

# Type LR125 Pressure Reducing Liquid Regulator

- Rugged design
- Reliable
- Thoroughly tested
- Internally actuated
- Compact
- 1, 2, 3, 4 in. body sizes
- Recommended for water and oil applications
- Full SST construction available for harsh environments
- API 614 Compliant

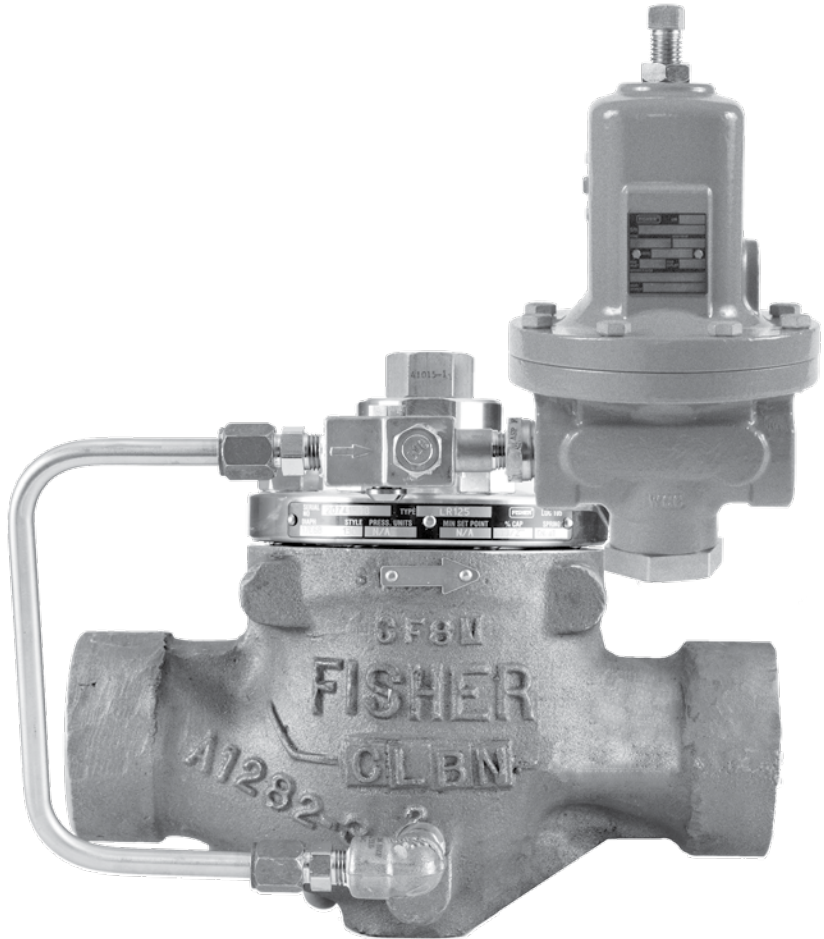


Figure 1. Type LR125 Pressure Reducing Liquid Regulator

## Introduction

The Type LR125 pilot-operated, pressure reducing regulator is designed for liquid industrial/commercial applications. The Type LR125 provides smooth operation, tight shutoff and long life. Its internally actuated metal plug eliminates disadvantages associated with flexible element style regulators, and the specially engineered flow path deflects debris, protecting the seat from damage and erosion. The Type LR125 is used in conjunction with a Type MR95H/MR95HP pilot and Type 112 restrictor. An internal inlet strainer prevents large particles from entering the main valve, limiting damage to internal parts.

## Features and Benefits

- 1 **Tight Shutoff**—The Type LR125 uses a diaphragm and metal plug, eliminating the disadvantages of flexible element style regulators. When open, the metal plug deflects particles and debris away from the diaphragm. The result is enhanced resistance to particle erosion, which provides excellent shutoff over an extended life. When closed, loading pressure and the main spring push the diaphragm onto the tapered-edged seat on the cage.



# Bulletin 71.2:LR125

## Specifications

The Specifications section lists the specifications for the Type LR125 regulator. Factory specification is stamped on the nameplate fastened on the regulator at the factory.

### Main Valve Body Sizes, End Connection Styles and Structural Design Ratings<sup>(1)(2)</sup>

See Table 1

### Maximum Inlet Pressures<sup>(1)</sup>

**Type LR125 Main Valve:** See Table 1

**Type MR95H/MR95HP Pilot:** See Table 2

**Type 112 Restrictor:** 1500 psig / 103 bar

### Maximum Outlet Pressure

**Type LR125 Main Valve:** See Table 1

**Type MR95H/MR95HP Pilot:** See Table 2

### Outlet (Control) Pressure Ranges

See Table 3

### Main Valve Plug Travel

**1 in. / DN 25:** 0.37 in. / 9.4 mm

**2 in. / DN 50:** 0.68 in. / 17 mm

**3 in. / DN 80:** 0.98 in. / 25 mm

**4 in. / DN 100:** 1.19 in. / 30 mm

### Main Valve Minimum Differential Pressures<sup>(1)</sup>

See Table 6

### Temperature Capabilities<sup>(1)</sup>

See Table 4

### Main Valve Flow Direction

Up through the center of the cage and down through the cage slots

### Main Valve Internal Inlet Strainer Sizes

**1 in. / DN 25:** 12 Mesh (0.0661 in. / 1.68 mm)<sup>(3)</sup>

**2, 3 and 4 in. / DN 50, 80 and 100:**

10 Mesh (0.0787 in. / 2 mm)<sup>(3)</sup>

### Regulating Capacities

See Table 12

### Flow and IEC Sizing Coefficients

**Type LR125 Main Valve:** See Table 7

**Type MR95H/MR95HP Pilot:** See Table 8

**Type 112 Restrictor:** See Table 9

### Pressure Registration

**External:** 1/2 NPT

### Spring Case Vent

Type Y602-12

### Approximate Weights

See Table 10

### Options

- Pre-piped Pilot Supply
- Travel Indicator

### Construction Materials

#### Type LR125 Main Valve

*Body:* WCC Steel, CF8M or CF3M Stainless Steel

*Bonnet:* Steel or Stainless Steel

*Bonnet Bushing:* Steel or Stainless Steel

*Cage:* Stainless steel

*Spring:* Stainless steel

*Top Plug:* Stainless steel

*Bottom Plug:* Stainless steel

*Internal Inlet Strainer:* Stainless steel

*Diaphragm:* Nitrile (NBR) or Fluorocarbon (FKM)

