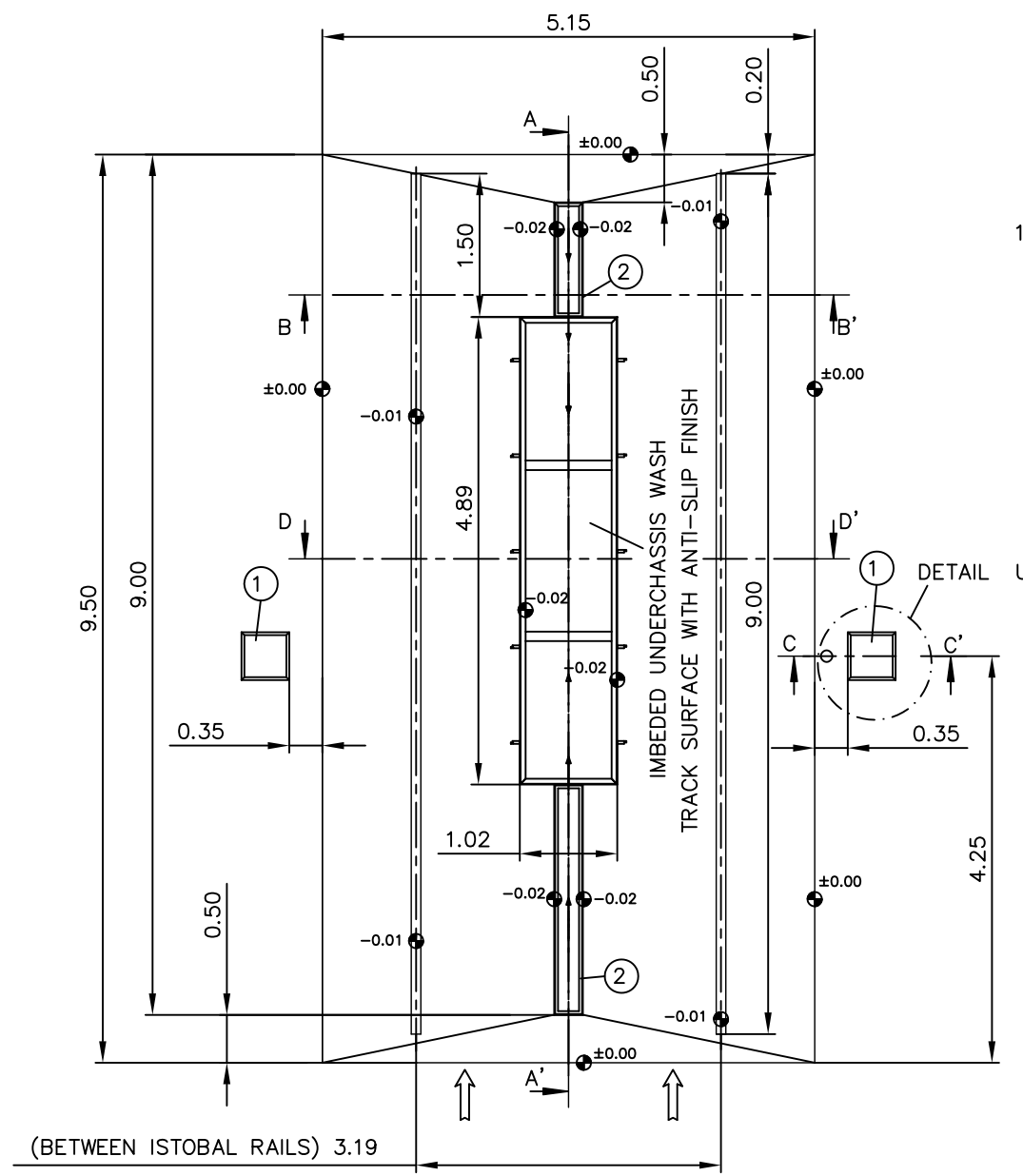




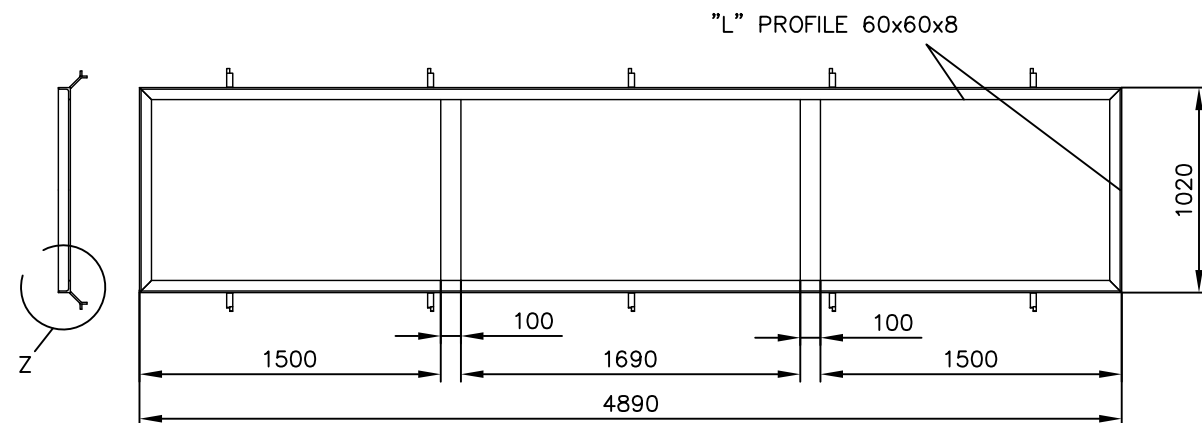
ENGINEERING AND INSTALLATION MANUAL M14+
ROLLOVERS, 2.30m. MOD: 4PF1300

1. ENGINEERING PLANS (WITH UNDERCHASSIS WASH).
2. ENGINEERING PLANS (WITHOUT UNDERCHASSIS WASH).
3. PIPES.
4. INSTALLATION-1 (CHAIN SUPPLY).
5. INSTALLATION-2 (CHAIN SUPPLY).
6. CONNECTIONS DIAGRAM (for underground connections).
7. CONNECTIONS DIAGRAM (for aerial connections).
8. ELECTRICAL INFORMATION ON SERVICE CONNECTION.
9. ELECTRICAL DISTRIBUCION CABINET (1)
10. ELECTRICAL DISTRIBUCION CABINET (2)

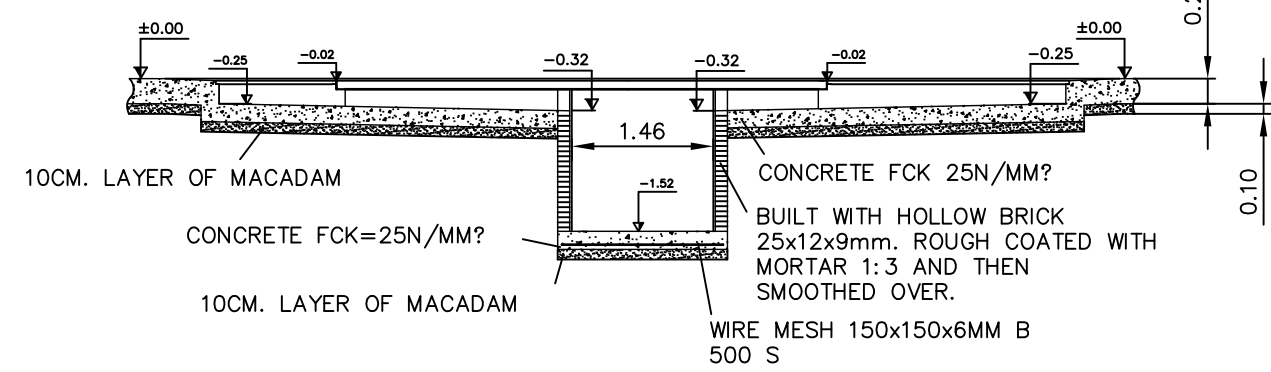


- ① CHAIN CONNECTION PIT, RIGHT OR LEFT
(POSITION DEPENDS ON TYPE OF INSTALLATION)
- ② PREFABRICATED GUTTER

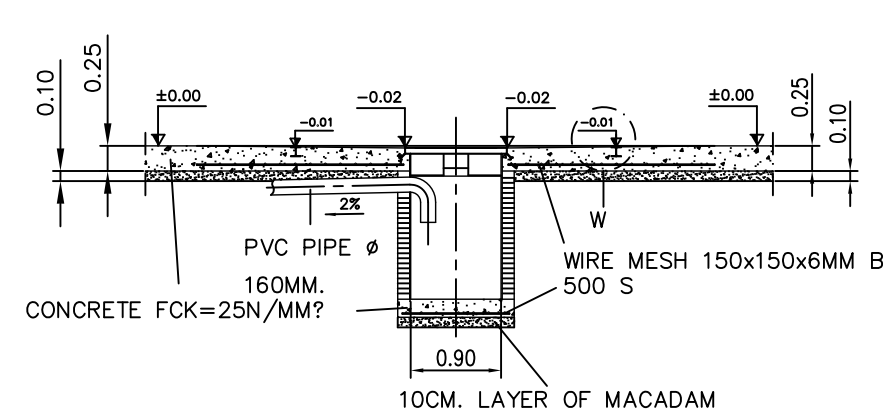
FITTINGS, IMBEDED UNDERCHASSIS WASH
(NOT SUPPLIED BY ISTOBAL)
MEASUREMENTS IN MM.



