

ALL DIMENSIONS ARE ±0.06 EXCEPT AS NOTED

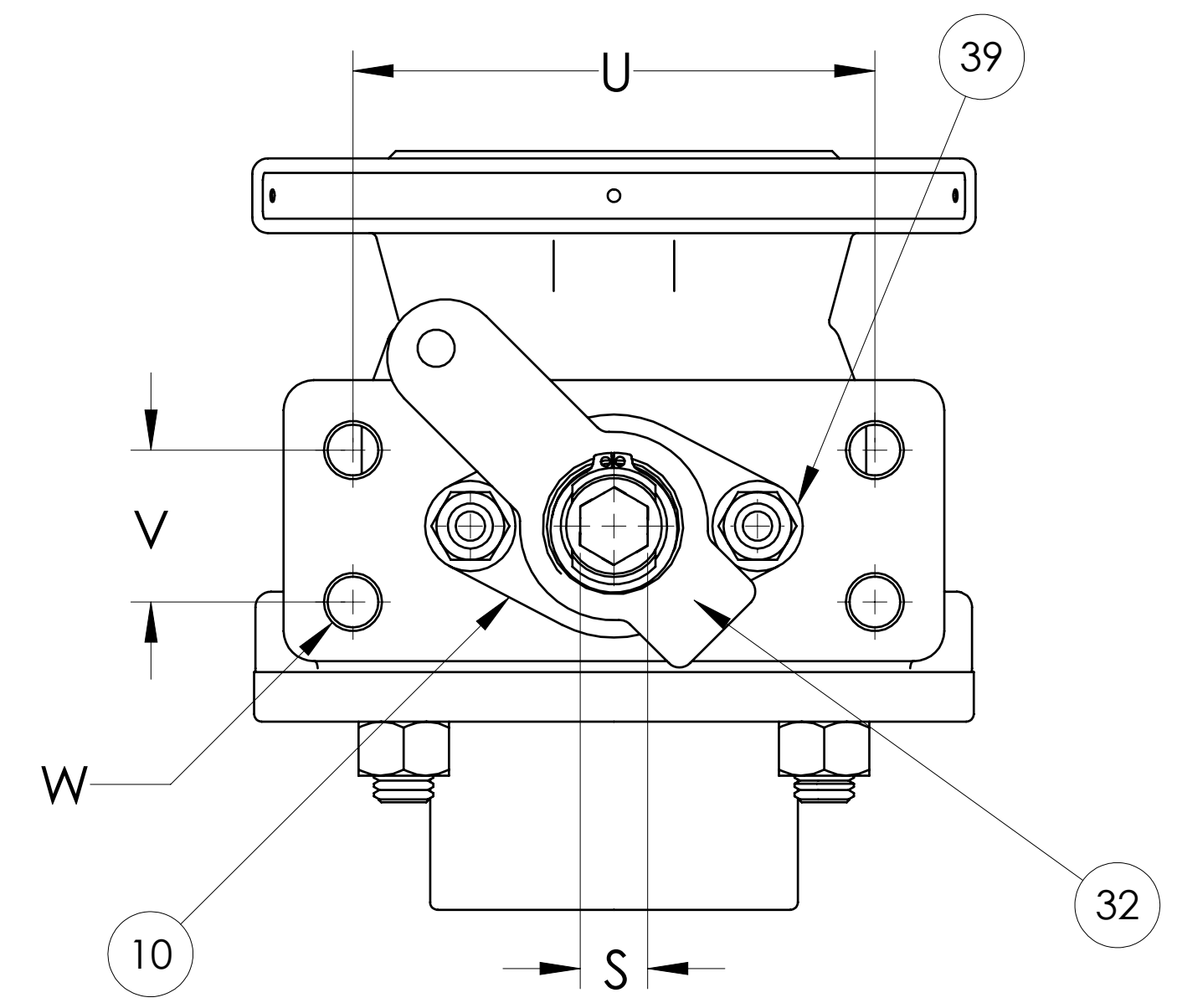
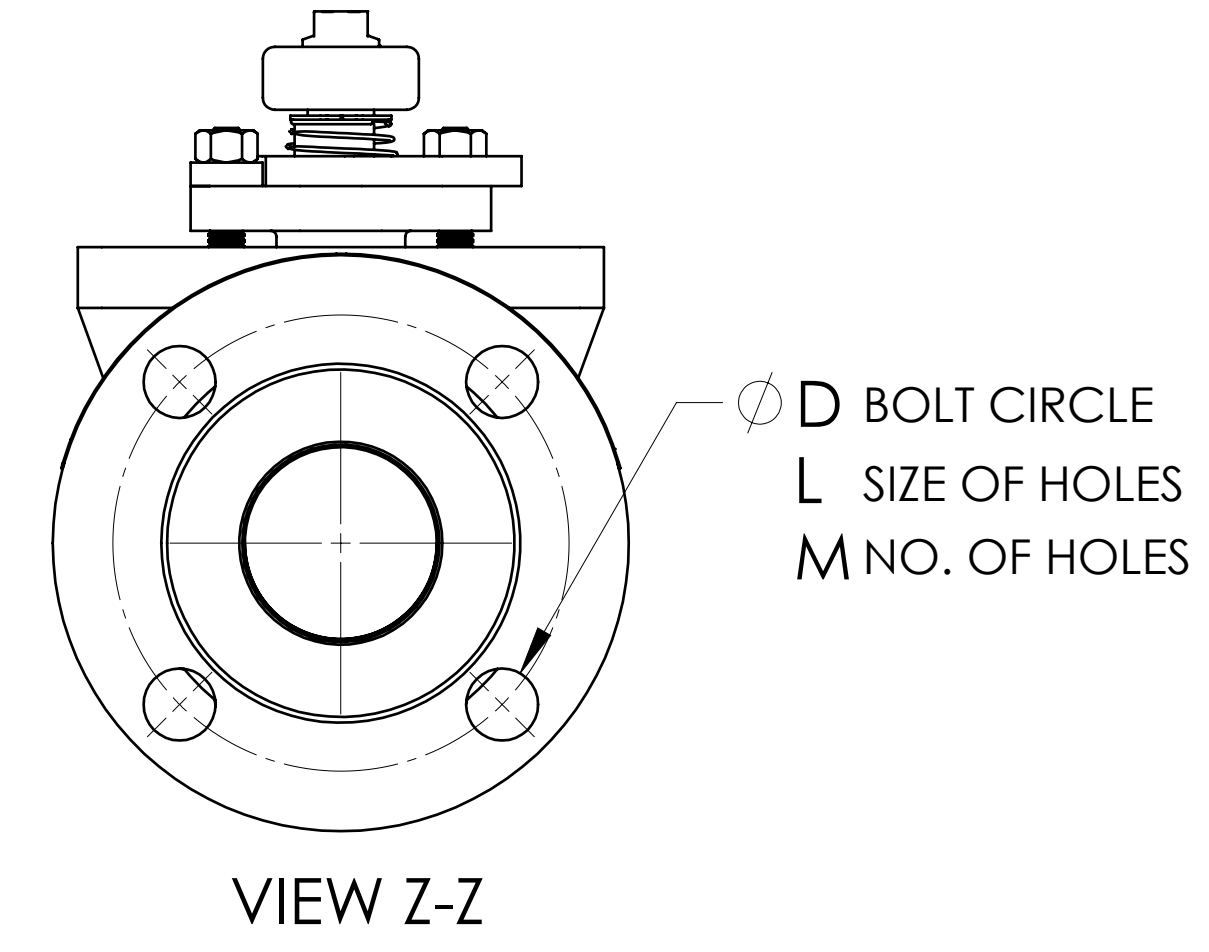
VALVE SIZE	A	B	C	D	E	G	H	J	K	L	M	P	S	T	U	V	W	X
1"	SEE SHEETS 3 AND 4																	
2"	6.29	3.19	6.00	4.75	2.00	5.05	SEE NOTE 5	5.50	3.09	0.75	4	0.24	0.69	0.62	4.33	1.26	1/2-13	2 NPT
3"	8.02	4.11	7.50	6.00	3.00	5.87	5	6.32	3.90	0.75	4	0.24	0.69	0.75	4.33	1.26	1/2-13	3 NPT

