

**DESIGN AND CONSTRUCTION MANUAL**  
**2.3 APPROVED MANUFACTURERS LIST**



TABLE OF CONTENTS			
Spec Name	TITLE	Sheet Number	PDF Page Number
	Table of Contents and Reference Codes	1	1
	Revision Record	2	2
ES-ACT-ELEC	Actuators -Electric	3	9
	Gas/Hydraulic	3	9
ES-ACT-PNEU	Pneumatic	3	10
MS-COMP-AIR	Air Compressors	4	11
MS-DRY-AIR	Air Dryers	5	12
	Automation Equipment	6	13
MS-VLV-BAL	Ball Valves 2 inch and Larger	7	14
MS-VLV-BAL	Ball Valves 2 inch and Smaller	8	17
	Valve Modifications	9	19
	Butterfly Valves	10	20
MS-HTR-CAT	Catalytic Heaters	11	21
MS-AND-MAG; MS-RECT	Cathodic Protection	12	22
MS-VLV-CHK	Check Valves	13	26
MS-CLOS	Closures	14	28
MS-CTG-FBE, PC, DFBE	Coatings	15	29
ES-MTR-CONE	Core Meters-(See Measurement)		
MS-VLV-CON	Control Valves	16	33
	Corrosion-(See Measurement)		
MS-CPG	Coupling (Joint) Harnesses	17	34
	Differential Meters-(See Measurement)		
MS-VLV-DMP	Dump Valves	18	35
	Elastomer Properties	19	36
	Electrical Equipment	20	37
MS-FLNG	Flanges	21	44
	Flexible Metal Conduit	22	46
ES-SEP	Filter Separators/Separators/Scrubbers/Filters	23	47
ES-ODR	See Measurement		
ES-GAS -DET	Gas Detectors	24	48
	Gas Sampling	25	49
MS-GKS-BLT	Gaskets	26	50
MS-VLV-GTE	Gate Valves	27	51
MS-GAUGE	Gauges	28	52
	Globe Valves	29	53
MS-GROUT	Grout	30	54
	Hot Tap Fittings	31	55
MS-INS	Insulation	32	56
	Measurement & Gas Quality	33	57
ES-CMP-BLDG	Metal Buildings	34	60
MS-VLV-INS	Needle and Instrument Valves	35	61
	PD Meters-(See Measurement)		
	Pipe Support	36	62
MS-VLV-PLG	Plug Valves	37	63
MS-VLV-RLF	Pressure Relief Valves	38	66
MS-REG	Regulators	39	67
	Regulators - Instrument Supply	40	69
MS-FIT-CSW	Steel Fittings	41	70
MS-PIP-CS	Steel Pipe	42	71
MS-TANKS	Tanks	43	74
ES-DEHY, ES-FLARE	TEG Dehydration & Flares	44	75
MS-TWELL	Thermowells	45	76
MS-TRANS	Transmitters & Transducers	46	77
MS-TUB	Tubing and Tube Fittings	47	78
ES-MTR-USMDH, USMDH1, USMSM, USMCO	Ultra-Sonic Meters-(See Measurement)		
	UPS Systems	48	79
	Water Valves	49	80
	Waterline Conveyance Systems	50	81

REFERENCE CODES	
CODES	PREFERENCE LEVELS
AV	Approved Vendor
AVL	Approved Vendor with Limitations
EAR	Engineering Approval Required
RFR	Not Approved / Requires Further Research

**DESIGN AND CONSTRUCTION MANUAL**  
**2.3 APPROVED MANUFACTURERS LIST**



REVISIONS		
Date	Engineer	Title - Details
6/1/2023	Kevin Bellanca	Thermowells - Added Reotemp Instruments
5/3/2023	Neil Florentine (STM)	Insulation - Added Neolinsulation to Removable and Reusable Thermal Insulation Covers, and Heat Trace & TEG Dehydration Plant Application, Removable Insulation categories as an AV
4/24/2023	Sheila Miller	Steel Fittings - Tectubi - Clarified that Tectubi is approved for 3R and segmentable elbows, and any and all other weldfittings produced in the US or Italy.
4/18/2023	Matt Johnson (STM)	TEG Dehydration & Flares - Removed Exterran and Valerus from the Dehy list. Removed Industrial Refractory Services (Envirotherm) and Exterran from Flare list. Added Flare Services (AV), Titan (AV) and FLOCO (EAR) to the Flares list.
4/18/2023	Dan Moore (STM)	Cathodic Protection Materials - Repair Methods - Replaced Black Diamond with Atlas. Combined Atlas and ClockSpring into same line item as CSNRI manufacturers both.
3/14/2023	Sheila Miller	Closures - Changed Manufacturer of Yale and Sentry closures from R&M Energy to NOV (National Oilwell Varco)
11/14/2022	Sheila Miller	TOC - Added PDF Page Numbers (no linking at this time)
11/14/2022	Matt Peterson (STM)	Measurement and Gas Quality - Cone Meters - Changed vendor name from Cameron to Sensia (Rockwell Automation - Schlumberger) and revised address and website .
11/10/2022	Matt Johnson (STM)	Steel Fittings / Forged Fittings - Added J.B. Smith , and clarified that ANVIL International and JB Smith are both ACS Engineered Solutions brands
11/10/2022	Sheila Miller (Adam Beckner)	Added Category - Valve Modifications.
8/30/2022	Matt Jarrett / Greg Grishaber (STM)	Waterline Conveyance Systems - Added SECOR, ISCO and PREMIUM Manufacturing as Suppliers of HDPE Pipe. Added Pipeline Plastics and United Poly Systems as Manufacturers of HDPE Pipe. Added SECOR as Supplier of HDPE Transition Fittings. Added ISCO and PREMIUM Manufacturing as Manufacturer of HDPE Fittings and Transition Fittings.
8/1/2022	Sheila Miller	Steel Pipe - Added Benteler as an AV to SMLS pipe
7/14/2022	Matt Jarrett (STM)	Waterline Conveyance Systems - Added SECOR to HDPE Fittings.
5/31/2022	James Kerns (STM)	Electrical Equipment - Added WEG as an AV to the Electric Motors - 480V and Below category
5/11/2022	Sheila Miller (Greg Grishaber)	Closures - Modco has shut down. Will be replaced on AML with Stark Solutions who are owned by the same corporation.
5/9/2022	Sheila Miller	Plug Valves - Added SCV as an AV
5/9/2022	Sheila Miller (KJB)	Control Valves - Added VRG Controls as an AV.
4/12/2022	Kevin Bellanca (STM)	Measurement and Gas Quality - Moisture Analyzers - Added Panametrics as an AV. Deleted GE.
4/3/2022	Sheila Miller (JP-B)	Steel Fittings - Forged Fitting and Pipe nipples, 2" and Less - Clarified that Capitol Manufacturing, CAMCO and CapProducts are the approved Phoenix Forge group companies.
3/16/2022	Sheila Miller	Removed all links to Websites. Changed name of "Gas Analytical" to Critical Control Services"
1/19/2022	Matt Jarrett (STM)	Waterline Conveyance Systems - Removed Flying W Plastics from HDPE Pipe, and HDPE Fittings.
1/13/2022	Dan Unitowski	Closures - Added In-Line Fig 800 Clamp Ring Closure as an AV.
12/23/2021	Matt Jarrett (STM)	Waterline Conveyance Systems - Removed Charter Plastics from HDPE Pipe, and HDPE Fittings. Removed GA Industries from Combination Air Valves. Removed Seametrics from Magnetic Flow Meter. Added Four Three Energy and Keystone Fabrication to Vault Internal Spools. Changed name of Gate Valve category to Wedge Gate Valve and added a Knife Gate Valve category. Added DeZURIK and DSS to Knife Gate Valves. Added DeZURIK to Check Valves. Added HYMAX to HDPE Repair Clamp Coupling.
12/15/2021	Sheila Miller (JCK, NFF)	Filter Separators - Removed Shawndra from the list.
12/13/2021	Sheila Miller	Ball Valves - 2 inch and Larger/ 2-inch and smaller - Vintrol has ceased all operations on November 30, 2021. Emerson will provide warranty on existing valves.
10/26/2021	Matt Jarrett (STM)	Water Conveyance Systems - HDPE Fittings - Added Core & Main as an EAR.
7/27/2021	Kevin Bellanca (STM)	Gauges - Added ReoTemp to Pressure Gauges category as AV
6/21/2021	Kevin Bellanca (STM)	Check Valves - Added Warren Check Valves
1/8/2021	Kevin Bellanca (STM)	Measurement and Gas Quality - Removed references to EQT spec
11/24/2020	Kevin Bellanca (STM)	Thermowells - Added TTEC (Thermocouple Technology) as AV. They should have been added as part of the Rice Integration.
11/11/2020	Nickey Zafiris (STM)	Pipe Supports - Added Atlas Pipe Supports back on the list. Removed in 2017 due to lack of knowledge of Representative. Liberty Sales has them.

**DESIGN AND CONSTRUCTION MANUAL**  
**2.3 APPROVED MANUFACTURERS LIST**



REVISIONS		
Date	Engineer	Title - Details
8/17/2020	David Cass (STM)	Filter Separators - Added Forum Energy Technologies to the Main Gas Separators category based on their successful use at Eureka.
7/13/2020	Sheila Miller	Ball Valves - 2-inch and Larger - KF/Circor - removed from AML due to sale to MS Valves GmbH. Factory has been shutdown. US facility planned for future.
5/1/2020	Nickey Zafris (STM)	Coatings - Updated Powercrete to only be required on HDDs - Removed the three coat systems - Removed Canusa shrink sleeves - Removed Trenton Hot Wax Tape - Added additional wax tape products - Moved the information in the "Transitional Coatings" section to the Wax Tape Section - Removed the following coating products: o S/W Sherloxane topcoat (no interest from applicators) o S/W and Carboline One coat systems o S/W Hi Solids Polyurethane for cold weather application o S/W High Temp coating for both categories o International High Temp coating for 450+ o International Under Insulation, both types
4/21/2020	Sheila Miller	Steel Pipe - ERW/HFW - Added Axis Pipe
2/25/2020	Sheila Miller	Ball Valves 2-inch and larger - Virgo - Added note that larger sizes can be purchased with the Engineer's recommendation and approval
2/25/2020	Sheila Miller	Ball Valves 2-inch and larger - Changed GWC status to AV after issue during hydrotest was vetted.
2/21/2020	Sheila Miller	Closures - Threaded - Added Flanged ends to Modco Closure approval
2/4/2020	Sheila Miller	Ball Valves 2-inch and larger - Changed GWC status to EAR from AV due to issues during hydrotests
2/3/2020	Matt Peterson (STM)	Filter Separators - Added category for liquids and included Pentair and PECO as EAR
1/8/2020	Sheila Miller	Ball Valves - 2-inch and Larger - Added Balon Trunnion mounted ball valves
11/18/2019	Sheila Miller	Steel Pipe - ERW/HFW - (Eureka Integration) Added Paragon Industries as they were on the Eureka Approved list
11/11/2019	Sheila Miller (BC)	Actuators- Pneumatic - added Limitorque as EAR
11/5/2019	Sheila Miller	Ball Valves - 2-inch and Larger - Revised PBV to add additional ANSI classes to the 3 Piece and 2 Piece valves
10/14/2019	Sheila Miller	Steel Fittings - Added Erne Fittings based on approvals by Eureka, Transcanada, Spectra and Energy Transfer and a review of 12" MTRs for elbows
9/26/2019	Neil Florentine/Jim Knibloe (STM)	Filter Separators - Added Jonell Systems based on the fact that we are purchasing for Crescent Moon. Several exist in our system as supplied on Exterran equipment.
9/26/2019	Sheila Miller (NTZ)	Coatings - Corrected Powercrete type to DD for use on HDD Pipe, etc.
8/20/2019	Sheila Miller	Coatings- for Above Grade Fabrications/Appurtenances/Piping - restored all manufacturers.
8/13/2019	Alina Lawrence (STM)	Closures - Changed status of TwinLock -PEI from AV to EAR due to Operations' issues
8/13/2019	David Cass (STM)	CP - Added CC Technologies - Mesa to the Test Station list. They are used for IR drop
8/7/2019	Doug Mace (STM)	Actuators- Electric: Revised <b>EIM</b> Series 2000 to <b>Bettis</b> based on Company change
8/5/2019	Matt Peterson (STM)	Pressure Relief Valves - Added Leser
8/5/2019	Nickey Zafris (STM)	Coatings- FBE: Changed Sherwin Williams from EAR to AV. Dual Coat: Changed Sherwin Williams from EAR to AV. Added Canusa as EAR. Changed contact info for Seal for Life, and Denso products. Added Transitional Coatings section. For Above Grade Fabrications/Appurtenances/Piping: Removed all manufacturers except PPG. Three Coat Systems: Changed PPG top coat to Amercoat 450H. Two Coat Systems: Changed Top coat to Pitthane Ultra. One Coat Systems: added two PPG systems. High Temp Coatings: Added PPG Primer Amerlock 2/400 GF. Coating under Acoustic Insulation and Coating under Thermal Insulation: Added Amerlock 2/400 GF. Added Cold Weather Products section.
8/5/2019	Nickey Zafris (STM)	Cathodic Protection - Rockshield - Added PipeSak PipeJacket
6/18/2019	Sheila Miller	Steel Pipe - Changed name of DSAW pipe manufacturer Tata to Liberty due to sale of company in August 2017.
6/12/2019	David Cass (STM)	Cathodic Protection - Added GridGuard HD and GridGuard HD Plus
6/12/2019	Sheila Miller	Tubing and Tubing Fittings - Added Sandvik and Mannesmann
5/8/2019	Sheila Miller	Ball Valves 2-inch and Larger - added Warren Valve

**DESIGN AND CONSTRUCTION MANUAL**  
**2.3 APPROVED MANUFACTURERS LIST**



REVISIONS		
Date	Engineer	Title - Details
4/10/2019	Sheila Miller	Ball Valves 2 inch and Smaller - KF- added 2" size, and SW ends
2/22/2019	Sheila Miller	Steel Fittings - EZE Flow: changed to approve the purchase of segmentable elbows due to the purchase of this company, and manufacturing revamping by Allied.
1/8/2019	Sheila Miller	Steel Pipe - ERW (HFW): corrected Salzgitter name to Mannesmann Line Pipe (2017 renaming). Corrected size range to 4" to 24".
10/3/2018	Sheila Miller (P Arthur)	Ball Valves -2" and Larger - Changed GWC to AV based on positive experience at River.
9/10/2018	Sheila Miller	Steel Pipe - ERW: Added Salzgitter Mannesmann.
8/31/2018	Andy Manski	Added Calbond to Electrical Equipment tab
8/11/2018	Matt Jarrett (STM)	Added Waterline Conveyance Systems tab
8/11/2018	Sheila Miller	Pipe Supports - (RI) - Added TerraTek Support Systems
8/6/2018	Sheila Miller	Added Automation Equipment Tab
7/13/2018	Brody Conklin (STM)	Water Valves - (RI) - Added Dezurik, and Bray as AV
7/13/2018	Andrea Conaway (STM)	UPS Systems - (RI) Added Allen Bradley, and APC-Schneider Electric as EAR
7/13/2018	Kevin Bellanca (STM)	Tubing and Tubing Fittings - (RI) Added Hy-Lok to SS Tube Fittings category as an AV
7/13/2018	Kevin Bellanca (STM)	Thermowells - (RI) Added Burns Engineering, and Temperature Measurement Systems as AV
7/13/2018	Brody Conklin (STM)	TEG Dehydration & Flares - (RI) Added Valerus, Titan, Bird Equipment, Cimarron, and Forum Energy Technologies to TEG Dehy category as EAR. Added Cimarron, Forum Energy Technologies, and Bird Equipment to Flare category as EAR.
7/13/2018	Brody Conklin (STM)	Pressure RV - (RI) Added Wellmark (Apergy), and FulFlo as EAR
7/13/2018	Kevin Bellanca (STM)	Needle and Instrument Valves - (RI) Added Phoenix Controls as an AV
7/13/2018	Brody Conklin / Kevin Bellanca (STM)	Metal Buildings - (RI) Added Steelcon, Nexgen Industrial, and Lincoln Contracting & Equipment, to Compressor Station Buildings category as an AV. Added Parkline, and StarFlite Systems, to Meter or Regulation Buildings category as an AV.
7/13/2018	Brody Conklin (STM)	Insulation - (RI) Added Geo. V. Hamilton to Insulation Covers, and Heat Trace & TEG Dehydration Plant Application, Removable Insulation categories as an AV
7/13/2018	Kevin Bellanca (STM)	Gauges - (RI) Added Inferno Manufacturing Corp to Liquid Level Gauges category as AV
7/13/2018	Brody Conklin (STM)	Filter Separators/Separators/etc. - (RI) Added Valerus and Titan to Separators - Main Gas category as EAR.
7/13/2018	James Kerns (STM)	Electrical Equipment - Added CED Mosebach Electric to <b>Electrical Power Dist Equip</b> comments <b>Electric Wire Category</b> - Changed Service Wire, Southwire to AV from AVL. Added Houston Wire and Cable information. Added Saginaw to <b>Boxes/Enclosures</b> as EAR. Added comments to <b>Electric Motors 480V and Below</b> category for Baldor, Marathon and Siemens.
7/13/2018	Brody Conklin / Andrea Conaway (STM)	Electrical Equipment - (RI) - Added Allen Bradley (AB) to <b>Electrical Power Distribution Equip.</b> as EAR. Added AB to <b>MV VFD and Soft Starters</b> as EAR. Added AB to <b>VFD (480V and below)</b> as EAR. Added Cummins to <b>Generators</b> as EAR. Added category " <b>Power Meters</b> " and listed Eaton, and Cummins as AV. Added Littelfuse, and Bussman to <b>Fuses</b> as AV. Added OGRE to <b>Station Batteries</b> as AV. Added Morningstar to <b>Battery Chargers</b> as AV. Added Rota-Reel to <b>Grounding Reels</b> as AV. Added Lyte Poles to <b>Outdoor Breakdown Lighting Poles</b> as AV. Added Raychem/Pentair to <b>Heat Tracing</b> as AV. Added GE Industrial, and Northstar to <b>Lighting Fixtures - Indoor Div. 2</b> as AV. Added LSI Industries, and Northstar to <b>Lighting Fixtures - Outdoor</b> as AV.
7/13/2018	Andrea Conaway (STM)	Automation Equipment - Added category and vendors
6/11/2018	Matt Peterson (STM)	Check Valves - DFT Piston Checks - revised to show 2" to 24" available (was 2" to 12")
6/11/2018	Nickey Zafis (STM)	Coatings - Sherwin Williams added to most categories as EAR.
5/4/2018	Kevin Bellanca (STM)	Measurement and Gas Quality - added AS Schneider / Yokogawa Manifold due to extensive use at EQT and former Rice facilities with no issues.
4/30/2018	Daniel Paschel (STM)	Closures - Twinlock revised to AV from EAR after research completed.
4/5/2018	Sheila Miller	Steel Pipe - ERW(HFW) - Added Dura-Bond Pipe in place of the US Steel McKeesport Mill.

**DESIGN AND CONSTRUCTION MANUAL**  
**2.3 APPROVED MANUFACTURERS LIST**



REVISIONS		
Date	Engineer	Title - Details
3/29/2018	Sheila Miller	Closures - Added TwinLock (PEI) as an EAR due to extensive use on former Rice Pipelines. Upgrade investigation to AV is underway.
3/26/2018	Sheila Miller	Steel Pipe - ERW - CSI (California Steel Industries) - revised sizes to add 20" and 24" due to additional mill capabilities.
3/22/2018	Sheila Miller	Cathodic Protection - Revised Sypris to an EAR from RFR under Weld End Isolation Joints.
3/13/2018	Sheila Miller	Ball Valves - 2-inch and larger - Added GWC Italia as an EAR vendor.
3/9/2018	Sheila Miller	Steel Pipe - Seamless - The US Steel Lorain plant was noted as closing in 2016 and thus was removed from the list. However, the mill producing the 10" to 24" remains in operation, and thus was added back into the list as AV.
2/26/2018	Sheila Miller	Steel Fittings - EzeFlow - Reinstated to the list as an AV with the exception of Segmentable elbows. Allied Group (Tectubi) purchased them in 2016 and instituted all new processes and procedures to eliminate issues that occurred in the past.
12/11/2017	Dan Moore	General updates. See individual sheets for additions.
11/1/2017	Dan Unitowski	General updates. See individual sheets for additions.
10/18/2017	Kevin Dishner. Dan Moore	General updates. See individual sheets for additions.
10/9/2017	Kevin Dishner. Dan Moore	General updates. See individual sheets for additions.
9/27/2017	Kevin Dishner. Dan Moore	General updates. See individual sheets for additions.
9/12/2017	Kevin Dishner. Dan Moore	General updates. See individual sheets for additions.
9/1/2017	Heather Misutka	Thermowells - Wika added
9/1/2017	Kevin Bellanca, Nickey Zafris	General updates. See individual sheets for additions.
8/30/2017	Sheila Miller (RBord/KB)	Ball Valves 2inch and Smaller - Added Vintrol as AV
8/30/2017	Sheila Miller (KB)	Regulators- added Pietro Fiorentini as an EAR for Siam Shut devices
8/17/2017	Sheila Miller (KB)	Gas Sampling - Added Welker as an EAR
8/16/2017	Sheila Miller (KB)	Ball Valves 2" and Smaller - Added Keckley as an AV
8/3/2017	Sheila Miller	Steel Pipe - ERW - Changed name of Energex to Wheatland Tube per Manufacturer's Bulletin of June 1, 2017
7/24/2017	Heather Misutka	Tanks - Updated Hamilton Tanks contact information
6/29/2017	Sheila Miller	Steel Fittings - 2" and Less Forged - Added Westbrook for pipe nipples due to longstanding use at EQT
6/19/2017	Sheila Miller (NTZ)	Coatings - Added Sherwin Williams Acrolon 218 HS
6/16/2017	Sheila Miller (NTZ)	Coatings - Removed Carboline and Wassner. Modified Above Ground Coatings to better describe coatings for Steel Pipe including adding product numbers.
5/30/2017	Sheila Miller (KB)	Ball Valves 2" and Larger - Added Perar Ball Valves
5/30/2017	Sheila Miller (KB)	Gas Sampling - Added Orbital Gas Systems
5/8/2017	Sheila Miller	Steel Pipe - ERW/HFW - Removed Tuberias from the list due to no experience with the product. <del>SMLS - Removed Tenaris/Dalmine from the list as this plant produces structural steel.</del> Restored 6/01/17. Changed to AV Ball Valves 2-inch and larger - Added Virgo. Limited to smaller sizes and ANSI ratings until more experience gained.
5/5/2017	Sheila Miller	Steel Pipe - ERW/HFW - Changed Welspun to AV based on positive mill visit, and experience with pipe used thus far. DSAW - Changed Tata to AV based on ITI Evaluation reports and experience with pipe used thus far.
4/12/2017	Sheila Miller	Metal Buildings - Added Steel Nation, and Metal Buildings Direct to reflect EQT experience with recent and past purchases.
3/23/2017	Sheila Miller	Pressure RV - Removed contact information in comment column as it was out of date.
3/14/2017	Sheila Miller	Ball Valves 2" and Larger - Added Argus Piggig Ball Valves to reflect long standing purchases
3/8/2017	Sheila Miller	Pipe Supports - Changed Ashland Fabrication from EAR to AV based on good experience with using over the past year.

**DESIGN AND CONSTRUCTION MANUAL**  
**2.3 APPROVED MANUFACTURERS LIST**



REVISIONS		
Date	Engineer	Title - Details
2/10/2017	Sheila Miller	Measurement & Gas Quality - Changed the following from EAR to AV: Orifice Fittings - Canalta; Orifice Plates - Red River Instrument, Kelley; Changed from AV to EAR: Ultrasonic Meters-Daniel, Instromet; USM- Clamp on - Siemens. Meter Bldgs - Removed Sagebrush. Added Flow Conditioner-Tube Bundle category with Daniel as an AV. Gas Flow Computers: Added Thermo Fisher Scientific as an AV Odorizers - Removed Peerless
2/10/2017	Sheila Miller	Deleted "Coriolis Meter" Sheet, "Differential Meter" Sheet, "PD Meters" Sheet, "Cone Meter" Sheet, and "Ultrasonic Meter" Sheet as this information is included in "Measurement and Gas Quality" sheet.
2/10/2017	Sheila Miller	Steel Pipe - Made the following changes due to EQT Engineering Evaluations and Technical Evaluations by ITI International for DSAW (LSAW) and HSAW pipe for MVP. DSAW - Changed Europe, and Welspun from EAR to AV. Added JFE Steel and NSSMC. SMLS - Added IPSCO KOPPEL ERW - Changed EVRAZ from EAR to AV HSAW - Changed Welspun from EAR to AV. Added Berg, Borusan Mannesmann, CPW and Salzgitter as AV.
1/31/2017	Sheila Miller	Gas Quality and Odorizers - Eliminated sheet as information from Measurement Sheet was duplicated
1/31/2017	Sheila Miller	Measurement & Gas Quality - Changed the following from AVL to AV - Orifice Fittings - Daniel, TMCo Sure Shot; Orifice Plates - Daniel; Moisture Analyzer - SpectraSensor; Chromatograph - ABB
1/27/2017	Sheila Miller	Measurement - GC Buildings - Added J. Poli, Inc.as AV
1/27/2017	Sheila Miller	Check Valves - 2" and Larger - Added Streamflo Crown Judd to Swing (AV) and Piston (EAR) categories
1/27/2017	Sheila Miller	Ball Valves - Removed EAR valves from List - Neway, TK. Removed RFR valves - Southern California, Velan; Changed AVL valves to AV - WKM, WOM, Vintrol and KF (Floating)
1/27/2017	Sheila Miller	Ball Valves 2" and Smaller - Changed AVL valves to AV - Jag Flocomponents, PBV
1/27/2017	Sheila Miller	Check Valves - Swing - Removed RFR from list - Velan
1/27/2017	Sheila Miller	Closures - Removed EAR -GD Engineering from list
1/27/2017	Sheila Miller	Flanges - Changed AVL to AV - Federal, Weldbend, DL, TriLad
1/27/2017	Sheila Miller	Steel Fittings - Removed EAR - EZEFLOW from list due to OVC issues. Changed AVL to AV - TecTubi.
1/27/2017	Sheila Miller	Tubing and Tube Fitting - Removed RFR Salem, Sandux. Changed AVL to AV - Let-Lok
1/27/2017	Sheila Miller	Check Valves 2" and Smaller - Removed EAR Flowserve/Vogt
1/19/2017	Sheila Miller	Cathodic Protection - Separated into Cathodic Protection and Coatings sheets. Specified Below and Above Grade. Added Pikotek VCS Flange Isolation Kits as EAR
11/30/2016	Sheila Miller/ Nick Salkeld	Steel Pipe - Revised Vallourec pipe to increase diameters from 6" to 10", to 2" to 10" due to additional manufacturing capabilities.
9/19/2016	Sheila Miller	Ball Valves - PBV - Corrected sizes on Two Piece valve to reflect max size of 12-inch
8/29/2016	Heather Misutka	Regulators- Added BelGAS
6/20/2016	Heather Misutka	Tubing and Tube Fitting - Added SSP Tubing
5/16/2016	Heather Misutka	Electrical Equipment - Added Southern Pipe to Schedule 80 PVC Conduit
3/8/2016	Sheila Miller	Flanges - Changed limitation from F-65 to F-70 and added Coffey to the list of Approved vendors for F-42 to F-70 flanges.
2/29/2016	Heather Misutka	Electrical Equipment - Changed Cantex from EAR to AV; Added AMR – EAR under Meter Buildings and Enclosures; Cathodic Protection - Added Valspar to coatings section
2/15/2016	Sheila Miller	Cathodic Protection - Weld End Insulators - Revised name of PSI to GPT, Added ALFA Engineering due to Corporate changes, not an additional vendor.
12/15/2015	Sheila Miller	Steel Fittings - Changed EZEFLOW from AV to EAR after bad experience on OVC. See note on SharePoint for details.
10/22/2015	Heather Misutka	Electrical Equipment- changed Appleton from AV to EAR; updated contact information
10/14/2015	Heather Misutka	Ball Valves 2inch and larger - added Valbart Ball Valves
9/24/2015	Sheila Miller	Steel Pipe - Seamless revisions
9/1/2015	Heather Misutka	Measurement & Meters/ Gas Quality Odorizers - Added The Davis & Davis Company
8/13/2015	Sheila Miller	Steel Pipe- Added HSAW category with Stupp (AV) and Welspun (EAR). Added Welspun to ERW category -(EAR)

**DESIGN AND CONSTRUCTION MANUAL**  
**2.3 APPROVED MANUFACTURERS LIST**



REVISIONS		
Date	Engineer	Title - Details
8/4/2015	Heather Misutka	Pipe Supports - Added ASHLAND FABRICATION, INC.
7/16/2015	Heather Misutka	Measurement & Meters - Added note to Fabrication Services and removed vendors
7/2/2015	Heather Misutka	Transmitters & Transducers - Added Setra
6/10/2015	Heather Misutka	Regulator Section - Added Fisher OSE Slam Shut and Rupture Pin Valve
4/30/2015	Heather Misutka	Electrical Equipment- Added Southwire to Electric Wire section, changed Service Wire Co. to AVL
4/6/2015	Sheila Miller	Check Valves - 2" and Larger - Revised Cameron Tom Wheatley Sizing to include up to 42".
2/4/2015	Sheila Miller	CP - Added Stupp Corp as an EAR to the Coating - Applicators - FBE List.
12/17/2014	Ken Haynes	Added Gas Sampling Tab; Sheet Number 24
12/12/2014	Ken Haynes	Measurement & Meters - Added Yokogawa
12/3/2014	George Samo	Transmitters/Transducers - Added Yokogawa
10/30/2014	Sheila Miller	Pipe Supports - Updated Atlas contact information
10/8/2014	Yana Lakova	Per Joe Hought, Flexible Metal Conduit category was added with Anaconda Type UA Liquidtight Flexible Metal Conduit - AV - State Electric Supply - Dunbar, WV (304) 766-0500
10/1/2014	Sheila Miller	Steel Fittings- Added AV Pennsylvania Machine Works to forged fittings 2" or less
9/12/2014	Sheila Miller	Pipe- CS: Added PTC due to lack of 1" Vendors
8/12/2014	Yana Lakova	Per Joe Hought, Electrical Equipment Vendor List was updated.
6/26/2014	Yana Lakova	Added Pipe Support Section
9/18/2013	Sheila Miller	Closures: Added Flanged ends to the InLine Closures Approval
6/12/2013	Yana Lakova	Republic Conduit was included to the Schedule 40 RGS Conduit per Joe Hought
4/9/2013	Yana Lakova	Per Joe Hought, Electrical Equipment Vendor List was updated.
3/27/2013	Yana Lakova	Added Thermowells
3/6/2013	Rob Roush	Added EVRAZ Regina Steel as EAR for Steel Pipe - ERW
2/13/2013	Yana Lakova	Created tabs for Measurement & Meters, Gas Quality Odorizers, Differential Meters, PD Meters, Coriolis. Added VINtrol Inc. to the approved Check valves manufacturers.
10/31/2012	Yana Lakova	Created a tab for Cone Meters, Updated Steel Pipe to add Wheatland Tube (JMC Steel Group) and California Steel
10/25/2012	Jeremy Watts	Hot Tap Fittings - Created a tab for Hot Tap Fittings and entered T.D. Williamson, WeldFit and Dresser
9/5/2012	Sheila Miller	Filter Separators/Separators/etc - Added Mueller Environmental Designs as an EAR
8/5/2012	Sheila Miller	Steel Pipe - Seamless - Clarified that US Steel Lorain Mill #4 is approved for sizes 1.5" to 4" - all that they currently manufacturer. (prior to this it said "to 4")
6/18/2012	Sheila Miller	Ball Valves 2-inch and Larger - Changed Neway status to EAR based on recent issues at Callisto CS. Valve being investigated for future Status change.
3/17/2012	John Pastelock	Tanks - Added Category to list
<del>3/6/2012</del>	<del>Sheila Miller</del>	<del>Steel Fittings - Butt Weld Fittings - Changed the status of Tectubi Fittings to NOT APPROVE the purchase of segmentable elbows. - REVOKED THIS RESTRICTION 9/8/2012</del>
2/2/2012	Sheila Miller	Flanges -Corrected to show Tri-Lad as approved for F-42-65.
2/2/2012	Sheila Miller	Steel Fittings - Forged Fittings - Added Phoenix Forge Group to Capital Manufacturing Description
11/17/2011	Jeff McKee	Added Elastomer Properties sheet
7/20/2011	Sheila Miller	Ball Valves 2-inch and Larger - KF Welded Body Valves approved for use
5/26/2011	Sheila Miller	Ball Valves 2 inch and Larger - Corrected name from JagFlo to Neway.

