

CANADA SENSORS TECHNOLOGY INC.



Manufacturer of Advanced Technology Pressure & Level Transmitters

CRN Approval, ISO 9001:2015 Certified



PRESSURE TRANSMITTER – PROCESS 1-HYD

HART™ Enabled Intrinsically Safe Model, HART™ Enabled General Purpose Model for Hydrogen Service

Canada Sensors *intelligent* transmitters bring the latest technology to the pressure transmitter & related instrumentation market-place with self-diagnostic features which will maintain consistent accuracy throughout temperature and pressure scales.

FEATURES

- ✓ HART™ Protocol
- ✓ Hydrogen Service
- ✓ Intrinsically Safe – HazLoc Zone 0
- ✓ On-board Barometric Sensor
- ✓ Eliminate Output Drift
- ✓ Self-Adjusting Real Time Data
- ✓ Real Time Temperature Compensation
- ✓ On-board RTD
- ✓ Pressure Ranges up to 10,000 PSI
- ✓ Characterized Sensor Head (Plasma Gold Coated)
- ✓ Monolithic Block Sensor Head >100 million cycles
- ✓ Full Scale Accuracy 0.1%
- ✓ RoHS2 Compliant
- ✓ 1 Year Conditional Warranty

TECHNICAL DATA

HART™ Enabled

Two Wire 4-20 mA Output Pressure Transmitter

Process 1-HYD Pressure Transmitters are scaled & digitally mapped to temperatures from -40C to +85C

Temperature compensation, through a mathematical formula, will occur at multiple levels throughout the range of the pressure transmitter offering highly accurate information.

The Process 1-HYD transmitter has an on-board barometric calibration chip. This is a self-zeroing and self-adjusting feature with zero drift at any altitude or day or night. The transmitter does not require any external adjustments.

Highly accurate and repeatable 0.1% full scale accuracy

Intrinsically Safe - HazLoc Zone 0

Ingress Protection is minimum IP67

Operating pressure ranges from -30"Hg vacuum to 10,000 PSI

Digitally mapped error correction throughout the pressure range

Individually characterized sensor head – Two versions: 316SS silicone oil filled sensor or machined one piece monolithic block sensor head with no internal o-rings or seals which are single seal compliant to ANSI/ISA-12.27.01.2003

Corrosion Inhibiting feature is standard on the Process 1-HYD model. This PTFE corrosion protection protects from ambient conditions such as UV rays, humidity, sand, sea-spray, hydrogen sulfide environments, and most chemicals.

Gold coating on the process connection provides protection from hydrogen molecule migration and hydrogen embrittlement to ASTM F519

Multiple Electrical Connectors & Housings Available

Multiple Process Connection Threads Available in 316SS only for this model



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**Manufacturer of Advanced Technology
Level and Pressure Transmitters**

Additional Features: Powder Coated Canister
Engraved Product Information
Laser Welded
1 Year Conditional Warranty (Serial Number Traceability)

Advanced Technology ... Improving Business
Smart THROUGH and THROUGH
This transmitter packs a powerful punch
No drift. No set-up. It just works.

MISSION STATEMENT

Canada Sensors Technology Inc. strives to build a mutually positive and beneficial relationship with our customers, ensuring their long-term success, through the understanding of their needs and the needs of their customers.

We will listen to our customers and constantly improve our technologies as our customers' needs change with time.

Canada Sensors Technology Inc. is committed to providing the highest level of product quality and customer service. Canada Sensors Technology Inc. is ISO 9001:2015 certified.

Technical Specifications - Process 1 - HYD

Performance

Accuracy:	0.075% Full Scale Output
Stability:	< 0.075% Full Scale Output
Temperature Range:	-40C to +85C Calibrated
Temperature Accuracy:	< 0.075% Full Scale Output
Pressure Cycles:	> 100 Million
Over Range Protection:	2 x Full Scale Output
Burst Pressure:	5 x Full Scale Output

NOTE: Over Range Protection and Burst Pressure shall be reduced to 1.5 x Full Scale Output for pressures exceeding 10,000 PSI due to thread limitations

Electrical Data

Excitation:	14-33 VDC (product accessories may alter excitation values)
Comms:	HART Protocol & Modbus in Development
Current Consumption:	3.6 mA
Zero Offset:	4 mA
Span Tolerance:	Range or Sensor with Turndown
Output Load:	500 OHMS
Barometric Chip:	Monitoring Range 88KPA (12.76 PSI) to 108 KPA (15.7 PSI)
RTD Temperature:	On Board 100 ohm Platinum
Intrinsically Safe - HazLoc Zone 0	

NOTE: An Ex Barrier is required for any connections that cross the boundary from an Ordinary Location (Non-Classified/Non-Hazardous) to a Classified (Hazardous) location

Environmental Data

Temperature

Operating:	-40C to +85C (product accessories may alter temperature ratings)
Storage:	-55C to +125C

Thermal Limits

Compensated Range:	-40C to +85C
Temp Comp Zero:	0.075% Full Scale Output @ +85C
Temp Comp Span:	0.075% Full Scale Output @ +85C

