

PRATT®

Ballcentric® Full/100% Port Eccentric Plug Valve



**Engineering Creative Solutions
for Fluid Systems Since 1901**

Suggested Specifications

The Henry Pratt Company criteria of quality, reliability, safety and value are embodied in the Ballcentric® Eccentric valve, setting higher standards for dependable performance with excellent features achieved by the utilization of the very latest design and manufacturing techniques.

- Computer Aided Design
- High Integrity Casting
- CNC manufacturing delivers consistent sizes on all components

All complemented by rigorous Quality Control System

Body

Conforming to AWWA C504 wall thickness, the Ballcentric valve body casting is in ASTM A126 CL B cast iron using high pressure molding techniques. Flanged or mechanical joint ends are available. Other materials are available upon request.

Flange diameter, thickness and drilling conform to ANSI B16.1 Class 125. Mechanical joints conform to AWWA C111 (ANSI A21.11).

Seat

The Ballcentric valve incorporates as standard, on 3" and larger, a 1/8" thick welded 99% nickel seat for corrosion and erosion resistance specifically profiled for low torque and extended seat life.

Stem Seal

High integrity sealing by combining the advantages of a resilient and abrasion resistant U-Cup seal. From vacuum to high pressure, the self-adjusting sealing system (per AWWA C504) gives positive, trouble-free service and is retained independently of the plug stem or external torque device, thereby eliminating periodic maintenance.

Bearings

The plug rotates in permanently lubricated sintered 303 stainless steel bearings, located in the body and bonnet, along with upper and lower PTFE thrust washers, which ensure consistently low operating torque.

Plug

Supported on integral trunnions, the plug is totally encapsulated with an elastomer that is molded to the casting providing tight shut off even under vacuum conditions. High integrity corrosion-free sealing is achieved by a variety of abrasion resistant elastomers which protect the plug right up to the trunnions. When assembled, the light compression of the elastomers onto PTFE thrust washers, prevents entry of abrasive materials into the bearings.

Bonnet Seal

Superior "O" ring sealing with metal/metal contact means lower bolting stresses compared with compression gaskets.

Flow

The full port design (round on 2.5" – 12" and rectangular on 14" and larger) with streamlined internal contours gives the highest industry capacity straight through flow in the full open position, reducing turbulence and pressure drop and the effect of erosive media. Handling of sludges and slurries is therefore enhanced.

