ACRIS - PFA Lined ISORIA - Elastomer Lined MAMMOUTH - Large Diameter Elastomer Lined









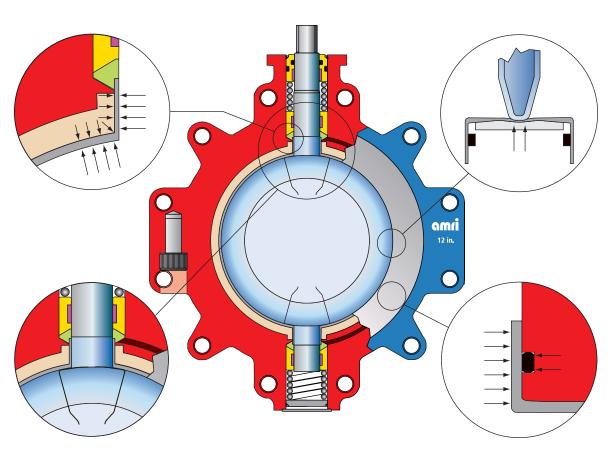
SEALING PRINCIPLES

Primary and Secondary Shaft Sealing

The primary seal is formed by the flexible, spherically molded liner, sealing against the matching spherically machined disc hub when compressed by the resilient elastomer backup liner. The PFA liner as well as the PFA shaft over-molding extends into the valve body itself. Tight compression is maintained at the hub area and around the shaft by the resilient back-up liner combined with the flexible PFA liner, forming an independent secondary seal.

Upstream/Downstream Sealing

The dense PFA body liner is flexible, and allows the resilient elastomer back-up liner to compress the spherically molded PFA liner into the spherically machined shaft-disc with enough force to create a tight seal. This is in contrast to PTFE liners which are usually thick sinterings resulting in a stiff liner unable to give tight shut-off over a long period of time. The wide elastomer backup liner in the ACRIS rests in a machined body groove which is essential in providing tight shut-off for end of line service at full pressure. This has enabled the ACRIS to be used for pump and vessel isolation as well as other difficult services.



Safety Sealing

A third seal is provided by a graphitefilled PTFE safety seal, which provides force against the junction of the PFA liner and PFA over-molded shaft. This seal is constantly energized by a coil spring, and self compensates for temperature changes and wear.

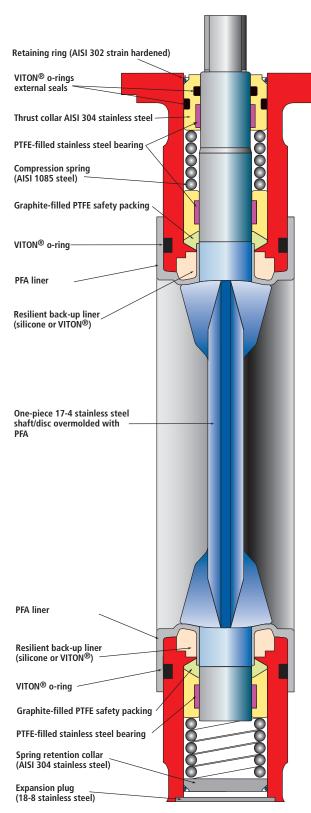
® Viton is a registered trademark of E.I.DuPont Company.

Flange Sealing

Provided by compression of the liner between the valve body and the flanges. An elastomer o-ring, fitted underneath the PFA liner, allows proper flange sealing with warped flange faces or in vacuum applications.







® Viton is a registered trademark of E.I.DuPont Company.

APPLICATIONS

ACRIS butterfly valves often replace other types of valves such as plug, ball and knife gates in non-traditional butterfly valve applications. The ACRIS can be used for end of line service and provide tight shut-off at the full rated pressure of the valve.

ACRIS valves withstand the effects of all known corrosive fluids, and offer the purity required for ultra high purity applications. The superior pressure/temperature operating parameters are conservatively stated for reliable, full-term operation of the valve. Operated within these parameters, the ACRIS has a long, indefinite life in most applications.

