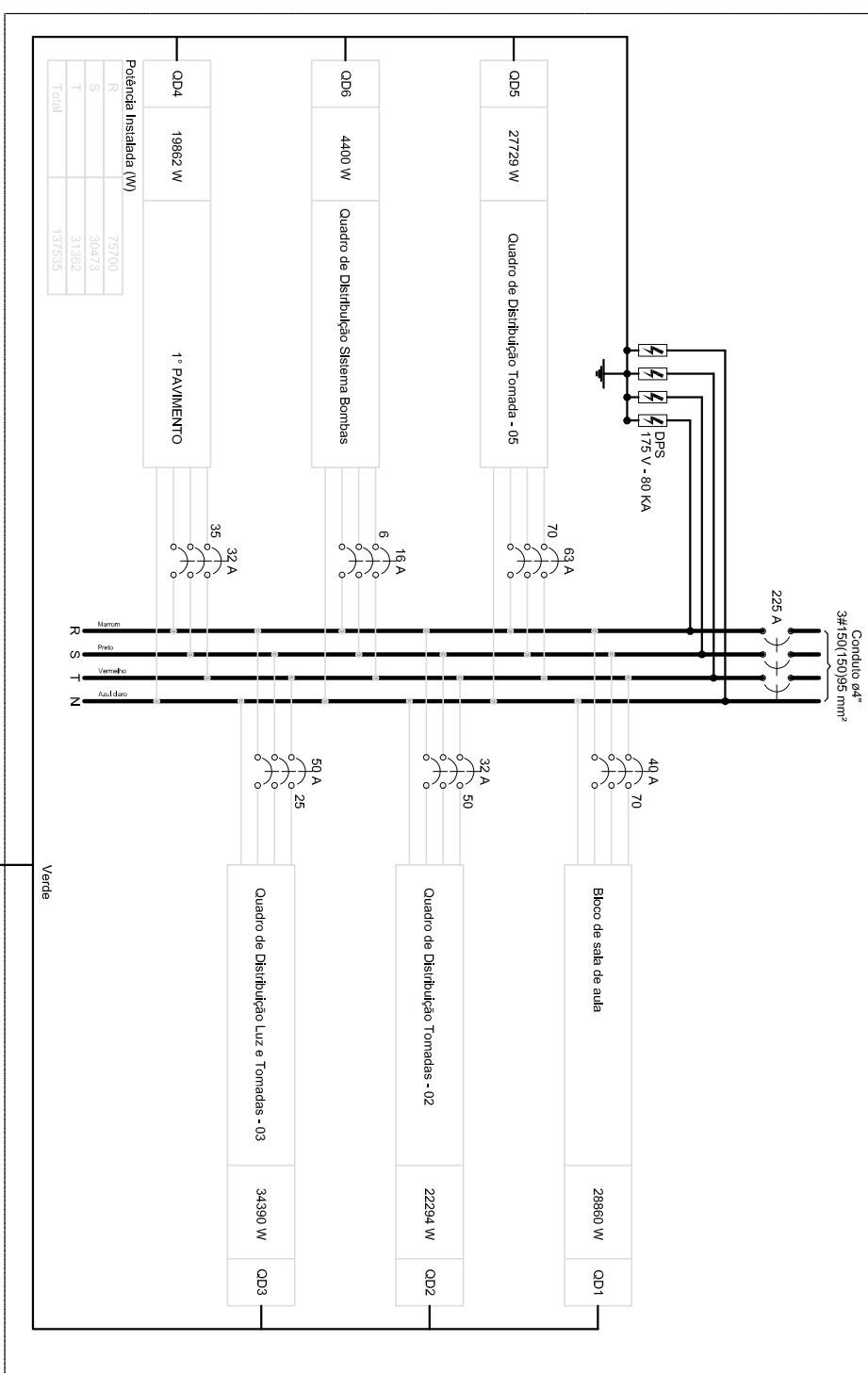
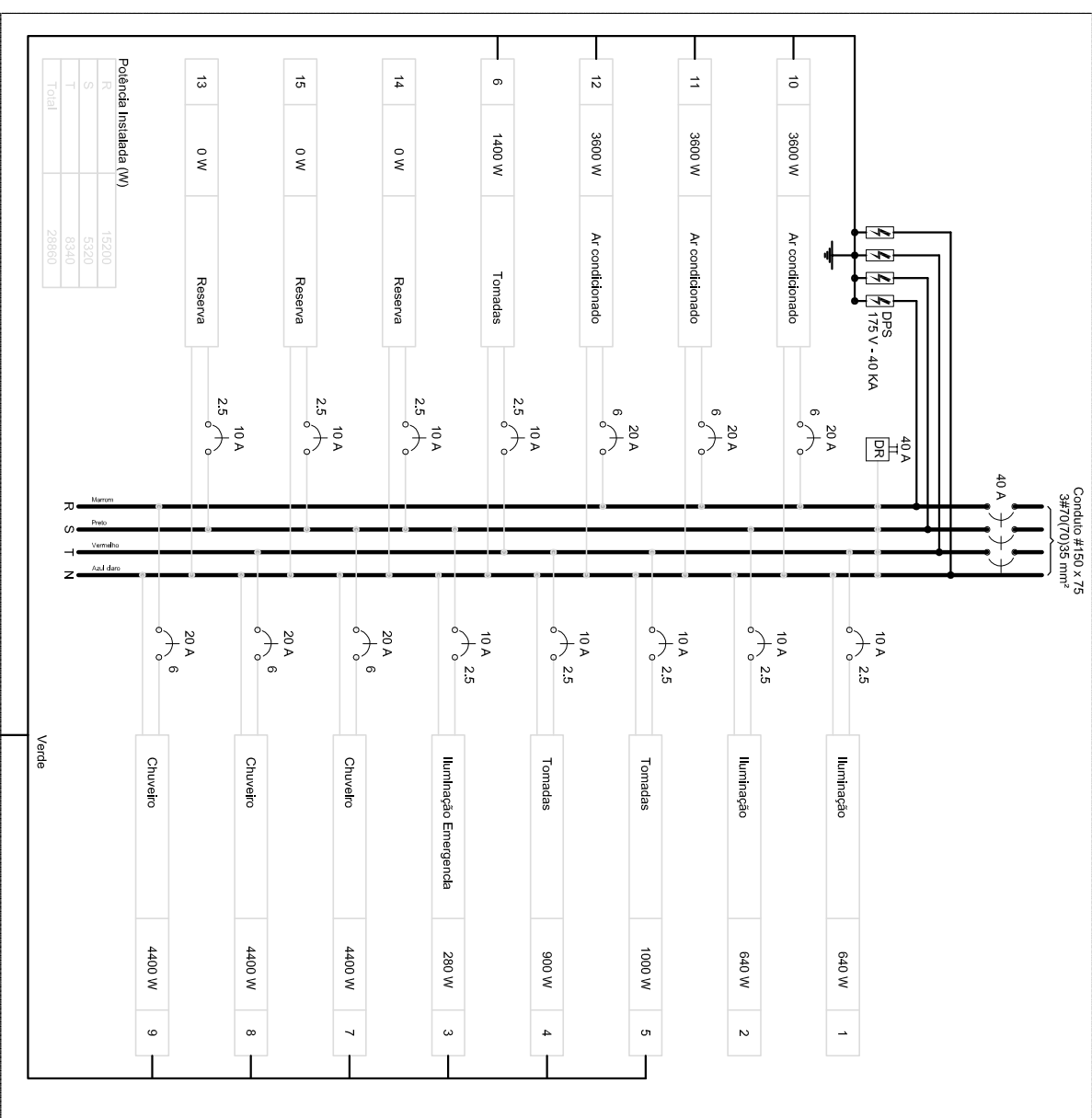


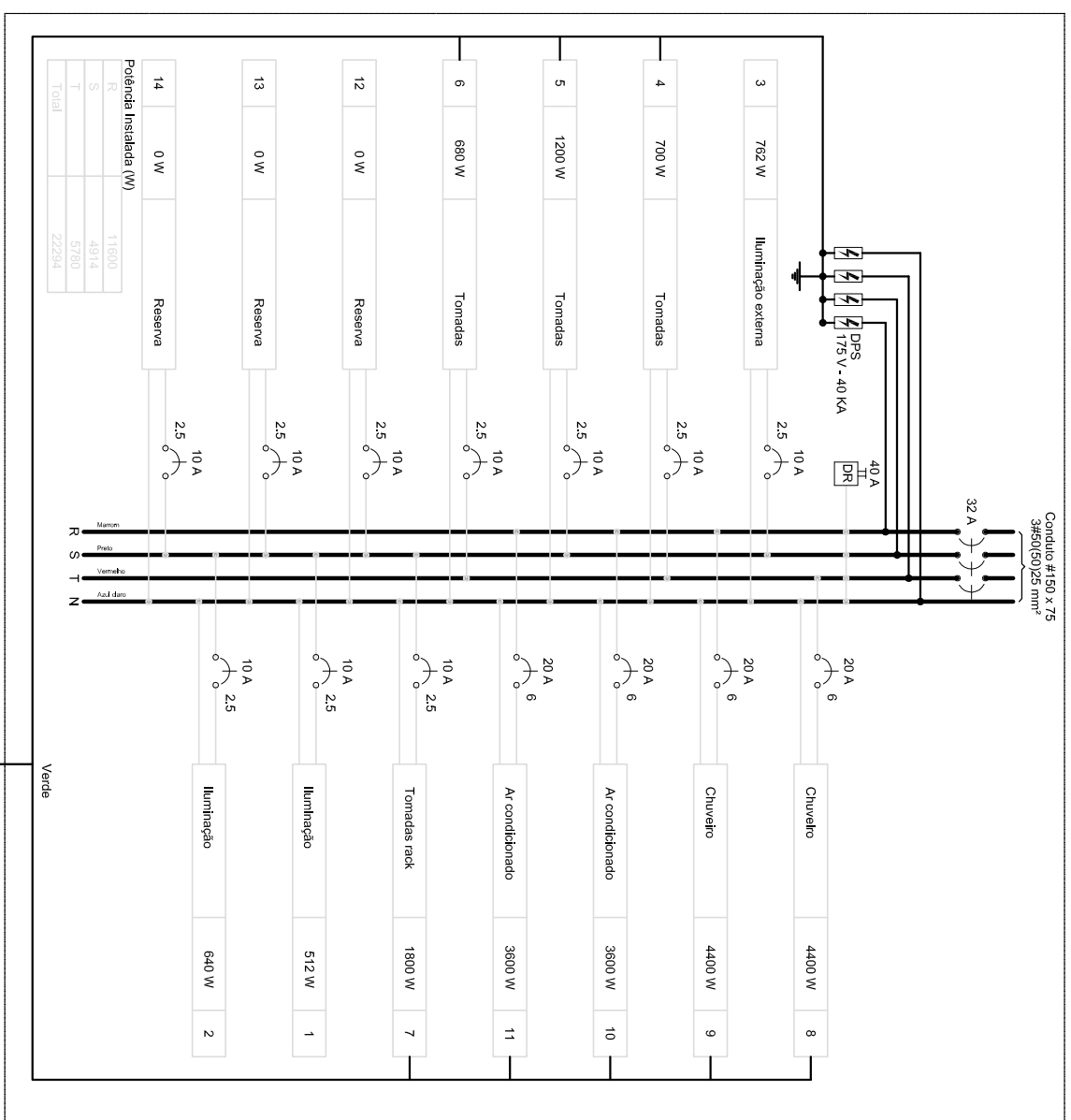
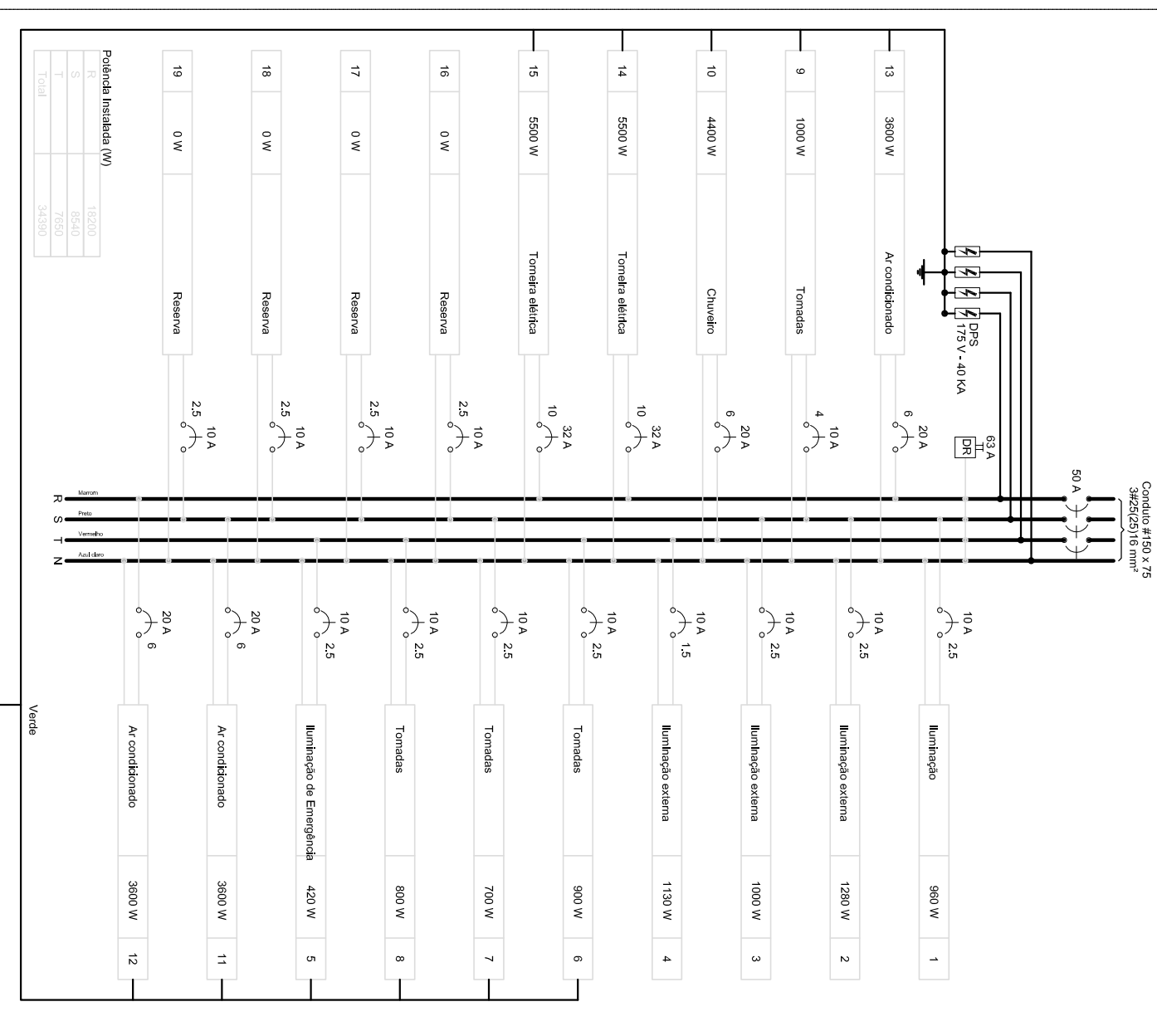
[illegible][illegible]

Case	Problem	Ch. 1	Ch. 2	Ch. 3	Ch. 4	Ch. 5	Ch. 6	Ch. 7	Ch. 8	Ch. 9	Ch. 10	Ch. 11	Ch. 12	Ch. 13	Ch. 14	Ch. 15	Ch. 16	Ch. 17	Ch. 18	Ch. 19	Ch. 20	Ch. 21	Ch. 22	Ch. 23	Ch. 24	Ch. 25	Ch. 26	Ch. 27	Ch. 28	Ch. 29	Ch. 30	Ch. 31	Ch. 32	Ch. 33	Ch. 34	Ch. 35	Ch. 36	Ch. 37	Ch. 38	Ch. 39	Ch. 40	Ch. 41	Ch. 42	Ch. 43	Ch. 44	Ch. 45	Ch. 46	Ch. 47	Ch. 48	Ch. 49	Ch. 50	Ch. 51	Ch. 52	Ch. 53	Ch. 54	Ch. 55	Ch. 56	Ch. 57	Ch. 58	Ch. 59	Ch. 60	Ch. 61	Ch. 62	Ch. 63	Ch. 64	Ch. 65	Ch. 66	Ch. 67	Ch. 68	Ch. 69	Ch. 70	Ch. 71	Ch. 72	Ch. 73	Ch. 74	Ch. 75	Ch. 76	Ch. 77	Ch. 78	Ch. 79	Ch. 80	Ch. 81	Ch. 82	Ch. 83	Ch. 84	Ch. 85	Ch. 86	Ch. 87	Ch. 88	Ch. 89	Ch. 90	Ch. 91	Ch. 92	Ch. 93	Ch. 94	Ch. 95	Ch. 96	Ch. 97	Ch. 