*O-rings:* Nitrile (NBR) or Fluorocarbon (FKM)

*Flanged Locknut:* Stainless Steel

*Backup Rings:* Polytetrafluoroethylene (PTFE)

*Upper Spring Seat:* Stainless steel

*Indicator Protector and Cover:* Plastic

*Indicator Stem:* Stainless steel

*Indicator Fitting:* Stainless steel

*Travel Indicator Plug:* Stainless steel

#### Type MR95H/MR95HP Pilot

*Body:* WCC Steel or CF8M Stainless Steel

*Spring Case:* WCC Steel or CF8M Stainless Steel

*Orifice:* Stainless Steel

*Diaphragm:* Neoprene (CR) or Fluorocarbon (FKM)

*Disk:* Nitrile (NBR) or Fluorocarbon (FKM)

### Mounting Parts

*Pilot Mounting Pipe Nipple:* Plated steel or Stainless steel

*Pipe Fittings:* Plated steel or Stainless steel

*Tubing:* Stainless Steel

#### Type 112 Restrictor

*Body:* 15-5 Stainless Steel

*Groove Valve:* Stainless steel

*Retainer:* Stainless steel

*Pipe Plug:* Stainless steel

*O-rings:* Nitrile (NBR) or Fluorocarbon (FKM)

1. The pressure/temperature limits in this Bulletin and any applicable standard or code limitation should not be exceeded.

2. Ratings and end connections other than ASME standards can usually be provided; contact your local Sales Office.

3. Nominal sieve opening

**2 Debris Protection**—The specially engineered flow path, along with the metal plug, allows flow through the regulator without seat impingement. The addition of an internal inlet strainer prevents large particles from entering the regulator, minimizing damage to internal parts.

**3 High Accuracy**—Multiple control pressure ranges offered by Type MR95H/MR95HP pilot and lower accuracy class inherent to pilot operated pressure

regulator design provide the Type LR125 with tight and accurate control.

**4 Long Life**—The robust design of the Type LR125 with its metal plug and specially engineered flow path allows flow through the regulator without seat impingement. The diaphragm design eliminates the possibility of taking a “set”, a common problem with flexible element

