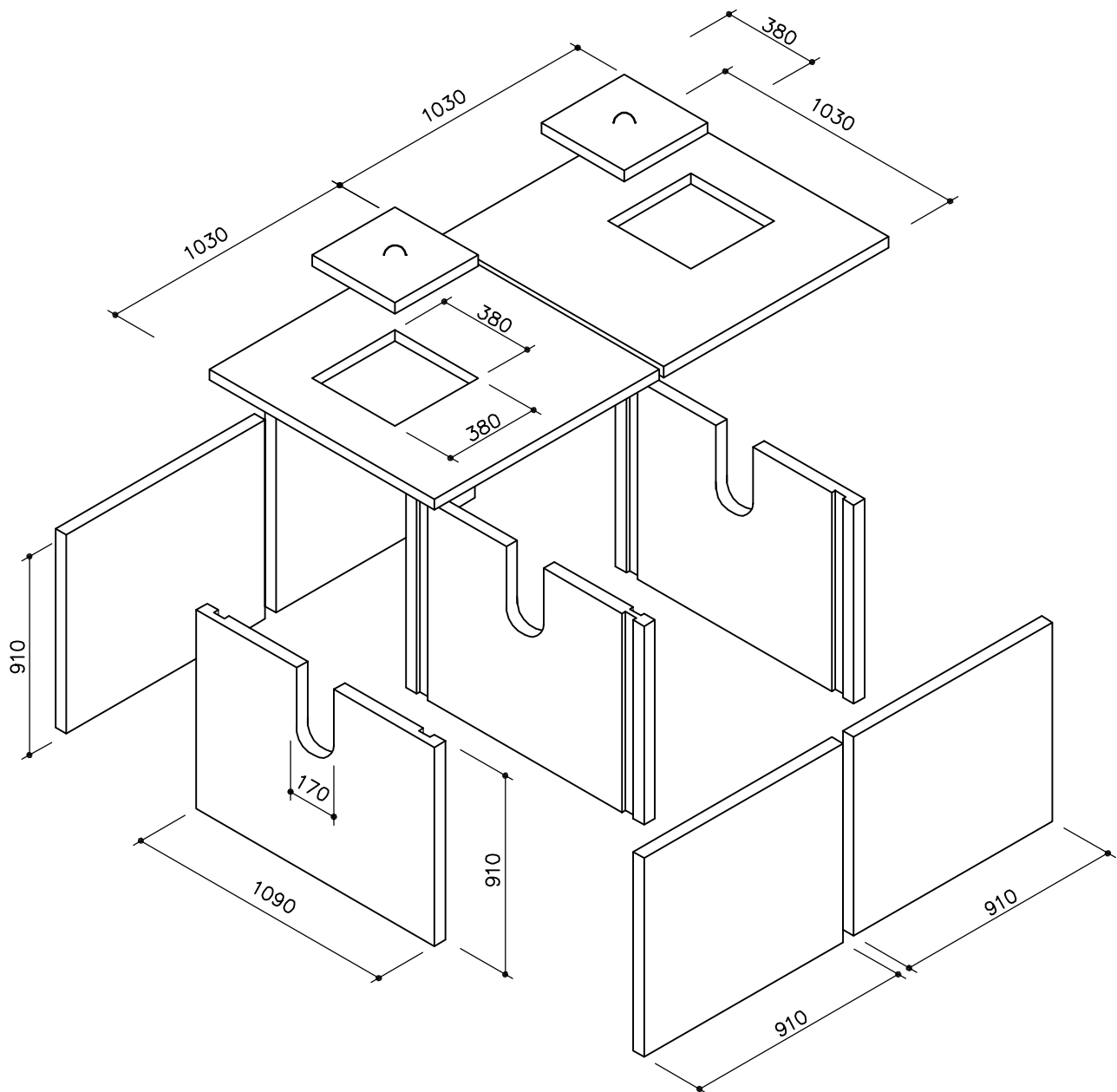
GUARD RAIL POST



CATTLE GRID



SEPTIC TANK

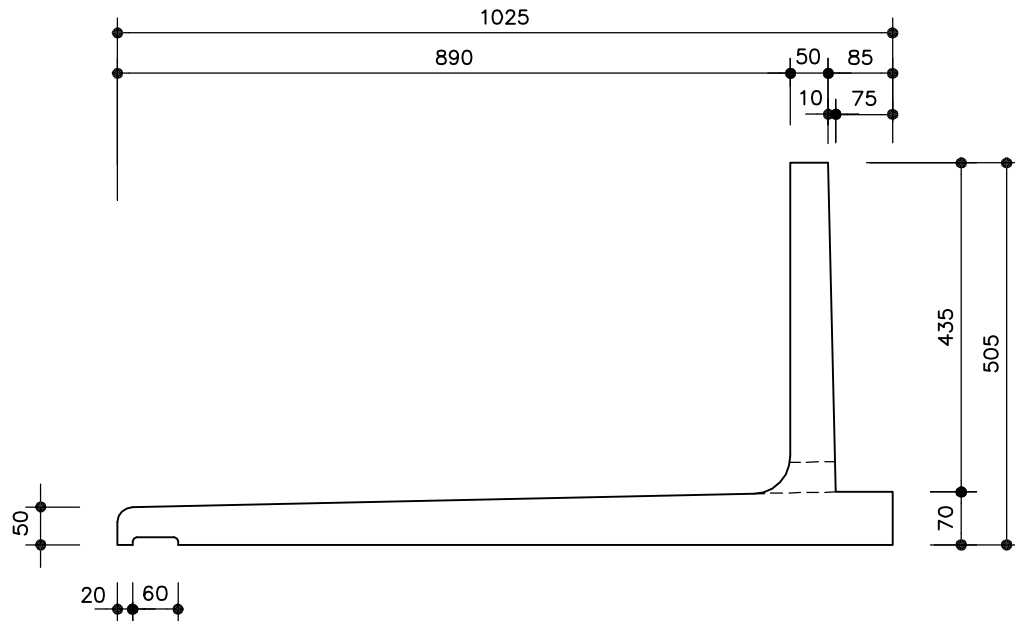


ASSEMBLING SKETCH

NOTE:

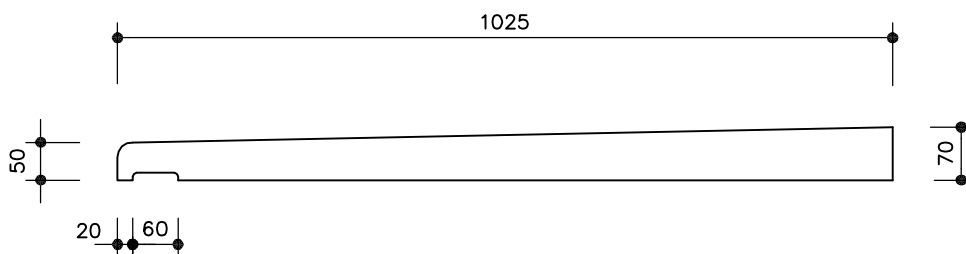
1. MASS: 1 000kg
2. ALL SECTIONS 50mm THICK
3. EFFECTIVE INTERNAL DIMENSIONS: 910x910x910mm
4. ALL SECTIONS LIGHTLY RE-INFORCED
5. ADDITIONAL COMPARTMENTS AS REQUIRED
6. CAPACITY 720 LITRES / COMPARTMENT

