ver 030117

Maximum Capacity, Rugged Control Valve Ideal for Pipeline Regulation

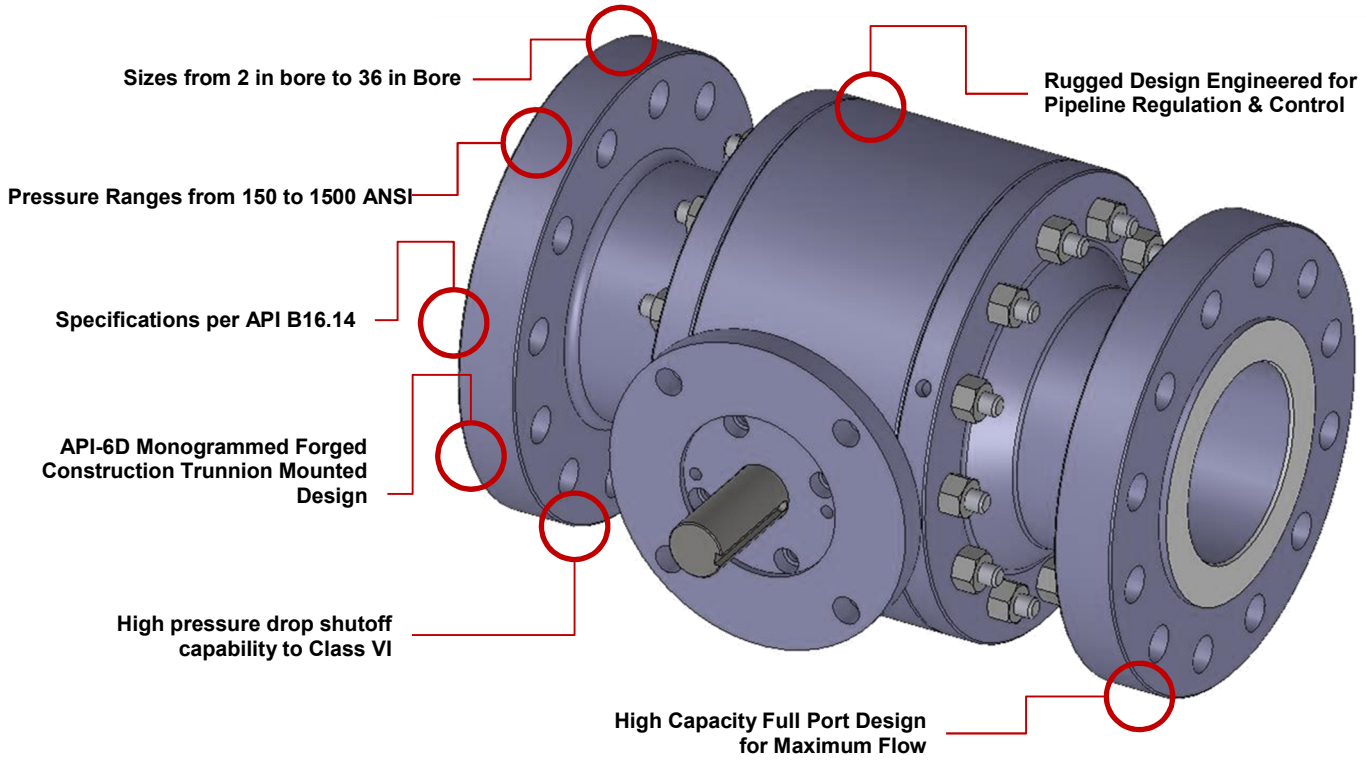
Description:

PRCV Pipeline Rotary Control Valves are rugged, trunnion mounted configuration with the durable features necessary for reliability and high performance in natural gas control applications. The full port design of the PRCV provides a full opening design ideal for maximum capacity. The design features a 100:1 or better turndown performance enabling accurate regulation of wide flow range. The trunnion platform is equipped with VRG Control Specification features necessary to ensure maximum control accuracy and reliability for gas pipeline regulation applications. The PRCV mates seamlessly with VRG RHPA Actuators and Control Instrumentation to create the highest performance pipeline control valve package on market. The PRCV-FP Series can incorporate the Below Ground configuration when utilizing RHPA Series Actuators for maximum noise attenuation with maximum capacity and lowest cost.

Applications:

- Moderate Pressure Control Applications
- Monitor Overpressure Protection
- Volumetric Flow Control Applications
- Below Ground configuration Capable

Complete Station Design and Control Valve Sizing Provided by VRG Controls



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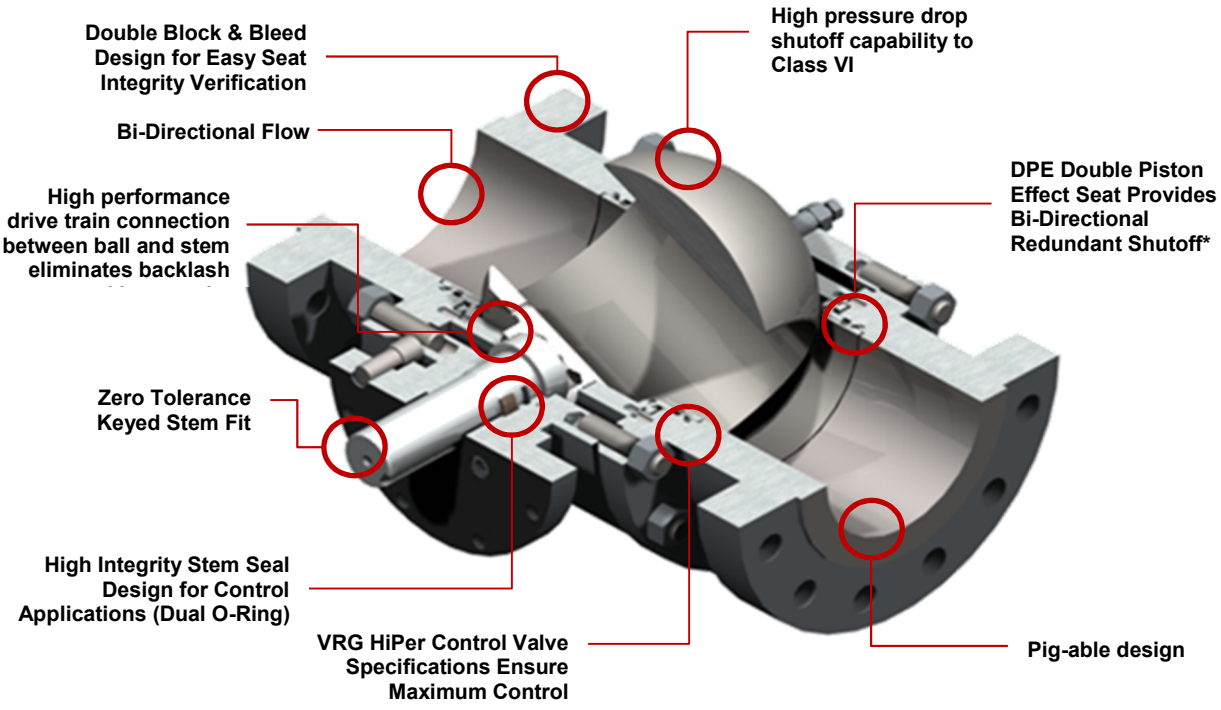
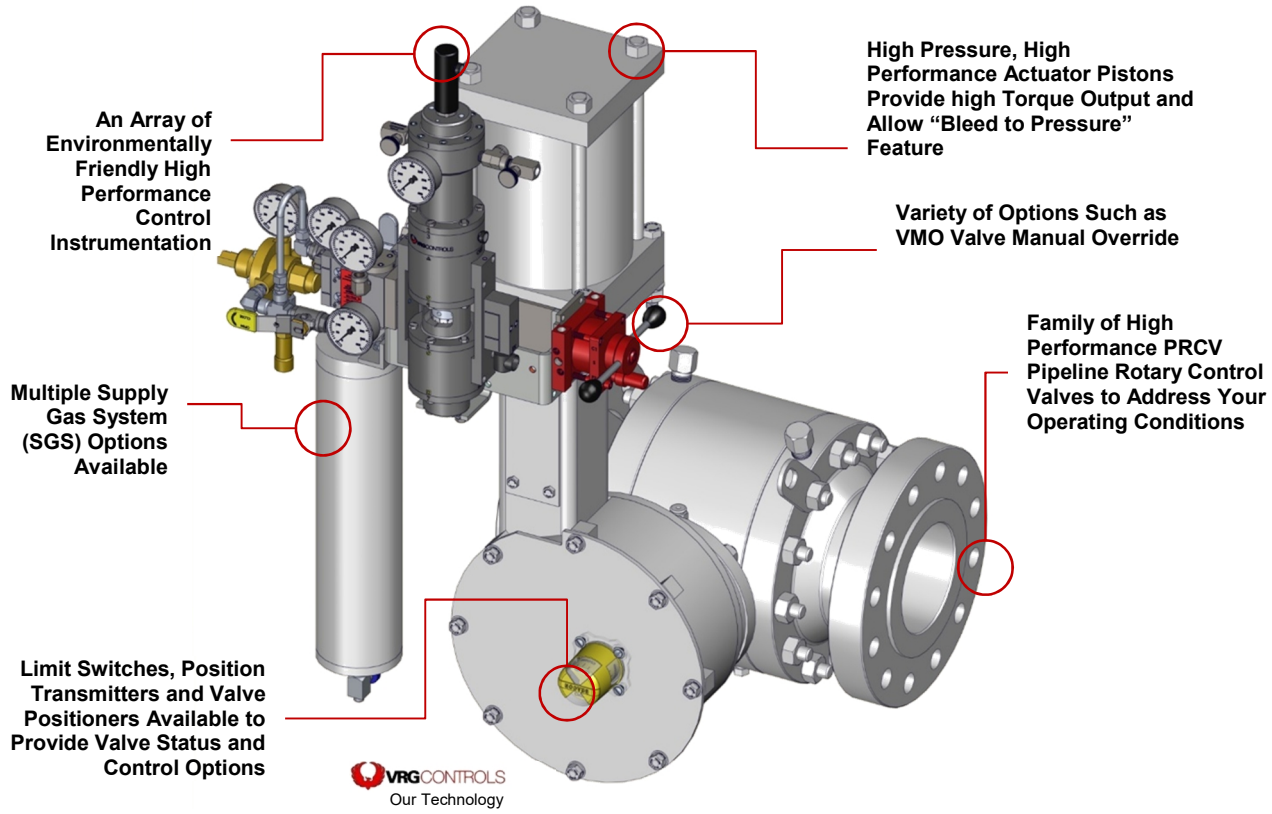

