

pressure



Pressure range

MGC-HIGH 0 to 300 bar
MGC-LOW 0 to 100 bar

Dual-scale gauges

All gauges include bar & kg/cm²

High accuracy

MGC-HIGH $\pm 0.6\%$ F.S. of gauge
MGC-LOW $\pm 1\%$ F.S. of gauge

Fast calibration

The hydraulic pump rapidly produces the required testing pressure

Easy to use

Easy assembly of the pressure pump and the easy-to-read gauge

Portable

The pressure test set is delivered in a handy and durable carrying case making it easy to move about the ship

Hydraulic pumps

Easy to operate dual step pumps

DNV approval

All JF Instruments calibrators are marine type approved by Det Norske Veritas

Complete marine program

Part of a complete program of marine approved temperature, pressure and signal calibrators; including temperature sensors
See more at www.jofra.com

ISO 9001 Manufacturer

JF INSTRUMENTS™ MGC Series

Marine Gauge Calibrator

Flexible pressure calibration systems to optimize the performance of your vessel

Economical solution with quality gauges.

The MGC series is using quality mechanical gauges as the pressure reference. Connect the reference gauge and the unit-under-test to the hydraulic pump and calibrate. The MGC-LOW ranges up to 100 bar and the MGC-HIGH goes to 300 bar. Each system contains 3 or 4 dual-scale gauges to cover the range with the best possible accuracy.



Maintain and calibrate monitoring devices for:

- Turbo-charger lubrication
- Lubricating oil systems
- Cylinder / piston / fuel valve cooling media
- Fuel oil inlet
- Scavenge air
- Exhaust gas
- Sea water cooling
- Thrust / shaft plane / stern tube bearings
- Crankcase protection
- Charge air
- Turbine and gear bearings
- Uptake gas
- Steam
- Feed water
- Servo oil propeller pitch
- Cooling water outlet
- Purifiers
- Refrigeration systems
- Starting air
- Gland steam
- Hydraulic systems
- Condensing system
- Oil burner
- Main steam
- Generators
- Condensers
- Safety valves

AMETEK®
CALIBRATION INSTRUMENTS

The JF model MGC-LOW consists of 2 dual-scaled precision pressure gauges with $\pm 1\%$ F.S. accuracy and a hydraulic handpump fitted with hose, valve and couplings: delivered in a handy carrying case.

The pressure gauges are all dual-scaled in bar & kg/cm² and of a quality matching marine requirements.

The calibrator is easy to operate and the hydraulic pump very rapidly produces the required testing pressure.

The gauges provide the user with a clear indication of pressure for comparison to the system instrument. The operator can then identify the extent of any error; it is possible to compensate for or note the error and thereby only replace faulty pressure indicators.



STANDARD DELIVERY MGC-LOW

- 2 gauges (select system)
 - System 1: 6 and 16 bar & kg/cm²
 - System 2: 16 and 40 bar & kg/cm²
 - System 3: 40 and 100 bar & kg/cm²
- Carrying case, plastic
- T-620 hydraulic pump
- 1.64 ft (0.5 m) hose
- BSP adapters:
 - Adaptor, 1/4" BSP male x 1/4" BSP male (60R115)
 - Adaptor, 1/4" BSP female x 1/4" BSP female (60R324)
 - Adaptor, 1/4" BSP female x 3/8" BSP female (60R325)
 - Adaptor, 1/2" BSP female x 1/4" BSP female (60R326)
 - Adaptor, 1/4" BSP female x 3/4" BSP female (60R327)
- Traceable calibration certificate
- User manual



FUNCTIONAL SPECIFICATIONS

Pressure specifications
MGC-LOW..... 0 to 100 bar

Accuracy
MGC-LOW..... $\pm 1\%$ F.S. of connected gauge

Pressure units
MGC-LOW..... bar and kg/cm², dual scale

Pressure medium
MGC-LOW..... Hydraulic oil

Shipping (+ std. accessories + carrying case)
Weight: MGC-LOW 6 kg (13.2 lb)
Size: L x W x H..... 530 x 130 x 390 mm (20.9 x 5.1 x 15.4 in)



