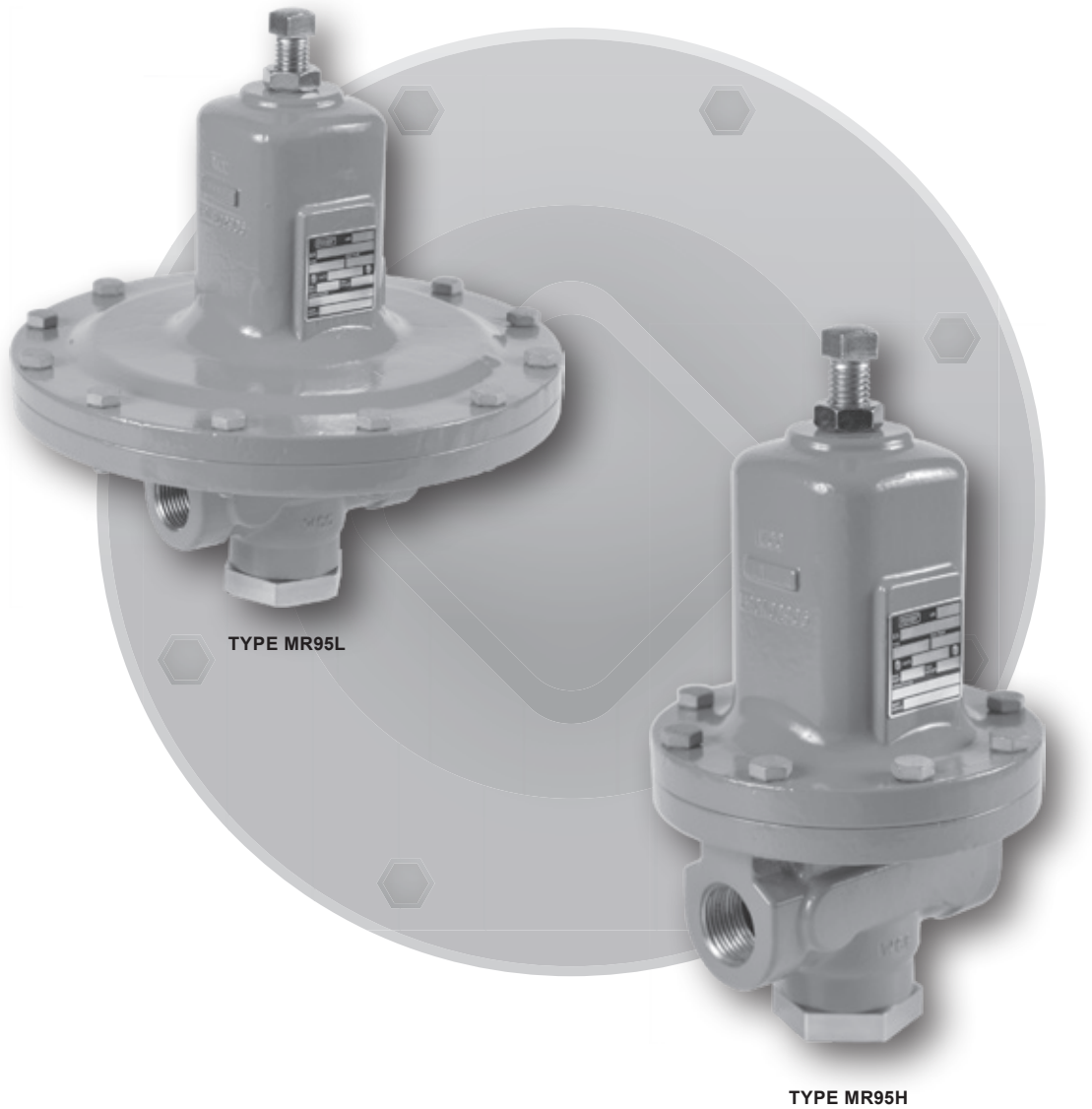
MR95 Series Pressure Regulators



PRESSURE REDUCING REGULATORS

Figure 1. *Typical MR95 Series Pressure Regulators*

Specifications

This section lists the specifications for the MR95 Series regulators. Factory specification such as type, maximum inlet pressure, maximum temperature, maximum outlet pressure, spring range, orifice size and seat material are stamped on the nameplate fastened on the regulator at the factory.

Available Constructions

Type MR95L: Pressure reducing regulator for outlet pressures from 2 to 30 psig / 0.14 to 2.1 bar. 1/4 to 1 in. body sizes only

Type MR95H: Pressure reducing regulator for outlet pressures from 5 to 150 psig / 0.34 to 10.3 bar.

Type MR95HP: Pressure reducing regulator for outlet pressures from 15 to 400 psig / 1.0 to 27.6 bar (soft-seated)

Type MR95HT: High temperature pressure reducing regulator for outlet pressures from 15 to 300 psig / 1.0 to 20.7 bar (metal seat) and up to 650°F / 343°C

Type MR95LD: Pressure reducing differential regulator for differential set pressures from 2 to 30 psi / 0.14 to 2.1 bar with maximum inlet pressure up to 300 psi / 20.7 bar and maximum outlet pressure up to 125 psi / 8.6 bar. 1/4 to 1 in. body sizes only

Type MR95HD: Pressure reducing differential regulator for differential set pressures from 5 to 150 psi / 0.34 to 10.3 bar with maximum inlet/outlet pressures up to 300 psig / 20.7 bar

Type MR95HDP: Pressure reducing differential regulator for differential set pressures from 5 to 150 psi / 0.34 to 10.3 bar with maximum inlet/outlet pressures up to 600 psi / 41.4 bar

Body and Orifice Sizes

1/4 NPT body: 0.284 in. / 7.22 mm orifice

1/2 in. / DN 15 body: 0.416 in. / 10.56 mm orifice

3/4 and 1 in. / DN 20 and 25 Body Sizes: 0.631 in. / 16.02 mm orifice

1-1/2 and 2 in. / DN 40 and 50 Body Sizes (not available for Types MR95L and MR95LD): 1.142 in. / 29 mm orifice

End Connection Styles

See Tables 1 and 2

Outlet and Differential Pressure Ranges[1]

See Table 3

Maximum Spring Case Loading Pressure for Types MR95LD, MR95HD and MR95HDP

See Table 4

Maximum Cold Working Pressures of Body Size and Materials[1]

See Table 4

Pressure Registration

Internal or External

Shutoff Classification Per ANSI/FCI 70-3-2004

Metal Seats: Class IV

Elastomer Seats: Class VI or better

PTFE: Class IV

Maximum Temperature Ranges of Diaphragm, Trim, Seat and Body Materials[1][2][3][4]

See Table 5

Flow and Sizing Coefficients

See Table 6

Relief Sizing Coefficients for MR95 Series Regulators with Reduced Flow Orifices

See Table 7

API 614 Compliant

Steel or Stainless steel constructions with Stainless steel trim meet API 614 Requirements

Sour Gas Service Capability

Optional materials are available for applications handling sour gases. These constructions comply with the recommendations of NACE International Standards MR0175-2002, MR0103, and/or ANSI/NACE MR0175/ISO 15156.

FDA, USP Class VI and ADI Free EPDM Elastomers

For use in applications requiring clean regulator solutions (wetted components only)

Pressure Setting Adjustment

Adjusting screw: Standard for Types MR95L, MR95H, MR95HP and MR95HT only

Handwheel: Standard for Types MR95LD, MR95HD and MR95HDP. Optional for 1/2 in. / DN 15 body size of Types MR95L, MR95H, MR95HP and MR95HT

Tee handle: Optional for other body sizes (except 1/2 in. / DN 15) of Types MR95L, MR95H, MR95HP and MR95HT

1. The pressure/temperature limits in this Instruction Manual and any applicable standard or code limitation should not be exceeded.
2. Pressure and/or the body end connection may decrease these maximum temperatures.
3. Special Cryogenic constructions for process temperatures as low as -320°F / -196°C are available by request. The cryogenic temperature constructions passed laboratory testing for external leakage down to -320°F / -196°C.
4. The Fluorocarbon (FKM) diaphragm is designed to operate within its rated temperature range, but has the potential to soften in hotter applications. It is recommended to perform regular torque flange cap screw inspections to ensure that sufficient clamping load is maintained on the diaphragm seal. (See page 14.)

Specifications (continued)

Approximate Weights

MR95H Series:

1/4 NPT body: 5 lbs / 2.3 kg
1/2 in. / DN 15 body: 10 lbs / 4.5 kg
3/4 and 1 in. / DN 20 and 25 Body Sizes: 22 lbs / 10 kg
1-1/2 and 2 in. / DN 40 and 50 Body Sizes: 55 lbs / 25 kg

MR95L Series:

1/4 NPT body: 7 lbs / 3.2 kg
1/2 in. / DN 15 body: 15 lbs / 6.8 kg
3/4 and 1 in. / DN 20 and 25 Body Sizes: 35 lbs / 16 kg

Table 1. *Types MR95L and MR95LD Regulators Body Constructions*

BODY SIZE	BODY CONSTRUCTION	END CONNECTION	BODY MATERIAL				
			Gray Cast Iron	LCC or WCC Steel(1)	CF8M Stainless Steel(1)	CF3M Stainless Steel(1)	Monel® or Hastelloy® C(1)
1/4 NPT	Without Control Line and Gauge Port	NPT	■	■	■	■	
1/2 in. / DN 15	Without Control Line and Gauge Port	NPT	■	■	■	■	■
		SWE		■	■	■	
		Welded CL150 RF		■	■	■	
		Welded CL300 RF		■	■	■	
		Welded PN 16/25/40 RF		■		■	
	With Control Line but Without Gauge Port	NPT		■	■	■	
		Welded CL150 RF		■	■	■	
		Welded CL300 RF		■	■	■	
		Welded PN 16/25/40 RF		■		■	
3/4 in. / DN 20	Without Control Line and Gauge Port	NPT	■	■	■	■	■
		SWE		■	■	■	
		Welded CL150 RF		■	■	■	
		Welded CL300 RF		■	■	■	
		Welded PN 16/25/40 RF		■		■	
	With Control Line but Without Gauge Port	NPT		■	■	■	
		Welded CL150 RF		■	■	■	
		Welded CL300 RF		■	■	■	
		Welded PN 16/25/40 RF		■		■	
	With Gauge Port but Without Control Line	NPT	■	■	■	■	
		Welded CL150 RF		■	■	■	
		Welded CL300 RF		■	■	■	
		Welded PN 16/25/40 RF		■		■	
1 in. / DN 25	Without Control Line and Gauge Port	NPT	■	■	■	■	■
		SWE		■	■	■	
		Welded CL150 RF		■	■	■	
		Welded CL300 RF		■	■	■	
		Welded PN 16/25/40 RF		■		■	
	With Control Line but Without Gauge Port	NPT		■	■	■	
		Welded CL150 RF		■	■	■	
		Welded CL300 RF		■	■	■	
		Welded PN 16/25/40 RF		■		■	
	With Gauge Port but Without Control Line	NPT	■	■	■	■	
		Welded CL150 RF		■	■	■	
		Welded CL300 RF		■	■	■	
		Welded PN 16/25/40 RF		■		■	

■ - Shaded areas indicate that the construction is available.
□ - Blank areas indicate that you need to contact your local Sales Office for the availability of the constructions.
1. Meets the chemical and physical requirements of NACE MR0175-2002, NACE MR0103 and NACE MR0175/ISO 15156.

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Table 2. *Types MR95H, MR95HD, MR95HDP, MR95HT and MR95HP Regulators Body Constructions*

BODY SIZE	BODY CONSTRUCTION	END CONNECTION	BODY MATERIAL					
			Gray Cast Iron[1]	LCC or WCC Steel[2]	CF8M Stainless Steel[2]	CF3M Stainless Steel[2]	Monel® or Hastelloy® C[2]	Aluminum-Bronze
1/4 NPT[3]	Without Gauge Port and Control Line	NPT	■	■	■	■		
1/2 in. / DN 15	Without Control Line and Gauge Port	NPT	■	■	■	■	■	
		SWE		■	■	■		
		Welded CL150 RF		■	■	■		
		Welded CL300 RF		■	■	■		
		Welded CL600 RF		■	■	■		
		Welded PN 16/25/40 RF		■		■		
		Integral CL150 RF				■	■	■
		Integral CL300 RF				■	■	■
		Integral CL600 RF				■	■	■
		Integral PN 16/25/40 RF				■	■	■
	With Control Line but Without Gauge Port	NPT		■	■	■		
		Welded CL150 RF		■	■	■		
		Welded CL300 RF		■	■	■		
		Welded CL600 RF		■	■	■		
		Welded PN 16/25/40 RF		■		■		
3/4 in. / DN 20	Without Gauge Port and Control Line	NPT	■	■	■	■	■	
		SWE		■	■	■		
		Welded CL150 RF		■	■	■		
		Welded CL300 RF		■	■	■		
		Welded CL600 RF		■	■	■		
		Welded PN 16/25/40 RF		■		■		
	With Control Line but Without Gauge Port	NPT		■	■	■		
		Welded CL150 RF		■	■	■		
		Welded CL300 RF		■	■	■		
		Welded PN 16/25/40 RF		■		■		
	With Gauge Port but Without Control Line	NPT	■	■	■	■		
		Welded CL150 RF		■	■	■		
		Welded CL300 RF		■	■	■		
		Welded PN 16/25/40 RF		■		■		
1 in. / DN 25	Without Gauge Port and Control Line	NPT	■	■	■	■	■	
		SWE		■	■	■		
		Welded CL150 RF		■	■	■		
		Welded CL300 RF		■	■	■		
		Welded CL600 RF		■	■	■		
		Welded PN 16/25/40 RF		■		■		
		Integral CL150 RF				■	■	■
		Integral CL300 RF				■	■	■
		Integral CL600 RF				■	■	■
		Integral PN 16/25/40 RF				■	■	■

■ - Shaded areas indicate that the construction is available.
□ - Blank areas indicate that you need to contact your local Sales Office for the availability of the constructions.
1. Gray cast iron body material is available for Types MR95H and MR95HD only.
2. Meets the chemical and physical requirements of NACE MR0175-2002, NACE MR0103 and NACE MR0175/ISO 15156.
3. 1/4 NPT size not available for Type MR95HDP.

- continued -

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Table 2. *Types MR95H, MR95HD, MR95HDP, MR95HT and MR95HP Regulators Body Constructions (continued)*

BODY SIZE	BODY CONSTRUCTION	END CONNECTION	BODY MATERIAL					
			Gray Cast Iron[1]	LCC or WCC Steel[2]	CF8M Stainless Steel[2]	CF3M Stainless Steel[2]	Monel® or Hastelloy® C[2]	Aluminum-Bronze
1 in. / DN 25	With Control Line but Without Gauge Port	NPT		■	■	■		
		Welded CL150 RF		■	■	■		
		Welded CL300 RF		■	■	■		
		Welded PN 16/25/40 RF		■		■		
	With Gauge Port but Without Control Line	NPT	■	■	■	■		
		Welded CL150 RF		■	■	■		
		Welded CL300 RF		■	■	■		
		Welded PN 16/25/40 RF		■		■		
1-1/2 in. / DN 40	Without Gauge Port and Control Line	NPT	■	■	■	■	■	
		SWE		■	■	■		
		Welded CL150 RF		■	■	■		
		Welded CL300 RF		■	■	■		
		Welded CL600 RF		■	■	■		
		Welded PN 16/25/40 RF		■		■		
	With Control line but Without Gauge Port	NPT		■	■	■		
		Welded CL150 RF		■	■	■		
		Welded CL300 RF		■	■	■		
		Welded PN 16/25/40 RF		■		■		
	With Gauge Port but Without Control Line	NPT	■	■	■	■		
		Welded CL150 RF		■	■	■		
		Welded CL300 RF		■	■	■		
		Welded PN 16/25/40 RF		■		■		
2 in. / DN 50	Without Gauge Port and Control Line	NPT	■	■	■	■	■	
		SWE		■	■	■		
		Welded CL150 RF		■	■	■		
		Welded CL300 RF		■	■	■		
		Welded CL600 RF		■	■	■		
		Welded PN 16/25/40 RF		■		■		
		Integral CL150 RF				■	■	■
		Integral CL300 RF				■	■	■
		Integral CL600 RF				■	■	■
		Integral PN 16/25/40 RF				■	■	■
	With Control Line but Without Gauge Port	NPT		■	■	■		
		Welded CL150 RF		■	■	■		
		Welded CL300 RF		■	■	■		
		Welded PN 16/25/40 RF		■		■		
	With Gauge Port but Without Control Line	NPT	■	■	■	■		
		Welded CL150 RF		■	■	■		
		Welded CL300 RF		■	■	■		
		Welded PN 16/25/40 RF		■		■		

■ - Shaded areas indicate that the construction is available.
□ - Blank areas indicate that you need to contact your local Sales Office for the availability of the constructions.
1. Gray cast iron body material is available for Types MR95H and MR95HD only.
2. Meets the chemical and physical requirements of NACE MR0175-2002, NACE MR0103 and NACE MR0175/ISO 15156.

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Table 3. *MR95 Series Outlet and Differential Pressure Ranges and Spring Information*

TYPE	BODY SIZE		OUTLET OR DIFFERENTIAL PRESSURE RANGE[1]		SPRING WIRE DIAMETER		SPRING FREE LENGTH		SPRING MATERIAL[2]	SPRING PART NUMBER	SPRING COLOR
	In.	DN	psi/psig	bar	In.	mm	In.	mm			
MR95L and MR95LD	1/4	- - - -	2 to 6	0.14 to 0.41	0.148	3.76	2.00	50.8	Zinc-plated steel	1E392527022	Yellow
			5 to 15	0.34 to 1.0	0.170	4.32	2.00	50.8	Zinc-plated steel	ERAA01888A0	Green
			13 to 30	0.90 to 2.1	0.207	5.26	1.94	49.2	Powder-coated steel	ERAA01889A0	Red
	1/2	15	2 to 6	0.14 to 0.41	0.207	5.26	2.50	63.5	Powder-coated steel[3]	ERCA04288A0	Yellow
			5 to 15	0.34 to 1.0	0.234	5.94	2.60	65.9	Powder-coated steel[3]	ERAA01910A0	Green
			13 to 30	0.90 to 2.1	0.283	7.19	2.44	62.0	Powder-coated steel[3]	ERAA01911A0	Red
	3/4 and 1	20 and 25	2 to 6	0.14 to 0.41	0.306	7.77	4.00	102	Powder-coated steel[3]	1E398927022	Yellow
			5 to 15	0.34 to 1.0	0.343	8.71	4.00	102	Powder-coated steel[3]	1E399027142	Green
			13 to 30	0.90 to 2.1	0.406	10.31	4.00	102	Powder-coated steel[3]	1E399127162	Red
			2 to 6	0.14 to 0.41	0.306	7.77	4.00	102	Powder-coated Stainless steel	1E3989X0052	Yellow
			5 to 15	0.34 to 1.0	0.375	9.53	3.88	98.6	Stainless steel	1K762537022	Unpainted
			13 to 30	0.90 to 2.1	0.437	11.1	4.00	102	Stainless steel	11A8269X012	Unpainted
MR95H, MR95HD and MR95HDP	1/4	- - - -	15 to 30	1.0 to 2.1	0.148	3.76	2.00	50.8	Zinc-plated steel	1E392527022	Yellow
			25 to 75	1.7 to 5.2	0.170	4.32	2.00	50.8	Zinc-plated steel	ERAA01888A0	Green
			70 to 150	4.8 to 10.3	0.207	5.26	1.94	49.2	Powder-coated steel[3]	ERAA01889A0	Red
	1/2	15	15 to 30	1.0 to 2.1	0.207	5.26	2.50	63.5	Powder-coated steel[3]	ERCA04288A0	Yellow
			25 to 75	1.7 to 5.2	0.234	5.94	2.60	65.9	Powder-coated steel[3]	ERAA01910A0	Green
			70 to 150	4.8 to 10.3	0.283	7.19	2.44	62.0	Powder-coated steel[3]	ERAA01911A0	Red
	3/4 and 1	20 and 25	15 to 30	1.0 to 2.1	0.306	7.77	4.00	102	Powder-coated steel[3]	1E398927022	Yellow
			25 to 75	1.7 to 5.2	0.343	8.71	4.00	102	Powder-coated steel[3]	1E399027142	Green
			70 to 150	4.8 to 10.3	0.406	10.31	4.00	102	Powder-coated steel[3]	1E399127162	Red
			15 to 30	1.0 to 2.1	0.306	7.77	4.00	102	Powder-coated Stainless steel	1E3989X0052	Yellow
			25 to 75	1.7 to 5.2	0.375	9.53	3.88	98.6	Stainless steel	1K762537022	Unpainted
			70 to 150	4.8 to 10.3	0.437	11.1	4.00	102	Stainless steel	11A8269X012	Unpainted
	1-1/2 and 2	40 and 50	5 to 80	0.34 to 5.5	0.500	12.7	6.50	165	Powder-coated steel	ERCA04290A0	Black with Light Blue Stripe
			60 to 120	4.1 to 8.3	0.562	14.3	6.56	167	Powder-coated steel	ERAA01893A0	Light Gray
			100 to 140	6.9 to 9.7	0.594	15.1	6.56	167	Enamel-coated steel	ERAA01894A0	Yellow
			120 to 150	8.3 to 10.3	0.625	15.9	6.57	167	Powder-coated steel	1P7888X0022	Black
			5 to 60	0.34 to 4.1	0.5	12.7	6.5	165	Inconel®	ERAA09035A0	Unpainted
			50 to 120	3.4 to 8.3	0.625	15.9	6.5	165	Inconel®	ERAA08881A0	Unpainted
MR95HT	1/4	- - - -	15 to 100	1.0 to 6.9	0.192	4.88	2.00	50.8	Inconel®	ERCA04292A0	Unpainted
			80 to 300	5.5 to 20.7	0.281	7.14	2.00	50.8	Inconel®	ERCA04291A0	Unpainted
	1/2	15	15 to 100	1.0 to 6.9	0.281	7.14	2.50	63.5	Inconel®	ERCA04294A0	Unpainted
			80 to 300	5.5 to 20.7	0.375	9.53	2.60	66.0	Inconel®	ERCA04293A0	Unpainted
	3/4 and 1	20 and 25	15 to 100	1.0 to 6.9	0.437	11.1	4.08	104	17-4 PH Stainless steel	ERCA04295A0	Unpainted
			80 to 300	5.5 to 20.7	0.562	14.3	4.08	104	17-4 PH Stainless steel	ERCA04296A0	Unpainted
	1-1/2 and 2	40 and 50	15 to 100	1.0 to 6.9	0.625	15.9	6.70	170	17-4 PH Stainless steel	ERCA04297A0	Unpainted
			60 to 260	4.1 to 17.9	0.812	20.6	6.70	170	17-4 PH Stainless steel	ERCA04298A0	Unpainted
MR95HP	1/4	- - - -	15 to 100	1.0 to 6.9	0.192	4.88	2.00	50.8	Inconel®	ERCA04292A0	Unpainted
			80 to 400	5.5 to 27.6	0.281	7.14	2.00	50.8	Inconel®	ERCA04291A0	Unpainted
	1/2	15	15 to 100	1.0 to 6.9	0.281	7.14	2.50	63.5	Inconel®	ERCA04294A0	Unpainted
			80 to 400	5.5 to 27.6	0.375	9.53	2.60	66.0	Inconel®	ERCA04293A0	Unpainted
	3/4 and 1	20 and 25	15 to 100	1.0 to 6.9	0.437	11.1	4.08	104	17-4 PH Stainless steel	ERCA04295A0	Unpainted
			80 to 400	5.5 to 27.6	0.562	14.3	4.08	104	17-4 PH Stainless steel	ERCA04296A0	Unpainted
	1-1/2 and 2	40 and 50	15 to 100	1.0 to 6.9	0.625	15.9	6.70	170	17-4 PH Stainless steel	ERCA04297A0	Unpainted
			60 to 300	4.1 to 20.7	0.812	20.6	6.70	170	17-4 PH Stainless steel	ERCA04298A0	Unpainted

