



ACCURACY

0 to 20% of Range: $\pm(0.04\%$ of Full Scale)

20% to 110% of Range: $\pm(0.2\%$ of Reading)

Vacuum: $\pm(0.25\%$ of Full Scale*)

* Full Scale = -1.0 kg/cm^2

Includes all effects of linearity, hysteresis, repeatability, temperature, and stability for two years.

All models indicate vacuum, but vacuum specification applies to 2 kg, 10 kg, and 20 kg models only.

Not recommended for continuous use below -1.0 kg/cm^2 . Refer to [XP2I-DP data sheet](#) for gauges that are intended for continuous high vacuum use.

OPERATING TEMPERATURE

Temperature Range: -10 to 50°C (14 to 122°F)

Non-condensing. No change in accuracy over operating temperature range. Gauge must be zeroed to achieve rated specification.

DISPLAY

Screen: **5 digits, 16.8 mm (0.66") high**

Display Rate: **4 readings/second**

LCD readable in sunlight with bright backlight.

POWER

2 x AA: **900 hours, typical**

Extended Battery Life: **1 reading/15 seconds: 3,000 hours**

1 reading/30 seconds: 6,000 hours

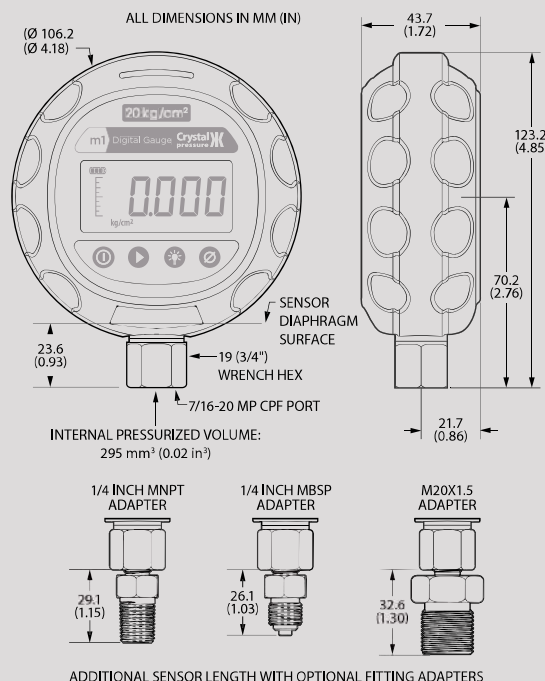
1 reading/60 seconds: 10,000 hours

1 reading/5 minutes: 25,000 hours

1 reading/10 minutes: 30,000 hours

Uses 2 alkaline AA (LR6) batteries. Use of backlight reduces operating time. Extended battery life is keypad selectable. Do not overtighten rear cover when replacing batteries.

m1 Pressure Gauge kg/cm^2



ENCLOSURE

Weight: 331 g (11.7 oz)	<i>Weight includes batteries and protective boot.</i>
Rating: IP65	<i>Water resistant housing incorporating o-ring seals [IEC 60529].</i>
Housing: Polyester/Polycarbonate Blend	<i>LCD protected from impact damage by polycarbonate lens under polyester window.</i>
Keypad and Labels: UV Resistant Polyester	<i>Skydrol® compatible.</i>

SENSOR

Wetted Materials: (WRENCH TIGHT) 316 stainless steel (FINGER TIGHT) 316 stainless steel and Viton® (internal o-ring)	<i>All welded, with a permanently filled diaphragm seal.</i>
Diaphragm Seal Fluid: Silicone Oil	<i>Metal to metal cone seal; O-ring can be removed if necessary.</i>
Connection: Crystal CPF* Female	<i>1/4" medium pressure tube system compatible with HIP LM4 and LF4 Series, Autoclave Engr SF250CX Male and Female Series.</i>
	<i>1/4" male NPT adapter included unless BSP or M20 is specified.</i>
	<i>*U.S. Patent No. 8,794,677</i>

STORAGE TEMPERATURE

Temperature Range: -40 to 75° C (-40 to 167° F)	<i>Batteries should be removed if stored for more than one month.</i>
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SPECIAL FEATURES

Averaging: Smooths unsteady readings (2 to 20 samples)
Vertical Bar Graph: Percent pressure indication for quick reference
Capture: Minimum (LO) and Maximum (HI)

m1 Pressure Gauge **kg/cm²**

CERTIFICATIONS



m1 complies with the Electromagnetic Compatibility and Pressure Equipment Directives. Refer to the EC Declaration of Conformity for specific details.



m1 is approved for use as a portable test instrument for Marine use and complies with Det Norske Veritas' Rules for Classification of Ships, High Speed & Light Craft, and Offshore Standards.

ACCESSORIES



Protective Boot P/N 3436 (included)

Protect your m1 from harsh environments with our form fitting chemical resistant thermoplastic boot (Skydrol fluid compatible).

