



Thanks to their special technology and high insulation power, CTLs are the safest and most effective means to transfer cryogenic fluids. The lines consist of an inner pipe or hose equipped with multi-layer insulation, and an outer pipe or hose with a vacuum cavity. Vacuum ensures heat convection process insulation whereas radiation is prevented by the multi-layer insulation of the inner pipe, supported by spacers having a very low coefficient of thermal conductivity.

The lines are manufactured in sections of variable length, in accordance with set standards or customized project specifications, and are supplied with vacuum, ready for assembly by means of bayonet couplings or joints to be welded.

All CTL spools are repeatedly tested during the process and finally tested for compliance, using a helium leak detector and a mass spectrometer with an acceptability range of at least 10^{-9} mbar l/s.



MAIN FEATURES

Nominal diameter [DN]	Ø Inner Pipe [mm]	Ø Outer Pipe [mm]	Maximum pressure [bar]	Linear heat in leak [W/m]	Joint heat in leak [W/joint]	Weight [Kg/m]
DN10	12	60.3	16	0,3	1,5	2,8
DN18	18	60.3	16	0,4	1,6	3,0
DN25	33.4	88.9	16	0,5	3,4	5,0
DN40	48.3	88.9	16	0,6	3,4	5,8
DN50	60.3	114.3	16	0,7	3,8	9,4

CTL CRYOGENIC TRANSFER LINE



Typology	1 meter	2 meter	3 meter	6 meter	90° Bend	45° Bend	Tee	Flex
Code	1	2	3	6	E1	E2	T	X
DN10	M-F M-S S-S F-S	M-F M-S S-S F-S	M-F M-S S-S F-S	M-F M-S S-S F-S	M-F M-S S-S F-S	M-F M-S S-S F-S	M-F-M F-M-F S-S-S S-F-S S-M-S	M-F M-S S-S F-S
DN16	M-F M-S S-S F-S	M-F M-S S-S F-S	M-F M-S S-S F-S	M-F M-S S-S F-S	M-F M-S S-S F-S	M-F M-S S-S F-S	M-F-M F-M-F S-S-S S-F-S S-M-S	M-F M-S S-S F-S
DN25	M-F M-S S-S F-S	M-F M-S S-S F-S	M-F M-S S-S F-S	M-F M-S S-S F-S	M-F M-S S-S F-S	M-F M-S S-S F-S	M-F-M F-M-F S-S-S S-F-S S-M-S	M-F M-S S-S F-S
DN40	M-F M-S S-S F-S	M-F M-S S-S F-S	M-F M-S S-S F-S	M-F M-S S-S F-S	M-F M-S S-S F-S	M-F M-S S-S F-S	M-F-M F-M-F S-S-S S-F-S S-M-S	M-F M-S S-S F-S
DN50	M-F M-S S-S F-S	M-F M-S S-S F-S	M-F M-S S-S F-S	M-F M-S S-S F-S	M-F M-S S-S F-S	M-F M-S S-S F-S	M-F-M F-M-F S-S-S S-F-S S-M-S	M-F M-S S-S F-S

STANDARD DIMENSIONS

M= male joint
F= female joint
S= solder joint

Encoding: CTL-DNAA-B-CC-(L only for flex in meters)

es. CTL-DN25-3-FS:
spool DN25, length 3 meters, with a female end and the other solder

es. CTL-DN10-E2-MF:
spool DN10, 45° bend, with a male end and the other female

es. CTL-DN50-X-SS-4:
spool DN50, flexible, with both solder terminals, length 4 meters

PRESSURE DROP PER LINEAR METER (CALCULATED AT 7 BARG)