**DESIGN AND CONSTRUCTION MANUAL**  
**2.3 APPROVED MANUFACTURERS LIST**



REVISIONS		
Date	Engineer	Title - Details
5/11/2011	Sheila Miller	Cathodic Protection - Added Denso LT Wax Tape and Glass Outerwrap per MP 003
3/23/2011	Sheila Miller	Cathodic Protection - Added Wassner Paint as EAR to be used on Sunrise only
12/28/2010	Jeff McKee	Organized Sheets and TOC in alphabetical order
10/26/2010	Jeff McKee	Flanges/Steel Fittings - Added Tri-Lad / Tectubi
8/3/2010	Jeff McKee	Ball Valves 2 inch and Larger - Added Vintrol to Trunnion



**DESIGN AND CONSTRUCTION MANUAL**  
**2.3 APPROVED MANUFACTURERS LIST**



**ACTUATORS**

**Electric**

Vendor/Manufacturer Name	Preference Level	Model #	Actuating Direction	Travel	Housing Material	Worm Gear/Drive Material	Body Enclosure Rating	Power Options	Motor Locking Capability	Manual Operation	Temperature Rating	Limit Switches	Torque Switches	Torque Output Range (in-lb)	Compatible Valve Types	Mounting Orientation	Comments	Website
EIM (Emerson)	EAR	HQ SERIES	ROTARY (QUARTER-TURN)	90° +/- 10°	ALUMINUM ALLOY	BRONZE, ALLOY STEEL	NEMA 7	SINGLE PHASE 60 Hz (110V OR 230V); 3 PHASE 60 Hz (380V OR 460V)	DOUBLE REDUCTION WORM GEAR	DECLUTCHABLE HANDWHEEL	-14°F - 158°F	4 SPDT	2 SPDT	480 - 26,040	ALL ROTARY QUARTER-TURN	SEE CATALOG	NEMA 7 IS A NON-STANDARD THOUGH AVAILABLE OPTION	<a href="http://www.emerson.com/en-us/automation/eim">http://www.emerson.com/en-us/automation/eim</a>
Bettis (Emerson)	EAR	SERIES 2000	ROTARY (QUARTER-TURN)	90° +/- 10°	ALUMINUM ALLOY	BRONZE, ALLOY STEEL	NEMA 7	SINGLE PHASE 60 Hz (115 V); 3 PHASE (208 V)	DOUBLE REDUCTION WORM GEAR	DECLUTCHABLE HANDWHEEL	SEE CATALOG	6 SPDT	2 SPDT	2,520 - 1,800,000	ALL ROTARY QUARTER-TURN			
Limitorque (Flowsolve)	EAR	L75 SERIES	ROTARY (QUARTER-TURN)	SEE CATALOG	ALUMINUM	STEEL	NEMA 7	SINGLE PHASE 60 Hz (120V)	SELF-LOCKING; MOTOR BRAKE AVAILABLE OPTION	DECLUTCHABLE HANDWHEEL	-40°F - 150°F	UP TO 2	2 SPDT	150 - 3,000	ALL ROTARY QUARTER-TURN	SEE CATALOG		<a href="https://www.flowsolve.com/en/limitorque/limitorque-electric-actuators">https://www.flowsolve.com/en/limitorque/limitorque-electric-actuators</a>
		L120 SERIES	ROTARY (MULTI-TURN)	SEE CATALOG	CAST ALUMINUM, DUCTILE IRON	ALLOY BRONZE, HEAT-TREATED STEEL	EXPLOSION PROOF- NEMA 7 NOT LISTED	3 PHASE 60 Hz (230V)	DOUBLE REDUCTION WORM GEAR	DECLUTCHABLE HANDWHEEL	-20°F - 150°F	4 SPDT (NON-STANDARD OPTION)	2 SPDT (NON-STANDARD OPTION)	UP TO 720,000	ALL ROTARY MULTI-TURN		MAY NOT BE NEMA 7 RATED	
		LY SERIES	ROTARY (QUARTER-TURN)	SEE CATALOG	CAST ALUMINUM, DUCTILE IRON	ALLOY BRONZE, HEAT-TREATED STEEL	EXPLOSION PROOF- NEMA 7 NOT LISTED	SEE CATALOG	DOUBLE REDUCTION WORM GEAR	DECLUTCHABLE HANDWHEEL	-20°F - 150°F	8 SPDT	2	2,400 - 14,400	ALL ROTARY QUARTER-TURN		MAY NOT BE NEMA 7 RATED	
		MX SERIES	ROTARY (MULTI-TURN)	SEE CATALOG	CAST ALUMINUM, DUCTILE IRON	ALLOY BRONZE, HEAT-TREATED STEEL	EXPLOSION PROOF- NEMA 7 NOT LISTED	3 PHASE 60 Hz (208V OR 230V)	DOUBLE REDUCTION WORM GEAR	DECLUTCHABLE HANDWHEEL	-20°F - 150°F	SEE CATALOG	SEE CATALOG	SEE CATALOG	ALL ROTARY MULTI-TURN		MAY NOT BE NEMA 7 RATED	
Rotork	EAR	A RANGE																<a href="http://www.rotork.com/en/product/index/arange">http://www.rotork.com/en/product/index/arange</a>

**Gas Hydraulic**

Vendor/Manufacturer Name	Preference Level						Comments	Website
Shafer (Emerson)	EAR							<a href="http://www.emerson.com/en-us/catalog/shafer-rg2">http://www.emerson.com/en-us/catalog/shafer-rg2</a>
Bettis (Emerson)	EAR							<a href="http://www.emersonprocess.se/en-US/brands/bettis/products/valve_actuators/typeOfActuators/hydraulic/Pages/index.aspx">http://www.emersonprocess.se/en-US/brands/bettis/products/valve_actuators/typeOfActuators/hydraulic/Pages/index.aspx</a>
Biffi	EAR							<a href="http://biffi.it/products/hydraulic_actuators/">http://biffi.it/products/hydraulic_actuators/</a>
Rotork	EAR							<a href="http://www.rotork.com/en/product/index/rh">http://www.rotork.com/en/product/index/rh</a>

ACTUATORS

Pneumatic

Vendor/ Manufacturer Name	Preference Level	Model #	Pressure Rating	Style	Motion	Actuating Direction	Body Material	Seal Material	Thrust Output (lbf)	Torque Output Range (in-lb)	Air Supply Pressure (psig)	Compatible Valve Types	Mounting Orientation	Comments	Website
Automax (Flowserve)	EAR	SUPERNOVA B-SERIES	-	RACK-AND- PINION	SPRING-RETURN, DOUBLE-ACTING	ROTARY - QUARTER TURN	ANODIZED ALUMINUM	BUNA, VITON	-	25 - 58,000	60 - 100	BUTTERFLY, BALL, PLUG	SPECIFY	QUARTER-TURN AND 180° TURN AVAILABLE	<a href="https://www.flowserve.com/en/products/all-products?product_brand=496">https://www.flowserve.com/en/products/all-products?product_brand=496</a>
		SXL SERIES	-	RACK-AND- PINION	SPRING-RETURN, DOUBLE-ACTING	ROTARY - QUARTER TURN	STAINLESS STEEL	VITON	-	25 - 58,000	60 - 100	BUTTERFLY, BALL, PLUG	SPECIFY	FOR USE IN CORROSIVE ENVIRONMENTS	
		HEAVY DUTY (R2, R3, R4, R5)	-	SCOTCH YOKE, RACK-AND- PINION	SPRING-RETURN, DOUBLE-ACTING	ROTARY - QUARTER TURN	ANODIZED ALUMINUM	BUNA, VITON	-	3,000 - 500,000	40 - 100	BUTTERFLY, BALL, PLUG	SPECIFY	QUARTER-TURN; AVAILABLE WITH OPTIONAL OVERRIDE AND FAILSAFE FEATURES	
Becker Precision Equipment (GE Oil & Gas)	EAR	RPDA SERIES	-	CRANK ARM	DOUBLE-ACTING	ROTARY - QUARTER TURN	CARBON STEEL	BUNA	-	3,000 - 825,504	UP TO 500	BUTTERFLY, BALL, PLUG	SPECIFY	AVAILABLE W/ BLEED TO PRESSURE SYSTEM	<a href="https://www.geoilandgas.com/file-download-search">https://www.geoilandgas.com/file-download-search</a>
		RPSR SERIES	-	CRANK ARM	SPRING-RETURN (SINGLE-ACTING)	ROTARY - QUARTER TURN	CARBON STEEL	BUNA	-	1,000 - 130,000	UP TO 500	BUTTERFLY, BALL, PLUG	SPECIFY	AVAILABLE W/ BLEED TO PRESSURE SYSTEM	
		SYDA SERIES	-	SCOTCH YOKE	DOUBLE-ACTING	ROTARY - QUARTER TURN	CARBON STEEL	BUNA, PTFE	-	SEE CATALOG	UP TO 130	BUTTERFLY, BALL, PLUG	SPECIFY	AVAILABLE W/ BLEED TO PRESSURE SYSTEM	
Bettis (Emerson)	EAR	G SERIES	-	SCOTCH YOKE	SPRING-RETURN, DOUBLE-ACTING	ROTARY - QUARTER TURN	DUCTILE IRON	BUNA	-	12,581 - 6,000,000 (DOUBLE- ACTING); 3,000,000+ (SPRING- RETURN)	40 - 200	BUTTERFLY, BALL, PLUG	SPECIFY	AVAILABLE W/ SYMMETRIC OR CANTED YOKE	<a href="http://www.emerson.com/en-us/automation/valves-actuators-regulators/actuators/pneumatic">http://www.emerson.com/en-us/automation/valves-actuators-regulators/actuators/pneumatic</a>
		D SERIES	-	RACK-AND- PINION	SPRING-RETURN, DOUBLE-ACTING	ROTARY - QUARTER TURN	CAST ANODIZED ALUMINUM	BUNA	-	44 - 22,379 (DOUBLE-ACTING); 48 - 7,939 (SPRING-RETURN)	40 - 120	BUTTERFLY, BALL, PLUG	SPECIFY	96° TOTAL ROTATION AVAILABLE	
		CBA-300 SERIES	-	SCOTCH YOKE	SPRING-RETURN, DOUBLE-ACTING	ROTARY - QUARTER TURN	DUCTILE IRON	BUNA	-	7,388 - 11,694 (DOUBLE- ACTING); 4,589 - 10,607 (SPRING-RETURN)	40 - 110 (DOUBLE- ACTING); 40 - 150 (SPRING-RETURN)	BUTTERFLY, BALL, PLUG	SPECIFY		
Biffi	EAR	ALGAS SPRING- RETURN	-	SCOTCH YOKE	SPRING-RETURN	ROTARY - QUARTER TURN	CARBON STEEL	NBR	-	1,260 - 685,500	20 - 150	BUTTERFLY, BALL, PLUG	SPECIFY		<a href="http://biffi.it/products/pneumatic_actuators/">http://biffi.it/products/pneumatic_actuators/</a>
		ALGAS DOUBLE- ACTING	-	SCOTCH YOKE	DOUBLE-ACTING	ROTARY - QUARTER TURN	CARBON STEEL	NBR	-	1,880 - 2,200,000	20 - 150	BUTTERFLY, BALL, PLUG	SPECIFY		
Hytork (Emerson)	EAR	XL RANGE	-	RACK-AND- PINION	SINGLE-ACTING, DOUBLE-ACTING	ROTARY - QUARTER TURN	ALUMINUM	NBR, VITON, EPDM	-	32 - 24,830	40 - 150	BUTTERFLY, BALL, PLUG	SPECIFY		<a href="http://www.emerson.com/en-us/automation/hytork">http://www.emerson.com/en-us/automation/hytork</a>
Ledeon (Cameron)	EAR													SEE CATALOG FOR DETAILS	<a href="https://cameron.slb.com/products-and-services/valves-index/valve-automation-ledeon/ledeon-pneumatic-actuators">https://cameron.slb.com/products-and-services/valves-index/valve-automation-ledeon/ledeon-pneumatic-actuators</a>
Limitorque (Flowserve)	EAR													SEE CATALOG FOR DETAILS	<a href="https://www.flowserve.com/en/products/actuation-instrumentation/fluid-power-actuation">https://www.flowserve.com/en/products/actuation-instrumentation/fluid-power-actuation</a>
Morin (Biffi)	EAR	SERIES S	-	SCOTCH YOKE	SINGLE-ACTING, DOUBLE-ACTING	ROTARY - QUARTER TURN	STAINLESS STEEL	TEFLON (PTFE)	-	110 - 238,000 (DOUBLE- ACTING); 50 - 104,125 (SINGLE-ACTING)	40 - 160	BUTTERFLY, BALL, PLUG	SPECIFY		<a href="http://biffi.it/products/pneumatic_actuators/?id=tcn:554-46956&amp;catid=tcn:554-46954-1024">http://biffi.it/products/pneumatic_actuators/?id=tcn:554-46956&amp;catid=tcn:554-46954-1024</a>
		SERIES B/C	-	SCOTCH YOKE	SINGLE-ACTING, DOUBLE-ACTING	ROTARY - QUARTER TURN	DUCTILE IRON	TEFLON (PTFE)	-	SEE CATALOG	40 - 160	BUTTERFLY, BALL, PLUG	SPECIFY		
Rotork	EAR	CP RANGE	-	SCOTCH YOKE	SINGLE-ACTING, DOUBLE-ACTING	ROTARY - QUARTER TURN	DUCTILE IRON	BUNA	-	UP TO 39,828	UP TO 174	BUTTERFLY, BALL, PLUG	SPECIFY		<a href="http://www.rotork.com/en/product/index/gt">http://www.rotork.com/en/product/index/gt</a>
		GP RANGE	-	SCOTCH YOKE	SINGLE-ACTING, DOUBLE-ACTING	ROTARY - QUARTER TURN	CARBON STEEL, DUCTILE IRON	NBR	-	SEE CATALOG	UP TO 175	BUTTERFLY, BALL, PLUG	SPECIFY		
		P RANGE	-	SCOTCH YOKE	SINGLE-ACTING, DOUBLE-ACTING	ROTARY - QUARTER TURN	DUCTILE IRON	NBR	-	UP TO 88,000	UP TO 250	BUTTERFLY, BALL, PLUG	SPECIFY		
Worcester (Flowserve)	EAR	SERIES 39	-	RACK-AND- PINION	SINGLE-ACTING, DOUBLE-ACTING	ROTARY - QUARTER TURN	COATED ALUMINUM	NBR	-	35 - 28,000 (SINGLE- ACTING); 80 - 60,000	30 - 80	BUTTERFLY, BALL, PLUG	SPECIFY		<a href="https://www.flowserve.com/sites/default/files/2016-09/WCENBR100304-AQ.pdf">https://www.flowserve.com/sites/default/files/2016-09/WCENBR100304-AQ.pdf</a>
		SERIES 34	-	SCOTCH YOKE	SINGLE-ACTING, DOUBLE-ACTING	ROTARY - QUARTER TURN	ALUMINUM	NBR	-	UP TO 1,000	SEE CATALOG	BUTTERFLY, BALL, PLUG	SPECIFY		<a href="https://www.flowserve.com/sites/default/files/2016-07/08932-e.pdf">https://www.flowserve.com/sites/default/files/2016-07/08932-e.pdf</a>

REFERENCE CODES	
CODES	PREFERENCE LEVELS
AV	Approved Vendor
AVL	Approved Vendor with Limitations
EAR	Engineering Approval Required
RFR	Not Approved / Requires Further Research

October 2017 AML General Updates: Added Websites. No Vendor additions.

**AIR COMPRESSORS**

ITEM	MANUFACTURER	PREFERENCE LEVEL	COMMENTS	WEBSITE
Air Compressors	Curtis	EAR		<a href="http://www.fscurtis.com">www.fscurtis.com</a>
	Gardner-Denver	EAR		<a href="http://www.gardnerdenverproducts.com">www.gardnerdenverproducts.com</a>
	Quincy	EAR		<a href="http://www.quincycompressor.com/">www.quincycompressor.com/</a>
	Sullair	EAR		<a href="http://www.sullair.com">www.sullair.com</a>

REFERENCE CODES	
CODES	PREFERENCE LEVELS
AV	Approved Vendor
AVL	Approved Vendor with Limitations
EAR	Engineering Approval Required
RFR	Not Approved / Requires Further Research

October 2017 AML General Updates: No Changes

**AIR DRYERS**

ITEM	MANUFACTURER	PREFERENCE LEVEL	COMMENTS	WEBSITE
Air Dryers	Sahara	EAR		www.saharahenderson.com
	Hankison	EAR		www.hankisonintl.com
	Kemp	EAR		www.kemp-spx.com/
	Gardner Denver	EAR		www.gardnerdenverproducts.com

REFERENCE CODES	
CODES	PREFERENCE LEVELS
AV	Approved Vendor
AVL	Approved Vendor with Limitations
EAR	Engineering Approval Required
RFR	Not Approved / Requires Further Research

October 2107 AML Updates: No Changes

**AUTOMATION EQUIPMENT**

ITEM	MANUFACTURER	PREFERENCE LEVEL	COMMENTS	WEBSITE
PLC	Allen-Bradley	AV	Purchased from CED Mosebach Electric Supply	<a href="http://www.mosebach.com/">http://www.mosebach.com/</a>
	Bristol	AV	Purchased from ECI	<a href="http://www.eci.us/">http://www.eci.us/</a>
	Schneider	AV	Purchased from Clayton	<a href="https://claytonengineering.com/">https://claytonengineering.com/</a>
Panels (PLC, Network, Communications)	Advanced Integration Group, Inc.	AV		<a href="https://www.aigcontrols.com/">https://www.aigcontrols.com/</a>
	Control Design, Inc.	AV		<a href="http://www.controldesigninc.com/">http://www.controldesigninc.com/</a>
	Doddridge Controls, Inc.	AV		<a href="http://doddridgecontrols.com/">http://doddridgecontrols.com/</a>
	Equipment & Controls, Inc.	AV		<a href="http://www.eci.us/">http://www.eci.us/</a>
	Fletcher Industries, Inc.	AV		
Redlion Equipment	Clayton Engineering Company	AV		
Analog Signal Splitter	HIM, Moore Industries	AV		<a href="http://www.miinet.com/">http://www.miinet.com/</a>
	ECT, Moore Industries	AV		<a href="http://www.miinet.com/">http://www.miinet.com/</a>
Network Switches	Cisco, N-Tron, Moxa, Phoenix	AV		
Frequency Converter	FDY, Moore Industries	AV		<a href="http://www.miinet.com/">http://www.miinet.com/</a>
Monico	Clayton Engineering Company	AV		

REFERENCE CODES	
CODES	PREFERENCE LEVELS
AV	Approved Vendor
AVL	Approved Vendor with Limitations
EAR	Engineering Approval Required
RFR	Not Approved / Requires Further Research

June 2018 AML Added

**DESIGN AND CONSTRUCTION MANUAL**  
**2.3 APPROVED MANUFACTURERS LIST**



**BALL VALVES**

Vendor/ Manufacturer Name	Preference Level	Sizes Offered (in.)	Pressure Rating	End Connection	Construction Type	Operation	Seat	Body	Available Body Materials	Locking Device	Port	Model #	Comments	Website
<b>Trunnion Ball Valves 2-inch and Larger</b>														
Valbart (Flowserve)	AV	2" - 42"	ANSI 150	RF, RTJ, WE	2 PIECE BOLTED (TOP ENTRY, SIDE ENTRY <= 4"), 3 PIECE BOLTED (SIDE ENTRY > 4"), WELDED BODY	LEVER, GEAR	METAL TO METAL, PRIMARY METAL TO SECONDARY SOFT	TRUNNION	CS, SS	YES	N/A	SIDE ENTRY, WELDED BODY, TOP ENTRY	42" VALVES WOULD HAVE TO BE MANUFACTURED IN ITALY AND SHIPPED FROM THERE	<a href="https://www.flowserve.com/en/products/all-products?product_brand=636">https://www.flowserve.com/en/products/all-products?product_brand=636</a>
			ANSI 300											
			ANSI 600											
			ANSI 900											
Balon	AV	4"-12" depending on Ansi Rating	ANSI 150 to ANSI 900	RF	3 PIECE BOLTED	GEAR		TRUNNION	CS				API 6D 0134 and 1507 Monograms	<a href="http://www.balon.com">www.balon.com</a>
Cameron	AV	2" - 56"	ANSI 150	RF/RF, WE/WE, RF/WE, RTJ/RTJ, RTJ/WE	2 PIECE BOLTED, WELDED BODY	LEVER, EXTENSION LEVER, WORM GEAR, EXTENSION WORM GEAR, ETC.	PTFE, NYLON	TRUNNION	CS, SS			FULL, REDUCED, VENTURI	SIDE ENTRY	<a href="https://cameron.slb.com/">https://cameron.slb.com/</a>
			ANSI 300											
			ANSI 300											
			ANSI 600											
			ANSI 900											
			ANSI 1500											
		2" - 24"	ANSI 1500	RF/RF, WE/WE, RF/WE, RTJ/RTJ, RTJ/WE	2 PIECE BOLTED, WELDED BODY	LEVER, EXTENSION LEVER, WORM GEAR, EXTENSION WORM GEAR, ETC.	PTFE, NYLON	TRUNNION	CS, SS			FULL, REDUCED, VENTURI	TOP ENTRY	
			ANSI 2500											
			ANSI 150											
			ANSI 300											
			ANSI 600											
			ANSI 900											
2" - 12"	ANSI 1500	RF/RF, WE/WE, RF/WE, RTJ/RTJ, RTJ/WE	2 PIECE BOLTED, WELDED BODY	LEVER, EXTENSION LEVER, WORM GEAR, EXTENSION WORM GEAR, ETC.	PTFE, NYLON	TRUNNION	CS, SS			FULL, REDUCED, VENTURI	TOP ENTRY			
	ANSI 2500													
	ANSI 150													
	ANSI 300													
	ANSI 600													
	ANSI 900													
Delta (Quarter Turn Resources, Inc.)	AV	2" - 6X4X6"	ANSI 150 - ANSI 1500	RF, RTJ	3 PIECE SPLIT	LEVER, WORM GEAR, ACTUATOR	PTFE	TRUNNION	ASTM A-350 GR. LF2		FULL, REDUCED	TYPE 54	<a href="http://qtrinc.biz/">http://qtrinc.biz/</a> <a href="http://deltacr.com/index.php/products/pipeline-valves/ball-valves">http://deltacr.com/index.php/products/pipeline-valves/ball-valves</a>	
			ANSI 2500											
		2" - 8X6X8"	ANSI 150	RF, RTJ	3 PIECE SPLIT	LEVER, WORM GEAR, ACTUATOR	VITON	TRUNNION	ASTM A-350 GR. LF2	FULL, REDUCED	TYPE 55			
			ANSI 300											
		6" - 60"	ANSI 300	RF, RTJ	3 PIECE SPLIT	LEVER, WORM GEAR, ACTUATOR	VITON	TRUNNION	ASTM A-350 GR. LF2	FULL, REDUCED	TYPE 55			
			ANSI 400											
		6" - 48"	ANSI 600	RF, RTJ	3 PIECE SPLIT	LEVER, WORM GEAR, ACTUATOR	VITON	TRUNNION	ASTM A-350 GR. LF2	FULL, REDUCED	TYPE 55			
			ANSI 900											
6" - 36"	ANSI 1500	RF, RTJ	3 PIECE SPLIT	LEVER, WORM GEAR, ACTUATOR	VITON	TRUNNION	ASTM A-350 GR. LF2	FULL, REDUCED	TYPE 55					
	ANSI 1500													
8" - 24"	ANSI 2500	RF, RTJ	3 PIECE SPLIT	LEVER, WORM GEAR, ACTUATOR	NYLON	TRUNNION	ASTM A-350 GR. LF2	FULL, REDUCED	TYPE 55					
	ANSI 2500													
Grove	AV	2" - 4"	ANSI 150	RF, RTJ, WE	3 PIECE BOLTED	LEVER	PTFE	TRUNNION	CS		FULL, REDUCED	B4	DOUBLE BLOCK AND BLEED AVAILABLE <a href="https://cameron.slb.com/-/media/cam/.../grove-b4-b5-b7-ball-valve-brochure.ashx">https://cameron.slb.com/-/media/cam/.../grove-b4-b5-b7-ball-valve-brochure.ashx</a>	
			ANSI 300											
			ANSI 400											
			ANSI 600											
			ANSI 900											
			ANSI 1500											
		6" - 60"	ANSI 150	RF, RTJ, WE	3 PIECE BOLTED	LEVER, WORM GEAR, ACTUATOR	METAL TO METAL	TRUNNION	CS		FULL, REDUCED	B5		
			ANSI 300											
			ANSI 400											
			ANSI 600											
			ANSI 900											
			ANSI 1500											
6" - 48"	ANSI 1500	RF, RTJ, WE	3 PIECE BOLTED	LEVER, WORM GEAR, ACTUATOR	METAL TO METAL	TRUNNION	CS		FULL, REDUCED	B7.1				
	ANSI 2500													
2" - 6"	ANSI 2500	RF, RTJ, WE	3 PIECE BOLTED	LEVER, WORM GEAR, ACTUATOR	METAL TO METAL	TRUNNION	CS		FULL, REDUCED	B7.B				
	ANSI 2500													
GWC Italia	AV	2" - 42"	ANSI 150	RF, WE, RTJ, RF X WE, RTJ X WE	3 PIECE SPLIT, BOLTED WELDED BODY	LOCKING HANDLE (2" -4"), LOCKING GEAR OPERATOR (6"+)	DEVLON, TEFLON, PEEK, VITON, RTFE, NYLON, METAL to METAL	TRUNNION	CS, SS	X	FULL, REDUCED		DOUBLE BLOCK AND BLEED, TOP ENTRY and SIDE ENTRY DESIGNS <b>Manufactured in Italy or US</b>	<a href="http://gwcvalve.com/">http://gwcvalve.com/</a>
			ANSI 300											
			ANSI 600											
			ANSI 900											
			ANSI 1500											
			ANSI 2500											
KF Industries (Circor Energy)	AV	2" - 42"	ANSI 150	RF, WE, RTJ, RF X WE, RTJ X WE	3 PIECE SPLIT, BOLTED WELDED BODY	LOCKING HANDLE (2" -4"), LOCKING GEAR OPERATOR (6"+)	DEVLON, TEFLON, PEEK	TRUNNION	CS, SS	X	FULL, REDUCED	SERIES P3, WB	<b>DOUBLE BLOCK AND BLEED, TOP ENTRY DESIGN.</b>  <b>Sold to MS Valves GmbH in June 2020. Removed from list in July 2020.</b>	<a href="http://www.circorenergy.com/brands/kf-valves.php">http://www.circorenergy.com/brands/kf-valves.php</a>
			ANSI 300											
			ANSI 600											
			ANSI 900											
2" - 24"	ANSI 1500	RF, WE, RTJ, RF X WE, RTJ X WE	3 PIECE SPLIT, BOLTED WELDED BODY	LOCKING HANDLE (2" -4"), LOCKING GEAR OPERATOR (6"+)	DEVLON, TEFLON, PEEK	TRUNNION	CS, SS	X	FULL, REDUCED	SERIES P3, WB				
	ANSI 1500													
2" - 12"	ANSI 2500	RF, WE, RTJ, RF X WE, RTJ X WE	3 PIECE SPLIT, BOLTED WELDED BODY	LOCKING HANDLE (2" -4"), LOCKING GEAR OPERATOR (6"+)	DEVLON, TEFLON, PEEK	TRUNNION	CS, SS	X	FULL, REDUCED	SERIES P3, WB				
	ANSI 2500													

**DESIGN AND CONSTRUCTION MANUAL**  
**2.3 APPROVED MANUFACTURERS LIST**



**BALL VALVES**

Vendor/ Manufacturer Name	Preference Level	Sizes Offered (in.)	Pressure Rating	End Connection	Construction Type	Operation	Seat	Body	Available Body Materials	Locking Device	Port	Model #	Comments	Website
PBV (Forum Energy Technologies)	AV	2" - 56" 2" -36" for ANSI 1500	ANSI 150 ANSI 300 ANSI 600 ANSI 900 ANSI 1500	RF RTJ WE RF X WE RTJ X WE	3 PIECE FORGED BOLTED, 3 PIECE FORGED WELDED	ACTUATOR, BARE STEM, LEVER, GEAR OPERATOR	PEEK, DEVLON, NYLON, GLASS-FILLED PTFE, VITON SEALS: HNBR, BUNA-N, EPDM, VITON A OR B	TRUNNION	CS, SS		FULL	SERIES 6700		<a href="http://www.f-e-l.com/our_products_technologies/valve-solutions/ball-valves">http://www.f-e-l.com/our_products_technologies/valve-solutions/ball-valves</a>
		2" - 12"	ANSI 150 ANSI 300 ANSI 600	RF, RTJ	2 PIECE BOLTED	ACTUATOR, BARE STEM, LEVER, GEAR OPERATOR	DEVLON, GLASS-FILLED PTFE, HNBR SEALS	TRUNNION	CS		FULL	SERIES 6800		
Perar	AV	2" - 60"	ANSI 150	RF, RTF, WE, RF X WE, RTJ X WE	3 PIECE FORGED BOLTED, 3 PIECE FORGED WELDED, 2 PIECE BOLTED, SIDE ENTRY, TOP ENTRY	LEVER, GEAR OPERATOR	VITON, HNBR, PTFE METAL TO METAL	TRUNNION	CS, SS		FULL, REDUCED			<a href="http://www.perar.it/">http://www.perar.it/</a>
		2" - 60"	ANSI 300											
		2" - 60"	ANSI 600											
		2" - 60"	ANSI 900											
		2" - 60"	ANSI 1500											
		2" - 60"	ANSI 2500											
SCV Valves	AV	2" - 42"	ANSI 150	RF, RTF, WE	3 PIECE BOLTED, 3 PIECE WELDED, SIDE ENTRY, TOP ENTRY	LEVER, GEAR OPERATOR	DEVLON, NYLON, PEEK, RTFFE	TRUNNION	CS, SS		FULL, REDUCED			<a href="http://www.scvvalve.com/">http://www.scvvalve.com/</a>
			ANSI 300											
			ANSI 600											
			ANSI 900											
			ANSI 1500											
			ANSI 2500											
Vinrol	AV	2" - 12"	ANSI 150	RF, RTJ, WE	2 PIECE BOLTED	LOCKING HANDLE, NUT, GEAR OPERATOR, GEAR OPERATOR WITH LOCKING DEVICE, BARE STEM, BARE STEM WITH LOCKING DEVICE	DELTRIN, FILLED RTFE, DEVLON, PEEK, TFM, METAL TO METAL	TRUNNION	CS, SS	X	FULL, REDUCED	T2	* Vinrol has ceased doing business as on 11/30/21. Valves are warranted by Emerson. Ok to use existing stock.	<a href="http://www.vinrol.com/products.html">http://www.vinrol.com/products.html</a>
			ANSI 300											
			ANSI 600											
		2" - 24"	ANSI 150	RF, RTJ, WE	3 PIECE BOLTED	LOCKING HANDLE, NUT, GEAR OPERATOR, GEAR OPERATOR WITH LOCKING DEVICE, BARE STEM, BARE STEM WITH LOCKING DEVICE	DELTRIN, FILLED RTFE, DEVLON, PEEK, TFM, METAL TO METAL	TRUNNION	CS, SS	X	FULL, REDUCED	T3		
			ANSI 300											
			ANSI 600											
Virgo	AV	2" - 12"	ANSI 150	RF, RTF, WE, RF X WE, RTJ X WE	3 PIECE CAST BOLTED	BARE STEM, GEAR, HAND LEVER, ACTUATOR, OTHER	DEVLON, PEEK, PCTFE (KEL F), REINFORCED PTFE (TEFLON)	TRUNNION	CS, SS		FULL, REDUCED	SIDE ENTRY, TOP ENTRY	* Virgo produces additional sizes and ANSI ratings. Those shown are approved at this time. Other sizes may be ordered at the discretion of Engineering.	<a href="http://www.emerson.com/en-us/automation/virgo">http://www.emerson.com/en-us/automation/virgo</a>
			ANSI 300											
			ANSI 600											
		2" - 12"	ANSI 150	RF, RTF, WE, RF X WE, RTJ X WE	3 PIECE FORGED BOLTED,	BARE STEM, CHAIN WHEEL, GEAR, HAND LEVER, ACTUATOR, OTHER	DEVLON, PEEK, PCTFE (KEL F), REINFORCED PTFE (TEFLON)	TRUNNION	CS, SS		FULL, REDUCED (REGULAR), REDUCED - DOUBLE	SIDE ENTRY		
			ANSI 300											
			ANSI 600											
2" - 12" *	ANSI 600													
Warren Valve (An Allied Group Company)	AV	2" - 42"	ANSI 150 - 1500					TRUNNION	CS, SS					<a href="http://www.warrenvalve.com/products/trunnion.php">http://www.warrenvalve.com/products/trunnion.php</a>
WKM (Cameron)	AV	2" - 16"	ANSI 150	RF, RJ	2 PIECE BOLTED	LEVER, NUT, WORM GEAR OPEATOR, WRENCH, BARE STEM	NYLON, FILLED PTFE, DEVLON, PK	TRUNNION	CS, SS	X	FULL, REDUCED	DYNASEAL 370D4 / 370D6		<a href="http://cameron.slb.com/products-and-services/valves-index/wkm">http://cameron.slb.com/products-and-services/valves-index/wkm</a>
			ANSI 300											
		2" - 12"	ANSI 600											
			ANSI 900											
World Oilfield Machine (WOM)	AV	2" - 24"	ANSI 150	RF, RTJ, WE	3 PIECE BOLTED	LEVER, NUT, GEAR OPERATOR	PTFE/NYLON	TRUNNION	CS, SS		NOT SPECIFIED	DUAL SEAL BALL VALVE	Double Block and Bleed	<a href="http://www.womusa.com/wom-product-category/ball-valves/">http://www.womusa.com/wom-product-category/ball-valves/</a>
			ANSI 300											
		2" - 30"	ANSI 600											
			ANSI 900											

**NOTE: All flanged end and weld end ball, plug, check valves 2" and larger must comply with API 6D and be monogrammed.**

**DESIGN AND CONSTRUCTION MANUAL**  
**2.3 APPROVED MANUFACTURERS LIST**



**BALL VALVES**

Vendor/ Manufacturer Name	Preference Level	Sizes Offered (in.)	Pressure Rating	End Connection	Construction Type	Operation	Seat	Body	Available Body Materials	Locking Device	Port	Model #	Comments	Website	
<b>Floating Ball Valves 2-inch through 6-inch (Company limits floating valve to sizes no larger than 6-inch)</b>															
Balon	AV	2" - 6"	ANSI 150	FLANGED	2 PIECE BOLTED	LEVER	TFE	FLOATING	CS, SS, NACE	X	FULL	SERIES F		<a href="https://www.balon.com/">https://www.balon.com/</a>	
		GEAR OPERATOR													
		2" - 6"	ANSI 300	FLANGED	2 PIECE BOLTED	LEVER						CS, SS, NACE			SERIES F
		GEAR OPERATOR													
		2" - 4"	ANSI 600	FLANGED	2 PIECE BOLTED	LEVER						CS, SS, NACE			SERIES F
		GEAR OPERATOR													
		2"	ANSI 900	FLANGED	2 PIECE BOLTED	LEVER						CS, SS, NACE			SERIES F
		2"				ANSI 1500						FLANGED			2 PIECE BOLTED
2" - 6"	ANSI 150	WELD END	3 PIECE THREADED	LEVER	CS	SERIES US									
2" - 6"				ANSI 300											
Cameron	AV	2" - 6" **	ANSI 150 - ANSI 2500	RF/RF, WE/WE, RF/WE, RTJ/RTJ, RTJ/WE	FULLY WELDED	LEVER, EXTENSION LEVER, WORM GEAR, EXTENSION WORM GEAR, ETC.	PTFE, NYLON	FLOATING	ASTM A350 Gr. LF-2(M)		FULL, REDUCED, VENTURI	FULLY WELDED	NO EXACT MODEL NUMBER GIVEN FOR THIS VALVE CATALOG	<a href="https://cameron.slb.com/">https://cameron.slb.com/</a>	
KF Industries (Circor)	AV	2" - 6" **	ANSI 150	FLANGED	2 PIECE BOLTED, UNIBODY	LEVER, GEAR OPERATOR, BARE STEM	PTFE, PEEK, DEVLON	FLOATING	CS, SS, NACE	X	FULL	SERIES F		<a href="http://www.circorenergy.com/brands/kf-valves.php">http://www.circorenergy.com/brands/kf-valves.php</a>	
			ANSI 300												
			ANSI 600												
PBV (Forum Energy Technologies)	AVL	2" - 6"	ANSI 150	FLANGED	2 PIECE BOLTED	LEVER, BARE STEM, GEAR OPERATOR	CTFM, NYLON, PEEK, METAL, VIRGIN TFM	FLOATING	CS	X	X	6510	THESE MODELS ARE THE REGULAR O-RING TYPE STEM SEAL	<a href="http://www.f-e-t.com/our_products_technologies/valve-solutions/ball-valves">http://www.f-e-t.com/our_products_technologies/valve-solutions/ball-valves</a>	
ViNtrol	AV	1" - 6" **	ANSI 150	RF, RTJ, WE, RF X WE, RTJ X WE	2 PIECE BOLTED	LEVER, NUT, GEAR OPERATOR, BARE STEM, GEAR OPERATOR W/ LOCKING DEVICE	DELRIN, PTFE, RTFE, DEVLON, PEEK, TFM	FLOATING	CS, SS	X	FULL, REDUCED	VF SERIES		<a href="http://www.vintrol.com/products.html">http://www.vintrol.com/products.html</a>	
			ANSI 300												
			ANSI 600												
			ANSI 900												
Virgo	AV	2" - 6"***	ANSI 150 - ANSI 600	RF, RTJ, WE	2/3 PIECE CAST	BARE STEM, GEAR, HAND LEVER, ACTUATOR, OTHER	MODIFIED PTFE / RTFE, DEVLON, PEEK	FLOATING	CS, SS		FULL, REDUCED /	SIDE ENTRY	Virgo produces additional sizes and	<a href="http://www.emerson.com/en-us/automation/virgo">http://www.emerson.com/en-us/automation/virgo</a>	
WKM (Cameron)	AV	2" - 6" **	ANSI 150	RF, WE	2 PIECE		TFE, FILLED TFE	FLOATING	CS, SS		FULL, REDUCED	DYNASEAL 310		<a href="http://cameron.slb.com/products-and-services/valves-index/wkm">http://cameron.slb.com/products-and-services/valves-index/wkm</a>	
			ANSI 300												
			ANSI 600												

NOTE: \*\* Larger diameter floating ball valves are available but NOT approved. Company limits floating ball valves to sizes 6 inch and smaller  
 NOTE: All flanged end and weld end ball, plug, check valves 2" and larger must comply with API 6D and be monogrammed.

