

# P133 Pressure Regulator

- Suitable for Monitoring
- Balanced Supply Valve
- Wide Pressure Range Offering

The P133 is a direct operated pressure reducing regulator with external pressure registration used in commercial and industrial applications such as furnaces and burners where accuracy and sensitivity is critical. The regulator utilizes a balanced diaphragm design that provides for the sensitivity and accuracy. This minimizes the effects of supply pressure variation on output pressure. The P133 is available in low pressure or high pressure models and a broad range of outlet spring ranges. The P133 is also suitable in pressure monitoring applications.

## Applications

- Industrial and Commercial Gas Regulation
- Compressors
- Gas Engines
- Natural Gas and Propane Applications



## Materials of Construction

Adjusting Screw	Aluminum, Brass or Steel
Body	Ductile Cast Iron or WCB Steel
Bonnet	Aluminum or Cast Iron
Cage	Aluminum
Diaphragm	Nitrile or Fluorocarbon
Lower Casing	Aluminum or Steel
Molded Seat Assembly	Nitrile or Fluorocarbon
Orifice	Aluminum
Upper Casing	Steel

## P133 Wide Open Flow Coefficients

Capacity	Wide Open $C_g$ for Relief Valve Sizing	Representative $C_1$
25% <sup>(1)</sup>	490	28.2
40% <sup>(1)</sup>	760	29.1
60% <sup>(1)</sup>	1150	31.8
100%	1800	35.0

1. Using optional restriction collar.  
2.  $C_1 = C_g / C_v$

## Specifications

	133L	133H	133K
Maximum Operating Inlet	60 PSIG	60 PSIG	150 PSIG
Maximum Emergency Inlet	125 PSIG	125 PSIG	150 PSIG
Maximum Operating Outlet	2 PSIG	10 PSIG	Set + 40 PSIG
Maximum Emergency Outlet	15 PSIG	15 PSIG	150 PSIG
Pressure Ranges	See Table 2		
Port Sizes	2 NPT		
Restrictor Collars	25%		
	40%		
	60%		
End Connections	2" NPT (Standard)		
	125 FF Flange (Iron Only)		
	150 RF Flange (Steel Only)		
Temperature Range	-40° F to 200° F		
	-40° C to 93° C		
Approx. Weight	35 lbs. (15.9 kg)		60 lbs. (27.2 kg)

## P133 Series Range Springs

Model	Spring Ranges		Spring Color	Part Number
	WC or PSIG	mBAR		
P133 L & P133 H	2" - 4" WC	4.98-19.92	Brown	655-697-002
	3.5" - 6" WC	8.71-14.94	Pink	655-730-002
	5" - 9" WC	12.45-22.41	Tan	655-730-003
	6" - 14" WC	14.94-34.87	Purple	655-697-011
	8.5" - 18" WC	21.17-44.83	White	655-697-005
	14" - 28" WC	34.87-69.74	Green	655-697-006
	0.75 - 2 PSIG	51.71-137.89	Dark Blue	655-697-007
P133 H	PSIG	BAR		
	1.5 - 3.25 PSIG	0.103 - 0.224	Orange	655-697-008
	2 - 5 PSIG	0.138 - 0.345	Yellow	655-730-000
	5 - 10 PSIG	0.345 - 0.689	Grey	655-730-001
P133K	6 - 20 PSIG	0.413 - 1.378	Silver	655-771-002
	16 - 30 PSIG	1.103 - 2.068	Red	655-771-003
	26 - 40 PSIG	1.792 - 2.757	Blue	655-771-004
	36 - 50 PSIG	2.482 - 3.447	Green	655-771-005
	45 - 60 PSIG	3.102 - 4.136	White	655-771-006
	2 - 5 PSIG	0.137 - 0.344	Yellow	655-771-000
	4.5 - 10 PSIG	0.310 - 0.689	Orange	655-771-001

## P133 Part Matrix

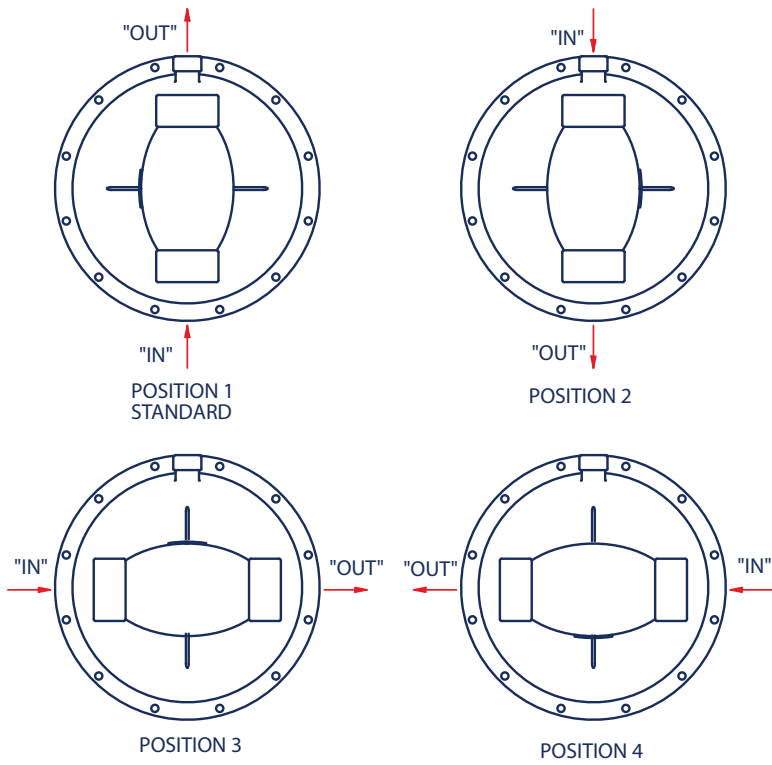
### P133 Regulator Rebuild Kits

Kit Includes	Part Number
<b>P133 L Version</b> <b>Nitrile</b> - Kits Includes: Diaphragm (2), valve disk assembly, orifice, orifice O-ring, upper stem O-ring (2), body O-ring, sealing washers (2), bearing, guide washer and cap gasket and thrust washer	971-P13-302
	971-P13-303
<b>P133 H Version</b> <b>Nitrile</b> -- Kits Includes: Diaphragm (2), valve disk assembly, orifice, orifice O-ring, upper stem O-ring (2), body O-ring, sealing washers (2), bearing, guide washer and cap gasket and thrust washer	971-P13-300
	971-P13-301
<b>P133 K Version</b> <b>Nitrile</b> - Kits Includes: Diaphragm (2), valve disk assembly, orifice, orifice O-ring, upper stem O-ring (2), body O-ring, sealing washers (2), bearing, guide washer and cap gasket and thrust washer, adaptor O-ring, diaphragm O-ring, mounting bracket gasket	971-P13-304
	971-P13-305
<b>Fluorocarbon</b> - Kits Includes: Diaphragm (2), valve disk assembly, orifice, orifice O-ring, upper stem O-ring (2), body O-ring, sealing washers (2), bearing, guide washer, cap gasket and thrust washer	

P133						
▲	▲	▲	▲	▲	▲	Version
<b>L</b>						Low Pressure
<b>H</b>						High Pressure
<b>K</b>						Heavy Pressure
						Main Spring
						WC or PSIG      mBAR
						<b>004</b> 2" - 4" WC      4.98 - 19.92
						<b>006</b> 3.5" - 6" WC      8.71 - 14.94
						<b>009</b> 5" - 9" WC      12.45 - 22.41
						<b>014</b> 6" - 14" WC      14.94 - 34.87
						<b>018</b> 8.5" - 18" WC      21.17 - 44.83
						<b>028</b> 14" - 28" WC      34.87 - 69.74
						<b>002</b> 0.75 - 2 PSIG      51.71 - 137.89
						PSIG      BAR
						<b>003</b> 1.5 - 3.25 PSIG      0.103 - 0.224
						<b>005</b> 2 - 5 PSIG      0.137 - 0.344
						<b>010</b> 5 - 10 PSIG      0.345 - 0.689
						<b>020</b> 6 - 20 PSIG      0.413 - 1.378
						<b>030</b> 16 - 30 PSIG      1.103 - 2.068
						<b>040</b> 26 - 40 PSIG      1.792 - 2.757
						<b>050</b> 36 - 50 PSIG      2.482 - 3.447
						<b>060</b> 45 - 60 PSIG      3.102 - 4.136
						<b>K05</b> 2 - 5 PSIG      0.137 - 0.344
						<b>K10</b> 4.5 - 10 PSIG      0.310 - 0.689
						Special Construction
						<b>O</b> None
						<b>A</b> 150 RF (2" Steel Only)
						<b>E</b> 125 FF (2" Iron Only)
						Restriction
						<b>00</b> None
						<b>25</b> 25%
						<b>40</b> 40%
						<b>60</b> 60%
						Port Orientation
						<b>1</b> Up (Standard)
						<b>2</b> Down
						<b>3</b> Right
						<b>4</b> Left
						Bonnet Orientation
						<b>C</b> 12 O'Clock
						<b>D</b> 3 O'Clock (Standard)
						<b>E</b> 6 O'Clock
						<b>F</b> 9 O'Clock
						Trim Material
						<b>0</b> Nitrile
						<b>2</b> Fluorocarbon
						Body Material
						<b>0</b> Iron
						<b>2</b> Steel

**P133 Port Orientation**

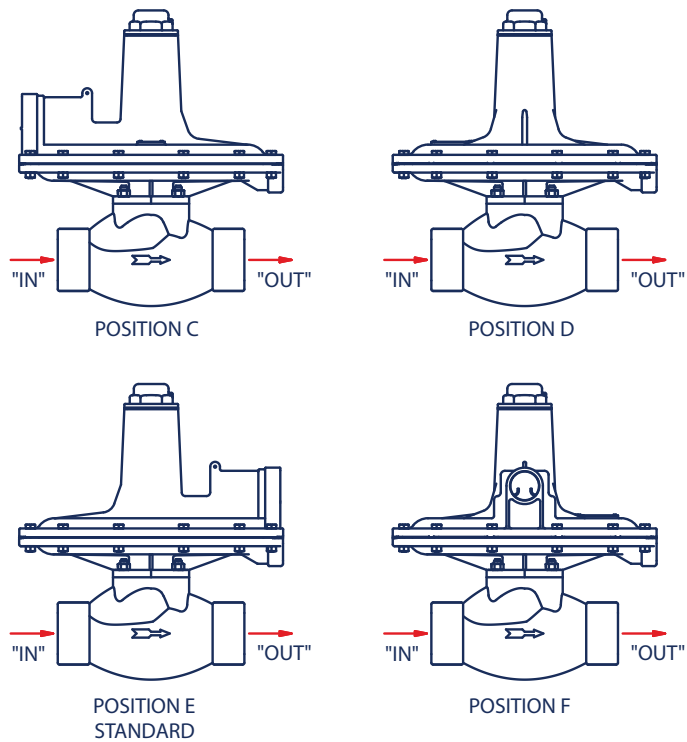
PORT ORIENTATION (ORDERING MATRIX DIGIT "12")



Port orientation is based on the body's 'Out' port location in relation to the control port of the housing.