Physical Data

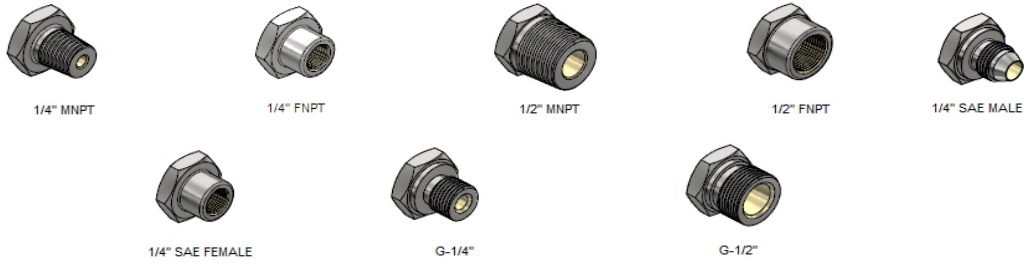
Sensor:	Gold Coated ASTM F519 Treatment is standard on all Monolithic Block - 316SS
Vibration:	25gRMS from 20Hz to 2000Hz
Shock:	100g , half sine, 11mSec.
Sensor:	Gold Coated ASTM F519 Treatment is standard on all Silicone Oil Filled - 316SS
Vibration:	25gRMS from 20Hz to 2000Hz
Shock:	100g , half sine, 11mSec.
NOTE: Silicone Oil Filled Sensors are a factory option for low pressure	
Process Connection:	1/4" MNPT; 1/4" FNPT; 1/2" MNPT; 1/2" FNPT; 1/4" SAE-Male; 1/4" SAE-Female; G-1/4"; G-1/2"
NOTE: ANSI Regulations dictate that NPT Thread should not to exceed 8,000 PSI @ +125C	
Electrical Connection:	316SS Weld-on: 6 Pin 90 Degree Military Connector; 1/2" MNPT Solid Conduit; 1/2" MNPT Positional Swivel Conduit; or w/ Aluminum XP Heads; Bendix Twist Connector 6 Pin (PTIH-10-6P); M12

NOTE: 316SS Wetted Parts are the minimum requirement for NACE compliance

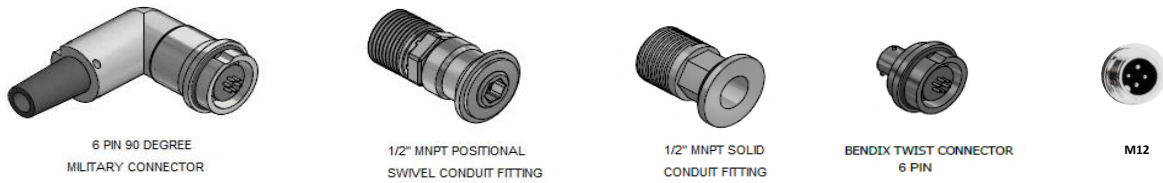
Product Weights:

	OZ	LBS	KG
Process 1-HYD w/ 316SS Weld-on 6 Pin 90 Degree Military Connector	17.5	1.1	0.50
Process 1-HYD w/ 316SS Weld-on x 1/2 MNPT Positional Swivel Conduit Fitting (2 ft Flying Lead)	25.5	1.6	0.72
Process 1-HYD w/ 316SS Weld-on 3/8" MNPT Solid Conduit Fitting (2 ft Flying Lead); Bendix Twist Connector 6 Pin (PTIH-10-6P); M12	23.5	1.5	0.67
Process 1-HYD w/ Aluminum XP Head (1/2" FNPT x 3) - 316SS Weld-on 1/2" MNPT Positional Swivel Conduit Fitting - Blank - No Window	60.5	3.8	1.72
Process 1-HYD w/ Aluminum XP Head (1/2" FNPT x 3) - 316SS Weld-on 1/2" MNPT Solid Conduit Fitting - Blank - No Window	58.5	3.7	1.66
Process 1-HYD w/ Aluminum XP Head (1/2" FNPT x 3) - 316SS Weld-on 1/2" MNPT Positional Swivel Conduit Fitting w/ 3 1/2 + Digits LCD Loop Powered Display	73.5	4.6	2.08
Process 1-HYD w/ Aluminum XP Head (1/2" FNPT x 3) - 316SS Weld-on 1/2" MNPT Solid Conduit Fitting w/ 3 1/2 + Digits LCD Loop Powered Display	71.5	4.5	2.03
Process 1-HYD w/ Aluminum XP Head (1/2" FNPT x 3) - 316SS Weld-on 1/2" MNPT Positional Swivel Conduit Fitting w/ 5 Digits LCD Loop Powered Display	113.5	7.1	3.22
Process 1-HYD w/ Aluminum XP Head (1/2" FNPT x 3) - 316SS Weld-on 1/2" MNPT Solid Conduit Fitting w/ 5 Digits LCD Loop Powered Display	111.5	7.0	3.16

Process Connections:

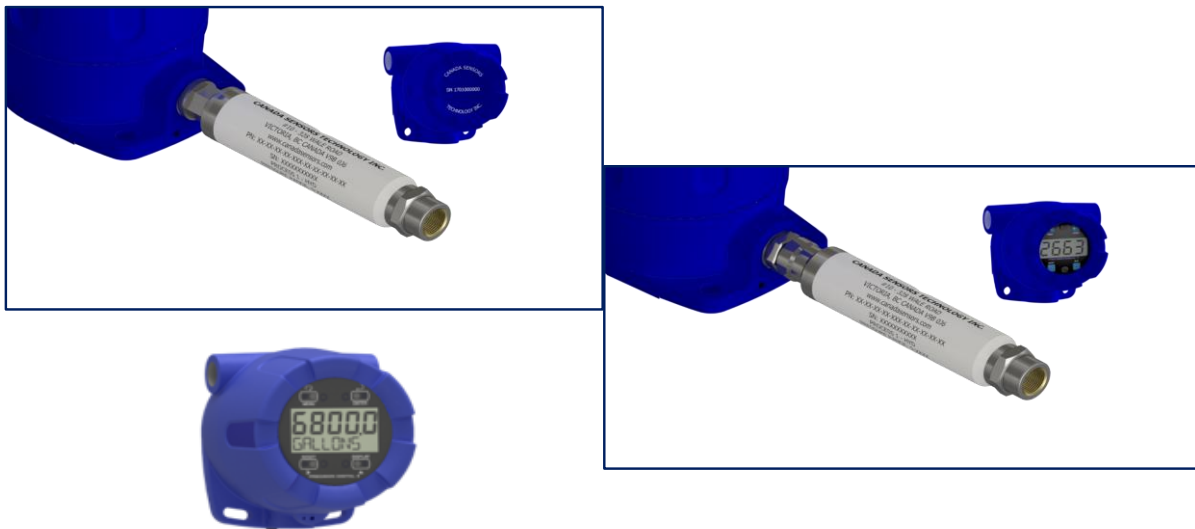


Electrical Connections:



Product Accessories:

- Aluminum XP Head (1/2" FNPT x 3) - 316SS Weld-on 1/2" MNPT Positional Swivel Conduit Fitting - Blank - No Window
- Aluminum XP Head (1/2" FNPT x 3) - 316SS Weld-on 1/2" MNPT Solid Conduit Fitting - Blank - No Window
- Aluminum XP Head (1/2" FNPT x 3) - 316SS Weld-on 1/2" MNPT Positional Swivel Conduit Fitting w/ 3 1/2 + Digits LCD Loop Powered Display
- Aluminum XP Head (1/2" FNPT x 3) - 316SS Weld-on 1/2" MNPT Solid Conduit Fitting w/ 3 1/2 + Digits LCD Loop Powered Display
- Aluminum XP Head (1/2" FNPT x 3) - 316SS Weld-on 1/2" MNPT Positional Swivel Conduit Fitting w/ 5 Digits LCD Loop Powered Display
- Aluminum XP Head (1/2" FNPT x 3) - 316SS Weld-on 1/2" MNPT Solid Conduit Fitting w/ 5 Digits LCD Loop Powered Display



Product Nomenclature

MODEL: Pressure Transmitter - Process 1-HYD

PN Example: A-B-C-D-E-F-G-H-I-J

01-HYD-01-01-01-025-02-02-08-03-01:

Process 1-HYD Transmitter, 4-20 mA, HART Enabled, Gauge (PSIG), 0 - 1500 PSI, 1/4" FNPT, 316SS Wetted Parts, 316SS Weld-on 1/2" MNPT Solid Conduit Fitting with 4 ft Flying Lead, Gold Plating, 0.075% Accuracy

