

Quoted by: Sandi Watts

P: (916) 699-0152 E: swatts@bkvalves.com

B&K Valves and Equipment - Northern California:

3432 Swetzer Road, Suite A & B Loomis, CA 95650

B&K Valves and Equipment - Southern California:

7040 Avenida Encinas, Suite 104

Carlsbad, CA 92011

PROJECT: Isolation Butterfly Valves for Burrough of Petersburg, AK

BID DATE: 7/8/2022 - Quote Valid for 30 Days

NOTES: *Quoted material represents a mix of import and

domestic items and is not per American Iron &

Steel or Buy American requirements.

TO: McMillen Jacobs Associates

POINT OF CONTACT: Matt Moughamian

E-Mail/Phone: moughamian@mcmjac.com / 208.830.2955

LINE ITEM	QTY	SIZE	DESCRIPTION	ACTUATOR TYPE	VALVE TAG #	\$ UNIT COST	\$ TOTAL COST
1	1	12"	Val-Matic Series 2000/1C16SV Butterfly Valve, AWWA Class 150B/125# Flanged Ends, Ductile Iron Body, 304SS Shaft, Ductile Iron Disc w/EPDM Resilient Seat, 316SS Bolts & Body Seat Ring, Buna-N V-Type Packing, Lined & Coated w/12-20 mils Fusion Bond Epoxy, 150 PSI CWP	TNA w/Handwheel	V-200	\$3,549.00	\$3,549.00

2	1		Orton Series MV Tripple Eccentric Butterfly Valve, AWWA Class 300 Flanged Ends, Carbon Steel ASTM A216-16 Body, 17.4PH Shaft, ASTM A351 -16 Stainless Steel Shaft, High Density Graphite Packing, ASTM A193 B8M Steel Bolts w/Heavy Hex Nuts, Jotun 2-Coat Epoxy Primer	Gearbox w/Handwheel	V-201	\$20,813.00	\$20,813.00
3	1	12"	Orton Series MV Tripple Eccentric Butterfly Valve, AWWA Class 300 Flanged Ends, Carbon Steel ASTM A216-16 Body, 17.4PH Shaft, ASTM A351 -16 Stainless Steel Shaft, High Density Graphite Packing, ASTM A193 B8M Steel Bolts w/Heavy Hex Nuts, Jotun 2-Coat Epoxy Primer	Gearbox w/Auma EMO	V-202	\$32,830.00	\$32,830.00
4	1		Freight to Alaska			\$4,500.00	\$4,500.00
B&K Valve	s & Equipn	nent, Inc. is a	Certified Small Business Enterprise in California			Total	\$61,692.00

Bid Notes:

- 1: No Taxes Included
- 2: Freight is estimated
- 3: Price Includes only the products referenced above and may vary subject to verification of quantity, product description, and dimensions.
- 4: Installation, Startup, Field Testing, Training, and other on-site services not included in quoted price.
- 5: Anchors and Spare Parts are not included in Quoted Price.
- 6: Submittals 1 week after purchase order is received.
- 7: Seat Test within 50 miles of District HQ not included.
- 8: Manufacture rep services are available at \$2400/day.
- 9: Factory Witness Testing and associated expenses not included.
- 10: Lead Time TBD (after release to production with approved submittals):

Val-Matic butterfly valves are fully AWWA C504 compliant and utilize a mechanically retained seat on disc with a 316 stainless steel body seat. A mechanically retained seat on disc offers the same performance and functionality as seat on body, with the added benefit to the owner of being easily and economically replaced in the field with simple tools.

B&K VALVES & EQUIPMENT

Terms & Conditions

PAYMENT TERMS: Net 30 days from date of invoice, with approved credit.

ALL PRICES: Prices do not include any Federal, State, local taxes or fees.

FREIGHT: Not Included, FOB ex-works factory unless otherwise stated specifically in

the quote.

ORDERS: Orders accepted by the factory may not be cancelled, or shipment

deferred without advance written consent of the factory. These orders

shall be subject to cancellation charges.

RETURNS: Will be at the discretion of the Factory. Applicable returns will only be

accepted by the factory if the shipping label states a return authorization number issued by the factory. A re-stocking charge shall apply to all returns. Return freight will be the customers' responsibility to arrange.