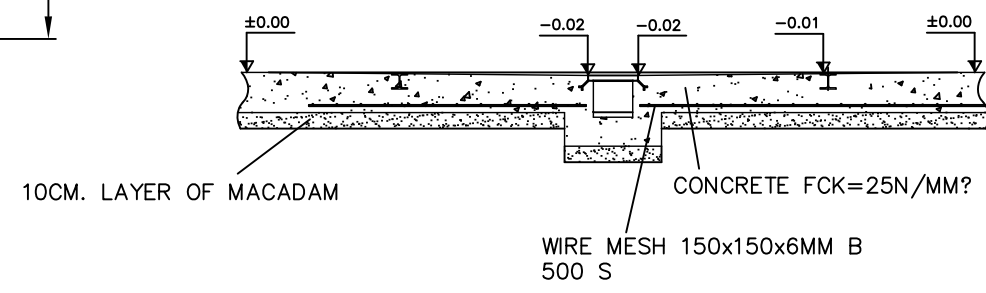
SECTION A - A'
IMBEDED UNDERCHASSIS WASH



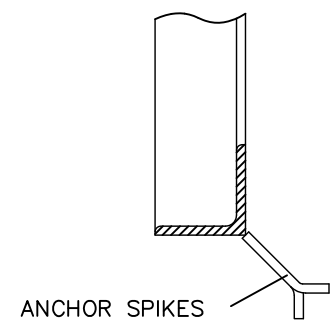
SECTION D - D'
IMBEDED UNDERCHASSIS WASH



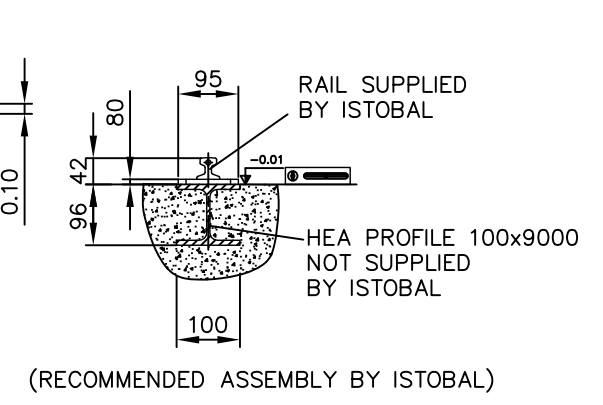
SECTION B - B'
SCALE 1 : 20



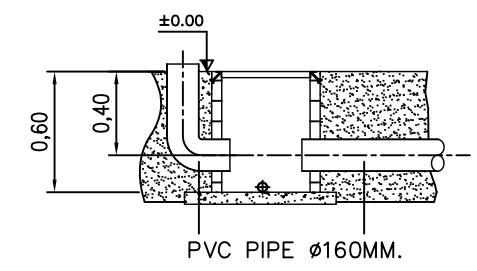
DETAIL Z



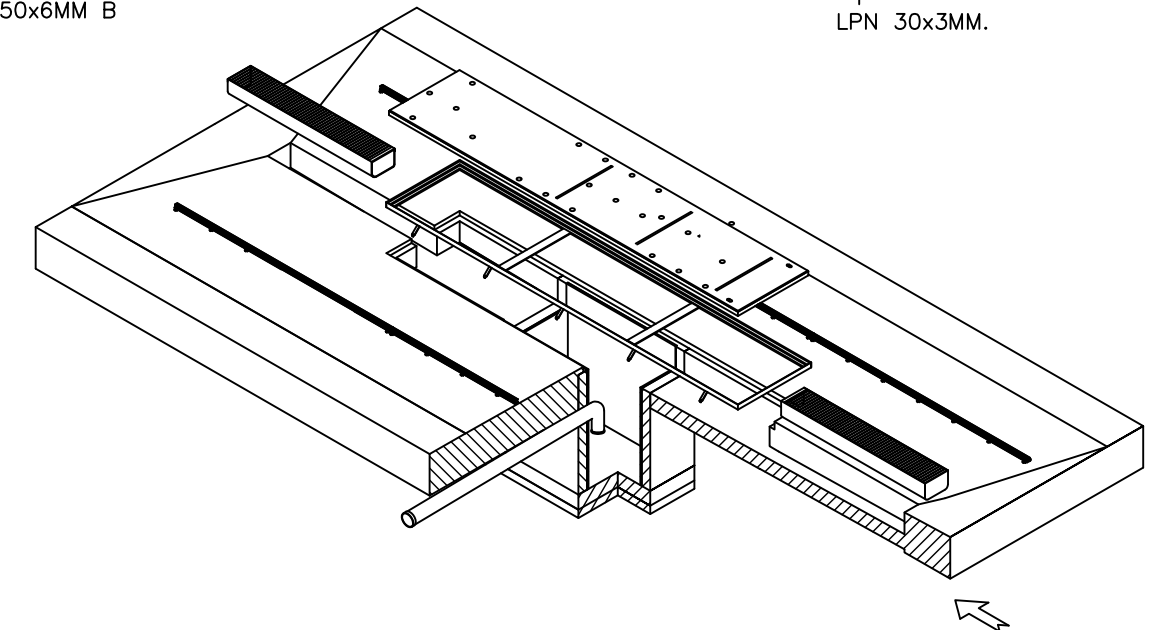
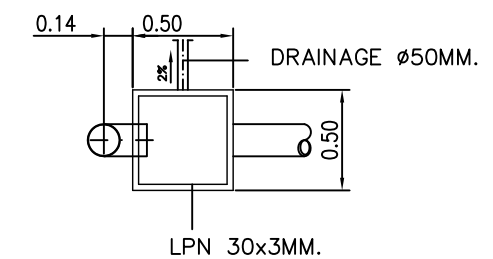
DETAIL W
MEASUREMENTS IN MM.



