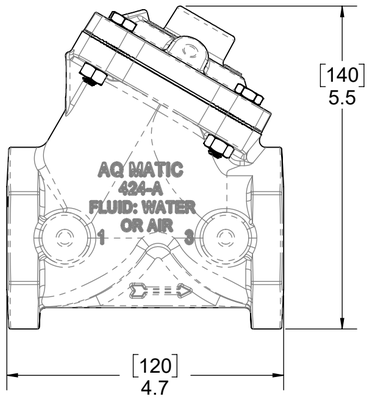
REPAIR PARTS KITS			
DESCRIPTION	**PART NUMBER**		
DIAPHRAGM & SEALS KIT CONSISTS OF ITEM NO'S: 5, 7, 8, 10, 12, 13, 15, 17	1070069 (424-RA)	1070082 (424-RAE)	1070094 (424-RAV)
	BUNA N SEALS AND BUNA DIAPHRAGM	EPDM SEALS AND BUNA DIAPHRAGM	FKM SEALS AND FKM DIAPHRAGM
INT. PARTS KIT (NORM. OPEN) CONSISTS OF STANDARD ITEM NO'S: 6 (2), 9, 11, 14	1070119 (424-RF)		
SEAT: ITEM NO. 16	1074245 (424-MO)		

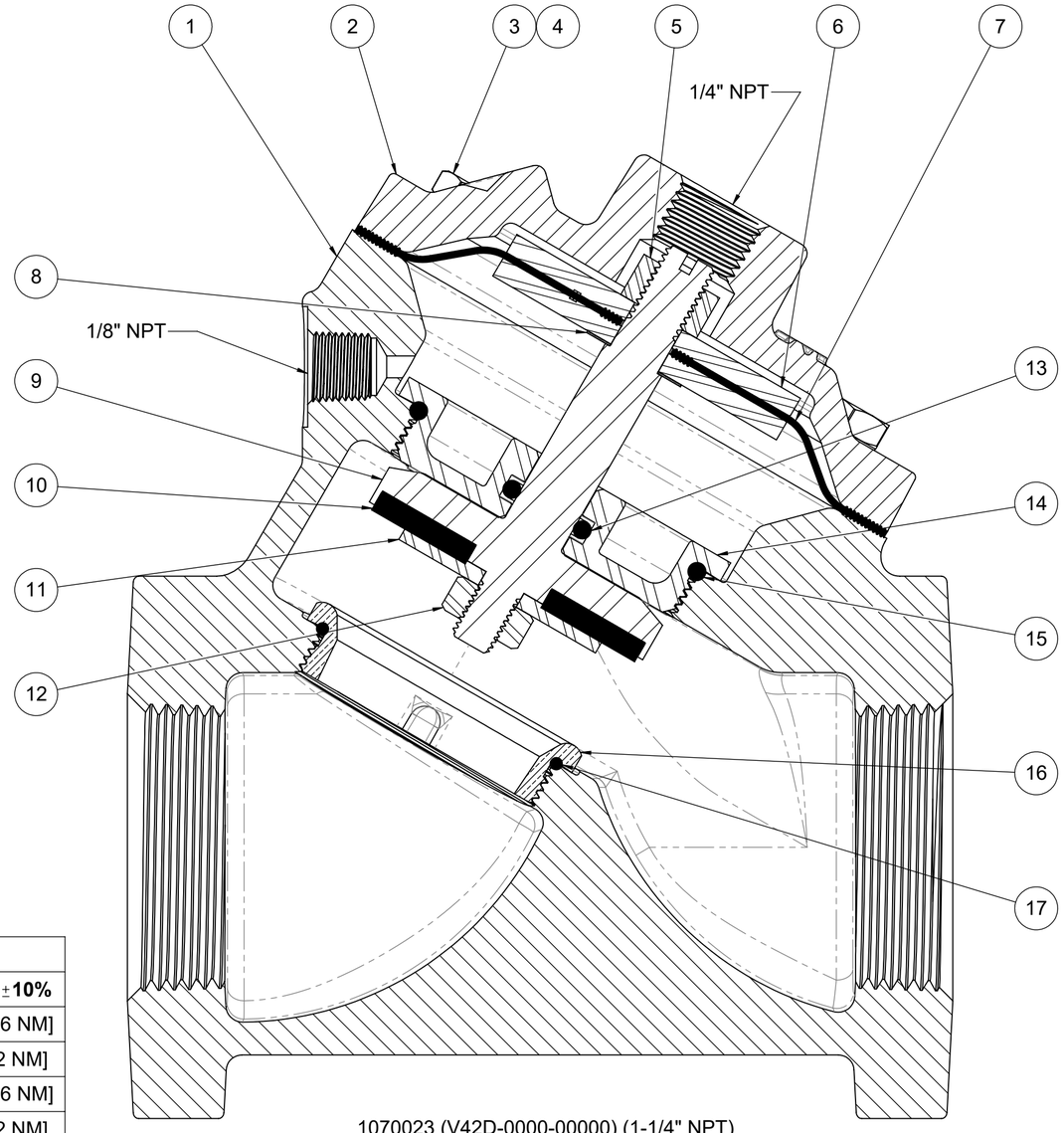
REVISION HISTORY				
ECN	REV.	DESCRIPTION OF CHANGE	DATE	APPROVED
2041	Z	PART NUMBER CORRECTIONS	3/16/2022	TRK
2055	AA	PART NUMBER CORRECTIONS	4/22/2022	TRK
2171	AB	REPLACED 1074226 (SHAFT GUIDE) WITH 43852	11/22/2022	TRK
2676	AC	REDRAWN WITH UPDATED MODELS, LEGACY TOOL ADDED	5/26/2026	PMJ

