

#### APPLICATIONS:

For discharge of liquid or gas from vessels, separators, treaters, knockouts and other similar liquid accumulators.

For back pressure or pressure reducing applications with pressure pilots.

#### FEATURES:

- Compact design
- O-Ring sealed seat
- Valve travel indicator
- Field-reversible topworks
- Teflon-packed stuffing box

#### CERTIFICATIONS:

Canadian Registration Number (CRN):  
0C15021.24567890NTY





Kimray is an ISO 9001- certified manufacturer.

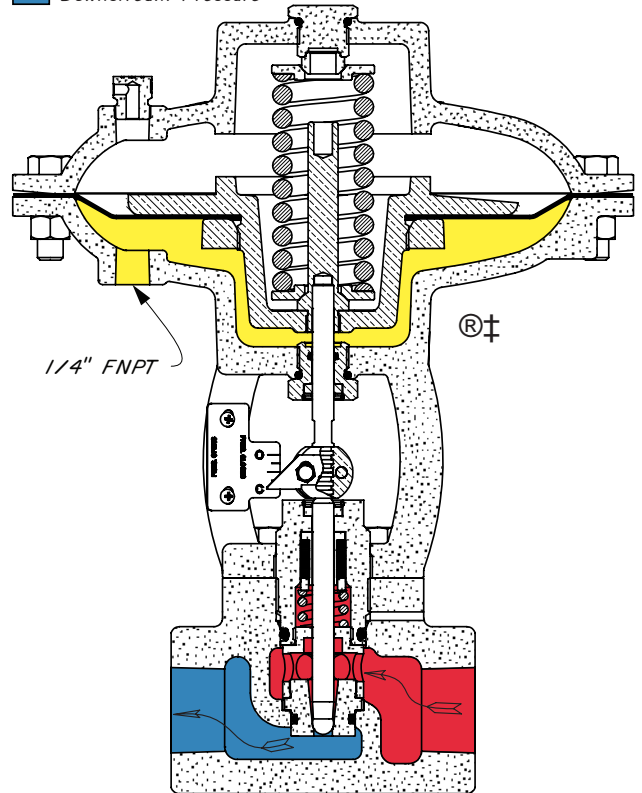
#### INNER VALVE SPECIFICATIONS:

The 1" HPCV standard valve plugs consist of a carbide ball rigidly connected to a 303 stainless steel stem. Standard seats are made of heat-treated tool steel.

The 2" HPCV standard valve plugs for 1/2" and smaller consist of a carbide ball rigidly connected to a 303 stainless steel stem. Standard valve plugs for 3/4" and 1" consist of a hardened high chrome alloy ball rigidly connected to a 303 stainless steel stem. Standard seats are made of heat-treated tool steel.

Inner valves can be made from a wide selection of materials. Specify when ordering.

-  Control Valve Diaphragm Assembly
-  Control Valve Diaphragm Pressure
-  Upstream Pressure
-  Downstream Pressure



Order Code †	Line Size	Stem Travel	Inner Valve	Linear		Quick Open		Equal Percent		
				Cv	Cf	Cv	Cf	Cv	Cf	
See page 01:300.1	1"	1/2"	1/8"	1.10	0.58	0.40	0.73	0.34	0.73	
			3/16"	1.50	0.59	0.92	0.74	----	----	
			1/4"	2.17	0.78	1.74	0.68	1.99	0.66	
			3/8"	3.20	0.91	3.86	0.74	----	----	
			1/2"	5.70	0.94	5.93	0.90	6.49	0.78	
	2"	3/4"	1/4"	3.00	0.55	1.87	0.65	1.72	0.65	
			3/8"	4.00	0.77	3.84	0.76	----	----	
			7/16"	----	----	----	----	5.40	0.60	
			1/2"	7.20	0.78	6.63	0.80	----	----	
			5/8"	----	----	----	----	10.8	0.58	
			3/4"	12.0	0.80	10.9	0.78	----	----	
			7/8"	----	----	----	----	17.0	0.66	
	1" Soft Seat			15/16"	9.95	0.65	----	----	----	----
	2" Soft Seat			1 1/2"	29.8	0.75	----	----	----	----

