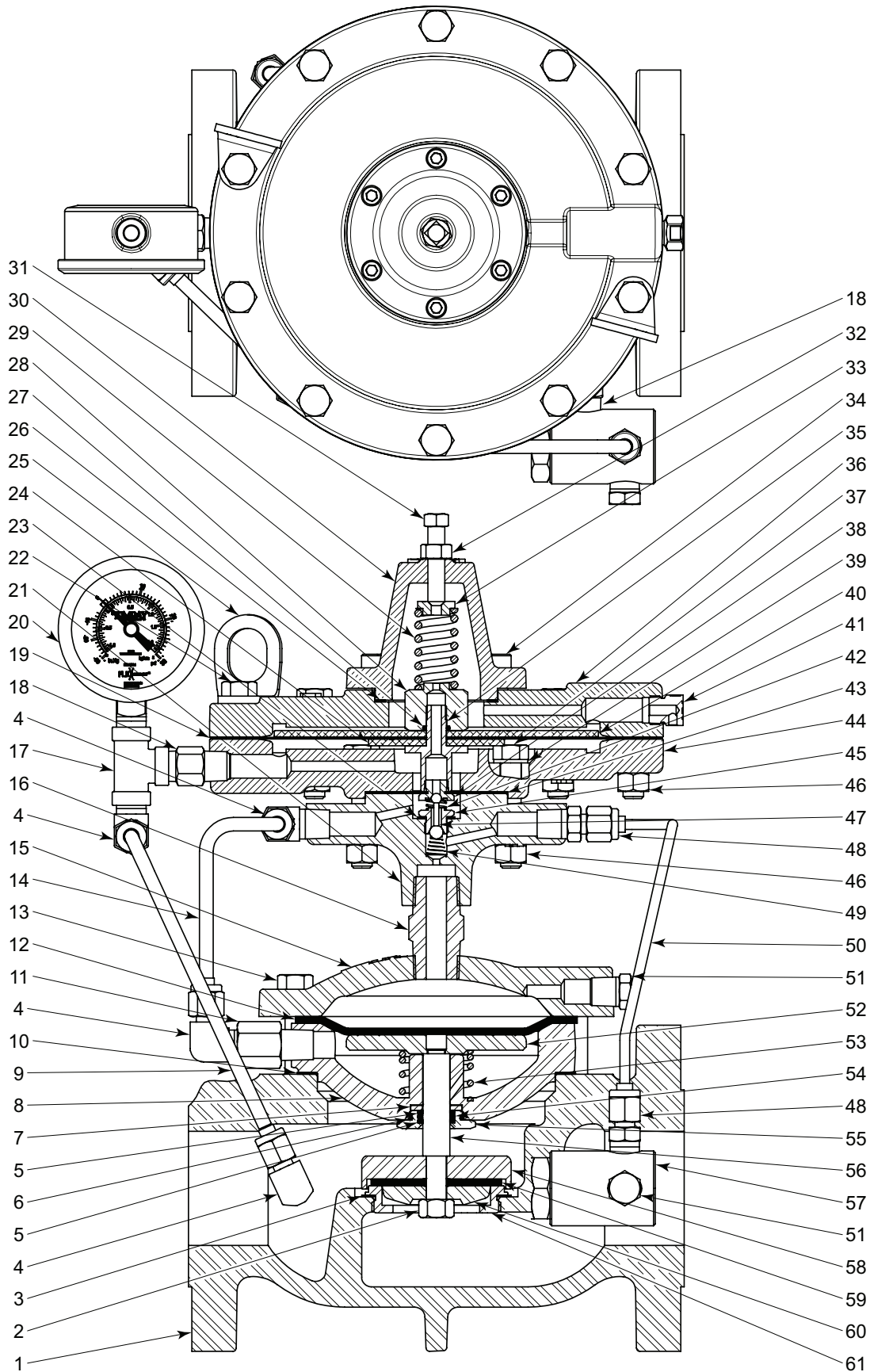


PRESSURE REGULATORS

STEEL GAS LOW PRESSURE PRESSURE REDUCING
MODEL LR PARTS DRAWING



All Pictures shown are for illustration purpose only. Actual product may vary due to product enhancement.