Double Block & Bleed Design for Easy Seat Integrity Verification
Bi-Directional Flow
High performance drive train connection between ball and stem eliminates backlash
Zero Tolerance Keyed Stem Fit
High Integrity Stem Seal Design for Control Applications (Dual O-Ring)
VRG HiPer Control Valve Specifications Ensure Maximum Control
High pressure drop shutoff capability to Class VI
DPE Double Piston Effect Seat Provides Bi-Directional Redundant Shutoff*
Pig-able design


An Array of Environmentally Friendly High Performance Control Instrumentation
Multiple Supply Gas System (SGS) Options Available
Limit Switches, Position Transmitters and Valve Positioners Available to Provide Valve Status and Control Options
High Pressure, High Performance Actuator Pistons Provide high Torque Output and Allow "Bleed to Pressure" Feature
Variety of Options Such as VMO Valve Manual Override
Family of High Performance PRCV Pipeline Rotary Control Valves to Address Your Operating Conditions
VRGCONTROLS
Our Technology

Aggressive Noise Attenuation for High Capacity Natural Gas Regulation Facilities

Natural gas regulation facilities inherently generate noise during pressure and volume control processes. As regulation facility throughput requirements have grown and populations have encroached on facilities the need for aggressive noise attenuation capabilities has increased. VRG Controls can provide a cost-effective solution to mitigate noise and lessen environmental impact. VRG Controls engineers have decades of experience implementing Buried Control Valve Installations in natural gas pipelines and gas utilities. The "Buried Concept" has exhibited proven reliability, effective noise attenuation capabilities and simple maintenance needed throughout the gas industry.

Buried Control Valve Features:

- Most Aggressive Noise Attenuation Technology in Industry Provides 25 to 37 dBA Compared to Non-Attenuated Applications
- Maximum Noise Attenuation without Sacrificing High Capacity
- Non-Clogging / Unrestricted Design Provides Decades of Trouble Free Service
- Maintains Inherent Flow Characteristics of PRCV Pipeline Rotary Control Valves
- Smaller M&R Station Footprint and Easier Accessibility for Operators
- Eliminate Need for Extra Heavy Wall Pipe, Pipe Lagging and Noise Attenuating Buildings
- Buried Concept Insulates Piping and Minimizes Ambient Heat Loss
- May be Paired with Stealth Technology PRCV's and Other Noise Attenuation Technology to Achieve Ultimate Noise Attenuation Performance
- Minimizes Number of Piping Fittings, Increases Capacity, and Avoids Topside Structural Components
- Reduced Noise Provides Greater Safety for Operators and General Public with Piping Maintained Safely Below Ground
- Maintenance is Easy with PRCV Pipeline Rotary Control Valve Lubrication and Drain Lines Extended Above Ground with Welded Construction to ASME Section 9 Specifications
- All Components are Hydro tested Beyond API Requirements and Documented

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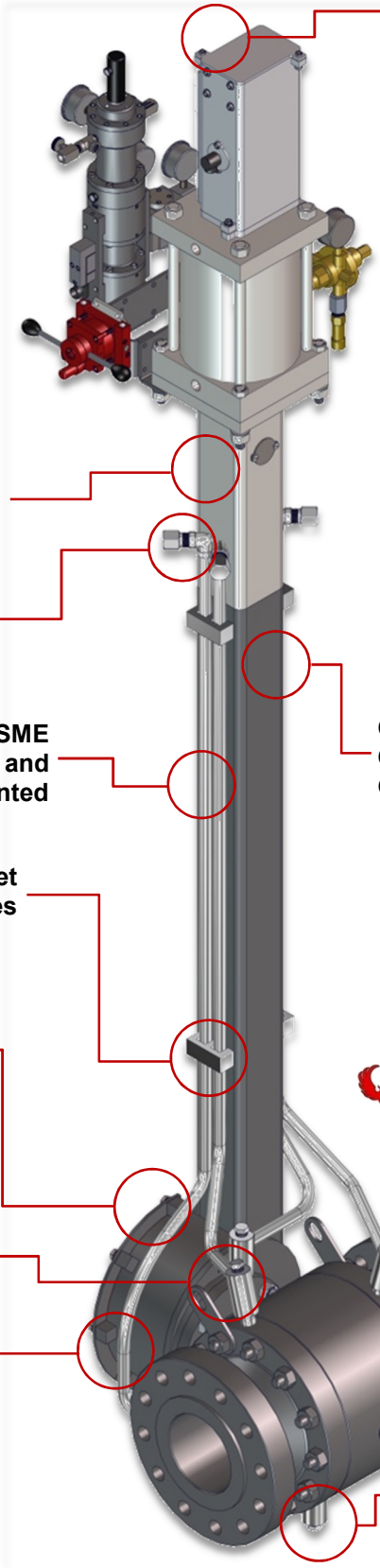
Ideal Features for High Capacity Natural Gas Regulation Facilities

VRG Exclusive PRCV Control Valve Sizing Program Allows Complete Design of Buried Control Valve Regulation Stations
FREE DOWNLOAD



Tail-rod Instrument Mounting System Standard Accepts All VRG Control Instrumentation Models and Accessories

Vented Actuator Housing

PRCV Maintenance Ports Terminated Above Ground

All Port Extension Lines ASME Code Welded, Hydro-tested and Documented

Fully Welded Bracket Supports on All Lines

Crank Arm and ZERO Tolerance Linkage System Eliminate Lost Motion and Torsional Deflection Associated with Vertical Stem Extensions