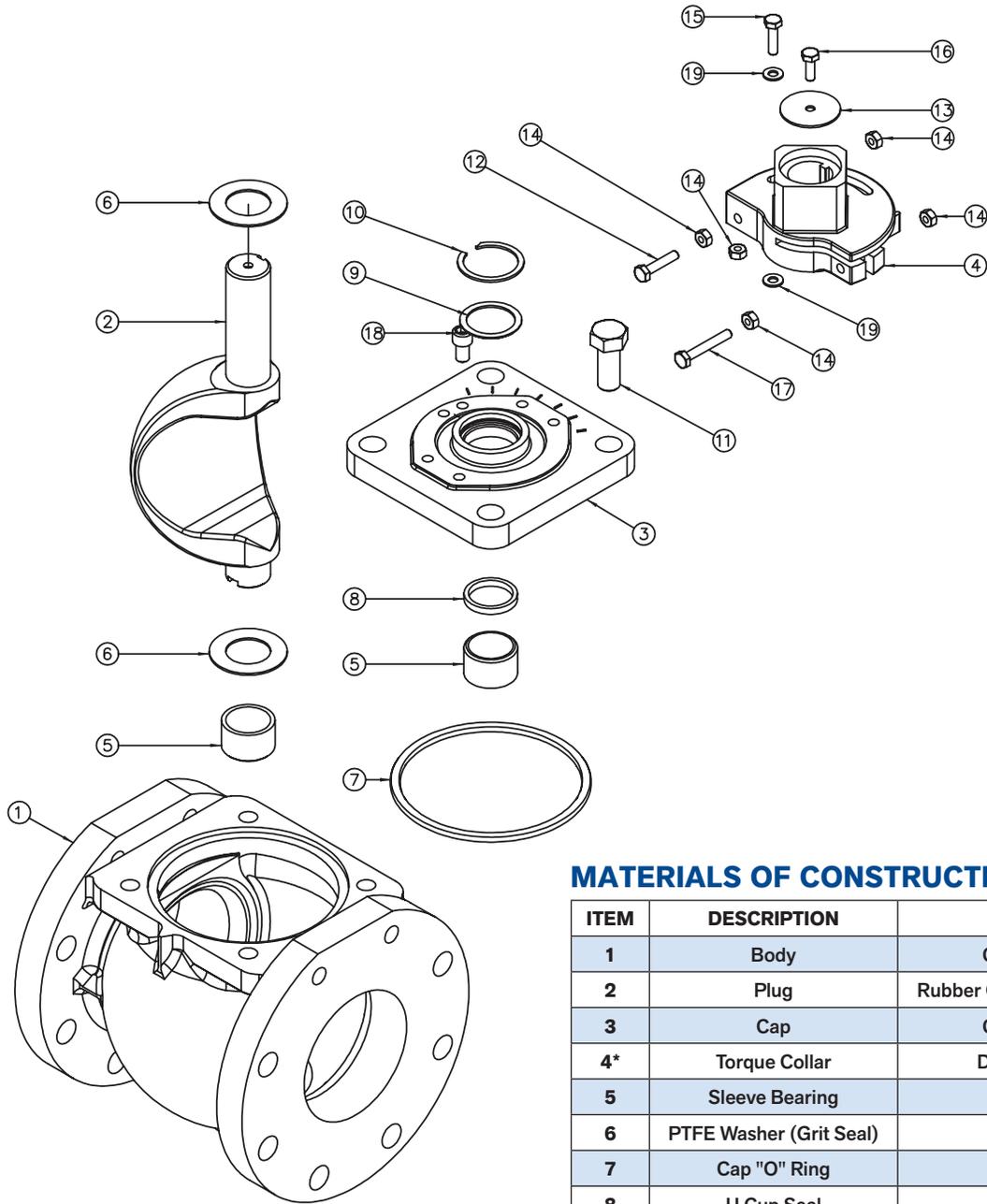
Interchangeable

Because of the common face to face dimension with wedge gate valves (3" – 12"), fitting the tight shut-off rotary Ballcentric valve into existing systems is accomplished without pipeline modifications.

Travel Stops

Adjustable open and closed travel stops are fitted as standard on both wrench and gear operated Ballcentric valves.