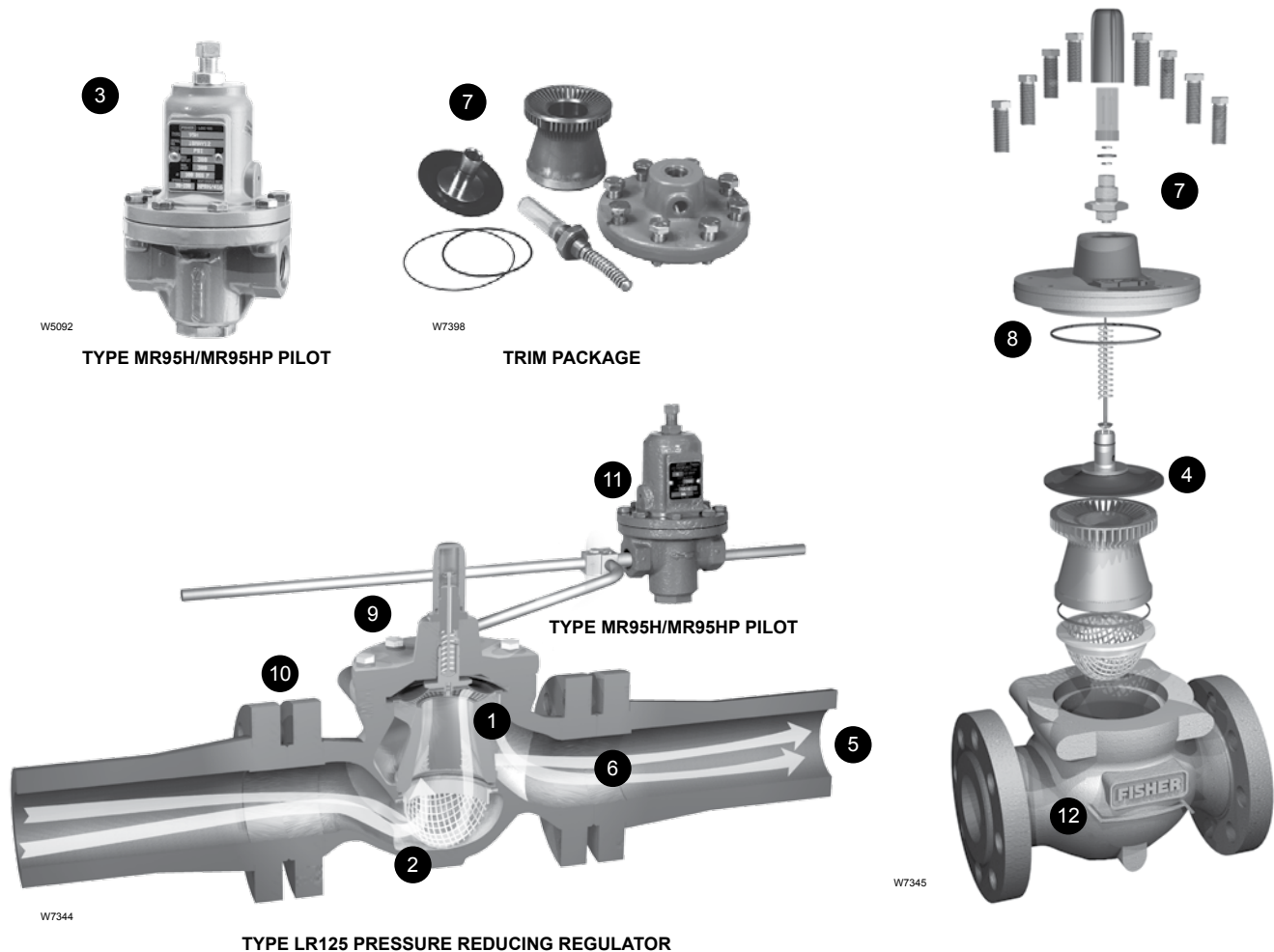


Figure 2. Type LR125 Features and Benefits

style regulators. To prevent damage, the diaphragm is fully supported in both the open and closed positions. These features enable the Type LR125 components to work longer with less wear and tear.

- 5 **Full Usable Capacity**—Fisher® branded regulators are laboratory tested. One hundred percent of the published flow capacity can be used with confidence.
- 6 **Thorough Laboratory Testing**—Emerson Process Management Regulator Technologies, Inc. (Emerson™) state-of-the-art flow laboratory allows thorough testing of all new designs. Tests are conducted on Fisher branded regulators for performance features such as flow, strength, shutoff and material compatibility.
- 7 **Easy In-Line Maintenance**—Top-entry design reduces maintenance time. Trim parts can be inspected, cleaned and replaced without removing the body from the pipeline. No special alignment is required when replacing the diaphragm.

- 8 **O-ring Design**—The Type LR125 uses elastomer O-rings instead of gaskets, reducing maintenance and assembly time.
- 9 **In-Service Travel Indicator**—The optional travel indicator responds to the precise movement of the diaphragm and plug assembly and shows the actual valve position. The travel indicator makes in-service inspection and troubleshooting easy. Also, it can be used for remote alarming and monitoring stem position.
- 10 **Versatility**—The Type LR125 uses the E-body, making available the standard construction materials and end connections (ASME and EN) used by other E-body regulators and control valves. Type MR95H can handle inlet pressures up to 300 psig / 20.7 bar and outlet pressures from 15 to 150 psig / 1.0 to 10.3 bar. Type MR95HP can handle up to 600 psig / 41.4 bar and outlet pressures from 15 to 400 psig / 1.0 to 27.6 bar.