LET	ECN	REVISION	DRAWN	APPROVED	DATE
A	18356	1.4 WAS 1.2	BA	PJD	25 JUN, 02
B	40702	REDRAWN IN SOLIDWORKS. SEE ECN FOR CHANGES.	BC	KAS	1/31/12

DEPTH TO SET STUDS		
VALVE SIZE	R	Y*
1"	-	
2"	1.24	1.2
3"	1.24	1.4

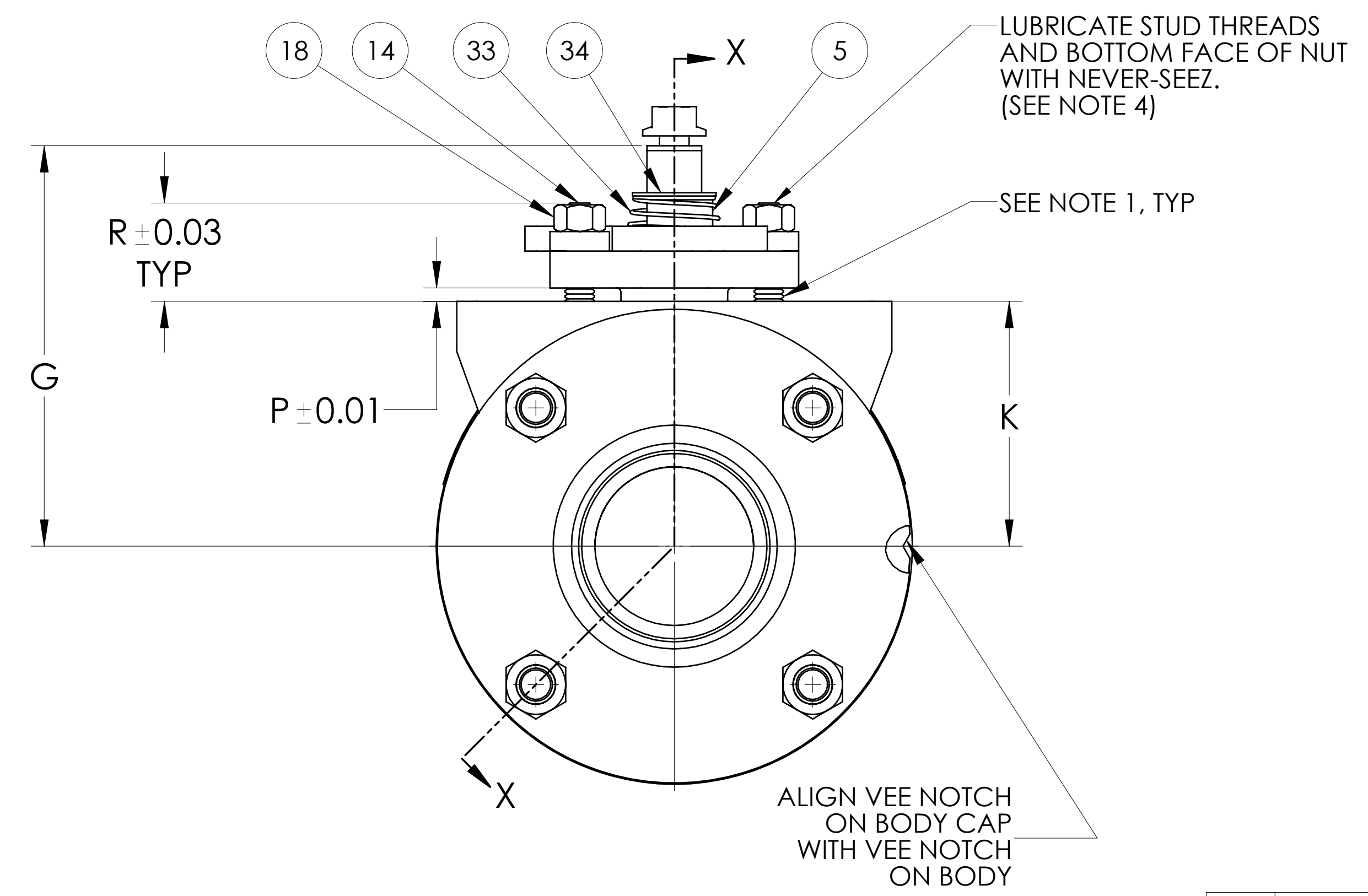
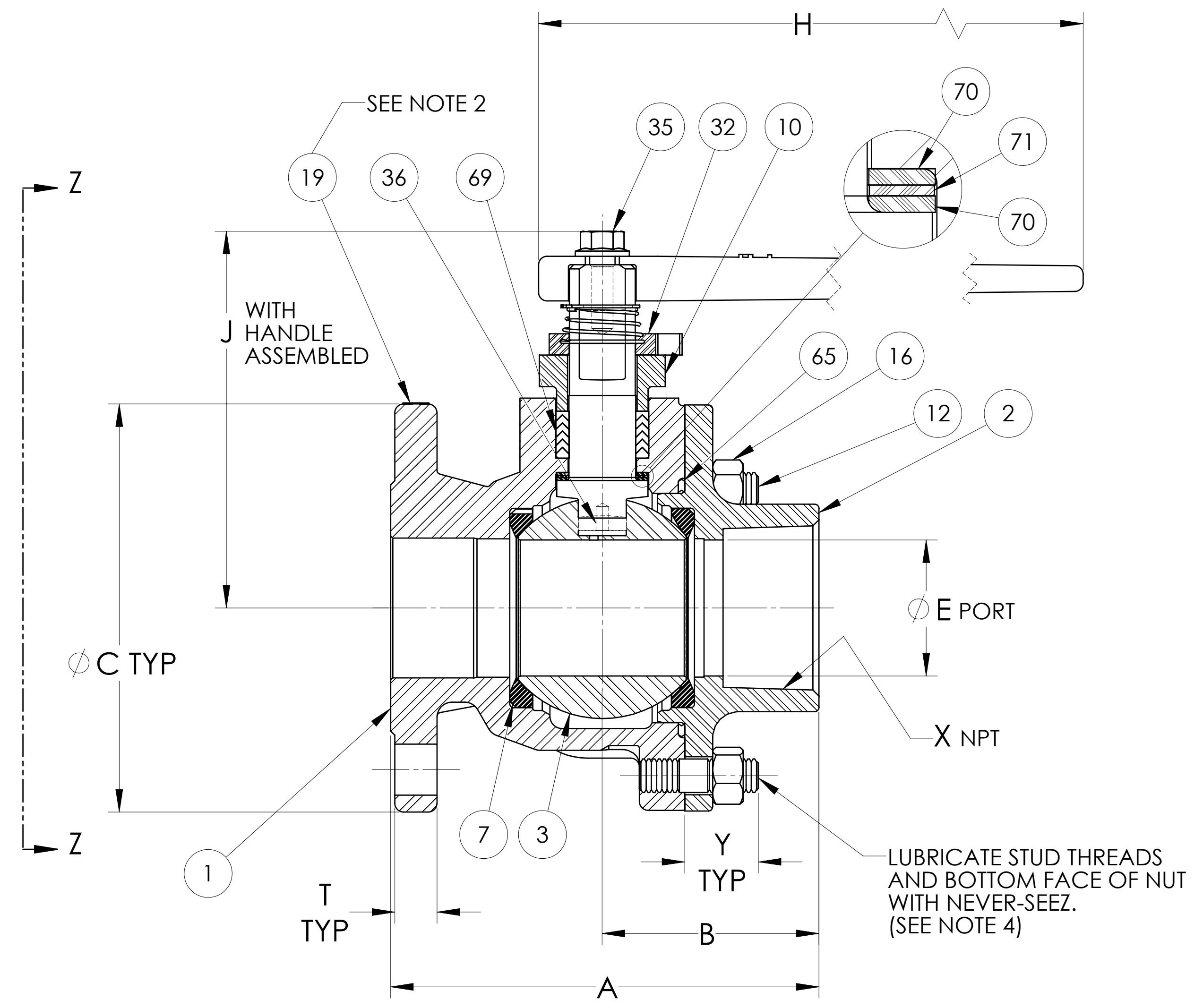
*NOM. REF

