HOMESTEAD®
WATER PRODUCTS
A Division of Olson Technologies, Inc.

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AWWA Butterfly Valves
Eccentric Plug Valves

Homestead Series 120 Eccentric Plug Valves conform to the following specifications:

A. Valve design conforms to AWWA C517-05.

B. Bodies, plugs and bonnets are made from Gray Iron castings, ASTM A-126, Class B. Body wall thickness meets AWWA C504-00, Section 4.5.1.5.

C. Ends of threaded valves have taper pipe threads that conform to ANSI B2.1.

D. End flanges are integral with the valve body. Flange drilling and thickness conforms to ANSI B16.1 (Cast Iron Pipe Flanges and Flanged Fittings) for pressure Class 125. Flanges are finished in accordance with MSS SP-6 (Finishes for Contact Faces of Connecting End Flanges of Ferrous Valves and Fittings).

E. Mechanical joint ends conform to AWWA C111/A21.11.

F. Face-to-Face dimensions of flanged end valves conform to ANSI B16.10 up to and including 12" size.

G. Valves are rated for 175 psi CWP for sizes 12" and smaller; 150 psi CWP for valves 14" through 36"; 125 psi CWP 42" and larger.

H. Valves conform to MSS SP-108 (Resilient Seated-Eccentric Cast Iron Plug Valves)

I. Port areas of valves 20" and smaller are not less than 80% of pipe area.

J. Upper and lower bearings are removable 316 stainless steel.

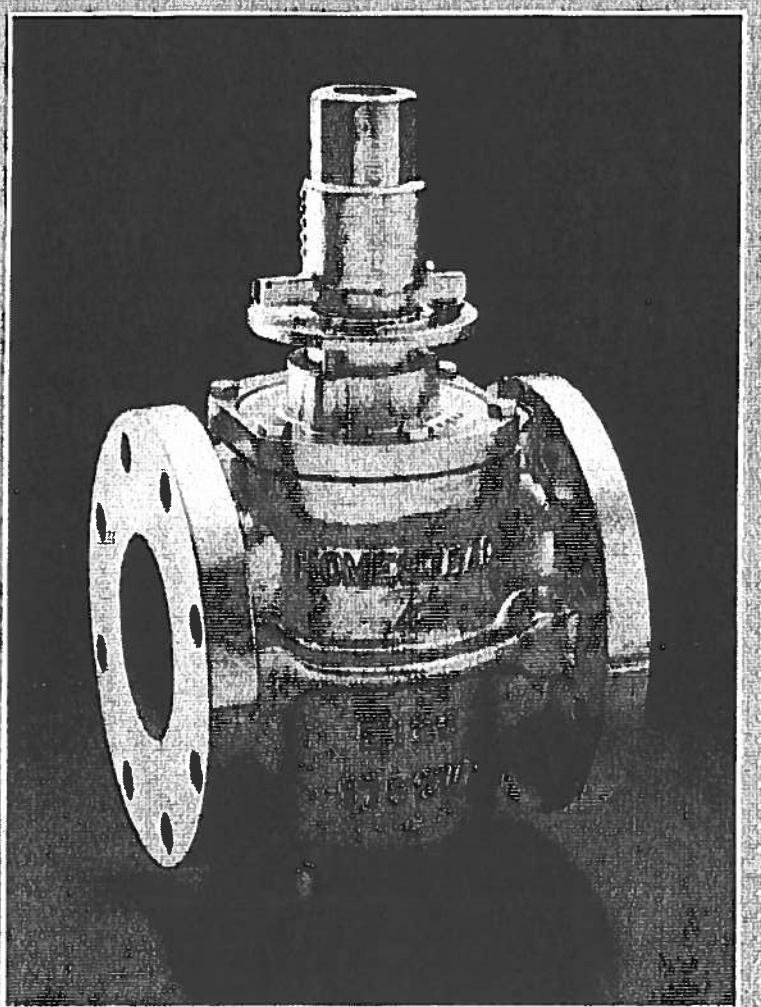
K. Seats are minimum 1/8" thick 95% raised welded nickel.

L. Stem seals are gland type multiple V-ring packing, field adjustable and replaceable without valve disassembly, conforming to AWWA C504, Section 4.5.7.1.