98	Ch. 99	Ch. 100	Ch. 101	Ch. 102	Ch. 103	Ch. 104	Ch. 105	Ch. 106	Ch. 107	Ch. 108	Ch. 109	Ch. 110	Ch. 111	Ch. 112	Ch. 113	Ch. 114	Ch. 115	Ch. 116	Ch. 117	Ch. 118	Ch. 119	Ch. 120	Ch. 121	Ch. 122	Ch. 123	Ch. 124	Ch. 125	Ch. 126	Ch. 127	Ch. 128	Ch. 129	Ch. 130	Ch. 131	Ch. 132	Ch. 133	Ch. 134	Ch. 135	Ch. 136	Ch. 137	Ch. 138	Ch. 139	Ch. 140	Ch. 141	Ch. 142	Ch. 143	Ch. 144	Ch. 145	Ch. 146	Ch. 147	Ch. 148	Ch. 149	Ch. 150	Ch. 151	Ch. 152	Ch. 153	Ch. 154	Ch. 155	Ch. 156	Ch. 157	Ch. 158	Ch. 159	Ch. 160	Ch. 161	Ch. 162	Ch. 163	Ch. 164	Ch. 165	Ch. 166	Ch. 167	Ch. 168	Ch. 169	Ch. 170	Ch. 171	Ch. 172	Ch. 173	Ch. 174	Ch. 175	Ch. 176	Ch. 177	Ch. 178	Ch. 179	Ch. 180	Ch. 181	Ch. 182	Ch. 183	Ch. 184	Ch. 185	Ch. 186	Ch. 187	Ch. 188	Ch. 189	Ch. 190	Ch. 191	Ch. 192	Ch. 193	Ch. 194	Ch. 195	Ch. 196	Ch. 197	Ch. 198	Ch. 199	Ch. 200	Ch. 201	Ch. 202	Ch. 203	Ch. 204	Ch. 205	Ch. 206	Ch. 207	Ch. 