SPECIAL MATERIALS: Products manufactured of special materials of construction cannot be

returned or the order cancelled.

DELIVERY: All products will be shipped as quickly as possible from the factory upon

receipt of the customer's Purchase Order or, when possible, on the date specified by the customer within reason. We will not be responsible for

delays in shipping due to conditions beyond our control.

CLAIMS: Any claims for shortage or damaged products must be made in writing

within five (5) days after receipt of shipment.

WARRANTY: Manufactures standard Warranty will apply; a copy will be supplied upon

request.

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ORTON

PRODUCTS

| MV Series | VF Series | MR Series | DS Series | TF Series | NR Series

Triple Eccentric Metal Seated Valves

MV SERIES

FEATURES AND BENEFITS:

- Metal to metal sealing
- Triple eccentric quarter-turn design
- Torque seated
- Bi-directional tight shutoff
- Zero leakage
- Non-rubbing seating
- · Inherently fire safe and fire tested

TYPICAL APPLICATIONS:

- Process fluids
- Hvdrocarbons
- Steam/Geothermal steam
- Hot gas/Sour gas (NACE)
- Oxygen, Hydrogen
- Blow down
- · Sulfur recovery
- Acid, Caustic, Chloride
- · Abrasive service

TEMPERATURE LIMITS

From -253°C (-423°F) up to +818°C (+1600°F)

PRESSURE LIMITS

From Full Vacuum up to +450 Bar (2200 psi)

PRODUCTION RANGE

- ND 2" 160" ANSI Cl. 150

- ND 2" 160" ANSI CI. 150
 ND 2" 80" ANSI CI.300
 ND 3" 80" ANSI CI. 600
 ND 6" 48" ANSI CI. 900
 ND 6" 24" ANSI body in ANSI CI. 1500
- · ANSI Cl. 2500 with ANSI Cl.900 trim

BODY STYLE

- Double flanged ISO 5752
- Double flanged ANSI B 16-10 (gate)
- Wafer & Lugged API 609
- Butt-Weld.

RATING

- NP 6-10 16 25
- ANSI Cl. 150 300 600 900 1500 2500

MATERIALS

- LCB, LC3
- Duplex
- Superduplex Monel
- Hastellov
- 254 SMO
- Alloy steel WC6, WC9
- Inconel
- Alloy 20
- Aluminium Bronze
- · Titanium.

APPLICABLE STANDARDS

Design: ANSI B16.34 / ASME VIII Face to face: API/ISO/ANSI

Flange: ANSI/ISO/DIN/UNI/JIS Testing: ZERO leakage Fire Test: BS 6755 - API 607 fourth Ed.

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 From:
 Sandi Watts

 To:
 Moughamian, Matt

 Cc:
 bwall@bkvalves.com

Subject: Response - Isolation Butterfly Valves for Burrough of Petersburg AK

Date: Wednesday, July 13, 2022 8:22:24 AM

Attachments: <u>image001.pnq</u>

VM-LSA TNA with Handwheel.pdf

Coating Data Sheet.pdf

CAUTION: This email was received from an external source

Good morning Matt.

Below is the factory response for clarification. Per Ben & Matt's discussion we quoted 316SS disc on the triple offset butterfly valves. These have a carbon steel body and are lined with fusion bonded epoxy. Also attached is the data sheet on the coating for reference. Please let us know if you have any questions.

- **For Valve V-200,** Please see the attached TNA drawing.
- For Valve V-201, can you pls add on the quote that the CWP pressure will be ~540 psig. Does this valve come with some type of Fusion Bonded Epoxy coating and not just a primer? Thanks for clarifying

[ORTON Reply]: We quoted 12" with pressure rating ANSI Cl.300: we added the note on the quote that we considered a CWP of 540 psi.

We considered valve body in carbon steel, with internal fusion bonded epoxy lining. External surface of the body is painted as per our standard painting cycle ST-PC1 described in the quotation.

The disc is in Stainless steel, and as such it doesn't need to be epoxy lined.

• For Valve V-202, can you pls add on the quote that the CWP pressure will be ~540 psig. Does this valve come with some type of Fusion Bonded Epoxy coating – and not just a primer? Thanks for clarifying

[ORTON Reply]: We quoted 12" with pressure rating ANSI Cl.300: we added the note on the quote that we considered a CWP of 540 psi.