ACRIS PFA lined butterfly valves can be used for pressures up to 150 psi and for industrial vacuum (to 0.0002 PSIA). The ACRIS is also suitable on steam service (up to 280°F) alternating with the flowing media.

ACRIS PERFORMANCE CHARACTERISTICS

Sizes: 1" to 24" Wafer body

1" to 24" Lug body

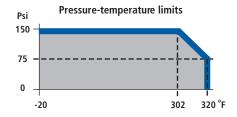
Pressure: Full industrial vacuum

(0.0002 psia) to 150 psi Temperature: - 20°F to 320°F

Downstream Dismantling:

All Lug body valves are rated for full working pressure, with the downstream piping removed. Flange Adaptability: ASME B16.5 Class 150, ASME B16.1 Class 125. Other flange drillings

are available on request.







CONSTRUCTION FEATURES

The ISORIA elastomer-lined butterfly valve is part of a series of valves designed for the multitude of moderately corrosive applications throughout industry. Included in this series is the MAMMOUTH for large diameter (up to 140") and high pressure (up to 375 psi) applications.

The ISORIA valve uses a spherically machined disc and a one-piece body that is totally isolated from the flowing media by means of the inner lining. A strong shaft-disc connection is provided by an

exclusive splined shaft/parallel key arrangement for precise positioning and reliable operation. This connection method also allows for easy disassembly of the valve.

Many years of superior service have proven the advantages of the ISORIA butterfly valve:

- Reliable, absolute tight sealing at all critical points (upstream/ downstream, shaft and flanges).
- "Locked-In" liner design provides for tight shut-off at full differential pressure with the downstream flange removed.
- No required maintenance (no adjustable packing gland, permanently lubricated).
- Low pressure drop (smooth profile liner and disc).
- Minimal required torque (PTFEfilled sleeve bearings).
- Strong internal shaft-disc connection (splined shafts ≤24in., parallel keys>24in.).
- Blowout proof shafts.
- Economical use of body materials (valve body is totally encapsulated by the inner lining).
- Minimal overall dimensions and weight.

- Bi-directional flow and tight shutoff characteristics.
- Sanitary construction (no fluid or particulate material traps).
- Complete compatibility with a wide range of AMRI manual, pneumatic, hydraulic and electric actuators.

TYPICAL APPLICATIONS

The ISORIA butterfly valve is suitable for a great variety of applications, depending on the selection of materials:

Water:

Lining - EPDM or Nitrile Disc - Ductile iron, 316 Stainless or Aluminum bronze

• Brine:

Lining - EPDM or Hypalon ® Disc - 316 Stainless or Alloy 20

• Pulp Stock:

Lining - EPDM or Hypalon ® Disc - 316 Stainless

Weak Acids:

Lining - EPDM or Hypalon ® Disc - 316 Stainless or Alloy 20

PERFORMANCE CHARACTERISTICS

ISORIA

MAMMOUTH

42" to 140" Flanged

Sizes: 1½" to 40" Wafer

26" to 40" Flanged 1½" to 24" Lug body

1½" to 12" Semi-lug body

Pressure: ISORIA - Industrial vacuum

(.01 PSIA) to 375 psi*

MAMMOUTH - Industrial vacuum

(.01 PSIA) to 375 psi*

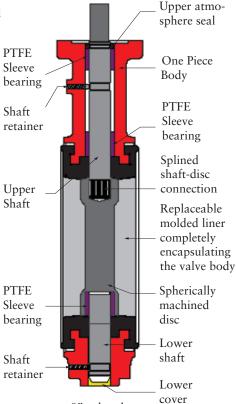
Temperature: -20°F to 392°F (Depending on materials used)

Flange ASME B16.5 Class 150 Adaptability: ASME B16.1 Class 125

ASME B16.47 Class 150 series A

PN 10, 16, 20, 25

AWWA C207 Class B, D & E



8" valve shown

^{*} Upper pressure limit varies on different models.



