

PRODUCT CATALOG



PRIDE



PERFORMANCE



PRECISION

CRISSAIR INC.

2022
VERSION 3.0

MANUFACTURER OF QUALITY AIRCRAFT FLUID CONTROL COMPONENTS SINCE 1954

2022 Version 3.0

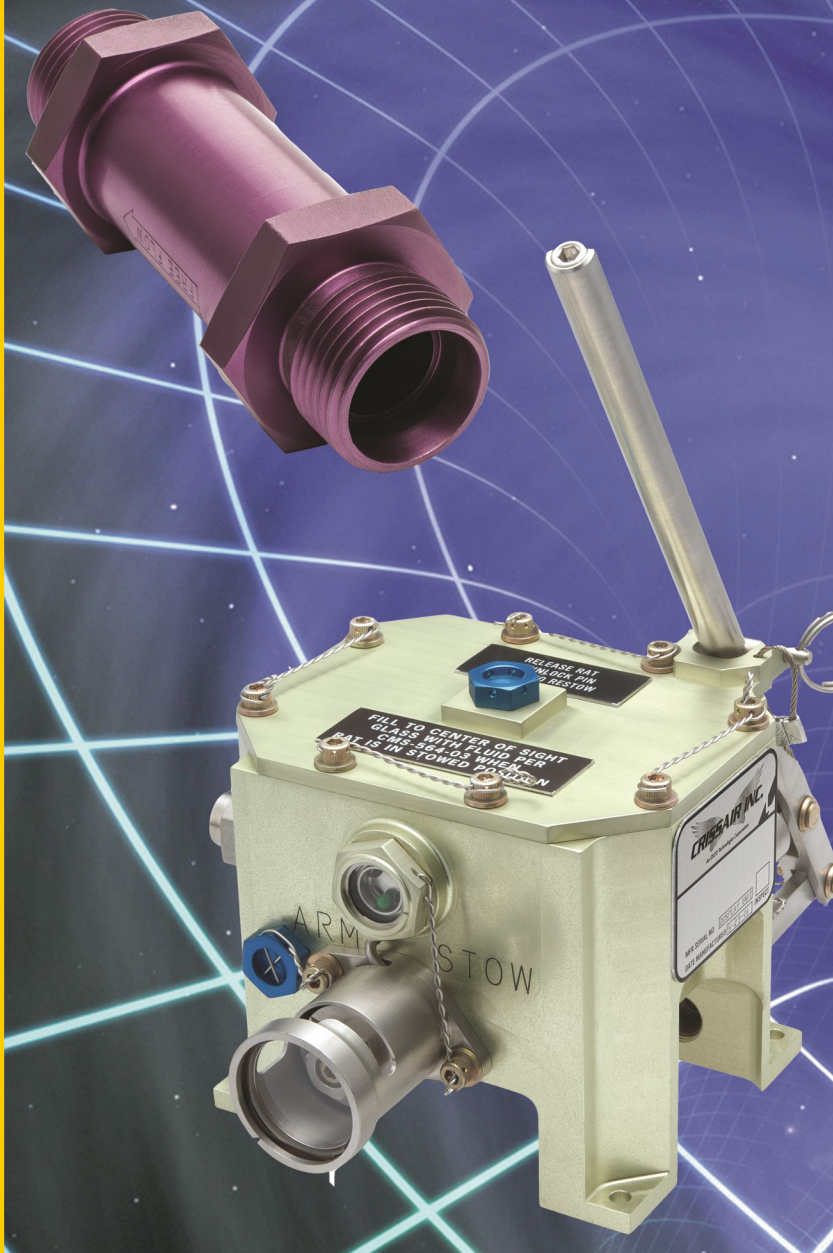


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HISTORY

Crissair Inc. has designed and manufactured quality precision fluid control products for nearly every airframe manufacturer and major sub-contractor in the military and commercial aircraft industries since opening the doors in 1954.



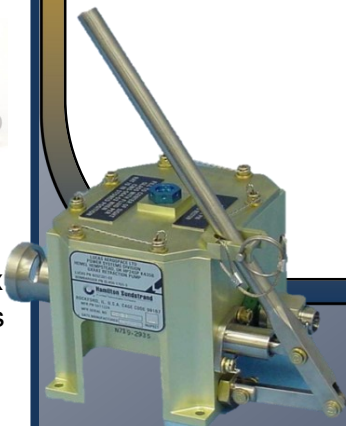
The inclusion of Canyon Engineering, in 2013, adds over 30 years of experience with complex aerospace and military fluid control products as well as an industrial product line.



Crissair Inc. owns and occupies a 78,000 square foot facility located in Valencia, CA. (50 miles north of LAX), with 50,000 square feet dedicated to manufacturing and testing. Another 50,000 square foot facility, dedicated to low cost manufacturing of detail components, is located just south of the border in Tijuana, Mexico. Crissair Inc. designs, manufactures, and tests a wide variety of fluid control products.



With a highly skilled and experienced engineering team utilizing lean six sigma methods, Crissair specializes in custom designs to meet the most challenging customer specifications. With over 12,000 designs in the library, development efforts and qualification schedules can be compressed very easily.



BACKGROUND



CRISSAIR, Inc. has assembly/test capabilities to allow for 100% testing of all products prior to shipment. Testing is conducted in accordance with the acceptance test procedures agreed to by both CRISSAIR, Inc. and our customers. CRISSAIR, Inc. also has a dedicated 15,000 square foot Engineering Lab to run Qualification testing in-house.

- Skydrol Test Stands—flow capacity to 80 GPM—pressure capability to 8000 PSI
- MIL-H-83232 Red Oil Test Stands—flow capacity to 60 GPM—pressure capability to 8000 PSI
- MIL-L-23699 Test Stands—flow capacity to 42 GPM—pressure capability to 1000 PSI—fluid temperature range: ambient to 300°F
- MIL-PRF-7024 Test Stands—flow capacity to 8 GPM—pressure capability to 1000 PSI
- Diesel Oil Test Stands—flow capacity to 15 GPM—pressure capability to 1500 PSI
- Water/Glycol Test Stands—flow capacity to 50 GPM—pressure capability 300 PSI
- Environmental Test Chambers—temperature range: -100 to +400°F
- Dielectric testers
- Insulation resistance testers
- Bonding resistance testers
- Oscilloscopes
- Data acquisition equipment
- Endurance setups
- Impulse setups

ASSEMBLY AND TEST



CERTIFIED TO: AS9100 REV D, ISO 9001:2008, AND ISO 14001:2004



Certificate of Registration

This certifies that the Quality Management System of
Crissair, Inc.
28909 Avenue Williams
Valencia, California, 91355, United States
has been assessed by NSF-ISR and found to be in conformance to the following standard(s):
AS9100D with ISO 9001:2015

* Audited in accordance with AS9100 (2017) Requirements for Aviation, Space, and Defense Quality Management System Certification Programs
NSF-ISR is accredited under the American Society for Quality (ASQ) Registrar Management Committee

Scope of Registration:
Design, Development, Manufacture and Repair of Fluid Control Devices.



Certificate Number: C006581-AS7
Certificate Issue Date: 16-FEB-2021
Certificate Re-issue Date: 03-MAR-2021
Expiration Date *: 02-MAR-2024

Jennifer Morecraft
Jennifer Morecraft,
Global Managing Director

NSF International Strategic Registrations
789 North Dixboro Road, Ann Arbor, Michigan 48105 | (888) NSF-9000 | www.nsf-isr.org

* Audited in accordance with AS9100 (2017) Requirements for Aviation, Space, and Defense Quality Management System Certification Programs
NSF-ISR is accredited under the American Society for Quality (ASQ) Registrar Management Committee



Certificate of Registration

This certifies that the Environmental Management System of

Crissair, Inc.
28909 Avenue Williams
Valencia, California, 91355, United States

has been assessed by NSF-ISR and found to be in conformance to the following standard(s):

ISO 14001:2004

Scope of Registration:
Design, Development, Manufacture, Repair of Fluid Control Devices for Aerospace, Automotive and Commercial Applications



Certificate Number: C006581-EM3
Certificate Issue Date: 24-FEB-2017
Registration Date: 03-MAR-2015
Expiration Date *: 02-MAR-2018

Carl Blazik
Carl Blazik,
Director, Technical
Operations & Business Units,
NSF-ISR, Ltd.

NSF International Strategic Registrations
789 North Dixboro Road, Ann Arbor, Michigan 48105 | (888) NSF-9000 | www.nsf-isr.org

* Audited in accordance with ISO 14001:2004 Requirements for Environmental Management Systems
NSF-ISR is accredited under the American Society for Quality (ASQ) Registrar Management Committee



Certificate of Registration

This certifies that the Quality Management System of

Crissair, Inc.
28909 Avenue Williams
Valencia, California, 91355, United States

has been assessed by NSF-ISR and found to be in conformance to the following standard(s):

ISO 9001:2008

Scope of Registration:
Design, Development, Manufacture, Repair of Fluid Control Devices for Aerospace, Automotive and Commercial Applications



Certificate Number: C006581-855
Certificate Issue Date: 26-FEB-2015
Registration Date: 03-MAR-2015
Expiration Date *: 02-MAR-2018

Carl Blazik
Carl Blazik,
Director, Technical
Operations & Business Units,
NSF-ISR, Ltd.

NSF International Strategic Registrations
789 North Dixboro Road, Ann Arbor, Michigan 48105 | (888) NSF-9000 | www.nsf-isr.org

* Audited in accordance with ISO 9001:2008 Requirements for Quality Management Systems
NSF-ISR is accredited under the American Society for Quality (ASQ) Registrar Management Committee

QUALITY



FAA REPAIR STATION, LIMITED ACCESSORIES

UNITED STATES OF AMERICA
DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

Air Agency Certificate

Number KIKR903X

This certificate is issued to

CRISSAIR, INC.

whose business address is

28909 AVENUE WILLIAMS
VALENCIA, CALIFORNIA 91355

*upon finding that its organization complies in all respects
with the requirements of the Federal Aviation Regulations
relating to the establishment of an Air Agency, and is
empowered to operate an approved* REPAIR STATION

with the following ratings:

LIMITED ACCESSORIES

*This certificate, unless canceled, suspended, or revoked,
shall continue in effect* INDEFINITELY.

Date issued:

APRIL 5, 2005
REISSUED: FEBRUARY 6, 2014

By direction of the Administrator

Victor G. Swanson
RICHARD SWANSON, MANAGER
VAN NUYS FSDO, WESTERN-PACIFIC REGION

This Certificate is not Transferable, and any major change in the basic facilities, or in the location thereof,
shall be immediately reported to the appropriate regional office of the Federal Aviation Administration.

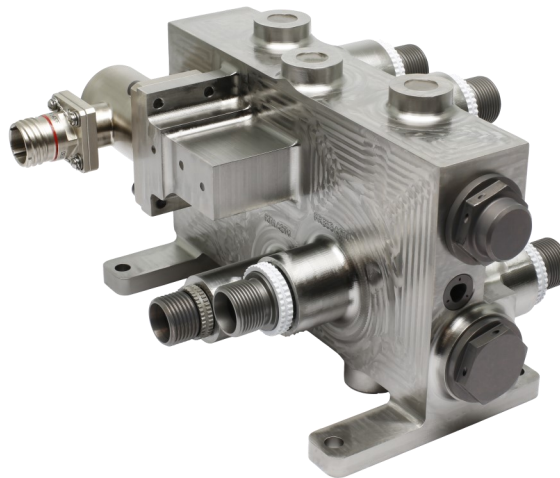
Any alteration of this certificate is punishable by a fine of not exceeding \$1,000, or imprisonment not exceeding 3 years, or both

FAA Form 8000-4 (1-17) SUPERSEDES FAA FORM 380. Electronic Forms (PDF)

QUALITY

OUR DEDICATED ENGINEERING STAFF WORKS CLOSELY WITH THE CUSTOMER FROM THE JOINT DEVELOPMENT PHASE THROUGH SUCCESSFUL PRODUCTION LAUNCH

- CAD Systems: Autodesk Inventor, PTC CREO (CAD, FEA & CFD), and Catia
- Hysan: Dynamic Flow Modeling
- LabVIEW: Data Acquisition
- Project Engineering: Cradle-to-grave methodology
- On-site Engineering Test Lab: Development and Qualification





CHECK VALVES

CRISSAIR Inc, is a world class, leading manufacturer of all styles of Check Valves.

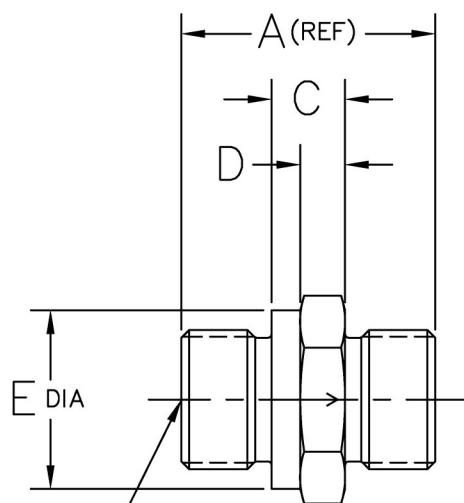
- **Inline Check Valves:** Crissair's line of inline check valves generally utilize a design containing a poppet and one-piece body. This unique design offers excellent performance and unmatched reliability for hydraulic, lubrication, and pneumatic systems. Many of Crissair's designs are qualified to MIL-V-19069 and MIL-V-25675, and can be found on the Qualified Products List QPL-25675.
- **Cartridge Check Valves:** The cartridge style check valves generally utilize the same internal components and design architecture as the inline check valves, but are specially designed to thread or insert into next level manifold assemblies.
- **Zero Leak designs** generally incorporate elastomeric poppets and/or seats.
- **Fuel Swing Check Valves:** Crissair's line of swing check valves are used in fuel or pneumatic system applications where low pressure drops and low leakage rates are of the essence. Many of Crissair's designs are qualified to MIL-V-7899 and can be found on the Qualified Products List QPL-7899.
- **Split Flapper Check Valves** are used within bleed air and environmental control systems (ECS). Some designs utilize materials capable of withstanding extremely high temperatures.

This catalog contains a small sample of drawings. Please contact Crissair for additional drawings and/or configurations.

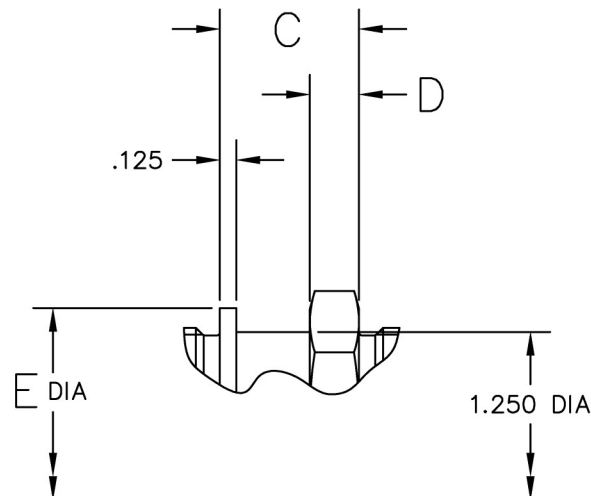
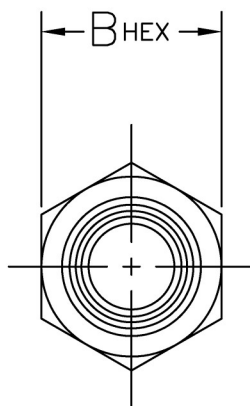




PART NUMBER: 2C4300 CHECK VALVE, SERIES, FLARELESS



BOTH PORTS PER MS33514E F
T THREADS (REF)



HYDRAULIC SCHEMATIC

PERFORMANCE SPECIFICATIONS:

QUALIFIED PER: MIL-V-19069

FLUIDS: ALL AIRCRAFT HYDRAULIC FLUIDS

MATERIAL: BODY 17-4PH CRES

BODY 431 CRES AVAILABLE WITH 2C5300 SERIES

POPPET 440C CRES

TEMPERATURE RANGE: -65°F TO 450°F

OPERATING PRESSURE: 3000 PSIG

PROOF PRESSURE: 4500 PSIG

CRACKING PRESSURE: 2 TO 8 PSID

FLOW: SEE TABLE AT 15 PSID MAX

INTERNAL LEAKAGE (CHECKED DIRECTION):

1 DPM MAX AT 5 PSID

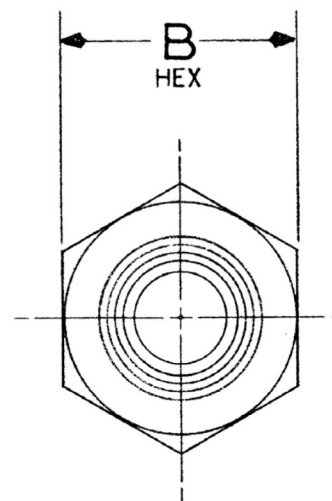
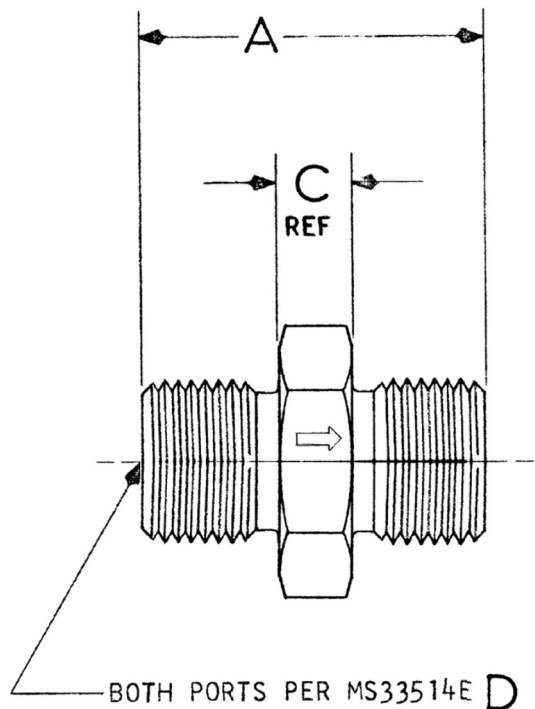
NONE AT 1000 TO 3000 PSID

MS24423-16	2C4316	1	1.312-12UNJF-3A	16	2.438	1.625	1.062	.375	1.615	29.0	.515
MS24423-12	2C4312	3/4	1.062-12UNJF-3A	12	1.938	1.375	.562	.343	1.365	16.0	.336
MS24423-10	2C4310	5/8	.8750-14UNJF-3A	10	1.781	1.125	.531	.312	1.115	10.5	.207
MS24423-8	2C4380	1/2	.7500-16UNJF-3A	8	1.624	1.000	.500	.281	.990	6.0	.162
MS24423-6	2C4360	3/8	.5625-18UNJF-3A	6	1.407	.813	.469	.250	.803	3.5	.092
—	2C4350	5/16	.5000-20UNJF-3A	5	1.344	.750	.438	.219	.740	2.3	.069
MS24423-4	2C4340	1/4	.4375-20UNF-3A	4	1.344	.688	.438	.219	.678	1.2	.062
MS PART NO	CRISSAIR PART NO	TUBE OD	T THREAD	F	A REF	B HEX	C	D	E DIA	RATED FLOW (GPM)	MAX WT (LBS)

CATEGORY 1: CHECK VALVES, INLINE



PART NUMBER: 2C1700 CHECK VALVE, SERIES, FLARELESS



PERFORMANCE SPECIFICATIONS:

FLUIDS: ALL AIRCRAFT HYDRAULIC FLUIDS

MATERIAL: BODY 17-4PH CRES

POPPET 440C CRES

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 3000 PSIG

PROOF PRESSURE: 4500 PSIG

CRACKING PRESSURE: 2 TO 8 PSID

FLOW: SEE TABLE AT 10 PSID MAX

INTERNAL LEAKAGE (CHECKED DIRECTION):

1 DPM MAX AT 5 PSID

NONE AT 1000 TO 3000 PSID

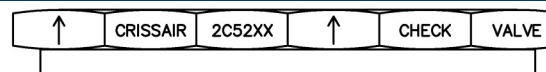
HYDRAULIC SCHEMATIC

2C1716	1	16	2.437	1.625	1.062	29.0	.424
2C1712	3/4	12	1.875	1.375	.500	16.0	.275
2C1710	5/8	10	1.625	1.125	.375	10.5	.184
2C1780	1/2	8	1.440	1.000	.316	6.0	.120
2C1760	3/8	6	1.250	.813	.312	3.5	.073
2C1750	5/16	5	1.125	.750	.219	2.3	.051
2C1740	1/4	4	1.125	.688	.219	1.2	.043
CRISSAIR PART NO	TUBE OD	D	A	B HEX	C REF	RATED FLOW (GPM)	MAX WT (LBS)

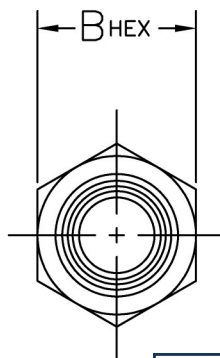
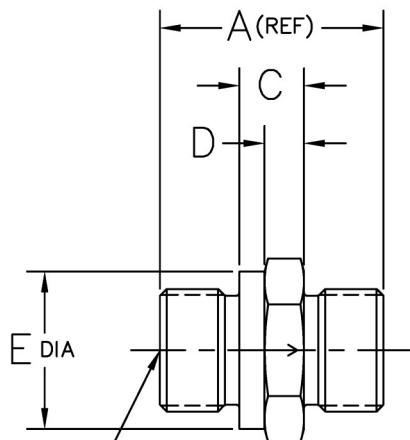
CATEGORY 1: CHECK VALVES, INLINE



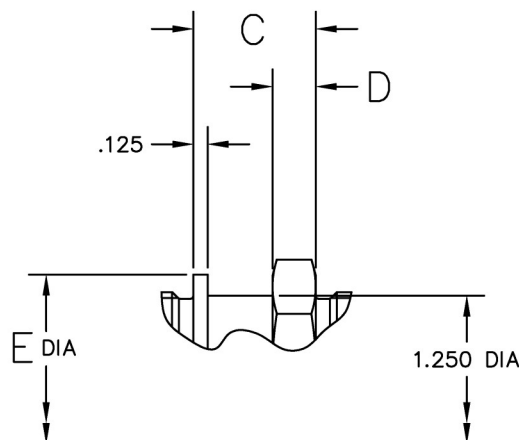
PART NUMBER: 2C5200 CHECK VALVE, SERIES, FLARELESS



MARKING DETAIL



BOTH PORT PER MS33514E (SIZE PER COLUMN F)
EXCEPT FOR HOLE SIZE A ON MS33514E



CONFIGURATION OF SIZE 16 ONLY



HYDRAULIC SCHEMATIC

PERFORMANCE SPECIFICATIONS:

QUALIFIED PER: MIL-V-19069

FLUIDS: ALL AIRCRAFT HYDRAULIC FLUIDS

MATERIAL: BODY 2024-T351 AL

POPPET 440C CRES

TEMPERATURE RANGE:-65°F TO 275°F

OPERATING PRESSURE: 3000 PSIG

PROOF PRESSURE: 4500 PSIG

CRACKING PRESSURE: 2 TO 8 PSID

FLOW: SEE TABLE AT 15 PSID MAX

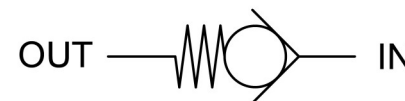
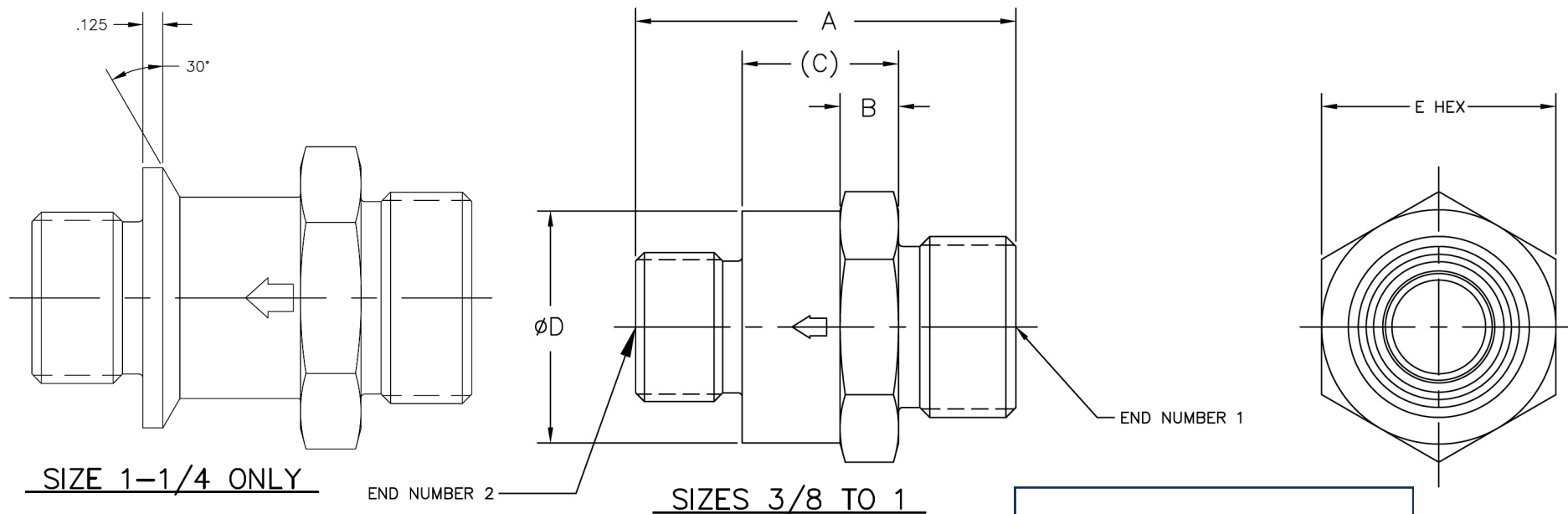
INTERNAL LEAKAGE (CHECKED DIRECTION):
1 DPM MAX AT 5 PSID
NONE AT 1000 TO 3000 PSID

2C5216	1	1 5/16-12UNJF-3A	16	2.438	1.625	1.062	.375	1.615	29.0	.273
2C5212	3/4	1 1/16-12UNJF-3A	12	1.938	1.375	.562	.343	1.365	16.0	.162
2C5210	5/8	7/8-14UNJF-3A	10	1.781	1.125	.531	.312	1.115	10.5	.099
2C5280	1/2	3/4-16UNJF-3A	8	1.624	1.000	.500	.281	.990	6.0	.077
2C5260	3/8	9/16-18UNJF-3A	6	1.407	.813	.469	.250	.803	3.5	.039
2C5250	5/16	1/2-20UNJF-3A	5	1.344	.750	.438	.219	.740	2.3	.030
2C5240	1/4	7/16-20UNJF-3A	4	1.344	.688	.438	.219	.678	1.2	.026
CRISSAIR PART NO	TUBE OD	TUBE THREAD (REF)	F	A REF	B HEX	C	D	E DIA	RATED FLOW (GPM)	MAX WT (LBS)

CATEGORY 1: CHECK VALVES, INLINE



CHECK VALVE, SERIES, FLARELESS



HYDRAULIC SCHEMATIC

PERFORMANCE SPECIFICATIONS:

FLUIDS: ALL AIRCRAFT HYDRAULIC FLUIDS

MATERIAL: BODY 17-4PH CRES

POPPET 440C CRES

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 4000 PSIG

PROOF PRESSURE: 6000 PSIG

CRACKING PRESSURE: 2 TO 8 PSID

FLOW: SEE TABLE

INTERNAL LEAKAGE (CHECKED DIRECTION):

1 DPM MAX AT 5 PSID

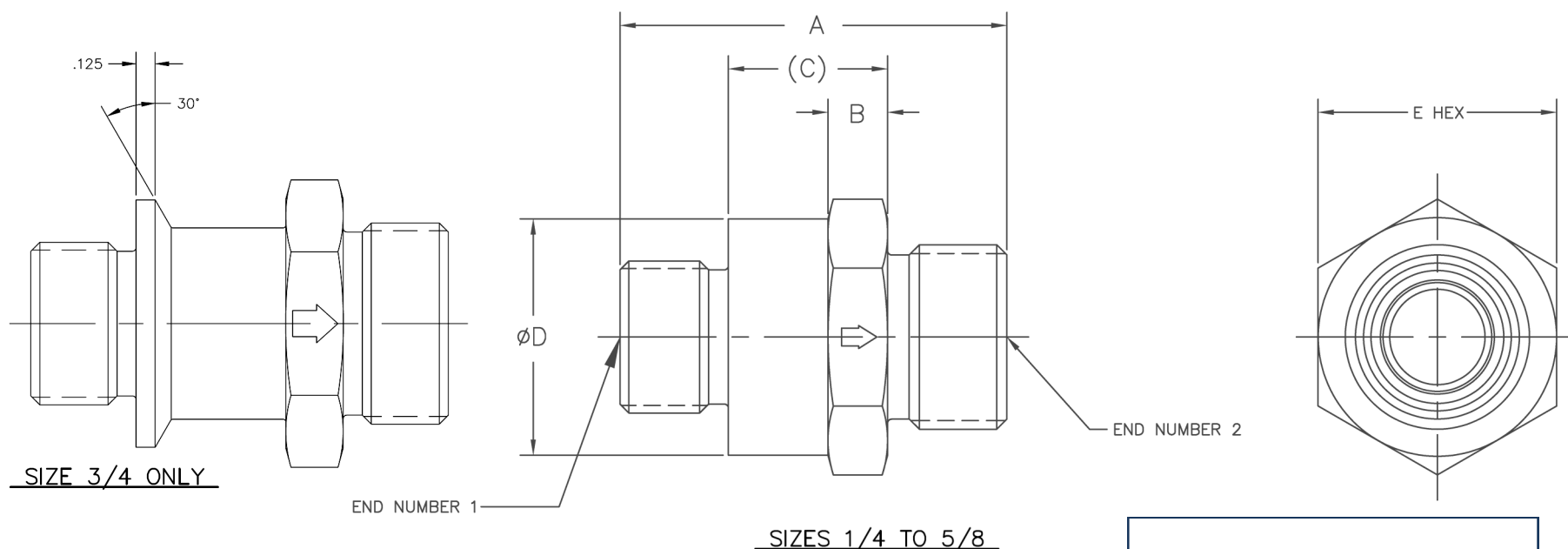
NONE AT 1000 TO 4000 PSID

4C2850-2	1 1/4	29.0	14	MS33514E20	MS33514E16	2.460	.375	1.084	1.865	1.875	.95
4C2862-2	1	16.0	12	MS33514E16	MS33514E12	2.030	.343	.654	1.615	1.625	.70
4C2860-2	3/4	10.5	12	MS33514E12	MS33514E10	1.850	.312	.537	1.365	1.375	.36
4C2858-2	5/8	6.0	14	MS33514E10	MS33514E8	1.670	.281	.483	1.115	1.125	.22
4C2856-2	1/2	3.5	12	MS33514E8	MS33514E6	1.480	.250	.449	.990	1.000	.15
4C2854	3/8	1.2	10	MS33514E6	MS33514E4	1.380	.219	.458	.803	.813	.10
CRISSAIR PART NO	TUBE SIZE	FLOW (GPM)	ΔP (PSID)	FITTING END ^{NO} 1 (FLARELESS TUBE)	FITTING END ^{NO} 2 (FLARELESS TUBE)	A ±.015	B ±.015	C (REF)	D ±.015	E ±.015	MAX WT (LBS)

CATEGORY 1: CHECK VALVES, INLINE



CHECK VALVE, SERIES, FLARELESS



HYDRAULIC SCHEMATIC

PERFORMANCE SPECIFICATIONS:

FLUIDS: ALL AIRCRAFT HYDRAULIC FLUIDS

MATERIAL: BODY 17-4PH CRES

POPPET 440C CRES

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 4000 PSIG

PROOF PRESSURE: 6000 PSIG

CRACKING PRESSURE: 2 TO 8 PSID

FLOW: SEE TABLE

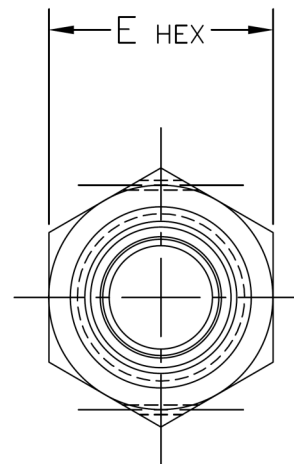
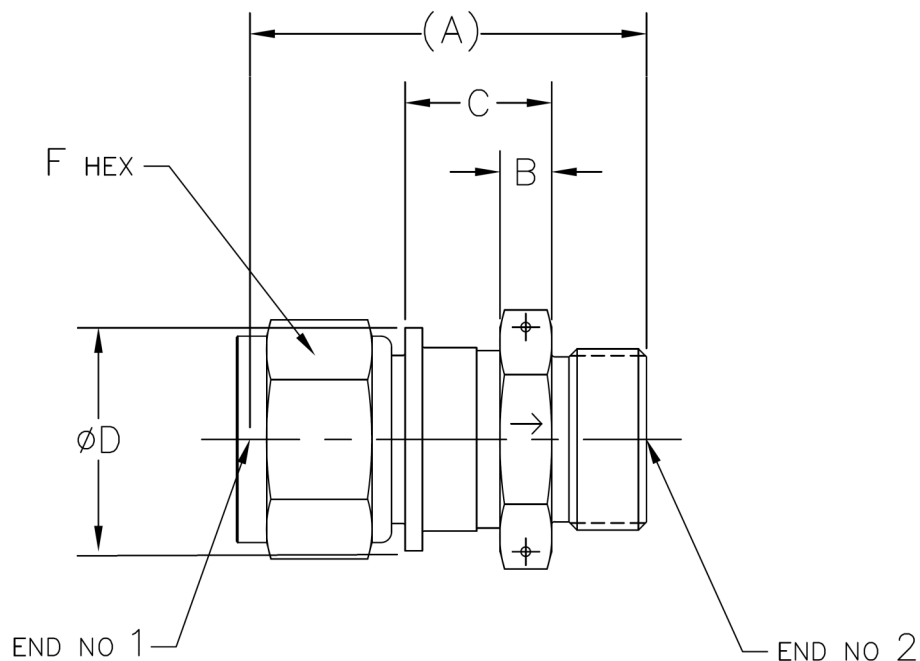
INTERNAL LEAKAGE (CHECKED DIRECTION):
1 DPM MAX AT 5 PSID
NONE AT 1000 TO 4000 PSID

4C2850-1	3/4	29.0	12	MS33514E12	MS33514E16	2.730	.375	1.354	1.615	1.625	.60
4C2862-1	5/8	16.0	10	MS33514E10	MS33514E12	2.230	.343	.917	1.365	1.375	.47
4C2860-1	1/2	10.5	10	MS33514E8	MS33514E10	2.020	.312	.833	1.115	1.125	.29
4C2858-1	3/8	6.0	12	MS33514E6	MS33514E8	1.800	.281	.769	.990	1.000	.21
4C2856-1	1/4	3.5	25	MS33514E4	MS33514E6	1.630	.250	.708	.803	.813	.13
CRISSAIR PART NO	TUBE SIZE	FLOW (GPM)	ΔP (PSID)	FITTING END ^{NO} 1 (FLARELESS TUBE)	FITTING END ^{NO} 2 (FLARELESS TUBE)	A ±.015	B ±.015	C (REF)	D ±.015	E ±.015	MAX WT (LBS)

CATEGORY 1: CHECK VALVES, INLINE



CHECK VALVE, SERIES, B-NUT/FLARELESS



PERFORMANCE SPECIFICATIONS:

FLUIDS: ALL AIRCRAFT HYDRAULIC FLUIDS

MATERIAL: BODY 15-5PH CRES

POPPET 440C CRES

SWIVEL NUT 304 CRES

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 3000 PSIG

4000 PSIG FOR 1C3200 SERIES

PROOF PRESSURE: 4500 PSIG

6000 PSIG FOR 1C3200 SERIES

CRACKING PRESSURE: 2 TO 8 PSID

FLOW: SEE TABLE AT 15 PSID MAX

INTERNAL LEAKAGE (CHECKED DIRECTION):

1 DPM MAX AT 0 TO 1000 PSID
NONE AT 1000 TO 3000 PSID

ALSO AVAILABLE WITH BODY
IN AL ALLOY AND TITANIUM



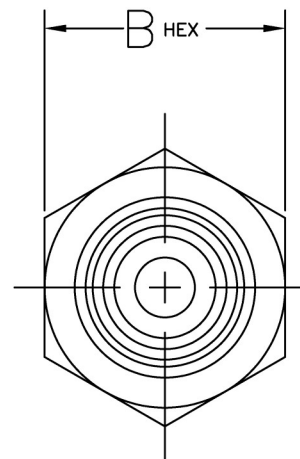
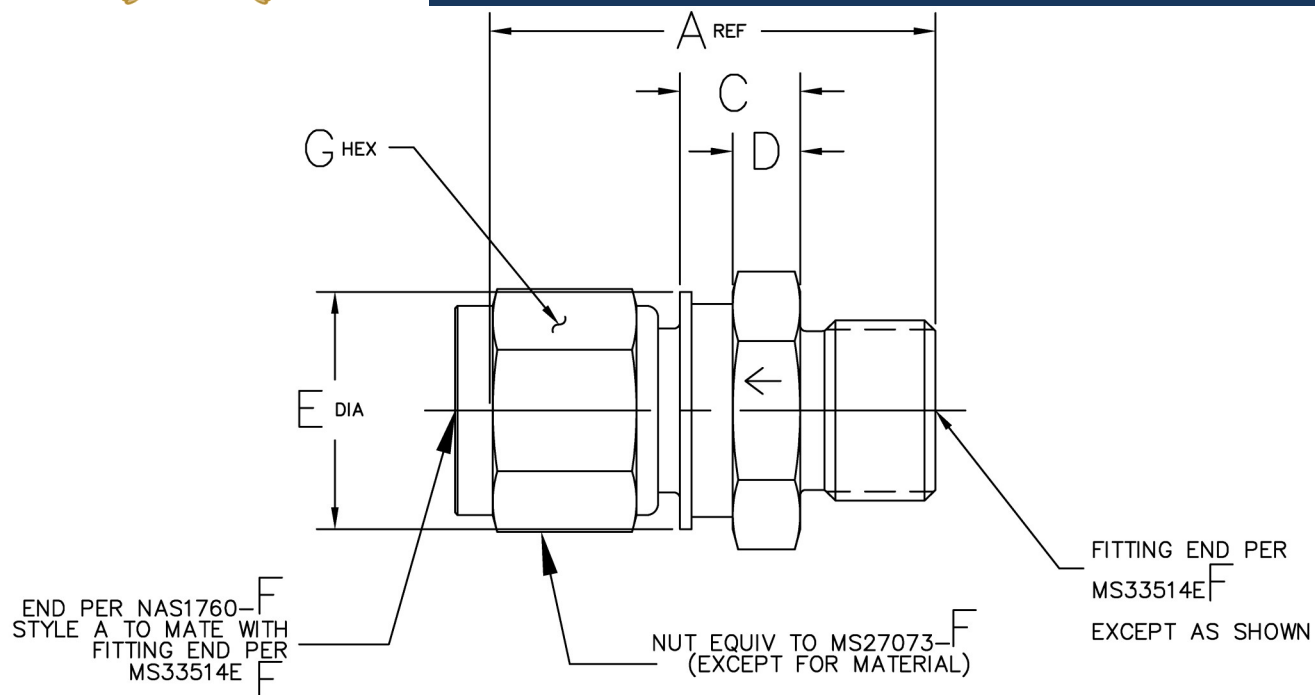
HYDRAULIC SCHEMATIC

1C3600	1	29.0	NAS1760A16	MS33514E16	2.876	.375	1.062	1.615	1.625	1.500
1C3598	3/4	16.0	NAS1760A12	MS33514E12	2.201	.343	.562	1.365	1.375	1.250
1C3596	5/8	10.5	NAS1760A10	MS33514E10	2.056	.312	.531	1.115	1.125	1.000
1C3510	1/2	6.0	NAS1760A8	MS33514E8	1.853	.281	.500	.990	1.000	.875
1C3594	3/8	3.5	NAS1760A6	MS33514E6	1.621	.250	.469	.803	.812	.688
1C3592	1/4	1.2	NAS1760A4	MS33514E4	1.491	.219	.438	.678	.688	.562
CRISSAIR PART NO	TUBE SIZE	FLOW (GPM)	FITTING END NO 1 (FLARELESS B-NUT)	FITTING END NO 2 (FLARELESS TUBE)	A (REF)	B ±.015	C ±.015	D ±.015	E ±.015	F ±.010

CATEGORY 1: CHECK VALVES, INLINE



CHECK VALVE, SERIES, B-NUT/FLARELESS



HYDRAULIC SCHEMATIC

PERFORMANCE SPECIFICATIONS:

FLUIDS: ALL AIRCRAFT HYDRAULIC FLUIDS

MATERIAL: BODY 17-4PH CRES

POPPET 440C CRES

SWIVEL NUT 6AL-4V TITANIUM

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 4000 PSIG

PROOF PRESSURE: 6000 PSIG

CRACKING PRESSURE: 2 TO 8 PSID

FLOW: SEE TABLE AT 15 PSID MAX

INTERNAL LEAKAGE (CHECKED DIRECTION):

1 DPM MAX AT 5 PSID TO 1000 PSID

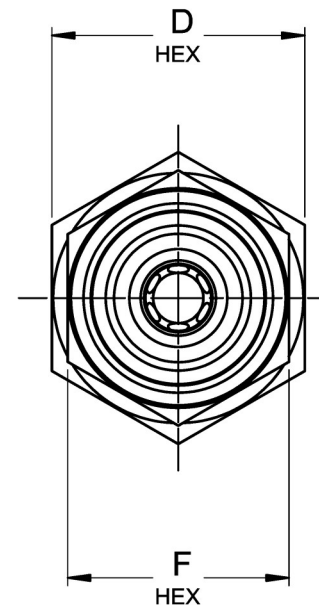
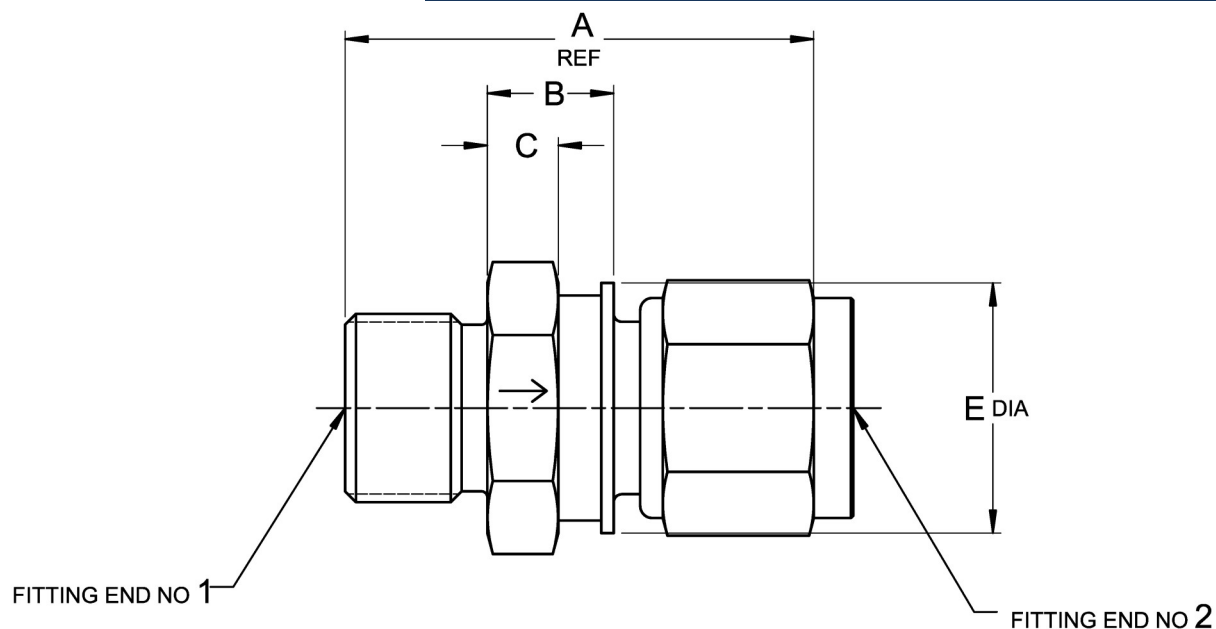
NONE AT 1000 TO 4000 PSID

1C3416	16	2.876	1.625	1.062	.375	1.615	1.496	20.0	.957
1C3414	14	2.600	1.500	.812	.360	1.490	(1.371)	16.0	.888
1C3412	12	2.201	1.375	.562	.343	1.365	1.246	10.5	.795
1C3410	10	2.056	1.125	.531	.312	1.115	.996	6.0	.362
1C3408	8	1.853	1.000	.500	.281	.990	.871	3.5	.270
1C3406	6	1.621	.813	.469	.250	.803	.684	1.2	.150
1C3404	4	1.491	.688	.438	.219	.678	.559	0.4	.104
CRISSAIR PART NO	F	A REF	B HEX	C	D	E DIA	G HEX	RATED FLOW (GPM)	MAX WT (LBS)

CATEGORY 1: CHECK VALVES, INLINE



CHECK VALVE, SERIES, B-NUT/FLARELESS



PERFORMANCE SPECIFICATIONS:

FLUIDS: ALL AIRCRAFT HYDRAULIC FLUIDS

MATERIAL: BODY 2024-T351 AL

POPPET 440C CRES

SWIVEL NUT 2024-T6 OR T851 AL

TEMPERATURE RANGE:-65°F TO 275°F

OPERATING PRESSURE: 3000 PSIG

PROOF PRESSURE: 4500 PSIG

CRACKING PRESSURE: 2 TO 8 PSID

FLOW: SEE TABLE AT 15 PSID MAX

INTERNAL LEAKAGE (CHECKED DIRECTION):

1 DPM MAX AT 5 PSID

NONE AT 1000 TO 3000 PSID



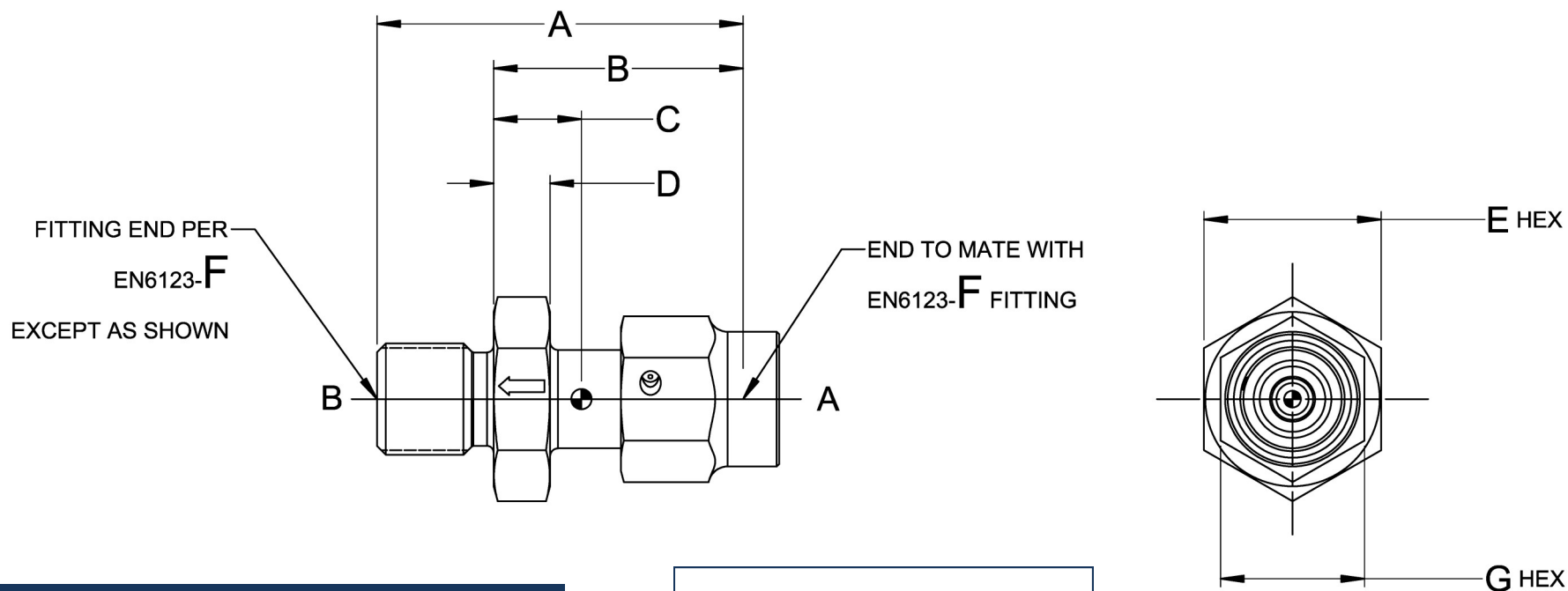
HYDRAULIC SCHEMATIC

7C2008	MS33514E8 (.7500-16 UNJF-3A)	NAS1760-8 (.7500-16 UNJF-3B)	1.853	.500	.281	1.000	.990	.875	3.5	.102
7C2006	MS33514E6 (.5625-18 UNJF-3A)	NAS1760-6 (.5625-18 UNJF-3B)	1.621	.469	.250	.813	.803	.687	1.2	.059
7C2004	MS33514E4 (.4375-20 UNJF-3A)	NAS1760-4 (.4375-20 UNJF-3B)	1.491	.438	.219	.688	.678	.562	0.4	.037
CRISSAIR PART NO	FITTING END NO. 1	FITTING END NO. 2	A REF	B	C	D HEX	E DIA	F HEX	RATED FLOW (GPM)	MAX WT (LBS)

CATEGORY 1: CHECK VALVES, INLINE



CHECK VALVE, SERIES, B-NUT/FLARELESS



PERFORMANCE SPECIFICATIONS:

FLUIDS: ALL AIRCRAFT HYDRAULIC FLUIDS

MATERIAL: BODY 15-5PH CRES

POPPET PH13-8MO CRES

SWIVEL 15-5PH CRES

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 5075 PSIG

PROOF PRESSURE: 7612 PSIG

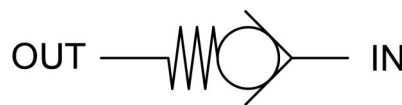
CRACKING PRESSURE: 2 TO 7.25 PSID

FLOW: 1C5554: 5.28 GPM AT 160 PSID

1C5556: 7.9 GPM AT 29 PSID

13.2 GPM AT 43.5 PSID

INTERNAL LEAKAGE (CHECKED DIRECTION):
2 DPM MAX AT 3 TO 73 PSID
NONE AT 73 TO 7612 PSID



HYDRAULIC SCHEMATIC

1C5554	4	1.422	.984 .954	.341	.234 .204	.691 .678	.565 .552
1C5556	8	1.866	1.319 1.289	.451	.266 .236	1.003 .990	.878 .865
CRISSAIR PART NO	F	A	B	C	D	E HEX	G HEX

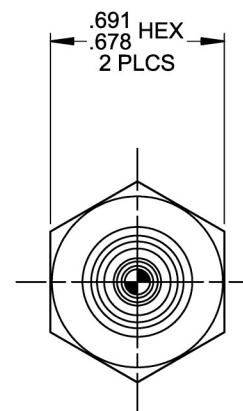
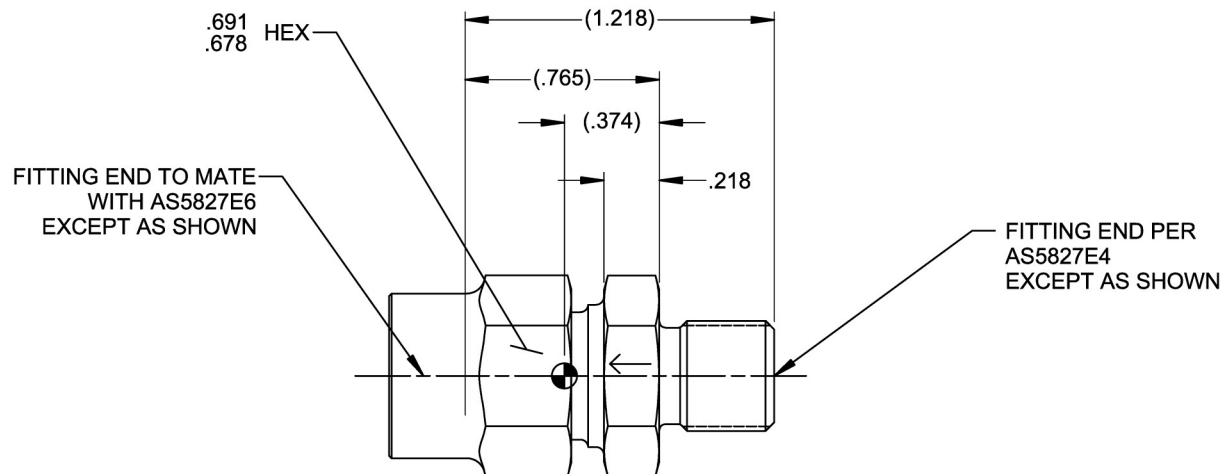
CATEGORY 1: CHECK VALVES, INLINE



PART NUMBER: 1C5396, B-NUT/FLARELESS



ISOMETRIC VIEW
FOR REFERENCE ONLY



PERFORMANCE SPECIFICATIONS:

FLUIDS: ALL AIRCRAFT HYDRAULIC FLUIDS

MATERIAL: BODY 15-5PH CRES

POPPET PH13-8MO CRES

SWIVEL 15-5PH CRES

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 6000 PSIG

PROOF PRESSURE: 9000 PSIG

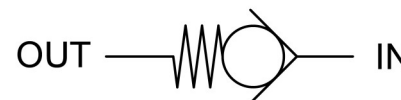
CRACKING PRESSURE: 2 TO 8 PSID

FLOW: 2 GPM AT 29 PSID MAX

INTERNAL LEAKAGE (CHECKED DIRECTION):

5 DPM MAX AT 0 TO 1000 PSID

1 DPM MAX AT 1001 TO 6000 PSID

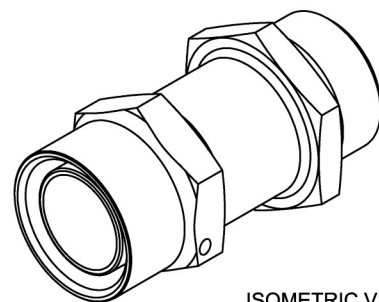


HYDRAULIC SCHEMATIC

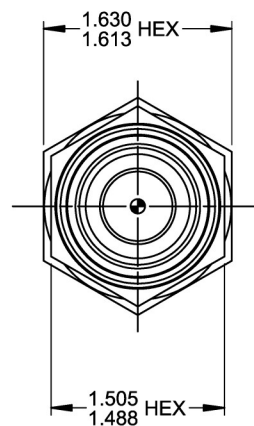
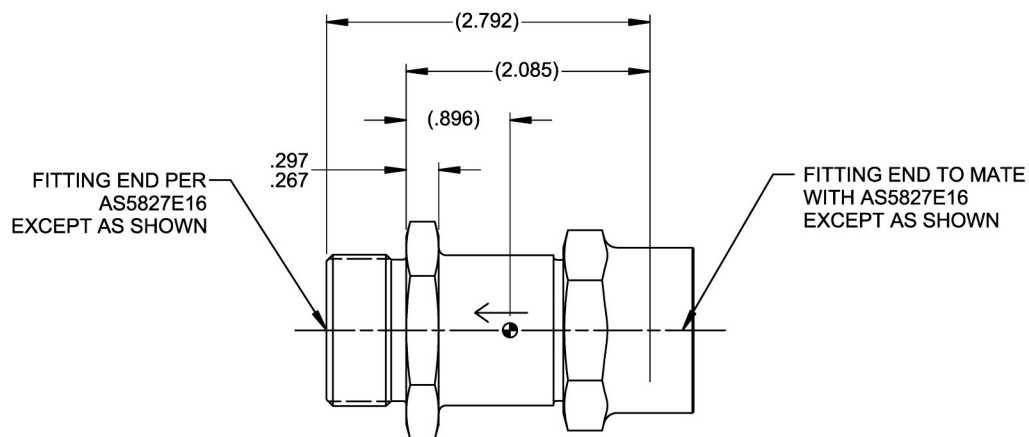
CATEGORY 1: CHECK VALVES, INLINE



PART NUMBER: 1C5388, B-NUT/FLARELESS



ISOMETRIC VIEW
FOR REFERENCE ONLY



PERFORMANCE SPECIFICATIONS:

FLUIDS: ALL AIRCRAFT HYDRAULIC FLUIDS

MATERIAL: BODY 15-5PH CRES

POPPET PH13-8MO CRES

SWIVEL 15-5PH CRES

TEMPERATURE RANGE: -65°F TO 275°F

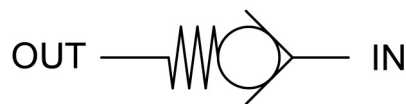
OPERATING PRESSURE: 5000 PSIG

PROOF PRESSURE: 7500 PSIG

CRACKING PRESSURE: 2 TO 8 PSID

FLOW: 40 GPM AT 36 PSID MAX

INTERNAL LEAKAGE (CHECKED DIRECTION):
5 DPM MAX AT 0 TO 5000 PSID

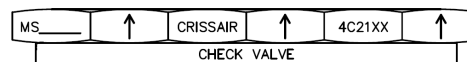


HYDRAULIC SCHEMATIC

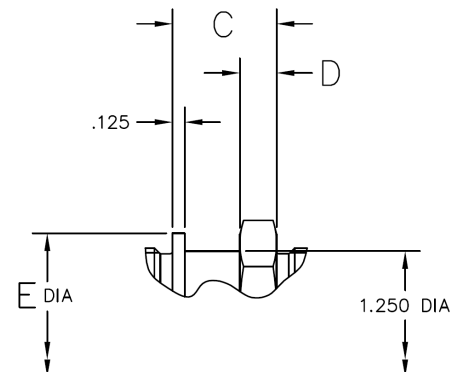
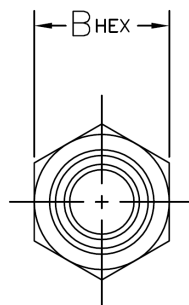
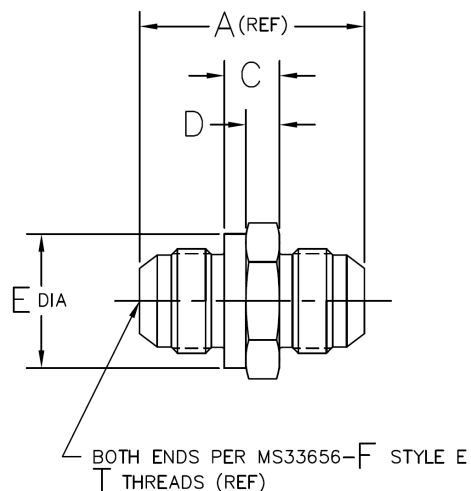
CATEGORY 1: CHECK VALVES, INLINE



PART NUMBER: 4C2100 CHECK VALVE, SERIES, FLARED



MARKING DETAIL



CONFIGURATION OF SIZE 16 ONLY



HYDRAULIC SCHEMATIC

PERFORMANCE SPECIFICATIONS:

FLUIDS: ALL AIRCRAFT HYDRAULIC FLUIDS

MATERIAL: BODY 17-4PH CRES

BODY 431 CRES AVAILABLE FOR 2C6500 SERIES

BODY 303 CRES AVAILABLE FOR 2C5100 SERIES

POPPET 440C CRES

TEMPERATURE RANGE: -65°F TO 450°F

OPERATING PRESSURE: 3000 PSIG

PROOF PRESSURE: 4500 PSIG

CRACKING PRESSURE: 2 TO 8 PSID

FLOW: SEE TABLE AT 15 PSID MAX

INTERNAL LEAKAGE (CHECKED DIRECTION):

1 DPM MAX AT 5 PSID

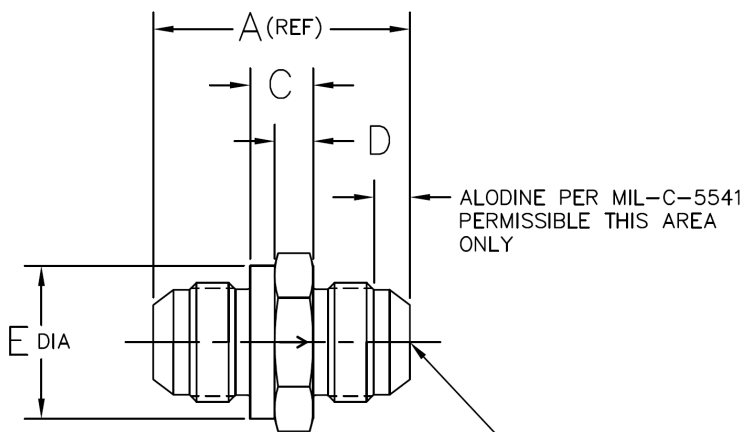
NONE AT 1000 TO 3000 PSID

MS24593-16	4C2116	1	1 5/16-12UNJ-3A	16	2.884	1.625	1.062	.375	1.615	29.0	.648
MS24593-12	4C2112	3/4	1 1/16-12UNJ-3A	12	2.290	1.375	.562	.343	1.365	16.0	.405
MS24593-10	4C2110	5/8	7/8-14UNJF-3A	10	2.047	1.125	.531	.312	1.115	10.5	.250
MS24593-8	4C2180	1/2	3/4-16UNJF-3A	8	1.814	1.00	.500	.281	.990	6.0	.189
MS24593-6	4C2160	3/8	9/16-18UNJF-3A	6	1.581	.813	.469	.250	.803	3.5	.104
MS24593-5	4C2150	5/16	1/2-20UNJF-3A	5	1.538	.750	.438	.219	.740	2.3	.078
MS24593-4	4C2140	1/4	7/16-20UNJF-3A	4	1.538	.688	.438	.219	.678	1.2	.070
MS P/N	CRISSAIR PART NO	TUBE OD	T THREAD	F	A REF	B HEX	C	D	E DIA	RATED FLOW (GPM)	MAX WT (LBS)

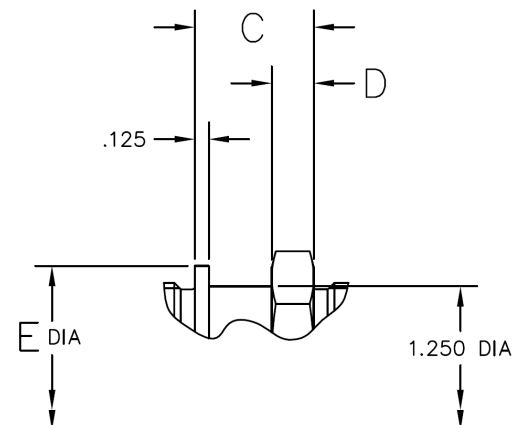
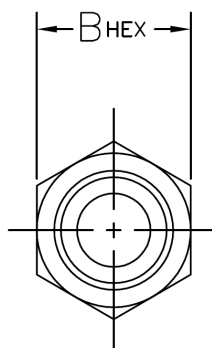
CATEGORY 1: CHECK VALVES, INLINE



PART NUMBER: 2C5000 CHECK VALVE, SERIES, FLARED



BOTH PORTS PER MS33656-F STYLE E



CONFIGURATION OF 2C5016 ONLY



PERFORMANCE SPECIFICATIONS:

FLUIDS: ALL AIRCRAFT HYDRAULIC FLUIDS
 MATERIAL: BODY 2024-T351 AL
 POPPET 440C CRES
 TEMPERATURE RANGE: -65°F TO 300°F
 OPERATING PRESSURE: 3000 PSIG
 PROOF PRESSURE: 4500 PSIG
 CRACKING PRESSURE: 2 TO 8 PSID
 FLOW: SEE TABLE AT 10 PSID MAX
 INTERNAL LEAKAGE (CHECKED DIRECTION):
 1 DPM MAX AT 5 PSID
 NONE AT 1000 TO 3000 PSID

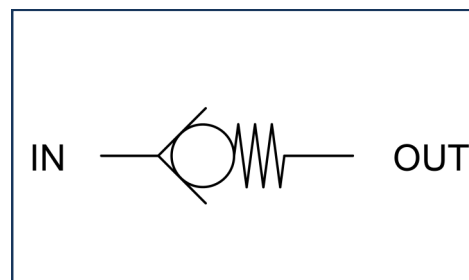
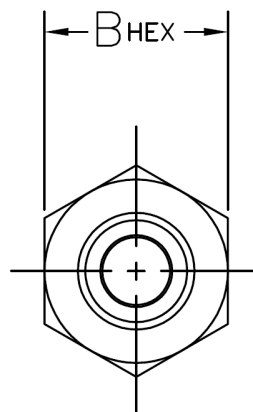
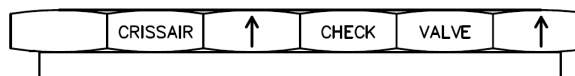
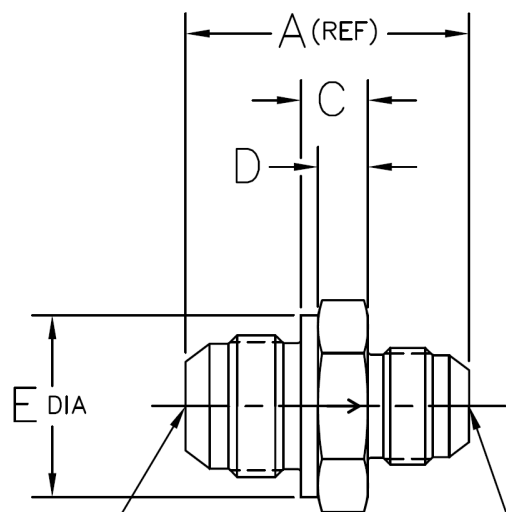
HYDRAULIC SCHEMATIC

2C5016	.273	1	16	2.884	1.625	1.062	.375	1.615	29.0	2C5017
2C5012	.162	3/4	12	2.290	1.375	.562	.343	1.365	16.0	2C5013
2C5010	.099	5/8	10	2.047	1.125	.531	.312	1.115	10.5	2C5011
2C5080	.077	1/2	8	1.814	1.000	.500	.281	.990	6.0	2C5081
2C5060	.039	3/8	6	1.581	.813	.469	.250	.803	3.5	2C5061
2C5050	.030	5/16	5	1.538	.750	.438	.219	.740	2.3	2C5051
2C5040	.026	1/4	4	1.538	.688	.438	.219	.678	1.2	2C5041
CRISSAIR PART NO	MAX WT (LBS)	TUBE OD	F	A REF	B HEX	C	D	E DIA	RATED FLOW (GPM)	APPLICABLE ASSY DWG NO

CATEGORY 1: CHECK VALVES, INLINE



PART NUMBER: 1C1400 CHECK VALVE, SERIES, FLARED



HYDRAULIC SCHEMATIC

PERFORMANCE SPECIFICATIONS:

FLUIDS: ALL AIRCRAFT HYDRAULIC FLUIDS

MATERIAL: BODY 303 CRES

POPPET 440C CRES

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 3000 PSIG

PROOF PRESSURE: 4500 PSIG

CRACKING PRESSURE: 2 TO 8 PSID

FLOW: SEE TABLE FOR FLOW OF MIL-H-83282 AT 100° ± 5°F

INTERNAL LEAKAGE (CHECKED DIRECTION):

1 DPM MAX AT 5 PSID

NONE AT 1000 TO 3000 PSID

INLET FITTING
PER MS33656E- F
EXCEPT AS
SHOWN

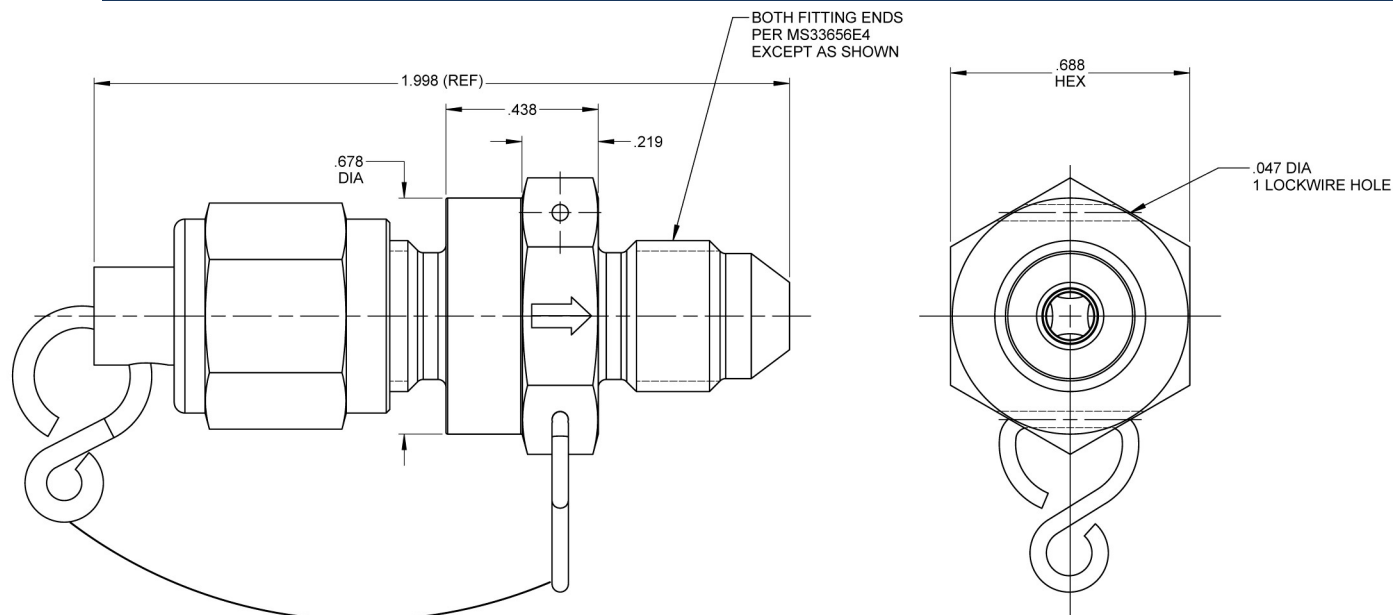
OUTLET FITTING
PER MS33656E- G
EXCEPT AS
SHOWN

1C1460	.120	6	5	1.575	.813	.469	.250	.803	2.3	15
1C1450	.100	5	4	1.569	.750	.469	.250	.740	1.2	15
1C1412	.600	16	12	2.275	1.625	.500	.375	1.615	16.0	15
1C1410	.405	12	10	2.125	1.375	.503	.375	1.365	10.5	15
1C1408	.250	10	8	1.946	1.125	.531	.312	1.115	6.0	15
1C1406	.189	8	6	1.713	1.000	.500	.250	.990	3.5	15
1C1404	.104	6	4	1.575	.813	.469	.250	.803	1.2	15
CRISSAIR PART NO	MAX WT (LBS)	INLET F FITTING	OUTLET G FITTING	A REF	B HEX	C	D	E DIA	RATED FLOW (GPM)	MAX ΔP PSID

CATEGORY 1: CHECK VALVES, INLINE



PART NUMBER: 1C2224 CHECK VALVE, FLARED



PERFORMANCE SPECIFICATIONS:

FLUIDS: ALL AIRCRAFT HYDRAULIC FLUIDS

MATERIAL: BODY 17-4PH CRES

BODY 303 CRES AVAILABLE FOR 1C1010

POPPET 440C CRES

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 5600 PSIG

3000 PSIG FOR 1C1010

PROOF PRESSURE: 8400 PSIG

4500 PSIG FOR 1C1010

CRACKING PRESSURE: 2 TO 8 PSID

FLOW: 1.2 GPM AT 10 PSID MAX

INTERNAL LEAKAGE (CHECKED DIRECTION):

1 DPM MAX AT 5 PSID

NONE AT 1000 TO 3000 PSID

WEIGHT: .123 LBS MAX

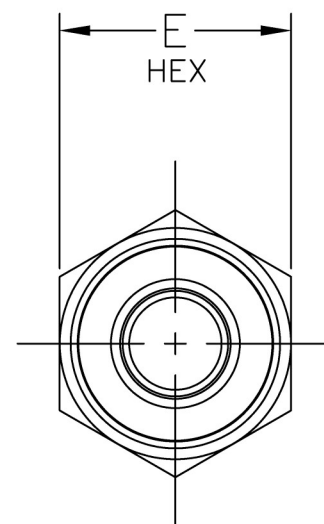
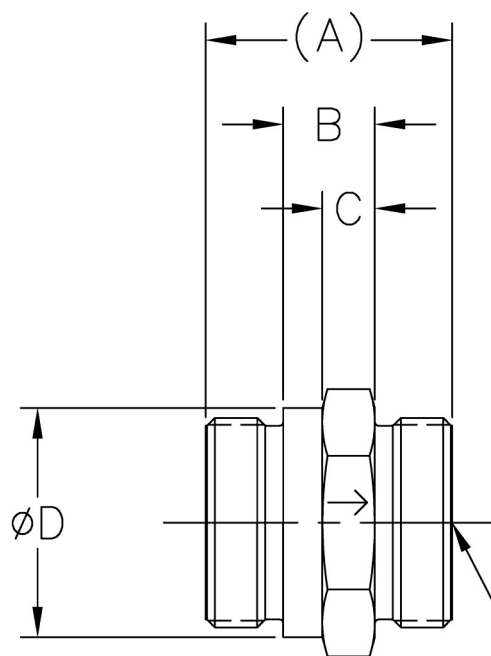


HYDRAULIC SCHEMATIC

CATEGORY 1: CHECK VALVES, INLINE



PART NUMBER: 7C1550 CHECK VALVE, SERIES, BEAM SEAL



BOTH FITTING ENDS
PER AS85720/1-F
EXCEPT AS SHOWN

PERFORMANCE SPECIFICATIONS:

FLUIDS: ALL AIRCRAFT HYDRAULIC FLUIDS

MATERIAL: BODY 17-4PH CRES

POPPET 440C CRES

TEMPERATURE RANGE: -65°F TO 275°F

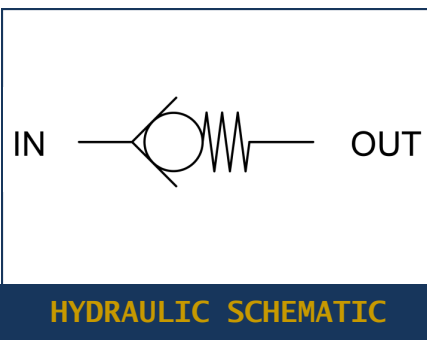
OPERATING PRESSURE: 5000 PSIG

PROOF PRESSURE: 7500 PSIG

CRACKING PRESSURE: 2 TO 8 PSID

FLOW: SEE TABLE AT 15 PSID MAX

INTERNAL LEAKAGE (CHECKED DIRECTION):
1 DPM MAX AT 5 PSID
NONE AT 1000 TO 5000 PSID

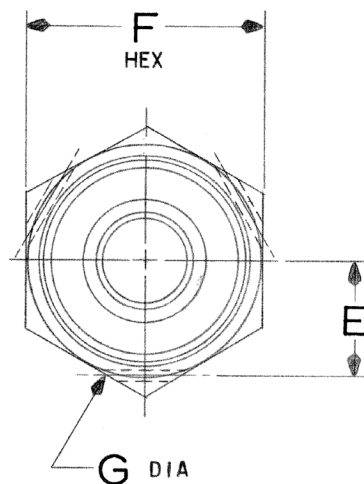
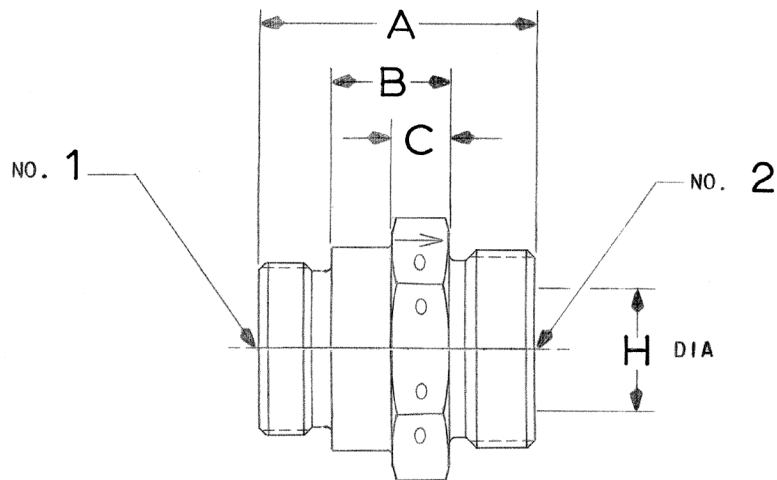


7C1566	16	1.465	.545	.312	1.365	1.375	16.0	.43
7C1562	12	1.260	.436	.281	1.115	1.125	10.5	.24
7C1560	10	1.140	.396	.250	.990	1.000	6.0	.17
7C1558	8	1.000	.384	.218	.803	.813	3.5	.11
7C1556	6	.840	.250	.188	.678	.688	1.2	.06
7C1554	4	.817	.267	.188	.615	.625	1.0	.04
CRISSAIR PART NO	F	(A)	B	C	ØD	E HEX	RATED FLOW (GPM)	MAX WT (LBS)

CATEGORY 1: CHECK VALVES, INLINE



PART NUMBER: 4C2800 CHECK VALVE, SERIES, BEAM SEAL



HYDRAULIC SCHEMATIC

PERFORMANCE SPECIFICATIONS:

FLUIDS: ALL AIRCRAFT HYDRAULIC FLUIDS

MATERIAL: BODY 17-4PH CRES

POPPET 440C CRES

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 4000 PSIG

PROOF PRESSURE: 6000 PSIG

CRACKING PRESSURE: 2 TO 8 PSID

FLOW: SEE TABLE AT 15 PSID MAX

4C2812 AT 18 PSID MAX

4C2814 AT 25 PSID MAX

INTERNAL LEAKAGE (CHECKED DIRECTION):

1 DPM MAX AT 5 PSID

NONE AT 1000 TO 4000 PSID

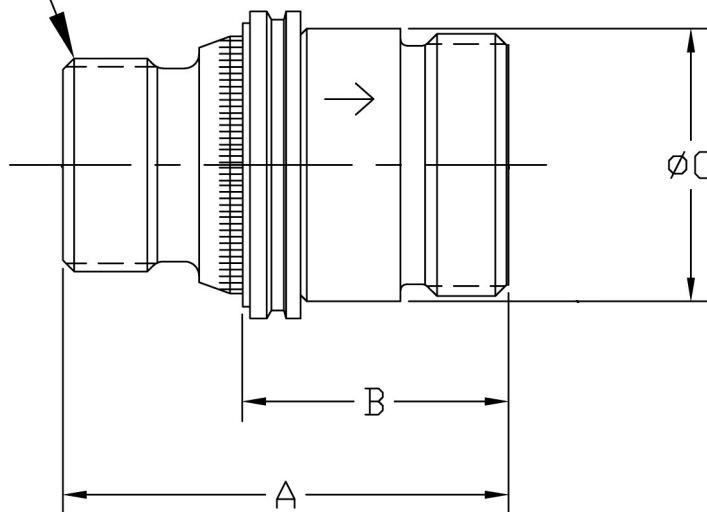
4C2814	R44090-14 1.1250-16 UNJ-3A	R44090-16 1.2500-14 UNJ-3A	1.688	.798	.312	.688	1.375	.070	.764 .770	22.0	.417
4C2812	R44090-12 1.0000-16 UNJ-3A	R44090-14 1.1250-16 UNJ-3A	1.410	.568	.312	.688	1.375	.070	.764 .770	16.0	.300
4C2810	R44090-10 .8438-18 UNJS-3A	R44090-12 1.0000-16 UNJ-3A	1.315	.531	.281	.562	1.125	.070	.639 .645	10.5	.213
4C2808	R44090-8 .7188-20 UNJS-3A	R44090-10 .8438-18 UNJS-3A	1.180	.500	.250	.500	1.000	.047	.513 .519	6.0	.175
4C2806	R44090-6 .5625-20 UNJS-3A	R44090-8 .7188-20 UNJS-3A	1.041	.438	.219	.406	.813	.047	.385 .390	3.5	.092
4C2804	R44090-4 .4375-24 UNJS-3A	R44090-6 .5625-20 UNJS-3A	1.008	.438	.188	.344	.688	.047	.260 .265	1.2	.072
CRISSAIR PART NO	FITTING END NO1	FITTING END NO2	(A)	B ±.015	C ±.015	E ±.015	F HEX ±.010	G DIA +.015 -.001	H DIA	RATED FLOW (GPM)	MAX WT (LBS)

CATEGORY 1: CHECK VALVES, INLINE



CHECK VALVE, SERIES, ROSAN/FLARELESS

FITTING END TO MATE WITH
ROSAN BOSS PS10035



HYDRAULIC SCHEMATIC

PERFORMANCE SPECIFICATIONS:

FLUIDS: ALL AIRCRAFT HYDRAULIC FLUIDS

MATERIAL: BODY 17-4 CRES

POPPET 440C CRES

LOCKRING A-286 CRES

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 3000 PSIG

PROOF PRESSURE: 4500 PSIG

CRACKING PRESSURE: 2 TO 8 PSID

FLOW: SEE TABLE AT 15 PSID MAX

INTERNAL LEAKAGE (CHECKED DIRECTION):

1 DPM MAX AT 5 PSID

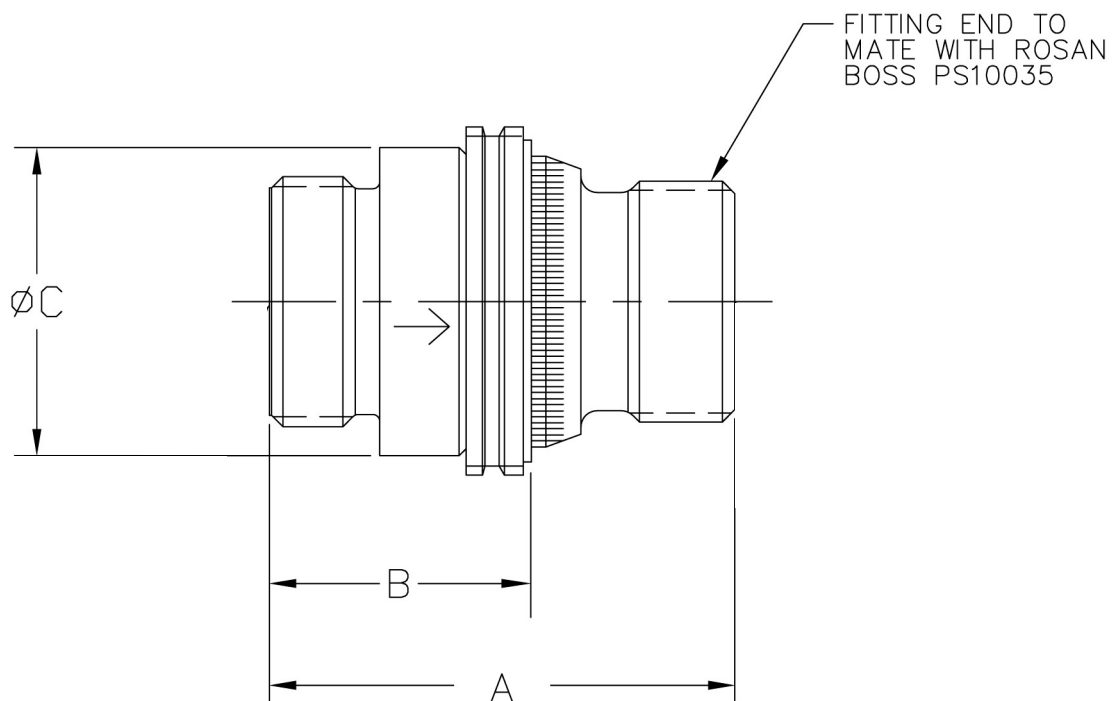
NONE AT 1000 TO 3000 PSID

4C2876-1	1	29.0	.611	-20 1.3125-18 UNJEF-3A	MS33514E16	2.320	1.554	1.400
4C2872-1	3/4	16.0	.283	-12 .8125-20 UNJEF-3A	MS33514E12	2.190	1.493	1.050
4C2870-1	5/8	10.5	.175	-10 .6785-24 UNJEF-3A	MS33514E10	1.920	1.285	.860
4C2868-1	1/2	6.0	.175	-10 .6785-24 UNJEF-3A	MS33514E8	1.800	1.165	.860
4C2866-1	3/8	3.5	.068	-6 .4375-20 UNJF-3A	MS33514E6	1.550	.985	.575
4C2864-1	1/4	1.2	.038	-4 .3125-24 UNJF-3A	MS33514E4	1.430	.919	.432
CRISSAIR PART NO	TUBE SIZE	FLOW (GPM)	MAX WT (LBS)	FITTING END NO 1 ROSAN (DRA 9 RF)	FITTING END NO 2 (FLARELESS TUBE)	A ±.015	B ±.020	C ±.015

CATEGORY 1: CHECK VALVES, INLINE



CHECK VALVE, SERIES, ROSAN/FLARELESS



PERFORMANCE SPECIFICATIONS:

FLUIDS: ALL AIRCRAFT HYDRAULIC FLUIDS

MATERIAL: BODY 17-4 CRES

POPPET 440C CRES

LOCKRING A286 CRES

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 3000 PSIG

PROOF PRESSURE: 4500 PSIG

CRACKING PRESSURE: 2 TO 8 PSID

FLOW: SEE TABLE AT 15 PSID MAX

INTERNAL LEAKAGE (CHECKED DIRECTION):

1 DPM MAX AT 5 PSID

NONE AT 1000 TO 3000 PSID

HYDRAULIC SCHEMATIC

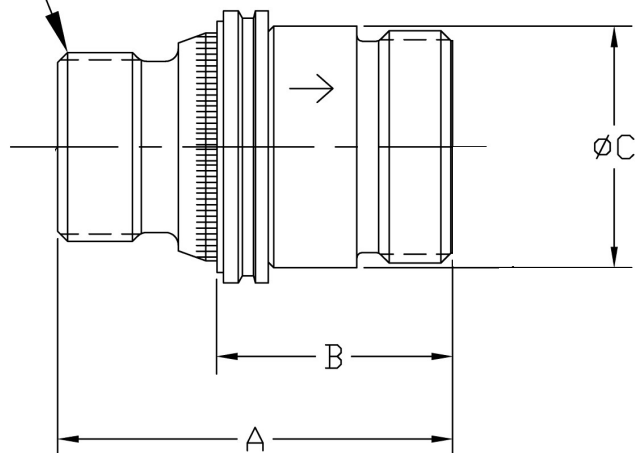
4C2876-2	1	29.0	MS33514E16	-20 1.3125-18 UNJEF-3A	2.420	1.655	1.400
4C2872-2	3/4	16.0	MS33514E12	-16 1.1250-18 UNJEF-3A	2.030	1.275	1.305
4C2870-2	5/8	10.5	MS33514E10	-12 .8125-20 UNJEF-3A	1.840	1.140	1.040
4C2868-2	1/2	6.0	MS33514E8	-10 .6785-24 UNJEF-3A	1.700	1.063	.860
4C2866-2	3/8	3.5	MS33514E6	-8 .5625-18 UNJF-3A	1.580	.980	.750 .711
4C2864-2	1/4	1.2	MS33514E4	-6 .4375-20 UNJF-3A	1.520	.955	.560
CRISSAIR PART NO	TUBE SIZE	FLOW (GPM)	FITTING END ^{NO1} (FLARELESS TUBE)	FITTING END ^{NO2} ROSAN (DRA 9 RF)	A ±.015	B ±.020	C ±.015

CATEGORY 1: CHECK VALVES, INLINE



CHECK VALVE, SERIES, ROSAN/DYNATUBE

FITTING END TO MATE WITH
ROSAN BOSS PS10035



HYDRAULIC SCHEMATIC

PERFORMANCE SPECIFICATIONS:

FLUIDS: ALL AIRCRAFT HYDRAULIC FLUIDS

MATERIAL: BODY 17-4PH CRES

POPPET 440C CRES

LOCKRING A-286 CRES

TEMPERATURE RANGE: -65°F TO 450°F

OPERATING PRESSURE: 3000 PSIG NOMINAL

PROOF PRESSURE: 4500 PSIG

CRACKING PRESSURE: 2 TO 8 PSID

FLOW: SEE TABLE AT 15 PSID

INTERNAL LEAKAGE (CHECKED DIRECTION):

1 DPM MAX AT 5 PSID

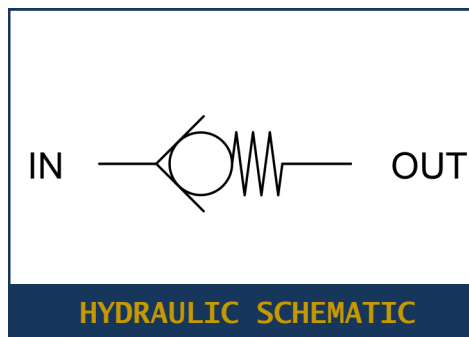
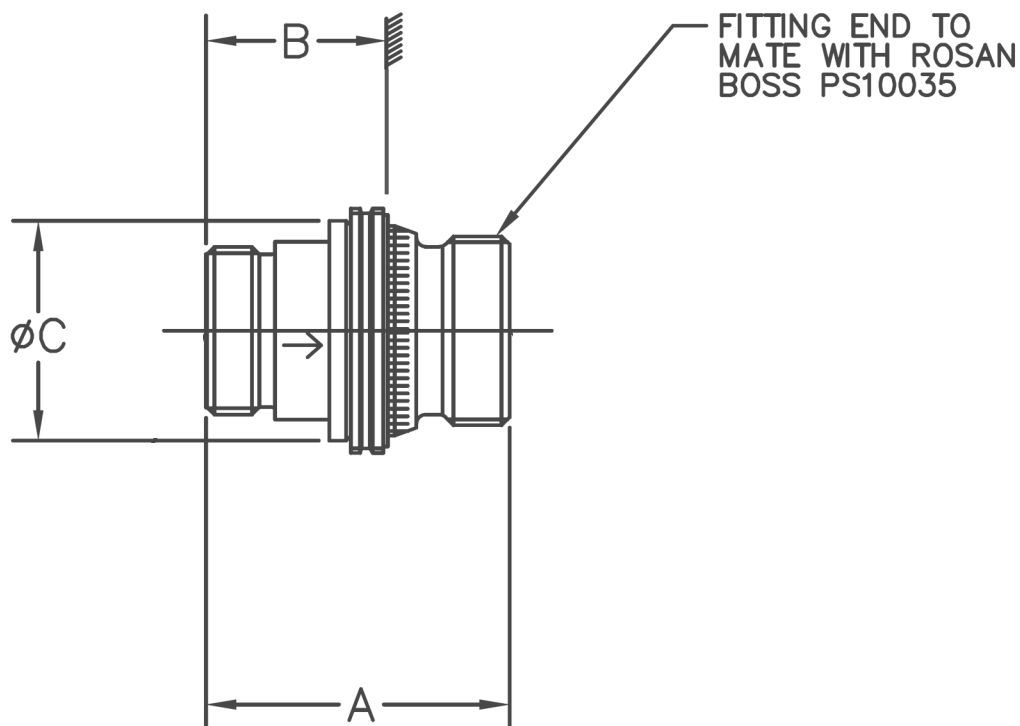
NONE AT 1000 TO 3000 PSID

4C2620-1	1 1/2	50.0	-24 1.625-18 UNJEF-3A	R44090-25S 1.8438-14 UNJS-3A	2.670	1.866	1.800	1.100
4C2616-1	1 1/4	29.0	-20 1.3125-18 UNJEF-3A	R44090-21S 1.5781-14 UNJS-3A	2.040	1.274	1.625 1.516	.660
4C2612-1	1	16.0	-16 1.1250-18 UNJEF-3A	R44090-16 1.2500-14 UNJS-3A	1.940	1.206	1.280	.640
4C2610-1	3/4	10.5	-12 .8125-20 UNJEF-3A	R44090-12 1.0000-16 UNJS-3A	1.700	1.003	1.040	.340
4C2680-1	5/8	6.0	-10 .6875-24 UNJEF-3A	R44090-10 .8438-18 UNJS-3A	1.580	.945	.860	.240
4C2660-1	1/2	3.5	-8 .5625-18 UNJF-3A	R44090-8 .7188-20 UNJS-3A	1.420	.820	.730	.150
4C2640-1	3/8	1.2	-6 .4375-20 UNJF-3A	R44090-6 .5625-20 UNJS-3A	1.360	.795	.577	.106
CRISSAIR PART NO	TUBE SIZE	FLOW (GPM)	FITTING END NO 1 ROSAN (DRA 9 RF)	FITTING END NO 2 DYNATUBE (TYPE A)	A ±.010	B ±.020	C ±.010	MAX WT (LBS)

CATEGORY 1: CHECK VALVES, INLINE



CHECK VALVE, SERIES, ROSAN/DYNATUBE



PERFORMANCE SPECIFICATIONS:

FLUIDS: ALL AIRCRAFT HYDRAULIC FLUIDS

MATERIAL: BODY 17-4PH CRES

POPPET 440C CRES

LOCKRING A-286 CRES

TEMPERATURE RANGE: -65°F TO 450°F

OPERATING PRESSURE: 3000 PSIG NOMINAL

PROOF PRESSURE: 4500 PSIG

CRACKING PRESSURE: 2 TO 8 PSID

FLOW: SEE TABLE AT 15 PSID

INTERNAL LEAKAGE (CHECKED DIRECTION):

1 DPM MAX AT 5 PSID

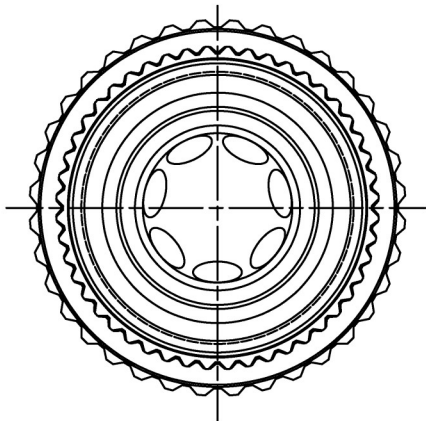
NONE AT 1000 TO 3000 PSID

4C2620-2	1 1/4	50.0	R44090-21S 1.5781-14 UNJS-3A	-24 1.6250-18 UNJEF-3A	2.700	1.896	1.600	1.010
4C2616-2	1	29.0	R44090-16 1.2500-14 UNJS-3A	-20 1.3125-18 UNJEF-3A	2.180	1.415	1.310	.550
4C2612-2	3/4	16.0	R44090-12 1.0000-16 UNJ-3A	-16 1.1250-18 UNJEF-3A	1.810	1.075	1.060	.340
4C2610-2	5/8	10.5	R44090-10 .8438-18 UNJS-3A	-12 .12520-20 UNJEF-3A	1.570	.870	1.040	.250
4C2680-2	1/2	6.0	R44090-8 .7188-20 UNJS-3A	-10 .6875-24 UNJEF-3A	1.450	.873	.870	.135
4C2660-2	3/8	3.5	R44090-6 .5625-20 UNJS-3A	-8 .5625-18 UNJEF-3A	1.380	.780	.720	.124
4C2640-2	1/4	1.2	R44090-4 .4375-24 UNJS-3A	-6 .4375-20 UNJEF-3A	1.330	.765	.577	.093
CRISSAIR PART NO.	TUBE SIZE	FLOW (GPM)	FITTING END ^{NO1} DYNATUBE (TYPE B)	FITTING END ^{NO2} ROSAN (DRA 9RF)	A ±.010	B ±.020	C ±.010	MAX WT (LBS)

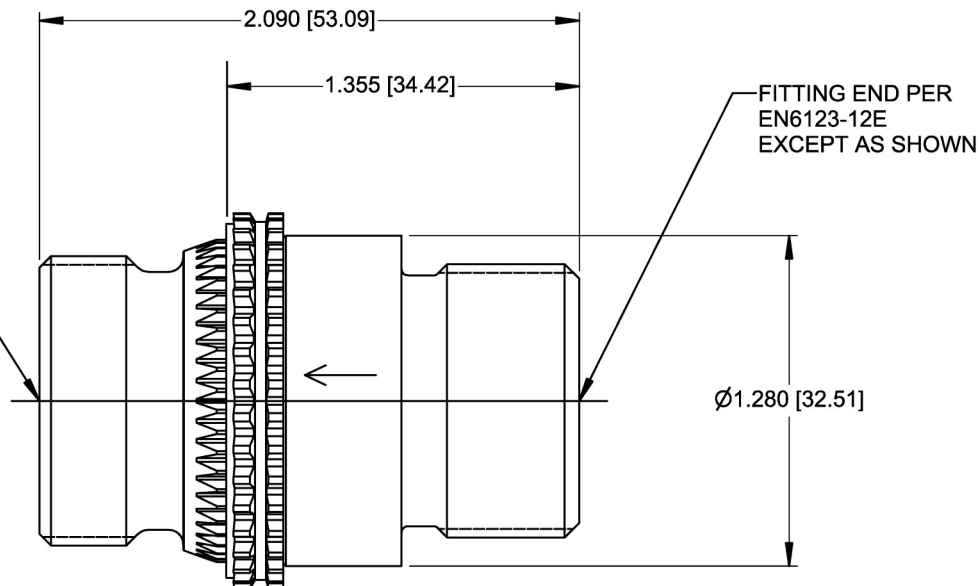
CATEGORY 1: CHECK VALVES, INLINE



PART NUMBER: 7C1112 CHECK VALVE, ROSAN/FLARELESS

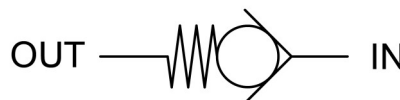


FITTING END TO MATE
WITH AS1300-16
EXCEPT AS SHOWN



PERFORMANCE SPECIFICATIONS:

FLUIDS: ALL AIRCRAFT HYDRAULIC FLUIDS
MATERIAL: BODY 15-5PH CRES
POPPET PH13-8MO
LOCKRING A-286 CRES
TEMPERATURE RANGE: -65°F TO 275°F
OPERATING PRESSURE: 5000 PSIG
PROOF PRESSURE: 7500 PSIG
CRACKING PRESSURE: 2 TO 8 PSID
FLOW: 11.23 GPM AT 8 PSID MAX
INTERNAL LEAKAGE (CHECKED DIRECTION):
1 DPM MAX AT 5 PSID
NONE AT 1000 TO 5000 PSID
WEIGHT: .437 LBS MAX

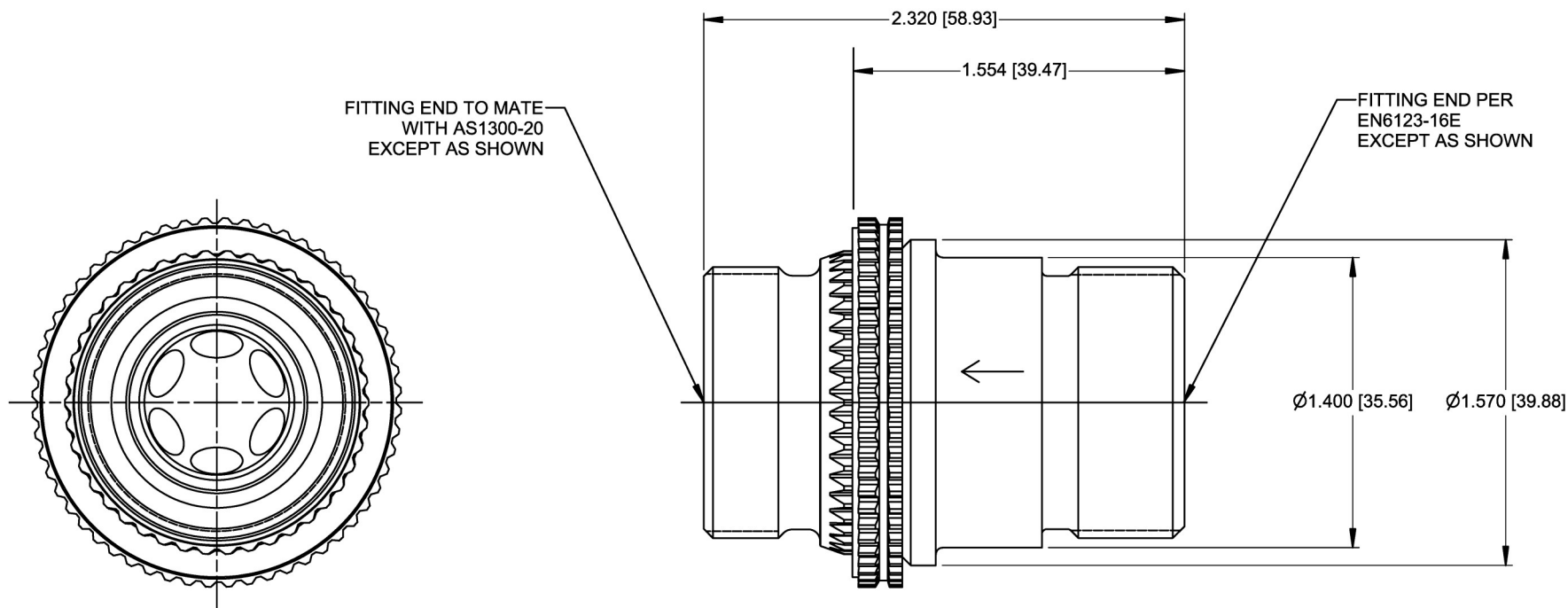


HYDRAULIC SCHEMATIC

CATEGORY 1: CHECK VALVES, INLINE

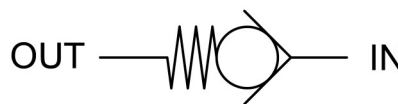


PART NUMBER: 7C1116 CHECK VALVE, ROSAN/FLARELESS



PERFORMANCE SPECIFICATIONS:

FLUIDS: ALL AIRCRAFT HYDRAULIC FLUIDS
MATERIAL: BODY 15-5PH CRES
POPPET PH13-8MO
LOCKRING A-286 CRES
TEMPERATURE RANGE: -65°F TO 275°F
OPERATING PRESSURE: 5000 PSIG
PROOF PRESSURE: 7500 PSIG
CRACKING PRESSURE: 2 TO 8 PSID
FLOW: 20 GPM AT 15 PSID MAX
INTERNAL LEAKAGE (CHECKED DIRECTION):
1 DPM MAX AT 5 PSID
NONE AT 1000 TO 5000 PSID
WEIGHT: .587 LBS MAX



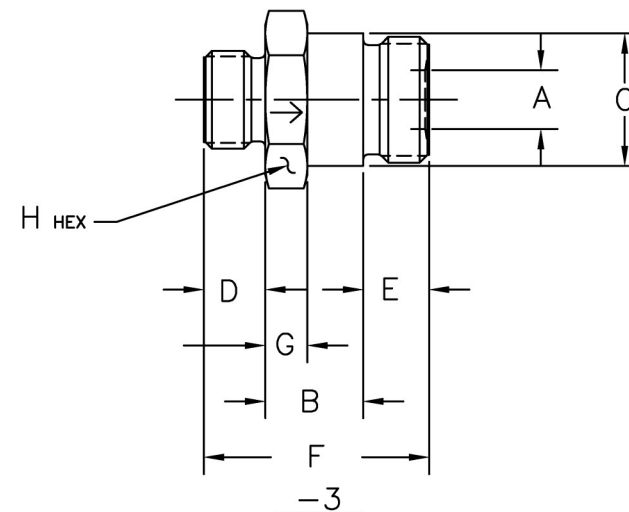
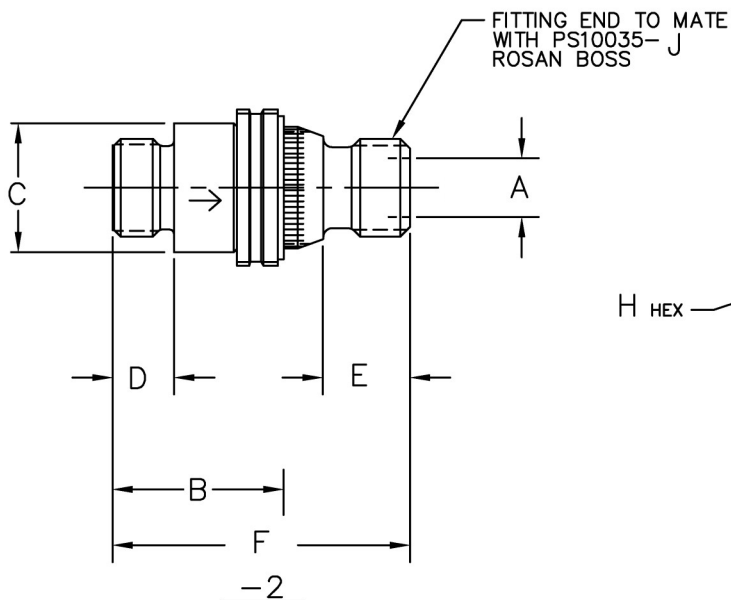
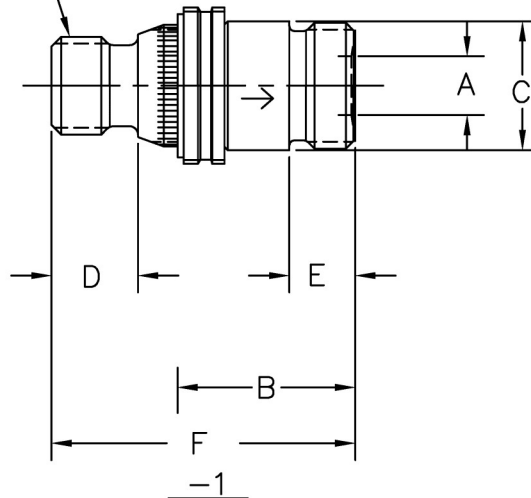
HYDRAULIC SCHEMATIC

CATEGORY 1: CHECK VALVES, INLINE



PART NUMBER: 4C2600 CHECK VALVE, SERIES

FITTING END TO MATE WITH
PS10035-J ROSAN BOSS



PERFORMANCE SPECIFICATIONS:

FLUIDS: ALL AIRCRAFT HYDRAULIC FLUIDS

MATERIAL: BODY 17-4PH CRES

POPPET 440C CRES

LOCKRING (-1 & -2 ONLY) A-286 CRES

TEMPERATURE RANGE: -65°F TO 450°F

OPERATING PRESSURE: 5000 PSIG NOMINAL

PROOF PRESSURE: 7500 PSIG

CRACKING PRESSURE: 2 TO 8 PSID

FLOW: SEE TABLE AT 15 PSID MAX

INTERNAL LEAKAGE (CHECKED DIRECTION):

1 DPM MAX AT 5 PSID

NONE AT 1000 TO 5000 PSID



HYDRAULIC SCHEMATIC

FULL TABLE ON NEXT PAGE

PHYSICAL SPECIFICATIONS

CATEGORY 1: CHECK VALVES, INLINE



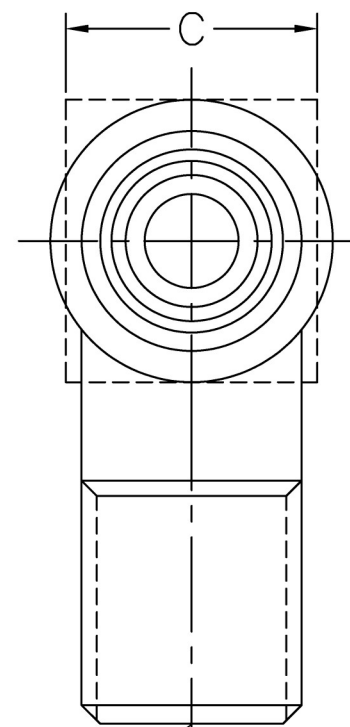
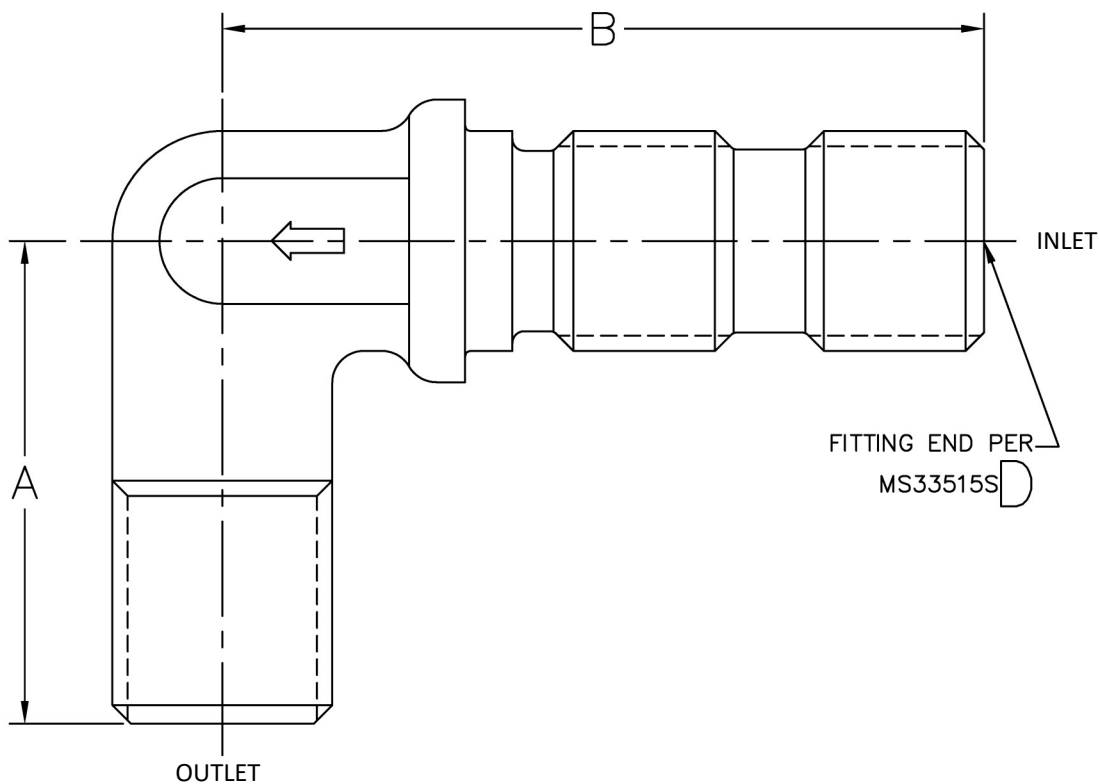
PART NUMBER: 4C2600 CHECK VALVE, SERIES

4C2620-1	ROSAN-24 (1.6250-18 UNJEF-3A)	DYNATUBE R44090-25S (1.8438-14 UNJS-3A)	1.275 1.267	1.886 1.846	1.800	.600	.565 .535	2.670	-	-	24	50.0	1.100
4C2620-2	DYNATUBE R44090-21S (1.5781-14 UNJS-3A)	ROSAN-24 (1.6250-18 UNJEF-3A)	1.275 1.267	1.916 1.876	1.800	.457	.600	2.700	-	-	24	50.0	1.010
4C2620-3	DYNATUBE R44090-21S (1.5781-14 UNJS-3A)	DYNATUBE R44090-25S (1.8438-14 UNJS-3A)	1.275 1.267	-	1.510	.457	.450 .420	2.700	.480	2.000	-	50.0	-
4C2616-1	ROSAN-20 (1.3125-18 UNJEF-3A)	DYNATUBE R44090-21S (1.5781-14 UNJS-3A)	1.021 1.013	1.294 1.254	1.250	.561	.365 .335	2.040	-	-	20	29.0	.660
4C2616-2	DYNATUBE R44090-16 (1.2500-14 UNJS-3A)	ROSAN-20 (1.3125-18 UNJEF-3A)	1.021 1.013	1.426 1.402	1.510	.460	.560	2.180	-	-	20	29.0	.550
4C2616-3	DYNATUBE R44090-16 (1.2500-14 UNJS-3A)	DYNATUBE R44090-21S (1.5781-14 UNJS-3A)	1.021 1.013	-	1.250	.460	.365 .335	1.840	.380	1.625	-	29.0	.570
4C2612-1	ROSAN-16 (1.1250-18 UNJEF-3A)	DYNATUBE R44090-16 (1.2500-14 UNJS-3A)	.771 .763	1.226 1.186	1.280	.557	.460	1.940	-	-	16	16.0	.640
4C2612-2	DYNATUBE R44090-12 (1.0000-16 UNJ-3A)	ROSAN-16 (1.1250-18 UNJEF-3A)	.771 .763	1.088 1.064	1.310	.412	.557	1.810	-	-	16	16.0	.340
4C2612-3	DYNATUBE R44090-12 (1.0000-16 UNJ-3A)	DYNATUBE R44090-16 (1.2500-14 UNJS-3A)	.771 .763	-	.990	.412	.368 .338	1.440	.312	1.375	-	16.0	.360
4C2610-1	ROSAN-12 (.8125-20 UNJEF-3A)	DYNATUBE R44090-12 (1.0000-16 UNJ-3A)	.645 .639	1.023 .983	1.040	.520	.412	1.700	-	-	12	10.5	.340
4C2610-2	DYNATUBE R44090-10 (.8438-18 UNJS-3A)	ROSAN-12 (.8125-20 UNJEF-3A)	.645 .639	.885 .861	1.040	.372	.520	1.570	-	-	12	10.5	.250
4C2610-3	DYNATUBE R44090-10 (.8438-18 UNJS-3A)	DYNATUBE R44090-12 (1.0000-16 UNJ-3A)	.645 .639	.531	1.060	.372	.412	1.315	.281	1.125	-	10.5	.270
4C2680-1	ROSAN-10 (.6875-24 UNJEF-3A)	DYNATUBE R44090-10 (.8438-18 UNJS-3A)	.519 .513	.945	.860	.458	.372	1.580	-	-	10	6.0	.240
4C2680-2	DYNATUBE R44090-8 (.7188-20 UNJS-3A)	ROSAN-10 (.6875-24 UNJEF-3A)	.519 .513	.827 .803	.870	.308	.458	1.450	-	-	10	6.0	.135
4C2680-3	DYNATUBE R44090-8 (.7188-20 UNJS-3A)	DYNATUBE R44090-10 (.8438-18 UNJS-3A)	.519 .513	.500	.875	.308	.372	1.180	.250	1.000	-	6.0	.195
4C2660-1	ROSAN-8 (.5625-18 UNJF-3A)	DYNATUBE R44090-8 (.7188-20 UNJS-3A)	.390 .385	.840 .800	.730	.422	.308	1.420	-	-	08	3.5	.150
4C2660-2	DYNATUBE R44090-6 (.5625-20 UNJS-3A)	ROSAN-8 (.5625-18 UNJF-3A)	.390 .385	.800 .760	.720	.295	.422	1.380	-	-	08	3.5	.124
4C2660-3	DYNATUBE R44090-6 (.5625-20 UNJS-3A)	DYNATUBE R44090-8 (.7188-20 UNJS-3A)	.390 .385	.438	.780	.295	.308	1.041	.188	.812	-	3.5	.127
4C2640-1	ROSAN-6 (.4375-20 UNJF-3A)	DYNATUBE R44090-6 (.5625-20 UNJS-3A)	.265 .260	.815 .775	.577	.388	.295	1.360	-	-	06	1.2	.106
4C2640-2	DYNATUBE R44090-4 (.4375-24 UNJS-3A)	ROSAN-6 (.4375-24 UNJF-3A)	.265 .260	.785 .745	.577	.275	.388	1.330	-	-	06	1.2	.093
4C2640-3	DYNATUBE R44090-4 (.4375-24 UNJS-3A)	DYNATUBE R44090-6 (.5625-20 UNJS-3A)	.265 .260	.438	.593	.275	.295	1.008	.188	.688	-	1.2	.081
CRISSAIR PART NO	FITTING END ^{NO} 1	FITTING END ^{NO} 2	ØA	B	ØC	D	E	F	G	H	J	RATED FLOW (GPM)	MAX WT (LBS)