**P133 Bonnet Vent Orientation**

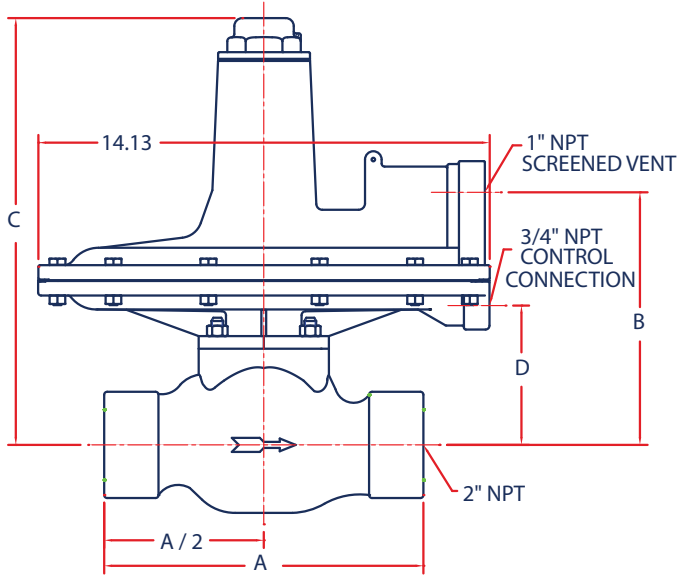
BONNET VENT ORIENTATION (ORDERING MATRIX DIGIT "13")



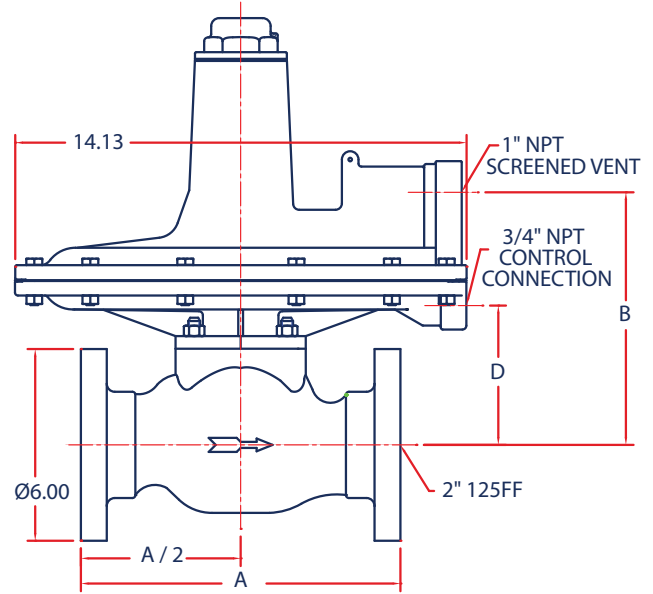
## P133 Dimensions

	Body Type	A			B	C	D		
		2" NPT	125 FF	150 RF			2" NPT	125 FF	150 RF
<b>H &amp; L</b>	Standard	10.0	--	--	7.91	13.36	4.36	--	--
	Flanged	--	10.0	10.0	7.91	13.36	--	4.36	4.36
<b>K</b>	Standard	10.0	--	--	8.57	19.84	3.93	--	--
	Flanged	--	10.0	10.0	8.57	19.84	--	3.93	3.93

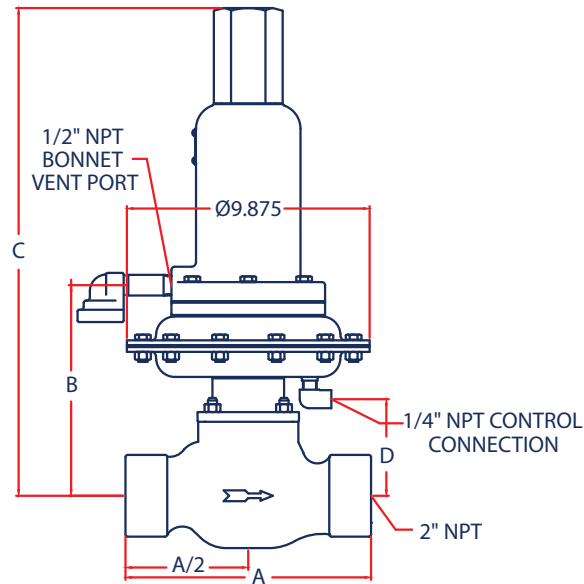
### P133 Standard



### P133 Flanged



### P133K



### P133L Unrestricted Flow Capacities in Thousands of SCFH

(Nm<sup>3</sup>/h) of 0.6 Specific Gravity Natural Gas at 14.7 PSIA and 60 °F

Inlet Pressure		Outlet Pressure Setting <sup>(1)</sup> and Outlet Pressure Range													
		4 in. WC (10 mBAR) 2 to 4 in. WC (5 to 10 mBAR)		6 in. WC (15 mBAR) 3.5 to 6 in. WC (8.7 to 15 mBAR)		7 in. WC (17 mBAR) 5 to 9 in. WC (12 to 22 mBAR)		14 in. WC (35 mBAR) 8.5 to 18 in. WC (21.2 to 44.8 mBAR)		14 in. WC (35 mBAR) 14 to 28 in. WC (35 to 70 mBAR)		1 PSIG (0.07 BAR) 14 to 28 in. WC (35 to 70 mBAR)		2 PSIG (0.14 BAR) 0.75 to 2 PSIG (0.05 to 0.14 BAR)	
		1 in. WC (2.5 mBAR) Droop	1 in. WC (2.5 mBAR) Droop	1 in. WC (2.5 mBAR) Droop	1 in. WC (2.5 mBAR) Droop	2 in. WC (5 mBAR) Droop	1 in. WC (2.5 mBAR) Droop	2 in. WC (5 mBAR) Droop	10% Droop	20% Droop	10% Droop	20% Droop			
PSIG	BAR														
1	0.07	14 (0.38)	13 (0.35)	12 (0.32)	5 (0.13)	8.4 (0.22)									
2	0.14	20.8 (0.56)	20 (0.54)	17 (0.46)	8.2 (0.22)	15.2 (0.41)				11.5 (0.31)	16 (0.43)				
3	0.21	26 (0.70)	24.5 (0.66)	21 (0.56)	12 (0.32)	19.5 (0.52)				15.5 (0.42)	21.5 (0.58)	12.5 (0.34)	18.5 (0.50)		
5	0.34	35 (0.94)	33 (0.88)	32 (0.86)	16 (0.43)	28 (0.75)	14 (0.38)	23 (0.62)	24 (0.64)	31.5 (0.84)	20.5 (0.55)	28 (0.75)			
10	0.69	52 (1.39)	52 (1.39)	48 (1.29)	34 (0.91)	45 (1.21)	26 (0.70)	38 (1.02)	37.5 (1.00)	44 (1.18)	38 (1.02)	46 (1.29)			
20	1.38	78 (2.09)	77 (2.06)	79 (2.12)	69 (1.85)	76 (2.04)	60 (1.61)	69 (1.85)	70 (1.88)	77 (2.06)	62 (1.66)	76 (2.04)			
30	2.07	101 (2.7)	100 (2.68)	100 (2.68)	91 (2.44)	97 (2.60)	87 (2.33)	93 (2.49)	90 (2.41)	101 (2.71)	87 (2.33)	101 (2.71)			
40	2.76	124 (3.32)	122 (3.27)	124 (3.32)	109 (2.92)	116 (3.11)	107 (2.87)	115 (3.08)	110 (2.95)	122 (3.27)	105 (2.81)	121 (3.24)			
50	3.45	146 (3.91)	144 (3.86)	145 (3.89)	130 (3.48)	136 (3.64)	132 (3.54)	137 (3.67)	127 (3.40)	145 (3.89)	124 (3.32)	145 (3.89)			
60	4.14	170 (4.56)	168 (4.50)	166 (4.45)	155 (4.15)	161 (4.32)	152 (4.07)	158 (4.23)	149 (3.99)	167 (4.48)	145 (3.89)	170 (4.56)			

1. Outlet pressure setting was made at approximately 10% of the maximum capacity for the listed conditions.

### P133H Unrestricted Flow Capacities in Thousands of SCFH

(Nm<sup>3</sup>/h) of 0.6 Specific Gravity Natural Gas at 14.7 PSIA and 60 °F

Inlet Pressure		Outlet Pressure Setting <sup>(1)</sup> and Outlet Pressure Range												
		3 PSIG (0.21 BAR) 1.5 to 3 PSIG (0.10 to 0.21 BAR)		2 PSIG (0.14 BAR) 2 to 5 PSIG (0.14 to 0.34 BAR)		5 PSIG (0.34 BAR) 2 to 5 PSIG (0.14 to 0.34 BAR)		5 PSIG (0.34 BAR) 5 to 10 PSIG (0.34 to 0.69 BAR)		10 PSIG (0.69 BAR) 5 to 10 PSIG (0.34 to 0.69 BAR)				
		10% Droop	20% Droop	10% Droop	20% Droop	10% Droop	20% Droop	10% Droop	20% Droop	10% Droop	20% Droop			
PSIG	BAR													
3	0.21			6.5 (0.17)	11.5 (0.31)									
5	0.34	14 (0.38)	22 (0.59)	11 (0.30)	18 (0.48)									
7	0.48	21.5 (0.58)	31 (0.83)	13 (0.35)	22 (0.59)	15.5 (0.42)	24 (0.64)	9 (0.24)	15 (0.40)					
10	0.69	28 (0.75)	42 (1.13)	15 (0.40)	27 (0.72)	24 (0.64)	35 (0.94)	14 (0.38)	22 (0.59)					
15	1.03	40 (1.07)	57 (1.53)	25.5 (0.68)	39 (1.04)	35 (0.94)	51 (1.37)	19 (0.51)	31.5 (0.84)	21 (0.56)	35 (0.94)			
20	1.38	52 (1.39)	72 (1.93)	35 (0.94)	52 (1.39)	46 (1.23)	67 (1.80)	24 (0.64)	41 (1.10)	31 (0.83)	51 (1.37)			
30	2.07	76 (2.04)	96 (2.57)	49 (1.31)	73 (1.96)	68 (1.82)	95 (2.55)	35 (0.94)	58 (1.55)	44 (1.18)	74 (1.98)			
40	2.76	98 (2.63)	119 (3.19)	66 (1.77)	97 (2.60)	88 (2.36)	117 (3.14)	44 (1.18)	73 (1.96)	56 (1.50)	97 (2.60)			
50	3.44	118 (3.16)	141 (3.78)	84 (2.25)	112 (3.00)	103 (2.76)	138 (3.70)	57 (1.53)	89 (2.38)	74 (1.98)	117 (3.14)			
60	4.14	136 (3.64)	165 (4.42)	104 (2.79)	132 (3.54)	122 (3.27)	156 (4.18)	65 (1.74)	106 (2.84)	91 (2.44)	136 (3.64)			