1. For Types MR95LD, MR95HD and MR95HDP regulators, the pressure ranges indicate the differential pressure that can be obtained with the indicated spring. The differential pressure (spring setting) is added to the spring case loading pressure to determine the actual outlet pressure.
2. Springs meet NACE MR0175-2002, NACE MR0103 and NACE MR0175/ISO 15156 requirements only for applications in which the spring is not exposed to the sour gas.
3. Available in Inconel®.

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Table 4. *Maximum Cold Working Pressures of Body Size and Material[1][2]*

TYPE	BODY SIZE	BODY MATERIAL	MAXIMUM INLET PRESSURE		MAXIMUMOUTLETPRESSURE		MAXIMUM SPRING CASE PRESSURE	
			psig	bar	psig	bar	psig	bar
MR95L and MR95LD	All available sizes[3]	Gray cast iron	250	17.2	50	3.4	50	3.4
		WCC Steel	300	20.7	125	8.6	125	8.6
		LCC Steel	300	20.7	125	8.6	125	8.6
		CF8M Stainless steel	300	20.7	125	8.6	125	8.6
		CF3M Stainless steel	300	20.7	125	8.6	125	8.6
		Monel®[4]	300	20.7	125	8.6	125	8.6
		Hastelloy® C[4]	300	20.7	125	8.6	125	8.6
MR95H and MR95HD	All available sizes[3]	Gray cast iron	250	17.2	250	17.2	250	17.2
		WCC Steel	300	20.7	300	20.7	300	20.7
		LCC Steel	300	20.7	300	20.7	300	20.7
		CF8M Stainless steel	300	20.7	300	20.7	300	20.7
		CF3M Stainless steel	300	20.7	300	20.7	300	20.7
		Monel®[4]	300	20.7	300	20.7	300	20.7
		Hastelloy® C[4]	300	20.7	300	20.7	300	20.7
		Aluminum-Bronze[4]	300	20.7	300	20.7	300	20.7
MR95HDP	All available sizes[3]	WCC Steel	600	41.4	600	41.4	600	41.4
		LCC Steel	600	41.4	600	41.4	600	41.4
		CF8M Stainless steel	600	41.4	550	33.9	550	33.9
		CF3M Stainless steel	600	41.4	550	33.9	550	33.9
		Monel®[4]	600	41.4	550	33.9	550	33.9
		Hastelloy® C[4]	600	41.4	550	33.9	550	33.9
		Aluminum-Bronze[4]	600	41.4	550	33.9	550	33.9
MR95HP	All available sizes[3]	WCC Steel	1000	68.9	600	41.4	600	41.4
		LCC Steel	1000	68.9	600	41.4	600	41.4
		CF8M Stainless steel	1000	68.9	550	37.9	550	37.9
		CF3M Stainless steel	1000	68.9	550	37.9	550	37.9
		Monel®[4]	1000	68.9	550	37.9	550	37.9
		Hastelloy® C[4]	1000	68.9	550	37.9	550	37.9
		Aluminum-Bronze[4]	1000	68.9	550	37.9	550	37.9
MR95HT	1/4 NPT and 1/2 to 1 in. / DN 15 to 25	WCC Steel	600	41.4	600	41.4	600	41.4
		LCC Steel	600	41.4	600	41.4	600	41.4
		CF8M Stainless steel	600	41.4	550	37.9	550	37.9
		CF3M Stainless steel	600	41.4	550	37.9	550	37.9
		Monel®[4]	600	41.4	550	37.9	550	37.9
		Hastelloy® C[4]	600	41.4	550	37.9	550	37.9
		Aluminum-Bronze[4]	600	41.4	550	37.9	550	37.9
	1-1/2 and 2 in. / DN 40 and 50	WCC Steel	600	41.4	450	31.0	450	31.0
		LCC Steel	600	41.4	450	31.0	450	31.0
		CF8M Stainless steel	600	41.4	450	31.0	450	31.0
		CF3M Stainless steel	600	41.4	450	31.0	450	31.0
		Monel®	600	41.4	450	31.0	450	31.0
		Hastelloy® C	600	41.4	450	31.0	450	31.0
		Aluminum-Bronze	600	41.4	450	31.0	450	31.0

1. The pressure/temperature limits in this Instruction Manual and any applicable standard or code limitation should not be exceeded.
2. The pressure limits given are based on the body size and body materials only. Actual pressure limits of the assembled regulator may decrease and vary depending on the temperature, body end connection, diaphragm, seat and/or trim material of the regulator.
3. See Tables 1 and 2 for all available body sizes.
4. Not available for 1/4 NPT body size.

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Hastelloy® C is a mark owned by Haynes International, Inc.

Table 5. *MR95 Series Temperature Capabilities[1][2][5]*

TRIM MATERIAL	SEAT	DIAPHRAGM	O-RING	DIAPHRAGM PROTECTOR	GASKET	INNER VALVE SPRING	CONTROL SPRING	TEMPERATURE	
								°F	°C
Nitrile (NBR)	✓		✓					-40 to 180	-40 to 82
Neoprene (CR)		✓						-40 to 180	-40 to 82
Fluorocarbon (FKM)[3][8]	✓	✓	✓					0 to 300, Limited to 200°F for hot water	-18 to 149, Limited to 93°C for hot water
Ethylenepropylene (EPDM)	✓	✓	✓					20 to 275	-7 to 135
Sanitary Ethylenepropylene (EPDM)[7]	✓	✓	✓					20 to 275	-7 to 135
Fluorosilicone (FVMQ)		✓						-76 to 104	-60 to 40
Perfluoroelastomer (FFKM)	✓		✓					0 to 425	-18 to 218
PTFE	✓			✓				-40 to 400	-40 to 204
Stainless Steel (400 Series)	✓	✓						-40 to 650	-40 to 343
Stainless Steel (300 Series)	✓	✓				✓		-40 to 450 for Inner Valve Spring -320 to 650 for other trim parts	-40 to 232 for Inner Valve Spring -196 to 343 for other trim parts
Steel (Zinc or Chromium plated)							✓	-40 to 450	-40 to 232
17-4 Stainless Steel							✓	-40 to 650	-40 to 343
Inconel®						✓	✓	-320 to 650	-196 to 343
Composition[6]					✓			-40 to 406	-40 to 208
Graphite					✓			-320 to 650	-196 to 343

BODY MATERIAL			TEMPERATURE	
			°F	°C
Gray cast iron			-20 to 406	-29 to 208
WCC Steel[4]			-20 to 650	-29 to 343
LCC Steel[4]			-40 to 650	-40 to 343
Stainless steel[4], Monel® or Hastelloy® C			-320 to 550	-196 to 288
Aluminum-Bronze			-40 to 500	-40 to 260

1. The pressure/temperature limits in this Instruction Manual and any applicable standard limitation should not be exceeded.
2. The temperature limits given are based on the body size and body materials only. Actual temperature limits of the assembled regulator may decrease and vary depending on the body end connection, diaphragm, seat and/or trim material of the regulator.
3. Not for use on steam service.
4. Meets API 614 requirements (with Stainless steel trim).
5. Special Cryogenic constructions for process temperatures as low as -320°F / -196°C are available by request. The cryogenic temperature constructions passed laboratory testing for external leakage down to -320°F / -196°C.
6. Temperature rating can be increased up to 450°F / 232°C but may require increased gasket maintenance.
7. Sanitary EPDM elastomers meet FDA, USP Class VI and ADI Free requirements.
8. The Fluorocarbon (FKM) diaphragm is designed to operate within its rated temperature range, but has the potential to soften in hotter applications. It is recommended to perform regular torque flange cap screw inspections to ensure that sufficient clamping load is maintained on the diaphragm seal. (See page 14.)

Table 6. *Types MR95LD, MR95HD and MR95HDP Flow and Sizing Coefficient*

BODY SIZE		WIDE-OPEN COEFFICIENT (FOR RELIEF SIZING)			C_1	K_m	IEC SIZING COEFFICIENT		
In.	DN	C_v	C_g	C_s			X_T	F_D	F_L
1/4 NPT	- - - -	1.1	37	1.85	33.6	0.74	0.715	0.62	0.86
1/2	15	2.9	103	5.15	35.5	0.79	0.797	0.70	0.89
3/4 and 1	20 and 25	6.0	221	11.05	36.8	0.88	0.857	0.68	0.94
1-1/2 and 2	40 and 50	18.1	700	35.00	38.7	0.88	0.945	0.65	0.94

$K_m = F_L^2$

Table 7. *Relief Sizing Coefficients for MR95 Series Regulators with Reduced Flow Orifices[1]*

BODY SIZE		WIDE-OPEN COEFFICIENT FOR MR95 SERIES REDUCED FLOW OPTION	WIDE-OPEN COEFFICIENT FOR LEGACY 95 SERIES
In.	DN	C_g	C_g
1/4 NPT	- - - -	28	28
1/2	15	70	67
3/4 and 1	20 and 25	156	156
1-1/2 and 2	40 and 50	482	475

1. The reduced flow orifice option offers similar flow capacity as the equivalent 95 Series configuration.

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WARNING

Failure to follow these instructions or to properly install and maintain this equipment could result in an explosion, fire and/or chemical contamination causing property damage and personal injury or death.

Fisher™ regulators must be installed, operated and maintained in accordance with federal, state and local codes, rules and regulations and Emerson Process Management Regulator Technologies, Inc. (Emerson) instructions.

If the regulator vents gas or a leak develops in the system, service to the unit may be required. Failure to correct trouble could result in a hazardous condition.

Installation, operation and maintenance procedures performed by unqualified personnel may result in improper adjustment and unsafe operation. Either condition may result in equipment damage or personal injury. Only a qualified person shall install or service the MR95 Series regulator.

Introduction

Scope of the Manual

This manual provides instructions for the installation, adjustment, maintenance and parts ordering for MR95 Series pressure regulators. These regulators are usually shipped separately for line or panel mounting or installed on other equipment. Instructions and parts lists for other equipment are found in separate manuals.

Product Description

The MR95 Series pressure reducing and differential pressure regulators are suitable for multiple fluid mediums including liquid, gas, air and steam services.

Typical applications include use in but not limited to wash tanks, small heaters, fuel and oil lines, air supply systems, test fixtures and sterilizers.

Pressure Reducing Regulators

Types MR95L, MR95H, MR95HP and MR95HT regulators are direct-operated pressure reducing regulators for pressure control requiring constant outlet pressures between 2 to 400 psig / 0.14 and 27.6 bar.

Differential Pressure Regulators

Types MR95LD, MR95HD and MR95HDP regulators are direct-operated differential pressure reducing regulators with differential pressure range from 2 to 150 psi / 3.4 to 10.3 bar.

See Tables 1 through 6 for detailed breakdown of the various construction offerings. Typical MR95 Series regulators are shown in Figure 1.

Principle of Operation

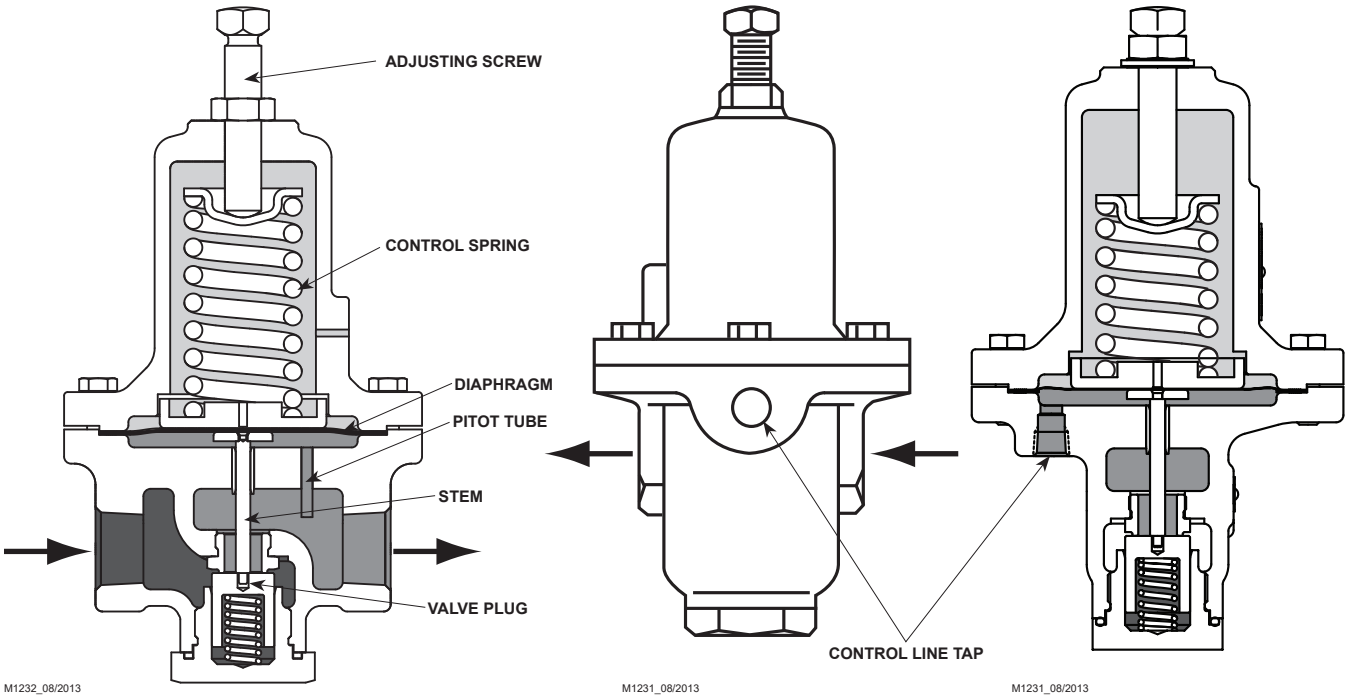
For Types MR95H, MR95L, MR95HP and MR95HT Pressure Reducing Regulators

Types MR95L, MR95H, MR95HP and MR95HT (see Figure 2) are direct-operated regulators and use spring force to regulate outlet pressure. Downstream pressure is registered either internally through the body or externally through a control line to the under side of the diaphragm. When the downstream pressure is at or above the set pressure, the disk is held against the orifice and restricting flow through the regulator. When demand increases, downstream pressure drops slightly allowing the spring to extend, moving the stem down and the disk away from the orifice. This allows fluid flow through the body to the downstream system.

For Types MR95LD, MR95HD and MR95HDP Differential Pressure Regulators

Types MR95LD, MR95HD and MR95HDP regulators maintain a differential pressure between the loading supply pressure and the downstream pressure of the regulator.

See Figure 2. The design of the regulator isolates the diaphragm and pressure response chamber from the main flow stream. The downstream pressure (outlet pressure) is registered under the diaphragm through the pitot tube or registration hole. If the downstream pressure increases, pressure under the diaphragm also increases. This force overcomes the spring compression and loading supply pressure, allowing the stem to rise. The valve plug spring forces the valve plug closer to the orifice. Flow through the regulator is reduced so that downstream pressure returns to the desired differential level. When the downstream pressure decreases, the opposite action takes place. Pressure under the diaphragm decreases. The valve stem pushes the valve plug downward, opening the flow stream and increasing the fluid flow through the regulator. Downstream pressure rises back to the desired differential level.