CATEGORY 1: CHECK VALVES, INLINE



PART NUMBER: 2C7250 CHECK VALVE, SERIES, FLARELESS



PERFORMANCE SPECIFICATIONS:

FLUIDS: ALL AIRCRAFT HYDRAULIC FLUIDS

MATERIAL: BODY 303 CRES

POPPET 440C CRES

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 3000 PSIG

PROOF PRESSURE: 4500 PSIG

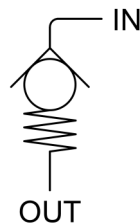
CRACKING PRESSURE: 2 TO 8 PSID

FLOW: SEE TABLE AT 15 PSID MAX

INTERNAL LEAKAGE (CHECKED DIRECTION):

1 DPM MAX AT 5 PSID

NONE AT 1000 TO 3000 PSID



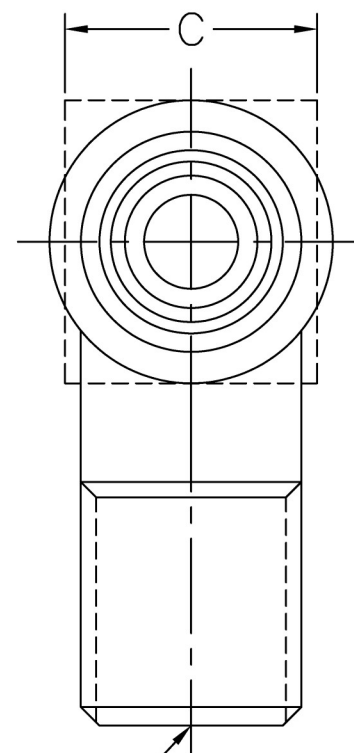
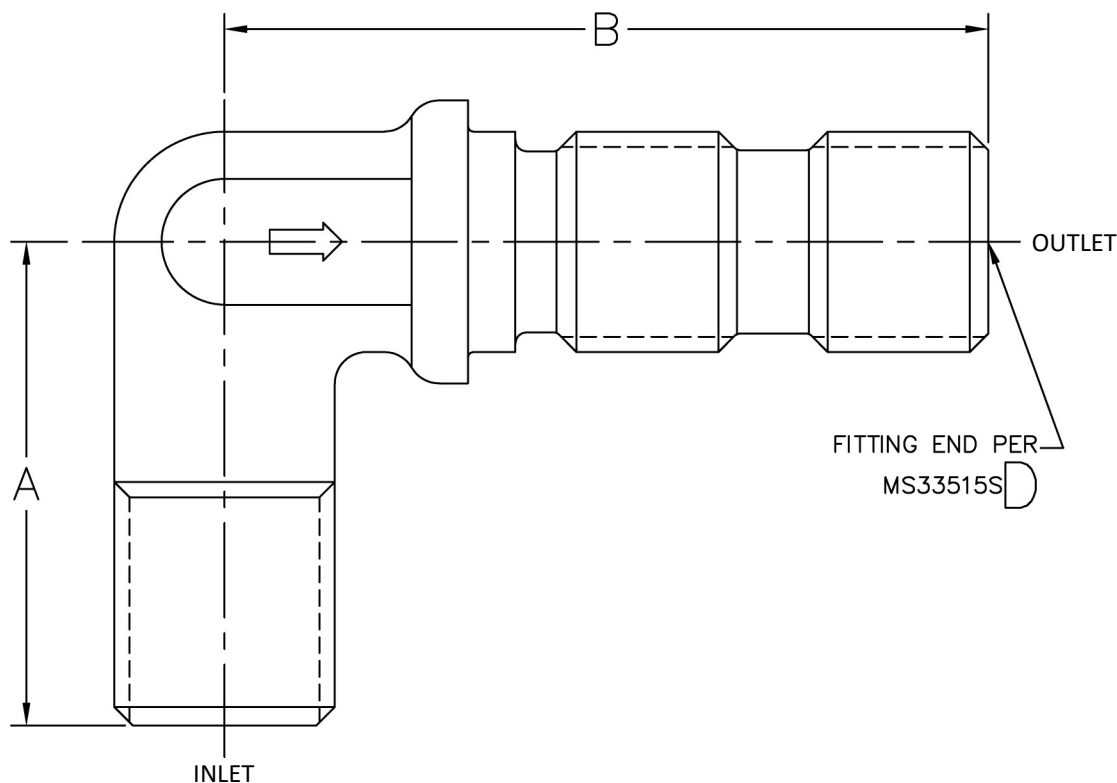
HYDRAULIC SCHEMATIC

2C7250-16	2.438	2.594	1.500	16	29.0
2C7250-12	1.906	2.468	1.250	12	16.0
2C7250-10	1.671	2.250	1.000	10	10.0
2C7250-8	1.500	1.968	.875	8	6.0
2C7250-6	1.266	1.688	.625	6	3.5
2C7250-5	1.156	1.532	.625	5	2.3
2C7250-4	1.062	1.500	.500	4	1.2
CRISSAIR PART NO	A +.046 -.000	B +.046 -.000	C ±.015	D	RATED FLOW (GPM)

CATEGORY 1: CHECK VALVES, INLINE



PART NUMBER: 2C7270 CHECK VALVE, SERIES, FLARELESS



PERFORMANCE SPECIFICATIONS:

FLUIDS: ALL AIRCRAFT HYDRAULIC FLUIDS

MATERIAL: BODY 303 CRES

POPPET 440C CRES

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 3000 PSIG

PROOF PRESSURE: 4500 PSIG

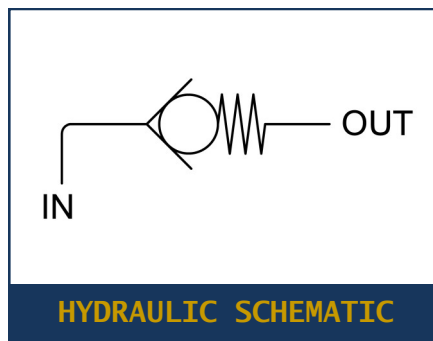
CRACKING PRESSURE: 2 TO 8 PSID

FLOW: SEE TABLE AT 15 PSID MAX

INTERNAL LEAKAGE (CHECKED DIRECTION):

1 DPM MAX AT 5 PSID

NONE AT 1000 TO 3000 PSID

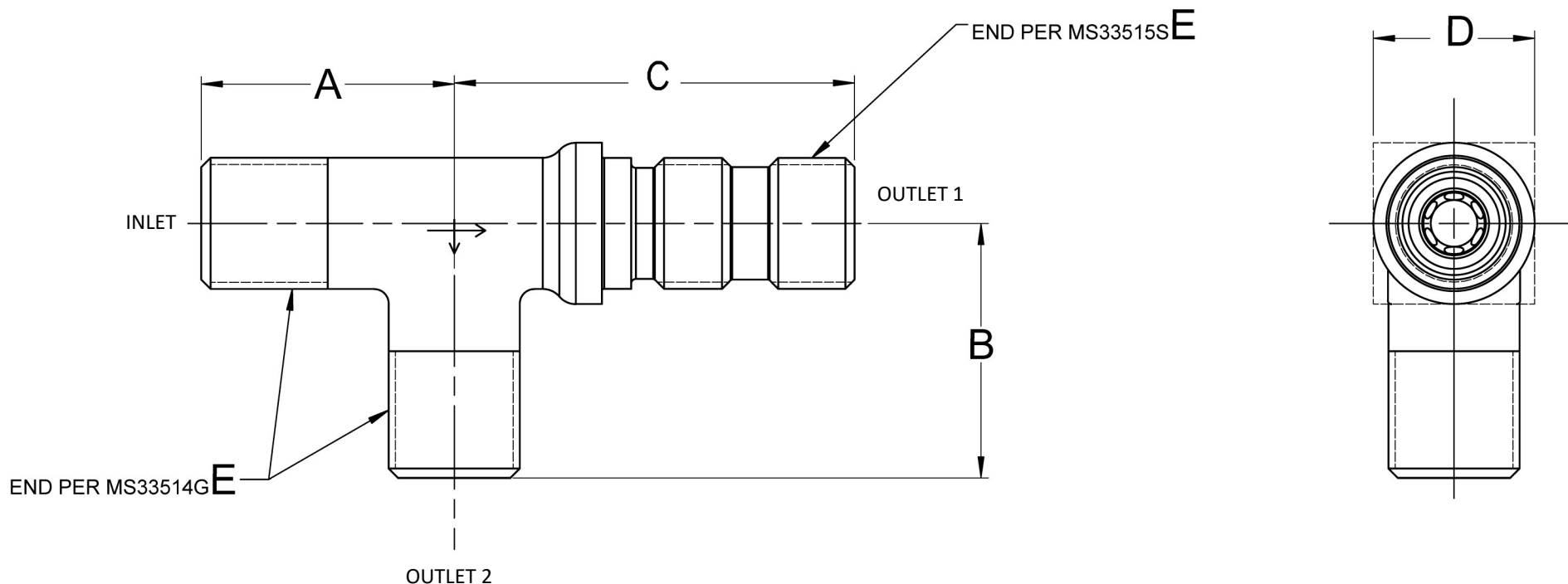


2C7270-16	1.718	2.594	1.500	16	29.0
2C7270-12	1.625	2.468	1.250	12	16.0
2C7270-10	1.500	2.250	1.000	10	10.0
2C7270-8	1.312	1.968	.875	8	6.0
2C7270-6	1.062	1.688	.625	6	3.5
2C7270-5	1.032	1.532	.625	5	2.3
2C7270-4	.938	1.500	.500	4	1.2
CRISSAIR PART NO	A +.046 -.000	B +.046 -.000	C ±.015	D	RATED FLOW (GPM)

CATEGORY 1: CHECK VALVES, INLINE



PART NUMBER: 2C7390 CHECK VALVE, SERIES, FLARELESS



PERFORMANCE SPECIFICATIONS:

FLUIDS: ALL AIRCRAFT HYDRAULIC FLUIDS

MATERIAL: BODY 303 CRES

POPPET 440C CRES

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 3000 PSIG

PROOF PRESSURE: 4500 PSIG

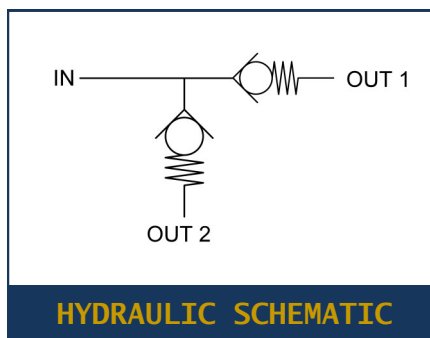
CRACKING PRESSURE: 2 TO 8 PSID

FLOW: SEE TABLE AT 15 PSID MAX

INTERNAL LEAKAGE (CHECKED DIRECTION):

1 DPM MAX AT 5 PSID

NONE AT 1000 TO 3000 PSID

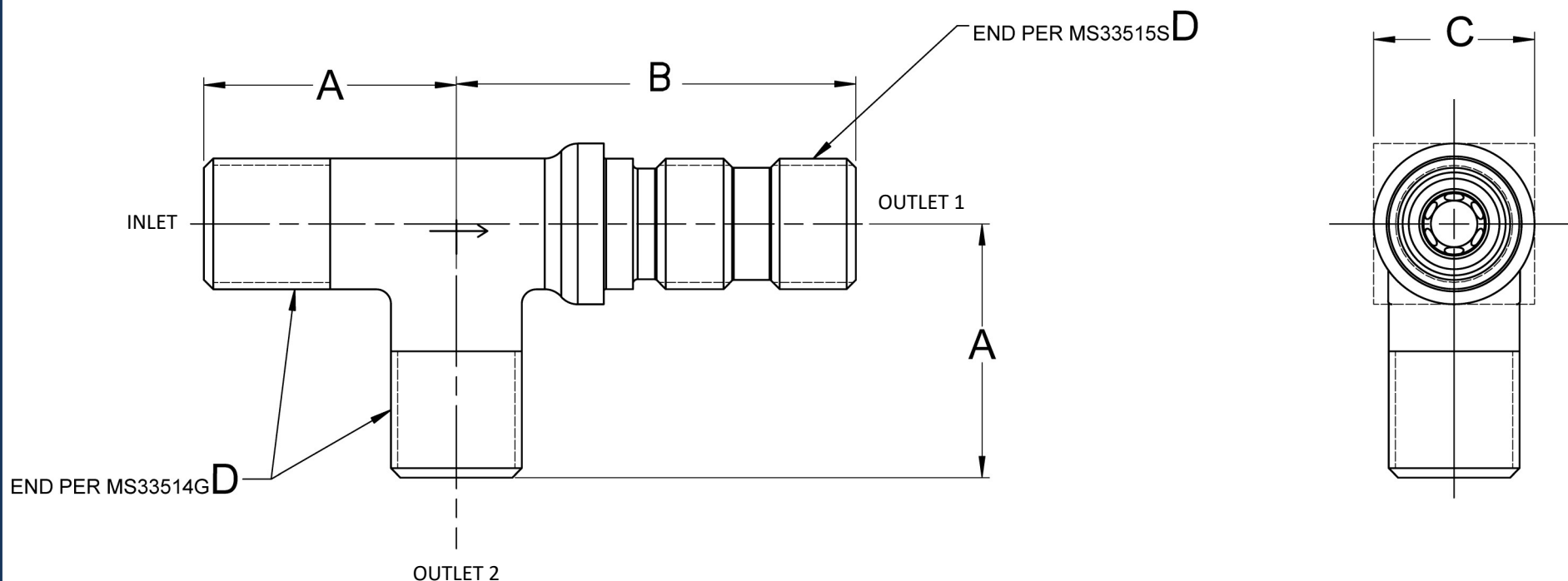


2C7390-16	1.718	2.438	2.594	1.500	16	29.0
2C7390-12	1.625	1.906	2.468	1.250	12	16.0
2C7390-10	1.500	1.671	2.250	1.000	10	10.0
2C7390-8	1.312	1.500	1.968	.875	8	6.0
2C7390-6	1.062	1.062 1.090	1.688	.625	6	3.5
2C7390-5	1.032	1.156	1.532	.625	5	2.3
2C7390-4	.938	1.062	1.500	.500	4	1.2
CRISSAIR PART NO	A +.046 -.000	B +.046 -.000	C +.046 -.000	D ±.015	E	RATED FLOW (GPM)

CATEGORY 1: CHECK VALVES, INLINE



PART NUMBER: 2C7400 CHECK VALVE, SERIES, FLARELESS



PERFORMANCE SPECIFICATIONS:

FLUIDS: ALL AIRCRAFT HYDRAULIC FLUIDS

MATERIAL: BODY 2024-T4 AL

POPPET 440C CRES

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 3000 PSIG

PROOF PRESSURE: 4500 PSIG

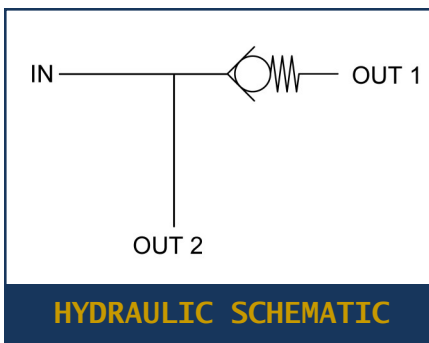
CRACKING PRESSURE: 2 TO 8 PSID

FLOW: SEE TABLE AT 15 PSID MAX

INTERNAL LEAKAGE (CHECKED DIRECTION):

1 DPM MAX AT 5 PSID

NONE AT 1000 TO 3000 PSID

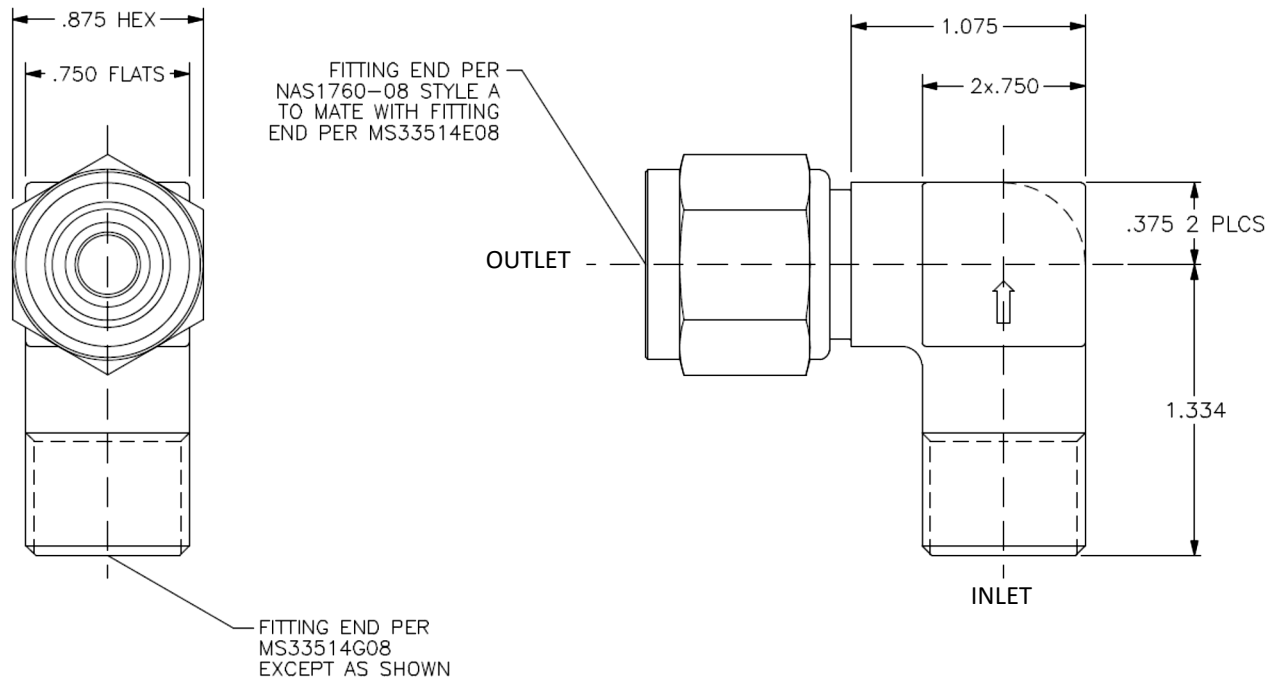


2C7400-16	1.718	2.594	1.500	16	29.0
2C7400-12	1.625	2.468	1.250	12	16.0
2C7400-10	1.500	2.250	1.000	10	10.0
2C7400-8	1.312	1.968	.875	8	6.0
2C7400-6	1.062	1.688	.625	6	3.5
2C7400-5	1.032	1.532	.625	5	2.3
2C7400-4	.938	1.500	.500	4	1.2
CRISSAIR PART NO	A +.046 -.000	B +.046 -.000	C ±.015	D	RATED FLOW (GPM)

CATEGORY 1: CHECK VALVES, INLINE



PART NUMBER: 1C4782 CHECK VALVE, B-NUT/FLARELESS



PERFORMANCE SPECIFICATIONS:

FLUIDS: ALL AIRCRAFT HYDRAULIC FLUIDS

MATERIAL: BODY 304 CRES

POPPET 440C CRES

SWIVEL NUT 304 CRES

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 3000 PSIG

PROOF PRESSURE: 4500 PSIG

CRACKING PRESSURE: 2 TO 8 PSID

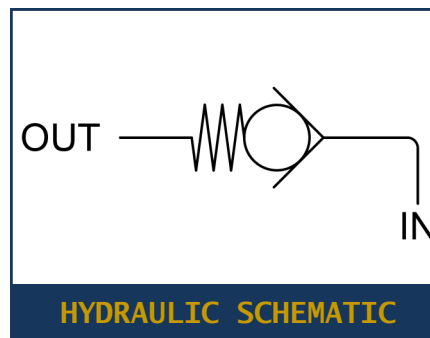
FLOW: 3.5 GPM AT 15 PSID MAX

INTERNAL LEAKAGE (CHECKED DIRECTION):

1 DPM MAX AT 5 PSID

NONE AT 1000 TO 3000 PSID

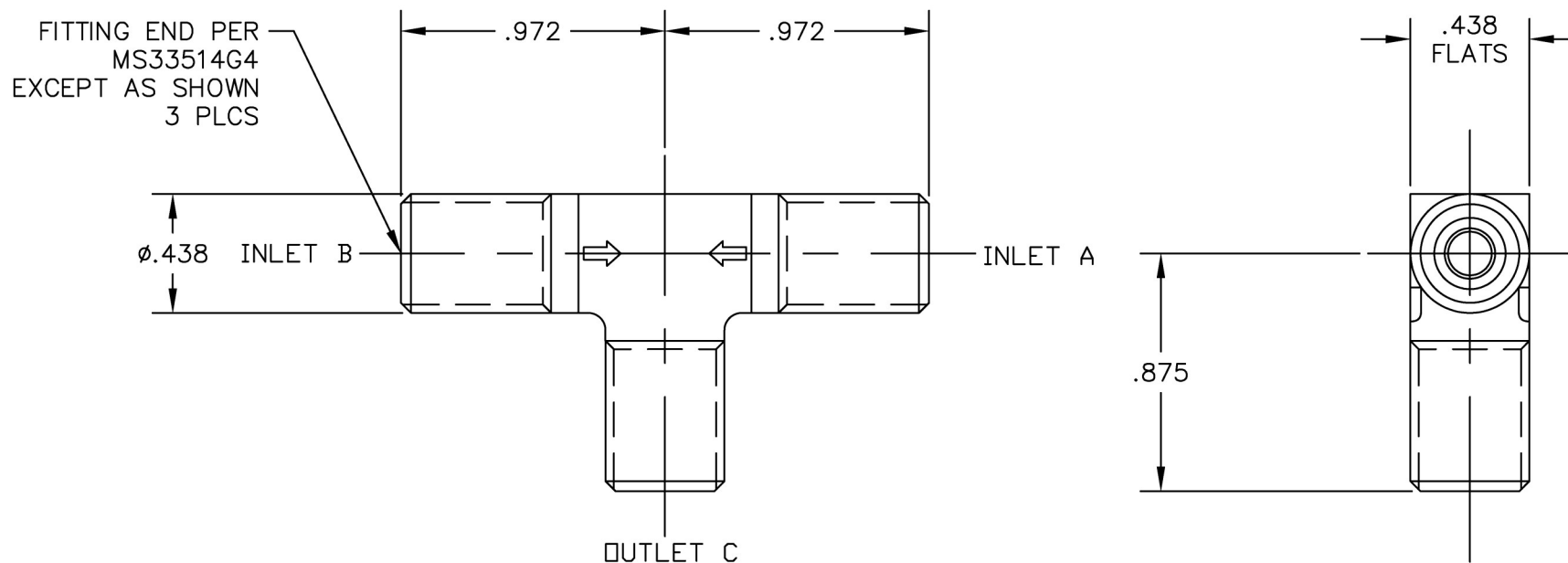
WEIGHT: .37 LBS MAX



CATEGORY 1: CHECK VALVES, INLINE



PART NUMBER: 1C4404 CHECK VALVE, TEE FLOW, FLARELESS



PERFORMANCE SPECIFICATIONS:

FLUIDS: ALL AIRCRAFT HYDRAULIC FLUIDS OR BLEED AIR

MATERIAL: BODY 347 CRES

POPPET 440C CRES

TEMPERATURE RANGE: -65°F TO 860°F (FLUID)
-65°F TO 250°F (AMBIENT)

OPERATING PRESSURE: 2 TO 300 PSIG

PROOF PRESSURE: 675 PSIG AT ROOM TEMPERATURE

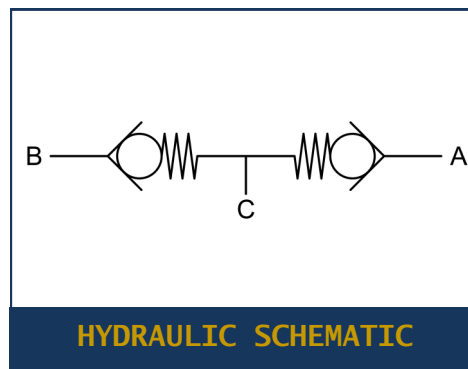
OPENING PRESSURE: FULLY OPEN AT 1 PSID

CLOSING PRESSURE: 0 TO 8 PSID IN REVERSE FLOW DIRECTION

FLOW: 1.5 GPM AT 7 PSID MAX AT 100°F (HYDRAULIC FLUID)

INTERNAL LEAKAGE (CHECKED DIRECTION):
5.0 SCFH MAX AT 300 PSID
IN REVERSE FLOW DIRECTION (BLEED AIR)

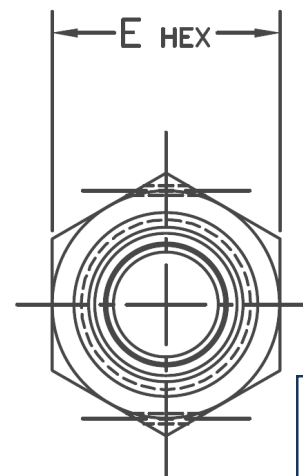
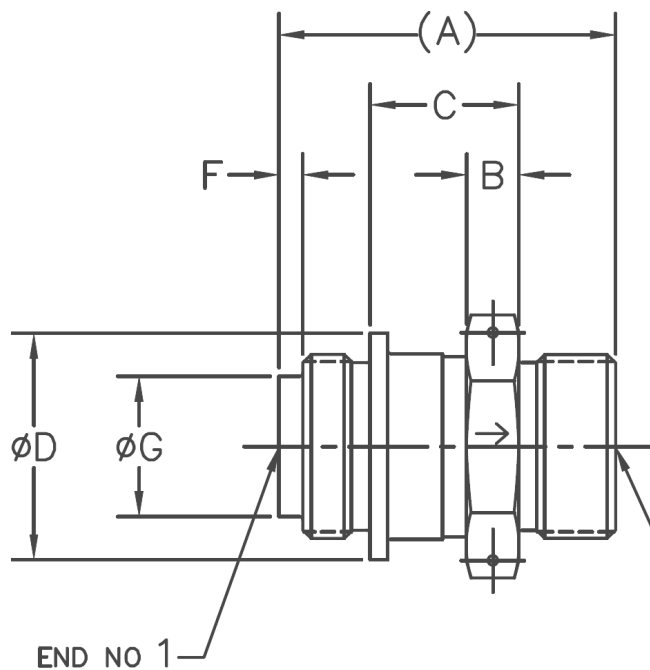
WEIGHT: .090 LBS MAX



CATEGORY 1: CHECK VALVES, INLINE



CHECK VALVE, SERIES, FLARELESS/MOD



ALSO AVAILABLE WITH BODY
IN AL ALLOY AND TITANIUM



HYDRAULIC SCHEMATIC

PERFORMANCE SPECIFICATIONS:

FLUIDS: ALL AIRCRAFT HYDRAULIC FLUIDS

MATERIAL: BODY 15-5PH CRES

POPPET 440C CRES

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 3000 PSIG

PROOF PRESSURE: 4500 PSIG

CRACKING PRESSURE: 2 TO 8 PSID

FLOW: SEE TABLE AT 15 PSID MAX

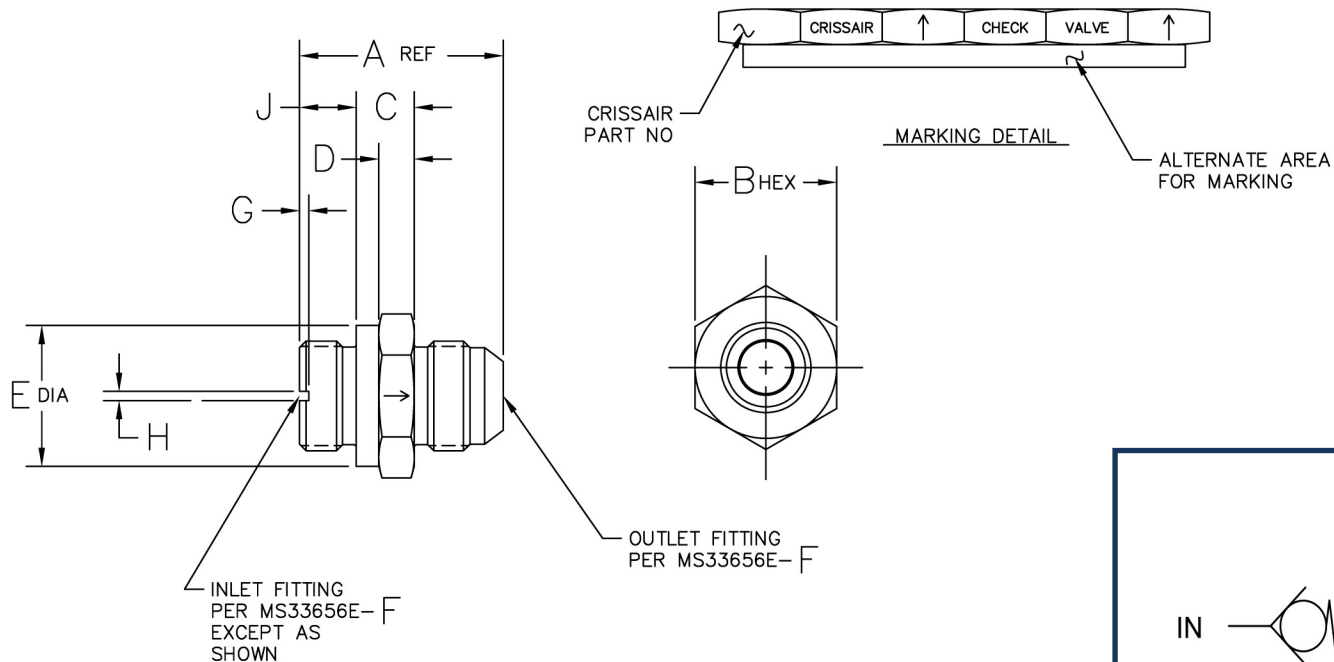
INTERNAL LEAKAGE (CHECKED DIRECTION):
1 DPM AT 0 TO 1000 PSID
NONE AT 1000 TO 3000 PSID

1C3614	1	29.0	AS930B-16	MS33514E16	2.400	.375	1.062	1.615	1.625	.170	1.000
1C3612	3/4	16.0	AS930B-12	MS33514E12	1.900	.343	.562	1.365	1.375	.170	.750
1C3610	5/8	10.5	AS930B-10	MS33514E10	1.746	.312	.531	1.115	1.125	.150	.625
1C3512	1/2	6.0	AS930B-8	MS33514E8	1.632	.281	.500	.990	1.000	.130	.500
1C3608	3/8	3.5	AS930B-6	MS33514E6	1.478	.250	.469	.803	.813	.140	.375
1C3606	1/4	1.2	AS930B-4	MS33514E4	1.441	.219	.438	.678	.688	.150	.250
CRISSAIR PART NO	TUBE SIZE	FLOW (GPM)	FITTING END NO 1 (MODIFIED AS930)	FITTING END NO 2 (FLARELESS TUBE)	A (REF)	B ±.015	C ±.015	D ±.015	E ±.015	F ±.010	G ±.015

CATEGORY 1: CHECK VALVES, INLINE



PART NUMBER: 1C1700 CHECK VALVE, SERIES, FLARED/MOD



PERFORMANCE SPECIFICATIONS:

FLUIDS: ALL AIRCRAFT HYDRAULIC FLUIDS

MATERIAL: BODY 303 CRES

POPPET 440C CRES

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 3000 PSIG

PROOF PRESSURE: 4500 PSIG

CRACKING PRESSURE: 2 TO 8 PSID

FLOW: SEE TABLE

INTERNAL LEAKAGE (CHECKED DIRECTION):
1 DPM MAX AT 5 PSID
NONE AT 1000 TO 3000 PSID

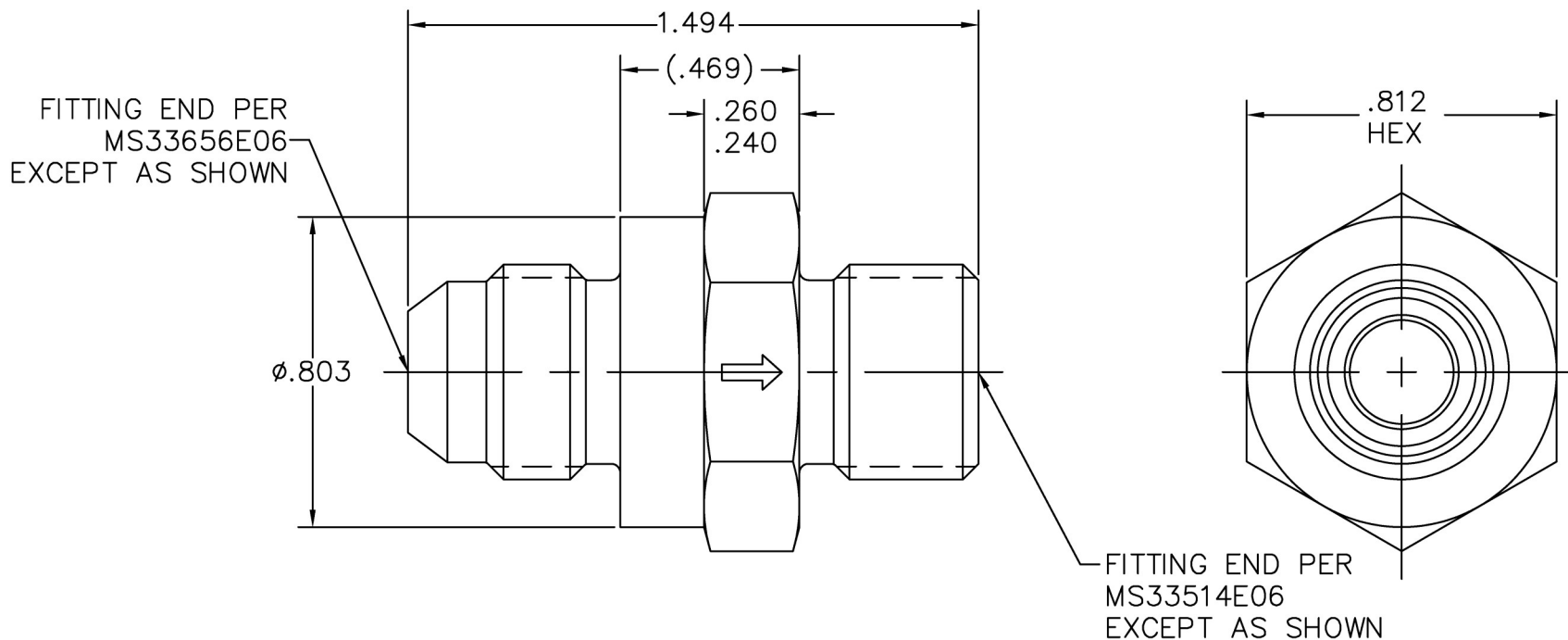
HYDRAULIC SCHEMATIC

1C1704	.077	4	.080	.060	.350	1.338	.688	.438	.219	.678	1.2	15
1C1706	.104	6	.080	.060	.370	1.395	.813	.469	.250	.803	3.5	15
1C1710	.250	10	.090	.090	.492	1.781	1.125	.531	.312	1.115	10.5	15
CRISSAIR PART NO	WEIGHT LBS MAX	F FITTING	G	H	J	A REF	B HEX	C	D	E DIA	RATED FLOW (GPM)	MAX ΔP PSID

CATEGORY 1: CHECK VALVES, INLINE



PART NUMBER: 1C4102 CHECK VALVE, FLARED/FLARELESS



PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT HYDRAULIC FLUIDS

MATERIAL: BODY 17-4PH CRES

POPPET 440C CRES

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 3000 PSIG

PROOF PRESSURE: 4500 PSIG

CRACKING PRESSURE: 2 TO 8 PSID

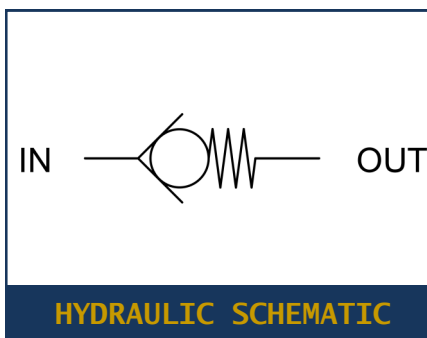
FLOW: 3.5 GPM AT 15 PSID MAX

INTERNAL LEAKAGE (CHECKED DIRECTION):

1 DPM MAX AT 5 PSID

NONE AT 1000 TO 3000 PSID

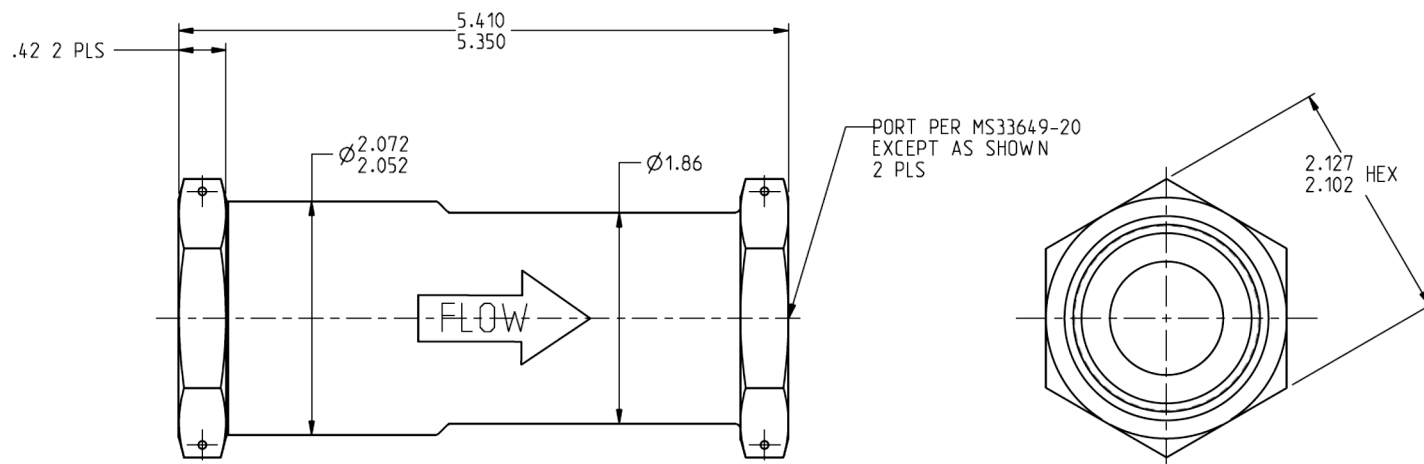
WEIGHT: .10 LBS MAX



CATEGORY 1: CHECK VALVES, INLINE



PART NUMBER: 35590-X CHECK VALVE



PERFORMANCE SPECIFICATIONS:

FLUIDS: ETHYLENE GLYCOL/WATER MIXTURES OR PHOSPHATE ESTER

MATERIAL: BODY 6061-T6 AL

POPPET 6061-T6 AL

ELASTOMER ETHYLENE PROPYLENE

TEMPERATURE RANGE: -65°F TO 160°F

OPERATING PRESSURE: 123 PSIG

PROOF PRESSURE: 185 PSIG

CRACKING PRESSURE: 0.9 ± 0.1 PSID*

FLOW: 22 GPM AT 1.7 PSID MAX*

RESEAT: 0.6 PSID MINIMUM*

INTERNAL LEAKAGE (CHECKED DIRECTION):
1 CC/MIN MAX AT 123 PSID

WEIGHT: 0.79 LBS MAX

*CRACK, FLOW, AND RESEAT CAN MOVE UP OR DOWN
BY USING SHIMS OR REPLACING THE SPRING



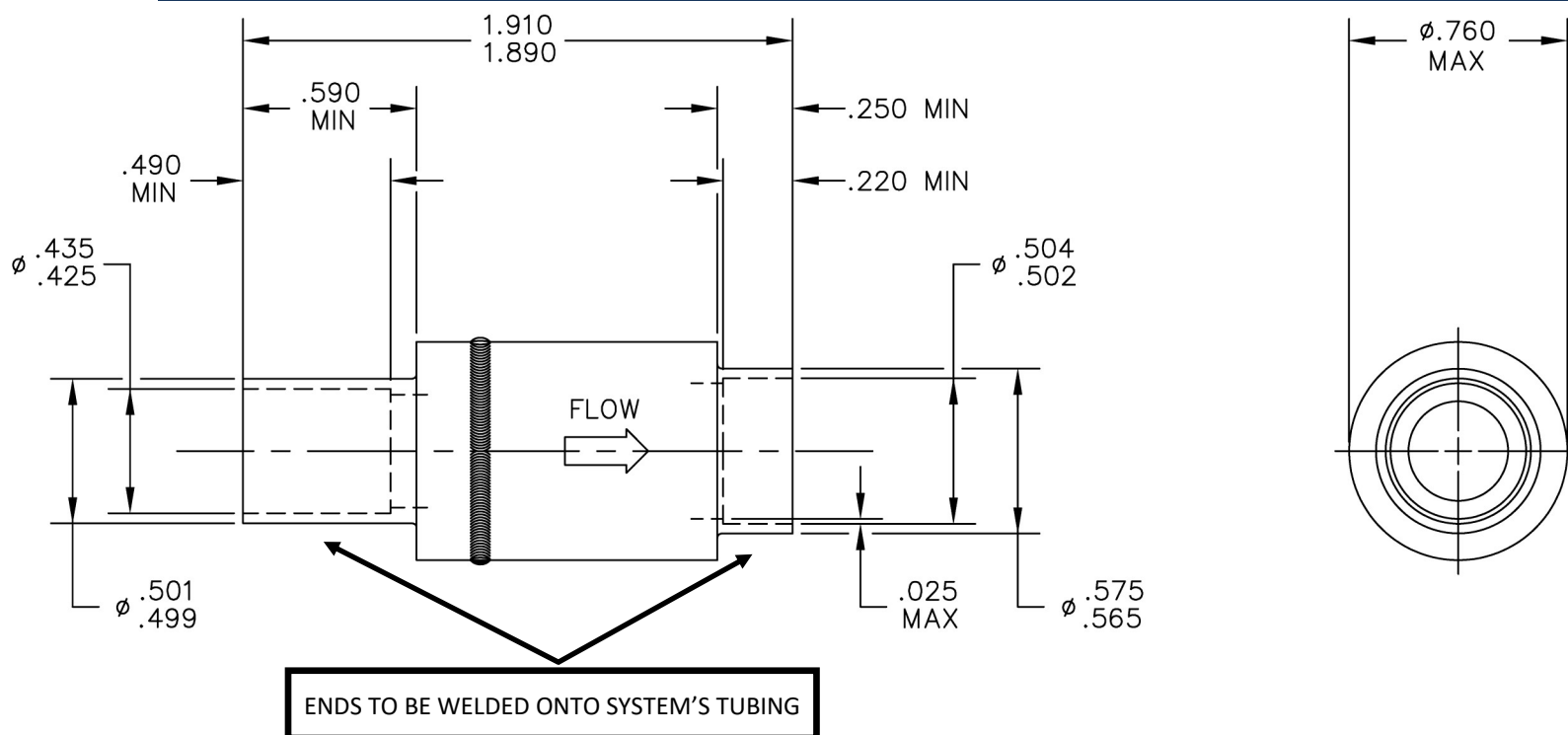
HYDRAULIC SCHEMATIC



CATEGORY 1: CHECK VALVES, ZERO LEAK, INLINE



PART NUMBER: 1C3688 CHECK VALVE, WELDED ENDS



PERFORMANCE SPECIFICATIONS:

FLUIDS: AIR WITH MIL-L-7808 OR MIL-L-23699 MIST
MATERIAL: BODY 347 CRES
POPPET 440C CRES
TEMPERATURE RANGE: -65°F TO 400°F
OPERATING PRESSURE: 65 PSIG
PROOF PRESSURE: 100 PSIG
CRACKING PRESSURE: 0.5 PSID
FLOW: 0.5 LB/MIN AT 1.0 PSID MAX
INTERNAL LEAKAGE (CHECKED DIRECTION):
0.001 LB/MIN MAX AT 0.5 TO 65 PSID
WEIGHT: 0.13 LBS MAX



HYDRAULIC SCHEMATIC

CATEGORY 1: CHECK VALVES, ZERO LEAK, INLINE



CRISSAIR HAS HUNDREDS OF OTHER CHECK VALVES NOT LISTED IN THE CATALOG WITH DIFFERENT MATERIALS, FITTINGS, AND SIZE CONFIGURATIONS.

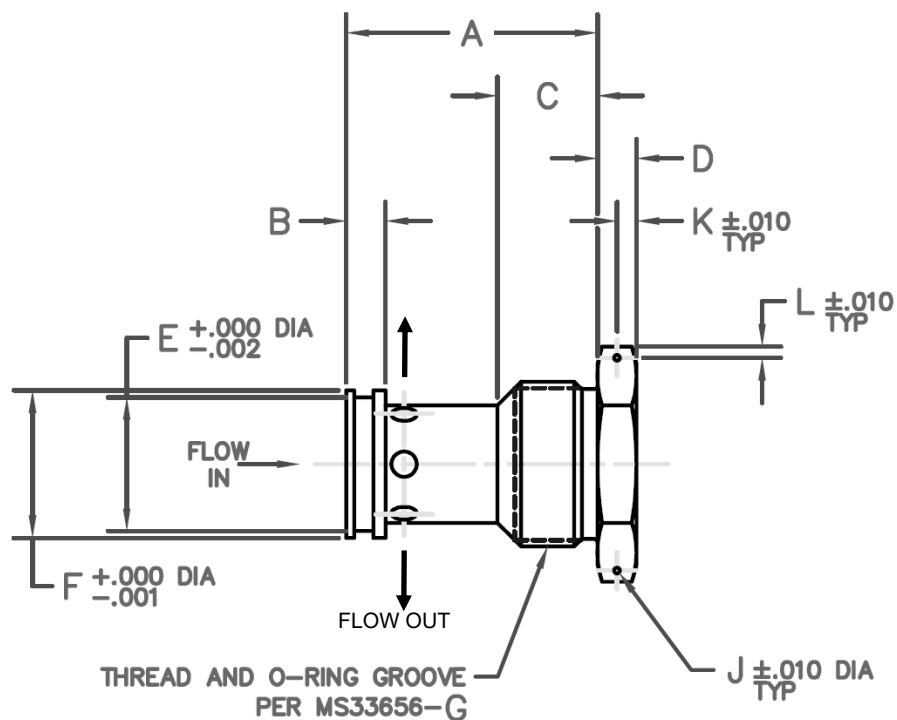
CONTACT CRISSAIR FOR ADDITIONAL INFORMATION/DRAWINGS AT

(661) 367-3300 OR SALES@CRISSAIR.COM.

YOU CAN ALSO VISIT WWW.CRISSAIR.COM.



PART NUMBER: 2C6200A CHECK VALVE, SERIES



HYDRAULIC SCHEMATIC

PERFORMANCE SPECIFICATIONS:

FLUIDS: MIL-H-5606 OR MIL-H-83282

(PHOSPHATE ESTER / SKYDROL OPTIONS

AVAILABLE UPON REQUEST)

MATERIAL: POPPET 440C CRES

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 3000 PSIG

PROOF PRESSURE: 4500 PSIG

CRACKING PRESSURE: 2 TO 8 PSID

FLOW: SEE TABLE AT 15 PSID MAX

INTERNAL LEAKAGE (CHECKED DIRECTION):

1 DPM MAX AT 5 PSID

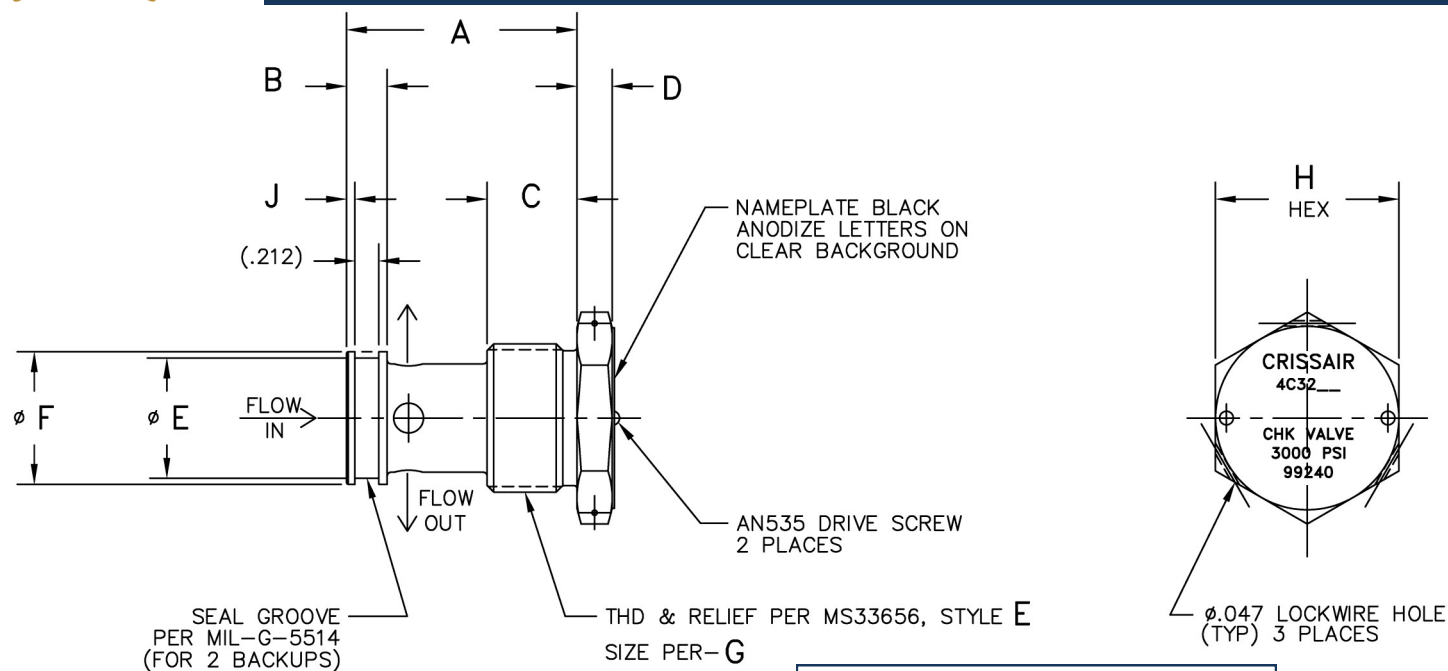
NONE AT 1000 - 3000 PSID

2C6216A	2C6236A	16	29.0	2.312	.312	.820	.375	1.381	1.491	20	1.875	.046	.187	.090
2C6212A	2C6232A	12	16.0	2.000	.312	.795	.312	1.068	1.178	16	1.625	.046	.156	.090
2C6210A	2C6230A	10	10.5	1.750	.290	.680	.312	.813	.923	12	1.375	.046	.156	.090
2C6208A	2C6228A	8	6.0	1.625	.280	.575	.250	.626	.736	10	1.125	.046	.125	.090
2C6206A	2C6226A	6	3.5	1.468	.270	.575	.219	.501	.611	8	1.000	.046	.109	.090
2C6204A	2C6224A	4	1.2	1.188	.250	.490	.188	.373	.483	6	.812	.046	.094	.090
BODY 2024-T4 AL PART NO	BODY 303 CRES PART NO	SIZE	RATED FLOW (GPM)	A	B	C	D	E	F	G	H	J	K	L

CATEGORY 1: CHECK VALVES, CARTRIDGE



PART NUMBER: 4C3200 CHECK VALVE, SERIES



PERFORMANCE SPECIFICATIONS:

FLUIDS: MIL-H-5606 OR MIL-H-83282

(PHOSPHATE ESTER / SKYDROL OPTIONS
AVAILABLE UPON REQUEST)

MATERIAL: BODY 2024-T351 AL

POPPET 440C CRES

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 3000 PSIG

PROOF PRESSURE: 4500 PSIG

CRACKING PRESSURE: 2 TO 8 PSID

FLOW: SEE TABLE AT 15 PSID MAX

INTERNAL LEAKAGE (CHECKED DIRECTION):
NONE AT 3000 PSID



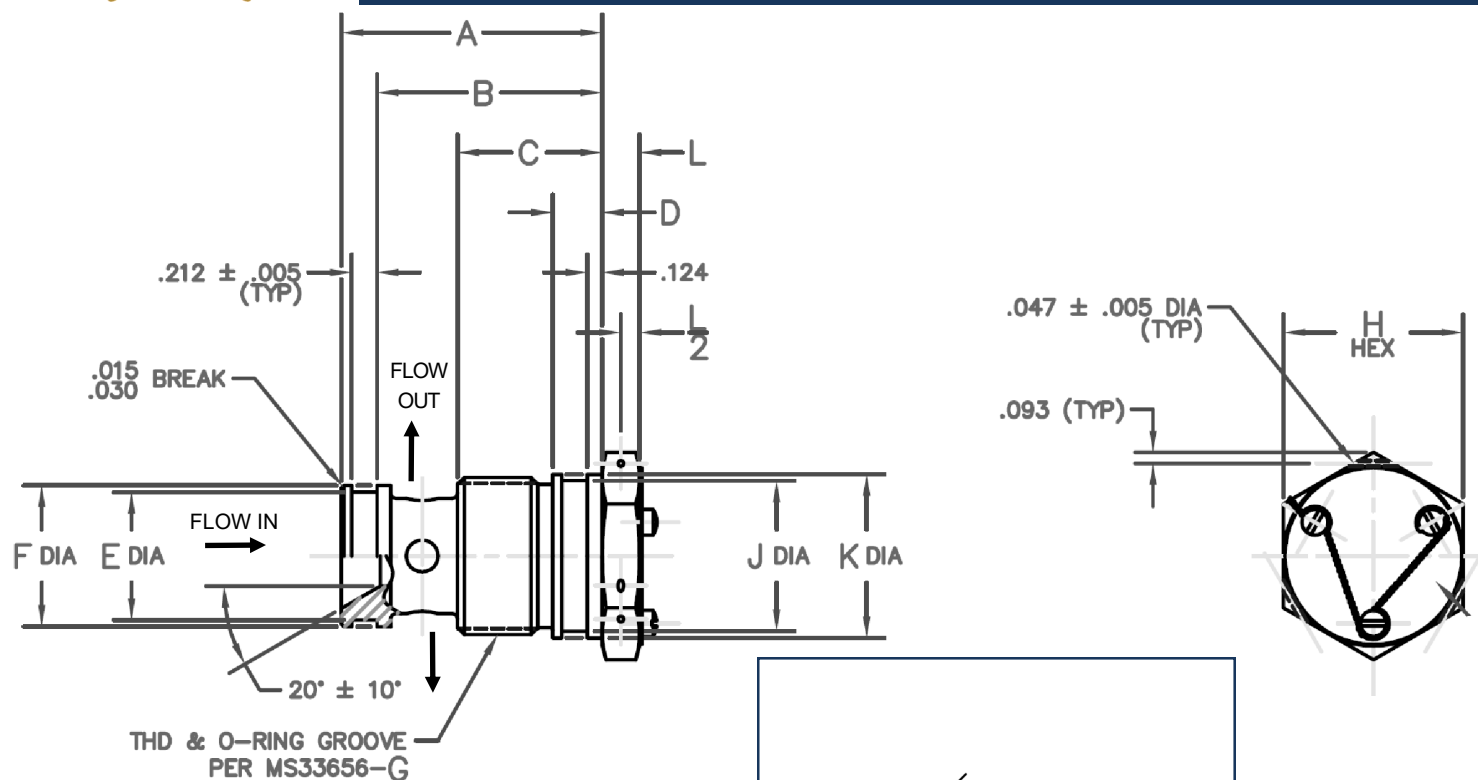
HYDRAULIC SCHEMATIC

4C3216	16	2.370	.370	.820	.375	1.379	1.489	20	1.875	.080	29.0	.417
4C3212	12	2.040	.360	.795	.312	1.066	1.178	16	1.625	.075	16.0	.263
4C3210	10	1.750	.350	.680	.312	.813	.923	12	1.375	.070	10.5	.167
4C3208	8	1.700	.350	.575	.250	.626	.736	10	1.125	.070	6.0	.107
4C3206	6	1.440	.340	.575	.219	.501	.611	8	1.000	.065	3.5	.072
4C3204	4	1.250	.320	.490	.188	.373	.483	6	.812	.055	1.2	.040
CRISSAIR PART NO	DASH NO	A	B	C	D	E +.000 -.002	F +.000 -.001	G	H HEX	J	RATED FLOW (GPM)	MAX WT LBS

