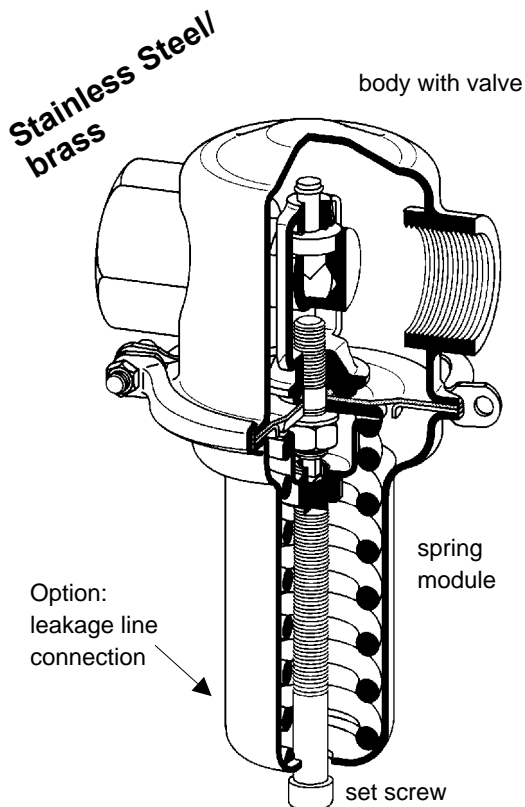


PRESSURE REDUCING VALVE 502



for liquids and gases up to 265 °F,
especially for CO₂,
body stainless steel, internals made of brass.



Technical Data

Connection	NPT 1/2" - 2" other connections on request
Inlet Pressure	up to 1450 psi
Outlet Pressure	0.3-230 psi in 8 adjusting ranges
C _v -value	0.7 - 5 US gall/min
Tightness	ANSI class VI
Sense Line	for adjusting ranges 0.3 -16 psi

Description

Mankenberg self acting pressure reducing valves are simple basic regulators that provide precision control and are easy to install and maintain. They control the pressure at the outlet side without use of any external electrical or pneumatic actuators.

Pressure reducing valve 502 is a diaphragm-controlled, spring-loaded proportional regulator used mainly for sanitary applications in the food and beverage industries. It does not require the use of an external sense line. For better control performance the low adjusting ranges 0.3 - 16 psi have a sense line connection. During installation a sense line **MUST** be installed.

These valves are made of deep-drawn stainless steel and brass and feature excellent corrosion resistance. It is less heavy than conventional casted valves and mostly support brackets are not necessary.

The spring module including the cover, spring, set screw, diaphragm and internals is fastened with 2 screws at the clamp for easy handling. Changing the diaphragm or the complete spring module for another pressure range is very easy and done without special tools or training. The valve remains in place in the line even for maintenance. Adjusting the set pressure does not change the height of the unit.

The spring keeps the valve in full open position when the pipeline is depressurized. Under pressure the medium flows from the inlet through the valve seat to the outlet and acts on the spring module. As the outlet pressure rises above the set pressure, the valve orifice is reduced restricting the flow. As the outlet pressure drops the valve orifice becomes larger increasing flow. The pressure setting is adjusted by turning the set screw to change the spring tension.

OPTIONS

- Manometer connection.
- Drain hole for CO₂ at the lowest point of the spring cap to lead away inside arising condensat..
- For toxic or hazardous applications, use a spring cap with the set -screw sealing fitted with a leakage line connection. During installation a leakage line **MUST** be installed.
- Different materials for gaskets and diaphragms are available for comparability with your product. Please ask Mankenberg if you have a problematic medium.
- Special designs are available to suit your specifications. Please inquire.
- Guideline for selection, installation and operation "What you should know, Notes on Safety etc." **MUST** be followed

Mankenberg reserves the right to change specifications without notice.