PRESSURE REGULATORS

**STEEL GAS LOW PRESSURE PRESSURE REDUCING
MODEL LR PARTS LIST**

ITEM	QTY.	DESCRIPTION	PART NUMBER							
			STANDARD				CORROSIVE			
			2 INCH	3 INCH	4 INCH	6 INCH	2 INCH	3 INCH	4 INCH	6 INCH
1	1	Body	2468	2469	2470	2959	2468 ‡	2469 ‡	2470 ‡	2959 ‡
2	1	Nut *	173	906		175	173SS6	174SS6		175SS6
3	1	Gasket *	276	277	196	279	276	277	196	279
4	4	Elbow	875				875SS6			
5	2	Back Up *	149T	150T	151T	152T	149T	150T	151T	152T
6	1	O-Ring *	5225	5226	5227	4086	5225	5226	5227	4086
7	1	Spacer	4557DS6	4561DS6	4566DS6	4571DS6	4557DS6	4561DS6	4566DS6	4571DS6
8	1	Lower Housing	2481	2482	2483	2957	2481 ‡	2482 ‡	2483 ‡	2957 ‡
9	1	Tubing	2552SS6	213SS6	4251S6	5061SS6	2552SS6	213SS6	4251S6	5061SS6
10	1	Gasket *	196	197	198	199	196	197	198	199
11	1	Adapter	7244				7244S6			
		Elbow	----				1481			
		Nipple	----				2600			
12	1	Diaphragm *	1706	1640	2015	2140	1706	1640	2015	2140
13	(QTY)	Bolt	965 (8)	907(10)	907 (12)	2142 (16)	965 (8)	907(10)	907 (12)	2142 (16)
14	1	Tubing	4008SS6	213SS6	4050SS6	5060SS6	4008SS6	213SS6	4050SS6	5060SS6
15	1	Bonnet	2487	2488	2489	2956	2487 ‡	2488 ‡	2489 ‡	2956 ‡
16	1	Nipple	2516				2516SS6			
17	1	Tee	219	2000	219		219SS6	2000SS6	219SS6	
18	2	Nipple	648				648SS6			
19	1	Diaphragm *	1212				1212			
20	1	Pressure Gauge	7704				7704			
21	1	Base	2515				2515 ‡			
22	10	Screw	236				236			
23	1	Gasket *	118				118			
24	1	Lower Diaphragm Plate	1340				1340SS6			
25	2	Lifting Ring	7559			----	7559			----
26	1	Gasket *	1216				1216			
27	1	O-Ring *	265				265			
28	1	Nut	2912				2912SS6			
29	1	Spring	4379 (Std.) 1527 (Opt. 2.5 lbs.) & 3061 (Opt. 5 lbs.)				4379 (Std.) 1527 (Opt. 2.5 lbs.) & 3061 (Opt. 5 lbs.)			
30	1	Bonnet	1336				1336 ‡			
31	1	Adjusting Screw	897				897			
32	1	Nut	922				922			
33	1	Spring Guide	7148S6 (Std.) 636SS6 (Opt. 2.5 & 5 lbs.)				7148S6 (Std.) 636SS6 (Opt. 2.5 & 5 lbs.)			
34	6	Screw	7531				7531			
35	1	Stem	2913				2913SS6			
36	1	Upper Pilot Housing	1206				1206 ‡			
37	4	Screw	191				191			
38	1	Pilot Seat *	113				113SS6			
39	4	Gasket *	242				242			
40	1	Upper Diaphragm Plate	1208				1208SS6			
41	1	Vent Plug	147				147SS6			
42	1	Spring *	566				566HAC			
43	1	Diaphragm *	110				110			
44	1	Lower Pilot Housing	1356				1356 ‡			
45	1	Pilot Seat *	565				565SS6			
46	14	Nut	241				241			
47	1	Pilot Plug *	112				112			
48	2	Elbow / Conn.	874				874SS6			
49	1	Spring *	1360				1360HAC			
50	1	Tubing	2552SS6	213SS6	4251S6	2529SS6	4251SS6	213SS6	4251S6	2529SS6
51	1	Plug	699				699SS6			
52	1	Diaphragm Plate	2490	2491	2492	2958	2490	2491	2492	2958SS6
53	1	Spring	1388	1528	1529	1575	1388	1528	1529	1575
54	1	O-Ring *	154	807	156	157	154	807	156	157
55	1	Retainer	4557ES6	4561ES6	4566ES6	4571ES6	4557ES6	4561ES6	4566ES6	4571ES6
56	1	Valve Stem	138	139	140	141	138SS6	139SS6	140SS6	141SS6
57	1	1/4 F30 Filter	YAS				YASS6			
58	1	Seat Disc	2493SS6	2494SS6	2495SS6	2961SS6	2493SS6	2494SS6	2495SS6	2961SS6
59	1	Seat *	164HSN	165HSN	166HSN	167HSN	164HSN	165HSN	166HSN	167HSN
60	1	Standard Ratio Plug	177SS6	178	179	3079SS6	177SS6	3076SS6	3078SS6	3079SS6
		Reduced Ratio Plug	4933	1228SS6	177SS6	178	4933SS6	1228SS6	177SS6	3076SS6
61	1	Removable Seat	2496SS6K	2497SS6K	274K	3075SS6K	2496SS6K	2497SS6K	2498SS6K	3075SS6K
Repair Kits			RUAD	RUBD	RUCD	RUDD	‡ Coated Parts available with "K" service type			
			* These parts are recommended spare parts and are stocked as repair kits.							