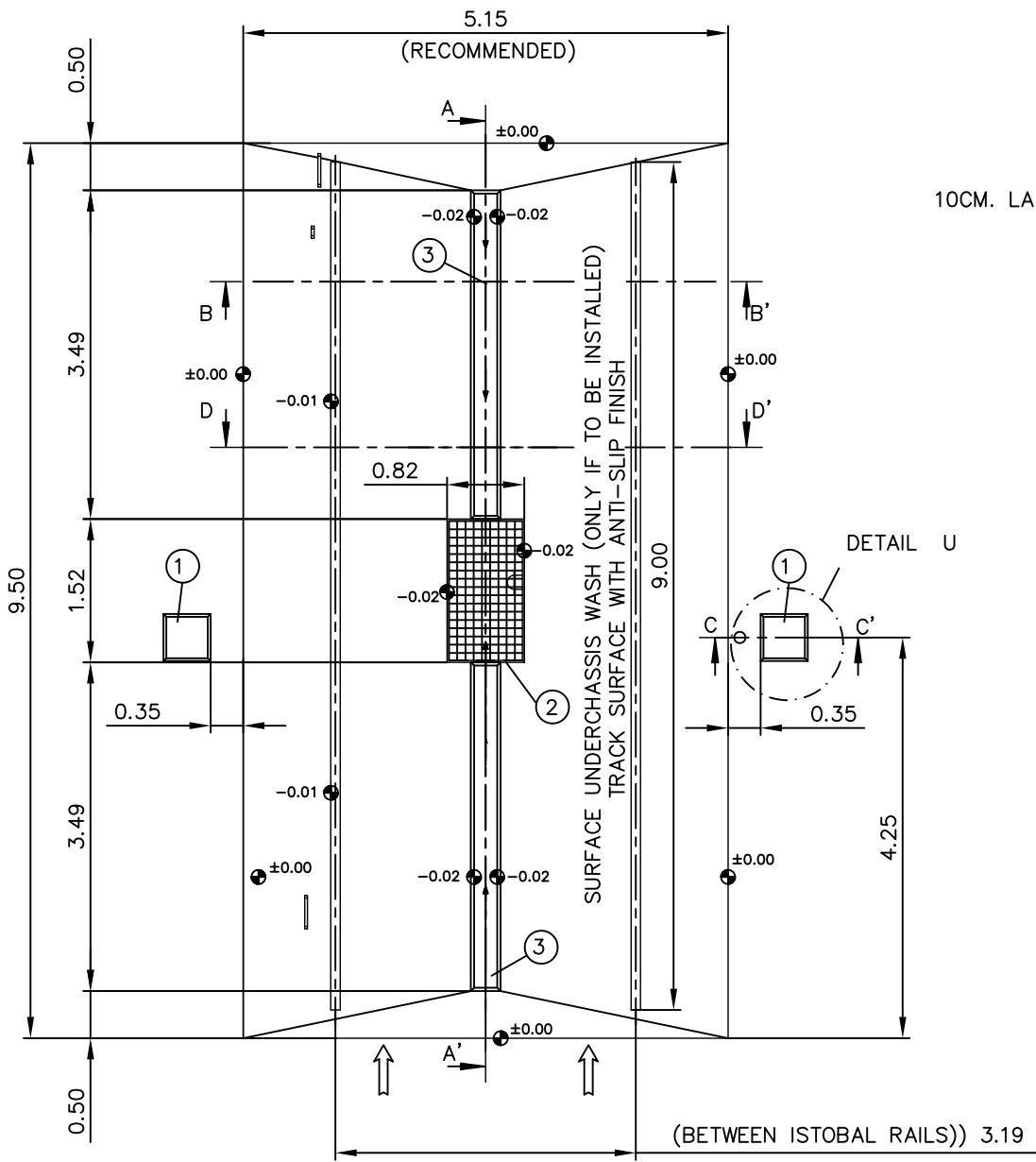
SECTION C - C'
SUPPLY PIT



DETAIL U
SUPPLY PIT

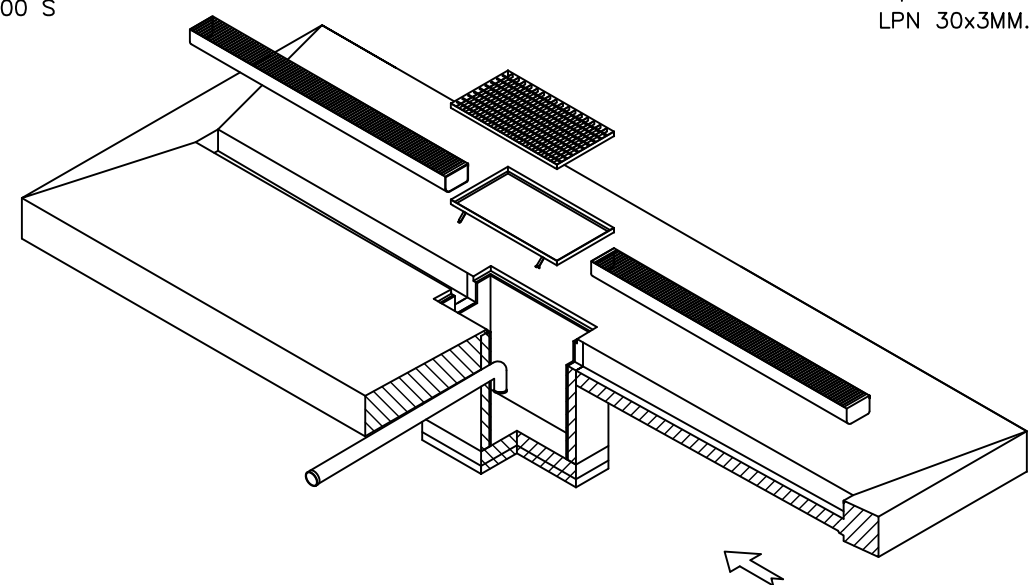
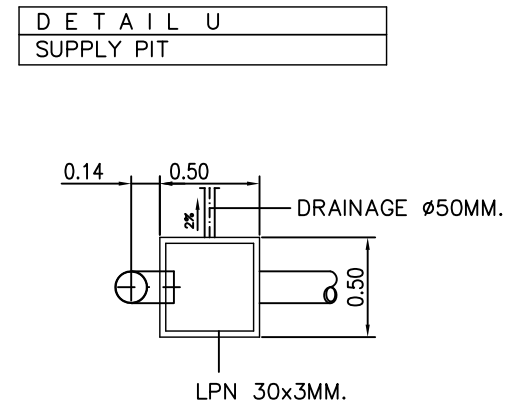
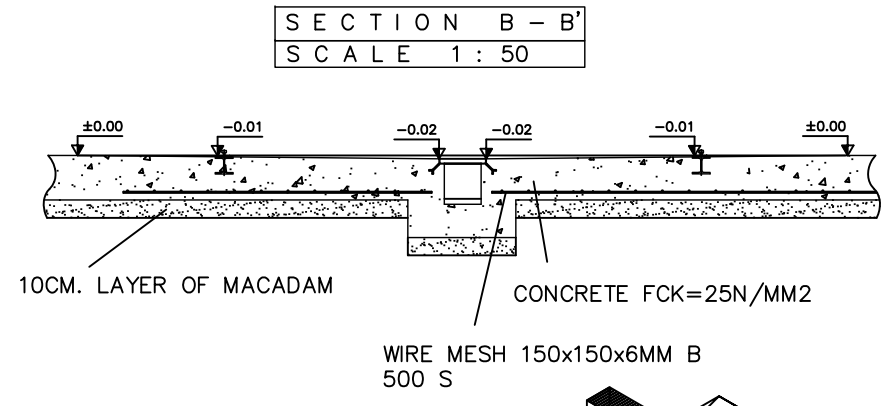
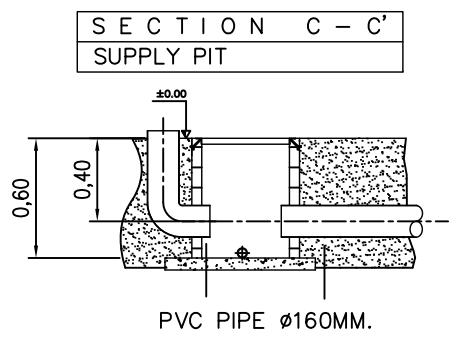
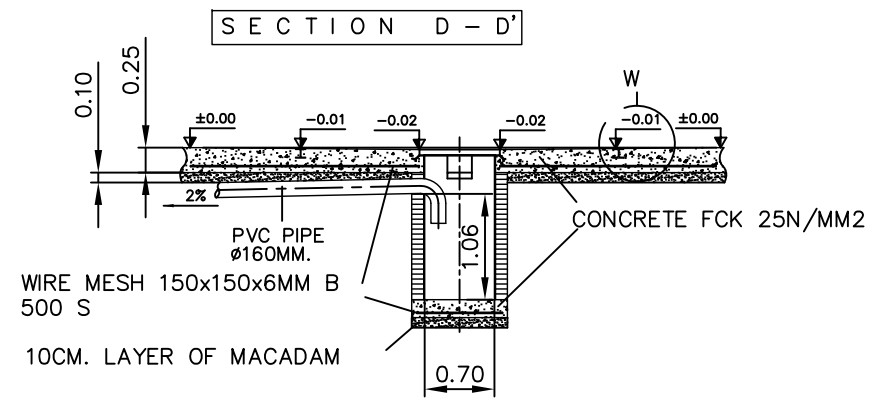
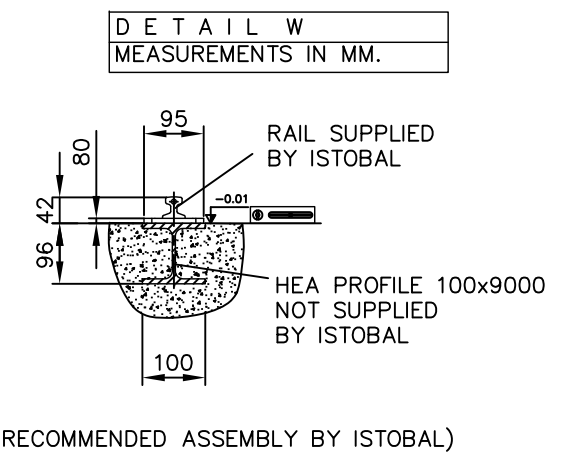
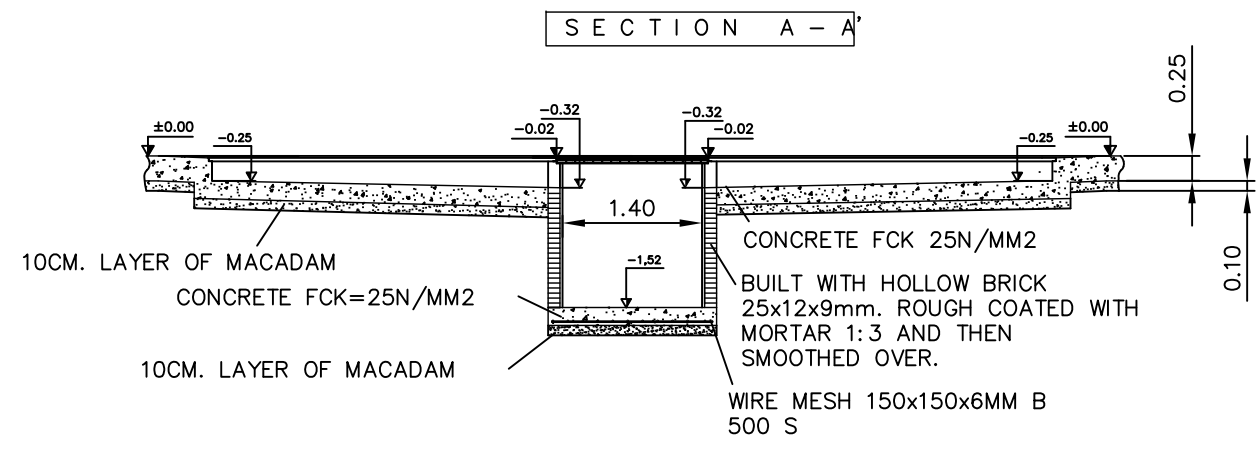
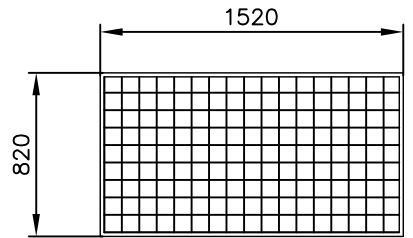


DENOMINACION: ENGINEERING PLANS FOR M14+ ROLLOVER IMBEDED UNDERCHASSIS WASH	Escala	DIBUJADO	16.11.07	PLAMOSERTEC		
	1:75	COMPROBADO:	IT-07.05			NUM:
		MODIF.				31ZL200B 01



- ① CHAIN CONNECTION PIT, RIGHT OR LEFT (POSITION DEPENDS ON TYPE OF INSTALLATION)
- ② REF. 2375600 GRILLE WITH 820 x 1516 MM FRAME
- ③ PREFABRICATED GUTTER

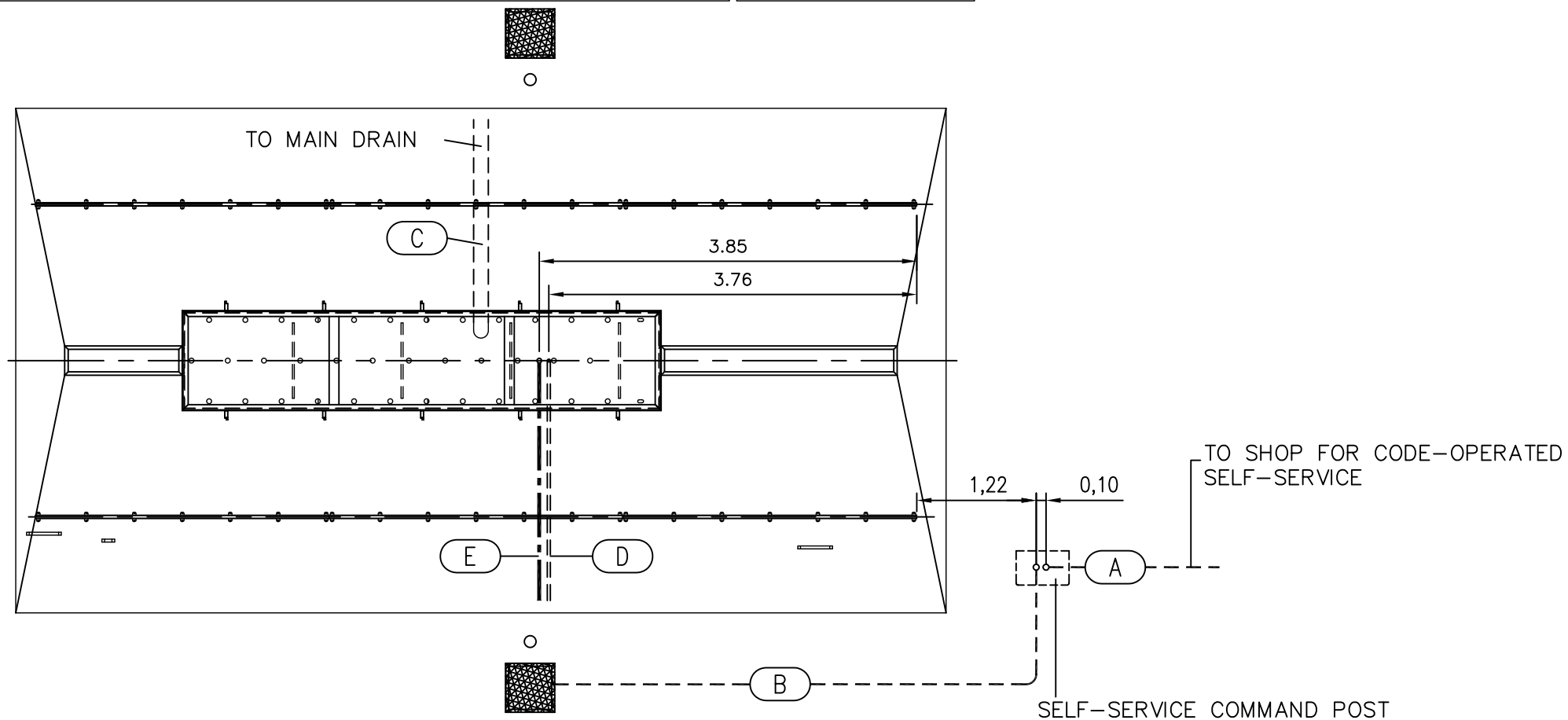
GRILLE WITH 820x1516MM. FRAME, REF. 2375600(OPTIONAL)



DENOMINACION: ENGINEERING PLANS FOR M14+ ROLLOVER WITHOUT UNDERCHASSIS WASH	ESCALA:	DIBUJADO:	16.11.07	PLAMOSERTEC	
	1:75	COMPROBADO:	IT-07.05	NUM:	
		MODIF.		31ZL200B 02	