	A	B	C	D	E	F	G	H	I	J
Model										
01-HYD	-	Process 1-HYD								
Output										
01	-	4-20 mA								
Calibration Adjustment										
01	-	HART Enabled								
Pressure Reference										
01	-	Gauge (PSIG)								
Pressure Range										
001	-	-30"Hg Vac - 0 PSI								
002	-	-30"Hg Vac x 15 PSI								
003	-	-30"Hg Vac x 30 PSI								
004	-	-30"Hg Vac x 60 PSI								
005	-	-30"Hg Vac x 100 PSI								
006	-	-30"Hg Vac x 150 PSI								
007	-	-30"Hg Vac x 200 PSI								
008	-	-30"Hg Vac x 300 PSI								
009	-	-30"Hg Vac x 600 PSI								
010	-	0 - 2 PSI								
011	-	0 - 5 PSI								
012	-	0 - 10 PSI								
013	-	0 - 15 PSI								
014	-	0 - 30 PSI								
015	-	0 - 60 PSI								
016	-	0 - 100 PSI								
017	-	0 - 150 PSI								
018	-	0 - 200 PSI								
019	-	0 - 300 PSI								
020	-	0 - 400 PSI								
021	-	0 - 500 PSI								
022	-	0 - 600 PSI								
023	-	0 - 750 PSI								
024	-	0 - 1000 PSI								
025	-	0 - 1500 PSI								
026	-	0 - 2000 PSI								
027	-	0 - 3000 PSI								
028	-	0 - 4000 PSI								
029	-	0 - 5000 PSI								
030	-	0 - 6000 PSI								
031	-	0 - 7500 PSI								
032	-	0 - 10000 PSI								
Process Connection										
01	-	1/4" MNPT (Maximum Pressure 10,000 PSI)								
02	-	1/4" FNPT (Maximum Pressure 10,000 PSI)								
03	-	1/2" MNPT (Maximum Pressure 10,000 PSI)								
04	-	1/2" FNPT (Maximum Pressure 10,000 PSI)								
05	-	1/4" SAE-Male (Maximum Pressure 10,000 PSI)								
06	-	1/4" SAE-Female (Maximum Pressure 10,000 PSI)								
07	-	G-1/4" (Maximum Pressure 5,000 PSI)								
08	-	G-1/2" (Maximum Pressure 5,000 PSI)								
Wetted Parts										
02	-	316SS								
Electrical Connection										
01	-	316SS Weld-on 6 Pin 90 Degree Military Connector								
02	-	316SS Weld-on 1/2" MNPT Positional Swivel Conduit Fitting (2 ft Flying Lead)								
03	-	316SS Weld-on 1/2" MNPT Positional Swivel Conduit Fitting (4 ft Flying Lead)								
04	-	316SS Weld-on 1/2" MNPT Positional Swivel Conduit Fitting (6 ft Flying Lead)								
05	-	316SS Weld-on 1/2" MNPT Positional Swivel Conduit Fitting (10 ft Flying Lead)								
07	-	316SS Weld-on 1/2" MNPT Solid Conduit Fitting (2 ft Flying Lead)								
08	-	316SS Weld-on 1/2" MNPT Solid Conduit Fitting (4 ft Flying Lead)								
09	-	316SS Weld-on 1/2" MNPT Solid Conduit Fitting (6 ft Flying Lead)								
10	-	316SS Weld-on 1/2" MNPT Solid Conduit Fitting (10 ft Flying Lead)								
31	-	316SS Weld-on Bendix 6-Pin								
32	-	316SS Weld-on M12								
34	-	Aluminum XP Head (1/2" FNPT x 3) - 316SS Weld-on 1/2" MNPT Positional Swivel Conduit Fitting - Blank - No Window								
35	-	Aluminum XP Head (1/2" FNPT x 3) - 316SS Weld-on 1/2" MNPT Solid Conduit Fitting - Blank - No Window								
37	-	Aluminum XP Head (1/2" FNPT x 3) - 316SS Weld-on 1/2" MNPT Positional Swivel Conduit Fitting w/ 3 1/2 + Digits LCD Loop Powered Display								
38	-	Aluminum XP Head (1/2" FNPT x 3) - 316SS Weld-on 1/2" MNPT Solid Conduit Fitting w/ 3 1/2 + Digits LCD Loop Powered Display								
40	-	Aluminum XP Head (1/2" FNPT x 3) - 316SS Weld-on 1/2" MNPT Positional Swivel Conduit Fitting w/ 5 Digits LCD Loop Powered Display								
41	-	Aluminum XP Head (1/2" FNPT x 3) - 316SS Weld-on 1/2" MNPT Solid Conduit Fitting w/ 5 Digits LCD Loop Powered Display								
Environmental Treatment										
03	-	Gold Coating								
Accuracy										
01	-	0.075 %								



E: Alternate Pressure Range Units

kPa

kPa	001 - kPa	-	-100 x 0 kPa
kPa	002 - kPa	-	-100 x 100 kPa
kPa	003 - kPa	-	-100 x 200 kPa
kPa	004 - kPa	-	-100 x 400 kPa
kPa	005 - kPa	-	-100 x 700 kPa
kPa	006 - kPa	-	-100 x 1000 kPa
kPa	007 - kPa	-	-100 x 1400 kPa
kPa	008 - kPa	-	-100 x 2000 kPa
kPa	009 - kPa	-	-100 x 4000 kPa
kPa	010 - kPa	-	0 - 15 kPa
kPa	011 - kPa	-	0 - 35 kPa
kPa	012 - kPa	-	0 - 70 kPa
kPa	013 - kPa	-	0 - 100 kPa
kPa	014 - kPa	-	0 - 200 kPa
kPa	015 - kPa	-	0 - 400 kPa
kPa	016 - kPa	-	0 - 700 kPa
kPa	017 - kPa	-	0 - 1000 kPa
kPa	018 - kPa	-	0 - 1400 kPa
kPa	019 - kPa	-	0 - 2000 kPa
kPa	020 - kPa	-	0 - 2800 kPa
kPa	021 - kPa	-	0 - 3500 kPa
kPa	022 - kPa	-	0 - 4000 kPa
kPa	023 - kPa	-	0 - 5000 kPa
kPa	024 - kPa	-	0 - 7000 kPa
kPa	025 - kPa	-	0 - 10000 kPa
kPa	026 - kPa	-	0 - 14000 kPa
kPa	027 - kPa	-	0 - 20000 kPa
kPa	028 - kPa	-	0 - 28000 kPa
kPa	029 - kPa	-	0 - 35000 kPa
kPa	030 - kPa	-	0 - 40000 kPa
kPa	031 - kPa	-	0 - 50000 kPa
kPa	032 - kPa	-	0 - 70000 kPa