NOTES:

1. AMERICAN NATIONAL STANDARD TAPER PIPE THREADS (NPT) PER ANSI B2.1-1968.
2. VALVES AVAILABLE WITH B.S.P.T. END CONNECTIONS.

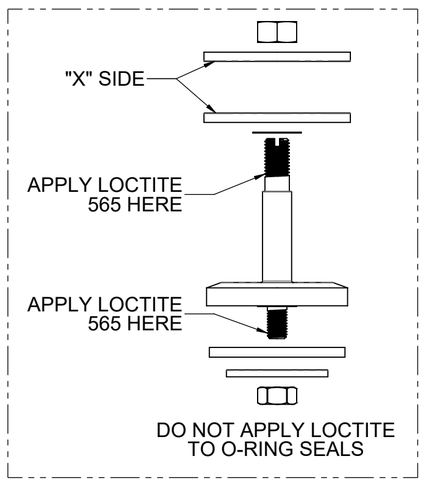
ASSEMBLY TOOLS	
DESCRIPTION	**KIT NO.**
FOR INSTALLATION AND REMOVAL OF SEAT (ITEM NO. 16) (TOOL NOT SHOWN)	1074247 (424-MT)
FOR INSTALLATION AND REMOVAL OF SHAFT GUIDE FOR VALVES MADE BEFORE NOV. 23, 2022 (ITEM NO. 14) (TOOL NOT SHOWN)	1074227 (424-GT)
FOR INSTALLATION AND REMOVAL OF SHAFT GUIDE FOR VALVES MADE AFTER NOV. 23, 2022 (ITEM NO. 14) (TOOL NOT SHOWN)	3/4" HEX. SOCKET





1070023 (V42D-0000-00000) (1-1/4" NPT)
1070025 (V42E-0000-00000) (1-1/2" NPT)

NORMALLY OPEN (STANDARD)



TORQUE TABLE		
ITEM #	**DESCRIPTION**	**TORQUED TO ±10%**
16	SEAT	120 IN-LBS [13.6 NM]
11	LOWER NUT	90 IN-LBS [10.2 NM]
14	SHAFT GUIDE	120 IN-LBS [13.6 NM]
5	UPPER NUT	90 IN-LBS [10.2 NM]
3 & 4	NUT & CAP SCREW	90 IN-LBS [10.2 NM]