CATEGORY 1: CHECK VALVES, CARTRIDGE



PART NUMBER: 2C9180 CHECK VALVE, SERIES



PERFORMANCE SPECIFICATIONS:

FLUIDS: PHOSPHATE ESTER / SKYDROL (MIL-H-5606 OR
MIL-H-83282 OPTIONS AVAILABLE UPON REQUEST)

MATERIAL: BODY 2024-T351 AL
POPPET 440C CRES

TEMPERATURE RANGE: -65°F TO 225°F

OPERATING PRESSURE: 3000 PSIG

PROOF PRESSURE: 4500 PSIG

CRACKING PRESSURE: 2 TO 8 PSID

FLOW: SEE TABLE

INTERNAL LEAKAGE (CHECKED DIRECTION):
1 DPM MAX AT 5 PSID
NONE AT 1000 TO 3000 PSID



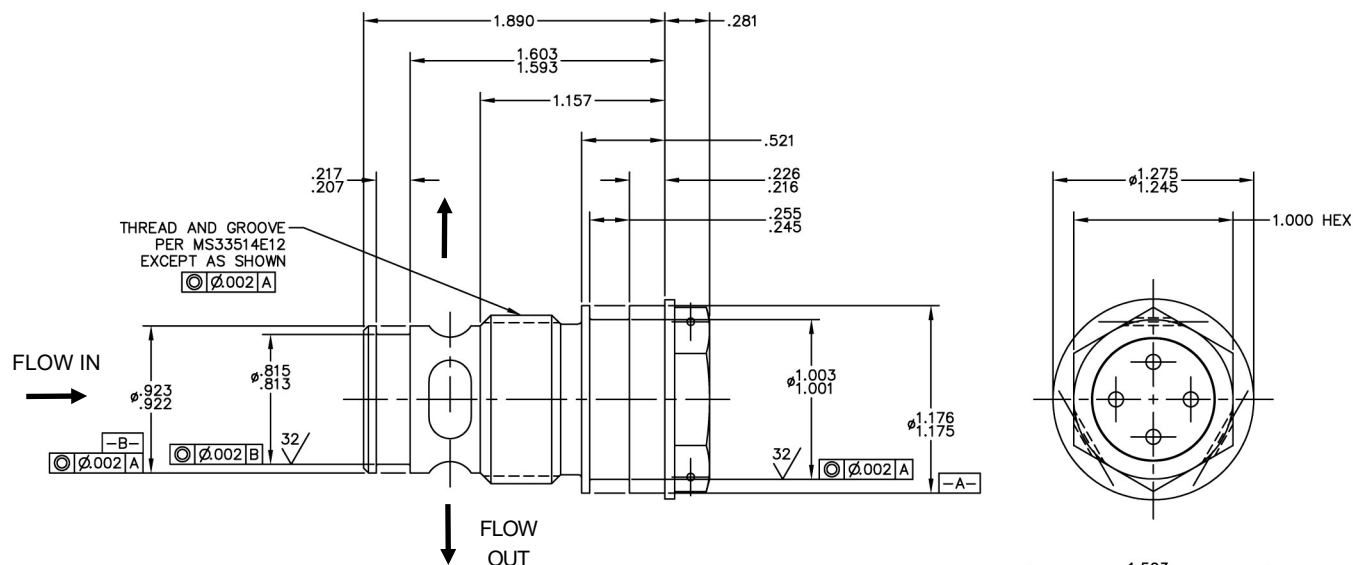
HYDRAULIC SCHEMATIC

2C9196	.380	16	29.0	15	2.430	2.121	1.300	.411	1.068	1.178	16	1.625	1.381	1.491	.380
2C9192	.270	12	16.0	15	2.170	1.883	1.206	.411	1.068	1.178	16	1.500	1.256	1.366	.312
2C9190	.170	10	10.5	15	1.925	1.644	1.080	.400	.813	.923	12	1.250	1.006	1.116	.312
2C9188	.110	8	6.0	15	1.685	1.404	.970	.395	.626	.736	10	1.125	.813	.923	.250
2C9186	.076	6	3.5	25	1.600	1.324	.965	.390	.501	.611	8	1.000	.688	.798	.219
2C9184	.043	4	1.2	15	1.440	1.164	.870	.380	.373	.483	6	.750	.501	.611	.188
CRISSAIR PART NO	MAX WT (LBS)	SIZE	RATED FLOW (GPM)	MAX ΔP PSID	A ±.010	B ±.010	C	D ±.005	E +.000 -.002	F +.000 -.001	G	H	J +.000 -.002	K +.000 -.001	L

CATEGORY 1: CHECK VALVES, CARTRIDGE



PART NUMBER: 1C4836 CHECK VALVE



HYDRAULIC SCHEMATIC

PERFORMANCE SPECIFICATIONS:

FLUIDS: PHOSPHATE ESTER / SKYDROL (MIL-H-5606 OR MIL-H-83282 OPTIONS AVAILABLE UPON REQUEST)

MATERIAL: BODY 15-5PH CRES

POPPET PH13-8MO CRES

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 5075 PSIG

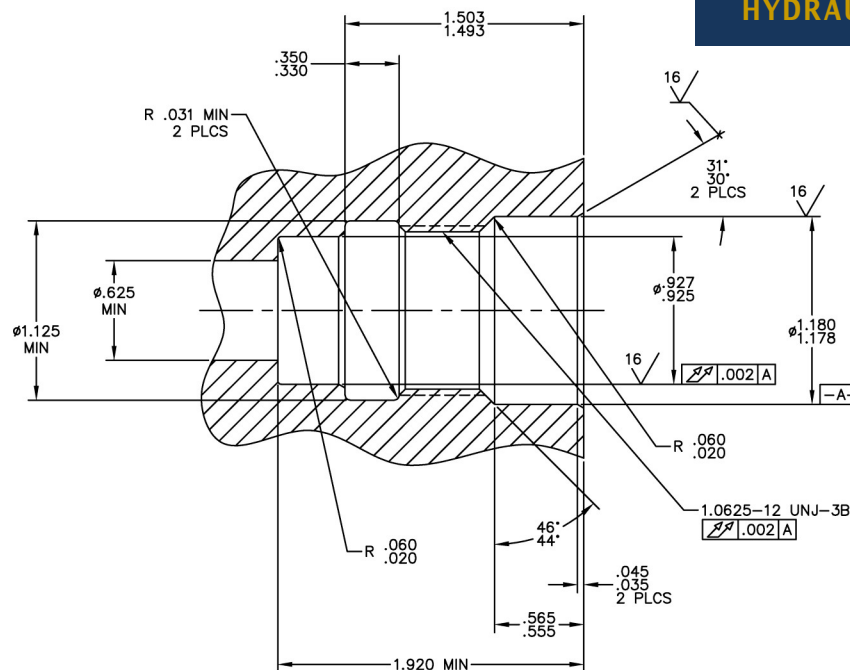
PROOF PRESSURE: 8700 PSIG

CRACKING PRESSURE: 2 TO 8 PSID

FLOW: 8 GPM AT 15 PSID MAX

INTERNAL LEAKAGE (CHECKED DIRECTION):
1 DPM FROM 15 TO 5075 PSID

WEIGHT: .375 LBS MAX



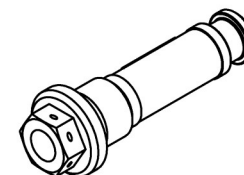
CATEGORY 1: CHECK VALVES, CARTRIDGE



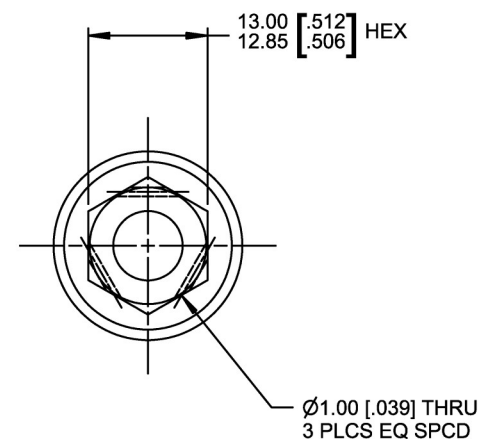
WEIGHT: .102 LBS MAX



CATEGORY 1: CHECK VALVES, CARTRIDGE



ISOMETRIC VIEW
FOR REFERENCE ONLY

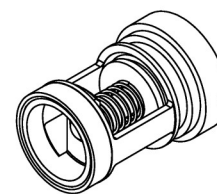
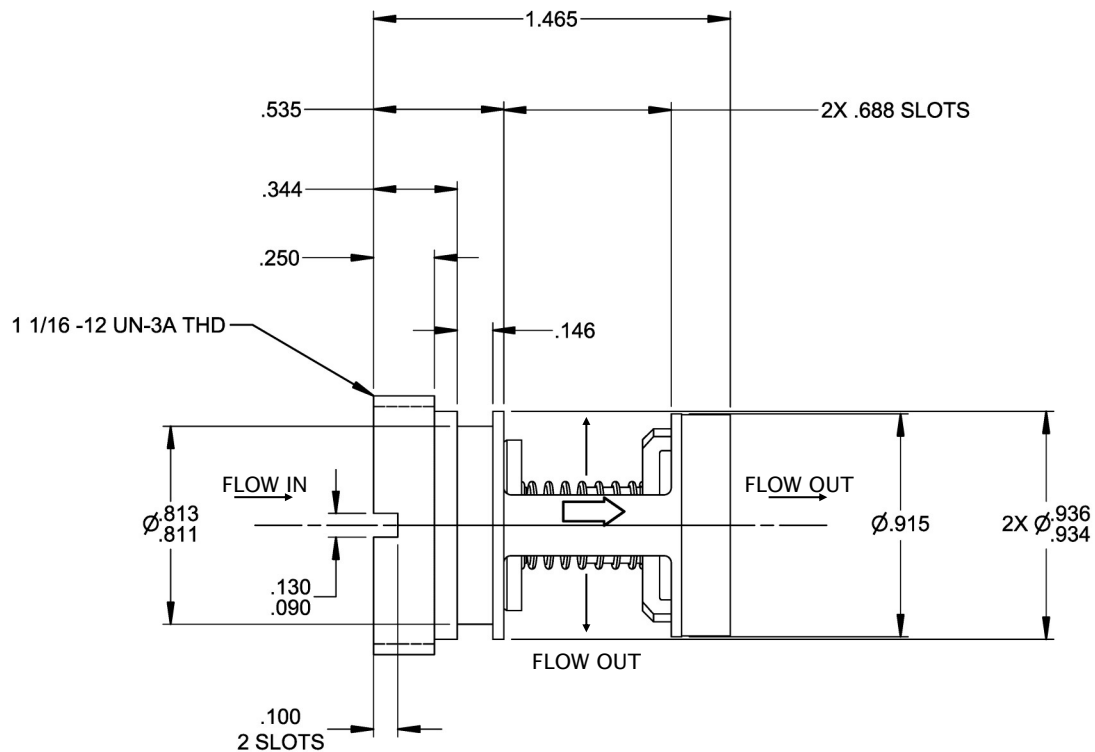


HYDRAULIC SCHEMATIC

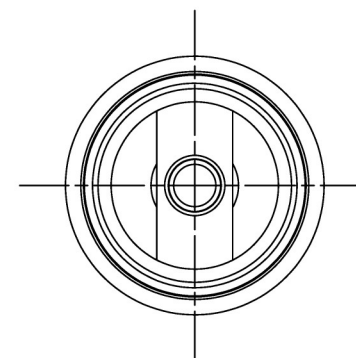
CATEGORY 1: CHECK VALVES, CARTRIDGE



PART NUMBER: 1C6064 CHECK VALVE



ISOMETRIC VIEW
FOR REFERENCE ONLY



PERFORMANCE SPECIFICATIONS:

FLUIDS: ALL AIRCRAFT HYDRAULIC FLUIDS

MATERIAL: BODY 303 CRES

POPPET 440C CRES

TEMPERATURE RANGE: -65°F TO +275°F

OPERATING PRESSURE: 3000 PSIG

PROOF PRESSURE: 4500 PSIG

CRACKING PRESSURE: 2 TO 8 PSID

FLOW: 32 GPM AT 10 PSID MAX

INTERNAL LEAKAGE (CHECKED DIRECTION):
1 DPM MAX AT 5 PSID
NONE AT 1000 TO 3000 PSID



HYDRAULIC SCHEMATIC

CATEGORY 1: CHECK VALVES, CARTRIDGE



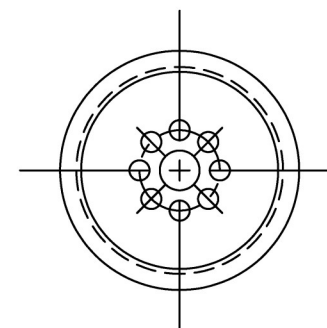
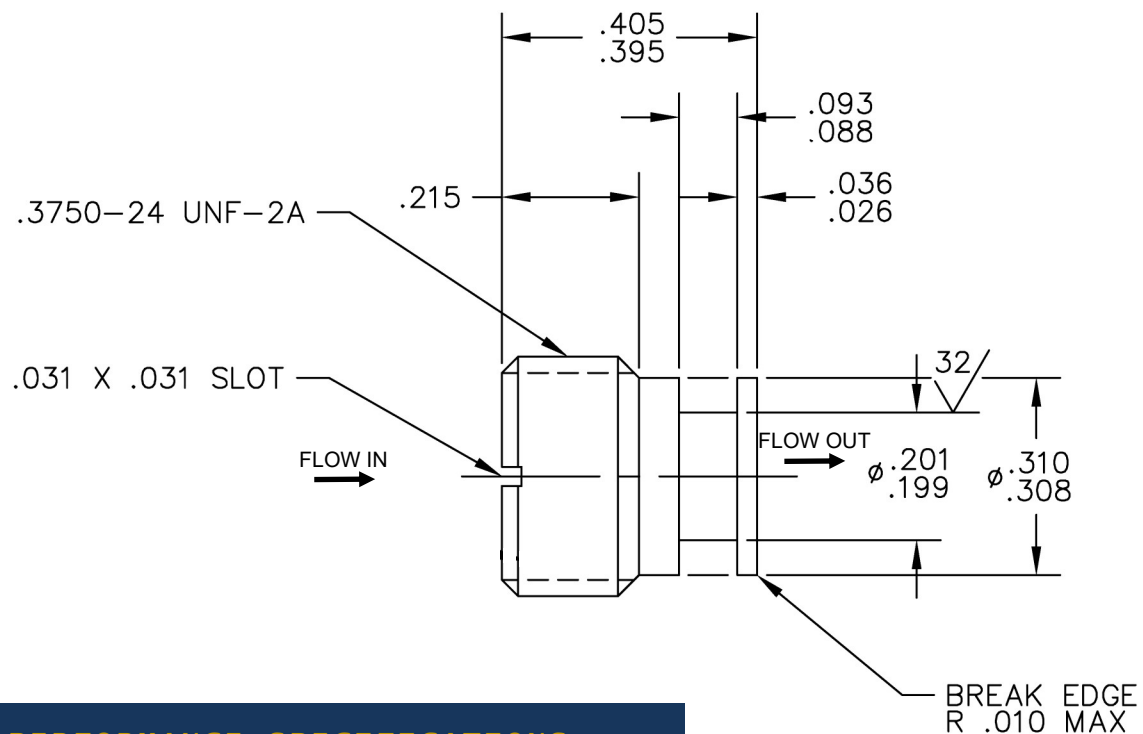
WEIGHT: .08 LBS MAX



CATEGORY 1: CHECK VALVES, CARTRIDGE



PART NUMBER: 3C4342 CHECK VALVE



PERFORMANCE SPECIFICATIONS:

FLUIDS: ALL AIRCRAFT HYDRAULIC FLUIDS

MATERIAL: BODY 17-4PH CRES

POPPET 17-4PH CRES

ELASTOMER NITRILE

TEMPERATURE RANGE: -65°F TO 275°F (FLUID NON-OPERATING)

20°F TO 170°F (FLUID OPERATING)

-40°F TO 203°F (AMBIENT)

OPERATING PRESSURE: 3000 PSIG

PROOF PRESSURE: 4500 PSIG

CRACKING PRESSURE: 25 PSID MAX

FLOW: .5 GPM AT 21 PSID MAX AT 100°± 20°F

INTERNAL LEAKAGE (CHECKED DIRECTION): NONE

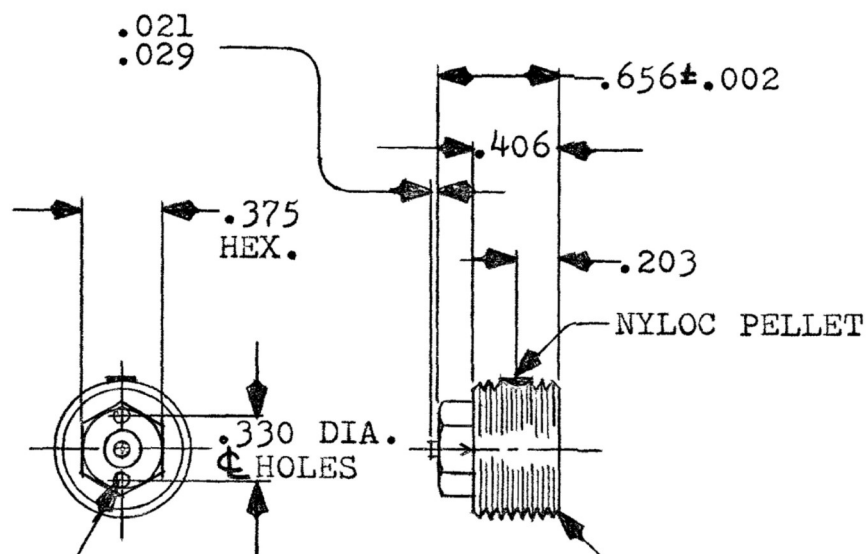


HYDRAULIC SCHEMATIC

CATEGORY 1: CHECK VALVES, CARTRIDGE



PART NUMBER: 2C5726 CHECK VALVE



THREAD 9/16-24 NEF-3A
PER MIL-S-7742

STAMP FLOW ARROWS 180° APART

$.045 \pm .002$ DIA. x $.050$ DEPTH
2 HOLES 180° APART

PERFORMANCE SPECIFICATIONS:

FLUIDS: ALL AIRCRAFT HYDRAULIC FLUIDS

MATERIAL: BODY 303 CRES

POPPET 440C CRES

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 3000 PSIG

PROOF PRESSURE: 4500 PSIG

CRACKING PRESSURE: 2 TO 8 PSID MAX

FLOW: .5 GPM AT 15 PSID MAX

INTERNAL LEAKAGE (CHECKED DIRECTION):

NONE AT 3000 PSID

WEIGHT: .033 LBS MAX

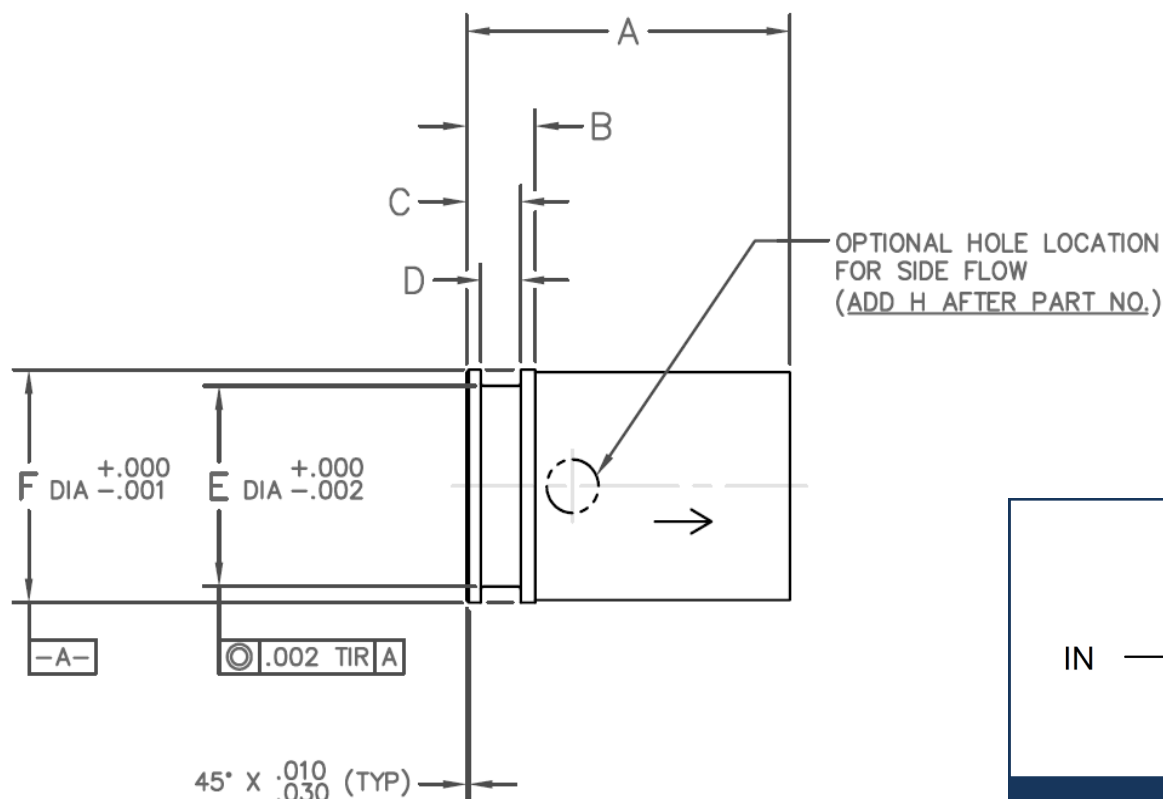


HYDRAULIC SCHEMATIC

CATEGORY 1: CHECK VALVES, CARTRIDGE



PART NUMBER: CDS1000-CHECK VALVE



HYDRAULIC SCHEMATIC

PERFORMANCE SPECIFICATIONS:

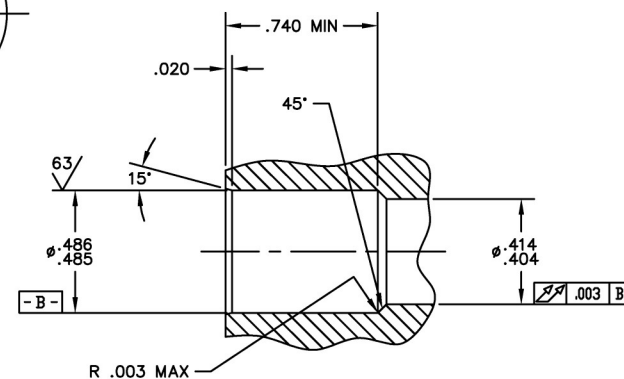
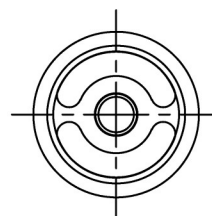
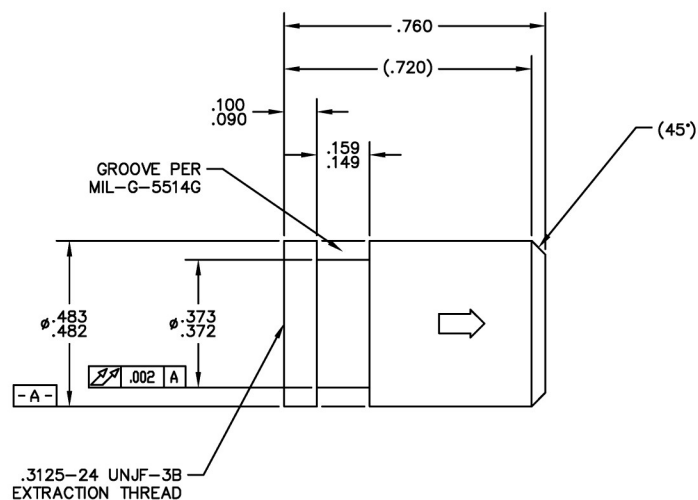
FLUIDS: ALL AIRCRAFT HYDRAULIC FLUIDS
 MATERIAL: POPPET 440C CRES
 TEMPERATURE RANGE: -65°F TO 450°F
 OPERATING PRESSURE: 3000 PSIG
 PROOF PRESSURE: 4500 PSIG
 CRACKING PRESSURE: 2 TO 8 PSID
 FLOW: SEE TABLE AT 15 PSID MAX ΔP
 INTERNAL LEAKAGE (CHECKED DIRECTION):
 1 DPM MAX AT 5 PSID
 NONE AT 1000 TO 3000 PSID

2C9334	2C9960	24	2.500	.620	.420	.309	1.498	1.738	70.0
2C9354	2C9958	20	2.480	.560	.350	.250	1.315	1.491	50.0
2C9352	2C9696	16	1.850	.500	.350	.250	1.003	1.179	29.0
2C9952	2C9692	12	1.500	.420	.335	.250	.817	.989	16.0
2C9950	2C9690	10	1.452	.404	.290	.212	.688	.798	10.5
2C9948	2C9688	8	1.174	.404	.290	.212	.563	.673	6.0
2C9946	2C9686	6	1.075	.404	.290	.212	.373	.483	3.5
2C9954	2C9694	5	1.000	.404	.290	.212	.373	.483	2.3
2C9944	2C9684	4	.900	.404	.290	.212	.248	.358	1.2
BODY 303 CRES PART NO	BODY 2024-T351 AL PART NO	SIZE	A ±.015	B MAX	C ±.010	D ±.005	E DIA	F DIA	RATED FLOW (GPM)

CATEGORY 1: CHECK VALVES, CARTRIDGE



PART NUMBER: 1C4418 CHECK VALVE



INSTALLATION CAVITY
SCALE: NONE

PERFORMANCE SPECIFICATIONS:

FLUIDS: ALL AIRCRAFT HYDRAULIC FLUIDS

MATERIAL: BODY 15-5PH CRES

POPPET 440C CRES

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 4000 PSIG

PROOF PRESSURE: 6000 PSIG

CRACKING PRESSURE: 2 TO 8 PSID

FLOW: 4.00 GPM AT 15 PSID MAX USING MIL-H-83282 AT 80°F

INTERNAL LEAKAGE (CHECKED DIRECTION):

1 DPM MAX AT 5 PSID

NONE AT 1000 TO 4000 PSID

WEIGHT: .02 LBS MAX

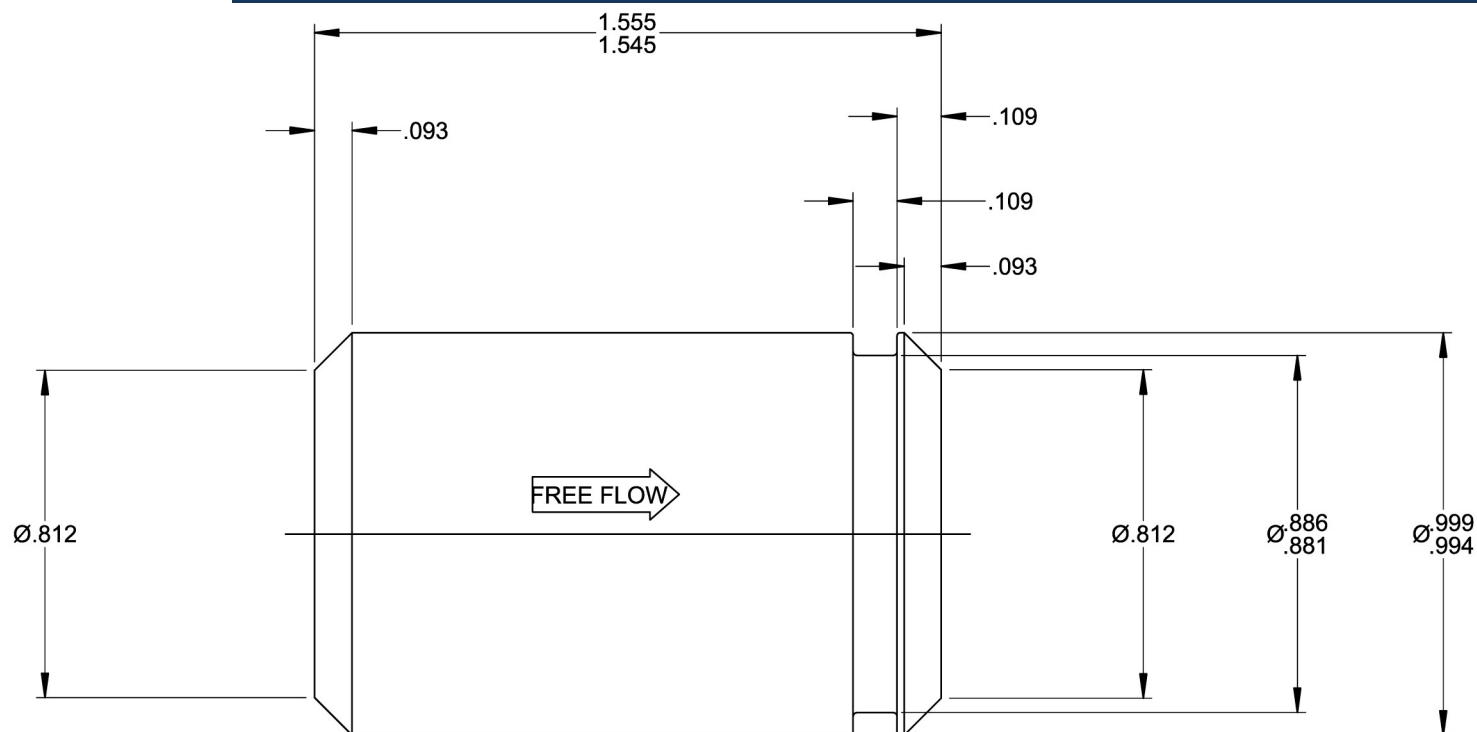


HYDRAULIC SCHEMATIC

CATEGORY 1: CHECK VALVES, CARTRIDGE

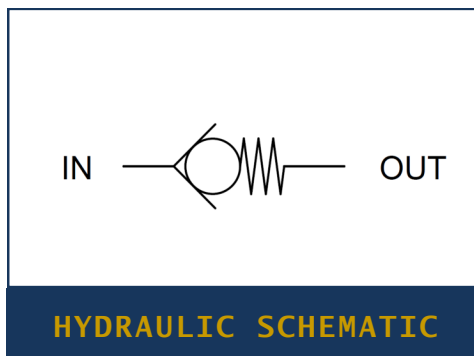


PART NUMBER: 1C1382 CHECK VALVE



PERFORMANCE SPECIFICATIONS:

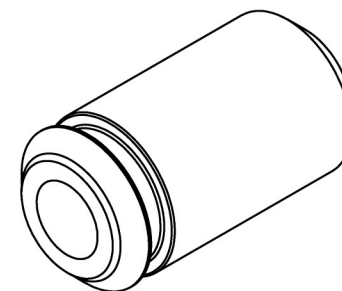
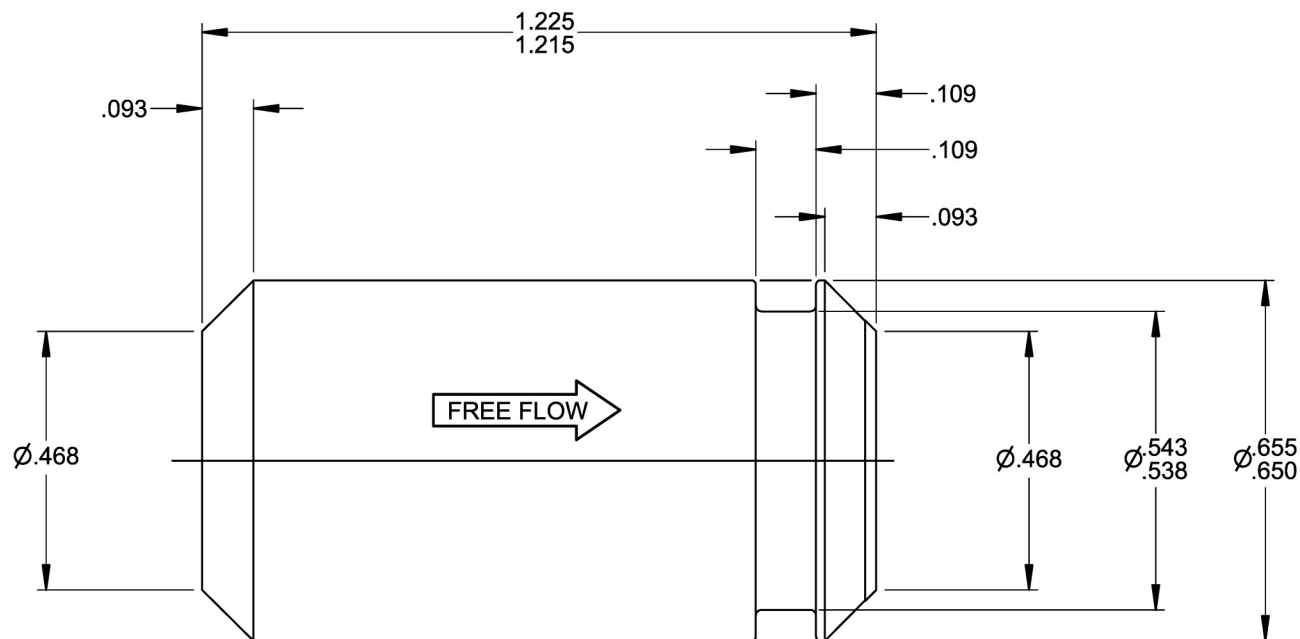
FLUIDS: ALL AIRCRAFT HYDRAULIC FLUIDS
MATERIAL: BODY 303 CRES
POPPET 440C CRES
TEMPERATURE RANGE: +40°F TO 160°F
OPERATING PRESSURE: 3000 PSIG
PROOF PRESSURE: 5000 PSIG
CRACKING PRESSURE: 1 TO 2 PSID
FLOW: 16 GPM AT 15 PSID MAX
INTERNAL LEAKAGE (CHECKED DIRECTION):
2 DPM MAX AT 5 PSID
NONE AT 1000 TO 3000 PSID



CATEGORY 1: CHECK VALVES, CARTRIDGE



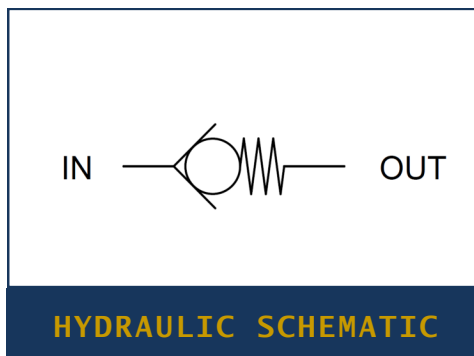
PART NUMBER: 1C1376 CHECK VALVE



ISOMETRIC VIEW
FOR REFERENCE ONLY

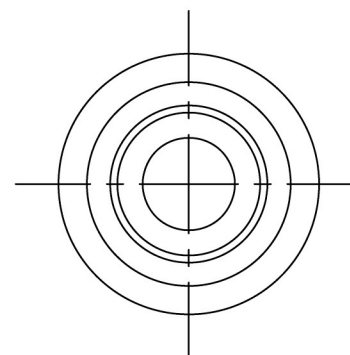
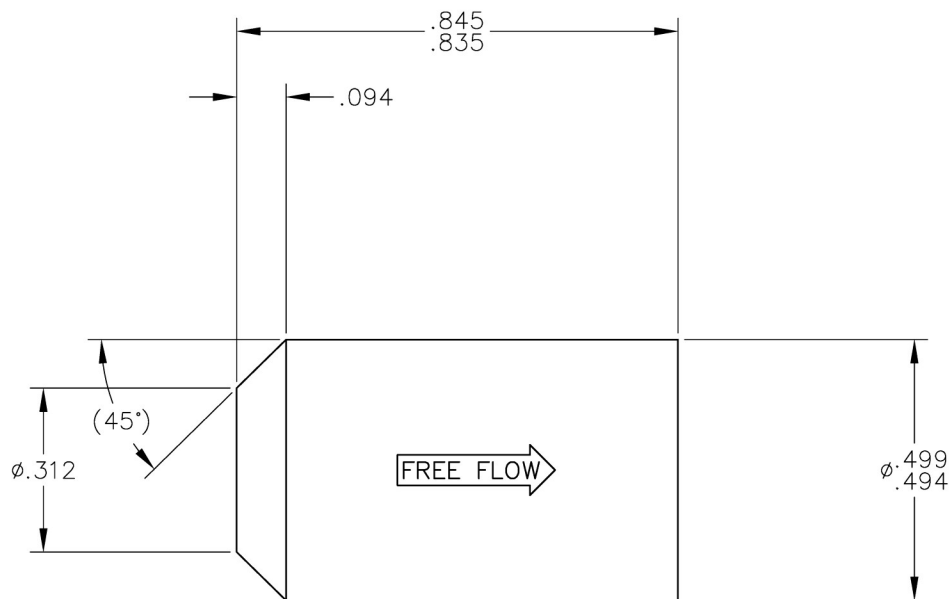
PERFORMANCE SPECIFICATIONS:

FLUIDS: ALL AIRCRAFT HYDRAULIC FLUIDS
MATERIAL: BODY 303 CRES
POPPET 440C CRES
TEMPERATURE RANGE: +40°F TO 160°F
OPERATING PRESSURE: 3000 PSIG
PROOF PRESSURE: 5000 PSIG
CRACKING PRESSURE: 1 TO 2 PSID
FLOW: 5 GPM AT 15 PSID MAX
INTERNAL LEAKAGE (CHECKED DIRECTION):
2 DPM MAX AT 5 PSID
NONE AT 1000 TO 3000 PSID





PART NUMBER: 1C4792 CHECK VALVE



PERFORMANCE SPECIFICATIONS:

FLUIDS: ALL AIRCRAFT HYDRAULIC FLUIDS

MATERIAL: BODY 303 CRES

POPPET 440C CRES

TEMPERATURE RANGE: 40°F TO 300°F

OPERATING PRESSURE: 3000 PSIG

PROOF PRESSURE: 5000 PSIG

CRACKING PRESSURE: 4 TO 5 PSID

FLOW: 2.5 GPM AT 15 PSID MAX

INTERNAL LEAKAGE (CHECKED DIRECTION):

2 DPM MAX AT 5 PSID

NONE AT 1000, 1500 AND 3000 PSID

WEIGHT: .03 LBS MAX

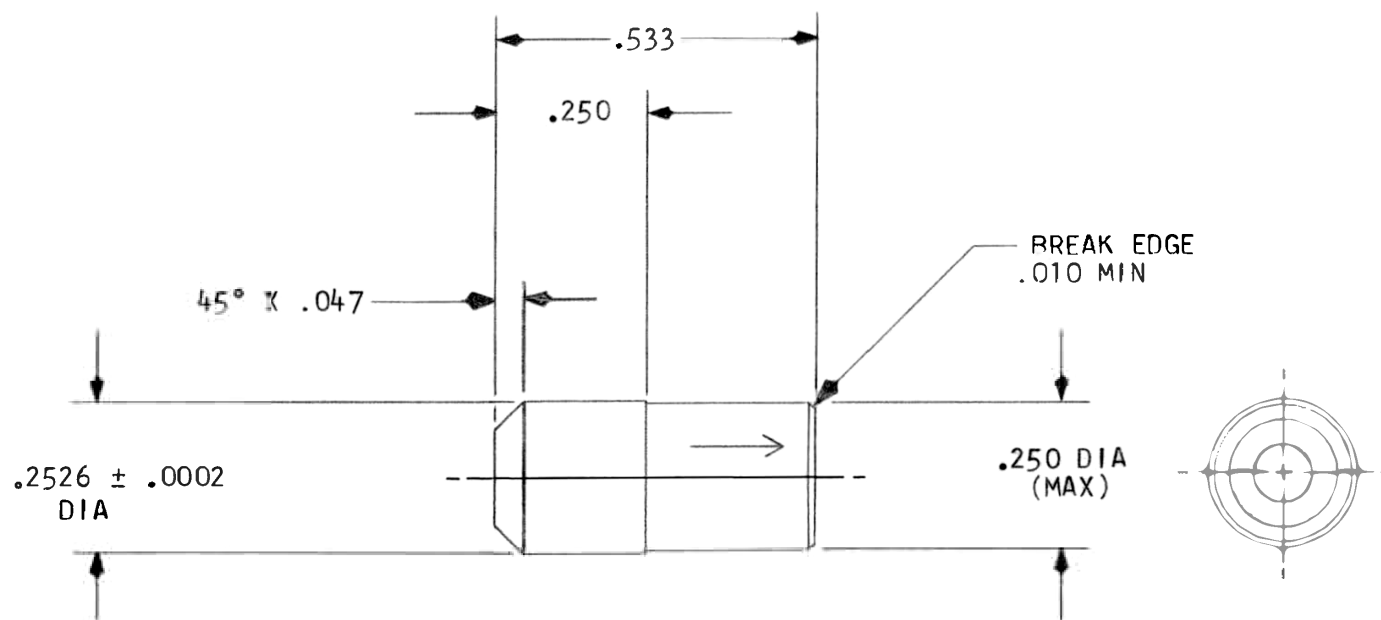


HYDRAULIC SCHEMATIC

CATEGORY 1: CHECK VALVES, CARTRIDGE



PART NUMBER: 2C5654 CHECK VALVE



PERFORMANCE SPECIFICATIONS:

FLUIDS: ALL AIRCRAFT HYDRAULIC FLUIDS

MATERIAL: BODY 303 CRES

POPPET 440C CRES

TEMPERATURE RANGE: -65°F TO 225°F

OPERATING PRESSURE: 3000 PSIG

PROOF PRESSURE: 4500 PSIG

CRACKING PRESSURE: 2 TO 5 PSID

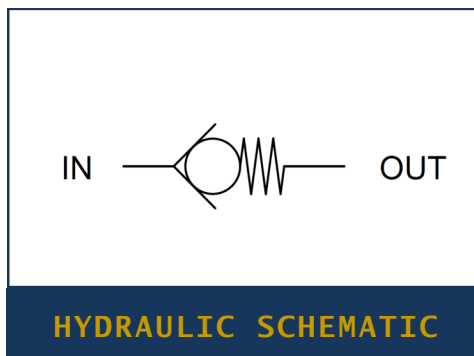
FLOW: .8 GPM AT 15 PSID MAX

INTERNAL LEAKAGE (CHECKED DIRECTION):

1 DPM MAX AT 5 PSID

NONE AT 1000 TO 3000 PSID

WEIGHT: .0036 LBS MAX

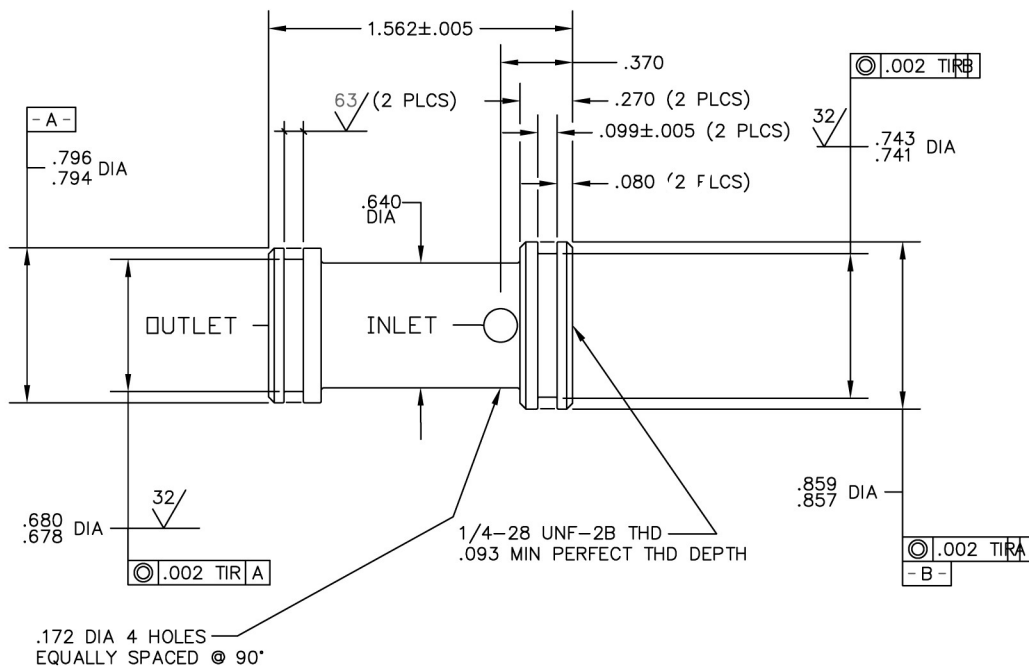


HYDRAULIC SCHEMATIC

CATEGORY 1: CHECK VALVES, CARTRIDGE



PART NUMBER: 3C4108 CHECK VALVE



PERFORMANCE SPECIFICATIONS:

FLUIDS: MIL-H-5606 OR MIL-H-83282 (PHOSPHATE ESTER & SKYDROL OPTIONS AVAILABLE UPON REQUEST)

MATERIAL: BODY 6061-T651 AL
POPPET 17-4PH CRES
ELASTOMER FLUOROCARBON

TEMPERATURE RANGE: -65°F TO 300°F

OPERATING PRESSURE: 125 PSIG

PROOF PRESSURE: 225 PSIG

CRACKING PRESSURE: 2 TO 4 PSID

FLOW: 2.0 GPM AT 5 PSID MAX AT 176°F

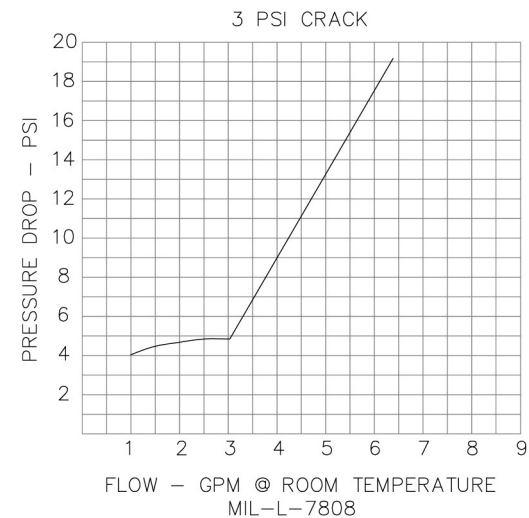
INTERNAL LEAKAGE (CHECKED DIRECTION):

NONE TO 300 PSID

WEIGHT: .065 LBS MAX



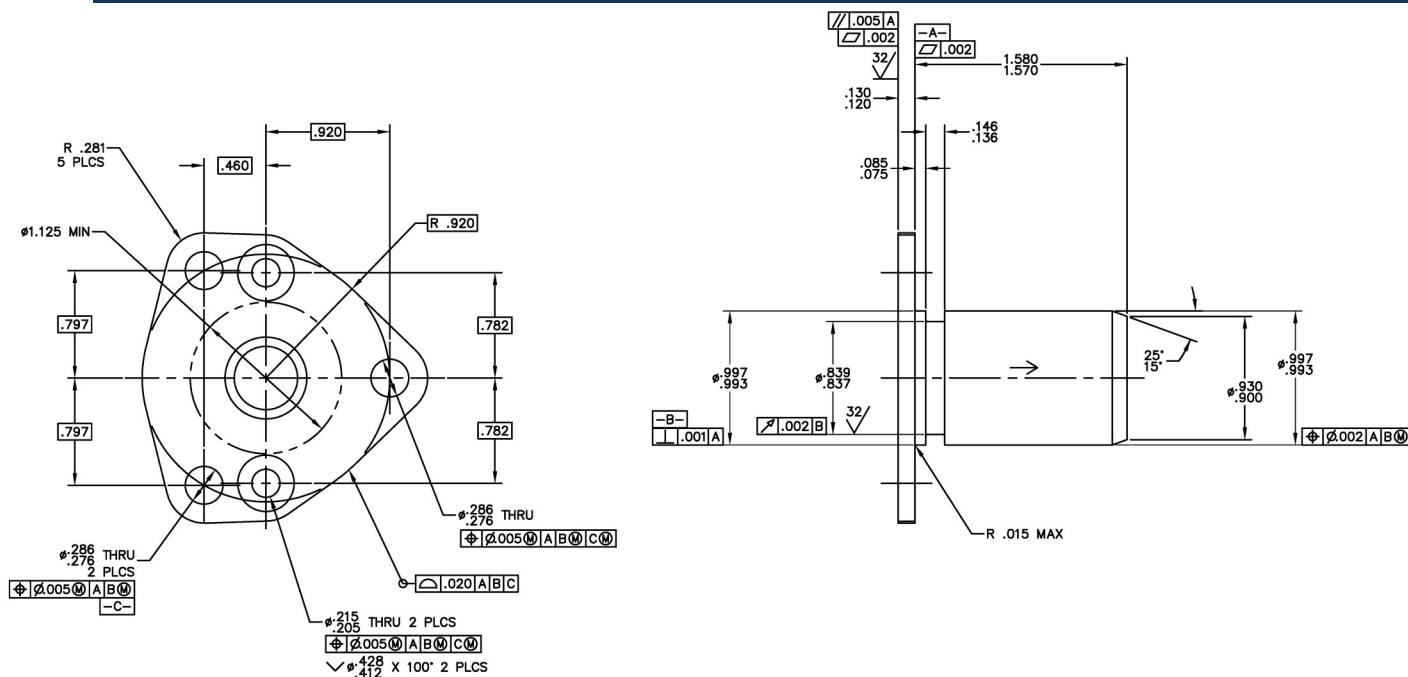
HYDRAULIC SCHEMATIC



CATEGORY 1: CHECK VALVES, CARTRIDGE



PART NUMBER: 3C4628 CHECK VALVE



PERFORMANCE SPECIFICATIONS:

FLUIDS: MIL-H-5606 OR MIL-H-83282
 (PHOSPHATE ESTER / SKYDROL OPTIONS
 AVAILABLE UPON REQUEST)
 MATERIAL: BODY 15-5PH CRES
 POPPET 303 CRES
 ELASTOMER FLUOROCARBON
 TEMPERATURE RANGE: -40°F TO 350°F
 OPERATING PRESSURE: 100 PSIG
 PROOF PRESSURE: 200 PSIG
 CRACKING PRESSURE: 2 TO 8 PSID
 FLOW: 12.0 GPM AT 15 PSID MAX
 INTERNAL LEAKAGE (CHECKED DIRECTION):
 NONE AT 0 TO 300 PSID
 WEIGHT: .32 LBS MAX



HYDRAULIC SCHEMATIC

CATEGORY 1: CHECK VALVES, CARTRIDGE



CRISSAIR HAS HUNDREDS OF OTHER CHECK VALVES NOT LISTED IN THE CATALOG WITH DIFFERENT MATERIALS, FITTINGS, AND SIZE CONFIGURATIONS.

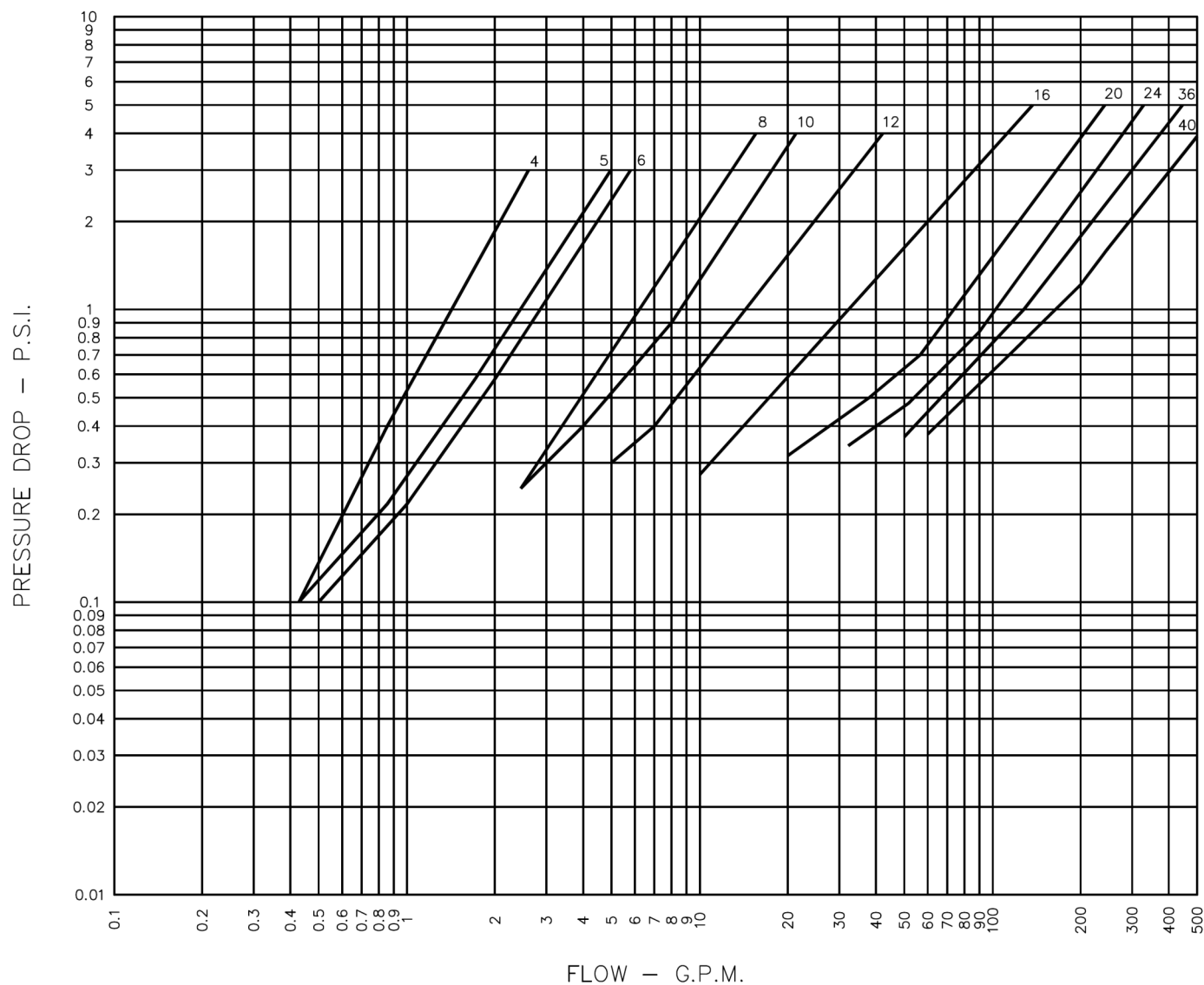
CONTACT CRISSAIR FOR ADDITIONAL INFORMATION/DRAWINGS AT

(661) 367-3300 OR SALES@CRISSAIR.COM.

YOU CAN ALSO VISIT WWW.CRISSAIR.COM.