1. Outlet pressure setting was made at approximately 10% of the maximum capacity for the listed conditions.

### P133H Flow Capacities in Thousands of SCFH

(Nm<sup>3</sup>/h) of 0.6 Specific Gravity Natural Gas at 14.7 PSIA and 60 °F

Inlet Pressure		Outlet Pressure Setting <sup>(1)</sup> and Outlet Pressure Range											
		25% Capacity				40% Capacity				60% Capacity			
		5 PSIG (0.34 BAR) 2 to 5 PSIG (0.14 to 0.34 BAR)		10 PSIG (0.69 BAR) 5 to 10 PSIG (0.34 to 0.69 BAR)		5 PSIG (0.34 BAR) 2 to 5 PSIG (0.14 to 0.34 BAR)		10 PSIG (0.69 BAR) 5 to 10 PSIG (0.34 to 0.69 BAR)		5 PSIG (0.34 BAR) 2 to 5 PSIG (0.14 to 0.34 BAR)		10 PSIG (0.69 BAR) 5 to 10 PSIG (0.34 to 0.69 BAR)	
PSIG	BAR	10% Droop	20% Droop	10% Droop	20% Droop	10% Droop	20% Droop	10% Droop	20% Droop	10% Droop	20% Droop	10% Droop	20% Droop
7	0.48	8.0 (0.21)	9.0 (0.24)			11.0 (0.0)	15.0 (0.40)			13.0 (0.35)	17.0 (0.46)		
10	0.69	12.3 (0.33)	13.0 (0.35)			16.5 (0.44)	20.0 (0.54)			20.0 (0.54)	25.0 (0.67)		
15	1.03			13.0 (0.35)	15.5 (0.42)			16.5 (0.44)	23.5 (0.63)			20.0 (0.54)	29.5 (0.79)
20	1.38	20.8 (0.56)	21.2 (0.57)	17.5 (0.47)	20.0 (0.54)	31.5 (0.84)	33.5 (0.90)	23.5 (0.63)	30.5 (0.82)	36.0 (0.96)	46.5 (1.25)	29.0 (0.78)	39.5 (1.06)
40	2.76	33.5 (0.90)	33.5 (0.90)	33.0 (0.88)	33.5 (0.90)	52.0 (1.39)	53.2 (1.43)	46.0 (1.23)	53.2 (1.43)	70.0 (1.88)	77.5 (2.08)	57.0 (1.53)	74.5 (2.00)
60	4.14	45.5 (1.22)	45.5 (1.22)	45.5 (1.22)	45.5 (1.22)	72.7 (1.95)	72.7 (1.95)	67.0 (1.80)	72.7 (1.95)	105.0 (2.81)	107.0 (2.87)	87.0 (2.33)	107 (2.87)

1. Outlet pressure setting was made at approximately 10% of the maximum capacity for the listed conditions.

**P133K Regulator 100% Capacities** in Thousands of SCFH of (0.6 Specific Gravity Gas)

Outlet Pressure Range, Control Spring Number and Color	Outlet Pressure Setting <sup>1</sup>		Inlet Pressure		2" (DN 50) Body Size 1.91 Inches (48.5 mm) Orifice Size		
					Droop from Setpoint		
					10%	20%	30%
PSIG	BAR	PSIG	BAR	SCFH (Nm3/h)	SCFH (Nm3/h)	SCFH (Nm3/h)	
2 to 5 PSIG 0.14 to 0.34 BAR  655-771-000  Yellow	2	0.14	10	0.7	10.4 (0.28)	18.9 (0.51)	27.5 (0.74)
			20	1.4	16.4 (0.44)	29.8 (0.80)	43.3 (1.16)
			40	2.8	27.0 (0.72)	49.1 (1.32)	71.2 (1.91)
			60	4.1	37.1 (0.99)	67.5 (1.81)	97.9 (2.62)
			80	5.5	47.2 (1.26)	85.7 (2.30)	124.3 (3.33)
			100	6.9	57.1 (1.53)	103.9 (2.78)	150.6 (4.04)
			125	8.6	69.5 (1.86)	126.5 (3.39)	183.4 (4.92)
	150	10.3	82.0 (2.20)	149.1 (4.00)	216.3 (5.80)		
	5	0.34	10	0.7	20.2 (0.54)	41.5 (1.11)	42.8 (1.15)
			20	1.4	35.1 (0.94)	71.7 (1.92)	72.3 (1.94)
			40	2.8	59.6 (1.60)	121.3 (3.25)	121.5 (3.26)
			60	4.1	82.4 (2.21)	167.9 (4.50)	168.0 (4.50)
			80	5.5	104.9 (2.81)	213.6 (5.72)	213.6 (5.72)
			100	6.9	127.2 (3.41)	258.9 (6.94)	258.9 (6.94)
125			8.6	155.0 (4.15)	315.4 (8.45)	315.4 (8.45)	
4.5 to 10 PSIG 0.31 to 0.69 BAR  655-771-001  Orange	5	0.34	10	0.7	11.4 (0.31)	21.4 (0.57)	32.0 (0.86)
			20	1.4	19.6 (0.52)	36.4 (0.98)	53.4 (1.43)
			40	2.8	33.0 (0.88)	61.3 (1.64)	89.6 (2.40)
			60	4.1	45.7 (1.22)	84.7 (2.27)	123.7 (3.32)
			80	5.5	58.1 (1.56)	107.7 (2.89)	157.3 (4.22)
			100	6.9	70.5 (1.89)	130.6 (3.50)	190.7 (5.11)
			125	8.6	85.8 (2.30)	159.0 (4.26)	232.2 (6.22)
	150	10.3	101.2 (2.71)	187.5 (5.02)	273.8 (7.34)		
	10	0.69	25	1.7	40.3 (1.08)	80.5 (2.16)	81.7 (2.19)
			30	2.7	47.1 (1.26)	93.9 (2.52)	94.8 (2.54)
			40	2.8	59.9 (1.60)	119.1 (3.19)	119.7 (3.21)
			60	4.1	84.0 (2.25)	166.8 (4.47)	167.1 (4.48)
			80	5.5	107.4 (2.88)	213.0 (5.71)	213.2 (5.71)
			100	6.9	130.4 (3.50)	258.7 (6.93)	258.8 (6.94)
125			8.6	159.0 (4.26)	315.4 (8.45)	315.4 (8.45)	
150	10.3	187.5 (5.02)	371.8 (9.96)	371.8 (9.96)			
6 to 20 PSIG 0.41 to 1.4 BAR  655-771-002  Silver	10	0.69	15	1.0	16.4 (0.44)	32.0 (0.86)	51.9 (1.39)
			20	1.4	22.1 (0.59)	42.2 (1.13)	67.7 (1.81)
			40	2.8	39.9 (1.07)	75.4 (2.02)	111.0 (2.98)
			60	4.1	55.9 (1.50)	105.0 (2.81)	155.0 (4.15)
			80	5.5	71.4 (1.91)	134.0 (3.59)	198.0 (5.31)
			100	6.9	86.8 (2.33)	163.0 (4.37)	240.0 (6.43)
			125	8.6	106.0 (2.84)	199.0 (5.33)	292.0 (7.83)
	150	10.3	125.0 (3.35)	235.0 (6.30)	344.0 (9.22)		
	20	1.38	25	1.7	38.8 (1.39)	65.0 (1.74)	70.0 (1.88)
			20	2.1	50.3 (1.81)	82.3 (2.21)	86.0 (2.30)
			40	2.8	69.4 (2.98)	112.0 (3.00)	114.0 (3.06)
			60	4.1	102.0 (4.15)	163.0 (4.37)	164.0 (4.40)
			80	5.5	133.0 (5.31)	211.0 (5.66)	211.0 (5.66)
			100	6.9	162.0 (6.43)	257.0 (6.89)	258.0 (6.91)
125			8.6	198.0 (7.83)	315.0 (8.44)	315.0 (8.44)	
150	10.3	234.0 (9.22)	372.0 (9.97)	372.0 (9.97)			

1. Outlet pressure setting was made at approximately 10% of the maximum capacity for the listed conditions.  
 - Gray areas indicate maximum flow capacity.