<b>Pigging Valves</b>														
Argus	AV	2" -16"	ANSI 150 - ANSI 1500	RF/RF, RTJ/RTJ,		LEVER, WORM GEAR	Devlon "V"	TRUNNION	ASTM A350 Gr. LF-2	X				<a href="http://www.argusmachine.com/oilfield-products/pigging-valves/">http://www.argusmachine.com/oilfield-products/pigging-valves/</a>

<b>REFERENCE CODES</b>	
<b>CODES</b>	<b>PREFERENCE LEVELS</b>
AV	Approved Vendor
AVL	Approved Vendor with Limitations
EAR	Engineering Approval Required
RFR	Not Approved / Requires Further Research

October 2017 AML General Update. Added SCV based on 9/21/17 Approval



**DESIGN AND CONSTRUCTION MANUAL**  
**2.3 APPROVED MANUFACTURERS LIST**



**BALL VALVES**

Manufacturer Name	Preference Level	Sizes Offered (in.)	Pressure Rating	End Connection	Construction Type	Operation	Seat	Body	Available Body Materials	Locking Device	Full Port	Model #	Comments	Website																		
<b>Ball Valves 2" and Smaller</b>																																
Balon	AV	1	2500#	FNPT	2 PIECE	LEVER	TFE	FLOATING	CS, SS, NACE		X	SERIES F		<a href="https://www.balon.com/">https://www.balon.com/</a>																		
		1	3000#																													
		1 1/2	2500#																													
		2	2000#	FLANGED																												
		1	ANSI 150																													
		1 1/2																														
2																																
JAG flocomponents	AV	1/4	3,705#	FNPT	3 PIECE THREADED	LEVER	DELRIN	FLOATING	ASTM A-105	X	X	T3 1500 NPT	THIS MODEL IS RATED TO CLASS 1500, WHICH WILL HOLD 3,705 PSI WITH DELRIN SEAL.	<a href="http://www.jagflo.com/">http://www.jagflo.com/</a>																		
		3/8																														
		1/2																														
		3/4																														
		1																														
		1 1/4																														
		1 1/2																														
		2		ANSI 600								FLANGED			3 PIECE THREADED	LEVER	PTFE	FLOATING	ASTM A-105N	X	X	T3 600 FLANGED										
		1/4																														
		3/8																														
		1/2																														
		3/4																														
		1																														
		1 1/4		ANSI 1500								FLANGED			3 PIECE THREADED	LEVER	PTFE	FLOATING	ASTM A-105N	X	X	T3 1500 FLANGED										
		1 1/2																														
		2																														
		1																					ANSI 2500	FLANGED	3 PIECE THREADED	LEVER	PEEK	FLOATING	ASTM A-105N	X	X	T3 2500 FLANGED
		1 1/2																														
2																																
1																																
1 1/2																																
2																																
Keckley	AV	1/4" - 2"	ANSI 150 - 600 2160# to 6000 #	FNPT, FLANGED		LEVER, OVAL HANDLE	PEEK, PTFE		CS, SS		X	BVSC, BVS3, BVS6, BVF1		<a href="https://www.keckley.com/seal-welded-unibody-high-pressure-ball-valves.html">https://www.keckley.com/seal-welded-unibody-high-pressure-ball-valves.html</a>																		
KF Industries (Watts)	AV	1/4	3000# (2220# for PTFE)	FNPT, MNPT, FXM, SW	3 PIECE THREADED	LEVER	PTFE, PEEK, DELRIN	FLOATING	CS, SS	X	X	Series B	NO FULL PORT OPTION FOR 2"	<a href="http://www.circorenergy.com/brands/kf-valves.php">http://www.circorenergy.com/brands/kf-valves.php</a>																		
		1/2																														
		3/4																														
		1		5000#								FNPT, MNPT, FXM, SW			3 PIECE THREADED	LEVER	PTFE, PEEK, DELRIN	FLOATING	CS, SS	X	X	Series BH										
		1 1/2																														
		2																														
1/4	5000#	FNPT	3 PIECE	LEVER	NYLON, DEVLON, DELRIN, PEEK	FLOATING	ASTM A-105 CS, SS	X	X	P138																						
3/8																																
1/2																																
3/4																																
1																																
1 1/4																																
1 1/2	ANSI 150, ANSI 300, ANSI 600	FLANGED (RF)	3 PIECE	LEVER	TFE 25% C. GRAPHITE	FLOATING	ASTM A-105 CS	X	X	P138-ML																						
1 1/4																																
1 1/2																																
2	ANSI 150, ANSI 300, ANSI 600	FNPT	3 PIECE BOLTED	LEVER, OVAL	20% C 5%	FORGED	ASTM A-105 CS			X	6333																					
1/4" - 1 1/2"																																
1/4" - 1 1/2"												3000#	FNPT	3 PIECE BOLTED	LEVER, OVAL	DEVLON	FORGED	ASTM A-105 CS		X	6331											
1/4" - 1 1/2"	3000#	FNPT	3 PIECE BOLTED	LEVER, OVAL	DEVLON	FORGED	ASTM A-105 CS		X	6336																						

**DESIGN AND CONSTRUCTION MANUAL**  
**2.3 APPROVED MANUFACTURERS LIST**



**BALL VALVES**

Manufacturer Name	Preference Level	Sizes Offered (in.)	Pressure Rating	End Connection	Construction Type	Operation	Seat	Body	Available Body Materials	Locking Device	Full Port	Model #	Comments	Website
ViNtrol	AV	1/4" - 2"	2000#	FNPT	2-Piece Threaded / Seal Welded	LEVER	Reinforced Teflon, PEEK	FLOATING	LCC Body / SS Ball	X	X	CCB	Vintrol has ceased doing business as of 11/30/21. Valves are warranted by Emerson. Ok to use existing stock.	<a href="http://www.vintrol.com/products.html">http://www.vintrol.com/products.html</a>
			3000#		3-Piece Threaded / Seal Welded							CH3		
			6000#									CH6		
WKM (Dynaseal) (Cameron)	AV	1/4	3000#	FNPT	2 PIECE	LEVER, WRENCH, OVAL HANDWHEEL	HOMOPOLYMER ACETAL PLASTIC	FLOATING	CS, SS	X	X	Dynaseal 310	3000# MWP ONLY APPLICABLE FOR ACETAL PLASTIC TYPE SEAT	<a href="http://cameron.slb.com/products-and-services/valves-index/wkm">http://cameron.slb.com/products-and-services/valves-index/wkm</a>
		3/8												
		1/2												
		3/4												
		1												
		1 1/2												
2														

NOTE: All screwed end ball valves 1/2" through 2" must be manufactured to a specification that meets the pressure testing requirements of ASME/ANSI B16.34. Threaded-end floating ball valves 2" and less must be marked in accordance with MSS SP-25.

REFERENCE CODES	
CODES	PREFERENCE LEVELS
AV	Approved Vendor
AVL	Approved Vendor with Limitations
EAR	Engineering Approval Required
RFR	Not Approved / Requires Further Research

October 2017 General AML review: Removed Jamesbury, Removed Swagelok from this list - See Needle & Instrument Valves.

**VALVE MODIFICATIONS**

Supplier/Vendor/ Manufacturer Name	Preference Level	Comments	Website
MRC Global	AV		www.mrcglobal.com
Edgen Murray	AV		www.edgenmurray.com
DNOW (Distribution NOW)	AV		www.dnow.com
ECI	AV		www.eci.us
Flowserve	AV		www.flowserve.com
Cameron (SLB)	AV		www.slb.com

NOTES:

Valve modifications include; end connection changes; the addition or modification of extended gearing, lube and vent lines; other changes as approved by Design Engineering.

Subcontractors are not permitted to perform modifications to valves unless approved by Design Engineering.

Reference Codes	
CODES	PREFERENCE LEVELS
AV	Approved Vendor
AVL	Approved Vendor with Limitations
EAR	Engineering Approval Required
RFR	Not Approved / Requires Further Research

## BUTTERFLY VALVES

Vendor/Manufacturer Name	Preference Level	Sizes Offered (inch)	Pressure Rating	Model #	Notes	Website
Jamesbury	EAR	3" - 60"	ANSI 150	Series 815		<a href="http://www.buyjamesbury.com/literature/butterfly-valve-bulletin.pdf">http://www.buyjamesbury.com/literature/butterfly-valve-bulletin.pdf</a>
		3" - 36"	ANSI 300	Series 830		
Keystone (Emerson)	EAR	2" - 24"	ANSI 150	Series 36		<a href="http://valves.emerson.com/brands/keystone">http://valves.emerson.com/brands/keystone</a>
			ANSI 300	Series 37		
Bray / McCannalok	EAR	3" - 42"	ANSI 150	Series 40/41		<a href="http://prooil.com.mx/wp-content/uploads/2016/07/VALVULA-serie_40-BRAY-McCANNALOK.pdf">http://prooil.com.mx/wp-content/uploads/2016/07/VALVULA-serie_40-BRAY-McCANNALOK.pdf</a>
		3" - 36"	ANSI 300	Series 42/43		
		3" - 12"	ANSI 600	Series 44/45		
NIBCO	EAR	2" - 48"	150-350 PSIG	Varies		<a href="http://www.nibco.com/Valves/Butterfly-Valves/">http://www.nibco.com/Valves/Butterfly-Valves/</a>
ABZ (Forum Energy Technologies)	EAR	1" - 72"	150-200 PSIG	Varies		<a href="http://www.f-e-t.com/products/production-and-infrastructure/valve-solutions/butterfly-valves/abz">http://www.f-e-t.com/products/production-and-infrastructure/valve-solutions/butterfly-valves/abz</a>
		2" - 72"	ANSI 150-600			
Centerline (Crane)	EAR	2" - 48"	75-200 PSIG	Series 200		<a href="http://www.cranecpe.com/chem-energy/products/valves/butterfly-valves/high-performance-butterfly-valves/center-line-butterfly-valves/center-line-resilient-seated-butterfly-valves&amp;brandid=3A27DAF9-0F12-C5C2-FA071C0D22A2C2DC">http://www.cranecpe.com/chem-energy/products/valves/butterfly-valves/high-performance-butterfly-valves/center-line-butterfly-valves/center-line-resilient-seated-butterfly-valves&amp;brandid=3A27DAF9-0F12-C5C2-FA071C0D22A2C2DC</a>
		2" - 24"	150-285 PSIG	Series 225/250		
		2" - 20"	150 PSIG	Series 800		
Vanessa (Emerson)	EAR	3" - 24" 28" - 60"	ASME 150-300	Series 30,000	Can special order up to ASME 1500 and up to 112" diameter	<a href="http://valves.emerson.com/en/brands/vanessa">http://valves.emerson.com/en/brands/vanessa</a>
		4" - 24" 28" - 48"	ASME 600			
		6" - 24" 28" - 42"	ASME 900			
DeZURIK	EAR	3" - 144"	75-250 PSIG	Varies		<a href="http://www.dezurik.com/products/brands/dezurik/butterfly-valves/1/2/">http://www.dezurik.com/products/brands/dezurik/butterfly-valves/1/2/</a>

REFERENCE CODES	
CODES	PREFERENCE LEVELS
AV	Approved Vendor
AVL	Approved Vendor
EAR	Engineering Approval Required
RFR	Not Approved / Requires Further Research

October 2017 AML Updates	General Refresh. Removed duplicates. Removed Posiseal.
--------------------------	--

**CATALYTIC HEATERS**

ITEM	MANUFACTURER	PREFERENCE LEVEL	CONTACT INFO	DATA SHEET	WEBSITE	COMMENTS
Gas Heating Assemblies	Bruest	EAR	Catalytic Industrial Group, Inc. 20th & Sycamore P.O. Box 827 Independence, KS 67301 Phone: (620) 331-0750 Email: sales@bruestcatalyticheaters.com	Bruest Catalytic Heaters	<a href="http://www.bruestcatalyticheaters.com">http://www.bruestcatalyticheaters.com</a>	
	Catco	EAR	Catco Catalytic Heater Company 451 Apache Trail Terrell, TX 75160 Phone: (972) 563-8065 Email: info@catcousa.com	Catco Heaters	<a href="http://www.catcousa.com">http://www.catcousa.com</a>	
	IMAC Systems Inc.	EAR	IMAC Systems, Inc. 90 Main Street P.O.Box 1605 Tullytown, PA 19007 Phone: (215) 946-2200 Email: sales@imacsystems.com	IMAC Explosion Proof Heaters	<a href="http://www.imacsystems.com">http://www.imacsystems.com</a>	Purchased through Applied Pipeline: Applied Pipeline 7313 Route 338 PO Box 124 Knox, PA 16232 Phone: (814) 938-1079 Email: sales@appliedpipeline.com
	CataDyne	EAR	Thermon 7171 Southwest Parkway Building 300, Suite 200 Austin, TX 78735 Phone: (512) 690-0600	CataDyne Enclosure Heaters	<a href="http://www.catadyne.com/">http://www.catadyne.com/</a>	

REFERENCE CODES	
CODES	PREFERENCE LEVELS
AV	Approved Vendor
AVL	Approved Vendor with Limitations
EAR	Engineering Approval Required
RFR	Not Approved / Requires Further Research

August 2017 AML Update	General updates. Added CataDyne.
------------------------	----------------------------------

CATHODIC PROTECTION MATERIALS

ITEM	MANUFACTURER	PREFERENCE LEVEL	CONTACT	WEBSITE	COMMENTS/PRODUCT INFORMATION	
Anodes - Galvanic	Magnesium	AV	411 Elizabeth Avenue Somerset, NJ 08873 Sales Rep: Chuck Castor Phone: (330) 807-0186 Email: info@stuartsteel.com	www.stuartsteel.com		
		AV	1055 W. Smith Road Medina, OH 44256 Phone: (330) 723-5082	www.corrpro.com		
	Zinc and Linear Anodes	Matcor	AV	101 Liberty Lane Chalfont, PA 18914 Phone: (800) 250-4986 Email: matcorsales@matcor.com	www.matcor.com	
		Corrpro	AV	1055 W. Smith Road Medina, OH 44256 Phone: (330) 723-5082	www.corrpro.com	
Anodes - Impressed Current	Mixed Metal Oxide Anodes - 5 Amp	AV	101 Liberty Lane Chalfont, PA 18914 Phone: (800) 250-4986 Email: matcorsales@matcor.com	www.matcor.com	Prepackaged - 5 amp MMP3605	
	Mixed Metal Oxide Anodes - 1 Amp	AV	101 Liberty Lane Chalfont, PA 18914 Phone: (800) 250-4986 Email: matcorsales@matcor.com	www.matcor.com	Prepackaged - 1 amp MMP3301	
Cable/Wire	Cathodic Protection Cable (HMWPE)	AV	80 Otis Street PO Box 4377 Rome, NY 13440 Phone: (315) 339-5268 Email: sales@kristechwire.com	www.kristechwire.com		
		AV	5525 West Centre Drive West Chester, OH 44069 Phone: (513) 860-1800 Email: sales@republicwire.com	http://republicwire.com/		
	Corrosion Test Station Wire, Type TW, MTW, THHW	AV	80 Otis Street PO Box 4377 Rome, NY 13440 Phone: (315) 339-5268 Email: sales@kristechwire.com	www.kristechwire.com		
		AV	5525 West Centre Drive West Chester, OH 44069 Phone: (513) 860-1800 Email: sales@republicwire.com	http://republicwire.com/		

CATHODIC PROTECTION MATERIALS

ITEM	MANUFACTURER	PREFERENCE LEVEL	CONTACT	WEBSITE	COMMENTS/PRODUCT INFORMATION
Pipeline Casing Products	Casing End Seals	LINK-SEAL (GPT)	AV 6455 Clara Road, Suite 300 Houston, TX 77041 Phone: (713) 747-6029	www.gptindustries.com	Distributed by Kerr Engineering: Daryl Smith Desk: (412) 362-6553 Cell: (860) 690-3141
		Maloney Technical Products	AV 1300 East Berry Street Fort Worth, TX 76119 Phone: (817) 923-3344 Email: Contact@maloneytech.com	www.maloneytech.com	
		Canusa-CPS	EAR 5875 N. Sam Houston Pkwy, Suite 200 Houston, TX 77086 Phone: (281) 886-2350 Email: info@canusacps.com	www.canusacps.com	
		Advanced Products & Systems, Inc.	EAR 108 Asset Avenue Scott, LA 70583 Phone: (337) 233-6116 Email: sales@apsonline.com	http://www.apsonline.com	
	Casing Filler	Royston	AV 295 University Ave Westwood, MA 02090 Phone: (781) 332-0700 Email: info@chasecorp.com	www.chasecorp.com	Royfill H (406)
		Trenton	AV Sales Contact: Frank Rampton Phone: (734) 368-7528 Email: frampton@trentoncorp.com	trentoncorp.com	Fill-Coat #1
	Casing Pipe Isolators (Spacers)	Advanced Products & Systems, Inc.	AV 108 Asset Avenue Scott, LA 70583 Phone: (337) 233-6116 Email: sales@apsonline.com	http://www.apsonline.com	
		GPT (PSI)	AV 6455 Clara Road, Suite 300 Houston, TX 77041 Phone: (713) 747-6029	www.gptindustries.com	Distributed by Kerr Engineering: Daryl Smith Desk: (412) 362-6553 Cell: (860) 690-3141
		Maloney Technical Products	AV 1300 East Berry Street Fort Worth, TX 76119 Phone: (817) 923-3344 Email: Contact@maloneytech.com	www.maloneytech.com	
	Connections	Connectors	Burndy	AV 47 E International Park Drive Manchester, NH 03109 Phone: (800) 346-4175	http://www.burndy.com/
Graybar			AV Phone: (855) 347-2839 Email: graybar.support@graybar.com	www.graybar.com	
Splice Kits (C-P Cable)(encapsulation)		3M	AV 3M Center St. Paul, MN 55144 Phone: (888) 364-3577	www.3m.com	3M Scotchcast 90-B 1
		King Innovation	AV 42 N. Central Drive O' Fallon, MO 63366 Phone: (636) 519-5400 Email: customerservice@kinginnovation.com	www.kinginnovation.com	DryConn VisiLock
Sleeve, Copper (for anodes)		Erico (Pentair)	AV 1-800-753-9221	www.erico.com	
		Corrpro	AV 1055 W. Smith Road Medina, OH 44256 Phone: (330) 723-5082	www.corrpro.com	
		Thermoweld	AV 1140 North 129th East Ave Tulsa, OK 74116 Phone: (918) 627-5210	www.thermoweld.com	
Exothermic Weld, Charge, and Cartridge		Erico (Pentair)	AV 1-800-753-9221	www.erico.com	
		Corrpro	AV 1055 W. Smith Road Medina, OH 44256 Phone: (330) 723-5082	www.corrpro.com	
		Thermoweld	AV 1140 North 129th East Ave Tulsa, OK 74116 Phone: (918) 627-5210	www.thermoweld.com	
Flange Protectors	Flange Protectors	AV Advanced Products & Systems, Inc. 108 Asset Avenue Scott, LA 70583 Phone: (337) 233-6116 Email: sales@apsonline.com	http://www.apsonline.com		

CATHODIC PROTECTION MATERIALS

ITEM	MANUFACTURER	PREFERENCE LEVEL	CONTACT	WEBSITE	COMMENTS/PRODUCT INFORMATION
Isolation Materials	Flange Isolation Kits	AV	6455 Clara Road, Suite 300 Houston, TX 77041 Phone: (713) 747-6029	www.gptindustries.com	Distributed by Kerr Engineering: Daryl Smith Desk: (412) 362-6553 Cell: (860) 690-3141
		AV	108 Asset Avenue Scott, LA 70583 Phone: (337) 233-6116 Email: sales@apsonline.com	http://www.apsonline.com	
		EAR	6455 Clara Road, Suite 300 Houston, TX 77041 Phone: (713) 747-6029	www.gptindustries.com	For wet gas systems or well-line separation when no meter present
		AV	39605 W Independence Ave Shawnee, OK 74804 Phone: (405) 273-6302	www.centralplastics.com	
	Isolating Union (150# and 3M)	AV	1125 Capitol Road Crowley, LA 70526 Phone: (800) 848-1100 Email: sales@capitolcamco.com	www.capitolcamco.com	Must be non-metallic
		AV	39605 W Independence Ave Shawnee, OK 74804 Phone: (405) 273-6302	www.centralplastics.com	
	Weld End Isolation Joints	AV	GPT (ElectroStop) (PSI) 6455 Clara Road, Suite 300 Houston, TX 77041 Phone: (713) 747-6029	www.gptindustries.com	
		AV	ALFA Engineering info@alfa-eng.net	http://www.alfa-eng.net/	
		EAR	108 Asset Avenue Scott, LA 70583 Phone: (337) 233-6116 Email: sales@apsonline.com	http://www.apsonline.com	
		EAR	Kerotest kerotest@kerotest.com	http://kerotest.com/	Purchased through Precision Pipeline: 253 Walnut Street Houston, PA 15324 www.precisionpipeline.com Phone: (724) 746-5427
		EAR	Zunt commercial@zunt.com	http://zunt.com/	
		EAR	Sypris Technologies/Tube Turn Robert Stanton Phone: (502) 322-5917 Email: robert.stanton@sypris.com	https://www.tubeturns.com/	
	Pipe Support Isolation	AV	1085 Andrew Drive Suite C West Chester, PA 19382 Phone: (610) 696-9220 Email: sales@glasmesh.com	http://www.glasmesh.com/	Used on old above ground on pipe supports that don't have FRP installed
	Line Markers	Line Marker	AV	43 Allegheny Square Glassport, PA 15045 Phone: (412) 675-0101	www.cottmfg.com
AV			PO Box 939 Culpeper, VA 22701 Phone: (540) 825-8334	www.binghamandtaylor.com	
AV			100 Hafner Ave #3 Pittsburgh, PA 15223 Phone: (412) 357-1757	www.ecs4gas.com	
AV			19845 U.S. Highway 76 Newberry, SC 29108 Phone: (803) 321-1185	www.carsonite.com	
AV			1300 East Berry Street Fort Worth, TX 76119 Phone: (817) 923-3344 Email: Contact@maloneytech.com	www.maloneytech.com	
AV			2603 Pacific Park Drive Whittier, CA 90601 Phone: (877) 325-1525 Email: sales@promarksupply.com	www.promarksupply.com	Durabond is also a rep for these



CATHODIC PROTECTION MATERIALS

ITEM		MANUFACTURER	PREFERENCE LEVEL	CONTACT	WEBSITE	COMMENTS/PRODUCT INFORMATION
Power Sources	Rectifiers	JA Electronics	AV	Michael Grace Phone: (281) 879-9903 Email: mgrace@jaelectronics.com	http://jaelectronics.com/	
Repair Methods	Composite Repair	CSNRI - ClockSpring and Atlas products	AV	621 Lockhaven Drive Houston, TX 77073 Phone: (281) 590-8491	csnricomposites.com	Troy Tonkin Liberty Group Phone: 412-302-5163 www.libertysales.net
Rock Shield	Rock shield	RockGuard HD (Industrial Fabrics)	AV	Patrick Lay Phone: (724) 717-5787 Email: play@ind-fab.com	http://www.rockguard.biz/	
		GridGuard HD Plus	AV	Jamie Blanco Phone: (225) 335-9676 Email: jamieb@j-drain.com	https://www.j-drain.com/grid-guard.html	
		GridGuard HD	AV	Jamie Blanco Phone: (225) 335-9676 Email: jamieb@j-drain.com	https://www.j-drain.com/grid-guard.html	
		PipeJacket	AV	Robin (Rocky) Seils Phone: (314) 308-0011 Email: rseils@pipesak.com	https://pipesak.com/product/pipe-jacket/	
		Tuff-N-Nuff	AV	Williams Tower 2800 Post Oak Blvd, Suite 4100 Houston, TX 77056 Phone: (519) 472-5080	http://www.pipesak.com/default.aspx	
Remote Monitoring	RTUs	Eagle Research Corp	AV	1076 State Route 34 Hurricane, WV 25526 Phone: (304) 757-6565 Email: info@eagleresearchcorp.com	www.eagleresearchcorp.com	
Test Stations	Test Stations (Aboveground & Surface level)	Cott Manufacturing Company	AV	43 Allegheny Square Glassport, PA 15045 Phone: (412) 675-0101	www.cottmfg.com	
		CP Test & Valve Products, Inc.	AV	234 Sanford Avenue Kearny, NJ 07032 Phone: (201) 998-1500	www.cptest.com	
		Gerome Electric Supply	AV	110 Misty Meadow Lane Uniontown, PA 15401 Phone: (724) 437-2788 Email: orders@gerometestox.com	www.gerometestox.com	
		Pro-Mark Utility Supply	AV	2603 Pacific Park Drive Whittier, CA 90601 Phone: (877) 325-1525 Email: sales@promarksupply.com	www.promarksupply.com	Durabond is also a rep for these
		CC Technologies (Mesa)	AV	3180 Industry Drive - Unit "C" North Charleston, SC 29418 Phone: 843.628.1342 Fax: 866.594.3233	z/www.mesaproducts.com/Products/Coupon_Test_Station	MESA CS-3100 IR Drop Test stations are used in compressor stations
	Test Station Terminal Board	CP Test & Valve Products, Inc.	AV	234 Sanford Avenue Kearny, NJ 07032 Phone: (201) 998-1500	www.cptest.com	

REFERENCE CODES	
CODES	PREFERENCE LEVELS
AV	Approved Vendor
AVL	Approved Vendor with Limitations
EAR	Engineering Approval Required
RFR	Not Approved / Requires Further Research

August 2017 AML Update	Revamped entire page. Added RTUs and Impressed current Anodes.
------------------------	--

CHECK VALVES 2 INCH AND LARGER

ITEM	MANUFACTURER	PREFERENCE LEVEL	MODEL NUMBERS	SIZE	RATING	END TYPES	Comments	Website
Swing Check Valves - 2 Inch and Larger	M&J (SPX)	AV	Top Entry Swing	2" - 24"	ANSI 150 - ANSI 2500 (Size Dependent)	RF	SWING - Body Material: ASTM A216 - Seat Seal: Viton - Top Entry - Body Seal - Viton	<a href="http://www.spxflow.com/en/mj-valve/pd-mp-swing-check-valves/">www.spxflow.com/en/mj-valve/pd-mp-swing-check-valves/</a>
	Cameron	AV	Tom Wheatley Swing	6" - 42"	ANSI 150 - ANSI 2500 (Size Dependent)	RF	SWING - Body Material: ASTM A216 - Seat Seal: Viton - Top Entry - Body Seal - Viton	<a href="https://cameron.slb.com/products-and-services/valves-index/tom-wheatley">https://cameron.slb.com/products-and-services/valves-index/tom-wheatley</a>
			Wheatley Swing	2" - 6"	ANSI 150 - ANSI 2500 (Size Dependent)	RF	SWING - Body Material: ASTM A216 - Seat Seal: Viton - Top Entry - Body Seal Viton	
			Wheatley Swing	8" - 12"	ANSI 150 - ANSI 900	RF	SWING - Body Material: ASTM A216 - Seat Seal: Viton - Top Entry - Body Seal - Viton	
			Wheatley Swing Series 820	2" - 4"	ANSI 150 - ANSI 900	NPT	SWING - Body Material: ASTM A216 - Seat Seal: Viton - Top Entry - Body Seal - Viton	
	Vintrol	AV	Series 110	2" - 12"	ANSI 150 - ANSI 600	RF	SWING - Body Material: ASTM A216 - Seat Seal: HNBR - Top Entry - Body Seal - HNBR	<a href="http://www.vintrol.com/products.html#check_valve_anchor">http://www.vintrol.com/products.html#check_valve_anchor</a>
			Series 35 API 6D	2" - 16"	ANSI 150 - ANSI 1500	RF	SWING - Body Material: ASTM A216 - Seat Seal: HNBR - Top Entry - Body Seal - HNBR	
			Series 35 API 6A	2" - 4"	API 2000-5000 (Size Dependent)	RF	SWING - Body Material: ASTM A216 - Seat Seal: HNBR - Top Entry - Body Seal - HNBR	
Stream Flo Crown- Judd	AV	Top Entry Swing Figure 50	2" - 48"	ANSI 150 - 1500	RF	SWING - Body Material: ASTM A216 - Seat Seal: BUNA N - Top Entry - Body Seal - BUNA N (2"-12") Valves are marketed as Crown-Judd in USA, and Crown in Canada.	<a href="https://www.streamflo.com/en/products/check-valves/swing-check-valve/">https://www.streamflo.com/en/products/check-valves/swing-check-valve/</a>	
Warrem	AV	Top Entry Swing	2" - 42"	ANSI 150 - ANSI 2500	RF, RTJ		<a href="https://www.warrenvalve.com/check-valves/">https://www.warrenvalve.com/check-valves/</a>	
Piston Check Valves - 2 Inch and Larger	Mokveld	EAR	TKZ-Y	2" - 36"	ANSI 150 - ANSI 2500	RF	PISTON - Body Material: ASTM A216, Seal Material - Metal-to-Metal - End Entry	<a href="https://mokveld.com/en/axial-check-valve">https://mokveld.com/en/axial-check-valve</a>
	DFT	EAR	PDC (Nozzle Check)	2" - 24"	ANSI 150 - ANSI 1500	RF	Body Material ASTM A216 - Seal Ring: Teflon - Body Seal - Viton - Ball Check Material: 440C SS	<a href="http://www.dft-valves.com/blog/meet-the-pdc-valve-dfts-unique-check-valve/">http://www.dft-valves.com/blog/meet-the-pdc-valve-dfts-unique-check-valve/</a>
	Hoerbiger	EAR	Depend-a-Check	2" - 24"	ANSI 150 - ANSI 2500 (Size Dependent)	RF	PISTON - Body Material: ASTM A216, Seat Seal - None, End Entry	<a href="https://www.hoerbiger.com/en-0/pages/79">https://www.hoerbiger.com/en-0/pages/79</a>
	Cameron	EAR	Tom Wheatley Piston	2" - 12"	ANSI 150 - ANSI 2500 (Size Dependent)	RF	PISTON - Body Material: ASTM A216, Seal Material - None - Top Entry - Body Seal (Fiber Gasket, Buna - Size Dependant) - Piston Material - 316 SS	<a href="https://cameron.slb.com/products-and-services/valves-index/tom-wheatley">https://cameron.slb.com/products-and-services/valves-index/tom-wheatley</a>
	Norriseal	EAR	Series 7100	2" - 12"	ANSI 150 - ANSI 2500 (Size Dependent)	RF	PISTON - Body Material: ASTM A216, Piston Seal (Size Dependant) - Top Entry - Body Seal 316 L SSt w/ Graphite Filler - Piston Material 316 SS	<a href="http://norrisealwellmark.com/products/check-valves/">http://norrisealwellmark.com/products/check-valves/</a>
	Vintrol	EAR	Series 50	2" - 8"	ANSI 600 - ANSI 900	RF	Body Material ASTM A216	<a href="http://www.vintrol.com/products.html#check_valve_anchor">http://www.vintrol.com/products.html#check_valve_anchor</a>
	Stream Flo Crown	EAR	Figure P-50 RF	2" - 8"	ANSI 150 - 2500 (Size Dependent)	RF	PISTON - Body Material: Carbon/Low Alloy Steel, Seat Seal - None, End/Top Entry	<a href="https://www.streamflo.com/en/products/check-valves/swing-check-valve/">https://www.streamflo.com/en/products/check-valves/swing-check-valve/</a>
<b>NOTE: All flanged end and weld end ball, plug, check valves 2" and larger must comply with API 6D and be monogrammed.</b>								

CHECK VALVES 2 INCH AND SMALLER

ITEM	MANUFACTURER	PREFERENCE LEVEL	MODEL NUMBERS	SIZE	RATING	END TYPES	Comments	Website
Swing Check Valves - 2 Inch and Smaller	Cameron	AV	Tom Wheatley Swing	1" - 2"	ANSI 150 - ANSI 2500	RF	SWING - Body Material: ASTM A216 - Seat Seal: Viton - Top Entry - Body Seal - Viton	<a href="https://cameron.slb.com/products-and-services/valves-index/tom-wheatley">https://cameron.slb.com/products-and-services/valves-index/tom-wheatley</a>
			Wheatley Swing	1" - 2"	ANSI 150 - ANSI 2500	RF	SWING - Body Material: ASTM A216 - Seat Seal: Viton - Top Entry - Body Seal Viton	<a href="https://cameron.slb.com/products-and-services/valves-index/wheatley">https://cameron.slb.com/products-and-services/valves-index/wheatley</a>
			Wheatly Swing Series 820	1" - 2"	ANSI 150 - ANSI 1500	NPT	SWING - Body Material: ASTM A216 - Seat Seal: Viton - Top Entry - Body Seal - Viton	
	Flowserve/Vogt	EAR	B701	1" - 2"	ANSI 800 (WP = 1975#)	NPT	Swing - Body Material: ASTM A105, With Bonnet, Spiral Wound Gasket	<a href="https://www.flowserve.com/sites/default/files/2016-07/VVENC0000-06%20LoRes.pdf">https://www.flowserve.com/sites/default/files/2016-07/VVENC0000-06%20LoRes.pdf</a>
			S74	1" - 2"	ANSI 800 (WP = 1975#)	NPT	Swing - Body Material: ASTM A105, Without Bonnet	
Vintrol	AV	Series 32	1"- 3"	Pressure up to 2000 WOG	RF	SWING - Body Material: ASTM A216 - Seat Seal: HNBR - Top Entry - Body Seal - HNBR	<a href="http://www.vintrol.com/products.html#check_valve_anchor">http://www.vintrol.com/products.html#check_valve_anchor</a>	
Piston Check Valves - 2 Inch and Smaller	Norriseal	EAR	Series 7100	1" - 2"	ANSI 150 - ANSI 1500	NPT, RF	PISTON - Body Material: ASTM A216 , Piston Seal (Size Dependant) - Top Entry - Body Seal 316 L SSt w/ Graphite Filler - Piston Material 316 SS	<a href="http://norrisealwellmark.com/products/check-valves/">http://norrisealwellmark.com/products/check-valves/</a>
	DFT	EAR	SCV-750	1" - 3"	750# Working Pressure	NPT	Piston - Body Material: ASTM A351 CF8M, Body Seal: Viton	<a href="http://www.dft-valves.com/blog/meet-the-pdc-valve-dfts-unique-check-valve/">http://www.dft-valves.com/blog/meet-the-pdc-valve-dfts-unique-check-valve/</a>

REFERENCE CODES	
CODES	PREFERENCE LEVELS
AV	Approved Vendor
AVL	Approved Vendor with Limitations
EAR	Engineering Approval Required
RFR	Not Approved / Requires Further Research

October 2017 AML Updates	General Refresh to add Websites.
--------------------------	----------------------------------

