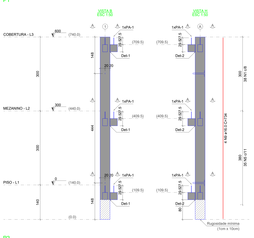
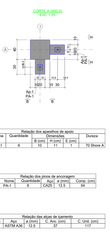
P1

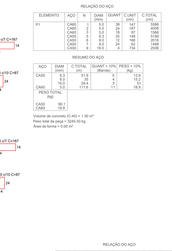












| ELEMENTO | AÇO | N. | DIAM (mm) | QUANT (m) | C.UNIT (cm) | C.TOTAL (cm) |
|---|---|---|---|---|---|---|
| P1 | CA60 | 1 | 5.0 | 38 | 147 | 5586 |
| | CA60 | 2 | 5.0 | 35 | 148 | 5180 |
| | CA60 | 3 | 5.0 | 18 | 87 | 1566 |
| | CA60 | 4 | 5.0 | 18 | 84 | 1512 |
| | CA60 | 5 | 5.0 | 12 | 168 | 2016 |
| | CA60 | 6 | 5.0 | 24 | 62 | 1488 |
| | CA60 | 7 | 5.0 | 24 | 62 | 1488 |

RESUMO DO AÇO

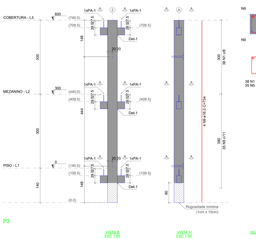
| AÇO | DIAM (mm) | C.TOTAL (m) | QUANT + 10% (Barras) | PESO + 10% (Kg) |
|---|---|---|---|---|
| CA50 | 8.0 | 51.8 | 6 | 13.0 |
| | 10.0 | 70.2 | 7 | 17.6 |
| CA60 | 5.0 | 111.6 | 11 | 16.9 |

PESO TOTAL (Kg)

| | |
|---|---|
| CA50 | 30.6 |
| CA60 | 16.9 |

Volume de concreto (C.40) = 1.36 m³
Peso total da peça = 3245.50 kg
Área de forma = 8.00 m²

P2













| ELEMENTO | AÇO | N. | DIAM (mm) | QUANT (m) | C.UNIT (cm) | C.TOTAL (cm) |
|---|---|---|---|---|---|---|
| P2 | CA60 | 1 | 5.0 | 38 | 147 | 5586 |
| | CA60 | 2 | 5.0 | 35 | 148 | 5180 |
| | CA60 | 3 | 5.0 | 18 | 87 | 1566 |
| | CA60 | 4 | 5.0 | 18 | 84 | 1512 |
| | CA60 | 5 | 5.0 | 12 | 168 | 2016 |
| | CA60 | 6 | 5.0 | 24 | 62 | 1488 |
| | CA60 | 7 | 5.0 | 24 | 62 | 1488 |

RESUMO DO AÇO

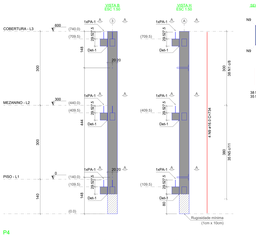
| AÇO | DIAM (mm) | C.TOTAL (m) | QUANT + 10% (Barras) | PESO + 10% (Kg) |
|---|---|---|---|---|
| CA50 | 8.0 | 51.8 | 6 | 13.0 |
| | 10.0 | 70.2 | 7 | 17.6 |
| CA60 | 5.0 | 111.6 | 11 | 16.9 |

PESO TOTAL (Kg)

| | |
|---|---|
| CA50 | 30.6 |
| CA60 | 16.9 |

Volume de concreto (C.40) = 1.36 m³
Peso total da peça = 3245.50 kg
Área de forma = 8.00 m²