Standard Materials of Construction 12" & Smaller

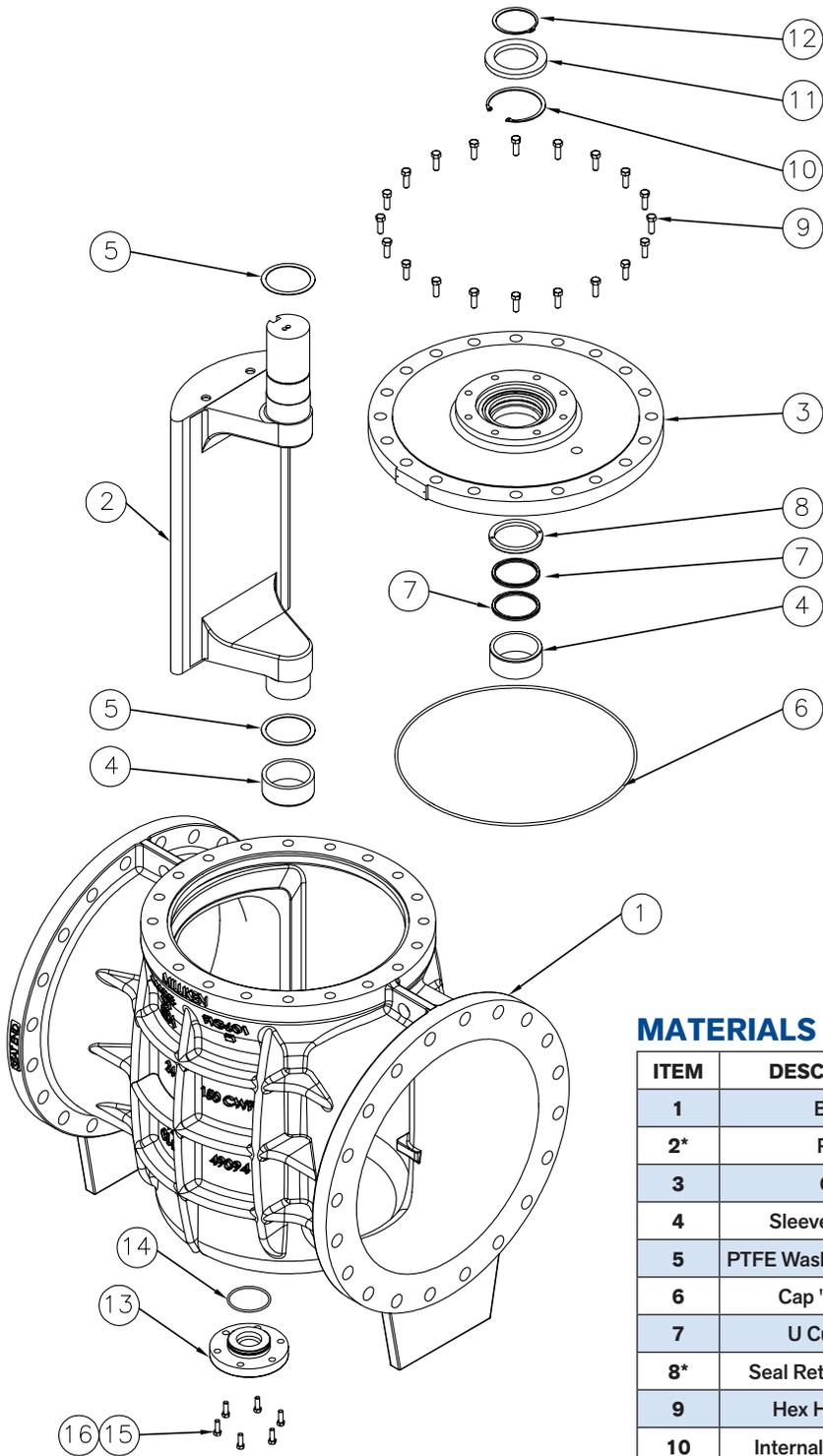


MATERIALS OF CONSTRUCTION

ITEM	DESCRIPTION	MATERIAL
1	Body	Cast Iron A126 Class B
2	Plug	Rubber Coated Duct. Iron ASTM A536
3	Cap	Cast Iron A126 Class B
4*	Torque Collar	Ductile Iron ASTM A536
5	Sleeve Bearing	303 Stainless Steel
6	PTFE Washer (Grit Seal)	PTFE
7	Cap "O" Ring	Elas. as Spec.
8	U Cup Seal	Elas. as Spec.
9	Washer	Brass – ASTM B-138-675
10	Internal Snap Ring	Spring Steel
11	Hex Head Bolt	Steel (Zinc Plated)
12*	Closed Stop	Steel (Zinc Plated)
13*	Locking Washer	Steel
14*	Nut	Steel (Zinc Plated)
15*	Open Stop	Steel (Zinc Plated)
16*	Cap Screw	Steel (Zinc Plated)
17*	Torque Bolt	Steel (Zinc Plated)
18*	Travel Stop	Steel
19*	Washer	Steel

