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NOTICE OF APPROVAL
AVIS D'APPROBATION

G-108-1

Ottawa, March 8, 1977

SPRAGUE METER DIVISION PRESSURE REGULATORS
MODELS B-32, B-34, CL-31, CL-231, CL-34-1,
CL-34-2, CL-31-IM, CL-34-1-IM, CL-34-2-IM

This Approval supersedes Notice of Approval G-108, dated May 22, 1975.

Apparatus

Model	Connection Sizes, Inches	Max. Inlet Press., psig	Outlet Pressure Range, psig	Orifice Sizes, Inches
B-32	¾, 1, 1¼	125	2 and 5	1/8, 3/16, 1/4, 5/16, 3/8, 1/2
B-34	1½, 2	125	2 and 5	1/2, 5/8, 3/4, 7/8, 1
CL-31	¾, 1, 1¼	125	1 to 20	1/8, 3/16, 1/4, 3/8
CL-231	1¼, 1½, 2	125	1 to 20	1/4, 3/8, 1/2
CL-34-1	1¼, 1½, 2	125	up to 5	1/4, 3/8, 1/2, 5/8, 3/4, 7/8
CL-34-2	1¼, 1½, 2	125	1 to 60	1/4, 3/8, 1/2, 5/8, 3/4, 7/8
CL-31-IM	¾, 1, 1¼	125	1 to 20	1/8, 3/16, 1/4, 5/16
CL-34-1-IM	1¼, 1½, 2	125	up to 5	3/8, 1/2, 5/8, 3/4
CL-34-2-IM	1¼, 1½, 2	125	1 to 60	3/8, 1/2, 5/8, 3/4

Approval is hereby granted for the use of the above named apparatus in Pressure Factor Measurement installations.

This Notice of Approval provides additional information on each pressure regulator previously covered in Circular G-108. Also, the Internal Monitor (I.M.) Orifice has been granted approval for use with the CL-31, CL-34-1 and CL-34-2 pressure regulators.

Description

MODEL B-32

This is a spring loaded, service type regulator designed primarily for loads up to 500 SCFH of 0.6 sp. gr. gas, but capable of the capacities specified in the manufacturer's bulletin number B-32, B-33, dated October 1972. For Pressure Factor Measurement applications, the most relevant information is contained on the page of the bulletin titled "PSIG Outlet Pressure Data". The capacities, set point and spring data are given on this page. It is important to note that only the capacities which correspond to a "1% Pressure Drop Absolute from Set" are approved. The capacities which correspond to a 2% Pressure Drop, exceed the allowable outlet pressure tolerance.

MODEL B-34

This is a spring loaded, service type regulator designed primarily for loads up to 10,000 SCFH of 0.6 sp. gr. gas, but capable of the capacities specified in the manufacturer's "Regulator Capacity Tables, B-34". These capacity tables supersede the capacity data contained in the manufacturer's bulletin B-34 dated October 1968. The currently approved flow capacity tables and the method of use of the data contained therein for verification purposes are provided in the Technical Gas Circular G-77-2 The "set point" for this regulator is a flow rate of 200 SCFH of 0.6 sp. gr. gas.

The regulator may be fitted with internal relief and is then designated as Model B-34R. Without internal relief it is designated as Model B-34N.

The Model B-34 uses a device known as a loading ring which produces a flow pattern of outlet pressure gas which in turn helps control the gas pressure under the diaphragm area. Refer to the manufacturer's publications "Diagrams of Adjustable Loading Ring Setting with Corresponding Outlet Pressure Flow Patterns" publication number 6-34-7/H-1000 and "Instructions for the Use of the Loading Ring" publication number 3-B-34/H/1500-3/75. The correct setting can be verified using these publications.

The colour of spring used depends on outlet pressure and may be either silver or yellow for 2 psig or red for 5 psig level.

MODEL CL-31

This is a constant pressure loaded regulator designed primarily for loads up to 4000 SCFH. Bulletin CL-31 dated March 1975 gives the capacities for each orifice size, set point flow and spring data. Also, this bulletin has a stipulation that:"¾ inch NPT outlet pipe will limit the capacity to 2000 SCFH and 1 inch NPT outlet pipe will limit the capacity to 3000 SCFH".

MODEL CL-231

This is a constant pressure loaded regulator designed primarily for loads up to 7500 SCFH. Bulletin CL-231 dated March, 1975 gives the capacities for each orifice size, set point flow, and spring data. An adjustable loading ring, similar to that used in the Model B-34, is incorporated and the CL-231 bulletin outlines the required loading ring settings.

MODEL CL-34

This is a constant loaded regulator used primarily for loads up to 10,000 SCFH but acceptable for the capacities outlined in Bulletin CL-34 dated October, 1969. This bulletin gives the set point flow and spring data. An adjustable loading ring, similar to that used in the Model B-34 and CL-231, is incorporated and the manufacturer's publication number 3-B-34/H/1500-3/75, "Instructions for the Use of the Loading Ring" should be consulted for the correct loading ring setting.

There are two models of the basic CL-34 regulator, designated as CL-34-1 and CL-34-2, depending on the range of outlet pressure as shown under "Apparatus" in this circular.

MODELS CL-31-IM, CL-34-1-IM AND CL-34-2-IM

Regulators fitted with the INTERNAL MONITOR ORIFICE are identified by the suffix "IM" following the type designation.

Basically, the internal monitor orifice is an added safety device. When incorporated into the regulator, it becomes a built-in secondary valve face and orifice which will override the primary valve face and orifice if the latter should fail. The internal monitor orifice is intended to control the gas pressure and flow and to provide a tight shut-off under no flow conditions.

Models CL-31, CL-34-1 and CL-34-2 can be supplied with this I.M. orifice. For spring selection data and capacities refer to the manufacturer's bulletins

CL-31-1M, dated February 1977
SL-34-1M, dated September 1976 but revised February 1977.

The set point flow for these regulators fitted with the IM are the same as those of the standard regulators.

For field testing procedure of PFM Installations, refer to Technical Gas Circular G-75-3.

Approval granted to

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Reference: G-6635-S6-5