#### NOTES:

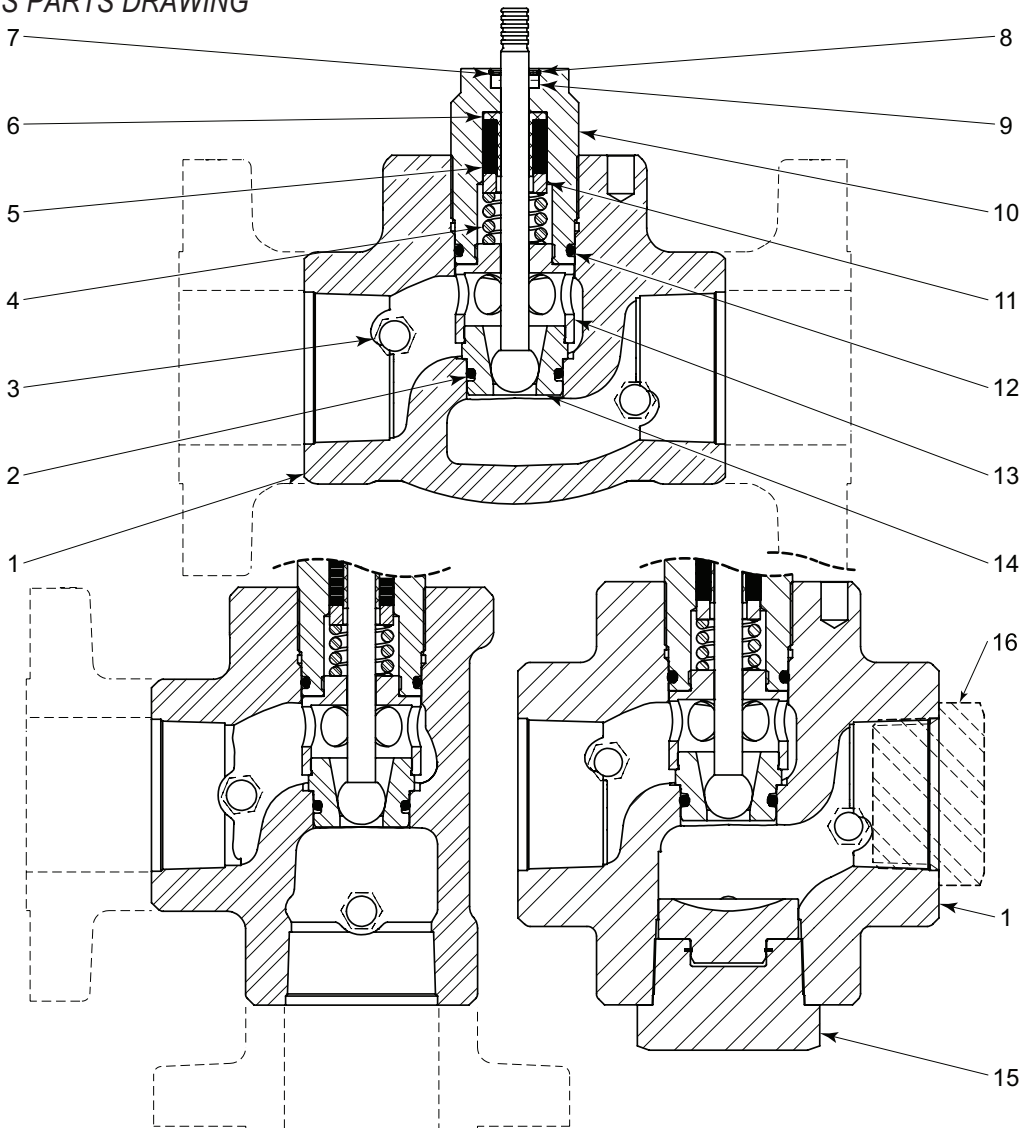
For standard & optional seals, metals, Cf Cv values, material specifications & dimensions see technical data on pages 01:1 - 01:X1

† For complete valve codes see page 01:300.1, For code builder see page 01:00.2  
Max W.P. values based on -20°F to 100°F.