CLOSURES

Manufacturer/Vendor	Preference Level	Model #	Sizes Offered (in.)	Pressure Rating	Configuration	Closure Type	End Connection	Seal	Safety Device	ASME Code Stamp	Meets NACE MR-01-75	Comments
<b>Threaded Closure</b>												
Stark Solutions	AV	S-500	2 - 14	ANSI 150 - 1500	Horizontal & Vertical	Threaded	WE, Flanged On Request	Viton - First Choice* HBNR - Second Choice*	Pressure Alert Valve	Yes with partial data reports	Yes	
NOV (National Oilwell Varco)	AV	Yale Fig. 500	2 - 14	ANSI 150 - 2500	Horizontal & Vertical	Threaded	WE	Viton - First Choice* HBNR - Second Choice*	Pressure Alert Valve	Yes with partial data reports	Yes	Formerly manufactured by R&M Energy Systems
NOV (National Oilwell Varco)	AV	Yale Fig. 515	2 - 42	ANSI 150 - 2500	Horizontal & Vertical	Threaded	Flanged	Viton - First Choice* HBNR - Second Choice*	Pressure Alert Valve	Yes with partial data reports	Yes	Formerly manufactured by R&M Energy Systems
In-Line	AV	Figure 700	2 - 48	ANSI 150 - 1500 higher ratings available upon request	Horizontal & Vertical	Threaded	WE, Flanged On Request	Viton - First Choice* HBNR - Second Choice*	Pressure Alert Fitting	Yes with partial data reports	Yes	
<b>Clamp Ring or Energized Lip Closure</b>												
PECO	AV	SafeLock	18 - 48	ANSI 150 - 600 higher ratings available upon request	Horizontal & Vertical	Energize Lip	WE	Viton - First Choice* HBNR - Second Choice*	SAFGard device (Pressure Warning Device)	Yes with partial data reports	--	
PECO	AV	Quick Opening Closures	6 - 30	ANSI 150 - 600 higher ratings available upon request	Horizontal & Vertical	Clamping 2 Piece Yoke	WE	Viton - First Choice* HBNR - Second Choice*	Pressure Warning Device	Yes with partial data reports	--	6" - 8" Figure 1 & 10" - 30" Figure 2
NOV (National Oilwell Varco)	AV	Sentry Closure	6 - 72	ANSI 150 - 1500 higher ratings available upon request	Horizontal & Vertical	Elastomeric pressure energized lip	WE	Viton - First Choice* HBNR - Second Choice*	Non-Venting Pressure Alert Valve	Yes with partial data reports	Yes	Formerly manufactured by R&M Energy Systems
Sypris Tube Turn	AV	Single Bolt Yoke Closures	2 - 8	ANSI 150 - 600	Horizontal & Vertical	Clamping 2 Piece Yoke	WE	Viton - First Choice* HBNR - Second Choice*	Pressure Warning Device with Yoke Positioning Plate	Yes with partial data reports	Yes	
Sypris Tube Turn	AV	Double Bolt Yoke Closures	8 - 72	ANSI 150 - 2500	Horizontal & Vertical	Clamping 2 Piece Yoke	WE	Viton - First Choice* HBNR - Second Choice*	Pressure Warning Device with Yoke Positioning Plate	Yes with partial data reports	Yes	
TD Williamson	AV	Clamp Ring Closures (D-2000)	4 - 48	ANSI 150 - 2500	Horizontal & Vertical	Clamp Ring	WE	Viton - First Choice* HBNR - Second Choice*	Pressure Warning Lock	Yes with partial data reports	--	4" - 30" lever type actuator; 32" and larger have ratchet binder
In-Line	AV	Clamp Ring Closures (Fig. 800)	8 - 24 (higher upon request)	ANSI 150 - 600	Horizontal & Vertical	Clamp Ring	WE	Viton - First Choice* HBNR - Second Choice*	Pressure Alert Fitting	Yes with partial data reports	Yes	
TwinLock (PEI)	EAR		6 - 60	ANSI 150 - 1500	Horizontal & Vertical	Integrated locking segments	WE, or Flanged	Viton - First Choice* HBNR - Second Choice*	Pressure alert valve, and safety lock			

\* - Susceptible to damage when exposed to large volumes of Methanol

REFERENCE CODES	
CODES	PREFERENCE LEVELS
AV	Approved Vendor
AVL	Approved Vendor with Limitations
EAR	Engineering Approval Required
RFR	Not Approved / Requires Further Research

August 2017 AML Updates | Refresh - No Additions

COATINGS

ITEM		MANUFACTURER	PREFERENCE LEVEL	PRODUCT	WEBSITE	CONTACT	COMMENTS		
Below Grade Coatings	Fusion Bond Epoxy (FBE)		3M	AV	Scotchkote 6233 Scotchkote 6233P	<a href="http://www.3m.com/3M/en_US/infrastructure-us/applications/pipeline-corrosion-protection-rehabilitation/">http://www.3m.com/3M/en_US/infrastructure-us/applications/pipeline-corrosion-protection-rehabilitation/</a>	Company Contact: Jeff Wilkins (512) 789-6461 Jbwilkins@mmm.com		
			Sherwin-Williams (formerly Valspar)	AV	Pipeclad 2000 FBE Powder		Company Contact: Jim Lacey (848) 707-1873 james.lacey@sherwin.com		
	Dual Coat System (a.k.a. Abrasion Resistant Overcoat (ARO))		3M	AV	Scotchkote 6352 Scotchkote 6352 HF	<a href="http://www.3m.com/3M/en_US/infrastructure-us/applications/pipeline-corrosion-protection-rehabilitation/">http://www.3m.com/3M/en_US/infrastructure-us/applications/pipeline-corrosion-protection-rehabilitation/</a>	Company Contact: Jeff Wilkins (512) 789-6461 Jbwilkins@mmm.com	Not for use on HDDs	
			Sherwin-Williams (formerly Valspar)	AV	Pipeclad 2040 FBE Powder		Company Contact: Jim Lacey (848) 707-1873 james.lacey@sherwin.com	Not for use on HDDs	
			Canusa	EAR	Canusa Scar-Guard Canusa ScarGuard XL		Company Contact: Dan Manion Liberty Sales & Distribution (814) 598-7115 Email: dmanion@libertysales.net	For use on aggressive HDD environments only - Corrosion Engineer must be contacted prior to use	
	Powercrete		Seal for Life	AV	Powercrete DD	<a href="http://www.sealforlife.com/products/powercrete.html">http://www.sealforlife.com/products/powercrete.html</a>	Company Contact: Adam Norris (724) 387-4339 Email: adam.norris@dura-bond.com	Used for HDDs	
	Fittings - Elbows, Tees, Valves, Etc.		Denso	AV	Protal 7125		Company Contact: Thomas Keadle (832) 465-0155 tkeadle@denso.com	Used in cold weather (4-50F)	
				AV	Protal 7200			Used when 50F and above	
			Out of Service Components	Specialty Polymer Coatings (SPC)	AV	SPC SP-2888 RG	<a href="http://www.spc-net.com/pipeline/products/product.php?key=17">http://www.spc-net.com/pipeline/products/product.php?key=17</a>	Company Contact: Jerry Holton (315) 283-3906 jerry@spc-net.com	
				PPG	EAR	SIGMASHIELD 880	<a href="http://www.ppghighperformancecoatings.com/Home.aspx">http://www.ppghighperformancecoatings.com/Home.aspx</a>	Company Contact: Todd DuBrock (412) 974-2473 dubrock@ppg.com	
			In Service (Wet) Components	Specialty Polymer Coatings (SPC)	AV	SPC SP-2888 RG	<a href="http://www.spc-net.com/pipeline/products/product.php?key=17">http://www.spc-net.com/pipeline/products/product.php?key=17</a>	Company Contact: Jerry Holton (315) 283-3906 jerry@spc-net.com	Only for damp pipes
					EAR	SPC SP-4888			
			Wax Tape	EAR	See "Wax Tape" Section	See "Wax Tape" Section	See "Wax Tape" Section	See "Wax Tape" Section	Corrosion Engineering approve all uses of wax tape on in-service fittings prior to application

COATINGS

ITEM		MANUFACTURER	PREFERENCE LEVEL	PRODUCT	WEBSITE	CONTACT	COMMENTS	
Below Grade Coatings	Girth Weld Coatings	Denso	AV	Protal 7125	http://www.densona.com/	Company Contact: Thomas Keadle (832) 465-0155 tkeadle@densona.com	Used in cold weather (4-50F)	
			AV	Protal 7200			Used when 50F and above	
		Canusa	AV	Canusa HBE-95	http://canusacps.com/main/home.html	5875 N. Sam Houston Parkway Suite 200 Houston, TX 77086 Phone: (281) 886-2350 Email: wh.canusacps@shawcor.com		
		Specialty Polymer Coatings (SPC)	AV	SPC SP-2888 RG	http://www.spc-net.com/pipeline/products/product.php?key=17	Company Contact: Jerry Holton (315) 283-3906 jerry@spc-net.com		
		Sherwin Williams (formerly Valspar)	EAR	Pipeclad 5000		Company Contact: Jim Lacey (848) 707-1873 james.lacey@sherwin.com		
		Seal for Life	AV	Powercrete R-95	http://www.sealforlife.com/products/powercrete.html	Company Contact: Adam Norris (724) 387-4339 Email: adam.norris@dura-bond.com	Distributed by Dura-bond Industries	
	Exothermic Weld Coatings	Denso	AV	Protal 7125	http://www.densona.com/	Company Contact: Thomas Keadle (832) 465-0155 tkeadle@densona.com	Used in cold weather (4-50F)	
			AV	Protal 7200			Used when 50F and above	
		Specialty Polymer Coatings (SPC)	AV	SPC-SP 2888 RG	http://www.spc-net.com/pipeline/products/product.php?key=17	Company Contact: Bob Windsheimer (412) 402-8555 bwindsheimer@carboline.com		
		Trenton Corporation	AV	Patch-Pad Exothermic Weld Protector	http://trentoncorp.com/	Company Contact: Frank Rampton (734) 368-7528 frampton@trentoncorp.com		
	Flange Filler	Chase Corporation	AV	TC Flangecoat	http://www.chasecorp.com/	295 University Ave Westwood, MA 02090 Phone: (781) 332-0700 Email: info@chasecorp.com	Corrosion Engineering Approval is required on all below grade flange installations	
		Trenton Corporation	AV	Innercoat for Flange Fill	http://trentoncorp.com/	Company Contact: Frank Rampton (734) 368-7528 frampton@trentoncorp.com	Corrosion Engineering Approval is required on all below grade flange installations	
	Wax Tape and Outerwrap	Trenton Corporation	AV	Primer	Wax-Tape Primer (White)	http://trentoncorp.com/	Company Contact: Frank Rampton (734) 368-7528 frampton@trentoncorp.com	
				Cold Applied Tape	Wax-Tape #1			
Outerwrap				Glas-Wrap Outerwrap MCO 110 Outerwrap	Only one of these outerwraps needs to be applied			
Transitional Coatings	Wax Tape and Outerwrap	Low Temperature Operations 0F<T<110F	AV	Primer	Wax-Tape Primer (White)	http://trentoncorp.com/	Company Contact: Frank Rampton (734) 368-7528 frampton@trentoncorp.com	
				Cold Applied Tape	Wax-Tape #2			
				Outerwrap	Glas-Wrap Outerwrap MCO 110 Outerwrap			Only one of these outerwraps needs to be applied
		High Temperature Operations 32F<T<230F	AV	Primer	Temcoat 3000	http://trentoncorp.com/	Company Contact: Frank Rampton (734) 368-7528 frampton@trentoncorp.com	
				Cold Applied Tape	Wax-Tape HT-3000			
				Outerwrap	Glas-Wrap Outerwrap MCO 110 Outerwrap			Only one of these outerwraps needs to be applied
	UV Resistant Top Coats	Chase Corporation	AV	TapeCoat Rugged Wrap		Company Contact: Dan Manion Liberty Sales & Distribution (814) 598-7115 Email: dmanion@libertysales.net		
	See approved "Top Coats" listed in the "Above Grade Coating" section of this spreadsheet							

COATINGS

ITEM		MANUFACTURER	PREFERENCE LEVEL	PRODUCT		WEBSITE	CONTACT	COMMENTS				
Above Grade	Fabrications, Appurtenances, and Steel Piping	PPG	AV	Primer	Pitt-Guard Rapid-Coat Direct-to-Rust Epoxy Mastic (95-245 Series)	http://www.ppghighperformancecoatings.com/Home.aspx	Company Contact: Todd DuBrock (412) 974-2473 dubrock@ppg.com					
				Top Coat	Pitthane Ultra (95-812 Series)							
			AV	Primer	Amercoat 370							
				Top Coat	Kwikspar 600							
			Sherwin-Williams	AV	Primer				Macropoxy 646 Fast Cure Epoxy		Company Contact: Shawn Evans 330-601-7393 shawn.b.evans@sherwin.com	Only one of these top coats is to be used per application
					Top Coat				Acrolon 218 HS (Gloss Series) SherThane 2K Urethane			
		Carboline	AV	Primer	Carbozinc 859	http://carboline.com/	Company Contact: Bob Windsheimer (412) 402-8555 bwindsheimer@carboline.com					
				Top Coat	Carbothane 134 HG							
		International	AV	Primer	Bar-Rust 235	http://www.international-pc.com/default.aspx	Company Contact: Justin Gritt (304) 951-9386 justin.gritt@akzonobel.com					
				Top Coat	Devthane 359							
		One-Coat Systems	PPG	AV	Kwikspar 600		http://www.ppghighperformancecoatings.com/Home.aspx	Company Contact: Todd DuBrock (412) 974-2473 dubrock@ppg.com				
				EAR	Durethane 95-330 DTM Mastic Urethane							
	International		AV	Intercure 99 NA		International	Company Contact: Justin Gritt (304) 951-9386 justin.gritt@akzonobel.com					
			EAR	Devthane 349QC								
	High Temperature Coatings (200 to 450F)	PPG	AV	Primer	PPG Hi-Temp 222G	http://www.ppghighperformancecoatings.com/Home.aspx	Company Contact: Todd DuBrock (412) 974-2473 dubrock@ppg.com	Only one of these primers is to be used per application				
				Primer	Amerlock 2/400 GF							
				Top Coat	PPG Hi-Temp 500 VS							
		Carboline	AV	Primer	Carbozinc 11	http://carboline.com/	Company Contact: Bob Windsheimer (412) 402-8555 bwindsheimer@carboline.com					
				Top Coat	Thermaline 4900 VOC							
		International	EAR	Primer	Interzinc 22	http://www.international-pc.com/default.aspx	Company Contact: Justin Gritt (304) 951-9386 justin.gritt@akzonobel.com					
Top Coat	Intertherm 1875											
High Temperature Coatings (450 to 1200F)	PPG	AV	PPG Hi-Temp 1027		http://www.ppghighperformancecoatings.com/Home.aspx	Company Contact: Todd DuBrock (412) 974-2473 dubrock@ppg.com						
	Carboline	AV	Thermaline Heat Sheild		http://carboline.com/	Company Contact: Bob Windsheimer (412) 402-8555 bwindsheimer@carboline.com						

COATINGS

ITEM	MANUFACTURER	PREFERENCE LEVEL	PRODUCT	WEBSITE	CONTACT	COMMENTS		
Above Grade	Coating Under Acoustic Insulation	PPG	PPG Hi-Temp 222G (2 coats, 4-6 mils each)	http://www.ppghighperformancecoatings.com/Home.aspx	Company Contact: Todd DuBrock (412) 974-2473 dubrock@ppg.com			
		PPG	Amerlock 2/400 GF	http://carboline.com/				
		Carboline	AV	Carboguard 890 Epoxy (2 coats, 4-6 mils each)	http://carboline.com/	Company Contact: Bob Windsheimer (412) 402-8555 bwindsheimer@carboline.com		
		Sherwin-Williams	EAR	Macropoxy 646 FC		Company Contact: Shawn Evans 330-601-7393 shawn.b.evans@sherwin.com	For temperatures <140F	
	Coating Under Thermal Insulation (Up to 300F)	PPG	AV	PPG Hi-Temp 222G (2 coats)	http://www.ppghighperformancecoatings.com/Home.aspx	Company Contact: Todd DuBrock (412) 974-2473 dubrock@ppg.com		
		PPG	EAR	Amerlock 2/400 GF				
		Carboline	AV	Carboguard 890 Epoxy (2 coats, 4-6 mils each)	http://carboline.com/	Company Contact: Bob Windsheimer (412) 402-8555 bwindsheimer@carboline.com		
		Sherwin-Williams	EAR	Phenicon HS Flake Filled		Company Contact: Shawn Evans 330-601-7393 shawn.b.evans@sherwin.com		
	Cold Weather Products	PPG	AV	w/o Accelerator	Amercoat 240		Company Contact: Todd DuBrock (412) 974-2473 dubrock@ppg.com	Surface Temp >0F
					Amercoat 235			Surface Temp > 20F
					Amercoat 370			Surface Temp >20F
				w/Accelerator	Amercoat 450 H			Surface Temp >20F
Urethane Accelerator 866M (97-722)				Pitthane Ultra	Surface Temp >20F			
		Amercoat 68 HS	Surface Temp >32F					
International		AV	w/o Accelerator	Bar-Rust 235		Company Contact: Justin Gritt (304) 951-9386 justin.gritt@akzonobel.com	Cures @ 0F; Surface Temp >20F	
				Devthane 359			Surface Temp > 35F	
			w/Accelerator Urethane Catalyst 070A0000	Devthane 359			Add 1-2 oz/gallon Surface Temp > 20F	
Sherwin-Williams		AV	w/o Accelerator	Duraplate 235 Epoxy		Company Contact: Shawn Evans 330-601-7393 shawn.b.evans@sherwin.com	Surface Temp >0F	
	EAR		Corothane I Aliphatic Finish Coat	Surface Temp >20F				
	AV	w/ Accelerator	Hi Solids Polyurethane	Surface Temp >40F				
	AV	QuickThane Urethane	Acrolon 218 HS (Gloss Series)	Surface Temp >35F				

REFERENCE CODES	
CODES	PREFERENCE LEVELS
AV	Approved Vendor
AVL	Approved Vendor with Limitations
EAR	Corrosion Engineering Approval Required
RFR	Not Approved / Requires Further Research

August 2017 AML Update	Revamped entire page and clarified which products are to be used for each application
------------------------	---



**FLOW / PRESSURE CONTROL VALVES**

ITEM	MANUFACTURER	PREFERENCE LEVEL	WEBSITE	ADDRESS	DATA SHEET	COMMENTS
Control Valves	Fisher (Emerson)	EAR	www.emerson.com	Equipment & Controls, Inc. (ECI) 2 Park Drive Lawrence, PA 15055	<a href="http://www.emerson.com/catalog/SearchDisplay?storeId=20151&amp;catalogId=20051&amp;langId=-1&amp;searchTerm=&amp;cmBusinessSegmentId=98390&amp;wcsBusinessSegmentId=&amp;cmFacetId=33408&amp;cmTabSelected=true-facet:&amp;productBeginIndex:0&amp;orderBy:&amp;pageView:grid&amp;minPrice:&amp;maxPrice:&amp;pageSi">http://www.emerson.com/catalog/SearchDisplay?storeId=20151&amp;catalogId=20051&amp;langId=-1&amp;searchTerm=&amp;cmBusinessSegmentId=98390&amp;wcsBusinessSegmentId=&amp;cmFacetId=33408&amp;cmTabSelected=true-facet:&amp;productBeginIndex:0&amp;orderBy:&amp;pageView:grid&amp;minPrice:&amp;maxPrice:&amp;pageSi</a>	
	Masonelian (GE Oil & Gas)	EAR	www.geoilandgas.com	Andrews Industrial Controls, Inc. 108 Rosslyn Road Carnegie, PA 15106	<a href="https://www.geoilandgas.com/file-download-search">https://www.geoilandgas.com/file-download-search</a>	
	Becker (GE Oil & Gas)	EAR	www.geoilandgas.com	Master Controls, Inc. P.O. Box 217 Granville, OH 43023	<a href="https://www.geoilandgas.com/file-download-search">https://www.geoilandgas.com/file-download-search</a>	
	Flowserve (Valtek)	EAR	www.flowserve.com	5215 N. O'Connor Blvd., Ste 2300 Irving, TX 75039	<a href="https://www.flowserve.com/en/products/valves">https://www.flowserve.com/en/products/valves</a>	New Valtek valves are NOT approved. Replacement parts for existing Valtek valves are permitted
	Kimray	EAR	www.kimray.com	52 NW 42nd Street Oklahoma City, OK 73118		
	VRG Controls	EAR	www.vrgcontrols.com	1199 Flex Ct Unit 8 Lake Zurich , IL 60047		

REFERENCE CODES	
CODES	PREFERENCE LEVELS
AV	Approved Vendor
AVL	Approved Vendor with Limitations
EAR	Engineering Approval Required
RFR	Not Approved / Requires Further Research

August 2017 AML Upd	General Update. Added Masonelian.
---------------------	-----------------------------------

COUPLING HARNESES

MANUFACTURER	PREFERENCE LEVEL	Model Number	Sizes	IF...Coupling Middle Ring Length	Then: Stud Length	Pressure Rating	Dimension for Pipe End to First Point of Lug	Website	Brochure	Comments
Smith-Blair (A Xylem Brand)	AV	132BXX (Insulated)	2 through 24 inch	5 inches	24 inches	Max 500 Psig. Depends upon the quantity used. See Manuf Literature	11 inches	<a href="http://smith-blair.com/index.php?mod=solutions&amp;mid=2&amp;sid=1">http://smith-blair.com/index.php?mod=solutions&amp;mid=2&amp;sid=1</a>	<a href="http://smith-blair.com/assets/pdf/product_brochures/pb_gasrodandulg.pdf">http://smith-blair.com/assets/pdf/product_brochures/pb_gasrodandulg.pdf</a>	Types: Insulating Joint Harness with Deflection Rings, Conductive Joint Harness with Deflection Rings, Conductive Joint Harness
		133BXX (Conductive)		7 inches	24 inches		11 inches			
Dresser	AV	Style 440	2 through 36 inch Additional Sizes available upon request	5 inches	26 inches	Max 300 Psig. Depends upon the quantity used. See Manuf Literature	6-3/8 inches	N/A	N/A	Types: Insulating Joint Harness with Deflection Rings, Conductive Joint Harness with Deflection Rings, Conductive Joint Harness  Dresser is now part of GE
				7 inches	32 inches		8-1/2 inches			
				12 inches	44 inches		14 1/2 inches			
				16 inches	44 inches		14 1/2 inches			



REFERENCE CODES	
CODES	PREFERENCE LEVELS
AV	Approved Vendor
AVL	Approved Vendor with Limitations
EAR	Engineering Approval Required
RFR	Not Approved / Requires Further Research

August 2017 AML Update | General Revisions

DUMP VALVES

ITEM	MANUFACTURER	PREFERENCE LEVEL	Model #	Sizes Offered (in.)	Pressure Rating	End Connection	Actuator	Seat	Shutoff Classification	Body	Flow Characteristic	Seal	Plug Material	Stem	Packing	Comments	Website	
Dump Valves	Fisher	EAR	D2 FloPro	1"	ANSI 900	Threaded	Air-to-Open or Air-to-Close	Specify S17400 for Standard Service	ANSI Class IV	Globe	Equal Percentage	HNBR (Hydrogenated Nitrile)	Specify S17400 for Standard Service	Specify S31600 for Standard Service	PTFE/Carbon PTFE (Teflon)	Used on gas separators and scrubbers	www.emerson.com/en-us/automation/fisher	
			D3 FloPro	1" - 2"	ANSI 600 ANSI 900	Flanged (ANSI 600) Threaded (ANSI 900)	Spring-to-Close or Spring-to-Open	Specify S17400 for Standard Service	ANSI Class IV	Globe	Equal Percentage	HNBR (Hydrogenated Nitrile)	Specify S17400 for Standard Service	Rated for Standard Service	PTFE/Carbon PTFE (Teflon)	Used on gas separators and scrubbers		
			D4 FloPro	1" - 2"	ANSI 150 - 1500	Flanged	Spring-to-Close or Spring-to-Open	Specify S17400 for Standard Service	ANSI Class IV	Globe	Equal Percentage	HNBR (Hydrogenated Nitrile)	Specify S17400 for Standard Service	Rated for Standard Service	PTFE/Carbon PTFE (Teflon)	Used on gas separators and scrubbers		
	Norriseal Wellmark	EAR	Series 2200 and 2220	1" - 2"	ANSI 150 - 1500	Threaded, RF, RTJ	Direct or Reverse	Metal or Soft	ANSI Class IV (Hard Seats) ANSI Class VI (Soft Seats)		Globe, Angle	Modified Percentage, Equal Percentage, Quick Opening	Nitrile or Viton	Available in Type 316 Stainless Steel, Carbide, Ceramic, Alloy 6 and Teflon	Type 316 Stainless Steel Available, Type 303SST Standard	TFE V Ring (Teflon)	Seal materials available for corrosion purposes	norrisealwellmark.com/products/control-valves/
			Series 1: 2023A No-Freeze Valve	1"	2220 (ANSI 900)	Threaded (Male)	Reverse Acting, Non-Adjustable	316 SST	not given		Angle/ Freeze Resistant	Quick Opening	Viton	not given	not given	not given	High-Pressure Dump Valve, specifically designed for constant trim immersion in the vessel's fluid	
			Series 2026 and 2027A	1" - 2"	2250 (ANSI 900)	Threaded	Direct (Adjustable) or Reverse (Adjustable or Non-Adjustable)	17-4PH SST or Carbide/316 SST	not given		Angle	not given	Buna-N or Viton	440/303 SST or Carbide/316 SST	not given	TFE V Ring (Teflon)	Used on separators and other process vessels. Model 2026 has 2" MNPT vessel connection and 1" FNPT inlet/outlet. Model 2027A has 2" MNPT vessel connection and 1" FNPT outlet only.	
	Murphy	EAR	DV Series	1" - 2"	2000 psig	Threaded, 1" - 2" Connection	Murphy L1200NDVOR or similar level controller	Type 316 Stainless Steel	not given	Angle	not given	Carbon/Graphite Filled PTFE (Teflon)	Type 316 Stainless Steel	Type 316 Stainless Steel	Carbon/Graphite Filled PTFE (Teflon)	Primarily for compressor scrubbers, but can be used for any liquids within vendor specifications	www.fwmurphy.com/products/valves/dvu	
	Forum Energy Technologies (Formerly Baker SPD valves)	EAR	BTE Top-Entry Choke/Control Valve	1" - 2"	ANSI 600	Flanged (ANSI 600) Threaded (FNPT - 5000 psig) Ring-Type Joint	not included	not given	not given	not given	Globe	not given	O-ring, material not given	Type 316 Stainless Steel, Ceramic and Tungsten Carbide Available	Type 316 Stainless Steel Standard	Teflon	Easily Actuated, uses KamLok wear sleeve	http://www.f-e-t.com/images/uploads/Choke_Catalog_05-17.pdf
			BAP 90° Angle Choke	2"	ANSI 600-1500, 5000psig	Flanged (ANSI 600-1500) Threaded (FNPT - 5000 psig)	not included	not given	not given	not given	Angle	not given	90 D.P.C. Nitrile Fluoroelastomer available	Type 316 Stainless Steel	Type 316 Stainless Steel	Teflon	Easily Actuated, uses KamLok wear sleeve. Inhibits freeze-up, able to handle two adjustable pressure drops	
	Mallard (Circor)	EAR	5400/5450 Control Valve	1" - 2" 2" 1"	4000 psig up to 200°F	Flanged (ANSI 150 - ANSI 1500) Threaded (FNPT - 4000psig)	Direct or Reverse	Stainless Steel or Tungsten Carbide, Soft	ANSI Class IV ANSI Class IV ANSI Class VI		Globe (1" - 2") Angle (2") Tee (1")	Modified Percentage, Quick Opening (On-Off Service)	Buna-N, Viton, Atlas, Kalrez	Carbon Steel or Type 316 Stainless Steel	Type 316 Stainless Steel	PTFE V-Ring (Teflon)	Pressure, level, temperature and flow control applications on separators, scrubbers, wellheads and other equipment	www.circorenergy.com/brands/mallard-control.php
5100			1"-2"	2220 psig	Threaded	Reverse (Fail Closed)	Stainless Steel	not given		Angle	Quick Opening	Buna-N, Viton	302 Stainless Steel	303 or 316 Stainless Steel	not given	Specifically designed for constant trim immersion in the vessel's fluid		

REFERENCE CODES	
CODES	PREFERENCE LEVELS
AV	Approved Vendor
AVL	Approved Vendor with Limitations
EAR	Engineering Approval Required
RFR	Not Approved / Requires Further Research

October 2017 AML General updates. Added Fisher D4. Revised Mallard Model number from 5200 to 5100.

ELASTOMERS

	NBR	FKM	Chloroprene	PTFE	Nylon
<b>Synonym Trade Names:</b>	<b>Nitrile, Buna-N</b>	<b>Viton, Fluororlastomer</b>	<b>CR, Neoprene</b>	<b>Teflon</b>	<b>PA, Polyamide</b>
<b>General Application Properties:</b>	General Material choice for Natural gas, NGL, oil and heat resistance	Most prevalent specialty Elastomer - used mainly for heat, solvent, and chemical resistance	Has moderate resistance to oil, resistant to Hydrogen Sulfide	Material is very chemically inert. Used mainly in static and dynamic sealing applications as a coating	Used mainly in diaphragm application due to light weight properties and as a reinforcement to other elastomers
<b>Specific Advantage/ Disadvantage:</b>	Excellent blend of physical properties with reasonable cost, has the best cold temperature properties	Becomes brittle at or just below 0 deg. F	Resistant to Hydrogen Sulfide involving Temps < 150 deg. F	Chemically inert - low coefficient of friction in packing material use	Good tenacity, excellent recovery of material properties under normal loading, good adhesion to other elastomers
<b>Application General Uses</b>					
<b>O-Rings</b>	X	X	X		
<b>Molded Parts</b>	X	X	X	X	X
<b>Liners for Valves</b>	X	X		X	
<b>Seat Discs</b>	X		X	X	X
<b>Lathe Cut Rings and Gaskets</b>	X		X		
<b>Diaphragms</b>	X	X			X
<b>Sheet Gaskets</b>	X	X	X		X
<b>Binder material</b>	X		X		
<b>Machined parts coatings</b>				X	
<b>Film Coatings</b>				X	
<b>Packing and Seals</b>				X	X
<b>Diaphragm Coatings</b>		X	X	X	
<b>Diaphragm Strengthening applications</b>					X
<b>Maximum Temperature Range of Elastomer:</b>	(-60 to +225 deg F)	(-20 to +450 deg F)	(-60 to +200 deg F)	(-100 to +400 deg F)	(-60 to +200 deg F)
<b>Specific Gravity:</b>	1.2 to 1.35	1.4 to 1.95	1.23 to 1.25	2.1 to 2.3	1.13 to 1.15
<b>Tensile Strength (psi):</b>	1250 to 4000	1000 to 3000	2000 to 4000	2000 to 6500	7000 to 12,000
<b>Elongation-at-Failure (%):</b>	200 to 700	100 to 500	300 to 600	250 to 350	60 to 300
<b>Weathering Resistance:</b>	Poor without antiozonant and antioxidant ingredients	Excellent	Excellent	Excellent	Very Poor
<b>Radiation Limit (rads):</b>	1.00E+07	1.00E+06	1.00E+06	1.00E+04	1.00E+06
<b>Hydrogen Sulfide Resistance:</b>	Applications should be < 1% and have Temps. < 150 deg. F	Applications should be < 10% and Temps. < 250 deg. F	Applications for temps < 150 deg. F	Applications at Temps - 250 to 400 deg. F	
*Note: HNBR is a new material with a wide range of H2S applications for Temps < 250 deg. F - Check for availability.					