December 2006

HOMESTEAD®

Series 120 Eccentric Plug Valves



The Eccentric of Choice.

HOMESTEAD

Series 120 Eccentric Plug Valves

100 years of quality is built into every Homestead® Eccentric Plug Valve

For over 100 years Homestead® has been building a reputation of dependability, reliability, safety and uncompromising quality. Continuing in this tradition, this new eccentric plug valve delivers the same high level of performance you have come to expect from Homestead.

- Exclusive *TRUE* bi-directional design
- CAD/CAM Design
- Unequaled craftmanship
- Advanced manufacturing procedures

BODY
The Homestead eccentric body casting is in ASTM A126 Class B cast iron and conforms to the leading standard for wall thickness. Flange thickness, diameter and drilling fully conform to ANSI B16.1 Class 125. Alternative flanged, screwed or mechanical joint ends are available. A high quality two-part epoxy coating can be applied externally and internally to protect the casting integrity and assure long, trouble-free performance.

SEAT
Homestead's eccentric valve seat has been geometrically optimized for low torque operation and extended life. A 90% raised welded nickel seat is incorporated to resist the effects of corrosion and erosion.

STEM SEAL
Homestead's fully adjustable seals assure stem sealing in even the most demanding applications.

BEARINGS
316 stainless steel radial bearings are utilized to assure long trouble-free operation.

PLUG
Single piece plug/stem is designed for a quick lift camming motion to provide both low torque and reduced wear of the plug face elastomer. The elastomer extends along the stem in both directions to protect the integral trunnions and form the bearing interference. A wide range of plug elastomers are available to assure complete fluid compatibility.

BONNET
The high stresses associated with compression gasketing have been eliminated by incorporating high quality o-rings into our bonnet design.

FLOW
Valve ports have been enlarged and tapered to reduce pressure drop and provide enhanced handling of municipal sludges.

POSITION INDICATORS
Travel stops are integral for full travel indication in both directions. Intermediate positions are indicated in 10 degree increments. Positive indication is given on lever and gear operated valves.

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Series 120 Eccentric Plug Valves

Integral flange design
gives added strength for heavy slurry and automation applications.

Large diameter stem/plug
is designed for superior (trouble free) operation in throttling or other services experiencing line vibration.

Resilient coated plug
resists corrosion and sustains a bubble-tight seal when activated against the welded nickel seat.