P3

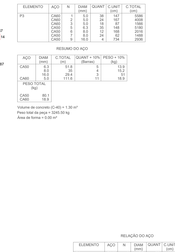












| ELEMENTO | AÇO | N. | DIAM (mm) | QUANT (m) | C.UNIT (cm) | C.TOTAL (cm) |
|---|---|---|---|---|---|---|
| P3 | CA60 | 1 | 5.0 | 38 | 147 | 5586 |
| | CA60 | 2 | 5.0 | 35 | 148 | 5180 |
| | CA60 | 3 | 5.0 | 18 | 87 | 1566 |
| | CA60 | 4 | 5.0 | 18 | 84 | 1512 |
| | CA60 | 5 | 5.0 | 12 | 168 | 2016 |
| | CA60 | 6 | 5.0 | 24 | 62 | 1488 |
| | CA60 | 7 | 5.0 | 24 | 62 | 1488 |

RESUMO DO AÇO

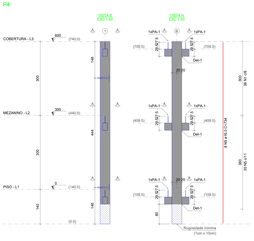
| AÇO | DIAM (mm) | C.TOTAL (m) | QUANT + 10% (Barras) | PESO + 10% (Kg) |
|---|---|---|---|---|
| CA50 | 8.0 | 51.8 | 6 | 13.0 |
| | 10.0 | 70.2 | 7 | 17.6 |
| CA60 | 5.0 | 111.6 | 11 | 16.9 |

PESO TOTAL (Kg)

| | |
|---|---|
| CA50 | 30.6 |
| CA60 | 16.9 |

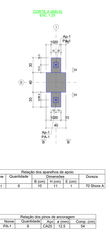
Volume de concreto (C.40) = 1.36 m³
Peso total da peça = 3245.50 kg
Área de forma = 8.00 m²

P4

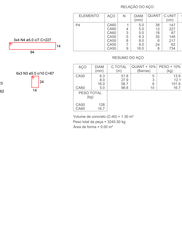












| ELEMENTO | AÇO | N. | DIAM (mm) | QUANT (m) | C.UNIT (cm) | C.TOTAL (cm) |
|---|---|---|---|---|---|---|
| P4 | CA60 | 1 | 5.0 | 38 | 147 | 5586 |
| | CA60 | 2 | 5.0 | 35 | 148 | 5180 |
| | CA60 | 3 | 5.0 | 18 | 87 | 1566 |
| | CA60 | 4 | 5.0 | 18 | 84 | 1512 |
| | CA60 | 5 | 5.0 | 12 | 168 | 2016 |
| | CA60 | 6 | 5.0 | 24 | 62 | 1488 |
| | CA60 | 7 | 5.0 | 24 | 62 | 1488 |

RESUMO DO AÇO

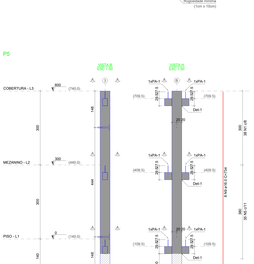
| AÇO | DIAM (mm) | C.TOTAL (m) | QUANT + 10% (Barras) | PESO + 10% (Kg) |
|---|---|---|---|---|
| CA50 | 8.0 | 51.8 | 6 | 13.0 |
| | 10.0 | 70.2 | 7 | 17.6 |
| CA60 | 5.0 | 111.6 | 11 | 16.9 |

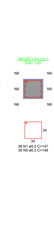
PESO TOTAL (Kg)

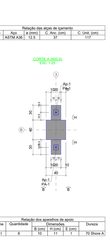
| | |
|---|---|
| CA50 | 30.6 |
| CA60 | 16.9 |

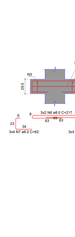
Volume de concreto (C.40) = 1.36 m³
Peso total da peça = 3245.50 kg
Área de forma = 8.00 m²

P5







| ELEMENTO | AÇO | N. | DIAM (mm) | QUANT (m) | C.UNIT (cm) | C.TOTAL (cm) |
|---|---|---|---|---|---|---|
| P5 | CA60 | 1 | 5.0 | 38 | 147 | 5586 |
| | CA60 | 2 | 5.0 | 35 | 148 | 5180 |
| | CA60 | 3 | 5.0 | 18 | 87 | 1566 |
| | CA60 | 4 | 5.0 | 18 | 84 | 1512 |
| | CA60 | 5 | 5.0 | 12 | 168 | 2016 |
| | CA60 | 6 | 5.0 | 24 | 62 | 1488 |
| | CA60 | 7 | 5.0 | 24 | 62 | 1488 |