Outlet Pressure Range, Control Spring Number and Color	Outlet Pressure Setting <sup>1</sup>		Inlet Pressure		2" (DN 50) Body Size 1.91 Inches (48.5 mm) Orifice Size		
					Droop from Setpoint		
					10%	20%	30%
PSIG	BAR	PSIG	BAR	SCFH (Nm3/h)	SCFH (Nm3/h)	SCFH (Nm3/h)	
16 to 30 PSIG 1.1 to 2.1 BAR  655-771-003  Red	20	1.38	25	1.7	24.8 (0.66)	50.4 (1.35)	70.0 (1.88)
			30	2.1	31.8 (0.85)	62.6 (1.68)	86.0 (2.30)
			40	2.8	43.5 (1.17)	84.0 (2.25)	114.0 (3.06)
			60	4.1	63.8 (1.71)	122.0 (3.27)	164.0 (4.40)
			80	5.5	83.0 (2.22)	158.0 (4.23)	211.0 (5.66)
			100	6.9	101.0 (2.71)	192.0 (5.15)	258.0 (6.91)
			125	8.6	124.0 (3.23)	235.0 (6.30)	315.0 (8.44)
	150	10.3	146.0 (3.91)	277.0 (7.42)	372.0 (9.97)		
	30	2.07	35	2.4	43.0 (1.15)	80.6 (2.16)	88.2 (2.36)
			40	2.8	53.8 (1.44)	98.4 (2.64)	104.0 (2.79)
			60	4.1	88.0 (2.36)	156.0 (4.18)	159.0 (4.26)
			80	5.5	117.0 (3.14)	207.0 (5.55)	208.0 (5.57)
			100	6.9	145.0 (3.89)	255.0 (6.83)	256.0 (6.86)
			125	8.6	178.0 (4.77)	313.0 (8.39)	314.0 (8.42)
150			10.3	211.0 (5.66)	371.0 (9.94)	371.0 (9.94)	
26 to 40 PSIG 1.8 to 2.8 BAR  655-771-004  Blue	30	2.1	35	2.4	28.9 (0.78)	59.6 (1.60)	88.2 (2.36)
			40	2.8	35.7 (0.96)	71.0 (1.90)	104.0 (2.79)
			60	4.1	57.5 (1.54)	110.0 (2.95)	159.0 (4.26)
			80	5.5	76.4 (2.05)	146.0 (3.91)	208.0 (5.57)
			100	6.9	94.3 (2.53)	179.0 (4.80)	256.0 (6.86)
			125	8.6	116.0 (3.11)	220.0 (5.90)	314.0 (8.42)
			150	10.3	137.0 (3.67)	260.0 (6.97)	371.0 (9.94)
	40	2.8	45	3.1	43.5 (1.17)	96.2 (2.58)	106.0 (2.84)
			50	3.4	52.6 (1.41)	114.0 (3.06)	122.0 (3.27)
			60	4.1	68.4 (1.83)	146.0 (3.91)	151.0 (4.05)
			80	5.5	95.4 (2.56)	186.0 (4.98)	204.0 (5.47)
			100	6.9	120.0 (3.22)	232.0 (6.22)	253.0 (6.78)
			125	8.6	149.0 (3.99)	287.0 (7.69)	312.0 (8.36)
			150	10.3	177.0 (4.74)	341.0 (9.14)	370.0 (9.92)
36 to 50 PSIG 2.5 to 3.4 BAR  655-771-005  Green	40	2.8	45	3.1	36.2 (0.97)	76.1 (2.04)	106.0 (2.84)
			50	3.4	43.4 (1.16)	88.1 (2.36)	122.0 (3.27)
			60	4.1	56.2 (1.51)	110.0 (2.95)	151.0 (4.05)
			80	5.5	78.1 (2.09)	150.0 (4.02)	204.0 (5.47)
			100	6.9	97.9 (2.62)	187.0 (5.01)	253.0 (6.78)
			125	8.6	122.0 (3.27)	232.0 (6.22)	312.0 (8.36)
			150	10.3	145.0 (3.89)	276.0 (7.40)	370.0 (9.92)
	50	3.4	55	3.8	50.4 (1.35)	112.0 (3.00)	124.0 (3.32)
			60	4.1	59.5 (1.60)	130.0 (3.48)	141.0 (3.78)
			80	5.5	90.2 (2.42)	191.0 (5.12)	197.0 (5.28)
			100	6.9	116.0 (3.11)	227.0 (6.08)	248.0 (6.65)
			125	8.6	147.0 (3.94)	283.0 (7.58)	309.0 (8.28)
			150	10.3	176.0 (4.72)	338.0 (9.06)	368.0 (9.86)
			45 to 60 PSIG 3.1 to 4.1 BAR  655-771-006  White	50	3.4	55	3.8
60	4.1	51.0 (1.37)				105.0 (2.81)	141.0 (3.78)
80	5.5	76.9 (2.06)				151.0 (4.05)	197.0 (5.28)
100	6.9	99.0 (2.65)				191.0 (5.12)	248.0 (6.65)
125	8.6	125.0 (3.35)				239.0 (6.40)	309.0 (8.28)
150	10.3	149.0 (3.99)				285.0 (7.64)	368.0 (9.86)
65	4.5	57.5 (1.54)				127.0 (3.40)	143.0 (3.83)
70	4.8	66.5 (1.78)		146.0 (3.91)	159.0 (4.26)		
60	4.1	80		5.5	83.2 (2.23)	179.0 (4.80)	188.0 (5.04)
		100		6.9	112.0 (3.00)	236.0 (6.32)	242.0 (6.49)
		125		8.6	144.0 (3.86)	280.0 (7.50)	305.0 (8.17)
		150		10.3	174.0 (4.66)	336.0 (9.00)	365.0 (9.78)

1. Outlet pressure setting was made at approximately 10% of the maximum capacity for the listed conditions.  
 - Gray areas indicate maximum flow capacity.



**P133K Regulator 25% Capacities** in Thousands of SCFH of (0.6 Specific Gravity Gas)

Outlet Pressure Range, Control Spring Number and Color	Outlet Pressure Setting <sup>1</sup>		Inlet Pressure		2" (DN 50) Body Size 1.91 Inches (48.5 mm) Orifice Size		
					Droop from Setpoint		
					10%	20%	30%
PSIG	BAR	PSIG	BAR	SCFH (Nm <sup>3</sup> /h)	SCFH (Nm <sup>3</sup> /h)	SCFH (Nm <sup>3</sup> /h)	
2 to 5 PSIG 0.14 to 0.34 BAR  655-771-000  Yellow	2	0.14	10	0.7	4.0 (0.11)	7.8 (0.21)	13.4 (0.36)
			20	1.4	6.4 (0.17)	12.5 (0.34)	12.2 (0.33)
			40	2.8	10.5 (0.28)	20.6 (0.55)	34.9 (0.94)
			60	4.1	14.5 (0.39)	28.4 (0.76)	48.1 (1.29)
			80	5.5	18.4 (0.49)	36.0 (0.97)	61.1 (1.64)
			100	6.9	22.3 (0.60)	43.7 (1.17)	74.0 (1.98)
			125	8.6	27.2 (0.73)	53.2 (1.43)	90.1 (2.42)
	150	10.3	32.0 (0.86)	62.7 (1.68)	106.2 (2.85)		
	5	0.34	10	0.7	8.3 (0.22)	11.5 (0.31)	11.9 (0.32)
			20	1.4	14.9 (0.40)	20.3 (0.54)	20.5 (0.55)
			40	2.8	25.4 (0.68)	34.6 (0.93)	34.7 (0.93)
			60	4.1	35.2 (0.94)	47.9 (1.28)	48.0 (1.29)
			80	5.5	44.8 (1.20)	61.0 (1.64)	61.0 (1.64)
			100	6.9	54.3 (1.46)	74.0 (1.98)	74.0 (1.98)
125			8.6	66.2 (1.77)	90.1 (2.42)	90.1 (2.42)	
150	10.3	78.1 (2.09)	106.2 (2.85)	106.2 (2.85)			
4.5 to 10 PSIG 0.31 to 0.69 BAR  655-771-001  Orange	5	0.34	10	0.7	4.4 (0.12)	8.7 (0.23)	11.9 (0.32)
			20	1.4	7.8 (0.21)	15.4 (0.41)	20.5 (0.55)
			40	2.8	13.3 (0.36)	26.1 (0.70)	34.7 (0.93)
			60	4.1	18.4 (0.49)	36.2 (0.97)	48.0 (1.29)
			80	5.5	23.4 (0.63)	46.1 (1.24)	61.0 (1.64)
			100	6.9	28.4 (0.76)	55.9 (1.50)	74.0 (1.98)
			125	8.6	34.6 (0.93)	68.1 (1.83)	90.1 (2.42)
	150	10.3	40.8 (1.09)	80.2 (2.15)	106.2 (2.85)		
	10	0.69	25	1.7	17.0 (0.46)	22.6 (0.61)	23.0 (0.62)
			30	2.7	19.9 (0.53)	26.5 (0.71)	26.8 (0.72)
			40	2.8	25.5 (0.68)	33.8 (0.91)	34.0 (0.91)
			60	4.1	35.9 (0.96)	47.5 (1.27)	47.6 (1.28)
			80	5.5	45.9 (1.23)	60.8 (1.63)	60.9 (1.63)
			100	6.9	55.8 (1.50)	73.9 (1.98)	73.9 (1.98)
125			8.6	68.0 (1.82)	90.1 (2.42)	90.1 (2.42)	
150	10.3	80.2 (2.15)	106.2 (2.85)	106.2 (2.85)			
6 to 20 PSIG 0.41 to 1.4 BAR  655-771-002  Silver	10	0.69	15	1.0	6.3 (0.17)	13.3 (0.36)	14.1 (0.38)
			20	1.4	8.8 (0.24)	18.3 (0.49)	18.9 (0.51)
			40	2.8	16.4 (0.44)	33.8 (0.91)	34.0 (0.91)
			60	4.1	23.1 (0.62)	47.5 (1.27)	47.6 (1.28)
			80	5.5	29.5 (0.79)	60.8 (1.63)	60.9 (1.63)
			100	6.9	35.8 (0.96)	73.9 (1.98)	73.9 (1.98)
			125	8.6	43.7 (1.17)	90.1 (2.42)	90.1 (2.42)
	150	10.3	51.5 (1.38)	106.2 (2.85)	106.2 (2.85)		
	20	1.38	25	1.7	15.7 (0.42)	16.8 (0.45)	18.6 (0.50)
			20	2.1	21.6 (0.58)	22.3 (0.60)	23.5 (0.63)
			40	2.8	30.7 (0.82)	31.1 (0.83)	31.9 (0.86)
			60	4.1	45.9 (1.23)	46.1 (1.24)	46.5 (1.25)
			80	5.5	59.8 (1.60)	60.0 (1.61)	60.2 (1.61)
			100	6.9	73.3 (1.96)	73.4 (1.97)	73.5 (1.97)
125			8.6	89.8 (2.41)	89.8 (2.41)	89.9 (2.41)	
150	10.3	106.1 (2.84)	106.1 (2.84)	106.2 (2.85)			

1. Outlet pressure setting was made at approximately 10% of the maximum capacity for the listed conditions.  
 - Gray areas indicate maximum flow capacity.