We considered valve body in carbon steel, with internal fusion bonded epoxy lining. External surface of the body is painted as per our standard painting cycle ST-PC1 described in the quotation.

The disc is in Stainless steel, and as such it doesn't need to be epoxy lined.

• **For Valve V-202**, other quotes I received were working on the assumption that the Elect Motor Operator would be an Auma Series SAR07 actuator running on 480 VAC, 3-phase power for <u>outdoor</u> service. Can you pls provide a bit of info on the quote for the Auma EMO that you all are planning on using. We would like the ability to do some minor throttling on this high-perf butterfly from about 55% open to 80% open or so.

[ORTON Reply]: please see attached the technical description of the quoted electric motor. The quoted AUMA model is SAR 10.2 with power supply 3ph/480V/60Hz. The quoted

actuator is suitable for outdoor service, however please note that we considered a minimum ambient temperature of -29°C (this limit is given by valve material, that is carbon steel, suitable up to -29°C, but also to electric motor, suitable up to -30°C). We confirm it is possible to perform throttling, through an analog input: there is an adaptive positioner with 0/4-20mA input for position setpoint.

Kind Regards,

Sandi Watts
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| MV Series | VF Series | MR Series | DS Series | TF Series | NR Series

Triple Eccentric Metal Seated Valves

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FEATURES AND BENEFITS:

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- Process fluids
- Hvdrocarbons
- Steam/Geothermal steam
- Hot gas/Sour gas (NACE)
- Oxygen, Hydrogen
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TEMPERATURE LIMITS

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- Hastellov
- 254 SMO
- Alloy steel WC6, WC9
- Inconel
- Alloy 20
- Aluminium Bronze
- · Titanium.

APPLICABLE STANDARDS

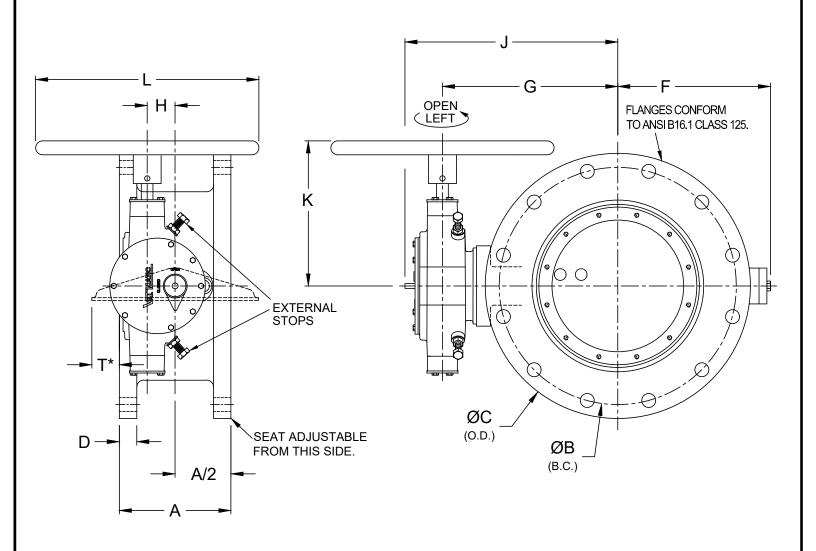
Design: ANSI B16.34 / ASME VIII Face to face: API/ISO/ANSI

Flange: ANSI/ISO/DIN/UNI/JIS Testing: ZERO leakage Fire Test: BS 6755 - API 607 fourth Ed.

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VALVE DRAWN TO SCALE.
*DISC SHOWN ROTATED 90°

COLD WORKING PRESSURE 150 PSI

DIMENSIONS, INCHES

VALVE SIZE	AWWA C504 CLASS		В	С	D	F	G	Н	J	K	L	T*	TURNS TO OPEN	NO. OF BOLTS	BOLT SIZE	ACTU- ATOR SIZE	SHPG WT.
12	150B	8.00	17.00	19.00	1.25	11.1	12.6	2.0	15.4	10.4	16	1.94	20	12	7/8	LS-2A	270

