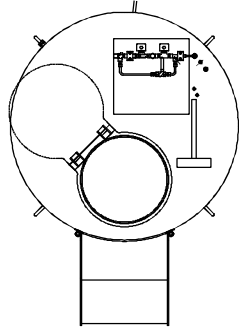
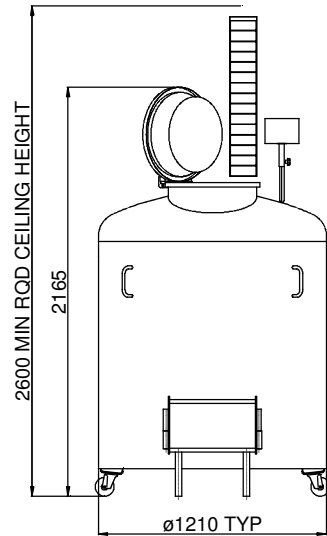
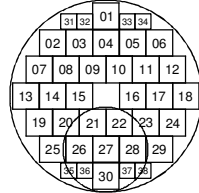


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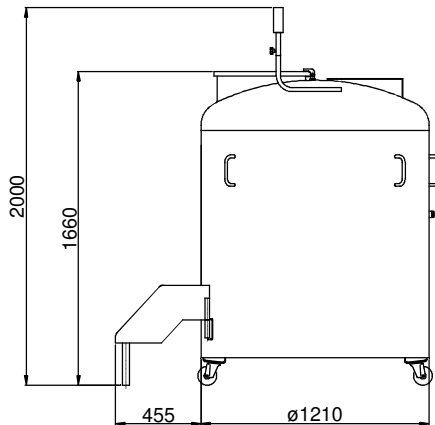
PLAN VIEW



STANDARD ICS CONFIGURATION  
30 OF 10X10 TOWERS  
8 OF 5X5 TOWERS  
CONTACT QUANTUM CRYOGENICS FOR  
INFORMATION ON ALTERNATIVE ICS



FRONT VIEW  
LID SHOWN IN OPEN POSITION



SIDE ELEVATION

	TECHNICAL SPECIFICATIONS		TECHNICAL SPECIFICATIONS
24V DC 1 AMP	POWER	ø1210 MM	EXTERNAL WIDTH
<3 DAYS	BATTERY BACK UP CAPACITY	ø1665 MM	EXTERNAL DEPTH
1/2" BSP 24V DC	SOLENOID VALVE 1	ø1210 MM	*EXTERNAL DEPTH WITH STEPS REMOVED
1/2" BSP 24V DC	SOLENOID VALVE 2	1660 MM	EXTERNAL HEIGHT
3/8" BSP BALL VALVE	MANUAL FILL BYPASS	2165 MM	*EXTERNAL HEIGHT WITH LID OPEN
DISCRETE SENSORS	LEVEL PROBE	2000 MM	*EXTERNAL HEIGHT INC CONTROLLER
PT1000	TEMPERATURE SENSOR	2600 MM	*MIN ROD CEILING HEIGHT (TO CLEAR TOWER)

- QUOTED LN2 CAPACITY REFERS TO FULL VOLUME OF LN2 SPACE. TO MAINTAIN TEMPERATURE STABILITY RECOMMEND UNIT IS REFILLED BEFORE REACHING EMPTY.
- NER IS QUOTED UNDER IDEAL CONDITIONS. IN PRACTICE NER MAY BE MUCH HIGHER DEPENDING ON USE.
- IDEAL CONDITIONS  
15-25°C  
~60% RH  
MAXIMUM SAMPLE LOAD.
- QUOTED HOLD TIME IS BASED ON QUOTED NER AND LN2 CAPACITY. REDUCED LN2 CAPACITY AND HIGHER THAN QUOTED NER WILL RESULT IN REDUCED HOLD TIME.
- MONITOR / RECORD NORMAL USAGE TO ESTABLISH REFILL VOLUME, WORKING NER AND WORKING HOLD TIME.
- FOR DETAILS OF ALTERNATIVE ICS PLEASE CONTACT QUANTUM CRYOGENICS.
- TWIN FAIL CLOSED SOLENOIDS
- ENSURE FILTER IS USED TO PROTECT SOLENOID VALVES
- WHEN CONNECTED TO A PIPED SUPPLY ENSURE SUPPLY PRESSURE IS REGULATED TO -2 BAR (30 PSI)
- GAS VENT / PRE-COOL / HOT GAS BYPASS SYSTEM MAY BE REQUIRED. CONTACT QUANTUM CRYOGENICS FOR MORE INFORMATION
- STANDARD SUPPLY HOSE DN12 STAINLESS STEEL 1.5M LONG 1/2"BSPT MALE TO 15MM BALLNOSE 69GHD BOTH ENDS. NITRILE RUBBER FOAM INSULATION WITH PVC WRAP. ALTERNATIVE LENGTH / CONNECTIONS AVAILABLE UPON REQUEST
- FOR DETAILS OF DATA LOGGING / REMOTE MONITORING / CONTROL OPTIONS PLEASE CONTACT QUANTUM CRYOGENICS
- ENSURE APPROPRIATE VENTILATION AND OXYGEN DEPLETION MONITORING ARE IN PLACE
- FRONT STEP ASSEMBLY IS REMOVABLE.

