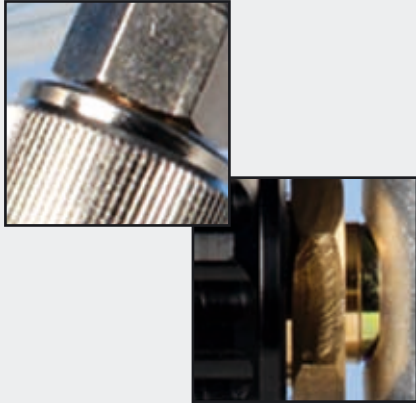


## pressure



Pneumatic and hydraulic models

Ranges from vacuum to 1,000 bar / 15,000 psi

Models available as comparators with included test gauge(s)

Economical, easy-to-use, meet most testing applications

Pumps offer advanced features such as vernier valves

Options and accessories that include alternate o-ring materials, fittings, and reservoirs

ISO 9001 Manufacturer

# JOFRA™ & MG Pumps

## Pneumatic, hydraulic and vacuum

### Pressure Sources

#### Economical and easy-to-use pressure pumps

AMETEK offers the user several solutions for pressure generation. This line spans from a small pneumatic “bicycle” style pump to a hydraulic pump that generates up to 1,000 bar (15,000 psi). These are durable pumps with features such as vernier valves, vent valves, manifold connections, swivel fittings, and optional O-ring materials and fittings making the pumps flexible to meet your calibration and testing applications. Pumps are available with gauges to create an economical pressure test system.



### PRODUCT DESCRIPTION

Pressure solutions with flexibility: pumps to meet most any pressure application. AMETEK offers pumps that are user-friendly, rugged, and trusted to meet your pressure testing and calibration needs.

Pumps are engineered with the user in mind and offer features that make your testing tasks easy to accomplish. There are models for use with most media: both pneumatic and hydraulic models.

These pumps are also available as handheld comparators that include reference gauges. These are the pumps that we include with our digital calibrators and are excellent compliments for the JOFRA DPC-500, APC, CPC, IPI, APM and AMC models. Use these pressure sources to complete your calibration system needs.

**AMETEK®**  
CALIBRATION INSTRUMENTS

**MODEL T-730 / T-740 / T-750**



**Model T-730** pneumatic pressure pump features a rugged pneumatic pump capable of generating test pressures up to 30 psi (2 bar). Ideal for pressure instrument calibration, the Model T-730 can be hand-operated in the field or mounted on a test stand in the instrument shop.

This pump features an extended range vernier adjustment for precisely controlling pump pressure and comfortable pistol grip handle.

**Model T-740** pneumatic pressure pump is similar to the T-730, except that it can generate pressures up to 300 psi (20.6 bar).

**Model T-750** vacuum pump is ideal for testing and calibrating vacuum instruments in ranges up to 25-inches Hg vacuum.

**Functional specifications - Model T-730**

Operating Pressure (Maximum)..... 2 bar / 30 psi  
 Wetted Parts..... Aluminum, brass, stainless steel,  
 ..... steel, nylon and Nylantron®  
 “O” Rings.....Buna-N  
 Test medium.....Air  
 Test Connections ..... 0.6 m / 24 in hose with 1/4” BSP  
 ..... and NPT female terminations  
 Net weight ..... 1.11 kg / 2.452 lb

**Functional specifications - Model T-740**

Operating Pressure (Maximum)..... 15 bar / 200 psi  
 Wetted Parts..... Aluminum, brass, stainless steel,  
 ..... steel, nylon and Nylantron®  
 “O” Rings.....Buna-N  
 Test medium.....Air  
 Test Connections ..... 0.6 m / 24 in hose with 1/4” BSP  
 ..... and NPT female terminations  
 Net weight ..... 1.04 kg / 2.30 lb

**Functional specifications - Model T-750**

Operating Pressure (Maximum)..... -0.850 bar / 25 inHg  
 Wetted Parts..... Aluminum, brass, stainless steel,  
 ..... steel, nylon and Nylantron®  
 “O” Rings.....Buna-N  
 Test medium.....Air  
 Test Connections ..... 0.6 m / 24 in hose with 1/4” BSP  
 ..... and NPT female terminations  
 Net weight ..... 1.08 kg / 2.38 lb

**Ordering code - Model T-730 / T-740 / T-750**

T-730 Pneumatic pump, 0 to 2 bar (30 psi)  
 T-740 Pneumatic pump, 0 to 15 bar (200 psi)  
 T-750 Vacuum pump, -0,850 to 0 bar (-25 to 0 inHg)

**MODEL T-810 / T-811**



**Model T-810** pneumatic pressure pump is an economical and lightweight pump. The pump has a T-fitting allowing for connection to the 1/8 in NPT threads and the 1/8 BSP threads on the T-810M model. The body has a flat on one side preventing it from rolling and offers features such as a fine control vernier and a thumbscrew for rapid or gradual pressure release. Hose kits are available for easy connection to test instrumentation.