PRCV Seat Seals Extended Above Ground

Stem Lubrication / Test Extended

Coal Tar Epoxy Coating on Below Ground Portion

Our Technology VRGCONTROLS

Drain Line / Blowdown Extended

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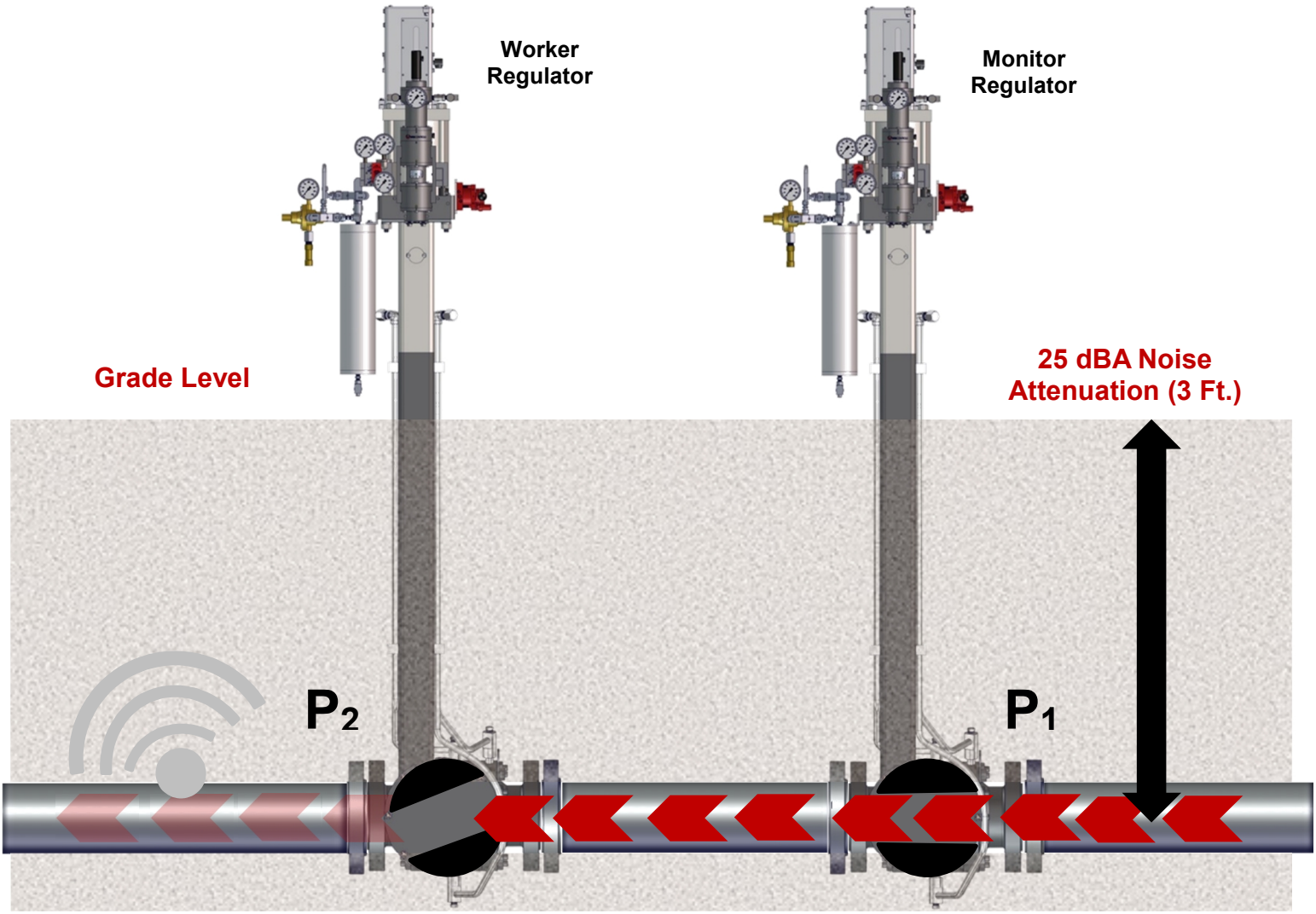
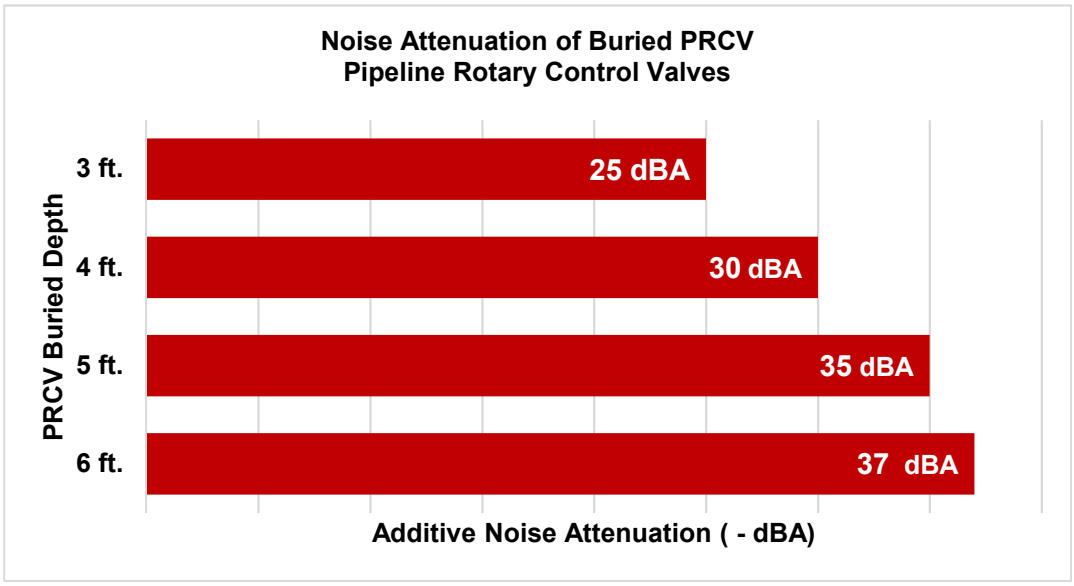
Typical Concept Buried Control Valve installation





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PRCV Buried Control Valve Maintenance and Inspection Considerations

Maintenance procedures for a PRCV Buried Control Valve are similar to those for above ground installations. Verbiage from the code of Federal Regulations regarding maintenance, PHMSA 49 CFR Part 192.739 reads:

Pressure limiting and regulating stations - Inspection and testing.
Each pressure limiting station, relief device (except rupture discs), and pressure regulating station and its equipment must be subjected at intervals not exceeding 15 months, but at least once each calendar year, to inspections and tests to determine that it is:

1. In good mechanical condition;
2. Adequate from the standpoint of capacity and reliability of operation for the service in which it is employed;
3. Set to function at the correct pressure;
4. Properly installed and protected from dirt, liquids, or other conditions that might prevent proper operation.

There are no federal requirements that mandate the need for the physical internal inspection of any regulator. This includes rotary control valves, globe control valves, and pilot-operated regulators. Natural gas industry trends have moved toward minimizing inspection of the internal components of the final control element. Virtually no operating companies inspect internals of above ground control valves on an annual basis, regardless of whether the control valve is installed in an above ground or buried installation. Integrity of PRCV seats may be easily verified using the PRCV drain/vent fitting and/or adjacent piping vents. Integrity of the PRCV Stem Seal may be verified and maintained using dedicated piping extensions. Verification of RHPA Actuator components may be easily achieved utilizing procedures outlined in VRG Installation, Operation and Maintenance Manuals which do not require any excavation. Maintenance procedures for VRG PRCV control valves are identical for above or below ground control valves. VRG PRCV control valves installed in Buried Control Valve Application should provide many years of trouble frees service when utilized under normal operating guidelines without a need for excavation.

Figure 1 – Below Ground Control Valve Installation
VRG Below Ground control valves installed for injection and withdrawal control on one of nation's largest sandstone aquifer natural gas storage facilities in Illinois, USA. Two valves are part of parallel valve system for system redundancy. Equipped with PMV DG3 Digital Positioner and VMO Valve Manual Override.

Table 1.0 – PRCV Pipeline Rotary Control Valve Model Number Derivation

PRCV	Bore Size (in)	Control Valve Series		ANSI Rating		End Connection		Base Valve Platform	
	2								
	3	FP	Full Port	1.5	150	F	RFFE Flanged	54	Delta Type 54
	4	STH1	Stealth Trim #1	3	300	W	Weld End	55	Delta Type 55
	6	STH2	Stealth Trim #2	6	600	RTJ	RTJ Flanged	T31	Cameron Type T31
	8	STHP	Stealth Trim HP	9	900	WXF	Example Combo	B4	Cameron Grove Type B4
	10			15	1500			B5	Cameron Grove Type B5
	12							VP	Valpres
	14							XX	Other
	16								
	18								
	20								
	22								
	24								
	26								
	30								
	32								
	34								
	36								
	42								
PRCV	**6**	**FP**		**6**		**F**		**55**	**PRCV6FP6F55**

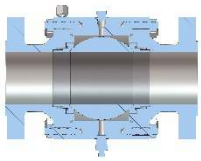
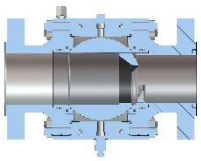
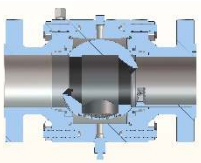
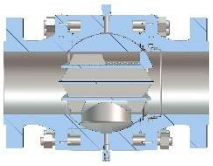
EXAMPLE: PRCV6FP6F55 = 6.0 in 600 ANSI RFFE Full Port PRCV, Delta Type 55 Base Platform

Notes:

1. Reduced Port and other custom configurations available. Contact VRG Controls for additional details and assistance.
2. Base Valve Platform represents the OEM manufacturer. VRG Controls PRCV Pipeline Rotary Control Valves are optimized for pipeline control modulating service utilizing VRG PRCV control valve specifications.