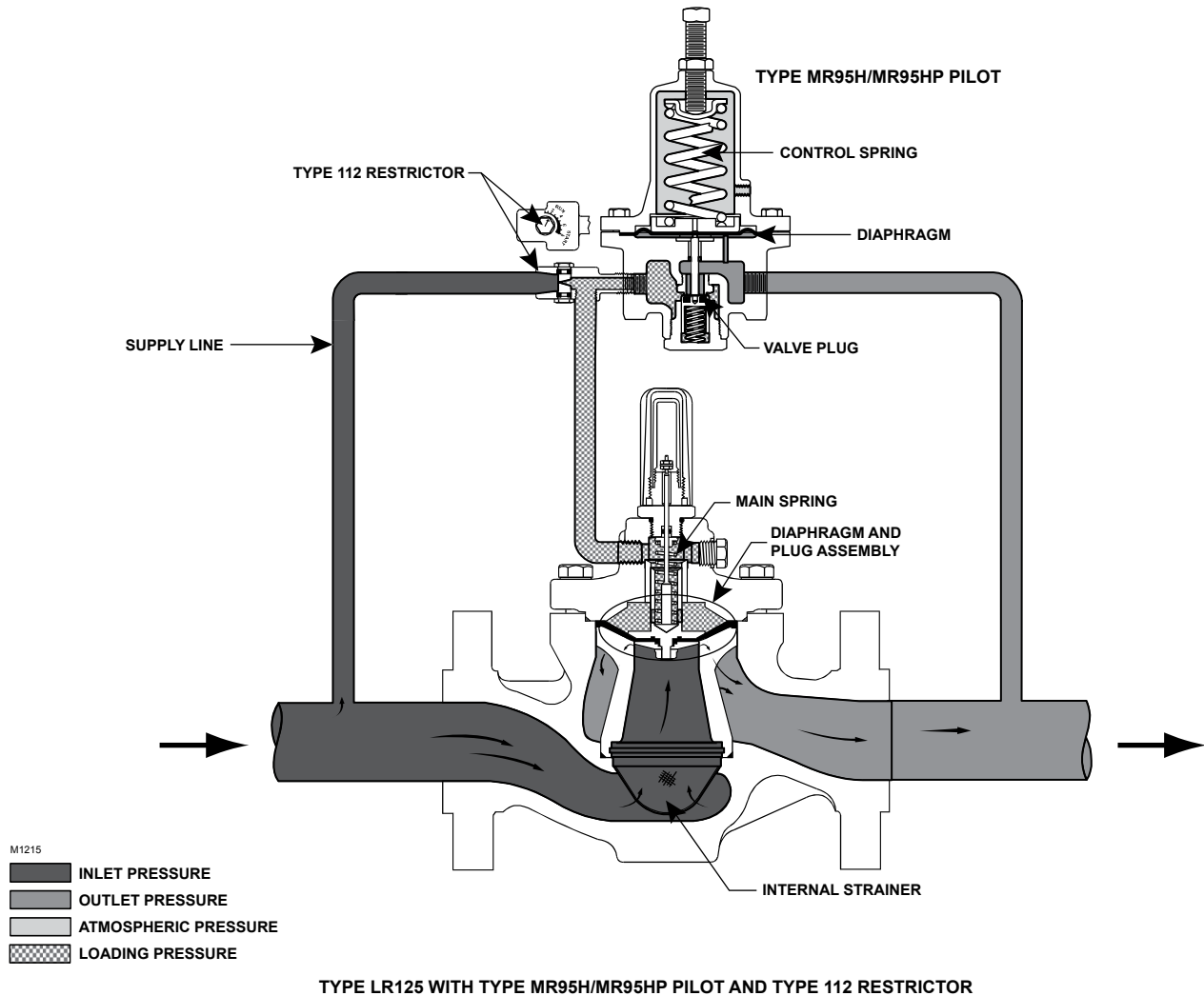


Figure 3. Type LR125 Operational Schematic

- 11 **Easy-to-Maintain**—The pilot is designed to allow quick and simple in-line trim inspection and parts replacement.
- 12 **Powder Paint Coating**—Carbon steel body is powder paint coated providing superior impact, abrasion and corrosion resistance.

## Pilot Type Description

**Type MR95H**—High-pressure pressure reducing pilot for 15 to 150 psig / 1.0 to 10.3 bar outlet pressures. Designed to handle inlet pressures up to 300 psig / 20.7 bar.

**Type MR95HP** — High-pressure reducing pilot for 15 to 400 psig / 1.0 to 27.6 bar outlet pressures. Designed to handle inlet pressures up to 600 psig / 41.4 bar.

## Principle of Operation

As long as the outlet (control) pressure is above the outlet pressure setting, the pilot valve plug or disk remains closed (Figure 3). Force from the main spring, in

addition to inlet pressure bleeding through the restrictor, provide downward loading pressure to keep the main valve diaphragm and plug assembly tightly shutoff.

When the outlet pressure decreases below the pilot outlet pressure setting, the pilot plug or disk assembly opens. Loading pressure bleeds downstream through the pilot faster than it can be replaced through the supply line. This reduces loading pressure on top of the main valve diaphragm and plug assembly and lets the unbalanced force between inlet and loading pressure overcome the main spring force to open the Type LR125 diaphragm and plug assembly.

As the outlet pressure rises toward the outlet pressure setting, it compresses the pilot diaphragm against the pilot control spring and lets the pilot valve plug or disk close. Loading pressure begins to build up on the Type LR125 diaphragm and plug assembly. The loading pressure, along with force from the main spring, pushes the diaphragm and plug assembly onto the tapered-edge seat, producing tight shutoff.

**Table 1. Type LR125 Main Valve Body Sizes, End Connection Styles, Structural Design Ratings and Maximum Operating Inlet Pressures<sup>(1)</sup>**

MAIN VALVE BODY SIZE		MAIN VALVE BODY MATERIAL	END CONNECTION STYLE <sup>(2)</sup>	STRUCTURAL DESIGN RATING <sup>(3)</sup>		MAXIMUM OPERATING INLET PRESSURE <sup>(4)</sup>	
In.	DN			psig	bar	psig	bar
1, 2, 3 and 4	25, 50, 80 and 100	WCC Steel	NPT or SWE (1 and 2 in. only)	1500	103	600	41.4
			CL150 RF	290	20.0	290	20.0
			CL300 RF	750	51.7	600	41.4
			CL600 RF	1500	103		
			PN 16/25/40 RF <sup>(4)</sup>	580	40.0		
		CF8M Stainless steel	NPT (1 and 2 in. only)	1440	99.2	550	37.9
			CL150 RF	275	19.0	275	19.0
			CL300 RF	720	49.6	550	37.9
			CL600 RF	1440	99.2		
			PN 16/25/40 RF <sup>(4)</sup>	580	40.0		

1. The pressure/temperature limits in this Bulletin and any applicable standard or code limitation should not be exceeded.
2. Ratings and end connections for other than ASME standard can usually be provided. Contact your local Sales Office for assistance.
3. Maximum cold working pressure (CWP) per ASME B16.34 or product Bulletin limit, whichever is lowest. Temperature may decrease these maximum pressures.
4. Not available for 4 in. / DN 100 body size.

**Table 2. Pilot Maximum Cold Working Pressure<sup>(1)(2)</sup>**

PILOT	BODY SIZE	BODY AND SPRING CASE MATERIAL	MAXIMUM INLET PRESSURE	MAXIMUM OUTLET PRESSURE
Type MR95H	1/2 NPT	Steel Stainless steel	300 psig / 20.7 bar 300 psig / 20.7 bar	300 psig / 20.7 bar 300 psig / 20.7 bar
Type MR95HP	1/2 NPT	Steel Stainless steel	600 psig / 41.4 bar 600 psig / 41.4 bar	600 psig / 41.4 bar 550 psig / 37.9 bar

1. The pressure/temperature limits in this Bulletin, and any applicable standard or code limitation should not be exceeded.
2. Temperature and/or the body end connection may decrease these maximum pressures.