Table 1 - Flow Coefficient(Cv) at % stem travel for Pilot-operated Regulators											
1" Pressure Regulator											
Trim Size in.(mm)	Cf	Valve Opening Percentage									
		10	20	30	40	50	60	70	80	90	100
1/2 in (12mm) Reduced	0.75	0.4	0.7	0.9	1.3	1.8	2.5	3.2	3.9	4.5	5
1 in (25mm) Full Port	0.74	1.1	1.8	2.4	3.4	4.8	6.6	8.5	10.2	11.9	13.2
2" Pressure Regulator											
Trim Size in. (mm)	Cf	Valve Opening Percentage									
		10	20	30	40	50	60	70	80	90	100
1 1/4 in (31 mm) Reduced	0.75	1.8	2.8	3.9	5.4	7.7	10.5	13.6	16.2	19.0	21.0
2 in Removable Full Port *	0.84	4.0	6.2	8.6	12.1	17.2	23.5	30.4	36.3	42.5	47.0
2 in (50 mm) Full Port *	0.75	4.4	6.9	9.5	13.4	19.1	26.0	33.6	40.2	47.0	52.0
3" Pressure Regulator											
Trim Size in. (mm)	Cf	Valve Opening Percentage									
		10	20	30	40	50	60	70	80	90	100
1 5/8 in (66 mm) Reduced	0.82	2.9	4.5	6.2	8.8	12.5	17.0	22.0	26.3	30.7	34.0
3 in (76 mm) Full Port	0.75	9.9	15.6	21.5	30.2	42.9	58.6	75.7	90.4	105.7	117.0
4" Pressure Regulator											
Trim Size in. (mm)	Cf	Valve Opening Percentage									
		10	20	30	40	50	60	70	80	90	100
2 in (50 mm) Reduced	0.80	4.7	7.3	10.1	14.2	20.2	27.5	35.6	42.5	49.7	55.0
4 in (100 mm) Full Port	0.75	17.8	27.9	38.6	54.2	77.0	105.2	135.9	162.2	189.8	210.0
6" Pressure Regulator											
Trim Size in. (mm)	Cf	Valve Opening Percentage									
		10	20	30	40	50	60	70	80	90	100
3 in (76 mm) Reduced	0.80	10.2	16.0	22.0	30.9	44.0	60.1	77.7	92.7	108.4	120.0
6 in (152 mm) Full Port	0.75	40.6	63.8	88.1	123.8	176.0	240.4	310.6	370.7	433.7	480.0