# HIGH PRESSURE CONTROL VALVES



## STEM GUIDED BOTTOM WORKS MODEL CVS PARTS DRAWING



ITEM	QTY.	DESCRIPTION	PART NO.							
			STANDARD		CORROSIVE		EROSIVE		MIXED DUTY	
			1 INCH	2 INCH	1 INCH	2 INCH	1 INCH	2 INCH	1 INCH	2 INCH
1	1	Body	See Table On Page 01:10.3							
2	1	O-Ring *	155	157	155	157	155	157	155	157
3	2	Plug	---	699	---	699SS6	---	699	---	699SS6
4	1	Spring	465	509	465HAC	509HAC	465	509	465HAC	509HAC
5	(QTY)	Packing Ring *	484 (4)	533 (6)	484 (4)	533 (6)	484 (4)	533 (6)	484 (4)	533 (6)
6	1	Packing Sleeve *	485	534	485	534	485	534	485	534
5&6	1	Optional VEE Packing 450°F max	5117	5118	5117	5118	5117	5118	5117	5118
		Optional Grafoil Packing 450°F max	5117GF	5118GF	5117GF	5118GF	5117GF	5118GF	5117GF	5118GF
7	1	Retainer	486	528	486	528	486	528	486	528
8	1	Snap Ring *	938	940	938	940	938	940	938	940
9	1	Felt Wiper *	480	527	480	527	480	527	480	527
10	1	Stuffing Box	479	526	479SS6	526SS6	479	526	479SS6	526SS6
11	1	Packing Follower	482SS6	531SS6	482SS6	531SS6	482SS6	531SS6	482SS6	531SS6
12	1	O-Ring *	156	520	156	520	156	520	156	520
13	1	Cage	2837	2889	2837SS6	2889SS6	2837	2889	2837	2889PH
14	1	Trim Set	See Table On Page 01:10.3							
Repair Kits			RFA	RFE	RFA	RFE	RFA	RFE	RFA	RFE
Stuffing Box Assemblies	Order Code	EAW	EBY	EAWSS6	EBYSS6	EAW	EBY	EAWSS6	EBYSS6	
	Max W.P. psig	6000	6170	6000	6170	6000	6170	6000	6170	

\* These parts are recommended spare parts and are stocked as repair kits.

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

THRU BODIES AVAILABLE				
ITEM	QTY.	DESCRIPTION	PART NO.	
			1 INCH	2 INCH
1	1	2000 psig NPT Thru	----	493
		4000 psig NPT Thru		494
		6000 psig NPT Thru	5029	4083
		150RF Thru	2374RF	4510
		300RF Thru	5335RF	4512
		600RF Thru	1945RF	4513
		1500RF Thru	2768RF	4516
		600RTJ Thru	2054RTJ	4514
		1500RTJ Thru	2771RTJ	4515
		2500RTJ Thru	----	4230
		API 5000 Thru	-----	6604 ‡
		‡ Available as part only not available as assembled valve Coated Bodies available with "K" & "E" service type		

ANGLE BODIES AVAILABLE				
ITEM	QTY.	DESCRIPTION	PART NO.	
			1 INCH	2 INCH
1	1	2000 psig NPT Angle	----	496
		4000 psig NPT Angle		497
		6000 psig NPT Angle	7509	4355
		150RF Angle	2772RF	2791
		300RF Angle	2773RF	2793
		600RF Angle	2133RF	2795
		1500RF Angle	----	2442
		600RTJ Angle	2778RTJ	2816
		1500RTJ Angle	2780RTJ	1742
		2500RTJ Angle	----	----
		API 5000 Angle	----	6612 ‡
		‡ Available as part only not available as assembled valve Coated Bodies available with "K" & "E" service types		

2 INCH DUAL PORT BODIES AVAILABLE			
ITEM	QTY.	DESCRIPTION	PART NO.
1	1	4000 psig NPT Dual Port Body	7622
		6000 psig NPT Dual Port Body	7702
15	1	2" NPT Hex Plug w/Wear Plug	7665AS
16	1	2" NPT Hex Plug for Angle Body	7665SF
Coated Bodies available with "K" & "E" service types			