208	Ch. 209	Ch. 210	Ch. 211	Ch. 212	Ch. 213	Ch. 214	Ch. 215	Ch. 216	Ch. 217	Ch. 218	Ch. 219	Ch. 220	Ch. 221	Ch. 222	Ch. 223	Ch. 224	Ch. 225	Ch. 226	Ch. 227	Ch. 228	Ch. 229	Ch. 230	Ch. 231	Ch. 232	Ch. 233	Ch. 234	Ch. 235	Ch. 236	Ch. 237	Ch. 238	Ch. 239	Ch. 240	Ch. 241	Ch. 242	Ch. 243	Ch. 244	Ch. 245	Ch. 246	Ch. 247	Ch. 248	Ch. 249	Ch. 250	Ch. 251	Ch. 252	Ch. 253	Ch. 254	Ch. 255	Ch. 256	Ch. 257	Ch. 258	Ch. 259	Ch. 260	Ch. 261	Ch. 262	Ch. 263	Ch. 264	Ch. 265	Ch. 266	Ch. 267	Ch. 268	Ch. 269	Ch. 270	Ch. 271	Ch. 272	Ch. 273	Ch. 274	Ch. 275	Ch. 276	Ch. 277	Ch. 278	Ch. 279	Ch. 280	Ch. 281	Ch. 282	Ch. 283	Ch. 284	Ch. 285	Ch. 286	Ch. 287	Ch. 288	Ch. 289	Ch. 290	Ch. 291	Ch. 292	Ch. 293	Ch. 294	Ch. 295	Ch. 296	Ch. 297	Ch. 298	Ch. 299	Ch. 300																																																																																