ø1016 MM	USABLE INTERNAL DIAMETER
870 MM	USABLE INTERNAL HEIGHT
516 KG	WEIGHT (EMPTY)
625 KG	WEIGHT (FULL)
136 (200) LITRES	LN2 CAPACITY
12 LITRES / DAY	NER (IDEAL CONDITIONS)
11.3 (16.6) DAYS	MAX HOLD TIME
1/2" BSPT	LN2 INLET CONNECTION ON VESSEL
1.5±0.5 BAR (22±7 PSI)	LN2 SUPPLY PRESSURE
4.5 BAR / 66 PSI	PRESSURE RELIEF VALVE SETTING
48000	2ML VIAL CAPACITY
15	ROWS PER TOWER
30	NUMBER OF 10X10 TOWERS
8	NUMBER OF 5X5 TOWERS

01	13-02-15	PM	XXX
REV	DATE	DRAWN	CHECKED



**QUANTUM**  
CRYOGENICS

1ST FLOOR UNIT 7A LUPTON RD.  
THAME, OXFORDSHIRE OX9 3SE  
+44 (0) 1844 339993

SCALE  
NTS

FINISH  
CLEAN

TOLERANCE  
0.0

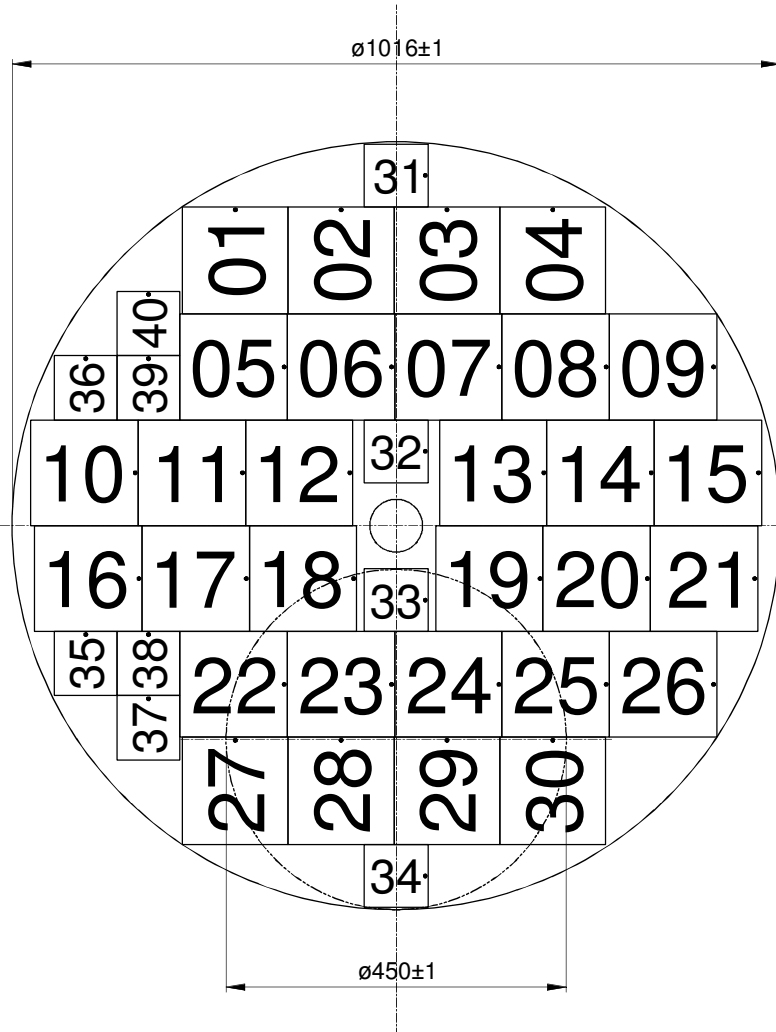
DIMS  
MM

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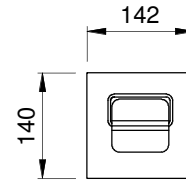
**POLARIS 50 VESSEL  
SPECIFICATION**

**A4-00245**

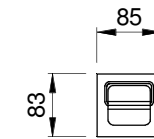
A4-00343



STANDARD TOWERS



10x10 TOWER



5x5 TOWER

CAROUSEL ID = 1016±1MM		
NECK ID = 450±1MM		
NO DIVIDER PLATES		
10x10 TOWER = 140x142MM		
TO SUIT 10x10 BOX = 133x133x56MM		
5x5 TOWER = 83x85MM		
TO SUIT 5x5 BOX = 76x76x56MM		
USABLE INTERNAL HEIGHT = 900MM		
TOWER HEIGHT (INC HANDLE)	= 775MM	900MM
	13 ROW	15 (13+2) ROW
30 OF 10x10 TOWERS	= 39000	45000
10 OF 5x5 TOWERS	= 3250	3750
TOTAL 2ML VIAL CAPACITY	= 42250	48750

TOWER DIMENSIONS INCLUSIVE OF ALL RIVETS AND MINOR FEATURES  
 BASED ON DIAMETERS FROM 9918-2050-01

01	21.04.16	PM	XXX
REV	DATE	DRAWN	CHECKED



**QUANTUM**  
 CRYOGENICS  
 1ST FLOOR UNIT 7A LUPTON RD.  
 THAME, OXFORDSHIRE OX9 3SE  
 +44 (0) 1844 339993

SCALE NTS  
 FINISH CLEAN  
 TOLERANCE ±1  
 DIMS MM

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**POLARIS 50 ICS**  
**10X10 TOWER LAYOUT**

**A4-00343**