**Table 3. Outlet (Control) Pressure Ranges**

PILOT	OUTLET PRESSURE RANGE		SPRING WIRE DIAMETER		SPRING FREE LENGTH		SPRING PART NUMBER AND COLOR
	psig	bar	In.	mm	In.	mm	
Type MR95H	15 to 30	1.0 to 2.1	0.207	5.26	2.50	63.5	ERCA04288A0, Yellow
	25 to 75	1.7 to 5.2	0.234	5.94	2.60	65.9	ERAA01910A0, Green
	70 to 150	4.8 to 10.3	0.283	7.19	2.44	62.0	ERAA01911A0, Red
Type MR95HP	15 to 100	1.0 to 6.9	0.281	7.14	2.50	63.5	ERCA04294A0, Unpainted
	80 to 400	5.5 to 27.6	0.375	9.53	2.60	63.5	ERCA04293A0, Unpainted

**Table 4. Diaphragm Material Selection Information**

	17E68 NITRILE (NBR)	17E97 NITRILE (NBR)	17E88 FLUOROCARBON (FKM)
Liquid Temperature	-20 to 150°F / -29 to 66°C	0 to 150°F / -18 to 66°C	0 to 250°F / -18 to 121°C <sup>(1)(2)</sup>
General Applications	Best for low pressure differential and cold temperature service applications.	Best for abrasive or erosive service applications.	Best for high temperature applications.
Heavy Particle Erosion	Fair	Excellent	Good

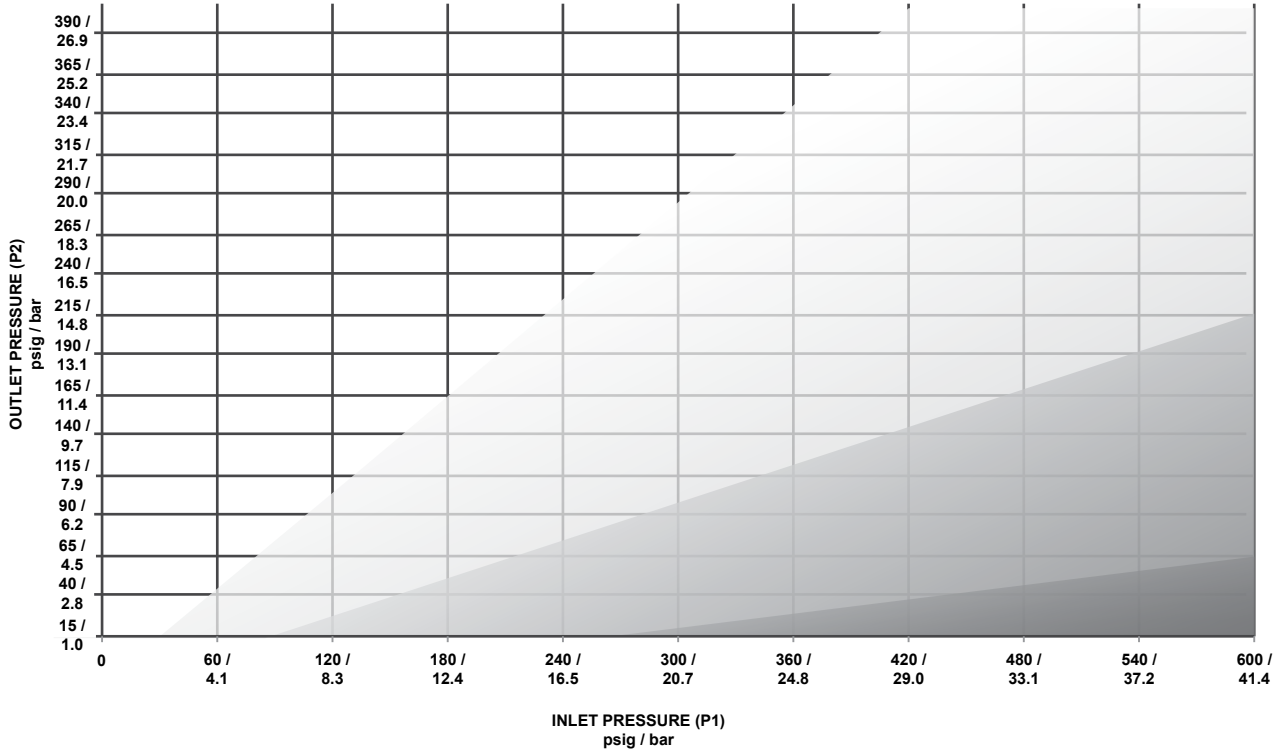
1. Fluorocarbon (FKM) is limited to 200°F / 93°C in hot water.
2. For differential pressures above 400 psig / 28 bar diaphragm temperature is limited to 150°F / 66°C.

**Table 5. Main Valve Maximum Pressure Ratings, Diaphragm Selection Information and Main Spring Selection<sup>(1)</sup>**

BODY SIZE		DIAPHRAGM MATERIAL	MAXIMUM OPERATING INLET PRESSURE <sup>(4)</sup>		MAXIMUM OPERATING DIFFERENTIAL PRESSURE <sup>(3)(4)</sup>		MAXIMUM EMERGENCY INLET AND DIFFERENTIAL PRESSURE		MAIN SPRING COLOR		
NPS	DN		psig	bar	psig	bar	psid	bar d			
1	25	17E68 Nitrile (NBR)	300	20.7	300	20.7	300	20.7	Black and Yellow		
			600	41.4	600	41.4	600	41.4	Black and White <sup>(2)</sup>		
		17E88 Fluorocarbon (FKM)	300	20.7	300	20.7	300	20.7	Black and Yellow		
			600	41.4	500	34	600	41.4	Black and White <sup>(2)</sup>		
		2	50	17E68 Nitrile (NBR)	300	20.7	300	20.7	300	20.7	Green and White
					600	41.4	600	41.4	600	41.4	Green and White
17E88 Fluorocarbon (FKM)	300			20.7	300	20.7	300	20.7	Purple <sup>(2)</sup>		
	600			41.4	500	34	600	41.4	Purple <sup>(2)</sup>		
3	80	17E68 Nitrile (NBR)	300	20.7	300	20.7	300	20.7	Light Blue and White		
			600	41.4	600	41.4	600	41.4	Light Blue and White		
		17E88 Fluorocarbon (FKM)	300	20.7	300	20.7	300	20.7	Black <sup>(2)</sup>		
			600	41.4	500	34	600	41.4	Black <sup>(2)</sup>		
4	100	17E68 Nitrile (NBR)	300	20.7	300	20.7	300	20.7	Green and White		
			600	41.4	600	41.4	600	41.4	Green and White		
		17E97 Nitrile (NBR)	300	20.7	300	20.7	300	20.7	Red <sup>(2)</sup>		
			600	41.4	600	41.4	600	41.4	Red <sup>(2)</sup>		