RESUMO DO AÇO

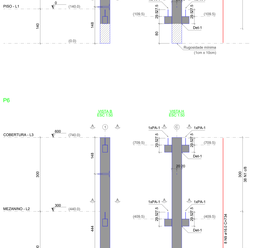
| AÇO | DIAM (mm) | C.TOTAL (m) | QUANT + 10% (Barras) | PESO + 10% (Kg) |
|---|---|---|---|---|
| CA50 | 8.0 | 51.8 | 6 | 13.0 |
| | 10.0 | 70.2 | 7 | 17.6 |
| CA60 | 5.0 | 111.6 | 11 | 16.9 |

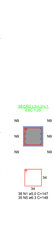
PESO TOTAL (Kg)

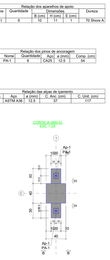
| | |
|---|---|
| CA50 | 30.6 |
| CA60 | 16.9 |

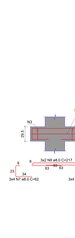
Volume de concreto (C.40) = 1.36 m³
Peso total da peça = 3245.50 kg
Área de forma = 8.00 m²

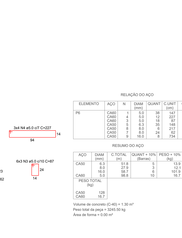
P6







| ELEMENTO | AÇO | N. | DIAM (mm) | QUANT (m) | C.UNIT (cm) | C.TOTAL (cm) |
|---|---|---|---|---|---|---|
| P6 | CA60 | 1 | 5.0 | 38 | 147 | 5586 |
| | CA60 | 2 | 5.0 | 35 | 148 | 5180 |
| | CA60 | 3 | 5.0 | 18 | 87 | 1566 |
| | CA60 | 4 | 5.0 | 18 | 84 | 1512 |
| | CA60 | 5 | 5.0 | 12 | 168 | 2016 |
| | CA60 | 6 | 5.0 | 24 | 62 | 1488 |
| | CA60 | 7 | 5.0 | 24 | 62 | 1488 |

RESUMO DO AÇO

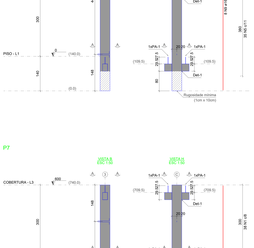
| AÇO | DIAM (mm) | C.TOTAL (m) | QUANT + 10% (Barras) | PESO + 10% (Kg) |
|---|---|---|---|---|
| CA50 | 8.0 | 51.8 | 6 | 13.0 |
| | 10.0 | 70.2 | 7 | 17.6 |
| CA60 | 5.0 | 111.6 | 11 | 16.9 |

PESO TOTAL (Kg)

| | |
|---|---|
| CA50 | 30.6 |
| CA60 | 16.9 |

Volume de concreto (C.40) = 1.36 m³
Peso total da peça = 3245.50 kg
Área de forma = 8.00 m²

P7













| ELEMENTO | AÇO | N. | DIAM (mm) | QUANT (m) | C.UNIT (cm) | C.TOTAL (cm) |
|---|---|---|---|---|---|---|
| P7 | CA60 | 1 | 5.0 | 38 | 147 | 5586 |
| | CA60 | 2 | 5.0 | 35 | 148 | 5180 |
| | CA60 | 3 | 5.0 | 18 | 87 | 1566 |
| | CA60 | 4 | 5.0 | 18 | 84 | 1512 |
| | CA60 | 5 | 5.0 | 12 | 168 | 2016 |
| | CA60 | 6 | 5.0 | 24 | 62 | 1488 |
| | CA60 | 7 | 5.0 | 24 | 62 | 1488 |