mBar

mBar	001 - mBar	-	-1000 x 0 mBar
mBar	002 - mBar	-	-1000 x 1000 mBar
mBar	003 - mBar	-	-1000 x 2000 mBar
mBar	004 - mBar	-	-1000 x 4000 mBar
mBar	005 - mBar	-	-1000 x 7000 mBar
mBar	006 - mBar	-	-1000 x 10000 mBar
mBar	007 - mBar	-	-1000 x 14000 mBar
mBar	008 - mBar	-	-1000 x 20000 mBar
mBar	009 - mBar	-	-1000 x 40000 mBar
mBar	010 - mBar	-	0 - 150 mBar
mBar	011 - mBar	-	0 - 350 mBar
mBar	012 - mBar	-	0 - 700 mBar
mBar	013 - mBar	-	0 - 1000 mBar
mBar	014 - mBar	-	0 - 2000 mBar
mBar	015 - mBar	-	0 - 4000 mBar
mBar	016 - mBar	-	0 - 7000 mBar
mBar	017 - mBar	-	0 - 10000 mBar
mBar	018 - mBar	-	0 - 14000 mBar
mBar	019 - mBar	-	0 - 20000 mBar
mBar	020 - mBar	-	0 - 28000 mBar
mBar	021 - mBar	-	0 - 35000 mBar
mBar	022 - mBar	-	0 - 40000 mBar
mBar	023 - mBar	-	0 - 50000 mBar
mBar	024 - mBar	-	0 - 70000 mBar
mBar	025 - mBar	-	0 - 100000 mBar
mBar	026 - mBar	-	0 - 140000 mBar
mBar	027 - mBar	-	0 - 200000 mBar
mBar	028 - mBar	-	0 - 275000 mBar
mBar	029 - mBar	-	0 - 350000 mBar
mBar	030 - mBar	-	0 - 400000 mBar
mBar	031 - mBar	-	0 - 500000 mBar
mBar	032 - mBar	-	0 - 700000 mBar