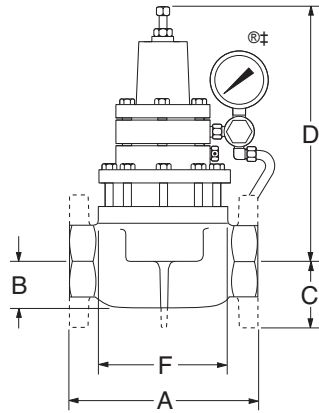
Kimray flow equations conform to ANSI/ISA - 75.01.01-2002
 Kimray inherent flow characteristics conform to ANSI/ISA 75.11.01 -1985

PRESSURE REGULATORS



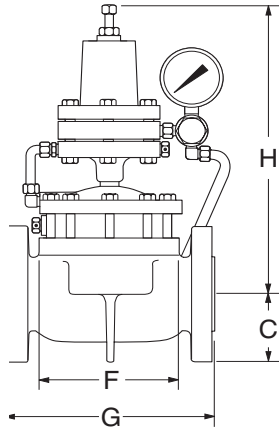
DIMENSIONS

BACK PRESSURE
UPSTREAM DIFFERENTIAL PRESSURE
PRESSURE REDUCING-BALANCED
PRESSURE REDUCING VACUUM

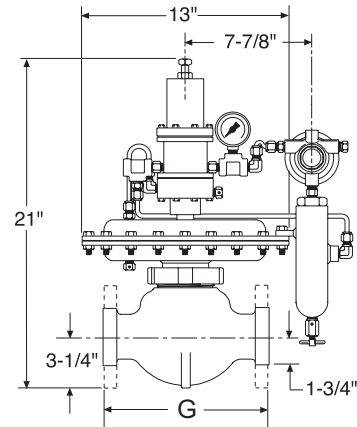


DUCTILE

PRESSURE DIFFERENTIAL
PRESSURE REDUCING
BACK PRESSURE VACUUM
LIQUID BACK PRESSURE

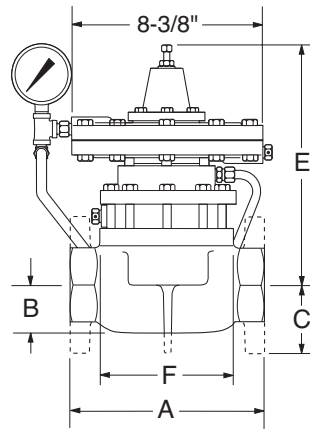


STEEL

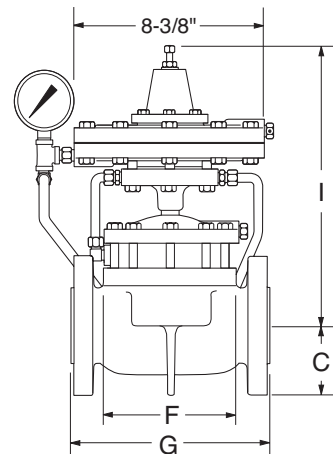


250 S/FGT-BP-S

LOW PRESSURE BACK PRESSURE
OUNCES BACK PRESSURE TO VACUUM
OUNCES PRESSURE REDUCING
OUNCES PRESSURE REDUCING VACUUM
VACUUM BACK PRESSURE TO VACUUM