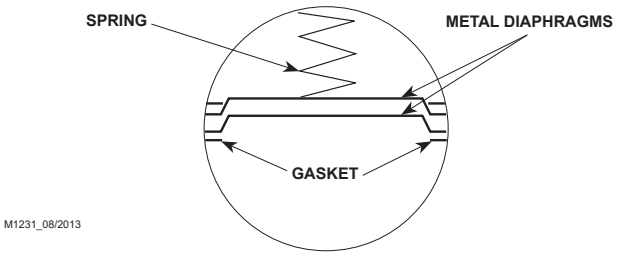


FRONT AND INTERNAL VIEW OF TYPE MR95H WITH INTERNAL PRESSURE REGISTRATION

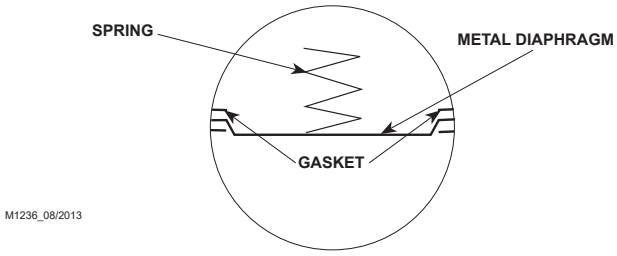
BACK VIEW OF 1/2 IN. / DN 15 TYPE MR95H WITH EXTERNAL PRESSURE REGISTRATION

SIDE AND INTERNAL VIEW OF 3/4 TO 2 IN. / DN 20 TO 50 TYPE MR95H WITH EXTERNAL PRESSURE REGISTRATION (ALSO TYPICAL OF TYPE MR95L, 1/2 TO 2 IN. / DN 15 TO 50 BODY SIZES)

INLET PRESSURE
OUTLET PRESSURE
ATMOSPHERIC PRESSURE



TYPE MR95H WITH 2 METAL DIAPHRAGMS (ALSO TYPICAL OF TYPES MR95HT AND MR95L EXCEPT FOR TYPE MR95L WITH 1/4 NPT BODY SIZE, 2 to 6 psi / 0.14 to 0.41 bar RANGE)



TYPE MR95L (1/4 NPT, 2 to 6 psi / 0.14 to 0.41 bar RANGE) WITH METAL DIAPHRAGM

Figure 2. *MR95 Series Operational Schematics*

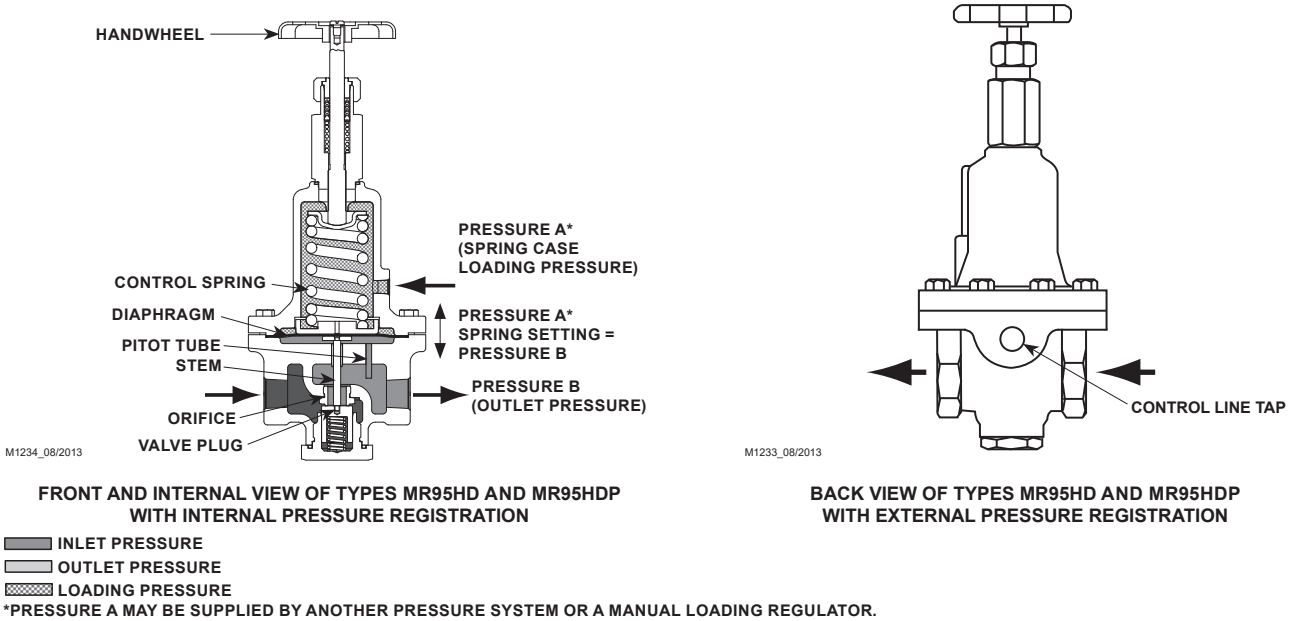


Figure 2. *MR95 Series Operational Schematics (continued)*

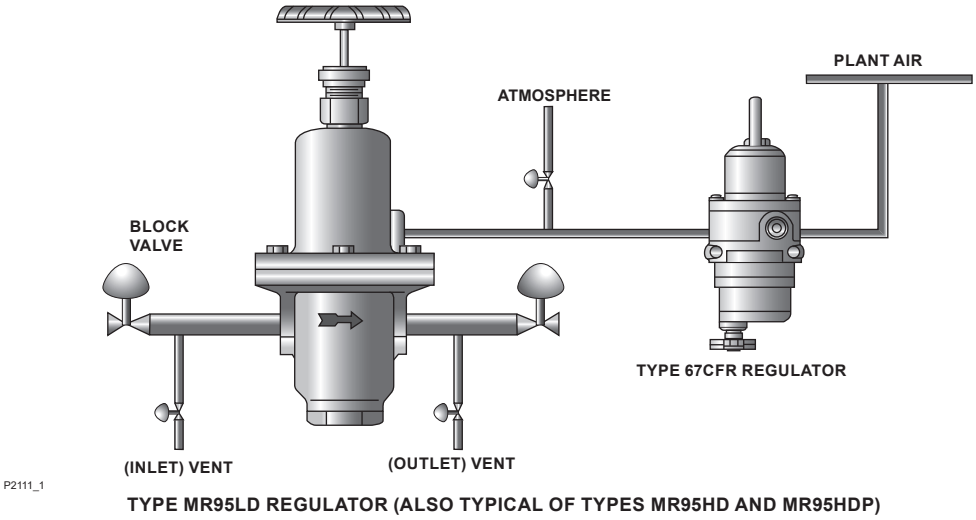


Figure 3. *Differential Pressure Regulator Installation Schematics*

Installation

WARNING

Personal injury or system damage may result if this regulator is installed, without appropriate overpressure protection, where service conditions could exceed the limits given in the Specifications section and/or regulator nameplate. Refer to Overpressure Protection section for recommendations on how to prevent service conditions from exceeding those limits.

Additionally, physical damage to the regulator may result in personal injury or property damage due to escaping of accumulated gas. To avoid such injury and damage, install the regulator in a safe location.

Under enclosed conditions or indoors, escaping gas may accumulate and be an explosion hazard. In this case, the vent should be piped outdoors.

For regulator constructions with a spring case vent, the vent should be kept open to permit free flow of gas to the atmosphere. Protect openings against entrance of rain, snow, insects or any other foreign material that may plug the spring case vent or vent line.

All pressure equipment should be installed in a non-seismic area; should not be exposed to fire; and should be protected from thunderbolt (lightning) strikes.

Before installing the regulator:

- Unpack the regulator and remove the protective shipping plugs from the end connections of the body and the pressure connection in the spring case.
- Check the regulator and make sure it has not been damaged or collected foreign material during shipping.
- Remove any debris or dirt in the tubing and the pipeline.
- Apply pipe compound to the external pipe thread for NPT bodies or use appropriate gaskets for flanged bodies.
- Make sure gas flow through the regulator is in the same direction as the arrow on the body.

On 1-1/2 or 2 in. / DN 40 or 50 Types MR95H, MR95HP and MR95HT regulators, the spring case vent is tapped so a vent line can be connected to provide venting to a remote location. On 1/4 NPT, 1/2, 3/4 and 1 in. / DN 15, 20 and 25 Types MR95H, MR95HP and MR95HT body sizes, the tapped vent option is available on request. Protect the exposed end of the vent pipe with a weather and insect resistant vent assembly. Periodically check all vents and remote vent lines to ensure that they are unobstructed.

On Types MR95LD, MR95HD and MR95HDP regulators, the loading pressure is connected to the 1/4 NPT connection in the spring case.

Overpressure Protection

WARNING

Personal injury, equipment damage or leakage due to escaping accumulated gas or bursting of pressure-containing parts may result if this regulator is:

- **Overpressured**
- **Installed where service conditions could exceed the limits given in the Specifications section and on the appropriate nameplate**
- **Where conditions exceed any ratings of adjacent piping or piping connections**

To avoid such injury or damage, provide pressure-relieving or pressure-limiting devices to prevent service conditions from exceeding those limits.

The Types MR95H and MR95HD regulators have an outlet pressure rating equal to the inlet pressure rating. The Types MR95L, MR95LD, MR95HDP, MR95HP and MR95HT regulators have an outlet pressure rating lower than the inlet pressure rating.

The recommended pressure limitations are stamped on the regulator nameplate. Some type of overpressure protection is needed if the actual inlet pressure exceeds the maximum operating outlet pressure rating. Provide external overpressure protection if the regulator inlet pressure is greater than the safe working pressure of downstream equipment.

Common methods of external overpressure protection include relief valves, monitoring regulators, shutoff devices and series regulation.

Regulator operation below the maximum pressure limitations does not preclude the possibility of damage from external sources or from debris in the pipeline. If the regulator is exposed to an overpressure condition, inspect it for any damage that may have occurred.

Startup

Note

The Specifications section and Tables 3 and 4 show the maximum inlet, the differential and the outlet pressures for specific constructions. Use pressure gauges to monitor inlet pressure, outlet pressure and any loading pressure during startup.

1. Check that proper installation is completed and downstream equipment has been properly adjusted.
2. Make sure all block and vent valves are closed.
3. Decompress the control spring by turning the adjusting screw (for Types MR95L, MR95H, MR95HP and MR95HT) or handwheel (for Types MR95LD, MR95HD and MR95HDP) counterclockwise.
4. Slowly open the valves in the following order:
   a. Loading supply and control line valve(s), if used
   b. Inlet block valve
   c. Outlet block valve
5. Set the regulator to the desired outlet (control) pressure according to the Adjustment procedure.

Adjustment

WARNING

To avoid personal injury, property damage or equipment damage caused by bursting of pressure containing parts or explosion of accumulated gas, never adjust the control spring to produce an outlet pressure higher than the upper limit of the outlet pressure range for that particular spring. If the desired outlet pressure is not within the range of the control spring, install a spring of the proper range.

The factory setting of the regulator can be varied within the pressure range stamped on the nameplate. Follow the following procedures for the proper adjustment of the outlet (control) spring. If the spring range was changed, b sure to change the stamped spring range on the nameplate.

All MR95 Series regulator springs can be backed off to provide zero outlet. Recommended outlet pressure ranges available, maximum inlet pressures and color codes of the respective springs are shown in Tables 3 and 4.

Types MR95L, MR95H, MR95HP and MR95HT

Key numbers are referenced in Figure 6, 8 or 9.

1. Loosen the jam nut (key 17).
2. Turn the adjusting screw (key 15) clockwise to increase outlet pressure or counterclockwise to decrease it.
3. Monitor the outlet pressure with a test gauge during the adjustment.
4. Tighten the jam nut (key 17) to maintain the desired setting.

Types MR95LD, MR95HD and MR95HDP

Key numbers are referenced in Figure 7 or 10.

1. Turn handwheel (key 38) clockwise to increase outlet pressure or counterclockwise to decrease it.
2. Monitor the outlet pressure with a test gauge during the adjustment.

Shutdown

1. Close the upstream block valve to the regulator inlet.
2. Close the downstream block valve to the regulator outlet.
3. Vent the downstream pressure by slowly opening the bleed valve between the regulator and the downstream shutoff valve. Without changing regulator spring adjustment, all pressure between the upstream and downstream shutoff valves will be released through the bleed valve, since the Type MR95L, MR95H, MR95HP or MR95HT regulator opens in response to the decreased outlet pressure. For Types MR95L, MR95H, MR95HP and MR95HT regulators, skip steps 4, 5 and 6. For Types MR95LD, MR95HD and MR95HDP continue steps 4 through 6.
4. Close the block valve to the loading pressure.
5. Vent loading pressure slowly to release pressure in the spring case.
6. Vent inlet pressure slowly (through the bleed valve) to release all remaining pressure in the regulator.

Maintenance

WARNING

To avoid personal injury, property damage or equipment damage caused by sudden release of pressure or explosion of accumulated gas, do not attempt any maintenance or disassembly without first isolating the regulator from system pressure and relieving all internal pressure from the regulator.

To avoid possible personal injury from spring or pressure-loaded actuator, make certain the adjusting screw is completely backed off and the spring case pressure is vented prior to disassembly. Otherwise, the spring load or loading pressure could forcefully eject the spring case.

Regulators that have been disassembled for repair must be tested for proper operation before being returned to service. Only parts manufactured by Emerson should be used for repairing Fisher™ regulators.

Due to normal wear or damage that may occur from external sources, this regulator should be inspected and maintained periodically. The frequency of inspection and replacement of parts depends upon the severity of service conditions or the requirement of local, state and federal rules and regulations.

Due to normal wear that may occur, inspect the parts periodically and replace if necessary. The frequency of inspection depends on the severity of service conditions or the requirements of state and federal laws.

Replace parts such as the O-rings, gaskets, diaphragm and packing as necessary. Always apply lubricants as the regulator is being reassembled. Suitable lubricants are shown in the assembly drawings.

The regulator does not have to be taken out of the pipeline to be disassembled. All key numbers are referenced in Figures 4 to 10.

Replacement or Maintenance of Orifice and Valve Plug

If it appears that the valve does not shut off tightly, the orifice and valve plug could be worn out or damaged. Proceed as follows to check and/or replace them.

1. Shut down the regulator. Refer to Shutdown section for the proper procedure.
2. Unscrew the valve plug guide (key 5) from the body (key 1). The valve plug spring (key 26) and the valve plug (key 4) will normally come out of the body along with the valve plug guide. On 1-1/2 or 2 in. / DN 40 or 50 body size regulators, the stem (key 6) will also come out of the regulator body.
3. Inspect the seating surface of the valve plug (key 4), make sure that the elastomer, PTFE or polished metal surface of the valve plug is not damaged. Also inspect the external O-ring (key 4c) on the valve plug of Type MR95HP. Replace the valve plug assembly if damage is noted.
4. Inspect the seating edge of the orifice (key 3). If damage is noted, unscrew the orifice from the body (key 1) and replace it with a new part. Reference Table 8 for proper torque values.
5. Reassemble the regulator in the reverse order of the above steps. When installing the valve plug guide (key 5), coat the threads and sealing surface with sealant to ensure an adequate metal-to-metal seal. Reference Table 8 for proper torque values.

Flange Cap Screw Torque Inspection

Retorquing of spring case cap screws may be necessary for some MR95 Series regulators after a period of use. Retorque the cap screws as follows:

1. Shut down the regulator. Refer to Shutdown section for the proper procedure.
2. Retighten the cap screws (key 16) in a crisscross pattern. See Table 9 for proper torque values.
3. Follow the Startup section to repressurize the regulator.
4. Refer to the Replacement of Diaphragm section as needed.

Replacement of Diaphragm

When the regulator does not respond to differential or downstream pressure changes, if fluid leaks or vents to the spring case (pressure reducing regulators) or the loading pressure seems to leak to the downstream piping (differential pressure regulators), the diaphragm could be worn out or ruptured. Inspect/replace the diaphragm as follows:

CAUTION

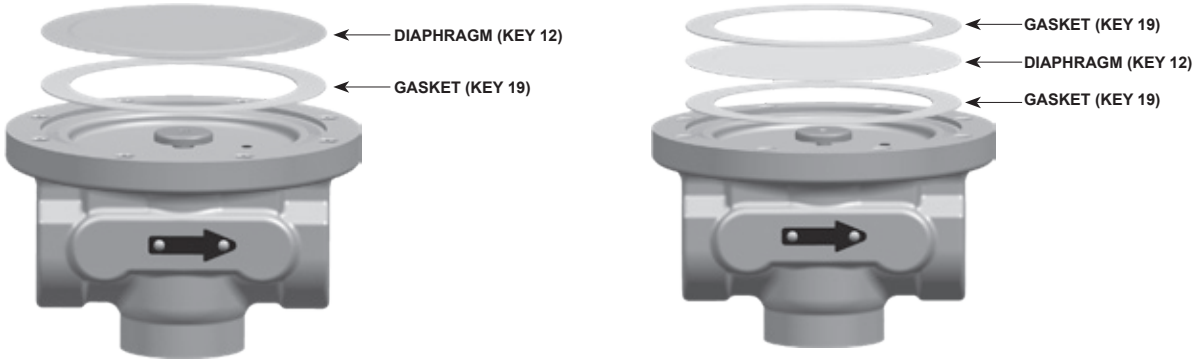
Metal diaphragms have thin sharp edges. To avoid hand cuts, be careful when handling the diaphragm and particularly the diaphragm edge.

1. Shut down the regulator. Refer to “Shutdown” section for the proper procedure.
2. **For Types MR95L, MR95H, MR95HP and MR95HT**—loosen the jam nut (key 17) and turn the adjusting screw (key 15) counterclockwise to remove all spring compression.
   For Types MR95LD, MR95HD and MR95HDP—turn the handwheel (key 38) counterclockwise to remove all spring compression.

CAUTION

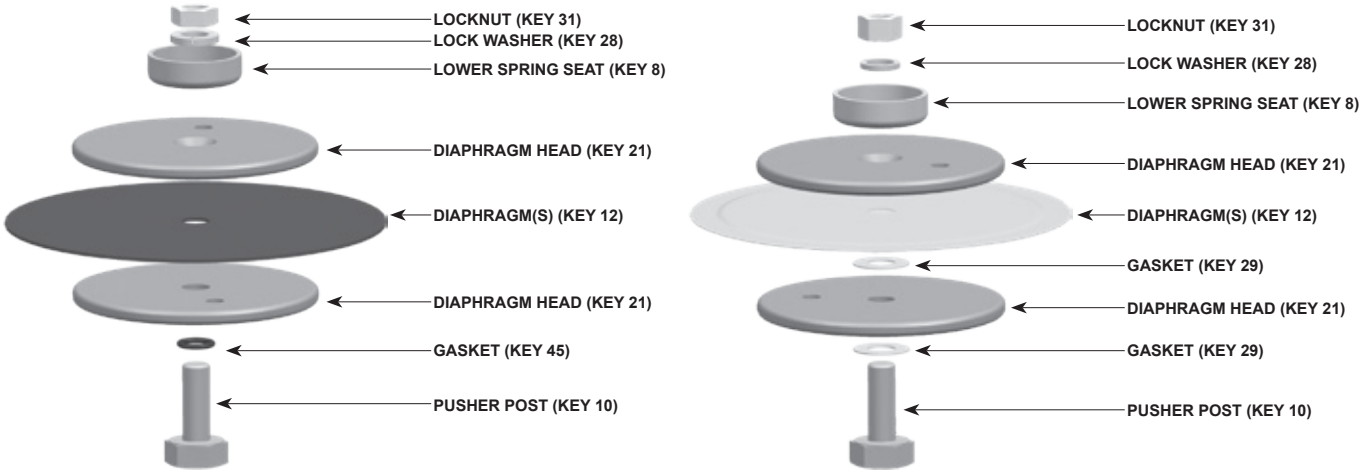
Provide adequate support to the spring case when disassembling MR95 Series regulator installed in a vertical installation or other application where the spring case is not oriented upward. Without adequate support, the spring case may fall and cause physical injury when the cap screws are loosened.

3. Remove the cap screws (key 16) from the diaphragm casing. Lift the entire spring case (key 2) off of the body (key 1).
4. Remove the upper spring seat (key 9) and regulator spring (key 11). For Types MR95H, MR95HP and MR95HT with body sizes 1-1/2 and 2 in. / DN 40 and 50 skip steps 5 and 6.
5. **For Types MR95HD and MR95HDP and 1/4 NPT to 1 in. / DN 25 body sizes of Types MR95H, MR95HP and MR95HT**—remove the lower spring seat (key 8).
   For Types MR95L and MR95LD—remove the diaphragm head assembly (key 21, lower spring seat and diaphragm head threaded together).
6. Remove the diaphragm(s) (key 12) and examine for damage. Replace if damage is noted. See Table 8 for the required number of diaphragm(s).Proceed to step 9.
7. For body sizes 1-1/2 and 2 in. / DN 40 and 50, remove the diaphragm and diaphragm head. The diaphragm head can only be disassembled for the 1-1/2 and 2 in. / DN 40 and 50 sizes. Disassemble it for inspection of the diaphragm (key 12) and two small diaphragm gaskets (key 29) or O-ring (key 45). Remove the locknut (key 31) from the pusher post (key 10) and separate the assembly. An O-ring is used to seal around the pusher post if an elastomer diaphragm is used and the gaskets are used with stainless steel diaphragm(s).
8. Remove the stem assembly (key 6) except for regulator with 1/4 NPT body size. Inspect the O-ring (not shown) from wear or damage. Replace stem assembly if damage is noted.
9. With diaphragm(s) (key 12) removed, ensure the pressure registration hole (pitot tube, key 20, in 3/4 in. / DN 20 and larger body sizes) is completely open and free of all obstructions.



