

Pressure Equipment Directive/Pressure Equipment Safety Regulation: Safety Instructions





Safety Information: MLT Chambers manufactured from carbon steel

Pressure Equipment Directive (2014/68/EU) / Pressure Equipment (Safety) Regulation 2016 (Incl. Brexit amendments 2021)

These safety instructions are to be used in conjunction with the MLT Controls product manual.

Definitions: -

P_s max = Maximum allowable chamber pressure at the stated temperature - bar

T_s max = Maximum allowable chamber temperature - °C

T_s min = Minimum allowable chamber temperature - °C

P_t = Chamber Test pressure - bar

This product is designed and manufactured to comply with Module H of the Pressure Equipment Directive 2014/68/EU; the Pressure Equipment (safety) Regulation (Inc. Brexit amendments 2021) Module H. It carries a CE mark and has a Declaration of Conformity to show compliance with the relevant Directive/Regulation.

Under the Pressure Equipment Directive/ the Pressure Equipment (safety) Regulation (Inc. Brexit amendments 2021) this product is classified as Piping.

This product is designed for use with gases and liquids within Groups 1 and 2.

It is the responsibility of the installer/user of this equipment to ensure: -

1. The product is installed and used by suitably trained personnel in accordance with all relevant Local and National regulations and codes.
2. Safe working practices for the media and process concerned are followed during installation and maintenance.
3. The materials of construction are suitable for the application. See also Table 1.
4. The pressure and temperature limits for this equipment are not exceeded, if necessary by the use of suitable safety accessories. See also Table 3.
5. All Delta Mobrey supplied installation fixing bolts are used where applicable, and are only replaced by exact equivalents. On all other flanges, the correct quantity, size and strength of bolts (clamp type) are used. All fasteners are evenly tightened to the correct torque. See also Table 2.
6. Correct gaskets/seals are fitted and are compatible with the media and process.
7. The product is protected from fire.
8. The product is protected from impact.
9. This product is not used as a support for other equipment or personnel.
10. Regular inspection for corrosion and wear are carried out, both internal and external.

Table 1 - Vessel Pressure Materials

Component	Material Specification
Transmitter Mounting Flange	ASTM A105 / ASTM A350 LF2
Chamber Body Tube	ASTM A106 Grade B
Chamber End Cap	ASTM A105
Process Flange / Fitting	ASTM A105
Process Piping	ASTM A106 Grade B
Studs (where supplied)	ASTM A193 B7
Nuts (where supplied)	ASTM A194 2H

**Table 2 - Bolt Torques
(Transmitter Mounting Flange)**

Flange Type	Bolting		Torque (Nm)	
	3" / DN80	4" / DN100	3" / DN80	4" / DN100
Class 150	5/8 UNC	5/8 UNC	230	190
Class 300	3/4 UNC	3/4 UNC	125	220
Class 600	3/4 UNC	7/8 UNC	203	325
PN16	M16	M16	125	125
PN25	M16	M20	95	150
PN40	M16	M20	95	150
For use with high tensile bolts only. For further bolting torque details see L1880 + L1882				

Table 3:

MLT Chambers manufactured from Carbon Steel

Process Rating Code	Flange Mounting - Code						
	C60	C61	C62	C63	C64	C71	C73
	C65	C66	C67	C68	C69	C76	C78
	Class	Class	Class	Class	Class	PN16	PN25
	150	300	600	900	1500		PN40
"01"	19.6	51	102	153	255	16	25
	9.4	37.7	75.2	112	188	13.1	20.5
Screwed	30	78	154	230	383	24	37.5
	19.6	19.6	19.6	19.6	19.6	16	19.6
*11", *21", *31"	9.4	9.4	9.4	9.4	9.4	13.1	9.4
	30	30	30	30	30	24	30
Class 150	19.6	51	51	51	51	16	25
*12", *22", *32"	9.4	37.7	37.7	37.7	37.7	13.1	20.5
	30	78	78	78	78	24	37.5
Class 300	19.6	51	102	102	102	16	25
*13", *23", *33"	9.4	37.7	75.2	75.2	75.2	13.1	20.5
	30	78	154	154	154	24	37.5
Class 600	16	16	16	16	16	16	16
*15", *25", *35"	13.1	13.1	13.1	13.1	13.1	13.1	13.1
	24	24	24	24	24	24	24
PN16	19.6	25	25	25	25	16	25
*16", *26", *36"	9.4	20.5	20.5	20.5	20.5	13.1	20.5
	30	37.5	37.5	37.5	37.5	24	37.5
PN25	19.6	40	40	40	40	16	25
*17", *27", *37"	9.4	32.8	32.8	32.8	32.8	13.1	20.5
	30	60	60	60	60	24	37.5
PN40							

Nameplate Stamping Explanation

e.g. C67 * 22"

Ps max 20C	Ts min
Ps max	at Ts max
Pt	

51	-10
37.7	320
78	

Ts min for carbon steel is always minus 10C = -10
Ts max for carbon steel is always 320C = 320



Safety Information: MLT Chambers manufactured from 316L stainless steel

Pressure Equipment Directive (2014/68/EU) / Pressure Equipment (Safety) Regulation 2016 (Incl. Brexit amendments 2021)

These safety instructions are to be used in conjunction with the MLT Controls product manual.