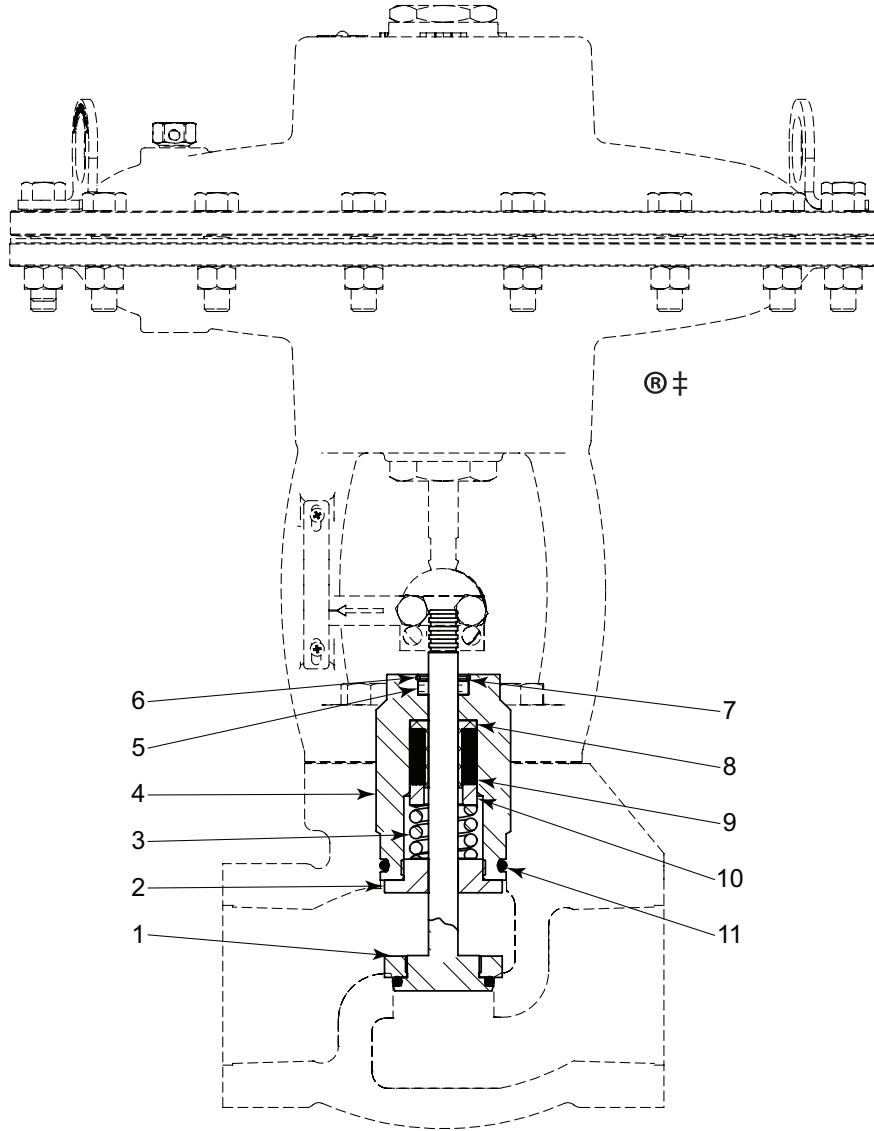
TRIM SETS AVAILABLE (Other materials available see page 01:200.2)									
ITEM	QTY.	SIZE	SERVICE	1" LINE SIZE			2" LINE SIZE		
				Linear	Quick Open	E.P.	Linear	Quick Open	E.P.
14	1	1/8"	Standard	T2842	T2856	T6400			
			Corrosive	T2842SS6		T6400SS6			
			Erosive						
			Mixed Duty	T2842PH					
		3/16"	Standard	T2841	T2855				
			Corrosive	T2841SS6					
			Erosive						
			Mixed Duty	T2841PH					
		1/4"	Standard	T2840	T2854	T4730	T2895	T2890	T6404
			Corrosive	T2840SS6		T4730SS6			T6404SS6
			Erosive			T4730ZR			
			Mixed Duty	T2840PH			T2895PH		T6404PH
		3/8"	Standard	T2838	T2853		T2896	T2891	
			Corrosive	T2838SS6			T2896SS6		
			Erosive					T2891ZR	
			Mixed Duty	T2838PH			T2896PH		
		7/16"	Standard						T2993
			Corrosive						T2993SS6
			Erosive						T2993ZR
			Mixed Duty						T2993PH
		1/2"	Standard	T2839	T5307	T4732	T2897	T2892	
			Corrosive	T2839SS6		T4732SS6	T2897SS6		
			Erosive			T4732ZR	T2987ZR		
			Mixed Duty	T2839PH			T2897PH		
		5/8"	Standard						T2992
			Corrosive						T2992SS6
			Erosive						T2992ZR
			Mixed Duty						T2992PH
		3/4"	Standard				T2898	T4690	
			Corrosive				T2898SS6		
			Erosive					T4690ZR	
			Mixed Duty				T2898PH		
		7/8"	Standard						T2947
			Corrosive						T2947SS6
			Erosive						T2947ZR
			Mixed Duty						T2947PH
		1"	Standard				T2899	T4691	
			Corrosive				T2899SS6		
			Erosive				T2899ZR		
			Mixed Duty				T2899PH		