TYPES MR95L AND MR95H METAL DIAPHRAGM | **TYPES MR95LD, MR95HD AND MR95HDP METAL DIAPHRAGM**

Figure 4. *Diaphragm Assembly for MR95 Series with 1/4 NPT and 1/2 to 1 in. / DN 15 to 25 Body Sizes*



COMPOSITION DIAPHRAGM | **METAL DIAPHRAGM**

Figure 5. *Diaphragm Assembly for MR95 Series with 1-1/2 and 2 in. / DN 40 and 50 Body Sizes*

Table 8. *Number of Diaphragms Required*

BODY SIZE	TYPE	SPRING RANGE	DIAPHRAGM MATERIAL	NUMBER OF DIAPHRAGM
1/4 NPT	MR95L and MR95LD	All ranges	Ethylyne Propylene Diene (EPDM)	1
			Sanitary Ethylenepropylene (EPDM)[1]	1
			Neoprene (CR)	1
			Fluorocarbon (FKM)	1
		All ranges except 2 to 6 psig / 0.14 to 0.41 bar	Metal	2
		2 to 6 psig / 0.14 to 0.41 bar	Metal	1
	MR95H, MR95HD, MR95HDP and MR95HP	All ranges	Metal	2
			Ethylyne Propylene Diene (EPDM)	1
			Sanitary Ethylenepropylene (EPDM)[1]	1
			Fluorocarbon (FKM)	1
			Neoprene (CR)	1
1/2 to 2 in. / DN 15 to 50	All types	All ranges	Metal	2
			Ethylyne Propylene Diene (EPDM)	1
			Sanitary Ethylenepropylene (EPDM)[1]	1
			Fluorocarbon (FKM)	2
			Neoprene (CR)	1

1. EPDM meets FDA, USP Class VI and ADI Free requirements.

Table 9. *Torque Specifications*

BODY SIZE		SPRING CASE BOLT[1][2]		ORIFICE		PLUG GUIDE	
In.	DN	Ft-Lb	N•m	Ft-Lb	N•m	Ft-Lb	N•m
1/4	- - - -	6 to 8	8 to 11	6 to 8	8 to 11	50 to 58	68 to 79
1/2	15	10 to 13	13 to 18	34 to 38	46 to 51	75 to 90	102 to 122
3/4 and 1	20 and 25	24 to 30	33 to 41	50 to 60	68 to 81	100 to 125	136 to 169
1-1/2 and 2	40 and 50	40 to 50	54 to 68	180 to 200	244 to 271	170 to 200	230 to 271

1. Reduce spring case bolt's torque by 30% when using Ethylenepropylene (EPDM) diaphragms.

10. If the unit has metal diaphragms (see Figures 4 and 5):
    a. (Applicable only for the lower diaphragm head of Types MR95H, MR95HT, MR95HD and MR95HDP, 1-1/2 and 2 in. / DN 40 and 50.) Find the pusher post (key 10) and place on a surface with the larger flat surface down and the thread stem up (metal diaphragm pusher post has a recessed diameter in the bottom surface). Then, find one smaller composition gasket (key 29) and fit it over the threaded end of the pusher post. Find and take one of the diaphragm heads and slip it over the threaded end of the pusher post with the chamfered side of the diaphragm head toward the gasket. Take a second gasket and place it over the threaded end of the pusher post on top of the diaphragm head.
    b. Replace one of the two large diaphragm gaskets (key 19) on the surface of the body (key 1) that will support the diaphragms (key 12). There will be two diaphragms used per regulator, except for Types MR95L and MR95LD, 1/4 NPT with 2 to 6 psi / 0.14 to 0.41 bar spring range setting which use only one metal diaphragm (the metal diaphragm is in between two diaphragm gaskets). Another diaphragm gasket will be placed on top of the second metal diaphragm. The raised surfaces of the metal diaphragms should be placed in the unit so that they are facing toward the assembler (toward the spring) except only when one metal diaphragm is being used then the raised surface should be facing down (towards the body). See Figure 2 as reference.
11. Reassemble in the reverse of the above procedures. Lubricate the upper spring seat (key 9) and the exposed threads of the adjusting screw (key 15) with anti-seize lubricant. Install the cap screws (key 16) in a crisscross pattern and tighten to finger tight only.
12. To ensure proper slack in the diaphragm, install the adjusting screw (key 15, for Types MR95L, MR95H, MR95HP and MR95HT) or handwheel (key 38, Types MR95LD, MR95HD and MR95HDP), if completely removed and turn it clockwise. This allows proper positioning of the diaphragm (key 12) to permit full travel of the valve plug (key 4). Finish tightening the cap screws (key 16). See Table 8 for proper torque values.
13. Complete reassembly procedures and turn the adjusting screw (key 15) or handwheel (key 38) to produce the desired outlet pressure. For Types MR95L, MR95H, MR95HP and MR95HT, tighten the jam nut (key 17) to maintain the desired setting.

Replacement of Packing (Types MR95LD, MR95HD and MR95HDP only)

Leakage around the adjusting screw may indicate worn packing material. Follow the instructions below to replace the packing rings.

1. Shut down the regulator. Refer to "Shutdown" section for the proper procedure.
2. Take out the machine screw (key 41) and lift off the washer (key 44) and handwheel (key 38).
3. Unscrew the packing box (key 32). Unscrew the packing nut (key 35) and the packing follower (key 34) off of the adjusting screw (key 33).
4. Unscrew and pull the adjusting screw (key 33) out through the bottom of the packing box (key 32).
5. Pull out the old packing (key 36) and replace it with three new packing rings. Replace the packing box gasket (key 37). Lubricate packing box gasket with general purpose Polytetrafluoroethylene (PTFE) or lithium grease.
6. Reassemble the stuffing box unit by returning the adjusting screw (key 33) to the inside of the stuffing/packing box (key 32). Slip the packing follower (key 34) onto the adjusting screw and into the packing box. Screw on the packing nut (key 35).
7. Put the stuffing/packing box (key 32) back onto the spring case (key 2). Set the handwheel (key 38) and washer (key 44) on the adjusting screw (key 33) and screw in the machine screw (key 41).

Parts Ordering

When corresponding with your local Sales Office about this equipment, always reference the equipment serial number or FS number that can be found on the nameplate.

When ordering replacement parts, reference the key number of each needed part as found in the following parts list. Separate kits containing all recommended spare parts are available.

Note

In this parts list, parts marked NACE are intended for corrosion-resistant service as detailed in the NACE International Standard MR0175-2002, MR0103, and/or ANSI/NACE MR0175/ISO 15156.

Parts List

Key	Description	Part Number
	Parts Kit (included are keys 3, 4, 12, 19, 29, 45 and 63; not all parts are used for all types)	
	Type MR95H	
	Stainless steel diaphragm and plug	
	1/4 NPT Body	RMR95HX0012
	1/2 in. / DN 15 Body	RMR95HX0042
	3/4 and 1 in. / DN 20 and 25 Body sizes	RMR95HX0072
	1-1/2 and 2 in. / DN 40 and 50 Body sizes	RMR95HX0102
	Neoprene (CR) diaphragm and Nitrile (NBR)/Brass Disk	
	1/4 NPT Body	RMR95HX0022
	1/2 in. / DN 15 Body	RMR95HX0052
	3/4 and 1 in. / DN 20 and 25 Body sizes	RMR95HX0082
	1-1/2 and 2 in. / DN 40 and 50 Body sizes	RMR95HX0112
	Neoprene (CR) diaphragm and Nitrile (NBR)/416 Stainless steel Disk	
	1/4 NPT Body	RMR95HX0032
	1/2 in. / DN 15 Body	RMR95HX0062
	3/4 and 1 in. / DN 20 and 25 Body sizes	RMR95HX0092
	1-1/2 and 2 in. / DN 40 and 50 Body sizes	RMR95HX0122
	Type MR95L	
	Stainless steel diaphragm and plug	
	1/4 NPT Body	RMR95LX0012
	1/2 in. / DN 15 Body	RMR95LX0042
	3/4 and 1 in. / DN 20 and 25 Body sizes	RMR95LX0072
	Neoprene (CR) diaphragm and Nitrile (NBR)/Brass Disk	
	1/4 NPT Body	RMR95LX0022
	1/2 in. / DN 15 Body	RMR95LX0052
	3/4 and 1 in. / DN 20 and 25 Body sizes	RMR95LX0082
	Neoprene (CR) diaphragm and Nitrile (NBR)/416 Stainless steel Disk	
	1/4 NPT Body	RMR95LX0032
	1/2 in. / DN 15 Body	RMR95LX0062
	3/4 and 1 in. / DN 20 and 25 Body sizes	RMR95LX0092
	Type MR95HT, Stainless Diaphragm and Plug	
	1/4 NPT Body	RMR95HTX012
	1/2 in. / DN 15 Body	RMR95HTX022
	Parts Kit (included are keys 3, 4, 12, 19, 29, 45 and 63; not all parts are used for all types) (continued)	
	Type MR95HT, Stainless Diaphragm and Plug	
	3/4 and 1 in. / DN 20 and 25 Body sizes	RMR95HTX032
	1-1/2 and 2 in. / DN 40 and 50 Body sizes	RMR95HTX042
1	Body	See Following Tables
2	Spring Case	See Following Tables
3*	Orifice(2)	
	Metal-to-metal seat	
	Types MR95L, MR95LD, MR95H, MR95HD and MR95HDP	
	1/4 NPT Body Size	
	416 Stainless steel	GF04856X022
	316 Stainless steel	GF04856X032
	Hastelloy® C	GF04856X052
	Monel®	GF04856X042
	1/2 in. / DN 15 Body Size	
	416 Stainless steel	GF04841X022
	316 Stainless steel	GF04841X032
	Alloy 6	GF04841X062
	Hastelloy® C	GF04841X052
	Monel®	GF04841X042
	3/4 and 1 in. / DN 20 and 25 Body sizes	
	416 Stainless steel	GF04821X022
	316 Stainless steel	GF04821X032
	Alloy 6	GF04821X062
	Hastelloy® C	GF04821X052
	Monel®	GF04821X042
	1-1/2 and 2 in. / DN 40 and 50 Body sizes	
	416 Stainless steel	GF04896X022
	316 Stainless steel	GF04896X032
	Alloy 6	GF04896X062
	Hastelloy® C	GF04896X052
	Monel®	GF04896X042
	Type MR95HT	
	1/4 NPT Body Size	
	416 Stainless steel	GF04856X022
	316 Stainless steel	GF04856X032
	1/2 in. / DN 15 Body Size	
	416 Stainless steel	GF04841X022
	316 Stainless steel	GF04841X032
	Alloy 6	GF04841X062
	3/4 and 1 in. / DN 20 and 25 Body sizes	
	416 Stainless steel	GF04821X022
	316 Stainless steel	GF04821X032
	Alloy 6	GF04821X062
	1-1/2 and 2 in. / DN 40 and 50 Body sizes	
	416 Stainless steel	GF04896X022
	316 Stainless steel	GF04896X032
	Alloy 6	GF04896X062
	Composition seat	
	Types MR95L, MR95LD, MR95H, MR95HD and MR95HDP	
	1/4 NPT Body Size	
	Brass, Oxygen Service	GF05038X012
	316 Stainless steel, NACE(1)	GF05038X032
	416 Stainless steel	GF05038X022
	Monel®	GF05038X042
	1/2 in. / DN 15 Body Size	
	Brass, Oxygen Service	GF05327X012
	316 Stainless steel, NACE(1)	GF05327X032
	416 Stainless steel	GF05327X022
	Monel®	GF05327X042
	3/4 and 1 in. / DN 20 and 25 Body sizes	
	Brass, Oxygen Service	GF04822X012
	316 Stainless steel, NACE(1)	GF04822X032
	416 Stainless steel	GF04822X022
	Monel®	GF04822X042
	1-1/2 and 2 in. / DN 40 and 50 Body sizes (Types MR95H, MR95HD and MR95HDP only)	
	Brass, Oxygen Service	GF05521X012
	316 Stainless steel, NACE(1)	GF05521X032
	416 Stainless steel	GF05521X022
	Monel®	GF05521X042

*Recommended spare part

Hastelloy® C is a mark owned by Haynes International, Inc.

Monel® is a mark owned by Special Metals Corporation.

1. NACE MR0175-2002, NACE MR0103 and NACE MR0175/ISO 15156.
2. See Type MR95 Reduced Orifice Part Numbers table on page 30 for reduced orifices that change Type MR95 C_v values to equivalent Type 95 C_v values.

Key	Description	Part Number
3*	Orifice (continued)[2]	
	Composition seat (continued)	
	Type MR95HP	
	1/4 NPT Body Size	
	316 Stainless steel, NACE[1]	GF05038X032
	416 Stainless steel	GF05038X022
	1/2 in. / DN 15 Body Size	
	316 Stainless steel, NACE[1]	GF05327X032
	416 Stainless steel	GF05327X022
	3/4 and 1 in. / DN 20 and 25 Body sizes	
	316 Stainless steel, NACE[1]	GF04822X032
	416 Stainless steel	GF04822X022
	1-1/2 and 2 in. / DN 40 and 50 Body sizes	
	316 Stainless steel, NACE[1]	GF05521X032
	416 Stainless steel	GF05521X022
4*	Valve Plug, Metal seat	See Following Table
4*	Disk Holder Assembly, Composition seat	See Following Table
4a	Disk Holder	----------
4b	Disk	----------
4c	O-ring (Type MR95HP only)	----------
5	Valve Plug Guide	
	Types MR95L, MR95LD, MR95H	
	MR95HD and MR95HDP	
	1/4 NPT Body Size	
	Brass, Oxygen Service	Refer to 316 SST PN
	416 Stainless steel	Refer to 316 SST PN
	316 Stainless steel, NACE[1]	GF05490X072
	Hastelloy® C	GF05490X052
	Monel®	GF05490X042
	1/2 in. / DN 15 Body Size	
	Brass, Oxygen Service	Refer to 316 SST PN
	416 Stainless steel	Refer to 316 SST PN
	316 Stainless steel, NACE[1]	GF05519X122
	Hastelloy® C	GF05519X052
	Monel®	GF05519X042
	3/4 and 1 in. / DN 20 and 25 Body sizes	
	Brass, Oxygen Service	Refer to 316 SST PN
	416 Stainless steel	Refer to 316 SST PN
	316 Stainless steel, NACE[1]	GF04830X202
	Hastelloy® C	GF04830X052
	Monel®	GF04830X042
	1-1/2 and 2 in. / DN 40 and 50 Body sizes	
	416 Stainless steel	Refer to 316 SST PN
	316 Stainless steel, NACE[1]	GF05510X152
	Hastelloy® C	GF05510X052
	Monel®	GF05510X042
	Types MR95HP and MR95HT	
	1/4 NPT Body Size	
	416 Stainless steel	Refer to 316 SST PN
	316 Stainless steel, NACE[1]	GF05490X032
	1/2 in. / DN 15 Body Size	
	416 Stainless steel	Refer to 316 SST PN
	316 Stainless steel, NACE[1]	GF05519X032
	3/4 and 1 in. / DN 20 and 25 Body sizes	
	416 Stainless steel	Refer to 316 SST PN
	316 Stainless steel, NACE[1]	GF04830X032
	1-1/2 and 2 in. / DN 40 and 50 Body sizes	
	416 Stainless steel	Refer to 316 SST PN
	316 Stainless steel, NACE[1]	GF05510X032
6	Stem/Stem Assembly	
	Types MR95L, MR95LD, MR95H	
	MR95HD and MR95HDP	
	1/4 NPT Body Size	
	416 Stainless steel	ERCA00638A0
	316 Stainless steel	
	Standard, Oxygen Service	ERCA00638A4
	NACE[1], Types MR95L and MR95H only	ERCA00638A1
	Hastelloy® C	ERCA00638A3
	Monel®	ERCA00638A2

Key	Description	Part Number
6	Stem/Stem Assembly (continued)	
	Types MR95L, MR95LD, MR95H	
	MR95HD and MR95HDP (continued)	
	1/2 in. / DN 15 Body Size	
	416 Stainless steel	
	Without control line	ERCA00639A0
	With control line	ERAA01904A0
	316 Stainless steel	
	Standard, Oxygen Service	ERCA00639A4
	NACE[1]	
	Without control line	ERCA00639A1
	With control line	
	Nitrile (NBR) seat	ERAA01904A1
	Fluorocarbon (FKM) seat	ERAA01904A2
	Hastelloy® C	ERCA00639A3
	Monel®	ERCA00639A2
	3/4 and 1 in. / DN 20 and 25 Body sizes	
	416 Stainless steel	
	Without control line	ERCA00640A0
	With control line	ERAA01896A0
	316 Stainless steel	
	Standard, Oxygen Service	ERCA00640A4
	NACE[1]	
	Without control line	ERCA00640A1
	With control line	
	Nitrile (NBR) seat	ERAA01896A1
	Fluorocarbon (FKM) seat	ERAA01896A2
	Hastelloy® C	ERCA00640A3
	Monel®	ERCA00640A2
	1-1/2 and 2 in. / DN 40 and 50 Body sizes	
	416 Stainless steel	
	Without control line	GF05507X022
	With control line	ERAA01906A0
	316 Stainless steel	
	Standard, Oxygen Service	GF05507X062
	NACE[1]	
	Without control line	GF05507X032
	With control line	
	Nitrile (NBR) seat	ERAA01906A2
	Fluorocarbon (FKM) seat	ERAA01906A3
	Hastelloy® C	GF05507X052
	Monel®	GF05507X042
	Type MR95HT	
	1/4 NPT Body Size	
	416 Stainless steel	ERCA00638A0
	316 Stainless steel	ERCA00638A4
	1/2 in. / DN 15 Body Size	
	416 Stainless steel	ERCA00639A0
	316 Stainless steel	ERCA00639A4
	3/4 and 1 in. / DN 20 and 25 Body sizes	
	416 Stainless steel	ERCA00640A0
	316 Stainless steel	ERCA00640A4
	1-1/2 and 2 in. / DN 40 and 50 Body sizes	
	416 Stainless steel	GF05507X022
	316 Stainless steel	GF05507X062
	Type MR95HP	
	1/4 NPT Body Size	
	416 Stainless steel	ERCA00638A0
	316 Stainless steel, NACE[1]	ERCA00638A1
	1/2 in. / DN 15 Body Size	
	416 Stainless steel	
	Without control line	ERCA00639A0
	With control line	ERAA01904A0
	316 Stainless steel, NACE[1]	
	Without control line	ERCA00639A1
	With control line	
	Nitrile (NBR) seat	ERAA01904A1
	Fluorocarbon (FKM) seat	ERAA01904A2
	3/4 and 1 in. / DN 20 and 25 Body sizes	
	416 Stainless steel	
	Without control line	ERCA00640A0
	With control line	ERAA01896A0
	316 Stainless steel, NACE[1]	
	Without control line	ERCA00640A1
	With control line	
	Nitrile (NBR) seat	ERAA01896A1
	Fluorocarbon (FKM) seat	ERAA01896A2

*Recommended spare part
Hastelloy® C is a mark owned by Haynes International, Inc.
Monel® is a mark owned by Special Metals Corporation.
1. NACE MR0175-2002, NACE MR0103 and NACE MR0175/ISO 15156.
2. See Type MR95 Reduced Orifice Part Numbers table on page 30 for reduced orifices that change Type MR95 C_v values to equivalent Type 95 C_v values.

Key	Description	Part Number
6	Stem/Stem Assembly (continued)	
	Type MR95HP (continued)	
	1-1/2 and 2 in. / DN 40 and 50 Body sizes	
	416 Stainless steel	
	Without control line	GF05507X022
	With control line	ERAA01906A0
	316 Stainless steel, NACE(1)	
	Without control line	GF05507X032
	With control line	
	Nitrile (NBR) seat	ERAA01906A2
	Fluorocarbon (FKM) seat	ERAA01906A3
6a	Stem	----------
6b	Pusher Plate (1/4 NPT and 1/2 to 1 in. / DN 15 to 25 Body sizes only)	----------
6b	O-ring (1-1/2 and 2 in. / DN 40 and 50 Body sizes only)	----------
6c	O-ring (1/2 to 1 in. / DN 15 to 25 Body sizes only)	----------
7	Stem Guide Bushing	
	1/4 NPT Body Size	
	416 Stainless steel	ERCA03695A0
	316 Stainless steel, NACE(1), Oxygen Service	ERCA03695A1
	Hastelloy® C	ERCA03695A3
	Monel®	ERCA03695A2
	1/2 in. / DN 15 Body Size	
	416 Stainless steel	ERCA03694A0
	316 Stainless steel, NACE(1), Oxygen Service	ERCA03694A1
	Hastelloy® C	ERCA03694A3
	Monel®	ERCA03694A2
	3/4 to 2 in. / DN 20 to 50 Body sizes	
	416 Stainless steel	ERCA03668A0
	316 Stainless steel, NACE(1), Oxygen Service	ERCA03668A1
	Hastelloy® C	ERCA03668A3
	Monel®	ERCA03668A2
8	Lower Spring Seat, NACE(1)	
	Types MR95L, MR95LD, MR95H, MR95HD and MR95HDP	
	1/4 NPT Body Size	
	Aluminum(2)	1E392309012
	Stainless steel	1E3923X0012
	1/2 in. / DN 15 Body Size	
	Aluminum(2)	1E395408012
	Stainless steel	1E3954X0042
	3/4 and 1 in. / DN 20 and 25 Body sizes	
	Aluminum(2)	1E398608012
	Stainless steel	1E3986X0042
	1-1/2 and 2 in. / DN 40 and 50 Body sizes	
	Steel(2)	1P787724152
	Stainless steel	1P7877X0012
	Types MR95HP and MR95HT	
	1/4 NPT Body Size	
	Steel(2)	ERCA00453A0
	Stainless steel	ERCA00453A1
	1/2 in. / DN 15 Body Size	
	Steel(2)	ERCA00436A0
	Stainless steel	ERCA00436A1
	3/4 and 1 in. / DN 20 and 25 Body sizes	
	Steel(2)	17B8733X012
	Stainless steel	17B8733X022
	1-1/2 and 2 in. / DN 40 and 50 Body sizes	
	Steel(2)	1P787724152
	Stainless steel	1P7877X0012
9	Upper Spring Seat, NACE(1)	
	Types MR95L, MR95LD, MR95H, MR95HD and MR95HDP	
	1/4 NPT Body Size	
	Steel(2)	ERCA00383A0
	Stainless steel	ERCA00383A1
	1/2 in. / DN 15 Body Size	
	Steel(2)	ERCA00823A0
	Stainless steel	ERCA00823A1
	3/4 and 1 in. / DN 20 and 25 Body sizes	
	Steel(2)	1E398725072
	Stainless steel	1E3987X0012

