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A Data Sheet is included for each line item on the purchase order.

Document numbers are listed at the bottom of the Data Sheet.

Any one drawing may apply to more than one item number.

All documents are assembled in alpha/numeric order within each section

- DATA SHEETS
- INSTALLATION DRAWINGS



Submittal Data Sheet

Date: 04/11/2017

ALL BIDDERS
USA

QUOTE NUMBER 69106
REV

PROJ.

Fact. ITEM	Cust. ITEM	QTY	DESCRIPTION
1		1	RCV.12.F1S.S3.TC.S3-S3-H-S5-S9*DR-145A-SP60-R.AFR2

Style	RCV	Rotary Control Valve
Size	12	12 Inch (300mm)
End Connection	F1S	Flanged Drilling; ISA 75.08.02 and IEC 534-3-2F-F
Body Material	S3	317 Stainless Steel
Packing	TC	PTFE Chevron; Temperature to 500° F. (250° C.)
Plug Material	S3	317 Stainless Steel; Electroless Nickel Coated to 800 Degree F.
Seat Material	S3	317 Stainless Steel; Electroless Nickel Coated; Temperature to 800° F.
Trim Size	H	High Capacity
Shaft	S5	17-4PH Stainless Steel to 800° F.
Bushing	S9	440C Stainless Steel to 800° F.
Coating or Paint	SC0	8 mils minimum (non-stainless steel parts) of Blue DeZURIK Epoxy (NSF Std. 61) on Exterior and Standard (SP10) surface prep
Actuator Type	DR-145A-SP60-R	Diaphragm; 145 Sq In; 60 PSI; Spring To Close
Accessories	AFR2	Air Filter Regulator with Gage; 1/4" NPT

RELATED DOCUMENTS

A047454	DWG INST RCV F1S DR-145A 10&12"
A049202	DWG VALVE ASSY RCV F 1-12"
A045997	DWG ACT DR-145A/250A DIAPH
A039819	DWG CONN PARTS PR/MG/DR/CMD/LT
A054211	DWG INST ACC AFR2 DR-145A/250A

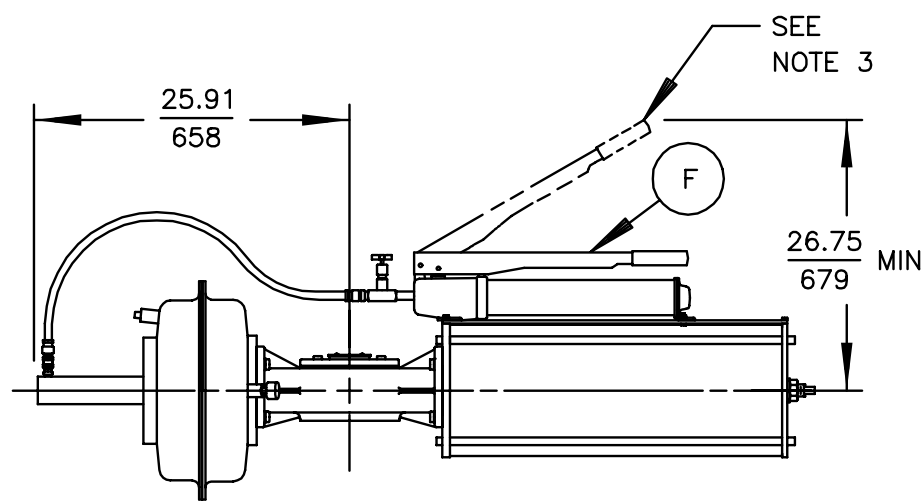
VALVE SIZE		DIMENSIONS <small>INCHES MILLIMETERS</small>										
INCH	MM	A ISA	B	C	D	E	F	G	H	J	K ISA	
10	250	$\frac{11.69}{297}$	$\frac{5.50}{140}$	$\frac{8.91}{226}$	$\frac{9.50}{241}$	$\frac{15.94}{405}$	$\frac{1.31}{33}$	12	$\frac{1.00}{25}$	$\frac{14.25}{362}$	$\frac{16.00}{406}$	$\frac{1.88}{48}$
12	300	$\frac{13.31}{338}$	$\frac{6.38}{162}$	$\frac{9.91}{252}$	$\frac{10.50}{267}$	$\frac{16.94}{430}$	$\frac{1.38}{35}$	12	$\frac{1.00}{25}$	$\frac{17.00}{432}$	$\frac{19.00}{483}$	$\frac{1.94}{49}$

ACTUATOR SIZE	DIM <small>IN MM</small>
DR-145-SP20	$\frac{30.06}{764}$
DR-145-SP35	$\frac{33.12}{841}$
DR-145-SP60	$\frac{31.31}{795}$