ITEM NO.	DESCRIPTION	THREAD	MATERIAL	STD	PART NO.	MODEL	QTY.
1	VALVE BODY,424	1 - 1/4" NPT	CAST IRON	*	1074196	424-A5	1
		1 - 1/2" NPT		*	1074199	424-A6	
		1 - 1/4" NPT	BRASS		1074190	424-AB5	
		1 - 1/2" NPT			1074193	424-AB6	
		1 - 1/4" BSPT	CAST IRON		1074197	424-A5-BSP	
		1 - 1/2" BSPT			1074200	424-A6-BSP	
2	CAP, 424, 1/4" NPT		CAST IRON	*	1074202	424-C	1
			BRASS		1074206	424-CB	
3	HEX SCREW, 1/4-20 X 1 1/8"		PLATED STEEL	*	1072399	SCZ-0007	4
			STAINLESS		1072392	SCS-0156	
4	NUT,HEX,1/4-20		PLATED STEEL	*	1071656	NUZ-0008	4
			STAINLESS		1071649	NUS-0007	
5	NUT,HEX,5/16-24,SS			*	1263853	RMET	1
6	PLATE,424 DIAP/425 DISC PLATE			*	43943	424-DS	2
7	DIAPHRAGM,424		BUNA	*	1074222	424-FB	1
			FKM		1074224	424-FV	
8	COPPER GASKET			*	1074252	424-R	1
9	NORMALLY OPEN COMBO SHAFT			*	44013	424-L2	1
10	DISC,424		BUNA	*	1074232	424-J	1
			EPDM		1074233	424-JE	
			FKM		1074236	424-JV	
			HYCAR		1074234	424-JH	
11	PLATE,DIAPH-421/DISC-424 SS			*	43942	424-H	1
12	NUT,HEX,1/4-28,SS			*	1263852	NUS-0010	1
13	O-RING, -110		BUNA TF COAT	*	1071689	ORB-110TC	1
			EPDM TF COAT		1071726	ORE-110TC	
			FKM TF COAT		1239021	ORV-110TC	
14	SHAFT GUIDE, 424, HEX, MCHD			*	43852	424-GGS	1
15	O-RING,-132		BUNA	*	1071695	ORB-132	1
			EPDM		1071734	ORE-132	
			FKM		1071806	ORV-132	
16	SEAT,424,BRASS,MCHD			*	1074245	424-MO	1
17	O-RING,-028		BUNA	*	1071678	ORB-028	1
			EPDM		15243	ORE-028	
			FKM		1071793	ORV-028	

SEE SHEET 2 FOR CONFIGURATION OPTIONS

INTERPRET DIMENSIONS & TOLERANCES PER ASME Y14.5M-2018

PRIMARY UNITS SHOWN IN INCHES.
SECONDARY UNITS SHOWN IN MILLIMETERS.

THIRD ANGLE PROJECTION

DEFAULT TOLERANCES:
ANGLES : ± 1°
1 PLACE .X: ± .100 [2.54]
2 PLACE .XX: ± .010 [0.3]
3 PLACE .XXX: ± .005 [0.13]

THE COMPONENT OR PRODUCT DESCRIBED IN THIS DOCUMENT MUST COMPLY WITH **RoHS 3 EU (EUROPEAN UNION) DIRECTIVE 2015/863** AND **EU REACH REGULATION (EC) 1907/2006**.

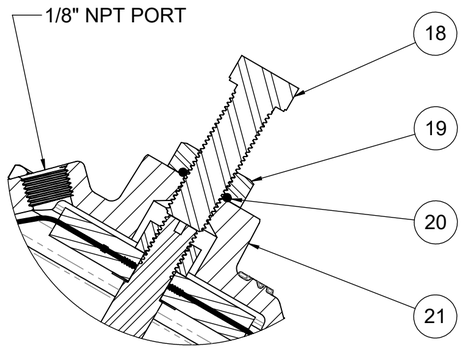
THIS DOCUMENT IS THE PROPERTY OF AQ-MATIC. REPRODUCTION, USE DISCLOSURE, OR TRANSMISSION OF THIS DOCUMENT, IN PART OR IN WHOLE, IS PROHIBITED WITHOUT THE WRITTEN CONSENT OF AQ-MATIC ENGINEERING. THIS DOCUMENT AND ANY COPIES SHALL BE RETURNED TO AQ-MATIC UPON REQUEST.

AQMATIC Valves & Controls

DESCRIPTION
CATALOG SHEET, 424, DIAPHRAGM VALVE STANDARD MODEL

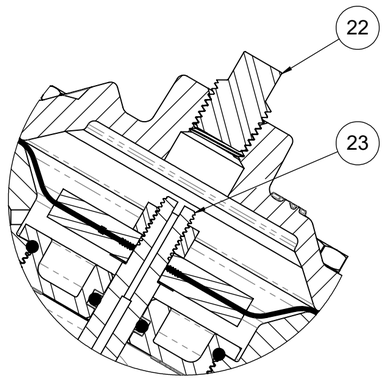
DWG NO.	1077614	REV.	AC
SIZE C	SCALE 3:2	SHEET 1 OF 2	