BODY JOINT STUD & NUT		
VALVE SIZE	QTY	
1"	-	
2"	4	
3"	6	



NOTES:

1. USE LOCTITE #271 ON STUD THREADS PER JSA-34.
2. ATTACH IDENTIFICATION TAG PER JMA-98.
3. FOR INSTALLATION MAINTENANCE & OPERATING INSTRUCTIONS SEE IMO-R23.
4. WHERE IDENTIFICATION APPEARS ON NUTS OR STUD FACE ASSEMBLY WITH IDENTIFICATION ALWAYS VISIBLE.
5. FOR 2" AND 3" 9RFT ONLY:
6" LONG HANDLES - 012 9057 36.
9" LONG HANDLES - 012 9051 36.



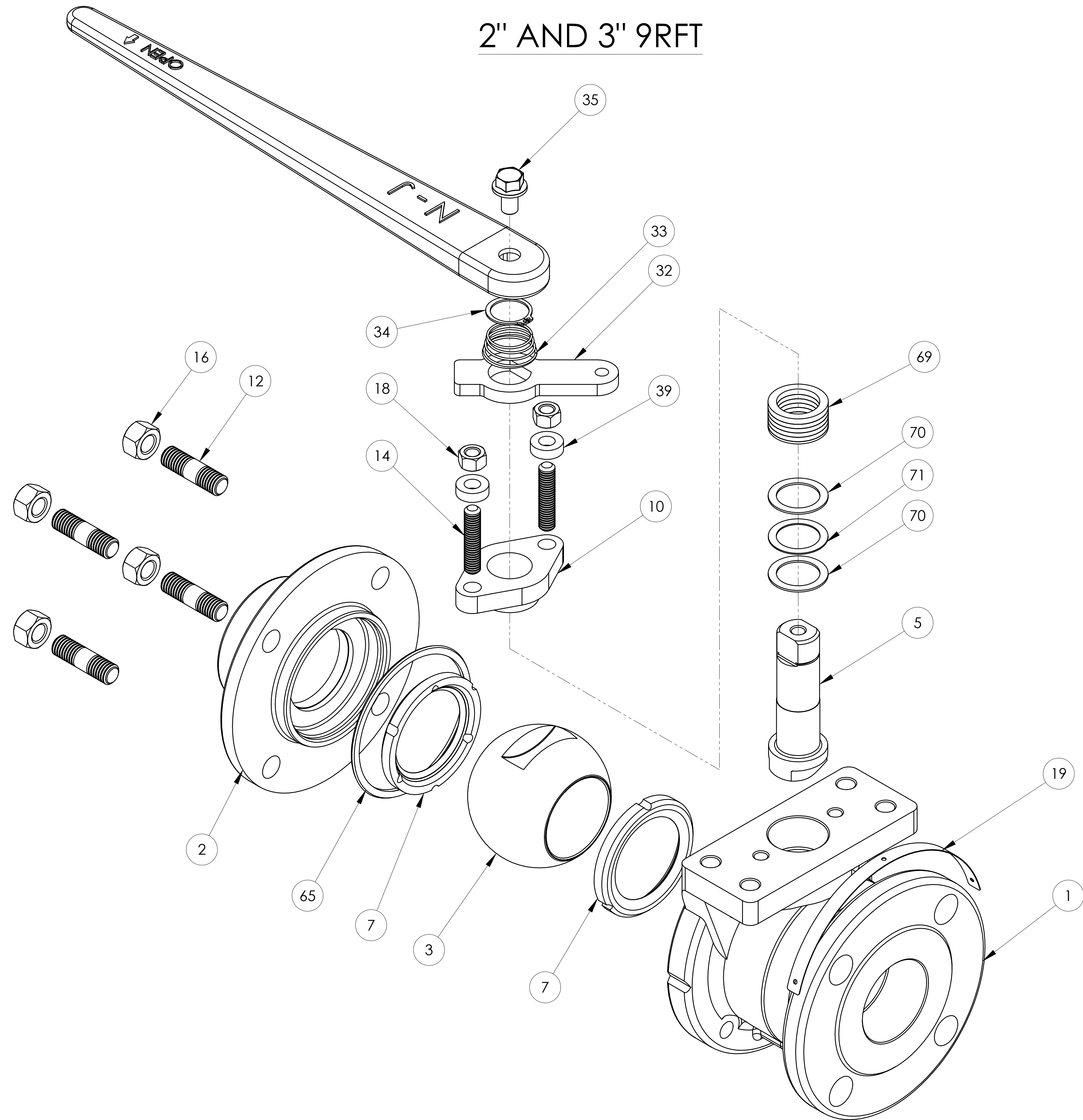
THIS DRAWING AND ALL INFORMATION CONTAINED HEREIN ARE THE PROPERTY OF METSO AUTOMATION USA, INC. AND ARE NOT TO BE USED EXCEPT AS AUTHORIZED BY METSO AUTOMATION USA, INC.