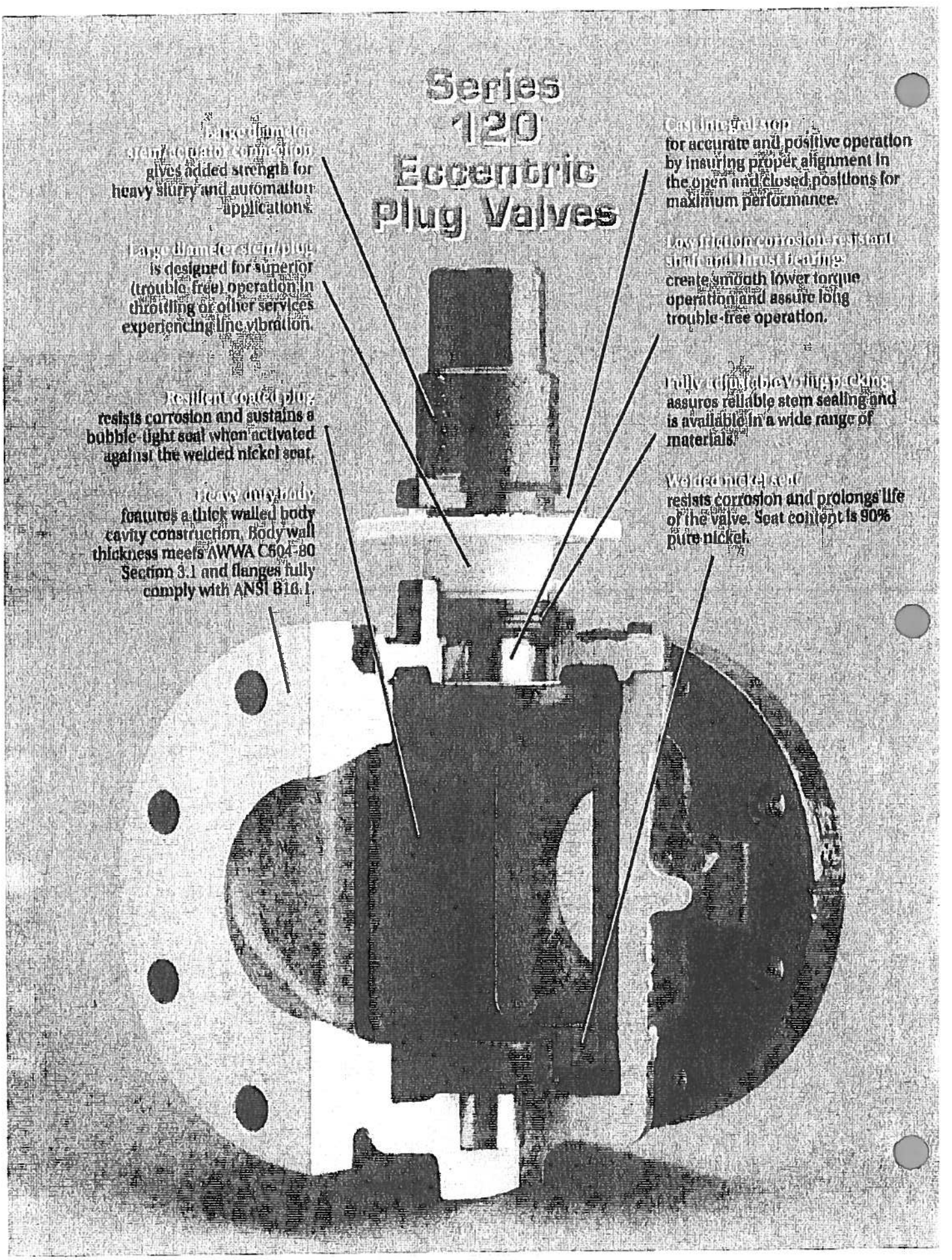
Heavy duty body
features a thick walled body cavity construction. Body wall thickness meets AWWA C504-80 Section 3.1 and flanges fully comply with ANSI B16.1.

Positive stop
for accurate and positive operation by insuring proper alignment in the open and closed positions for maximum performance.

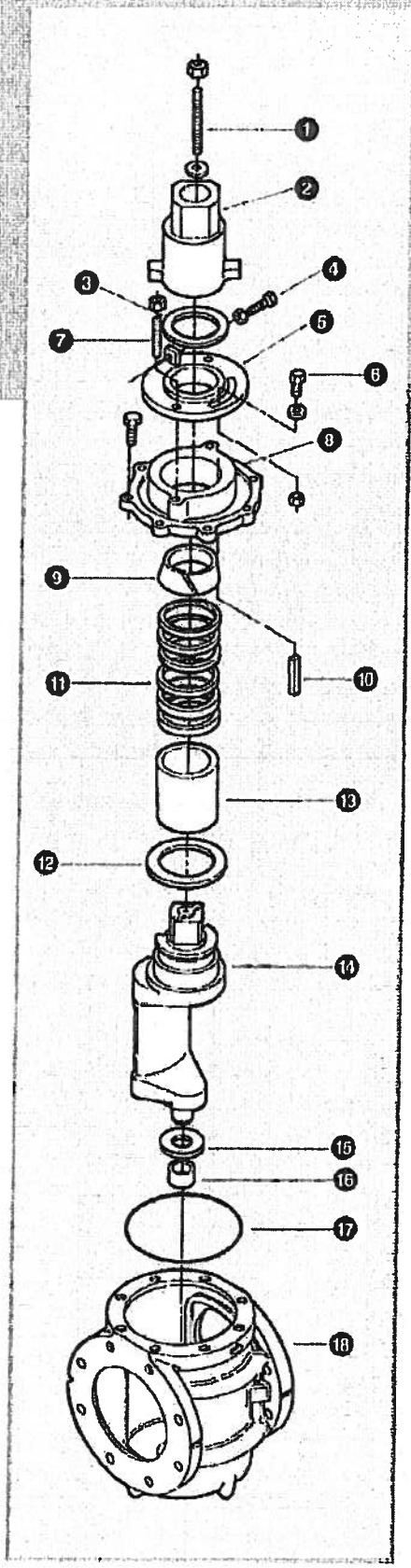
Low friction corrosion-resistant sintered thrust bearing
create smooth lower torque operation and assure long trouble-free operation.