Butterfly Valves



HOW TO ORDER VALVES

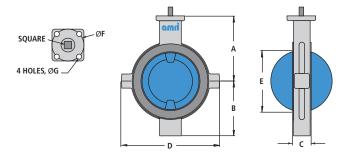
SIZE	TYPE VALVE	BODY STYLE	BODY MATERIAL	SHAFT	DISC	LINER	OPTIONS	CODE
11/2"	ISORIA 10	T1 – Wafer	3t = Cast iron	6k = 420 Stainless	2 = Aluminum bronze	XA & XC = EPDM		
to	(150 psig)	(1½"-40")	(T1 1½"- 24")	(Standard for	3a = Halar ECTFE	XV = High temperature		
40"		T4 - Lug	3g = Ductile iron	11/2" - 40")	coated ductile iron	EPDM		
		(11/2" - 24")	(T1 26" - 40",	6e = 17-4 Stainless	3g = Ductile iron	K=Nitrile		
		T5 - Flat face	T2, T4 & T5)	(Optional 1½" - 24")		CB = Carboxylated		
		flanged			coated ductile iron	nitrile		
		(6" - 40")			3x = EPDM coated ductile iron	CC = White carboxylated nitrile		
					5a = Ferralium	Y = Hypalon®		
					5g = Super Duplex	VA = Acid Viton®		
					6 = 316 Stainless	VC = High temperature		
					6i = Polished 316 SS	Viton®		
					6u = Alloy 20			
					7c = Hastelloy C			
11/2"	ISORIA 16	T1 – Wafer	3t = Cast iron	6k = 420 Stainless	2 = Aluminum bronze	XA & XC = EPDM		
to	(240 psig)	(1½"- 40")	(T1 1½"- 24")	(Standard for	3g = Ductile iron	XV = High temperature		
40"		T4 - Lug	3g = Ductile iron	1½" - 40")	6 = 316 Stainless	EPDM		
		(11/2" - 24")	(T1 26" - 40",	6e = 17-4 Stainless	6i = Polished	K = Nitrile		
		T5 - Flat face	T2, T4 & T5)	(Optional 1½"- 24")	316 stainless	Y = Hypalon®		
		flanged						
		(6" - 40")						
11/2"	ISORIA	T2 – Semi-Lug	3g = Ductile iron	6k = 420 Stainless	2 = Aluminum bronze	XC = EPDM		
to	(240 psig)	(1 ½" to 12")			3q = Ductile iron	K=Nitrile		
24"	(1 ½" to 8")	T4 – Lug			6 = 316 Stainless			
	ISORIA	(1 ½" to 24")						
	(150 psig)	(1,72,10,2.1)						
	(10" to 24")							
66" to	MAMMOUTH 6	T5 - Flat faced	3g = Ductile iron	6k = 420 Stainless	2 = Aluminum bronze	XC = EPDM		
140"	(90 psig)	flanged	Jy = Ductile IIOII	0K = 420 Stailliess	3q = Ductile iron	K = Nitrile		
42" to	MAMMOUTH 10	(42" - 140")			3p = Hard rubber	K = Mane		
96"	(150 psig)	(, ,			coated ductile iron			
44" to	MAMMOUTH 16				6 = 316 Stainless			
84"	(240 psig)							
44" to	MAMMOUTH 20							
78"	(300 psig)							
44" to 72"	MAMMOUTH 25 (375 psig)							
12	(373 psig)							
1"	ACRIS	IW-ISO	3 = Ductile iron wafer	(One-piece	shaft/disc)	F = PFA	Silicone back-up liner	Standard-
to		Wafer						No extra
24"		(1" to 24")	3 = Ductile iron lug	1k = 17-4				code
		11 150		over molde	d with PFA		Vitan® back !!	
		IL–ISO Lug		1s = Carb	on Stool		Viton® back-up liner	S9
		(1" to 24")		over molder			Viton® back-up liner;	S9C
		(1. 10 27)		(2" to			ASTM A193	350
				,2 10	,		Grade B7 bolts, cleaned,	
							tested & packaged	
							for chlorine gas service	
							Silicone back-up liner;	SC1
							assembled, cleaned,	
							tested & packaged for ULTRA PURE service	
							OLINA I DIKE SEIVICE	
							ASTM A193 Grade B7	SB7
							body bolts (in lieu of	
1			1				standard 18-8 Stainless)	1
							,	