SPORT STADIUM SEATS



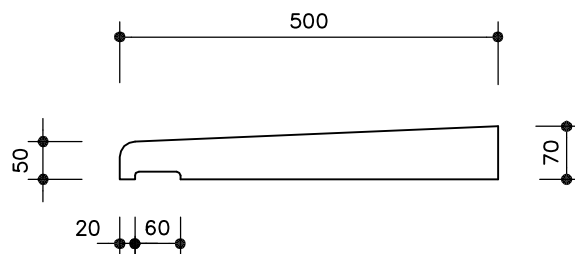
TYPE A

107kg
WIDTH = 494mm



TYPE B

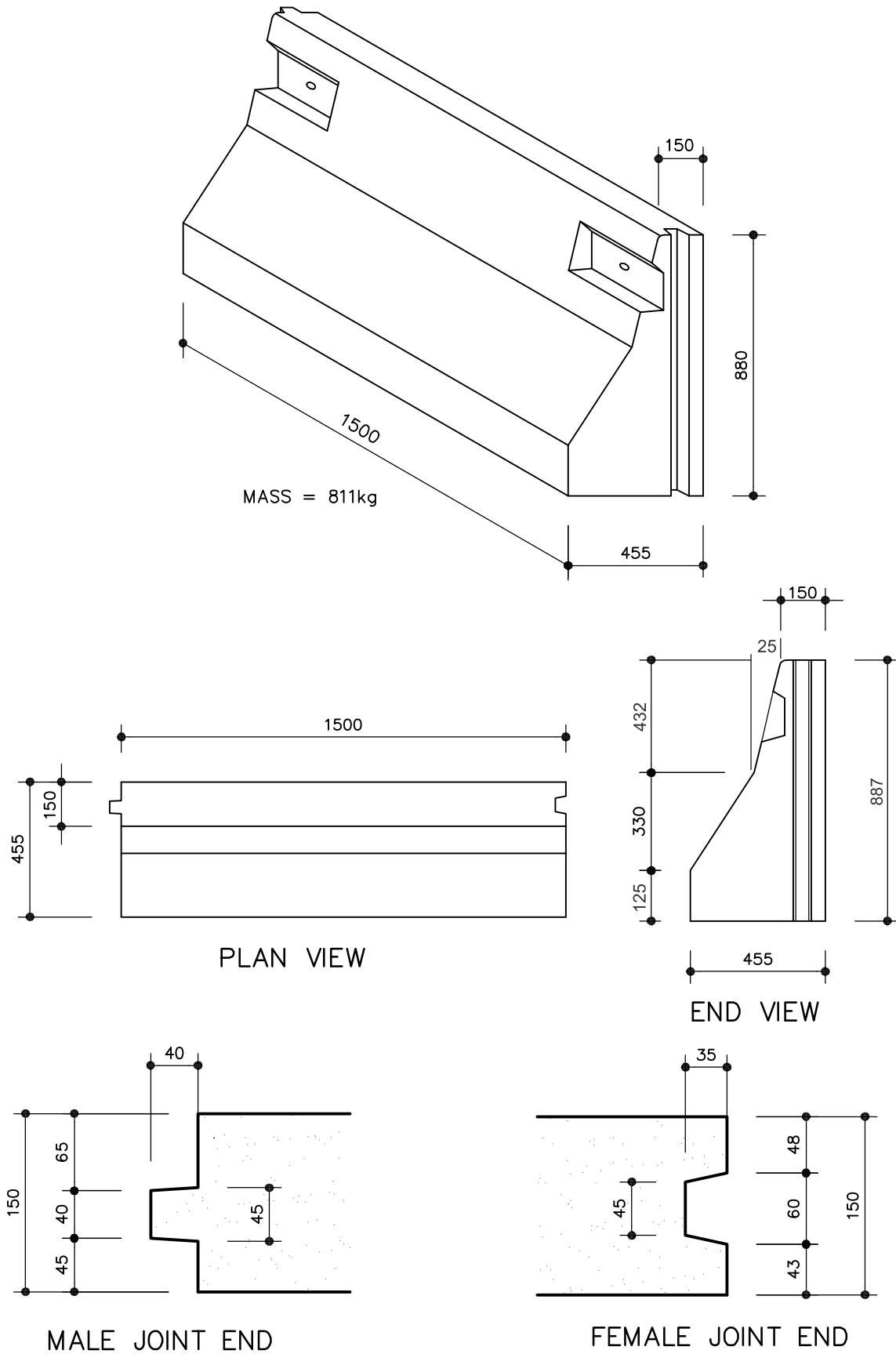
