

Cold Mass Nr. **2026**

Step Nr. **1**  
Volume / Volume to be tested  
CM -> Vacuum

CM -> Heat Exch. **3**

Heat Exch -> Vacuum **4**

Fuga calibrata / Calibrated leak parameter

Calibrated leak N°:	4011007195	4011007225	4011007195
Data calibr. / calibration date	08/10/02	08/10/02	08/10/02
Temp. calibrations fuga / Calibration Temp.	23,0 °C	23,0 °C	23,0 °C
Valore nom. fuga calibrata / Calibrated leak nom. value	3,00E-08 mbar l s-1	3,30E-08 mbar l s-1	3,00E-08 mbar l s-1

Calibrazione del sistema / System calibration

Conc. He nelle linee di test (100%) / Volumetric fraction of tracer gas in the injection envelope

T ambiente / Test temp.

Fuga calibrata con correz. T ed età / Size of calib. leak after corr. for ageing and T)

Segnate residuo prima delle misure di SFR / Residual signal prior SFR meas.

Segnale del LD / Signal given by the calibrated leak

Min. dev. segnale (-2x amp. segn. residuo) / Smallest read. signal dev. (= 2 x ampl. of RFR noise)

Tempo di attesa stabiliz. segnale / Time to achieve stabilised leak signal

$$= \frac{S_{FR}}{S_{PR} - R_{PR}} \cdot \frac{1}{C}$$

SENSIBILITA' DEL TEST / Sensitivity of the leak test

Condizioni del test / Leak test conditions

Pressione del sistema / System pressure

Segnate residuo del cercatughe ad inizio test / Residual signal prior to SF measurement

Segnale del LD a fine test / Signal given by the leak after 30 min. (>3)

$$= \frac{q_{FR}}{S_{FR} - R_{FR}} \cdot \frac{1}{C}$$

CALCOLO DELLA FUGA / Leak evaluation

VALORE DI RIFERIMENTO / REF. VALUE (MAX)

CONFORMANCE

Doc. di riferimento / Ref. documents

CERN contract number: F302/LH/LHC  
CERN technical spec.: LHC MMS-98-198 rev.2  
Leak test procedure (Ref. N°. Revision): 780RM09442 rev.0

Strumentazione / Test equipment

Helium Mass Spectrometer type:  
Pressure gauge type:  
Pumping group:

Prepared by: Name / Date

Approved by: Name / Date

Checked by: Name / Date

Checked at CERN by / Signature / Date

on vessel

PFEIFFER HLT 260  
full range compact PFEIFFER PKR 251 turbo pump LEYBOLD PT 360 l/s  
rotary vane pump PFEIFFER DUO 65 m3/h

on c.b.t. lines

PFEIFFER HLT 260  
rotary vane pump PFEIFFER DUO 20 m3/h

on heat exchanger line

PFEIFFER HLT 260  
rotary vane pump PFEIFFER DUO 20 m3/h

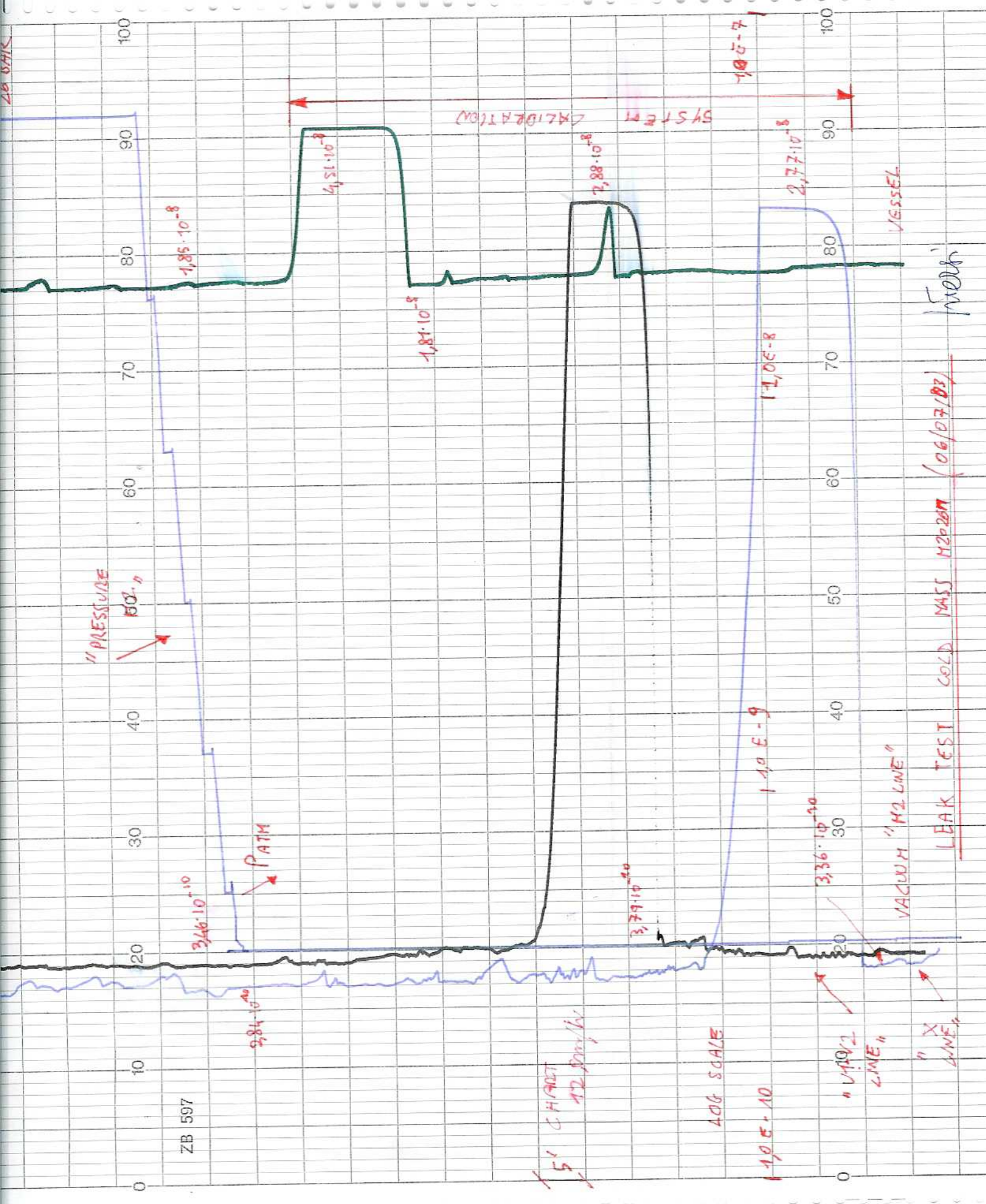
on vessel

PFEIFFER HLT 260  
full range compact PFEIFFER PKR 251 turbo pump LEYBOLD PT 360 l/s  
rotary vane pump PFEIFFER DUO 65 m3/h

Note / Remarks  
Test performed after welding of flange (Ø100) the capillary tube cold head, installed on the cold mass

*[Signature]*





ZB 597