^{*}NOTE: Valve face-to-face is per ISO 5752 and API-609 dimensions except for 14" and 18" ACRIS.

ror example:					
6" ACRIS IL-31KF/S9 =	IL	ISO Lug	ISORIA T4-3g6k6XC =	T4	Lug
	3	Ductile iron body	-	3q	Ductile Iron Body
	1k	17-4 Stainless over molded with PFA		6k	420 Stainless shaft
	F	PFA liner		6	316 Stainless disc
	/S9	Viton® back-up liner		XC	EPDM liner

 $[\]ensuremath{\mathfrak{B}}$ Viton and Hypalon are registered trademarks of E.I. DuPont Company.

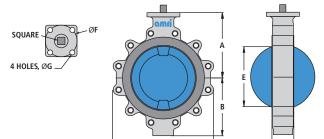




ACRIS (I SERIES) 1" TO 24" Wafer Body

S	SIZE	А	В	С	D	E	SHAFT		ISO TOP FLANGE MOUNTING			WEIGHT
IN	ММ	IN	IN	IN	IN	Disc Chord Length	Square	Height	ØF (Bolt Circle)	ØG (Hole Size)	ISO Pattern	LBS.
*1	25	3.74	1.69	1.35	3.38	0.000	.630	1.02	1.969	0.312	F05	4
*11/4	30	3.74	1.69	1.35	3.38	0.000	.630	1.02	1.969	0.312	F05	4
*11/2	40	3.93	1.88	1.35	3.74	0.874	.630	1.02	1.969	0.312	F05	5
2	50	4.25	2.24	1.69	3.97	1.312	.630	1.02	1.969	0.312	F05	5
3	80	4.88	4.05	1.83	5.23	2.539	.630	1.02	2.756	0.375	F07	10
4	100	5.62	4.80	2.12	6.73	3.271	.630	1.02	2.756	0.375	F07	12
6	150	6.88	6.25	2.25	8.62	5.428	.630	1.02	2.756	0.375	F07	25
8	200	8.85	7.75	2.51	10.86	7.403	.748	1.22	4.016	0.437	F10	42
10	250	10.03	8.93	2.82	13.22	9.432	.984	1.22	4.921	0.562	F12	70
12	300	11.41	10.43	3.19	15.98	11.252	1.181	1.61	4.921	0.562	F12	110
**14	350	13.54	13.11	4.12	20.98	13.127	1.181	1.61	5.511	0.708	F14	172
16	400	14.48	14.13	4.12	23.50	14.747	1.417	1.45	5.511	0.708	F14	231
**18	450	16.49	16.81	5.08	25.00	16.974	1.417	1.85	5.511	0.708	F14	330
20	500	17.48	17.12	5.08	27.48	19.019	1.575	1.85	6.496	0.866	F16	440
24	600	19.68	19.92	6.06	32.67	22.101	1.968	2.20	6.496	0.866	F16	565

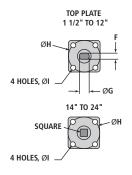
^{* 1} to 1½ inch valves are wafer with alignment holes. ** 14 and 18 inch ACRIS valves do not conform to ISO 5752 face-to-face dimensions.