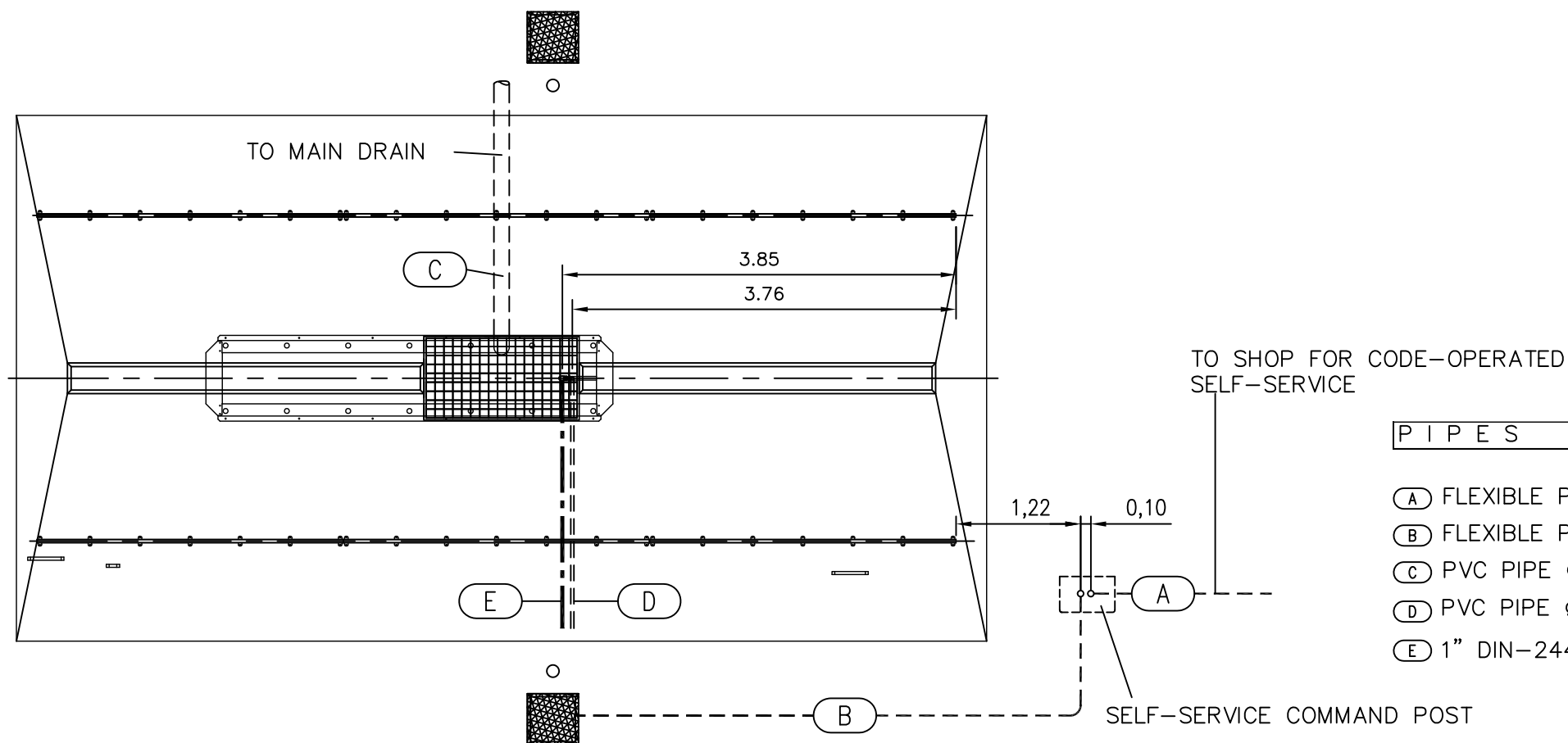
IMBEDED UNDERCHASSIS WASH

MOD. 4036700
MOD. 4036800



SURFACE UNDERCHASSIS WASH

MOD. 4827400



PIPES

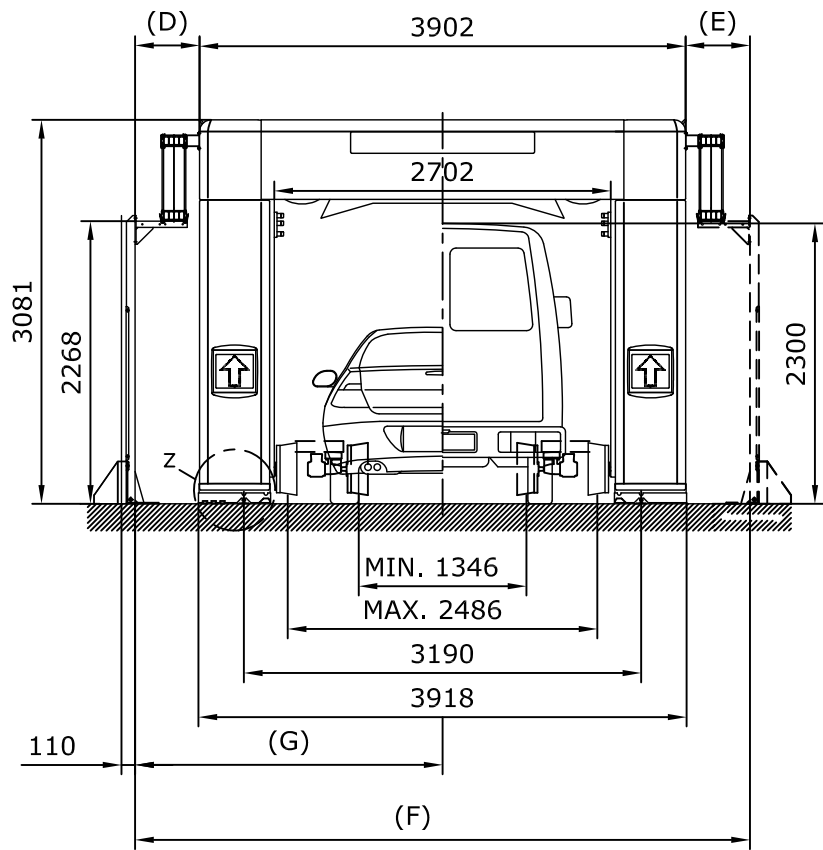
- (A) FLEXIBLE PVC Ø50MM. PIPING
- (B) FLEXIBLE PVC Ø50MM. PIPING
- (C) PVC PIPE Ø160MM.
- (D) PVC PIPE Ø30MM.
- (E) 1" DIN-2440 PIPING

MEASUREMENTS IN M.

PLAN AVAILABLE IN FILE FORMAT .DWG, .DXF, .IGS
(APPLY TO YOUR ISTOBAL DISTRIBUTOR).

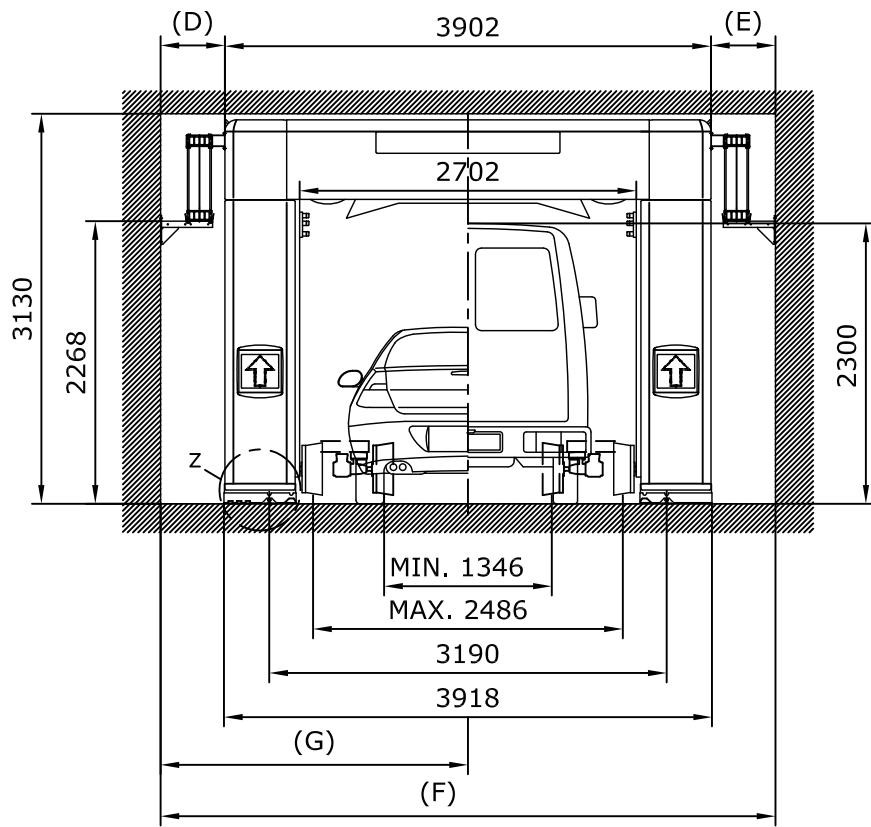
DENOMINACION: PIPES	ESCALA	DIBUJADO	18.11.07	PLAMOSERTEC		
	1:60	COMPROBADO:	IT-07.05			NUM:
	MODIF.			31ZL200B		Página

HEIGHT AND WIDTH OF BAY WITHOUT ENCLOSURE



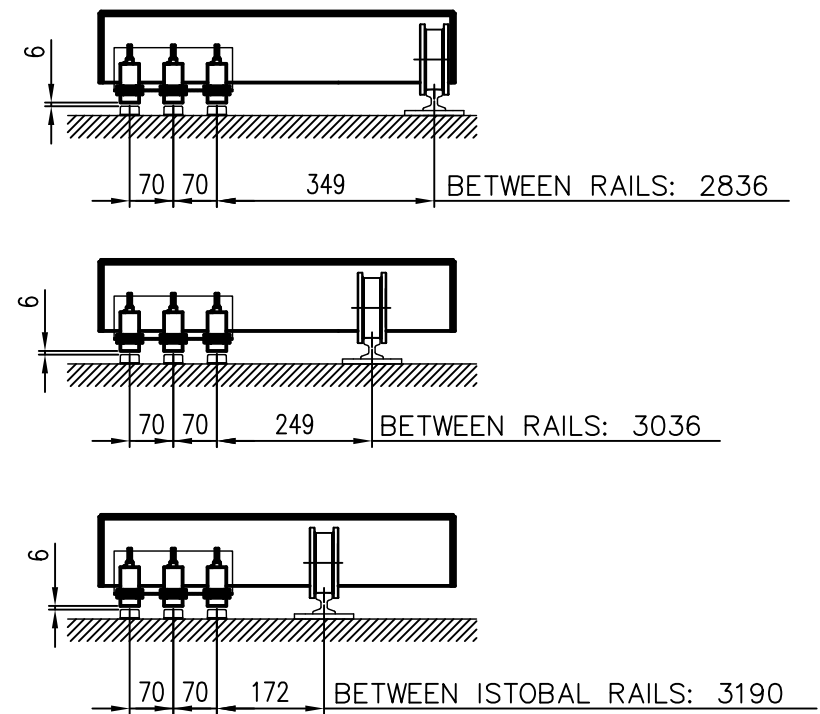
	F	G	D	E
RECOMMENDED	4902	2451	500	500
MINIMUM	4302	2359	350	130
W/O CUTTING SUPPORT ARM	5322	2861	910	510