																																																																																																																																																																																																																																																									
1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1

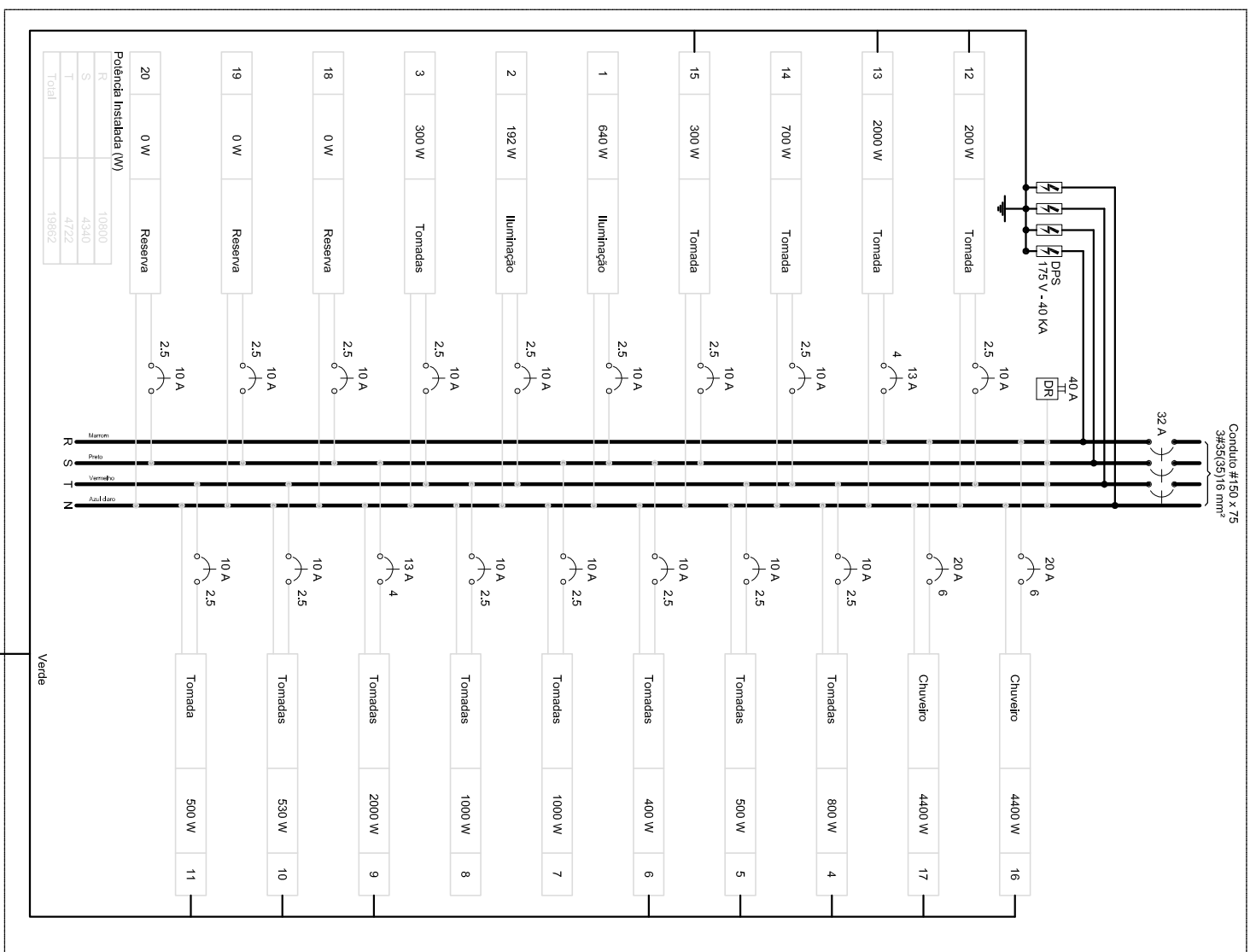
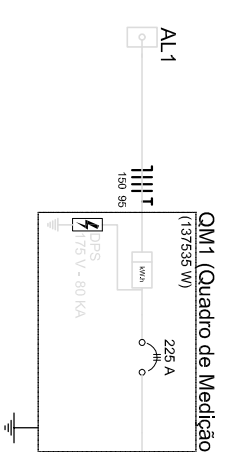
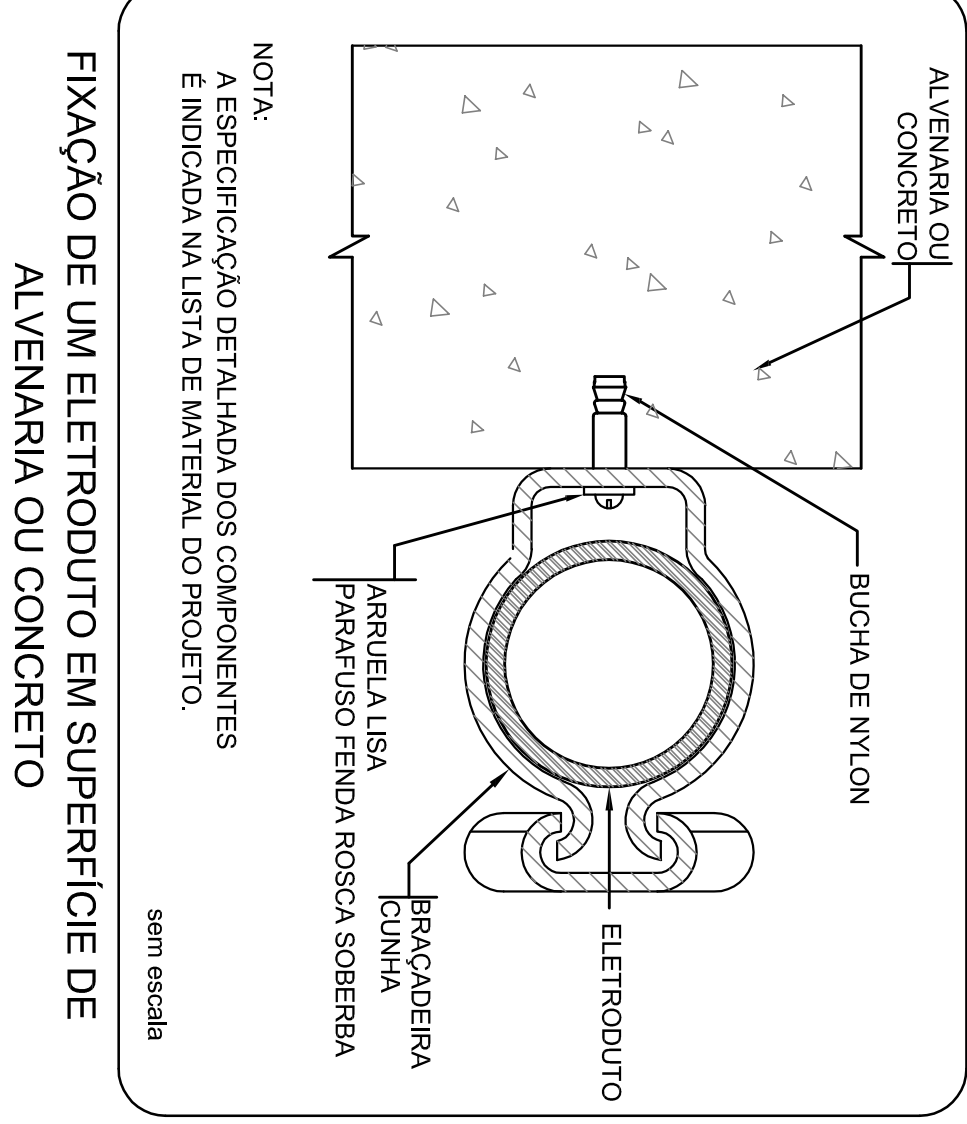
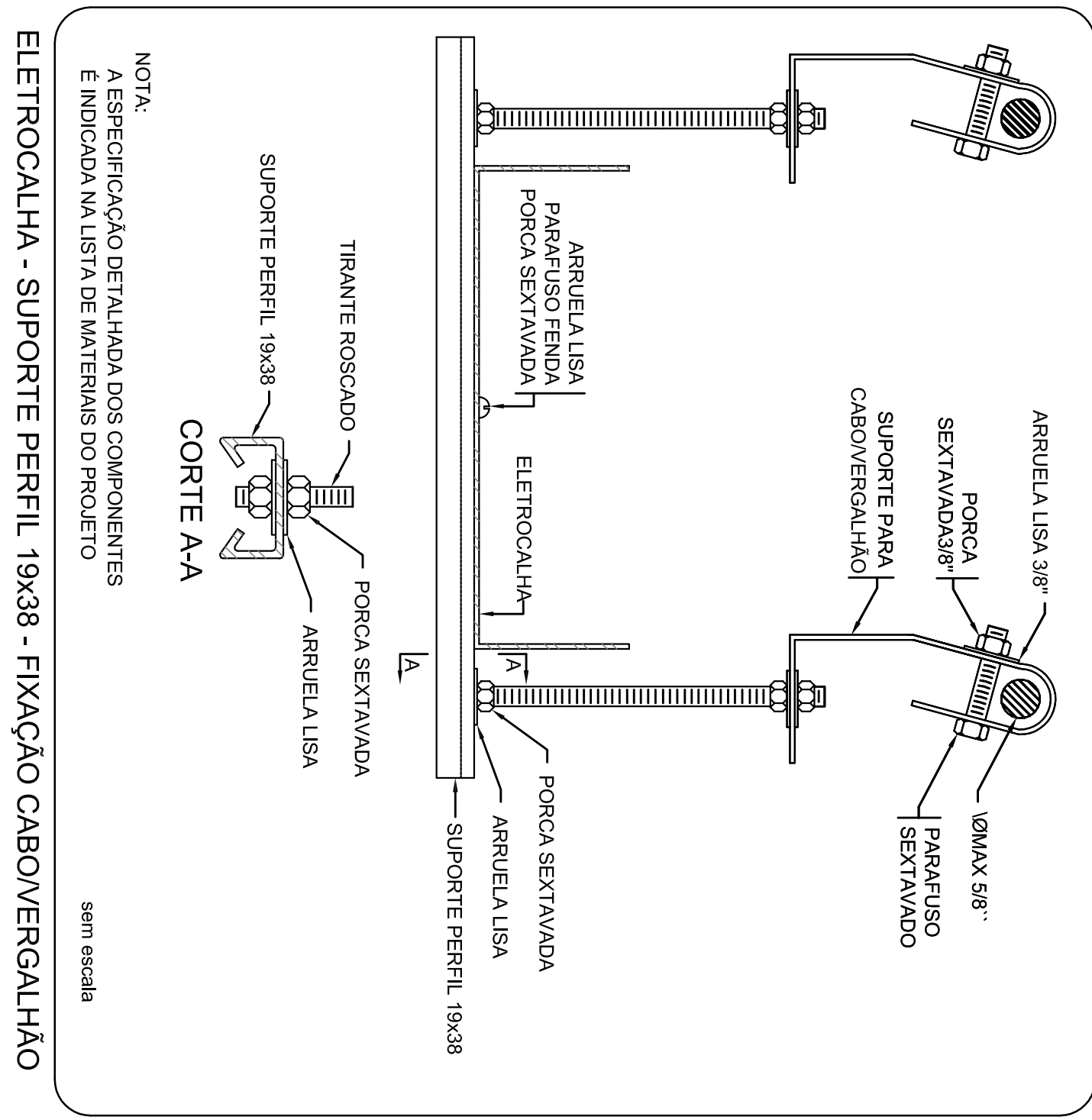
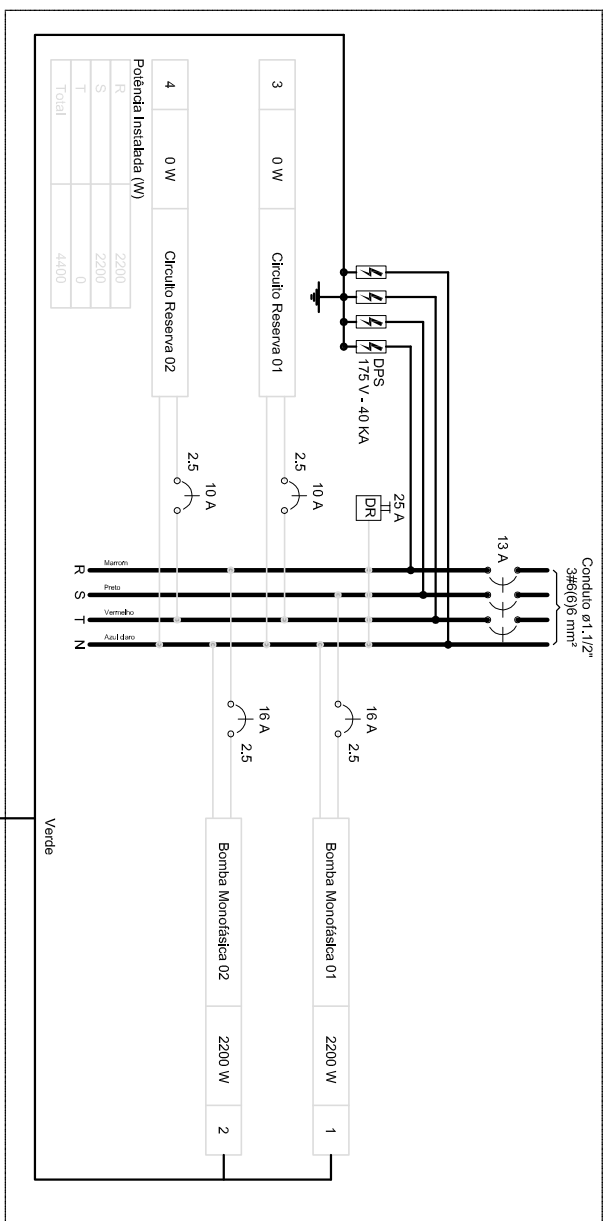
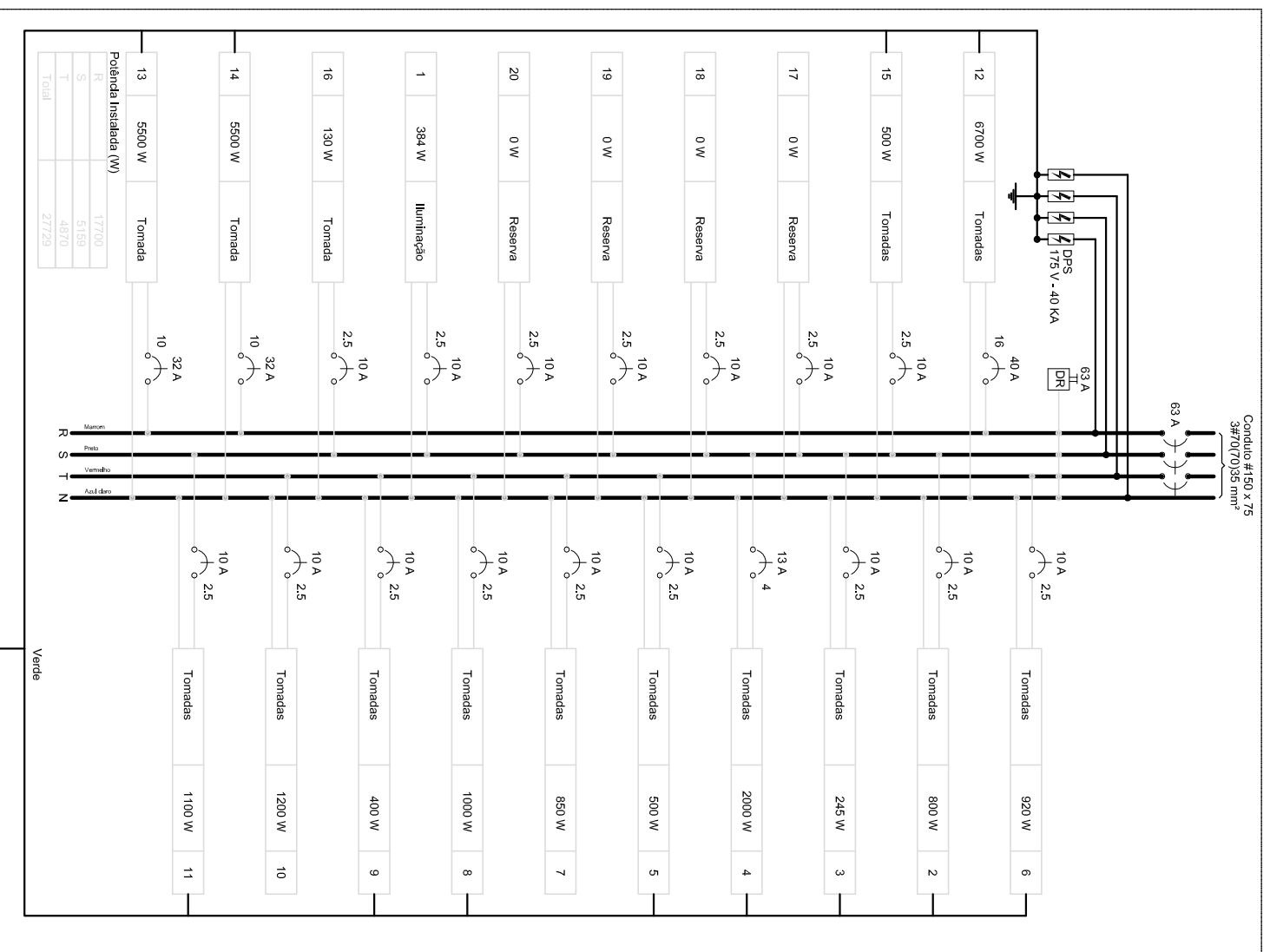
Tipos de carga	Potência instalada (VA)	Fator de demanda (%)	Demanda (kW)
Iluminação e TUV's (Receptores e semáforos)	1200	100	12,00
	2010	90	18,09
	TOTAL		30,09



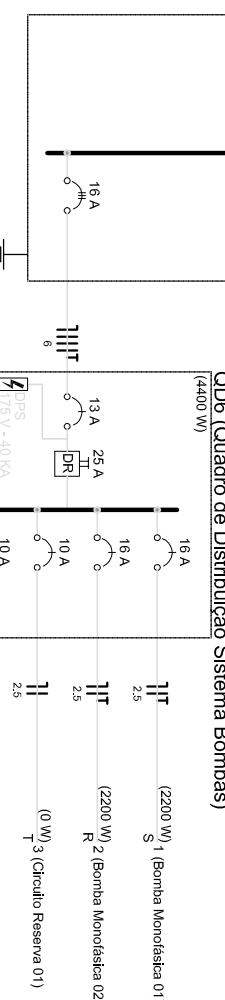
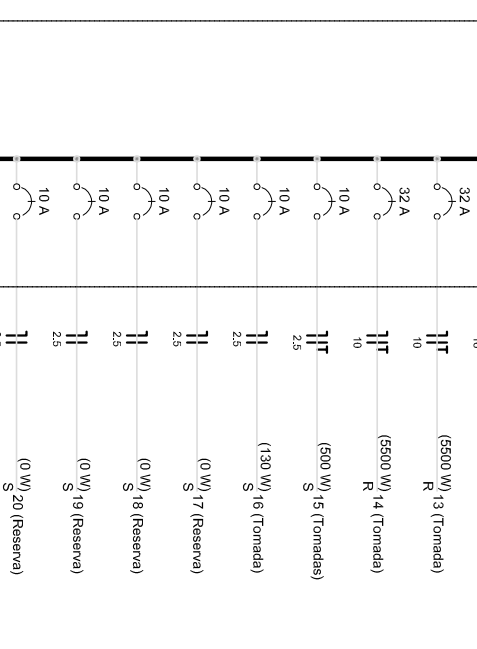
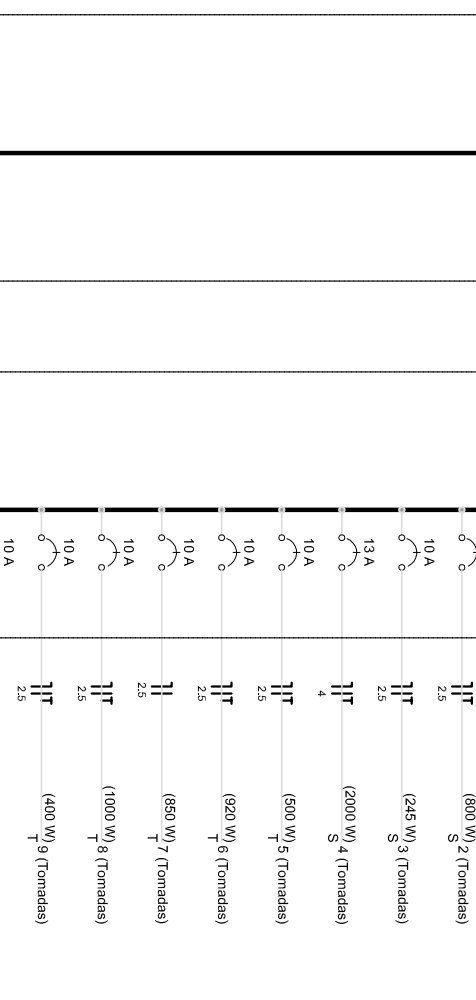
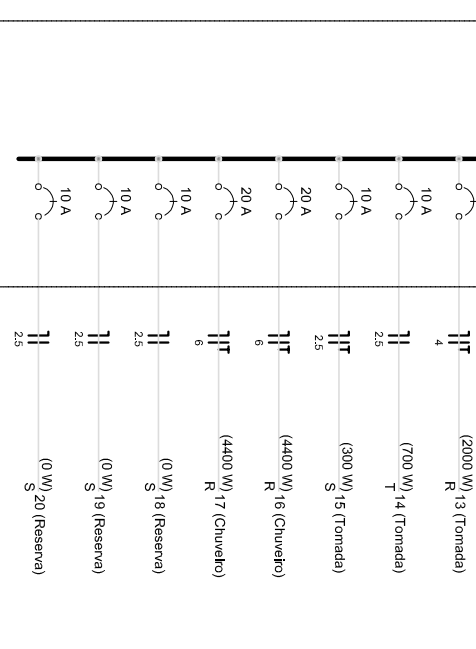
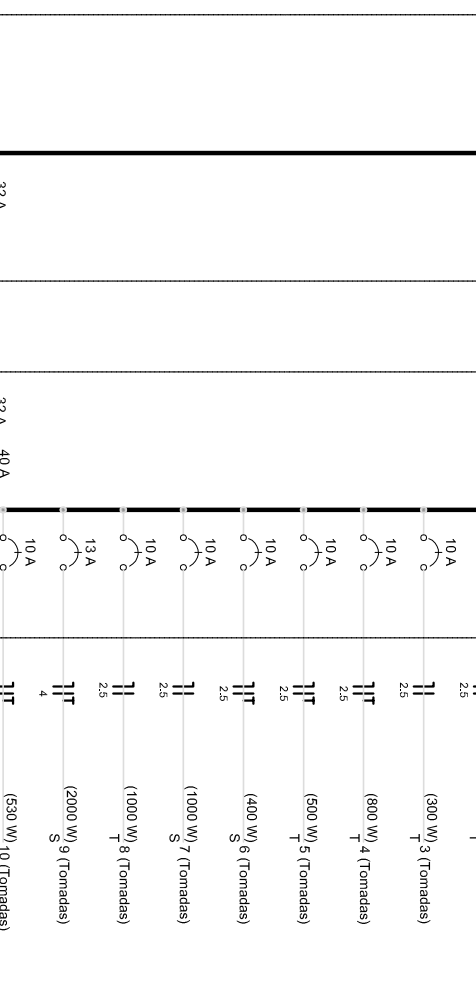