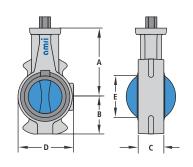


ACRIS (I SERIES) 1" TO 24" Lug Body

SIZE		Α	В	С	D	E	SHAFT		ISO T	OUNTING	WEIGHT	
IN	ММ	IN	IN	IN	IN	Disc Chord Length	Square	Height	ØF (Bolt Circle)	ØG (Hole Size)	ISO Pattern	LBS.
1	25	3.74	1.69	1.35	3.38	0.000	.630	1.02	1.969	0.312	F05	4
11/4	30	3.74	1.69	1.35	3.38	0.000	.630	1.02	1.969	0.312	F05	4
11/2	40	3.93	1.88	1.35	3.74	0.874	.630	1.02	1.969	0.312	F05	6
2	50	4.25	2.24	1.69	4.56	1.312	.630	1.02	1.969	0.312	F05	6
3	80	4.88	4.05	1.83	5.55	2.539	.630	1.02	2.756	0.375	F07	12
4	100	5.62	4.80	2.12	7.99	3.271	.630	1.02	2.756	0.375	F07	17
6	150	6.88	6.25	2.25	10.11	5.428	.630	1.02	2.756	0.375	F07	29
8	200	8.85	7.75	2.51	12.24	7.403	.748	1.22	4.016	0.437	F10	50
10	250	10.03	8.93	2.82	15.431	9.432	.984	1.22	4.921	0.562	F12	78
12	300	11.41	10.43	3.19	18.03	11.252	1.181	1.61	4.921	0.562	F12	116
**14	350	13.54	13.11	4.12	20.35	13.127	1.181	1.61	5.511	0.708	F14	195
16	400	14.48	14.13	4.12	23.62	14.747	1.417	1.45	5.511	0.708	F14	229
**18	450	16.49	16.81	5.08	24.40	16.974	1.417	1.85	5.511	0.708	F14	344
20	500	17.48	17.12	5.08	28.74	19.019	1.575	1.85	6.496	0.866	F16	400
24	600	19.68	19.92	6.06	32.99	22.101	1.968	2.20	6.496	0.866	F16	649

 $[\]ensuremath{^{**}}$ 14 and 18 inch ACRIS valves do not conform to ISO 5752 face-to-face dimensions.

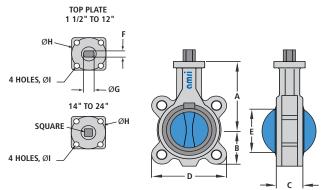




ISORIA 1½" TO 24" Wafer Body

SI	ZE	А	В	С	D	E		SHAFT			ISO TO	NTING	WEIGHT	
IN	ММ	IN	IN	IN	IN	Disc Chord Length	F	ØG	Square	Height	ØH (Bolt Circle)	⊘l (Hole Size)	ISO Pattern	LBS.
1½ 2 3 4 6 8 10 12 14 16 18	40 50 80 100 150 200 250 300 350 400 450	4.13 4.31 5.59 6.41 7.63 8.74 10.03 11.10 13.18 14.96 16.14	2.28 2.51 3.74 4.13 5.55 6.33 7.51 9.25 10.51 11.73 12.91	1.29 1.69 1.81 2.04 2.20 2.36 2.67 3.07 4.01 4.48	3.26 3.66 5.66 6.45 8.62 10.82 12.99 14.68 16.25 18.11 20.31	0.958 1.116 2.648 3.432 5.494 7.408 9.492 11.267 12.693 14.486 16.401	0.433 0.433 0.433 0.551 0.551 0.748 0.748 0.866	0.551 0.551 0.551 0.708 0.708 0.984 0.984 1.102	- - - - - - - - 0.984 1.417 1.417	.945 .945 .945 .945 1.181 1.378 1.575 1.771 2.165 2.165	1.969 1.969 1.969 1.969 2.756 2.756 4.016 4.921 4.921 5.511 5.511	0.275 0.275 0.275 0.275 0.354 0.354 0.433 0.551 0.551 0.708	F05 F05 F05 F07 F07 F10 F12 F12 F14 F14	2.4 2.8 5.5 8.5 15 23 36 66 110 158 211
20 24	500 600	17.32 19.48	14.09 17.24	5.00 6.06	22.83 27.32	18.305 22.101	-	-	1.417 1.968	2.165 2.559	5.511 6.496	0.708 0.866	F14 F16	286 418

Consult AMRI for 26" to 40" valve dimensions.