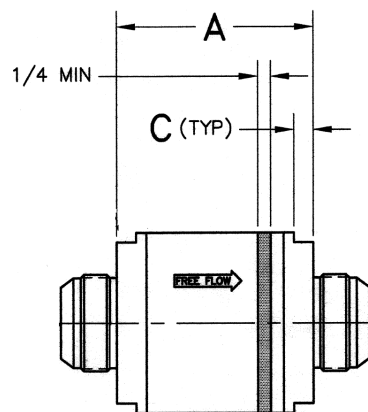
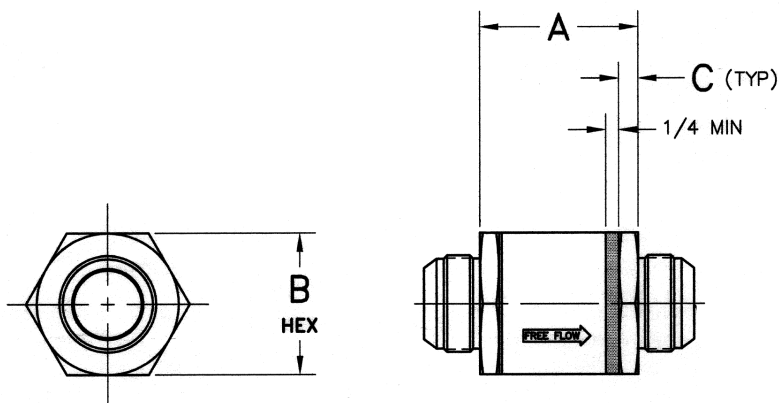
FLOW CURVE SWING CHECK VALVES (SIZES 4 TO 40)



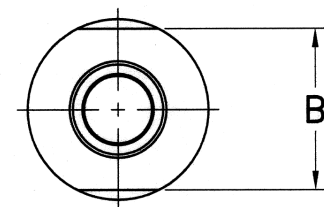
CATEGORY 1: SWING CHECK VALVES



PART NUMBER: 2S3000, FUEL CHECK VALVE, LOW PRESSURE



HYDRAULIC SCHEMATIC



PERFORMANCE SPECIFICATIONS:

FLUIDS: AIRCRAFT FUELS PER MIL-G-5572, MIL-T-5624 AND AIR

MATERIAL: BODY 2024-T351 AL

ELASTOMER MIL-P-5315

TEMPERATURE RANGE: -65°F TO 160°F

OPERATING PRESSURE: SEE TABLE

PROOF PRESSURE: SEE TABLE

CRACKING PRESSURE: 4" H₂O MAX PSID

FLOW: SEE TABLE AT 20 INCHES H₂O MAX ΔP

INTERNAL LEAKAGE: .50 CC/MIN (FUEL) OR

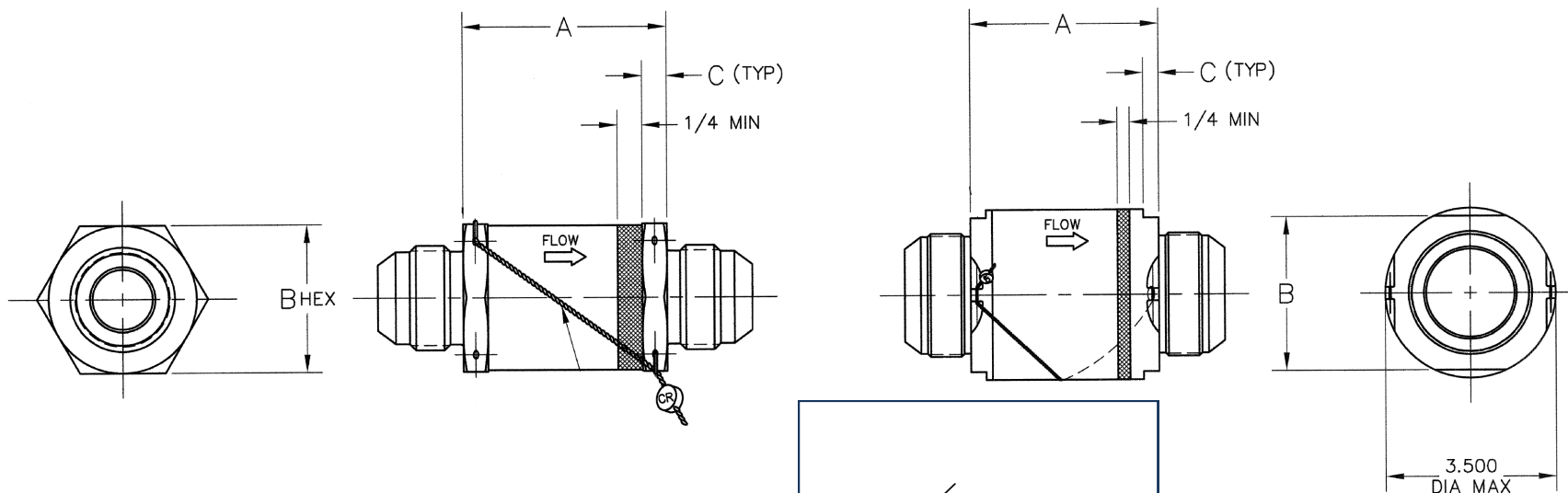
10 CC/MIN (AIR) MAX ABOVE 4" H₂O

2S3032	2.000	130	265 PSIG	400 PSIG	800 PSIG	3.813	3.125	0.312	1.940	
2S3028	1.750	100				3.429	3.000	0.375	1.504	
2S3024	1.500	70				3.063	2.750	0.375	1.159	
2S3020	1.250	50				2.688	2.500	0.312	0.853	
2S3016	1.000	30	300 PSIG	500 PSIG	1000 PSIG	2.375	1.812	0.250	0.431	
2S3012	0.750	15				2.063	1.500		0.315	
2S3010	0.625	10				1.782	1.187		0.192	
2S3008	0.500	6				1.674			0.176	
2S3006	0.375	3.75				1.563	1.063		0.127	
2S3005	0.312	2.30							0.117	
2S3004	0.250	1.25							0.113	
PART NO	TUBING O.D.	RATED FLOW (GPM)	OPERATING PRESSURE	PROOF PRESSURE	BURST PRESSURE	A ±.031	B HEX	C MIN	WT (LBS) MAX	

CATEGORY 1: SWING CHECK VALVES



PART NUMBER: 2S3000L, FUEL CHECK VALVE, LOW PRESSURE



PERFORMANCE SPECIFICATIONS:

FLUIDS: AIRCRAFT FUELS PER MIL-G-5572, MIL-T-5624 MIL-C-7024, TT-S-735, ASTM D-1655 JET FUELS, TYPE A, A-1, B

MATERIAL: BODY 2024-T351 AL

ELASTOMER MIL-R-83248

TEMPERATURE RANGE: -67°F TO 350°F (AMBIENT)
-67°F TO 200°F (FUEL)

CRACKING PRESSURE: 8 INCHES H₂O MAX AT 10 CC/MIN (MINIMUM)
FLOW VALVE SHALL RESEAT BEFORE OUTLET PRESS
EQUALS INLET PRESS (WITH NO PRESSURE, VALVE
MUST REMAIN CLOSED IN ANY ATTITUDE)

FLOW & ΔP: PART NO 2S3004L THROUGH 2S3008L~1.5 PSID MAX ΔP AT
RATED FUEL FLOW ALL OTHERS 1.0 PSID MAX ΔP AT RATED
FUEL FLOW (SEE TABLE)

INTERNAL LEAKAGE: (FUEL) 0.10 CC/MIN MAX FROM 4" H₂O TO OPER PRESS
(AIR) NO BUBBLES FOR 1 MINUTE FROM 4" H₂O OPER PRESS

DESIGN: IN ACCORDANCE WITH MIL-V-7899C CLASS B

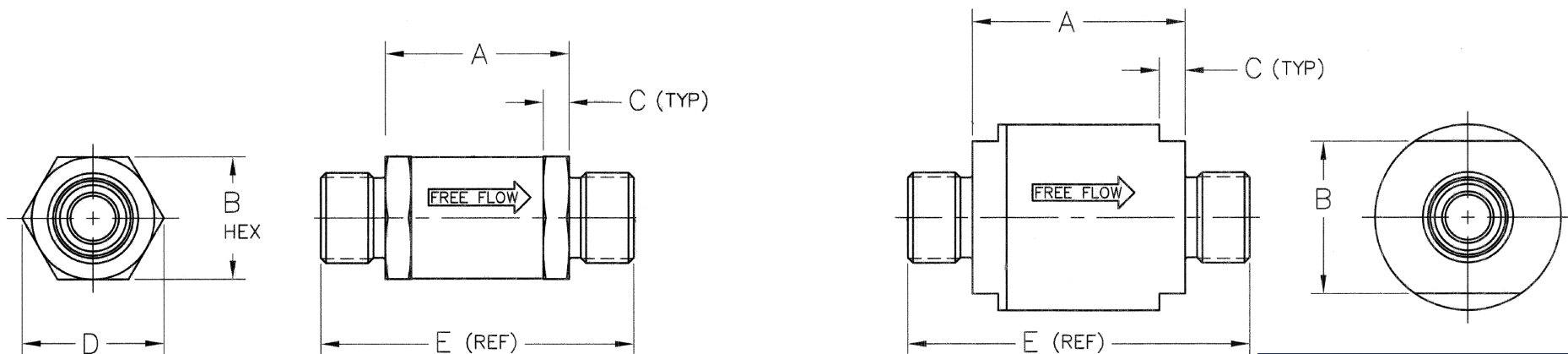
HYDRAULIC SCHEMATIC

MS28884B-32	2S3032L	2.000	130	265	400	800	3.813	3.125 ±.010	.312	1.940
MS28884B-28	2S3028L	1.750	100				3.429	3.000 ±.010	.375	1.504
MS28884B-24	2S3024L	1.500	70				3.063	2.750 +.008 -.016	.375	1.159
MS28884B-20	2S3020L	1.250	50				2.688	2.500 +.008 -.016	.312	.853
MS28884B-16	2S3016L	1.000	30	300	500	1000	2.375	1.812 +.008 -.016	.250	.431
MS28884B-12	2S3012L	.750	15				2.063	1.500 +.003 -.006		.315
MS28884B-10	2S3010L	.625	10				1.782	1.187 +.003 -.006		.192
MS28884B-8	2S3008L	.500	6				1.674		.176	
MS28884B-6	2S3006L	.375	3.75				1.563	1.063 +.003 -.006	.125	.127
MS28884B-5	2S3005L	.312	2.30							.117
MS28884B-4	2S3004L	.250	1.25							.113
MILITARY PART NO	PART NO	TUBING O.D.	RATED FLOW (GPM)				OPER PRESS (PSIG)	PROOF PRESS (PSIG)	BURST PRESS (PSIG)	A ±.031

CATEGORY 1: SWING CHECK VALVES



PART NUMBER: 2S3600L, FUEL CHECK VALVE, LOW PRESSURE



PERFORMANCE SPECIFICATIONS:

FLUIDS: AIRCRAFT FUELS PER MIL-G-5572, MIL-T-5624 AND AIR

MATERIAL: BODY 2024-T351 AL

ELASTOMER MIL-R-25897

TEMPERATURE RANGE: -65°F TO 160°F

CRACKING PRESSURE: 4" H₂O MAX

FLOW : SEE TABLE AT 1.5 PSID MAX

INTERNAL LEAKAGE: (FUEL) .01 CC/MIN MAX FROM 4" H₂O TO OPER PRESS
(AIR) NO BUBBLES FOR 1 MINUTE FROM 4" H₂O TO OPER PRESS

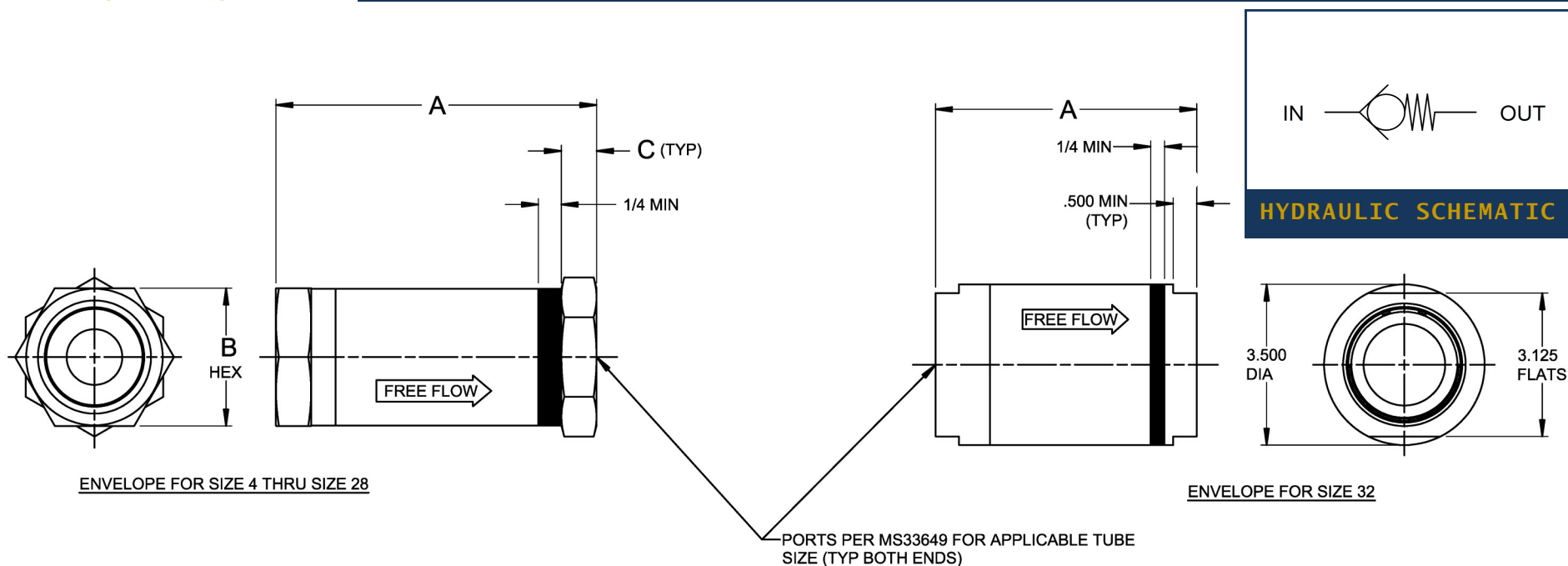
HYDRAULIC SCHEMATIC

2S3632L	2.000	130	265	400	800	3.813	3.125±.010	.312	-	5.189	1.940
2S3624L	1.500	70				3.063	2.750	.375	3.175	4.439	1.159
2S3620L	1.250	50				2.688	2.500	.312	2.887	4.064	.853
2S3616L	1.000	30	300	500	1000	2.375	1.812	.250	2.092	3.751	.431
2S3612L	.750	15				2.062	1.500		1.732	3.438	.315
2S3610L	.625	10	500	750	1250	1.782	1.187		1.371	3.032	.192
2S3608L	.500	6				1.673				2.797	.176
2S3606L	.375	3.75				1.529	1.063		1.225	2.467	.127
2S3605L	.313	2.30				1.545				2.451	.117
2S3604L	.250	1.25				1.563				2.469	.113
CRISSAIR PART NO	TUBING O.D.	FLOW (GPM)	OPER PRESS (PSIG)	PROOF PRESS (PSIG)	BURST PRESS (PSIG)	A ±.031	B HEX	C	D	E (REF)	WT (LBS) MAX

CATEGORY 1: SWING CHECK VALVES



PART NUMBER: 2S4200, FUEL CHECK VALVE, LOW PRESSURE



PERFORMANCE SPECIFICATIONS:

FLUIDS: AIRCRAFT FUELS PER MIL-G-5572, MIL-T-5624 AND AIR

MATERIAL: BODY 2024-T351 AL

ELASTOMER MIL-R-83248

TEMPERATURE RANGE: -65°F TO 350°F

CRACKING PRESSURE: 4" H₂O MAX

FLOW : SEE TABLE AT: 1.5 PSID (WITH OUTLET FITTING PER MS33514)

3.5 PSID (WITH OUTLET FITTING PER MS33656)

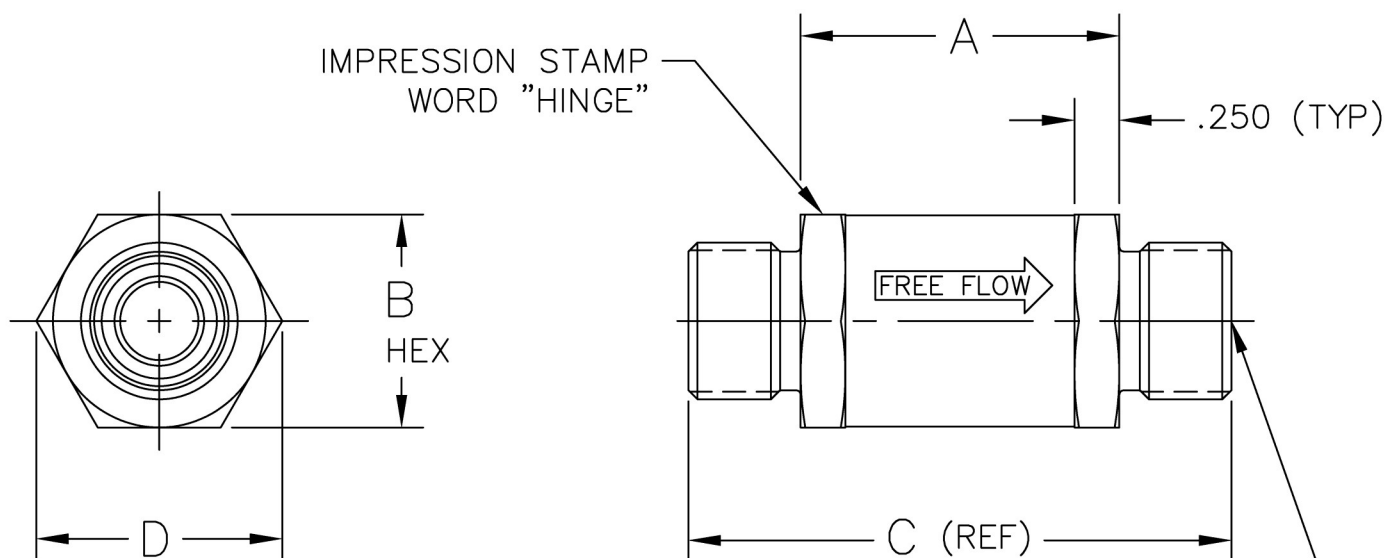
INTERNAL LEAKAGE: (FUEL) .50 CC/MIN MAX ABOVE 4" H₂O
(AIR) 10 CC/MIN MAX ABOVE 4" H₂O

2S4232	2.000	130	265	400	800	5.688	-	-
2S4228	1.750	100				5.063	3.000	.500
2S4224	1.500	70				4.625	2.750	
2S4220	1.250	50				4.062	2.500	
2S4216	1.000	30	300	500	1000	3.594	1.875	.375
2S4212	.750	15				3.500	1.500	
2S4210	.625	10				2.844	1.187	.250
2S4208	.500	6				2.344		
2S4206	.375	3.75				2.031	1.063	
2S4205	.312	2.30						
2S4204	.250	1.25						
CRISSAIR PART NO	TUBING O.D.	FLOW (GPM)	OPER PRESS (PSIG)	PROOF PRESS (PSIG)	BURST PRESS (PSIG)	A ±.031	B HEX	C

CATEGORY 1: SWING CHECK VALVES



PART NUMBER: 2S5300, FUEL CHECK VALVE, LOW PRESSURE



PORTS PER MS33514 OR AS33514, STYLE E FOR APPLICABLE
TUBE SIZE, EXCEPT FOR HEX (TYP BOTH ENDS)



HYDRAULIC SCHEMATIC

PERFORMANCE SPECIFICATIONS:

FLUIDS: HYDRAULIC FLUIDS PER BMS 3-11 & AIR

MATERIAL: BODY 2024-T351 AL

ELASTOMER NAS1613

TEMPERATURE RANGE: -65°F TO 160°F

CRACKING PRESSURE: 4" H₂O MAX

FLOW : SEE TABLE

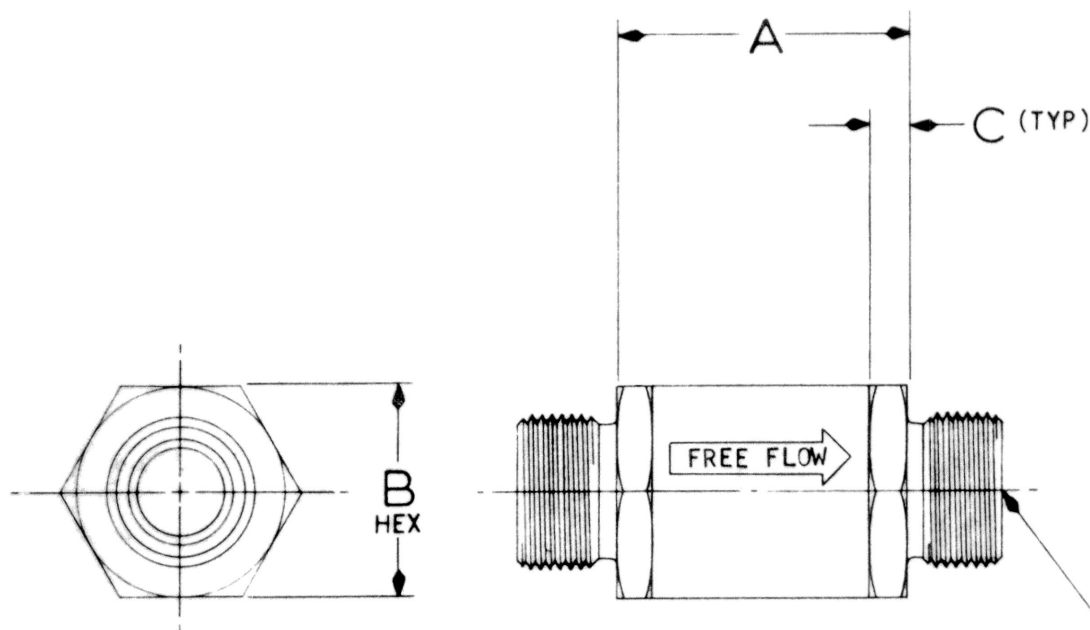
INTERNAL LEAKAGE: NO BUBBLES FOR ONE MINUTE AT 3"^{+0"}_{-.1"} H₂O AND
TABULATED PROOF PRESSURE

2S5312	.750	20	4.75	300	500	1000	2.062	1.500	3.438	1.734	.315
2S5310	.625	10	5.5	500	750	1250	1.782	1.187	3.032	1.375	.192
2S5308	.500	5	.375				1.673		2.797		.176
2S5306	.375	2					1.529	1.063	2.467	1.219	.127
2S5305	.313	1.5					1.545		2.451		.117
2S5304	.250	0.5					1.563		2.469		.113
CRISSAIR PART NO	TUBING O.D.	FLOW (SCFM)	ΔP "H ₂ O	OPER PRESS (PSIG)	PROOF PRESS (PSIG)	BURST PRESS (PSIG)	A ±.031	B HEX	C (REF)	D	WT LBS MAX

CATEGORY 1: SWING CHECK VALVES



PART NUMBER: 2S5400, FUEL CHECK VALVE, LOW PRESSURE



ENVELOPE FOR SIZE 4 THRU SIZE 24

PORTS PER MS33514, STYLE E FOR APPLICABLE
TUBE SIZE, EXCEPT FOR HEX (TYP BOTH ENDS)

PERFORMANCE SPECIFICATIONS:

FLUIDS: HYDRAULIC OIL PER MIL-H-5606 & AIR

MATERIAL: BODY 2024-T351 AL

ELASTOMER MIL-P-25732

TEMPERATURE RANGE: -65°F TO 275°F

CRACKING PRESSURE: 4" H₂O MAX

FLOW : SEE TABLE AT 30" H₂O MAX ΔP

INTERNAL LEAKAGE: (OIL) .50 CC/MIN MAX ABOVE 4" H₂O
(AIR) 10 CC/MIN MAX ABOVE 4" H₂O



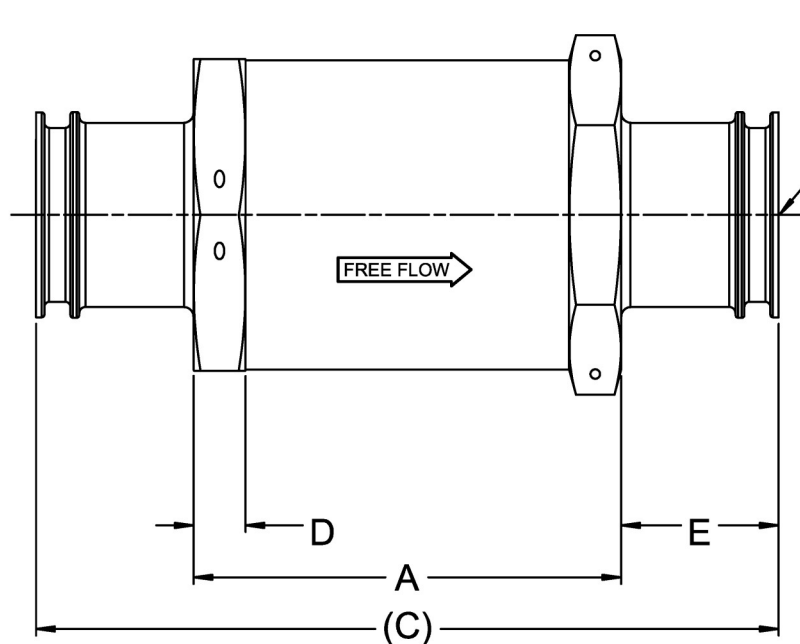
HYDRAULIC SCHEMATIC

2S5406	.375	3.75	500	750	1250	1.563	1.063	.250	.127
2S5404	.250	1.25							.113
CRISSAIR PART NO	TUBING O.D.	FLOW (GPM)	OPER PRESS (PSIG)	PROOF PRESS (PSIG)	BURST PRESS (PSIG)	A ±.031	B HEX	C (REF)	WT LBS MAX

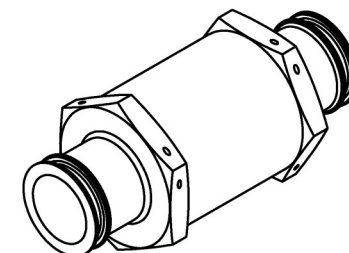
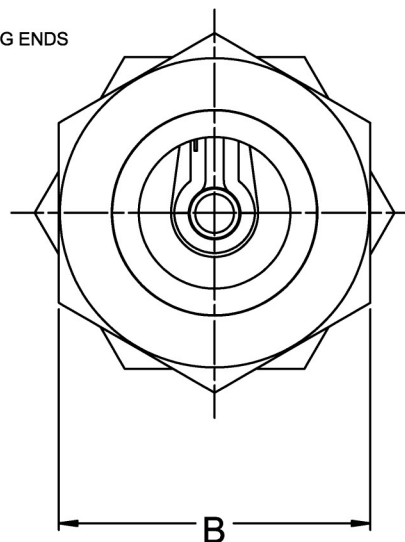
CATEGORY 1: SWING CHECK VALVES



SWING CHECK VALVE, SERIES



BOTH FITTING ENDS
PER F



ISOMETRIC VIEW
FOR REFERENCE ONLY

PERFORMANCE SPECIFICATIONS:

FLUIDS: AIR

MIL-PRF-87252C* (2S7410 ONLY)

MATERIAL: BODY 2024-T351 AL

ELASTOMER MIL-R-83248

ELASTOMER FLUOROSILICONE*

TEMPERATURE RANGE: -65°F TO 350°F AMBIENT

-65°F TO 158°F AMBIENT*

CRACKING PRESSURE: 8" H₂O MAX

FLOW : SEE TABLE AT 1 PSID MAX

INTERNAL LEAKAGE: 0.10 CC/MIN MAX FROM 8" H₂O TO 300 PSID

Ø .030 ORIFICE*

* P/N 2S7410 PERFORMANCE SPECIFICATIONS



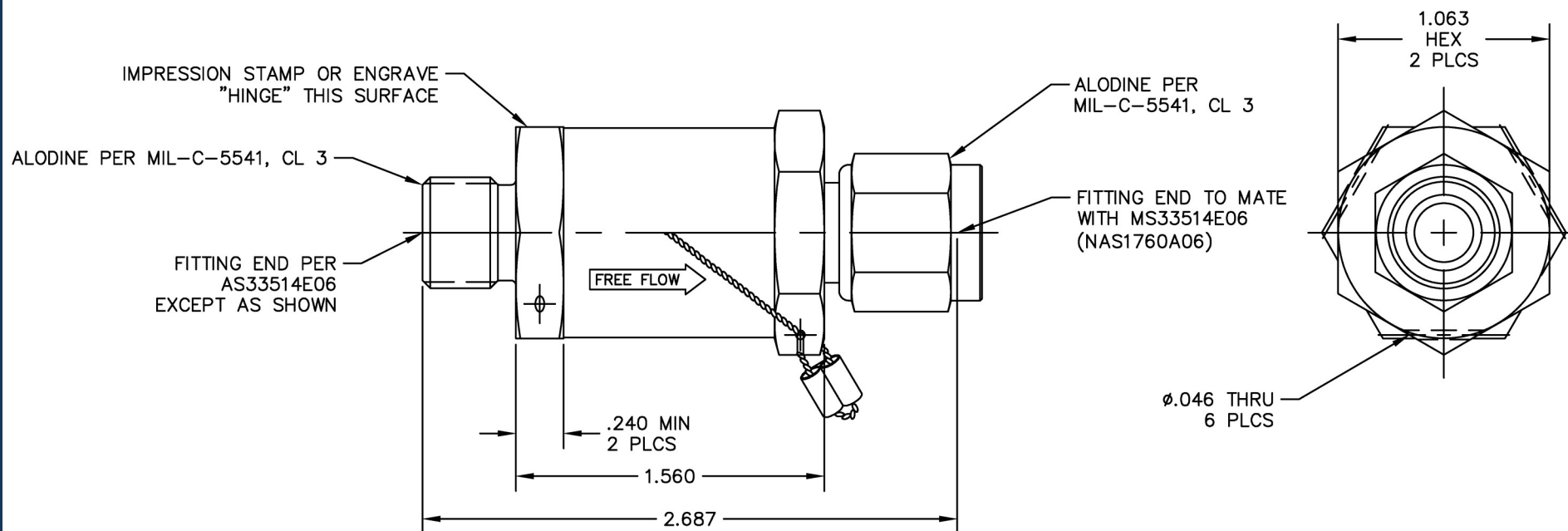
HYDRAULIC SCHEMATIC

2S7408	0.6	300	500	1000	2.058	1.500	3.574	.250	.758	AS1656-1-12	.27
2S7398	2.1				2.370	1.813	3.885			AS1656-1-16	.39
2S7400	1.2				2.688	2.500	4.203			AS1656-1-20	.79
2S7410	60 GPM	250	375	750	3.063	2.750	4.613	.375	.775	10F18S-24	1.03
CRISSAIR PART NO	FLOW (LB/MIN)	OPER PRESS (PSIG)	PROOF PRESS (PSIG)	BURST PRESS (PSIG)	A ±.031	B HEX	C (REF)	D	E	F	WT LBS MAX

CATEGORY 1: SWING CHECK VALVES



PART NUMBER: 2S6930, SWING CHECK VALVE



PERFORMANCE SPECIFICATIONS:

FLUIDS: ALL AIRCRAFT FUELS AND AIR

MATERIAL: BODY 6061-T651 AL

ELASTOMER FLUOROSILICONE

SWIVEL NUT 7075-T73 AL

TEMPERATURE RANGE: -65°F TO 165°F

OPERATING PRESSURE: 120 PSIG

PROOF PRESSURE: 240 PSIG

CRACKING PRESSURE: 0.8" TO 11" H₂O

FLOW: 3.25 GPM AT 1.5 PSID (USING MIL-C-7024)

INTERNAL LEAKAGE (CHECKED DIRECTION):

NONE FROM 8" H₂O TO 120 PSID

WEIGHT: .16 LBS MAX

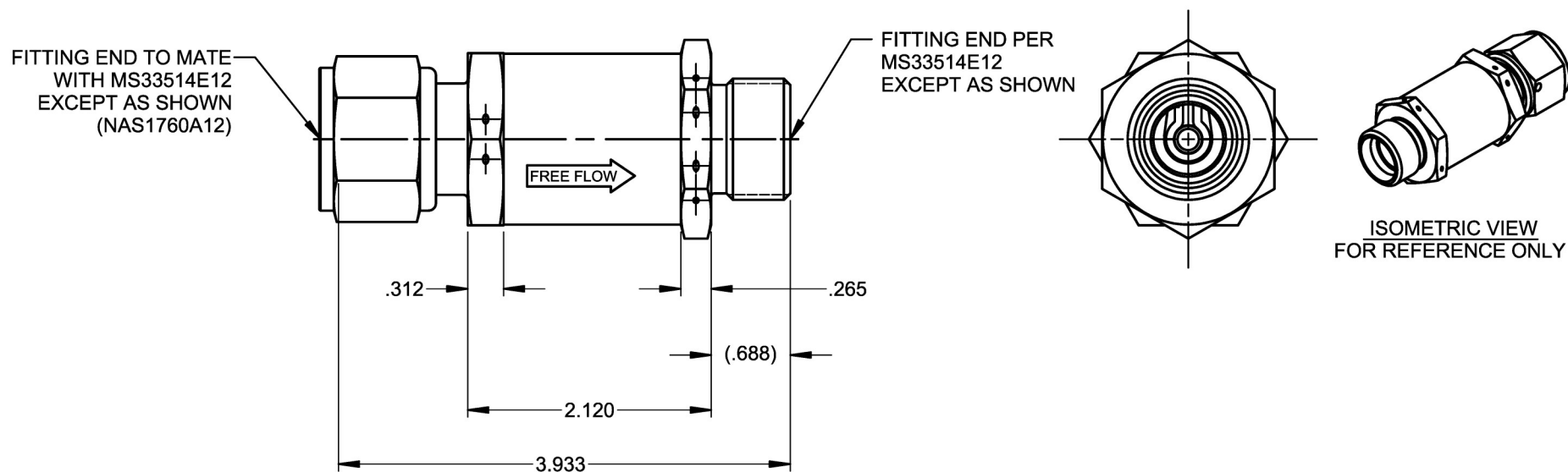


HYDRAULIC SCHEMATIC

CATEGORY 1: SWING CHECK VALVES

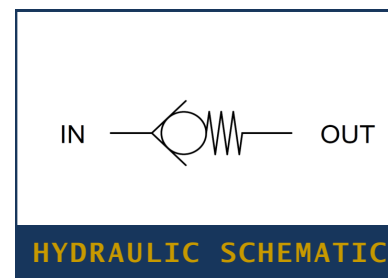


PART NUMBER: 2S7170, SWING CHECK VALVE



PERFORMANCE SPECIFICATIONS:

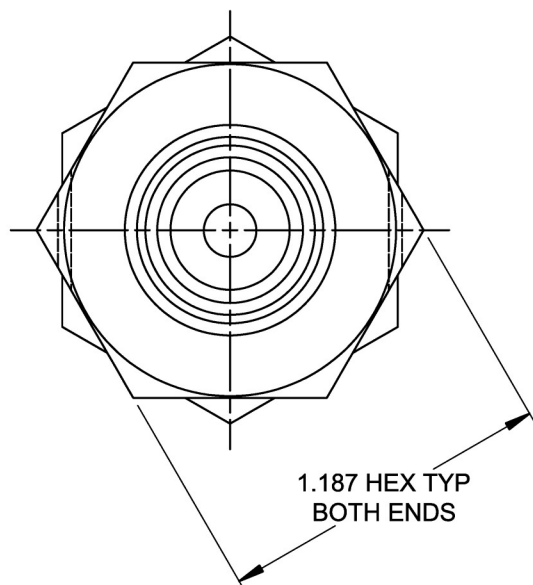
FLUIDS: ALL AIRCRAFT FUELS AND AIR
MATERIAL: BODY 2024-T351 AL
ELASTOMER MIL-R-25897
SWIVEL NUT 2024-T6 AL
TEMPERATURE RANGE: -65°F TO 160°F
OPERATING PRESSURE: 3.5 PSIG
PROOF PRESSURE: 40 PSIG
CRACKING PRESSURE: 4.5" - 10" H₂O
FLOW: 2 SCFM AT 0.7 PSID MAX
INTERNAL LEAKAGE (CHECKED DIRECTION):
NONE FROM 0 TO 20 PSID
WEIGHT: .40 LBS MAX



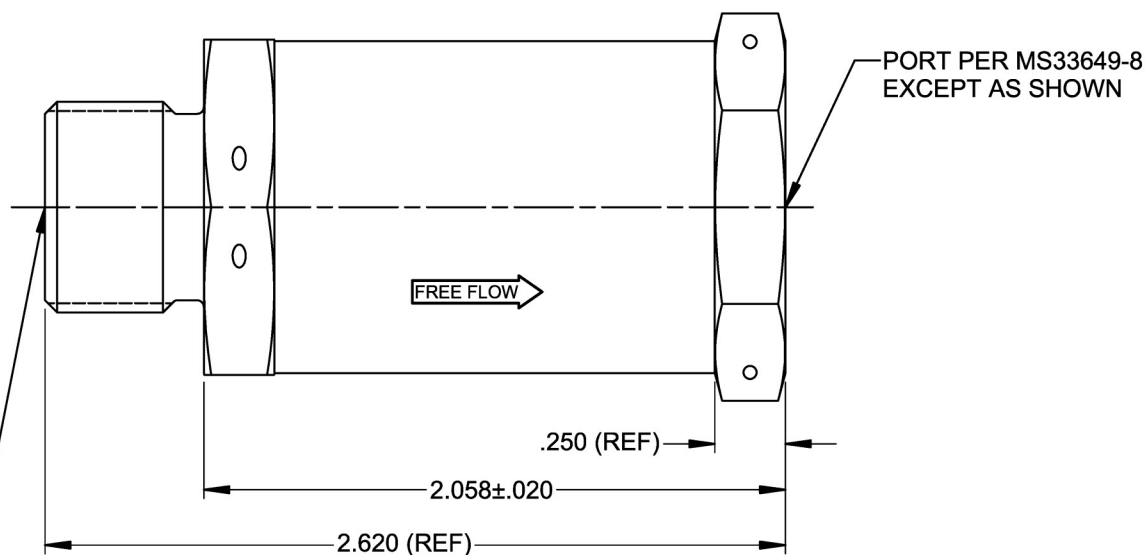
CATEGORY 1: SWING CHECK VALVES



PART NUMBER: 2S2566, SWING CHECK VALVE



END PER MS33514E8
EXCEPT AS SHOWN



PERFORMANCE SPECIFICATIONS:

FLUIDS: ALL AIRCRAFT FUELS AND AIR

MATERIAL: BODY 2024-T351 AL

ELASTOMER MIL-P-5315

TEMPERATURE RANGE: -65°F TO 200°F

OPERATING PRESSURE: 130 PSIG

PROOF PRESSURE: 195 PSIG

CRACKING PRESSURE: 4" H₂O MAX

FLOW: 6 GPM AT 20" H₂O MAX ΔP

INTERNAL LEAKAGE (CHECKED DIRECTION):

NONE AT 3" H₂O TO 130 PSID WITH WET SEAT

WEIGHT: .22 LBS MAX

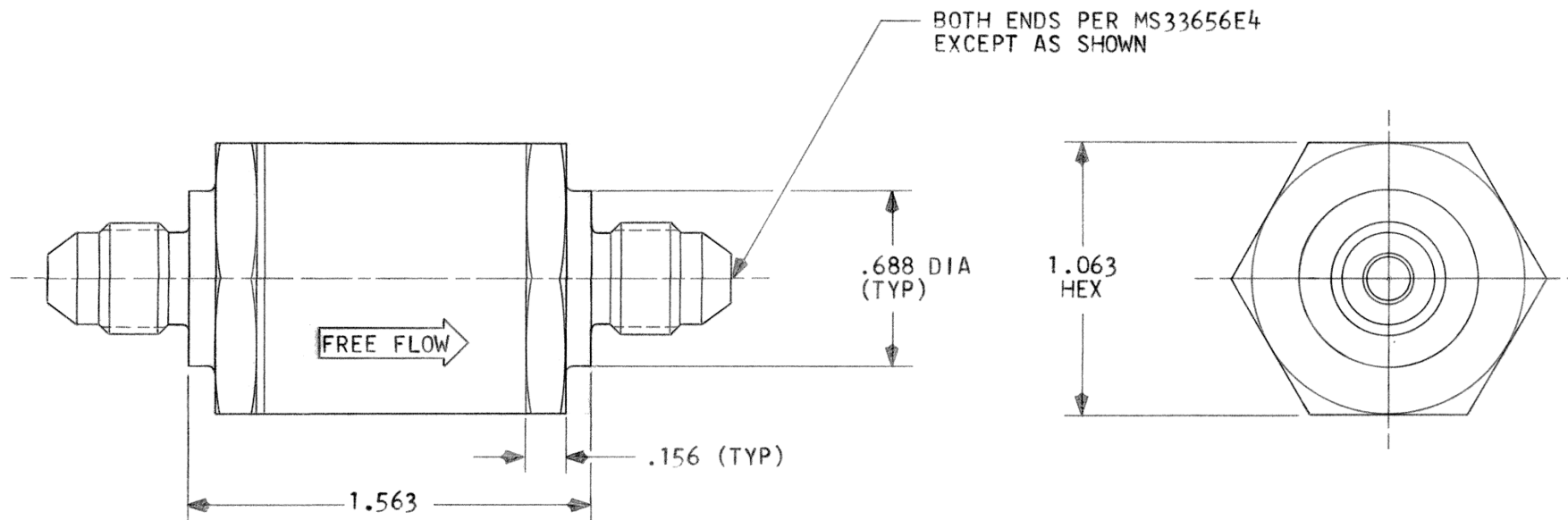


HYDRAULIC SCHEMATIC

CATEGORY 1: SWING CHECK VALVES



PART NUMBER: 2S2914, SWING CHECK VALVE



PERFORMANCE SPECIFICATIONS:

FLUIDS: ALL AIRCRAFT FUELS AND AIR

MATERIAL: BODY 303 CRES

TEMPERATURE RANGE: -65°F TO 560°F

OPERATING PRESSURE: 80 PSIG

PROOF PRESSURE: 107 PSIG

CRACKING PRESSURE: 10" H₂O MAX

FLOW: 0.2 LB/MIN AT 0.5 PSID MAX (AIR AT 38 PSIG INLET & 70°F)

INTERNAL LEAKAGE (CHECKED DIRECTION):

0.01 LB/MIN AT 20 PSID AND 70°F

WEIGHT: .30 LBS MAX



HYDRAULIC SCHEMATIC

CATEGORY 1: SWING CHECK VALVES



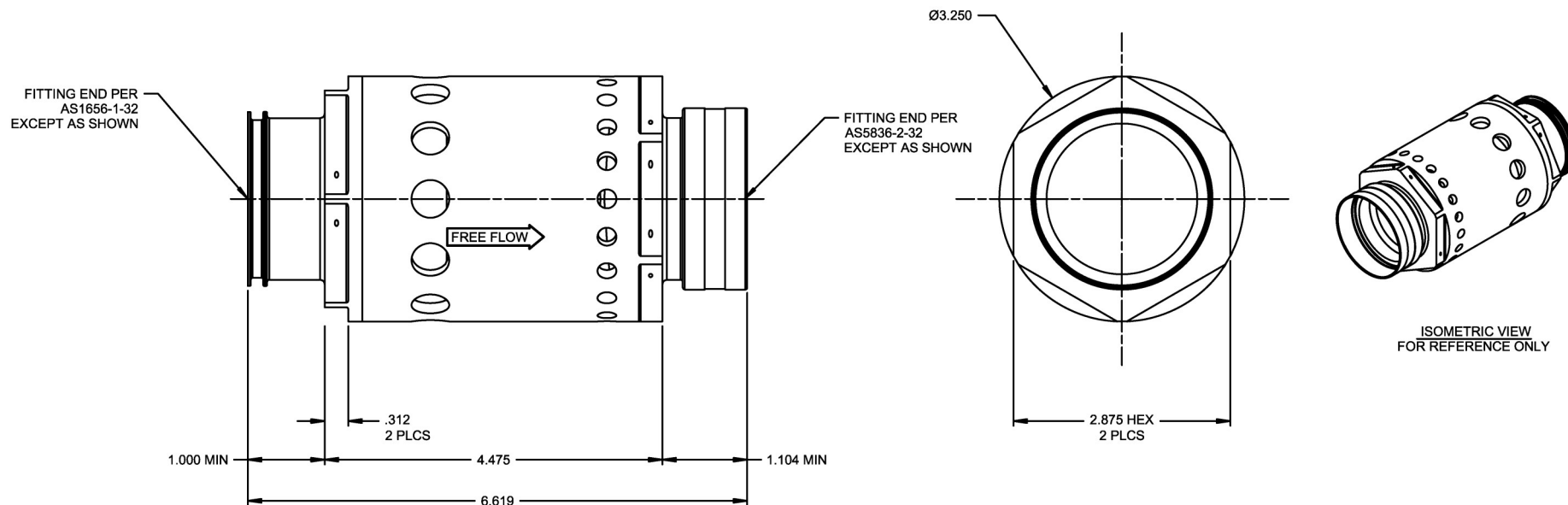
WEIGHT: .315 LBS MAX



CATEGORY 1: SWING CHECK VALVES



PART NUMBER: 2S7420, SWING CHECK VALVE



PERFORMANCE SPECIFICATIONS:

FLUIDS: JET A, JET A-1, JP-4, JP-5, JP-8, TS-1 AND AIR

MATERIAL: BODY 7075-T73511 AL

ELASTOMER MIL-R-83248

TEMPERATURE RANGE: -65°F TO 190°F

OPERATING PRESSURE: 50 PSIG

PROOF PRESSURE: 75 PSIG

CRACKING PRESSURE: 6 TO 8 PSID AT 0.01 LB/MIN FLOW

FLOW: (AIR) 6.0 LB/MIN AT 8 PSIG INLET

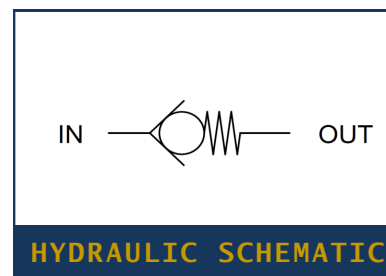
(FUEL) 140 GPM AT 11 PSID

INTERNAL LEAKAGE (CHECKED DIRECTION):

5 CC/MIN MAX FROM 0 TO 75 PSID

0.5" Hg MAX PRESSURE LOSS PER 5 MINUTES AT -12.2 PSID

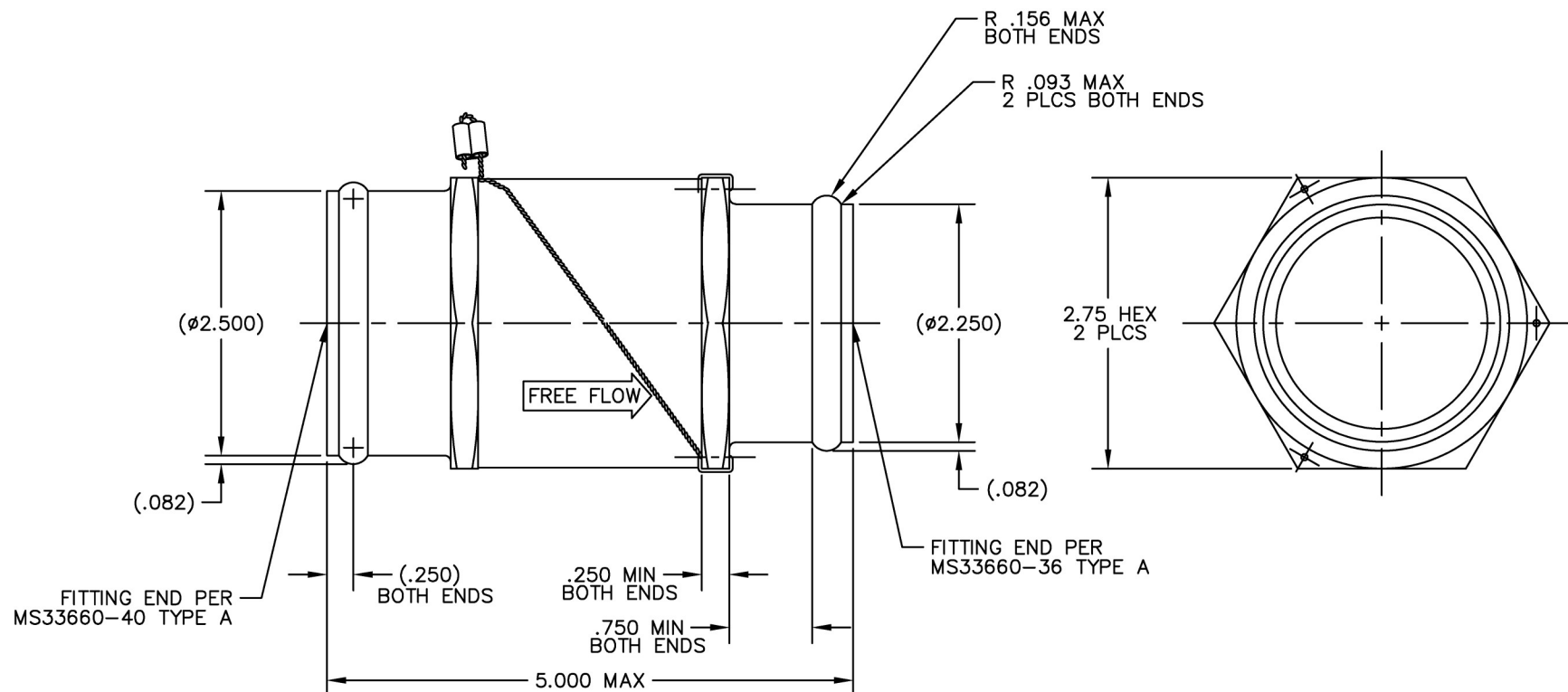
WEIGHT: 2.22 LBS MAX



CATEGORY 1: SWING CHECK VALVES



PART NUMBER: 2S6440, SWING CHECK VALVE



PERFORMANCE SPECIFICATIONS:

FLUIDS: AIR / WATER VAPOR

MATERIAL: BODY DELRIN

ELASTOMER ETHYLENE PROPYLENE

TEMPERATURE RANGE: -65°F TO 165°F

OPERATING PRESSURE: 0 TO 10 PSID VACUUM

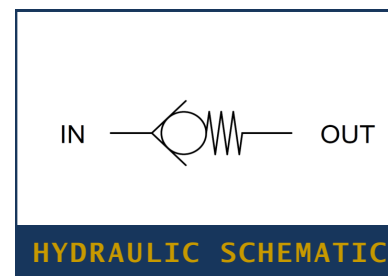
PROOF PRESSURE: 15 PSID VACUUM

CRACKING PRESSURE: 8" H₂O MAX

FLOW: 300 SCFM AT 7 PSID MAX

INTERNAL LEAKAGE (CHECKED DIRECTION):

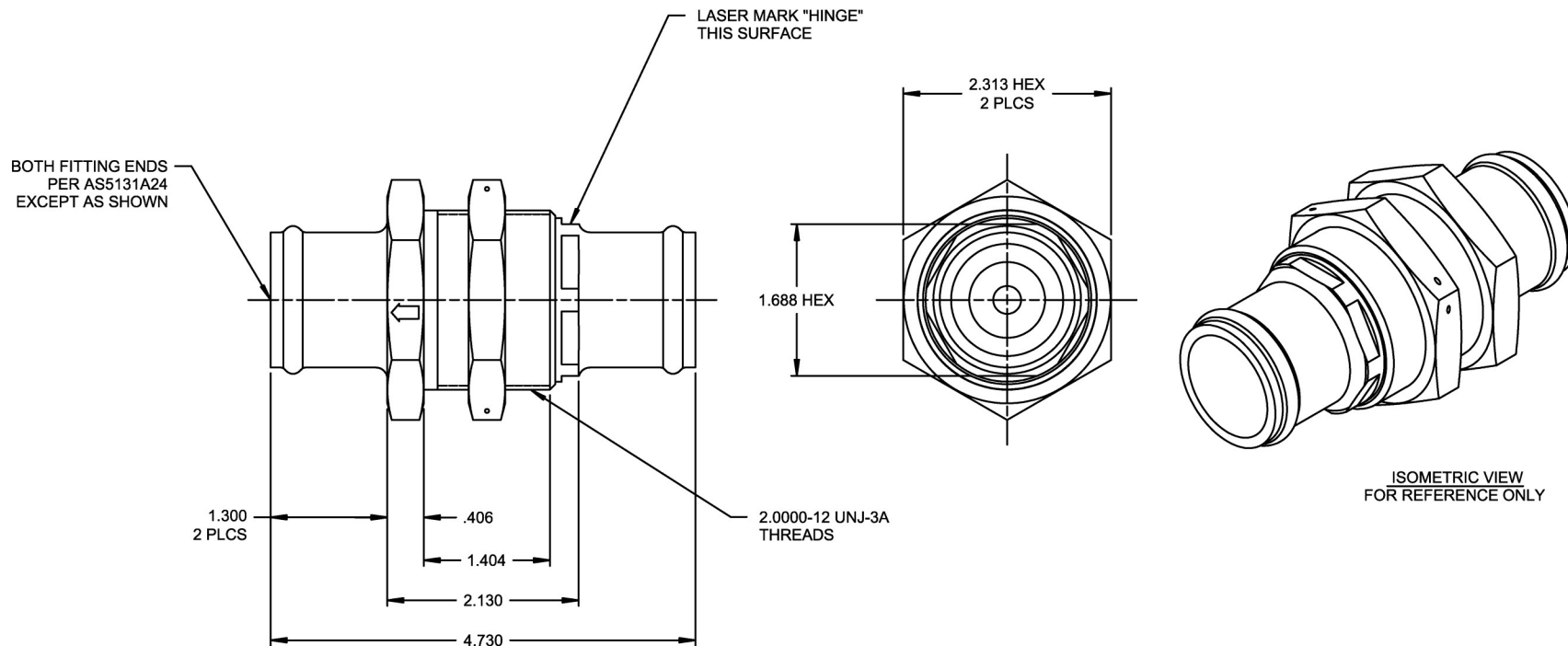
30 CC/MIN MAX FROM 0 TO 10 PSID



CATEGORY 1: SWING CHECK VALVES



PART NUMBER: 2S7174, SWING CHECK VALVE



PERFORMANCE SPECIFICATIONS:

FLUIDS: BLEED AIR

MATERIAL: BODY 2024-T351 AL

ELASTOMER MIL-R-83248

TEMPERATURE RANGE: -40°F TO 350°F

OPERATING PRESSURE: 15 PSIG

PROOF PRESSURE: 30 PSIG

CRACKING PRESSURE: 8" H₂O MAX

FLOW: 6.0 LB/MIN AT 0.2 PSID

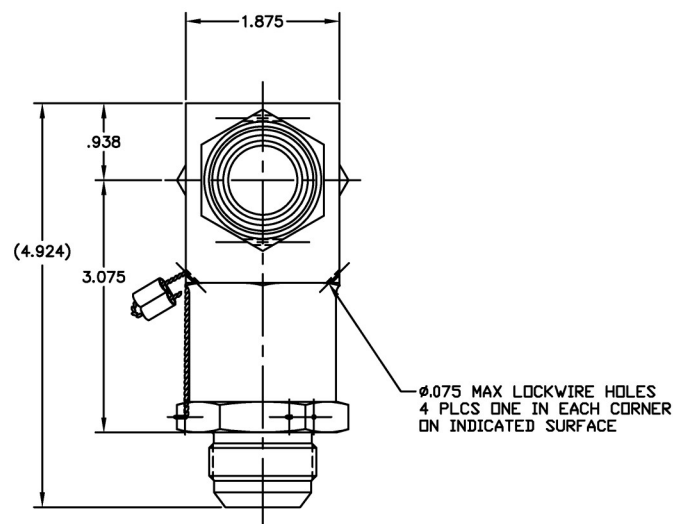
INTERNAL LEAKAGE (CHECKED DIRECTION):
0.2 LB/MIN AT 9 PSID

WEIGHT: .73 LBS MAX



HYDRAULIC SCHEMATIC

CATEGORY 1: SWING CHECK VALVES



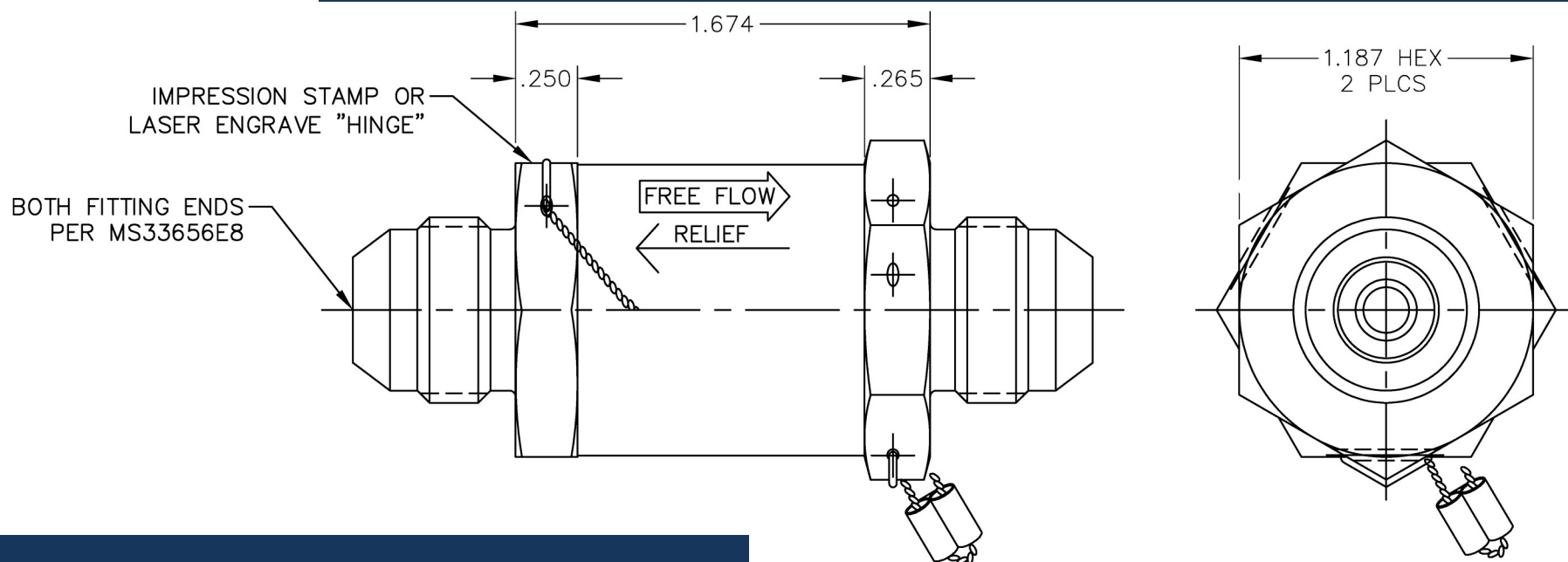
FLUIDS: ALL AIRCRAFT FUELS AND AIR
MATERIAL: BODY 2024-T351 AL
ELASTOMER FLUOROCARBON
TEMPERATURE RANGE: -65°F TO 270°F
OPERATING PRESSURE: 80 PSIG
PROOF PRESSURE: 400 PSIG
CRACKING PRESSURE: 0.3 PSID MAX
FLOW: 28 GPM AT 2.0 PSID MAX
INTERNAL LEAKAGE: 10 DPM MAX AT 1 PSID
1 DPM MAX FROM 10 TO 120 PSID
WEIGHT: 1.31 LBS MAX



CATEGORY 1: SWING CHECK VALVES



PART NUMBER: 2S6952, SWING CHECK VALVE WITH THERMAL RELIEF



PERFORMANCE SPECIFICATIONS:

FLUIDS: ALL AIRCRAFT FUELS AND AIR

MATERIAL: BODY 2024-T351 AL

ELASTOMER FLUOROCARBON

TEMPERATURE RANGE: -65°F TO 165°F (AMBIENT)
-65°F TO 135°F (FUEL)