**Model T-811** vacuum pump is similar to the T-810 except it is designed to generate up to 600 mmHg vacuum. It is available with metric threads in the T-811M model.

**Functional specifications - Model T-810**

Operating Pressure (Maximum) ..... 15 bar / 200 psi  
 Wetted Parts .....Delrin and stainless steel  
 “O” Rings.....Buna-N  
 Test Connections .....0.125 in FNPT (T-810)  
 ..... 0.125 in FBSPT (T-810-M)  
 Net weight .....0.32 kg / 0.71 lb

**Functional specifications - Model T-811**

Operating Pressure (Maximum).....600 mm Hg vacuum  
 Wetted Parts.....Delrin and Stainless steel  
 “O” Rings.....Buna-N  
 Test Connections ..... 0.6 m / 24 in hose with 1/4” BSP  
 ..... and NPT female terminations  
 Net weight .....0.32 kg / 0.71 lb

**Ordering code - Model T-810 / T-811**

T-810 Pneumatic pump, 0 to 15 bar (200 psi)  
 T-810M Pneumatic pump, Metric BSP, 0 to 15 bar (200 psi)  
 T-811 Vacuum pump, 0 to 600 mm Hg vacuum  
 T-811M Vacuum pump, Metric BSP, 0 to 600 mm Hg vacuum

**MODEL T-930**



**Model T-930** pneumatic pressure pump is an easy-to-use single hand-operated pneumatic pump. The T-930 pump features both vacuum and pressure generation up to 35 bar (500 psi). One button (valve) makes it easy to switch from vacuum to pressure measurements. Built-in release valve, vernier valve for fine adjustment and dual pressure output enable safe and simple operation. The unit offers both metric and imperial threads on the reference connection and the hose.

**Functional specifications - Model T-930**

Operating Pressure (Maximum)..... 35 bar / 500 psi  
 Wetted Parts.....Anodized aluminum, nickel-plated brass,  
 ..... stainless steel, Nylon  
 Test Connections .....Hose 1 m / 40 in with 1/4" BSP  
 ..... and NPT female terminations  
 Net weight ..... 0.96 kg / 2.12 lbs

**Ordering code - Model T-930**

T-930 Pneumatic pump: -0.95 to 35 bar / -28 inHg to 500 psi

**MODEL T-620 / T-620H**



**Model T-620** hydraulic pressure pump is small, lightweight and portable. The T-620 features a transparent reservoir to easy view of the test fluid. The pump is compatible with petroleum-based oils or hydraulic fluids. The reference gauge is mounted on the body manifold with a swivel fitting for easy viewing. A vernier adjustment allows for precisely control pressure. A vent valve is provided for quick and positive shut-off and pressure release. The pump is equipped with a 24 in (60.95 cm) rubber hose with 1/4 in NPT connector and 1/4 in BSP adapter for connecting to the instrument-under-test.

**Functional specifications - Model T-620 / T-620H**

Operating Pressure (Maximum)  
 Model T-620 ..... 200 bar / 3,000 psi  
 Model T-620H..... 350 bar / 5,000 psi  
 Wetted Parts.... Aluminum, brass, stainless steel, and Lexan®  
 "O" Rings .....Buna-N  
 Reservoir Capacity..... 200 cl / 0.5 pint  
 Test medium ..... Hydraulic oil  
 Test Connections ..... hose 0.5 m / 20 in with 1/4" BSP  
 ..... and NPT female terminations  
 Net weight ..... 0.95 kg / 2.09 lbs

**Ordering code - Model T-620 / T-620H**

T-620 Hydraulic pump, 0 to 200 bar (3,000 psi)  
 T-620H Hydraulic pump, 0 to 350 bar (5,000 psi)

**MODEL P016 / P017**



**Model P016 and P017** screw pump are designed for easy and controlled generation of high pressure. The screw pump has a 4-output manifold, fine adjustment, vernier valve, liquid reservoir, and fittings are optional. The screw pump may be delivered for hydraulic oil or water. Standard thread connections are 1/4 in BSP and adapters are available.