HEIGHT AND WIDTH OF BAY WITH ENCLOSURE

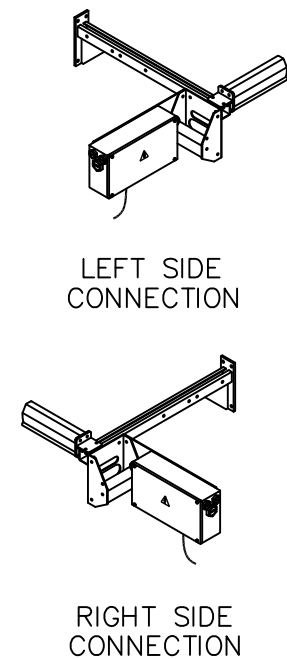


	F	G	D	E
RECOMMENDED	4902	2451	500	500
MINIMUM	4332	2301	350	80
W/O CUTTING SUPPORT ARM	5322	2861	910	510

DETAIL Z OPERATING POSITION



DETAIL Y CONNECTION

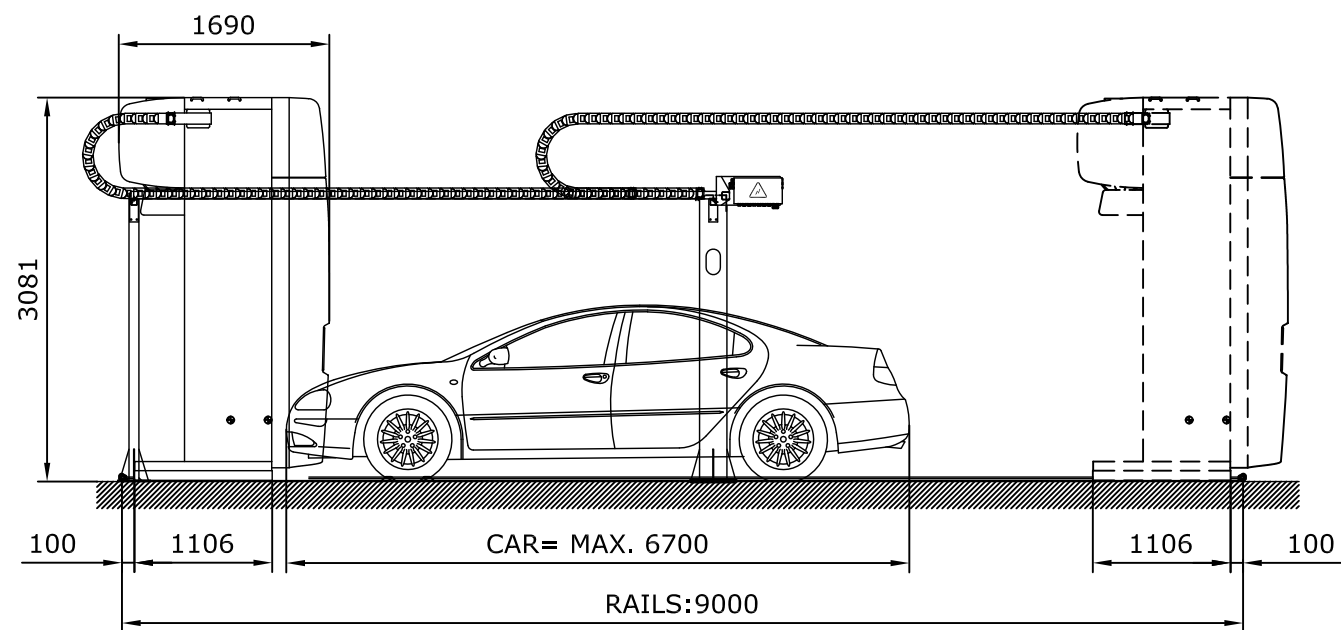


NOTE :

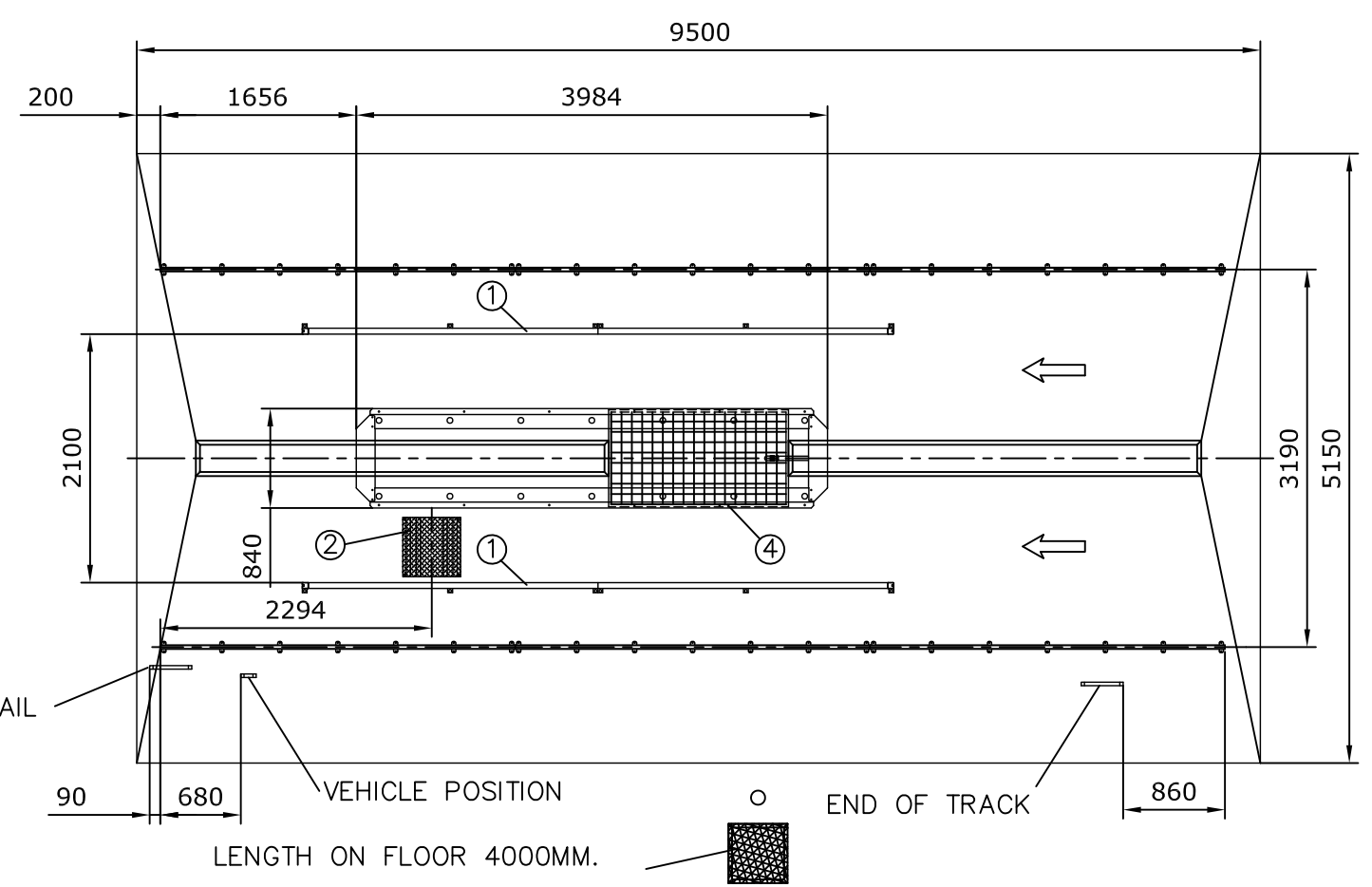
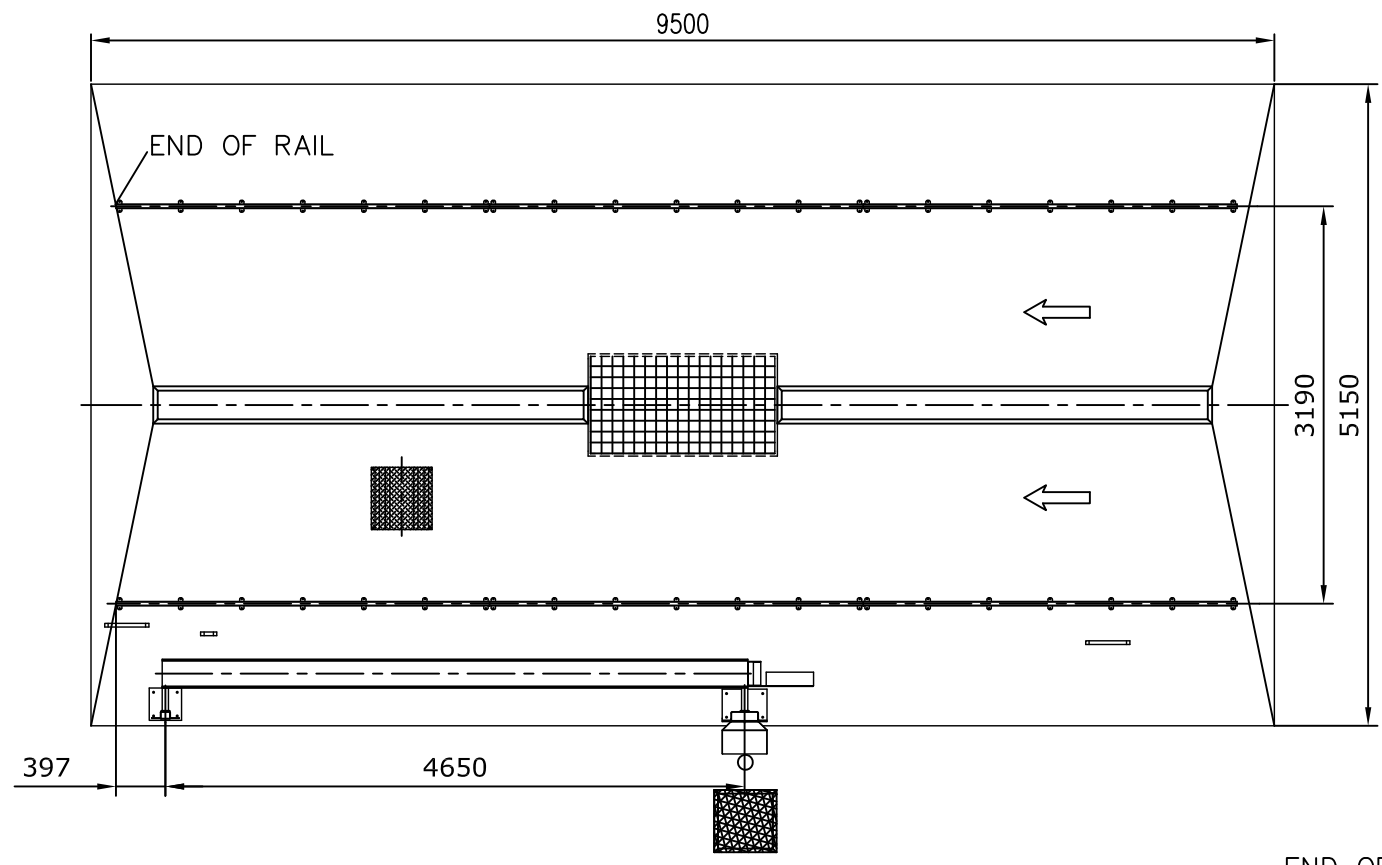
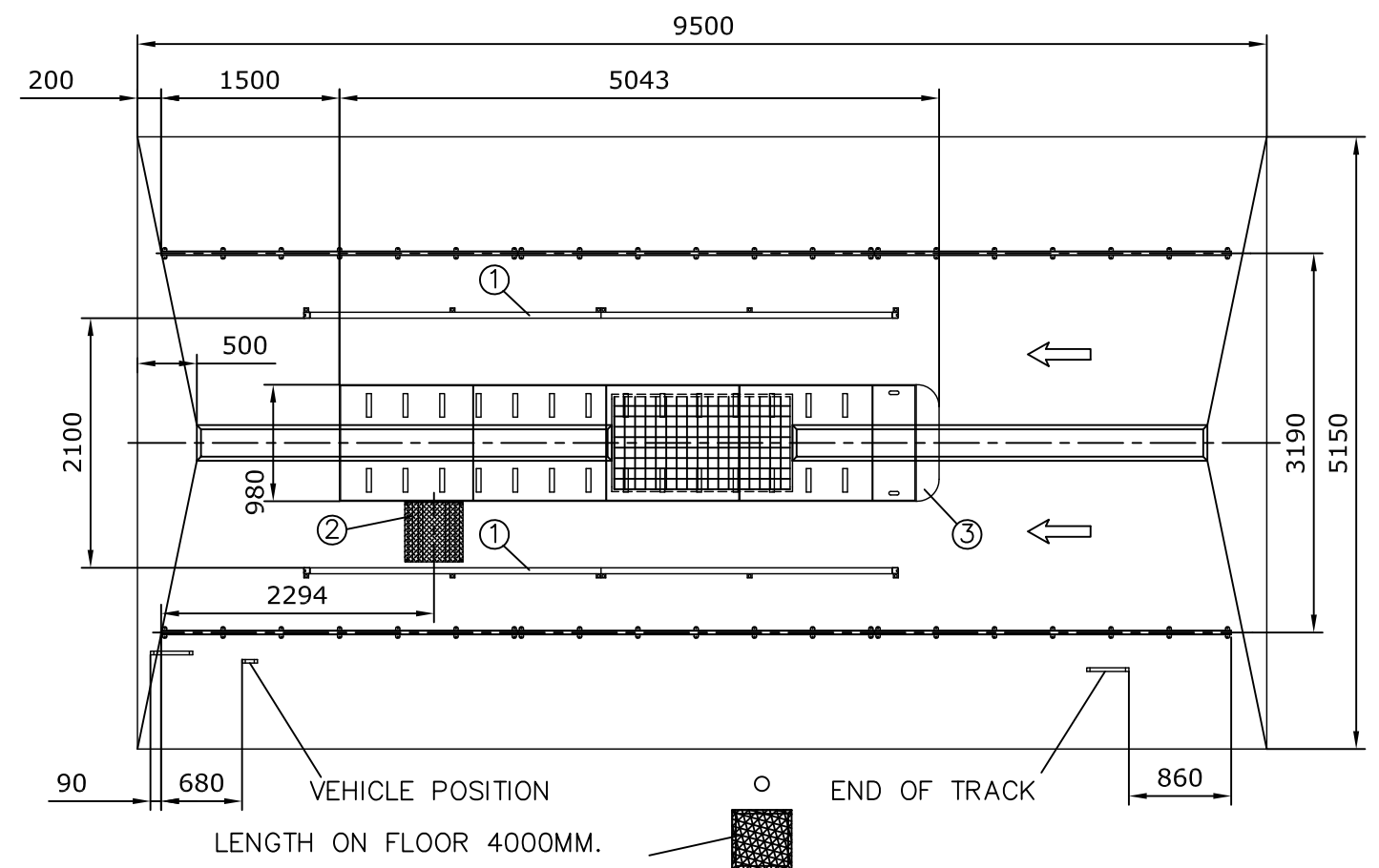
- IF "D" OR "E" IS LESS THAN 500, INSTALL THE OPTIONAL. SIDE SPACE SAFELY WITH PROFILES
- SELF SERVICE INSTALLATIONS WHERE THE DRIVER REMAINS IN THE VEHICLE DURING THE WASH, MUST BE SUPERVISED.
- ADJUST THE GAP BETWEEN THE GROUND AND THE UNDERSIDE OF THE SKATE TO 10 MM. OR LESS.