Fully adjustable V-type packing
assures reliable stem sealing and is available in a wide range of materials.

Welded nickel seat
resists corrosion and prolongs life of the valve. Seat content is 90% pure nickel.



Homestead Eccentric plug valves ... designed for total quality



Item	Component	Material	Specification
1	Nut, Washer, Stud	Carbon, Stainless or Zinc Plated Steel	
2	Stop Collar	Cast Iron	A126 Class B
3	Washer	Teflon®	PTFE
4	Adj. Stop Bolt/Nut	Carbon, Stainless or Zinc Plated Steel	
5	Memory Plate	Cast Iron	A126 Class B
6	Cap Screws	Carbon, Stainless or Zinc Plated Steel	
7	Studs	Carbon, Stainless or Zinc Plated Steel	
8	Bonnet	Cast Iron	A126 Class B
9	Brake Ring	Teflon®	PTFE
10	Key	Carbon Steel	
11	V-Ring Packing	Neoprene, Buna-N, EPDM	
12	Upper Thrust Washer	316SS or Nylatron®	
13	Upper Radial Bearing	316SS or Perm. lubricated 316SS	
14	Plug	Cast Iron	A126 Class B
15	Lower Thrust Washer	316SS or Nylatron®	
16	Lower Radial Bearing	316SS or Perm. lubricated 316SS	
17	O-Ring	Neoprene, Buna-N, EPDM	
18	Body	Cast Iron	A126 Class B

Plug Valve Facing Materials

Standard	Optional
Neoprene	Hypalon
Buna-N	Natural Rubber
EPDM	Viton B
	Isoprene

Homestead Series 120 Eccentric Plug Valves

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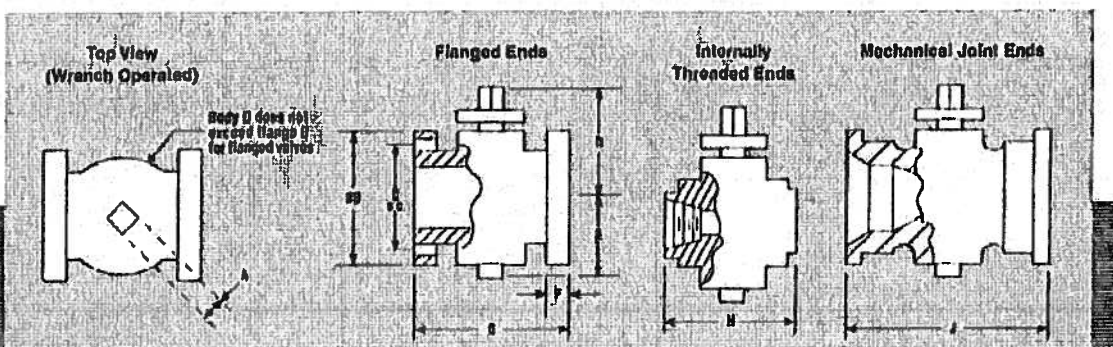
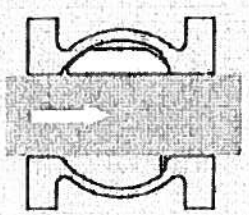
Valve Dimensions

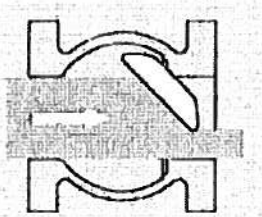


Valve Size	DIMENSIONS — INCHES								
	A	B	C	D	E	F	G	H	J
2	2	6	4 3/4	5 3/4	2 1/2	5/8	7	5 3/4	N/A
3	2	7 1/2	6	9 5/16	4 5/16	3/4	8	7 1/2	11 1/2
4	2	9	7 1/2	10 3/8	5 3/16	15/16	9	10	14 1/4
6	2	11	9 1/2	12 1/4	6 7/8	1	10 1/2	N/A	15 3/4
8	2	13 1/2	11 3/4	14 1/4	8 5/16	1 1/8	11 1/2	N/A	17 3/8
10	N/A	16	14 1/4	N/A	10 1/16	1 3/16	13	N/A	19 1/8
12	N/A	19	17	N/A	14 3/16	1 1/4	14	N/A	20 3/4

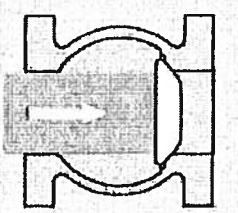
The Homestead Eccentric Operation



In the open position, the Homestead eccentric allows maximum straight-through flow thus minimizing pressure drop.