150B FLANGED BUTTERFLY VALVE WITH TRAVELING NUT ACTUATOR, HANDWHEEL, EXTERNAL CLOSE STOPS AND POSITION INDICATOR

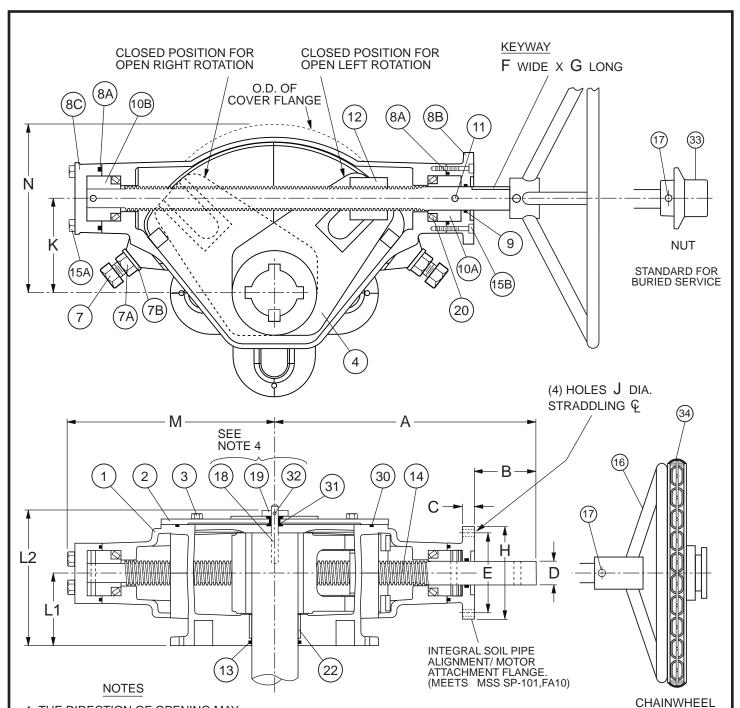
DATE 8-11-20

DRWG. NO.

VMC-2012/LS



VALVE AND MANUFACTURING CORP.



- 1. THE DIRECTION OF OPENING MAY BE REVERSED BY PULLING KEY WITH THE VALVE IN THE CLOSED POSITION, CYCLING ACTUATOR 90°, AND THEN REINSERTING KEY AS SHOWN BY DOTTED LINES.
- 2. ACTUATOR MEETS AWWA C504, LATEST REVISION.
- 3. SEE DRAWING NO. VM-LS1A-M FOR STANDARD MATERIALS OF CONSTRUCTION.

4.	FOR BURIED OR SUBMERGED SERVICE, UNIT PACKED WITH GREASE, NO INDICATION.

				D	IME	NSI	ON, I	INC	HES					
ACT. SIZE	Α	В	С	D	Е	F	G	Η	J	K	L1	L2	М	N
LS-1A	7.83	2.52	0.50	1.00	4.00	0.25	2.00	4.88	0.44	1.50	2.06	4.56	5.53	3.66
LS-2A	8.71	2.52	0.50	1.00	4.00	0.25	2.00	4.88	0.44	2.00	2.44	5.13	6.40	4.22
LS-3A	12.06	3.25	0.50	1.25	4.00	0.25	2.75	4.88	0.44	3.50	3.56	6.94	9.09	6.94
LS-4A	13.81	3.25	0.50	1.25	4.00	0.25	2.75	4.88	0.44	5.00	3.81	7.25	10.84	9.13