PRCV Pipeline Rotary Control Valve
Product Overview

Ver 050219

PRCV Series	PRCV-FP	PRCV-STH1	PRCV-STH2	PRCV-STHP
Size Range	2 in to 42 in	6 in to 24 in	6 in to 24 in	6 in to 24 in
Design Standard	API-6D / ASME B16.5 API 6FA	API-6D / ASME B16.5 API 6FA	API-6D DIM / ASME B16.5 API 6FA	API-6D DIM, ASME B16.5 & B16.34, API 6FA / PED
ANSI Range	150 – 1500 ANSI	150 – 1500 ANSI	150 – 1500 ANSI	150 – 1500 ANSI
End Connections	RFFE, Weld, RTJ, Combo	RFFE, Weld, RTJ, Combo	RFFE, Weld, RTJ, Combo	RFFE, Weld, RTJ, Combo
Trim Type	Full Port	Stealth Trim Level 1	Stealth Trim Level 2	Stealth Trim High Performance
Performance Trim Technology	N/A	Upstream Var Diffuser Upstream Fixed Diffuser	Upstream Var Diffuser Downstream Var Diffuser Upstream Fixed Diffuser Drilled Hole Ball Side Exit	Upstream Var Diffuser Ball Diffuser Plates Ball Side Exit
Relative Capacity	Maximum Capacity	Very High Capacity	Very High Capacity	High Capacity
Max Noise Attenuation	N/A	7 dBA	15 dBA	25 dBA
Max Control ΔP	FULL ANSI ΔP	1000 psid	1000 psid	1440 psid
Max Shutoff ΔP	FULL ANSI ΔP	FULL ANSI ΔP	FULL ANSI ΔP	FULL ANSI ΔP
Compatible Buried Applications	YES	YES	YES	YES
Max Range-Ability	100:1	300:1	300:1	200:1
Min Control Cv	1.0% Max Cv	0.33% Max Cv	0.33 % Max Cv	0.5% Max Cv
Max Control Cv	90% Max Cv	85% Max Cv	85% Max Cv	85% Max Cv
Shutoff	API 6D Bubble Tight	Class VI	Class V	Class V
Seats	2X Seats Soft Seats Std Double Piston Effect Metal Seats Optional	2X Seats Soft Seats Std Double Piston Effect Metal Seats Optional	1X Upstream Soft Seats Std Double Piston Effect Metal Seats Optional	1X Upstream Metal Seats Std Double Piston Effect
Compatible Actuators	VRG RHPA-DA VRG RHPA-SR Electric Actuators Other Manufacturers	VRG RHPA-DA VRG RHPA-SR Electric Actuators Other Manufacturers	VRG RHPA-DA VRG RHPA-SR Electric Actuators Other Manufacturers	VRG RHPA-DA VRG RHPA-SR Electric Actuators Other Manufacturers
Final Assembly and Test Country of Origin (Valve Trims)	USA	USA	USA	ITALY

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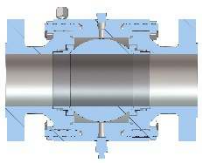
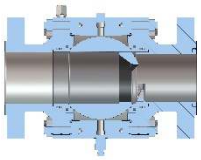
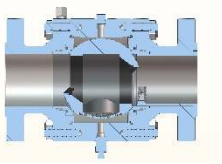
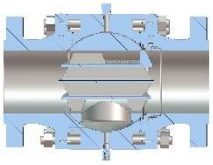
PRCV Pipeline Rotary Control Valve
Product Overview

Ver 050219

PRCV Series	PRCV-FP	PRCV-STH1	PRCV-STH2	PRCV-STHP
Base Platform	T31 / 54 / 55 / B5	55 / B5	55 / B5	VP
Base Manufacturer	Delta / Cameron / Grove	Delta / Grove	Delta / Grove	Valpres
Control Valve Specs	Per VRG PRCV Specifications	Per VRG PRCV Specifications	Per VRG PRCV Specifications	Per VRG PRCV Specifications
Body (Forged)	A350 LF2	A350 LF2	A350 LF2	A350 LF2
Stem	AISI 4140 + 1.0 mil ENP	AISI 4140 + 1.0 mil ENP	AISI 4140 + 1.0 mil ENP	17-4PH SS
Ball	A350 LF2 + 1.0 mil ENP + PRCV Control Specification Moly Sulfide Coating Baked & Polished ** N/A Type T31	A350 LF2 + 1.0 mil ENP + PRCV Control Specification Moly Sulfide Coating Baked & Polished	A350 LF2 + 1.0 mil ENP + PRCV Control Specification Moly Sulfide Coating Baked & Polished	A350 LF6 6.0 mil TCC PRCV Control Specification
Lubrication	Mobil SHC220	Mobil SHC220	Mobil SHC220	Mobil SHC220
Stem Seal	VITON O-RINGS, or NYLON or PTFE U-Cups	VITON O-RINGS, or NYLON or PTFE U-Cups	VITON O-RINGS, or NYLON or PTFE U-Cups	PTFE V-PACK
Stem Injection**	Stem Inject & Opposing Stem Relief Port	Stem Inject & Opposing Stem Relief Port	Stem Inject & Opposing Stem Relief Port	Stem Inject & Opposing Stem Relief Port
Body Drain**	Rotate 90° From Stem	Rotate 90° From Stem	Rotate 90° From Stem	Rotate 90° From Stem
Seat Ring**	A350 LF2 50% Seat Springs Wave Spring – Type T31	A350 LF2 50% Seat Springs	A350 LF2 50% Seat Springs	AI182 F6A 6.0 mil TCC 50% Seat Springs
Seat Seal	VITON O-Ring Insert DEVLON O-Ring Insert NYLON Molded Insert	VITON O-Ring Insert DEVLON O-Ring Insert	VITON O-Ring Insert DEVLON O-Ring Insert	N/A - Metal Seated
Seat Injection	Upstream/Downstream Buttonhead ** N/A Type 54	Upstream/Downstream Buttonhead	Upstream/Downstream Buttonhead	Upstream Buttonhead
O-Rings	VITON	VITON	VITON	VITON AED
Firesafe Seals	GRAPHITE	GRAPHITE	GRAPHITE	GRAPHITE
Upstream Var. Diffuser	--	17-4PH SS	17-4PH SS	17-4PH SS
Downstream Var. Diffuser	--	--	17-4PH SS	17-4PH SS
Fixed Diffuser	--	17-4PH SS	17-4PH SS	--
Rotary Diffuser Plates	--	--	--	17-4PH SS
Ball Side Exit Hole	--	--	YES	YES
Exterior Coating	SP-10 / VRG Zinc Primer / VRG Epoxy Topcoat (WHITE) *Customer Specific Coatings Available	SP-10 / VRG Zinc Primer / VRG Epoxy Topcoat (WHITE) *Customer Specific Coatings Available	SP-10 / VRG Zinc Primer / VRG Epoxy Topcoat (WHITE) *Customer Specific Coatings Available	SP-10 / VRG Zinc Primer / VRG Epoxy Topcoat (WHITE) *Customer Specific Coatings Available

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Table 1.0 - Flow Coefficients vs. Control Valve Position PRCV-FP Pipeline Rotary Control Valve

		Valve Opening (Degrees Rotation)								
Valve Size	**Min Control Cv**	**10°**	**20°**	**30°**	**40°**	**50°**	**60°**	**70°**	**80°**	**90°**
2 in	3	4	12	23	39	64	104	156	224	260
3 in	5	9	26	49	82	136	220	330	474	550
4 in	10	16	47	87	145	241	389	585	840	975
6 in	26	42	124	231	388	642	1039	1559	2240	2600
8 in	52	86	251	467	783	1297	2097	3148	4522	5250
10 in	84	139	406	755	1267	2100	3395	5096	7321	8500
12 in	138	227	664	1235	2072	3434	5552	8334	11973	13900
16 in	223	367	1074	2000	3354	5559	8987	13490	19380	22500
20 in	384	634	1852	3448	5784	9587	15498	23262	33420	38800
24 in	574	947	2769	5155	8646	14331	23168	34773	49958	58000
30 in	971	1600	4679	8710	14608	24214	39145	58755	84412	98000
36 in	1525	2515	7352	13687	22955	38050	61514	92330	132648	154000
FACTOR	0.010	0.016	0.048	0.089	0.149	0.247	0.399	0.600	0.861	1.000
Xt	0.82	0.82	0.82	0.91	0.79	0.71	0.55	0.36	0.91	0.10