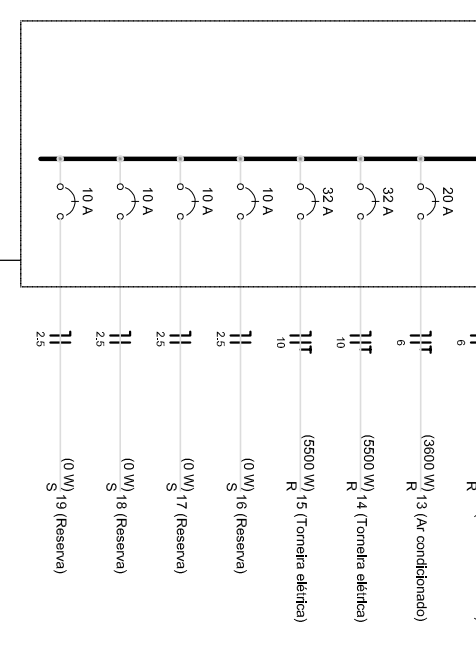
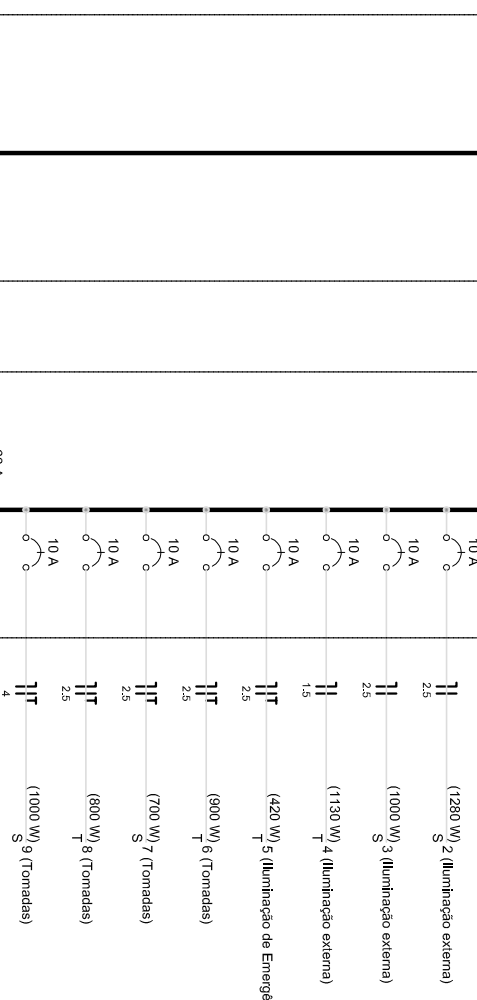
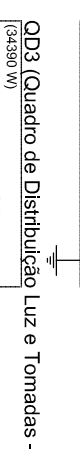
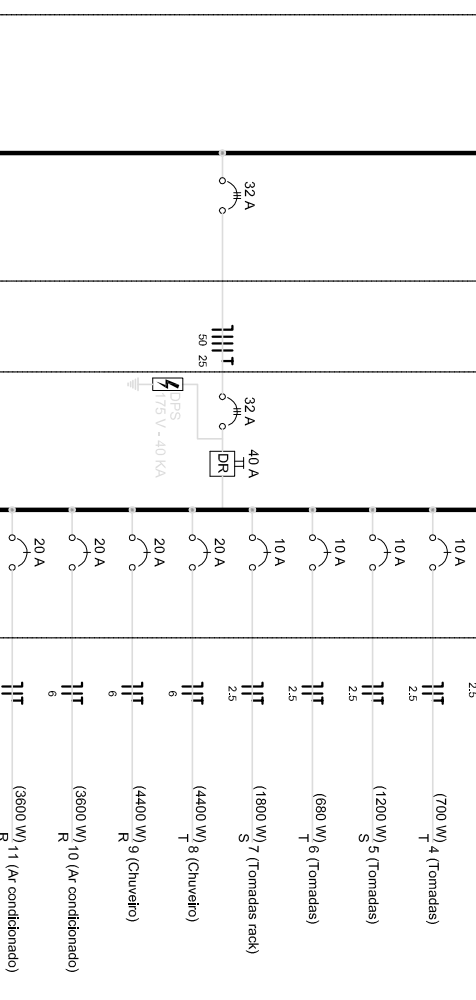
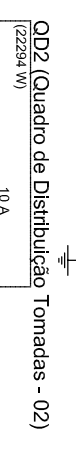
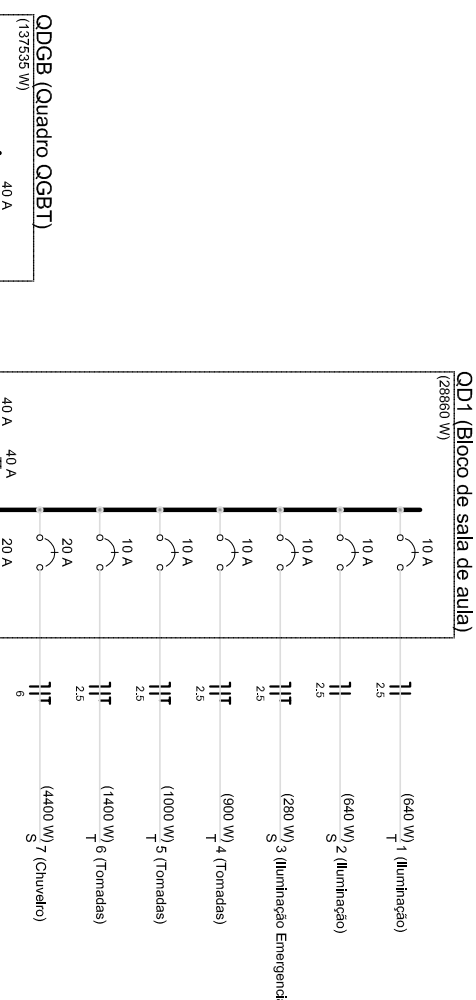
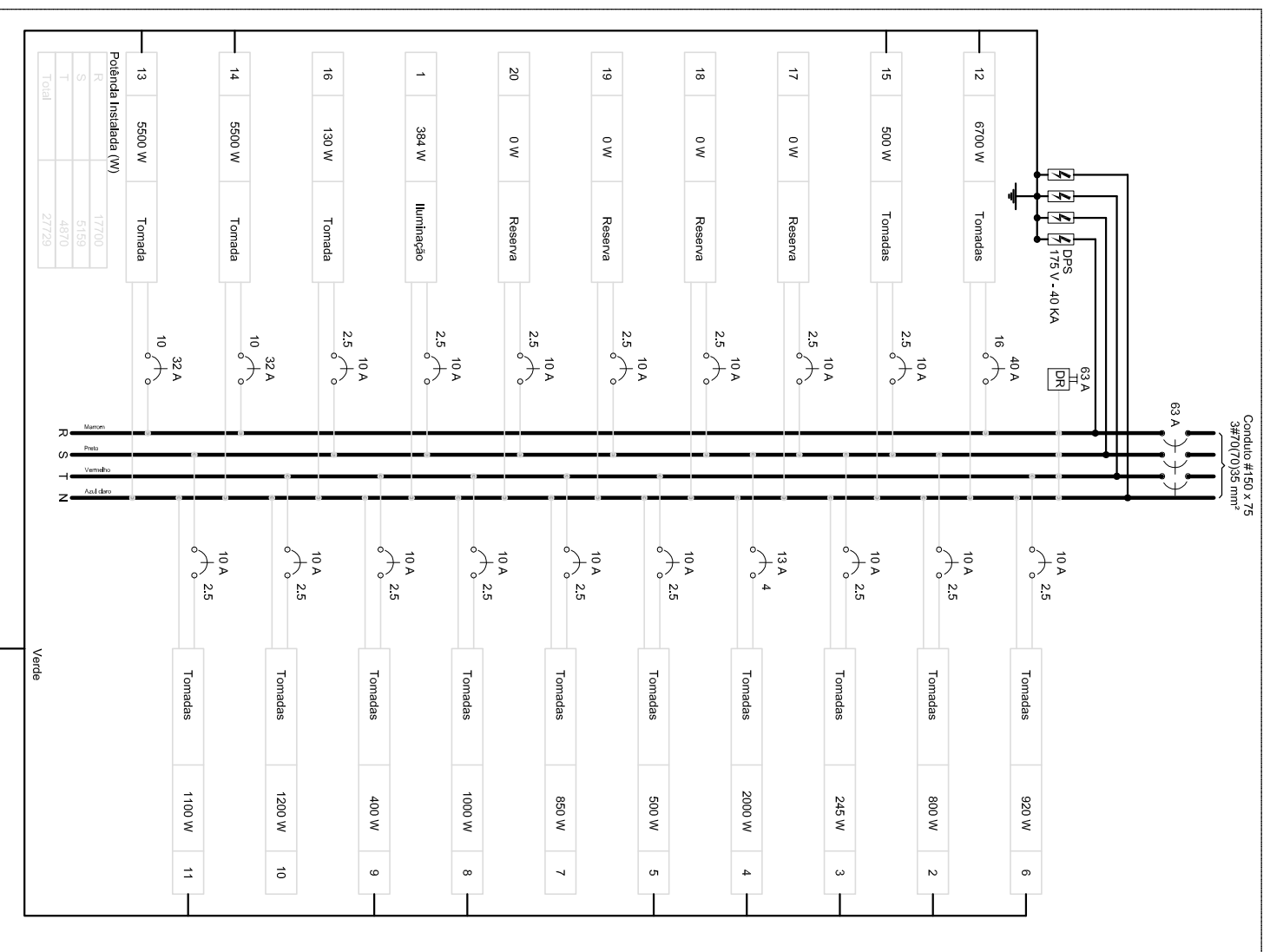
Case	Material	Thickness (mm)	Length (mm)	Width (mm)	Height (mm)	Volume (mm ³)	Weight (g)	Yield (N/mm ²)	Tensile (N/mm ²)	Elongation (%)	Modulus (N/mm ²)	Hardness (HV)
1	Aluminum	20	100	100	100	20000	1600	100	120	10	70000	100
2	Steel	20	100	100	100	20000	1600	200	250	5	200000	200
3	Carbon Fiber	20	100	100	100	20000	1600	300	350	2	300000	300
4	Kevlar	20	100	100	100	20000	1600	150	180	8	150000	150
5	Fiberglass	20	100	100	100	20000	1600	100	120	10	100000	100
6	Concrete	20	100	100	100	20000	1600	50	60	15	50000	50
7	Brick	20	100	100	100	20000	1600	40	50	15	40000	40
8	Marble	20	100	100	100	20000	1600	30	40	15	30000	30