**Functional specifications - Model P016 and P017**

Operating Pressure (Maximum)  
 Screw pump oil (P016) ..... 350 bar / 5,000 psi  
 Screw pump water (P017) ..... 350 bar / 5,000 psi  
 Wetted Parts..... Aluminum, brass, stainless steel  
 Test medium ..... Hydraulic oil or water  
 Test Connections ..... 4 x 1/4" BSP  
 Net weight ..... 3.7 kg / 8.16 lbs

**Ordering code - Model P016 / P017**

65-P016 Screw pump oil: 0 to 350 bar (5,000 psi)  
 65-P017 Screw pump water: 0 to 350 bar (5,000 psi)

**MODEL P014**



**Model P014** hydraulic pump is designed for high pressure oil applications. The small size and light weight make it a sensible, rugged, and portable solution. The pump has a 4 pressure output manifold similar to the JOFRA screw pump. Fine adjustment vernier valve and fittings are optional. Standard thread connections are 1/4 in BSP and adapters are available.

**Functional specifications - Model P014**

Operating Pressure (Maximum)..... 700 bar / 10,000 psi  
 Wetted Parts..... Aluminum, brass, stainless steel  
 Test medium ..... Oil  
 Test Connections ..... 2 x 1/4" BSP female  
 Net weight ..... 5.28 kg / 11.64 lbs

**Ordering code - Model P014**

65-P014 Hydraulic pump for oil: 0 to 700 bar (10,000 psi)

## MODEL TYPE T



**Model type T** pump is designed for high pressure applications up to 15,000 psi (1,000 bar). The pump may be ordered with either oil or a water/alcohol mixture as the pressure medium. The pump is constructed of 300 series stainless steel and Monel allowing for the use of other hydraulic media. There are three available seal packages for the system: Buna-N, Viton®, and EPT. 1). The Type T pump features a

dual pressure output manifold, fine adjustment vernier valve, relief valve, and dual volume control for rapid pressure increase at lower pressures and easier pumping at higher pressures.

1) Customer must verify compatibility of seals and pump materials with pressure medium. Viton is a registered trademark.

### Functional specifications - Model Type T

Operating Pressure (Maximum)..... 1.000 bar / 15,000 psi  
Wetted Parts.....Stainless steel and Monel  
Test Connections .....BSP fittings 1/4" and 1/2" female;  
.....NPT fittings 1/4" and 1/2" female  
Net weight ..... 10.8 kg / 23,8 lbs

### Ordering code - Model Type T

T-1	Hydraulic pump: 0 to 1,000 bar (15,000 psi) water - Buna N <sub>2</sub>
T-1/VITON	Hydraulic pump: 0 to 1,000 bar (15,000 psi) water - Viton
T-1/EPT	Hydraulic pump: 0 to 1,000 bar (15,000 psi) water - EPT
T-1/OIL	Hydraulic pump: 0 to 1,000 bar (15,000 psi) oil - Buna N <sub>2</sub>
T-1/OIL/VITON	Hydraulic pump: 0 to 1,000 bar (15,000 psi) oil - Viton
T-1/OIL/EPT	Hydraulic pump: 0 to 1,000 bar (15,000 psi) oil - EPT

2) Standard

### Pumps as part of ready-to-use pressure systems

All pumps from AMETEK is offered as part of a complete ready-to-use pressure systems together with the JOFRA DPC-500, APC, CPC and IPI calibrators, which are as standard delivered in a carrying case, including pump, hose, set of fittings, batteries, test leads, user manual, and a traceable calibration certificate.

For all pressure systems, the pump and the indicator are separate systems. Therefore, a replacement of the pump does not mean that the complete system has to be sent in for repair. Maintenance of the instrument is also made easy. Recalibration of the unit can be performed locally with an accurate pressure reference: No need to send the unit back to the manufacturer for recalibration. If a factory calibration is required, the pump and indicator are independent and only the indicator needs to be returned.

Find more information about JOFRA pressure calibrators at [www.jofra.com](http://www.jofra.com)



**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**<sup>®</sup>  
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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