ISORIA 1½" TO 24" Lug Body

S	IZE	А	В	С	D	E		SHAFT		ISO TOP	FLANGE MOUNT	ING	WEIGHT	
IN	ММ	IN	IN	IN	IN	Disc Chord Length	F	ØG	Square	Height	⊘H (Bolt Circle)	ØI (Hole Size)	ISO Pattern	LBS.
11/2	40	4.13	2.28	1.29	4.17	0.958	0.433	0.551	-	.945	1.969	0.275	F05	4.4
2	50	4.31	2.51	1.69	4.60	1.116	0.433	0.551	-	.945	1.969	0.275	F05	5.5
3	80	5.59	3.74	1.81	5.47	2.648	0.433	0.551	-	.945	1.969	0.275	F05	8.8
4	100	6.41	4.13	2.04	8.14	3.432	0.551	0.708	-	.945	1.969	0.275	F05	12
6	150	7.63	5.55	2.20	10.11	5.494	0.551	0.708	-	1.181	2.756	0.354	F07	24
8	200	8.74	6.33	2.36	12.20	7.408	0.748	0.984	-	1.378	2.756	0.354	F07	52
10	250	10.03	7.75	2.67	15.51	9.492	0.748	0.984	-	1.378	4.016	0.433	F10	85
12	300	11.10	9.09	3.07	18.18	11.267	0.866	1.102	-	1.575	4.921	0.551	F12	101
14	350	13.18	10.03	3.07	20.74	12.693	-	-	0.984	1.771	4.921	0.551	F12	136
16	400	14.96	11.69	4.01	23.81	14.486	-	-	1.417	2.165	5.511	0.708	F14	222
18	450	16.14	12.95	4.48	25.03	16.401	-	-	1.417	2.165	5.511	0.708	F14	268
20	500	17.32	14.13	5.00	28.26	18.305	-	-	1.417	2.165	5.511	0.708	F14	394
24	600	19.48	17.28	6.06	32.87	22.101	-	-	1.968	2.559	6.496	0.866	F16	564



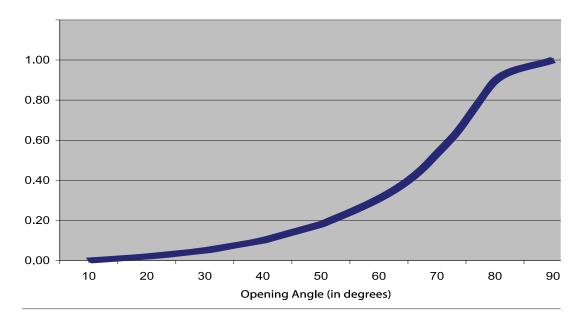
AMRI products are used in a broad range of applications, from simple water lines, to extremely corrosive chemicals, to nuclear power plants. AMRI is a market leader in providing valves for difficult services, including:

- Highly corrosive applications in chemical and petro-chemical plants
- Chlorine gas (wet or dry), brine and caustic in the chlorine industry
- Ultra-Pure 18 mega-ohm water and make up water in the semi-conductor industry
- Bleached and brown pulp stock, caustic, white and black liquor, and all the bleaching chemicals (chlorine dioxide, sodium chlorate, chlorine, and sodium hypochlorite) in the paper industry
- Acid plants using sulfuric, hydrofluoric, nitric and phosphoric acid
- Ballast, crude, diesel fuel, fresh water and seawater in ship-building or on existing cargo, tanker or passenger ships
- Large diameter (up to 140 inch) water lines in the power and water industries
- Food applications
- Nuclear and conventional power plants