78kg
WIDTH = 494mm



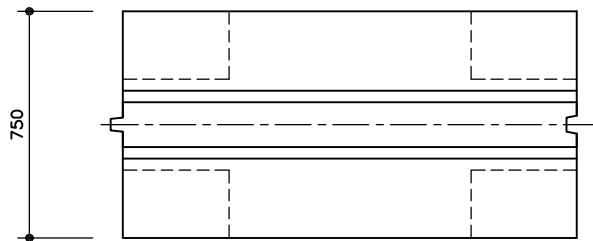
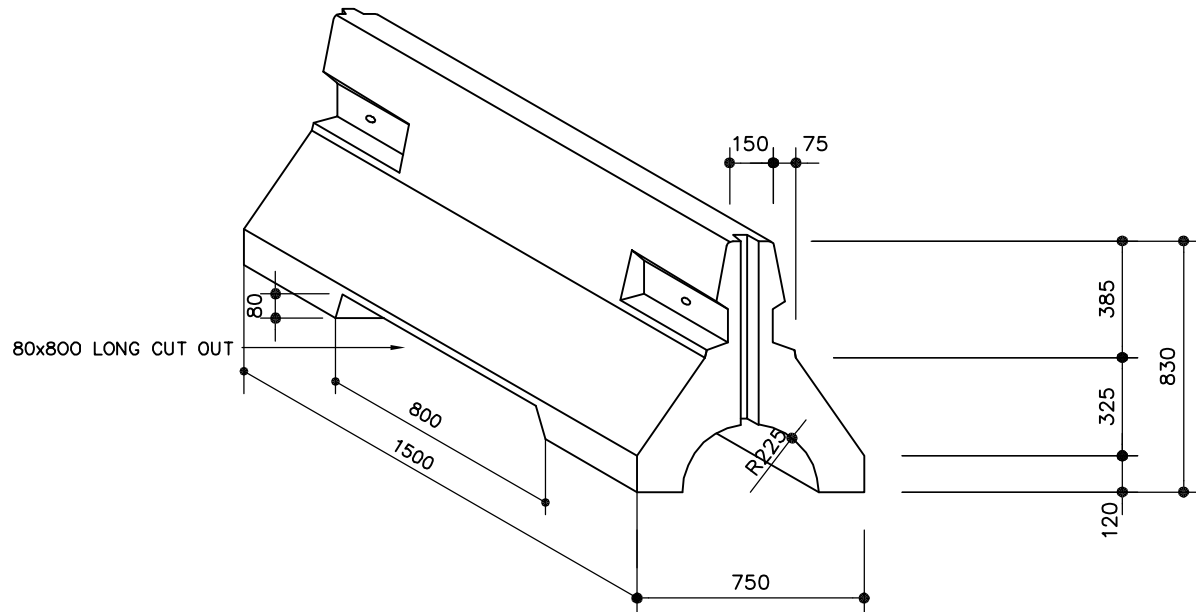
TYPE C