**ELECTRICAL EQUIPMENT**

ITEM	MANUFACTURER	PREFERENCE LEVEL	COMMENTS	WEBSITE
<b>Electrical Power Distribution Equipment</b>				
	Eaton	AV		www.eaton.com
	Siemens	EAR	Advanced Controls & Distribution - Cranberry Twp, PA (724) 741-8200	www.sea.siemens.com
	Square D (Schneider Electric)	EAR	State Electric Supply - Dunbar, WV (304) 766-0500	www.squared.com
	Allen Bradley	EAR	Fletcher Industries, Tri State Supply, CED Moseback Electric	ab.rockwellautomation.com
<b>Conduit Fittings</b>				
	Appleton (Emerson)	AV	State Electric Supply - Dunbar, WV (304) 766-0500	www.appletonelec.com
	Crouse-Hinds (Eaton)	AV	State Electric Supply - Dunbar, WV (304) 766-0500	www.crouse-hinds.com
<b>Electric Wire</b>				
	Alpha	AVL	State Electric Supply - Dunbar, WV (304) 766-0500	www.alphawire.com
	Belden	AV	State Electric Supply - Dunbar, WV (304) 766-0500	www.belden.com
	Essex	EAR	State Electric Supply - Dunbar, WV (304) 766-0500	www.superioressex.com
	General Cable (BICC)	AVL	State Electric Supply - Dunbar, WV (304) 766-0500	www.generalcable.com
	Okonite	AV	State Electric Supply - Dunbar, WV (304) 766-0500	www.okonite.com
	Service Wire Co.	AV	State Electric Supply - Dunbar, WV (304) 766-0500	www.servicewire.com
	Southwire	AV	State Electric Supply - Dunbar, WV (304) 766-0501	www.southwire.com
	Houston Wire & Cable	EAR	State Electric Supply - Dunbar, WV (304) 766-0501	www.houwire.com

**ELECTRICAL EQUIPMENT**

ITEM	MANUFACTURER	PREFERENCE LEVEL	COMMENTS	WEBSITE
<b>Electrical Connectors</b>				
	Burndy	AV	State Electric Supply - Dunbar, WV (304) 766-0500	www.burndy.com
	Scotch - 3M	AV	State Electric Supply - Dunbar, WV (304) 766-0500	www.3m.com
	Thomas & Betts	AV	State Electric Supply - Dunbar, WV (304) 766-0500	www.tnb.com
<b>Terminal Strips</b>				
	Buchanan	AV	State Electric Supply - Dunbar, WV (304) 766-0500	www.te.com
	Marathon	AV	State Electric Supply - Dunbar, WV (304) 766-0500	www.marathonsp.com
	Weidmuller	AV	State Electric Supply - Dunbar, WV (304) 766-0500	www.weidmuller.com
<b>Boxes/Enclosures</b>				
	Adalet	AV	State Electric Supply - Dunbar, WV (304) 766-0500	www.adalet.com
	Appleton (Emerson)	AV	State Electric Supply - Dunbar, WV (304) 766-0500	www.appletonelec.com
	Crouse-Hinds (Eaton)	AV	State Electric Supply - Dunbar, WV (304) 766-0500	www.crouse-hinds.com
	Hammond	EAR	State Electric Supply - Dunbar, WV (304) 766-0500	www.hammondmfg.com
	Hoffman (Pentair)	AV	State Electric Supply - Dunbar, WV (304) 766-0500	www.hoffmanonline.com
	Stahlin	EAR	State Electric Supply - Dunbar, WV (304) 766-0500	www.stahlin.com
	Saginaw Control & Engineering (SCE)	EAR	State Electric Supply - Dunbar, WV (304) 766-0500	www.saginawcontrol.com

**ELECTRICAL EQUIPMENT**

ITEM	MANUFACTURER	PREFERENCE LEVEL	COMMENTS	WEBSITE
<b>MV VFD and Soft Starters</b>				
	Toshiba	EAR	Dearing Corp. - Youngstown, OH (330) 783-2258 (Rick Dearing)	<a href="http://www.toshiba.com">www.toshiba.com</a>
	Eaton	EAR		<a href="http://www.eaton.com">www.eaton.com</a>
	Robicon	EAR		<a href="http://www.automation.siemens.com">www.automation.siemens.com</a>
	Motortronics	EAR	Dearing Corp. - Youngstown, OH (330) 783-2258 (Rick Dearing)	<a href="http://www.motortronics.com">www.motortronics.com</a>
	Allen Bradley	EAR	Tri State Supply	<a href="http://ab.rockwellautomation.com">ab.rockwellautomation.com</a>
<b>VFD (480V and below)</b>				
	Eaton	AV		<a href="http://www.eaton.com">www.eaton.com</a>
	Siemens	EAR	Advanced Controls & Distribution - Cranberry Twp, PA (724) 741-8200	<a href="http://www.automation.siemens.com">www.automation.siemens.com</a>
	Allen Bradley	EAR	Tri State Supply	<a href="http://ab.rockwellautomation.com">ab.rockwellautomation.com</a>
<b>Electric Motors - 480V and below</b>				
	Baldor (ABB)	AV	West Electric & Machine Company - Morgantown, WV (304) 296-8201	<a href="http://www.baldor.com">www.baldor.com</a>
	Marathon	AV	West Electric & Machine Company - Morgantown, WV (304) 296-8201	<a href="http://www.marathonelectric.com">www.marathonelectric.com</a>
	Siemens	AV	West Electric & Machine Company - Morgantown, WV (304) 296-8201 Advanced Controls & Distribution - Cranberry Twp, PA (724) 741-8200	<a href="http://www.automation.siemens.com">www.automation.siemens.com</a>
	WEG	AV	West Electric & Machine Company - Morgantown, WV (304) 296-8201	<a href="https://www.weg.net/institutional/BR/en/">https://www.weg.net/institutional/BR/en/</a>
<b>Electric Motors - Above 480V</b>				
	TECO	EAR	Glen Disosway (Grand Rapids, MI) (616) 776-7299	<a href="http://www.tecowestinghouse.com">www.tecowestinghouse.com</a>
	ABB	EAR		<a href="http://www.abb.com">www.abb.com</a>
	Siemens	EAR	Advanced Controls & Distribution - Cranberry Twp, PA (724) 741-8200	<a href="http://www.siemens.com">www.siemens.com</a>

**ELECTRICAL EQUIPMENT**

ITEM	MANUFACTURER	PREFERENCE LEVEL	COMMENTS	WEBSITE
<b>Generators - Prime &amp; Standby</b>				
	Caterpillar	EAR	Carter-Cat (Oakwood, VA) (800) 358-0327	<a href="http://www.cat.com/">http://www.cat.com/</a>
	Capstone	EAR	E-Finity Distributed Generation, LLC (610) 688-6212	<a href="http://www.e-finity.com">www.e-finity.com</a>
	Kohler	EAR	Kraft Power (Canton, OH) (330) 455-7096	<a href="http://www.kohlerpower.com">http://www.kohlerpower.com</a>
	Cummins	EAR	Cummins Bridgeway	<a href="http://www.cummins.com">www.cummins.com</a>
<b>Power Meters / ATS's (PXM4000)</b>				
	Eaton	AV		<a href="http://powerquality.eaton.com">powerquality.eaton.com</a>
	Cummins	AV	Cummins Bridgeway	<a href="http://www.cummins.com">www.cummins.com</a>
<b>Schedule 80 PVC Conduit</b>				
	Prime	AV	State Electric Supply - Dunbar, WV (304) 766-0500	<a href="http://www.primeconduit.com">www.primeconduit.com</a>
	Cantex	AV	State Electric Supply - Dunbar, WV (304) 766-0500	<a href="http://www.cantexinc.com">www.cantexinc.com</a>
	QCPI	AV	State Electric Supply - Dunbar, WV (304) 766-0500	<a href="http://www.queencityplastics.com">www.queencityplastics.com</a>
	Southern Pipe	AV	State Electric Supply - Dunbar, WV (3044) 766-0500	<a href="http://www.southern-pipe.com">www.southern-pipe.com</a>
<b>Schedule 40 RGS Conduit</b>				
	Wheatland Tube	AV	State Electric Supply - Dunbar, WV (304) 766-0500	<a href="http://www.wheatland.com">www.wheatland.com</a>
	Allied (Atkore)	AV	State Electric Supply - Dunbar, WV (304) 766-0500	<a href="http://www.alliedeg.us/">http://www.alliedeg.us/</a>
	Republic Conduit	AV	State Electric Supply - Dunbar, WV (304) 766-0500	<a href="http://www.republic-conduit.com">www.republic-conduit.com</a>



**ELECTRICAL EQUIPMENT**

ITEM	MANUFACTURER	PREFERENCE LEVEL	COMMENTS	WEBSITE
<b>Schedule 40 PVC Coated Conduit</b>				
	Plasti-Bond (Robroy Red)	AV	State Electric Supply - Dunbar, WV (304) 766-0500	www.plastibond.com
	Permacote	AV	State Electric Supply - Dunbar, WV (304) 766-0500	www.permacote.com
	Calbond	AV	Condor Associates - Glenshaw, PA (800) 283-9504	www.condorassociates.com
<b>Fuses</b>				
	Ferraz Shawmut	AV	State Electric Supply - Dunbar, WV (304) 766-0500	www.ferrazfuses.com
	Mersen	AV	State Electric Supply - Dunbar, WV (304) 766-0500	www.ep-us.mersen.com
	Littelfuse	AV	Tri State Supply	www.littelfuse.com
	Bussman	AV	Tri State Supply	<a href="http://www.cooperindustries.com/content/public/en/bussmann/products.html">http://www.cooperindustries.com/content/public/en/bussmann/products.html</a>
<b>Station Batteries</b>				
	Enersys	AV	Arthur N. Ulrich - Pataskala, OH (740) 927-8244	www.enersys.com
	OGRE	AV	Automation-X	www.ogreenergy.com
<b>Battery Chargers</b>				
	LaMarche	AV	Arthur N. Ulrich - Pataskala, OH (740) 927-8244	www.lamarche.com
	Morningstar	AV	Automation-X	www.morningstarcorp.com
<b>Photocells</b>				
	Tork	AV	State Electric Supply - Dunbar, WV (304) 766-0500	www.nsiindustries.com
<b>Fiber Optic Cable</b>				
	Optical Cable Corp.	AV		
<b>Grounding Reels</b>				
	Crouse-Hinds (Eaton)	AV	State Electric Supply - Dunbar, WV (304) 766-0500	www.crouse-hinds.com
	Rota-Reel	AV	Various	<a href="https://www.hunterspringandreeel.com/products/static-grounding-reel/rotareels">https://www.hunterspringandreeel.com/products/static-grounding-reel/rotareels</a>

**ELECTRICAL EQUIPMENT**

ITEM	MANUFACTURER	PREFERENCE LEVEL	COMMENTS	WEBSITE
<b>Outdoor Breakdown Lighting Poles</b>				
	Crouse-Hinds (Eaton)	AV	State Electric Supply - Dunbar, WV (304) 766-0500	www.crouse-hinds.com
	KW	AV	State Electric Supply - Dunbar, WV (304) 766-0500	www.kwindustries.com
	Lyte Poles	AV	Tri State Supply	www.lytepoles.com
	General Structures		Crescent Electric	www.generalstructuresinc.com
<b>XP Receptacles &amp; Switches</b>				
	Crouse-Hinds (Eaton)	AV	State Electric Supply - Dunbar, WV (304) 766-0500	www.crouse-hinds.com
	Appleton (Emerson)	AV	State Electric Supply - Dunbar, WV (304) 766-0500	www.appletonelec.com
<b>Cable Tray &amp; Fittings - Aluminum</b>				
	B-Line (Eaton)	AV		www.cooperindustries.com
	Husky	EAR	State Electric Supply - Dunbar, WV (304) 766-0500	www.mphusky.com
<b>Strobe Lights</b>				
	Federal Signal	AV	State Electric Supply - Dunbar, WV (304) 766-0500	www.federalsignal.com
<b>Fire Detectors</b>				
See Flame and Gas Detectors tab				
<b>Heat Tracing</b>				
	Thermon	AV	State Electric Supply - Dunbar, WV (304) 766-0500	www.thermon.com
	Chromalox	AV	State Electric Supply - Dunbar, WV (304) 766-0500	www.chromalox.com
	Raychem/Pentair	AV	Tri State Supply	www.raychem.com

**ELECTRICAL EQUIPMENT**

ITEM	MANUFACTURER	PREFERENCE LEVEL	COMMENTS	WEBSITE
<b>Lighting Fixtures - Indoor - Division 2</b>				
	Crouse-Hinds (Eaton)	AV	State Electric Supply - Dunbar, WV (304) 766-0500	www.crouse-hinds.com
	Appleton (Emerson)	EAR	Clarksburg, WV (800) 642-7467	www.appletonelec.com
	Lithonia	EAR	Laface & McGovern - Huntington, WV (304) 523-0145	www.lithonia.com
	Hubbell	EAR	Paolicelli One Source Associates - Carnegie, PA (412) 276-8816	www.hubbellighting.com
	GE Industrial	AV	Tri State Supply	www.currentbyge.com
	Northstar	AV	Crescent Electric	www.nslights.com
<b>Lighting Fixtures - Outdoor</b>				
	Crouse-Hinds (Eaton)	AV	State Electric Supply - Dunbar, WV (304) 766-0500	www.crouse-hinds.com
	Appleton (Emerson)	EAR	Clarksburg, WV (800) 642-7467	www.appletonelec.com
	Lithonia	EAR	Laface & McGovern - Huntington, WV (304) 523-0145	www.lithonia.com
	Hubbell	EAR	Paolicelli One Source Associates - Carnegie, PA (412) 276-8816	www.hubbellighting.com
	LSI Industries	AV	Tri State Supply	www.lsi-industries.com
	Northstar	AV	Crescent Electric	www.nslights.com
<b>REFERENCE CODES</b>				
<b>CODES</b>	<b>PREFERENCE LEVELS</b>			
AV	Approved Vendor			
AVL	Approved Vendor with Limitations			
EAR	Engineering Approval Required			
RFR	Not Approved / Requires Further Research			

August 2017 AML Update | General updates. Added the following Vendors: Lighting Fixtures Indoor: Lithonia, Hubbell as EAR. Lighting Fixtures Outdoor: Lithonia, Hubbell as EAR

**FLANGES**

ITEM	MANUFACTURER	PREFERENCE LEVEL	FLANGE SIZE (inches)	ANSI RANGE	CONTACT	DATASHEET	WEBSITE	COMMENTS
<b>Carbon Steel Flanges Grade B (up to 36,000 SMYS)</b>	Boltex Mfg. Co.	AV	1/2 - 48	ANSI 150 - 2500	4901 Oates Road Houston, TX 77013 Phone: (713) 675-9433 Email: flangesales@boltex.com	<a href="http://www.boltex.com/boltexreference.html">http://www.boltex.com/boltexreference.html</a>	<a href="http://www.boltex.com">www.boltex.com</a>	Specializes in Lower ANSI Ratings
	Galperti, Inc.	AV	1/2 - 48	ANSI 150 - 2500	Phone: (713) 433-0700 Email: galpmail@galperti-am.com	<a href="http://www.galperti-am.com/products/">http://www.galperti-am.com/products/</a>	<a href="http://www.galperti-am.com">www.galperti-am.com</a>	Specializes in Higher ANSI Ratings
	AFGlobal (Coffer)	AV	1/2 - 48	ANSI 150 - 1500	945 Bunker Hill Road, Suite 500 Houston, TX 77024 Phone: (713) 393-4200	<a href="http://www.afglobalcorp.com/products-and-services/industrial/forged-connectors-and-components/standard-flanges">http://www.afglobalcorp.com/products-and-services/industrial/forged-connectors-and-components/standard-flanges</a>	<a href="http://www.coffercorp.com">www.coffercorp.com</a>	
	DL Flange	AV	1/2 - 60	ANSI 150 - 2500	7785 East Little York Road Houston, TX 77016 Phone: (844) 353-5264 Email: sales@dflanges.com	<a href="http://www.dlflange.com">www.dlflange.com</a>	<a href="http://www.dlflange.com">www.dlflange.com</a>	Higher ANSI Ratings
	Federal Flange	AV	1/2 - 48	ANSI 150 - 2500	4014 Pinemont Houston, TX 77018 Phone: (713) 681-0606 Email: info@federalflange.com	<a href="http://www.federalflange.com/flange-selection/">http://www.federalflange.com/flange-selection/</a>	<a href="http://www.federalflange.com">www.federalflange.com</a>	Typically Higher Cost
	Tri-Lad Flanges and Fittings Inc. (Part of Allied International)	AV	1/2 - 72	ANSI 150 - 2500	30 Woodslee Ave Paris, ON N3L 3N6 Canada Phone: (519) 442-6520		<a href="http://www.tri-lad.com">www.tri-lad.com</a>	Higher ANSI Ratings. Domestic and Canadian Flanges ONLY.
	Weldbend	AV	1/2 - 60	ANSI 150 - 600	6600 South Harlem Avenue Argo, IL 60501 Phone: (773) 582-3500 Email: info@weldbend.com	<a href="https://www.weldbend.com/catalog.pdf">https://www.weldbend.com/catalog.pdf</a>	<a href="http://www.weldbend.com">www.weldbend.com</a>	Specializes in Lower ANSI Ratings

**FLANGES**

ITEM	MANUFACTURER	PREFERENCE LEVEL	FLANGE SIZE (inches)	ANSI RANGE	CONTACT	DATASHEET	WEBSITE	COMMENTS
Forged Steel Flanges Grades F-42 to F-70	Galperti, Inc.	AV	1/2 - 48	ANSI 150 - 2500	Phone: (713) 433-0700 Email: galpmail@galperti-am.com	<a href="http://www.galperti-am.com/products/">http://www.galperti-am.com/products/</a>	<a href="http://www.galperti-am.com">www.galperti-am.com</a>	Higher ANSI Ratings
	Boltex Mfg. Co.	AV	1/2 - 48	ANSI 150 - 900	4901 Oates Road Houston, TX 77013 Phone: (713) 675-9433 Email: flangesales@boltex.com	Boltex Reference	<a href="http://www.boltex.com">www.boltex.com</a>	Specializes in Lower ANSI Ratings
	AFGlobal (Coffer)	AV	1/2 - 48	ANSI 150 - 1500	945 Bunker Hill Road, Suite 500 Houston, TX 77024 Phone: (713) 393-4200	AFGlobal Forged Flanges	<a href="http://www.coffercorp.com">www.coffercorp.com</a>	
	DL Flange	AV	1/2 - 60	ANSI 150 - 2500	7785 East Little York Road Houston, TX 77016 Phone: (844) 353-5264 Email: sales@dflanges.com	<a href="http://www.dflange.com">www.dflange.com</a>	<a href="http://www.dflange.com">www.dflange.com</a>	Higher ANSI Ratings
	Federal Flange	AV	1/2 - 48	ANSI 150 - 900	4014 Pinemont Houston, TX 77018 Phone: (713) 681-0606 Email: info@federalflange.com	Federal Flange Selections	<a href="http://www.federalflange.com">www.federalflange.com</a>	Typically Higher Cost
	Tri-Lad Flanges and Fittings Inc. (Part of Allied International)	AV	1/2 - 60	ANSI 150 - 2500	30 Woodslee Ave Paris, ON N3L 3N6 Canada Phone: (519) 442-6520		<a href="http://www.tri-lad.com">www.tri-lad.com</a>	Higher ANSI Ratings. Domestic and Canadian Flanges ONLY.

REFERENCE	
CODES	PREFERENCE LEVELS
AV	Approved Vendor
AVL	Approved Vendor with Limitations
EAR	Engineering Approval Required
	Not Approved / Requires Further Research
RFR	

August 2017 AML Update	General updates. .
------------------------	--------------------

**FLEXIBLE METAL CONDUIT**

ITEM	SUPPLIER	PREFERENCE LEVEL	WEBSITE	ADDRESS
Anaconda Type UA Liquidtight Flexible Metal Conduit	State Electric Supply	AV	www.stateelectric.com	Dunbar, WV (304) 766-0500
AFC Cable Systems - UL High-Low Temperature Type Liquidtight Flexible Metal Conduit	State Electric Supply	AV	www.stateelectric.com	Dunbar, WV (304) 766-0500

REFERENCE CODES	
CODES	PREFERENCE LEVELS
AV	Approved Vendor
AVL	Approved Vendor with Limitations
EAR	Engineering Approval Required
RFR	Not Approved / Requires Further Research
August 2017 AML Updates.	Added AFC Cable Systems.

**DESIGN AND CONSTRUCTION MANUAL**  
**2.3 APPROVED MANUFACTURERS LIST**



**FILTER SEPARATORS, FILTER VESSELS, SLUG CATCHERS, SEPARATORS**

ITEM	MANUFACTURER	PREFERENCE LEVEL	ADDRESS	WEBSITE
Separators - Main Gas	Peerless (CECO Environmental)	EAR	Orchard Park, NY (716) 662-6540 <sup>(1)</sup>	www.cecoenviro.com
	PECO	EAR	Mineral Wells, TX (940) 325-2575	www.pecousa.com
	NATCO (Cameron)	EAR	Canonsburg, PA (570) 637-4833	www.cameron.slb.com
	King Tool	EAR	Longview, TX (903) 759-4478	www.kingtoolcompany.com
	Dollinger (SPX Flow)	EAR	Ivlyland, PA (215) 675-8670 <sup>(2)</sup>	www.dollinger-spx.com
	FLOCO	EAR	Warrendale, PA (724) 776-9300	www.floco.com
	Burgess-Aarding (CECO Environmental)	EAR	Orchard Park, NY (716) 662-6540	www.cecoenviro.com
	Apollo	EAR	Broken Arrow, OK (918) 251-6780	www.apolloeng.com
	GasTech Engineering	EAR	Tulsa, OK (918) 663-8383	www.gastecheng.com
	Mueller Environmental Designs	EAR	Brookshire, TX (713) 465-0995	www.muellerenvironmental.com
	Valerus (SNC-Lavalin)	EAR	Houston, TX	www.snclavalin.com
	Jonell Systems	EAR	Breckenridge Texas, Nowata OK	processtechnologies.filtrationgroup.com/en-US
	Forum Energy Technologies	EAR	10344 Sam Houston Park Drive, Houston TX 77064	https://f-e-t.com/
Titan (formerly PEQ/Exterran)	EAR	Woodlands, TX	www.titanpeq.com	
Instrument & Control	Welker	AV	Sugar Land, TX (281) 491-2331	www.welker.com
	Balston (Parker)	AV	Lancaster, NY (800) 343-4048	www.balstonfilters.com
	Fisher	AV	Lawrence, PA (724) 746-3700 <sup>(2)</sup>	www.emersonprocess.com
	IMAC	AV	Tullytown, PA (800) 955-4427	www.imacsystems.com
	Headline	AV	Sterling Heights, MI (586) 802-5561 <sup>(2)</sup>	www.headlinefilters.com
	Norriseal Wellmark	EAR	Houston, TX (877) 667-6418	http://norrisealwellmark.com/
	Kimray	EAR	Oklahoma City, OK (405) 525-6601	https://kimray.com/
Liquids	PECO	EAR	Mineral Wells, TX (940) 325-2575	www.pecousa.com
	Pentair	EAR	Conroe, TX (888) 896 6300	https://oilandgasseparations.pentair.com/

Notes:  
1. Regional Office  
2. Distributor

REFERENCE CODES	PREFERENCE LEVELS
AV	Approved Vendor
AVL	Approved Vendor with Limitations
EAR	Engineering Approval Required
RFR	Not Approved / Requires Further Research

August 2017 AML Review | General Updates. Added the following Vendors: Separators: Gas Tech as EAR. Instrument and Control: Norriseal Wellmark, and Kimray as EAR

**GAS DETECTORS**

ITEM	MANUFACTURER	PREFERENCE LEVEL	COMMENTS	WEBSITE
Flame and Gas Detectors	Bacharach	EAR		<a href="https://www.mybacharach.com/">https://www.mybacharach.com/</a>
	Foxboro (Schneider Electric)	EAR		<a href="http://www.foxboro.com">www.foxboro.com</a>
	General Monitors (MSA)	EAR		<a href="http://www.gmsystemsgroup.com/">http://www.gmsystemsgroup.com/</a>
	MSA	EAR		<a href="http://www.msanorthamerica.com">www.msanorthamerica.com</a>
	Texas Analytical Controls	EAR		<a href="http://www.tac-controls.com">www.tac-controls.com</a>
	Det-tronics (United Technologies)	AV		<a href="http://www.det-tronics.com">www.det-tronics.com</a>
	Fenwal Controls (Kidde)	EAR		<a href="https://kidde-fenwal.com">https://kidde-fenwal.com</a>
	Honeywell	EAR		<a href="http://www.honeywell.com">www.honeywell.com</a>

REFERENCE CODES	
CODES	PREFERENCE LEVELS
AV	Approved Vendor
AVL	Approved Vendor with Limitations
EAR	Engineering Approval Required
RFR	Not Approved / Requires Further Research

August 2017 AML Updates	General Updates
-------------------------	-----------------



## GAS SAMPLING

ITEM	MANUFACTURER	PREFERENCE LEVEL	WEBSITE	ADDRESS	DATA SHEET	COMMENTS
Heat Traced Tubing	Dekoron Unitherm	AV	www.unithermcc.com	1531 Commerce Creek Blvd Cape Coral, FL 33909	<a href="http://www.unithermcc.com/assets/files/datasheets/2256htm-imperial.pdf">http://www.unithermcc.com/assets/files/datasheets/2256htm-imperial.pdf</a>	
	O'Brien (AMETEK)	AV	www.obcorp.com	1900 Crystal Industrial Court St. Louis, MO 63114	<a href="http://www.obcorp.com/Literature_and_Documentation/Documents/QLT-TPSPEC_pdf.aspx">http://www.obcorp.com/Literature_and_Documentation/Documents/QLT-TPSPEC_pdf.aspx</a>	
	Valtronics - Supplied by Raychem (PENTAIR)	AV	www.valtronics.com	43 Ritmore Glen Ravenswood, WV 26164		
Sample Probe	A+ Corporation	AV	www.geniefilters.com	41041 Black Bayou Road Gonzales, LA 70737	<a href="http://www.geniefilters.com/products/continuous-sampling/">http://www.geniefilters.com/products/continuous-sampling/</a>	
	Welker	EAR	www.welker.com	13839 West Bellfort Street Sugar Land, TX 77498	<a href="http://naturalgas.welker.com/pdf/datasheet/SCHS_DataSheet.pdf">http://naturalgas.welker.com/pdf/datasheet/SCHS_DataSheet.pdf</a>	
	Orbital Gas Systems	EAR	www.orbitalgas.com	2326 Campbell Road, Building B Houston, TX 77080	<a href="http://orbitalgas.com/about-us/download-information/">http://orbitalgas.com/about-us/download-information/</a>	
Sample Probe Enclosure	Mustang Sampling	AV	www.mustangsampling.com	43 Ritmore Glen Ravenswood, WV 26164	<a href="http://mustangsampling.com/industry/natural-gas/">http://mustangsampling.com/industry/natural-gas/</a>	
	Welker	EAR	www.welker.com	13839 West Bellfort Street Sugar Land, TX 77498	<a href="http://naturalgas.welker.com/pdf/datasheet/SCHS_DataSheet.pdf">http://naturalgas.welker.com/pdf/datasheet/SCHS_DataSheet.pdf</a>	
	Orbital Gas Systems	EAR	www.orbitalgas.com	2326 Campbell Road, Building B Houston, TX 77080	<a href="http://orbitalgas.com/about-us/download-information/">http://orbitalgas.com/about-us/download-information/</a>	
Sample Conditioning System with Heated Regulator	Mustang Sampling	AV	www.mustangsampling.com	43 Ritmore Glen Ravenswood, WV 26164	<a href="http://mustangsampling.com/industry/natural-gas/">http://mustangsampling.com/industry/natural-gas/</a>	
	Welker	EAR	www.welker.com	13839 West Bellfort Street Sugar Land, TX 77498	<a href="http://naturalgas.welker.com/pdf/datasheet/SCHS_DataSheet.pdf">http://naturalgas.welker.com/pdf/datasheet/SCHS_DataSheet.pdf</a>	
	Orbital Gas Systems	EAR	www.orbitalgas.com	2326 Campbell Road, Building B Houston, TX 77080	<a href="http://orbitalgas.com/wp-content/uploads/2016/12/VE_Conditioning_Unit.pdf">http://orbitalgas.com/wp-content/uploads/2016/12/VE_Conditioning_Unit.pdf</a>	

REFERENCE CODES	
CODES	PREFERENCE LEVELS
AV	Approved Vendor
AVL	Approved Vendor with Limitations
EAR	Engineering Approval Required
RFR	Not Approved / Requires Further Research

  

August 2017 Update:	Changed Valtronics to Mustang in several categories
---------------------	---

**GASKETS**

ITEM	MANUFACTURER	PREFERENCE LEVEL	COMMENTS	WEBSITE
<b>Compressed sheet gasket -</b> Graphite, Graphite with Nitrile, or Carbon Fiber ANSI 300 and lower pressure ratings	The Flexitallic Group	AV		<a href="http://flexitallic.com/">http://flexitallic.com/</a>
	Garlock Sealing Tech.	AV		<a href="https://www.garlock.com/">https://www.garlock.com/</a>
	Lamons	AV		<a href="http://www.lamons.com/">http://www.lamons.com/</a>
<b>Spiral Wound gasket</b> ANSI 600 through ANSI 2500 inclusive	The Flexitallic Group	AV	Style CGI	<a href="http://flexitallic.com/">http://flexitallic.com/</a>
	Garlock Sealing Tech.	AV	Style RWI	<a href="https://www.garlock.com/">https://www.garlock.com/</a>
	Lamons	AV	Style WRI	<a href="http://www.lamons.com/">http://www.lamons.com/</a>
<b>Insulating gasket</b>	Refer to Cathodic Protection tab - Flange Isolation Kits section			
<b>Ring Type Joint (RTJ) gaskets</b> ANSI 150 through ANSI 2500 inclusive	The Flexitallic Group	AV		<a href="http://flexitallic.com/">http://flexitallic.com/</a>
	Lamons	AV		<a href="http://www.lamons.com/">http://www.lamons.com/</a>

REFERENCE CODES	
CODES	PREFERENCE LEVELS
AV	Approved Vendor
AVL	Approved Vendor with Limitations
EAR	Engineering Approval Required
RFR	Not Approved / Requires Further Research
August 2017 AML Review	General Update

GATE VALVES

ITEM	MANUFACTURER	MODEL(S)	PREFERENCE LEVEL <sup>(1)</sup>	RECOMMENDED SIZE RANGE <sup>(2)</sup>		ANSI RATING LIMITS		STANDARDS	SERVICE	BODY MATERIAL	STEM <sup>(4)</sup> CONFIGURATION	END TYPES	SEAT MATERIAL		SEAL MATERIAL	COMMENTS	Website	Brochure
				(inch)	(inch)	min	max						PRIMARY	SECONDARY				
GATE VALVE	Grove	G12	EAR	2	12	150	1500	API 6D	Natural Gas, Pipeline Fluids & Methanol - Pipeline & Compressor	Cast Steel	Enclosed, Rising	Flanged - Weld End	Metal-Metal	Viton O-Ring	Viton	Full opening, through conduit (piggable)	<a href="http://cameron.slb.com/products-and-services/valves-index/grove/grove-g12-gate-valve">http://cameron.slb.com/products-and-services/valves-index/grove/grove-g12-gate-valve</a>	N/A
		G4N	EAR	4	12	150	1500	API 6D	Natural Gas, Pipeline Fluids & Methanol - Pipeline & Compressor	Welded Steel	Enclosed, Rising	Flanged - Weld End	Metal-Metal	Viton O-Ring	Viton	Full opening, through conduit (piggable)	<a href="https://cameron.slb.com/products-and-services/valves-index/grove/grove-g4n-gate-valve">https://cameron.slb.com/products-and-services/valves-index/grove/grove-g4n-gate-valve</a>	<a href="https://cameron.slb.com/media/cam/resources/2014/10/08/18/48/grove-g4n-gate-valve-brochure.aspx">https://cameron.slb.com/media/cam/resources/2014/10/08/18/48/grove-g4n-gate-valve-brochure.aspx</a>
	M & J Valve	M303	EAR	6	12	150	1500	API 6D	Natural Gas, Pipeline Fluids & Methanol - Pipeline & Compressor	Welded Steel	Enclosed, Rising	Flanged - Weld End			Viton	NACE trims available	<a href="http://www.spxflow.com/en/mj-valve/pd-mp-slab-gate-valve-m303/">http://www.spxflow.com/en/mj-valve/pd-mp-slab-gate-valve-m303/</a>	<a href="http://www.spxflow.com/en/assets/pdf/mj-1760-us_slab_gate_valve_mj.pdf">http://www.spxflow.com/en/assets/pdf/mj-1760-us_slab_gate_valve_mj.pdf</a>
		EG	EAR	2	4	600	900	API 6D	Natural Gas, Pipeline Fluids & Methanol - Pipeline & Compressor	Cast Steel	Enclosed, Rising	Flanged	Viton		Viton		<a href="http://www.spxflow.com/en/mj-valve/pd-mp-expanding-gate-valve-eg/">http://www.spxflow.com/en/mj-valve/pd-mp-expanding-gate-valve-eg/</a>	
		EG	EAR	6	12	300	900	API 6D	Natural Gas, Pipeline Fluids & Methanol - Pipeline & Compressor	Cast Steel	Enclosed, Rising	Flanged	Viton		Viton			
		C303	EAR	2	12	150	1500	API 6D	Natural Gas, Pipeline Fluids & Methanol - Pipeline & Compressor	Cast Steel	Enclosed, Rising	Flanged			Viton	NACE trims available	<a href="http://www.spxflow.com/en/mj-valve/pd-mp-slab-gate-valve-m303/">http://www.spxflow.com/en/mj-valve/pd-mp-slab-gate-valve-m303/</a>	
	Kerotest	Model-1	EAR	1	12	150	300	API 6D, API 602	Natural Gas, Pipeline Fluids & Methanol, Aux. Systems (Oil, Glycol, Air, Water) - Pipeline & Compressor	Cast Steel	Non-Rising	Flanged - Weld End - Threaded - W.E.x Flg'd	Metal-Metal		Buna N	ANSI pressure class availability differs between valve size and style	<a href="http://www.kerotest.com/prodgate.htm">http://www.kerotest.com/prodgate.htm</a>	
		EV-11	EAR	2	12	150	300	API 6D	Natural Gas, Pipeline Fluids & Methanol, Aux. Systems (Oil, Glycol, Air, Water) - Pipeline & Compressor	Cast Steel	Non-Rising	Flanged - Weld End	Viton		Viton	Not API 6D Monogrammed		
	Velan	Flg'd Bonnet, F.S	EAR <sup>(4)</sup>	¼	2	150	150	API 602	Aux. Systems - Oil, Glycol, Air, Water	Forged Steel	Rising	Flanged	Metal-Metal		Graphite	See Note (4)	<a href="https://www.velan.com/en/products-gate-globe-and-check-valves">https://www.velan.com/en/products-gate-globe-and-check-valves</a>	
	Milwaukee	1550 Series	EAR <sup>(4)</sup>	2	12	150	150	API 600	Aux. Systems - Oil, Glycol, Air, Water	Cast Steel	Rising	Flanged	Metal-Metal		Graphoil	See Note (4)	<a href="http://www.milwaukeevalve.com/index.php/results/1550">http://www.milwaukeevalve.com/index.php/results/1550</a>	<a href="http://www.milwaukeevalve.com/data/files/15501552C_B2_2-12.pdf">http://www.milwaukeevalve.com/data/files/15501552C_B2_2-12.pdf</a>

Notes

- (1) EAR - Engineering Approval Required for Purchase
- (2) Manufacturers may supply valves in pipe sizes larger than the listed sizes, but valves larger than the listed sizes are not recommended for use due to the excessive overall valve height with stem.
- (3) Valves in shaded area of Reference Dimension columns are not recommended for use due to the excessive overall valve height with stem and are only displayed for comparison purposes.
- (4) Rising stem valves are only to be used in low pressure applications (285 psig or less), on non-gas systems and only when an acceptable non-rising, or enclosed rising stem valve is not available.

REFERENCE CODES	
CODES	PREFERENCE LEVELS
AV	Approved Vendor
AVL	Approved Vendor with Limitations
EAR	Engineering Approval Required
RFR	Not Approved / Requires Further Research

August 2017 AML Review	General Updates. No Additions.
------------------------	--------------------------------

**GAUGES**

ITEM	MANUFACTURER	PREFERENCE LEVEL	WEBSITE	ADDRESS	DATA SHEET	COMMENTS
Pressure Gauges	Ashcroft	AV	www.ashcroft.com	250 East Main Street Stratford, CT 06614	http://www.ashcroft.com/downloads/datasheets.cfm	
	Terriss Consolidated Industries	AV	www.terriss.com	807 Summerfield Ave Asbury Park, NJ 07712		
	Marsh Bellofram	AV	www.marshbellofram.com	8019 Ohio River Blvd. Newell, WV 26050		
	U.S. Gauge (AMETEK)	AV	www.ametekusg.com	205 Keith Valley Road Horsham, PA 19044	http://www.ametekusg.com/products/pressure-gauges	
	Crystal Engineering (AMETEK)	AV	www.ametekcalibration.com	708 Fiero Lane Suite 9 San Luis Obispo, CA 93401	http://www.ametekcalibration.com/products/pressure/digital-pressure-gauges	
	Wika	AV	www.wika.us	1000 Wiegand Boulevard Lawrenceville, GA 30043	http://www.wika.us/download_datasheets_pm_en_us.WIKA	
	Winters Instruments	AV	www.winters.com	5400 W. Sam Houston Parkway N. Houston, TX 77041	http://winters.com/productcategory/process-gauges/	
	Reotemp Instruments	AV	www.reotemp.com	10656 Roselle Street San Diego, CA 92121	http://reotemp.com/temperature/	
Temperature Gauges	Weksler (Ashcroft)	AV	www.weksler-gauges.com	681 Grand Boulevard, Unit 3 Deer Park, NY 11729		
	Reotemp Instruments	AV	www.reotemp.com	10656 Roselle Street San Diego, CA 92121	http://reotemp.com/temperature/	
	Tel-Tru Manufacturing Co.	AV	www.teltru.com	408 St. Paul Street Rochester, NY 14605		
	U.S. Gauge (AMETEK)	AV	www.ametekusg.com	205 Keith Valley Road Horsham, PA 19044	http://www.ametekusg.com/products/temperatureproducts	
	Wika	AV	www.wika.us	1000 Wiegand Boulevard Lawrenceville, GA 30043	http://www.wika.us/download_datasheets_tv_en_us.WIKA	
	Weksler (Ashcroft)	AV	www.weksler-gauges.com	681 Grand Boulevard, Unit 3 Deer Park, NY 11729		
Pressure Differential Gauges	Marsh Bellofram	AV	www.marshbellofram.com	8019 Ohio River Blvd. Newell, WV 26050		
	Mid-West Instrument	AV	www.midwestinstrument.com	6500 Dobry Dr. Sterling Heights, MI 48314	http://www.midwestinstrument.com/product_matrix.asp	
	Dwyer Instruments	AV	www.dwyer-inst.com	102 Indiana Hwy. 212 Michigan City, IN 46360	http://www.dwyer-inst.com/Product/Pressure/DifferentialPressure/	
	Yorkshire Precision Gauges	AV	www.ypg-ltd.com	Cuckoo Lane, Hatfield, Doncaster, England DN7 6QF		
Liquid Level Gauges	Orange Research	AV	www.orangeresearch.com	140 Cascade Blvd. Milford, CT 06460		
	Penberthy (Emerson)	AV	valves.emerson.com	601 Croton Rd King of Prussia, PA 19406	http://valves.emerson.com/documents_drawings?d=DT000002&b=B000052&c=- tab_technical-documentation	
	K-Tek (ABB)	AV	new.abb.com	17100 Manchac Park Lane Baton Rouge, LA 70817		
	Inferno Manufacturing Corp.	AV	www.infernomfg.com	115 Ricou St. Shreveport, LA 71107	http://www.infernomfg.com/liquidLevelGauges/liquidLevelGauges.html	
Temperature Switches	Jerguson (Clark Reliance)	AV	www.jerguson.com	16633 Foltz Pkwy Strongsville, OH 44149		
	Ashcroft	AV	www.ashcroft.com	250 East Main Street Stratford, CT 06614	http://www.ashcroft.com/downloads/datasheets.cfm	

**REFERENCE CODES**

CODES	PREFERENCE LEVELS
AV	Approved Vendor
AVL	Approved Vendor with Limitations
EAR	Engineering Approval Required
RFR	Not Approved / Requires Further Research

August 2017 AML Revision	General Updates. Added Wika and Orange Research
June 2018 AML Revision	Added Inferno Manufacturing Corp.