Flow Coefficient Factors at 10° Increments for ACRIS and ISORIA

Angle	10°	20°	30°	40°	50°	60°	70°	80°	90°
Cv	0	.02	.05	.10	.18	.30	.50	.90	1.0

Flow Factor vs. Opening Angle





ELASTOMERS & PFA

AMRI butterfly valves offer a long and reliable operational lifetime due primarily to:

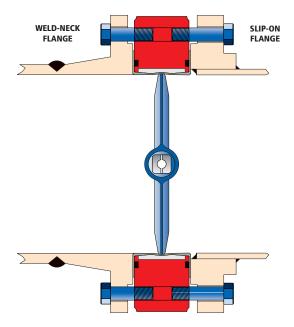
- The superior mechanical design details and manufacturing quality.
- The high quality of the valve's inner lining. In order to maintain high quality standards of the elastomers and PFA parts, AMRI has created its own molding manufacturing division.

This division was created with three specific goals:

- To define and create elastomer formulations best suited for specific applications.
- To produce all elastomers and PFA parts in-house in order to ensure components appropriate for butterfly valve working conditions.
- To exercise complete quality control over the elastomers and PFA parts from verification of the raw materials to testing of the finished product.

As a result, AMRI can recommend the best suited valve for each application.

Cross-sectional view of typical installation options



PARTIAL LIST OF AVAILABLE VALVE LINERS											
LINER MATERIAL		TYPICAL APPLICATIONS									
EPDM	XA XC	Water (soft, industrial, sea, warm) amines, ketones, nitrogen derivatives, esters, concentrated bases, weak acids.									
High Temperature EPDM	XV	High temperature process applications (Same Applications as XA & XC)									
Nitrile Rubber	K	Hydrocarbons, and low aromatic content oils									
Carboxylated Nitrile	СВ	Abrasive applications: cement, sand, pellets									
Hypalon®	Υ	Acids, bases, abrasive chemicals, brine, caustic soda									
Acid Viton®	VA	Concentrated acids									
High Temperature Viton®	VC	Solvents at high temperature, aromatic Hydrocarbons, warm gases									
PFA	F	All chemical products									

®Viton and Hypalon are registered trademarks of E.I. DuPont Company.

FLOW COEFFICIENTS

Cvo = gallons/minute with DP = 1 psi

	MODEL											
SIZE	ACRIS	ISORIA	ISORIA 10	ISORIA 16								
1	50	_	_	_								
11/4	50	_	_	_								
1½	100	75	62	62								
2	209	151	154	154								
2 ½	376	319	280	280								
3	580	580	475	475								
4	916	870	760	760								
5	1276	1914	1044	1044								
6	2320	3016	2090	2090								
8	5800	4756	4120	4120								
10	9396	7598	8453	8453								
12	15892	9918	10465	10465								
14	21344	12876	12880	9269								
16	26912	16936	17020	12075								
18	34104	21112	22655	15295								
20	41760	25636	28750	20010								
24	60500	35032	41860	28750								
≥ 26	Please consult AMRI											



MANUAL

LEVERS:



CR - Ductile iron epoxy coated; locks in 10 positions.

SM - Ductile iron epoxy coated; stainless trim; locks in any position.

MANUAL GEAR



MG - Worm gear, cast iron housing, iron bearings, visual indication, epoxy coated.



MR - Worm gear, ductile iron housing, PTFE sleeve bearings, stainless input shaft, visual indication, epoxy coated.



M31 - Variable torque advantage output for reduced input force, cast iron housing, bronze and steel internals, roller bearings, direct mount limit switch capability, visual indication, epoxy coated.

PNEUMATIC ACTUATORS

C SERIES



Direct mount to AMRI butterfly valves

Hard anodized aluminum housing (internal and external)

Polyurethane coated end caps

Standard ISO 5211 valve mounting interface

Top mounting for positioner and limit switch box in accordance with VDI/

VDE 3845 NAMUR specifications

Direct mounting NAMUR solenoid valve capability

Adjustable mechanical travel stops in both directions

Blow out proof pinion gear

Nitrile (Buna-N) seals, continuous working temperatures from -4°F to +175°F

Optional low and high temperature seal kits

Visual indication

Works equally well on lubricated and non-lubricated air



ACCESSORIES



POSITIONERS

3-15 psig or 4-20 mA inputs; visual indication; Class I, II, & III, Divisions 1 & 2, Groups A-G; NEMA 4X housing; simple mechanical zero and span adjustments; low, high and max flow spool valves with low air consumption, NAMUR mount.