**NOTES:**



**1" & 2" HPCV OVERSIZED SOFT SEATS STUFFING BOX ASSEMBLY PARTS DRAWING**

For increased flow at low operating pressure. Maximum pressure drop is 300 psig For on - off service only.  
 Uses standard valve body  
 Teflon seal



ITEM	QTY.	DESCRIPTION	PART NO.			
			STANDARD		CORROSIVE	
			1 INCH	2 INCH	1 INCH	2 INCH
1	1	Soft Seat	2137	2136	2137SS6	2136SS6
2	1	Nut	1828	1829	1828SS6	1829SS6
3	1	Spring	465	509	465HAC	509HAC
4	1	Stuffing Box	479	526	479SS6	526SS6
5	1	Felt Wiper *	480	527	480	527
6	1	Snap Ring *	938	940	938	940
7	1	Retainer	486	528	486	528
8	1	Packing Sleeve *	485	534	485	534
9	(QTY)	Packing Ring *	484 (4)	533 (6)	484 (4)	533 (6)
10	1	Packing Follower	482SS6	531SS6	482SS6	531SS6
11	1	O-Ring *	156	520	156	520
Repair Kits			RFA	RFE	RFA	RFE
Stuffing Box Assemblies			EAX	EBZ	EAXSS6	EBZSS6

\* These parts are recommended spare parts and are stocked as repair kits.

#### APPLICATIONS:

For discharge of liquid or gas from vessels, separators, treaters, knockouts and other similar liquid accumulators.






For back pressure or pressure reducing applications with pressure pilots.

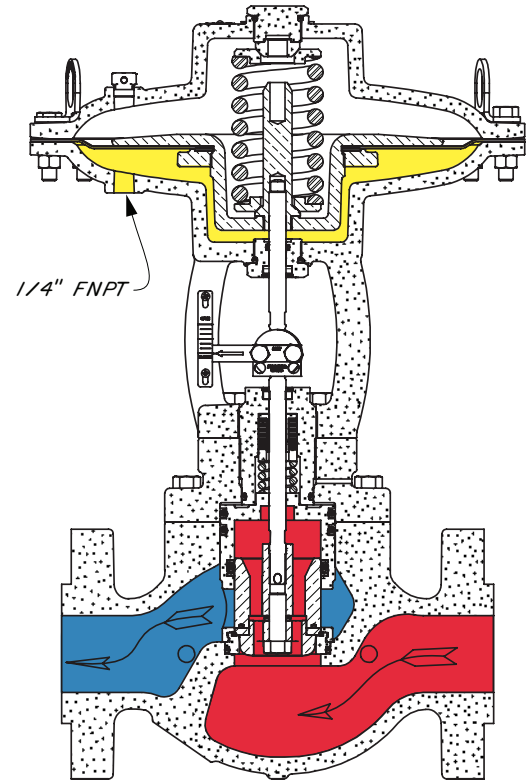
#### FEATURES:

- Compact design
- Soft seat with metal-to-metal backup
- Valve travel indicator
- Field-reversible topworks
- Teflon-packed stuffing box
- Bubble-tight shut-off
- Piston balanced seat assembly

#### CERTIFICATIONS:

Canadian Registration Number (CRN):  
 0C10903.24567890NTY (2" HPCV PB)  
 0C15019.24567890NTY (3"-10" HPCV PB)  
 Kimray is an ISO 9001- certified manufacturer.