OPERATING PRESSURE: 60 PSIG

PROOF PRESSURE: 120 PSIG

CRACKING PRESSURE: 8" H₂O MAX (CHECK VALVE)

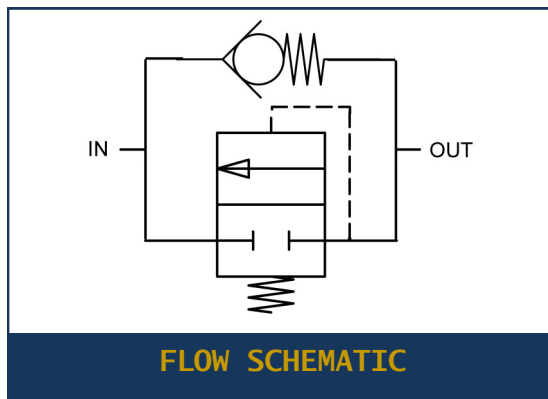
FLOW: 3.25 GPM AT 1.5 PSID MAX (FREE FLOW)
10 CC/MIN AT 65 PSID MAX (THERMAL RELIEF)

RELIEF: 47 TO 55 PSID

RESEAT: 35 PSID MIN

INTERNAL LEAKAGE (CHECKED DIRECTION):
.50 CC/MIN (FUEL) MAX ABOVE 4" H₂O (CHECK VALVE)
2 DPM MAX AT ZERO TO 45 PSIG IN CHECK DIRECTION
(THERMAL RELIEF)

WEIGHT: .16 LBS MAX

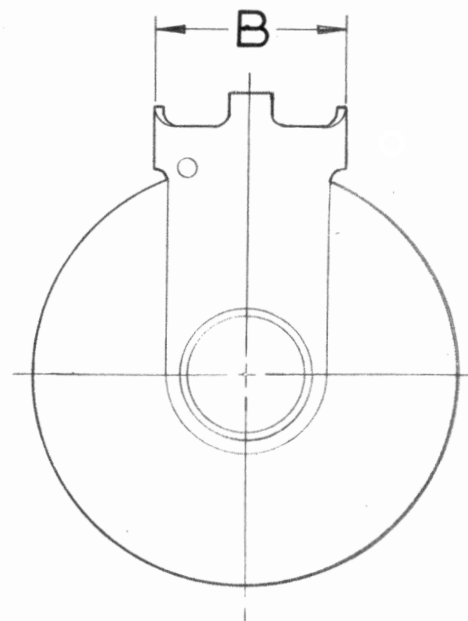
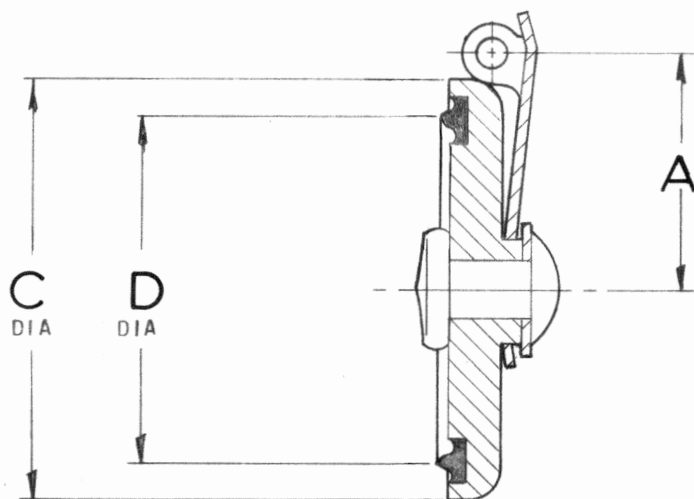


FLOW SCHEMATIC

CATEGORY 1: SWING CHECK VALVES



PART NUMBER: 2S4800L, SWING CHECK VALVE



PERFORMANCE SPECIFICATIONS:

FLUIDS: AIRCRAFT FUELS AND AIR

MATERIAL: DISC 2024-T351 AL

ARM 302 CRES

ELASTOMER MIL-R-25897

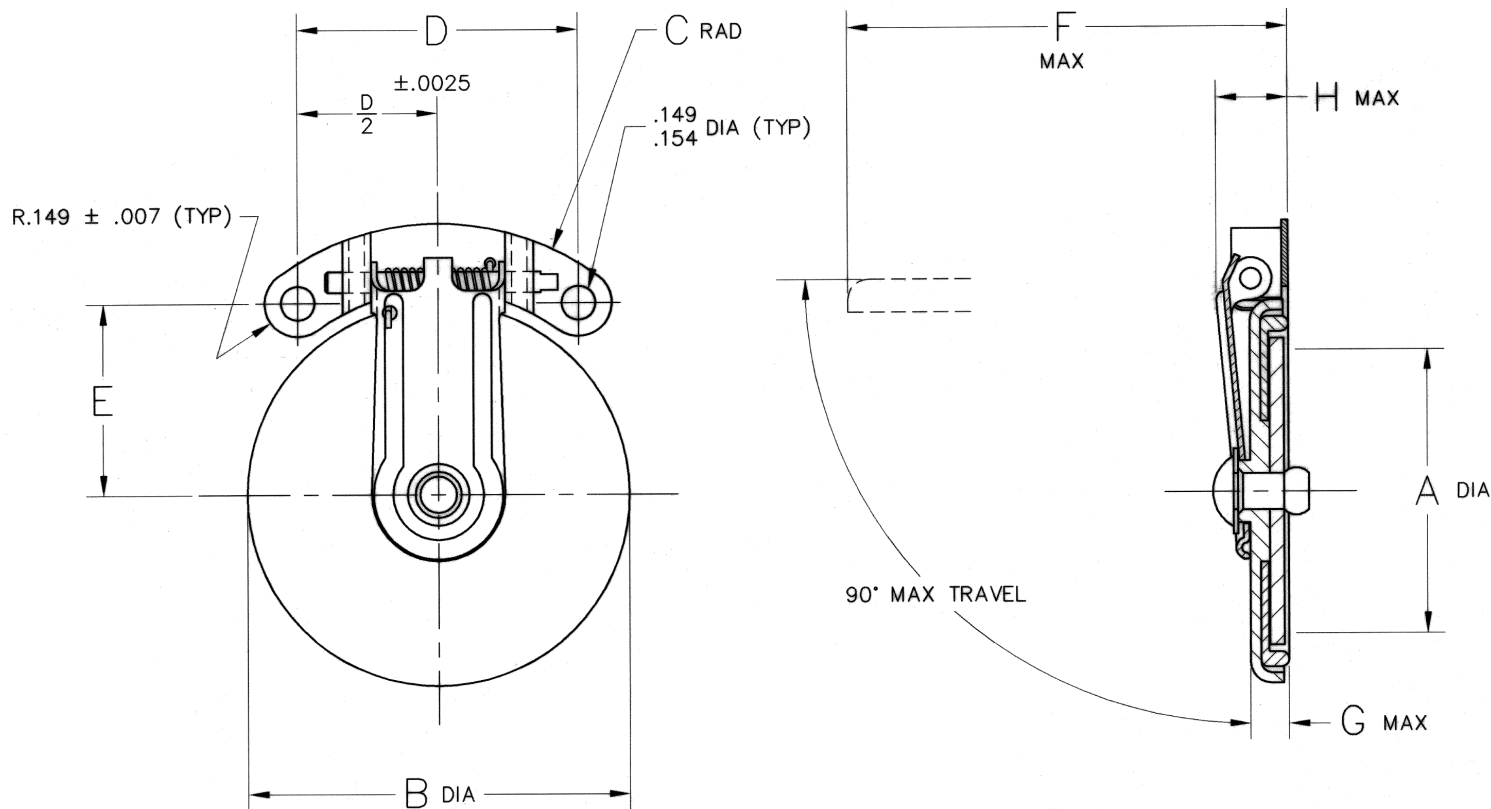
TEMPERATURE RANGE: -65°F TO 160°F

PART NO	SIZE NO.	TUBE OD	$\pm.005$ A	$\begin{smallmatrix} +.000 \\ -.005 \end{smallmatrix}$ B	$\pm.005$ C	REF D
2S4804L	4	1/4	.332	.253	.562	.428
2S4804L	5	5/16	.332	.253	.562	.428
2S4804L	6	3/8	.332	.253	.562	.428
2S4808L	8	1/2	.375	.253	.660	.548
2S4808L	10	5/8	.375	.253	.660	.548
2S4812L	12	3/4	.500	.310	.880	.720
2S4816L	16	1	.625	.440	1.131	.960
2S4820L	20	1 1/4	.800	.557	1.406	-
2S4824L	24	1 1/2	.937	.591	1.688	-
2S4828L	28	1 3/4	1.093	.591	1.980	-
2S4832L	32	2	1.188	.623	2.200	-

CATEGORY 1: SWING CHECK VALVES



PART NUMBER: 2S5100, SWING CHECK VALVE, BRACKET-MOUNTED



PERFORMANCE SPECIFICATIONS:

FLUIDS: AIRCRAFT FUELS AND AIR

MATERIAL: ELASTOMER MIL-P-5315

TEMPERATURE RANGE: -65°F TO 160°F

CRACKING PRESSURE: 4" H₂O MAX

FLOW: SEE TABLE AT 20 INCHES H₂O MAX ΔP

INTERNAL LEAKAGE: .5 CC/MIN (FUEL) OR 10 CC/MIN (AIR) MAX

ABOVE 4" H₂O THROUGH SIZE 32

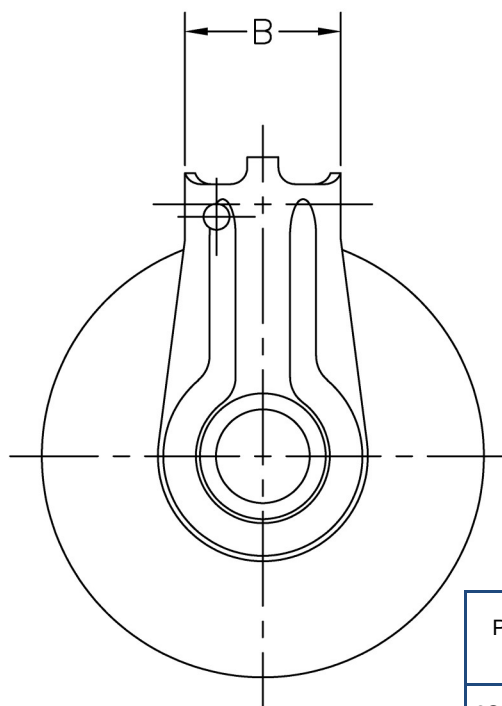
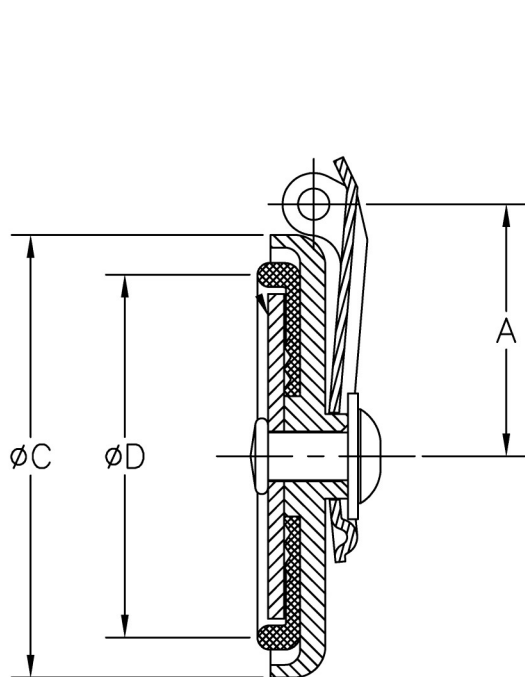
OTHER SIZES 1.0 CC/MIN & 20 CC/MIN RESPECTIVELY

PART NO	±.005 A	±.005 B	±.010 C	±.005 D	±.005 E	MAX F	MAX G	MAX H	FLOW (GPM)	PRESSURES (PSIG)		
										OPER	PROOF	BURST
2S5112	.561	.880	.757	.860	.440	1.076	.152	.282	15	300	500	1000
2S5116	.792	1.131	.903	1.110	.525	1.337	.165	.335	30			
2S5120	1.024	1.406	1.085	1.248	.710	1.687	.180	.373	50			
2S5124	1.248	1.688	1.188	1.240	.845	1.965	.187	.362	70	265	400	800
2S5128	1.483	1.980	1.338	1.240	1.025	2.269	.210	.395	100			
2S5132	1.781	2.200	1.438	1.382	1.100	2.480	.221	.470	130			
2S5140	2.280	2.800	1.795	1.406	1.500	3.150	.280	.550	215	60	120	180
2S5148	2.780	3.300	2.030	1.656	1.703	3.750	.300	.620	320			

CATEGORY 1: SWING CHECK VALVES



PART NUMBER: 2S6314, SWING CHECK VALVE



PART NO	SIZE NO.	TUBE OD	A	B	øC	øD
2S6314-4	4	1/4	.337 .327	.253 .248	.567 .557	.418
2S6314-4	5	5/16	.337 .327	.253 .248	.567 .557	.418
2S6314-4	6	3/8	.337 .327	.253 .248	.567 .557	.418
2S6314-8	8	1/2	.380 .370	.253 .248	.665 .655	.523
2S6314-8	10	5/8	.380 .370	.253 .248	.665 .655	.523
2S6314-12	12	3/4	.505 .495	.310 .305	.885 .875	.721
2S6314-16	16	1	.630 .620	.440 .435	1.136 1.126	.957
2S6314-20	20	1 1/4	.805 .795	.557 .552	1.411 1.401	1.206
2S6314-24	24	1 1/2	.942 .932	.591 .586	1.693 1.683	1.455
2S6314-28	28	1 3/4	1.098 1.088	.591 .586	1.985 1.975	1.706
2S6314-32	32	2	1.193 1.183	.623 .618	2.205 2.195	1.929

PERFORMANCE SPECIFICATIONS:

FLUIDS: AIRCRAFT FUELS AND AIR

MATERIAL: RETAINER 380 AL

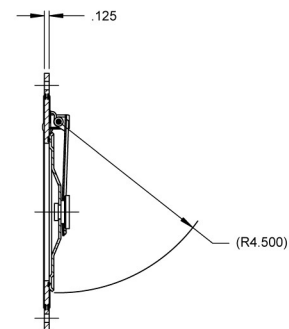
WASHER 2024-T3 AL

ARM 302 CRES

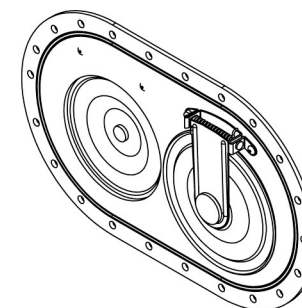
ELASTOMER MIL-R-83248

TEMPERATURE RANGE: -65°F TO 350°F

CATEGORY 1: SWING CHECK VALVES



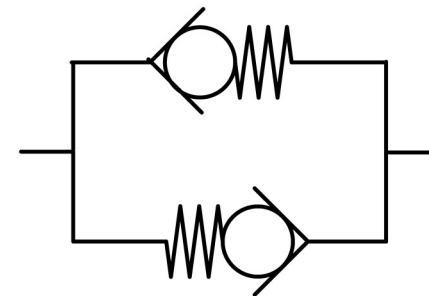
SECTION A-A



ISOMETRIC VIEW
FOR REFERENCE ONLY

PERFORMANCE SPECIFICATIONS:

WEIGHT: .95 LBS MAX

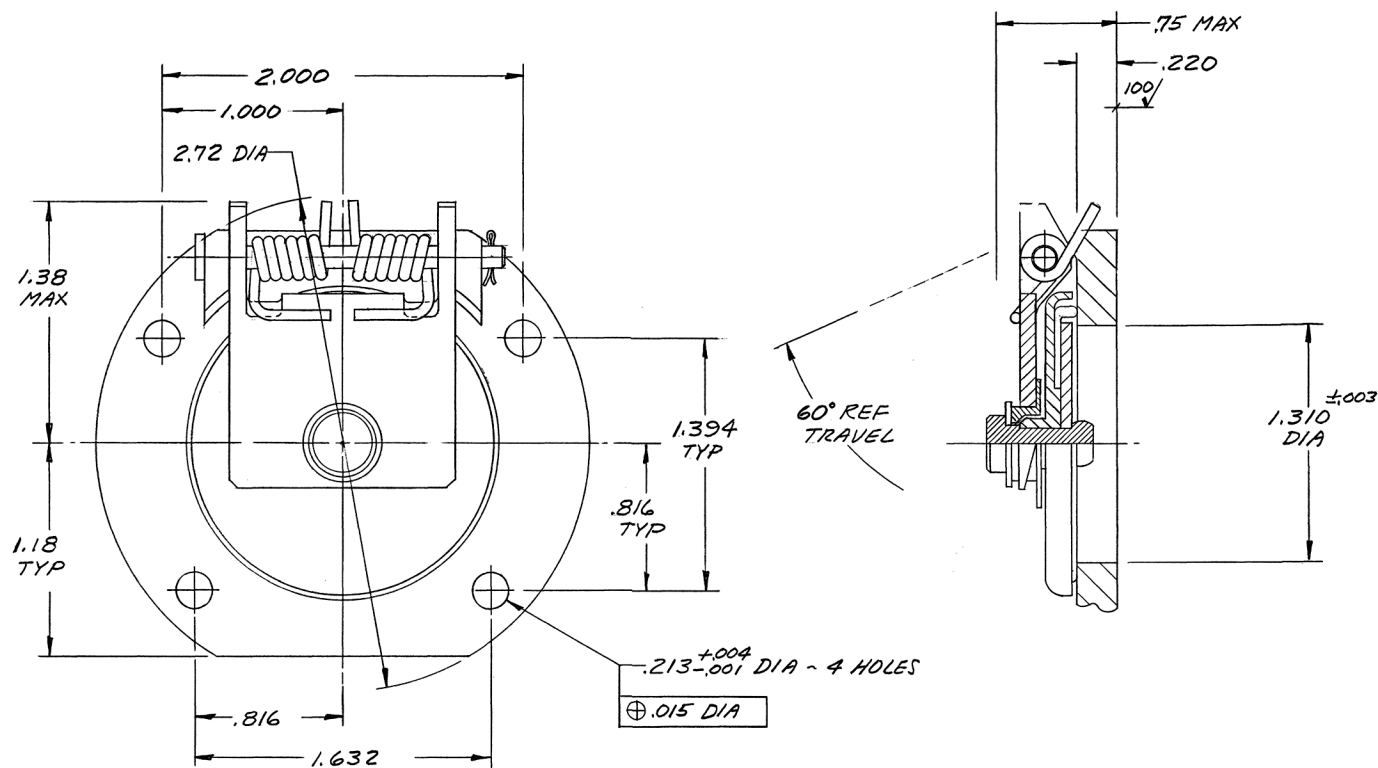


FLOW SCHEMATIC

CATEGORY 1: SWING CHECK VALVES



PART NUMBER: 2S2570, SWING CHECK VALVE



PERFORMANCE SPECIFICATIONS:

FLUIDS: AIR

MATERIAL: BODY 6061-T6 AL

ELASTOMER MIL-P-5315

TEMPERATURE RANGE: -65°F TO 160°F

OPERATING PRESSURE: 10 PSIG

PROOF PRESSURE: 20 PSIG

CRACKING PRESSURE: 1.5 PSID

FLOW: 26 SCFM AT 0.5 PSID ABOVE CRACK

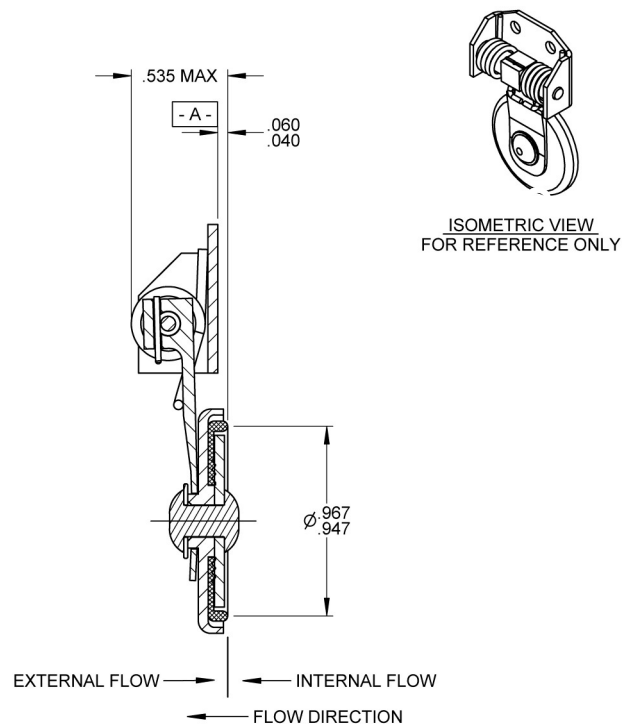
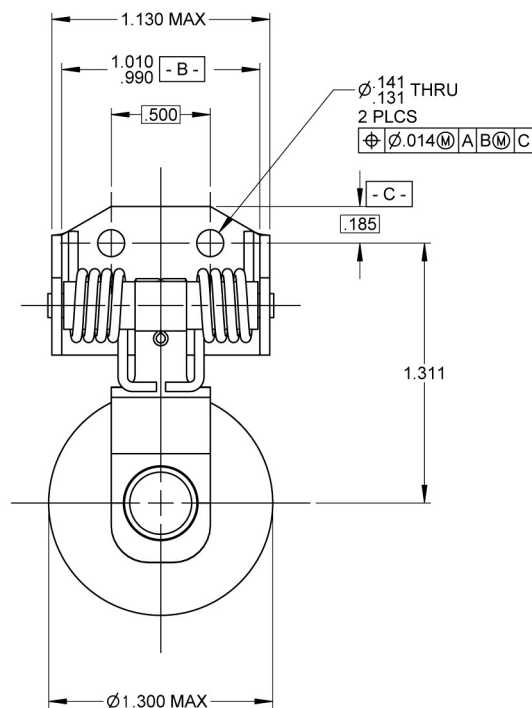
INTERNAL LEAKAGE (CHECKED DIRECTION):

.05 SCFM AT 10 PSID OR BELOW

CATEGORY 1: SWING CHECK VALVES



PART NUMBER: 2S7140, SWING CHECK VALVE



PERFORMANCE SPECIFICATIONS:

FLUIDS: AIR. JP-10 PER 3123AS1088, SEAWATER

MATERIAL: BRACKET 6061-T6 AL

RETAINER 2024-T851 AL

ARM 304 CRES

ELASTOMER FLUOROSILICONE

TEMPERATURE RANGE: -50°F TO 160°F

OPERATING PRESSURE: 60 PSIG

PROOF PRESSURE: 60 PSIG

CRACKING PRESSURE: 2 TO 3.5 PSID

FLOW: 130 SCFM USING AIR AT 7 PSID

INTERNAL LEAKAGE (CHECKED DIRECTION):

10 CC/MIN MAX PRIOR TO CRACK

WEIGHT: .05 LBS MAX

CATEGORY 1: SWING CHECK VALVES



CRISSAIR HAS HUNDREDS OF OTHER CHECK VALVES NOT LISTED IN THE CATALOG WITH DIFFERENT MATERIALS, FITTINGS, AND SIZE CONFIGURATIONS.

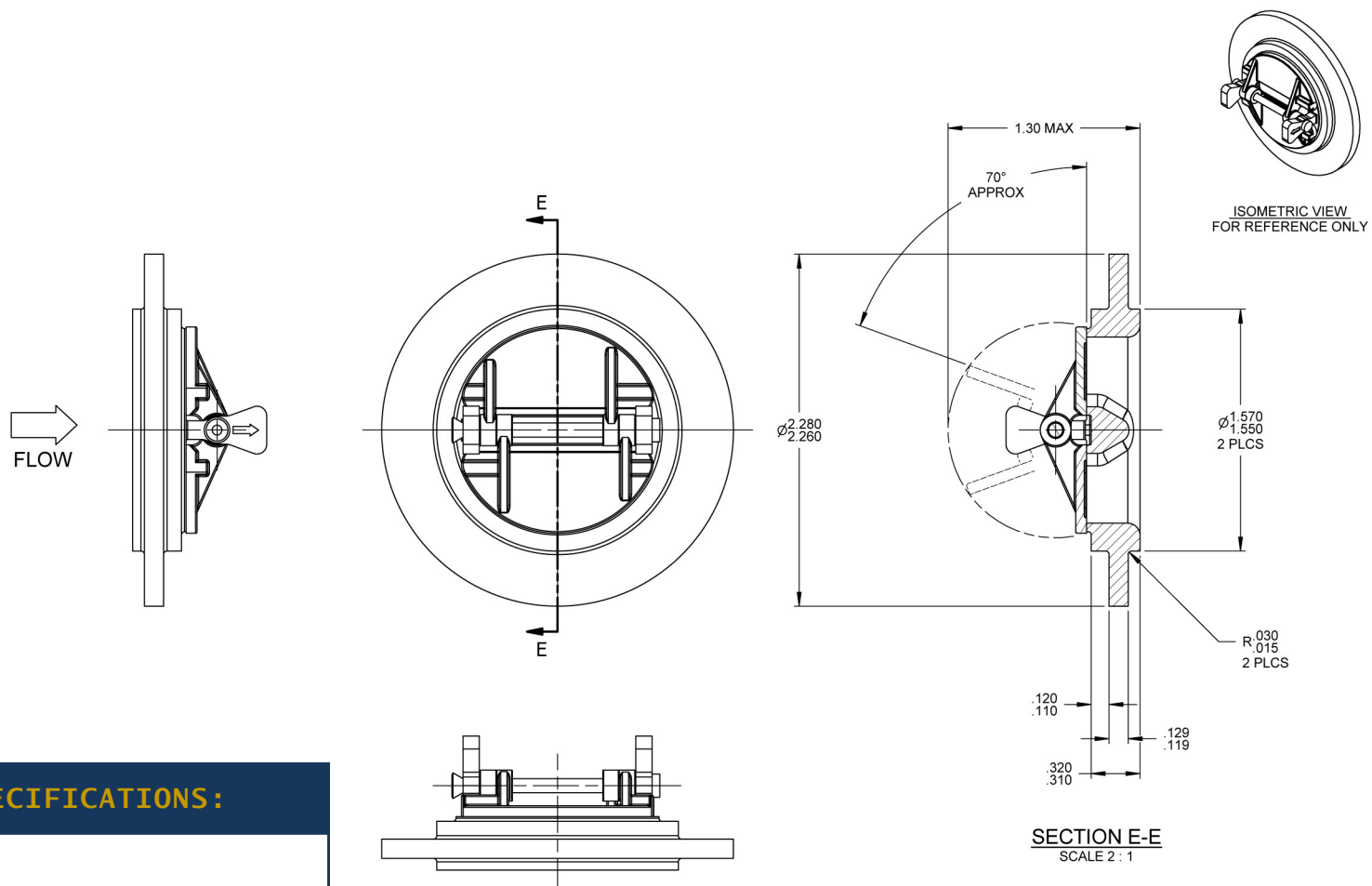
CONTACT CRISSAIR FOR ADDITIONAL INFORMATION/DRAWINGS AT

(661) 367-3300 OR SALES@CRISSAIR.COM.

YOU CAN ALSO VISIT WWW.CRISSAIR.COM.



PART NUMBER: 2S7364, CHECK VALVE



PERFORMANCE SPECIFICATIONS:

FLUIDS: BLEED AIR

MATERIAL: BODY 2024-T351 AL

FLAPPER A356-T6 AL

TEMPERATURE RANGE: -65°F TO 171°F (FLUID)

-67°F TO 185°F (AMBIENT)

OPERATING PRESSURE: 10 PSIG

PROOF PRESSURE: 15.6 PSIG AT 85°F

FLOW: 4 LB/MIN AT 0.35 PSID MAX AT 10 PSIG INLET AND 171°F

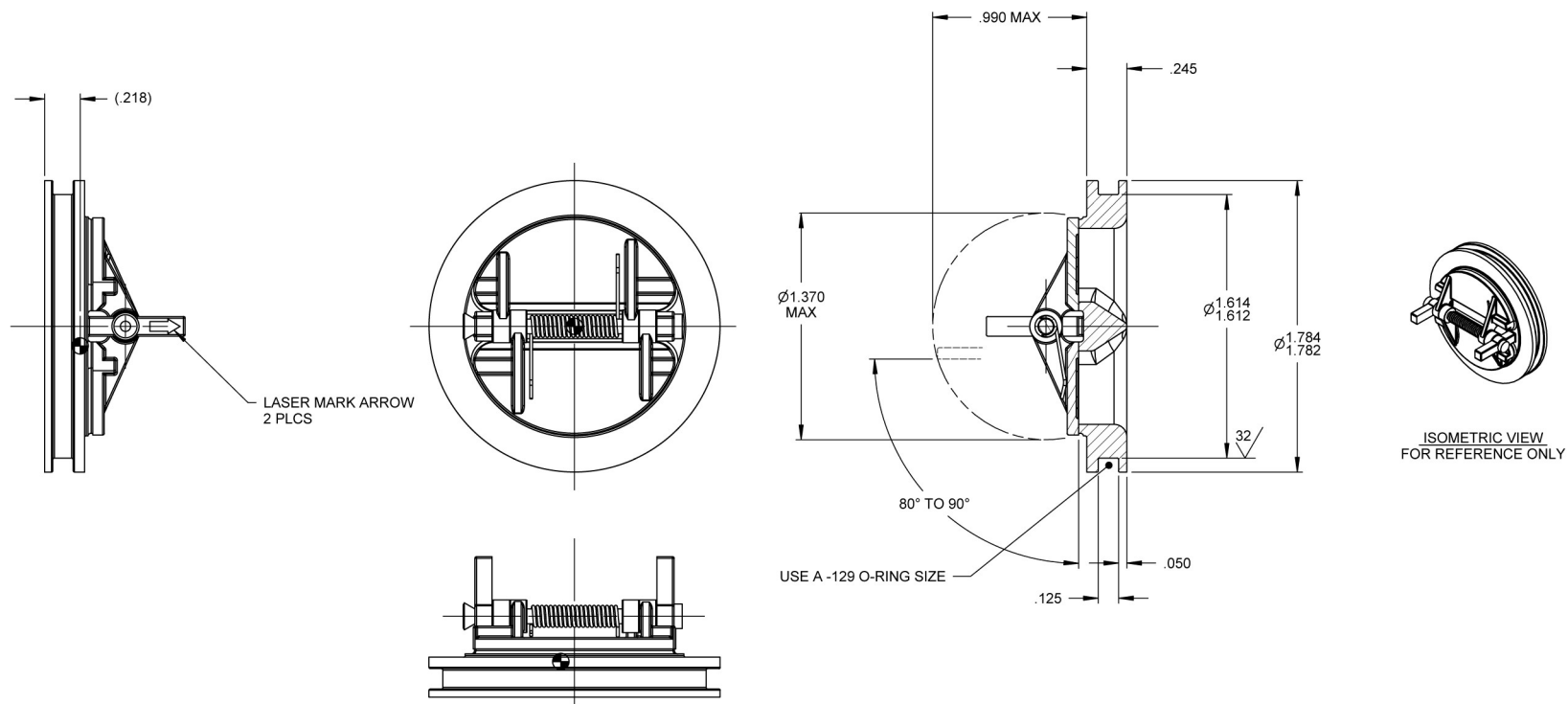
INTERNAL LEAKAGE: 0.10 LB/MIN MAX FROM 0 TO 10 PSIG AT 80°F

WEIGHT: 0.07 LBS MAX

CATEGORY 1: SPLIT FLAPPER CHECK VALVES



PART NUMBER: 2S7396, CHECK VALVE



PERFORMANCE SPECIFICATIONS:

FLUIDS: AIR

MATERIAL: BODY A356-T6 AL

FLAPPER A356-T6 AL

TEMPERATURE RANGE: -40°F TO 212°F

OPERATING PRESSURE: 8.7 PSIG

PROOF PRESSURE: 30.6 PSIG

CRACKING PRESSURE: 0.06 PSIG MAX

FLOW: 1.32 TO 3.97 LB/MIN AT 0.2 PSID MAX AT 8.7 PSIG INLET

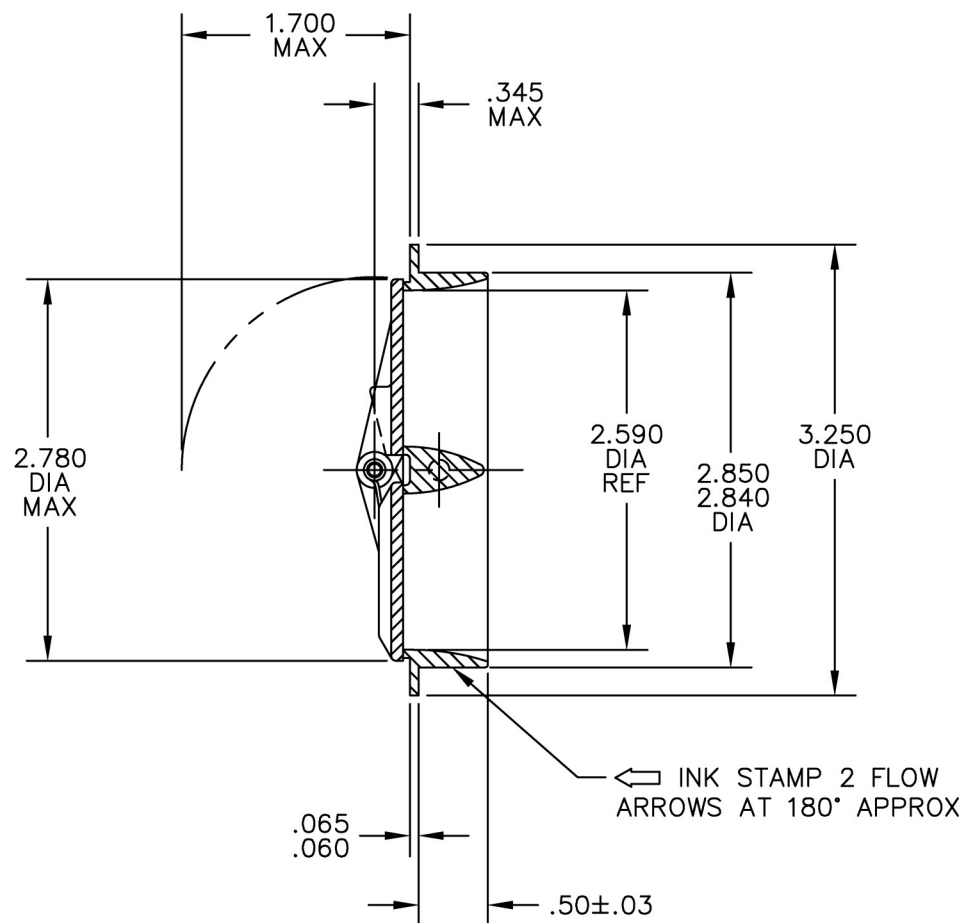
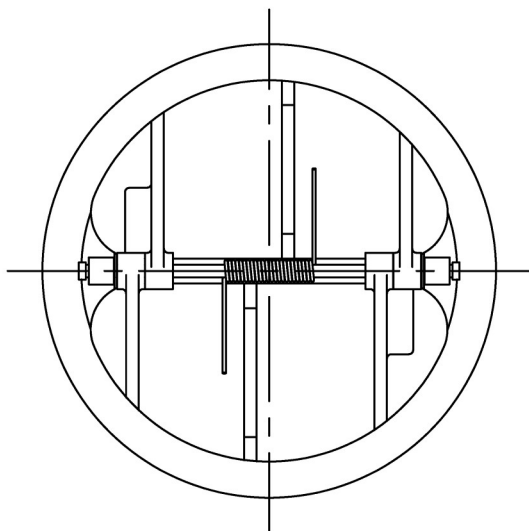
INTERNAL LEAKAGE: 0.2 LB/MIN MAX FROM 0 TO 8.7 PSIG

WEIGHT: 0.14 LBS MAX

CATEGORY 1: SPLIT FLAPPER CHECK VALVES



PART NUMBER: 2S2888, CHECK VALVE



PERFORMANCE SPECIFICATIONS:

FLUIDS: AIR

MATERIAL: BODY A356-T6 AL

FLAPPER A356-T6 AL

TEMPERATURE RANGE: -65°F TO 160°F

OPERATING PRESSURE: 13 PSIG

PROOF PRESSURE: 37 PSIG

CRACKING PRESSURE: 2" H₂O MAX

FLOW: 15.5 LB/MIN AT 13 PSID MAX AND 0 PSIG OUTLET

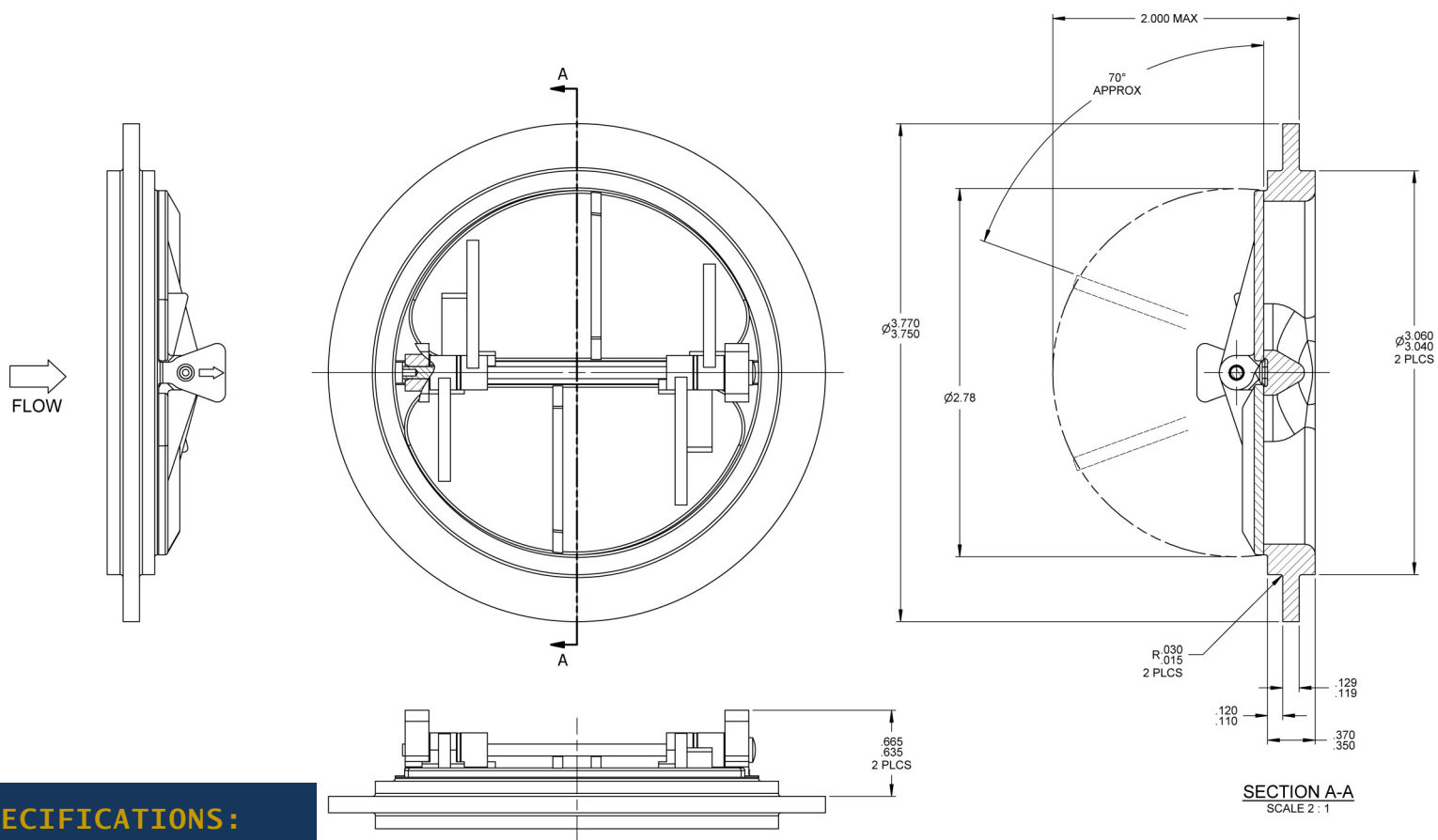
INTERNAL LEAKAGE: .05 LB/MIN MAX AT 27 PSIG

WEIGHT: 0.17 LBS MAX

CATEGORY 1: SPLIT FLAPPER CHECK VALVES



PART NUMBER: 2S7368-1, CHECK VALVE



PERFORMANCE SPECIFICATIONS:

FLUIDS: BLEED AIR

MATERIAL: BODY 2024-T351 AL

FLAPPER A356-T6 AL

TEMPERATURE RANGE: -65°F TO 300°F

OPERATING PRESSURE: 10 PSIG

PROOF PRESSURE: 20 PSIG

FLOW: 25 LB/MIN AT 0.6 PSID MAX AT 10 PSIG INLET AND 300°F

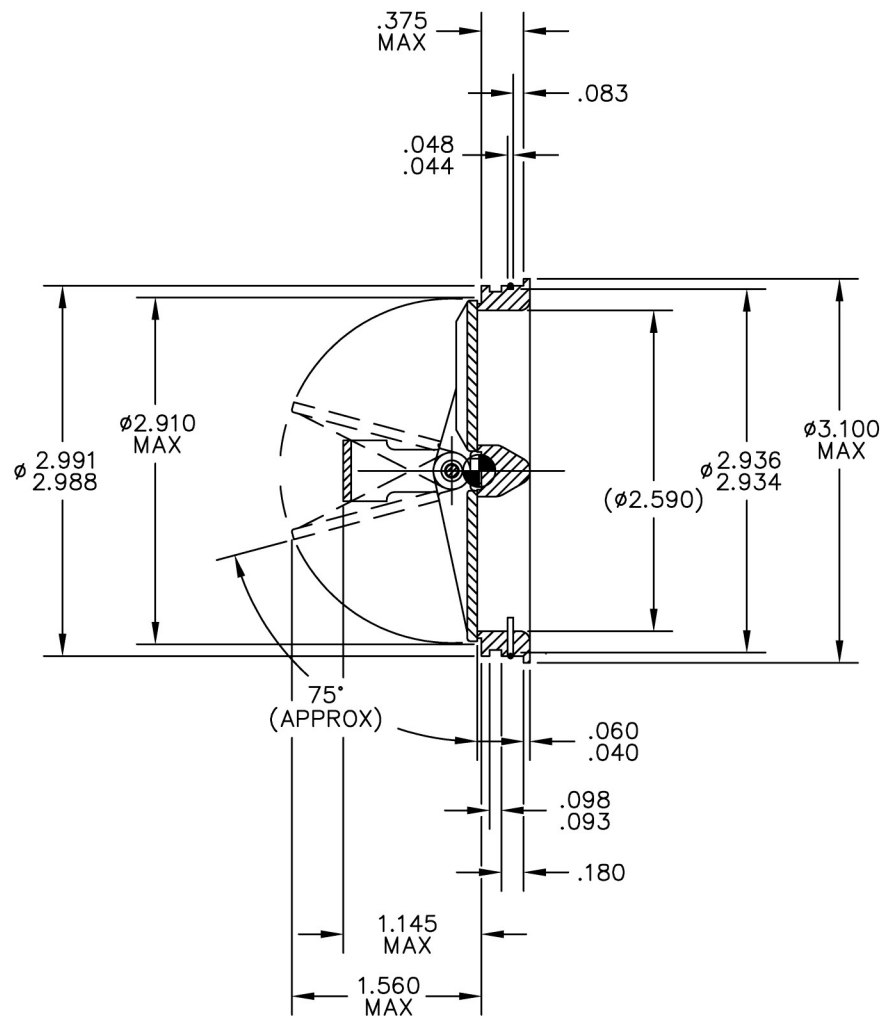
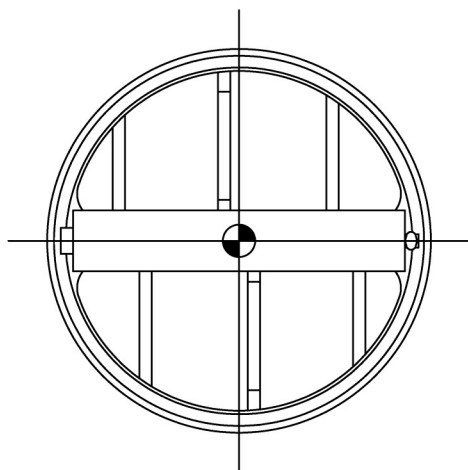
INTERNAL LEAKAGE: 0.1 LB/MIN FROM NONE TO 10 PSID

WEIGHT: 0.23 LBS MAX

CATEGORY 1: SPLIT FLAPPER CHECK VALVES



PART NUMBER: 2S6510-1, CHECK VALVE



PERFORMANCE SPECIFICATIONS:

FLUIDS: AIR

MATERIAL: BODY 2024-T351 AL

FLAPPER A356-T6 AL

TEMPERATURE RANGE: -65°F TO 250°F

OPERATING PRESSURE: 2 PSIG

PROOF PRESSURE: 4 PSIG

CRACKING PRESSURE: 10.0" H₂O MAX

FLOW: 10 LB/MIN AT 3.0" H₂O MAX PSID AT 14.7 PSIA INLET AND 70°F

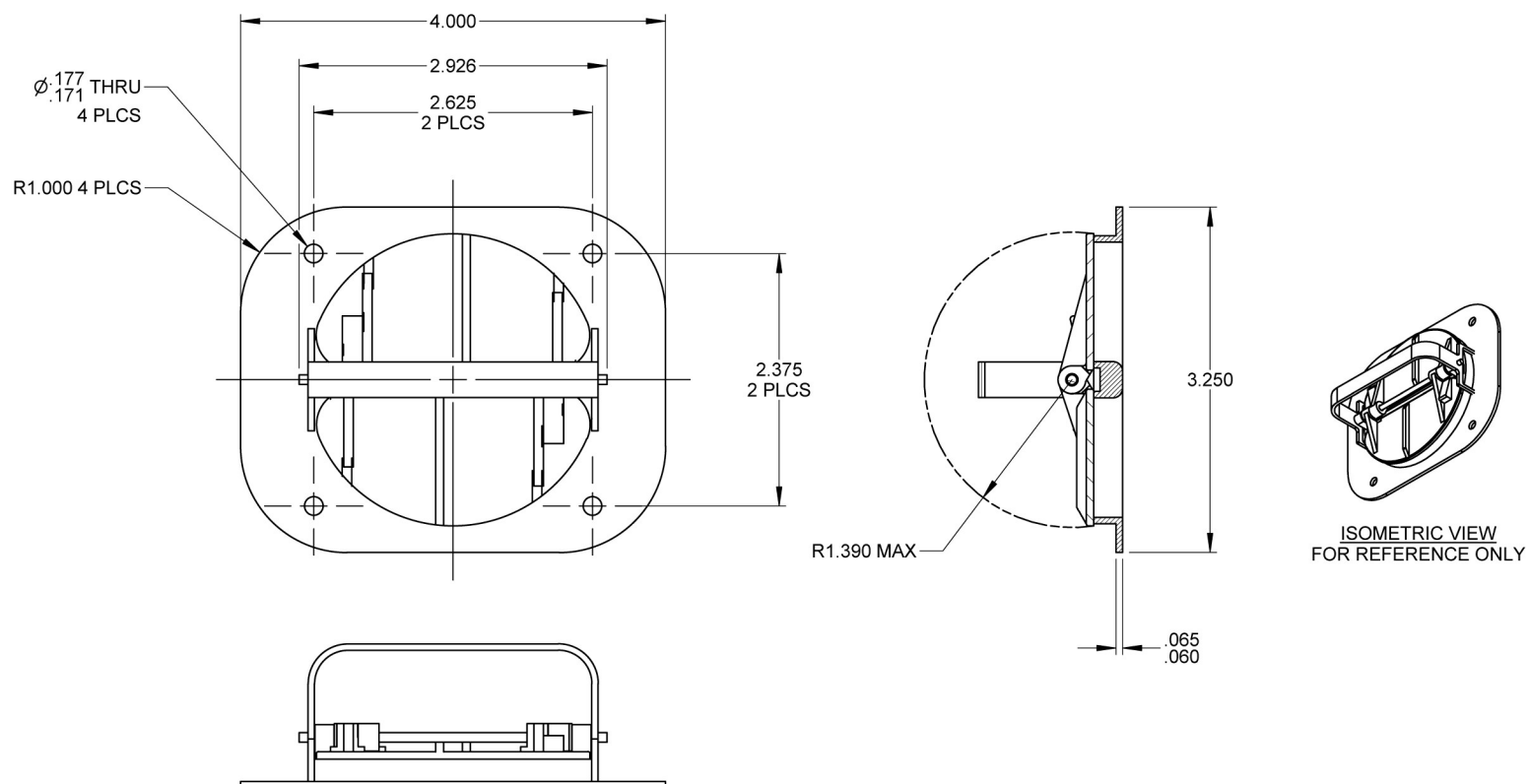
INTERNAL LEAKAGE: 15,000 CC/MIN MAX AT 2" H₂O AND 70°F

WEIGHT: 0.23 LBS MAX

CATEGORY 1: SPLIT FLAPPER CHECK VALVES



PART NUMBER: 2S7250, CHECK VALVE



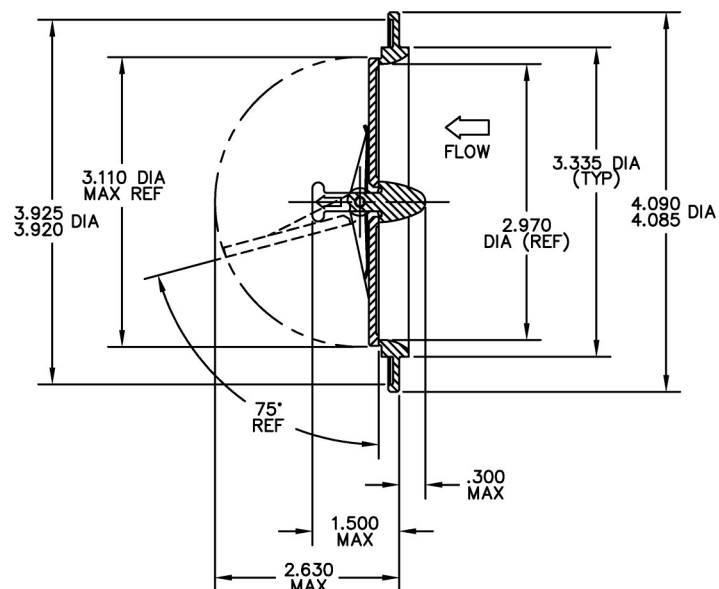
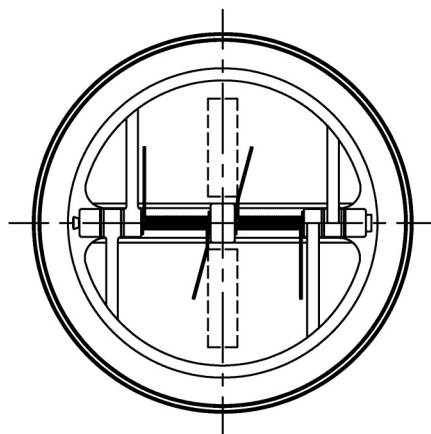
PERFORMANCE SPECIFICATIONS:

FLUIDS: AIR
MATERIAL: BODY A356-T6 AL
FLAPPER A356-T6 AL
TEMPERATURE RANGE: 5°F TO 158°F
OPERATING PRESSURE: 0.290 PSIG
PROOF PRESSURE: 0.435 PSIG
CRACKING PRESSURE: 0.007 PSIG MAX
FLOW: 105.9 CFM AT 0.007 PSIG MAX
INTERNAL LEAKAGE: 3 g/S MAX AT 0.290 PSIG
WEIGHT: 0.29 LBS MAX

CATEGORY 1: SPLIT FLAPPER CHECK VALVES



PART NUMBER: 2S6092-1, CHECK VALVE



PERFORMANCE SPECIFICATIONS:

FLUIDS: AIR

MATERIAL: BODY A356-T6 AL

FLAPPER A356-T6 AL

TEMPERATURE RANGE: -81°F TO 190°F

OPERATING PRESSURE: 12 TO 30 PSIA

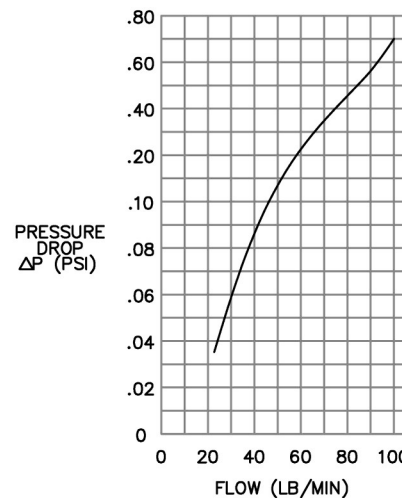
PROOF PRESSURE: 16.5 PSIG

CRACKING PRESSURE: 2" H₂O MAX

FLOW: SEE CHART

INTERNAL LEAKAGE: 0.064 LB/MIN AT 9 PSIG

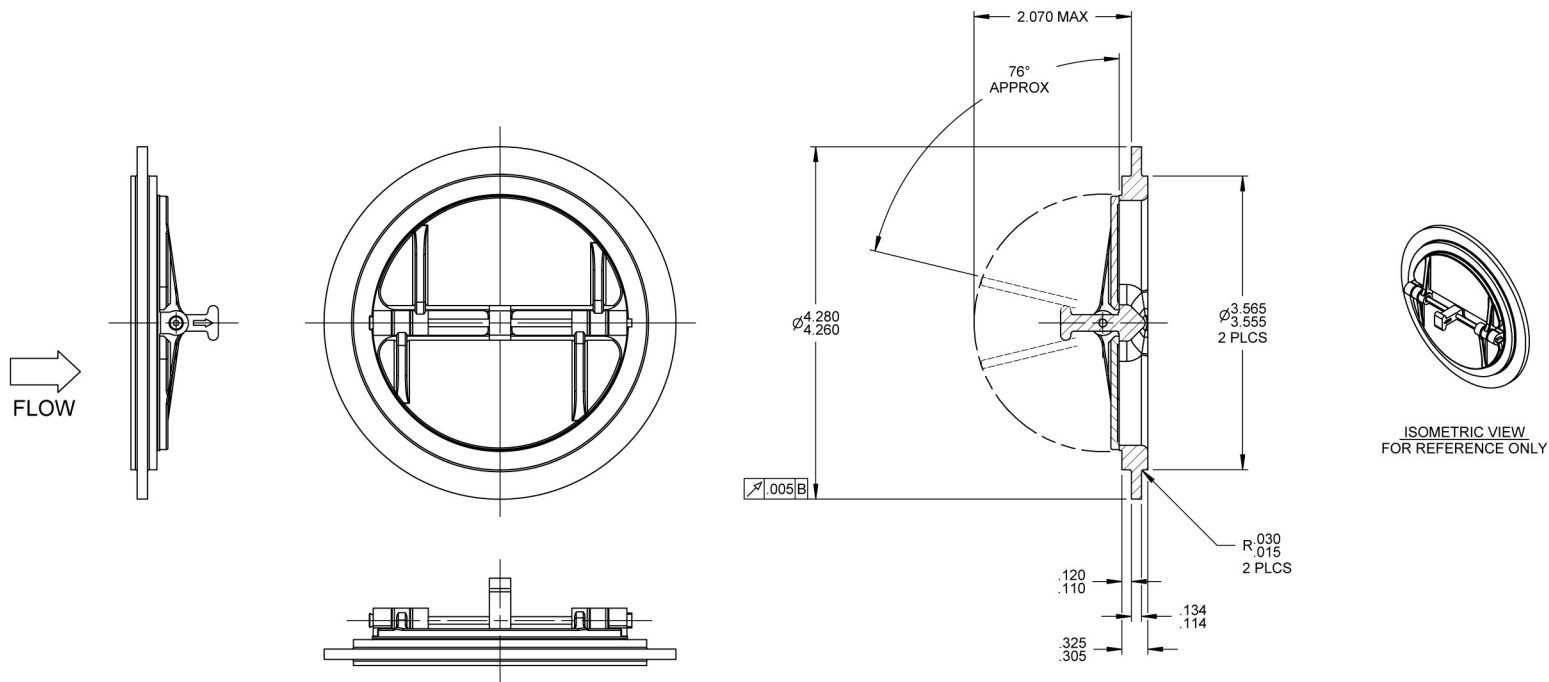
WEIGHT: 0.58 LBS MAX



CATEGORY 1: SPLIT FLAPPER CHECK VALVES



PART NUMBER: 2S7366, CHECK VALVE



PERFORMANCE SPECIFICATIONS:

FLUIDS: BLEED AIR

MATERIAL: BODY 2024-T351 AL

FLAPPER A356-T6 AL

TEMPERATURE RANGE: -65°F TO 165°F

OPERATING PRESSURE: 10 PSIG

PROOF PRESSURE: 15.6 PSIG

FLOW: 30 LB/MIN AT 0.3 PSID MAX AT 10 PSIG INLET AND 85°F

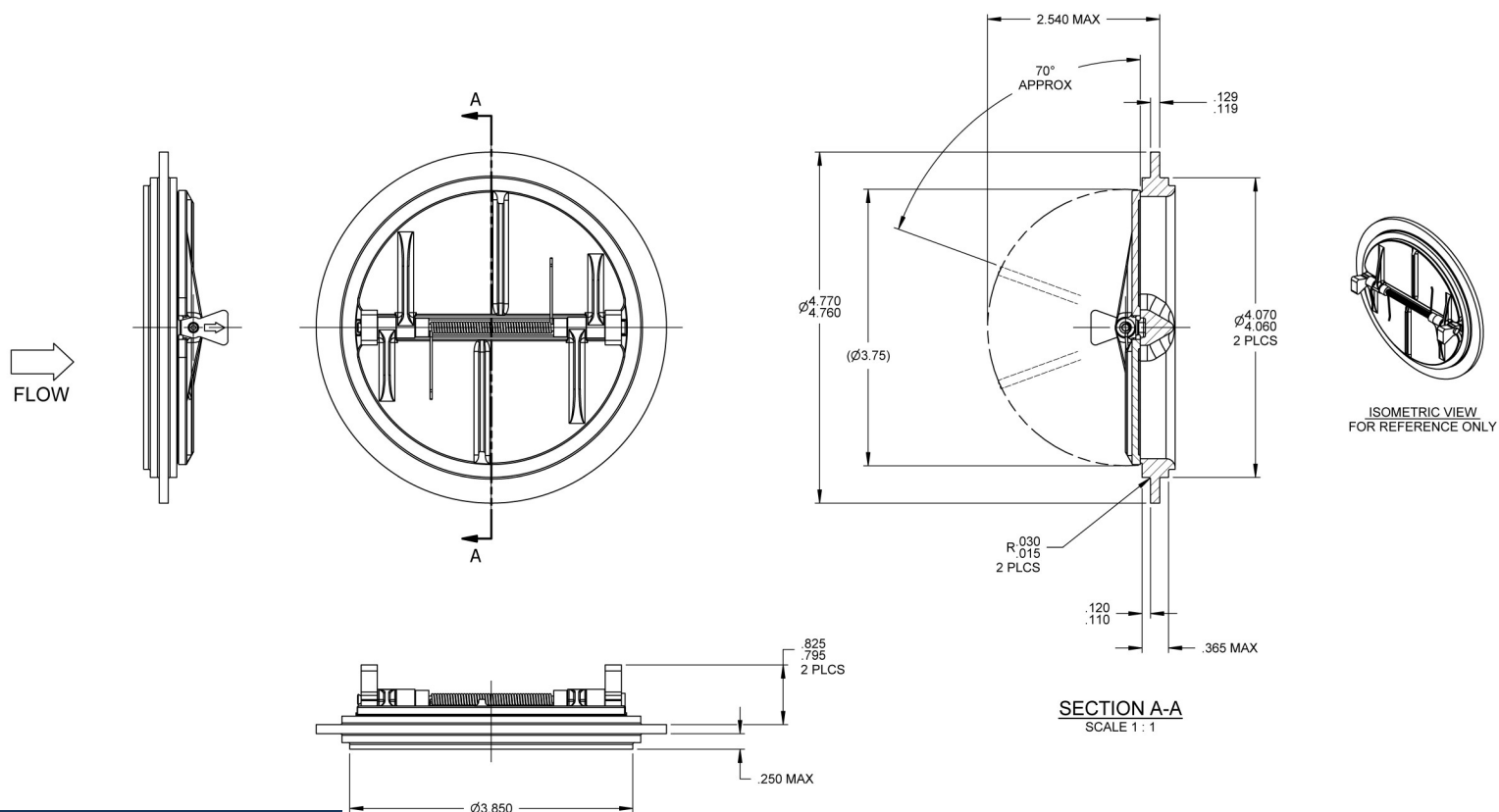
INTERNAL LEAKAGE: 0.1 LB/MIN FROM 0 TO 10 PSIG AT 80°F

WEIGHT: 0.28 LBS MAX

CATEGORY 1: SPLIT FLAPPER CHECK VALVES



PART NUMBER: 2S7360-1, CHECK VALVE



PERFORMANCE SPECIFICATIONS:

FLUIDS: BLEED AIR

MATERIAL: BODY 2024-T351 AL

FLAPPER 2024-T351 AL

TEMPERATURE RANGE: -65°F TO 165°F

OPERATING PRESSURE: 10 PSIG

PROOF PRESSURE: 20 PSIG

CRACKING PRESSURE: 4" H₂O MAX

FLOW: 25 LB/MIN AT 0.15 PSID MAX AT 10 PSIG INLET AND 300°F

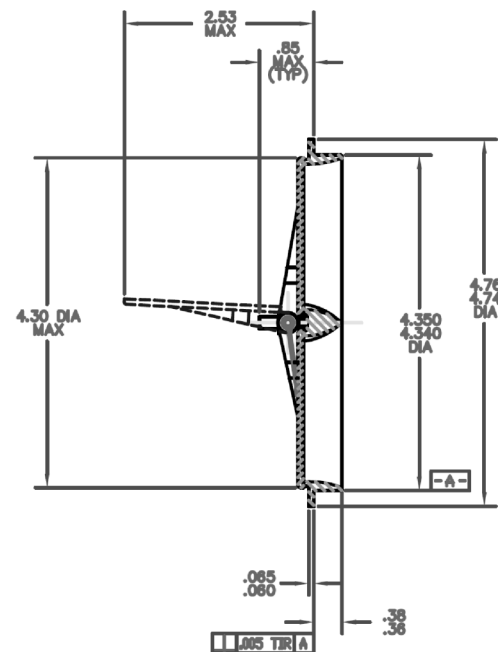
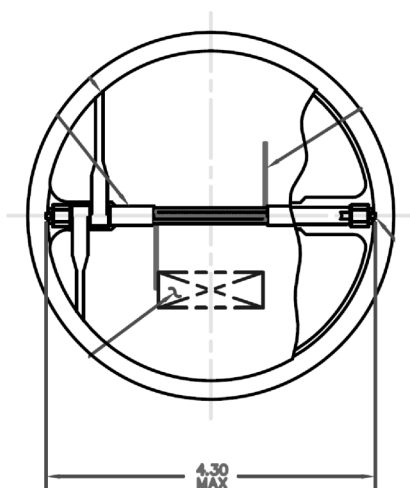
INTERNAL LEAKAGE: 0.1 LB/MIN FROM 0 TO 10 PSIG AT 80°F

WEIGHT: 0.4 LBS MAX

CATEGORY 1: SPLIT FLAPPER CHECK VALVES



PART NUMBER: 2S2208, CHECK VALVE



PERFORMANCE SPECIFICATIONS:

FLUIDS: AIR

MATERIAL: BODY 356-T6 AL

FLAPPER 17-4PH CRES

TEMPERATURE RANGE: -65°F TO 200°F

OPERATING PRESSURE: 0 TO 15 PSIG

PROOF PRESSURE: 30 PSIG

CRACKING PRESSURE: 2" H₂O MAX

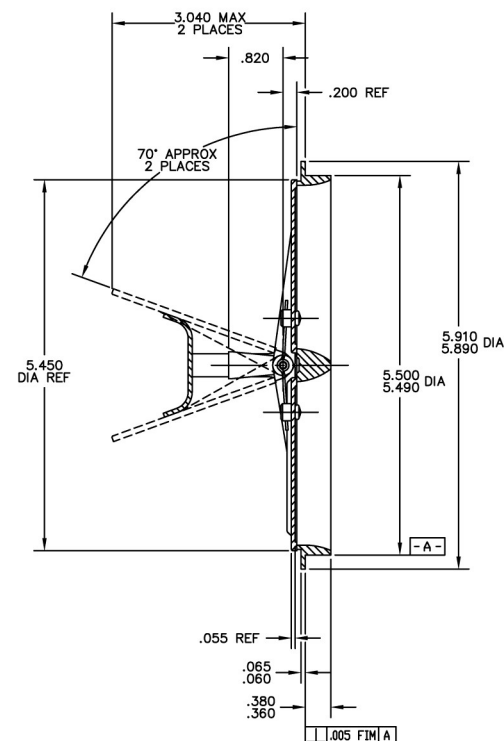
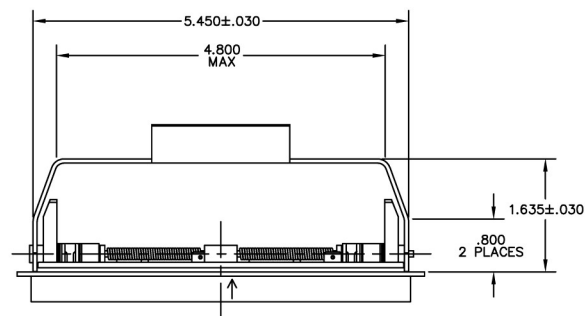
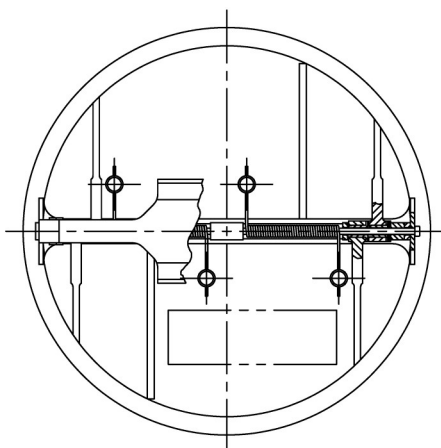
INTERNAL LEAKAGE: 0.10 LB/MIN AT 7.5 PSIG MAX

WEIGHT: 0.45 LBS MAX

CATEGORY 1: SPLIT FLAPPER CHECK VALVES



PART NUMBER: 2S6258-2, CHECK VALVE



PERFORMANCE SPECIFICATIONS:

FLUIDS: AIR

MATERIAL: BODY A356-T6 AL

FLAPPER A356-T6 AL

TEMPERATURE RANGE: -60°F TO 160°F

OPERATING PRESSURE: 0 TO 11 PSIG

PROOF PRESSURE: 15 PSIG

CRACKING PRESSURE: 0.5 PSIG MAX

FLOW: 320 LB/MIN MAX AT 15 PSIA INLET AND 0 PSIA OUTLET AT 70°F

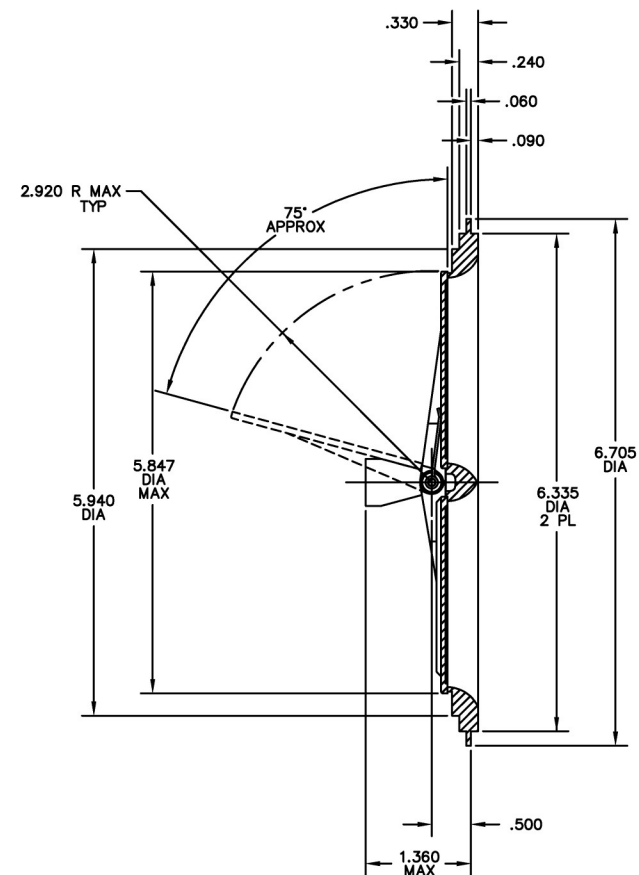
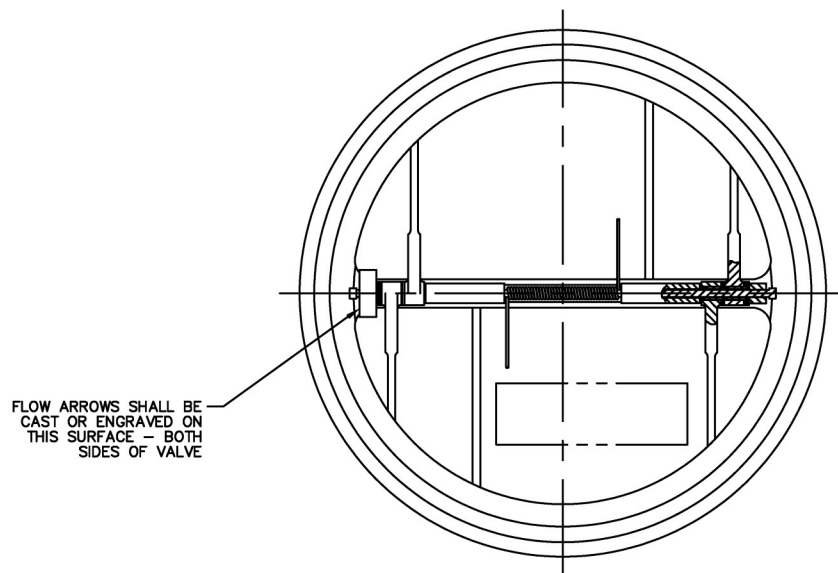
INTERNAL LEAKAGE: 0.13 LB/MIN FROM 0 TO 9.75 PSIG

WEIGHT: 0.63 LBS MAX

CATEGORY 1: SPLIT FLAPPER CHECK VALVES



PART NUMBER: 2S6334, CHECK VALVE



PERFORMANCE SPECIFICATIONS:

FLUIDS: AIR

MATERIAL: BODY A356-T6 AL

FLAPPER A356-T6 AL

TEMPERATURE RANGE: -65°F TO 165°F

OPERATING PRESSURE: 9.32 PSIG

PROOF PRESSURE: 13.98 PSIG

CRACKING PRESSURE: 0.5" H₂O MAX

FLOW: 90 LB/MIN MINIMUM AT 1.7" H₂O ΔP AT 15.77 PSIA INLET AND 77°F

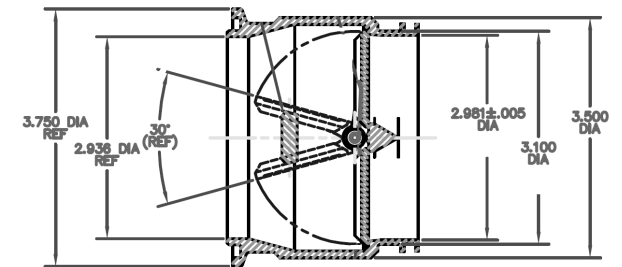
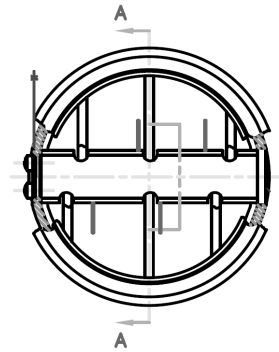
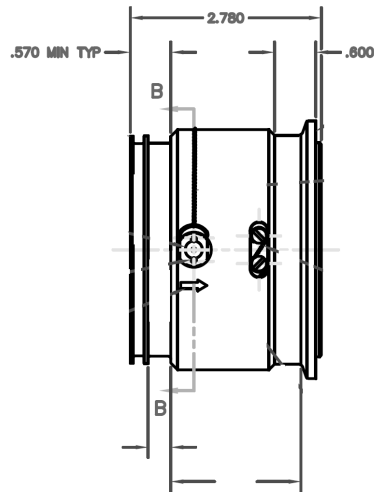
INTERNAL LEAKAGE: 0.15 LB/MIN MAX AT 7 PSIG AND 70°F

WEIGHT: 0.65 LBS MAX

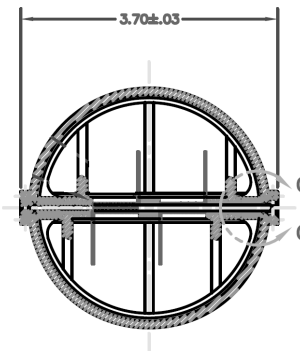
CATEGORY 1: SPLIT FLAPPER CHECK VALVES



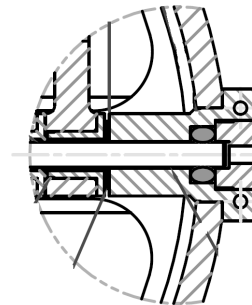
PART NUMBER: 2S2698-7, CHECK VALVE



SECTION A-A
SCALE: 1/1



SECTION B-B
SCALE: 1/1



DETAIL C-C
SCALE: 4/1

PERFORMANCE SPECIFICATIONS:

FLUIDS: AIR

MATERIAL: BODY A356-T6 AL

TEMPERATURE RANGE: -65°F TO +240°F

OPERATING PRESSURE: 15.2 PSIG AT 40°F

PROOF PRESSURE: 20 PSIG

PRESSURE DROP: 0.065 PSID MAX AT 15.2 PSIA INLET AT 40°F AND FLOW OF 21.5 LB/MIN

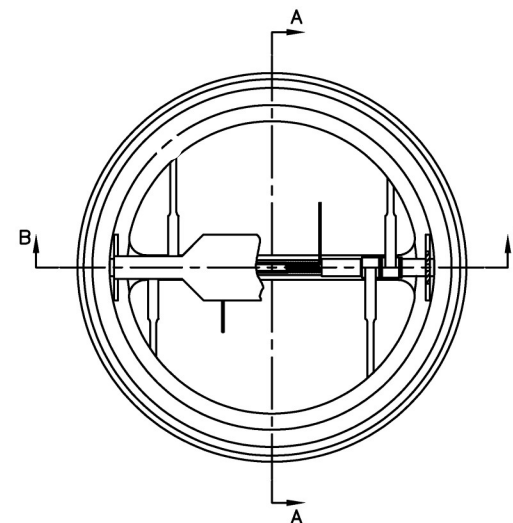
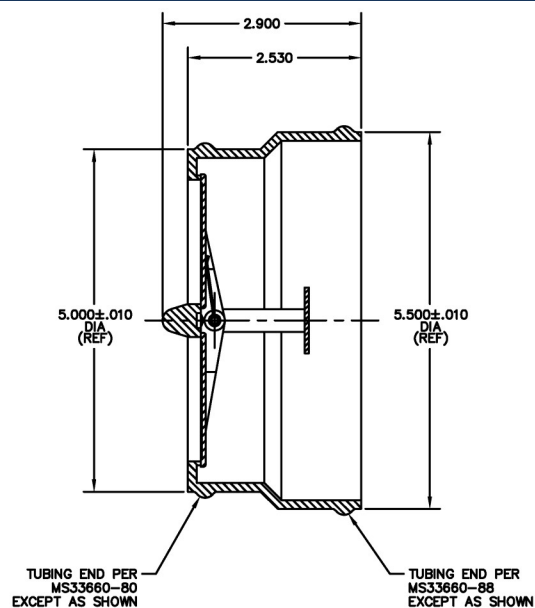
INTERNAL LEAKAGE: 0.2 LB/MIN MAX AT 1.0 PSIG CHECKED DIRECTION

WEIGHT: 0.60 LBS MAX

CATEGORY 1: SPLIT FLAPPER CHECK VALVES

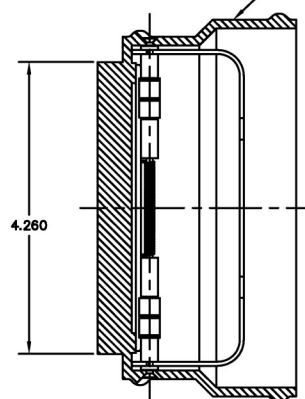


PART NUMBER: 2S6298, CHECK VALVE



SECTION A-A

2 FLOW ARROWS @ 180° APART (APPROX) THIS SURFACE



SECTION B-B
ROTATED 90° CW

PERFORMANCE SPECIFICATIONS:

FLUIDS: AIR

MATERIAL: BODY A356-T6 AL

FLAPPER A356-T6 AL

TEMPERATURE RANGE: -60°F TO 185°F

OPERATING PRESSURE: 1 PSIG

PROOF PRESSURE: 1 PSIG

CRACKING PRESSURE: 2" H₂O MAX

FLOW: 550 SCFM MINIMUM AT 2" H₂O MAX ΔP AND 1 PSIG INLET

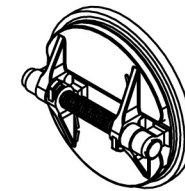
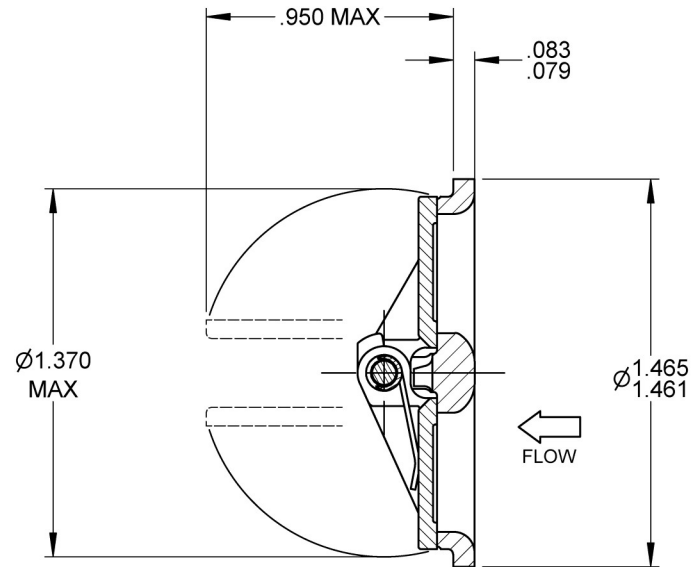
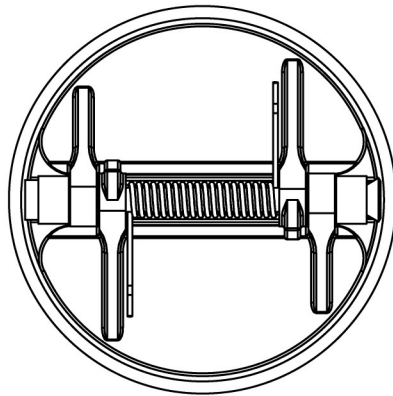
INTERNAL LEAKAGE: 0.05 LB/MIN MAX AT 1.0 PSID

WEIGHT: 1.01 LBS (ESTIMATED)

CATEGORY 1: SPLIT FLAPPER CHECK VALVES



PART NUMBER: 2S7354, CHECK VALVE



ISOMETRIC VIEW
FOR REFERENCE ONLY

PERFORMANCE SPECIFICATIONS:

FLUIDS: TURBO OIL PER MIL-PRF-7808, MIL-PRF-23699 AND AIR

MATERIAL: BODY 17-4PH CRES

FLAPPER 17-4PH CRES

TEMPERATURE RANGE: -67°F TO 400°F

OPERATING PRESSURE: 120 PSIG

PROOF PRESSURE: 180 PSIG

CRACKING PRESSURE: 0.1 PSIG MAX

FLOW: 3.0 GPM AT 2.5" H₂O MAX ΔP

20 GPM AT 1.0 PSID MAX ΔP

INTERNAL LEAKAGE: 0.5 SCFM MAX AT 6" H₂O

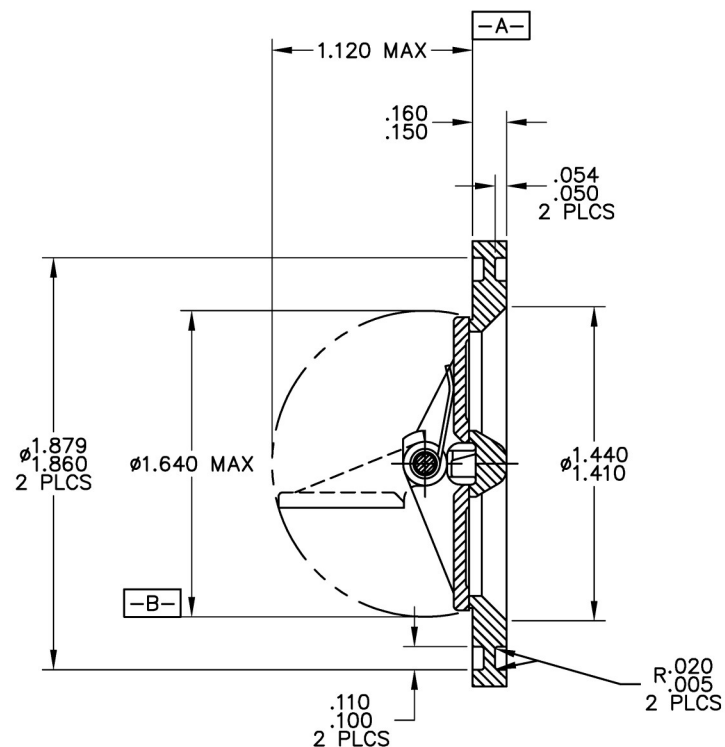
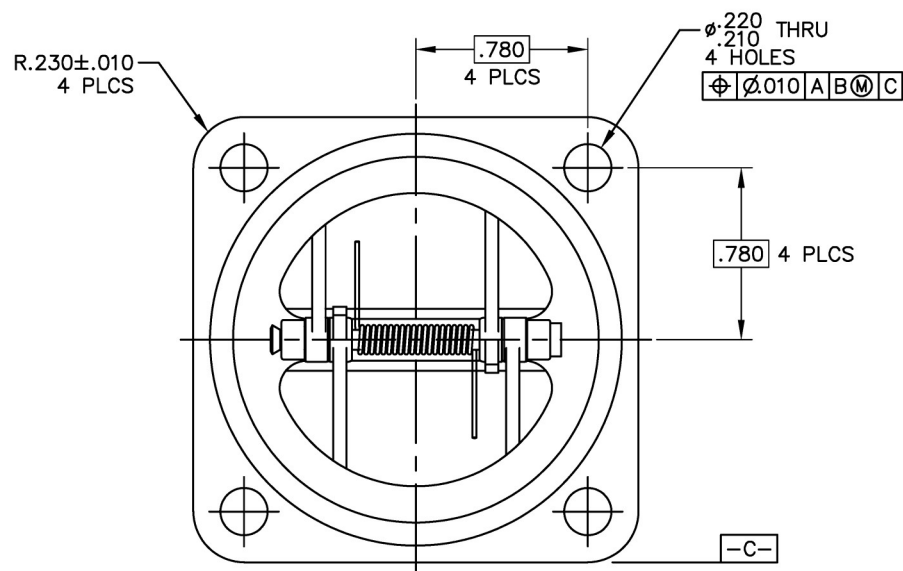
5.0 SCFM MAX AT 45 PSIG

WEIGHT: 0.067 LBS MAX

CATEGORY 1: SPLIT FLAPPER CHECK VALVES



PART NUMBER: 2S6518, CHECK VALVE



PERFORMANCE SPECIFICATIONS:

FLUIDS: AIR

MATERIAL: BODY 347 CRES

FLAPPER 17-4PH CRES

TEMPERATURE RANGE: -65°F TO 500°F

OPERATING PRESSURE: 50 PSIG

PROOF PRESSURE: 110 PSIG

CRACKING PRESSURE: 3" H₂O MAX

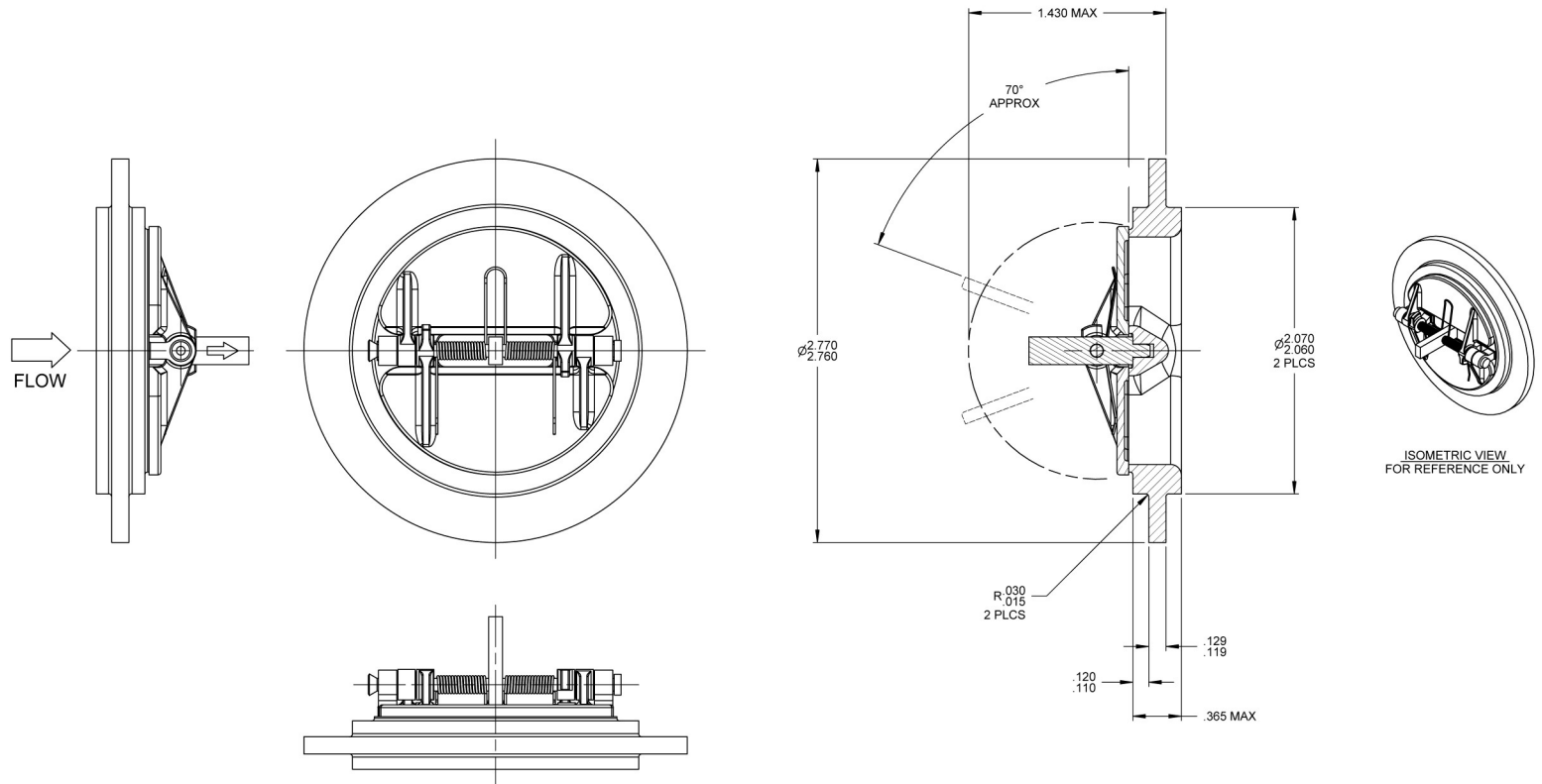
INTERNAL LEAKAGE: 0.1 LB/MIN MAX AT 50 PSIG AND 500°F

WEIGHT: 0.15 LBS MAX

CATEGORY 1: SPLIT FLAPPER CHECK VALVES



PART NUMBER: 2S7358, CHECK VALVE



PERFORMANCE SPECIFICATIONS:

FLUIDS: BLEED AIR

MATERIAL: BODY 17-4PH CRES

FLAPPER 17-4PH CRES

TEMPERATURE RANGE: -65°F TO 300°F

OPERATING PRESSURE: 10 PSIG

PROOF PRESSURE: 20 PSIG

CRACKING PRESSURE: 6" H₂O MAX

FLOW: 15 LB/MIN AT 1.5 PSIG MAX AND 300°F

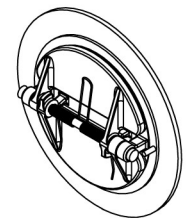
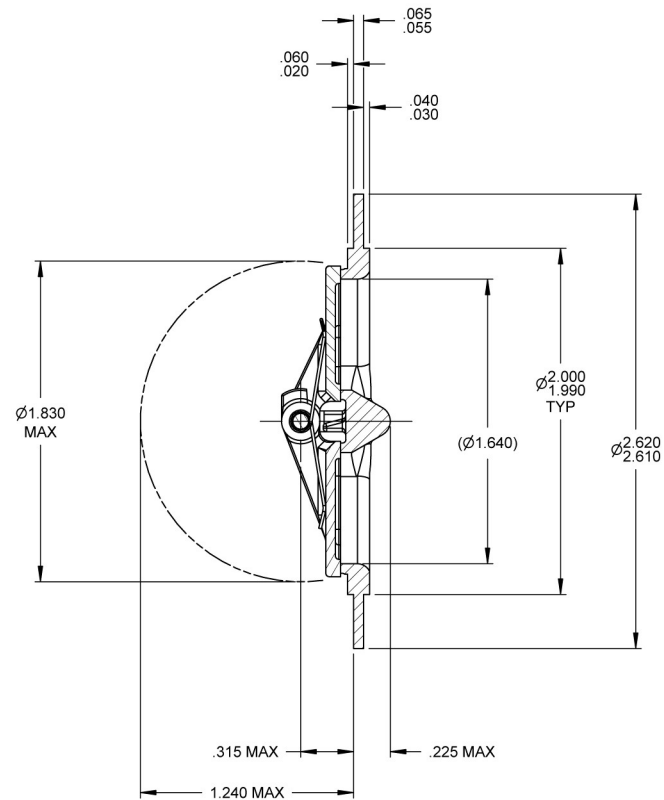
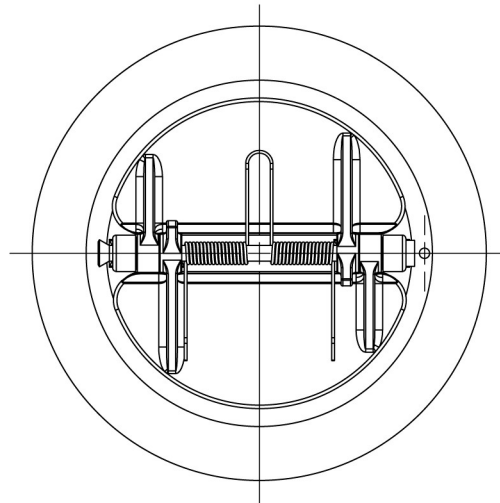
INTERNAL LEAKAGE: 0.1 LB/MIN MAX FROM 0 TO 10 PSIG AT 80°F

WEIGHT: 0.33 LBS MAX

CATEGORY 1: SPLIT FLAPPER CHECK VALVES



PART NUMBER: 2S2890-1, CHECK VALVE



ISOMETRIC VIEW
FOR REFERENCE ONLY

PERFORMANCE SPECIFICATIONS:

FLUIDS: AIR

MATERIAL: BODY 17-4PH CRES

FLAPPER 17-4PH CRES

TEMPERATURE RANGE: -65°F TO 700°F

OPERATING PRESSURE: 64 PSIG

PROOF PRESSURE: 220 PSIG

CRACKING PRESSURE: 0.15 PSIG MAX

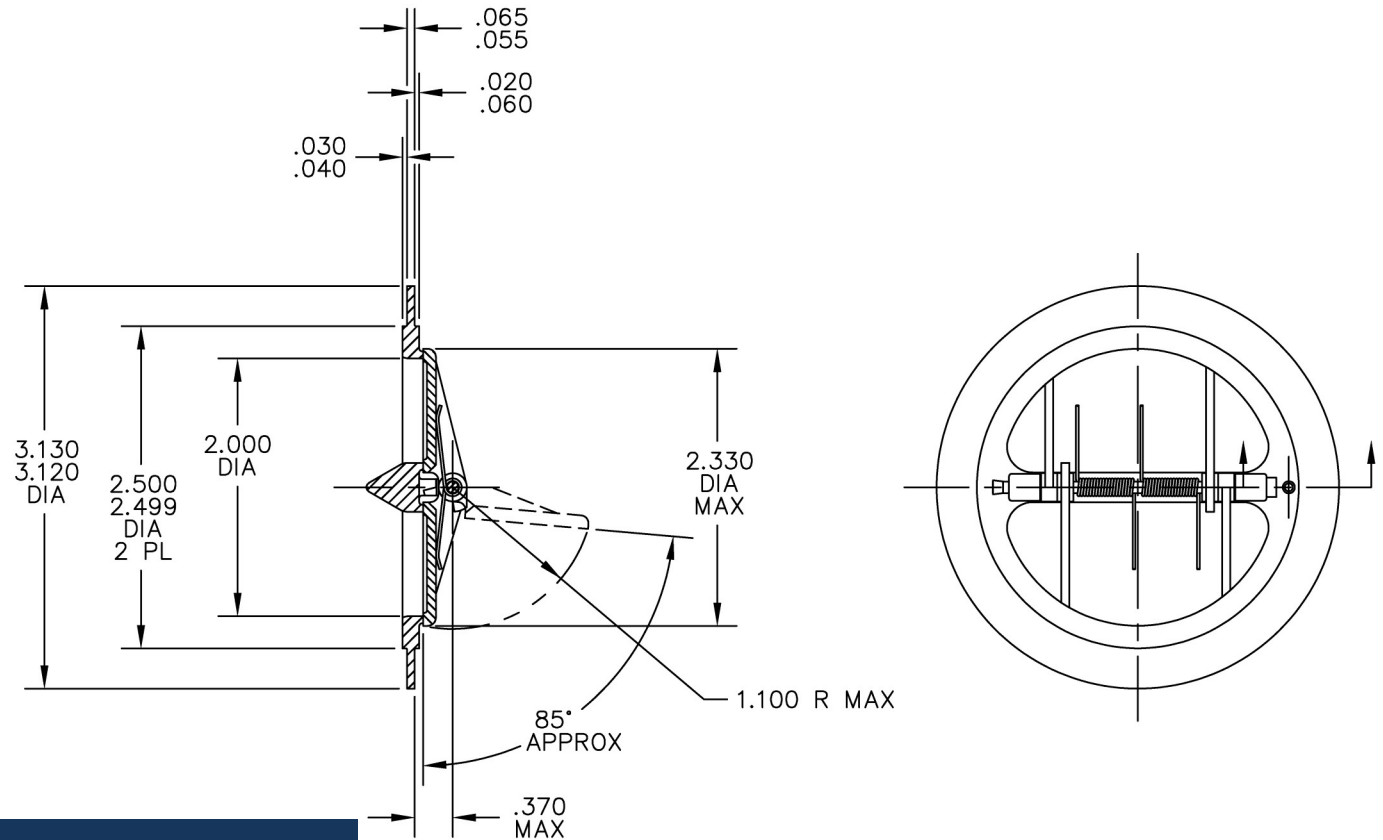
INTERNAL LEAKAGE: 0.11 LB/MIN MAX AT 50 PSIG AND 75°F

WEIGHT: 0.38 LBS MAX

CATEGORY 1: SPLIT FLAPPER CHECK VALVES



PART NUMBER: 2S6332, CHECK VALVE



PERFORMANCE SPECIFICATIONS:

FLUIDS: AIR

MATERIAL: BODY 17-4PH CRES

FLAPPER 17-4PH CRES

TEMPERATURE RANGE: -65°F TO 540°F

OPERATING PRESSURE: 47 PSIG

PROOF PRESSURE: 70.5 PSIG

CRACKING PRESSURE: 0.15 PSIG MAX

FLOW: 59 LB/MIN AT 33" H₂O MAX ΔP WITH INLET PRESSURE OF 52 PSIA AND 540°F

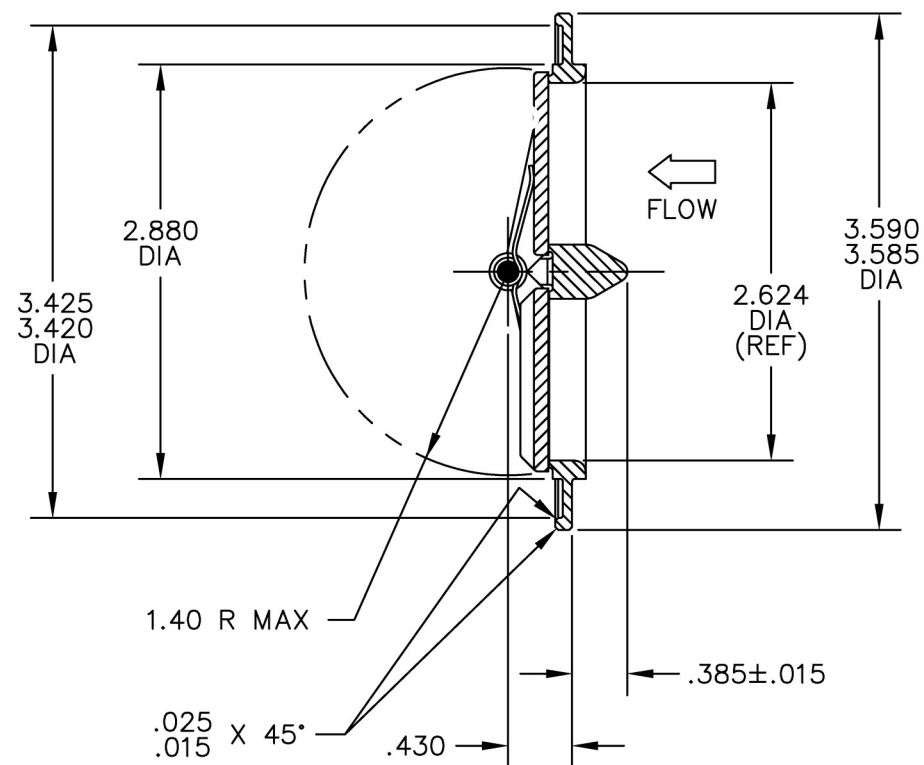
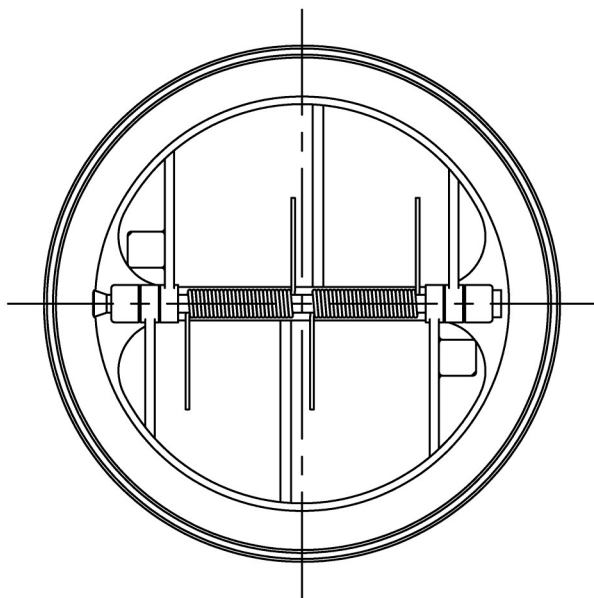
INTERNAL LEAKAGE: 0.15 LB/MIN MAX AT 47 PSIG AND 540°F

WEIGHT: 0.35 LBS MAX

CATEGORY 1: SPLIT FLAPPER CHECK VALVES



PART NUMBER: 2S2940, CHECK VALVE



PERFORMANCE SPECIFICATIONS:

FLUIDS: AIR

MATERIAL: BODY 17-4PH CRES

FLAPPER 347 CRES

TEMPERATURE RANGE: -65°F TO 700°F

OPERATING PRESSURE: 180 PSIG

PROOF PRESSURE: 345.3 PSIG

CRACKING PRESSURE: 0.2 PSIG MAX

FLOW: 125 LB/MIN AT 1 PSID MAX AT 180 PSIA INLET AND 470°F

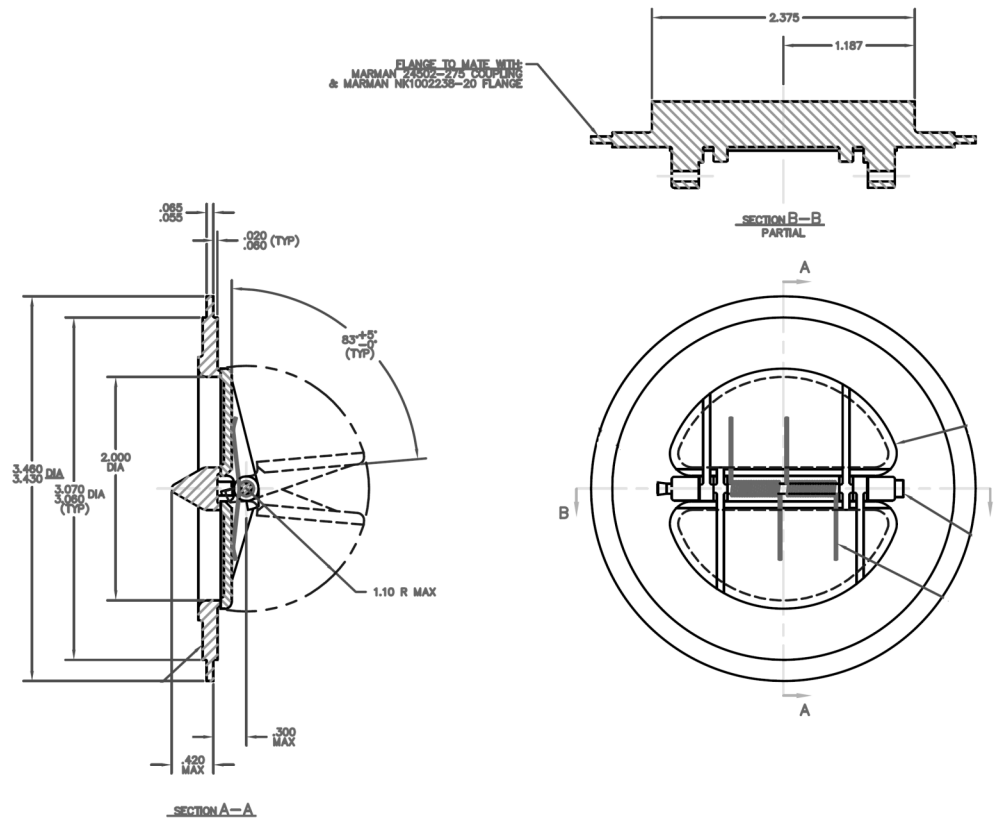
INTERNAL LEAKAGE: 0.1 LB/MIN MAX AT 180 PSIG

WEIGHT: 0.53 LBS MAX

CATEGORY 1: SPLIT FLAPPER CHECK VALVES



PART NUMBER: 2S2536, CHECK VALVE



PERFORMANCE SPECIFICATIONS:

FLUIDS: ENGINE BLEED AIR

MATERIAL: BODY 17-4PH CRES

FLAPPER 17-4PH CRES

TEMPERATURE RANGE: -65°F TO 660°F

OPERATING PRESSURE: 120 PSIG

PROOF PRESSURE: 180 PSIG

CRACKING PRESSURE: 2" H₂O MAX

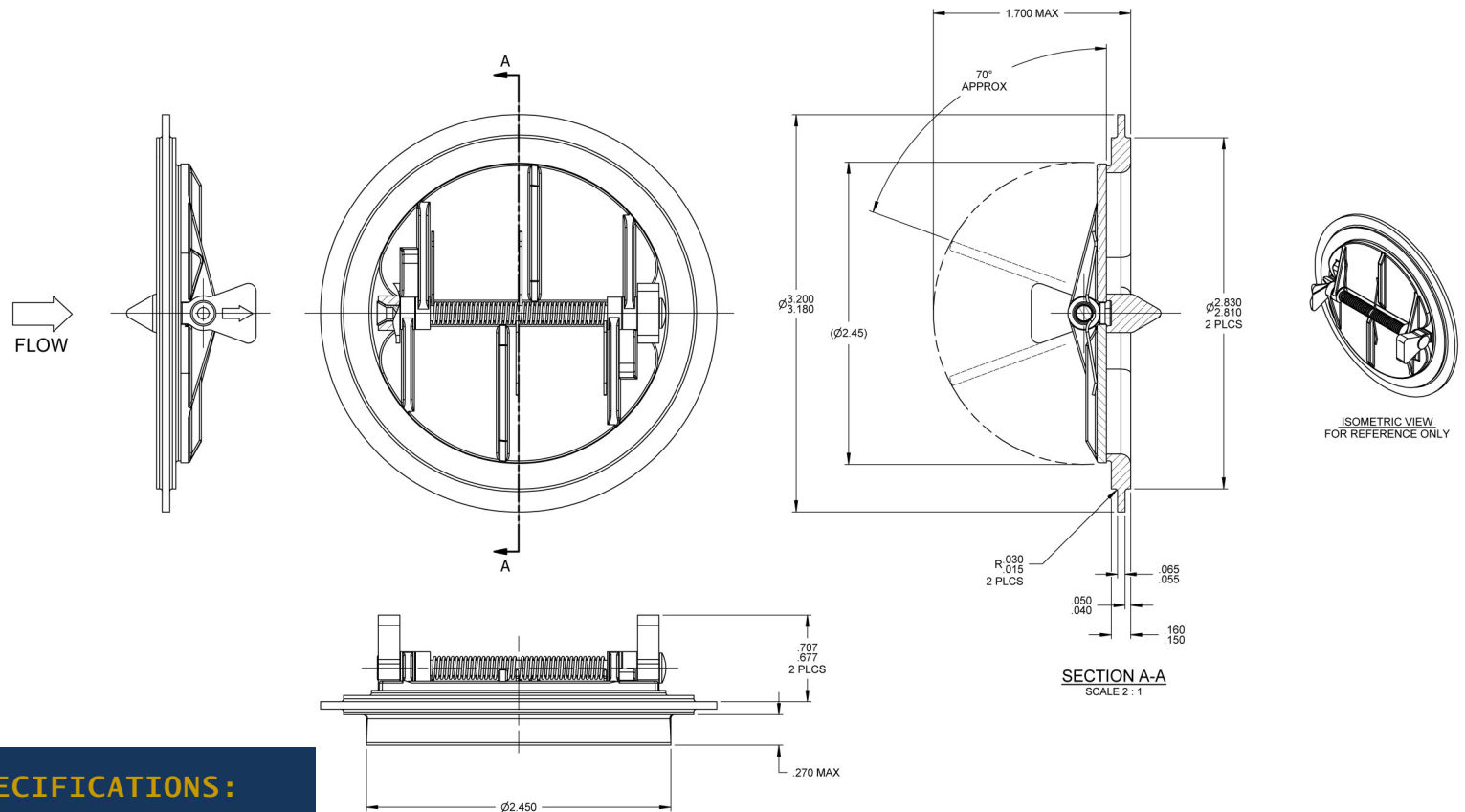
INTERNAL LEAKAGE: 0.40 LB/MIN MAX AT 170 PSIG AND 580°F

WEIGHT: 0.40 LBS MAX

CATEGORY 1: SPLIT FLAPPER CHECK VALVES



PART NUMBER: 2S7356-1, CHECK VALVE



PERFORMANCE SPECIFICATIONS:

FLUIDS: BLEED AIR

MATERIAL: BODY 17-4PH CRES

FLAPPER 347 CRES

TEMPERATURE RANGE: -65°F TO 550°F

OPERATING PRESSURE: 95 PSIG

PROOF PRESSURE: 100 PSIG

CRACKING PRESSURE: 6" H₂O MAX

FLOW: 100 LB/MIN AT 7 PSID MAX AT 50 PSIG INLET AND 550°F

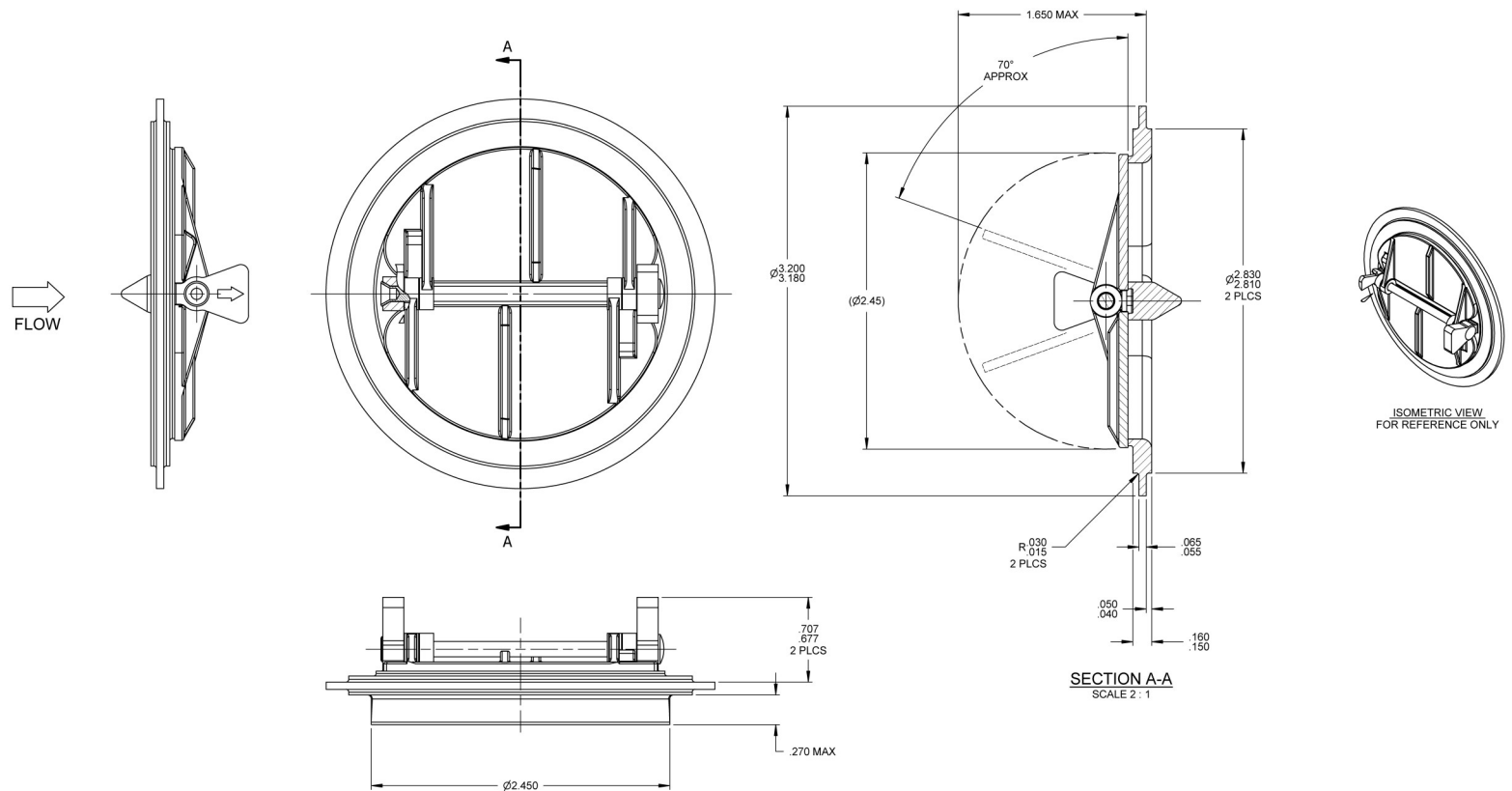
INTERNAL LEAKAGE: 0.30 LB/MIN MAX FROM O TO 95 PSID

WEIGHT: 0.35 LBS MAX

CATEGORY 1: SPLIT FLAPPER CHECK VALVES



PART NUMBER: 2S7370-1, CHECK VALVE



PERFORMANCE SPECIFICATIONS:

FLUIDS: BLEED AIR

MATERIAL: BODY 17-4PH CRES

FLAPPER 347 CRES

TEMPERATURE RANGE: -65°F TO 550°F

OPERATING PRESSURE: 95 PSIG

PROOF PRESSURE: 100 PSIG

FLOW: 100 LB/MIN AT 7 PSID MAX AT 50 PSIG INLET AND 550°F

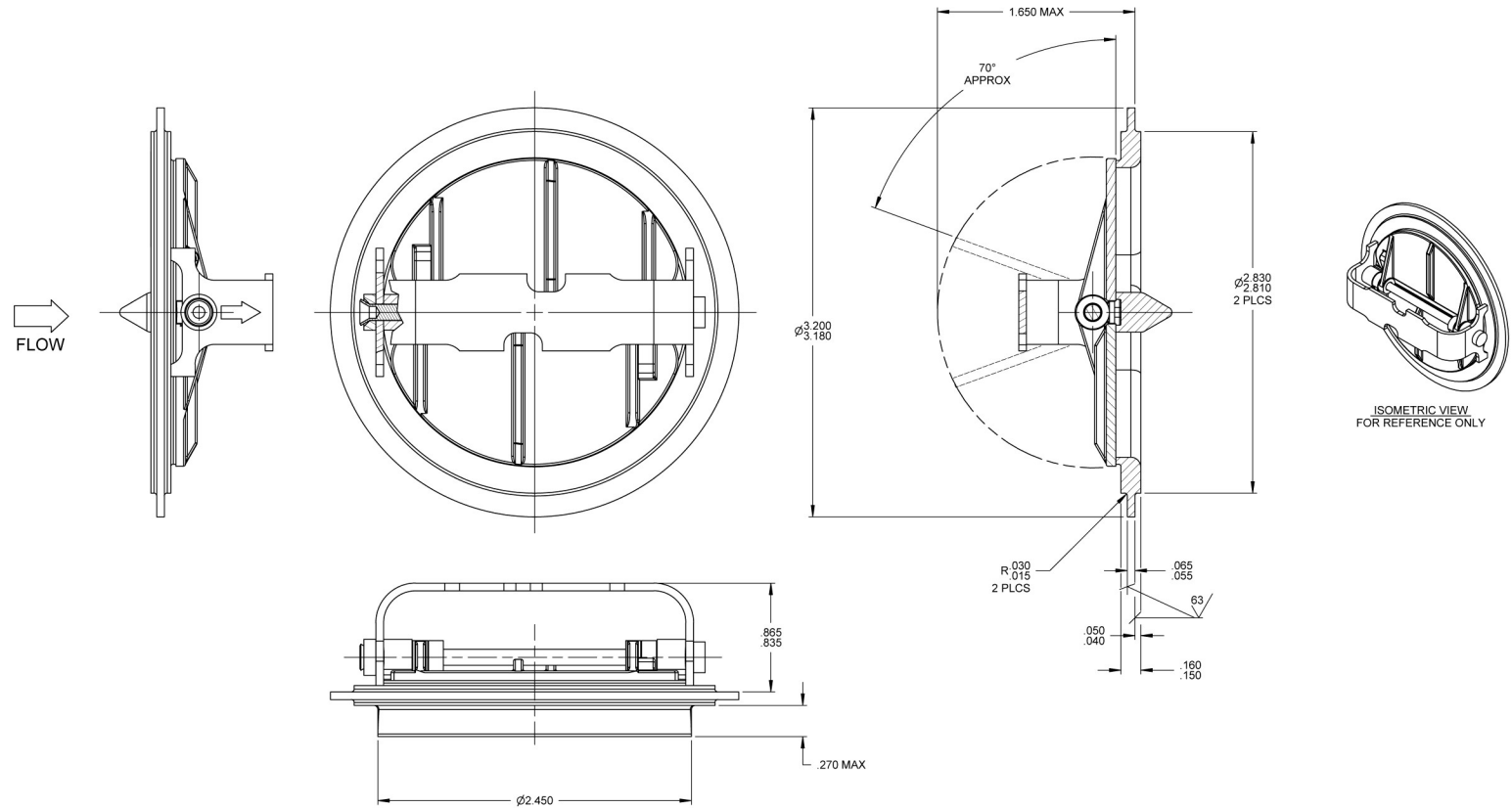
INTERNAL LEAKAGE: 0.1 LB/MIN MAX FROM 0 TO 10 PSIG AT 80°F

