

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Test and Calibration Equipment

with type designation(s)

Crystal Products Pressure and Temperature Calibrator Kits

Issued to

Crystal Engineering Corporation
San Luis Obispo, CA, USA

is found to comply with

DNV GL rules for classification – Ships, offshore units, and high speed and light craft

Application :

The instruments are only approved for use as portable test instruments. Traceable calibration certificates are available from the manufacturer.

This Certificate is valid until **2024-06-30**.

Issued at **Hamburg** on **2019-08-15**

DNV GL local station: **Long Beach**

for **DNV GL**

Approval Engineer: **Jens Dietrich**

Joannis Papanuskas
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

Product description

Crystal Engineering Corp. pressure and temperature calibrator kits as listed below:

Model	Description	Model Range	Datasheet
CPF Fittings	MPH-/MPM-/MPF-series	-	4895-S, rev.K 4895, rev.K
30-series	Pressure gauges	16 to 5000 PSI	4534, rev.L
XP2i-series	Pressure gauges	15 to 15000 PSI	5179, rev.B; 4533, rev.S; 4864, rev.O
nVision	Calibrator		4791, rev.N
	Pressure – PM Module	30 to 15000 PSI	
	Current/Voltage – MA20 Module	0 to 25mA / 0 to 28VDC	
	Temperature – RTD 100 Module	0 to 400 Ohms	
	Barometric – BARO Module	10.153 to 15.954 PSI	
M1-series	Pressure gauges	15 to 10000 PSI	4725, rev.H
HPC 40	Calibrator	30 to 15000 PSI	5487, rev.F
APM	Advanced pressure module	30 to 15000 PSI	5275, rev.C
HPC 50	Calibrator	15 to 15000 PSI	6487, rev.A
APMi	Advanced pressure module	0 to 15000 PSI	6543, rev.A
ATMi	Advanced temperature module	for Pt100 RTD	6544, rev.A

Place of manufacture

Crystal Engineering Corporation
708 Fiero Lane Suite 9
San Luis Obispo, CA USA 93401

Application/Limitation

The Type Approval covers hardware listed under product description.
The instruments are only approved for use as portable test instruments.
The Type Approval of gauges and calibrators are only valid for units with a valid calibration certificate.

Tests carried out

Each gauge and temperature calibrator has been calibrated at factory and is delivered with a valid calibration certificate.

Marking of product

Each model is marked with manufacturer name, model name and serial number.

Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the type are complied with, and that no alterations are made to the product design or choice of systems, software versions, components and/or materials.

The main elements of the assessment are:

- Ensure that type approved documentation is available
- Inspection of factory samples, selected at random from the production line (where practicable)
- Review of production and inspection routines, including test records from product sample tests and control routines
- Ensuring that systems, software versions, components and/or materials used comply with type approved documents and/or referenced system, software, component and material specifications
- Review of possible changes in design of systems, software versions, components, materials and/or performance, and make sure that such changes do not affect the type approval given
- Ensuring traceability between manufacturer's product type marking and the type approval certificate



Job Id: **262.1-004538-5**
Certificate No: **TAA00002FD**

Periodical assessment is to be performed after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

END OF CERTIFICATE