Figure 1.0 - Flow Profile Curve PRCV-FP Pipeline Rotary Control Valve

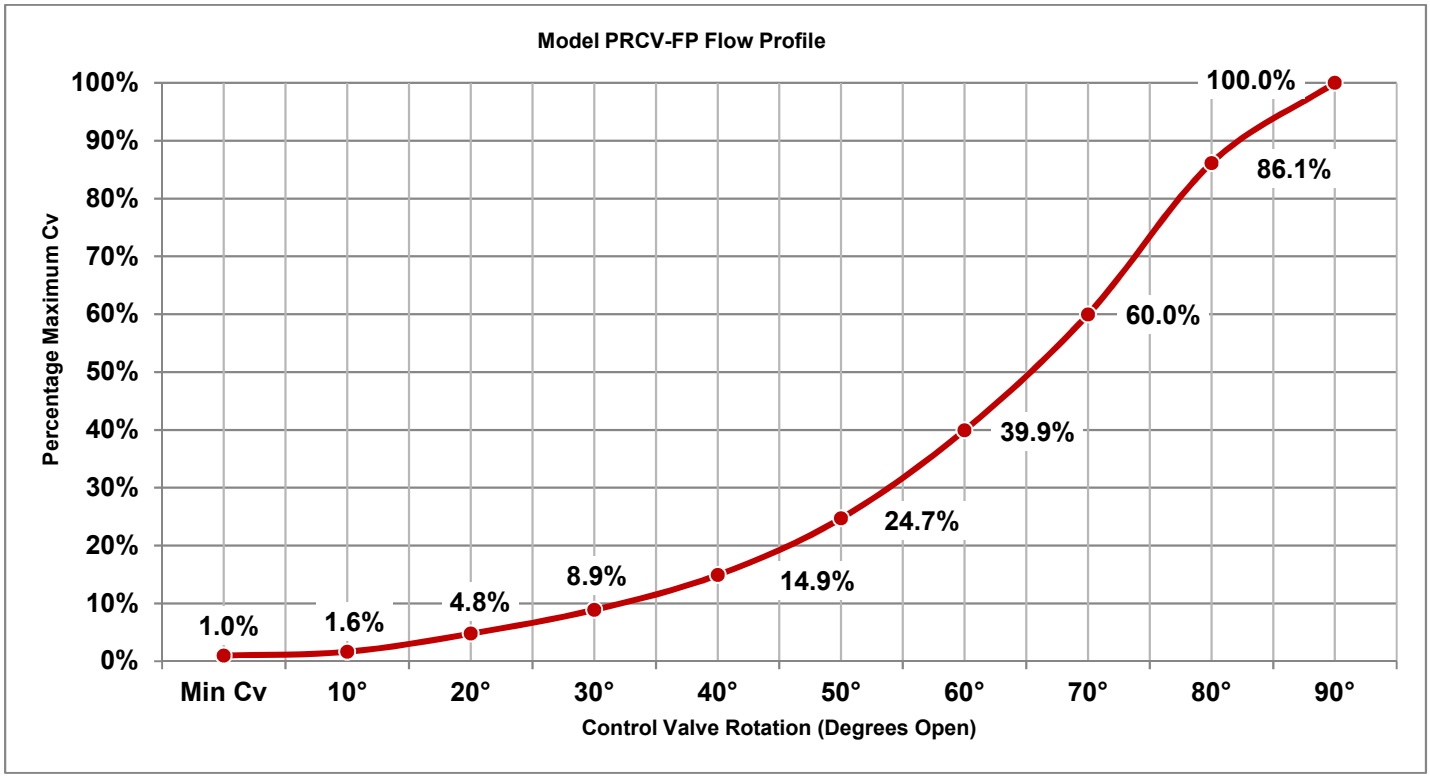


Table 1.0 - Flow Coefficients versus Control Valve Position PRCV-STH1 Pipeline Rotary Control Valve

		Valve Opening (Degrees Rotation)								
Valve Size	Min Control	10°	20°	30°	40°	50°	60°	70°	80°	90°
6 in	5	5	32	60	106	133	219	569	912	1398
8 in	7	8	49	92	163	205	337	875	1401	2148
10 in	11	13	76	144	255	384	632	1407	2242	3468
12 in	16	18	109	208	367	553	835	1788	2875	4749
16 in	27	33	194	369	651	983	1485	3097	5148	8222
20 in	42	51	305	577	1018	1536	2320	4776	7721	12595
24 in	60	74	438	832	1466	2213	3340	6878	11118	18137
FACTOR	0.0033	0.004	0.023	0.043	0.076	0.095	0.157	0.407	0.652	1.000

Consult VRG Controls For Additional Information

Figure 1.0 - Flow Profile Curve PRCV-STH1 Pipeline Rotary Control Valve

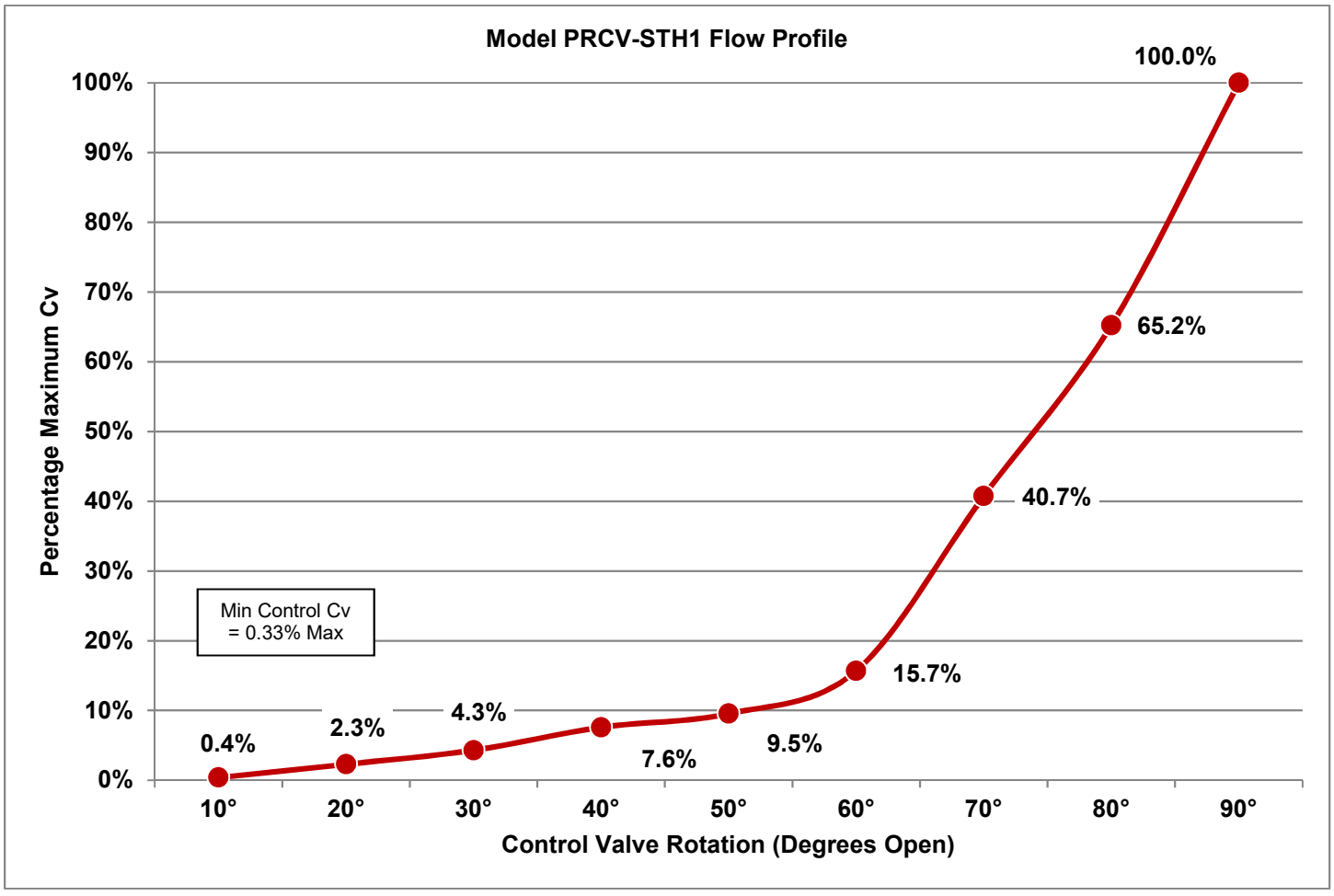


Table 1.0 - Flow Coefficients versus Control Valve Position PRCV-STH2 Pipeline Rotary Control Valve