*Note: Torque collar assembly on 8" and smaller

Standard Materials of Construction 14" & Larger



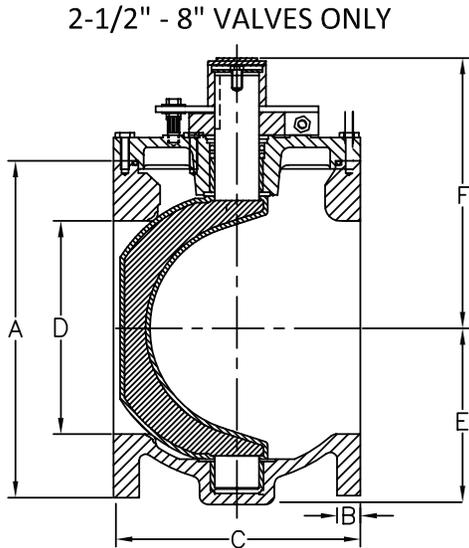
MATERIALS OF CONSTRUCTION

ITEM	DESCRIPTION	MATERIAL
1	Body	Cast Iron A126 Class B
2*	Plug	Rubber Coated Ductile Iron ASTM A536
3	Cap	Cast Iron A126 Class B
4	Sleeve Bearing	303 Stainless Steel
5	PTFE Washer (Grit Seal)	PTFE
6	Cap "O" Ring	Elas. as Spec.
7	U Cup Seal	Elas. as Spec.
8*	Seal Retaining Ring	See Note 1
9	Hex Head Bolt	Steel (Zinc Plated)
10	Internal Snap Ring	Spring Steel
11	Support Collar	Steel
12	External Snap Ring	Spring Steel
13	Bottom Cover	Cast Iron A126 Class B
14	Bottom Cover "O" Ring	Elas. as Spec.
15	Lock Washer	Spring Steel
16	Head Hex Bolt	Steel (Zinc Plated)

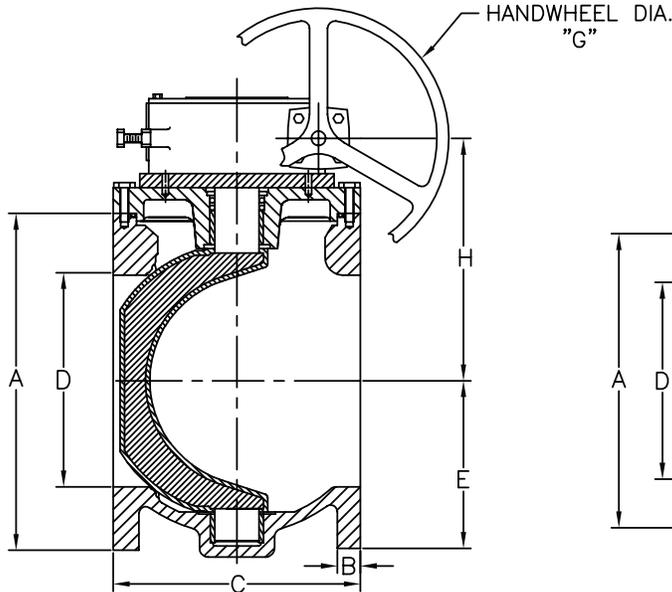
Note 1: Seal Retaining Ring: Brass-ASTM B-138-675 on 14"-20" Steel on 24" and Larger

Dimension Drawing 2.5" - 12"

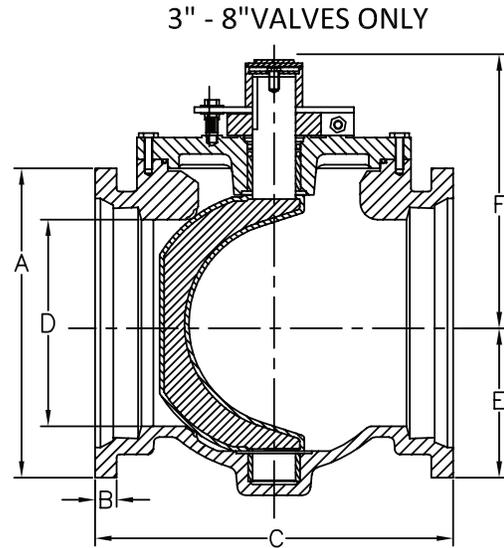
**FLANGED END FIG. 2.5" & 3" 601A
4" - 12" 601
175 PSI**