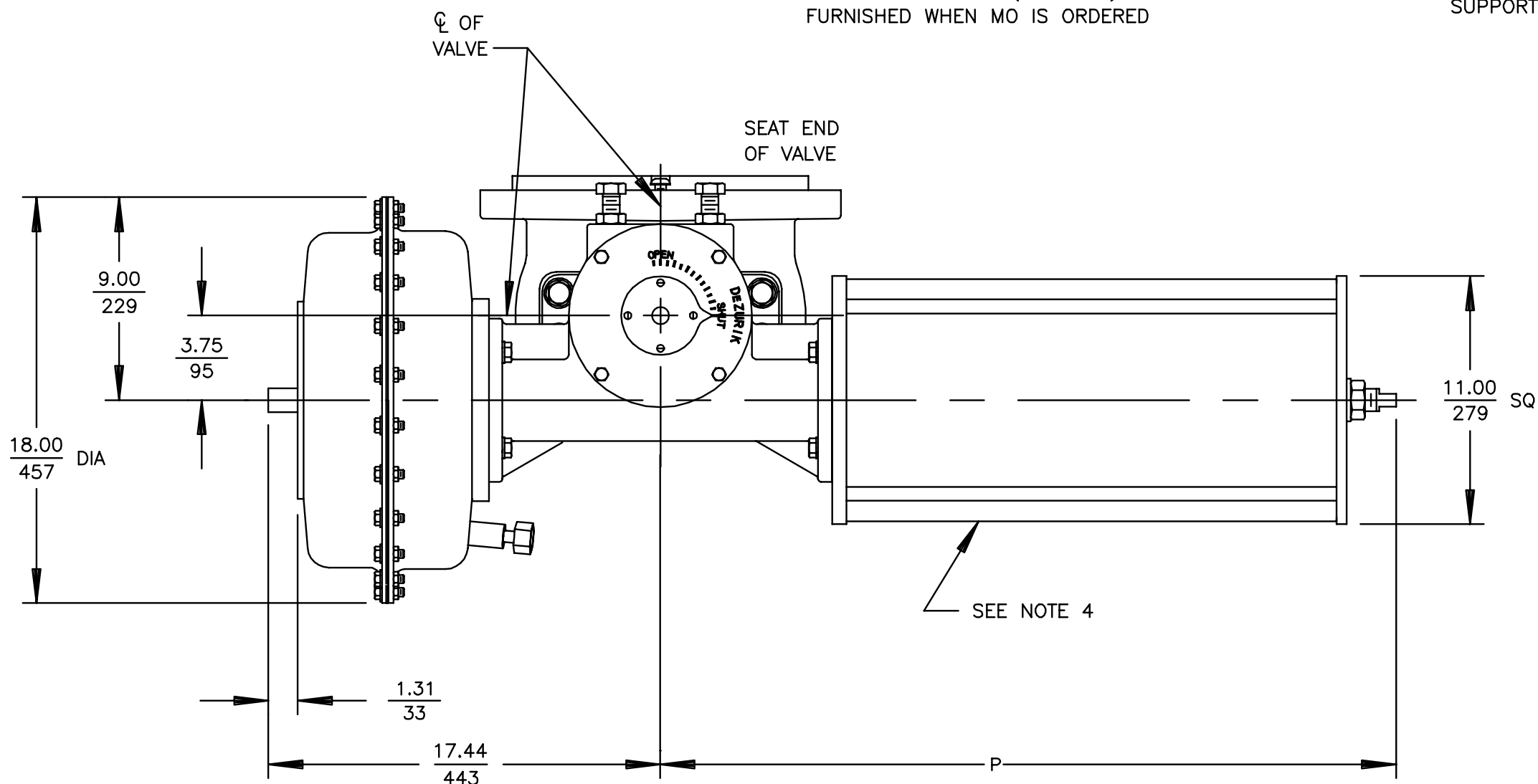
A	VALVE
B	ACTUATOR
F	MANUAL OVERRIDE (OPTIONAL)
P	CONNECTING PARTS

NOTE:

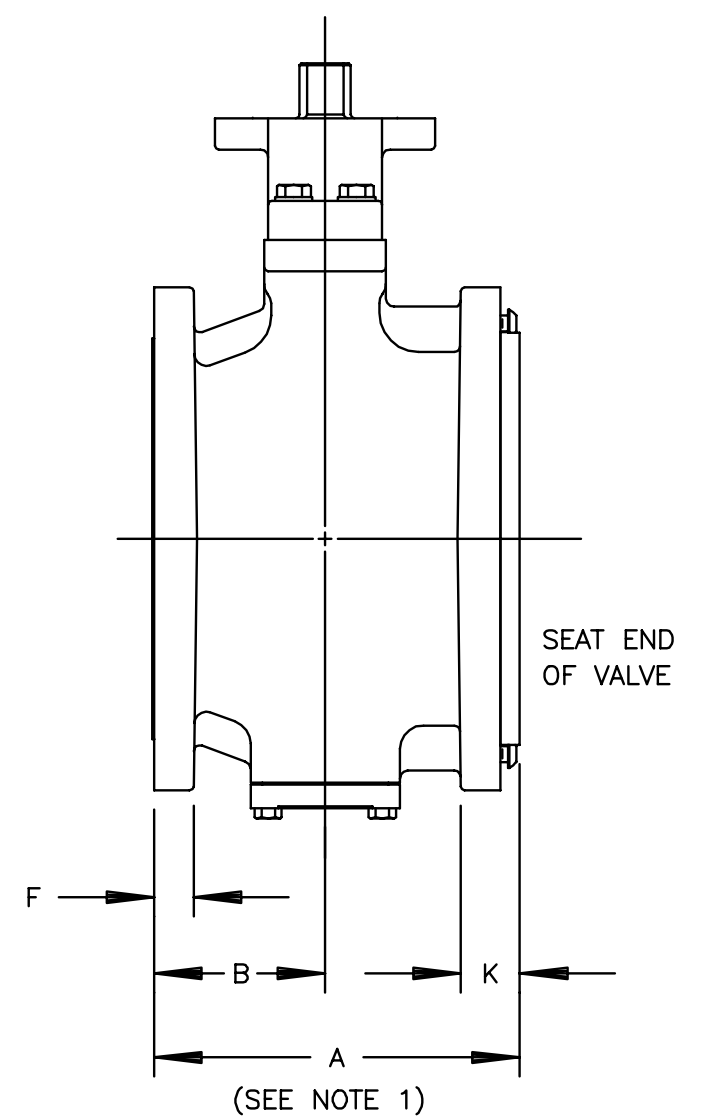
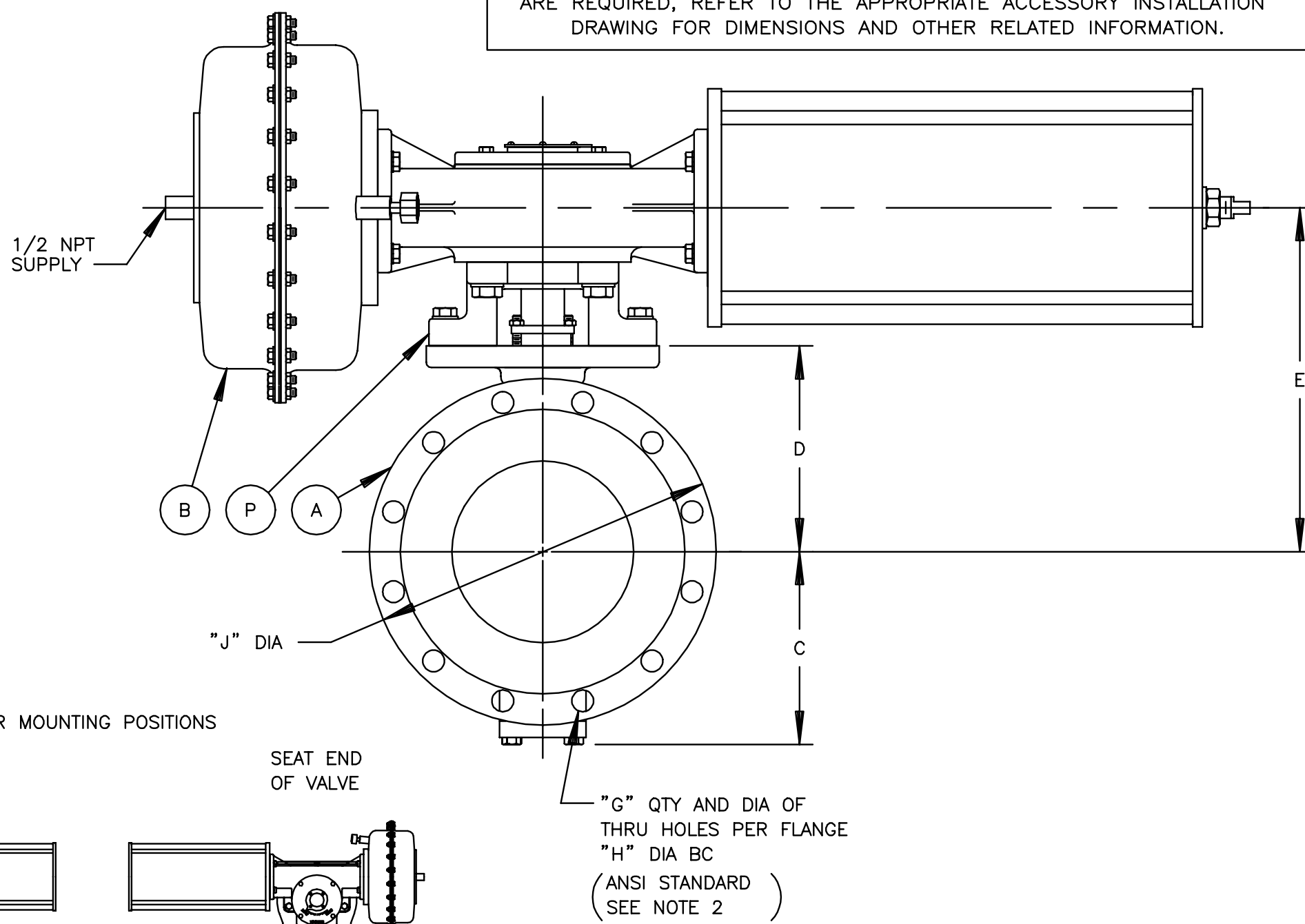
- FACE TO FACE DIMENSIONS PER ISA STANDARD 75.04.
- SEE A-40129 FOR NON-ANSI FLANGE DRILLING.
- INSTALL THE VALVE SO THAT THE MANUAL OVERRIDE PUMP IS HORIZONTAL, OR VERTICAL WITH THE HOSE CONNECTION ON THE BOTTOM. IF THE HOSE CONNECTION IS ON THE TOP: (1) CHANGE THE ACTUATOR MOUNTING POSITION ON THE VALVE, OR (2) REMOVE THE MANUAL OVERRIDE PUMP FROM THE VALVE AND SECURELY MOUNT THE PUMP AND THE HOSE EXTERNALLY FROM THE VALVE, WITH THE HOSE CONNECTION ON THE BOTTOM.
- CUSTOMER MUST PROVIDE ADDITIONAL PIPELINE SUPPORT.



MANUAL OVERRIDE (OPTIONAL)
FURNISHED WHEN MO IS ORDERED

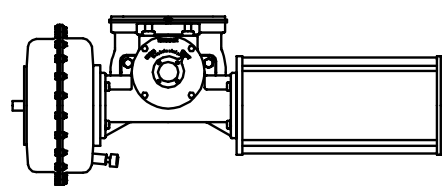


NOTICE
THIS DRAWING DOES NOT SHOW ACTUATOR ACCESSORIES. IF ACCESSORIES ARE REQUIRED, REFER TO THE APPROPRIATE ACCESSORY INSTALLATION DRAWING FOR DIMENSIONS AND OTHER RELATED INFORMATION.



