S100, S200, S250, S260, and S300 Series Regulator Lockup Characteristics

FISHER Controls

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Characteristics illustrated in this bulletin are measured from lockup at normal inlet pressure (the inlet pressure used to determine the final regulator outlet setting). Since the figures show only lockup under normal conditions, the appropriate bulletin should be consulted for performance during emergency conditions when regulator relief venting or high/low pressure shutoff mechanisms might be activated.

Examples given in the figures are calculated from a base of one-half of the increase above the outlet setting, or 3-1/2" w.c. for a typical 7" w.c. outlet pressure setting. A horizontal line is projected from 3-1/2" w.c. on the vertical axis to the appropriate port diameter curve, and a vertical line is dropped from the intersection to the horizontal axis. The pressure increase, found where the vertical line intersects the horizontal axis, is then added to the normal inlet pressure to determine the maximum allowable inlet pressure. However, if this procedure results in a value greater than the recommended maximum inlet pressure for a particular regulator, do not exceed that regulator's inlet pressure as given in the appropriate bulletin.

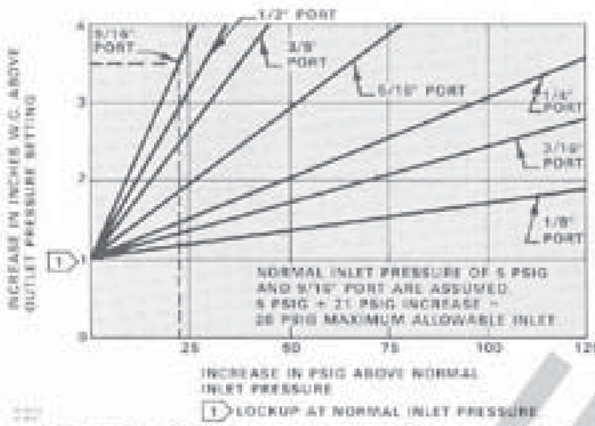
1/2" PORT
5/16" PORT
3/8" PORT
5/16" PORT
1/4" PORT
3/16" PORT
1/8" PORT
INCREASE IN INCHES W.C. ABOVE OUTLET PRESSURE SETTING
NORMAL INLET PRESSURE OF 5 PSIG AND 5/16" PORT ARE ASSUMED
5 PSIG + 21 PSIG INCREASE =
26 PSIG MAXIMUM ALLOWABLE INLET
25
50
75
100
125
INCREASE IN PSIG ABOVE NORMAL INLET PRESSURE
1 LOCKUP AT NORMAL INLET PRESSURE

Figure 1. S100 Series Lockup Characteristics

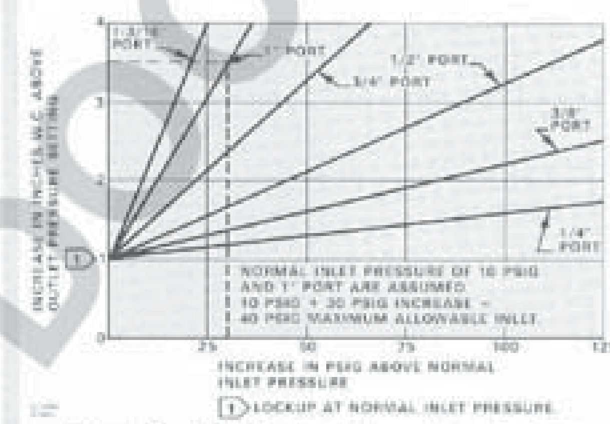
1-3/16" PORT
1" PORT
3/4" PORT
1/2" PORT
3/8" PORT
1/4" PORT
INCREASE IN INCHES W.C. ABOVE OUTLET PRESSURE SETTING
NORMAL INLET PRESSURE OF 10 PSIG AND 1" PORT ARE ASSUMED
10 PSIG + 30 PSIG INCREASE =
40 PSIG MAXIMUM ALLOWABLE INLET
25
50
75
100
125
INCREASE IN PSIG ABOVE NORMAL INLET PRESSURE
1 LOCKUP AT NORMAL INLET PRESSURE

Figure 2. S200 Series Lockup Characteristics

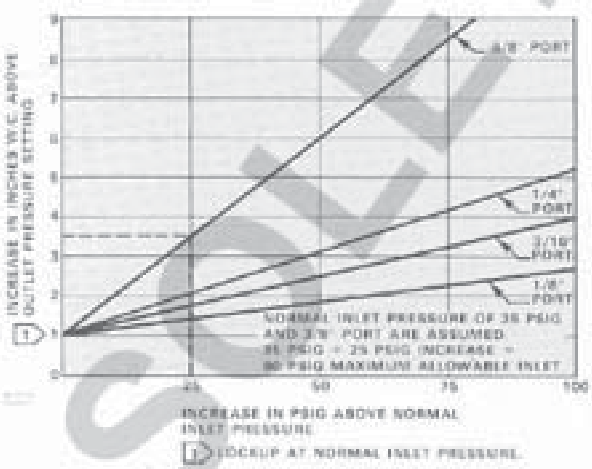
3/8" PORT
1/4" PORT
3/16" PORT
1/8" PORT
INCREASE IN INCHES W.C. ABOVE OUTLET PRESSURE SETTING
NORMAL INLET PRESSURE OF 35 PSIG AND 3/8" PORT ARE ASSUMED
35 PSIG + 25 PSIG INCREASE =
60 PSIG MAXIMUM ALLOWABLE INLET
25
50
75
100
INCREASE IN PSIG ABOVE NORMAL INLET PRESSURE
1 LOCKUP AT NORMAL INLET PRESSURE

Figure 3. S250 and S260 Series Lockup Characteristics

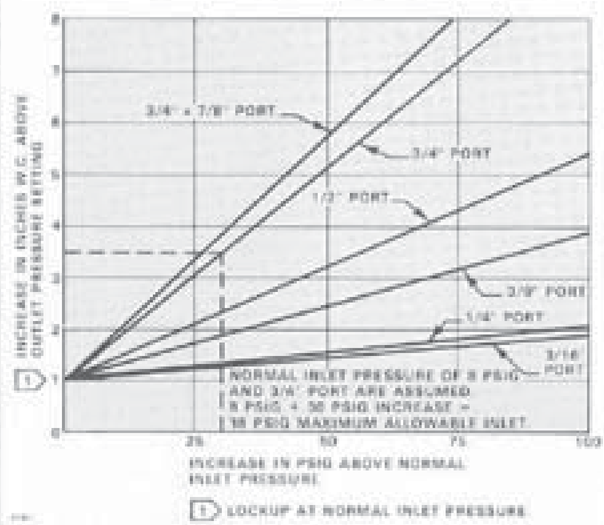
3/4" × 7/8" PORT
3/4" PORT
1/2" PORT
3/8" PORT
1/4" PORT
3/16" PORT
INCREASE IN INCHES W.C. ABOVE OUTLET PRESSURE SETTING
NORMAL INLET PRESSURE OF 8 PSIG AND 3/4" PORT ARE ASSUMED
8 PSIG + 30 PSIG INCREASE =
38 PSIG MAXIMUM ALLOWABLE INLET
25
50
75
100
INCREASE IN PSIG ABOVE NORMAL INLET PRESSURE
1 LOCKUP AT NORMAL INLET PRESSURE

Figure 4. S300 Series Lockup Characteristics

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Fisher Controls Company
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