SOLENOID VALVES

3 way and 4 way; AC or DC current; NEMA 4, 4x or 7, standard or NAMUR mount type manual override; brass, stainless steel, and anodized Aluminum.

STEM EXTENSIONS

AMRI stem extensions can be manufactured for manual, pneumatic, or electric operators in stainless steel or epoxy coated carbon steel. In either case, the stem extensions direct mount onto the valve and actuator, and can be made in any length required.

TRAVEL STOPS

AMRI actuators have the unique capability of being equipped with fully adjustable travel stops. This allows the customer to mechanically limit the opening or closing angle of the valve/actuator package. This is most often used when a less than full open flow rate is desired.



LIMIT SWITCHES

Mechanical or proximity; AC/DC current; fully adjustable cams; 1 X ½" NPT or 2 X 3/4" NPT conduit entries; NEMA 4, 4X, 7, and 9; internal terminal strip; visual indication, NAMUR mount.

LOCK-OUT/TAG-OUT

Available for all levers, manual gears and valve actuators. Allows locking of valves in open, closed, or both positions depending on customer requirements.

SLAVE LINKAGES

AMRI slave linkages are designed for simplicity and strength. One actuator cycles 2 valves located on a tee or in parallel lines.







Upper left: C Series spring return actuator with lock-out/tag-out, mounted to a 10" ACRIS isolating a CLO2 tank in a pulp mill. Upper middle: Manually operated 8" ACRIS replacing plug valves for pump isolation in EDC and VCM service. Upper right: Manually operated 4" ACRIS for UV light isolation in high purity water.

USA

AMRI, Inc. 2045 Silber Road Houston, Texas 77055 Phone: (713) 682-0000 Fax: (713) 682-0080

KSB, Inc.

4415 Sarellen Road Richmond, VA 23231 Phone: (804) 222-1818 Fax: (804) 226-6961

GIW Industries, Inc. 5000 Wrightsboro Road Grovetown, Georgia 30813-9750 Phone: (706) 863-1011 Fax: (706) 860-5897

ARGENTINA

KSB Compania Sudamericana de Bombas S.A.

Av. Ader 3625 - B1606DVE Carapachay

Buenos Aires, Argentina Phone: (011) 54-11-4766-3021 Fax: (011) 54-11-4766-5499

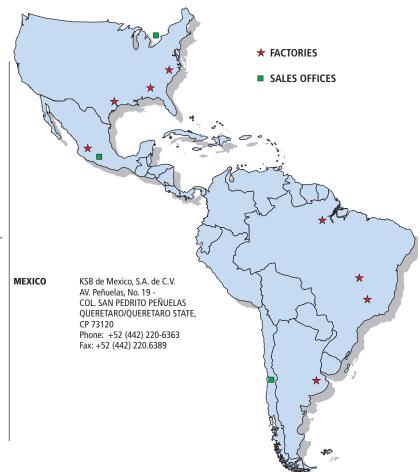
BRAZIL KSB Bombas Hidráulicas, S.A.

Rua José Rabelo Portella, 400 13220-000 - Várzea Paulista - SP Phone: (011) 5511-4596-8500 Fax: (011) 5511-4596-8747

CHILE KSB Chile, S.A.

Las Esteras Sur #2851 Comuna de Quilicura, Santiago

Phone: (011) 562-677-8300 Fax: (011) 562-677-8301





AMRI, Inc. 2045 Silber Road Houston, Texas 77055 Phone: 713-682-0000 Fax: 713-682-0080 Email: info@amrivalves.com http://www.amrivalves.com