The Homestead eccentric plug opens and closes freely, without scraping the body walls, therefore there is no plug binding. Flow remains straight making this eccentric ideal for gases, liquids, and slurries.



Simple quarter-turn operation achieves positive shut-off in either direction. The long-lasting resilient plug remains in full contact with the eccentric raised seat. Pressure and flow assist in producing an even tighter seal when flow is in the direction shown above.

Homestead Series 120 Eccentric Plug Valves

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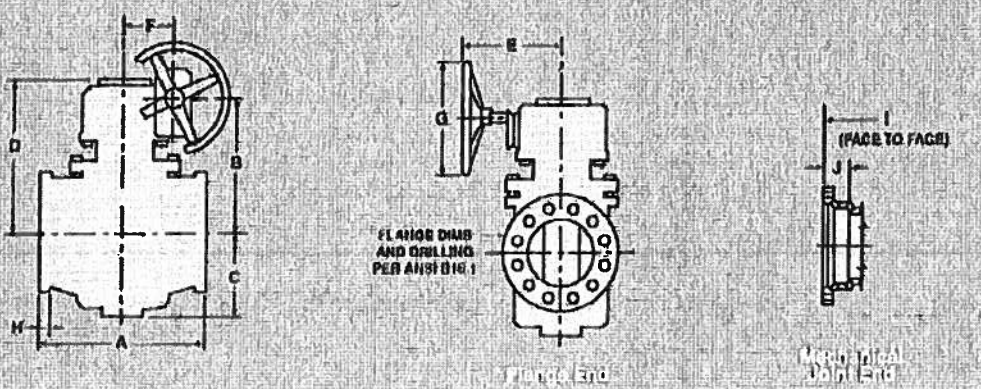
14"-20"

Handwheel Actuated Valve Dimensions



SIZE 14" – 20"	LINE PRESSURE ΔP	DIMENSIONS (INCHES/mm)									
		A	B	C	D	E	F	G	H	I	J
14"											
16"											
18"	< 100 PSI	21.5	21.12	15.75	26.5	13.6	4.6	12	1.56	29.3	3.50
		546.1	536.4	400.0	673.1	345.4	116.8	304.8	39.6	744.2	88.9
	> 100 PSI	21.5	21.12	15.75	26.5	13.6	4.6	18	1.56	29.3	3.50
		546.1	536.4	400.0	673.1	345.4	116.8	457.2	39.6	744.2	88.9
20"											

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Think HOMESTEAD® Instead

How to specify Homestead Non-Lubricated Series 120 Eccentric Plug Valves

- All non-lubricated eccentric plug valves shall be Homestead Series 120 or approved equal.
- Bodies shall be of the rectangular ported design, ASTM A126 Class B cast iron with bolted bonnets.
- Rated for 175 psi working pressure for valves 12" and smaller and 150 psi for valves 14" and larger.
- Flanges shall fully conform to ANSI B16.1 requirements in all respects including flange thickness.
- Port area of valves 20" and smaller shall not be less than 80% of pipe area, and not less than 70% of pipe area for valves 24" and larger.
- All valves must have fully coated plugs of Neoprene, Hycar, EPDM or Isoprene as dictated by the application with mating seats of no less than 90% pure nickel in the finished state, raised and welded into the body.
- Stainless steel seats are not acceptable and plug elastomer retained by means of seat rings and retaining screws are not acceptable.
- Upper and lower radial bearings must be removable 316 stainless steel for valves 20" and smaller; valves 24" and larger shall have 316 stainless steel or bronze bearings.
- Stem seals shall be multi-V ring adjustable packing type and shall be in-line replacable without valve disassembly.
- Flanged ends must be faced and drilled per ANSI B16.1, Class 125; mechanical joint ends must conform to AWWA C111.

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