Revised 5-19-11

DATE 8-22-08 TRAVELING NUT ACTUATOR DRWG. NO. AL MATIC® VALVE AND MANUFACTURING CORP. VM-LS1A

TRAVELING NUT ACTUATOR

SIZES LS-1A THROUGH LS-4A

PART NO.	PART NAME	MATERIAL
1	HOUSING	DUCTILE IRON ASTM A536, GRADE 65-45-12
2	HOUSING COVER	DUCTILE IRON ASTM A536, GRADE 65-45-12
3	COVER BOLTS	STAINLESS STEEL T316
4	LEVER	DUCTILE IRON ASTM A536, GRADE 65-45-12
7	STOP BOLT	PLATED STEEL
7A	LOCK NUT	PLATED STEEL
7B	STOP BOLT THREAD SEAL	PLATED STEEL WITH BUNA-N
8A	END CAP O-RING	BUNA-N
8B	END CAP (FOR SOIL PIPE ALIGNMENT OR MOTOR ATTACHMENT)	DUCTILE IRON ASTM A536, GRADE 65-45-12
8C	END CAP (BLIND END)	DUCTILE IRON ASTM A536, GRADE 65-45-12
9	STEM O-RING	BUNA-N
10A	STEM COLLAR (INPUT END)	ALUMINUM BRONZE (SIZES LS-1A & LS-2A) CARBON STEEL (SIZES LS-3A thru LS-4A)
10B	STEM COLLAR (BLIND END)	ALUMINUM BRONZE (SIZES LS-1A & LS-2A) CARBON STEEL (SIZES LS-3A thru LS-4A)
11	COLLAR PIN	ALLOY STEEL
12	CROSSHEAD	ALUMINUM BRONZE
13	SHAFT O-RING	BUNA-N
13 14	SHAFT O-RING STEM	BUNA-N HIGH TENSILE STEEL (NICKEL PLATED EXPOSED END)
14	STEM	HIGH TENSILE STEEL (NICKEL PLATED EXPOSED END)
14 15A	STEM END CAP HEX HD. BOLTS	HIGH TENSILE STEEL (NICKEL PLATED EXPOSED END) STAINLESS STEEL T316
14 15A 15B	STEM END CAP HEX HD. BOLTS END CAP SOCKET HD. BOLTS	HIGH TENSILE STEEL (NICKEL PLATED EXPOSED END) STAINLESS STEEL T316 STAINLESS STEEL T316
14 15A 15B 16	STEM END CAP HEX HD. BOLTS END CAP SOCKET HD. BOLTS HANDWHEEL (OPTIONAL)	HIGH TENSILE STEEL (NICKEL PLATED EXPOSED END) STAINLESS STEEL T316 STAINLESS STEEL T316 STEEL
14 15A 15B 16 17	STEM END CAP HEX HD. BOLTS END CAP SOCKET HD. BOLTS HANDWHEEL (OPTIONAL) PIN	HIGH TENSILE STEEL (NICKEL PLATED EXPOSED END) STAINLESS STEEL T316 STAINLESS STEEL T316 STEEL STAINLESS STEEL T316
14 15A 15B 16 17	STEM END CAP HEX HD. BOLTS END CAP SOCKET HD. BOLTS HANDWHEEL (OPTIONAL) PIN DOWEL PIN (NOTE 2)	HIGH TENSILE STEEL (NICKEL PLATED EXPOSED END) STAINLESS STEEL T316 STAINLESS STEEL T316 STEEL STAINLESS STEEL T316 PLATED STEEL ASTM A307
14 15A 15B 16 17 18	STEM END CAP HEX HD. BOLTS END CAP SOCKET HD. BOLTS HANDWHEEL (OPTIONAL) PIN DOWEL PIN (NOTE 2) INDICATOR (NOTE 2)	HIGH TENSILE STEEL (NICKEL PLATED EXPOSED END) STAINLESS STEEL T316 STAINLESS STEEL T316 STEEL STAINLESS STEEL T316 PLATED STEEL ASTM A307 CAST IRON ASTM A126, CLASS B
14 15A 15B 16 17 18 19 20	STEM END CAP HEX HD. BOLTS END CAP SOCKET HD. BOLTS HANDWHEEL (OPTIONAL) PIN DOWEL PIN (NOTE 2) INDICATOR (NOTE 2) TAPERED ROLLER BEARING	HIGH TENSILE STEEL (NICKEL PLATED EXPOSED END) STAINLESS STEEL T316 STAINLESS STEEL T316 STEEL STAINLESS STEEL T316 PLATED STEEL ASTM A307 CAST IRON ASTM A126, CLASS B HARDENED ALLOY STEEL (SEE NOTE 1)
