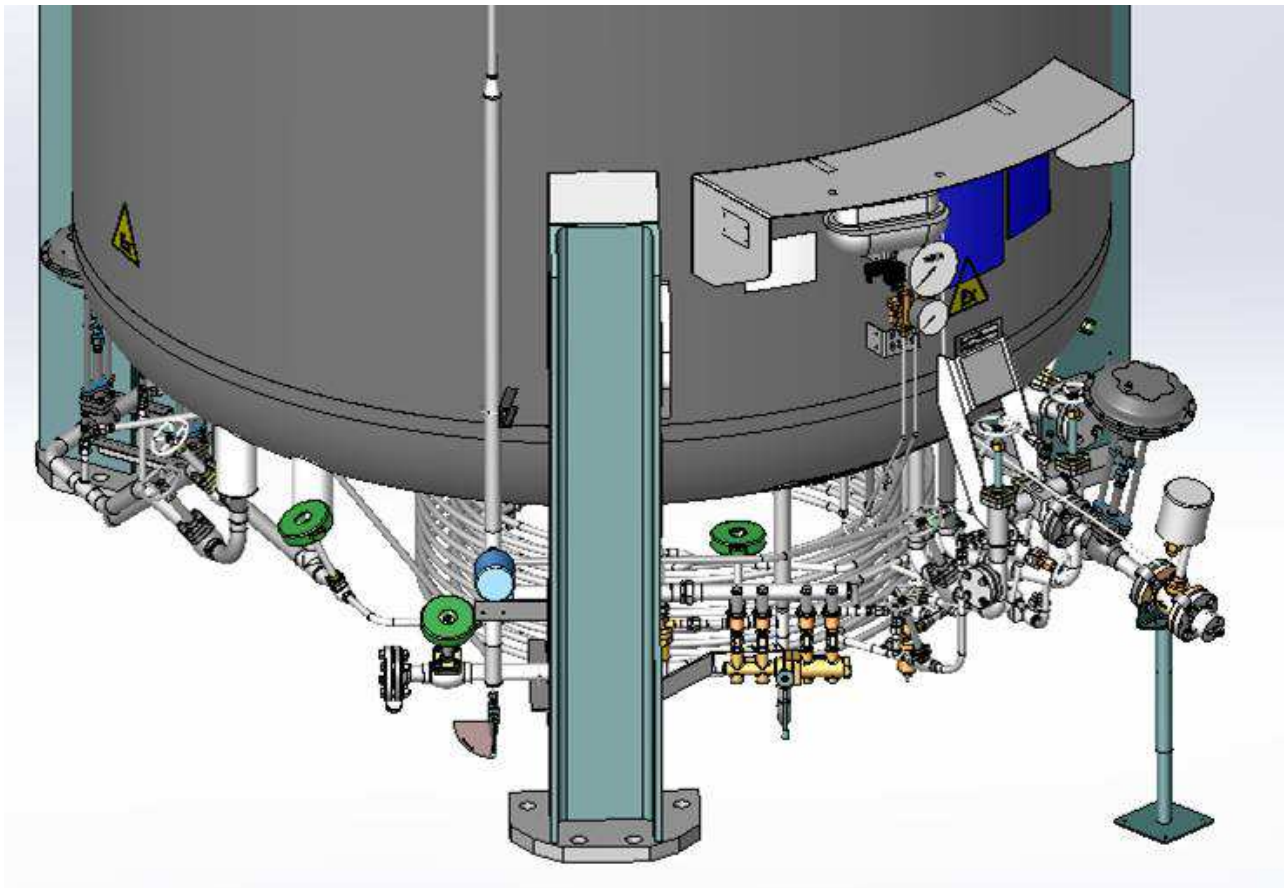


CRYOLOR ASIA PACIFIC introduces the latest generation vacuum isolated cryogenic tank, the **LNG Celine 3**, for liquid LNG service. Available in a range of sizes with a Maximum Allowable Working Pressure of **250 psig** (≈ 17 bar), **LNG Celine 3** is designed in accordance with **ASME / U stamp**.

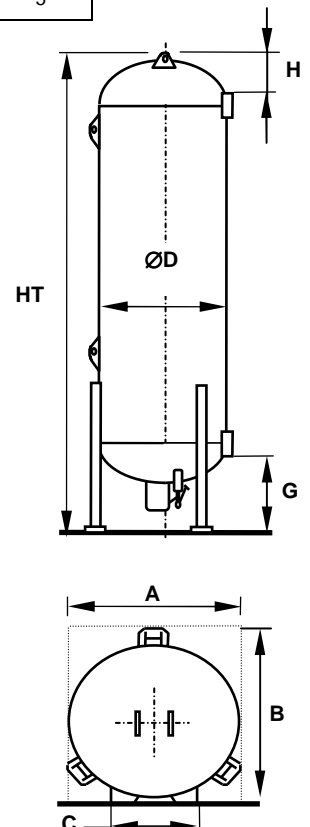
Moreover, the support legs used in the **LNG Celine 3** range are calculated to resist high winds and earthquakes (**IBC/UBC code**).