Key	Description	Part Number
9	Upper Spring Seat, NACE(1) (continued)	
	Types MR95L, MR95LD, MR95H, MR95HD and MR95HDP (continued)	
	1-1/2 and 2 in. / DN 40 and 50 Body sizes	
	Steel(2)	1P787624092
	Stainless steel	1P7876X0012
	Types MR95HP and MR95HT	
	1/4 NPT Body Size	
	Steel(2)	14B9950X012
	Stainless steel	14B9950X022
	1/2 in. / DN 15 Body Size	
	Steel(2)	ERCA00382A0
	Stainless steel	ERCA00382A1
	3/4 and 1 in. / DN 20 and 25 Body sizes	
	Steel(2)	ERCA00138A0
	Stainless steel	ERCA00138A1
	1-1/2 and 2 in. / DN 40 and 50 Body sizes	
	Steel(2)	1P787624092
	Stainless steel	1P7876X0012
10	Pusher Post, 1-1/2 and 2 in. / DN 40 and 50 Body sizes only	
	Metal-to-metal seat	
	416 Stainless steel, Types MR95H, MR95HD, MR95HDP and MR95HT only	GF05509X022
	316 Stainless steel, Types MR95H, MR95HD, MR95HDP and MR95HT only	GF05509X032
	Hastelloy® C, Types MR95H, MR95HD and MR95HDP only	GF05509X052
	Monel®, Types MR95H, MR95HD and MR95HDP only	GF05509X042
	Composition seat	
	416 Stainless steel	
	Types MR95H, MR95HD, MR95HDP and MR95HP only	GF05549X022
	316 Stainless steel, NACE(1), Oxygen Service	
	Types MR95H, MR95HD, MR95HDP and MR95HP only	GF05549X032
	Monel®, Types MR95H, MR95HD and MR95HDP only	GF05549X042
11	Control Spring, NACE(1)(2)	See Table 3
12*	Diaphragm	See Following Table
13	Nameplate	----------
14*	Diaphragm Protector, PTFE, NACE(1)	
	Types MR95L and MR95LD	
	1/4 NPT Body Size	11A5126X012
	1/2 in. / DN 15 Body Size	11A5127X012
	3/4 and 1 in. / DN 20 and 25 Body sizes	11A5128X012
	Types MR95H, MR95HP, MR95HD and MR95HDP	
	1/4 NPT Body Size	11A5129X012
	1/2 in. / DN 15 Body Size	11A5130X012
	3/4 and 1 in. / DN 20 and 25 Body sizes	11A5131X012
	1-1/2 and 2 in. / DN 40 and 50 Body sizes	11A5527X012
15	Adjusting Screw, NACE(1)(2)	
	Square Head Adjustment	
	1/4 NPT Body Size	GF05533X012
	1/2 in. / DN 15 Body Size	GF05553X012
	3/4 and 1 in. / DN 20 and 25 Body sizes	GF05543X012
	1-1/2 and 2 in. / DN 40 and 50 Body sizes	GF05522X012
	Stainless steel Square Head Adjustment	
	1/4 NPT Body Size	GF05533X022
	1/2 in. / DN 15 Body Size	GF05553X022
	3/4 and 1 in. / DN 20 and 25 Body sizes	GF05543X022
	1-1/2 and 2 in. / DN 40 and 50 Body sizes	GF05522X022
	Sealed Square Head Adjustment	
	1/2 in. / DN 15 Body Size	GF05553X012
	3/4 and 1 in. / DN 20 and 25 Body sizes	GF05543X012
	1-1/2 and 2 in. / DN 40 and 50 Body sizes	GF05522X012
	Handwheel Adjustment	
	1/2 in. / DN 15 Body Size	ERAA02331A0
16	Cap Screw, NACE(1)(2)	
	Types MR95L and MR95LD	
	1/4 NPT Body Size	
	Steel (10 required)	ERCA00651A0
	Stainless steel (10 required)	ERCA00651A1

*Recommended spare part
Hastelloy® C is a mark owned by Haynes International, Inc.
Monel® is a mark owned by Special Metals Corporation.
1. NACE MR0175-2002, NACE MR0103 and NACE MR0175/ISO 15156.
2. Part meets NACE requirements only for applications in which the part is not exposed to sour gas.

Key	Description	Part Number
16	Cap Screw, NACE[1][2] (continued)	
	Types MR95L and MR95LD (continued)	
	1/2 in. / DN 15 Body Size	
	Steel (10 required)	ERCA00100A0
	Stainless steel (10 required)	ERCA00100A1
	3/4 and 1 in. / DN 20 and 25 Body sizes	
	Steel (12 required)	GF05446X012
	Stainless steel (12 required)	GF05446X022
	Types MR95H and MR95HD	
	1/4 NPT Body Size	
	Steel (6 required)	ERCA04149A0
	Stainless steel (6 required)	ERCA04149A1
	1/2 in. / DN 15 Body Size	
	Steel (8 required)	ERCA00100A0
	Stainless steel (8 required)	ERCA00100A1
	3/4 and 1 in. / DN 20 and 25 Body sizes	
	Steel (8 required)	GF05446X012
	Stainless steel (8 required)	GF05446X022
	1-1/2 and 2 in. / DN 40 and 50 Body sizes	
	Steel (8 required)	ERCA00601A0
	Stainless steel (8 required)	ERCA00601A3
	Types MR95HP, MR95HDP and MR95HT	
	1/4 NPT Body Size	
	Steel (6 required)	ERCA04149A2
	Stainless steel (6 required)	ERCA04149A3
	1/2 in. / DN 15 Body Size	
	Steel (8 required)	ERCA00100A2
	Stainless steel (8 required)	ERCA00100A3
	3/4 and 1 in. / DN 20 and 25 Body sizes	
	Steel (8 required)	GF05446X032
	Stainless steel (8 required)	GF05446X042
	1-1/2 and 2 in. / DN 40 and 50 Body sizes	
	Steel (8 required)	ERCA00601A2
	Stainless steel (8 required)	ERCA00601A3
17	Jam Nut, NACE[1][2]	
	Square Head Adjustment	
	1/4 NPT Body Size	ERCA00652A0
	1/2 in. / DN 15 Body Size	ERCA00380A0
	3/4 and 1 in. / DN 20 and 25 Body sizes	GF05453X012
	1-1/2 and 2 in. / DN 40 and 50 Body sizes	ERCA00633A0
	Stainless steel Square Head Adjustment	
	1/4 NPT Body Size	ERCA00652A1
	1/2 in. / DN 15 Body Size	ERCA00380A1
	3/4 and 1 in. / DN 20 and 25 Body sizes	GF05453X022
	1-1/2 and 2 in. / DN 40 and 50 Body sizes	ERCA00633A1
	Sealed Square Head Adjustment	
	1/2 in. / DN 15 Body Size	ERCA00380A0
	3/4 and 1 in. / DN 20 and 25 Body sizes	GF05453X012
	1-1/2 and 2 in. / DN 40 and 50 Body sizes	ERCA00633A0
	Tee Handle Adjustment	
	1/4 NPT Body Size	ERCA00652A0
	3/4 and 1 in. / DN 20 and 25 Body sizes	GF05453X012
	1-1/2 and 2 in. / DN 40 and 50 Body sizes	ERCA00633A0
	Handwheel Adjustment	
	1/2 in. / DN 15 Body Size	ERCA00380A0
18	Nameplate Drive Screw, Stainless steel (4 required)	ERAA01884A0
19*	Diaphragm Gasket	
	(2 required for pressure loaded spring case)	
	For 302 Stainless steel Diaphragm	
	Types MR95L and MR95LD	
	1/4 NPT Body Size	ERCA00655A0
	1/2 in. / DN 15 Body Size	ERCA00491A0
	3/4 and 1 in. / DN 20 and 25 Body sizes	ERCA00556A0
	Types MR95H, MR95HD and MR95HDP	
	1/4 NPT Body Size	1E393104022
	1/2 in. / DN 15 Body Size	ERCA00485A0
	3/4 and 1 in. / DN 20 and 25 Body sizes	ERCA00510A0
	1-1/2 and 2 in. / DN 40 and 50 Body sizes	ERCA00526A0

Key	Description	Part Number
19*	Diaphragm Gasket (continued)	
	(2 required for pressure loaded spring case) (continued)	
	For 302 Stainless steel Steam Service, Monel® and Hastelloy® C Diaphragms (continued)	
	Types MR95L and MR95LD	
	1/4 NPT Body Size	ERCA00655A1
	1/2 in. / DN 15 Body Size	ERCA00491A1
	3/4 and 1 in. / DN 20 and 25 Body sizes	ERCA00556A1
	Types MR95H, MR95HT, MR95HD and MR95HDP	
	1/4 NPT Body Size	1E3931X0012
	1/2 in. / DN 15 Body Size	ERCA00485A1
	3/4 and 1 in. / DN 20 and 25 Body sizes	ERCA00510A1
	1-1/2 and 2 in. / DN 40 and 50 Body sizes	ERCA00526A1
	For Stainless steel Oxygen Service Diaphragm	
	Type MR95L	
	1/4 NPT Body Size	ERCA00655A2
	1/2 in. / DN 15 Body Size	ERCA00491A2
	3/4 and 1 in. / DN 20 and 25 Body sizes	ERCA00556A2
	Type MR95H	
	1/4 NPT Body Size	1E3931X0022
	1/2 in. / DN 15 Body Size	ERCA00485A2
	3/4 and 1 in. / DN 20 and 25 Body sizes	ERCA00510A2
	1-1/2 and 2 in. / DN 40 and 50 Body sizes	ERCA00526A2
20	Pitot Tube (for constructions without control line)	
	1/4 NPT Body Size	
	Copper, Oxygen Service	ERCA04393A0
	304 Stainless steel	ERCA04393A1
	316 Stainless steel, NACE[1]	ERCA04393A2
	Hastelloy® C	ERCA04393A4
	Monel®	ERCA04393A3
	1/2 in. / DN 15 Body Size	
	Copper, Oxygen Service	ERCA04277A0
	304 Stainless steel	ERCA04277A1
	316 Stainless steel, NACE[1]	ERCA04277A2
	Hastelloy® C	ERCA04277A4
	Monel®	ERCA04277A3
	3/4 and 1 in. / DN 20 and 25 Body sizes	
	Copper, Oxygen Service	GF05550X012
	304 Stainless steel	GF05550X022
	316 Stainless steel, NACE[1]	GF05550X032
	Hastelloy® C	GF05550X052
	Monel®	GF05550X042
	1-1/2 and 2 in. / DN 40 and 50 Body sizes	
	Copper, Oxygen Service	ERCA00381A0
	304 Stainless steel	ERCA00381A1
	316 Stainless steel, NACE[1]	ERCA00381A2
	Hastelloy® C	ERCA00381A4
	Monel®	ERCA00381A3
21	Diaphragm Head Assembly, NACE[1]	
	(Types MR95L and MR95LD only)	
	1/4 NPT Body Size	
	Aluminum/Steel[2]	ERCA00641A0
	Stainless steel	ERCA00641A1
	1/2 in. / DN 15 Body Size	
	Aluminum/Steel[2]	ERCA00642A0
	Stainless steel	ERCA00642A1
	3/4 and 1 in. / DN 20 and 25 Body sizes	
	Aluminum/Steel[2]	ERCA00643A0
	Stainless steel	ERCA00643A1
21a	Diaphragm Head	----------
21b	Lower Spring Seat	----------
21c	Screw	----------
21	Diaphragm Head, 1-1/2 and 2 in. / DN 40 and 50 Sizes (2 required)	
	Plated Steel	ERCA00578A0
	316 Stainless steel, NACE[1] and Oxygen Service	ERCA00578A1
	Hastelloy® C, Types MR95H, MR95HD and MR95HDP only	ERCA00578A3
	Monel®, Types MR95H and MR95HD only	ERCA00578A2
22	Adjusting Screw Assembly	
	Tee Handle Adjustment	
	1/4 NPT Body Size, NACE[1][2]	ERAA01707A0
	3/4 and 1 in. / DN 20 and 25 Body sizes	ERAA01716A0
	1-1/2 and 2 in. / DN 40 and 50 Body sizes	ERAA01694A0

*Recommended spare part

Hastelloy® C is a mark owned by Haynes International, Inc.

Monel® is a mark owned by Special Metals Corporation.

1. NACE MR0175-2002, NACE MR0103 and NACE MR0175/ISO 15156.
2. Part meets NACE requirements only for applications in which the part is not exposed to sour gas.

Key	Description	Part Number
23	Handwheel	ERAA02088A0
26	Inner Valve Spring	
	1/4 NPT Body Size	
	302 Stainless steel, Oxygen Service	ERCA04280A0
	Inconel®, NACE(1)	ERCA04281A0
	1/2 in. / DN 15 Body Size	
	302 Stainless steel, Oxygen Service	ERCA04282A0
	Inconel®, NACE(1)	ERCA04283A0
	3/4 and 1 in. / DN 20 and 25 Body sizes	
	302 Stainless steel, Oxygen Service	ERCA04284A0
	Inconel®, NACE(1)	ERCA04285A0
	1-1/2 and 2 in. / DN 40 and 50 Body sizes	
	302 Stainless steel, Oxygen Service	ERCA04286A0
	Inconel®, NACE(1)	ERCA04287A0
27	Inner Valve Base, 1-1/2 to 2 in. / DN 40 to 50	
	416 Stainless steel	ERCA00376A1
	316 Stainless steel, NACE(1)	ERCA00376A2
	Hastelloy® C	ERCA00376A4
	Monel®	ERCA00376A3
	Brass, Oxygen Service	ERCA00376A0
27	Inner Valve Base Assembly, 1-1/2 and 2 in. / DN 40 and 50, Type MR95HP only	
	Nitrile (NBR) Seat	
	416 Stainless steel	ERAA01909A0
	316 Stainless steel, NACE(1)	ERAA01909A1
	Fluorocarbon (FKM) Disk	
	416 Stainless steel	ERAA01909A3
	316 Stainless steel, NACE(1)	ERAA01909A2
29*	Gasket (2 required)	
	For 1-1/2 and 2 in. / DN 40 and 50 only	
	302 Stainless steel Diaphragm	
	Types MR95H, MR95HD and MR95HDP	ERCA00579A0
	302 Stainless steel Diaphragm, Oxygen Service	
	Type MR95H	ERCA00579A2
	302 Stainless steel Steam Service, Monel® and Hastelloy® C Diaphragm	
	Types MR95H, MR95HT, MR95HD and MR95HDP	ERCA00579A1
31	Locknut, Steel, 1-1/2 to 2 in. / DN 40 to 50 only	1P788724122
32	Stuffing Box	
	Handwheel Adjustment **(standard)**	
	1/4 NPT Body Size	ERAA02699A0
	1/2 to 1 in. / DN 15 to 25 Body sizes	ERAA01655A0
	1-1/2 and 2 in. / DN 40 and 50 Body sizes	ERAA01662A0
	Handwheel Adjustment with Stainless steel Trim	
	1/4 NPT Body Size	ERAA02699A1
	1/2 to 1 in. / DN 15 to 25 Body sizes	ERAA01655A1
	1-1/2 and 2 in. / DN 40 and 50 Body sizes	ERAA01662A1
33	Adjusting Screw	
	1/4 NPT Body Size	ERAA01631A0
	1/2 in. / DN 15 Body Size	ERAA02333A0
	3/4 and 1 in. / DN 20 and 25 Body sizes	ERAA01673A0
	1-1/2 and 2 in. / DN 40 and 50 Body sizes	ERAA01677A0
34	Packing Follower	
	Handwheel Adjustment **(standard)**	
	1/4 NPT Body Size	ERAA01632A0
	1/2 to 2 in. / DN 15 to 50 Body sizes	1K884924092
	Handwheel Adjustment with Stainless steel Trim	
	1/4 NPT Body Size	ERAA01632A0
	1/2 to 2 in. / DN 15 to 50 Body sizes	1K8849X0012
35	Stuffing Box Nut	
	Handwheel Adjustment	ERAA01633A0
	Handwheel Adjustment with Stainless steel Trim	ERAA01633A1
36	Packing (3 required)	
	1/4 NPT Body Size	ERAA01634A0
	1/2 to 2 in. / DN 15 to 50 Body sizes	ERAA01657A0
37*	Stuff Box Gasket	
	1/4 NPT Body Size	ERAA01635A0
	1/2 to 2 in. / DN 15 to 50 Body sizes	1P494106242

Key	Description	Part Number
38	Handwheel/Handle	
	Handwheel Adjustment	
	1/4 NPT Body Size	ERAA01636A0
	1/2 to 1 in. / DN 15 to 25 Body sizes	ERAA01669A0
	1-1/2 and 2 in. / DN 40 and 50 Body sizes	1J410819042
	Handwheel Adjustment with Stainless steel Trim	
	1/4 NPT Body Size	ERAA02956A1
	1/2 to 1 in. / DN 15 to 25 Body sizes	ERAA02957A1
	1-1/2 and 2 in. / DN 40 and 50 Body sizes	ERAA02959A1
39	Internal Adaptor	
	1/4 NPT Body Size	ERAA01637A0
	1/2 to 2 in. / DN 15 to 50 Body sizes	ERAA01666A0
40	External Adaptor	
	1/4 NPT Body Size	ERAA01638A0
	1/2 to 2 in. / DN 15 to 50 Body sizes	ERAA01667A0
41	Machine Screw	
	Handwheel Adjustment	
	1/4 NPT Body Size	ERAA01639A0
	1/2 to 1 in. / DN 15 to 25 Body sizes	ERAA01670A0
	Handwheel Adjustment with Stainless steel Trim	
	1/4 NPT Body Size	ERAA01639A1
	1/2 to 1 in. / DN 15 to 25 Body sizes	ERAA01670A1
41	Jam Nut (Types MR95HD and MR95HDP, 1-1/2 and 2 in. / DN 40 and 50 Body sizes only)	
	Handwheel Adjustment	ERAA01688A0
	Handwheel Adjustment with Stainless steel Trim	ERAA01688A1
42	Spring, Stainless steel	ERAA01640A0
43	Washer	
	1/4 NPT Body Size	ERAA01641A0
	1/2 to 2 in. / DN 15 to 50 Body sizes	ERAA01660A0
44	Washer	
	Handwheel Adjustment	
	1/4 NPT Body Size	ERAA01642A0
	1/2 to 1 in. / DN 15 to 25 Body sizes	ERAA01671A0
	1-1/2 and 2 in. / DN 40 and 50 Body sizes	ERAA01689A0
	Handwheel Adjustment with Stainless steel Trim	
	1/4 NPT Body Size	ERAA01642A1
	1/2 to 1 in. / DN 15 to 25 Body sizes	ERAA01671A1
	1-1/2 and 2 in. / DN 40 and 50 Body sizes	ERAA01689A1
45*	O-ring (2 required for Types MR95HD and MR95HDP only)	
	For 1-1/2 and 2 in. / DN 40 and 50 only	
	Neoprene (CR) Diaphragm	ERCA00664A0
	Fluorocarbon (FKM) Diaphragm	ERCA00664A1
	Ethylenepropylene (EPDM) Diaphragm	ERCA00664A2
	Sanitary Ethylenepropylene (EPDM) Diaphragm(3)	ERCA00664A5
47	NACE Tag	----------
48	Tag Wire	----------
49	Lockwasher (for 1-1/2 and 2 in. / DN 40 and 50 Body sizes only)	
	Steel	ERCA00379A0
	Stainless steel	ERCA00379A1
50*	Sealing Washer	
	Sealed Square Head Adjustment	
	1/2 in. / DN 15 Body Size	1V205699012
	3/4 and 1 in. / DN 20 and 25 Body sizes	11A9681X012
	1-1/2 and 2 in. / DN 40 and 50 Body sizes	1V424699012
51	Vent, Type Y602-12	
	1-1/2 and 2 in. / DN 40 and 50 Body sizes only	ERAA02123A0
52	Plug, Stainless steel	ERAA01942A0
62	Adaptor, Stainless steel,	
	3/4 to 1 in. / DN 20 to 25 Body sizes, Types MR95L and MR95LD:	
	2 gauges - 2 required	ERAA01930A0
	1 gauge - 1 required	ERAA01930A0
63*	Bottom Plug Seal	
	1/4 NPT Body Size	
	Nitrile (NBR)	ERCA03017A0
	Perfluoroelastomer (FFKM)	ERCA03017A3
	Fluorocarbon (FKM)	ERCA03017A1
	Ethylenepropylene (EPDM)	ERCA03017A2
	Sanitary Ethylenepropylene (EPDM) Diaphragm(3)	ERCA03017A5
	Graphite	ERCA02976A0

*Recommended spare part
Hastelloy® C is a mark owned by Haynes International, Inc.
Inconel® and Monel® are marks owned by Special Metals Corporation.
1. NACE MR0175-2002, NACE MR0103 and NACE MR0175/ISO 15156.
2. Part meets NACE requirements only for applications in which the part is not exposed to sour gas.
3. EPDM meets FDA, USP Class VI and ADI Free requirements.