DUCTILE



STEEL

LINE SIZE	BODY SIZE	A	B	C	D*	E	F	G	H*	I
1"	NPT	4 3/8"	1 1/8"		7 1/2"	11 5/8"	3 1/4"			
	FLANGED	7 1/4"	1 1/8"	2 1/8"	7 1/2"	11 5/8"	3 1/4"			
2"	NPT	8 1/2"	2 1/8"		11 1/2"	10 1/2"	6 1/2"			
	FLANGED	9"		3"	11 1/2"	10 1/2"	6 1/2"	9 1/8"	14 1/2"	14"
	GROOVED	8 3/4"	2 1/8"		11 1/2"	10 1/2"	6 1/2"			
250 S/FGT	NPT							10 1/2"		
	FLANGED							10 3/8"		
3"	NPT	12 1/16"	3 1/16"		13"	12"	8 1/2"			
	FLANGED	12 3/16"		3 3/4"	13"	12"	8 1/2"	12 3/8"	16 1/2"	15 1/2"
4"	NPT	15" 1/16"	4"		14 1/2"	13 3/16"	10 1/2"			
	FLANGED	15 1/16"		4 1/2"	14 1/2"	13 3/16"	10 1/2"	15 1/16"	18 1/2"	16 11/16"
6"	FLANGED	22"		5 1/2"	17"	17 7/8"	16"	21 15/16"	20 1/2"	18 3/8"

FLANGE DIMENSIONS ARE ANSI 125/150 STANDARD. *Add 7/8" to Pressure Reducing Balanced and Up Stream Differential Pressure Regulators for this dimension.

All Pictures shown are for illustration purpose only. Actual product may vary due to product enhancement.
‡ Configuration of Back Pressure Control Valve is a trademark of Kimray, Inc.