1. See Table 1 for main valve structural design ratings and Table 2 for pilot ratings.
2. The black and white, purple, black and red springs are only recommended for applications where the maximum inlet pressure can exceed 300 psig / 20.7 bar.
3. Maximum differential pressures may be lower for applications where cavitation may be present.
4. These are recommendations that provide the best regulator performance for a typical application. Please contact your local Sales Office for further information if a deviation from the standard recommendations are required.

## CAVITATION PREDICTION, WATER



- SIZABLE REGION
- INCIPIENT CAVITATION REGION
- FULL CAVITATION REGION

Figure 4. Cavitation Sizing for Water

Table 6. Main Valve Minimum Differential Pressures<sup>(1)</sup>

MAIN VALVE BODY SIZE		MAIN SPRING PART NUMBER AND COLOR	DIAPHRAGM MATERIAL	MINIMUM DIFFERENTIAL, PERCENT OF CAPACITY			
				For 90% Capacity		For 100% Capacity	
In.	DN			psid	bar d	psid	bar d
1	25	GE12727X022, Black and Yellow	17E68 and 17E88	30	2.1	30	2.1
			17E97	35	2.5	35	2.5
		19B2401X022, Black and White	17E88 and 17E97	43	3.0	43	3.0
2	50	18B2126X022, Green and White	17E68 and 17E88	18	1.2	19	1.3
			17E97	24	1.7	24	1.7
		18B5955X012, Red	17E88 and 17E97	29	2.0	31	2.1
3	80	19B0781X022, Light Blue and White	17E68 and 17E88	21	1.5	28	1.9
			17E97	23	1.6	23	1.6
		19B0782X022, Black and White	17E88 and 17E97	32	2.2	38	2.6
4	100	18B8501X022, Green and White	17E68 and 17E88	16	1.1	30	2.1
			17E97	16	1.1	34	2.3
		18B8502X022, Red and White	17E88 and 17E97	21	1.5	40	2.8

1. See Table 1 for structural design ratings and Table 2 for pilot rating.

Table 7. Flow and Sizing Coefficients for Type LR125 Main Valve at 100% Capacity

MAIN VALVE BODY SIZE		REGULATING COEFFICIENTS		WIDE-OPEN COEFFICIENTS		$K_m$	IEC SIZING COEFFICIENTS		
In.	DN	$C_v$	$C_1$	$C_v$	$C_1$		$X_T$	$F_D$	$F_L$
1	25	14.8	33.4	15.2	33.5	0.88	0.706	0.06	0.94
2	50	50.8	37.2	52.4	37.2	0.92	0.875	0.09	0.96
3	80	91.4	38.8	94.1	38.8	0.94	0.952	0.09	0.97
4	100	147	38.7	151	38.7	0.85	0.947	0.09	0.92

Table 8. Flow and Sizing Coefficients for Type MR95H/MR95HP Pilot

BODY SIZE, IN. / DN	WIDE-OPEN COEFFICIENT	$C_1$	$K_m$	IEC SIZING COEFFICIENTS		
	$C_v$			$X_T$	$F_D$	$F_L$
1/2 / 15	2.9	35.5	0.79	0.797	0.70	0.89

$K_m = F_L^2$

**Table 9. Type 112 Restrictor Flow Coefficients**

RESTRICTOR SETTING	C <sub>v</sub>	C <sub>i</sub>
2	0.03	35
4	0.07	
6	0.14	
8	0.17	

**Table 10. Approximate Weights Including Type MR95H/MR95HP Pilot and Restrictor**

BODY SIZE		MAIN VALVE BODY, LBS / kg			
In.	DN	NPT or SWE	CL150 RF	CL300 RF	CL600 RF
1	25	22 / 10	24 / 11	28 / 13	32 / 15
2	50	51 / 23	54 / 24	58 / 26	65 / 29
3	80	103 / 47	107 / 49	110 / 50	123 / 56
4	100	139 / 63	145 / 66	159 / 72	192 / 87

## Installation

The robust design of the Type LR125 allows this regulator to be installed indoors or outdoors. This regulator is designed to withstand the elements. The powder paint coating protects regulator against minor impacts, abrasions and corrosion. When installed outdoors, the Type LR125 does not require protective housing. However, the Type MR95H/MR95HP pilot should be oriented so that the pilot spring case vent is pointed down. Otherwise, make sure the vent is protected so that rain, moisture, insects or any debris will not accumulate inside or block the vent assembly. When installed indoors, install remote venting of the pilot spring case as required by applicable codes and regulations.

## Overpressure Protection

Overpressuring any portion of a regulator or associated equipment may cause personal injury, leakage or property damage due to bursting of pressure-containing parts. Provide appropriate pressure relieving or pressure limiting devices to ensure that the limits in the Specifications section are not exceeded. Common methods of external overpressure protection include relief valves, monitoring regulators, shutoff devices and series regulation. Regulator operation within ratings does not prevent the possibility of damage from external sources or from debris in the pipeline. Install additional strainer or filter upstream of the regulator for applications with high levels of debris.