- **A maximum use of Stainless steel:** Only Céline 3 uses as much stainless in its construction to guarantee the lowest life cycle costs - valves, interconnecting piping, pressure raising coil and all welded connections are stainless steel.
- **Components selected for their operational reliability** - mono-bloc pressure building economizer
 - regulator, safety system with dual relief valves and burst discs as standard, stainless steel valves.
- **Reduced overall operational costs** - optimized pipework layout with fewer connections minimize potential leaks and facilitate operation & servicing, filling assembly isolation valves, proven painting techniques guarantee years of care-free operation.



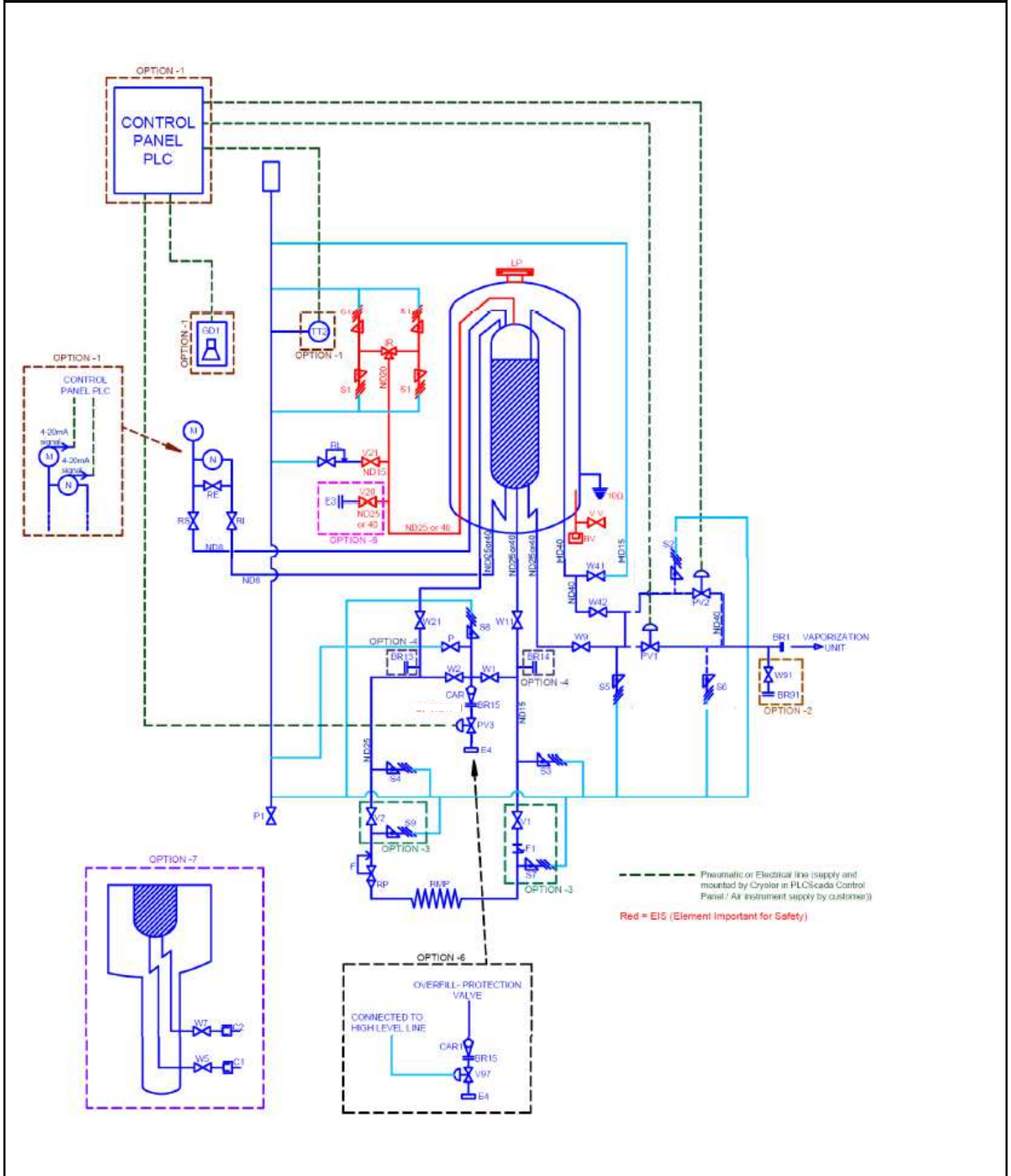
| Type | CA6 (1.5 KUSG) | | CA11 (3 KUSG) | | CA21 (6 KUSG) | | CA33 (9 KUSG) | |
|---|-------------------|--------|------------------|--------|------------------|--------|------------------|--------|
| | | | | | | | | |
| Gross capacity (liters / USG) * | 6 150 | 1 625 | 10 540 | 2 784 | 23 660 | 6 250 | 34 340 | 9 071 |
| Net capacity (liters / USG) * | 5 792 | 1 530 | 9 926 | 2 622 | 22 278 | 5 885 | 32 623 | 8 618 |
| Empty weight (kg / lbs) * | 4 300 | 9 480 | 5 800 | 12 787 | 10 500 | 23 149 | 14 600 | 32 188 |
| Weight full LNG (kg / lbs) ** | 6964 | 15 354 | 10 366 | 22 853 | 20 748 | 45 741 | 29607 | 65271 |
| Continuous Flow Rate for 8 hours at 5 bar (Nm3/hr)*** | 1000 | | 1000 | | 2000 | | 2000 | |
| Daily Evaporation Rate LNG (%) | 0.44 % | | 0.42 % | | 0.41 % | | 0.38 % | |
| Ø Diameter (mm / feet) | 2 200 | 7.2 | 2 200 | 7.2 | 2 200 | 7.2 | 2 840 | 9.3 |
| HT height (mm / feet) | 4 200 | 13.8 | 5 200 | 17.1 | 10 235 | 33.6 | 8 850 | 29.0 |
| H (mm / feet) | 520 | 1.7 | 520 | 1.7 | 520 | 1.7 | 650 | 2,2 |
| G (mm / feet) | 1 055 | 3.5 | 1 055 | 3.5 | 980 | 3.2 | 1 100 | 3,6 |
| A (mm / feet) | 2 250 | 7.4 | 2 250 | 7.4 | 2 300 | 7.5 | 2 950 | 9,7 |
| B (mm / feet) | 2 450 | 8 | 2 450 | 8 | 2 500 | 8.2 | 3 300 | 10,8 |
| C (mm / feet) | 1 245 | 4.1 | 1 245 | 4.1 | 1 245 | 4.1 | 1 530 | 5 |