-  Control Valve Piston Assembly
-  Control Valve Diaphragm Assembly
-  Control Valve Diaphragm Pressure
-  Upstream Pressure
-  Downstream Pressure



Order Code **	Line Size	Flow Characteristic	Inner Valve	Stem Travel	Max. W.P. psig ***	Cv	Cf
See page 01:300.2	2"	EP	1 1/2"	3/4"	4000	28.6	0.75
			2"			57.0	0.76
	3"		2"	1 3/8"		52.6	0.75
			3"			107	0.76
	4"		3"	1 3/4"		115	0.75
			4 3/8"			222	0.75
	6"		4 3/8"	1480	222	0.75	
			6 3/4"		431	0.75	
	8"		Reduced EP		6"	453	0.75
			Refined EP		8 1/2"	630	0.75
			Modified EP		8 1/2"	810	0.75
	10"		Reduced EP		6"	655	0.75
Refined EP		8 1/2"	884	0.75			
	Modified EP	8 1/2"	1091	0.75			

#### NOTES:

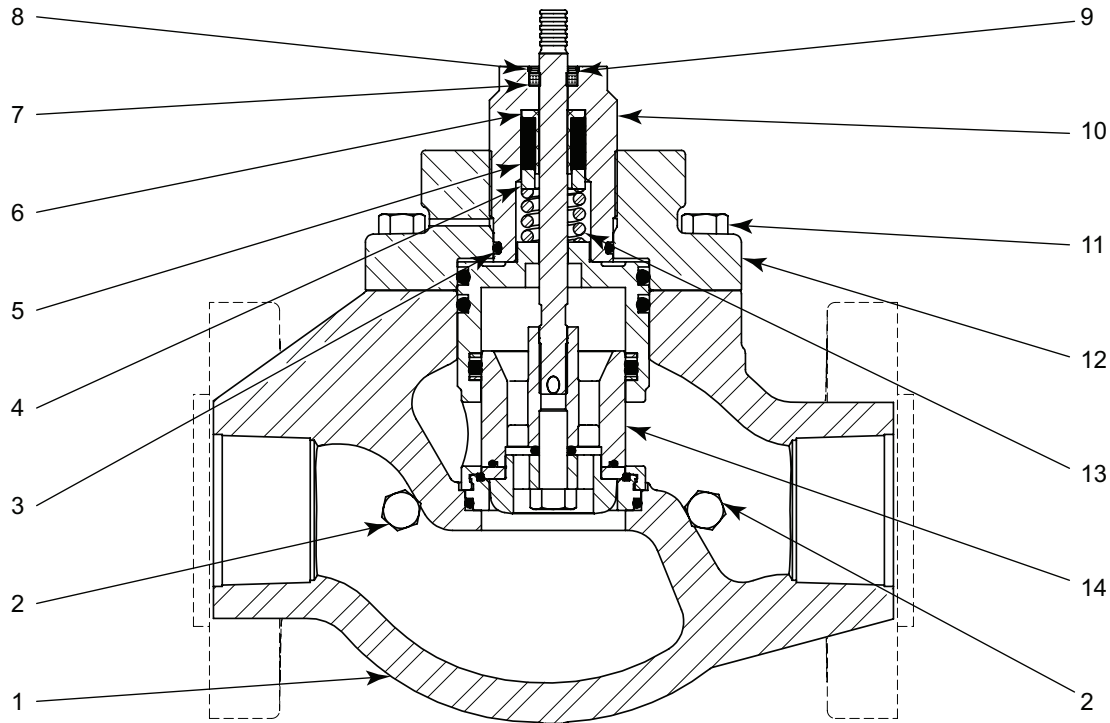
For standard & optional seals, metals, Cf Cv values, material specifications & dimensions see technical data on pages 01:1 - 01:XI

\*\* For complete valve codes see pages 01:300.2

\*\*\* Max W.P. values based on -20°F to 100°F.