## Cavitation Sizing

### Note

**The cavitation sizing graph in Figure 4 applies to water only. For cavitation sizing for other liquids, contact your local Sales Office.**

Use Figure 4 to determine cavitation sizing of Type LR125. The Cavitation Prediction Curve depicts P1 and P2 combinations where cavitation is likely to occur.

The curve shape was determined through analysis and lab confirmation on water. Determine the desired inlet pressure and outlet pressure of the system and find the intersection of those values on the graph.

**No Cavitation Region**—Cavitation is not expected in this region. Damage to regulator components and piping is highly unlikely as a result of cavitation.

### Note

**Emerson™ denies responsibility for damage and voids the warranty if the product is used within the Cavitation Region (see Figure 4).**

**Cavitation Region**—Cavitation may occur. Damage to regulator components and piping is possible. The risk of damage increases as P1 and P2 move down and to the right on the table. Cavitation damage can be avoided by dividing the total pressure drop into stages so that the P1 and P2 combination falls into the “No Cavitation Region” at every stage.

## Capacity Information

### Note

**Flow capacities are laboratory verified; therefore, regulators may be sized for 100% flow published capacities. It is not necessary to reduce published capacities.**

The capacity information on the following pages is based on four % droop, 10%, 20%, 30% and 40%. Droop is the negative control deviation or pressure offset below the setpoint of the regulator.

Table 11 shows C<sub>v</sub> values at different % droop and selected inlet pressures and outlet pressure settings.

Table 12 shows the liquid regulating capacities of the Type LR125 regulator at selected inlet pressures and outlet pressure settings. Flows are in gallons per minute (GPM) and liters per minute (L/min) of water.





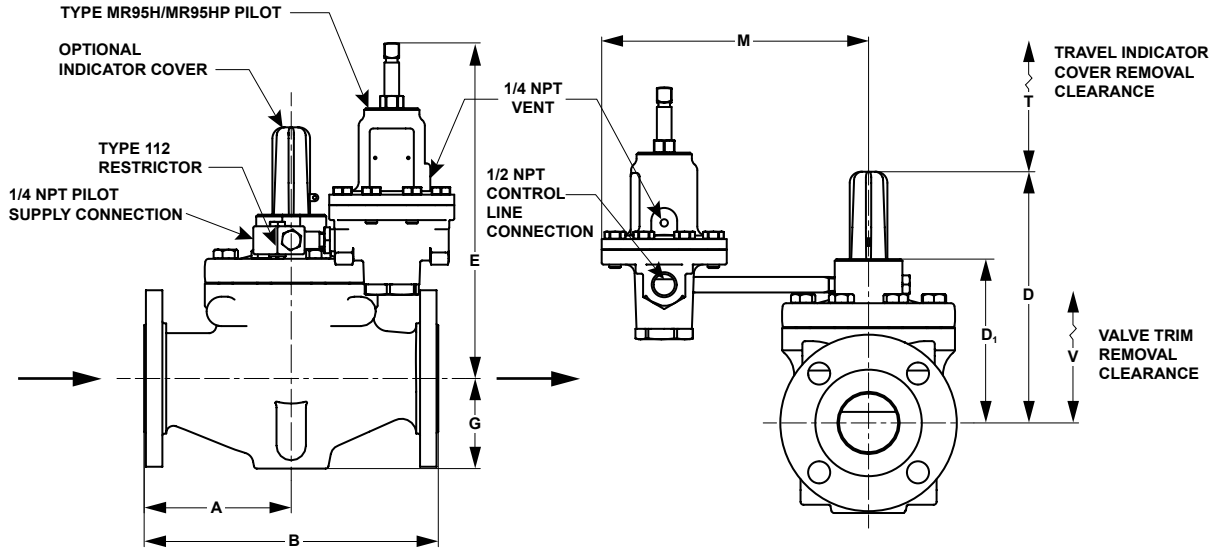
Table 12. Capacity<sup>(1)</sup>, Water (GPM / L/min) for 1 and 2 in. / DN 25 and 50 Bodies at % Droop (Pressure Offset Below Setpoint)<sup>(2)</sup>

Table with columns: SPRING RANGE AND COLOR, OUTLET PRESSURE (psig, bar), INLET (psig, bar), 1 IN. / DN 25 (10%, 20%, 30%, 40%), 2 IN. / DN 50 (10%, 20%, 30%, 40%). Rows include categories like 15 to 30 psig / Yellow, 25 to 75 psig / Green, 70 to 150 psig / Red, and 80 to 400 psig / Silver Spring.

Exceeds recommended maximum pressure drop ratio of 0.65. 1. Type LR125 on liquid service with 1/2 NPT Type MR95H/MR95HP Pilot, 100% Cage Capacity with internal inlet strainer and Type 112 Restrictor Setting of "4". 2. Values published in this table are laboratory tested and are presented based on % droop (negative control deviation only) or pressure offset below setpoint.