		Valve Opening (Degrees Rotation)								
Valve Size	Min Control	10°	20°	30°	40°	50°	60°	70°	80°	90°
6 in	5	5	26	51	90	136	205	541	888	1371
8 in	7	8	48	91	160	241	364	858	1373	2105
10 in	11	13	74	142	250	377	569	1380	2198	3399
12 in	15	18	107	204	359	542	818	1752	2818	4655
16 in	27	32	191	363	638	964	1455	3036	5046	8059
20 in	92	50	299	567	998	1506	2274	4682	7568	12346
24 in	59	72	430	815	1438	2168	3274	6742	10898	17778
FACTOR	0.003	0.004	0.023	0.043	0.076	0.114	0.173	0.408	0.652	1.000

Consult VRG Controls For Additional Information

Figure 1.0 - Flow Profile Curve PRCV-STH2 Pipeline Rotary Control Valve

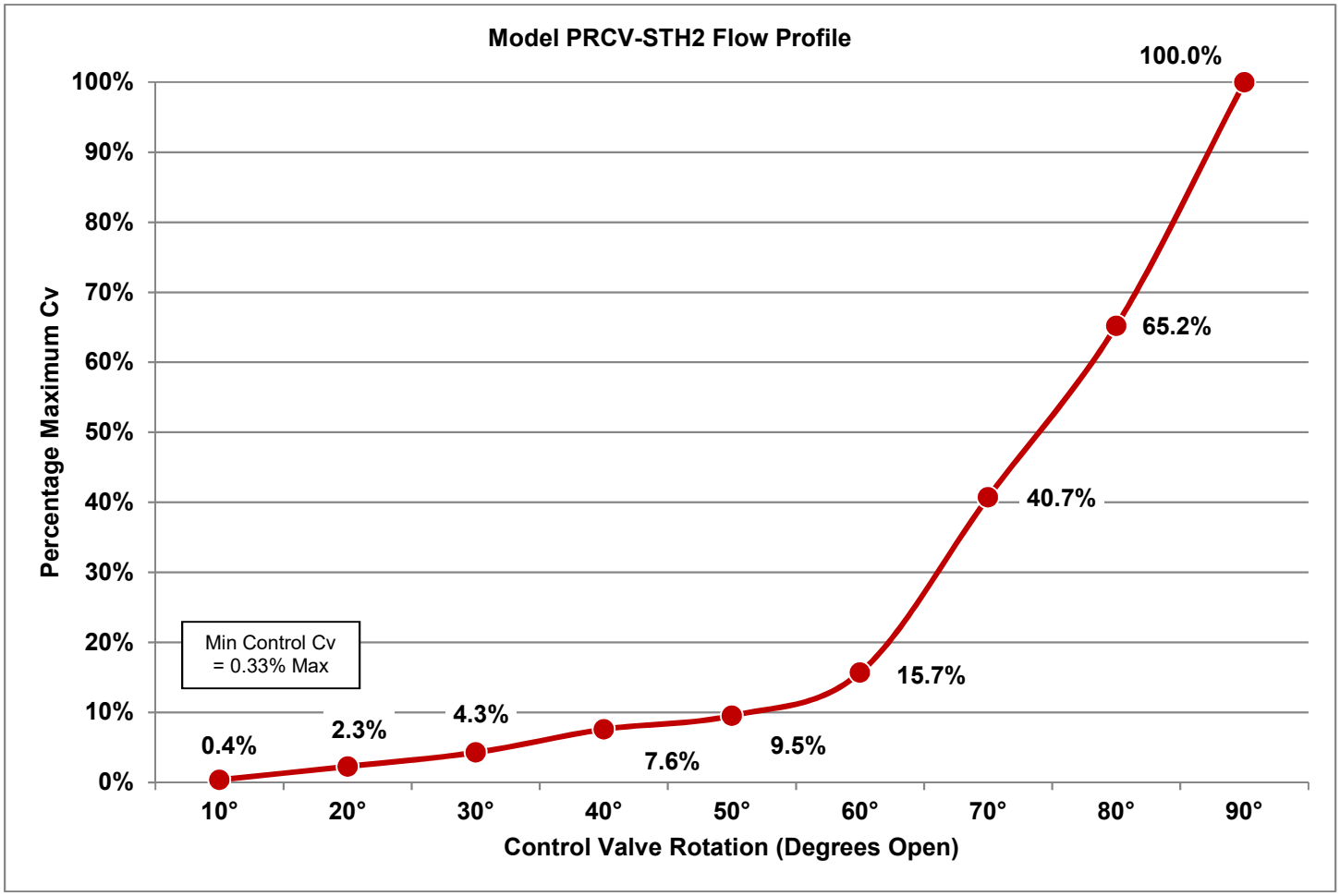
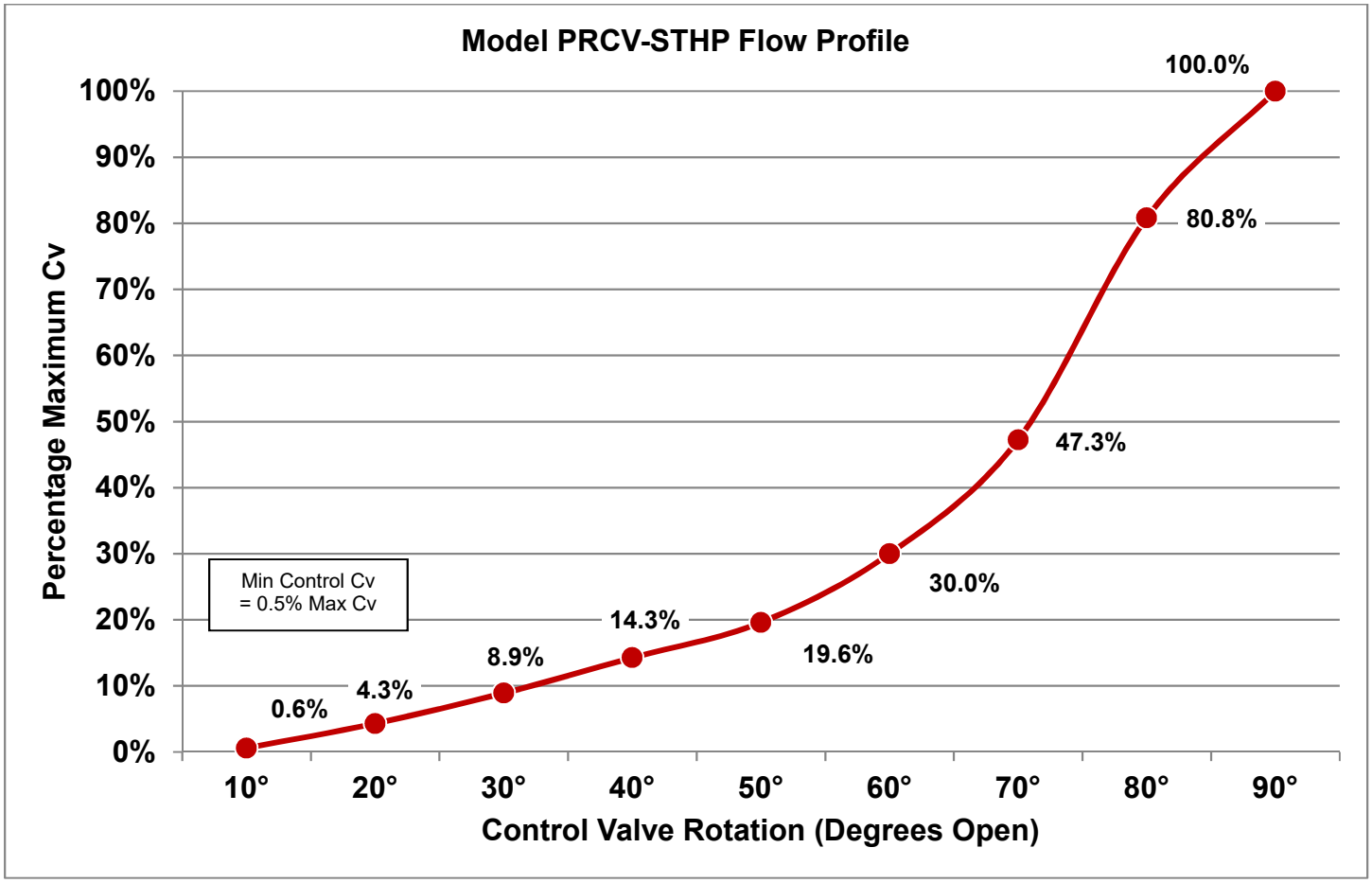