UNLESS OTHERWISE NOTED DIMENSIONING, TOLERANCING, & DRAWING INTERPRETATION IS IN ACCORDANCE WITH ASME Y14.5M

ANGLES = ±5° FINISH = REMOVE SHARP EDGES AND CORNERS TO .02 - .03 RADIUS OR CHAMFER, DIMENSIONS IN INCHES.

MATERIAL CODE	MATERIAL TYPE	MATERIAL SPECIFICATION	IDENT MARK
JSA-1, JSA-10	JSA-17, JSA-80	JSA-34	JST-02
TITLE: ASSEMBLY 1", 2", 3" 9RFT RAILROAD VALVE			SCALE: 3:4
DRAWN: BA			DATE: 8/29/01
APPVD: PJD			DATE: 8/29/01
SIZE: D			REV: B

2" AND 3" 9RFT



ITEM NO.	PART NAME	QTY.
1	BODY	1
2	BODY CAP	1
3	BALL	1
5	STEM	1
7	SEAT	2
10	COMPRESSION PLATE	1
12	BODY STUD	*
14	BONNET STUD	2
16	BODY STUD NUT	*
18	BONNET STUD NUT	2
19	IDENTIFICATION TAG	1
32	INDICATOR STOP	1
33	SPRING	1
34	RETAINING RING	1
35	HANDLE SCREW	1
36	GROUNDING SPRING	1
39	STOP BUSHING	1
65	BODY GASKET	1
69	PACKING	1
70	STEM BEARING	2
71	SECONDARY STEM SEAL	1

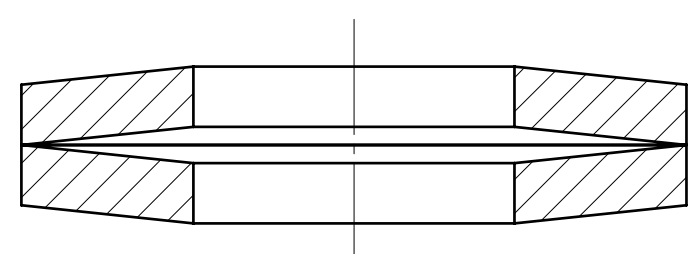
* SEE BODY JOINT STUD AND NUT TABLE FOR QUANTITIES (SHT. 1)