REVISION HISTORY				
ECN	REV.	DESCRIPTION OF CHANGE	DATE	APPROVED
SEE SHEET 1 FOR REVISION HISTORY				



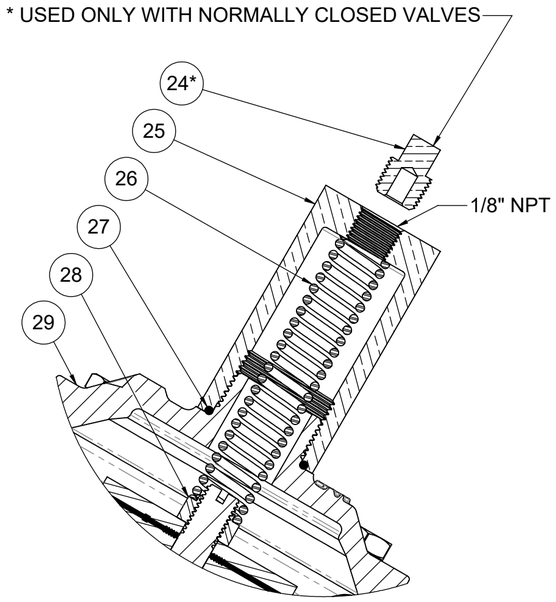
1072720 (V42D-0010-00000) (1-1/4" NPT)
1070028 (V42E-0010-00000) (1-1/2" NPT)

LIMIT STOP



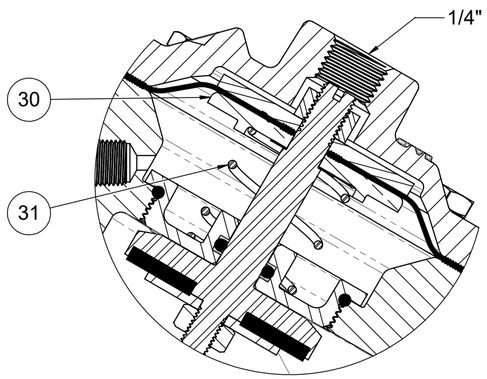
1072723 (V42D-0030-00000) (1-1/4" NPT)
1070026 (V42E-0030-00000) (1-1/2" NPT)

NORMALLY CLOSED



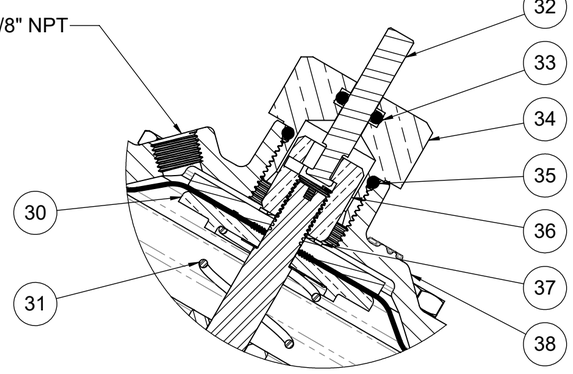
1072716 (V42D-0002-00000) (1-1/4" NPT)
1072792 (V42E-0002-00000) (1-1/2" NPT)

SPRING ASSIST CLOSED



1072715 (V42D-0001-00000) (1-1/4" NPT)
1070027 (V42E-0001-00000) (1-1/2" NPT)

SPRING ASSIST OPEN



1072722 (V42D-0021-00000) (1-1/4" NPT)
1072804 (V42E-0021-00000) (1-1/4" NPT)

POSITION INDICATOR

ITEM NO.	DESCRIPTION	MATERIAL	STD	PARTNO	MODEL	QTY.
LIMIT STOP MODEL						
18	SCREW,HEX HD CAP,3/8-24 X 1.5		*	1072362	SCS-0031	1
19	NUT,STOP,3/8-24,MACHINED		*	4510459	400-H	1
20	O-RING, 2-012, NITRILE		*	1071668	ORB-012	1
21	CAP, 424, LIMIT STOP	CAST IRON	*	1074210	424-CCC	1
		BRASS		1074213	424-CCCB	
NORMALLY CLOSED MODEL						
22	PLUG,PIPE,1/4 MNPT		*	1071918	PLZ-0008	1
				1071904	PLB-0009	
23	NORMALLY CLOSED COMBO SHAFT		*	44013-02	424-LL2	1
SPRING ASSIST CLOSED MODEL						
24*	PLUG,PIPE,1/8 MNPT,BRS,SQ H			1071903	PLB-0007	1
25	RETAINER NUT, 424		*	1074274	424-TT	1
26	SPRING,COMPRESSION,302 SS		*	1074270	424-SS	1
27	O-RING, 2-020,BUNA		*	1071674	ORB-020	1
28	NUT,CENTERING,424,MCHD		*	1074276	424-X	1
29	CAP, 424, SPRING ASSIST CLOSED	CAST IRON	*	1074208	424-CC	1
		BRASS		1074209	424-CCB	
SPRING ASSIST OPEN MODEL						
30	PLATE,DIAPHRAGM,424,SAO,SS		*	43728	-	1
31	SPRING,316S		*	1236766	424-S	1
POSITION INDICATOR MODEL						
32	PI ROD,424,SS,MACH		*	1074251	424-PM	1
33	O-RING,-108,BUNA,TFLN CTD		*	1071688	ORB-108TC	1
34	ROD,GUIDE,PI,V42		*	1074121	421-GF	1
35	O-RING,-116,BUNA		*	1071692	ORB-116	1
36	TOP NUT		*	1074272	424-TB	1
37	LOCKWASHER,5/16,INTRNL TOOTH		*	1073590	WAS-0007	1
38	CAP, 424, POSITION INDICATOR	CAST IRON	*	1074217	424-CF	1
		BRASS		1074218	424-CFB	