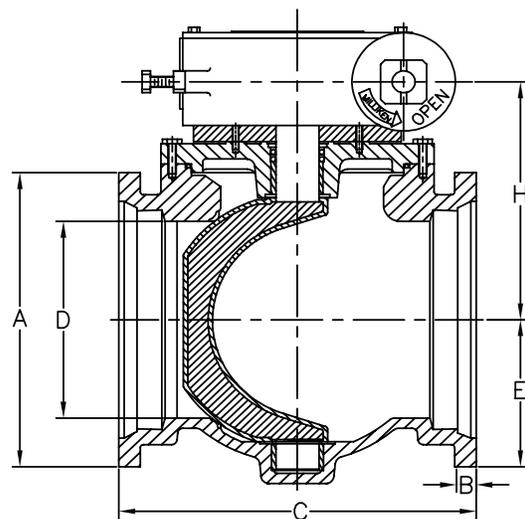
2-1/2" - 12" VALVES



**MECHANICAL JOINT END FIG. 600
175 PSI**



3" - 12" VALVES



FLANGED END - ANSI 125								
Size	2.50	3	4	5	6	8	10*	12*
A	7	7.5	9	10	11	13.5	16	19
B	.69	.75	.94	.94	1	1.13	1.19	1.25
C	7.5	8	9	10	10.5	11.5	13	14
D	2.5	3	4	5	6	8	10	12
E	3.5	3.75	4.5	5.75	5.75	7.63	8.88	10
F	6.62	6.62	7.38	8.66	8.66	11.16	--	--
G	6	6	6	6	6	12	12	12
H	5.34	5.34	6.38	7.63	7.63	9.69	11.44	12.81
Weight (Approx.)	30	40	70	105	115	190	** 345	** 440

MECHANICAL JOINT END						
Size	3	4	6	8	10*	12*
A	7.69	9.00	11.13	13.38	15.63	17.94
B	.94	1	1.06	1.13	1.19	1.25
C	11.5	14.25	15.75	17.38	19.38	20.75
D	3	4	6	8	10	12
E	3.84	4.50	5.69	7.63	8.88	10
F	6.62	7.38	8.66	11.16	--	--
H	5.34	6.38	7.63	9.69	11.44	12.81
Weight (Approx.)	50	80	125	200	** 360	** 480

*10" & above have gear operators as standard

**Weight includes gear operator

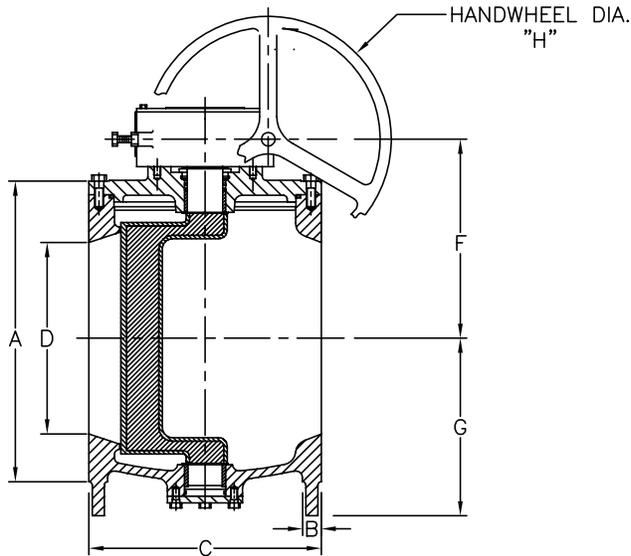
NOTE: Drawings are for information purposes only; please request certified drawings before preparing piping diagrams.