34kg
WIDTH = 494mm

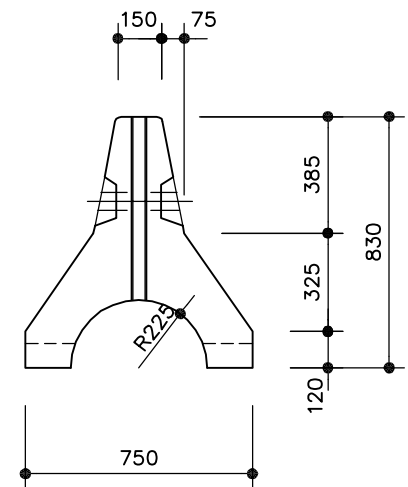
NEW JERSEY BARRIER - SINGLE



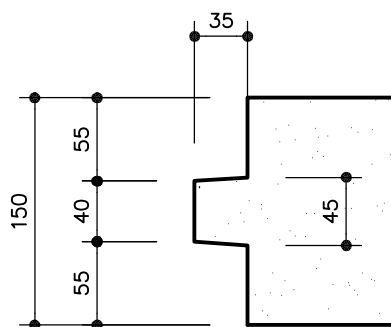
DOUBLE-SIDED NEW JERSEY BARRIER



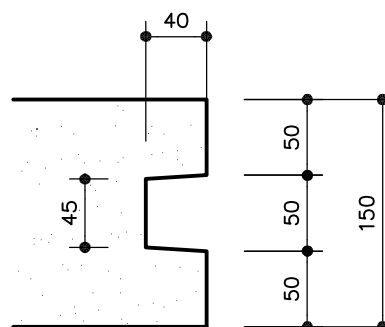
PLAN VIEW



END VIEW



MALE JOINT END

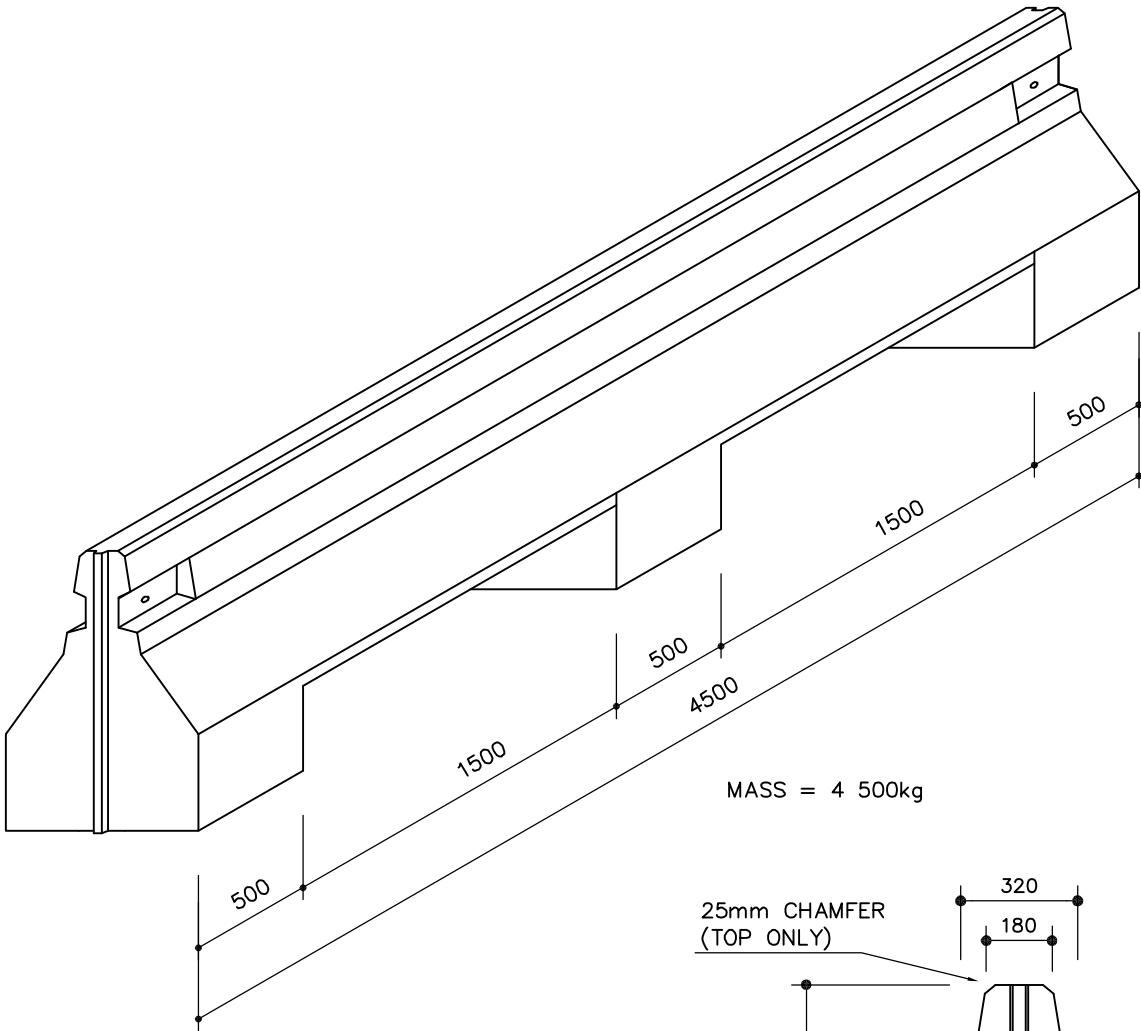


FEMALE JOINT END

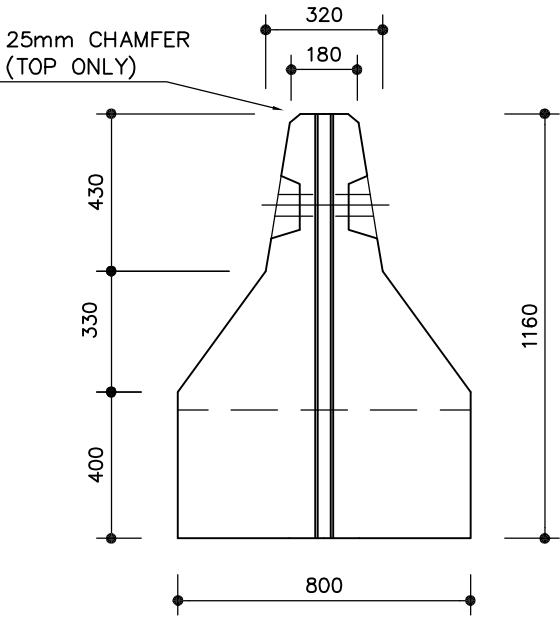
NOTE:

1. 40 MPA
2. UNIT 1500 LONG
3. CUT OUT AT BOTTOM 0,080x0,800
4. ENDS WITH INTERLOCK AND RECESSED FOR "FISH PLATES"
5. MASS = 960kg each
6. NOT REINFORCED