| Type | CA41 (11 KUSG) | | CA53 (13 KUSG) | | CA63 (15 KUSG) | |
|---|-------------------|--------|-------------------|---------|-------------------|---------|
| | | | | | | |
| Gross capacity (liters / USG) * | 41 300 | 10 910 | 56 270 | 14 865 | 63 750 | 16 841 |
| Net capacity (liters / USG) * | 38 882 | 10 272 | 52 974 | 13 994 | 60 018 | 15 855 |
| Empty weight (kg / lbs) * | 17 130 | 37 765 | 21 920 | 48 325 | 24 240 | 53 440 |
| Weight full LNG (kg / lbs) | 35 016 | 77 197 | 46 288 | 102 048 | 51 848 | 114 306 |
| Continuous Flow Rate for 8 hours at 5 bar (Nm3/hr)*** | 2000 | | 2000 | | 2000 | |
| Daily Evaporation Rate LNG (%) | 0.36 % | | 0.34 % | | 0.31 % | |
| Ø Diameter (mm / feet) | 2840 | 9.3 | 2 840 | 9,3 | 2 840 | 9,3 |
| HT height (mm / feet) | 10 510 | 34.5 | 13 510 | 50,9 | 15 025 | 49,3 |
| H (mm / feet) | 650 | 2.2 | 650 | 2,2 | 3 660 | 12 |
| G (mm / feet) | 1 100 | 3.6 | 1 100 | 3,6 | 1 100 | 3,6 |
| A (mm / feet) | 2 950 | 9.7 | 2 999 | 9,8 | 2 999 | 9,8 |
| B (mm / feet) | 3 300 | 10.8 | 3 350 | 11 | 3 350 | 11 |
| C (mm / feet) | 1 530 | 5 | 1 530 | 5 | 1 530 | 5 |



- * ± 4%
- ** Depends on density of LNG
- *** Other Flow rate, Pressure & Time on request