RESUMO DO AÇO

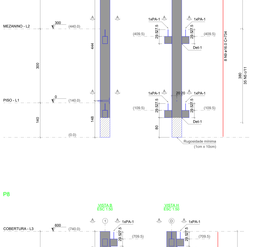
| AÇO | DIAM (mm) | C.TOTAL (m) | QUANT + 10% (Barras) | PESO + 10% (Kg) |
|---|---|---|---|---|
| CA50 | 8.0 | 51.8 | 6 | 13.0 |
| | 10.0 | 70.2 | 7 | 17.6 |
| CA60 | 5.0 | 111.6 | 11 | 16.9 |

PESO TOTAL (Kg)

| | |
|---|---|
| CA50 | 30.6 |
| CA60 | 16.9 |

Volume de concreto (C.40) = 1.36 m³
Peso total da peça = 3245.50 kg
Área de forma = 8.00 m²

P8













| ELEMENTO | AÇO | N. | DIAM (mm) | QUANT (m) | C.UNIT (cm) | C.TOTAL (cm) |
|---|---|---|---|---|---|---|
| P8 | CA60 | 1 | 5.0 | 38 | 147 | 5586 |
| | CA60 | 2 | 5.0 | 35 | 148 | 5180 |
| | CA60 | 3 | 5.0 | 18 | 87 | 1566 |
| | CA60 | 4 | 5.0 | 18 | 84 | 1512 |
| | CA60 | 5 | 5.0 | 12 | 168 | 2016 |
| | CA60 | 6 | 5.0 | 24 | 62 | 1488 |
| | CA60 | 7 | 5.0 | 24 | 62 | 1488 |

RESUMO DO AÇO

| AÇO | DIAM (mm) | C.TOTAL (m) | QUANT + 10% (Barras) | PESO + 10% (Kg) |
|---|---|---|---|---|
| CA50 | 8.0 | 51.8 | 6 | 13.0 |
| | 10.0 | 70.2 | 7 | 17.6 |
| CA60 | 5.0 | 111.6 | 11 | 16.9 |

PESO TOTAL (Kg)

| | |
|---|---|
| CA50 | 30.6 |
| CA60 | 16.9 |

Volume de concreto (C.40) = 1.36 m³
Peso total da peça = 3245.50 kg
Área de forma = 8.00 m²

P9













| ELEMENTO | AÇO | N. | DIAM (mm) | QUANT (m) | C.UNIT (cm) | C.TOTAL (cm) |
|---|---|---|---|---|---|---|
| P9 | CA60 | 1 | 5.0 | 38 | 147 | 5586 |
| | CA60 | 2 | 5.0 | 35 | 148 | 5180 |
| | CA60 | 3 | 5.0 | 18 | 87 | 1566 |
| | CA60 | 4 | 5.0 | 18 | 84 | 1512 |
| | CA60 | 5 | 5.0 | 12 | 168 | 2016 |
| | CA60 | 6 | 5.0 | 24 | 62 | 1488 |
| | CA60 | 7 | 5.0 | 24 | 62 | 1488 |

RESUMO DO AÇO

| AÇO | DIAM (mm) | C.TOTAL (m) | QUANT + 10% (Barras) | PESO + 10% (Kg) |
|---|---|---|---|---|
| CA50 | 8.0 | 51.8 | 6 | 13.0 |
| | 10.0 | 70.2 | 7 | 17.6 |
| CA60 | 5.0 | 111.6 | 11 | 16.9 |

PESO TOTAL (Kg)

| | |
|---|---|
| CA50 | 30.6 |
| CA60 | 16.9 |

Volume de concreto (C.40) = 1.36 m³
Peso total da peça = 3245.50 kg
Área de forma = 8.00 m²

P10













| ELEMENTO | AÇO | N. | DIAM (mm) | QUANT (m) | C.UNIT (cm) | C.TOTAL (cm) |
|---|---|---|---|---|---|---|
| P10 | CA60 | 1 | 5.0 | 38 | 147 | 5586 |
| | CA60 | 2 | 5.0 | 35 | 148 | 5180 |
| | CA60 | 3 | 5.0 | 18 | 87 | 1566 |
| | CA60 | 4 | 5.0 | 18 | 84 | 1512 |
| | CA60 | 5 | 5.0 | 12 | 168 | 2016 |
| | CA60 | 6 | 5.0 | 24 | 62 | 1488 |
| | CA60 | 7 | 5.0 | 24 | 62 | 2098 |

