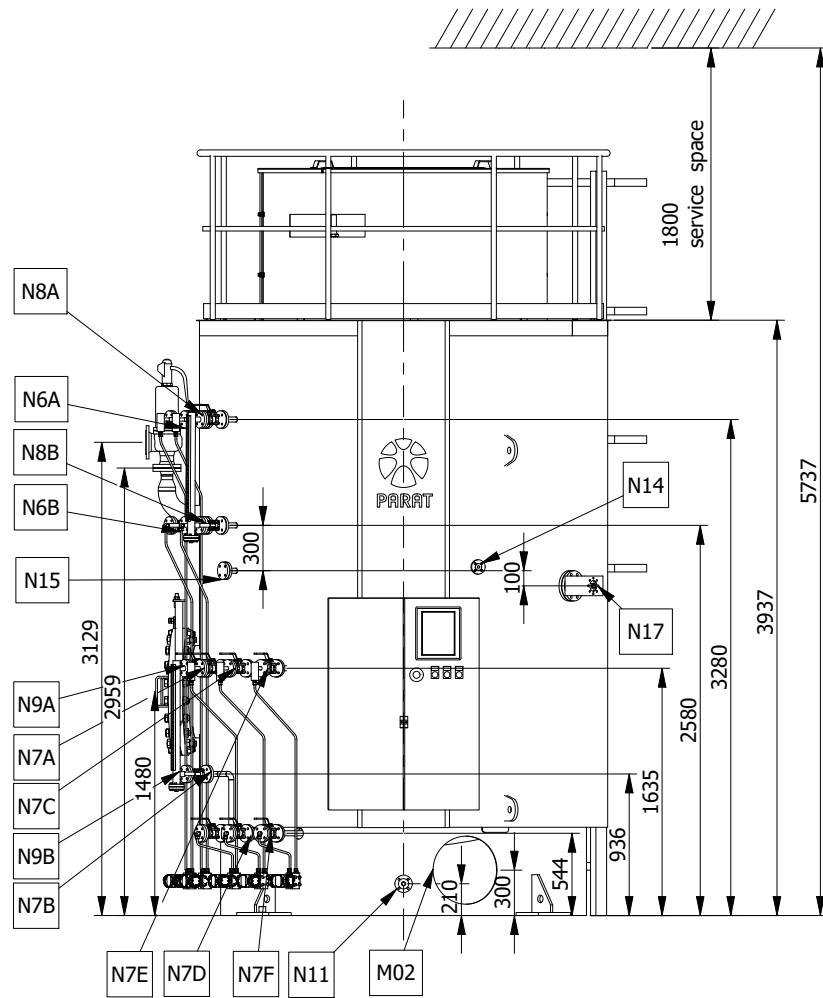
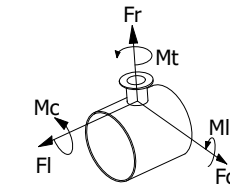


| | | | |
|-----|---------------------------|------------|-------------|
| 00 | Released to manufacturing | 27.10.2022 | Gan |
| Rev | Comment | Date | Approved by |

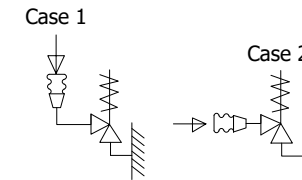


| Nozzle list | | | | | |
|-------------|-----|---------------|-------------|-----------------------------|--|
| Item | No. | Dim. | Orientation | Elevation | Service |
| N1 | 1 | DN150 PN16 | 90° | 257 | Outlet |
| N2 | 1 | DN150 PN16 | 90° | 1155 | Inlet |
| N4 | 1 | DN65/100 PN40 | 180° | 2959 Fl.Face/3129 discharge | Safety valve |
| N5 | 3 | DN200 PN40 | See dwg. | ON TOP | Nozzle for electrodes |
| N6A/B | 2 | DN25 PN40 | 215° | 3280/2580 | DP cell level inner container |
| N7A | 1 | DN25 PN40 | 215° | 1635 | DP cell level control |
| N7B | 1 | DN25 PN40 | 215° | 936 | DP cell level /cleaning lower water gauge nozzle |
| N7C/D | 2 | DN25 PN40 | 225° | 1635/544 | DP cell level control |
| N7E/F | 2 | DN25 PN40 | 235° | 1635/544 | DP cell level control |
| N8A/B | 2 | DN25 PN40 | 215° | 3280/2580 | Level gauge upper |
| N9A/B | 2 | DN25 PN40 | 215° | 1634/936 | Level gauge lower |
| N10 | 1 | DN25 PN40 | 215° | 1677 Fl.Face | Pressure column |
| N11 | 1 | DN25 PN40 | 270° | 210 | Drain |
| N13 | 1 | DN100 PN40 | CENTER | on top | ventilation/inspection |
| N14 | 1 | DN15 PN40 | 290° | 2280 | Airing/ pressure setting |
| N15 | 1 | DN25 PN40 | 215° | 2280 | Drainage - Inner container |
| N17 | 1 | DN80 PN40 | 320° | 2180 | For level regulation |
| N50 | 1 | | 45° | | Ladder |
| M1 | 1 | DN600 PN16 | 175° | 1480 | Manway |
| M2 | 1 | ø450mm | 290° | 300 | Manway in skirt |