COMPLEMENTARY PRODUCTS

Crystal Engineering offers a wide range of products that work with the m1:

- [Fittings that connect without tools, safely and without leaks](#)
- [Lightweight, super flexible high pressure hoses](#)
- [Fitting kits and adapters](#)
- [Pneumatic hand pumps](#)
- [Hydraulic hand pumps](#)
- [Portable pressure comparators](#)

RANGE & RESOLUTION TABLE

P/N	Range (kg)	Over-pressure	Display Resolution									
			kg/cm ²	bar	mbar	kPa	MPa	psi	in H ₂ O	in Hg	mm Hg	mm H ₂ O
2KG	2	3.0 x	0.0001	0.0001	0.1	0.01		0.001	0.1	0.01	0.1	1
10KG	10	2.0 x	0.001	0.001	1	0.1	0.0001	0.01	0.1	0.01	1	
20KG	20	2.0 x	0.001	0.001	1	0.1	0.0001	0.01		0.1	1	
100KG	100	2.0 x	0.01	0.01		1	0.001	0.1		0.1		
200KG	200	1.5 x	0.01	0.01		1	0.001	0.1		1		
700KG	700	1.5 x	0.1	0.1			0.01	1		1		

ORDERING INFORMATION*

Model	P/N	Adapter Type
M1		
	Standard:	NPT (omit)
	Optional:	G 1/4 B -BSP
		M20x1.5 ... -M20

Pump System*	Carrying Case~
No Pump. (omit)	
System A. -AXX	Aluminum ... (omit)
System A. -AHX	Waterproof. -W
System B. -BXX	
System B. -BHX	
System C. -CXX	
System C. -CHX	
System D. -DOX	
System D. -DWX	
System E. -EOX	
System F. -FOV	
System F. -FWV	
System G. -GOX	
System G. -GWX	
System H. -HOX	

AMETEK offers a variety of solutions for pressure generation and measurement. Our line of products for pressure generation includes everything from small pneumatic hand pumps to a precision, hydraulic pressure comparator capable of generating up to 15 000 psi / 1000 bar / 100 MPa.

All of our pumps may be ordered as part of a Pump System, complete with an m1 and delivered in a sturdy carrying case with custom insert.

* Refer to the following page for a more detailed description of each pump system.

SAMPLE PART NUMBERS

M1-20KG 20 kg standard gauge, with a 1/4" NPT pressure fitting.
M1-100KG-BSP 100 kg gauge, with a 1/4" BSP pressure fitting.
M1-200KG-CHX-W 200 kg standard gauge with a System C pump system and a waterproof carrying case.

► Ordering a Pump System Only
















Any pump system, carrying case, and connection fittings for an m1 pressure gauge may be ordered separately from the gauge. Enter M1-NONE followed by the Pump System part number and the Carrying Case option code.

SAMPLE PART NUMBER

M1-NONE-GOX-W ... System G pump system with a waterproof carrying case.

* KG versions available in USA direct from factory only.

PUMP SYSTEMS OVERVIEW

Pump System	Part Number	Pressure Range	Pneumatic	Hydraulic	Hand Pump	Bench Top	Included Pump	Case Options	
								Aluminum	Waterproof (Pelican Case)
System A	AXX	0 to 30psi / 2 bar	■		■		 T-960-CPF	■	■
	AHX	0 to 580 psi / 40 bar	■		■		 T-970-CPF	■	■
System B	BXX	-25 inHg to 30 psi / -0.85 to 2 bar	■		■		 T-965-CPF	■	■
	BHX	-27 inHg to 580 psi / -0.91 to 40 bar	■		■		 T-975-CPF	■	■
System C	CXX	0 to 3000 psi / 200 bar		■ (Oil)	■		 T-620-CPF	■	■
	CHX	0 to 5000 psi / 350 bar		■ (Oil)	■		 T-620H-CPF	■	■
System D	DOX	0 to 5000 psi / 350 bar		■ (Oil)		■	 P-018-CPF	■	
	DWX	0 to 5000 psi / 350 bar		■ (Water)		■	 P-014-CPF	■	
System E	EOX	0 to 10 000 psi / 700 bar		■ (Oil)		■	 P-014-CPF	■	
System F	FOV	0 to 15 000 psi / 1000 bar		■ (Oil)		■	 T-1-CPF	■	
	FWV	0 to 15 000 psi / 1000 bar		■ (Water)		■	 T-1-CPF	■	
System G	GOX	0 to 15 000 psi / 1000 bar		■ (Oil)		■	 GaugeCalHP		■
	GWX	0 to 15 000 psi / 1000 bar		■ (Water)		■	 GaugeCalHP		■
System H	HOX	-27 inHg to 580 psi / -0.91 to 40 bar	■		■		 T-975-CPF		■
		0 to 5000 psi / 350 bar		■ (Oil)	■		 T-620H-CPF		■