C _v -values [US gall/min]						
Body Size	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
C _v	0.7	1	1.7	3.2	4.2	5

Adjusting Ranges [psi]							
0.3-1.7	1.5-7	4-16	15-36	30-75	60-120	90-175	145-230

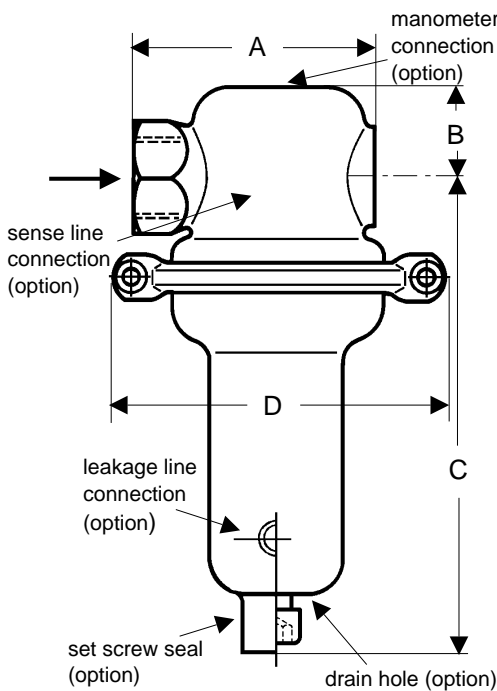
Max. Pressure Ratio (max. p ₁ /p ₂)						
Body Size	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
Adjusting Ranges 0.3-1.7 psi						
Ratio p ₁ /p ₂	810	750	530	280	230	185
Adjusting Range 1,5 - 7 psi						
Ratio p ₁ /p ₂	220	200	140	75	60	50
Adjusting Range 4 - 16 psi						
Ratio p ₁ /p ₂	100	90	65	35	25	20
Adjusting Ranges 15 - 36 psi						
Ratio p ₁ /p ₂	55	50	35	20	15	10
Adjusting Ranges 30 - 75, 60 - 120 and 90 - 175 psi						
Ratio p ₁ /p ₂	25	25	15	10	8	6
Adjusting Ranges 145 - 230 psi						
Ratio p ₁ /p ₂	20	15	13	7	5	4

PRESSURE REDUCING VALVE 502



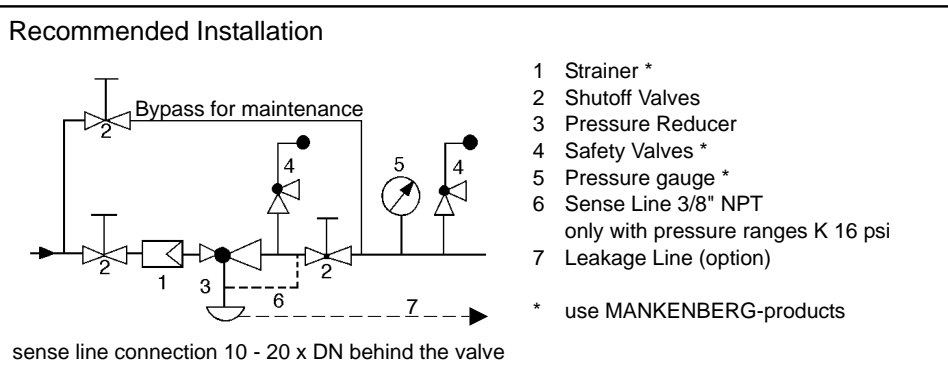
for liquids and gases up to 265 °F,
especially for CO₂,
body stainless steel, internals made of brass.

Materials				
Adjusting Pressure Range	0.3 - 16 psi		16 - 230 psi	
Temperature	175°F	265 °F	175°F	265 °F
Body	CrNiMo-steel			
Diaphragm Housing	CrNiMo-steel		steel	
Spring Cap				
Internals	brass / Cr-steel			
Spring	CrNi-steel			
Valve Seal	EU	FPM / PTFE / PTFE	EU	FPM / EPDM / PTFE
Diaphragm	CR	FPM / EPDM	CR	FPM / PTFE
Protection Film	PTFE (option)			



Dimensions [inch]							
Adjusting Range [psi]	Size	Body Size (DN)					
		1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
all ranges	A	5.63	6.02	6.77	7.36	7.80	8.58
	B	1.3	1.3	1.6	1.8	2	2.4
0.3 - 1.7	C	10.3		10.7		11.3	
	D	14					
1.5 - 7	C	10.3		10.7		11.3	
	D	10.4					
4 - 16	C	10.3		10.7		11.3	
	D	8					
15 - 230	C	7.7		8.1		8.7	
	D	5.5					

Weights [pound]						
Adjusting Range [psi]	Body Size (DN)					
	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
0.3 - 1.7	22	22	23	29	30	31
1.5 - 7	12	12	13	18	19	20
4 - 16	10	10	11	15.5	16.5	18
15 - 230	3	3	4.5	5.5	6.5	8



Mankenberg reserves the right to change specifications without notice.
Special designs are available to suit your specifications.