RESUMO DO AÇO

| AÇO | DIAM (mm) | C.TOTAL (m) | QUANT + 10% (Barras) | PESO + 10% (Kg) |
|---|---|---|---|---|
| CA50 | 8.0 | 51.8 | 6 | 13.0 |
| | 10.0 | 70.2 | 7 | 17.6 |
| CA60 | 5.0 | 111.6 | 11 | 16.9 |

PESO TOTAL (Kg)

| | |
|---|---|
| CA50 | 30.6 |
| CA60 | 16.9 |

Volume de concreto (C.40) = 1.36 m³
Peso total da peça = 3245.50 kg
Área de forma = 8.00 m²

| | |
|---|---|
| P1/L1 | P2/L1 |
| P3/L1 | P4/L1 |
| P5/L1 | P6/L1 |
| P7/L1 | P8/L1 |
| P9/L1 | P10/L1 |

RESUMO DO AÇO

| AÇO | N. | DIAM (mm) | QUANT (m) | C.UNIT (cm) | C.TOTAL (cm) |
|---|---|---|---|---|---|
| CA60 | 1 | 5.0 | 38 | 147 | 5586 |
| | 2 | 5.0 | 35 | 148 | 5180 |
| | 3 | 5.0 | 18 | 87 | 1566 |
| | 4 | 5.0 | 18 | 84 | 1512 |
| | 5 | 5.0 | 12 | 168 | 2016 |
| | 6 | 5.0 | 24 | 62 | 1488 |
| | 7 | 5.0 | 24 | 62 | 1488 |
| CA50 | 1 | 8.0 | 342 | 148 | 51800 |
| | 2 | 8.0 | 342 | 148 | 51800 |
| | 3 | 8.0 | 342 | 148 | 51800 |
| | 4 | 8.0 | 342 | 148 | 51800 |
| | 5 | 10.0 | 35 | 714 | 41106 |

RESUMO DO AÇO

| AÇO | DIAM (mm) | C.TOTAL (m) | QUANT + 10% (Barras) | PESO + 10% (Kg) |
|---|---|---|---|---|
| CA50 | 8.0 | 51.8 | 66 | 158.4 |
| | 10.0 | 70.2 | 77 | 213.8 |
| | 16.0 | 1036 | 99 | 176.3 |
| PESO TOTAL (Kg) | | | | |
| CA50 | 968.6 | | | |
| CA60 | 176.3 | | | |

Volume de concreto (C.40) = 12.56 m³
Área de forma = 0.00 m²

Revisão/Data


ENGEPROSUL ENGENHARIA LTDA
CNPJ: 21.298.329/0001-04
TORQUATO SEVERO, 50
CENTRO - PELOTAS/RS
RESPONSÁVEL TÉCNICO
JONATAN CARDOSO DE OLIVEIRA CREA/SC-143410-3
FONE: (51) 9307-1762 | (51)99538-8738


# PROJETO ESTRUTURAL

## GOVERNO MUNICIPAL DE CAMPO BOM/RS

SECRETARIA MUNICIPAL DE OBRAS

ESTRUTURAL

FASE: Fase 3 - PAVILHÃO 1

ENDEREÇO: RUA ALLO PICANHA, Nº 715, BAIRRO N (VILA RICA) - CAMPO BOM/RS, CEP 93700-000
QUADRA 29 - LOTE 02 ZAS 3 - METRO/QUILHA M 51.396 E 51.387

PROPRIETÁRIO: Município de Campo Bom/RS - CNPJ: 90.832.819/0001-55

ENTENDIMENTO: PILARES P9

RESPONSÁVEL TÉCNICO

JONATAN CARDOSO DE OLIVEIRA
CREA/SC-143410-3

JOSÉ LADISLAU FERREIRA NETO
CAU/RS: A-147566-9

ESC - INDICADA

PRANCHA

E02

PROPRIETÁRIO:
Município de Campo Bom/RS
CNPJ: 90.832.819/0001-55