Key 1, Types MR95L and MR95LD Regulator Body Part Numbers

BODY SIZE	END CONNECTION	BODY MATERIAL						
		Gray Cast Iron	WCC Steel[1]	LCC Steel[1]	CF8M Stainless steel[1]	CF3M Stainless steel[1]	Monel®[1]	Hastelloy® C[1]
1/4 in.	NPT	ERCA01629A0	GF04880X022	GF04880X062	GF04880X052	GF04880X042	----------	----------
1/2 in. / DN 15 Without Control Line	NPT	ERCA01658A0	GF04890X022	GF04890X082	GF04890X052	GF04890X042	GF04890X062	GF04890X072
	SWE	----------	GF05405X022	GF05405X062	GF05405X052	GF05405X042	----------	----------
	Welded CL150 RF	----------	ERCA00572A0	ERCA00572A3	ERCA00572A2	ERCA00572A1	----------	----------
	Welded CL300 RF	----------	ERCA00574A0	ERCA00574A3	ERCA00574A2	ERCA00574A1	----------	----------
	Welded PN 16/25/40 RF	----------	ERCA00576A0	ERCA00576A2	----------	ERCA00576A1	----------	----------
1/2 in. / DN 15 With Control Line	NPT	----------	ERAA02167A1	ERAA02167A4	ERAA02167A3	ERAA02167A2	----------	----------
	Welded CL150 RF	----------	ERAA02495A0	ERAA02495A3	ERAA02495A2	ERAA02495A1	----------	----------
	Welded CL300 RF	----------	ERAA02497A0	ERAA02497A3	ERAA02497A2	ERAA02497A1	----------	----------
	Welded PN 16/25/40 RF	----------	ERAA02500A0	ERAA02500A2	----------	ERAA02500A1	----------	----------
3/4 in. / DN 20 Without Gauge Port and Control Line	NPT	ERCA01572A0	GF04818X022	GF04818X082	GF04818X052	GF04818X042	GF04818X062	GF04818X072
	SWE	----------	GF05372X022	GF05372X062	GF05372X052	GF05372X042	----------	----------
	Welded CL150 RF	----------	ERCA00580A0	ERCA00580A3	ERCA00580A2	ERCA00580A1	----------	----------
	Welded CL300 RF	----------	ERCA00584A0	ERCA00584A3	ERCA00584A2	ERCA00584A1	----------	----------
	Welded PN 16/25/40 RF	----------	ERCA00588A0	ERCA00588A2	----------	ERCA00588A1	----------	----------
3/4 in. / DN 20 Without Gauge Port but With Control Line	NPT	----------	ERAA02132A1	ERAA02132A4	ERAA02132A3	ERAA02132A2	----------	----------
	Welded CL150 RF	----------	ERAA02133A0	ERAA02133A3	ERAA02133A2	ERAA02133A1	----------	----------
	Welded CL300 RF	----------	ERAA02134A0	ERAA02134A3	ERAA02134A2	ERAA02134A1	----------	----------
	Welded PN 16/25/40 RF	----------	ERAA02135A0	ERAA02135A2	----------	ERAA02135A1	----------	----------
3/4 in. / DN 20 With Gauge Port but Without Control Line	NPT	ERAA02136A0	ERAA02136A1	ERAA02136A4	ERAA02136A3	ERAA02136A2	----------	----------
	Welded CL150 RF	----------	ERAA02137A0	ERAA02137A3	ERAA02137A2	ERAA02137A1	----------	----------
	Welded CL300 RF	----------	ERAA02138A0	ERAA02138A3	ERAA02138A2	ERAA02138A1	----------	----------
	Welded PN 16/25/40 RF	----------	ERAA02139A0	ERAA02139A2	----------	ERAA02139A1	----------	----------
1 in. / DN 25 Without Gauge Port and Control Line	NPT	ERCA01564A0	GF05370X022	GF05370X082	GF05370X052	GF05370X042	GF05370X062	GF05370X072
	SWE	----------	GF05371X022	GF05371X062	GF05371X052	GF05371X042	----------	----------
	Welded CL150 RF	----------	ERCA00592A0	ERCA00592A3	ERCA00592A2	ERCA00592A1	----------	----------
	Welded CL300 RF	----------	ERCA00596A0	ERCA00596A3	ERCA00596A2	ERCA00596A1	----------	----------
	Welded PN 16/25/40 RF	----------	ERCA03686A0	ERCA03686A2	----------	ERCA03686A1	----------	----------
1 in. / DN 25 Without Gauge Port but With Control Line	NPT	----------	ERAA02140A1	ERAA02140A4	ERAA02140A3	ERAA02140A2	----------	----------
	Welded CL150 RF	----------	ERAA02141A0	ERAA02141A3	ERAA02141A2	ERAA02141A1	----------	----------
	Welded CL300 RF	----------	ERAA02142A0	ERAA02142A3	ERAA02142A2	ERAA02142A1	----------	----------
	Welded PN 16/25/40 RF	----------	ERAA02143A0	ERAA02143A2	----------	ERAA02143A1	----------	----------
1 in. / DN 25 With Gauge Port but Without Control Line	NPT	ERAA02144A0	ERAA02144A1	ERAA02144A4	ERAA02144A3	ERAA02144A2	----------	----------
	Welded CL150 RF	----------	ERAA02145A0	ERAA02145A3	ERAA02145A2	ERAA02145A1	----------	----------
	Welded CL300 RF	----------	ERAA02146A0	ERAA02146A3	ERAA02146A2	ERAA02146A1	----------	----------
	Welded PN 16/25/40 RF	----------	ERAA02147A0	ERAA02147A2	----------	ERAA02147A1	----------	----------

1. Meets the chemical and physical requirements of NACE MR0175-2002, NACE MR0103 and NACE MR0175/ISO 15156.

- continued -

Key	Description	Part Number
63*	Bottom Plug Seal (continued)	
	1/2 in. / DN 15 Body Size	
	Nitrile (NBR)	ERCA03016A0
	Fluorocarbon (FKM)	ERCA03016A1
	Ethylenepropylene (EPDM)	ERCA03016A2
	Sanitary Ethylenepropylene (EPDM) Diaphragm[1]	ERCA03016A7
	Graphite	ERCA02978A0
	3/4 and 1 in. / DN 20 and 25 Body sizes	
	Nitrile (NBR)	ERCA00628A0
	Perfluoroelastomer (FFKM)	ERCA00628A3
	Fluorocarbon (FKM)	ERCA00628A1
	Ethylenepropylene (EPDM)	ERCA00628A2
	Sanitary Ethylenepropylene (EPDM) Diaphragm[1]	ERCA00628A5
	Graphite	ERCA00517A0
	1-1/2 and 2 in. / DN 40 and 50 Body sizes	
	Nitrile (NBR)	ERCA00630A0
	Perfluoroelastomer (FFKM)	ERCA00630A3
	Fluorocarbon (FKM)	ERCA00630A1
	Ethylenepropylene (EPDM)	ERCA00630A2
	Sanitary Ethylenepropylene (EPDM) Diaphragm[1]	ERCA00630A5
	Graphite	ERCA01407A0
64	Flow Arrow	----------
65	Pipe Plug, (3/4 to 2 in. / DN 20 to 50 Body sizes), (Type MR95HT, 2 required) (Other Types with 1 gauge, 1 required)	
	Steel	ERAA03130A0
	Stainless steel	ERAA03131A0
66	Inlet Pressure Gauge (3/4 to 2 in. / DN 20 to 50 Body sizes)	
	0 to 160 psi / 0 to 11 bar	
	Brass	11B8579X042
	Stainless steel	ERAA03132A3
	0 to 300 psi / 0 to 20 bar	
	Brass	11B8579X052
	Stainless steel	ERAA03132A4
	0 to 600 psi / 0 to 40 bar	
	Brass	11B8579X102
	Stainless steel	ERAA03132A5
	0 to 1000 psi / 0 to 68 bar	
	Brass	11B8579X112
	Stainless steel	ERAA03132A6

*Recommended spare part
1. EPDM meets FDA, USP Class VI and ADI Free requirements
Monel® is a mark owned by Special Metals Corporation.
Hastelloy® C is a mark owned by Haynes International, Inc.

Key 1, Types MR95H, MR95HD, MR95HDP, MR95HP and MR95HT Regulator Body Part Numbers

BODY SIZE	END CONNECTION	BODY MATERIAL							
		Gray Cast Iron	WCC Steel[1]	LCC Steel[1]	CF8M Stainless steel[1]	CF3M Stainless steel[1]	Monel®[1]	Hastelloy® C[1]	Aluminum-Bronze[1]
1/4 in.	NPT	ERCA01628A0[2]	GF04858X022	GF04858X062	GF04858X052	GF04858X042	----------	----------	----------
1/2 in. / DN 15 Without Control Line	NPT	ERCA01657A0[2]	GF04837X022	GF04837X082	GF04837X052	GF04837X042	GF04837X062	GF04837X072	----------
	SWE	----------	GF05408X022	GF05408X062	GF05408X052	GF05408X042	----------	----------	----------
	Welded CL150 RF	----------	ERCA00573A0	ERCA00573A3	ERCA00573A2	ERCA00573A1	----------	----------	----------
	Welded CL300 RF	----------	ERCA00575A0	ERCA00575A3	ERCA00575A2	ERCA00575A1	----------	----------	----------
	Welded CL600 RF	----------	ERAA01758A0	ERAA01758A3	ERAA01758A2	ERAA01758A1	----------	----------	----------
	Welded PN 16/25/40 RF	----------	ERCA00577A0	ERCA00577A2	----------	ERCA00577A1	----------	----------	----------
	Integral CL150 RF	----------	----------	----------	----------	ERAA02397A3	ERAA02397A4	ERAA02397A5	ERAA02397A6
	Integral CL300 RF	----------	----------	----------	----------	ERAA02398A3	ERAA02398A4	ERAA02398A5	ERAA02398A6
	Integral CL600 RF	----------	----------	----------	----------	ERAA02399A3	ERAA02399A4	ERAA02399A5	ERAA02399A6
	Integral PN 16/25/40 RF	----------	----------	----------	----------	ERAA02408A3	ERAA02408A4	ERAA02408A5	ERAA02408A6
1/2 in. / DN 15 With Control Line	NPT	----------	ERCA00528A1[3]	ERCA00528A5[3]	ERCA00528A4[3]	ERCA00528A3[3]	----------	----------	----------
	Welded CL150 RF	----------	ERAA02496A0[3]	ERAA02496A3[3]	ERAA02496A2[3]	ERAA02496A1[3]	----------	----------	----------
	Welded CL300 RF	----------	ERAA02498A0[3]	ERAA02498A3[3]	ERAA02498A2[3]	ERAA02498A1[3]	----------	----------	----------
	Welded CL600 RF	----------	ERAA02499A0[3]	ERAA02499A3[3]	ERAA02499A2[3]	ERAA02499A1[3]	----------	----------	----------
	Welded PN 16/25/40 RF	----------	ERAA02501A0[3]	ERAA02501A2[3]	----------	ERAA02501A1[3]	----------	----------	----------
3/4 in. / DN 20 Without Gauge Port and Control Line	NPT	ERCA01571A0[2]	GF04817X022	GF04817X082	GF04817X052	GF04817X042	GF04817X062	GF04817X072	----------
	SWE	----------	GF05368X022	GF05368X062	GF05368X052	GF05368X042	----------	----------	----------
	Welded CL150 RF	----------	ERCA00581A0	ERCA00581A3	ERCA00581A2	ERCA00581A1	----------	----------	----------
	Welded CL300 RF	----------	ERCA00585A0	ERCA00585A3	ERCA00585A2	ERCA00585A1	----------	----------	----------
	Welded CL600 RF	----------	ERAA01749A0	ERAA01749A3	ERAA01749A2	ERAA01749A1	----------	----------	----------
	Welded PN 16/25/40 RF	----------	ERCA00589A0	ERCA00589A2	----------	ERCA00589A1	----------	----------	----------
3/4 in. / DN 20 Without Gauge Port but With Control Line	NPT	----------	ERCA00536A1	ERCA00536A5	ERCA00536A4	ERCA00536A3	----------	----------	----------
	Welded CL150 RF	----------	ERCA00582A0	ERCA00582A3	ERCA00582A2	ERCA00582A1	----------	----------	----------
	Welded CL300 RF	----------	ERCA00586A0	ERCA00586A3	ERCA00586A2	ERCA00586A1	----------	----------	----------
	Welded PN 16/25/40 RF	----------	ERCA00590A0	ERCA00590A2	----------	ERCA00590A1	----------	----------	----------
3/4 in. / DN 20 With Gauge Port but Without Control Line	NPT	ERCA00537A0[2]	ERCA00537A1	ERCA00537A5	ERCA00537A4	ERCA00537A3	----------	----------	----------
	Welded CL150 RF	----------	ERCA00583A0	ERCA00583A3	ERCA00583A2	ERCA00583A1	----------	----------	----------
	Welded CL300 RF	----------	ERCA00587A0	ERCA00587A3	ERCA00587A2	ERCA00587A1	----------	----------	----------
	Welded PN 16/25/40 RF	----------	ERCA00591A0	ERCA00591A2	----------	ERCA00591A1	----------	----------	----------

1. Meets the chemical and physical requirements of NACE MR0175-2002, NACE MR0103 and NACE MR0175/ISO 15156.
2. For Types MR95H, MR95HD and MR95HDP only.
3. Not available for Type MR95HT.

- continued -

Key	Description	Part Number
67	Outlet Pressure Gauge (3/4 to 2 in. / DN 20 to 50 Body sizes)	
	0 to 15 psi / 0 to 1 bar	
	Brass	11B8579X012
	Stainless steel	ERAA03132A0
	0 to 30 psi / 0 to 2 bar	
	Brass	11B8579X022
	Stainless steel	ERAA03132A1
	0 to 60 psi / 0 to 4 bar	
	Brass	11B8579X032
	Stainless steel	ERAA03132A2

Key	Description	Part Number
67	Outlet Pressure Gauge (continued) (3/4 to 2 in. / DN 20 to 50 Body sizes) (continued)	
	0 to 160 psi / 0 to 11 bar	
	Brass	11B8579X042
	Stainless steel	ERAA03132A3
	0 to 300 psi / 0 to 20 bar	
	Brass	11B8579X052
	Stainless steel	ERAA03132A4
	0 to 600 psi / 0 to 40 bar	
	Brass	11B8579X102
	Stainless steel	ERAA03132A5
69	ATEX Tag	----------
70	PED Tag	----------

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Key 1, Types MR95H, MR95HD, MR95HDP, MR95HP and MR95HT Regulator Body Part Numbers

BODY SIZE	END CONNECTION	BODY MATERIAL							
		Gray Cast Iron	WCC Steel[1]	LCC Steel[1]	CF8M Stainless Steel[1]	CF3M Stainless steel[1]	Monel®[1]	Hastelloy® C[1]	Aluminum-Bronze[1]
1 in. / DN 25 Without Gauge Port and Control Line	NPT	ERCA01563A0[2]	GF05235X022	GF05235X082	GF05235X052	GF05235X042	GF05235X062	GF05235X072	----------
	SWE	----------	GF05367X022	GF05367X062	GF05367X052	GF05367X042	----------	----------	----------
	Welded CL150 RF	----------	ERCA00593A0	ERCA00593A3	ERCA00593A2	ERCA00593A1	----------	----------	----------
	Welded CL300 RF	----------	ERCA00597A0	ERCA00597A3	ERCA00597A2	ERCA00597A1	----------	----------	----------
	Welded CL600 RF	----------	ERAA01750A0	ERAA01750A3	ERAA01750A2	ERAA01750A1	----------	----------	----------
	Welded PN 16/25/40 RF	----------	ERAA01790A0	ERAA01790A2	----------	ERCA01790A1	----------	----------	----------
	Integral CL150 RF	----------	----------	----------	----------	ERCA00551A2	ERCA00551A4	ERCA00551A5	ERCA00551A6
	Integral CL300 RF	----------	----------	----------	----------	ERCA00552A2	ERCA00552A4	ERCA00552A5	ERCA00552A6
	Integral CL600 RF	----------	----------	----------	----------	ERAA01752A2	ERAA01752A4	ERAA01752A5	ERAA01752A6
	Integral PN 16/25/40 RF	----------	----------	----------	----------	ERCA00555A2	ERCA00555A4	ERCA00555A5	ERCA00555A6
1 in. / DN 25 Without Gauge Port but with Control Line	NPT	----------	ERCA00546A1	ERCA00546A5	ERCA00546A4	ERCA00546A3	----------	----------	----------
	Welded CL150 RF	----------	ERCA00594A0	ERCA00594A3	ERCA00594A2	ERCA00594A1	----------	----------	----------
	Welded CL300 RF	----------	ERAA02148A0	ERAA02148A3	ERAA02148A2	ERAA02148A1	----------	----------	----------
	Welded PN 16/25/40 RF	----------	ERAA02149A0	ERAA02149A2	----------	ERAA02149A1	----------	----------	----------
1 in. / DN 25 With Gauge Port but Without Control Line	NPT	ERCA00547A0[2]	ERCA00547A1	ERCA00547A5	ERCA00547A4	ERCA00547A3	----------	----------	----------
	Welded CL150 RF	----------	ERCA00595A0	ERCA00595A3	ERCA00595A2	ERCA00595A1	----------	----------	----------
	Welded CL300 RF	----------	ERAA02150A0	ERAA02150A3	ERAA02150A2	ERAA02150A1	----------	----------	----------
	Welded PN 16/25/40 RF	----------	ERAA02151A0	ERAA02151A2	----------	ERAA02151A1	----------	----------	----------
1-1/2 in. / DN 40 Without Gauge Port and Control Line	NPT	ERCA01591A0[2]	GF05411X022	GF05411X082	GF05411X052	GF05411X042	GF05411X062	GF05411X072	----------
	SWE	----------	GF05413X022	GF05413X062	GF05413X052	GF05413X042	----------	----------	----------
	Welded CL150 RF	----------	ERAA01760A0	ERAA01760A3	ERAA01760A2	ERAA01760A1	----------	----------	----------
	Welded CL300 RF	----------	ERAA01761A0	ERAA01761A3	ERAA01761A2	ERAA01761A1	----------	----------	----------
	Welded CL600 RF	----------	ERAA01783A0	ERAA01784A3	ERAA01783A2	ERAA01783A1	----------	----------	----------
	Welded PN 16/25/40 RF	----------	ERAA01762A0	ERAA01762A2	----------	ERAA01762A1	----------	----------	----------
1-1/2 in. / DN 40 Without Gauge Port but With Control Line	NPT	----------	ERCA00559A1[3]	ERCA00559A5[3]	ERCA00559A4[3]	ERCA00559A3[3]	----------	----------	----------
	Welded CL150 RF	----------	ERAA02368A0[3]	ERAA02368A3[3]	ERAA02368A2[3]	ERAA02368A1[3]	----------	----------	----------
	Welded CL300 RF	----------	ERAA02369A0[3]	ERAA02369A3[3]	ERAA02369A2[3]	ERAA02369A1[3]	----------	----------	----------
	Welded PN 16/25/40 RF	----------	ERAA02370A0[3]	ERAA02370A2[3]	----------	ERAA02370A1[3]	----------	----------	----------
1-1/2 in. / DN 40 With Gauge Port but Without Control Line	NPT	ERCA00560A0[2]	ERCA00560A1	ERCA00560A5	ERCA00560A4	ERCA00560A3	----------	----------	----------
	Welded CL150 RF	----------	ERAA02374A0	ERAA02374A3	ERAA02374A2	ERAA02374A1	----------	----------	----------
	Welded CL300 RF	----------	ERAA02375A0	ERAA02375A3	ERAA02375A2	ERAA02375A1	----------	----------	----------
	Welded PN 16/25/40 RF	----------	ERAA02376A0	ERAA02376A2	----------	ERAA02376A1	----------	----------	----------

1. Meets the chemical and physical requirements of NACE MR0175-2002, NACE MR0103 and NACE MR0175/ISO 15156.
2. For Types MR95H, MR95HD and MR95HDP only.
3. Not available for Type MR95HT.