**GLOBE VALVES**

Item	Manufacturer Name	Preference Level	Transaction	Address	Website	Comments
Globe Valves	Orbit (Cameron)	EAR	N/A	3250 Briarpark Drive, Suite 300 Houston, TX 77042 Tel: (800) 823-9160 email: orbit@c-a-m.com		
	Velan	EAR	N/A	Tony Boland Regional Sales Manager 45 W. Franklin St. Bellbrook, OH 45305 Tel: (937) 848-2011 Fax: (937) 848-2144 email: tony.boland@velan.com	<a href="https://www.velan.com/en/products">https://www.velan.com/en/products</a>	
	Flowserve/Vogt	EAR	N/A	Vogt Valves 1511 Jefferson St. Sulphur Springs, TX 75482 Tel: (903) 885-4691 Fax: (903) 439-3386		

REFERENCE CODES	
CODES	PREFERENCE LEVELS
AV	Approved Vendor
AVL	Approved Vendor with Limitations
EAR	Engineering Approval Required
RFR	Not Approved / Requires Further Research

October 2017 AML General Update: Added Addresses and Websites. No Additions or Deletions.

**GROUT**

ITEM	MANUFACTURER	PREFERENCE LEVEL	COMMENTS	Regional Contact	WEBSITE
<b>Cement Based Grout</b>	Five Star	AV	Shelton, CT 800-243-2206	Richard O'Malley 215-694-0221	<a href="http://www.fivestarproducts.com/">www.fivestarproducts.com/</a>
	ITW Chockfast	AV	Montgomeryville, PA (215) 855-8450		<a href="http://www.itwpolytech.com">www.itwpolytech.com</a>
	Chem Masters	AV	Madison, OH (800) 486-7866		<a href="http://www.chemmasters.net">www.chemmasters.net</a>
	BASF Embeco 885	AV	Cleveland, OH (216) 839-7500		<a href="http://www.basf-cc.com.au/EN/Pages/default.aspx">www.basf-cc.com.au/EN/Pages/default.aspx</a>
<b>Epoxy Based Grout</b>	Five Star	EAR	Shelton, CT 800-243-2206	Richard O'Malley 215-694-0221	<a href="http://www.fivestarproducts.com/">www.fivestarproducts.com/</a>
	ITW Chockfast	EAR	Montgomeryville, PA (215) 855-8450		<a href="http://www.itwpolytech.com">www.itwpolytech.com</a>
	Masterflow	EAR	Cleveland, OH (216) 839-7500		<a href="http://www.basf-cc.com.au/EN/Pages/default.aspx">www.basf-cc.com.au/EN/Pages/default.aspx</a>
	International (Ceilcote 749 DP)	EAR	Berea, OH (877) 234-5268	Tim Franzinger 724-719-8117 Tim.Franzinger@akzonobel.com	<a href="http://www.international-pc.com/products/linings/ceilcote/ceilcote.aspx">http://www.international-pc.com/products/linings/ceilcote/ceilcote.aspx</a>

REFERENCE CODES	
CODES	PREFERENCE LEVELS
AV	Approved Vendor
AVL	Approved Vendor with Limitations
EAR	Engineering Approval Required
RFR	Not Approved / Requires Further Research

August 2017 AML Review	General Updates. No additions
------------------------	-------------------------------

### HOT TAP FITTINGS

ITEM	MANUFACTURER	PREFERENCE LEVEL	CONTACT	WEBSITE
Hot Tap Fittings	T.D. Williamson	AV	Daryl Smith of Kerr Engineering 800-245-3198 ext. 123	www.tdwilliamson.com
	Dresser, Inc. (Blackhawk)	AV		<a href="https://www.geoilandgas.com/pipeline-storage/downstream-pipeline">https://www.geoilandgas.com/pipeline-storage/downstream-pipeline</a>
	WeldFit	AV	Brittany Giarnelli - 724-875-6545 for quotes	www.weldfit.com
Line Stop Fittings	T.D. Williamson	AV	Daryl Smith of Kerr Engineering 800-245-3198 ext. 123	www.tdwilliamson.com
	Dresser, Inc. (Blackhawk)	AV		<a href="https://www.geoilandgas.com/pipeline-storage/downstream-pipeline">https://www.geoilandgas.com/pipeline-storage/downstream-pipeline</a>
	WeldFit	AV	Brittany Giarnelli - 724-875-6545 for quotes	www.weldfit.com
Purge and Equalization Fitting	T.D. Williamson	AV	Daryl Smith of Kerr Engineering 800-245-3198 ext. 123	www.tdwilliamson.com
	WeldFit	AV	Brittany Giarnelli - 724-875-6545 for quotes	www.weldfit.com

REFERENCE CODES	
CODES	PREFERENCE LEVELS
AV	Approved Vendor
AVL	Approved Vendor with Limitations
EAR	Engineering Approval Required
RFR	Not Approved / Requires Further Research

August 2017 AML Review	General Update. Added Purge and Equalization Fitting Item.
------------------------	--

**INSULATION**

ITEM	MANUFACTURER	PREFERENCE LEVEL	COMMENTS	Website
<b>Aluminum Jacketed Thermal Insulation</b>	Bolland Machine	AV		<a href="http://bollandmachine.com/index.htm">http://bollandmachine.com/index.htm</a>
	DOW Chemical	AV		<a href="http://www.dow.com/">http://www.dow.com/</a>
	Industrial Insulation and Coatings, LLC	AV		<a href="http://www.iicinsulation.com/">http://www.iicinsulation.com/</a>
	Johns Manville	AV		<a href="http://www.jm.com/">http://www.jm.com/</a>
	Owens-Corning	AV		<a href="http://owenscorningcommercial.com/">http://owenscorningcommercial.com/</a>
	Pittsburgh Corning	AV		<a href="http://www.foamglasinsulation.com/">http://www.foamglasinsulation.com/</a>
<b>Removable and Reusable Thermal Insulation Covers</b>	Bolland Machine	AV		<a href="http://bollandmachine.com/index.htm">http://bollandmachine.com/index.htm</a>
	Shannon	AV		<a href="http://www.blanket-insulation.com/">http://www.blanket-insulation.com/</a>
	MIT	AV		<a href="http://www.insulpad.com/">http://www.insulpad.com/</a>
	Geo. V. Hamilton	AV		<a href="http://hamiltongv.com/">http://hamiltongv.com/</a>
	NeoInsulation, LLC	AV		<a href="https://neoinsulation.com/">https://neoinsulation.com/</a>
<b>Heat Trace &amp; TEG Dehydration Plant Application, Removable Insulation</b>	Bolland Machine	AV		<a href="http://bollandmachine.com/index.htm">http://bollandmachine.com/index.htm</a>
	Shannon	AV		<a href="http://www.blanket-insulation.com/">http://www.blanket-insulation.com/</a>
	MIT	AV		<a href="http://www.insulpad.com/">http://www.insulpad.com/</a>
	Geo. V. Hamilton	AV		<a href="http://hamiltongv.com/">http://hamiltongv.com/</a>
	NeoInsulation, LLC	AV		<a href="https://neoinsulation.com/">https://neoinsulation.com/</a>
<b>Removable and Reusable Insulation - Ceramic Mat (Exhaust Manifolds, Mufflers, Expansion Joints &amp; Turbos)</b>	Fiberfrax Durablanket	AV		<a href="http://www.industrialinsulation.com/ceramic_fiber_blanket.htm">http://www.industrialinsulation.com/ceramic_fiber_blanket.htm</a>
	Bolland Machine	AV		<a href="http://bollandmachine.com/index.htm">http://bollandmachine.com/index.htm</a>

REFERENCE CODES	CODES	PREFERENCE LEVELS	December 2017 AML General Updates: website additions
	AV	Approved Vendor	
	AVL	Approved Vendor with Limitations	



**DESIGN AND CONSTRUCTION MANUAL**  
**2.3 APPROVED MANUFACTURERS LIST**



**MEASUREMENT & GAS QUALITY**

ITEM	MANUFACTURER	PREFERENCE LEVEL	WEBSITE	ADDRESS	DATA SHEET	COMMENTS
<b>GAS QUALITY ANALYZERS</b>						
CO <sub>2</sub>	Teledyne API	EAR	www.teledyne-api.com	9970 Carroll Canyon Road San Diego, CA 92131	<a href="http://www.teledyne-api.com/pdfs/T360_Sales_Literature.pdf">http://www.teledyne-api.com/pdfs/T360_Sales_Literature.pdf</a>	
	Siemens	EAR	www.siemens.com	Advanced Controls & Distribution 20800 RTE 19 Cranberry Township, PA 16066	<a href="https://support.industry.siemens.com/cs/attachments/86730369/OXYMAT_and_ULTRAMAT_Safety_Manual_en-US.pdf?download=true">https://support.industry.siemens.com/cs/attachments/86730369/OXYMAT_and_ULTRAMAT_Safety_Manual_en-US.pdf?download=true</a>	
H <sub>2</sub> S	Del Mar Scientific	EAR	www.delmarscientific.com	4951 Airport Parkway, Suite 803 Addison, TX 75001	<a href="https://www.delmarscientific.com/content/about_us/oil_and_gas">https://www.delmarscientific.com/content/about_us/oil_and_gas</a>	Also provides total sulfur analysis
	Galvanic Analytical	EAR	www.galvanic.com	41 Wellman Street Lowell, MA 01851	<a href="http://www.galvanic.com/assets/documents/GalvanicSpecificationsProTech903.pdf">http://www.galvanic.com/assets/documents/GalvanicSpecificationsProTech903.pdf</a>	Also provides total sulfur analysis
	SpectraSensors	EAR	www.spectrasensors.com	4333 W. Sam Houston Pkwy N., Suite 100 Houston, TX 77043	<a href="http://www.spectrasensors.com/media/files/files/f3551614/DS_SS2100.pdf">http://www.spectrasensors.com/media/files/files/f3551614/DS_SS2100.pdf</a>	
Moisture	Delta Instrument	AV	www.deltainstrument.com	148 Veterans Drive Northvale, NJ 07647	<a href="http://www.deltainstrument.com/pdfs/cut_sheets/alpha/2142_SADPmini-Ex_Datasheet_Delta_US.pdf">http://www.deltainstrument.com/pdfs/cut_sheets/alpha/2142_SADPmini-Ex_Datasheet_Delta_US.pdf</a>	Typically used as portable analyzers
	SpectraSensors	AV	www.spectrasensors.com	4333 W. Sam Houston Pkwy N., Suite 100 Houston, TX 77043	<a href="http://www.spectrasensors.com/files/1672/">http://www.spectrasensors.com/files/1672/</a>	Typically used as permanent in-line analyzers
	Panametrics (Baker Hughes)	AV	www.bakerhughes.com/panametrics	221 Crescent St., Waltham, Ma 02453	<a href="https://dam.bakerhughes.com/m/11d7d3183b62c71f/original/920-468j_ltr-pdf.pdf">https://dam.bakerhughes.com/m/11d7d3183b62c71f/original/920-468j_ltr-pdf.pdf</a>	
O <sub>2</sub>	Teledyne	EAR	www.teledyne-ai.com	16830 Chestnut St City of Industry, CA 91748	<a href="http://www.teledyne-api.com/pdfs/datasheets/T802-data.pdf">http://www.teledyne-api.com/pdfs/datasheets/T802-data.pdf</a>	
	SpectraSensors	EAR	www.spectrasensors.com	4333 W. Sam Houston Pkwy N., Suite 100 Houston, TX 77043	<a href="http://www.spectrasensors.com/media/files/files/4a8b5d3c/DS_OXY5500.pdf">http://www.spectrasensors.com/media/files/files/4a8b5d3c/DS_OXY5500.pdf</a>	
	Advanced Micro Instruments	EAR	www.amio2.com	18269 Gothard Street Huntington Beach, CA 92648	<a href="http://www.amio2.com/oxygen-analyzers">http://www.amio2.com/oxygen-analyzers</a>	
Chromatographs	Rosemount - Danalyzer (Emerson)	EAR	www.emerson.com	10241 West Little York, Suite 200 Houston, TX 77040	<a href="http://www2.emersonprocess.com/siteadmincenter/PMRosemountAnalyticalDocuments/Danalyzer-GC-PDS-370XA.pdf">http://www2.emersonprocess.com/siteadmincenter/PMRosemountAnalyticalDocuments/Danalyzer-GC-PDS-370XA.pdf</a>	
	Chandler Engineering (AMETEK)	EAR	<a href="http://www.chandlereng.com/">http://www.chandlereng.com/</a>	2001 N Indianwood Ave Broken Arrow, OK 74012	<a href="http://www.ametekpi.com/download/AMETEK-Model-292B.pdf">http://www.ametekpi.com/download/AMETEK-Model-292B.pdf</a>	
	ABB	AV	www.abb.com	Precision Pipeline Equipment, Inc. 253 Walnut Street Houston, PA 15342	<a href="https://search-ext.abb.com/library/Download.aspx?DocumentID=DS%2f2101164&amp;LanguageCode=en&amp;DocumentPartId=&amp;Action=Launch">https://search-ext.abb.com/library/Download.aspx?DocumentID=DS%2f2101164&amp;LanguageCode=en&amp;DocumentPartId=&amp;Action=Launch</a>	Portable & stationary units available
Continuous Samplers	Parker Hannifin (PGI)	EAR	ph.parker.com	6035 Parkland Blvd. Cleveland, OH 44124	<a href="http://www.parker.com/Literature/InstrumentationProductsDivision/BulletinsandBrochures/InterceptorGasSamplers-PG-HINT.pdf">http://www.parker.com/Literature/InstrumentationProductsDivision/BulletinsandBrochures/InterceptorGasSamplers-PG-HINT.pdf</a>	
	Welker	EAR	www.welker.com	13839 West Bellfort Street Sugar Land, TX 77498	<a href="http://naturalgas.welker.com/pdf/datasheet/GSS-4PM_DataSheet.pdf">http://naturalgas.welker.com/pdf/datasheet/GSS-4PM_DataSheet.pdf</a>	
	YZ Systems	EAR	www.yzsystems.com	8825 N Sam Houston Parkway W, Houston TX 77064	<a href="http://www.yzsystems.com/StaticFiles/MRCContent/StaticFiles/YZSystem/YZ-Systems-DynaPak_Datasheet_HIRes-59203.pdf">http://www.yzsystems.com/StaticFiles/MRCContent/StaticFiles/YZSystem/YZ-Systems-DynaPak_Datasheet_HIRes-59203.pdf</a>	
<b>TECHNICAL SUPPORT</b>						
Technical Support	Valtronics	EAR	www.valtronics.com	43 Ritmore Glen Ravenswood, WV 26164		
	Critical Control Energy Services (Formerly Gas Analytical Services)	EAR	www.criticalcontrol.com	954 Manifold Road Washington, PA 15301		
	Eagle Research	EAR	www.eagleresearchcorp.com	1076 State Route 34 Hurricane, WV 25526		
	Equipment & Controls, Inc. (ECI)	EAR	www.eci.us	2 Park Drive Lawrence, PA 15055		
	Teays Valley Engineering	EAR	www.teaysvalleyeng.com	35 Golf Dr. St. Albans, WV 25177		

**DESIGN AND CONSTRUCTION MANUAL**  
**2.3 APPROVED MANUFACTURERS LIST**



**MEASUREMENT & GAS QUALITY**

ITEM	MANUFACTURER	PREFERENCE LEVEL	WEBSITE	ADDRESS	DATA SHEET	COMMENTS
<b>METERS</b>						
Coriolis	Micro Motion (Emerson)	AV	www.emerson.com	7070 Winchester Circle Boulder, CO 80301	<a href="http://www.emerson.com/catalog/en-us/coriolis-facet.&amp;productBeginIndex:0&amp;orderBy:&amp;pageView:grid&amp;minPrice:&amp;maxPrice:&amp;pageSize:&amp;">http://www.emerson.com/catalog/en-us/coriolis-facet.&amp;productBeginIndex:0&amp;orderBy:&amp;pageView:grid&amp;minPrice:&amp;maxPrice:&amp;pageSize:&amp;</a>	
	Yokogawa	AV	www.yokogawa.com	12530 West Airport Blvd. Sugar Land, TX 77478	<a href="https://web-material3.yokogawa.com/RCC3x_GS_E_ed22_pub18122014.us.pdf">https://web-material3.yokogawa.com/RCC3x_GS_E_ed22_pub18122014.us.pdf</a>	
Cone	McCrometer	AV	www.mccrometer.com	3255 West Stetson Avenue Hemet, CA 92545	<a href="https://www.mccrometer.com/v-cone-flow-meter/product-downloads?id=52003823651">https://www.mccrometer.com/v-cone-flow-meter/product-downloads?id=52003823651</a>	
	Sensia (Rockwell Automation + Schlumberger)	AV	www.sensiaglobal.com/Measurement/Cone-Flow-Meters	200 Westlake Park Blvd Houston, TX 77079	<a href="https://www.sensiaglobal.com/measurement/cone-flow-meters/nuflo-cone-dp-flow-meter?aliaspath=%2FProducts%2FCone-Flow-Meters%2FNUFLO-Cone-DP-Flow-Meter">https://www.sensiaglobal.com/measurement/cone-flow-meters/nuflo-cone-dp-flow-meter?aliaspath=%2FProducts%2FCone-Flow-Meters%2FNUFLO-Cone-DP-Flow-Meter</a>	11/14/22 Revised AML to reflect Sensia rather than Cameron. MRC is the Rep. NUFLO Cone DP Flow Meter
Diaphragm	Sensus	EAR	www.sensus.com	8601 Six Forks Road, Suite 700 Raleigh, NC 27615	<a href="https://sensus.com/products/?utility=gas&amp;hardware_type=meter&amp;usage=residential">https://sensus.com/products/?utility=gas&amp;hardware_type=meter&amp;usage=residential</a>	
	Elster American Meter (Honeywell)	EAR	www.elster-americanmeter.com	2221 Industrial Road Nebraska City, NE 68410	<a href="https://www.elster-americanmeter.com/en/product-catalog?name=&amp;hidden=businessUnit&amp;businessUnit=3&amp;hidden=region&amp;region=6&amp;country=195&amp;category=10&amp;type=125&amp;page=0&amp;layout=list&amp;lang=en&amp;fid=4D7D31767CD542AE8B7FF016AEB6ADCF&amp;ts=20170619104937515-productSearchFile">https://www.elster-americanmeter.com/en/product-catalog?name=&amp;hidden=businessUnit&amp;businessUnit=3&amp;hidden=region&amp;region=6&amp;country=195&amp;category=10&amp;type=125&amp;page=0&amp;layout=list&amp;lang=en&amp;fid=4D7D31767CD542AE8B7FF016AEB6ADCF&amp;ts=20170619104937515-productSearchFile</a>	
Insertion Turbine	Spirax Sarco (EMCO)	EAR	www.spiraxsarco.com	1150 Northpoint Blvd Blythewood, SC 29016	<a href="http://www.spiraxsarco.com/global/us/Products/Documents/RIM20_Rotor_Insertion_Flowmeter-Technical_Information.pdf">http://www.spiraxsarco.com/global/us/Products/Documents/RIM20_Rotor_Insertion_Flowmeter-Technical_Information.pdf</a>	
Insertion Flow	Rosemount (Emerson)	EAR	www.emerson.com	2400 Barranca Parkway Irvine, CA 92606	<a href="http://www.emerson.com/documents/automation/104792.pdf">http://www.emerson.com/documents/automation/104792.pdf</a>	
Orifice Fittings	Daniel (Emerson)	AV	www.emerson.com	11100 Brittonmoore Park Drive Houston, TX 77041	<a href="http://www.emerson.com/documents/automation/44048.pdf">http://www.emerson.com/documents/automation/44048.pdf</a>	
	TMCo	AV	www.tmco-usa.com	10801 Hammerly Blvd, Suite 232 Houston, TX 77043	<a href="http://www.tmco-usa.com/wp-content/uploads/2009/09/Dual_Chamber_2013.pdf">http://www.tmco-usa.com/wp-content/uploads/2009/09/Dual_Chamber_2013.pdf</a>	
	Canalta	AV	www.canaltaflow.com	6759 65th Ave Red Deer AB T4P 1A5, Canada	<a href="http://www.canaltaflow.com/images/brochure/Canalta_DCOF_Product_Manual.pdf">http://www.canaltaflow.com/images/brochure/Canalta_DCOF_Product_Manual.pdf</a>	
Orifice Plates	Daniel (Emerson)	AV	www.emerson.com	11100 Brittonmoore Park Drive Houston, TX 77041	<a href="http://www.emerson.com/documents/automation/43806.pdf">http://www.emerson.com/documents/automation/43806.pdf</a>	
	Red River Instrument	AV	www.redriverinstrument.com	1075 Miller County 217 Fouke, AR 71837	<a href="https://www.redriverinstrument.com/wp-content/uploads/2014/11/brochure-1.pdf">https://www.redriverinstrument.com/wp-content/uploads/2014/11/brochure-1.pdf</a>	
	Kelley	AV	www.kelleyplates.com	206 Alpine Street Texarkana, TX 75501	<a href="http://www.kelleyplates.com/products/">http://www.kelleyplates.com/products/</a>	
Rotary	Dresser (Roots) (GE Oil & Gas)	EAR	www.geoilandgas.com	16240 Port Northwest Drive, Suite 100 Houston, TX 77041	<a href="https://www.geoilandgas.com/distributed-gas/distribution/dresser-rotary-meters">https://www.geoilandgas.com/distributed-gas/distribution/dresser-rotary-meters</a>	
Turbine	Sensus	EAR	www.sensus.com	8601 Six Forks Road, Suite 700 Raleigh, NC 27615	<a href="https://sensus.com/products/?region=north-america&amp;utility=gas&amp;hardware_type=meter&amp;usage=commercial-industrial">https://sensus.com/products/?region=north-america&amp;utility=gas&amp;hardware_type=meter&amp;usage=commercial-industrial</a>	
	Elster American Meter (Honeywell)	EAR	www.elster-americanmeter.com	2221 Industrial Road Nebraska City, NE 68410	<a href="https://www.elster-americanmeter.com/en/product-catalog?name=&amp;hidden=businessUnit&amp;businessUnit=3&amp;hidden=region&amp;region=6&amp;country=195&amp;category=10&amp;type=24&amp;page=0&amp;layout=list&amp;lang=en&amp;fid=4D7D31767CD542AE8B7FF016AEB6ADCF&amp;ts=20170619132336679-productSearchFilter">https://www.elster-americanmeter.com/en/product-catalog?name=&amp;hidden=businessUnit&amp;businessUnit=3&amp;hidden=region&amp;region=6&amp;country=195&amp;category=10&amp;type=24&amp;page=0&amp;layout=list&amp;lang=en&amp;fid=4D7D31767CD542AE8B7FF016AEB6ADCF&amp;ts=20170619132336679-productSearchFilter</a>	
Ultrasonic	Daniel (Emerson)	EAR	www.emerson.com	11100 Brittonmoore Park Drive Houston, TX 77041	<a href="http://www.emerson.com/catalog/en-us/ultrasonic-facet.&amp;productBeginIndex:0&amp;orderBy:&amp;pageView:grid&amp;minPrice:&amp;maxPrice:&amp;pageSize:&amp;">http://www.emerson.com/catalog/en-us/ultrasonic-facet.&amp;productBeginIndex:0&amp;orderBy:&amp;pageView:grid&amp;minPrice:&amp;maxPrice:&amp;pageSize:&amp;</a>	
	Elster Instromet (Honeywell)	EAR	www.elster-instromet.com	3955 World Houston Parkway, Suite 120 Houston, TX 77032	<a href="https://www.elster-instromet.com/en/products?name=&amp;hidden=businessUnit&amp;businessUnit=3&amp;businessUnit=7&amp;hidden=region&amp;region=1&amp;region=2&amp;region=3&amp;region=4&amp;region=5&amp;region=7&amp;hidden=country&amp;country=2&amp;category=10&amp;type=25&amp;page=0&amp;layout=list&amp;lang=en&amp;fid=F032EA0A89">https://www.elster-instromet.com/en/products?name=&amp;hidden=businessUnit&amp;businessUnit=3&amp;businessUnit=7&amp;hidden=region&amp;region=1&amp;region=2&amp;region=3&amp;region=4&amp;region=5&amp;region=7&amp;hidden=country&amp;country=2&amp;category=10&amp;type=25&amp;page=0&amp;layout=list&amp;lang=en&amp;fid=F032EA0A89</a>	
	Sick	AV	www.sick.com	4140 World Houston Parkway Houston, TX 77032	<a href="https://www.sick.com/us/en/product-portfolio/ultrasonic-gas-flow-measuring-devices/gas-flow-meters/c/q288756">https://www.sick.com/us/en/product-portfolio/ultrasonic-gas-flow-measuring-devices/gas-flow-meters/c/q288756</a>	

**DESIGN AND CONSTRUCTION MANUAL**  
**2.3 APPROVED MANUFACTURERS LIST**



**MEASUREMENT & GAS QUALITY**

ITEM	MANUFACTURER	PREFERENCE LEVEL	WEBSITE	ADDRESS	DATA SHEET	COMMENTS
Ultrasonic Clamp-on	Siemens	EAR	w3.siemens.com	Advanced Controls & Distribution 20800 RTE 19 Cranberry Township, PA 16066	<a href="http://w3.siemens.com/mcms/sensor-systems/en/process-instrumentation/flow-measurement/ultrasonic-flow-meter/clamp-on-flow/pages/clamp-on-flow.aspx">http://w3.siemens.com/mcms/sensor-systems/en/process-instrumentation/flow-measurement/ultrasonic-flow-meter/clamp-on-flow/pages/clamp-on-flow.aspx</a>	Minimum operating pressure in steel pipe is 100 psig
	Flexim	AV	www.flexim.com	250-V Executive Drive Edgewood, NY 11717	<a href="https://www.flexim.com/us/products/permanent-flowmeters-gases?products_use=119&amp;products_property=All&amp;products_mobility=141">https://www.flexim.com/us/products/permanent-flowmeters-gases?products_use=119&amp;products_property=All&amp;products_mobility=141</a>	Minimum operating pressure in steel pipe is 100 psig
<b>FABRICATION SERVICES</b>						
<p align="center"><a href="#">Equitrans Employees: Please See D &amp; C Manual - 2.8 Approved Design Engineering Contractors List - Pipe Fabrication Vendors.</a>                      External parties: See the Measurement Fabrication Shops link on the Equitrans internet site.</p>						
<b>OTHER</b>						
Flow Conditioner - Conditioning Plate	Canada Pipeline Accessories (CPA)	AV	www.flowconditioner.com	10653 46 St SE Calgary, AB T2C 1G1, Canada	<a href="http://flowconditioner.com/flow-conditioners/">http://flowconditioner.com/flow-conditioners/</a>	
Flow Conditioner - Straightening Vanes	Daniel (Emerson)	EAR	www.emerson.com	11100 Brittmoore Park Drive Houston, TX 77041	<a href="http://www.emerson.com/catalog/en-us/automation-solutions/daniel-straightening-vanes">http://www.emerson.com/catalog/en-us/automation-solutions/daniel-straightening-vanes</a>	
Gas Flow Computers	Eagle Research	AV	www.eagleresearchcorp.com	1076 State Route 34 Hurricane, WV 25526		
	Thermo Fisher Scientific	AV	www.thermofisher.com	27 Forge Parkway Franklin, MA 02038		
	Fisher (Emerson)	AV	www2.emersonprocess.com	6005 Rogerdale Road Houston, TX 77072		
Gas Manifolds	Hex Valves	AV	www.hexvalve.com	3170 Wasson Road Cincinnati, OH 45209		
	Anderson Greenwood (AGCO) (Emerson)	AV	valves.emerson.com	A. Blair Powell 5409 Enterprise Blvd. Bethel Park, PA 15102		
	AS Schneider / Yokogawa	AV	www.as-schneider.com	17471 Village Green Dr. Houston, TX 77040		
	Parker Hannifin (PGI)	AV	www.parker.com	6035 Parkland Blvd. Cleveland, OH 44124		
Odorizers	YZ Systems	AV	www.yzsystems.com/	8825 N Sam Houston Parkway W, Houston TX 77064	<a href="http://www.yzsystems.com/YZSystems/en/PRODUCTS/Odorization">http://www.yzsystems.com/YZSystems/en/PRODUCTS/Odorization</a>	

REFERENCE CODES	
CODES	PREFERENCE LEVELS
AV	Approved Vendor
AVL	Approved Vendor with Limitations
EAR	Engineering Approval Required
RFR	Not Approved / Requires Further Research
August 2017 AML Revisions	General Updates. Added Manifolds. Added Chandler as EAR for Chromatographs. Added YZ Systems to Continuous Samplers. Moved Buildings to "METAL BUILDINGS" Sheet

**DESIGN AND CONSTRUCTION MANUAL**  
**2.3 APPROVED MANUFACTURERS LIST**



**METAL BUILDINGS**

ITEM	MANUFACTURER	PREFERENCE LEVEL	WEBSITE	ADDRESS	DATA SHEET	COMMENTS
Compressor Station Buildings	Parkline Buildings	AV	www.parkline.com	Eleanor Industrial Park WV Route 62 Eleanor, WV 25070		
	Steel Nation, Inc.	AV	steelnation.com	1120 Washington Road - Rt 19 Washington, PA 15301		
	Steelcon	AV	www.steelcon.co	47161 State Route 558 New Waterford, OH 44445		
	Nexgen Industrial	AV	www.nexgenindustrial.com	125 Long Street Rices Landing, PA 15357		
	Lincoln Contracting & Equipment	AV	www.lincolncontracting.com	P.O. Box 96 Boswell, PA 15531		
	Metal Building Erectors (MBE)	AV	mbewv.com	62 Eleanor Circle Fraziers Bottom, WV 25082		
	Metal Buildings Direct, Inc.	AV	http://www.builtfastbuilttolast.com/	341 State Avenue Beaver, PA 15009		
Meter or Regulation Buildings	Valtronics	AV	www.valtronics.com	43 Ritmore Glen Ravenswood, WV 26164		
	Parkline Buildings	AV	www.parkline.com	Eleanor Industrial Park WV Route 62 Eleanor, WV 25070		
	StarFlite Systems	AV	www.starflitesystems.com	116 Dogwood Lane Connoquenessing, PA 16027		
	Metal Building Erectors (MBE)	AV	mbewv.com	62 Eleanor Circle Fraziers Bottom, WV 25082		
GC/RTU Buildings	Teays Valley Engineering	AV	www.teaysvalleyeng.com	35 Golf Dr. St. Albans, WV 25177		ES-GC-BLDG
	Valtronics	AV	www.valtronics.com	43 Ritmore Glen Ravenswood, WV 26164		ES-GC-BLDG
	AMR PEMCO	AV	www.amrpemco.com	12187 North Scenic Hwy Rocky Gap, VA 24366		ES-GC-BLDG
	Davis & Davis Company	EAR	www.davisdavisco.com	2249 W College Ave Englewood, CO 80110		ES-GC-BLDG
	Critical Control Technologies (Formerly Gas Analytical Services)	AV	criticalcontrol.com	130 Airport Road Indiana, PA 15701		ES-GC-BLDG
	J Poli, Inc (JPI)	EAR	www.jpoliinc.com	2601 Jane Street Pittsburgh, PA 15203		ES-GC-BLDG

REFERENCE CODES	
CODES	PREFERENCE LEVELS
AV	Approved Vendor
AVL	Approved Vendor with Limitations
EAR	Engineering Approval Required
RFR	Not Approved / Requires Further Research

August 2017 AML Revisions	Added Meter and GC Buildings and Manufacturers
June 2018 AML Revisions	Updated Formatting, Added Steelcon, Nexgen Industrial, Lincoln Contracting & Equipment, and Starflight System, and Parkline

**NEEDLE AND INSTRUMENT VALVES**

ITEM	MANUFACTURER	PREFERENCE LEVEL	WEBSITE	ADDRESS	DATA SHEET	COMMENTS
<b>Needle and / or Instrument Valves</b>	Hoke (Circor Instrumentation)	AV	www.hoke.com	405 Centura CT Spartanburg, SC 29303	<a href="http://catalog.hoke.com/category/needle-valves">http://catalog.hoke.com/category/needle-valves</a>	
	Ham-Let Advanced Control Technology	AV	www.ham-let.com	12565 West Airport Blvd. Sugar Land, TX 77478	<a href="http://www.ham-let.com/catalogue/group/105">http://www.ham-let.com/catalogue/group/105</a>	
	Swagelok	AV	www.swagelok.com	29500 Solon Road Solon, OH 44139		
	Dragon Valves Inc.	AV	www.dragonvalves.com	13457 Excelsior Dr. Norwalk, CA 90650	<a href="http://dragonvalves.com/pdf/DragonValves-Catalog-Rev-1-6.pdf">http://dragonvalves.com/pdf/DragonValves-Catalog-Rev-1-6.pdf</a>	
	Parker Hannifin (PGI)	AV	www.parker.com	6035 Parkland Blvd. Cleveland, OH 44124	<a href="http://ph.parker.com/us/en/manual-needle-valves">http://ph.parker.com/us/en/manual-needle-valves</a>	
	Phoenix Controls	AV	www.phoenixcontrols.com	Phoenix Controls 75 Discovery Way Acton, MA 01720	<a href="https://www.phoenixcontrols.com/en-US/Pages/Product.aspx?category=Valves&amp;cat=ECC-PHOENIXCTRLS&amp;pid=Valves">https://www.phoenixcontrols.com/en-US/Pages/Product.aspx?category=Valves&amp;cat=ECC-PHOENIXCTRLS&amp;pid=Valves</a>	
	SSP	AV	www.my-ssp-usa.com	8250 Boyle Parkway Twinsburg, OH 44087	<a href="http://www.my-ssp-usa.com/products/valves/needle-valves">http://www.my-ssp-usa.com/products/valves/needle-valves</a>	
	Anderson Greenwood (AGCO) (Emerson)	AV	valves.emerson.com	A. Blair Powell 5409 Enterprise Blvd. Bethel Park, PA 15102	<a href="http://valves.emerson.com/documents_drawings?d=DT000002&amp;b=B000001&amp;c=PT000022 - tab_technical-documentation">http://valves.emerson.com/documents_drawings?d=DT000002&amp;b=B000001&amp;c=PT000022 - tab_technical-documentation</a>	

REFERENCE CODES	
CODES	PREFERENCE LEVELS
AV	Approved Vendor
AVL	Approved Vendor with Limitations
EAR	Engineering Approval Required
RFR	Not Approved / Requires Further Research

August 2017 AML Revision	Changed name of sheet from Instrument Valves to "Needle and Instrument Valves". General Updates. Added SSP.
June 2018 AML Update	Added Phoenix Controls

