



**NOTICE OF APPROVAL
AVIS D'APPROBATION**

G-121

Ottawa, February 20, 1978

Canadian Meter Company
Model 1803B-PFM Pressure Regulator
(Designated as 1800 CP in U.S.)

Apparatus

Inlet Pressure Range, psig:	10 to 125
Outlet Pressure Range, psig:	1 to 30
Approved Maximum Flow of 0.6 Sp. Gr. Gas, SCFH:	Refer to Capacity TABLE
Orifice Diameter:	1/8" x 3/16", 3/16", 1/4"
Valve Body Sizes, NPT:	3/4" x 1", 1 1/4" x 1 1/4"

Set Point Conditions:

1. Inlet Pressure, psig: 80
2. Outlet Pressure, psig: 1 to 30
3. Flowrate, 0.6 Sp. Gr. Gas SCFH: 200

The approved maximum flow for a given installation is determined by the minimum inlet pressure of the system in which the regulator is installed. Reference should be made to the Capacity TABLE included in this Notice of Approval.

Approval is hereby granted for the use of the above apparatus in Pressure Factor Measurement installations. This approval applies only to PFM installations which conform to the requirements of Part VIII of the Departmental Instructions for Inspection of Gas Meters and Auxiliary Devices.

Description

The 1803B-PFM regulator is a pilot loaded regulator with one spring to control all outlet pressures from 1 psig to 30 psig. The main regulator is furnished with one non-adjustable closing spring for all outlet pressures.

Information pertaining to construction, application, mounting position, etc. can be found in the manufacturer's bulletin No. 109.1, issued in November 1977.

The heading of this bulletin refers to the Reliance, Model 1800 CP Regulator with an annotation that in Canada the regulator is known as model 1803B-PFM. The casting for this regulator bears identification No. 1803B-PFM. The reference in the bulletin to a "pressure compensating index" does not apply to the Canadian market for billing applications.

Page 3 of this approval lists the valve head and orifice sizes approved for PFM applications.

For field test procedure reference should be made to the technical Gas Circular G-75-3.

Approval granted to:

Canadian Meter Company Ltd.,
Milton, Ontario and
Edmonton, Alberta.



D.L. Smith, P. Eng.,
Chief,
Electricity and Gas Division.
Legal Metrology Branch

Ref: G6635-C6-5

CAPACITY TABLE FOR MODEL 1803B-PFM REGULATOR

Connection size - 3/4" x 1" N.P.T.

Connection size - 1 1/4" N.P.T.

1/8" x 3/16" Orifice								
Outlet Pressure (psig)	Inlet Pressure (psig)							
	10	15	25	35	50	80**	100	125
1	330	410	500	650	875	1,275	1,550	1,925
2	320	405	500	650	875	1,275	1,550	1,925
5	275	350	500	650	875	1,275	1,550	1,925
10	—	305	490	650	875	1,275	1,550	1,925
20	—	—	365	600	870	1,275	1,550	1,925
30	—	—	—	415	825	1,275	1,550	1,925

3/16" Orifice								
Outlet Pressure (psig)	Inlet Pressure (psig)							
	10	15	25	35	50	80**	100	125
1	715	890	1,170	1,425	1,900	2,810	3,400	4,075
2	695	885	1,170	1,425	1,900	2,810	3,400	4,075
5	550	820	1,170	1,425	1,900	2,810	3,400	4,075
10	—	665	1,155	1,425	1,900	2,810	3,400	4,075
20	—	—	750	1,310	1,890	2,810	3,400	4,075
30	—	—	—	895	1,790	2,810	3,400	4,075

1/4" Orifice								
Outlet Pressure (psig)	Inlet Pressure (psig)							
	10	15	25	35	50	80**	100	125
1	1,235	1,545	2,050	2,550	3,300	4,925	5,930	7,250
2	1,205	1,535	2,050	2,550	3,300	4,925	5,930	7,250
5	1,000	1,375	2,050	2,550	3,300	4,925	5,930	7,250
10	—	1,070	1,925	2,550	3,300	4,925	5,930	7,250
20	—	—	1,125	2,150	3,290	4,925	5,930	7,250
30	—	—	—	1,325	3,110	4,925	5,930	7,250