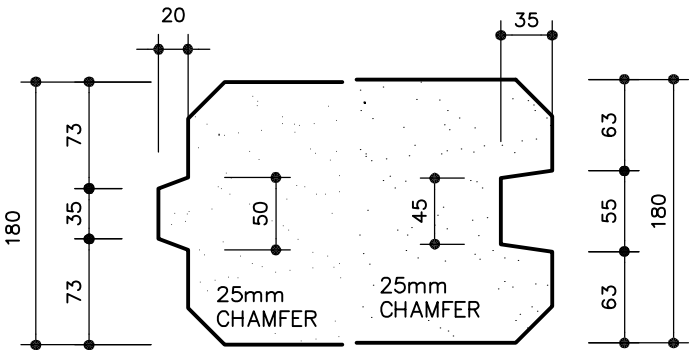
NEW JERSEY BARRIER - DOUBLE



MASS 4.500



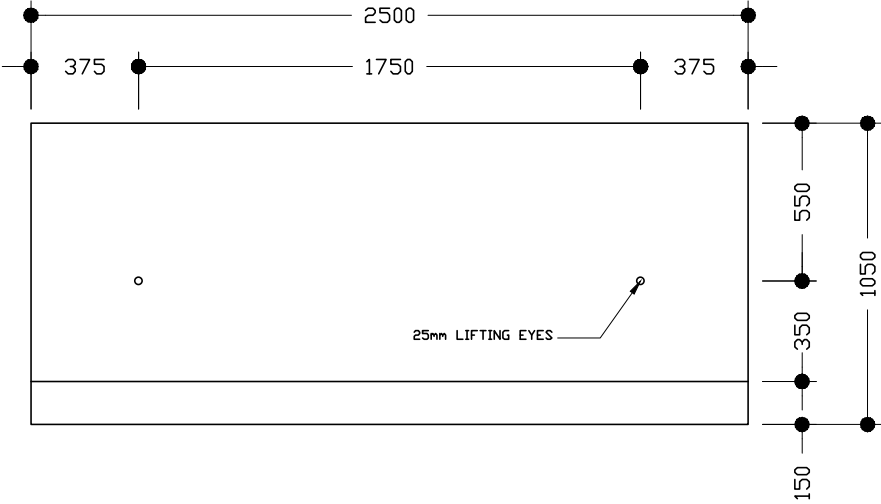
END VIEW



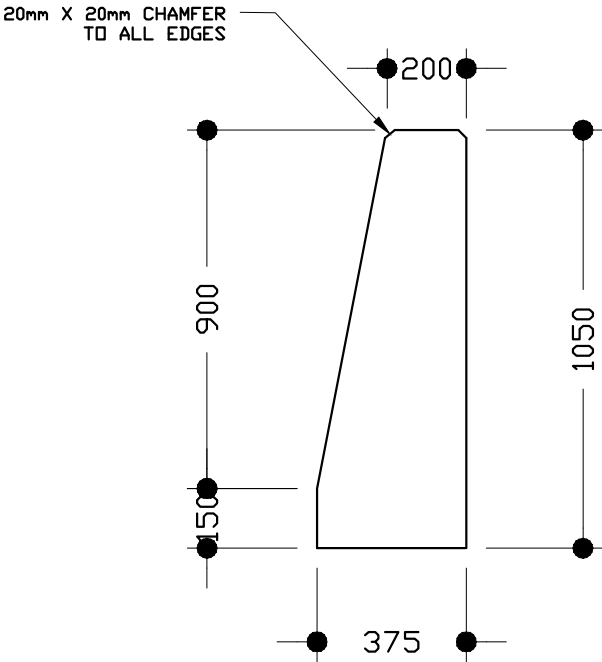
MALE JOINT END

FEMALE JOINT END

BARRIER WALL UNIT

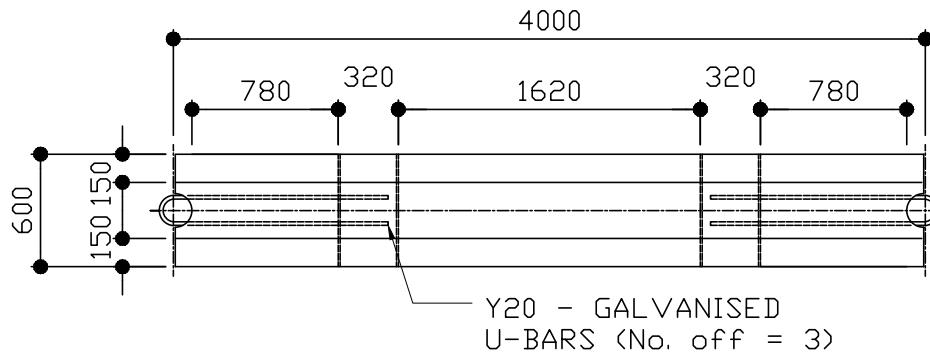


TYPE A
FRONT ELEVATION

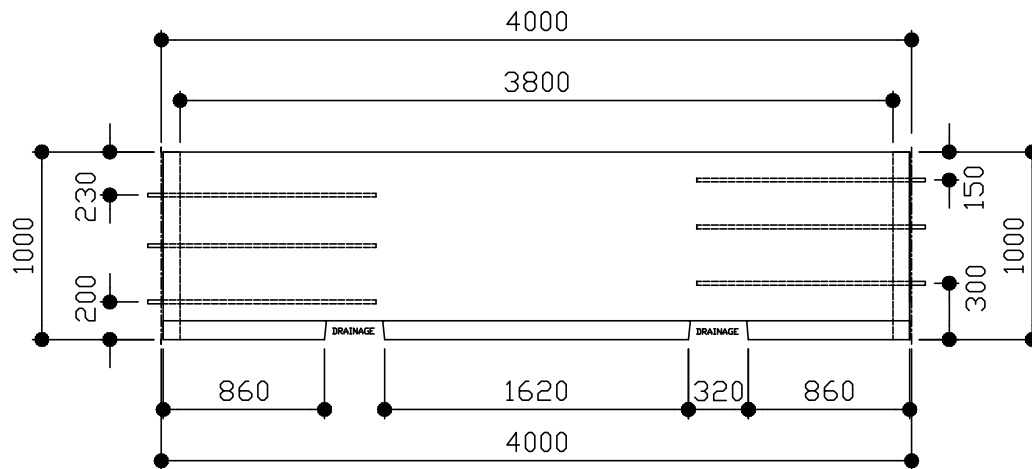


TYPE A
SIDE ELEVATION

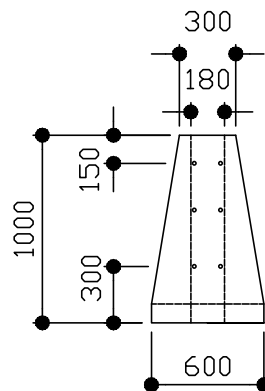