**DESIGN AND CONSTRUCTION MANUAL**  
**2.3 APPROVED MANUFACTURERS LIST**



**PIPE SUPPORT**

ITEM	MANUFACTURER	PREFERENCE LEVEL	COMMENTS	DATA SHEET	WEBSITE
Adjustable Pipe Supports	EZ LINE	AV	E-Z Line Pipe Support Co., LLC P.O. Box 767 21340 Hwy 6 Manvel, TX 77578 Phone: (713) 675-6693 Fax: (713) 947-0768	<a href="http://www.ezline.com/ezline-adjustable-pipe-supports/">http://www.ezline.com/ezline-adjustable-pipe-supports/</a>	<a href="http://www.ezline.com">http://www.ezline.com</a>
	TerraTek Support Systems	AV	TerraTek 30 Lauren Lane Lattermier Mines, PA 18234 Phone: 540-454-8161 Repped by Jim Ceriani Northrup Equipment Company 814-771-4934	<a href="http://www.terratek.us/index.php/TerraTek-Support-Systems-W-Series.html">http://www.terratek.us/index.php/TerraTek-Support-Systems-W-Series.html</a> <a href="http://www.terratek.us/index.php/terratek-support-systems-p-series.html">Helical Pile design P Series: http://www.terratek.us/index.php/terratek-support-systems-p-series.html</a>	<a href="http://www.terratek.us">http://www.terratek.us</a>
	ASHLAND FABRICATION, INC.	AV	Applied Pipeline 7313 Route 338 PO Box 124 Knox, PA 16232 Phone: (814) 938-1079 Email: sales@appliedpipeline.com	<a href="http://appliedpipeline.com/ashland.php">http://appliedpipeline.com/ashland.php</a>	<a href="http://appliedpipeline.com/ashland.php">http://appliedpipeline.com/ashland.php</a>
	Atlas (Appalachian Energy Solutions)	AV	Appalachian Energy Solutions, Inc. 90 E. Songbird Road Bradford, PA 16701 Phone: (814) 598-1224 E-mail: AppEnergy@verizon.net	<a href="https://www.libertysales.net/sites/default/files/Atlas%20Pipe%20Supports%20Rev%207-16_0.pdf">https://www.libertysales.net/sites/default/files/Atlas%20Pipe%20Supports%20Rev%207-16_0.pdf</a>	<a href="https://www.libertysales.net/product-category/appalachian-energy-solutions">https://www.libertysales.net/product-category/appalachian-energy-solutions</a>
Shim Block and Clamp Assemblies	EZ LINE	AV	E-Z Line Pipe Support Co., LLC P.O. Box 767 21340 Hwy 6 Manvel, TX 77578 Phone: (713) 675-6693 Fax: (713) 947-0768	<a href="http://www.ezline.com/ezline-pipe-clamps-and-shim-block-assemblies/">http://www.ezline.com/ezline-pipe-clamps-and-shim-block-assemblies/</a>	<a href="http://www.ezline.com">http://www.ezline.com</a>
	TerraTek Support Systems	AV	TerraTek 30 Lauren Lane Lattermier Mines, PA 18234 Phone: 540-454-8161 Repped by Jim Ceriani Northrup Equipment Company 814-771-4934	<a href="http://www.terratek.us/index.php/TerraTek-Support-Systems-Poly-Block-Series.html">http://www.terratek.us/index.php/TerraTek-Support-Systems-Poly-Block-Series.html</a>	<a href="http://www.terratek.us">http://www.terratek.us</a>
	ASHLAND FABRICATION, INC.	AV	Applied Pipeline 7313 Route 338 PO Box 124 Knox, PA 16232 Phone: (814) 938-1079 Email: sales@appliedpipeline.com	<a href="http://appliedpipeline.com/ashland.php">http://appliedpipeline.com/ashland.php</a>	<a href="http://appliedpipeline.com/ashland.php">http://appliedpipeline.com/ashland.php</a>
	Atlas (Appalachian Energy Solutions)	AV	Appalachian Energy Solutions, Inc. 90 E. Songbird Road Bradford, PA 16701 Phone: (814) 598-1224 E-mail: AppEnergy@verizon.net	<a href="https://www.libertysales.net/sites/default/files/Atlas%20-%20Clamp%20Order%20Guide.pdf">https://www.libertysales.net/sites/default/files/Atlas%20-%20Clamp%20Order%20Guide.pdf</a>	<a href="https://www.libertysales.net/product-category/appalachian-energy-solutions">https://www.libertysales.net/product-category/appalachian-energy-solutions</a>
Coated U-bolts	UBOLT-COTE Pipe Support (Advance Products and Systems)	AV	Advance Products and Systems, Inc. 108 Asset Ave Scott, LA 70583 Phone: (337) 233-6116 Email: sales@apsonline.com	<a href="http://www.apsonline.com/uploads/LITUboltandAtlas.pdf">http://www.apsonline.com/uploads/LITUboltandAtlas.pdf</a>	<a href="http://www.apsonline.com">http://www.apsonline.com</a>

<b>REFERENCE CODES</b>	August 2017 AML Update	General updates. .
<b>CODES</b>	<b>PREFERENCE LEVELS</b>	
AV	Approved Vendor	
AVL	Approved Vendor with Limitations	
EAR	Engineering Approval Required	
RFR	Not Approved / Requires Further Research	

PLUG VALVES

ITEM	MANUFACTURER	PREFERENCE LEVEL	MODEL / FIGURE NUMBER	SIZE (INCH)	RATING	END TYPES	OPERATION	FLOW PATTERN / PORT	VALVE TYPE	CONTACT	DATASHEET	WEBSITE
Plug Valve	FlowServe Corp - Nordstrom	AV	Fig 1924	2	ANSI 150	Threaded	Wrench	Short	Super Nordstrom	5215 N. O'Connor Blvd Suite 2300 Irving, TX 75039 Phone: (972) 443-6500		www.flowsolve.com
			Fig 2024	1/2 to 2	ANSI 300	Threaded	Wrench	Short	Super Nordstrom			
			Fig 2224	1/2 to 2	ANSI 600	Threaded	Wrench	Regular	Super Nordstrom			
			Fig 1945			RF	Wrench	Short	Dynamic Balance			
			Fig 1945-1/4	2-4	ANSI 150	RFWE	Wrench	Short	Dynamic Balance			
			Fig 1945-1/2			WEWE	Wrench	Short	Dynamic Balance			
			Fig 1949			RF						
			Fig 1949-1/4	6 - 12	ANSI 150	RFWE	Worm Gear	Short	Dynamic Balance			
			Fig 1949-1/2			WEWE						
			Fig 4149			RF						
			Fig 4149-1/2	14 - 30	ANSI 150	WEWE	Worm Gear	Venturi	Dynamic Balance			
			Fig 4149 1/4	14 - 16	ANSI 150	RFWE	Worm Gear	Venturi	Dynamic Balance			
			Fig 2045			RF						
			Fig 2045	2 - 4	ANSI 300	RTJ	Wrench	Short	Dynamic Balance			
			Fig 2045-1/4			RFWE						
			Fig 2045-1/2			WEWE						
			Fig 4249			RF						
			Fig 4249	6 - 24	ANSI 300	RTJ	Worm Gear	Venturi	Dynamic Balance			
			Fig 4249 -1/4			RFWE						
			Fig 4249 -1/2			WEWE						
			Fig 2245			RF						
			Fig 2245	1 - 4	ANSI 600	RTJ	Wrench	Regular	Dynamic Balance			
			Fig 2245-1/4			RFWE						
			Fig 2245-1/2			WEWE						
			Fig 2249			RF						
			Fig 2249	6 - 12	ANSI 600	RTJ	Worm Gear	Wrench	Dynamic Balance			
			Fig 2249 - 1/4			RFWE						
			Fig 2249 - 1/2			WEWE						
			Fig 4749			RF						
			Fig 4749	6 - 30	ANSI 600	RTJ	Worm Gear	Venturi	Dynamic Balance			
			Fig 4749 - 1/4			RFWE						
			Fig 4749 - 1/2			WEWE						
			Fig 2345			RF						
			Fig 2345	3 - 4	ANSI 900	RTJ	Wrench	Regular	Dynamic Balance			
			Fig 2345 - 1/4			RFWE						
			Fig 2345 - 1/2			WEWE						
			Fig 2349			RF						
			Fig 2349	4 - 12	ANSI 900	RTJ	Worm Gear	Regular	Dynamic Balance			
			Fig 2349 - 1/4			RFWE						
			Fig 2349 - 1/2			WEWE						
Fig 4949			RF									
Fig 4949	16 - 20	ANSI 900	RTJ	Worm Gear	Venturi	Dynamic Balance						
Fig 4949 - 1/4			RFWE									
Fig 4949 - 1/2			WEWE									
Fig 3045			RF									
Fig 3045	1 - 4	ANSI 1500	RTJ	Wrench	Regular	Dynamic Balance						
Fig 3045 - 1/4			RFWE									
Fig 3045 - 1/2			WEWE									
Fig 3049	2	ANSI 1500	RF	Wrench	Regular	Dynamic Balance						
Fig 3049			RTJ									
Fig 3049			RF									
Fig 3049	3 - 10	ANSI 1500	RTJ	Worm Gear	Regular	Dynamic Balance						
Fig 3049 - 1/4			RFWE									
Fig 3049 - 1/2			WEWE									
Fig 6049			RF									
Fig 6049	6, 12, 16	ANSI 1500	RTJ	Worm Gear	Venturi	Dynamic Balance						
Fig 6049 - 1/4			RFWE									
Fig 6049 -1/2			WEWE									

PLUG VALVES

ITEM	MANUFACTURER	PREFERENCE LEVEL	MODEL / FIGURE NUMBER	SIZE (INCH)	RATING	END TYPES	OPERATION	FLOW PATTERN / PORT	VALVE TYPE	CONTACT	DATASHEET	WEBSITE
Plug Valve	Valvitalia - Delta Valves Europe	AV	Type 20	1/4 to 2	ANSI 600	Threaded Socket Weld	Wrench	Regular		Purchased through: Mid-Atlantic  Bart Duggan One Dollare Ave P.O. Box 409 Scottsdale, PA 15683 Phone: (724) 220-5415 (office) Phone: (724) 366-9089 (cell) Email: bart@midatlanticpa.com	<a href="http://qtrinc.biz/products/lubricated-plug-valves/">http://qtrinc.biz/products/lubricated-plug-valves/</a>	<a href="http://www.qtrinc.biz/products.htm">http://www.qtrinc.biz/products.htm</a>
				3/8 - 2	ANSI 1500	Threaded Socket Weld	Wrench	Regular				
				2 - 4	ANSI 150	RF	Wrench	Short				
						RTJ	Wrench	Short				
				6 - 30	ANSI 150	WEWE	Worm Gear	Short				
						RF	Worm Gear	Venturi				
				6 - 30	ANSI 150	RTJ	Worm Gear	Venturi				
						WEWE	Worm Gear	Venturi				
				1-1/2 to 4	ANSI 300	RF	Wrench	Short				
						RTJ	Wrench	Short				
				6 - 24	ANSI 300	WEWE	Worm Gear	Venturi				
						RF	Worm Gear	Venturi				
				1 to 4	ANSI 600	RTJ	Wrench	Regular				
						WEWE	Worm Gear	Regular				
				6 - 24	ANSI 600	RF	Worm Gear	Regular				
						RTJ	Worm Gear	Regular				
				6 - 24	ANSI 600	WEWE	Worm Gear	Venturi				
						RF	Worm Gear	Venturi				
				1/2 - 2	ANSI 900	RTJ	Wrench	Regular				
				3 - 4	ANSI 900	RF	Wrench	Regular				
RTJ	Wrench	Regular										
6 - 20	ANSI 900	WEWE	Worm Gear	Regular								
		RF	Worm Gear	Regular								
6 - 20	ANSI 900	RTJ	Worm Gear	Venturi								
		WEWE	Worm Gear	Venturi								
1/2 - 3	ANSI 1500	RF	Wrench	Regular								
4 - 12	ANSI 1500	RTJ	Worm Gear	Regular								
		RF	Worm Gear	Regular								
4 - 12	ANSI 1500	RTJ	Worm Gear	Venturi								
	SCV Valves	AV		2-12	ANSI 150, 300, 600	RF, RTJ, WE		Regular, Venturi, Short				<a href="https://www.scvvalve.com/pressure-balanced-lubricated-plug-valves---api-6d.html">https://www.scvvalve.com/pressure-balanced-lubricated-plug-valves---api-6d.html</a>
Valve Lubricant	Climax Lubricants & Equipment Co.	AV	#600 Lubricant / Sealant							Houston, TX 77262-5235	<a href="https://www.climaxlube.com/assets/PDFs/spec-sheets/Spec_Sheet_-_600.pdf">https://www.climaxlube.com/assets/PDFs/spec-sheets/Spec_Sheet_-_600.pdf</a>	<a href="https://www.climaxlube.com/industries">https://www.climaxlube.com/industries</a>
	Sealweld Corporation	AV	EQUA-LUBE EIGHTY							15421 Vantage Parkway W #118 Houston, TX 77032 Phone: (713) 466-7373 Email: usasales@sealweld.com	<a href="http://www.sealweld.com/product.php?c=82">http://www.sealweld.com/product.php?c=82</a>	<a href="http://www.sealweld.com">www.sealweld.com</a>



**PLUG VALVES**

ITEM	MANUFACTURER	PREFERENCE LEVEL	MODEL / FIGURE NUMBER	SIZE (INCH)	RATING	END TYPES	OPERATION	FLOW PATTERN / PORT	VALVE TYPE	CONTACT	DATASHEET	WEBSITE
REFERENCE CODES												
<b>CODES</b>	<b>PREFERENCE LEVELS</b>			August 2017 AML   General updates.								
AV	Approved Vendor											
AVL	Approved Vendor with Limitations											
EAR	Engineering Approval Required											
RFR	Not Approved / Requires Further Research											

PRESSURE RELIEF VALVES

ITEM	MANUFACTURER	PREFERENCE LEVEL	COMMENTS	WEBSITE
Pressure Relief Valves	Anderson Greenwood	EAR	Emerson owned. ECI /ICE reps	<a href="http://valves.emerson.com/brands/anderson_greenwood">valves.emerson.com/brands/anderson_greenwood</a>
	Crosby	EAR	Emerson owned	<a href="http://valves.emerson.com/en/brands/crosby">valves.emerson.com/en/brands/crosby</a>
	Farris	EAR	Curtiss-Wright owned	<a href="http://www.cw-valvegroup.com/About/Farris.aspx">www.cw-valvegroup.com/About/Farris.aspx</a>
	Flow Safe	EAR		<a href="http://www.flowsafe.com">www.flowsafe.com</a>
	Mercer	EAR	Can purchase direct from Mercer at discount to third-party suppliers	<a href="http://www.mercervalve.net">www.mercervalve.net</a>
	Wellmark (Apergy)	EAR	Vapor Relief for Reboiler	<a href="http://www.norrisealwellmark.com">www.norrisealwellmark.com</a>
	FulFlo	EAR	Hydraulic Applications	<a href="http://www.fulflo.com">www.fulflo.com</a>
	Leser	EAR	A. Blair Powell representation	<a href="https://www.leser.com">https://www.leser.com</a>

REFERENCE CODES	
CODES	PREFERENCE LEVELS
AV	Approved Vendor
AVL	Approved Vendor with Limitations
EAR	Engineering Approval Required
RFR	Not Approved / Requires Further Research

October 2017 General AML Updates: Removed Consolidated from list due to lack of use. Updated Websites and comments.

REGULATORS

Note: Verify the Spring Range, Orifice Size, Pilot Selection, and Flexible Element Rating for each Application.

Manufacturer	Preference Level	Model	Type	Temp. Capabilities Deg. F	Sizes	End Connections	Material Specs				Max. Inlet Pressure (psig)	Outlet Pressure Range (psig)	Purposes				Comments	Website
							Body	Seats	Diaphragm	Trim			OPP / Regulation	Instrument Supply	Air	Other		
Fisher (Emerson)	EAR	627, 627H, 627M, 627HM, 630	Self operated	(-20 to 180)	3/4 to 2-inch	Threaded or RF	Ductile Iron, Aluminum, Steel	Nylon, Nitrile, Viton	Nitrile or Neoprene	Ductile Iron, Stainless Steel	2000 for NPT 1480 for RF 1000 for Ductile iron	5 to 500	X	X				
	EAR	299H	Pilot operated	(-20 to 150)	3/4 to 2-inch	Threaded or RF	Ductile iron, steel	Nitrile	Nitrile	Aluminum	175	3.5 in. w.c. to 60	X			X	<a href="http://www.emerson.com/en-us/catalog/fisher-299h">http://www.emerson.com/en-us/catalog/fisher-299h</a>	
	EAR	95H	Self operated	450 w/ EDPM 550 w/ FFKM *	1/4 to 2 inch	Threaded	Steel, Stainless Steel	Viton	Stainless Steel	Stainless Steel	600	5 to 300	X			X	<a href="http://www.emerson.com/en-us/catalog/automation-solutions/valves-actuators-regulators/regulators-relief-valves/fisher-95">http://www.emerson.com/en-us/catalog/automation-solutions/valves-actuators-regulators/regulators-relief-valves/fisher-95</a>	
	EAR	95L	Self operated	Stainless Steel/ Steel Body to + 450, w/ elastomeric seat + 450 *	1/4 to 1 inch	Threaded or RF	Steel, Stainless Steel	Viton	Stainless Steel	Stainless Steel	300	250 to 300	X			X	<a href="http://www.emerson.com/en-us/catalog/automation-solutions/valves-actuators-regulators/regulators-relief-valves/fisher-95">http://www.emerson.com/en-us/catalog/automation-solutions/valves-actuators-regulators/regulators-relief-valves/fisher-95</a>	
	EAR	EZR	Pilot operated	(-20 to 260)	1, 2, 3 inch	Threaded or RF	Steel	Nitrile, Viton	Nitrile, Viton	Stainless Steel	1050	6 in w.c. to 1000	X				<a href="http://www.emerson.com/en-us/catalog/fisher-ezr">http://www.emerson.com/en-us/catalog/fisher-ezr</a>	
	EAR	EZH	Pilot operated	(-20 to 180) OR (0 to 180)	1 to 3 inch	Threaded or RF	Steel	Nitrile, Viton	Nitrile, Viton	Stainless Steel	1500	14.5 to 1160	X				<a href="http://www.emerson.com/en-us/catalog/fisher-ezh-ezhso">http://www.emerson.com/en-us/catalog/fisher-ezh-ezhso</a>	
	EAR	310A	Pilot operated (high P)	(-20 to 300)	1 to 3 inch	Threaded or RF	Steel	Teflon	Nitrile	Steel, Stainless Steel	1480	10 to 750	X				<a href="http://www.emerson.com/en-us/catalog/fisher-310a">http://www.emerson.com/en-us/catalog/fisher-310a</a>	
	EAR	OSE	Slam Shut	(-22 to +176)	1 to 10 inch	Threaded, FF or RF	Cast Iron, WCC Steel	Nitrile	Reinforced Nitrile	Stainless Steel	1470	4" wc to 1058 psig	X				<a href="http://www.emerson.com/en-us/catalog/fisher-ose">http://www.emerson.com/en-us/catalog/fisher-ose</a>	
Mooney	EAR	Flow Tap	Self operated	(-20 to +150)	3/4 & 1 inch	Threaded	Ductile Iron	Nitrile	Nitrile/ Nylon	Aluminum	1000	5 to 250	X	X			<a href="https://www.geoilandgas.com/subsea-offshore/offshore-production/valve-regulators">https://www.geoilandgas.com/subsea-offshore/offshore-production/valve-regulators</a>	
	EAR	Flow Grid	Pilot operated	(-20 to +150)	2 to 3 inch	Threaded, Socket Weld, RF, Flangeless & Butt Welded	Ductile Iron, Steel, Stainless Steel	Nitrile/ Nylon and Viton/ Nylon	Nitrile/ Nylon or Nitrile/ Viton	Steel, Stainless Steel	1440	5 in. wc to 900	X				<a href="https://www.geoilandgas.com/subsea-offshore/offshore-production/valve-regulators">https://www.geoilandgas.com/subsea-offshore/offshore-production/valve-regulators</a>	
	EAR	Slam Shut	Pilot operated	(-20 to +150)	2 to 3 inch	RF	Steel	Nitrile/ Nylon and Viton/ Nylon	Nitrile/ Nylon and Viton/ Nylon	Aluminum	740	10 to 450	X				<a href="https://www.geoilandgas.com/subsea-offshore/offshore-production/valve-regulators">https://www.geoilandgas.com/subsea-offshore/offshore-production/valve-regulators</a>	
	EAR	Flow Max	Pilot operated	(-20 to +150)	2, 3 inch	Threaded, RF	Ductile Iron, Aluminum	Nitrile	Nitrile/ Nylon	Cast Aluminum	250	5 in wc to 248	X					
Sensus	EAR	046	Self operated	(-20 to +150)	3/4, 1, 1-1/4 inch	Threaded	Ductile Iron, Stainless Steel	Nitrile or Viton	Nitrile / Nylon	Stainless Steel	1000	3 to 200	X		X	X	<a href="https://sensus.com/products/046-field-regulators/">https://sensus.com/products/046-field-regulators/</a>	
	EAR	441/ 461	Self operated	(-20 to +150)	2, 3 inch	Threaded, RF	Ductile Iron, Cast Steel, Aluminum	Nitrile, Polyurethane	Nitrile with Dacron reinforcement	Stainless Steel	125 to 1200	3 to 250	X				<a href="https://sensus.com/products/441-x57-461-x57-high-pressure/">https://sensus.com/products/441-x57-461-x57-high-pressure/</a>	

REGULATORS

Note: Verify the Spring Range, Orifice Size, Pilot Selection, and Flexible Element Rating for each Application.

Manufacturer	Preference Level	Model	Type	Temp. Capabilities Deg. F	Sizes	End Connections	Material Specs				Max. Inlet Pressure (psig)	Outlet Pressure Range (psig)	Purposes				Comments	Website	
							Body	Seats	Diaphragm	Trim			OPP / Regulation	Instrument Supply	Air	Other			
Dresser (A GE Company)	EAR	Flexflo - Model 83	Pilot operated	(-40 to +212)	1, 1-1/2, 2, 3 inch	RF	Steel	Not Applicable	Not Applicable	Not Applicable	1480	up to 1480	X					<a href="https://www.geoilandgas.com/sites/geoilandgas/files/Valves-Ins/gea_30483_money_flexflo_surge_reliefers_brochure.pdf">https://www.geoilandgas.com/sites/geoilandgas/files/Valves-Ins/gea_30483_money_flexflo_surge_reliefers_brochure.pdf</a>	
Kimray	EAR, RFR	230 SGT PRB	Pilot operated	(-20 to 100)	2 inch	Threaded, RF	Ductile Iron	Polyurethane	Nitrile	Stainless Steel	300	0.5 to 250	X					<a href="https://kimray.com/products/browse/itemdetail/324">https://kimray.com/products/browse/itemdetail/324</a>	
Rupture Pin Technologies	EAR	JA	Slam Shut	(-20 to +150)	2 to 12 inch	RF	WCB, WCC	Buna, Viton, EPDM	Not Applicable	Stainless Steel	5000	25 - 3750	X					<a href="http://www.rupturepin.com/model-j-a/">http://www.rupturepin.com/model-j-a/</a>	
BelGAS	EAR	P627, R627, L627, P630	Self operated	(-20 to 180)	3/4 to 2-inch	Threaded or RF	Ductile Iron, Aluminum, Steel	Nylon, Nitrile, Viton	Nitrile or Neoprene	Ductile Iron, Stainless Steel	2000 for NPT 1480 for RF 1000 for Ductile iron	5 to 500	X	X			Direct Fisher Replacements	<a href="https://www.marshbellofram.com/">https://www.marshbellofram.com/</a>	
	EAR	P39	Self operated	(-40 to 225)	1/4 inch	Threaded NPT	Brass	TFE, Nitrile	302 Stainless	Nylon or TFE	6000	0 to 225	X	X		X	IMAC ISS	<a href="http://www.mb-belgas.com/type-p39-configurable-gas-pressure-relief-regulator/">http://www.mb-belgas.com/type-p39-configurable-gas-pressure-relief-regulator/</a>	
	EAR	P912	Self operated	(-20 to 170)	1/4 inch	Threaded NPT	Zinc	Stainless Steel	Nitrile	Stainless Steel	250	0 to 5	X	X			X	IMAC ISS	<a href="https://www.marshbellofram.com/belgas/products/belgas-type-p912-pneumatic-air-pressure-regulator/">https://www.marshbellofram.com/belgas/products/belgas-type-p912-pneumatic-air-pressure-regulator/</a>
	EAR	P289	Self operated	(-20 to 150)	1, 2 inch	Threaded NPT	Aluminum	Brass / Stainless Steel	Nitrile Or Fluoroelastomer	Brass / Stainless Steel	25 to 100	0	X				X	Back Pressure - Relief	<a href="https://www.marshbellofram.com/belgas/products/type-p289-back-pressure-regulator/">https://www.marshbellofram.com/belgas/products/type-p289-back-pressure-regulator/</a>
	EAR	P1367	Self operated	(-20 to 160)	1/4 inch	Threaded NPT	Various	Various	Various	Various	4000 for Stainless Steel, 2150 for Aluminum	20 / 35	X	X			X	ISS	<a href="https://www.marshbellofram.com/belgas/products/belgas-type-p1367-pneumatic-supply-pressure-manifold-system/">https://www.marshbellofram.com/belgas/products/belgas-type-p1367-pneumatic-supply-pressure-manifold-system/</a>

\* = Seat and Diaphragm material for Temperature Applications outside of -20 to 150 deg. must be approved by the Design Engineer

Elastomer Synonym Names:

- NBR = Nitrile, Buna-N
- FKM = Viton, Fluoroelastomer
- Chloroprene = CR, Neoprene
- PTFE = Teflon
- Nylon = PA, Polyamide

REFERENCE CODES	
CODES	PREFERENCE LEVELS
AV	Approved Vendor
AVL	Approved Vendor with Limitations
EAR	Engineering Approval Required
RFR	Not Approved / Requires Further Research
December 2017 General AML update: Removed Sensus Model 1100 and Kimray model 413 as they are no longer available. Added websites. Revised specs as needed.	

REGULATORS - Instrument Supply

Manufacturer	Preference Level	Model	Temp. Capabilities Deg. F	Sizes	End Connections	Material Specs				Max. Inlet Pressure (psig)	Outlet Pressure Range (psig)	Purposes				Website
						Body	Seats	Diaphragm	Trim			OPP / Regulation	Instrument Supply	Air	Other	
Fisher	EAR	1367	(-20 to 150)	1/8 , 1/4 in	Threaded	Aluminum, Brass	Nitrile	Nitrile	Aluminum	2000	5 to 90		X			<a href="http://www.emerson.com/en-us/catalog/fisher-1367">http://www.emerson.com/en-us/catalog/fisher-1367</a>
	EAR	64	(-20 to 150)	1/2 in	Threaded	Cast Aluminum	Nitrile	Nitrile	Stainless Steel	250	3 to 100			X	X	<a href="http://www.emerson.com/en-us/catalog/fisher-64">http://www.emerson.com/en-us/catalog/fisher-64</a>
	EAR	67	(-40 to 180)	1/4 in	Threaded	Aluminum or Steel	Nitrile or Viton	Nitrile or Viton	Stainless Steel	250 to 400 depending on model	15 to 150		X	X	X	
	EAR	1301F & 1301G *	(-20 to 180) - Neoprene, (-20 to +400) FKM, (-40 to +300) EPDM)	1/4 in	Threaded	Stainless Steel	Viton	Stainless Steel	Stainless Steel	6000	10 to 225 - 1301 F, 200 - 500 - 1301G		X	X		<a href="http://www.emerson.com/en-us/catalog/fisher-1301f-1301g">http://www.emerson.com/en-us/catalog/fisher-1301f-1301g</a>
Ingersoll-Rand ARO	EAR	ARO-FLO	(0 to 125)		Threaded									X		<a href="http://www.arozone.com/en/products/filters-regulators-and-lubricators-frls.html">http://www.arozone.com/en/products/filters-regulators-and-lubricators-frls.html</a>

\* = Seat and Diaphragm material for Temperature Applications outside of -20 to 150 deg. must be approved by

REFERENCE CODES	
CODES	PREFERENCE LEVELS
AV	Approved Vendor
AVL	Approved Vendor with Limitations
EAR	Engineering Approval Required
RFR	Not Approved / Requires Further Research

**Elastomer Synonym Names:**  
**NBR = Nitrile, Buna-N**  
**FKM = Viton, Fluororlastomer**  
**Chloroprene = CR, Neoprene**  
**PTFE =Teflon**  
**Nylon = PA, Polyamide**

December 2017 General Updates:	Removed Ingersoll Rand model numbers as they have changed. Added Websites
--------------------------------	--

STEEL PIPE FITTINGS

ITEM	MANUFACTURER	PREFERENCE LEVEL	COMMENTS	LOCATION	WEBSITE
Butt-Weld Pipe Fittings	BendTec, Inc.	AV	6" through 66", Gr B through Y70. Induction bends.	Clearfield, UT	<a href="http://bendtec.com/">http://bendtec.com/</a>
	Custom Alloy Corp.	AV	1/2" through 48", Gr B through Y70. All weld fittings except Segmentable Elbows.	High Bridge, NJ	<a href="http://www.customalloy.us/">http://www.customalloy.us/</a>
	Hackney Ladish, Inc. (also Flo-Bend)	AV	1/2" through 48", Gr B through Y70. All weld fittings. 3R and segmentable ells.	Dallas, TX, Enid, OK, and Russellville, AR.	<a href="http://www.hackneyladish.com/">http://www.hackneyladish.com/</a>
	Steel Forgings, Inc.	AV	10" through 48", Y42 through Y70. Tees 10"-48", Reducers 10"-42", Caps 10"-36", and all size Saddles.	Shreveport, LA	<a href="http://www.steelforgings.com/">http://www.steelforgings.com/</a>
	Tube Forgings of America (TFA)	AV	1/2" through 30" (24" reducers), Gr B standard, Y42 through Y70 special. All weld fittings. 3R and segmentable ells.	Portland, OR	<a href="http://www.tubeforgings.com/">http://www.tubeforgings.com/</a>
	Weldbend Corp.	AV	1/2" through 48", Grade B only. All weld fittings. No 3R or segmentable ells.	Argo, Ill.	<a href="https://www.weldbend.com/">https://www.weldbend.com/</a>
	Mills Iron Works	AV	1/2" through 24", Gr B. Reducers only.	Gardena, CA	<a href="http://www.millsiron.com/">http://www.millsiron.com/</a>
	Ezeflow (Allied Group)	AV	8" through 84", Gr B through Y70. All weld fittings, 3R and Segmentable Elbows.	Granby, Quebec, Canada	<a href="http://ezeflow.com/ezeflow/">http://ezeflow.com/ezeflow/</a>
	Tectubi Raccordi S.p.A. (Allied Group) Domestic or Italian made fittings ONLY.	AV	1/2" through 80", Gr B through Y70. All weld fittings, 3R and Segmentable Elbows and any other products are approved as long as they are Domestic or Italian made fittings.	Piacenza, Italy	<a href="http://www.tectubiraccordi.com/">http://www.tectubiraccordi.com/</a>
	Erne Fittings GMBH	AV	1/2" through 42", Gr B through Y70. Tees, reducers and Elbows including 3R and Segmentable .	Murzzuschlag, Austria	<a href="https://www.ernefittings.com/en/products">https://www.ernefittings.com/en/products</a>
Forged Fittings and Pipe Nipples 2" and less	Anvil International (ASC)	AV	An ASC Engineered Solutions brand		<a href="http://www.asc-es.com">http://www.asc-es.com</a>
	J.B. Smith MFG	AV	An ASC Engineered Solutions brand		<a href="http://www.asc-es.com">http://www.asc-es.com</a>
	Bonney Forge	AV			<a href="http://www.bonneyforge.com/">http://www.bonneyforge.com/</a>
	Capitol Manufacturing	AV	A Phoenix Forge Group company	Crowley, LA	<a href="https://www.phoenixforge.com/catalogs/capitol%20mfg%20catalog%20497.pdf">https://www.phoenixforge.com/catalogs/capitol%20mfg%20catalog%20497.pdf</a>
	CAMCO	AV	A Phoenix Forge Group company		<a href="https://www.phoenixforge.com/catalogs/camco%20catalog.pdf">https://www.phoenixforge.com/catalogs/camco%20catalog.pdf</a>
	CapProducts LTD	AV	A Phoenix Forge Group company	Vanastra, ON, Canada	<a href="https://www.phoenixforge.com/catalogs/caproducts%20catalog.pdf">https://www.phoenixforge.com/catalogs/caproducts%20catalog.pdf</a>
	Pennsylvania Machine Works	AV			<a href="http://www.pennusa.com">http://www.pennusa.com</a>
	Westbrook Manufacturing	AV	1/8" - 2" Pipe nipples, Swage Nipples, Bull Plugs		<a href="http://www.westbrookmfg.com/">http://www.westbrookmfg.com/</a>

REFERENCE CODES

CODES	PREFERENCE LEVELS	
AV	Approved Vendor	October 2017 AML General Update: Noted no Segmentable Elbows for Custom Alloy
AVL	Approved Vendor with Limitations	
EAR	Engineering Approval Required	
RFR	Not Approved / Requires Further Research	