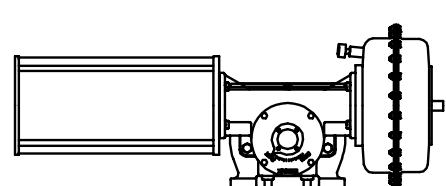
ACTUATOR MOUNTING POSITIONS

SEAT END OF VALVE



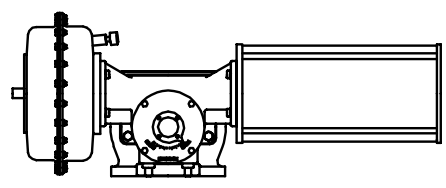
STANDARD AIR TO OPEN POSITION
SHOWN ON THIS DRAWING

SEAT END OF VALVE



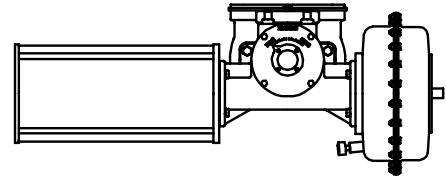
180° AIR TO OPEN POSITION

SEAT END OF VALVE

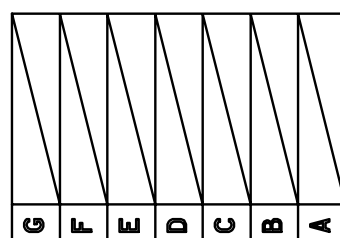


STANDARD AIR TO CLOSE POSITION

SEAT END OF VALVE



180° AIR TO CLOSE POSITION

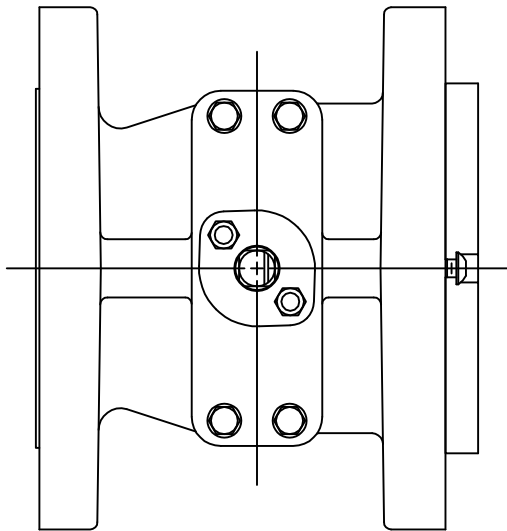


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RCV ROTARY CONTROL VALVES SIZE 10 & 12 CL150 FLANGED
DR-145-SP_ DIAPHRAGM ACTUATOR

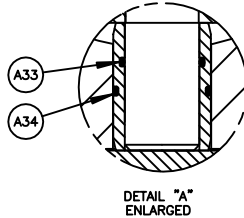
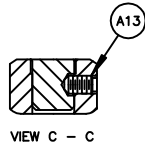
DOCT. CODE	DRAWN	APPROVED
C1	MPB	JS
	CHECKED	DATE
	JS	08/27/96

A-47454

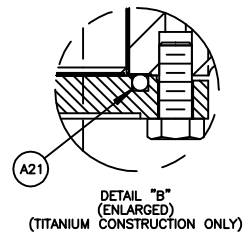
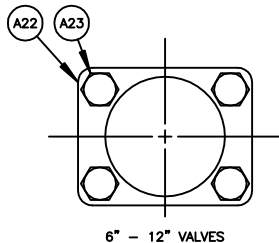
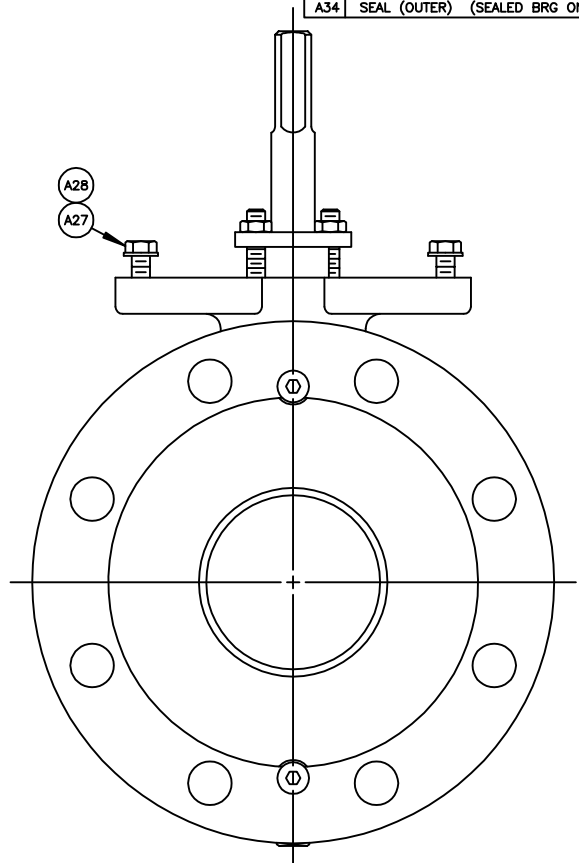
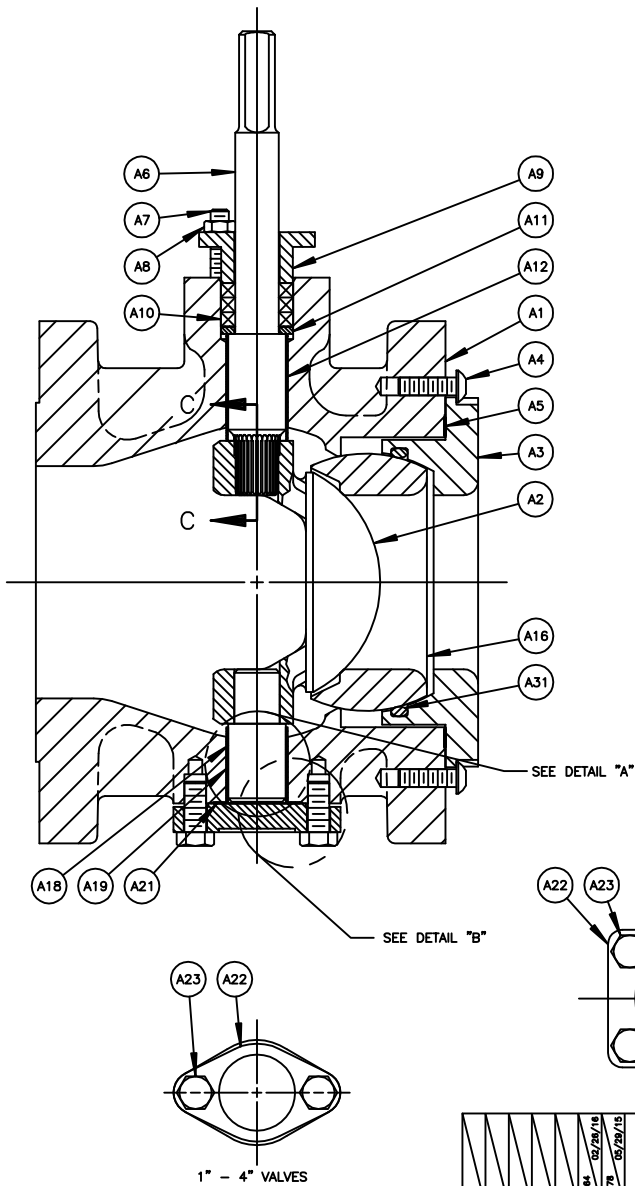


NOTE:

1. WHEN ORDERING PARTS, INCLUDE VALVE SIZE AND PART NUMBER FROM DATA PLATE. ALSO INCLUDE THIS DRAWING NUMBER WITH PART NAME, NUMBER AND QUANTITY.
2. RECOMMENDED SPARE PARTS ARE ITEMS NO A5, A10, A11, A12, A16, A19, A21, A31, A33 AND A34. (ADD A2 FOR TUNGSTEN TRIM)
3. VALVE IS SHOWN IN CLOSED POSITION. CCW ROTATION OF UPPER SHAFT OPENS VALVE.