FLOW DIAGRAM OF LNG TANK



| NOMENCLATURES – BASE TANK | | |
|----------------------------------|---|------------------------|
| REP | DESIGNATION | SIZE |
| W11 | BOTTOM FILLING VALVE (FIRE SAFE TYPE) | ND25<21KL ND40≥21KL |
| W21 | TOP FILLING VALVE (FIRE SAFE TYPE) | ND25<21KL ND40≥21KL |
| W1 | BOTTOM FILLING VALVE | ND25<21KL ND40≥21KL |
| W2 | TOP FILLING VALVE | ND25<21KL ND40≥21KL |
| P | PURGE VALVE | ND15 |
| CAR | CHECK VALVE | |
| BR15 | COUPLING | ND40 |
| E4 | FILLING CONNECTION | ND40 |
| W9 | WITHDRAWAL VALVE (FIRE SAFE TYPE) | ND25<21KL ND40≥21KL |
| BR1 | COUPLING | ND25<21KL ND40≥21KL |
| W41 | FULL TRYCOCK VALVE (Close Position) (FIRE SAFE TYPE) | ND15 |
| W42 | ISOLATING VALVE (FIRE SAFE TYPE) | ND40 |
| P1 | PURGE VALVE | ND6 |
| F-RP | REGULATOR with filter set at 5 bar | 3/4" |
| RMP | PRESSURE BUILDING COIL | |
| S3-S4-S5-S8 | LINE SAFETY VALVE set at 25 bar | 1/2" |
| M | PRESSURE GAUGE | |
| N | LEVEL GAUGE | |
| RI | LOW PRESSURE SHUT-OFF VALVE | ND4 |
| RS | HIGH PRESSURE SHUT OFF VALVE | ND4 |
| RE | EQUILIZER VALVE | ND4 |
| S1 | INNER VESSEL SAFETY VALVE set at. 17 bar | 1/2" |
| IR | 3 WAY VALVE | ND20 |
| V21 | ISOLATING VALVE | ND15 |
| RL | PRESSURE LIMITER set at. 7 bar | 3/4" |
| LP | OUTER JACKET SAFETY DEVICE (LIFT PLATE) | CRYOLOR DESIGN |
| BV | VACUUM CONNECTION | ND28 |
| VV | VACUUM VALVE | 1/8 |
| PV1 | AUTOMATIC WITHDRAWAL VALVE | ND25<21KL ND40≥21KL |
| PV2 | AUTOMATIC ECONOMISER VALVE | ND40 |
| PV3 | AUTOMATIC VALVE | ND40 |
| S2,S6 | LINE SAFETY VALVE set at 25 bar | 1/2" |

| NOMENCLATURES - OPTIONS | | |
|--|--|--------------|
| OPTION – 1 : STORAGE TANK WITH AUTOMATIC CONTROLS | | |
| REP | DESIGNATION | SIZE |
| PLC | PROGRAMMABLE LOGIC CONTROLLER | |
| TT2 | TEMPERATURE TRANSMITTER | |
| GD1 | GAS DETECTOR | |
| M | PRESSURE GAUGE with 4-20 mA Signal | |
| N | LEVEL GAUGE with 4-20 mA Signal | |
| | PNUMATIC & ELECTRICAL LINES | |
| OPTION - 2 | | |
| REP | DESIGNATION | SIZE |
| W91 | VALVE | ND40 |
| BR91 | LIQUID CONNECTION | ND40 |
| OPTION - 3 | | |
| REP | DESIGNATION | SIZE |
| V1, V2 | ISOLATING VALVE or BYPASS VALVE | ND15 |
| S7, S9 | LINE SAFETY VALVE set at. 25 bar | 1/4" |
| F1 | STRAINER | ND15 |
| OPTION – 4 | | |
| REP | DESIGNATION | SIZE |
| BR-13 | COUPLING | ND40 |
| BR-14 | COUPLING | ND40 |
| OPTION - 5 | | |
| REP | DESIGNATION | SIZE |
| E3 | COUPLING | ND25 OR ND40 |
| V20 | ISOLATING VALVE | ND25 OR ND40 |
| OPTION - 6 | | |
| REP | DESIGNATION | SIZE |
| V97 | OVERFILLING PROTECTION VALVE Set at. 18.7 bar | ND40 |
| OPTION – 7 : Thermosiphon Option | | |
| REP | DESIGNATION | SIZE |
| W5 | PUMP GAS RETURN ISOLATION | ND20 |
| W7 | PUMP LIQUID SUPPLY ISOLATION | ND20 |
| C1, C2 | PUMP LIQUID & GAS CONNECTION | ND20 |