**DESIGN AND CONSTRUCTION MANUAL**  
**2.3 APPROVED MANUFACTURERS LIST**



**STEEL PIPE**

ITEM	MANUFACTURER	PREFERENCE LEVEL	DIAMETER / MILL LOCATION	WEBSITE	MILL ADDRESS	SALES OFFICE	NEARBY OR AFFILIATED COATER	COMMENTS	
DSAW (LSAW)	Berg Steel Pipe, Division of Europipe	AV	Sizes: 24" - 64". Max WT 1,250; Panama City, FL	<a href="http://www.bergpipe.com/17-0-BSPC-Startpage.html">http://www.bergpipe.com/17-0-BSPC-Startpage.html</a>	Berg Steel Pipe Corp., 5315 W 19th Street, Port Industrial Park, Panama City, FL 32401 904-874-2224	Berg-Europipe Sales Office: 10375 Richmond Ave, Suite 425, Houston, TX 77042 713-827-7423	<a href="http://www.ebpipecoating.com/">http://www.ebpipecoating.com/</a>		
	Liberty Steel (Formerly Tata Steel, Corus and British Steel)	AV	Sizes: 16" to 42". Max WT 2.0" Hartlepool, NE England	<a href="http://www.libertyhousegroup.com/our-businesses/liberty-steel/liberty-steel-hartlepool/">http://www.libertyhousegroup.com/our-businesses/liberty-steel/liberty-steel-hartlepool/</a>	Hartlepool 42" Mill Brenda Road Hartlepool, UK TS25 2EF	mailto:Libertypipes.enquiries@uklargepipe.com		Changed from EAR to AV on 5/5/17 due to recommendation by ITI International technical evaluation for MVP. Liberty Group purchased Tata on August 2017.	
	DuraBond Pipe	AV	Sizes: 24" to 42". Max WT 1,000" Steelton, PA ( Old Bethlehem Mill)	<a href="https://www.dura-bond.com/steel-line-pipe/">https://www.dura-bond.com/steel-line-pipe/</a>	Dura-Bond Pipe Facility Location: 2716 South Front Street, Steelton, PA 17113 717-966-1400	Pipe Coating Facility Locations: McKeesport, PA and Steelton, PA 724-327-0280	<a href="https://www.dura-bond.com/corrosion-protection/">https://www.dura-bond.com/corrosion-protection/</a>		
	Europipe	AV	Sizes: 16" to 64", Max WT 1.770" Mulheim, Germany; (Parent Company to Berg Steel Pipe)	<a href="http://www.europipe.com/products/large-diameter-pipes-line-pipes/">http://www.europipe.com/products/large-diameter-pipes-line-pipes/</a>		<a href="http://www.europipe.com/contact/contact-persons/">http://www.europipe.com/contact/contact-persons/</a>	<a href="http://www.europipe.com/services/coating/">http://www.europipe.com/services/coating/</a>	Changed from EAR to AV on 2/10/17 due to recommendation by ITI International technical evaluation for MVP	
	JFE Steel Corp	AV	Sizes: 20" to 64", Max WT 1.5" Chiba, Japan (Formerly Kawasaki) Sizes: 16" to 56", Max WT 1.750" Fukuyama, Japan (Formerly NKK)	<a href="http://www.jfe-steel.co.jp/en/">http://www.jfe-steel.co.jp/en/</a>					Added to AML on 2/10/17 due to ITI International technical recommendation to MVP
	JSW Steel	EAR	Sizes: 24" to 48" JSW Texas Works, Baytown TX	<a href="http://www.jswsteel.us/">http://www.jswsteel.us/</a>	5200 E Mc Kinney Rd #110 Baytown, TX 77523	5200 E Mc Kinney Rd #110 Baytown, TX 77523			
	NSSMC (Nippon Steel and Sumitoma Metal)	AV	Sizes 18" - 56", Max WT 1.575" Kimitsu, Japan Sizes: 20" - 60" Max WT 1.500" Kashima, Japan	<a href="http://www.nssmc.com/en/">http://www.nssmc.com/en/</a>					Added to AML on 2/10/17 due to ITI International technical recommendation to MVP
	Welspun Gujarat Stahl Rohren, Ltd. (Marketed in the US by US Steel)	AV	Sizes: 18" to 64", Max WT 2.540" Dahej - L-Saw Mill, Gujarat, India Sizes: 16" to 64", Max WT 1.690" (New JCO), Anjar, India	<a href="http://www.welspuncorp.com/">http://www.welspuncorp.com/</a>					
Seamless	IPSCO Koppel Tubulars, LLC	AV	Sizes 2" to 4"	<a href="https://tmk-ipsco.tmk-group.com/">https://tmk-ipsco.tmk-group.com/</a>	23rd & Duss Avenue, Ambridge, PA 15003	109 Majestic Drive, Canonsburg, PA 15317			
	Tenaris Group/Dalmine	AV	Sizes: 2 inch and over, Bergamo, Italy	<a href="http://www.tenaris.com/en/aboutus/product-onprocesses.aspx">http://www.tenaris.com/en/aboutus/product-onprocesses.aspx</a>					
	U. S. Steel Tubular Products	AV	Sizes: 4" to 8", Fairfield AL; Sizes: 10" to 24" Lorain, OH	<a href="https://usstubular.com/">https://usstubular.com/</a>				Lorain Plant stopped production of small bore - 1.5 to 4" in April 2016	
	Vallourec Star, LP	AV	Sizes: 2" to 10", Youngstown OH	<a href="http://www.vallourec.com/EN/Pages/default.aspx">http://www.vallourec.com/EN/Pages/default.aspx</a>	2669 Martin Luther King Jr. Blvd Youngstown, OH 44510-1033				
	Wheatland Tube (JMC Steel Group)	AV	Sizes: 1/8" to 2" Sharon PA	<a href="http://www.wheatland.com/standard-steel-pipe">http://www.wheatland.com/standard-steel-pipe</a>	Wheatland: Mill St. Plant, 134 Mill Street, Sharon, PA 16146	Wheatland Tube HQ: 700 South Dock Street, Sharon, PA 16146, 800.257.8182, info@wheatland.com		Wheatland no longer manufactures SMLS pipe. However, existing stock can still be used.	
	Michigan Seamless Tube (MST)	AV	A106 - Sizes: 1/2" to 2"	<a href="http://www.mstube.com/en/">http://www.mstube.com/en/</a>	400 McMunn Street, South Lyon, MI 48178			Note: Working on obtaining API 5L Certificate	
	PTC Alliance	AV	Sizes: 1/2" to 2"	<a href="http://www.ptcalliance.com/ptca-product/cold-drawn-seamless-cds-3/">http://www.ptcalliance.com/ptca-product/cold-drawn-seamless-cds-3/</a>		6051 Wallace Road EXT, Suite 200 Wexford, PA 15090 412-299-2616			
	Benteler Steel Tube Manufacturing Corp	AV	Sizes: 1/2" to 4"	<a href="https://www.benteler.com/en/products/steel-tube-products/">https://www.benteler.com/en/products/steel-tube-products/</a>	1 Benteler Dr Shreveport, LA 71115	3050 Post Oak Blvd, Suite 1130 Houston, TX 77056			

**DESIGN AND CONSTRUCTION MANUAL**  
**2.3 APPROVED MANUFACTURERS LIST**



**STEEL PIPE**

ITEM	MANUFACTURER	PREFERENCE LEVEL	DIAMETER / MILL LOCATION	WEBSITE	MILL ADDRESS	SALES OFFICE	NEARBY OR AFFILIATED COATER	COMMENTS
ERW (HFW)	American Steel Pipe (Division of American Cast Iron Pipe Company)	AV	Sizes: 10" to 20", Birmingham, AL, 20" Mill; 16" to 24", Birmingham, AL, 24" Mill	<a href="http://www.american-usa.com/products/electric-resistance-welded-steel-pipe">http://www.american-usa.com/products/electric-resistance-welded-steel-pipe</a>				
	Axis Pipe and Tube	AV	Sizes: 6.625" to 16" Bryan, TX	<a href="http://www.axispipeandtube.com/linepipe.html">http://www.axispipeandtube.com/linepipe.html</a>	1451 Louis Mikulin Road, Bryan, Texas 77807	16420 Park Ten Place, Suite 412, Houston, TX 77084		
	CSI (California Steel Industries)	AV	Sizes: 4" to 24" Fontana, CA	<a href="https://www.californiasteel.com/?c=products&amp;p=erw">https://www.californiasteel.com/?c=products&amp;p=erw</a>	14000 San Bernardino Ave Fontana, CA	Sales Office: 14000 San Bernardino Ave Fontana, CA; Manager, Tubular Products: Ray Dubreuil 909.350.6409 rdubreuil@californiasteel.com; Outside Sales Rep.: Rick Cronholm 909.350.5978 rcronholm@californiasteel.com		
	Wheatland Tube (Zekelman Industries)	AV	Sizes: 2" to 6"; Warren OH	<a href="http://www.wheatland.com/">http://www.wheatland.com/</a>	Warren Mill : 901 Dietz Road, Warren, OH 44483	Wheatland Tube: 700 South Dock Street   Sharon, PA 16146		As of June 1, 2017 Energelex was renamed to Wheatland Tube. Remaining Energelex stock is approved for use.
	EVRAZ Regina Steel	AV	Sizes: 12" to 24" Regina, Saskatchewan Canada, 24" ERW Mill,	<a href="http://www.evrzna.com/Products/LinePipe/Tabid/79/Default.asp">http://www.evrzna.com/Products/LinePipe/Tabid/79/Default.asp</a>	Physical Address: 100 Armour Road Regina, Saskatchewan S4P 3C7 Phone: 800-667-1616 or 306-924-7700	EVRAZ North America Tim Latter Director, ERW & Large Diameter Sales, U.S. Cell: (832)431-7185		Used on MAKO system and other projects.
	IPSCO Tubulars (Kentucky) Inc. (formerly Newport Steel)	AV	Sizes: 4" to 6" and 8" to 16" IPSCO Tubulars (Kentucky) Inc., Wilder, KY (Newport) ; 4" to 8", IPSCO Tubulars Inc., Camanche IA 2" - 4" Blytheville, AK -	<a href="https://www.tmk-group.com/Welded_line_pipe">https://www.tmk-group.com/Welded_line_pipe</a>	Camanche, IA - <a href="http://www.tmk-ipSCO.com/Facilities/FacilitiesCamanche.asp">http://www.tmk-ipSCO.com/Facilities/FacilitiesCamanche.asp</a> ; Wilder KY - <a href="http://www.tmk-ipSCO.com/Facilities/FacilitiesWilder.asp">http://www.tmk-ipSCO.com/Facilities/FacilitiesWilder.asp</a>			
	Stupp Corporation	AV	Sizes: 10" to 24", Baton Rouge LA	<a href="http://www.stuppcorp.com/">http://www.stuppcorp.com/</a>	<a href="http://www.stuppcorp.com/content/erw-facility">http://www.stuppcorp.com/content/erw-facility</a>		Bayou Coating LLC: <a href="http://www.stuppcorp.com/content/bayou-coating-facility">http://www.stuppcorp.com/content/bayou-coating-facility</a>	
	Tenaris Hickman L.P. (formerly Maverick)	AV	Sizes: 8" to 16", Hickman, AK, Mill #6; 3-1/2" to 10" Hickman AK, Mill #7	<a href="http://www.tenaris.com/en/aboutus/productonprocesses.aspx">http://www.tenaris.com/en/aboutus/productonprocesses.aspx</a>				
	Tex-Tube Company (Member of The Villacero Group of Companies)	AV	Sizes: 2" thru 8" Houston TX	<a href="http://www.tex-tube.com/">http://www.tex-tube.com/</a>				
	Mannesmann Line Pipe GmbH (Salzgitter Group)	AV	Sizes: 4" to 24" Siegen, and Hamm, Germany	<a href="https://www.mannesmann-linepipe.com/en/supply-range/oil-gas-line-pipe.html">https://www.mannesmann-linepipe.com/en/supply-range/oil-gas-line-pipe.html</a>				2017 Name change
	Dura-Bond Pipe Industries	AV	Sizes: 8" to 20" Camp Hill/McKeesport, PA (Former US Steel Mill)	<a href="https://www.dura-bond.com/">https://www.dura-bond.com/</a>	301 4th Ave McKeesport PA 15132			Dura-Bond took over the US Steel mill at McKeesport and received its API 5L certificate in March 2018. Stock Pipe from the former US Steel Mill is also approved to use.
	US Steel Tubular Products, Inc., Texas Operations Division (formerly Lone Star)	AV	Sizes: 4.5" to 16".	<a href="https://usstubular.com/manufacturing-facilities/lone-star-tubular-operations">https://usstubular.com/manufacturing-facilities/lone-star-tubular-operations</a>				
Welspun Tubular	AV	Sizes: 1-1/4" to 20" Little Rock AR WT 2 - 16mm, up to 24M lengths	<a href="http://www.welspuncorp.com/">http://www.welspuncorp.com/</a>	9301, Frazier Pike Little Rock, Arkansas 72205	Sales & Marketing Office Address: 15721 Park Row, Suite 230, Houston, TX 77084 281-492-3220	in-plant facility @ Little Rock		
Paragon Industries	AV	Sizes: 4" to 16" Sapulpa, OK Light wall to 0.500"WT	<a href="https://paragonindinc.com/services-view/line-pipe/">https://paragonindinc.com/services-view/line-pipe/</a>	3378 West Highway 117 Sapulpa, Ok 74066	918-292-4459 918-291-0918	Paragon Coating Facility (PCF)		



**DESIGN AND CONSTRUCTION MANUAL**  
**2.3 APPROVED MANUFACTURERS LIST**



**STEEL PIPE**

ITEM	MANUFACTURER	PREFERENCE LEVEL	DIAMETER / MILL LOCATION	WEBSITE	MILL ADDRESS	SALES OFFICE	NEARBY OR AFFILIATED COATER	COMMENTS	
HSAW	Stupp Corporation	AV	Sizes: 24" to 60", WT 0.250" - 1.00" Baton Rouge, LA (up to 80' lengths)	<a href="http://www.stuppcorp.com/">http://www.stuppcorp.com/</a>	12555 Ronaldson Road Baton Rouge, LA 70807	Pittsburgh Sales P.O. Box 1539 Beaver Falls, PA 15010 412.295.6197 office	Stupp Coatings in-plant @ Baton Rouge	Used on OVC project 2014-2016	
	Welspun Tubular	AV	Sizes: 24" to 60" Max WT 1.000 (USA) Little Rock, AR Sizes: 24"-64" Max WT 1.250" Anjar, India (former Stelco Mill)	<a href="http://www.welspuncorp.com/">http://www.welspuncorp.com/</a>	USA Plant: 9301, Frazier Pike Little Rock, Arkansas 72205	Sales & Marketing Office Address: 15721 Park Row, Suite 230, Houston, TX 77084 281-492-3220	in-plant facility @ Little Rock	Changed from EAR to AV on 2/10/17 due to recommendation by ITI Internation technical evaluators to MVP	
	Berg Spiral	AV	Sizes: 26" to 56" Max WT 0.790" Mobile, AL	<a href="http://www.bergpipe.com/17-1-BSPM-Startpage.html">http://www.bergpipe.com/17-1-BSPM-Startpage.html</a>					Added to AML on 2/10/17 due to ITI International technical recommendation to MVP
	Borusan Mannesmann	AV	Sizes: 20" to 120" Max WT 1.000" Gemlik, Turkey	<a href="http://www.borusanmannesmann.com/en/default.aspx">http://www.borusanmannesmann.com/en/default.aspx</a>					Added to AML on 2/10/17 due to ITI International technical recommendation to MVP. Used for MAKO System pipelines
	CPW (Corinth Pipe Works)	AV	Sizes: 24" to 100" Max WT 1.000" Thisvi, Greece	<a href="http://www.cpw.gr/en/about-us/overview/">http://www.cpw.gr/en/about-us/overview/</a>					Added to AML on 2/10/17 due to ITI International technical recommendation to MVP
	Mannesmann Grossrohr (Salzgitter Group)	AV	Sizes: 26" to 60" Max WT 1.000" Salzgitter, Germany	<a href="https://www.salzgitter-ag.com/en/company/business-units/mannesmann.html">https://www.salzgitter-ag.com/en/company/business-units/mannesmann.html</a>					Added to AML on 2/10/17 due to ITI International technical recommendation to MVP

REFERENCE CODES	
CODES	PREFERENCE LEVELS
AV	Approved Vendor
AVL	Approved Vendor with Limitations
EAR	Engineering Approval Required
RFR	Not Approved / Requires Further Research

October 2017 General AML Updates: Added Websites, editorial improvements. No Additions or deletions.

**DESIGN AND CONSTRUCTION MANUAL**  
**2.3 APPROVED MANUFACTURERS LIST**



**TANKS**

Item	Vendor/Manufacturer	Preference Level	Address	Additional Vendor Contact Information	Tank Types - to be ordered from Vendors	Pressure Type	Additional Notes:	Website
Tanks	Highland Tanks	AV	One Highland Drive Stoystown, PA 15563 Ph: 814-893-5701	Jeffery J. Polce Ph: 412-824-8077	Fabricated Singlewall and Doublewall - Horizontal and Vertical Tanks, Square, Steel Doublewall - oil transfer day - tanks	Atmospheric Pressure (15 psig)		<a href="https://www.highlandtank.com/">https://www.highlandtank.com/</a>
	Hamilton Tanks	AV	2200 Refugee Rd. Columbus, OH 43207 Ph: 800-614-445-8446	Mike Davis - Hamilton Tanks 2200 Refugee Rd. Columbus OH 43207 Toll Free: 800-627-8265 Office: 614-445-8446 EXT 204 Cell: 614-374-3329	Fabricated Steel Singlewall and Doublewall - Horizontal	Atmospheric Pressure (15 psig)		<a href="http://www.hamiltontanks.com/">http://www.hamiltontanks.com/</a>
	REITZ (George I REITZ & Sons)	AV	17214 Route 36 Brookville, PA 15825 Ph: 814-849-2308 Fx: 814-849-6321	Rich Howenstine G.I. Reitz & Sons Ph: 412-952-8398	Small and Large Steel Singlewall and Doublewall Horizontal Tanks, small elevated steel oil feed tanks, square doublewall - oil transfer, day tanks	Atmospheric		<a href="http://www.gireitz.com/">http://www.gireitz.com/</a>
	Economy Tanks	AV	99 Winfield Rd. St Albans, WV 25177 Ph: 304-727-4338 Fx: 304-727-5007		Fabricated Steel Singlewall and Doublewalled - Horizontal and Vertical Tanks	Atmospheric		<a href="http://www.economytank.com/">http://www.economytank.com/</a>
	Westerman Tanks	AV	245 N. Broad Street, Bremen, OH 43107 Ph: 740-569-4143	Note: Ordering of Westerman Tanks will be through McJunkin / Redman due to an agreement Westerman has with them.		Atmospheric		<a href="http://westermancompanies.com/">http://westermancompanies.com/</a>
	Modern Welding Company of Ohio, Inc.	AV	One Modern Way Newark, OH 43055	Tim Fabek - Sales Ph: 740-344-9425 Fx: 740-344-6018	Fabricated Steel Singlewall and Doublewall - Horizontal and Vertical Tanks	Atmospheric	Carbon steel and custom alloy	<a href="https://www.modweldco.com/">https://www.modweldco.com/</a>
	Maxum Petroleum	AV	3428 Turnpike Road, Summersville WV	John Shelton - Sales Ph: 304-872-5533 Fx: 304-872-3767	Small and Large Steel Singlewall and Double wall Horizontal Tanks, Elevated Steel Doublewall oil day tanks	Atmospheric		

REFERENCE CODES	
<b>CODES</b>	<b>PREFERENCE LEVELS</b>
AV	Approved Vendor
AVL	Approved Vendor with Limitations
EAR	Engineering Approval Required
RFR	Not Approved / Requires Further Research

October 2017 General Updates: Added Websites

**DESIGN AND CONSTRUCTION MANUAL**  
**2.3 APPROVED MANUFACTURERS LIST**



**TEG DEHYDRATION AND FLARES**

ITEM	MANUFACTURER	PREFERENCE LEVEL	COMMENTS	CONTACT	WEBSITE
TEG Dehydration	NATCO (Cameron)	AV		Jim Christian - Canonsburg, PA (570) 637-4833	<a href="http://www.slb.com">http://www.slb.com</a>
	Frederick Logan Company, Inc. (Floco)	AV		F. Charles Logan - Warrendale, PA 724-776-9300	<a href="http://www.floco.com">www.floco.com</a>
	Titan (formerly PEQ/Exterran)	EAR		Woodlands, TX	<a href="http://www.titanpeq.com">www.titanpeq.com</a>
	Bird Equipment	EAR		Noble, OK	<a href="http://www.birdequipmentllc.com">www.birdequipmentllc.com</a>
	Cimarron	EAR		Houston, TX	<a href="http://www.cimarronenergy.com/">http://www.cimarronenergy.com/</a>
	Forum Energy Technologies	EAR		Houston, TX	<a href="http://www.f-e-t.com">www.f-e-t.com</a>
Flares	Flare Services	AV	Mike Riddell, President	Weatherford, TX 817-789-0940	<a href="https://flareparts.com">https://flareparts.com</a>
	Titan (formerly PEQ/Exterran)	AV		Woodlands, TX	<a href="http://www.titanpeq.com">www.titanpeq.com</a>
	Cimarron	EAR		Houston, TX	<a href="http://www.cimarronenergy.com/">http://www.cimarronenergy.com/</a>
	Forum Energy Technologies	EAR		Houston, TX	<a href="http://www.f-e-t.com">www.f-e-t.com</a>
	Frederick Logan Company, Inc. (Floco)	EAR		F. Charles Logan - Warrendale, PA 724-776-9300	<a href="http://www.floco.com">www.floco.com</a>
	Bird Equipment	EAR		Noble, OK	<a href="http://www.birdequipmentllc.com">www.birdequipmentllc.com</a>

REFERENCE CODES	
CODES	PREFERENCE LEVELS
AV	Approved Vendor
AVL	Approved Vendor with Limitations
EAR	Engineering Approval Required
RFR	Not Approved / Requires Further Research

August 2017 AML Update	Added Contact Column. Made the following Manufacturer Changes: TEG Dehydration: Removed ETI and Sivals due to lack of MSAs and no pursuit of such. Flares: Removed Flare Industries due to termination of MSA and buyout by Aereon.
------------------------	---

**THERMOWELLS**

ITEM	MANUFACTURER	PREFERENCE LEVEL	WEBSITE	ADDRESS	DATA SHEET	COMMENTS
Thermowells	Alloy Engineering	AV	www.thermowells.com	304 Seaview Avenue Bridgeport, CT 06607	<a href="http://www.thermowells.com/thermowells.html">http://www.thermowells.com/thermowells.html</a>	
	Ashcroft	AV	www.ashcroft.com	250 East Main Street Stratford, CT 06614	<a href="http://www.ashcroft.com/products/thermowells/">http://www.ashcroft.com/products/thermowells/</a>	
	Reotemp Instruments	AV	<a href="https://reotemp.com/temperature/thermowells/">https://reotemp.com/temperature/thermowells/</a>	10656 Roselle Street San Diego, CA 92121	<a href="https://reotemp.com/configurators/thermowell-configurator/">https://reotemp.com/configurators/thermowell-configurator/</a>	
	Rosemount	AV	www2.emersonprocess.com	8000 West Florissant Avenue P.O. Box 4100 St. Louis MO 63136	<a href="https://www.emerson.com/en-us/automation/measurement-instrumentation/temperature-measurement/thermowell-design-software">https://www.emerson.com/en-us/automation/measurement-instrumentation/temperature-measurement/thermowell-design-software</a>	
	Burns Engineering	AV	www.burnsengineering.com	10201 Bren Road E Minnetonka, MN 55343	<a href="http://www.burnsengineering.com/industrial-thermowells">http://www.burnsengineering.com/industrial-thermowells</a>	
	Temperature Measurement Systems	AV	www.tms80.com	1502 East Royall Boulevard Malakoff, TX 75148	<a href="https://www.tms80.com/thermowells">https://www.tms80.com/thermowells</a>	
	Thermocouple Technology, LLC (TTEC)	AV	<a href="http://www.tteonline.com/index.html">http://www.tteonline.com/index.html</a>	350 New Street Quakertown, PA 18951	<a href="http://thermocouples.tteonline.com/category/thermowells">http://thermocouples.tteonline.com/category/thermowells</a>	
	Smart Sensors, Inc.	AV	www.smartsensors.com	5175 Ashley Court Houston, TX 77041	<a href="http://www.smartsensors.com/thermowell.htm">http://www.smartsensors.com/thermowell.htm</a>	
	Wika	AV	www.wika.us	229 Beltway Green Boulevard Pasadena, TX 77503	<a href="https://www.wika.us/products_thermowells_en_co.WIKA">https://www.wika.us/products_thermowells_en_co.WIKA</a>	

REFERENCE CODES	
CODES	PREFERENCE LEVELS
AV	Approved Vendor
AVL	Approved Vendor with Limitations
EAR	Engineering Approval Required
RFR	Not Approved / Requires Further Research

October 2017 AML Update	No Changes
June 2018 AML Update	Formatting updates. Added Burns Engineering and Temperature Measurement Systems

**DESIGN AND CONSTRUCTION MANUAL**  
**2.3 APPROVED MANUFACTURERS LIST**



**TRANSMITTERS & TRANSDUCERS**

ITEM	MANUFACTURER	PREFERENCE LEVEL	CONTACT	WEBSITE
Transducers and Transmitters	Honeywell	EAR	Judy King - ACI Controls (412) 275-3992	www.honeywell.com
	Moore (Temperature and Frequency)	EAR	Jeff Russo - Gilson Engineering (304) 342-0012	www.miiinet.com
	Rosemount	EAR	Larry Gerwig - Emerson (304) 205-7733	www.emersonprocess.com
	Siemens	EAR	Jeff Russo - Gilson Engineering (304) 342-0012	www.automation.siemens.com
	Setra	EAR	KDK Reps (330) 342-0518	http://www.setra.com
	Vega (Level)	EAR	Chris Fellers - Andrews Industrial Controls (412) 352-2515	www.vega.com
	Wika	EAR	Motion Industries (304) 368-6300	www.wika.us
Yokogawa	EAR	Chris Fellers - Andrews Industrial Controls (412) 352-2515	http://www.yokogawa.com/us/	

REFERENCE CODES	
CODES	PREFERENCE LEVELS
AV	Approved Vendor
AVL	Approved Vendor with Limitations
EAR	Engineering Approval Required
RFR	Not Approved / Requires Further Research

August 2017 AML Update	General Updates to Contacts and Website. Added the following Manufacturers: Vega, Wika
------------------------	--

TUBING AND TUBE FITTINGS

ITEM	MANUFACTURER	PREFERENCE LEVEL	WEBSITE	ADDRESS	DATA SHEET	COMMENTS
Stainless Steel Tubing	Swagelok	AV	<a href="http://www.swagelok.com">www.swagelok.com</a>	29500 Solon Road Solon, OH, 44139	<a href="https://www.swagelok.com/en/product">https://www.swagelok.com/en/product</a>	
	Let-lok (Ham-Let)	AV	<a href="http://www.ham-let.com">www.ham-let.com</a>	12565 West Airport Boulevard Sugar Land, TX 77478	<a href="http://www.ham-let.com/catalogue">http://www.ham-let.com/catalogue</a>	
	SSP Tubing	AV	<a href="http://www.my-ssp-usa.com">www.my-ssp-usa.com</a>	8250 Boyle Parkway Twinsburg, OH 44087	<a href="http://www.my-ssp-usa.com/products">http://www.my-ssp-usa.com/products</a>	
	Sandvik	AV	<a href="http://www.materials.sandvik.com">www.materials.sandvik.com</a>	SE-811 81 Sandviken, Sweden		
	Mannesmann (Salzgitter Group)	AV	<a href="http://www.mannesmann-stainless-tubes.com">www.mannesmann-stainless-tubes.com</a>	Wiesenstraße 36 45473 Mulheim an der Ruhr, Germany		
	Eaton (Dekoron)	AV	<a href="http://www.unithermcc.com">www.unithermcc.com</a>	1531 Commerce Creek Boulevard Cape Coral, FL 33909	<a href="http://www.unithermcc.com/products?lang=en">http://www.unithermcc.com/products?lang=en</a>	
	RathGibson (PCC Energy Group)	AV	<a href="http://www.pccenergy.com">www.pccenergy.com</a>	2505 Foster Avenue Janesville, WI 53547	<a href="http://www.pccenergy.com/companies/rathgibson/rathgibson-products/">http://www.pccenergy.com/companies/rathgibson/rathgibson-products/</a>	
Stainless Steel Tube Fittings	Swagelok	AV	<a href="http://www.swagelok.com">www.swagelok.com</a>	29500 Solon Road Solon, OH, 44139	<a href="https://www.swagelok.com/en/product">https://www.swagelok.com/en/product</a>	
	Let-lok (Ham-Let)	AV	<a href="http://www.ham-let.com">www.ham-let.com</a>	12565 West Airport Boulevard Sugar Land, TX 77478	<a href="http://www.ham-let.com/catalogue">http://www.ham-let.com/catalogue</a>	
	Duolok (SSP)	AV	<a href="http://www.my-ssp-usa.com">www.my-ssp-usa.com</a>	8250 Boyle Parkway Twinsburg, OH 44087	<a href="http://www.my-ssp-usa.com/products">http://www.my-ssp-usa.com/products</a>	
	Hy-Lok	AV	<a href="http://www.hylokusa.com">www.hylokusa.com</a>	14211 Westfair West Drive Houston, TX 77041	<a href="http://www.hylokusa.com/products/">http://www.hylokusa.com/products/</a>	

REFERENCE CODES	
CODES	PREFERENCE LEVELS
AV	Approved Vendor
AVL	Approved Vendor with Limitations
EAR	Engineering Approval Required
RFR	Not Approved / Requires Further Research

October 2017 AML Update	Editorial Only
June 2018 AML Update	Formatting Updates. Added Hy-Lok

**UPS SYSTEMS**

ITEM	MANUFACTURER	PREFERENCE LEVEL	CONTACT	WEBSITE	COMMENT
UPS System	Allen Bradley	EAR		ab.rockwellautomation.com/Power-Supplies	
	APC - Schneider Electric	EAR		www.apc.com/us/en/	
	La Marche	EAR	Arthur N. Ulrich Company - Pataskala, OH (740) 927-8244	www.lamarchemfg.com	
	Emerson - SolaHD	EAR		www.emersonprocess.com	Formerly Bristol-Babcock
	Eaton -FERRUPS Tower	EAR		powerquality.eaton.com	Formerly Eaton Powerware

REFERENCE CODES	
CODES	PREFERENCE LEVELS
AV	Approved Vendor
AVL	Approved Vendor with Limitations
EAR	Engineering Approval Required
RFR	Not Approved / Requires Further Research

August 2017 AML Update	Removed "Best Ferrups" and added "Eaton - FERRUPS" in its place due to a buyout. Added SolaHD as Emerson due to buyout.
---------------------------	--

**DESIGN AND CONSTRUCTION MANUAL**  
**2.3 APPROVED MANUFACTURERS LIST**



**WATER VALVES**

ITEM	MANUFACTURER	PREFERENCE LEVEL	COMMENTS	WEBSITE
Water Valves	Demco	AV		<a href="http://cameron.slb.com">http://cameron.slb.com</a>
	Keystone	AV		<a href="http://valves.emerson.com/en/brands/keystone">http://valves.emerson.com/en/brands/keystone</a>
	Norriseal Wellmark	AV		<a href="http://norrisealwellmark.com/products/butterfly-valves/">http://norrisealwellmark.com/products/butterfly-valves/</a>
	Dezurik	AV		<a href="http://www.dezurik.com">www.dezurik.com</a>
	Bray	AV		<a href="http://www.bray.com">www.bray.com</a>

REFERENCE CODES	
CODES	PREFERENCE LEVELS
AV	Approved Vendor
AVL	Approved Vendor with Limitations
EAR	Engineering Approval Required
RFR	Not Approved / Requires Further Research

October 2017 AML General Update. Corrected names



**WATERLINE CONVEYANCE SYSTEMS**

ITEM	MANUFACTURER or SUPPLIER	PREFERENCE LEVEL	LOCATION	WEBSITE	COMMENTS
<b>HDPE Pipe</b>	Performance Pipe	AV	Plano, TX	www.performancepipe.com	
	WL Plastics	AV	Fort Worth, TX	www.wlplastics.com	
	Pipeline Plastics, LLC	AV	Westlake, TX; Decatur, TX; Belle Fourche, SD; Levelland, TX; Fair Bluff, NC	pipe.us.com	817-693-4100
	United Poly Systems	AV	Springfield, MO; Albuquerque, NM	unitedpolysystems.com	417-708-9887
	Premium Manufacturing (Supplier)	AV	Salt Lake City, UT	premiummanufacturing.com	Neil Sheldon 801-963-2663 (Owner)
	ISCO Industries, Inc. (Supplier)	AV	Louisville, KY	isco-pipe.com	Anthony Miller 319-595-4200 (Business Manager)
	SECOR (Supplier)	AV	Houston TX	www.secoronline.com	John Hudek 361-449-6858 (Sales Manager)
<b>HDPE Fittings &amp; Flange Adapters</b>	Performance Pipe	AV	Plano, TX	www.performancepipe.com	
	W&L Plastics	AV	Fort Worth, TX	www.wlplastics.com	
	GF Central Plastics	EAR	Dallas, TX	www.centralplastics.com	
	Core & Main	EAR	Poca, WV	https://coreandmain.com/	Fabricator of HDPE Fittings 98 Black Betsy Bottom Road, Poca WV 304-756-9901 800-635-6030
	ISCO Industries, Inc.	AV	Louisville, KY	isco-pipe.com	Anthony Miller 319-595-4200 (Business Manager)
	Premium Manufacturing	AV	Salt Lake City, UT	premiummanufacturing.com	Neil Sheldon 801-963-2663 (Owner)
	SECOR (Supplier)	AV	Houston TX	www.secoronline.com	John Hudek 361-449-6858 (Sales Manager)

**WATERLINE CONVEYANCE SYSTEMS**

ITEM	MANUFACTURER or SUPPLIER	PREFERENCE LEVEL	LOCATION	WEBSITE	COMMENTS
HDPE to Steel Transition Fittings	Poly-Cam	AV	Anoka, MN	www.polycam.com	
	ISCO Industries, Inc.	AV	Louisville, KY	isco-pipe.com	Anthony Miller 319-595-4200 (Business Manager)
	Premium Manufacturing	AV	Salt Lake City, UT	premiummanufacturing.com	Neil Sheldon 801-963-2663 (Owner)
	SECOR (Supplier)	AV	Houston TX	www.secoronline.com	John Hudek 361-449-6858 (Sales Manager)
Combination Air Valve	A.R.I.	AV	USA	www.arivalves.com	
Air Relief Valve	A.R.I.	AV	USA	www.arivalves.com	
HDPE Vault - Combination Air Valve	Lee Supply	AV	Charleroi, PA	leesupply.com	
Concrete Vault (Precast)	A.C. Miller Concrete Products	AV	Blairsville, PA	www.acmiller.com	
	Mack Industries	AV	Valley City, OH	www.mackconcrete.com	
Vault Internal Spools	Four Three Energy	AV	Sandyville, WV	https://www.43energy.com/	
	Keystone Fabrication	AV	Mt. Pleasant, PA		
	Somerset Steel Erection	AV	Boswell, PA	www.somersetsteel.com	

**WATERLINE CONVEYANCE SYSTEMS**

ITEM	MANUFACTURER or SUPPLIER	PREFERENCE LEVEL	LOCATION	WEBSITE	COMMENTS
Wedge Gate Valve	KITZ	AV	Stafford, TX	www.kitz.com	
	Sharpe	AV	Chicago, IL	www.sharpevalves.com	
	Milwaukee	AV	New Berlin, Wisconsin	www.milwaukeevalve.com	
Knife Gate Valve	DeZURIK	AV		www.dezurik.com	
	DSS	AV		www.dssvalves.com	
Check Valve	Crane	AV	Montgomery, TX	www.cranecpe.com	
	DeZURIK	AV		www.dezurik.com	
	Titan	AV	Lumberton, NC	www.titanfci.com	
	Williams	AV	Long Island City, NY	www.williamsvalve.com	
Pressure Relief Valve	GA Industries	AV	Cranberry Twp, PA	www.gaindustries.com	
Butterfly Valve	DeZURIK	AV		www.dezurik.com	
	Bray	AV		www.bray.com	

**WATERLINE CONVEYANCE SYSTEMS**

ITEM	MANUFACTURER or SUPPLIER	PREFERENCE LEVEL	LOCATION	WEBSITE	COMMENTS
HDPE Service Saddles	JCM Industries	AV	Nash, TX	<a href="http://www.jcmindustries.com">www.jcmindustries.com</a>	
HDPE Repair Clamp Coupling	Hymax	AV		<a href="http://www.hymaxusa.com">www.hymaxusa.com</a>	
	JCM Industries	AV	Nash, TX	<a href="http://www.jcmindustries.com">www.jcmindustries.com</a>	
Magnetic Flow Meter	Endress Hauser	AV	Greenwood, IN	<a href="https://www.us.endress.com/en">https://www.us.endress.com/en</a>	
	Rosemount	EAR		<a href="http://www.emerson.com/en-us/automation/measurement-instrumentation/flow-measurement">http://www.emerson.com/en-us/automation/measurement-instrumentation/flow-measurement</a>	Emerson
Ball Valves (3-in and Smaller)	Apollo	AV	Matthews, NC	<a href="http://www.apollovalves.com">www.apollovalves.com</a>	
Pressure Gauge	Wika	AV	Lawrenceville, GA	<a href="http://www.wika.us">www.wika.us</a>	
Gasket (HDPE Flange to Steel Flange)	Garlock Sealing Tech.	AV	Palmyra, NY	<a href="http://www.garlock.com">www.garlock.com</a>	
Gasket (Steel Flange to Steel Flange)	The Flexitallic Group	AV		<a href="http://flexitallic.com/">http://flexitallic.com/</a>	Style CG

REFERENCE CODES	
CODES	PREFERENCE LEVELS
AV	Approved Vendor
AVL	Approved Vendor with Limitations
EAR	Engineering Approval Required
RFR	Not Approved / Requires Further Research