NO	PART NAME	QTY
A1	BODY	1
A2	PLUG	1
A3	RETAINER	1
A4	SCREW	2
A5	GASKET (RETAINER)	1
A6	SHAFT UPPER	1
A7	STUD	2
A8	NUT	2
A9	GLAND	1
A10	PACKING	-
A11	THRUST WASHER	1
A12	BEARING UPPER (BODY)	1
A13	SET SCREW	1
A14		
A15		
A16	SEAT	1
A17		
A18	SHAFT LOWER	1
A19	BEARING LOWER (BODY)	1
A20		
A21	GASKET (COVER)	1
A21	O-RING (TITANIUM CONSTRUCTION ONLY)	1
A22	COVER	1
A23	SCREW (1" - 4" VALVES)	2
A23	SCREW (6" - 12" VALVES)	4
A24		
A25		
A26		
A27	SCREW	4
A28	LOCKWASHER	4
A29		
A30		
A31	SEAL	1
A32		
A33	SEAL (INNER) (SEALED BRG ONLY)	2
A34	SEAL (OUTER) (SEALED BRG ONLY)	2



Q	L	M	D	C	B	A
					83184	02/28/18
					88785	05/28/19

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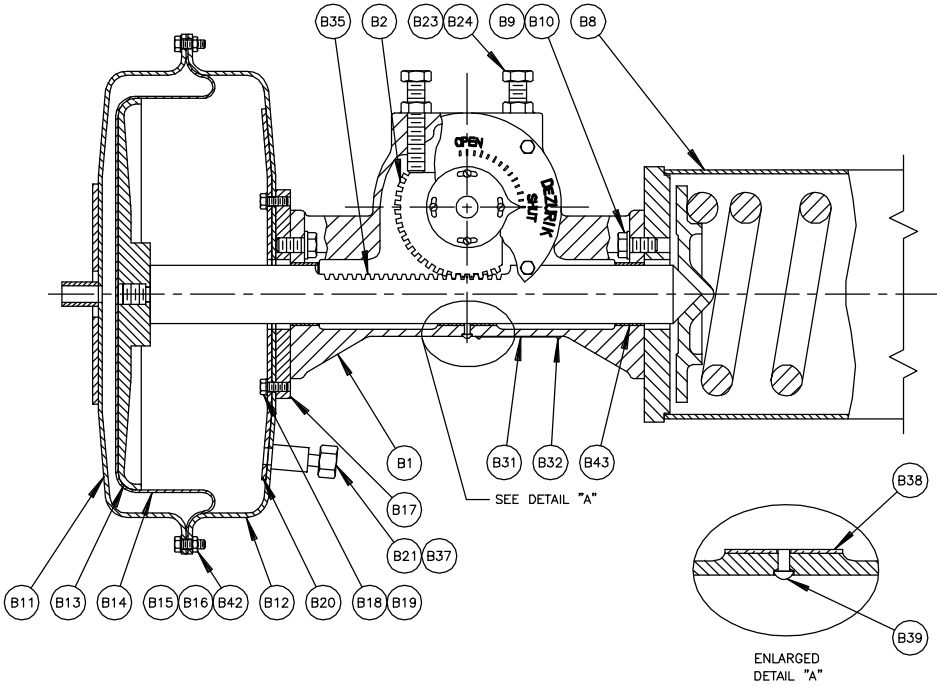
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C1	CHECKED	RJP	DATE	04/23/97