MEASUREMENTS IN MM.

DENOMINACION: INSTALLATION (Chain supply)	Escala 1:75	DIBUJADO 16.11.07 PLAMOSERTEC		
		COMPROBADO: IT-07.05		NUM: 31ZL200B
		MODIF.		Página 04

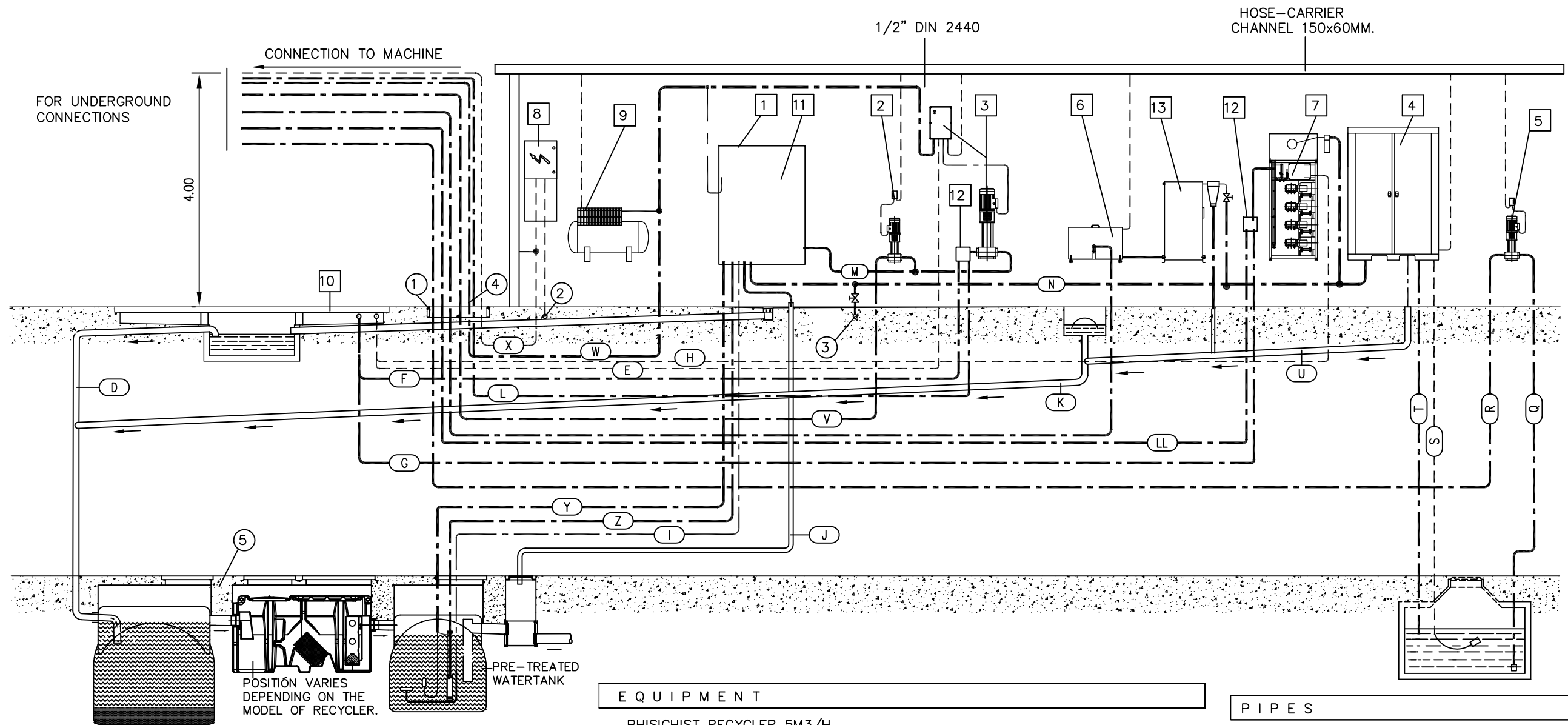


TRACK ACCESSORIES LOCATION



TRACK ACCESSOIRES		
N.	DESCRIPTION	MODEL
1	CENTRING GUIDES	4822400
2	PLATFORM POSITIONER	4823300
3	UNDERCHASSIS WASH	4036700 4036800
4	UNDERCHASSIS WASH	4827400

DENOMINACION: INSTALLATION (Chain supply)	ESCALA	1:75	DIBUJADO	16.11.07	PLAMOSERTEC	
	COMPROBADO:	IT-07.05	MODIF.	24.06.08		
	NUM:	31ZL200B	Página	05		



CHAIN CONNECTION PIT (1)

ELECTRICAL CONNECTION (2)

RUN THE MAINS LEAD-IN TO THE GENERAL DISTRIBUTION BOX USING A FLEXIBLE UNDERFLOOR PVC Ø100. SHEATH.
 * THE SIZE OF THE GENERAL LEAD-IN IS CALCULATED USING THE SUM OF SIMULTANEOUS INTENSITIES (SEE CHART), EITHER 3PH + N + PE FOR 400V. OR 3PH + PE FOR 230V. THE OVER - FLOOR LENGTH IS 4 M.

ELECTRICAL DISTRIBUTION CABINET (8)

ORGANIZE THE ELECTRICAL ACCORDING TO THE OPTIONS INSTALLED.

WATER SUPPLY (3)

* TAKE THE MAINS WATER SUPPLY TO THE SPOT SHOWN THROUGH A 1 1/2" DIN 2440 UNDERGROUND PIPE WITH A MINIMUM FLOW OF 5000 L/HOUR AT A PRESSURE OF 3 TO 6 BAR.
 * DEPTH OF PIPES IS APPROX. 0.10 M. UNDERGROUND
 * ALL DIN 2440 PIPES MUST BE GALVANIZED.
 * ALL PVC PIPING MUST BE ABLE TO WITHSTAND A MINIMUM PRESSURE OF 10 BARS. THE MAXIMUM LENGTH FOR SUCTION PIPES IS 10m. AND THE MAXIMUM SUCTION HEIGHT IS 3m.