9	Granite	20	100	100	100	20000	1600	20	30	15	20000	20
10	Quartz	20	100	100	100	20000	1600	10	20	15	10000	10
11	Wood	20	100	100	100	20000	1600	10	15	15	10000	10
12	Plastic	20	100	100	100	20000	1600	50	60	15	50000	50
13	Polycarbonate	20	100	100	100	20000	1600	100	120	10	100000	100
14	Acrylic	20	100	100	100	20000	1600	50	60	15	50000	50
15	PMMA	20	100	100	100	20000	1600	50	60	15	50000	50
16	PE	20	100	100	100	20000	1600	10	15	15	10000	10
17	PP	20	100	100	100	20000	1600	10	15	15	10000	10
18	PVC	20	100	100	100	20000	1600	10	15	15	10000	10
19	PS	20	100	100	100	20000	1600	10	15	15	10000	10
20	PC	20	100	100	100	20000	1600	100	120	10	100000	100
21	ABS	20	100	100	100	20000	1600	100	120	10	100000	100
22	PMMA	20	100	100	100	20000	1600	50	60	15	50000	50
23	PE	20	100	100	100	20000	1600	10	15	15	10000	10
24	PP	20	100	100	100	20000	1600	10	15	15	10000	10
25	PVC	20	100	100	100	20000	1600	10	15	15	10000	10
26	PS	20	100	100	100	20000	1600	10	15	15	10000	10
27	PC	20	100	100	100	20000	1600	100	120	10	100000	100
28	ABS	20	100	100	100	20000	1600	100	120	10	100000	100
29	PMMA	20	100	100	100	20000	1600	50	60	15	50000	50
30	PE	20	100	100	100	20000	1600	10	15	15	10000	10
31	PP	20	100	100	100	20000	1600	10	15	15	10000	10
32	PVC	20	100	100	100	20000	1600	10	15	15	10000	10
33	PS	20	100	100	100	20000	1600	10	15	15	10000	10
34	PC	20	100	100	100	20000	1600	100	120	10	100000	100
35	ABS	20	100	100	100	20000	1600	100	120	10	100000	100
36	PMMA	20	100	100	100	20000	1600	50	60	15	50000	50
37	PE	20	100	100	100	20000	1600	10	15	15	10000	10
38	PP	20	100	100	100	20000	1600	10	15	15	10000	10
39	PVC	20	100	100	100	20000	1600	10	15	15	10000	10
40	PS	20	100	100	100	20000	1600	10	15	15	10000	10
41	PC	20	100	100	100	20000	1600	100	120	10	100000	100
42	ABS	20	100	100	100	20000	1600	100	120	10	100000	100
43	PMMA	20	100	100	100	20000	1600	50	60	15	50000	50
44	PE	20	100	100	100	20000	1600	10	15	15	10000	10
45	PP	20	100	100	100	20000	1600	10	15	15	10000	10
46	PVC	20	100	100	100	20000	1600	10	15	15	10000	10
47	PS	20	100	100	100	20000	1600	10	15	15	10000	10
48	PC	20	100	100	100	20000	1600	100	120	10	100000	100
49	ABS	20	100	100	100	20000	1600	100	120	10	100000	100
50	PMMA	20	100	100	100	20000	1600	50	60	15	50000	50

[illegible][illegible][illegible]

Tempo de entrega	Porcentagem produzida (ANV)	Tempo em dias úteis (%)	Desempenho (ANV)
	52,00	50	12,00
Entrega em 1 dia (100 dias e mais dias)	25,67	56	12,00

[illegible][illegible]

Tempo de entrega	Preço da entrega (R\$)	Fator de elevação (F)	Demanda (R\$)
Entrega em 11 dias e 10 horas (normal)	12,00	100	52,00
Entrega em 22 dias (normal)	22,00	50	11,00



Legenda

- [illegible]