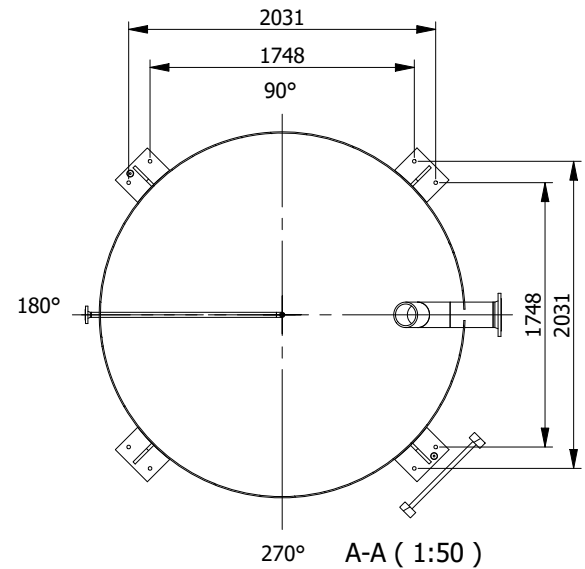


| Allowable nozzle loads | | |
|------------------------|--------------------|----------------------|
| Item | Force Fr,FI,Fc[KN] | Moment Mt,MI,Mc[KNm] |
| N1 | 5 | 4 |
| N2 | 5 | 4 |

Loads acting to the shell-nozzle connection



| Reaction loads from PSV | | |
|-------------------------|-------------------|-------------------|
| Description | Force Fr / FI[KN] | Moment MI/Mc[KNm] |
| Allowable | 3 | 2 |
| Case 1 | N/A | N/A |
| Case 2 | 1,81 | 1,1/0 |




Design code: NS-EN-13445 2021

| | |
|---------------------------|---|
| Design pressure int. | : 10 barg |
| PSV relief press | : 10 barg |
| Working pressure | : 4-6 barg |
| Test pressure | : XX barg |
| Design temperature max | : 184°C |
| Corrosion allowance | : 0,75 |
| Joint factor | : 0,85 |
| Heat treatment | : NONE |
| Weight dry | : 8 tons |
| Weight operating | : 13 tons |
| Weight full (test weight) | : 25 tons |
| Volume | : 14 m³ |
| Tolerances | : acc. to PARAT doc.no.: 10.26/ |
| Insulation plates | : 150mm Rockwool covered with alu. |
| Painting | : Unisolated parts :dark grey (PAH std) |

Reference drawings:
Fabrication drawing : TBA
Material list : TBA

Strength calculations EN13445-03 : TBA

| | | | | | | | |
|--|--------------------|---------------------|--------------------|---|-------------|--------------|--------------------|
| Creation date: 26.10.2022 | Created by: ANZ | Scale: 1:50 | Format/Size: A3 | Project no.: 421966-01 | Discipline: | Area/Module: | System no.: |
| Issued by: | Checked by: | Approved by: GAN | | Client: ALTEO | | | |
|  Parat Halvorsen AS P.O. Box 173 NO-4402 Fløkkefjord Norway Tel +47 99 48 55 00 Fax +47 38 22 44 71 office@parat.no www.parat.no | | | | Subject: General Arrangement Drawing 6MW Electrodeboiler 22kV | | | |
| | | | | PHAS dwg. no.: 45522-64.idw | | | Sheet: |
| | | | | Client dwg. no.: - | | | 1 / 1 |
| This drawing is the property of Parat Halvorsen AS, and must not be copied or communicated to a third part. Reciever is responsible for the misuse. | | | | Ref. doc.: - | | | Rev.: 00 |