Dimension Drawing 14" - 48"

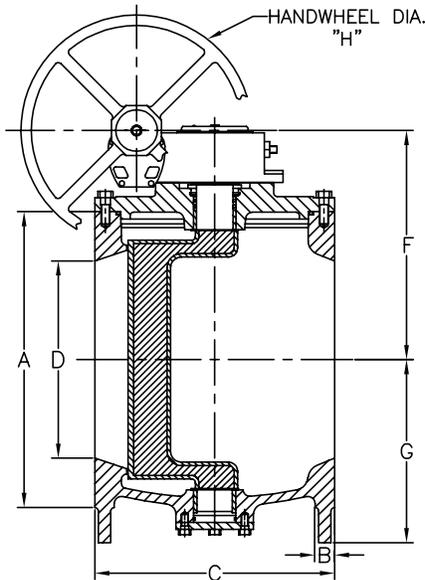
FLANGED END FIG. 601F

150 PSI

14" TO 20" VALVES



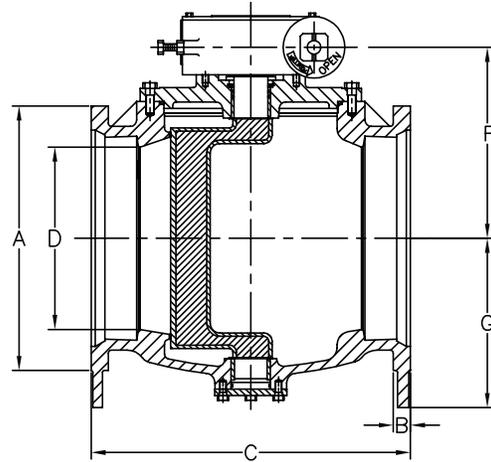
24" VALVES AND LARGER



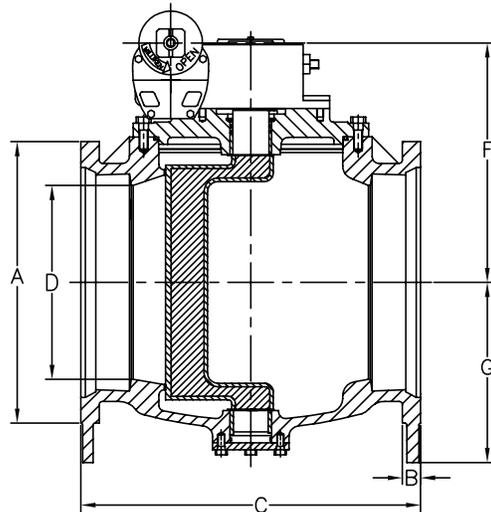
MECHANICAL JOINT END FIG. 600F

150 PSI

14" TO 20" VALVES



24" VALVES AND LARGER



FLANGED END - ANSI 125									
Size	14	16	18	20	24	30	36	42	48
A	21	23.5	25	27.5	32	38.75	46	53	59.5
B	1.38	1.44	1.56	1.69	1.88	2.13	2.38	2.63	3
C	17	17.75	21.5	23.5	42	51	60	72	84
D	14	16	18	20	24	30	36	42	48
F	16.81	17.48	18.63	22.25	30.25	34.63	38.38	42	49.9
G	15	16.13	17.64	20.7	24.75	29	33.38	36	42.5
H	18	18	18	18	24	24	24	32	32
Weight (Approx.)	905	1080	1480	1800	4090	7125	8800	11842	14146

MECHANICAL JOINT END									
Size	14	16	18	20	24	30	36	42	48
A	20.31	22.5	24.84	27.06	31.5	39.13	46	53	60
B	1.31	1.38	1.44	1.5	1.56	1.81	2	2	2
C	24.5	27.25	31	37.5	51	51	60	72	84
D	14	16	18	20	24	30	36	42	48
F	16.81	17.48	18.63	21.75	30.25	34.63	39.13	42	49.5
G	15	16.13	17.57	20	24.75	29	33.38	36	42.5
Weight (Approx.)	1065	1353	1675	1800	4090	7125	8775	11842	13767

Mechanical joint valves meet ANSI 21.11 & AWWA C-111

Flanged valves meet ANSI B16.1

Weight includes gear operator

NOTE: Drawings are for information purposes only; please request certified drawings before preparing piping diagrams