CONVERSION KITS	
DESCRIPTION	**KIT NO.**
CONVERSION KIT (LIMIT STOP) CONSISTS OF STANDARD ITEM NO'S: 18 THRU 21	1074243 (424-LSC)
CONVERSION KIT (SPRING ASSIST CLOSED) CONSISTS OF STANDARD ITEM NO'S: 25 THRU 29	1074266 (424-SCC)
CONVERSION KIT (SPRING ASSIST OPEN) CONSISTS OF STANDARD ITEM NO'S: 8, 30, 31	1074269 (424-SOC)
CONVERSION KIT (POSITION INDICATOR) CONSISTS OF STANDARD ITEM NO'S: 32 THRU 38	1074250 (424-PIC)

REPAIR PARTS KITS	
DESCRIPTION	**KIT NO.**
INTERNAL PARTS KIT (LIMIT STOP) CONSISTS OF STANDARD ITEM NO'S: 18, 19, 20	1074242 (424-LS)
INTERNAL PARTS KIT (NORMALLY CLOSED) CONSISTS OF STANDARD ITEM NO'S: 6 (X2), 11, 14, 23	1070130 (424-RG)
INTERNAL PARTS KIT (SPRING ASSIST CLOSED) CONSISTS OF STANDARD ITEM NO'S: 25 THRU 28	1074265 (424-SC)
INTERNAL PARTS KIT (SPRING ASSIST OPEN) CONSISTS OF STANDARD ITEM NO'S: 8, 30, 31	1074268 (424-SO)
INTERNAL PARTS KIT (POSITION INDICATOR) CONSISTS OF STANDARD ITEM NO'S: 32 THRU 37	1074249 (424-PI)

TORQUE TABLE		
ITEM NO.	**DESCRIPTION**	**TORQUED TO ±10%**
19	NUT,STOP,3/8-24,MACHINED	90 IN-LBS [10.2 NM]
24	NUT,SPRING RETAINER,424,MCHD	120 IN-LBS [13.6 NM]
27	NUT,CENTERING,424,MCHD	90 IN-LBS [10.2 NM]
33	ROD,GUIDE,PI,V42	120 IN-LBS [13.6 NM]
35	TOP NUT	90 IN-LBS [10.2 NM]

SEE SHEET 1 FOR STANDARD NORMALLY OPEN MODEL

INTERPRET DIMENSIONS & TOLERANCES PER ASME Y14.5M-2018

PRIMARY UNITS SHOWN IN INCHES.
SECONDARY UNITS SHOWN IN MILLIMETERS.

THIRD ANGLE PROJECTION

DEFAULT TOLERANCES:
ANGLES : ± 1°
1 PLACE .X: ± .100 [2.54]
2 PLACE .XX: ± .010 [0.3]
3 PLACE .XXX: ± .005 [0.13]

THE COMPONENT OR PRODUCT DESCRIBED IN THIS DOCUMENT MUST COMPLY WITH **RoHS 3 EU (EUROPEAN UNION) DIRECTIVE 2015/863** AND **EU REACH REGULATION (EC) 1907/2006**.
THIS DOCUMENT IS THE PROPERTY OF AQ-MATIC. REPRODUCTION, USE DISCLOSURE, OR TRANSMISSION OF THIS DOCUMENT, IN PART OR IN WHOLE, IS PROHIBITED WITHOUT THE WRITTEN CONSENT OF AQ-MATIC ENGINEERING. THIS DOCUMENT AND ANY COPIES SHALL BE RETURNED TO AQ-MATIC UPON REQUEST.

AQMATIC Valves & Controls

DESCRIPTION
CATALOG SHEET, 424, DIAPHRAGM VALVE STANDARD MODEL

DWG NO.	1077614	REV.	AC
SIZE C	SCALE 1:1	SHEET 2 OF 2	