mm Hg	001 - mm Hg	-	-1500 x 0 mm Hg
mm Hg	002 - mm Hg	-	-1500 x 800 mm Hg
mm Hg	003 - mm Hg	-	-1500 x 1500 mm Hg
mm Hg	004 - mm Hg	-	-1500 x 3000 mm Hg
mm Hg	005 - mm Hg	-	-1500 x 5000 mm Hg
mm Hg	006 - mm Hg	-	-1500 x 8000 mm Hg
mm Hg	007 - mm Hg	-	-1500 x 10000 mm Hg
mm Hg	008 - mm Hg	-	-1500 x 15000 mm Hg
mm Hg	009 - mm Hg	-	-1500 x 30000 mm Hg
mm Hg	010 - mm Hg	-	0 - 100 mm Hg
mm Hg	011 - mm Hg	-	0 - 250 mm Hg
mm Hg	012 - mm Hg	-	0 - 500 mm Hg
mm Hg	013 - mm Hg	-	0 - 800 mm Hg
mm Hg	014 - mm Hg	-	0 - 1500 mm Hg
mm Hg	015 - mm Hg	-	0 - 3000 mm Hg
mm Hg	016 - mm Hg	-	0 - 5000 mm Hg
mm Hg	017 - mm Hg	-	0 - 8000 mm Hg
mm Hg	018 - mm Hg	-	0 - 10000 mm Hg
mm Hg	019 - mm Hg	-	0 - 15000 mm Hg
mm Hg	020 - mm Hg	-	0 - 20000 mm Hg
mm Hg	021 - mm Hg	-	0 - 25000 mm Hg
mm Hg	022 - mm Hg	-	0 - 30000 mm Hg
mm Hg	023 - mm Hg	-	0 - 40000 mm Hg
mm Hg	024 - mm Hg	-	0 - 50000 mm Hg
mm Hg	025 - mm Hg	-	0 - 80000 mm Hg
mm Hg	026 - mm Hg	-	0 - 100000 mm Hg
mm Hg	027 - mm Hg	-	0 - 150000 mm Hg
mm Hg	028 - mm Hg	-	0 - 200000 mm Hg
mm Hg	029 - mm Hg	-	0 - 250000 mm Hg
mm Hg	030 - mm Hg	-	0 - 300000 mm Hg
mm Hg	031 - mm Hg	-	0 - 400000 mm Hg
mm Hg	032 - mm Hg	-	0 - 500000 mm Hg
in H₂O (60° F)			
in H ₂ O (60° F)	001 - in H ₂ O	-	-400 x 0 in H ₂ O (60° F)
in H ₂ O (60° F)	002 - in H ₂ O	-	-400 x 400 in H ₂ O (60° F)
in H ₂ O (60° F)	003 - in H ₂ O	-	-400 x 800 in H ₂ O (60° F)
in H ₂ O (60° F)	004 - in H ₂ O	-	-400 x 1500 in H ₂ O (60° F)
in H ₂ O (60° F)	005 - in H ₂ O	-	-400 x 3000 in H ₂ O (60° F)
in H ₂ O (60° F)	006 - in H ₂ O	-	-400 x 4000 in H ₂ O (60° F)
in H ₂ O (60° F)	007 - in H ₂ O	-	-400 x 5000 in H ₂ O (60° F)
in H ₂ O (60° F)	008 - in H ₂ O	-	-400 x 8000 in H ₂ O (60° F)
in H ₂ O (60° F)	009 - in H ₂ O	-	-400 x 16500 in H ₂ O (60° F)
in H ₂ O (60° F)	010 - in H ₂ O	-	0 - 60 H ₂ O (60° F)
in H ₂ O (60° F)	011 - in H ₂ O	-	0 - 150 in H ₂ O (60° F)
in H ₂ O (60° F)	012 - in H ₂ O	-	0 - 300 in H ₂ O (60° F)
in H ₂ O (60° F)	013 - in H ₂ O	-	0 - 400 in H ₂ O (60° F)
in H ₂ O (60° F)	014 - in H ₂ O	-	0 - 800 in H ₂ O (60° F)
in H ₂ O (60° F)	015 - in H ₂ O	-	0 - 1500 in H ₂ O (60° F)
in H ₂ O (60° F)	016 - in H ₂ O	-	0 - 3000 in H ₂ O (60° F)
in H ₂ O (60° F)	017 - in H ₂ O	-	0 - 4000 in H ₂ O (60° F)
in H ₂ O (60° F)	018 - in H ₂ O	-	0 - 5000 in H ₂ O (60° F)
in H ₂ O (60° F)	019 - in H ₂ O	-	0 - 8000 in H ₂ O (60° F)
in H ₂ O (60° F)	020 - in H ₂ O	-	0 - 10000 in H ₂ O (60° F)
in H ₂ O (60° F)	021 - in H ₂ O	-	0 - 14000 in H ₂ O (60° F)
in H ₂ O (60° F)	022 - in H ₂ O	-	0 - 16000 in H ₂ O (60° F)
in H ₂ O (60° F)	023 - in H ₂ O	-	0 - 20000 in H ₂ O (60° F)
in H ₂ O (60° F)	024 - in H ₂ O	-	0 - 30000 in H ₂ O (60° F)
in H ₂ O (60° F)	025 - in H ₂ O	-	0 - 40000 in H ₂ O (60° F)
in H ₂ O (60° F)	026 - in H ₂ O	-	0 - 50000 in H ₂ O (60° F)
in H ₂ O (60° F)	027 - in H ₂ O	-	0 - 80000 in H ₂ O (60° F)
in H ₂ O (60° F)	028 - in H ₂ O	-	0 - 100000 in H ₂ O (60° F)
in H ₂ O (60° F)	029 - in H ₂ O	-	0 - 140000 in H ₂ O (60° F)
in H ₂ O (60° F)	030 - in H ₂ O	-	0 - 160000 in H ₂ O (60° F)
in H ₂ O (60° F)	031 - in H ₂ O	-	0 - 200000 in H ₂ O (60° F)
in H ₂ O (60° F)	032 - in H ₂ O	-	0 - 300000 in H ₂ O (60° F)