Table 1.0 - Flow Coefficients versus Control Valve Position PRCV-STHP Pipeline Rotary Control Valve

		Valve Opening (Degrees Rotation)								
Valve Size	Min Control	10°	20°	30°	40°	50°	60°	70°	80°	90°
6 in	3	4	29	60	96	131	202	318	544	673
8 in	6	7	50	103	165	226	347	547	935	1157
10 in	9	11	81	167	267	366	561	885	1513	1872
12 in	13	16	116	240	384	527	809	1275	2179	2696
16 in	24	29	206	427	683	936	1437	2266	3873	4792
20 in	37	45	322	667	1068	1462	2245	3540	6050	7487
24 in	54	65	464	960	1538	2106	3234	5098	8715	10784
FACTOR	0.005	0.006	0.04	0.09	0.14	0.20	0.30	0.47	0.81	1.00

Consult VRG Controls For Additional Information

Figure 1.0 - Flow Profile Curve PRCV-STHP Pipeline Rotary Control Valve



PRCV Pipeline Rotary Control Valves
Noise Frequency Distribution

Ver 030117

Overview: Aerodynamic noise predictions are calculated at a point 3.0 ft. downstream and 3.0 ft. above the pipe wall in which the control valve considered is installed. An overall dBA scale rating is derived that combines all frequencies generated into a single "audible" value. To determine predicted noise as distributed by octave band, utilize the Table 1.0 – PRCV Octave Band Correction Factors. To calculate overall dBA predicted noise performance, utilize VRGSize Sizing Program.

Table 1.0 – PRCV Octave Band Correction Factors

		Frequency Octave Band							
Pipe Dia. (in)	**Pipe Schedule**	**63 Hz**	**125 Hz**	**250 Hz**	**500 Hz**	**1000 Hz**	**2000 Hz**	**4000 Hz**	**8000 Hz**
4	5S to XXS	-50	-50	-50	-41	-27	-15	-3	-6
6	5S to XXS	-50	-50	-41	-29	-15	-3	-6	-9
8	5S to 160	-50	-50	-41	-29	-15	-3	-6	-9
10	5S to 160	-50	-50	-41	-29	-15	-3	-6	-9
12	5S to 160	-50	-40	-29	-17	-3	-3	-9	-16
14	5S to 160	-50	-40	-29	-17	-3	-3	-9	-16
16	5S to 160	-50	-41	-29	-17	-3	-3	-9	-16
18	5S to 160	-50	-41	-29	-17	-3	-3	-9	-16
20	5S to 160	-50	-41	-29	-17	-3	-3	-9	-16
24	5S to 160	-41	-29	-17	-3	-6	-6	-16	-21
24	120 to 160	-50	-41	-29	-9	-3	-3	-9	-16
30	5S to 30	-41	-29	-17	-3	-6	-6	-16	-21
36	10 to 40	-41	-29	-17	-3	-6	-6	-16	-21
42	10 to 40	-41	-29	-17	-3	-6	-6	-16	-21

Example:

A PRCV installed in 6 in Dia. SCH 40 Pipe has a predicted noise of 85 dBA from VRG Size program.
Using the above table with 85 dBA prediction, the octave band noise distribution is as follows:

	Frequency Octave Band							
	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
6 in SCH 40 Pipe	-50	-50	-41	-29	-15	-3	-6	-9
Predicted dBA	85	85	85	85	85	85	85	85
Resultant Corrected dB Per Octave Band	**35 dB**	**35 dB**	**44 dB**	**56 dB**	**70 dB**	**82 dB**	**79 dB**	**76 dB**

Table 1.0 – PRCV / FP / STH1 / STH2 / STHP Pipeline Rotary Control Valves – Face-to-Face Dimensions (RFFE)

Valve Size	150 ANSI		300 ANSI		600 ANSI		900 ANSI		1500 ANSI		Valve Size
in	in	(mm)	in	(mm)	in	(mm)	in	(mm)	in	(mm)	(mm)
2	7	(178)	8.5	(216)	11.5	(292)	14.5	(368)	14.5	(368)	(50)
3	8	(203)	11.1	(283)	14	(356)	15	(381)	18.5	(470)	(80)
4	9	(229)	12	(305)	17	(432)	18	(457)	21.5	(546)	(100)
6	**15.5**	**(394)**	**15.9**	**(403)**	**22**	**(559)**	**24**	**(610)**	**28**	**(711)**	**(150)**
8	**18**	**(457)**	**19.8**	**(502)**	**26**	**(660)**	**29**	**(737)**	**32.8**	**(832)**	**(200)**
10	**21**	**(533)**	**20.4**	**(518)**	**31**	**(787)**	**33**	**(838)**	**39**	**(991)**	**(250)**
12	**24**	**(610)**	**25.5**	**(648)**	**33**	**(838)**	**38**	**(965)**	**44.5**	**(1130)**	**(300)**
16	**30**	**(762)**	**33**	**(838)**	**39**	**(991)**	**44.5**	**(1130)**	**54.5**	**(1384)**	**(400)**
20	**36**	**(914)**	**39**	**(991)**	**47**	**(1194)**	**52**	**(1321)**	**65.5**	**(1664)**	**(500)**
24	**42**	**(1067)**	**45**	**(1143)**	**55**	**(1397)**	**61**	**(1549)**	**80.5**	**(2045)**	**(600)**
30	51	(1295)	55	(1397)	65	(1651)	74	(1880)	--	--	(750)
36	60	(1524)	68	(1727)	82	(2083)	90	(2286)	--	--	(900)

Notes:

1. Reduced Port and other configurations available. Contact VRG Controls for additional details.
2. PRCV-STH1, PRCV-STH2, and PRCV-STHP Restricted AVAILABLE IN 6 in to 24 in Bore only.

Table 2.0 – PRCV / FP / STH1 / STH2 / STHP Pipeline Rotary Control Valves – Weights (RFFE)

Valve Size	150 ANSI		300 ANSI		600 ANSI		900 ANSI		1500 ANSI		Valve Size
in	Lbs.	(kg)	Lbs.	(kg)	Lbs.	(kg)	Lbs.	(kg)	Lbs.	(kg)	(mm)
2	61	(28)	68	(31)	79	(36)	112	(51)	130	(59)	(50)
3	130	(59)	150	(68)	160	(72)	195	(88)	255	(116)	(80)
4	210	(95)	240	(109)	295	(134)	355	(161)	430	(195)	(100)
6	**330**	**(200)**	**485**	**(220)**	**550**	**(250)**	**850**	**(390)**	**1,270**	**(575)**	**(150)**
8	**610**	**(350)**	**825**	**(375)**	**975**	**(440)**	**1,225**	**(560)**	**1,650**	**(750)**	**(200)**
10	**975**	**(500)**	**1,175**	**(535)**	**1,550**	**(700)**	**1,800**	**(820)**	**2,620**	**(1190)**	**(250)**
12	**1,435**	**(705)**	**1,675**	**(760)**	**2,025**	**(920)**	**2,700**	**(1230)**	**3,640**	**(1650)**	**(300)**
16	**2,250**	**(1020)**	**2,850**	**(1295)**	**3,375**	**(1530)**	**4,420**	**(2000)**	**8,800**	**(4000)**	**(400)**
20	**4,225**	**(1920)**	**4,575**	**(2075)**	**5,800**	**(2630)**	**7,610**	**(3450)**	**--**	**--**	**(500)**
24	**6,175**	**(2800)**	**6,775**	**(3075)**	**8,700**	**(3950)**	**12,100**	**(5490)**	**--**	**--**	**(600)**
30	10,600	(4800)	12,275	(5575)	14,725	(6690)	21,000	(9530)	--	--	(750)
36	16,750	(7600)	18,525	(8400)	23,400	(10620)	29,900	(12200)	--	--	(900)

Notes:

1. Published weights are for bare stem valves and do not include packaging, actuator, control instrumentation or accessories.
2. Reduced Port and other configurations available. Contact VRG Controls for additional details.
3. PRCV-STH1, PRCV-STH2, and PRCV-STHP Restricted AVAILABLE IN 6 in to 24 in Bore only.