MEDIAN SAFETY BARRIER - TYPE 1



MEDIAN SAFETY BARRIER - TYPE 1
PLAN VIEW



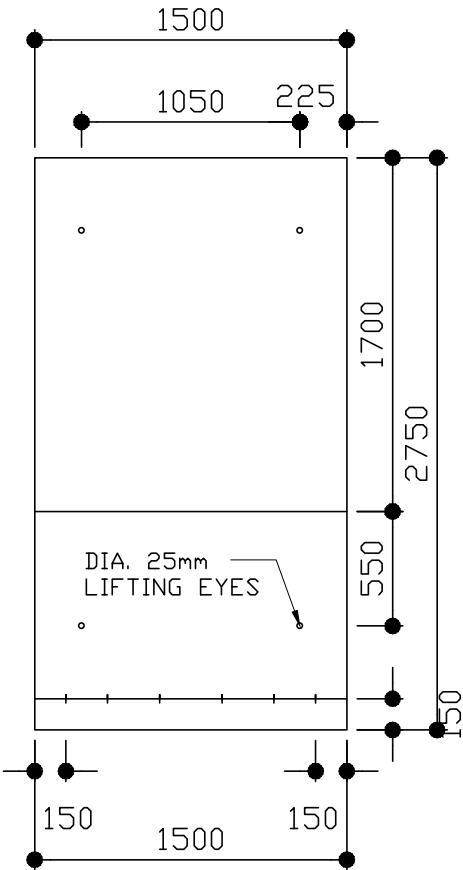
MEDIAN SAFETY BARRIER - TYPE 1
FRONT ELEVATION



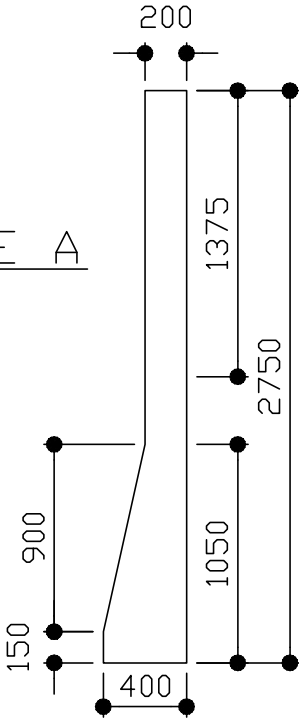
MEDIAN SAFETY BARRIER - TYPE 1
TYPICAL SECTION

MASS = 4245 kg

BARRIER WALL UNIT - TYPE A



BARRIER WALL UNIT - TYPE A
FRONT ELEVATION

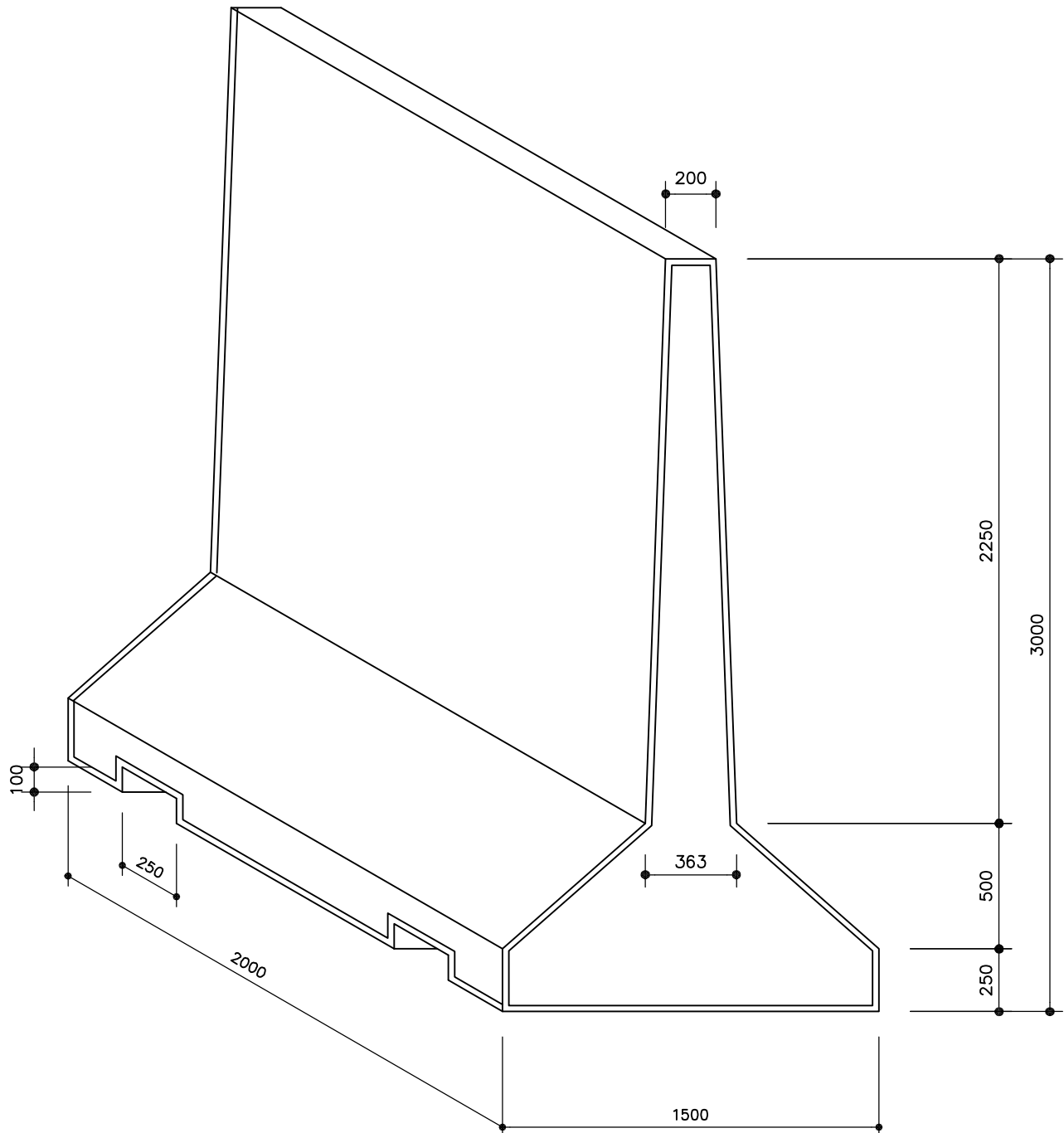


BARRIER WALL UNIT - TYPE A
SIDE ELEVATION

MASS = 2300 kg

BULK STORAGE RETAINING UNIT

ALSO AVAILABLE IN 4,0m HEIGHT



NOTE:

1. 3,0m HEIGHT MASS = 7 100kg (4,0m HEIGHT MASS = 8 200kg)
2. CHAMFER 25x25 ALL EXTERNAL FACE
3. REINFORCED TO DESIGNER SPECIFICATION

BARRIER WALL

NOTE:

1. 30 MPA
2. UNIT 2000mm LONG (EFFECTIVE LENGTH)
3. 25x25 CHAMFER
4. MASS = 8 100kg each