Outlet Pressure Range, Control Spring Number and Color	Outlet Pressure Setting <sup>1</sup>		Inlet Pressure		2" (DN 50) Body Size 1.91 Inches (48.5 mm) Orifice Size		
					Droop from Setpoint		
					10%	20%	30%
PSIG	BAR	PSIG	BAR	SCFH (Nm <sup>3</sup> /h)	SCFH (Nm <sup>3</sup> /h)	SCFH (Nm <sup>3</sup> /h)	
16 to 30 PSIG 1.1 to 2.1 BAR  655-771-003  Red	20	1.38	25	1.7	9.2 (0.25)	16.8 (0.45)	18.6 (0.50)
			30	2.1	12.6 (0.34)	22.3 (0.60)	23.5 (0.63)
			40	2.8	17.8 (0.48)	31.1 (0.83)	31.9 (0.86)
			60	4.1	26.6 (0.71)	46.1 (1.24)	46.5 (1.25)
			80	5.5	34.6 (0.93)	60.0 (1.61)	60.2 (1.61)
			100	6.9	42.3 (1.13)	73.4 (1.97)	73.5 (1.97)
			125	8.6	51.9 (1.39)	89.8 (2.41)	89.9 (2.41)
	150	10.3	61.3 (1.64)	106.1 (2.84)	106.2 (2.85)		
	30	2.07	35	2.4	18.5 (0.50)	20.2 (0.54)	23.0 (0.62)
			40	2.8	21.5 (0.58)	26.1 (0.70)	28.1 (0.75)
			60	4.1	37.1 (0.99)	43.6 (1.17)	44.6 (1.20)
			80	5.5	50.0 (1.34)	58.4 (1.56)	59.0 (1.58)
			100	6.9	62.1 (1.66)	72.3 (1.94)	72.7 (1.95)
			125	8.6	76.6 (2.05)	89.2 (2.39)	89.4 (2.40)
150			10.3	90.9 (2.44)	105.7 (2.83)	105.9 (2.84)	
26 to 40 PSIG 1.8 to 2.8 BAR  655-771-004  Blue	30	2.1	35	2.4	10.3 (0.28)	20.2 (0.54)	23.0 (0.62)
			40	2.8	13.6 (0.36)	26.1 (0.70)	28.1 (0.75)
			60	4.1	23.4 (0.63)	43.6 (1.17)	44.6 (1.20)
			80	5.5	31.6 (0.85)	58.4 (1.56)	59.0 (1.58)
			100	6.9	39.1 (1.05)	72.3 (1.94)	72.7 (1.95)
			125	8.6	48.3 (1.29)	89.2 (2.39)	89.4 (2.40)
			150	10.3	57.3 (1.54)	105.7 (2.83)	105.9 (2.84)
	40	2.8	45	3.1	15.5 (0.42)	23.7 (0.64)	27.5 (0.74)
			50	3.4	20.3 (0.54)	29.7 (0.80)	32.7 (0.88)
			60	4.1	27.8 (0.74)	39.6 (1.06)	41.6 (1.12)
			80	5.5	39.9 (1.07)	56.0 (1.50)	57.2 (1.53)
			100	6.9	50.6 (1.36)	70.7 (1.90)	71.5 (1.92)
			125	8.6	63.2 (1.69)	88.1 (2.36)	88.6 (2.37)
			150	10.3	75.4 (2.02)	105.0 (2.81)	105.4 (2.82)
36 to 50 PSIG 2.5 to 3.4 BAR  655-771-005  Green	40	2.8	45	3.1	12.5 (0.34)	23.7 (0.64)	27.5 (0.74)
			50	3.4	16.4 (0.44)	29.7 (0.80)	32.7 (0.88)
			60	4.1	22.4 (0.60)	39.6 (1.06)	41.6 (1.12)
			80	5.5	32.1 (0.86)	56.0 (1.50)	57.2 (1.53)
			100	6.9	40.7 (1.09)	70.7 (1.90)	71.5 (1.92)
			125	8.6	50.8 (1.36)	88.1 (2.36)	88.6 (2.37)
			150	10.3	60.6 (1.62)	105.0 (2.81)	105.4 (2.82)
	50	3.4	55	3.8	17.5 (0.47)	27.0 (0.72)	31.9 (0.86)
			60	4.1	22.5 (0.60)	33.3 (0.89)	37.2 (1.00)
			80	5.5	37.1 (0.99)	52.5 (1.41)	54.6 (1.46)
			100	6.9	48.7 (1.30)	68.4 (1.83)	69.8 (1.87)
			125	8.6	61.9 (1.66)	86.6 (2.32)	87.5 (2.34)
			150	10.3	74.5 (2.00)	103.9 (2.78)	104.5 (2.80)
			45 to 60 PSIG 3.1 to 4.1 BAR  655-771-006  White	50	3.4	55	3.8
60	4.1	18.9 (0.51)				33.3 (0.89)	37.2 (1.00)
80	5.5	31.1 (0.83)				52.5 (1.41)	54.6 (1.46)
100	6.9	40.9 (1.10)				68.4 (1.83)	69.8 (1.87)
125	8.6	52.0 (1.39)				86.6 (2.32)	87.5 (2.34)
150	10.3	62.5 (1.68)				103.9 (2.78)	104.5 (2.80)
60	4.1	65				4.5	19.5 (0.52)
		70		4.8	24.7 (0.66)	36.9 (0.99)	41.7 (1.12)
		80		5.5	33.1 (0.83)	47.6 (1.28)	51.1 (1.37)
		100		6.9	46.3 (1.24)	65.2 (1.75)	67.4 (1.81)
		125		8.6	60.4 (1.62)	84.5 (2.26)	85.9 (2.30)
		150		10.3	73.5 (1.97)	102.4 (2.74)	103.4 (2.77)

1. Outlet pressure setting was made at approximately 10% of the maximum capacity for the listed conditions.  
 - Gray areas indicate maximum flow capacity.

**P133K Regulator 40% Capacities** in Thousands of SCFH of (0.6 Specific Gravity Gas)

Outlet Pressure Range, Control Spring Number and Color	Outlet Pressure Setting <sup>1</sup>		Inlet Pressure		2" (DN 50) Body Size		
					1.91 Inches (48.5 mm) Orifice Size		
					Droop from Setpoint		
PSIG	BAR	PSIG	BAR	10%	20%	30%	
				SCFH (Nm <sup>3</sup> /h)	SCFH (Nm <sup>3</sup> /h)	SCFH (Nm <sup>3</sup> /h)	
2 to 5 PSIG 0.14 to 0.34 BAR  655-771-000  Yellow	2	0.14	10	0.7	6.9 (0.18)	13.2 (0.35)	19.7 (0.53)
			20	1.4	10.5 (0.28)	20.1 (0.54)	29.7 (0.80)
			40	2.8	16.6 (0.44)	31.9 (0.86)	47.2 (1.26)
			60	4.1	22.7 (0.61)	43.6 (1.17)	64.4 (1.73)
			80	5.5	28.8 (0.77)	55.2 (1.48)	81.7 (2.19)
			100	6.9	34.8 (0.93)	66.9 (1.79)	99.0 (2.65)
			125	8.6	42.4 (1.14)	81.5 (2.18)	120.5 (3.23)
	150	10.3	50.0 (1.34)	96.0 (2.57)	142.1 (3.81)		
	5	0.34	10	0.7	14.5 (0.39)	19.8 (0.53)	20.4 (0.55)
			20	1.4	24.4 (0.65)	32.8 (0.88)	32.9 (0.88)
			40	2.8	39.5 (1.06)	52.9 (1.42)	52.9 (1.42)
			60	4.1	54.0 (1.45)	72.3 (1.94)	72.3 (1.94)
			80	5.5	68.5 (1.84)	91.6 (2.46)	91.6 (2.46)
			100	6.9	82.9 (2.22)	111.0 (2.98)	111.0 (2.98)
125			8.6	101.0 (2.71)	135.2 (3.62)	135.2 (3.62)	
4.5 to 10 PSIG 0.31 to 0.69 BAR  655-771-001  Orange	5	0.34	10	0.7	3.8 (0.10)	7.1 (0.19)	10.4 (0.28)
			20	1.4	5.8 (0.16)	10.7 (0.29)	15.7 (0.42)
			40	2.8	9.2 (0.25)	17.0 (0.46)	24.9 (0.67)
			60	4.1	12.5 (0.34)	23.3 (0.62)	34.0 (0.91)
			80	5.5	15.9 (0.43)	29.5 (0.79)	43.1 (1.16)
			100	6.9	19.3 (0.52)	35.7 (0.96)	52.2 (1.40)
			125	8.6	23.5 (0.63)	43.5 (1.17)	63.6 (1.70)
	150	10.3	27.7 (0.74)	51.3 (1.38)	75.0 (2.01)		
	10	0.69	25	1.7	28.2 (0.76)	37.0 (0.99)	37.4 (1.00)
			30	2.7	32.5 (0.87)	42.6 (1.14)	42.8 (1.15)
			40	2.8	40.5 (1.08)	52.9 (1.42)	52.9 (1.42)
			60	4.1	55.5 (1.49)	72.3 (1.94)	72.3 (1.94)
			80	5.5	70.4 (1.89)	91.6 (2.46)	91.6 (2.46)
			100	6.9	85.2 (2.28)	111.0 (2.98)	111.0 (2.98)
125			8.6	103.8 (2.78)	135.2 (3.62)	135.2 (3.62)	
6 to 20 PSIG 0.41 to 1.4 BAR  655-771-002  Silver	10	0.69	15	1.0	11.3 (0.30)	23.6 (0.63)	24.7 (0.66)
			20	1.4	15.1 (0.40)	30.9 (0.83)	31.5 (0.84)
			40	2.8	26.3 (0.70)	52.9 (1.42)	52.9 (1.42)
			60	4.1	36.0 (0.96)	72.3 (1.94)	72.3 (1.94)
			80	5.5	45.6 (1.22)	91.6 (2.46)	91.6 (2.46)
			100	6.9	55.2 (1.48)	111.0 (2.98)	111.0 (2.98)
			125	8.6	67.3 (1.80)	135.2 (3.62)	135.2 (3.62)
	150	10.3	79.3 (2.12)	159.3 (4.27)	159.3 (4.27)		
	20	1.38	25	1.7	28.5 (0.76)	31.2 (0.84)	33.2 (0.89)
			20	2.1	37.1 (0.99)	38.8 (1.04)	40.1 (1.08)
			40	2.8	50.4 (1.35)	51.2 (1.37)	51.9 (1.39)
			60	4.1	72.0 (1.93)	72.2 (1.94)	72.3 (1.94)
			80	5.5	91.6 (2.46)	91.6 (2.46)	91.6 (2.46)
			100	6.9	111.0 (2.98)	111.0 (2.98)	111.0 (2.98)
125			8.6	135.2 (3.62)	135.2 (3.62)	135.2 (3.62)	
150	10.3	159.3 (4.27)	159.3 (4.27)	159.3 (4.27)			

1. Outlet pressure setting was made at approximately 10% of the maximum capacity for the listed conditions.  
 - Gray areas indicate maximum flow capacity.