AIR SUPPLY (4)

MINIMUM PRESSURE 7 BAR

WASTE STAGES (5)

PHYSICIST RECYCLER ->SEE REF: 31NX000
 BIOLOGICAL RECYCLER ->SEE REF: 31NX200

EQUIPMENT

- 1 PHISICIST RECYCLER 5M3/H
BIOLOGICAL RECYCLER 6M3/H
- 2 RECYCLED WATER IMPELLER PUMP
- 3 UNDERCHASSIS WASH IMPELLER PUMP (ELECTRICALLY CONTROLLED)
- 4 REVERSE OSMOSIS DEMINERALIZING UNIT 5600 L/24HOURS
- 5 DEMINERALIZED WATER IMPELLER PUMP
- 6 IMPELLER PUMP HIGH PRESSURE WHEEL WASHER
- 7 HIGH PRESSURE PUMP 80 BAR
- 8 ELECTRICAL DISTRIBUTION CABINET
- 9 COMPRESSOR
- 10 UNDERCHASSIS WASH
- 11 STAINLESS STEELTANK 500L.
(OPTION ONLY POSSIBLE IF NOT INSTALLING WATER RECYCLING UNIT)
- 12 30UQ000 DISTRIBUTOR 2 WAYS FROM 4026400
- 13 STAINLESS STEELTANK 500L

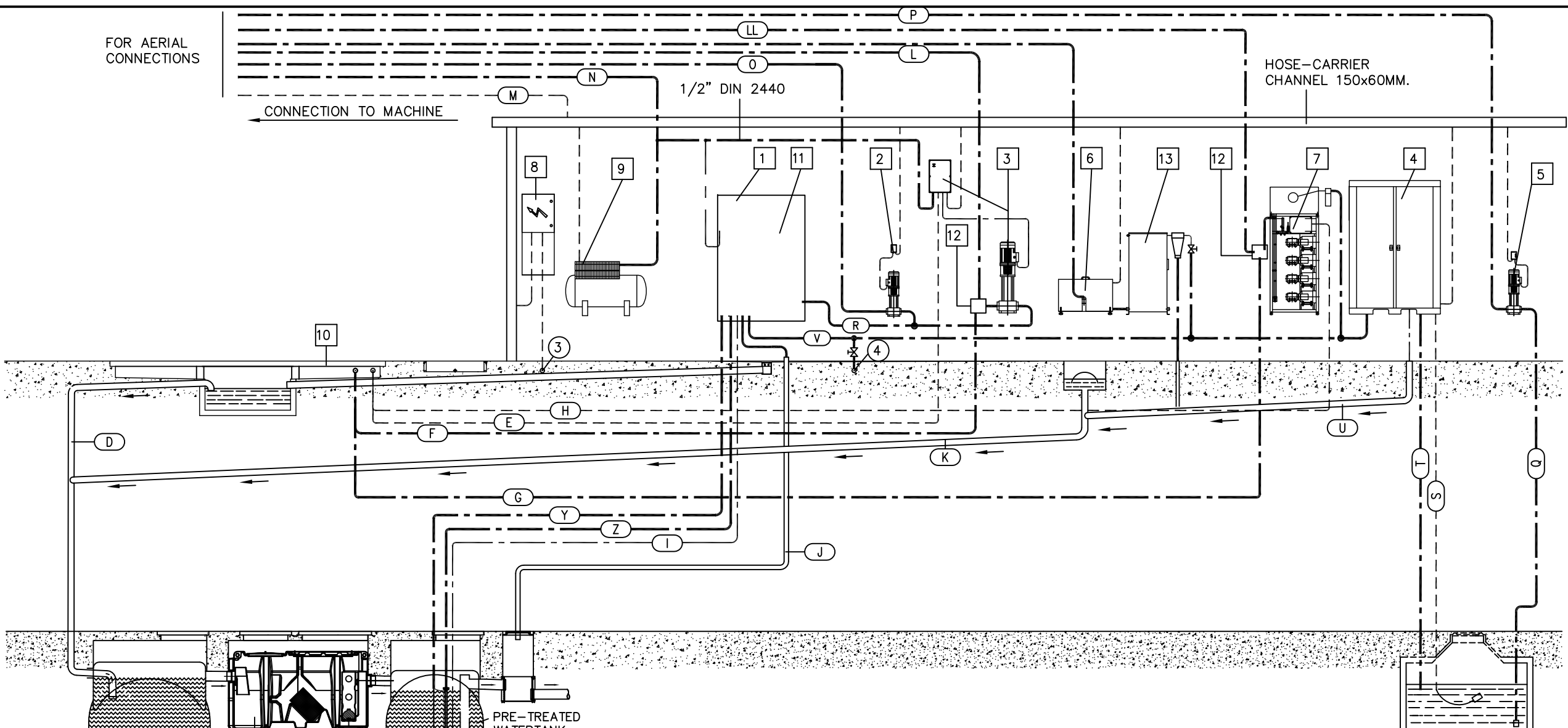
PIPES

- (D) PVC PIPE Ø160MM.
- (E) PVC PIPE Ø30MM.
- (F) 1" DIN-2440 PIPING
- (G) 1 1/2" DIN-2440 OR Ø50MM POLYTHENE PIPING

PIPES

- (H) PVC PIPE Ø30MM.
- (I) 3/8" DIN-2440 PIPING
OR 10-12MM POLYTHENE PIPING - MOD.: 4RA
- (J) Ø75MM PVC PIPING - MOD.: 4RA
- (K) Ø160MM PVC PIPING
- (L) PREWASH 15 bar LATERAL PRESSURE MEDIUM
- (LL) LATERAL H.P. PREWASH
(IN M-12 ALSO TOTAL H.P.)
- (M) 1" DIN-2440 OR Ø32mm
POLYTHENE PIPING
- (N) Ø32-Ø43mm POLYTHENE PIPING
- (Q) Ø40MM POLYTHENE PIPING
- (R) Ø32MM POLYTHENE PIPING
- (S) FLEXIBLE PVC Ø50 MM PIPING
- (T) 1 1/4" PVC PIPING
- (U) Ø110MM PVC PIPING
- (V) 1" DIN-2440 OR Ø32MM.
POLYTHENE PIPING
- (W) 1/2" DIN-2440 PIPING
- (X) FLEXIBLE PVC Ø100MM PIPING
- (Y) FLEXIBLE PVC Ø50MM PIPING
- (Z) Ø75MM PVC PIPING

DENOMINACION: M14+ CONNECTIONS DIAGRAM FOR UNDERGROUND CONNECTIONS	DIBUJADO	18.11.07	PLAMOSERTEC	
	COMPROBADO:	IT-07.05		
	MODIF.			
				NUM: 31ZL200B
				Página 06



ELECTRICAL CONNECTION (3)

RUN THE MAINS LEAD-IN TO THE GENERAL DISTRIBUTION BOX USING A FLEXIBLE UNDERFLOOR PVC Ø100. SHEATH.
 * THE SIZE OF THE GENERAL LEAD-IN IS CALCULATED USING THE SUM OF SIMULTANEOUS INTENSITIES (SEE CHART), EITHER 3PH + N + PE FOR 400V. OR 3PH + PE FOR 230V. THE OVER - FLOOR LENGTH IS 4 M.

ELECTRICAL DISTRIBUTION CABINET (8)

ORGANIZE THE ELECTRICAL ACCORDING TO THE OPTIONS INSTALLED.

WATER SUPPLY (4)

* TAKE THE MAINS WATER SUPPLY TO THE SPOT SHOWN THROUGH A 1 1/2" DIN 2440 UNDERGROUND PIPE WITH A MINIMUM FLOW OF 5000 L/HOUR AT A PRESSURE OF 3 TO 6 BAR.
 * DEPTH OF PIPES IS APPROX. 0.10 M. UNDERGROUND
 * ALL DIN 2440 PIPES MUST BE GALVANIZED.
 * ALL PVC PIPING MUST BE ABLE TO WITHSTAND A MINIMUM PRESSURE OF 10 BARS. THE MAXIMUM LENGTH FOR SUCTION PIPES IS 10m. AND THE MAXIMUM SUCTION HEIGHT IS 3m.

AIR SUPPLY
 MINIMUM PRESSURE 7 BAR

WASTE STAGES
 PHYSICIST RECYCLER ->SEE REF: 31NX000
 BIOLOGICAL RECYCLER ->SEE REF: 31NX200

EQUIPMENT

- 1 PHISICIST RECYCLER 5M3/H
BIOLOGICAL RECYCLER 6M3/H
- 2 RECYCLED WATER IMPELLER PUMP
- 3 UNDERCHASSIS WASH IMPELLER PUMP (ELECTRICALLY CONTROLLED)
- 4 REVERSE OSMOSIS DEMINERALIZING UNIT 5600 L/24HOURS
- 5 DEMINERALIZED WATER IMPELLER PUMP
- 6 IMPELLER PUMP HIGH PRESSURE WHEEL WASHER
- 7 HIGH PRESSURE PUMP 80 BAR
- 8 ELECTRICAL DISTRIBUTION CABINET
- 9 COMPRESSOR
- 10 UNDERCHASSIS WASH
- 11 STAINLESS STEEL TANK 500L.
(OPTION ONLY POSSIBLE IF NOT INSTALLING WATER RECYCLING UNIT)
- 12 30UQ000 DISTRIBUTOR 2 WAYS FROM 4026400
- 13 STAINLESS STEEL TANK 500L.

PIPES

- (D) PVC PIPE Ø160MM.
- (E) PVC PIPE Ø30MM.
- (F) 1" DIN-2440 PIPING
- (G) 1 1/2" DIN-2440 OR Ø50MM POLYTHENE PIPING

PIPES

- (H) PVC PIPE Ø30MM.
- (I) 3/8" DIN-2440 PIPING
OR 10-12MM POLYTHENE PIPING - MOD.: 4RA
- (J) Ø75MM PVC PIPING - MOD.: 4RA
- (K) Ø160MM PVC PIPING
- (L) PREWASH 15 bar LATERAL PRESSURE MEDIUM
- (LL) LATERAL H.P. PREWASH
(IN M-12 ALSO TOTAL H.P.)
- (M) ELECTRICAL CONNECTION TO MACHINE
- (N) 1/2" DIN-2440 PIPING
- (O) 1" DIN-2440
OR Ø32MM POLYTHENE PIPING
- (P) Ø32MM POLYTHENE PIPING
- (Q) Ø40MM POLYTHENE PIPING
- (R) 1" DIN-2440 OR Ø32mm
POLYTHENE PIPING
- (S) FLEXIBLE PVC Ø50MM PIPING
- (T) 1 1/4" PVC PIPING
- (U) Ø50MM PVC PIPING
- (V) Ø32-Ø43mm POLYTHENE PIPING
- (Y) FLEXIBLE PVC Ø50 MM PIPING
- (Z) Ø75MM PVC PIPING


DENOMINACION: M14+ CONNECTIONS DIAGRAM FOR AERIAL CONNECTIONS	DIBUJADO	18.11.07	PLAMOSERTEC		
	COMPROBADO:	IT-07.05			NUM: 31ZL200B
	MODIF.				Página 07