VALVE ASSEMBLY
RCV ROTARY CONTROL VALVES SIZE 1 - 12 FLANGED

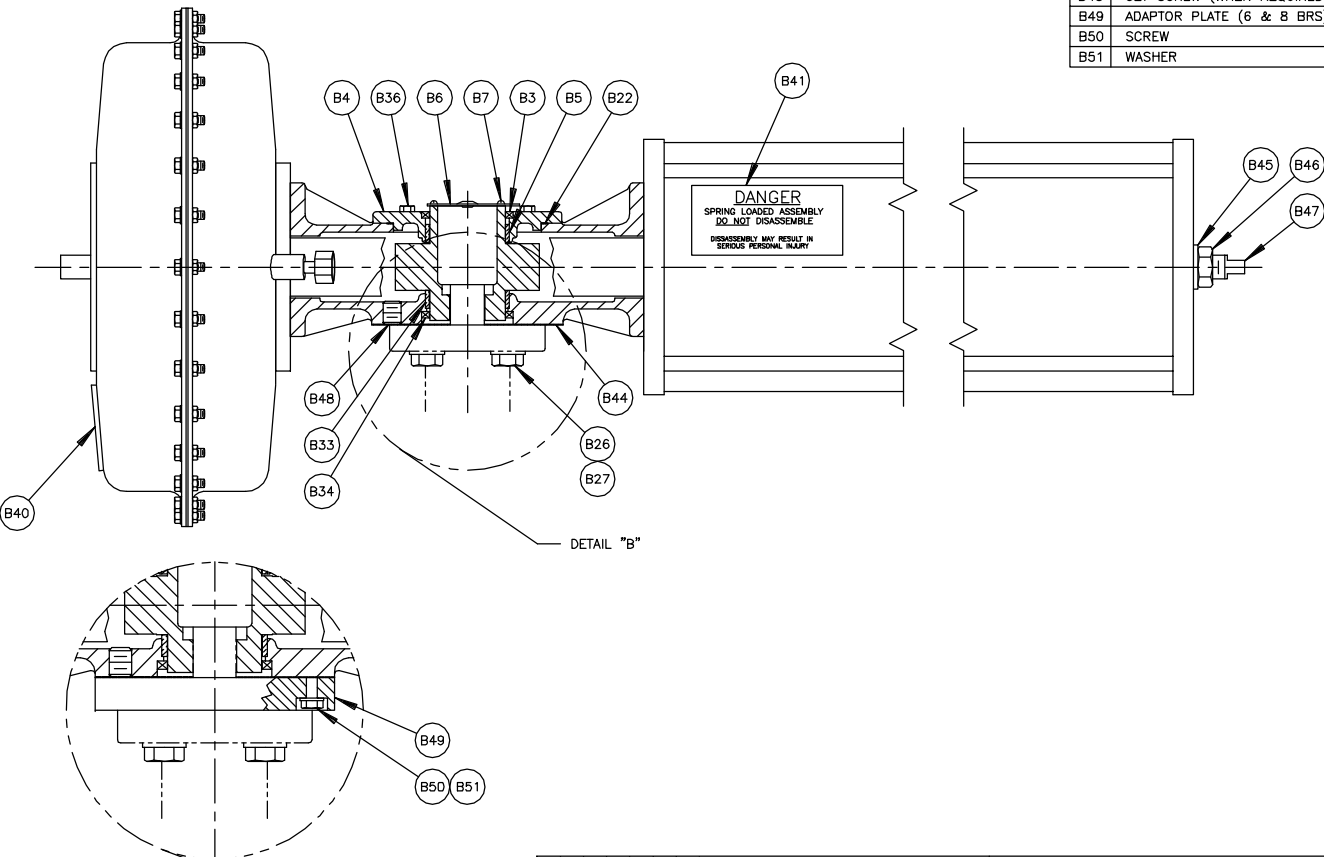
A49202

NOTE:

1. WHEN ORDERING PARTS, INCLUDE VALVE SIZE AND PART NUMBER FROM DATA PLATE, ALSO INCLUDE THIS DRAWING NUMBER WITH PART NAME, NUMBER AND QUANTITY.
2. RECOMMENDED SPARE PARTS ARE ITEMS NO B3, B14, B22, B34 & B44.



NO	PART NAME	QTY
B1	HOUSING ASSEMBLY	1
B2	GEAR SECTOR	1
B3	SEAL COVER	1
B4	COVER ASSEMBLY	1
B5	BEARING COVER	1
B6	POINTER	1
B7	SCREW	4
B8	SPRING CARTRIDGE	1
B9	SCREW	8
B10	LOCKWASHER	8
B11	DIAPHRAGM COVER ASSEMBLY	1
B12	DIAPHRAGM COVER, LOWER	1
B13	DIAPHRAGM DISC	1
B14	DIAPHRAGM	1
B15	SCREW (MODEL 145)	24
B15	SCREW (MODEL 250)	30
B16	NUT (MODEL 145)	24
B16	NUT (MODEL 250)	30
B17	DIAPHRAGM BASE	1
B18	SCREW	12
B19	LOCKWASHER	12
B20	REINFORCING PLATE	1
B21	BREATHER	1
B22	GASKET	1
B23	STOP BOLT	2
B24	JAM NUT	2
B26	SCREW	4
B27	LOCKWASHER	4
B31	DATA PLATE (EXCEPT HPI VALVE)	1
B32	DRIVE SCREW (EXCEPT HPI VALVE)	2
B33	BEARING, HOUSING	1
B34	SEAL, HOUSING	1
B35	STEM	1
B36	SCREW	4
B37	BUSHING	1
B38	BEARING	1
B39	RIVET	1
B40	DIAPHRAGM LABEL	1
B41	DANGER LABEL	1
B42	WASHER (MODEL 145)	24
B42	WASHER (MODEL 250)	30
B43	BEARING (HOUSING)	2
B44	GASKET	1
B45	WASHER (20 & 35 PSI SPRING CART ONLY)	1
B46	JAM NUT (20 & 35 PSI SPRING CART ONLY)	1
B47	ADJUSTMENT SCREW (20 & 30 PSI SPRING CARTRIDGE ONLY)	1
B48	SET SCREW (WHEN REQUIRED)	4
B49	ADAPTOR PLATE (6 & 8 BRS)	1
B50	SCREW	4
B51	WASHER	4



DETAIL "B" (ENLARGED) FOR VALVES REQUIRING ADAPTOR PLATE

Q	L	E	D	C	B	A
				50312	08/09/14	05/29/96
				50312	08/09/14	05/29/96
				50312	05/29/96	

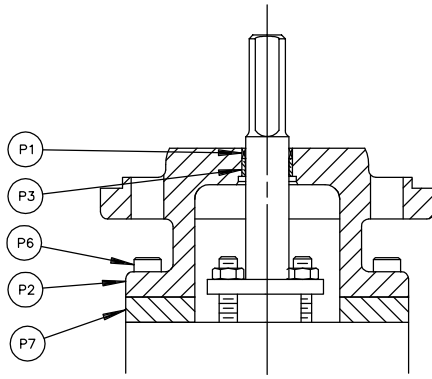
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DR_-145_-SP_ & DR_-250_-SP_ DIAPHRAGM ACTUATOR ASSEMBLY FOR USE WITH BUTTERFLY, BALL AND CONTROL VALVES

DOCT. CODE	DRAWN	APPROVED
C1	CHECKED	JE
		DATE 09/12/96

A45997

NO	PART NAME	QTY
P1	SEAL (SEE NOTE 3)	1
P2	ADAPTER	1
P3	BEARING (SEE NOTE 3)	1
P4		
P5	GASKET (S2, IS_ SEATS ONLY)	1
P6	SCREW	4
P7	SPACER (14" CLASS 150 ONLY)	2