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Key 1, Types MR95H, MR95HD, MR95HDP, MR95HP and MR95HT Regulator Body Part Numbers

BODY SIZE	END CONNECTION	BODY MATERIAL							
		Gray Cast Iron	WCC Steel[1]	LCC Steel[1]	CF8M Stainless steel[1]	CF3M Stainless steel[1]	Monel®[1]	Hastelloy® C[1]	Aluminum-Bronze[1]
2 in. / DN 50 Without Gauge Port and Control Line	NPT	ERCA01590A0[2]	GF05290X022	GF05290X082	GF05290X052	GF05290X042	GF05290X062	GF05290X072	- - - - - - - - - -
	SWE	- - - - - - - - - -	GF05412X022	GF05412X062	GF05412X052	GF05412X042	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -
	Welded CL150 RF	- - - - - - - - - -	ERAA01766A0	ERAA01766A3	ERAA01766A2	ERAA01766A1	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -
	Welded CL300 RF	- - - - - - - - - -	ERAA01767A0	ERAA01767A3	ERAA01767A2	ERAA01767A1	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -
	Welded CL600 RF	- - - - - - - - - -	ERAA01784A0	ERAA01784A3	ERAA01784A2	ERAA01784A1	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -
	Welded PN 16/25/40 RF	- - - - - - - - - -	ERAA01768A0	ERAA01768A2	- - - - - - - - - -	ERAA01768A1	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -
	Integral CL150 RF	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -	ERCA00567A2	ERCA00567A4	ERCA00567A5	ERCA00567A6
	Integral CL300 RF	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -	ERCA00568A2	ERCA00568A4	ERCA00568A5	ERCA00568A6
	Integral CL600 RF	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -	ERAA01764A2	ERAA01764A4	ERAA01764A5	ERAA01764A6
	Integral PN 16/25/40 RF	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -	ERCA00569A2	ERCA00569A4	ERCA00569A5	ERCA00569A6
2 in. / DN 50 Without Gauge Port but With Control Line	NPT	- - - - - - - - - -	ERCA00565A1[3]	ERCA00565A5[3]	ERCA00565A4[3]	ERCA00565A3[3]	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -
	Welded CL150 RF	- - - - - - - - - -	ERAA02371A0[3]	ERAA02371A3[3]	ERAA02371A2[3]	ERAA02371A1[3]	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -
	Welded CL300 RF	- - - - - - - - - -	ERAA02372A0[3]	ERAA02372A3[3]	ERAA02372A2[3]	ERAA02372A1[3]	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -
	Welded PN 16/25/40 RF	- - - - - - - - - -	ERAA02373A0[3]	ERAA02373A2[3]	- - - - - - - - - -	ERAA02373A1[3]	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -
2 in. / DN 50 With Gauge Port but Without Control Line	NPT	ERCA00566A0[2]	ERCA00566A1	ERCA00566A5	ERCA00566A4	ERCA00566A3	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -
	Welded CL150 RF	- - - - - - - - - -	ERAA02377A0	ERAA02377A3	ERAA02377A2	ERAA02377A1	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -
	Welded CL300 RF	- - - - - - - - - -	ERAA02378A0	ERAA02378A3	ERAA02378A2	ERAA02378A1	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -
	Welded PN 16/25/40 RF	- - - - - - - - - -	ERAA02379A0	ERAA01768A2	- - - - - - - - - -	ERAA02379A1	- - - - - - - - - -	- - - - - - - - - -	- - - - - - - - - -

1. Meets the chemical and physical requirements of NACE MR0175-2002, NACE MR0103 and NACE MR0175/ISO 15156..
2. For Types MR95H, MR95HD and MR95HDP only.
3. Not available for Type MR95HT.

Key 2, Spring Case Part Numbers

TYPE	BODY SIZE		STYLE	SPRING CASE MATERIAL					
	In.	DN		Gray Cast Iron	WCC Steel[1]	LCC Steel[1]	CF8M Stainless steel[1]	Monel®	Hastelloy® C
MR95L	1/4 NPT	- - - -	Drilled Hole **(standard)**	ERCA03546A0	ERCA02874A0	ERCA02874A3	ERCA02874A2	- - - - - - - - - -	- - - - - - - - - -
			1/4 NPT Vent	ERCA00609A1	ERAA01872A2	ERAA01872A4	ERAA01872A3	- - - - - - - - - -	- - - - - - - - - -
	1/2	15	Drilled Hole **(standard)**	ERCA03564A0	ERCA02883A0	ERCA02883A3	ERCA02883A2	- - - - - - - - - -	- - - - - - - - - -
			1/4 NPT Vent	ERCA00615A0	ERAA01885A0	ERAA01885A4	ERAA01885A1	ERAA01885A2[1]	ERAA01885A3[1]
	3/4 and 1	20 and 25	Drilled Hole **(standard)**	ERCA03497A0	ERCA02908A0	ERCA02908A3	ERCA02908A2	- - - - - - - - - -	- - - - - - - - - -
			1/4 NPT Vent	ERCA00623A0	ERCA00621A2	ERCA00621A6	ERCA00621A3	ERCA00621A4[1]	ERCA00621A5[1]
MR95LD	1/4 NPT	- - - -	1/4 NPT Vent **(standard)**	- - - - - - - - - -	ERCA03517A0	ERCA03517A3	ERCA03517A2	- - - - - - - - - -	- - - - - - - - - -
	1/2	15	1/4 NPT Vent **(standard)**	- - - - - - - - - -	ERCA03531A0	ERCA03531A3	ERCA03531A2	- - - - - - - - - -	- - - - - - - - - -
	3/4 and 1	20 and 25	1/4 NPT Vent **(standard)**	- - - - - - - - - -	ERCA04405A0	ERCA04405A2	ERCA04405A1	- - - - - - - - - -	- - - - - - - - - -
MR95H, MR95HP and MR95HT	1/4 NPT	- - - -	Drilled Hole **(standard)**	ERCA03544A0[2]	ERCA02872A0	ERCA02872A3	ERCA02872A2	- - - - - - - - - -	- - - - - - - - - -
			1/4 NPT Vent	ERCA00610A1[2]	ERAA01873A2	ERAA01873A4	ERAA01873A3	- - - - - - - - - -	- - - - - - - - - -
	1/2	15	Drilled Hole **(standard)**	ERCA03562A0[2]	ERCA02881A0	ERCA02881A3	ERCA02881A2	- - - - - - - - - -	- - - - - - - - - -
			1/4 NPT Vent	ERCA00616A0[2]	ERAA01886A0	ERAA01886A4	ERAA01886A1	ERAA01886A2[1]	ERAA01886A3[1]
	3/4 and 1	20 and 25	Drilled Hole **(standard)**	ERCA03496A0[2]	ERCA02907A0	ERCA02907A3	ERCA02907A2	- - - - - - - - - -	- - - - - - - - - -
			1/4 NPT Vent	ERCA00624A0[2]	ERCA00622A2	ERCA00622A6	ERCA00622A3	ERCA00622A4[1]	ERCA00622A5[1]
	1-1/2 and 2	40 and 50	1/4 NPT Vent	ERCA03641A0[2]	ERCA02900A0	ERCA02900A5	ERCA02900A2	ERCA02900A3[1]	ERCA02900A4[1]
MR95HD and MR95HDP	1/4 NPT	- - - -	1/4 NPT Vent **(standard)**	- - - - - - - - - -	ERCA03515A0	ERCA03515A3	ERCA03515A2	- - - - - - - - - -	- - - - - - - - - -
	1/2	15	1/4 NPT Vent **(standard)**	- - - - - - - - - -	ERCA03529A0	ERCA03529A3	ERCA03529A2	- - - - - - - - - -	- - - - - - - - - -
	3/4 and 1	20 and 25	1/4 NPT Vent **(standard)**	- - - - - - - - - -	ERCA03499A0	ERCA03499A3	ERCA03499A2	- - - - - - - - - -	- - - - - - - - - -
	1-1/2 and 2	40 and 50	1/4 NPT Vent **(standard)**	- - - - - - - - - -	ERCA03691A0	ERCA03691A3	ERCA03691A2	- - - - - - - - - -	- - - - - - - - - -

1. Meets the chemical and physical requirements of NACE MR0175-2002, NACE MR0103 and NACE MR0175/ISO 15156.
2. Available for Type MR95H only.

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Key 3, Reduced Orifice Part Numbers

BODY SIZE		SEAT TYPE	ORIFICE MATERIAL				
In.	DN		Brass	416 Stainless steel	316 Stainless steel[1]	Monel®[1]	Hastelloy® C[1]
1/4		Composition seat	ERAA07702A0	ERAA07702A1	ERAA07702A2	ERAA07702A3	ERAA07702A4
1/2	15		ERAA07695A0	ERAA07695A1	ERAA07695A2	ERAA07695A3	ERAA07695A4
3/4 to 1	20 to 25		ERAA07700A0	ERAA07700A1	ERAA07700A2	ERAA07700A3	ERAA07700A4
1-1/2 to 2	40 to 50		ERAA07698A0	ERAA07698A1	ERAA07698A2	ERAA07698A3	ERAA07698A4
1/4		Metal-to-metal seat	- - - - - - - - - - -	ERAA07701A0	ERAA07701A1	ERAA07701A2	ERAA07701A3
1/2	15		- - - - - - - - - - -	ERAA07694A0	ERAA07694A1	ERAA07694A2	ERAA07694A3
3/4 to 1	20 to 25		- - - - - - - - - - -	ERAA07699A0	ERAA07699A1	ERAA07699A2	ERAA07699A3
1-1/2 to 2	40 to 50		- - - - - - - - - - -	ERAA07697A0	ERAA07697A1	ERAA07697A2	ERAA07697A3

1. Meets the chemical and physical requirements of NACE MR0175-2002, NACE MR0103 and NACE MR0175/ISO 15156.

Key 4, Valve Plug, Metal Seat

TYPE	MATERIAL[1]	BODY SIZE, IN. / DN			
		1/4 NPT	1/2 / 15	3/4 and 1 / 20 and 25	1-1/2 and 2 / 40 and 50[2]
MR95L, MR95LD, MR95H, MR95HD, MR95HDP and MR95HT	416 Stainless steel	ERCA00360A0	ERCA00287A0	GF05476X022	ERCA00375A0
	316 Stainless steel	ERCA00360A1	ERCA00287A1	GF05476X032	ERCA00375A1
	Hastelloy® C	ERCA00360A3	ERCA00287A3	GF05476X052	ERCA00375A3
	Monel®	ERCA00360A2	ERCA00287A2	GF05476X042	ERCA00375A2
	Alloy 6	- - - - - - - - - - -	ERCA00287A4	GF05476X062	ERCA00375A4

1. Hastelloy® C and Monel® are not available for Type MR95HT.
2. For Types MR95H, MR95HD, MR95HDP and MR95HT only.

Key 4, Disk Holder Assembly, Composition Seat

TYPE	MATERIAL	BODY SIZE, IN. / DN			
		1/4 NPT	1/2 / 15	3/4 and 1 / 20 and 25	1-1/2 and 2 / 40 and 50[3]
Nitrile (NBR) Seat					
MR95L,MR95LD, MR95H, MR95HD and MR95HDP	Brass	- - - - - - - - - - -	ERCA00635A3	ERCA00636A3	ERCA00637A3
	316 Stainless steel	ERCA00634A5[1]	ERCA00635A5[1]	ERCA00636A5[1]	ERCA00637A5[1]
	416 Stainless steel	ERCA00634A4	ERCA00635A4	ERCA00636A4	ERCA00637A4
MR95HP	316 Stainless steel	ERAA01901A1[1]	ERAA01905A1[1]	ERAA01892A1[1]	ERCA00637A5[1]
	416 Stainless steel	ERAA01901A0	ERAA01905A0	ERAA01892A0	ERCA00637A4
Fluorocarbon (FKM) Seat					
MR95L,MR95LD, MR95H, MR95HD and MR95HDP	Brass	- - - - - - - - - - -	ERCA00635A9[2]	ERCA00636A9[2]	ERCA00637A9[2]
	316 Stainless steel	ERCA00634B1[1][2]	ERCA00635B1[1]	ERCA00636B1[1]	ERCA00637B1[1]
	416 Stainless steel	ERCA00634B0	ERCA00635B0	ERCA00636B0	ERCA00637B0
	Monel®	ERCA00634B2	ERCA00635B2	ERCA00636B2	ERCA00637B2
MR95HP	316 Stainless steel	ERAA01901A2[1]	ERAA01905A2[1]	ERAA01892A2[1]	ERCA00637B1[1]
	416 Stainless steel	ERAA01901A3	ERAA01905A3	ERAA01892A3	ERCA00637B0
Perfluoroelastomer (FFKM) Seat					
MR95L,MR95LD, MR95H, MR95HD and MR95HDP	316 Stainless steel	ERCA00634B9	ERCA00635B9	ERCA00636B9	ERCA00637B9
Polytetrafluoroethylene (PTFE) Seat					
MR95L, MR95LD, MR95H and MR95HD	Brass	- - - - - - - - - - -	ERCA00635B4	ERCA00636B4	ERCA00637B4
	316 Stainless steel	ERCA00634B6	ERCA00635B6	ERCA00636B6	ERCA00637B6
	416 Stainless steel	ERCA00634B5	ERCA00635B5	ERCA00636B5	ERCA00637B5
Ethylenepropylene (EPDM) Seat					
MR95L,MR95LD, MR95H, MR95HD and MR95HDP	416 Stainless steel	ERCA00634A7	ERCA00635A7	ERCA00636A7	ERCA00637A7
Sanitary Ethylenepropylene (EPDM)[4] Seat					
MR95L,MR95LD, MR95H, MR95HD and MR95HDP	416 Stainless steel	ERAA01902A6	ERAA01895A6	GF05137X092	ERCA00671A7

1. NACE MR0175-2002, NACE MR0103 and NACE MR0175/ISO 15156.
2. Oxygen Service
3. Not available for Types MR95L and MR95LD.
4. EPDM meets FDA, USP Class VI and ADI Free requirements.

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Key 12, Composition Diaphragm, NACE MR0175-2002 and NACE MR0103*

TYPE	BODY SIZE		DIAPHRAGM MATERIAL			
	In.	DN	Neoprene (CR)	Fluorocarbon (FKM) (2 required)	Ethylenepropylene (EPDM)	Sanitary Ethylenepropylene (EPDM)(2)
MR95L and MR95LD	1/4 NPT	- - - -	ERCA00675A0	ERCA00675A1(1)	ERCA00675A2	ERCA00675A3
	1/2	15	ERCA00509A0	ERCA00509A1	ERCA00509A2	ERCA00509A4
	3/4 and 1	20 and 25	ERCA00599A0	ERCA00599A1	ERCA00599A2	ERCA00599A4
MR95H, MR95HD, MR95HDP and MR95HP	1/4 NPT	- - - -	ERCA00672A0	ERCA00672A1(1)	ERCA00672A2	ERCA00672A5
	1/2	15	ERCA00507A0	ERCA00507A1	ERCA00507A2	ERCA00507A4
	3/4 and 1	20 and 25	ERCA00515A0	ERCA00515A1	ERCA00515A2	ERCA00515A4
	1-1/2 and 2	40 and 50	ERCA00661A0	ERCA00661A1	ERCA00661A2	ERCA00661A5

1. Only one diaphragm is needed for regulators with 1/4 NPT body size.
2. EPDM meets FDA, USP Class VI and ADI Free requirements.
*Recommended spare part.

Key 12, Metal Diaphragm*

TYPE	BODY SIZE		DIAPHRAGM MATERIAL (2 REQUIRED)			
	In.	DN	302 Stainless steel	302 Stainless steel (Oxygen Service)	Monel®	Hastelloy® C
MR95L	1/4 NPT	- - - -	ERCA00654A0(1)	ERCA00654A1(1)	ERCA00654A2(1)	ERCA00654A3(1)
	1/2	15	ERCA00490A0	ERCA00490A1	ERCA00490A2	ERCA00490A3
	3/4 and 1	20 and 25	ERCA00557A0	ERCA00557A1	ERCA00557A2	ERCA00557A3
MR95H	1/4 NPT	- - - -	ERCA00647A0	ERCA00647A1	ERCA00647A2	ERCA00647A3
	1/2	15	ERCA00459A0	ERCA00459A1	ERCA00459A2	ERCA00459A3
	3/4 and 1	20 and 25	ERCA00511A0	ERCA00511A1	ERCA00511A2	ERCA00511A3
	1-1/2 and 2	40 and 50	ERCA00527A0	ERCA00527A1	ERCA00527A2	ERCA00527A3
MR95LD	1/4 NPT	- - - -	ERCA00654A0(1)	- - - - - - - - - - -	ERCA00654A2(1)	ERCA00654A3(1)
	1/2	15	ERCA00490A0	- - - - - - - - - - -	ERCA00490A2	ERCA00490A3
	3/4 and 1	20 and 25	ERCA00557A0	- - - - - - - - - - -	ERCA00557A2	ERCA00557A3
MR95HD, MR95HDP and MR95HT	1/4 NPT	- - - -	ERCA00647A0	- - - - - - - - - - -	ERCA00647A2	ERCA00647A3
	1/2	15	ERCA00459A0	- - - - - - - - - - -	ERCA00459A2	ERCA00459A3
	3/4 and 1	20 and 25	ERCA00511A0	- - - - - - - - - - -	ERCA00511A2	ERCA00511A3
	1-1/2 and 2	40 and 50	ERCA00527A0	- - - - - - - - - - -	ERCA00527A2	ERCA00527A3

1. Only one metal diaphragm is needed for Types MR95L and MR95LD with 1/4 NPT body size and 2 to 6 psi / 0.14 to 0.41 bar spring range.
*Recommended spare part.

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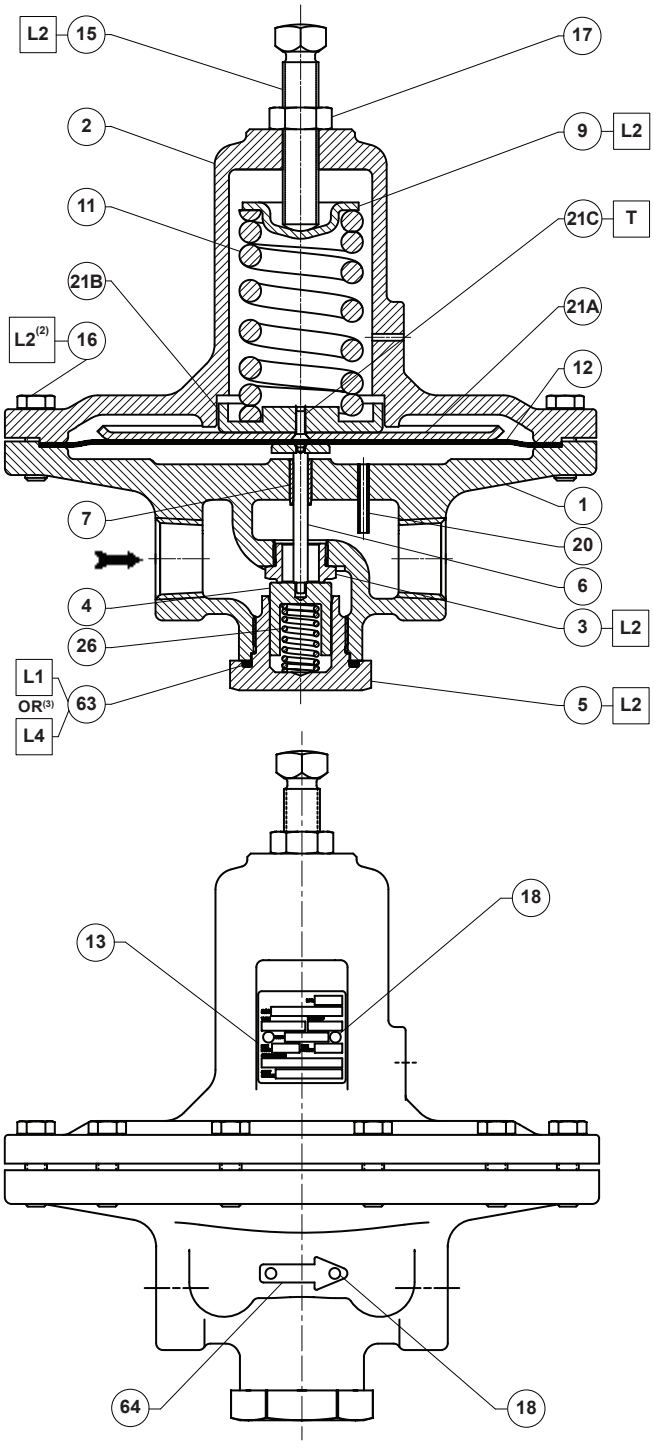
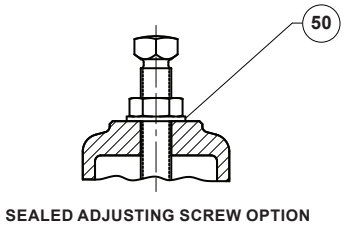
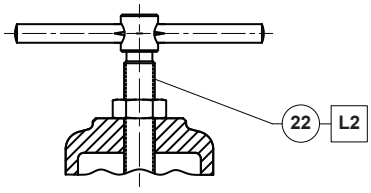
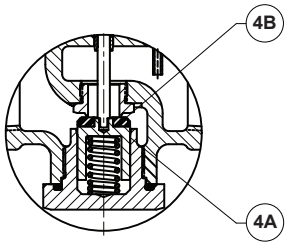