14 15A 15B 16 17 18 19 20 22	STEM END CAP HEX HD. BOLTS END CAP SOCKET HD. BOLTS HANDWHEEL (OPTIONAL) PIN DOWEL PIN (NOTE 2) INDICATOR (NOTE 2) TAPERED ROLLER BEARING SHAFT BEARING	HIGH TENSILE STEEL (NICKEL PLATED EXPOSED END) STAINLESS STEEL T316 STEEL STAINLESS STEEL T316 STEEL STAINLESS STEEL T316 PLATED STEEL ASTM A307 CAST IRON ASTM A126, CLASS B HARDENED ALLOY STEEL (SEE NOTE 1) TEFLON / FIBERGLASS BACKED
14 15A 15B 16 17 18 19 20 22 30	STEM END CAP HEX HD. BOLTS END CAP SOCKET HD. BOLTS HANDWHEEL (OPTIONAL) PIN DOWEL PIN (NOTE 2) INDICATOR (NOTE 2) TAPERED ROLLER BEARING SHAFT BEARING COVER O-RING	HIGH TENSILE STEEL (NICKEL PLATED EXPOSED END) STAINLESS STEEL T316 STAINLESS STEEL T316 STEEL STAINLESS STEEL T316 PLATED STEEL ASTM A307 CAST IRON ASTM A126, CLASS B HARDENED ALLOY STEEL (SEE NOTE 1) TEFLON / FIBERGLASS BACKED BUNA-N
14 15A 15B 16 17 18 19 20 22 30 31	STEM END CAP HEX HD. BOLTS END CAP SOCKET HD. BOLTS HANDWHEEL (OPTIONAL) PIN DOWEL PIN (NOTE 2) INDICATOR (NOTE 2) TAPERED ROLLER BEARING SHAFT BEARING COVER O-RING GROMMET	HIGH TENSILE STEEL (NICKEL PLATED EXPOSED END) STAINLESS STEEL T316 STAINLESS STEEL T316 STEEL STAINLESS STEEL T316 PLATED STEEL ASTM A307 CAST IRON ASTM A126, CLASS B HARDENED ALLOY STEEL (SEE NOTE 1) TEFLON / FIBERGLASS BACKED BUNA-N BUNA-N
14 15A 15B 16 17 18 19 20 22 30 31 32	STEM END CAP HEX HD. BOLTS END CAP SOCKET HD. BOLTS HANDWHEEL (OPTIONAL) PIN DOWEL PIN (NOTE 2) INDICATOR (NOTE 2) TAPERED ROLLER BEARING SHAFT BEARING COVER O-RING GROMMET SET SCREW (NOTE 2) OPERATING NUT (OPTIONAL FOR ABOVE GROUND SERVICE,	HIGH TENSILE STEEL (NICKEL PLATED EXPOSED END) STAINLESS STEEL T316 STAINLESS STEEL T316 STEEL STAINLESS STEEL T316 PLATED STEEL ASTM A307 CAST IRON ASTM A126, CLASS B HARDENED ALLOY STEEL (SEE NOTE 1) TEFLON / FIBERGLASS BACKED BUNA-N BUNA-N STEEL
14 15A 15B 16 17 18 19 20 22 30 31 32 33	STEM END CAP HEX HD. BOLTS END CAP SOCKET HD. BOLTS HANDWHEEL (OPTIONAL) PIN DOWEL PIN (NOTE 2) INDICATOR (NOTE 2) TAPERED ROLLER BEARING SHAFT BEARING COVER O-RING GROMMET SET SCREW (NOTE 2) OPERATING NUT (OPTIONAL FOR ABOVE GROUND SERVICE, STANDARD FOR BURIED SERVICE)	HIGH TENSILE STEEL (NICKEL PLATED EXPOSED END) STAINLESS STEEL T316 STAINLESS STEEL T316 STEEL STAINLESS STEEL T316 PLATED STEEL ASTM A307 CAST IRON ASTM A126, CLASS B HARDENED ALLOY STEEL (SEE NOTE 1) TEFLON / FIBERGLASS BACKED BUNA-N BUNA-N STEEL CAST IRON ASTM A126, CLASS B

1. FOR SIZES LS-3A & LS-4A, TAPERED ROLLER BEARINGS (PART NO. 20) ARE USED ON INBOARD SIDE OF EACH STEM COLLAR.

NOTE: ALL SPECIFICATIONS AS LAST REVISED.

2. NOT FURNISHED FOR BURIED/SUBMERGED SERVICE.

Revised 7-10-17

MATERIALS OF CONSTRUCTION

DATE 8/22/08

DRWG. NO.

VALVE AND MANUFACTURING CORP.

VM-LS1A-M