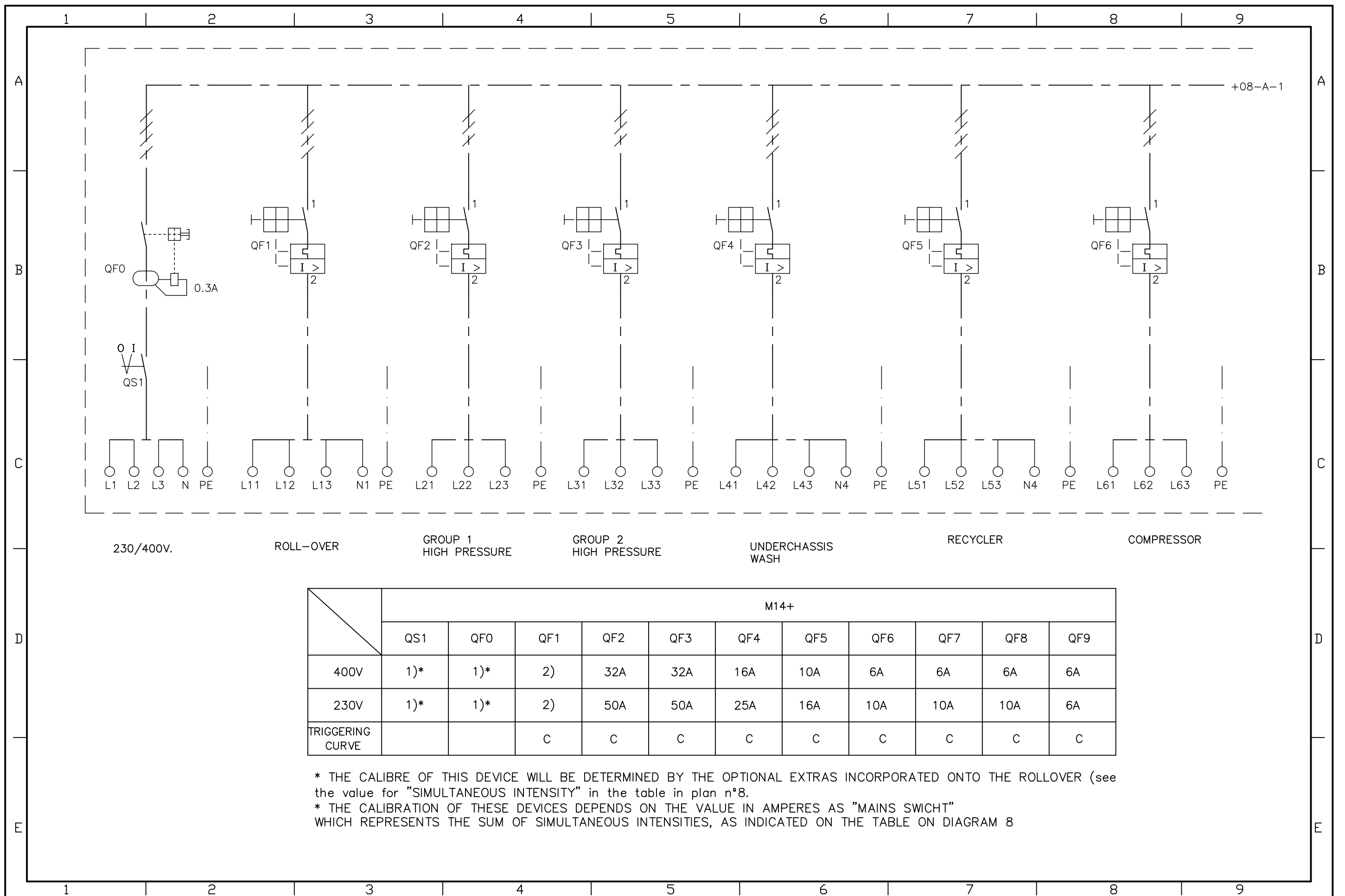
ELECTRICAL INFORMATION

MOD.:	TABLE 1	POWER Kw	230V		400V		SIMULTANEOUS INTENSITY (A)		SUM OF SIMULTANEOUS INTENSITIES A
			mm ²	A GL	mm ²	A GL	230V	400V	
4PF1300	ROLLOVER M14+	9,5	10x3F+N+PE	50	6x3F+N+PE	32	39	26	
4PF1300	ROLLOVER M14+	9,5	25x3F+PE	80	10x3F+N+PE	50	67	42	
31WH423	+ SIDE DRY	7,6							
4PF1300	ROLLOVER M14+	9,5	25x3F+PE	100	16x3F+N+PE	63	82	51	
31WH423	+ SIDE DRY	7,6							
4038000	+ CHAUFFEUR	6							
4005100	PRESSURE SET	12	16x3F+PE	63	6x3F+PE	32	48	28	
4005100	PRESSURE SET	12	16x3F+PE	63	6x3F+PE	32	48	28	
4036700	UNDERCHASSIS WASH	5,5	4x3F+PE	25	3x2,5F+PE	16	19	11	
4824200	ELECTROPOMPE	1,5	3x1,5F+PE	10	3x1,5F+PE	6	6,4	3,7	
2269500	ELECTROPOMPE	1,5	3x1,5F+PE	10	3x1,5F+PE	6	6,4	3,7	
	PHYSICAL RECYCLER 5M ³ /H (With chauffeur)	5	4x3F+PE	25	4x3F/N/PE	25			
	BIOLOGICAL RECYCLER 6M ³ /H (Without chauffeur)	5	4x3F+PE	25	4x3F/N/PE	25			
4DA1	DEMINERALIZER (With optional)	2.5	4x3F+PE	20	2,5x3F+PE	16			
4DA2	DEMINERALIZER (With optional)	4	4x3F+PE	25	2,5x3F+PE	20			
	COMPRESSOR	1,5 (min.)	4x3F+PE	25	2,5x3F+PE	20			
FIGURES FOR SERVICE CONNECTION CALCULATION							A TOTAL		

Not e:

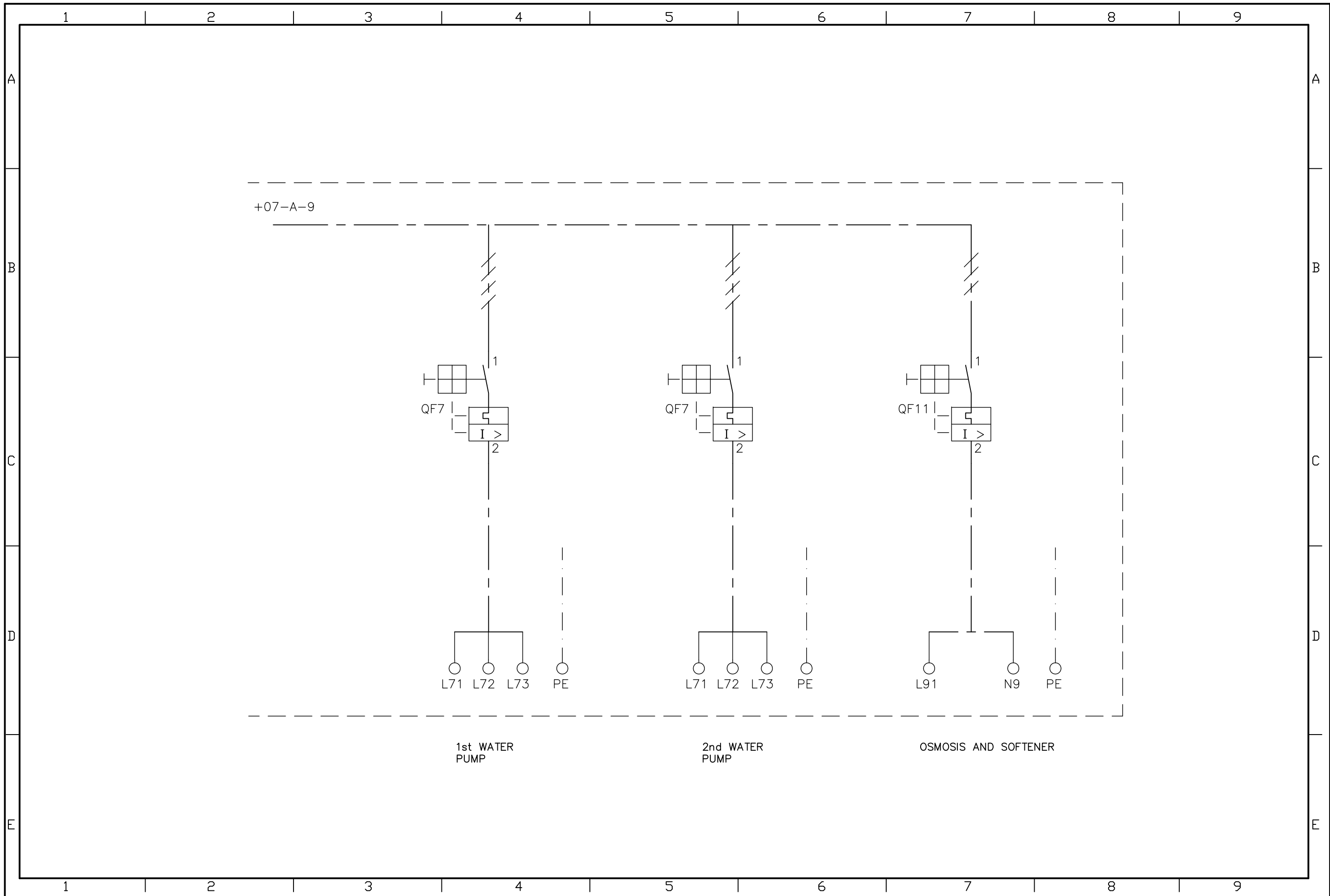
- To determine the value for the main electricity supply, take the values in the "SIMULTANEOUS INTENSITY" column relating to the rollover and optional extras and copy them into the "SUM OF SIMULTANEOUS INTENSITIES" column.
- The values for cable diameter and calibre of magnetothermal protections are for guidance only. The definitive values are to be determined in line with the local regulations in force.

DENOMINACION: ELECTRICAL INFORMATION ON SERVICE CONNECTION	DIBUJADO	18.11.07	PLAMOSERTEC	 NUM: 31ZL200B	Página 08
	COMPROBADO:	IT-07.05			
	MODIF.				



	M14+										
	QS1	QF0	QF1	QF2	QF3	QF4	QF5	QF6	QF7	QF8	QF9
400V	1)*	1)*	2)	32A	32A	16A	10A	6A	6A	6A	6A
230V	1)*	1)*	2)	50A	50A	25A	16A	10A	10A	10A	6A
TRIGGERING CURVE			C	C	C	C	C	C	C	C	C

* THE CALIBRE OF THIS DEVICE WILL BE DETERMINED BY THE OPTIONAL EXTRAS INCORPORATED ONTO THE ROLLOVER (see the value for "SIMULTANEOUS INTENSITY" in the table in plan n°8.
 * THE CALIBRATION OF THESE DEVICES DEPENDS ON THE VALUE IN AMPERES AS "MAINS SWICHT" WHICH REPRESENTS THE SUM OF SIMULTANEOUS INTENSITIES, AS INDICATED ON THE TABLE ON DIAGRAM 8



DENOMINACION: ELECTRICAL DISTRIBUTION CABINET	DIBUJADO	18.11.07	PLAMOSERTEC	 NUM: 31ZL200B <small>Página</small> 10
	COMPROBADO:	IT-07.05		
	MODIF.			