NOTE: Dimensions on 54" and larger available upon request

NOTE: 100% Rectangular Port Valves

Technical Specifications

Full/100% Port Ballcentric® Eccentric Plug Valves 2½"- 48" AWWA C517-09 Standards

Valves shall be of the non-lubricated eccentric type with an elastomer covering all seating surfaces. The elastomer shall be suitable for the service intended. Flanged valves shall be manufactured in accordance with ANSI B16.1 Class 125 including facing, drilling and flange thickness. Mechanical joint ends shall be in compliance with AWWA/ANSI C-111-92. Ports shall be round on sizes 2 ½"-12" and rectangular port design on valves 14" and larger. All valves shall be capable of being "pigged" with a soft pig when required.

Valve bodies shall be of ASTM A-126 Class B cast iron in accordance with AWWA C-517-09 Section 4.3.3.1. Valves 3" and larger shall be furnished with a welded-in overlay seat of 1/8" thick of not less than 99% nickel in accordance with AWWA C-517-09 Section 4.3.3.4. Sprayed, plated or screwed-in seats are not acceptable.

Plugs shall be of ASTM A-536-Grade 65-45-12 ductile iron for all sizes in compliance with AWWA C-517-09 Section 4.3.3.2. The plugs shall be of one piece solid construction with PTFE thrust washers on the upper and lower bearing journals to reduce torque and prevent dirt and grit from entering the bearing and seal area.

Valves shall be furnished with replaceable sleeve type bearings conforming to AWWA C-517-09 Section 4.3.3.6. Bearings shall be of sintered, oil impregnated 303 stainless steel.

Valve shaft seals shall be of the "U" cup type in accordance with AWWA C-517-09 Section 4.4.7. Seals shall be self adjusting and repackable without removing the bonnet from the valve.

Wrench operated valves 2½"-8" shall be capable of being converted to worm gear or automated operation without removing the bonnet or plug from the valve. All wrench operated valves shall be equipped with a 2" square nut for use with removeable levers or extended "T" handles.

Worm gear operators, where required, shall be of the heavy duty construction with the ductile iron quadrant supported on the top and bottom by oil impregnated bronze bearings. The worm gear and shaft shall be manufactured of hardened steel and run on high efficiency roller bearings. All worm gear operators shall be sized for bi-directional shutoff at the valves design pressure rating.

Valves shall be designed and manufactured to shut off bubble tight at 175 psi for valves 2½"-12" and 150 psi for valves 14" and larger. Each valve shall be given a hydrostatic and seat test with the test results being certified when required by the customer. Certified copies of Proof-of-Design test reports shall be furnished as outlined in AWWA C-517-09 Section 5.2.2 when requested.

Plug valves shall be Ballcentric® Series 601/600 as manufactured by Henry Pratt Company.

PRATT® PRODUCT GUIDE



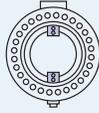
**Model
2FI**



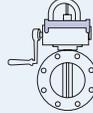
**Monoflange
MKII**



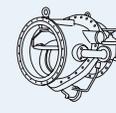
**Plug
Valve**



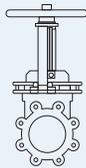
**Triton®
XR70**



**Indicating Butterfly Valve
UL & FM approved**



**Tilting Disc
Check Valve**



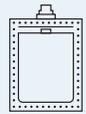
Knife Gate Valve



**N-Stamp Nuclear
Butterfly Valve**



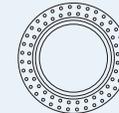
**Cone
Valve**



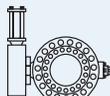
Rectangular



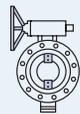
**PIVA Post Indicating Valve Assembly
UL & FM approved**



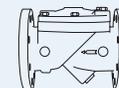
**Sleeve
Valve**



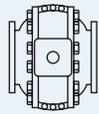
**Rubber Seated
Ball Valve**



**Triton®
HP250**



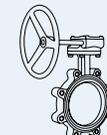
**Check
Valve**



**Metal Seated
Ball Valve**

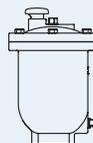


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**Industrial
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