mm H₂O (4° C)		
mm H ₂ O (4° C)	001 - mm H ₂ O	- -10000 x 0 mm H ₂ O (4° C)
mm H ₂ O (4° C)	002 - mm H ₂ O	- -10000 x 10000 mm H ₂ O (4° C)
mm H ₂ O (4° C)	003 - mm H ₂ O	- -10000 x 20000 mm H ₂ O (4° C)
mm H ₂ O (4° C)	004 - mm H ₂ O	- -10000 x 40000 mm H ₂ O (4° C)
mm H ₂ O (4° C)	005 - mm H ₂ O	- -10000 x 70000 mm H ₂ O (4° C)
mm H ₂ O (4° C)	006 - mm H ₂ O	- -10000 x 100000 mm H ₂ O (4° C)
mm H ₂ O (4° C)	007 - mm H ₂ O	- -10000 x 140000 mm H ₂ O (4° C)
mm H ₂ O (4° C)	008 - mm H ₂ O	- -10000 x 200000 mm H ₂ O (4° C)
mm H ₂ O (4° C)	009 - mm H ₂ O	- -10000 x 400000 mm H ₂ O (4° C)
mm H ₂ O (4° C)	010 - mm H ₂ O	- 0 - 1400 mm H ₂ O (4° C)
mm H ₂ O (4° C)	011 - mm H ₂ O	- 0 - 3500 mm H ₂ O (4° C)
mm H ₂ O (4° C)	012 - mm H ₂ O	- 0 - 7000 mm H ₂ O (4° C)
mm H ₂ O (4° C)	013 - mm H ₂ O	- 0 - 10000 mm H ₂ O (4° C)
mm H ₂ O (4° C)	014 - mm H ₂ O	- 0 - 20000 mm H ₂ O (4° C)
mm H ₂ O (4° C)	015 - mm H ₂ O	- 0 - 40000 mm H ₂ O (4° C)
mm H ₂ O (4° C)	016 - mm H ₂ O	- 0 - 70000 mm H ₂ O (4° C)
mm H ₂ O (4° C)	017 - mm H ₂ O	- 0 - 100000 mm H ₂ O (4° C)
mm H ₂ O (4° C)	018 - mm H ₂ O	- 0 - 140000 mm H ₂ O (4° C)
mm H ₂ O (4° C)	019 - mm H ₂ O	- 0 - 200000 mm H ₂ O (4° C)
mm H ₂ O (4° C)	020 - mm H ₂ O	- 0 - 300000 mm H ₂ O (4° C)
mm H ₂ O (4° C)	021 - mm H ₂ O	- 0 - 350000 mm H ₂ O (4° C)
mm H ₂ O (4° C)	022 - mm H ₂ O	- 0 - 400000 mm H ₂ O (4° C)
mm H ₂ O (4° C)	023 - mm H ₂ O	- 0 - 500000 mm H ₂ O (4° C)
mm H ₂ O (4° C)	024 - mm H ₂ O	- 0 - 700000 mm H ₂ O (4° C)
mm H ₂ O (4° C)	025 - mm H ₂ O	- 0 - 1000000 mm H ₂ O (4° C)
mm H ₂ O (4° C)	026 - mm H ₂ O	- 0 - 1400000 mm H ₂ O (4° C)
mm H ₂ O (4° C)	027 - mm H ₂ O	- 0 - 2000000 mm H ₂ O (4° C)
mm H ₂ O (4° C)	028 - mm H ₂ O	- 0 - 3000000 mm H ₂ O (4° C)
mm H ₂ O (4° C)	029 - mm H ₂ O	- 0 - 3500000 mm H ₂ O (4° C)
mm H ₂ O (4° C)	030 - mm H ₂ O	- 0 - 4000000 mm H ₂ O (4° C)
mm H ₂ O (4° C)	031 - mm H ₂ O	- 0 - 5000000 mm H ₂ O (4° C)
mm H ₂ O (4° C)	032 - mm H ₂ O	- 0 - 7000000 mm H ₂ O (4° C)
in Hg (32° F)		
in Hg (32° F)	001 - in Hg	- -30 x 0 in Hg (32° F)
in Hg (32° F)	002 - in Hg	- -30 x 30 in Hg (32° F)
in Hg (32° F)	003 - in Hg	- -30 x 60 in Hg (32° F)
in Hg (32° F)	004 - in Hg	- -30 x 125 in Hg (32° F)
in Hg (32° F)	005 - in Hg	- -30 x 200 in Hg (32° F)
in Hg (32° F)	006 - in Hg	- -30 x 300 in Hg (32° F)
in Hg (32° F)	007 - in Hg	- -30 x 400 in Hg (32° F)
in Hg (32° F)	008 - in Hg	- -30 x 600 in Hg (32° F)
in Hg (32° F)	009 - in Hg	- -30 x 1200 in Hg (32° F)
in Hg (32° F)	010 - in Hg	- 0 - 5 in Hg (32° F)
in Hg (32° F)	011 - in Hg	- 0 - 10 in Hg (32° F)
in Hg (32° F)	012 - in Hg	- 0 - 20 in Hg (32° F)
in Hg (32° F)	013 - in Hg	- 0 - 30 in Hg (32° F)
in Hg (32° F)	014 - in Hg	- 0 - 60 in Hg (32° F)
in Hg (32° F)	015 - in Hg	- 0 - 125 in Hg (32° F)
in Hg (32° F)	016 - in Hg	- 0 - 200 in Hg (32° F)
in Hg (32° F)	017 - in Hg	- 0 - 300 in Hg (32° F)
in Hg (32° F)	018 - in Hg	- 0 - 400 in Hg (32° F)
in Hg (32° F)	019 - in Hg	- 0 - 600 in Hg (32° F)
in Hg (32° F)	020 - in Hg	- 0 - 800 in Hg (32° F)
in Hg (32° F)	021 - in Hg	- 0 - 1000 in Hg (32° F)
in Hg (32° F)	022 - in Hg	- 0 - 1200 in Hg (32° F)
in Hg (32° F)	023 - in Hg	- 0 - 1500 in Hg (32° F)
in Hg (32° F)	024 - in Hg	- 0 - 2000 in Hg (32° F)
in Hg (32° F)	025 - in Hg	- 0 - 3000 in Hg (32° F)
in Hg (32° F)	026 - in Hg	- 0 - 4000 in Hg (32° F)
in Hg (32° F)	027 - in Hg	- 0 - 6000 in Hg (32° F)
in Hg (32° F)	028 - in Hg	- 0 - 8000 in Hg (32° F)
in Hg (32° F)	029 - in Hg	- 0 - 10000 in Hg (32° F)
in Hg (32° F)	030 - in Hg	- 0 - 12000 in Hg (32° F)
in Hg (32° F)	031 - in Hg	- 0 - 15000 in Hg (32° F)
in Hg (32° F)	032 - in Hg	- 0 - 20000 in Hg (32° F)