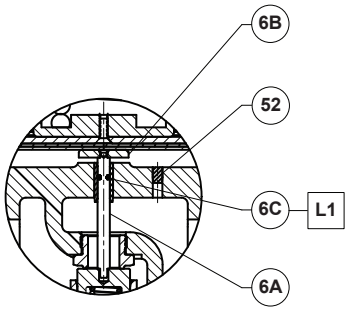
SEALED ADJUSTING SCREW OPTION



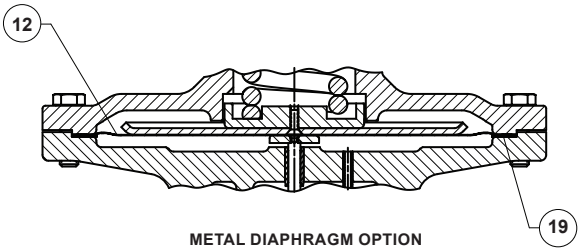
TEE-HANDLE OPTION



COMPOSITE SEAT OPTION



CONTROL LINE OPTION



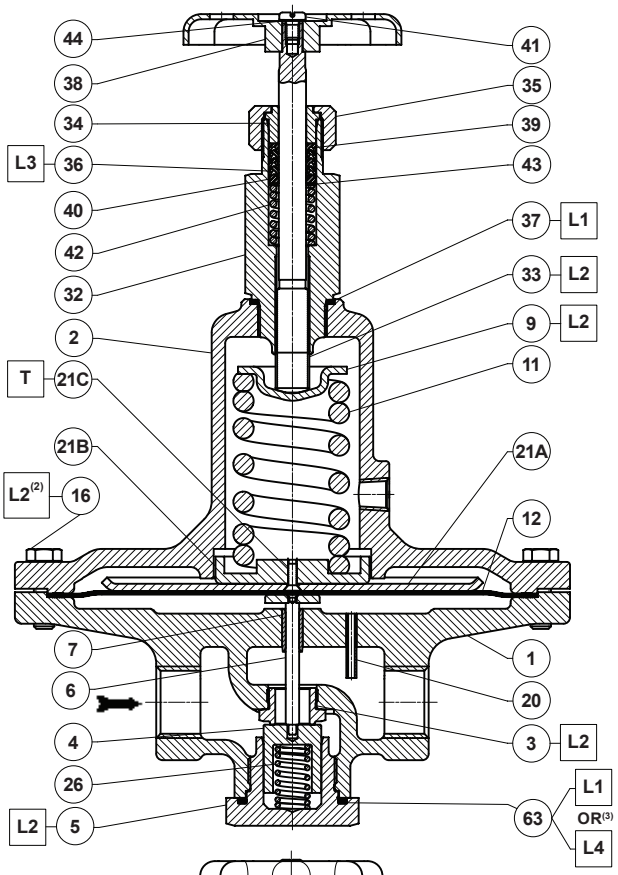
METAL DIAPHRAGM OPTION

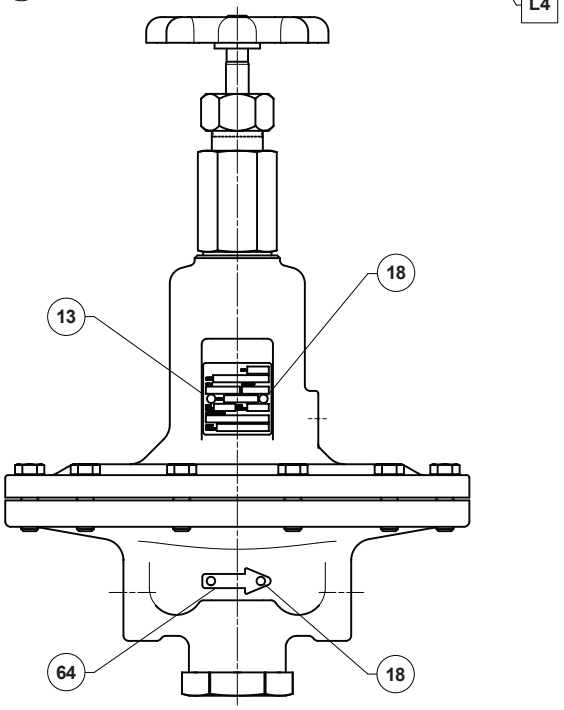
GF04915

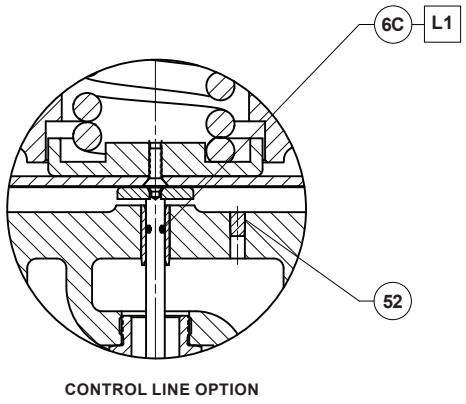
☐ **APPLY LUBRICANT OR SEALANT(1):**
T = THREAD LOCKER
L1 = GENERAL PURPOSE PTFE OR LITHIUM GREASE
L2 = ANTI-SEIZE COMPOUND
L4 = GRAPHITE SEALANT

1. Lubricants and sealants must be selected such that they meet the temperature requirements.
2. Apply L2 (anti-seize compound) on key 16 for stainless steel bolts.
3. Apply L4 (graphite sealant) instead of L1 (general purpose PTFE or lithium grease) on key 63 for graphite ring.

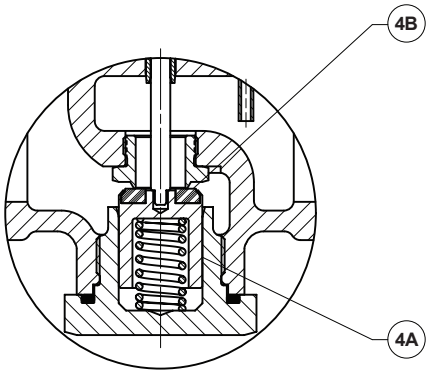
Figure 6. *Type MR95L, 1/4 NPT and 1/2 to 1 in. / DN 15 to 25 Body Sizes Assembly*



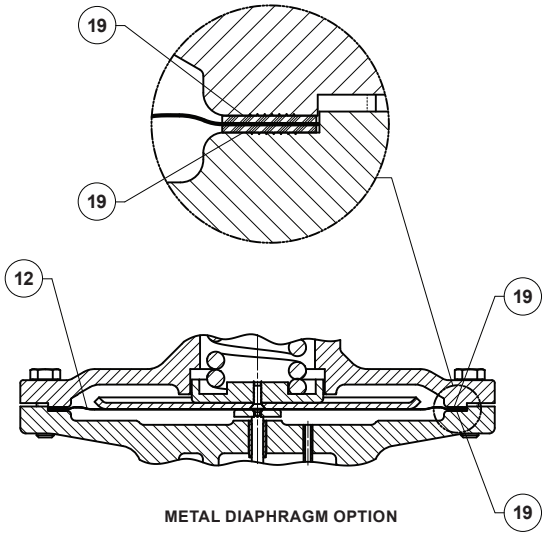




CONTROL LINE OPTION



COMPOSITE SEAT OPTION



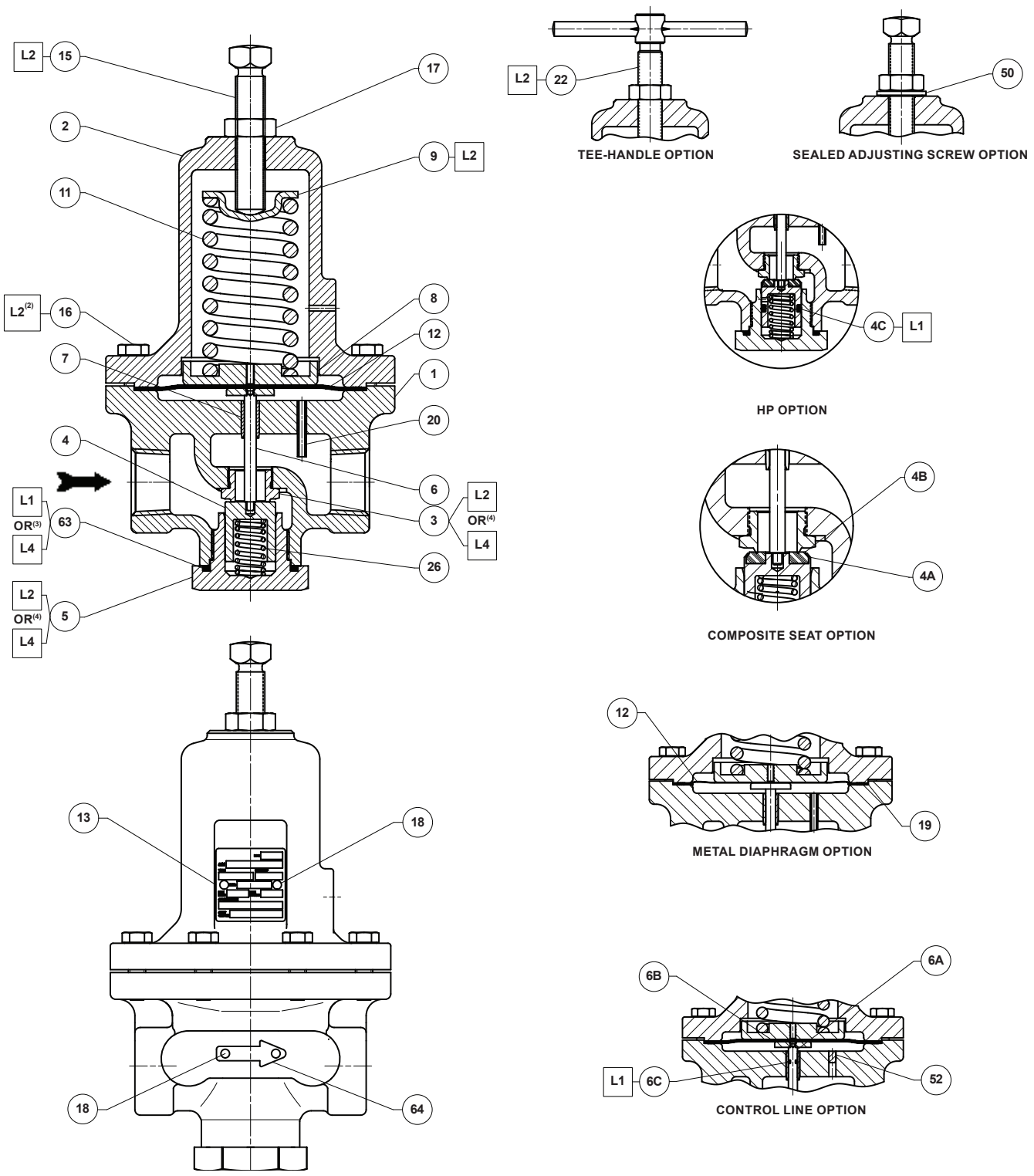
METAL DIAPHRAGM OPTION

GF04919

☐ **APPLY LUBRICANT OR SEALANT(1):**
T = THREAD LOCKER
L1 = GENERAL PURPOSE PTFE OR LITHIUM GREASE
L2 = ANTI-SEIZE COMPOUND
L3 = SILICONE GREASE
L4 = GRAPHITE SEALANT

1. Lubricants and sealants must be selected such that they meet the temperature requirements.
2. Apply L2 (anti-seize compound) on key 16 for stainless steel bolts.
3. Apply L4 (graphite sealant) instead of L1 (general purpose PTFE or lithium grease) on key 63 for graphite ring.

Figure 7. *Type MR95LD, 1/4 NPT and 1/2 to 1 in. / DN 15 to 25 Body Sizes Assembly*

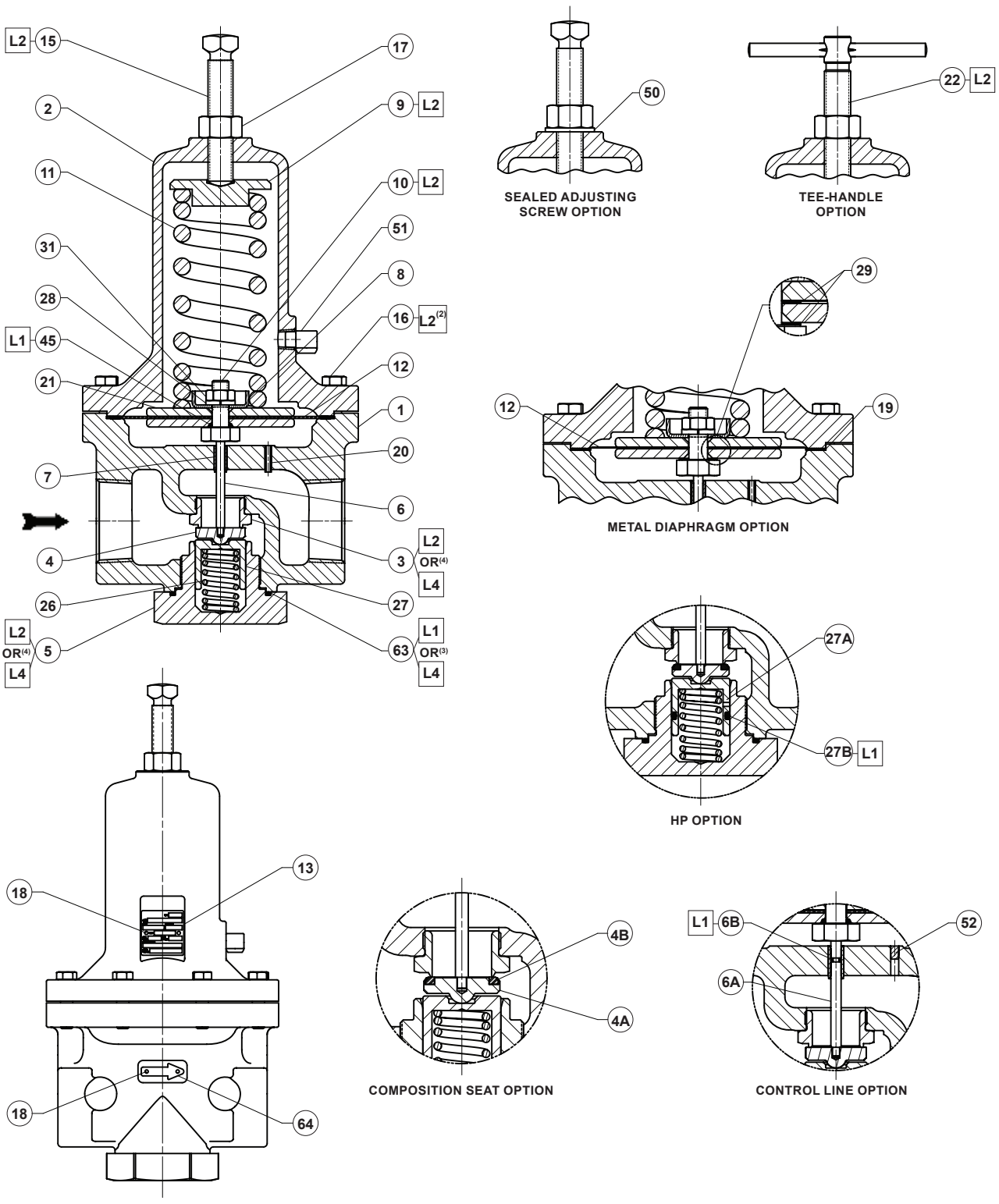


GF04914

☐ **APPLY LUBRICANT OR SEALANT(1):**
L1 = GENERAL PURPOSE PTFE OR LITHIUM GREASE
L2 = ANTI-SEIZE COMPOUND
L4 = GRAPHITE SEALANT

1. Lubricants and sealant must be selected such that they meet the temperature requirements.
2. Apply L2 (anti-seize compound) on key 16 for stainless steel bolts.
3. Apply L4 (graphite sealant) instead of L1 (general purpose PTFE or lithium grease) on key 63 for graphite ring.
4. Apply L4 (graphite sealant) instead of L2 (anti-seize compound) on keys 3 and 5 for Type MR95HT.

Figure 8. *Types MR95H, MR9HP and MR9HT, 1/4 NPT and 1/2 to 1 in. / DN 15 to 25 Body Sizes Assembly*

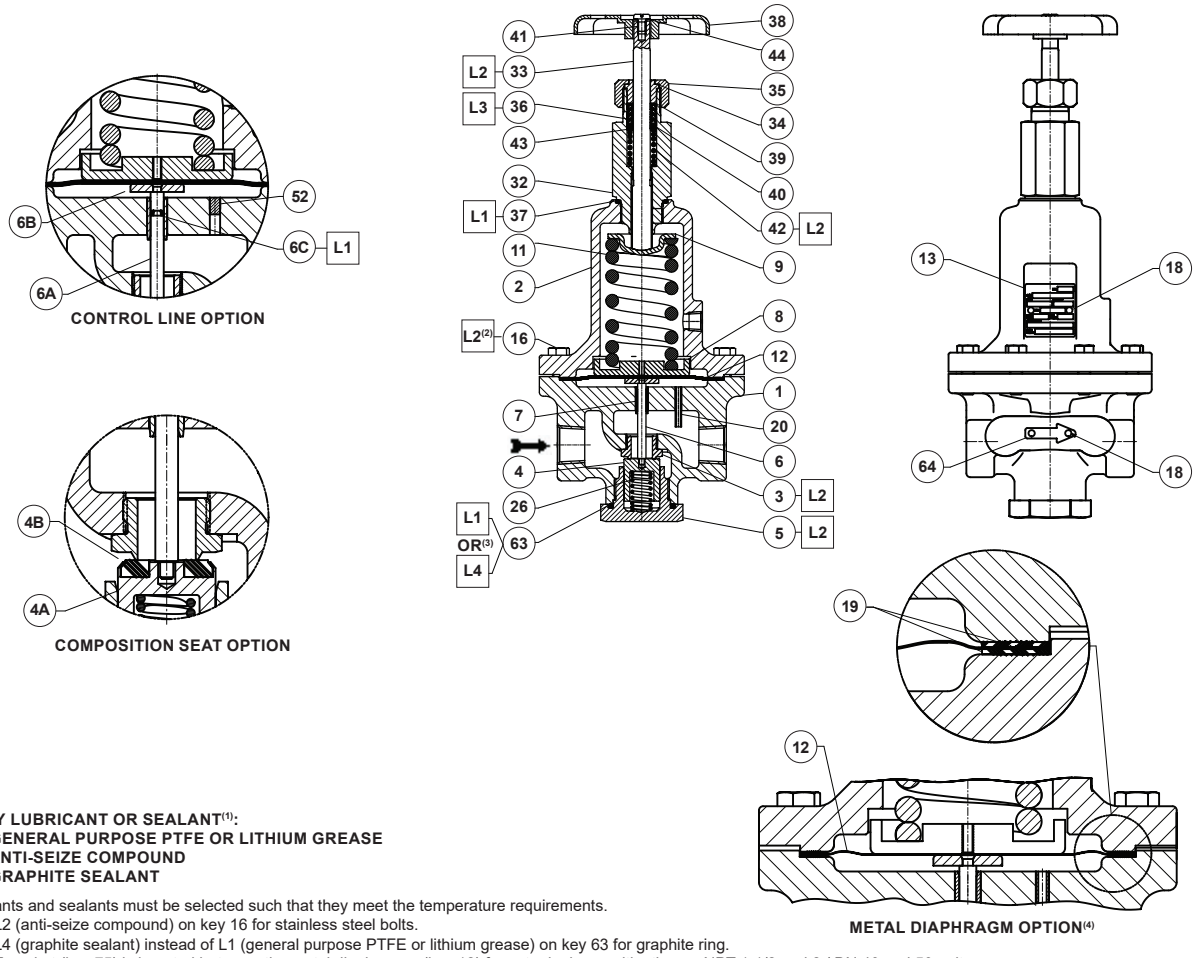


GF04500

☐ **APPLY LUBRICANT OR SEALANT(1):**
L1 = GENERAL PURPOSE PTFE OR LITHIUM GREASE
L2 = ANTI-SEIZE COMPOUND
L4 = GRAPHITE SEALANT

1. Lubricants and sealants must be selected such that they meet the temperature requirements.
2. Apply L2 (anti-seize compound) on key 16 for stainless steel bolts.
3. Apply L4 (graphite sealant) instead of L1 (general purpose PTFE or lithium grease) on key 63 for graphite ring.
4. Apply L4 (graphite sealant) instead of L2 (anti-seize compound) on keys 3 and 5 for Type MR95HT.

Figure 9. *Types MR95H, MR9HP and MR9HT, 1-1/2 to 2 in. / DN 40 and 50 Body Sizes Assembly*



GF04918

☐ **APPLY LUBRICANT OR SEALANT(1):**
L1 = GENERAL PURPOSE PTFE OR LITHIUM GREASE
L2 = ANTI-SEIZE COMPOUND
L4 = GRAPHITE SEALANT

1. Lubricants and sealants must be selected such that they meet the temperature requirements.
2. Apply L2 (anti-seize compound) on key 16 for stainless steel bolts.
3. Apply L4 (graphite sealant) instead of L1 (general purpose PTFE or lithium grease) on key 63 for graphite ring.
4. A PTFE gasket (key 75) is inserted between the metal diaphragms (key 12) for extra leakage mitigation on NPT 1-1/2 and 2 / DN 40 and 50 units.

Figure 10. *Types MR95HD and MR95HDP, 1/4 NPT and 1/2 to 2 in. / DN 15 to 50 Body Sizes Assembly*

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