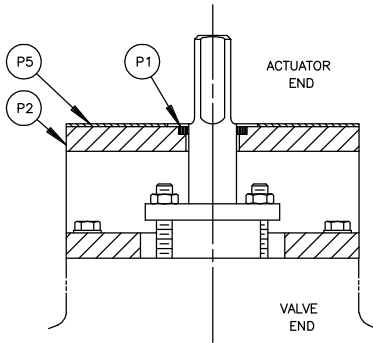


BHP VALVE WITH DR55 AND DR85 ACTUATORS

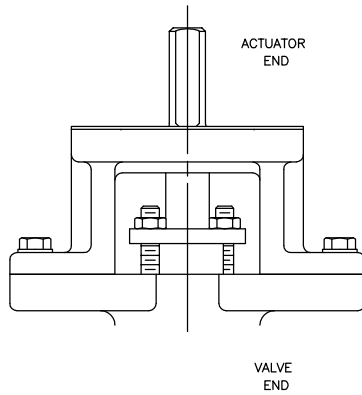
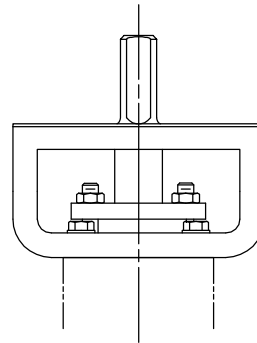
NOTE:

1. WHEN ORDERING PARTS, INCLUDE VALVE SIZE AND PART NUMBER FROM DATA PLATE. ALSO INCLUDE THIS DRAWING NUMBER WITH PART NAME, NUMBER AND QUANTITY.
2. RECOMMENDED SPARE PARTS ARE ITEMS NO. P1 & P5.
3. ITEM P1 (SEAL) IS USED WITH DIAPHRAGM DR40/55/85 AND POWERRAC PR ACTUATORS ONLY.

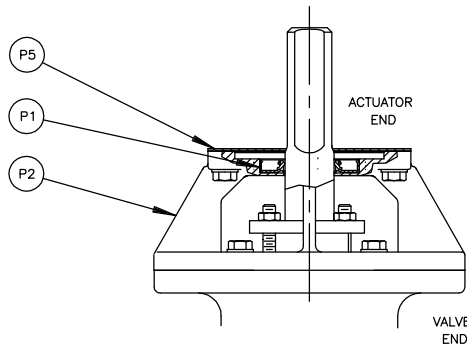
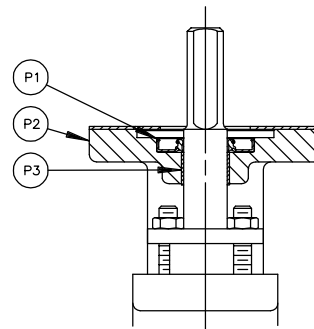
ITEM P3 (BEARING) IS USED WITH LEVER AND DIAPHRAM DR55_ & DR85_ ACTUATORS ONLY.



VIEW SHOWING FABRICATED ADAPTOR



VIEW SHOWING CAST ADAPTOR



VIEW SHOWING ADAPTOR FUV BHP VALVES

K	50012	1/25/05
J	50012	02/19/02
H	60110	01/02/02
G	54608	12/04/97
F	50012	08/09/95
E	52896	01/26/93
D	52896	09/19/94
C	52753	04/29/94
B	52062	04/25/94
A	51860	08/11/92

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CONNECTING PARTS FOR USE WITH LEVER, POWERRAC, MANUAL GEAR AND DIAPHRAGM ACTUATORS ON VPB, RCV AND BHP VALVES			
DOCT. CODE	DRAWN	APPROVED	
C1	CHECKED	SN	JEB
	TNB	DATE	09-19-91