1/8" x 3/16" Orifice								
Outlet Pressure (psig)	Inlet Pressure (psig)							
	10	15	25	35	50	80**	100	125
1	330	410	550	685	895	1,305	1,580	1,925
2	320	405	550	685	895	1,305	1,580	1,925
5	275	385	550	685	895	1,305	1,580	1,925
10	—	305	530	685	895	1,305	1,580	1,925
20	—	—	365	630	890	1,305	1,580	1,925
30	—	—	—	415	825	1,305	1,580	1,925

3/16" Orifice								
Outlet Pressure (psig)	Inlet Pressure (psig)							
	10	15	25	35	50	80**	100	125
1	715	890	1,190	1,490	1,935	2,835	3,435	4,180
2	695	885	1,190	1,490	1,935	2,835	3,435	4,180
5	595	840	1,190	1,490	1,935	2,835	3,435	4,180
10	—	665	1,155	1,490	1,935	2,835	3,435	4,180
20	—	—	790	1,365	1,930	2,835	3,435	4,180
30	—	—	—	895	1,790	2,835	3,435	4,180

1/4" Orifice								
Outlet Pressure (psig)	Inlet Pressure (psig)							
	10	15	25	35	50	80**	100	125
1	1,235	1,545	2,065	2,585	3,365	4,925	5,965	7,265
2	1,205	1,535	2,065	2,585	3,365	4,925	5,965	7,265
5	1,035	1,460	2,065	2,585	3,365	4,925	5,965	7,265
10	—	1,155	2,000	2,585	3,365	4,925	5,965	7,265
20	—	—	1,370	2,375	3,355	4,925	5,965	7,265
30	—	—	—	1,555	3,110	4,925	5,965	7,265

NOTE: Capacity figures shown represent the capability of the regulator when installed with adequately sized downstream piping.

The following table may be used as a guide in sizing downstream piping:

Pipe Size	Maximum Flow SCFH
3/4"	2,000
1"	3,000
1 1/4"	6,000
1 1/2"	9,000

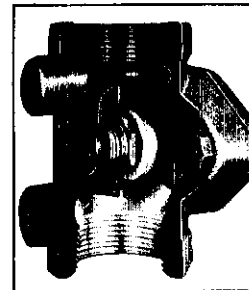
**Set Inlet Pressure for all outlet pressures
Set Flow 200 SCFH of 0.60 Specific Gravity Gas

At given outlet pressure setting, the outlet pressure is controlled to ± 1% absolute outlet pressure over full range of inlet pressure shown.

Features

CONTROLLED PERFORMANCE STABILITY
PRINCIPLE OF PILOT LOADING & PRESSURE
BALANCING A LARGE MAIN DIAPHRAGM
ASSURES STABLE & NON-PULSATING
PRECISION CONTROL OVER A WIDE
RANGE OF PRESSURE & FLOWS.

INTERCHANGEABLE
ORIFICES & SEATS
REMOVABLE WITHOUT
BREAKING ANY PIPE JOINTS



TEST PRESSURE TAP CONNECTION
(OPTIONAL) FOR USE WITH
PETE'S PLUG (OPTIONAL)
ELIMINATES COSTLY GAGES

TAKE PRESSURE READINGS QUICKLY
WITH LINE PRESSURIZED

CONNECTION
ROTATED 90°

HIGH TENSILE
IRON BODY

SCREENED INLET TO PILOT

ONE SPRING CONTROLS ALL OUTLET
PRESSURES 1 PSIG TO 30 PSIG

EASY ADJUSTMENT
WITH LOCKING FEATURE

CLOSING SPRING
(FOR ALL OUTLET PRESSURES)

DIAPHRAGMS
NYLON INSERTED
BUNA "N" RUBBER ESPECIALLY
SELECTED FOR SENSITIVE
OPERATION & STRENGTH

FLANGE TYPE UNION
LOOSEN TWO BOLTS TO ROTATE
DIAPHRAGM ASSEMBLY TO ANY
DESIRED POSITION

DIE-CAST ALUMINUM BODY
RESULTS IN PRESSURE TIGHT,
FINE FINISH CASTING,
HIGH STRENGTH & LIGHT WEIGHT