<small>THIS DRAWING AND ALL INFORMATION CONTAINED HEREIN ARE THE PROPERTY OF METSO AUTOMATION USA, INC. AND ARE NOT TO BE USED EXCEPT AS AUTHORIZED BY METSO AUTOMATION USA, INC.</small> <small>UNLESS OTHERWISE NOTED DIMENSIONING, TOLERANCING, & DRAWING INTERPRETATION IS IN ACCORDANCE WITH ASME Y14.5M</small> <small>ANGLES = ±5° FINISH = 250 REMOVE SHARP EDGES AND CORNERS TO .02 - .03 RADIUS OR CHAMFER, DIMENSIONS IN INCHES.</small>	<small>SPECIFICATIONS TO BE USED IN CONJUNCTION WITH THIS DRAWING</small> JSA-1, JSA-10 JSA-17, JSA-80 JSA-34 JST-02 JMA-98	<small>MAKE FROM PART NO.</small> DO NOT SCALE DRAWING	<small>SCALE</small> 3:4	
	<small>TITLE:</small> ASSEMBLY 1", 2", 3" 9RFT RAILROAD VALVE	<small>DRAWN</small> BA	<small>DATE</small> 8/29/01	<small>REV</small> B
	<small>SIZE</small> D	<small>DWG NO.</small> 5428	<small>DATE</small> 8/29/01	<small>APPVD.</small> PJD
	METSO AUTOMATION USA, INC. SHREWSBURY, MASSACHUSETTS		SHEET 2 OF 4	

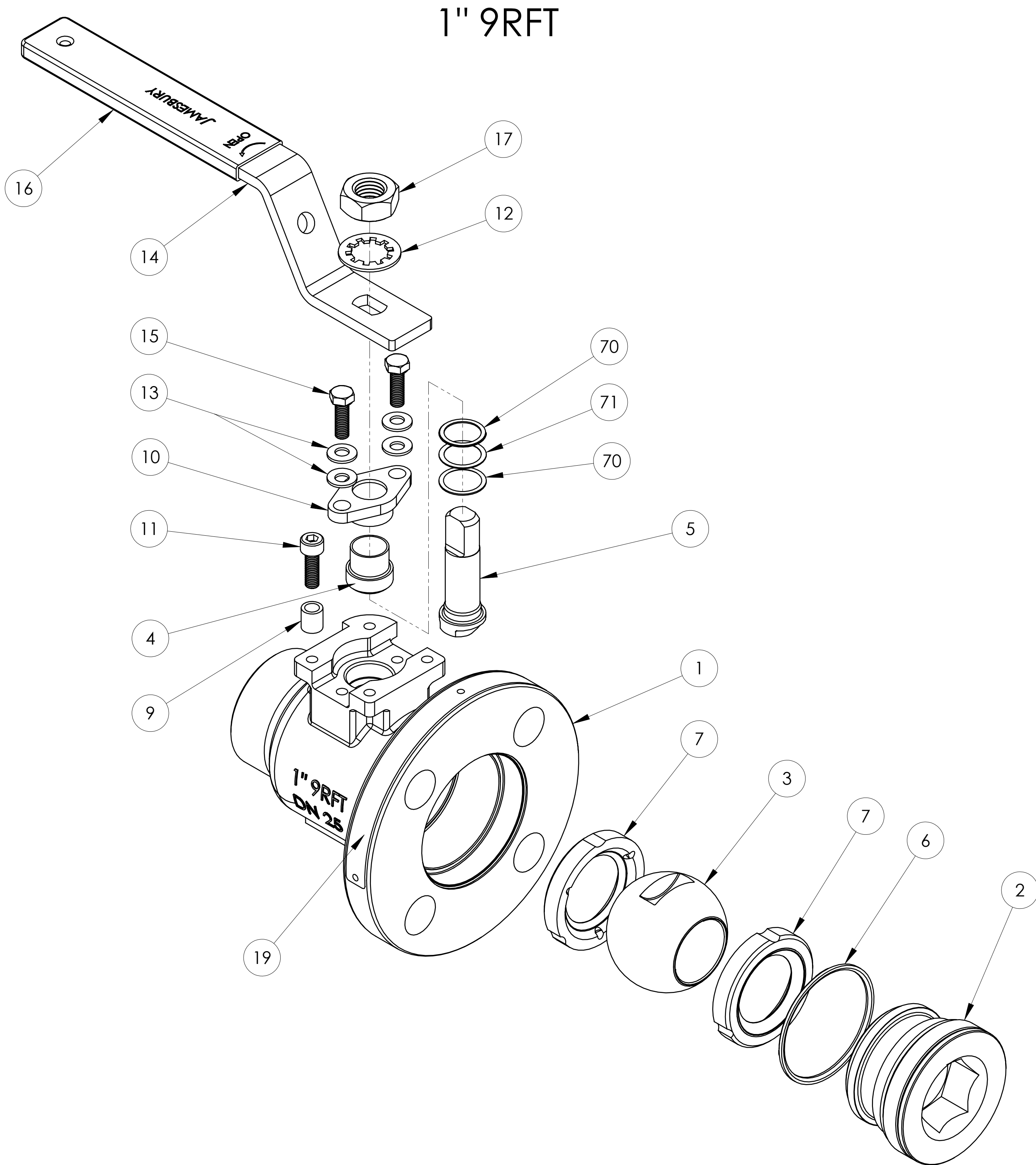
TABLE 1 INSERT TORQUE	
VALVE SIZE	TORQUE LB-FT (±10%)
1"	200