Outlet Pressure Range, Control Spring Number and Color	Outlet Pressure Setting <sup>1</sup>		Inlet Pressure		2" (DN 50) Body Size		
					1.91 Inches (48.5 mm) Orifice Size		
					Droop from Setpoint		
PSIG	BAR	PSIG	BAR	10%	20%	30%	
				SCFH (Nm <sup>3</sup> /h)	SCFH (Nm <sup>3</sup> /h)	SCFH (Nm <sup>3</sup> /h)	
16 to 30 PSIG 1.1 to 2.1 BAR  655-771-003  Red	20	1.4	25	1.7	17.2 (0.46)	31.2 (0.84)	33.2 (0.89)
			30	2.1	22.1 (0.59)	38.8 (1.04)	40.1 (1.08)
			40	2.8	29.8 (0.80)	51.2 (1.37)	51.9 (1.39)
			60	4.1	42.5 (1.14)	72.2 (1.94)	72.3 (1.94)
			80	5.5	54.1 (1.45)	91.6 (2.46)	91.6 (2.46)
			100	6.9	65.5 (1.76)	111.0 (2.98)	111.0 (2.98)
			125	8.6	79.8 (2.14)	135.2 (3.62)	135.2 (3.62)
	150	10.3	94.0 (2.52)	159.3 (4.27)	159.3 (4.27)		
	30	2.07	35	2.4	34.4 (0.92)	38.7 (1.04)	41.8 (1.12)
			40	2.8	38.4 (1.03)	46.6 (1.25)	48.8 (1.31)
			60	4.1	61.2 (1.64)	71.0 (1.90)	71.6 (1.92)
			80	5.5	79.7 (2.14)	91.5 (2.45)	91.6 (2.46)
			100	6.9	96.9 (2.60)	111.0 (2.98)	111.0 (2.98)
			125	8.6	118.0 (3.16)	135.2 (3.62)	135.2 (3.62)
150			10.3	139.1 (3.73)	159.3 (4.27)	159.3 (4.27)	
26 to 40 PSIG 1.8 to 2.8 BAR  655-771-004  Blue	30	2.1	35	2.4	19.7 (0.53)	38.7 (1.04)	41.8 (1.12)
			40	2.8	24.6 (0.66)	46.6 (1.25)	48.8 (1.31)
			60	4.1	39.0 (1.04)	71.0 (1.90)	71.6 (1.92)
			80	5.5	50.7 (1.36)	91.5 (2.45)	91.6 (2.46)
			100	6.9	61.6 (1.65)	111.0 (2.98)	111.0 (2.98)
			125	8.6	75.0 (2.01)	135.2 (3.62)	135.2 (3.62)
			150	10.3	88.4 (2.37)	159.3 (4.27)	159.3 (4.27)
	40	2.8	45	3.1	30.3 (0.81)	46.2 (1.24)	50.4 (1.35)
			50	3.4	37.1 (0.99)	54.3 (1.46)	57.4 (1.54)
			60	4.1	48.0 (1.29)	67.8 (1.82)	69.7 (1.87)
			80	5.5	65.6 (1.76)	90.5 (2.42)	91.2 (2.44)
			100	6.9	80.9 (2.17)	110.9 (2.97)	111.0 (2.98)
			125	8.6	98.9 (2.65)	135.2 (3.62)	135.2 (3.62)
			150	10.3	116.6 (3.12)	159.3 (4.27)	159.3 (4.27)
36 to 50 PSIG 2.5 to 3.4 BAR  655-771-005  Green	40	2.8	45	3.1	24.6 (0.66)	46.2 (1.24)	50.4 (1.35)
			50	3.4	30.0 (0.80)	54.3 (1.46)	57.4 (1.54)
			60	4.1	38.8 (1.04)	67.8 (1.82)	69.7 (1.87)
			80	5.5	52.9 (1.42)	90.5 (2.42)	91.2 (2.44)
			100	6.9	65.3 (1.75)	110.9 (2.97)	111.0 (2.98)
			125	8.6	79.8 (2.14)	135.2 (3.62)	135.2 (3.62)
			150	10.3	94.0 (2.52)	159.3 (4.27)	159.3 (4.27)
	50	3.4	55	3.8	34.8 (0.93)	53.7 (1.44)	59.0 (1.58)
			60	4.1	41.8 (1.12)	61.9 (1.66)	66.0 (1.77)
			80	5.5	62.9 (1.69)	88.1 (2.36)	89.8 (2.41)
			100	6.9	79.7 (2.14)	110.0 (2.95)	110.7 (2.97)
			125	8.6	98.7 (2.64)	135.2 (3.62)	135.2 (3.62)
			150	10.3	116.6 (3.12)	159.3 (4.27)	159.3 (4.27)
			45 to 60 PSIG 3.1 to 4.1 BAR  655-771-006  White	50	3.4	55	3.8
60	4.1	35.3 (0.95)				61.9 (1.66)	66.0 (1.77)
80	5.5	53.0 (1.42)				88.1 (2.36)	89.8 (2.41)
100	6.9	67.2 (1.80)				110.0 (2.95)	110.7 (2.97)
125	8.6	83.1 (2.23)				135.2 (3.62)	135.2 (3.62)
150	10.3	98.1 (2.63)				159.3 (4.27)	159.3 (4.27)
60	4.1	65				4.5	39.5 (1.06)
		70		4.8	46.7 (1.25)	69.5 (1.86)	74.6 (2.00)
		80		5.5	58.6 (1.57)	83.8 (2.25)	87.2 (2.34)
		100		6.9	77.8 (2.08)	108.0 (2.89)	109.6 (2.94)
		125		8.6	98.1 (2.63)	134.6 (3.61)	135.1 (3.62)
		150		10.3	116.8 (3.13)	159.3 (4.27)	159.3 (4.27)

1. Outlet pressure setting was made at approximately 10% of the maximum capacity for the listed conditions.  
 - Gray areas indicate maximum flow capacity.



**P133K Regulator 60% Capacities** in Thousands of SCFH of (0.6 Specific Gravity Gas)

Outlet Pressure Range, Control Spring Number and Color	Outlet Pressure Setting <sup>1</sup>		Inlet Pressure		2" (DN 50) Body Size		
					1.91 Inches (48.5 mm) Orifice Size		
					Droop from Setpoint		
PSIG	BAR	PSIG	BAR	10%	20%	30%	
				SCFH (Nm3/h)	SCFH (Nm3/h)	SCFH (Nm3/h)	
2 to 5 PSIG 0.14 to 0.34 BAR  655-771-000  Yellow	2	0.14	10	0.7	9.1 (0.24)	17.7 (0.47)	26.4 (0.71)
			20	1.4	14.5 (0.39)	28.3 (0.76)	42.1 (1.13)
			40	2.8	24.2 (0.65)	47.1 (1.26)	70.0 (1.88)
			60	4.1	33.5 (0.90)	65.2 (1.75)	96.9 (2.60)
			80	5.5	42.6 (1.14)	83.0 (2.22)	123.4 (3.31)
			100	6.9	51.8 (1.39)	100.8 (2.70)	149.8 (4.02)
			125	8.6	63.2 (1.69)	122.9 (3.29)	182.7 (4.90)
	150	10.3	74.5 (2.00)	145.0 (3.89)	215.6 (5.78)		
	5	0.34	10	0.7	18.8 (0.50)	26.1 (0.70)	27.0 (0.72)
			20	1.4	33.6 (0.90)	45.7 (1.22)	46.1 (1.24)
			40	2.8	57.8 (1.55)	78.4 (2.10)	78.5 (2.10)
			60	4.1	80.5 (2.16)	109.1 (2.92)	109.2 (2.93)
			80	5.5	102.9 (2.76)	139.4 (3.74)	139.4 (3.74)
			100	6.9	125.1 (3.35)	169.4 (4.54)	169.4 (4.54)
125			8.6	152.7 (4.09)	206.7 (5.54)	206.8 (5.54)	
150	10.3	180.2 (4.83)	244.0 (6.54)	244.0 (6.54)			
4.5 to 10 PSIG 0.31 to 0.69 BAR  655-771-001  Orange	5	0.34	10	0.7	10.0 (0.27)	20.0 (0.54)	27.0 (0.72)
			20	1.4	17.7 (0.47)	34.8 (0.93)	46.1 (1.24)
			40	2.8	30.4 (0.82)	59.5 (1.60)	78.5 (2.10)
			60	4.1	42.3 (1.13)	82.9 (2.22)	109.2 (2.93)
			80	5.5	54.0 (1.45)	105.8 (2.84)	139.4 (3.74)
			100	6.9	65.7 (1.76)	128.6 (3.45)	169.4 (4.54)
			125	8.6	80.1 (2.15)	157.0 (4.21)	206.8 (5.54)
	150	10.3	94.6 (2.54)	185.2 (4.96)	244.0 (6.54)		
	10	0.69	25	1.7	38.3 (1.03)	51.2 (1.40)	52.1 (1.40)
			30	2.7	45.1 (1.21)	60.0 (1.63)	60.7 (1.63)
			40	2.8	57.8 (1.55)	76.6 (2.07)	77.1 (2.07)
			60	4.1	81.8 (2.19)	108.0 (2.90)	108.3 (2.90)
			80	5.5	105.1 (2.82)	138.6 (3.72)	138.8 (3.72)
			100	6.9	128.0 (3.43)	168.8 (4.53)	168.9 (4.53)
125			8.6	156.5 (4.19)	206.3 (5.53)	206.4 (5.53)	
150	10.3	184.9 (4.96)	243.7 (6.53)	243.8 (6.53)			
6 to 20 PSIG 0.41 to 1.4 BAR  655-771-002  Silver	10	0.69	15	1.0	14.6 (0.39)	31.1 (0.83)	32.7 (0.88)
			20	1.4	20.0 (0.54)	41.8 (1.12)	42.9 (1.15)
			40	2.8	37.3 (1.00)	76.6 (2.05)	77.1 (2.07)
			60	4.1	52.7 (1.41)	108.0 (2.89)	108.3 (2.90)
			80	5.5	67.7 (1.81)	138.6 (3.71)	138.8 (3.72)
			100	6.9	82.5 (2.21)	168.8 (4.52)	168.9 (4.53)
			125	8.6	100.8 (2.70)	206.3 (5.53)	206.4 (5.53)
	150	10.3	119.1 (3.19)	243.7 (6.53)	243.8 (6.53)		
	20	1.38	25	1.7	36.9 (0.99)	40.9 (1.10)	44.2 (1.18)
			20	2.1	49.2 (1.32)	52.0 (1.39)	54.5 (1.46)
			40	2.8	69.2 (1.86)	71.1 (1.90)	72.7 (1.95)
			60	4.1	103.6 (2.78)	104.7 (2.81)	105.7 (2.83)
			80	5.5	135.5 (3.63)	136.3 (3.65)	136.9 (3.67)
			100	6.9	166.5 (4.46)	167.0 (4.48)	167.6 (4.49)
125			8.6	204.6 (5.48)	205.0 (5.49)	205.4 (5.50)	
150	10.3	242.3 (6.49)	242.7 (6.50)	243.0 (6.51)			

1. Outlet pressure setting was made at approximately 10% of the maximum capacity for the listed conditions.  
 - Gray areas indicate maximum flow capacity.