Definitions: -

P_s max = Maximum allowable chamber pressure at the stated temperature - bar

T_s max = Maximum allowable chamber temperature - °C

T_s min = Minimum allowable chamber temperature - °C

P_t = Chamber Test pressure - bar

This product is designed and manufactured to comply with Module H of the Pressure Equipment Directive 2014/68/EU; the Pressure Equipment (safety) Regulation (Inc. Brexit amendments 2021) Module H. It carries a CE mark and has a Declaration of Conformity to show compliance with the relevant Directive/Regulation.

Under the Pressure Equipment Directive/ the Pressure Equipment (safety) Regulation (Inc. Brexit amendments 2021) this product is classified as Piping.

This product is designed for use with gases and liquids within Groups 1 and 2.

It is the responsibility of the installer/user of this equipment to ensure: -

1. The product is installed and used by suitably trained personnel in accordance with all relevant Local and National regulations and codes.
2. Safe working practices for the media and process concerned are followed during installation and maintenance.
3. The materials of construction are suitable for the application. See also Table 1.
4. The pressure and temperature limits for this equipment are not exceeded, if necessary by the use of suitable safety accessories. See also Table 3
5. All Delta Mobrey supplied installation fixing bolts are used where applicable, and are only replaced by exact equivalents. On all other flanges, the correct quantity, size and strength of bolts (clamp type) are used. All fasteners are evenly tightened to the correct torque. See also Table 2.
6. Correct gaskets/seals are fitted and are compatible with the media and process.
7. The product is protected from fire.
8. The product is protected from impact.
9. This product is not used as a support for other equipment or personnel.
10. Regular inspection for corrosion and wear are carried out, both internal and external.

Table 1 - Vessel Pressure Materials

Component	Material Specification
Transmitter Mounting Flange	ASTM A182 F316L
Chamber Body Tube	ASTM A312 TP316L
Chamber End Cap (flat)	ASTM A182 F316L
Chamber End Cap (dished)	ASTM A403 WP316L
Process Flange / Fitting	ASTM A182 F316L
Process Piping	ASTM A312 TP316L
Studs (where supplied)	ASTM A320 L7
Nuts (where supplied)	ASTM A194 Grade7 + S3

**Table 2 - Bolt Torques
(Transmitter Mounting Flange)**

Flange Type	Bolting		Torque (Nm)	
	3" / DN80	4" / DN100	3" / DN80	4" / DN100
Class 150	5/8 UNC	5/8 UNC	230	190
Class 300	3/4 UNC	3/4 UNC	125	220
Class 600	3/4 UNC	7/8 UNC	203	325
PN16	M16	M16	125	125
PN25	M16	M20	95	150
PN40	M16	M20	95	150
For use with high tensile bolts only. For further bolting torque details see L1880 + L1882				

Table 3

MLT Chambers manufactured from 316L Stainless Steel

Process Rating Code	Flange Mounting - Code							
	S60	S61	S62	S63	S64	S71	S72	S73
	S65	S66	S67	S68	S69	S76	S77	S78
	Class	Class	Class	Class	Class	PN16	PN25	PN40
	150	300	600	900	1500			
*01"	15.8	41.3	82.7	124	206	12.3	19.2	30.6
Screwed	9.4	24.7	49.4	74.1	123	7.2	11.4	18.3
	24	62	125	186	309	19	29	46
*11", *21", *31"	15.8	15.8	15.8	15.8	15.8	12.3	15.8	15.8
Class 150	9.4	9.4	9.4	9.4	9.4	7.2	9.4	9.4
	24	24	24	24	24	19	24	24
*12", *22", *32"	15.8	41.3	41.3	41.3	41.3	12.3	19.2	30.6
Class 300	9.4	24.7	24.7	24.7	24.7	7.2	11.4	18.3
	24	62	62	62	62	19	29	46
*13", *23", *33"	15.8	41.3	82.7	82.7	82.7	12.3	19.2	30.6
Class 600	9.4	24.7	49.4	49.4	49.4	7.2	11.4	18.3
	24	62	125	125	125	19	29	46
*15", *25", *35"	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3
PN16	7.2	7.2	7.2	7.2	7.2	7.2	7.2	7.2
	19	19	19	19	19	19	19	19
*16", *26", *36"	15.8	19.2	19.2	19.2	19.2	12.3	19.2	19.2
PN25	9.4	11.4	11.4	11.4	11.4	7.2	11.4	11.4
	24	29	29	29	29	19	29	29
*17", *27", *37"	15.8	30.6	30.6	30.6	30.6	12.3	19.2	30.6
PN40	9.4	18.3	18.3	18.3	18.3	7.2	11.4	18.3
	24	46	46	46	46	19	29	46

Nameplate Stamping Explanation

e.g. S67 * 22"

Ps max 20C	Ts min
Ps max	at Ts max
Pt	

41.3	-60
24.7	320
62	

Ts min for 316L Stainless Steel is always -60C = -60
Ts max for 316L Stainless Steel is always 320C = 320

MLT Chambers

Delta Mobrey Limited
Hudson House, Albany Park, Camberley, Surrey, GU16 7PL, United Kingdom
Tel: +44 (0)1252 729140
Email: salesadmin@delta-mobrey.com

On-site Services team:
Email: service@delta-mobrey.com

www.delta-mobrey.com