- continued -





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TYPE LR125 WITH TYPE MR95H/MR95HP PILOT

Figure 5. Type LR125 Dimensions

Table 13. Type LR125 Dimensions

BODY SIZE		DIMENSIONS, IN. / mm													
In.	DN	A			B			D	D <sub>1</sub>	E	G	M		T	V
		CL150 RF	CL300 RF	CL600 RF	CL150 RF	CL300 RF	CL600 RF					WCC Steel	CF8M SST		
1	25	3.62 / 91.9	3.88 / 98.6	4.13 / 104.9	7.25 / 184.2	7.75 / 196.9	8.25 / 209.6	7.40 / 189.0	5.40 / 137.0	11.39 / 289.3	2.40 / 60.0	8.10 / 205.8	8.10 / 205.8	2.97 / 75.4	9.40 / 238.8
2	50	5.0 / 127.0	5.3 / 133.4	5.6 / 143.0	10.00 / 254.0	10.50 / 266.7	11.25 / 286.0	9.00 / 229.0	6.89 / 175.0	11.65 / 295.9	3.10 / 79.0	8.18 / 207.8	9.18 / 233.2	2.00 / 51.0	11.00 / 279.4
3	80	5.9 / 149.3	6.3 / 158.8	6.6 / 168.3	11.75 / 298.5	12.50 / 317.5	13.25 / 336.6	13.30 / 338.0	9.33 / 236.9	13.68 / 347.5	3.80 / 97.0	8.66 / 220.0	9.66 / 245.4	3.80 / 97.0	15.00 / 381.0
4	100	6.9 / 176.3	7.3 / 184.2	7.8 / 196.9	13.88 / 352.6	14.50 / 368.3	15.50 / 393.7	14.70 / 373.0	10.47 / 265.9	15.24 / 387.1	5.10 / 130.0	9.52 / 241.8	9.52 / 241.8	3.80 / 97.0	17.00 / 431.8

## Ordering Information

Carefully review each specification, then complete the Ordering Guide on this page. If a pilot setpoint is not requested, the regulator will be factory set at the approximate midrange. Please complete the specifications worksheet at the bottom of the ordering guide on page 12.

## Ordering Guide

### Body Size (Select One)

- 1 in. / DN 25\*\*\*
- 2 in. / DN 50\*\*\*
- 3 in. / DN 80\*\*\*
- 4 in. / DN 100\*\*\*

### Body Material and End Connection Style (Select One)

#### WCC Steel Body

- NPT (Available in 1 and 2 in. bodies only)\*\*\*
- SWE (Available in 1 and 2 in. bodies only)\*\*\*
- CL150 RF\*\*\*
- CL300 RF\*\*\*
- CL600 RF\*\*\*
- PN 16/25/40 RF\* (Not available in 4 in. body)  
\_\_\_\_\_ specify rating

#### CF8M Stainless Steel Body

- NPT (Available in 1 and 2 in. bodies only)\*\*\*
- CL150 RF\*\*\*
- CL300 RF\*\*\*
- CL600 RF\*\*\*
- PN 16/25/40 RF\* (Not available in 4 in. body)  
\_\_\_\_\_ specify rating

#### Main Valve Diaphragm Material (Select One)

- 17E68 Nitrile (NBR) (low minimum differential capability) (standard)\*\*\*
- 17E97 Nitrile (NBR) (high erosion resistant)\*\*\*
- 17E88 Fluorocarbon (FKM) (high temperature capability)\*\*

#### Main Valve O-ring Material (Select One)

- Nitrile (NBR) (standard)\*\*\*
- Fluorocarbon (FKM)\*\*

#### Travel Indicator (Select One)

- No (standard)\*\*\*
- Yes\*\*\*

#### Inlet Body Tap (Select One)

- Inlet body tap only (standard)\*\*\*
- Inlet body tap with pre-piped pilot supply\*\*\*
- Inlet/outlet body taps only\*\*\*
- Inlet/outlet body taps with pre-piped pilot supply and pilot bleed\*\*\*

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## Ordering Guide (continued)

### Pilot Diaphragm Material (Select One)

- Neoprene (CR) (standard)\*\*\*
- Fluorocarbon (FKM)\*\*

### Pilot Valve Plug Material (Select One)

- Nitrile (NBR) (standard)\*\*\*
- Fluorocarbon (FKM)\*\*\*

### Pilot Outlet Pressure Range (Select One)

#### Type MR95H

- 15 to 30 psig / 1.0 to 2.1 bar, Yellow\*\*\*
- 25 to 75 psig / 1.7 to 5.2 bar, Green\*\*\*
- 70 to 150 psig / 4.8 to 10.3 bar, Red\*\*\*

#### Type MR95HP

- 15 to 100 psig / 1.0 to 6.9 bar, Unpainted
- 80 to 400 psig / 5.5 to 27.6 bar, Unpainted

Regulators Quick Order Guide	
***	Readily Available for Shipment
**	Allow Additional Time for Shipment
*	Special Order, Constructed from Non-Stocked Parts. Consult your local Sales Office for Availability.
Availability of the product being ordered is determined by the component with the longest shipping time for the requested construction.	

### Main Valve Replacement Parts Kit (Optional)

- Yes, send one diaphragm cartridge and O-rings kit to match this order.

### Pilot Replacement Parts Kit (Optional)

- Yes, send one replacement kit to match this order.

Specification Worksheet	
<b>Application:</b>	
Specific Use	_____
Line Size	_____
Fluid Type	_____
Specific Gravity	_____
Temperature	_____
Does the Application Require Overpressure Protection?	
<input type="checkbox"/> Yes	<input type="checkbox"/> No
<b>Pressure:</b>	
Maximum Inlet Pressure	_____
Minimum Inlet Pressure	_____
Differential Pressure	_____
Set Pressure	_____
Maximum Flow	_____
<b>Accuracy Requirements:</b>	
Less Than or Equal To:	
<input type="checkbox"/> 5%	<input type="checkbox"/> 10% <input type="checkbox"/> 20% <input type="checkbox"/> 40%
<b>Construction Material Requirements (if known):</b>	
_____	
_____	

### Industrial Regulators

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For further information visit [www.fisherregulators.com](http://www.fisherregulators.com)

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