# HIGH PRESSURE CONTROL VALVES

PISTON BALANCED / CAGE GUIDED BOTTOM WORKS  
MODEL CVC PARTS DRAWING



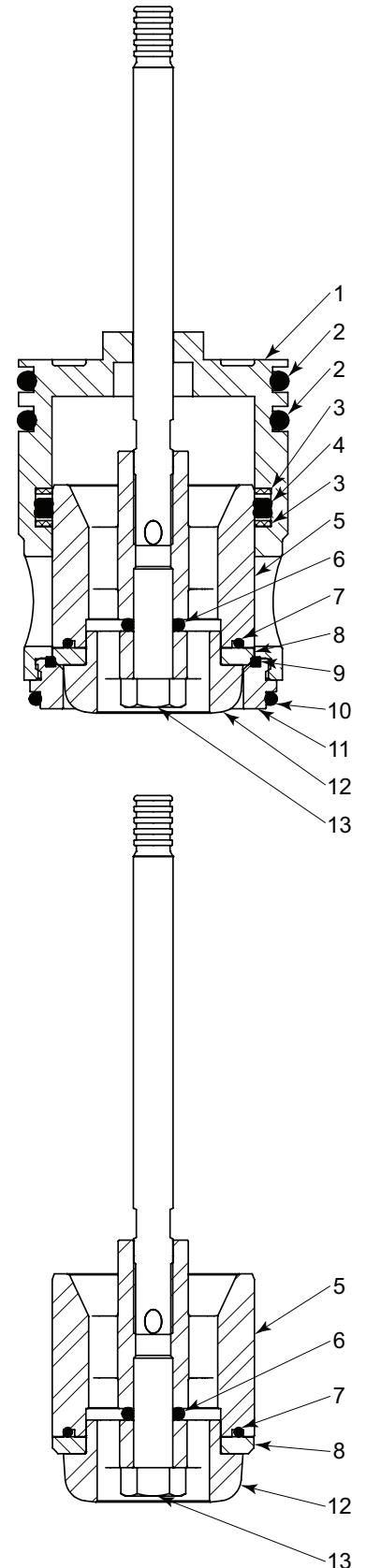
ITEM	QTY.	DESCRIPTION	PART NO.					
			STANDARD					
			2 INCH	3 INCH	4 INCH	6 INCH	8 INCH	10 INCH
1	1	Body	Coated Bodies available with "K" & "E" service types					
		1500 psig NPT Thru	4813	----	----	----	----	----
		4000 psig NPT Thru	4764	----	----	----	----	----
		150RF Thru	5071	6427	6428	6429	7040RF	7173
		300RF Thru	5051	5070	5249	5302	6661RF	6888RF
		600RF Thru	4712	4950	5146	5322	6567RF	6572RF
		600RTJ Thru	4713	4951	----	----	6567RTJ	----
		1500RF Thru	4714	7028RF	----	----	----	----
		1500RTJ Thru	4715	7028RTJ	----	----	----	----
		3 INCH 600RF Thru	4871	----	----	----	----	----
3 INCH 600RTJ Thru	4872	----	----	----	----	----		
2	2	Plug	699			292SS6		
3	1	O-Ring *	520	2081				
4	1	Packing Follower *	531SS6	4978SS6		5340SS6		
5	(QTY)	Packing Ring *	533 (6)	4977 (8)		5339 (8)		
6	1	Packing Sleeve *	534	4979		5341		
5&6	1	Optional VEE Packing 450°F max	5118	----	----	----	----	----
		Optional Grafoil Packing 450°F max	5118GF	----	----	----	----	----
7	(QTY)	Wiper *	527 (1)	4969 (2)		5337 (2)		
8	1	Snap Ring *	940	4968		5311		
9	1	Retainer	528	4970		5338		
10	1	Stuffing Box	526	4976		5346SS6		
11	(QTY)	Bolt	524 (8)	4991 (8)	5134 (12)	5323 (12)		
12	1	Upper Housing	4724	4958	5133	5301	6637	
13	1	Spring	509	4980		5347		
14	1	Plug Assembly	See Table On Page 01:20.3					
Repair Kits			RUR	RUT	RUU	RWD	RWF	

\* These parts are recommended spare parts and are stocked as repair kits.