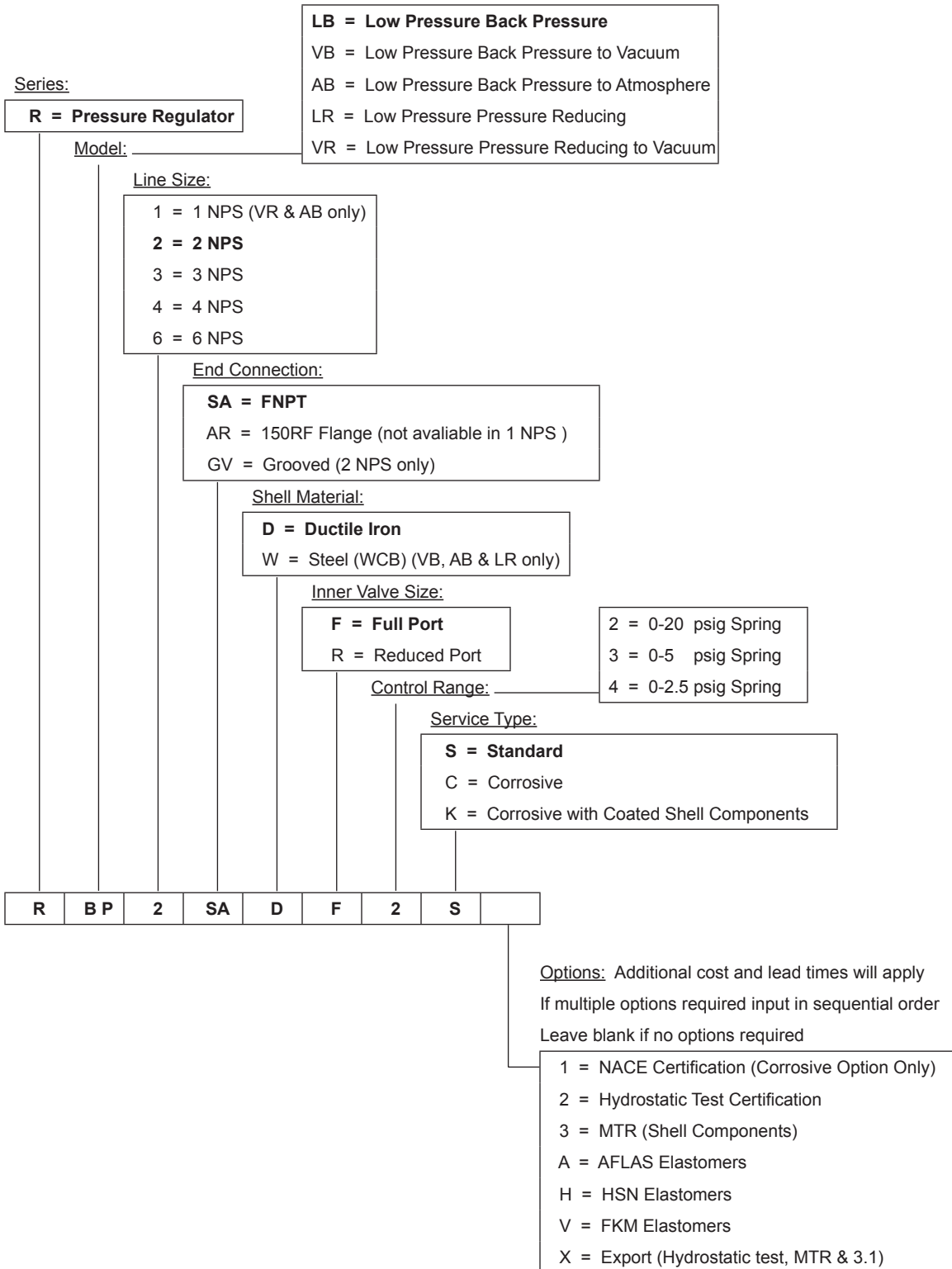
www.kimray.com

Table 2 - Seal Options		
Part	Standard Material	Optional Material
Seat	HSN	FKM, AFLAS®
O-rings	Nitrile	HSN, FKM, AFLAS®
All Diaphragms	Nitrile	HSN, FKM, AFLAS®

Table 3 - Seal Specifications				
	NITRILE	HIGHLY SATURATED NITRILE	FKM	AFLAS®
Kimray Suffix	-	HSN	V	AF
Resistance	Abrasion	G	G-E	G
	Acid	F	G-E	E
	Chemical	F	F	E
	Cold	G	G	P
	Flame	P	P	E
	Heat	G	E	E
	Oil	G-E	E	E
	Ozone	P	G	G-E
	Set	G	G	G-E
	Tear	F	F	F
	Water/Steam	F	E	P
	Weather	F	G	E
	CO2	F-G	G	G
	H2S	P	F	P
	Methanol	F	E	P
Properties	Dynamic	G	G	G
	Electrical	F	F	G-E
	Impermeability	G	G	G
	Tensile Strength	G	G-E	G
Temp. Range	-20° to +225°F	-20° to +250°F	-15° to +400°F	+15° to +450°F
	-29° to +107°C	-29° to +121°C	-26° to +204°C	-9° to +232°C
RATINGS: P-POOR, F-FAIR, G-GOOD, E-EXCELLENT				

Table 4 - Material Options

Part Description	Valve Size	Standard Material	Corrosive Material
Ratio Plug	1" & 2"	316 Powdered Metal SS-316NI-25	
	1" & 2" Reduced Trim	Alloy Steel (ASTM A108)	316SS (ASTM A479)
	3"	Powdered Metal F-008	316SS (ASTM A479)
	4" & 6"	Ductile (ASTM A395)	316SS (ASTM A479)
Seat Disc	1"	Powdered Metal F-008	316SS (ASTM A479)
	2", 3" & 4"	Ductile (ASTM A395)	316SS (ASTM A351 CF8M)
	6"	Ductile (ASTM A395)	316SS (ASTM A 240)
Stem	1" thru 6"	303SS (ASTM A582)	316SS (ASTM A479)
Body	1" thru 6"	Ductile (ASTM A395)	WCB (ASTM A216) + Kimcoat
	2" thru 6"	WCB (ASTM A216)	316SS (ASTM A351 CF8M)
Tubing	1" thru 6"	304SS (ASTM A249)	316SS (ASTM A213)
Removable Seat	2" thru 6" Ductile Body	Ductile (ASTM A395)	316SS (ASTM A351 CF8M)
	2" thru 6" Steel Body	316SS (ASTM A351 CF8M)	



Not all selections available on all products listed.
See the following product pages for available options
06:10.9 - 06:10.11, 06:30.5 - 06:30.9,
06:50.9 - 06:50.13, 06:90.1 - 06:90.13