Outlet Pressure Range, Control Spring Number and Color	Outlet Pressure Setting <sup>1</sup>		Inlet Pressure		2" (DN 50) Body Size		
					1.91 Inches (48.5 mm) Orifice Size		
					Droop from Setpoint		
PSIG	BAR	PSIG	BAR	10%	20%	30%	
				SCFH (Nm3/h)	SCFH (Nm3/h)	SCFH (Nm3/h)	
16 to 30 PSIG 1.1 to 2.1 BAR  655-771-003  Red	20	1.4	25	1.7	22.0 (0.59)	40.9 (1.10)	44.2 (1.18)
			30	2.1	28.9 (0.78)	52.0 (1.39)	54.5 (1.46)
			40	2.8	40.5 (1.08)	71.1 (1.90)	72.7 (1.95)
			60	4.1	60.4 (1.62)	104.7 (2.81)	105.7 (2.83)
			80	5.5	78.9 (2.12)	136.3 (3.65)	136.9 (3.67)
			100	6.9	96.9 (2.60)	167.0 (4.48)	167.6 (4.49)
			125	8.6	119.0 (3.19)	205.0 (5.49)	205.4 (5.50)
	150	10.3	141.0 (3.78)	242.7 (6.50)	243.0 (6.51)		
	30	2.07	35	2.4	39.1 (1.05)	50.7 (1.36)	55.7 (1.49)
			40	2.8	50.1 (1.34)	62.1 (1.66)	66.0 (1.77)
			60	4.1	84.3 (2.26)	99.7 (2.67)	101.8 (2.73)
			80	5.5	113.6 (3.04)	132.8 (3.56)	134.3 (3.60)
			100	6.9	141.2 (3.78)	164.5 (4.41)	165.6 (4.44)
			125	8.6	174.8 (4.68)	203.1 (5.44)	203.9 (5.46)
150			10.3	207.9 (5.57)	241.2 (6.46)	241.8 (6.48)	
26 to 40 PSIG 1.8 to 2.8 BAR  655-771-004  Blue	30	2.1	35	2.4	25.0 (0.67)	50.7 (1.36)	55.7 (1.49)
			40	2.8	31.9 (0.86)	62.1 (1.66)	66.0 (1.77)
			60	4.1	53.4 (1.43)	99.7 (2.67)	101.8 (2.73)
			80	5.5	71.9 (1.93)	132.8 (3.56)	134.3 (3.60)
			100	6.9	89.3 (2.39)	164.5 (4.41)	165.6 (4.44)
			125	8.6	110.5 (2.96)	203.1 (5.44)	203.9 (5.46)
			150	10.3	131.4 (3.52)	241.2 (6.46)	241.8 (6.48)
	40	2.8	45	3.1	38.5 (1.03)	60.5 (1.62)	67.1 (1.80)
			50	3.4	48.0 (1.29)	72.1 (1.93)	77.5 (2.08)
			60	4.1	63.9 (1.71)	92.5 (2.48)	96.4 (2.58)
			80	5.5	90.8 (2.43)	128.1 (3.43)	130.7 (3.50)
			100	6.9	115.0 (3.08)	161.0 (4.32)	162.9 (3.50)
			125	8.6	144.0 (3.86)	200.5 (5.37)	201.9 (5.41)
			150	10.3	172.1 (4.61)	239.1 (6.41)	240.2 (6.44)
36 to 50 PSIG 2.5 to 3.4 BAR  655-771-005  Green	40	2.8	45	3.1	31.2 (0.84)	60.5 (1.62)	67.1 (1.80)
			50	3.4	38.8 (1.04)	72.1 (1.93)	77.5 (2.08)
			60	4.1	51.5 (1.38)	92.5 (2.48)	96.4 (2.58)
			80	5.5	73.1 (1.96)	128.1 (3.43)	130.7 (3.50)
			100	6.9	92.6 (2.48)	161.0 (4.32)	162.9 (3.50)
			125	8.6	115.8 (3.10)	200.5 (5.37)	201.9 (5.41)
			150	10.3	138.5 (3.71)	239.1 (6.41)	240.2 (6.44)
	50	3.4	55	3.8	44.2 (1.18)	70.3 (1.88)	78.6 (2.11)
			60	4.1	53.9 (1.44)	82.1 (2.20)	89.0 (2.38)
			80	5.5	84.8 (2.27)	121.7 (3.26)	125.9 (3.37)
			100	6.9	110.9 (2.97)	156.4 (4.19)	159.4 (4.27)
			125	8.6	140.9 (3.78)	197.1 (5.28)	199.3 (5.34)
			150	10.3	169.7 (4.55)	236.5 (6.34)	238.2 (6.38)
			45 to 60 PSIG 3.1 to 4.1 BAR  655-771-006  White	50	3.4	55	3.8
60	4.1	45.4 (1.22)				82.1 (2.20)	89.0 (2.38)
80	5.5	71.4 (1.91)				121.7 (3.26)	125.9 (3.37)
100	6.9	93.2 (2.50)				156.4 (4.19)	159.4 (4.27)
125	8.6	118.4 (3.17)				197.1 (5.28)	199.3 (5.34)
150	10.3	142.6 (3.82)				236.5 (6.34)	238.2 (6.38)
150	10.3	142.6 (3.82)				236.5 (6.34)	238.2 (6.38)
60	4.1	65		4.5	50.0 (1.34)	80.1 (2.15)	90.1 (2.42)
		70		4.8	59.9 (1.60)	92.0 (2.47)	100.5 (2.69)
		80		5.5	77.0 (2.06)	113.2 (3.03)	119.8 (3.21)
		100		6.9	105.8 (2.84)	150.5 (4.03)	155.0 (4.15)
		125		8.6	137.5 (3.68)	192.9 (5.17)	196.2 (5.26)
		150		10.3	167.4 (4.49)	233.2 (6.25)	235.8 (6.32)
		150		10.3	167.4 (4.49)	233.2 (6.25)	235.8 (6.32)

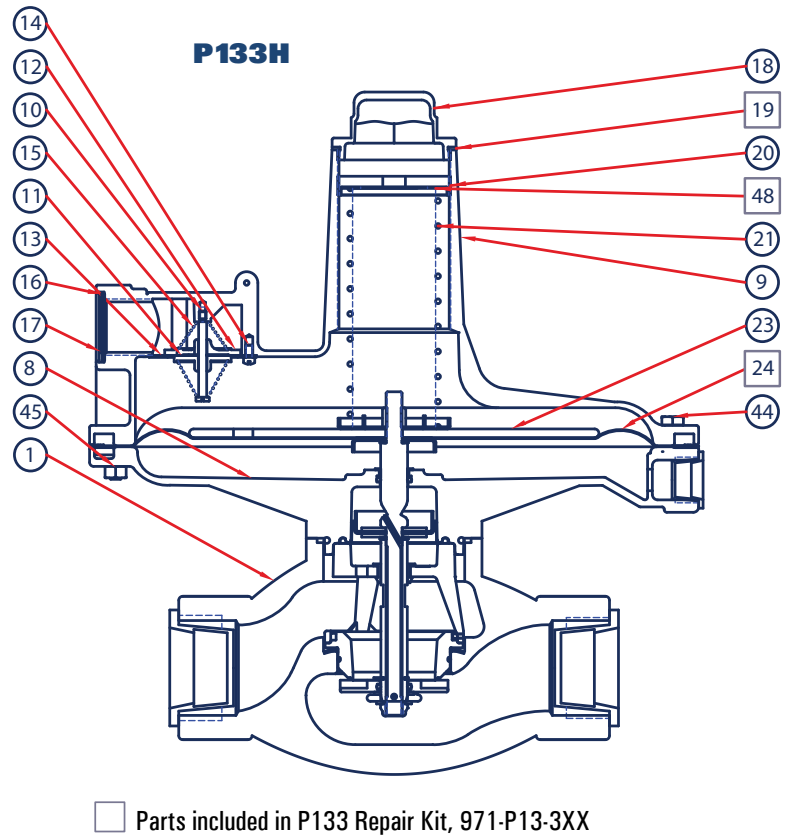
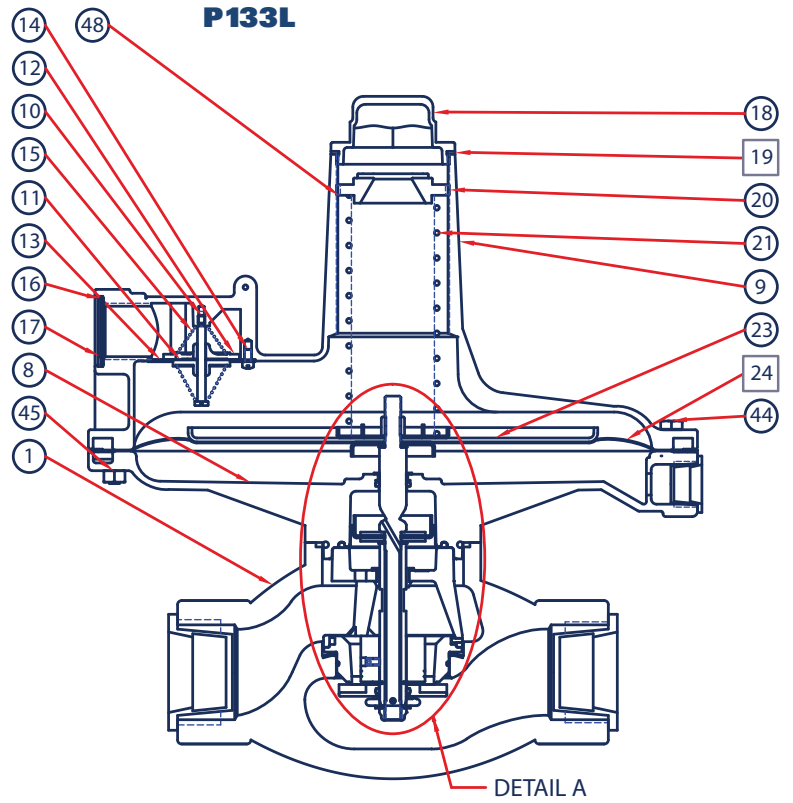
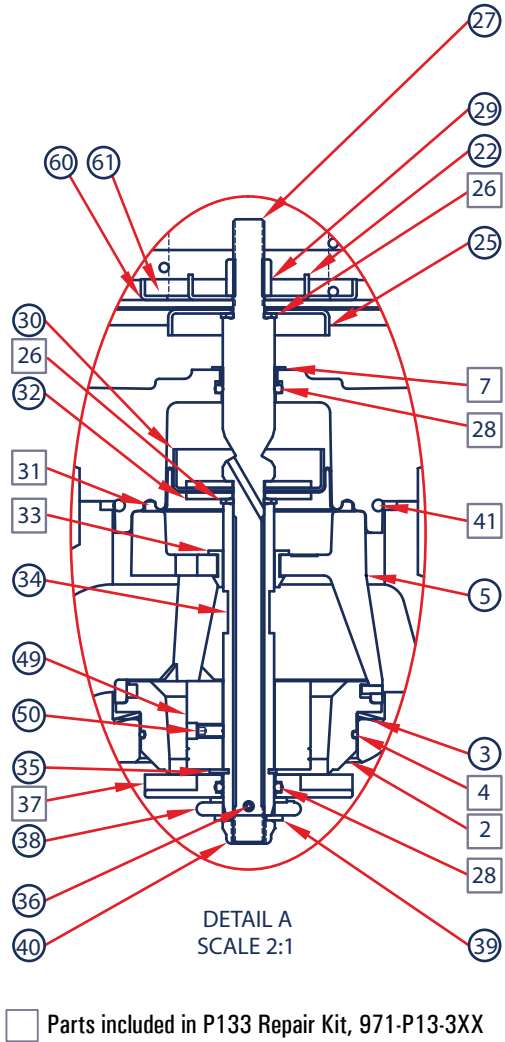
1. Outlet pressure setting was made at approximately 10% of the maximum capacity for the listed conditions.  
 - Gray areas indicate maximum flow capacity.