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

### PISTON BALANCED / CAGE GUIDED PLUG ASSEMBLY MODEL CVC PLUG ASSEMBLY PARTS DRAWING

ITEM	QTY.	DESCRIPTION	PART NO.					
			2 INCH	3 INCH	4 INCH	6 INCH	8 & 10 INCH	
<b>STANDARD</b>								
1	1	Cage	6459SS6	6460SS6	5544SS6	5430SS6	6568SS6	
2	2	O-Ring *	4768	2745	5144	2353	6640	
3	2	Back Up *	4771T	4988T	5145T	5321T	6635T	
4	1	Quad Ring *	4769Q	4992Q	5142Q	5318Q	6634Q	
5	1	Piston Assembly	6466ASS6	6467ASS6	6721ASS6	6723ASS6	6569ASS6	
6	1	O-Ring *	4773	807		1151		
7	1	O-Ring *	4086	2099	6724	6725	6642	
8	1	Seat Disc	6641	6673	6720	6722	6643	
9	1	Seal Ring *	6468P	6469P	5584P	5387P	6571P	
10	1	O-Ring *	2099	4983	5143	5319	6636	
11	1	Seat	6464	6465	5583	5375SS6	6570S6	
12	1	Ratio Plug	Equal Percentage	4720	4985	5139	5313	6609
			Reduced E.P.	4927	5123	5255	6425	6647
			Modified E.P.	----	----	----	----	6648
			Quick Open	6672	7094	----	----	----
13	1	Bolt	4767SS6	4986SS6		5354SS6		
Equal Percentage Plug Assembly			EFB	EFC	EFF	EFQ	EIC	
Reduced E.P. Plug Assembly			EFR	EHZ	EVK	MGE	MGI	
Modified E.P. Assembly			----	----	----	----	MGJ	
Quick Open Plug Assembly			EFBQO	EFCQO	----	----	----	
<b>CORROSIVE</b>								
1	1	Cage	6459SS6	6460SS6	5544SS6	5430SS6	6568SS6	
2	2	O-Ring *	4768	2745	5144	2353	6640	
3	2	Back Up *	4771T	4988T	5145T	5321T	6635T	
4	1	Quad Ring *	4769Q	4992Q	5142Q	5318Q	6634Q	
5	1	Piston Assembly	6466ASS6	6467ASS6	6721ASS6	6723ASS6	6569ASS6	
6	1	O-Ring *	4773	807		1151		
7	1	O-Ring *	4086	2099	6724	6725	6642	
8	1	Seat Disc	6641SS6	6673SS6	6720SS6	6722SS6	6643SS6	
9	1	Seal Ring *	6468P	6469P	5584P	5387P	6571P	
10	1	O-Ring *	2099	4983	5143	5319	6636	
11	1	Seat	6464SS6	6465SS6	5583SS6	5375SS6	6570S6	
12	1	Ratio Plug	Equal Percentage	4720SS6	4985SS6	5139SS6	5313SS6	6609SS6
			Reduced E.P.	4927SS6	5123SS6	5255SS6	6425SS6	6647SS6
			Modified E.P.	----	----	----	----	6648SS6
			Quick Open	6672SS6	7094SS6	----	----	----
13	1	Bolt	4767SS6	4986SS6		5354SS6		
Equal Percentage Plug Assembly			EFBSS6	EFCSS6	EFFSS6	EFQSS6	EICSS6	
Reduced E.P. Plug Assembly			EFRSS6	EHZSS6	EVKSS6	MGESS6	MGISS6	
Modified E.P. Assembly			----	----	----	----	MGJSS6	
Quick Open Plug Assembly			EFBQOSS6	EFCQOSS6	----	----	----	
<b>EROSIVE</b>								
1	1	Cage	6459SS6	6460SS6	5544SS6	5430SS6	6568SS6	
2	2	O-Ring *	4768	2745	5144	2353	6640	
3	2	Back Up *	4771T	4988T	5145T	5321T	6635T	
4	1	Quad Ring *	4769Q	4992Q	5142Q	5318Q	6634Q	
5	1	Piston Assembly	6466A	6467ASS6	6721ASS6	6723ASS6	6569ASS6	
6	1	O-Ring *	4773	807		1151		
7	1	O-Ring *	4086	2099	6724	6725	6642	
8	1	Seat Disc	6641ZR	6673ZR	6720ZR	6722ZR	6643ZR	
9	1	Seal Ring *	6468P	6469P	5584P	5387P	6571P	
10	1	O-Ring *	2099	4983	5143	5319	6636	
11	1	Seat	6464	6465	5583	5375SS6	6570S6	
12	1	Ratio Plug	Equal Percentage	4720	4985	5139	5313	6609
			Reduced E.P.	4927	5123	5255	6425	6647
			Modified E.P.	----	----	----	----	6648
			Quick Open	6672	7094	----	----	----
13	1	Bolt	4767SS6	4986SS6		5354SS6		
Equal Percentage Plug Assembly			EFB	EFC	EFF	EFQ	EIC	
Reduced E.P. Plug Assembly			EFR	EHZ	EVK	MGE	MGI	
Modified E.P. Assembly			----	----	----	----	MGJ	
Quick Open Plug Assembly			EFBQO	EFCQO	----	----	----	



\* These parts are recommended spare parts and are stocked as repair kits.

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**NOTES:**

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