ACCESSORIES

- 102151 Precision gauge 0 to 6 bar - kg/cm², class 1
- 102158 Precision gauge 0 to 16 bar - kg/cm², class 1
- 102165 Precision gauge 0 to 40 bar - kg/cm², class 1
- 102172 Precision gauge 0 to 100 bar - kg/cm², class 1
- AM-T-656 Service kit for T-620 and T-620H pumps
- 60R120 Bonded seal 1/4" BSP
- 65P175 1 meter, Pressure hose, (Max. 5.000psi / 350bar)
* 1/4" BSP female to 1/4" BSP male
- 65P180 2 meter, Pressure hose, (Max. 5.000psi / 350bar)
* 1/4" BSP female to 1/4" BSP male
- 60I156 1.5 meter, Pressure hose, (Max. 10000psi / 700bar)
* 1/4" BSP female to 1/4" BSP male
- 60I157 5 meter, Pressure hose, (Max. 10000psi / 700bar)
* 1/4" BSP female to 1/4" BSP male
- 60R155 Lloyds valve without clamp
- 60R160 Clamp for lloyds valve
* Lloyds valve system part no. is 60R155 + 60R160
- 50-REP615 Quick connector set, female 1/4" BSP to 1/4" BSP



Main deck – testing the pressure manometer at a manifold Application

When the ship is unloading, a manometer is required on each loading hose to be able to read the pressure at frequent intervals. This is due to the fact that in the agreement made between the shipowner and the shipping agent it is usually required that the ship must hold 7 kg on the manifold or unload the cargo in max. 24 hours.

Main deck – testing the pressure manometer at a manifold Savings

The owner saves money because he does not need to send the manometers ashore to be calibrated. At the same time, he is more likely to be able to convince his counterpart that the pressure read-out is correct, which again will justify payment of his demurrage.



The JF Model MGC-HIGH consists of 3 or 4 dual-scaled precision pressure gauges with $\pm 0.6\%$ F.S. accuracy and a hydraulic jack pump fitted with hose, valve and couplings: delivered in a handy carrying case.

The pressure gauges are all dual-scaled in bar & kg/cm² and of a quality matching marine requirements.

The gauges are easy to read and the hydraulic pump rapidly produces the required testing pressure.

The gauges provide the user with a clear indication of pressure for comparison to the system instrument. The operator can then identify the extent of any error; it is possible to compensate for or note the error and thereby only replace faulty pressure indicators.



Type approval certificate

All JF Instruments calibrators are type approved by Det Norske Veritas. Find the certificate at our web-page www.jofra.com DNV Marine Approval, Certificate no.: A-9557



FUNCTIONAL SPECIFICATIONS

Pressure specifications

MGC-HIGH..... 0 to 300 bar

Accuracy

MGC-HIGH..... $\pm 0.6\%$ F.S. of connected gauge

Pressure units

MGC-HIGH..... bar and kg/cm², dual scale

Pressure medium

MGC-HIGH..... Hydraulic oil

Shipping (+ std. accessories + carrying case)

Weight: MGC-HIGH 11 kg (24.3 lb)

Size: L x W x H..... 640 x 420 x 200 mm (25.2 x 16.5 x 7.9 in)

STANDARD DELIVERY MGC-HIGH

- 3-4 gauges (select system)
 - System 1: 6, 16 and 40 bar & kg/cm²
 - System 2: 10, 40, 100 and 300 bar & kg/cm²
 - System 3: 10, 40 and 100 bar & kg/cm²
 - System 4: 10, 40 and 300 bar & kg/cm²
- Carrying case, aluminium
- P-142 hydraulic pump
- 16.4 ft (5 m) hose
- BSP adapters:
 - Adaptor, 1/4" BSP male x 1/4" BSP male (60R115)
 - Adaptor, 1/4" BSP female x 1/4" BSP female (60R324)
 - Adaptor, 1/4" BSP female x 3/8" BSP female (60R325)
 - Adaptor, 1/2" BSP female x 1/4" BSP female (60R326)
 - Adaptor, 1/4" BSP female x 3/4" BSP female (60R327)
- Traceable calibration certificate
- User manual