## P133 Parts List

Item	Description	Qty.	Part Number
1	Iron - 2" NPT	1	664-363-000
	Steel - 2" NPT		664-361-000
	Iron - 2" 125# FF Flanged		664-370-000
	Steel - 2" 150# RF Flanged		664-373-000
2	Orifice - Aluminum	1	688-054-001
3	Belleville Washer	1	662-235-000
4	O-ring - Nitrile	1	649-317-000
	O-ring - Fluorocarbon		649-317-001
5	Cage - Aluminum	1	704-007-000
6	Cage Roll Pins	3	635-072-000
7	Stem Bearing	1	602-126-000
8	L & H Diaphragm Casing - Aluminu	1	629-230-000
	K Diaphragm Casing - Steel		629-256-000
9	L & H Bonnet - Aluminum	1	604-230-000
	K Bonnet - Iron		604-564-000
L & H Vent Assembly Parts			
10	Flapper Stem - L & H Only	1	661-008-000
11	Lower Flapper - L & H Only	1	661-009-000
12	Upper Flapper - L & H Only	1	661-010-000
13	Seat Ring - L & H Only	1	650-136-000
14	Self-tapping Screw - L & H Only	3	648-502-000
15	Vent Port Spring - L & H Only	2	655-697-000
16	Screen - L & H Only	1	647-018-000
17	Snap Ring - L & H Only	1	693-021-000
18	L & H Bonnet Cap	1	610-058-000
	K Bonnet Cap		610-094-000
19	L & H Bonnet Cap Gasket	1	624-068-000
	K Bonnet Cap Gasket		624-101-000
20	L Adjustment Screw	1	648-504-000
	H Adjustment Screw		648-536-000
	K Adjustment Screw		648-571-000
21	2" to 4" WC, Brown Spring	L & H	655-697-002
	3.5" to 6" WC, Pink Spring	L & H	655-730-002
	5" to 9" WC, Tan Spring	L & H	655-730-003
	6" to 14" WC, Purple Spring	L & H	655-697-011
	8.5" to 18" WC, White Spring	L & H	655-697-005
	14" to 28" WC, Green Spring	L & H	655-697-006
	.75 to 2 PSIG, Blue Spring	L & H	655-697-007
	1.5 to 6 PSIG, Orange Spring	H	655-697-008
	2 to 5 PSIG, Yellow Spring	H	655-730-000
	5 to 10 PSIG, Grey Spring	H	655-630-001
	6 to 20 PSIG, Silver Spring	K	655-771-002
	16 to 30 PSIG, Red Spring	K	655-771-003
	26 to 40 PSIG, Blue Spring	K	655-771-004
	36 to 50 PSIG, Green Spring	K	655-771-005
45 to 60 PSIG, White Spring	K	655-771-006	
2 to 5 PSIG, Yellow Spring	K	655-771-000	
4.5 to 10 PSIG, Orange Spring	K	655-771-001	
22	L & H Range Spring Seat	1	650-171-000
	K Range Spring Seat		634-224-000
23	L Upper Diaphragm Plate - Low Pressure	1	638-071-000
	H Upper Diaphragm Plate - High Pressure		638-070-000
	K Upper Diaphragm Plate - High Pressure		638-086-000
24	L & H Nitrile Upper Diaphragm	1	618-094-000
	L & H Fluorocarbon Upper Diaphragm		618-094-001
	K Nitrile Upper Diaphragm		600-517-000
	K Fluorocarbon Upper Diaphragm		600-517-001
25	L & H Diaphragm Sealing Plate	2	638-072-000
	K Diaphragm Sealing Plate		638-087-000
26	Sealing Washer - Nitrile	2	662-231-000
	Sealing Washer - Fluorocarbon		662-231-001

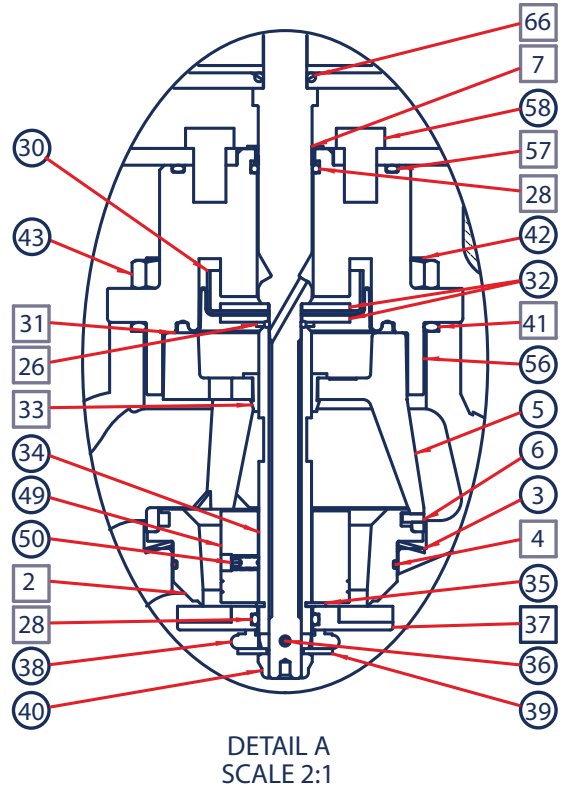
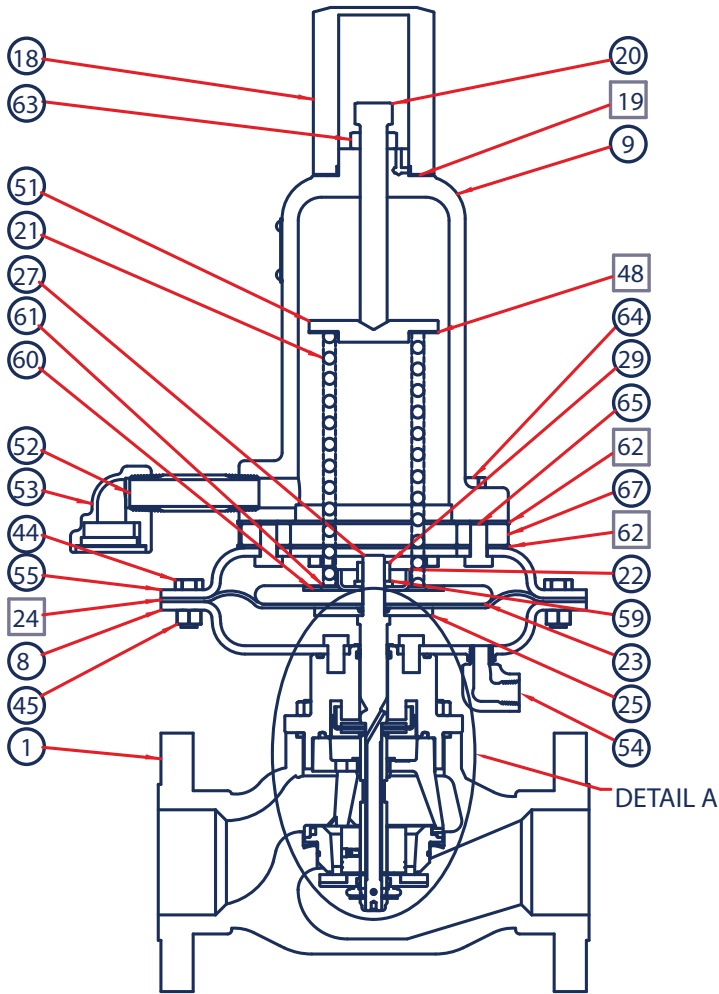
Item	Description	Qty.	Part Number
27	L & H Stem - 416L Stainless Steel	1	689-007-000
	K Stem - 416L Stainless Steel		689-007-001
28	O-ring - Nitrile	2	649-000-197
	O-ring - Fluorocarbon		649-000-342
29	L & H Upper Stem Hex Nut	1	634-196-000
	K Upper Stem Hex Nut		634-146-002
30	Lower Diaphragm Plate	1	638-069-000
31	Nitrile Lower Diaphragm	1	600-511-000
	Fluorocarbon Lower Diaphragm		600-511-001
32	Washer	2	662-232-000
33	Stem Guide Bushing	1	608-082-000
34	Stem Sleeve	1	653-056-000
35	Stem E-ring	1	693-025-000
36	Roll Pin	1	635-071-000
37	Valve Disk Assembly - Nitrile	1	822-039-000
	Valve Disk Assembly - Fluorocarbon		822-039-001
38	Registration Disk	1	619-064-000
39	Washer	1	662-233-000
40	Lower Stem Hex Nut	1	634-000-031
41	Body O-ring - Nitrile	1	649-000-257
	Body O-ring - Fluorocarbon		649-318-000
42	Body/Lower Casing Studs (not shown)	4	657-016-000
43	Body/Lower Casing Lock Nut (not shown)	4	634-184-000
44	L & H Lower Casing/Bonnet Screw	12	648-506-000
	K Lower Casing/Upper Casing Screw		648-467-007
45	L & H Lower Casing/Bonnet Nut	12	634-174-000
	K Lower Casing/Upper Casing Nut		634-151-000
47	Set Screw (not shown)	2	648-534-000
48	L - Thrust Washer - High Pressure only	1	662-234-001
	H Thrust Washer - High Pressure only		662-234-000
	K Thrust Washer - High Pressure only		662-234-002
49	25% Capacity Restrictor	1	612-009-000
	40% Capacity Restrictor		612-010-000
	60% Capacity Restrictor		612-011-000
50	Restrictor Collar Set Screw	1	648-535-000
51	Upper Spring Seat - Brass	1	626-119-000
52	Vent Pipe Nipple	1	633-025-000
53	Bonnet Vent Assembly	1	836-011-000
54	Lower Casing Vent	1	622-057-000
55	Upper Diaphragm Case	1	629-255-000
56	Casing Adaptor	1	673-027-000
57	Casing Adaptor O-ring - Nitrile	1	649-309-010
	Casing Adaptor O-ring - Fluorocarbon		649-304-002
58	Lower Casing Screw	4	648-000-034
59	Diaphragm Lock Washer	1	662-000-018
60	L & H Roller Bearing	1	602-133-000
	K Roller Bearing		602-134-000
61	L & H Roller Washer	1	662-240-000
	K Roller Washer		662-242-000
62	Mounting Bracket Gasket	2	624-102-000
63	Adjustment Screw Jam Nut	1	634-181-000
64	Bonnet/Bracket Screws	6	648-463-002
65	Bracket/Casing Screws	6	648-463-011
66	Diaphragm Washer O-ring - Nitrile	1	649-000-150
	Diaphragm Washer O-ring - Fluorocarbon		649-000-338
67	Mounting Bracket	1	607-311-000

**P133 Parts Drawing**



# P133 Parts Drawing

## P133K



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