Bar	001 - Bar	-	-1 x 0 Bar
Bar	002 - Bar	-	-1 x 1 Bar
Bar	003 - Bar	-	-1 x 2 Bar
Bar	004 - Bar	-	-1 x 4 Bar
Bar	005 - Bar	-	-1 x 7 Bar
Bar	006 - Bar	-	-1 x 10 Bar
Bar	007 - Bar	-	-1 x 14 Bar
Bar	008 - Bar	-	-1 x 20 Bar
Bar	009 - Bar	-	-1 x 40 Bar
Bar	010 - Bar	-	0 - 0.15 Bar
Bar	011 - Bar	-	0 - 0.35 Bar
Bar	012 - Bar	-	0 - 0.7 Bar
Bar	013 - Bar	-	0 - 1 Bar
Bar	014 - Bar	-	0 - 2 Bar
Bar	015 - Bar	-	0 - 4 Bar
Bar	016 - Bar	-	0 - 7 Bar
Bar	017 - Bar	-	0 - 10 Bar
Bar	018 - Bar	-	0 - 14 Bar
Bar	019 - Bar	-	0 - 20 Bar
Bar	020 - Bar	-	0 - 28 Bar
Bar	021 - Bar	-	0 - 35 Bar
Bar	022 - Bar	-	0 - 40 Bar
Bar	023 - Bar	-	0 - 50 Bar
Bar	024 - Bar	-	0 - 70 Bar
Bar	025 - Bar	-	0 - 100 Bar
Bar	026 - Bar	-	0 - 140 Bar
Bar	027 - Bar	-	0 - 200 Bar
Bar	028 - Bar	-	0 - 275 Bar
Bar	029 - Bar	-	0 - 350 Bar
Bar	030 - Bar	-	0 - 400 Bar
Bar	031 - Bar	-	0 - 500 Bar
Bar	032 - Bar	-	0 - 700 Bar
ata (kg/cm²)			
ata (kg/cm ²)	001 - ata	-	-1 x 0 ata (kg/cm ²)
ata (kg/cm ²)	002 - ata	-	-1 x 1.0 ata (kg/cm ²)
ata (kg/cm ²)	003 - ata	-	-1 x 2.1 ata (kg/cm ²)
ata (kg/cm ²)	004 - ata	-	-1 x 4 ata (kg/cm ²)
ata (kg/cm ²)	005 - ata	-	-1 x 7 ata (kg/cm ²)
ata (kg/cm ²)	006 - ata	-	-1 x 10 ata (kg/cm ²)
ata (kg/cm ²)	007 - ata	-	-1 x 14 ata (kg/cm ²)
ata (kg/cm ²)	008 - ata	-	-1 x 21 ata (kg/cm ²)
ata (kg/cm ²)	009 - ata	-	-1 x 40 ata (kg/cm ²)
ata (kg/cm ²)	010 - ata	-	0 - 0.14 ata (kg/cm ²)
ata (kg/cm ²)	011 - ata	-	0 - 0.35 ata (kg/cm ²)
ata (kg/cm ²)	012 - ata	-	0 - 0.7 ata (kg/cm ²)
ata (kg/cm ²)	013 - ata	-	0 - 1 ata (kg/cm ²)
ata (kg/cm ²)	014 - ata	-	0 - 2.1 ata (kg/cm ²)
ata (kg/cm ²)	015 - ata	-	0 - 4 ata (kg/cm ²)
ata (kg/cm ²)	016 - ata	-	0 - 7 ata (kg/cm ²)
ata (kg/cm ²)	017 - ata	-	0 - 10 ata (kg/cm ²)
ata (kg/cm ²)	018 - ata	-	0 - 14 ata (kg/cm ²)
ata (kg/cm ²)	019 - ata	-	0 - 21 ata (kg/cm ²)
ata (kg/cm ²)	020 - ata	-	0 - 30 ata (kg/cm ²)
ata (kg/cm ²)	021 - ata	-	0 - 35 ata (kg/cm ²)
ata (kg/cm ²)	022 - ata	-	0 - 40 ata (kg/cm ²)
ata (kg/cm ²)	023 - ata	-	0 - 50 ata (kg/cm ²)
ata (kg/cm ²)	024 - ata	-	0 - 70 ata (kg/cm ²)
ata (kg/cm ²)	025 - ata	-	0 - 100 ata (kg/cm ²)
ata (kg/cm ²)	026 - ata	-	0 - 140 ata (kg/cm ²)
ata (kg/cm ²)	027 - ata	-	0 - 210 ata (kg/cm ²)
ata (kg/cm ²)	028 - ata	-	0 - 300 ata (kg/cm ²)
ata (kg/cm ²)	029 - ata	-	0 - 350 ata (kg/cm ²)
ata (kg/cm ²)	030 - ata	-	0 - 400 ata (kg/cm ²)
ata (kg/cm ²)	031 - ata	-	0 - 500 ata (kg/cm ²)
ata (kg/cm ²)	032 - ata	-	0 - 700 ata (kg/cm ²)