ACCESSORIES

- 100403 Precision gauge 0 to 6 bar - kg/cm², class 0.6
- 100404 Precision gauge 0 to 10 bar - kg/cm², class 0.6
- 100405 Precision gauge 0 to 16 bar - kg/cm², class 0.6
- 100406 Precision gauge 0 to 40 bar - kg/cm², class 0.6
- 100409 Precision gauge 0 to 100 bar - kg/cm², class 0.6
- 100411 Precision gauge 0 to 300 bar - kg/cm², class 0.6
- 60R120 Bonded seal 1/4" BSP
- 60I156 1.5 meter, Pressure hose, (Max. 10000psi / 700bar)
 - * 1/4" BSP female to 1/4" BSP male
- 60I157 5 meter, Pressure hose, (Max. 10000psi / 700bar)
 - * 1/4" BSP female to 1/4" BSP male
- 60R155 Lloyds valve without clamp
- 60R160 Clamp for lloyds valve
 - * Lloyds valve system is = 60R155 + 60R160
- 50-REP615 Quick connector set, female 1/4" BSP to 1/4" BSP



ORDERING INFORMATION

Model MGC-LOW Series

Order number	Description
MGC-LOW	Base model number MGC-LOW gauge calibrator
	System
System 1	2 gauges: 6 and 16 bar / kg/cm2
System 2	2 gauges: 16 and 40 bar / kg/cm2
System 3	2 gauges: 40 and 100 bar / kg/cm2
MGC-LOW System 1	Sample order number JOFRA MGC-LOW System 1, 2 gauges: 6 and 16 bar / kg/cm2 (dual-scale) and standard accessories: T-620 handpump, fittings and carrying case



ORDERING INFORMATION

Model MGC-HIGH Series

Order number	Description
MGC-HIGH	Base model number MGC-HIGH gauge calibrator
	System
System 1	3 gauges: 6, 16 and 40 bar/kg/cm2
System 2	4 gauges: 10, 40, 100 and 300 bar/kg/cm2
System 3	3 gauges: 10, 40 and 100 bar/kg/cm2
System 4	3 gauges: 10, 40 and 300 bar/kg/cm2
MGC-HIGH System 1	Sample order number JOFRA MGC-HIGH System 1: 3 gauges: 6, 16 and 40 bar / kg/cm2 (dual-scale) and standard accessories: P-142 jack pump, fittings and carrying case



AMETEK Calibration Instruments
offers a complete range of calibration
equipment for temperature, pressure, and
signal - including calibration software.

JOFRA Temperature Instruments
Portable precision thermometers.
Dry-block and liquid bath calibrators: 4 series,
with more than 25 models and temperature
ranges from -90° to 1205°C / -130° to 2200°F.
All featuring speed, portability, accuracy and
advanced documenting functions with
JOFRACAL calibration software.

JOFRA Pressure Instruments
Convenient electronic systems ranging from
-1 to 1000 bar (25 inHg to 14,500 psi) -
multiple choices of pressure ranges, pumps and
accuracies, fully temperature-compensated
for problem-free and accurate field use.

JOFRA Signal Instruments
Process signal measurement and simulation for
easy control loop calibration and measurement
tasks - from handheld field instruments for
multi or single signals to laboratory reference
level bench top instruments.

JOFRA / JF Marine Instruments
A complete range of calibration equipment
for temperature, pressure and signal,
approved for marine use.

FP Temperature Sensors
A complete range of temperature sensors
for industrial and marine use.

*...because calibration is
a matter of confidence*

AMETEK[®]
CALIBRATION INSTRUMENTS

AMETEK Calibration Instruments is one of the world's leading manufacturers and developers of calibration instruments for temperature, pressure and process signals as well as for temperature sensors both from a commercial and a technological point of view.



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