Table 3.0 – PRCV / FP / STH1 / STH2 / STHP Pipeline Rotary Control Valves – Face-to-Face Dimensions (RTJ)

Valve Size	150 ANSI		300 ANSI		600 ANSI		900 ANSI		1500 ANSI		Valve Size
in	in	*(mm)*	in	*(mm)*	in	(mm)	in	*(mm)*	in	*(mm)*	(mm)
2	--	--	--	--	11.6	*(295)*	14.6	*(371)*	14.6	*(371)*	*(50)*
3	--	--	--	--	14.1	*(359)*	15.1	*(384)*	18.6	*(473)*	*(80)*
4	--	--	--	--	17.1	*(435)*	18.1	*(460)*	21.6	*(549)*	*(100)*
6	**--**	**--**	**--**	**--**	**22.1**	***(562)***	**24.1**	***(613)***	**28**	***(711)***	***(150)***
8	**--**	**--**	**--**	**--**	**26.1**	***(664)***	**29.1**	***(740)***	**33.1**	***(841)***	***(200)***
10	**--**	**--**	**--**	**--**	**31.1**	***(791)***	**33.1**	***(841)***	**39.4**	***(1000)***	***(250)***
12	**--**	**--**	**--**	**--**	**33.1**	***(841)***	**38.1**	***(968)***	**45.1**	***(1146)***	***(300)***
16	**--**	**--**	**--**	**--**	**39.1**	***(994)***	**44.9**	***(1140)***	**55.4**	***(1407)***	***(400)***
20	**--**	**--**	**--**	**--**	**47.3**	***(1200)***	**52.5**	***(1334)***	**--**	**--**	***(500)***
24	**--**	**--**	**--**	**--**	**55.4**	***(1407)***	**61.8**	***(1568)***	**--**	**--**	***(600)***
30	--	--	--	--	29.1	*(740)*	74.9	*(1902)*	--	--	*(750)*
36	--	--	--	--	82.6	*(2099)*	91.1	*(2315)*	--	--	*(900)*

Notes:

1. Reduced Port and other configurations available. Contact VRG Controls for additional details.
2. PRCV-STH1, PRCV-STH2, and PRCV-STHP Restricted AVAILABLE IN 6 in to 24 in Bore only.

Table 4.0 – PRCV / FP / STH1 / STH2 / STHP Pipeline Rotary Control Valves – Weights (RTJ)

Valve Size	150 ANSI		300 ANSI		600 ANSI		900 ANSI		1500 ANSI		Valve Size
in	Lbs.	*(kg)*	Lbs.	*(kg)*	Lbs.	*(kg)*	Lbs.	*(kg)*	Lbs.	*(kg)*	(mm)
2	--	--	--	--	79	*(36)*	112	*(51)*	130	*(59)*	*(50)*
3	--	--	--	--	160	*(73)*	195	*(88)*	255	*(116)*	*(80)*
4	--	--	--	--	295	*(134)*	355	*(161)*	430	*(195)*	*(100)*
6	**--**	**--**	**--**	**--**	**550**	***(249)***	**850**	***(386)***	**1,270**	***(576)***	***(150)***
8	**--**	**--**	**--**	**--**	**975**	***(442)***	**1,225**	***(556)***	**1,650**	***(748)***	***(200)***
10	**--**	**--**	**--**	**--**	**1,550**	***(703)***	**1,800**	***(816)***	**2,620**	***(1188)***	***(250)***
12	**--**	**--**	**--**	**--**	**2,025**	***(919)***	**2,700**	***(1225)***	**3,640**	***(1651)***	***(300)***
16	**--**	**--**	**--**	**--**	**3,375**	***(1531)***	**4,420**	***(2005)***	**8,800**	***(3992)***	***(400)***
20	**--**	**--**	**--**	**--**	**5,800**	***(2631)***	**7,610**	***(3452)***	**--**	**--**	***(500)***
24	**--**	**--**	**--**	**--**	**8,700**	***(3946)***	**12,100**	***(5488)***	**--**	**--**	***(600)***
30	--	--	--	--	14,725	*(6679)*	21,000	*(9525)*	--	--	*(750)*
36	--	--	--	--	23,400	*(10614)*	29,900	*(13562)*	--	--	*(900)*

Notes:

1. Published weights are for bare stem valves and do not include packaging, actuator, control instrumentation or accessories.
2. Reduced Port and other configurations available. Contact VRG Controls for additional details.
3. PRCV-STH1, PRCV-STH2, and PRCV-STHP Restricted AVAILABLE IN 6 in to 24 in Bore only.

Table 5.0 – PRCV / FP / STH1 / STH2 / STHP Pipeline Rotary Control Valves–Face-to-Face Dimensions (WELD END)

Valve Size	150 ANSI		300 ANSI		600 ANSI		900 ANSI		1500 ANSI		Valve Size
in	in	(mm)	in	(mm)	in	(mm)	in	(mm)	in	(mm)	(mm)
2	8.5	(216)	8.5	(216)	11.5	(292)	14.5	(368)	14.6	(371)	(50)
3	11.1	(283)	11.1	(283)	14	(356)	15	(381)	18.6	(473)	(80)
4	12	(305)	12	(305)	17	(432)	18	(457)	21.6	(549)	(100)
6	**18**	**(457)**	**18**	**(457)**	**22**	**(559)**	**24**	**(610)**	**27.8**	**(705)**	**(150)**
8	**20.5**	**(521)**	**20.5**	**(521)**	**26**	**(660)**	**29**	**(737)**	**32.8**	**(832)**	**(200)**
10	**22**	**(559)**	**22**	**(559)**	**31**	**(787)**	**33**	**(838)**	**39**	**(991)**	**(250)**
12	**25**	**(635)**	**25**	**(635)**	**33**	**(838)**	**38**	**(965)**	**44.5**	**(1130)**	**(300)**
16	**33**	**(838)**	**33**	**(838)**	**39**	**(991)**	**44.5**	**(1130)**	**54.5**	**(1384)**	**(400)**
20	**39**	**(991)**	**39**	**(991)**	**47**	**(1194)**	**52**	**(1321)**	**--**	**--**	**(500)**
24	**45**	**(1143)**	**45**	**(1143)**	**55**	**(1397)**	**61**	**(1549)**	**--**	**--**	**(600)**
30	55	(1397)	55	(1397)	65	(1651)	74	(1880)	--	--	(750)
36	68	(1727)	68	(1727)	82	(2083)	90	(2286)	--	--	(900)

Notes:

1. Reduced Port and other configurations available. Contact VRG Controls for additional details.
2. PRCV-STH1, PRCV-STH2, and PRCV-STHP Restricted AVAILABLE IN 6 in to 24 in Bore only.

Table 6.0 – PRCV / FP / STH1 / STH2 / STHP Pipeline Rotary Control Valves – Weights (WELD END)

Valve Size	150 ANSI		300 ANSI		600 ANSI		900 ANSI		1500 ANSI		Valve Size
in	Lbs.	(kg)	Lbs.	(kg)	Lbs.	(kg)	Lbs.	(kg)	Lbs.	(kg)	(mm)
2	57	(26)	57	(26)	61	(28)	72	(33)	82	(37)	(50)
3	125	(57)	125	(57)	140	(63)	150	(68)	185	(84)	(80)
4	200	(91)	200	(91)	235	(107)	255	(116)	290	(132)	(100)
6	**425**	**(195)**	**425**	**(195)**	**450**	**(204)**	**650**	**(295)**	**970**	**(440)**	**(150)**
8	**725**	**(330)**	**725**	**(330)**	**840**	**(380)**	**950**	**(430)**	**1,190**	**(540)**	**(200)**
10	**1,050**	**(475)**	**1,025**	**(465)**	**1,250**	**(570)**	**1,400**	**(640)**	**1,840**	**(835)**	**(250)**
12	**1,450**	**(660)**	**1,450**	**(660)**	**1,700**	**(770)**	**2,200**	**(1,000)**	**2,660**	**(1,210)**	**(300)**
16	**2,150**	**(975)**	**2,350**	**(1,065)**	**2,825**	**(1,280)**	**4,420**	**(1,590)**	**6,750**	**(3,070)**	**(400)**
20	**4,050**	**(1,840)**	**4,050**	**(1,840)**	**5,100**	**(2,310)**	**7,610**	**(2,730)**	**--**	**--**	**(500)**
24	**6,000**	**(2,730)**	**6,000**	**(2,725)**	**8,025**	**(3,640)**	**12,100**	**(4,150)**	**--**	**--**	**(600)**
30	10,400	(4,720)	10,925	(4,960)	13,450	(6,110)	21,000	(7,490)	--	--	(750)
36	16,650	(7,560)	16,650	(7,560)	20,860	(9,380)	29,900	(9,730)	--	--	(900)

Notes:

1. Published weights are for bare stem valves and do not include packaging, actuator, control instrumentation or accessories.
2. Reduced Port and other configurations available. Contact VRG Controls for additional details.
3. PRCV-STH1, PRCV-STH2, and PRCV-STHP Restricted AVAILABLE IN 6 in to 24 in Bore only.