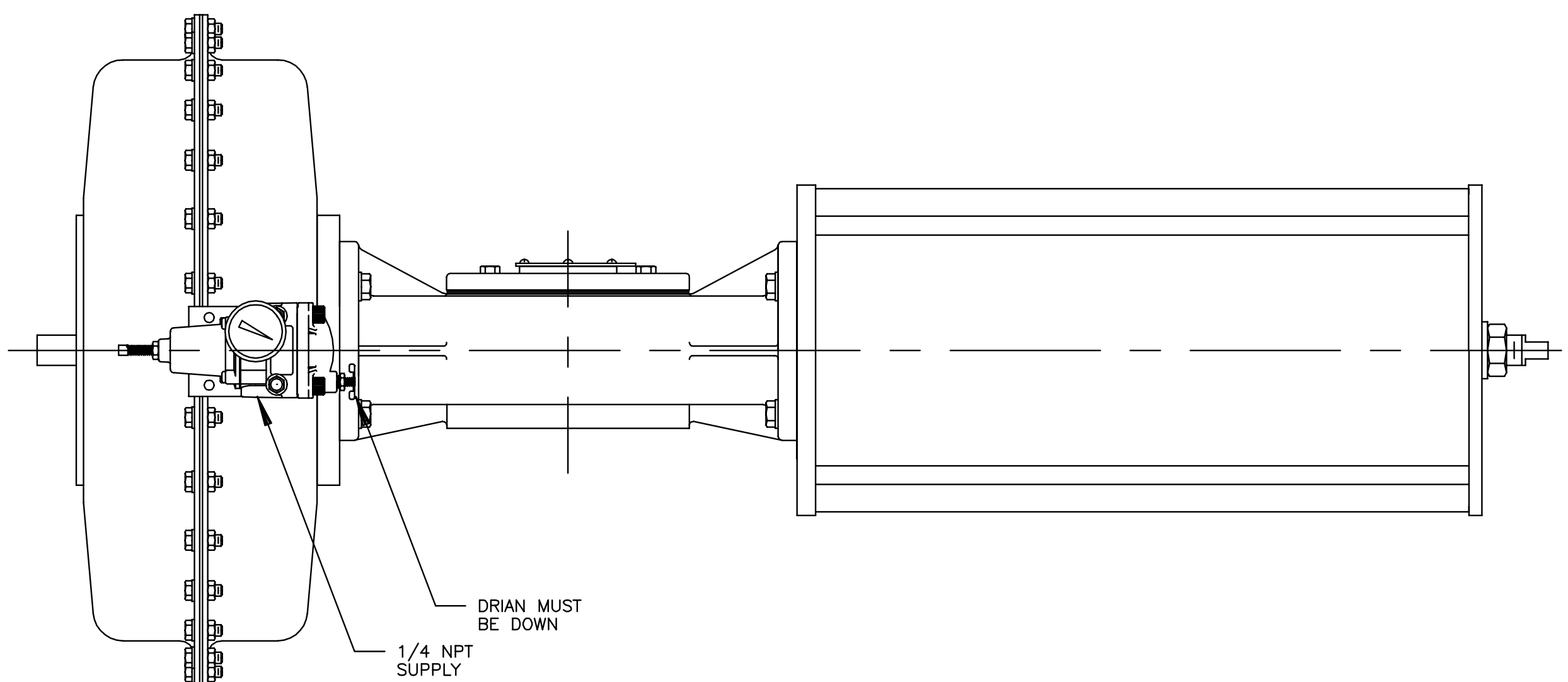
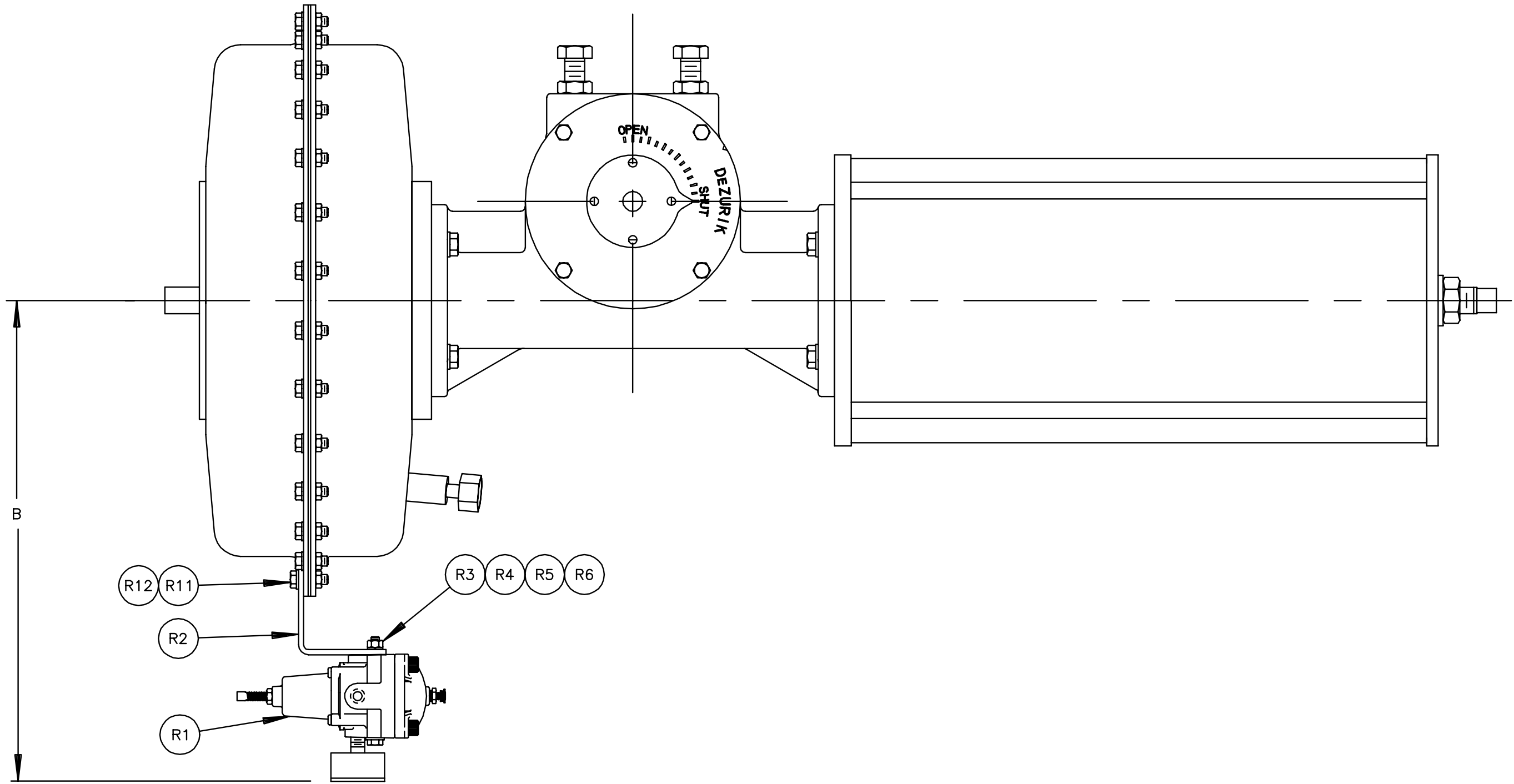
A-39819

ACTUATOR NUMBER	DIM
	B
DR_-145_-SP_	17.38 441
DR_-250_-SP_	19.63 499

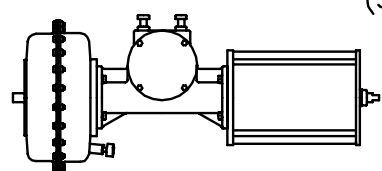
NO	PART NAME	QTY
R1	FILTER REGULATOR	1
R2	BRACKET	1
R3	SCREW	2
R4	LOCKWASHER	2
R5	WASHER	2
R6	NUT	2
R11	SCREW	1
R12	LOCKWASHER	1

NOTE:

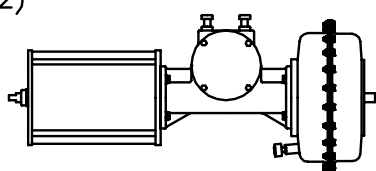
1. WHEN ORDERING PARTS, INCLUDE VALVE SIZE AND PART NUMBER FROM DATA PLATE. ALSO INCLUDE THIS DRAWING NUMBER WITH PART NAME, NUMBER AND QUANTITY.
2. DRAWING SHOWS ACTUATOR IN AIR TO OPEN POSITION.



ACTUATOR ASSEMBLY POSITIONS
(SEE NOTE 2)



STANDARD AIR TO OPEN POSITION
SHOWN ON THIS DRAWING



AIR TO CLOSE OPTION

G	F	E	D	C	B	A
						50312
						03/17/14

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AFR2 FILTER REGULATOR (AIRSET) FOR USE WITH
DR_-145_-SP_/DR_-250_-SP_ DIAPHRAGM ACTUATOR

DOCT. CODE	DRAWN	AZ	APPROVED	DT
C1	CHECKED	DT	DATE	05/08/02

A54211