TABLE 2 HEX HEAD CAP SCREW TORQUE	
VALVE SIZE	TORQUE LB-IN.
1"	20

TABLE 3 HANDLE NUT TORQUE	
VALVE SIZE	TORQUE LB-FT
1"	20-25



PROPER DISC SPRING ORIENTATION



ITEM NO.	DESCRIPTION	QTY.
1	BODY	1
2	INSERT	1
3	BALL	1
4	STEM SEAL	1
5	STEM	1
6	BODY SEAL	1
7	SEAT	2
9	STOP SPACER	1
10	COMPRESSION PLATE	1
11	SOCKET HEAD CAP SCREW	1
12	SHAKEPROOF WASHER	1
13	DISC SPRING	4
14	LEVER HANDLE	1
15	HEX HEAD CAP SCREW	2
16	LEVER HANDLE VINYL COATING	1
17	HANDLE NUT	1
19	IDENTIFICATION TAG	1
70	STEM BEARING	2
71	SECONDARY STEM SEAL	1

THIS DRAWING AND ALL INFORMATION CONTAINED HEREIN ARE THE PROPERTY OF METSO AUTOMATION USA, INC. AND ARE NOT TO BE USED EXCEPT AS AUTHORIZED BY METSO AUTOMATION USA, INC.

UNLESS OTHERWISE NOTED DIMENSIONING, TOLERANCING, & DRAWING INTERPRETATION IS IN ACCORDANCE WITH ASME Y14.5M

ANGLES = ±5° FINISH = 250 REMOVE SHARP EDGES AND CORNERS TO .02 - .03 RADIUS OR CHAMFER, DIMENSIONS IN INCHES.

THIS DRAWING IS TO BE USED IN CONJUNCTION WITH THIS DRAWING AS AUTHORIZED BY METSO AUTOMATION USA, INC.

JSA-1, JSA-10
JSA-17, JSA-80
JSA-34
JST-02
JMA-98

DO NOT SCALE DRAWING

SCALE 1:1

TITLE: ASSEMBLY
1", 2", 3" 9RFT
RAILROAD VALVE

DRAWN BA DATE 8/29/01
APPVD. PJD DATE 8/29/01

SIZE DWG NO. 5428

REV B

METSO AUTOMATION USA, INC. SHREWSBURY, MASSACHUSETTS

SHEET 4 OF 4