WEIGHT: 0.35 LBS MAX

CATEGORY 1: SPLIT FLAPPER CHECK VALVES



PART NUMBER: 2S7370, CHECK VALVE



PERFORMANCE SPECIFICATIONS:

FLUIDS: BLEED AIR

MATERIAL: BODY 17-4PH CRES

FLAPPER 347 CRES

TEMPERATURE RANGE: -65°F TO 550°F

OPERATING PRESSURE: 95 PSIG

PROOF PRESSURE: 100 PSIG

FLOW: 100 LB/MIN AT 7 PSID MAX AT 50 PSIG INLET AND 550°F

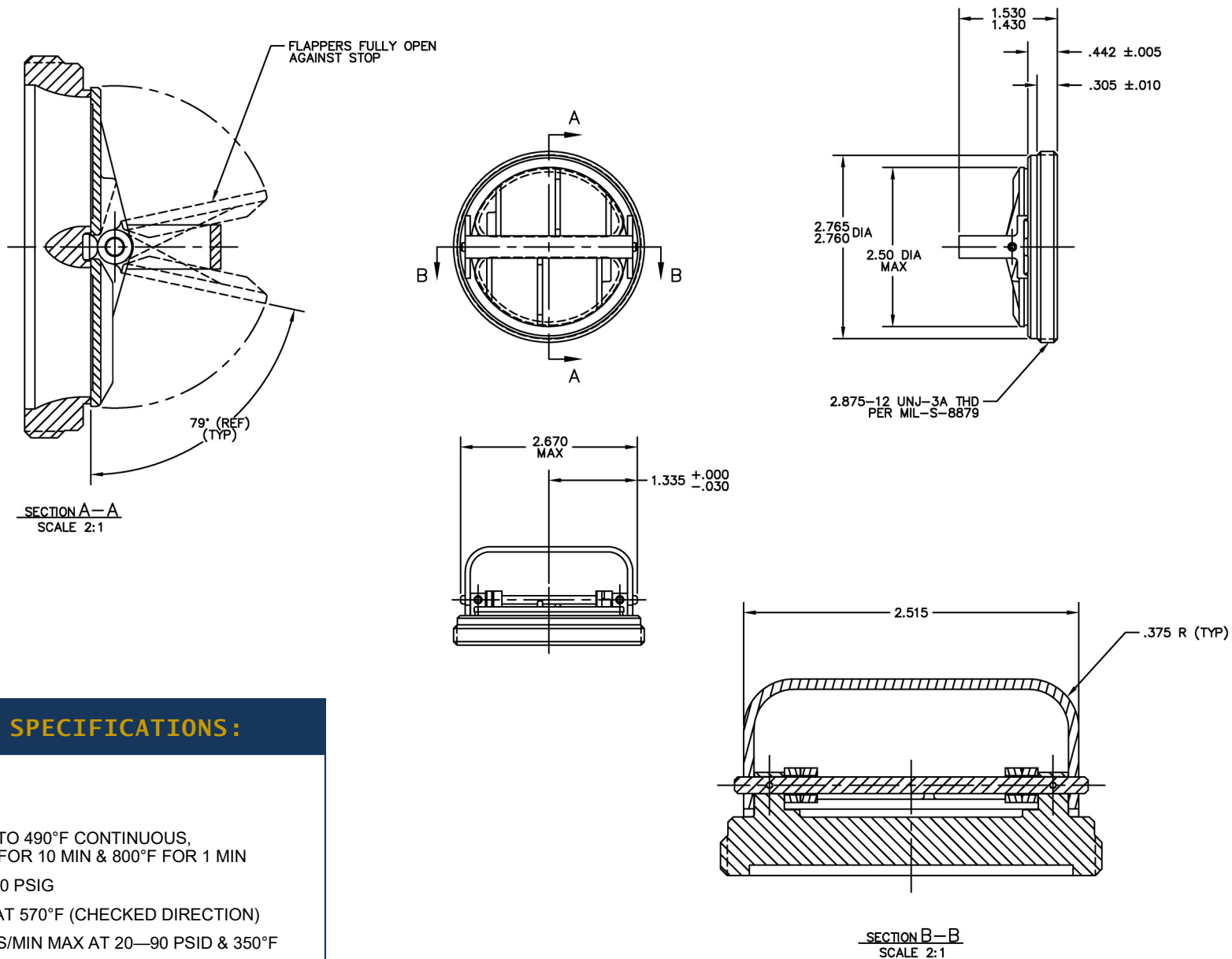
INTERNAL LEAKAGE: 0.1 LB/MIN MAX FROM 0 TO 10 PSIG AT 80°F

WEIGHT: 0.38 LBS MAX

CATEGORY 1: SPLIT FLAPPER CHECK VALVES



PART NUMBER: 2S2864, BLEED AIR CHECK VALVE



PERFORMANCE SPECIFICATIONS:

FLUIDS: AIR, ENGINE BLEED

MATERIAL: BODY 347 CRES

TEMPERATURE RANGE: -65°F TO 490°F CONTINUOUS,
700°F FOR 10 MIN & 800°F FOR 1 MIN

OPERATING PRESSURE: 20—90 PSIG

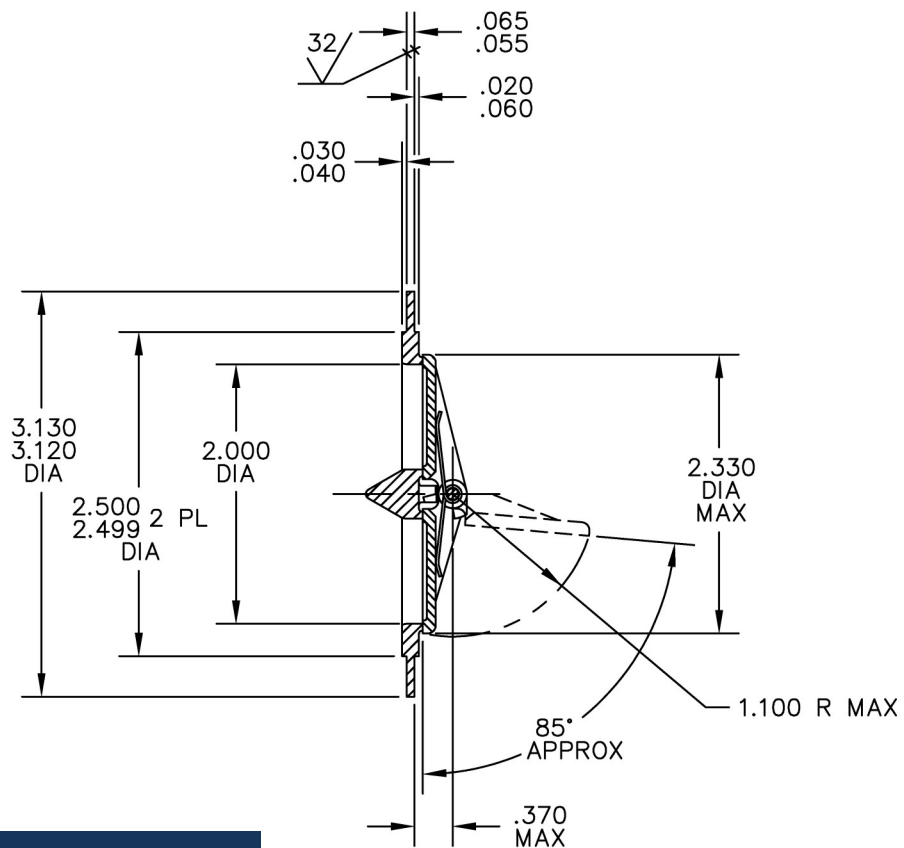
PROOF PRESSURE: 155 PSIG AT 570°F (CHECKED DIRECTION)

INTERNAL LEAKAGE: 0.300 LBS/MIN MAX AT 20—90 PSID & 350°F

CATEGORY 1: SPLIT FLAPPER CHECK VALVES



PART NUMBER: 2S6438, CHECK VALVE



PERFORMANCE SPECIFICATIONS:

FLUIDS: AIR

MATERIAL: BODY 17-4PH CRES

FLAPPER 17-4PH CRES

TEMPERATURE RANGE: -65°F TO 803°F

OPERATING PRESSURE: 84 PSIG

PROOF PRESSURE: 235 PSIG

FLOW: 25 LB/MIN AT 5.5" H₂O ΔP WITH 50 PSIA INLET AND 340°F

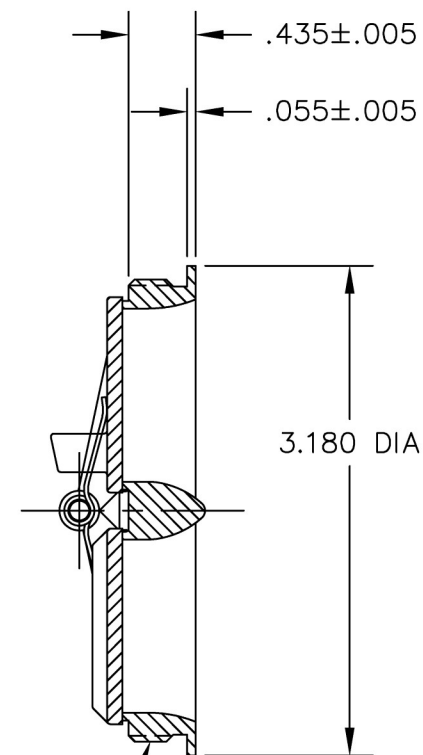
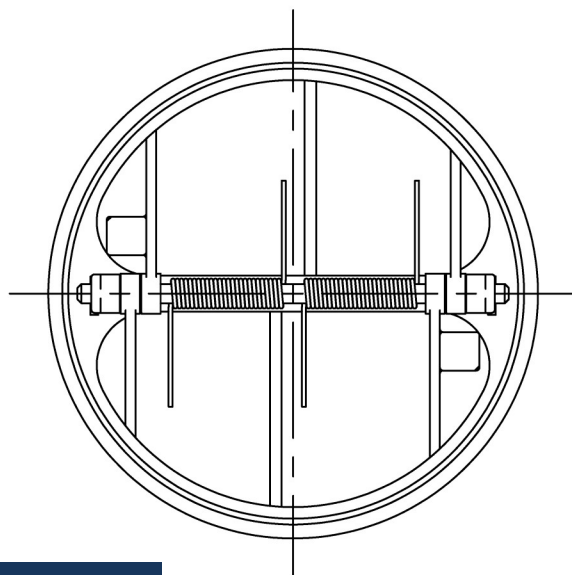
INTERNAL LEAKAGE: 0.15 LB/MIN MAX AT 55 PSIG AND 600°F

WEIGHT: 0.35 LBS MAX

CATEGORY 1: SPLIT FLAPPER CHECK VALVES



PART NUMBER: 2S2340-1, CHECK VALVE



3.000-16 UNJ-3A THD
PER MIL-S-8879

PERFORMANCE SPECIFICATIONS:

FLUIDS: BLEED AIR

MATERIAL: BODY 347 CRES

FLAPPER 347 CRES

TEMPERATURE RANGE: -65°F TO 1215°F

OPERATING PRESSURE: 40 TO 225 PSIG

PROOF PRESSURE: 248 PSIG

CRACKING PRESSURE: 2" H₂O MAX

FLOW: 150 LB/MIN AT 3.5 PSID MAX WITH 29.7 PSIA INLET AND 200°F

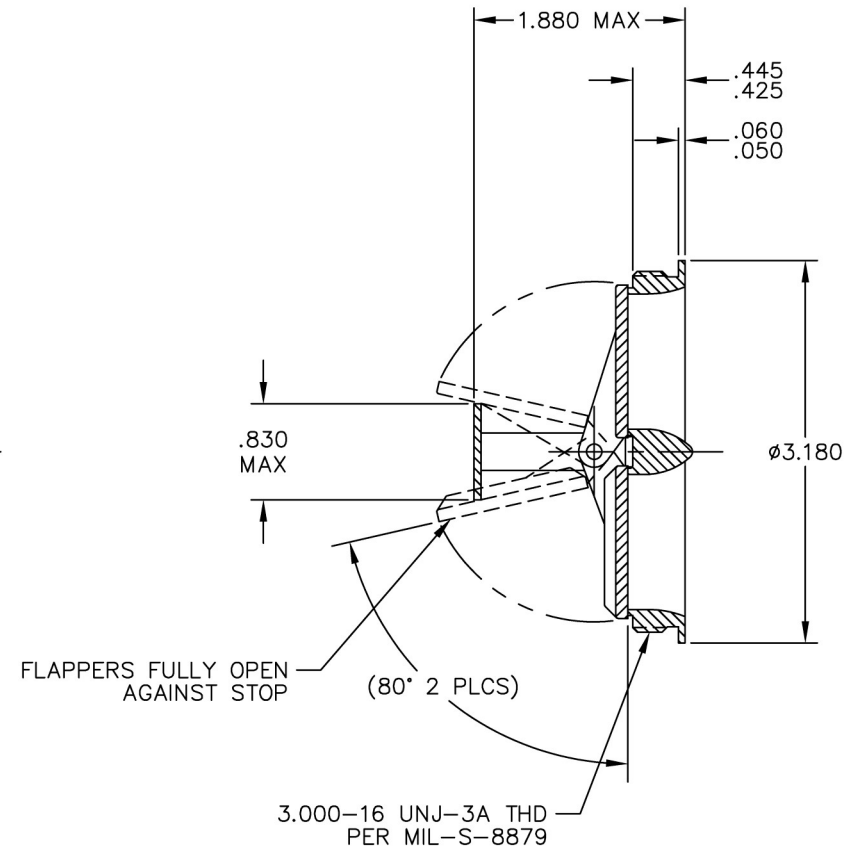
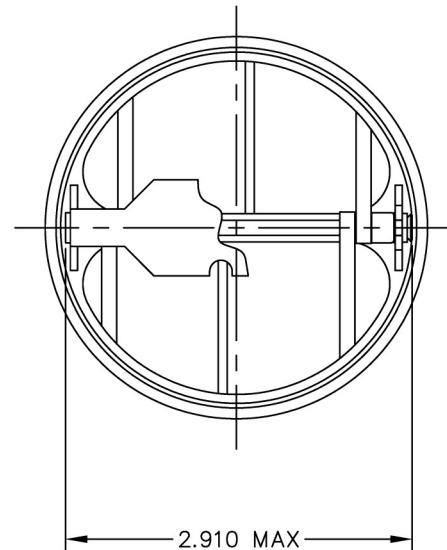
INTERNAL LEAKAGE: 0.25 LB/MIN MAX AT 70 TO 225 PSIG AND 80°F

WEIGHT: 0.65 LBS MAX

CATEGORY 1: SPLIT FLAPPER CHECK VALVES



PART NUMBER: 2S6252-1, CHECK VALVE



PERFORMANCE SPECIFICATIONS:

FLUIDS: BLEED AIR

MATERIAL: BODY 347 CRES

FLAPPER 347 CRES

TEMPERATURE RANGE: -65°F TO 1215°F

OPERATING PRESSURE: 40 TO 225 PSIG

PROOF PRESSURE: 248 PSIG

FLOW: 150 LB/MIN AT 3.5 PSID MAX WITH 29.7 PSIA INLET AND 200°F

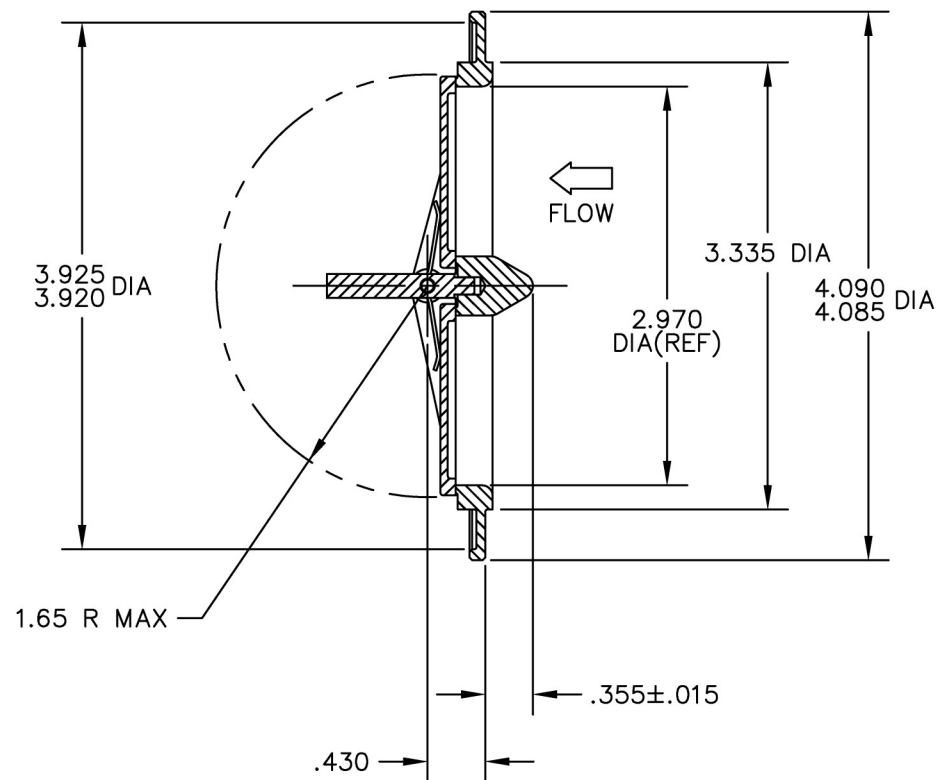
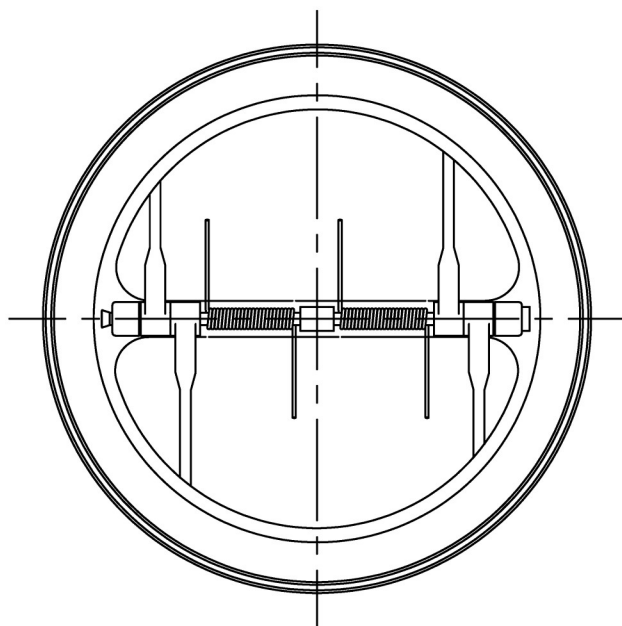
INTERNAL LEAKAGE: 0.25 LB/MIN MAX AT 70 TO 225 PSIG AND 80°F

WEIGHT: 0.65 LBS MAX

CATEGORY 1: SPLIT FLAPPER CHECK VALVES



PART NUMBER: 2S2942, CHECK VALVE



PERFORMANCE SPECIFICATIONS:

FLUIDS: AIR

MATERIAL: BODY 17-4PH CRES

FLAPPER 17-4PH CRES

TEMPERATURE RANGE: -65°F TO 700°F

OPERATING PRESSURE: 180 PSIG

PROOF PRESSURE: 345.3 PSIG

CRACKING PRESSURE: 0.2 PSIG MAX

FLOW: 125 LB/MIN AT 0.6 PSID (REF) WITH 180 PSIA INLET AND 470°F

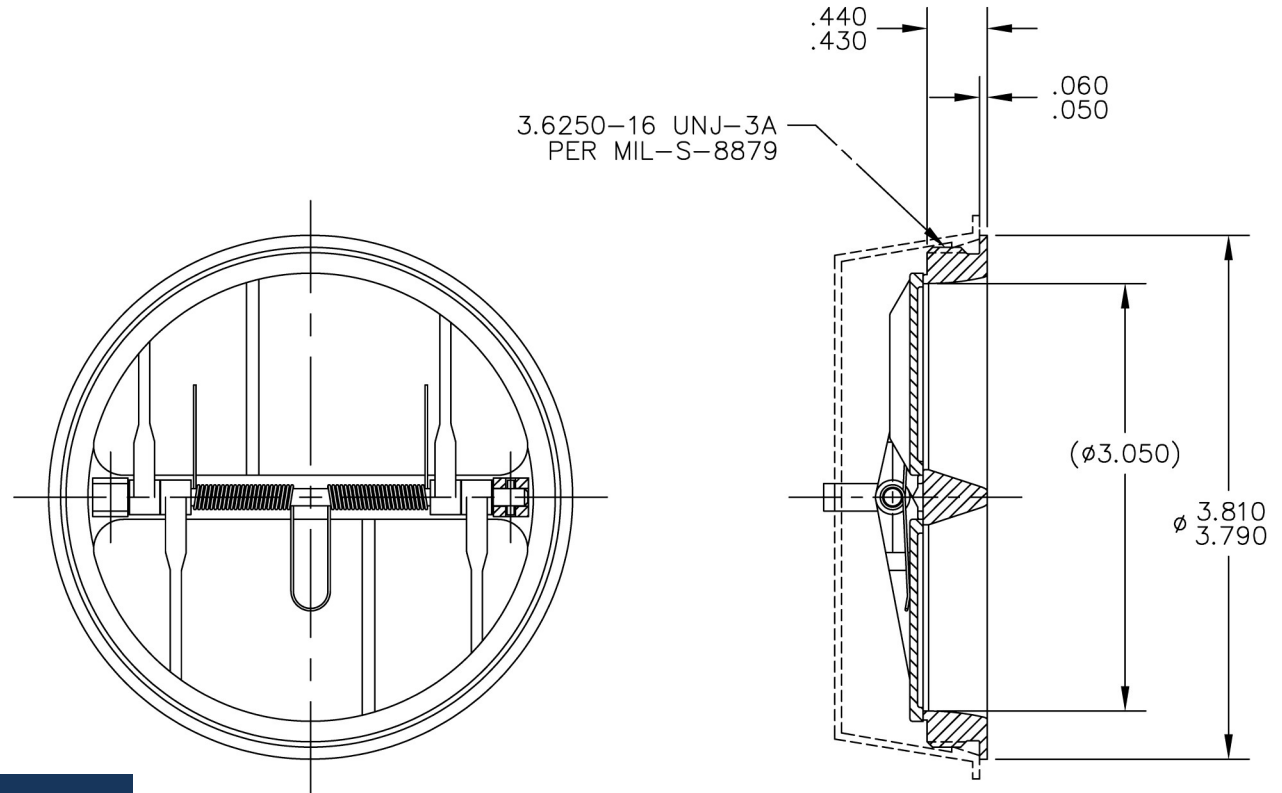
INTERNAL LEAKAGE: 0.1 LB/MIN MAX AT 180 PSIG

WEIGHT: 0.65 LBS MAX

CATEGORY 1: SPLIT FLAPPER CHECK VALVES



PART NUMBER: 2S2962, CHECK VALVE



PERFORMANCE SPECIFICATIONS:

FLUIDS: BLEED AIR

MATERIAL: BODY 347 CRES

FLAPPER 347 CRES

TEMPERATURE RANGE: -65°F TO 1215°F

OPERATING PRESSURE: 225 PSIG

PROOF PRESSURE: 248 PSIG

CRACKING PRESSURE: 2" H₂O MAX

INTERNAL LEAKAGE: 0.25 LB/MIN MAX AT 70 TO 225 PSIG AND 80°F

CATEGORY 1: SPLIT FLAPPER CHECK VALVES

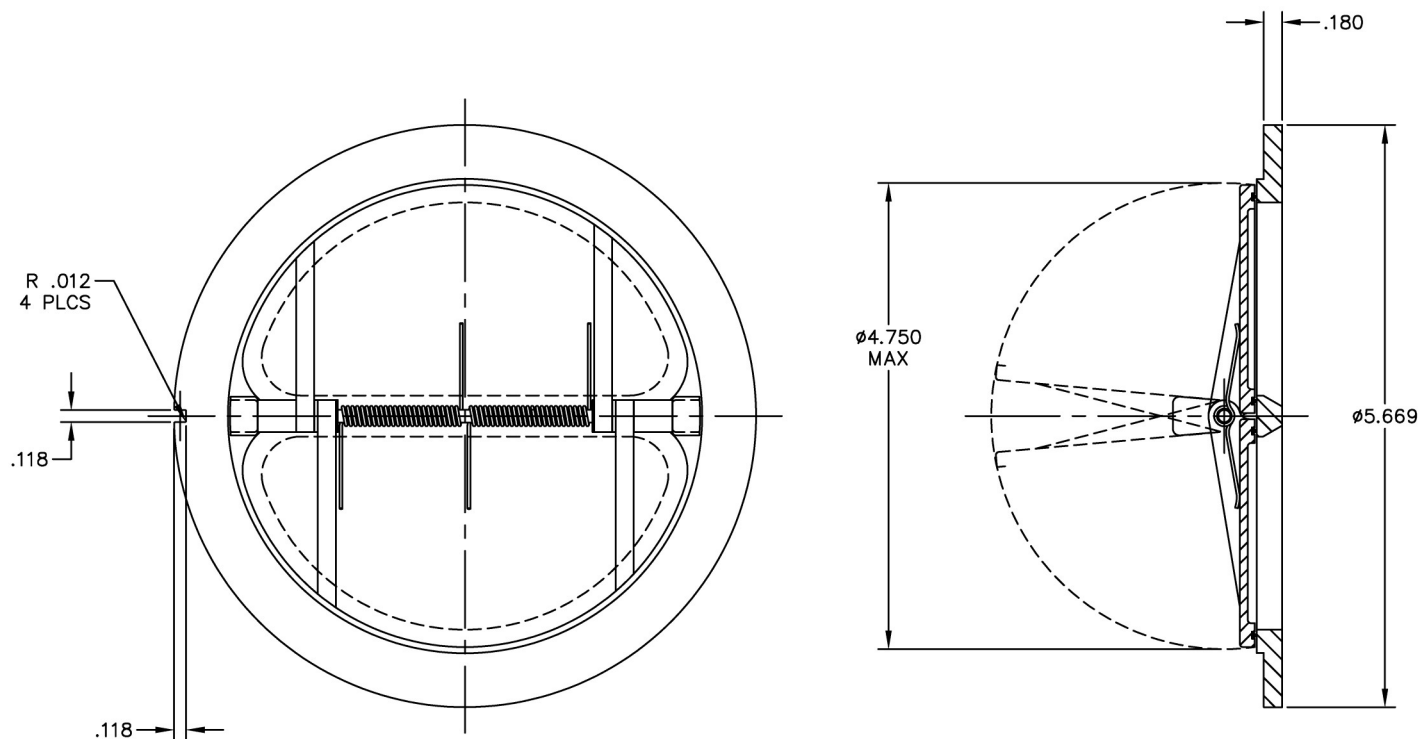


WEIGHT: 1.6 LBS MAX

CATEGORY 1: SPLIT FLAPPER CHECK VALVES



PART NUMBER: 2S6988, CHECK VALVE



PERFORMANCE SPECIFICATIONS:

FLUIDS: JP-4, JP-5 PER MIL-T-5624, JP-8 PER MIL-T-83133, JET A, JET A-1, JET-B

MATERIAL: BODY 15-5PH CRES

FLAPPER 15-5PH CRES

TEMPERATURE RANGE: -85°F TO 140°F

OPERATING PRESSURE: 0 TO 120 PSIG

PROOF PRESSURE: 180 PSIG (CHECKED DIRECTION)

240 PSIG (OPENED DIRECTION)

CRACKING PRESSURE: 0.3 PSID MAX

FLOW: 630 GPM AT 1.82 PSID MAX

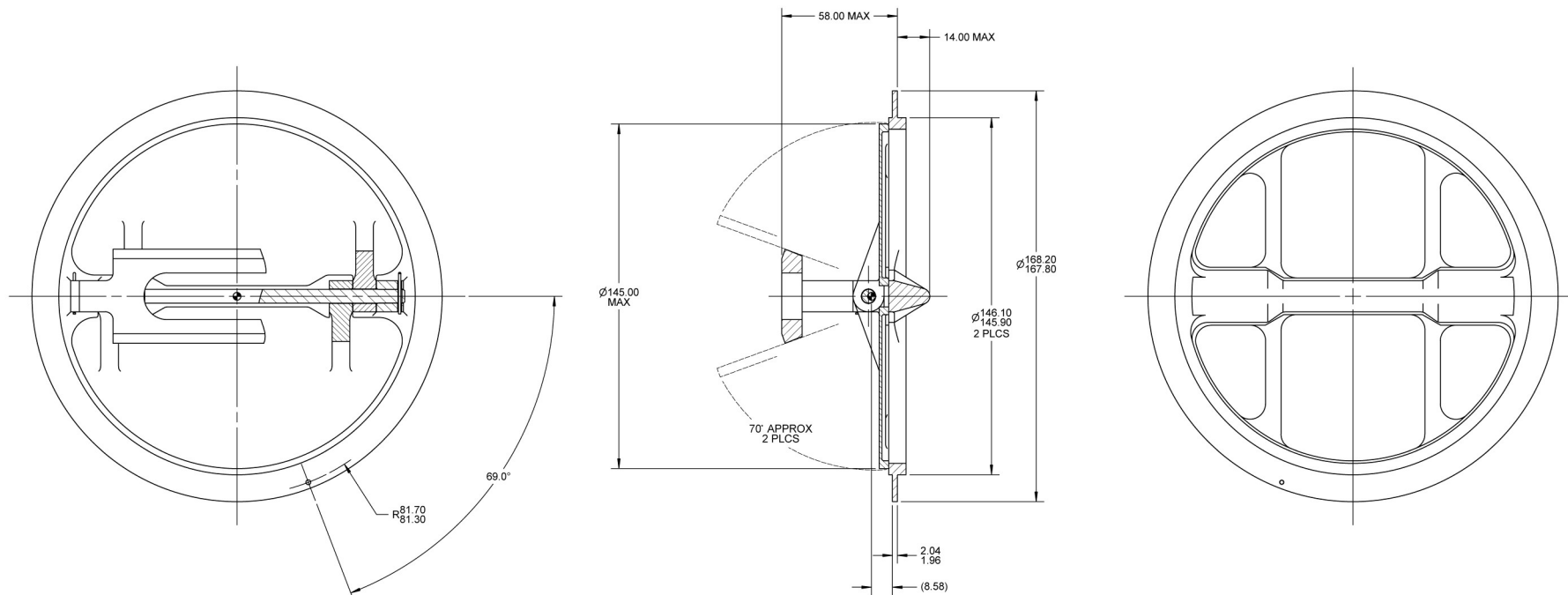
INTERNAL LEAKAGE: 10 DPM FROM NONE TO 120 PSID

WEIGHT: 1.9 LBS MAX

CATEGORY 1: SPLIT FLAPPER CHECK VALVES



PART NUMBER: 2S7138, CHECK VALVE



PERFORMANCE SPECIFICATIONS:

FLUIDS: BLEED AIR

MATERIAL: BODY 17-4PH CRES

FLAPPER 17-4PH CRES

TEMPERATURE RANGE: -67°F TO 500°F

OPERATING PRESSURE: 59.4 PSIG

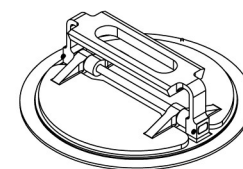
PROOF PRESSURE: 85.6 PSIG

CRACKING PRESSURE: 2" H₂O MAX

FLOW: 7.06 LB/S AT 58.5 PSIG MAX AND 77°F

INTERNAL LEAKAGE: 0.0079 LB/S MAX AT 59.4 PSIG AND 77°F

WEIGHT: 2.1 LBS MAX

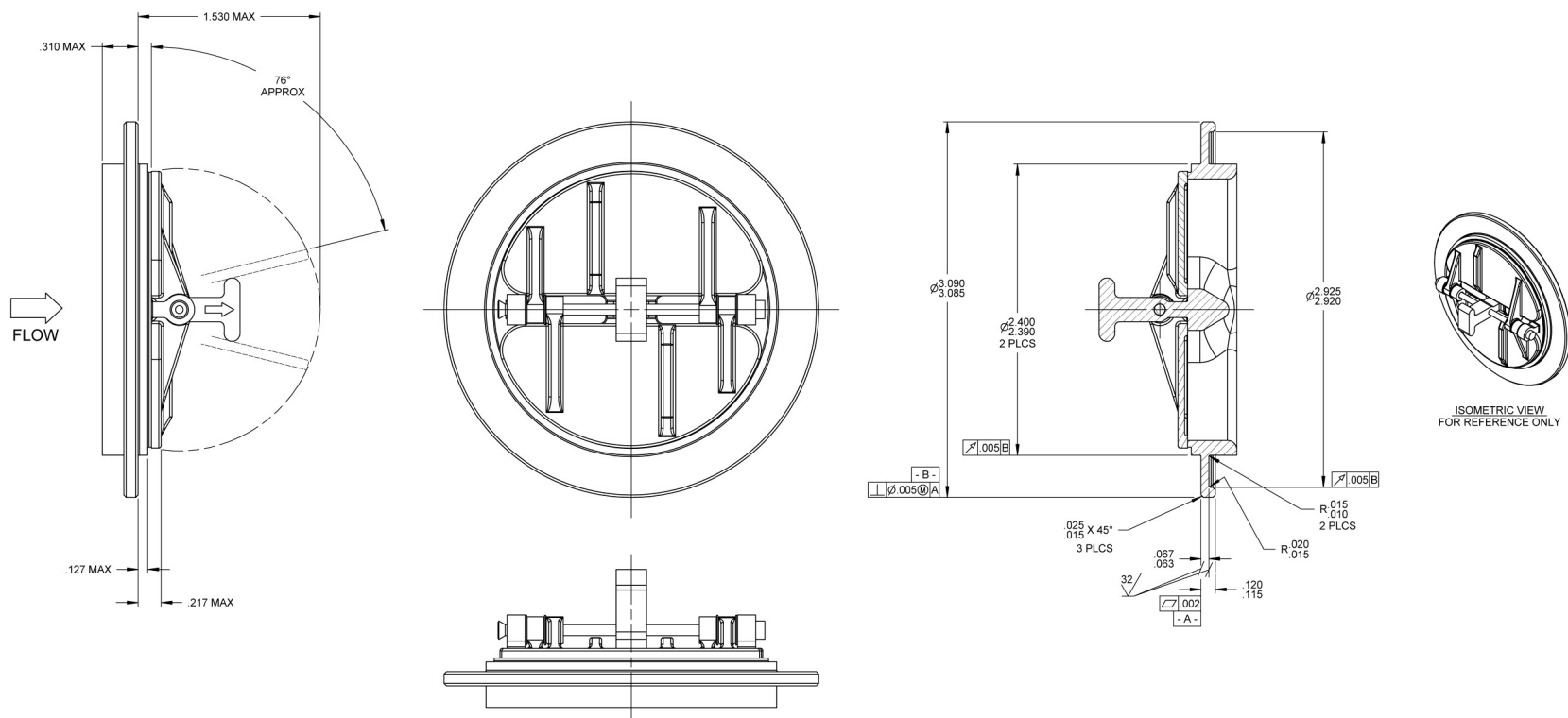


ISOMETRIC VIEW
FOR REFERENCE ONLY

CATEGORY 1: SPLIT FLAPPER CHECK VALVES



PART NUMBER: 2S7362, CHECK VALVE



PERFORMANCE SPECIFICATIONS:

FLUIDS: BLEED AIR

MATERIAL: BODY INCONEL 718

FLAPPER INCONEL 718

TEMPERATURE RANGE: -65°F TO 985°F

OPERATING PRESSURE: 115 PSIG (INLET)

82 PSIG (OUTLET)

PROOF PRESSURE: 309.6 PSIG

FLOW: 28.8 LB/MIN AT 0.4 PSIG MAX

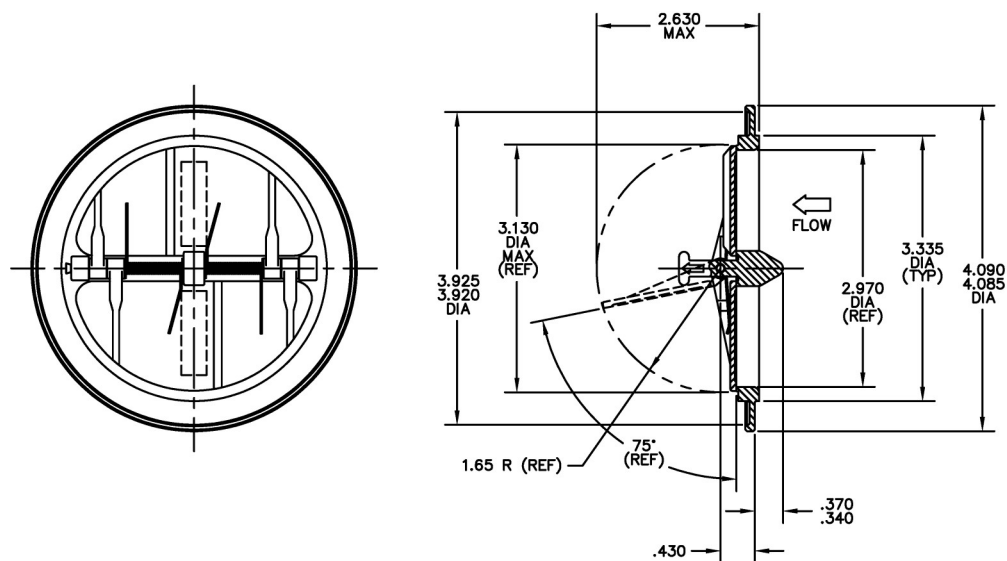
INTERNAL LEAKAGE: 0.50 LB/MIN MAX FROM 0 TO 81 PSIG AND 80°F

WEIGHT: 0.37 LBS MAX

CATEGORY 1: SPLIT FLAPPER CHECK VALVES



PART NUMBER: 2S6094-1, CHECK VALVE



PERFORMANCE SPECIFICATIONS:

FLUIDS: AIR

MATERIAL: BODY INCONEL 718

FLAPPER INCONEL 718

TEMPERATURE RANGE: -65°F TO 1110°F

OPERATING PRESSURE: 25 TO 184 PSIG

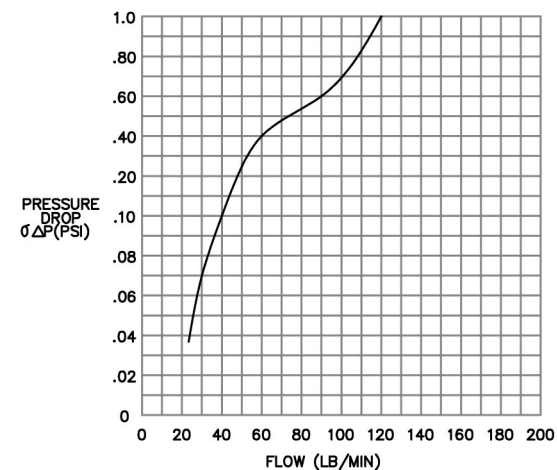
PROOF PRESSURE: 457 PSIG

CRACKING PRESSURE: 1" H₂O MAX

FLOW: SEE CHART

INTERNAL LEAKAGE: 0.35 LB/MIN MAX AT 110 PSIG AT 80°F

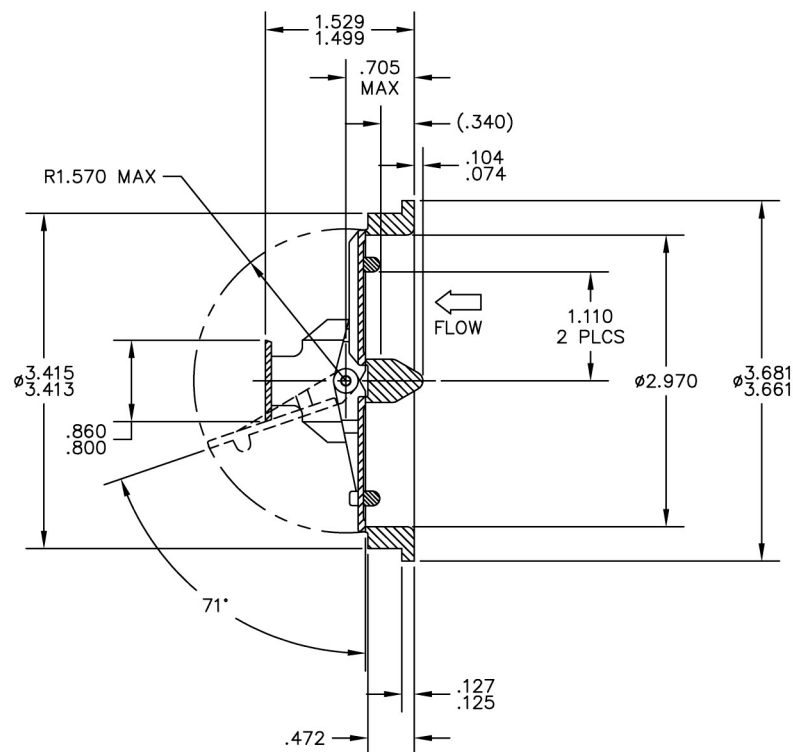
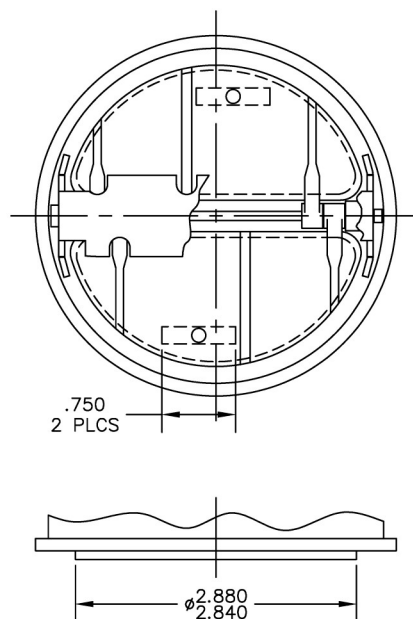
WEIGHT: 0.65 LBS MAX



CATEGORY 1: SPLIT FLAPPER CHECK VALVES



PART NUMBER: 2S7060, CHECK VALVE



PERFORMANCE SPECIFICATIONS:

FLUIDS: AIR

MATERIAL: BODY INCONEL 718

FLAPPER INCONEL 718

TEMPERATURE RANGE: -65°F TO 1076°F

OPERATING PRESSURE: 72.5 PSIG

PROOF PRESSURE: 537 PSIG

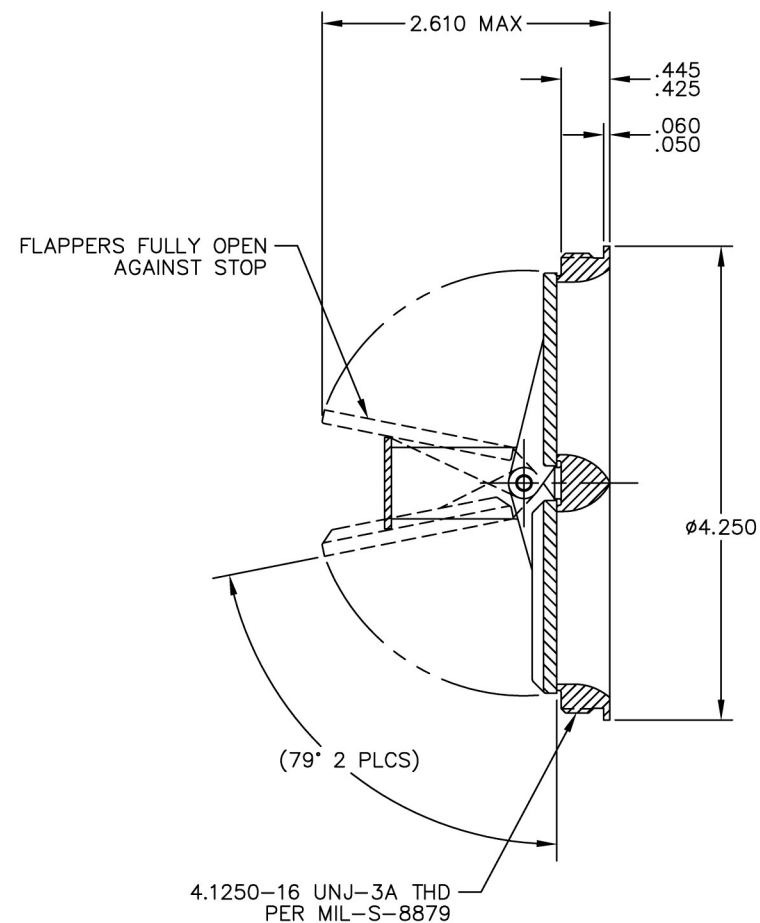
CRACKING PRESSURE: 1" H₂O MAX

FLOW: 110 LB/MIN AT 1.60 PSID MAX WITH 58 PSIA INLET AND 387°F

INTERNAL LEAKAGE: 0.35 LB/MIN MAX AT 72.5 PSIG AND 1040°F

WEIGHT: 0.85 LBS MAX

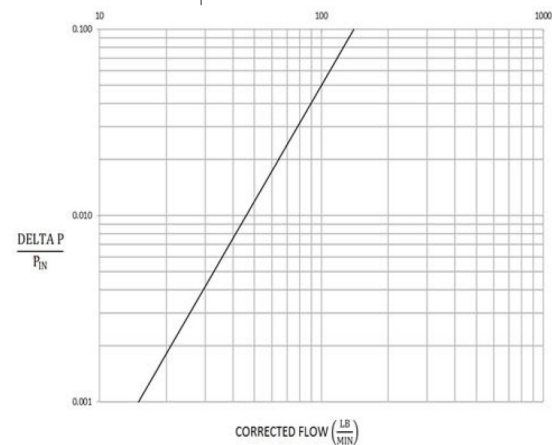
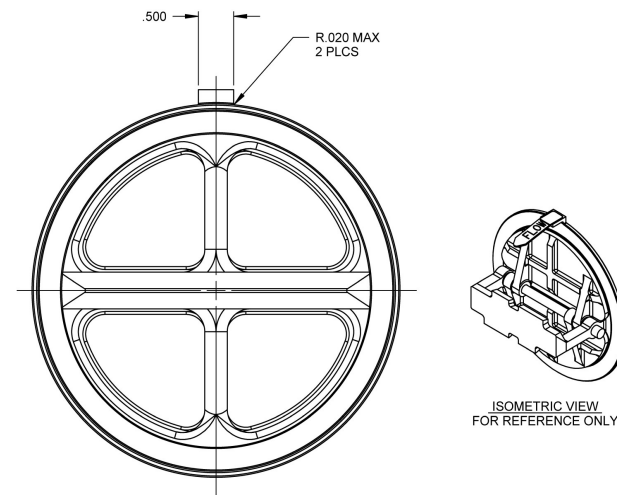
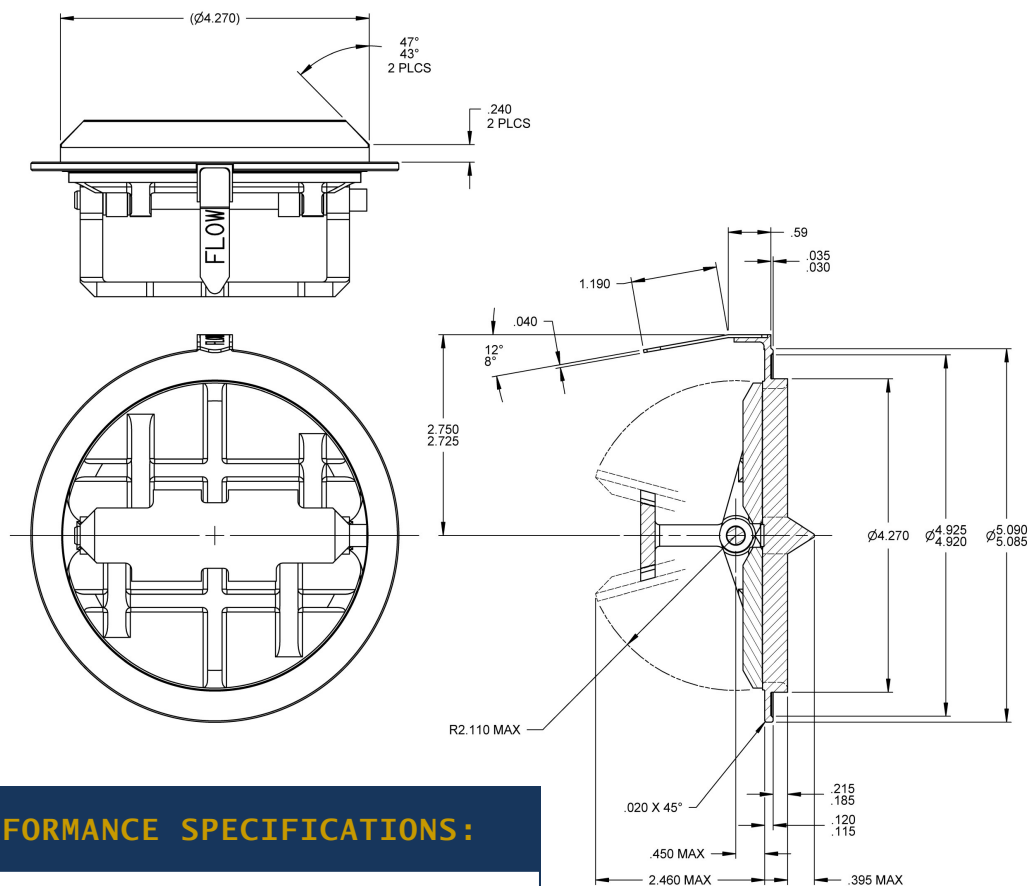
CATEGORY 1: SPLIT FLAPPER CHECK VALVES



CATEGORY 1: SPLIT FLAPPER CHECK VALVES



PART NUMBER: 2S7500, CHECK VALVE



MAXIMUM ALLOWABLE PRESSURE LOSS

PERFORMANCE SPECIFICATIONS:

FLUIDS: BLEED AIR

MATERIAL: BODY INCONEL 718

FLAPPER INCONEL 718

TEMPERATURE RANGE: -65°F TO 1184°F

OPERATING PRESSURE: 171 PSIG

PROOF PRESSURE: 372 PSIG (FLOW DIRECTION)

352 PSIG (CHECKED DIRECTION)

CRACKING PRESSURE: 2" H₂O MAX

FLOW: SEE CHART

INTERNAL LEAKAGE: 0.30 LB/MIN MAX AT 219 PSIG AND 70°F

WEIGHT: 1.93 LBS MAX

CATEGORY 1: SPLIT FLAPPER CHECK VALVES



CRISSAIR HAS HUNDREDS OF OTHER CHECK VALVES NOT LISTED IN THE CATALOG WITH DIFFERENT MATERIALS, FITTINGS, AND SIZE CONFIGURATIONS.

CONTACT CRISSAIR FOR ADDITIONAL INFORMATION/DRAWINGS AT

(661) 367-3300 OR SALES@CRISSAIR.COM.

YOU CAN ALSO VISIT WWW.CRISSAIR.COM.



RELIEF VALVES

Crissair Inc. designs and manufactures Pilot Operated High Pressure Relief Valves and Direct Acting Relief Valves.

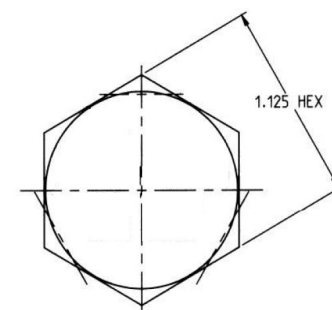
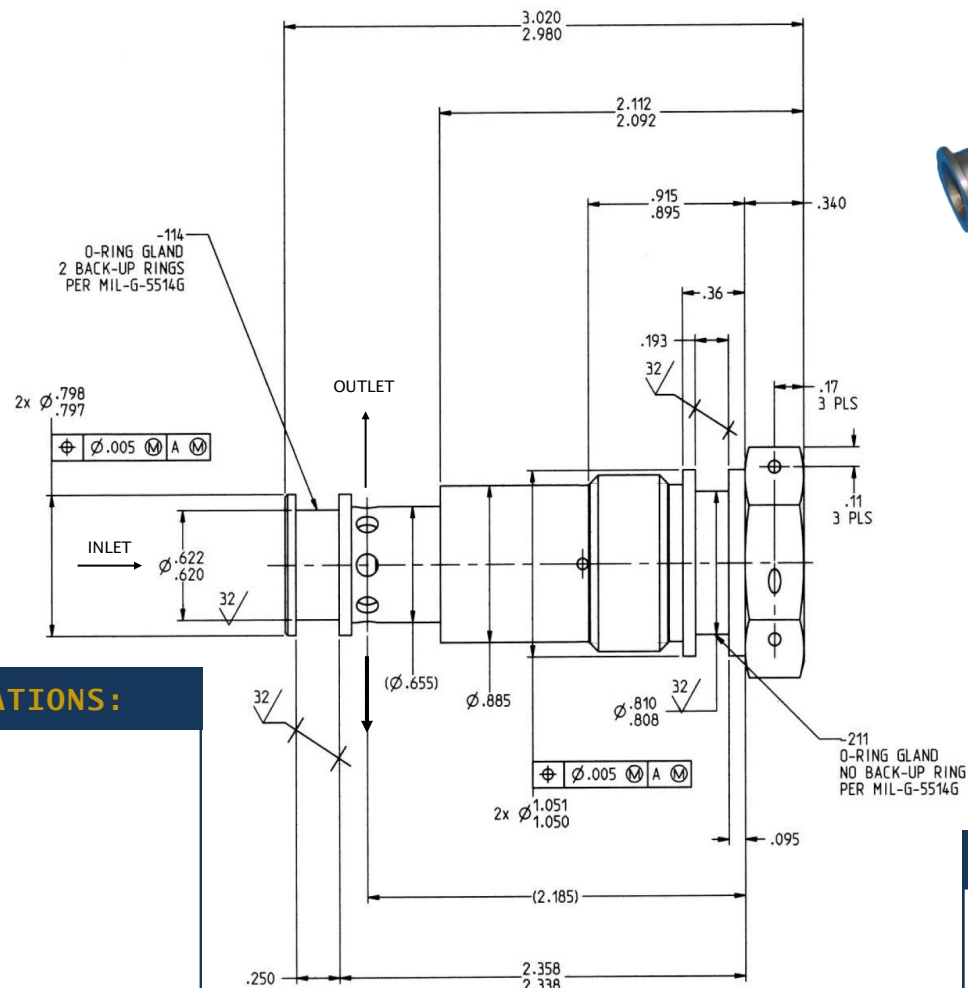
- Pilot Operated High Pressure Relief Valves offer very high flow rates and low leakage rates with a tight window (steep performance curve) between cracking pressure, full flow pressure, and reseal pressure; utilizing relatively small packages.
- Direct Acting Relief Valves are less complex and more suitable for systems with lower pressures (less than 3000 PSI) or high pressure systems with larger envelope availability and larger window between cracking pressure, full flow pressure, and reseal pressure.



This catalog contains a small sample of drawings. Please contact Crissair for additional drawings and/or configurations.



PART NUMBER: 36730-X SYSTEM PRESSURE RELIEF VALVE



PERFORMANCE SPECIFICATIONS:

FLUID: ANY AIRCRAFT HYDRAULIC FLUID

MATERIAL: HOUSING 6061-T6/CF AL

SEAT / POPPET 440C CRES

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 3000 PSIG

PROOF PRESSURE: 4500 PSIG

CRACKING PRESSURE: 3400—3600 PSID*

FLOW: 3800 PSID MAX AT 63 GPM*

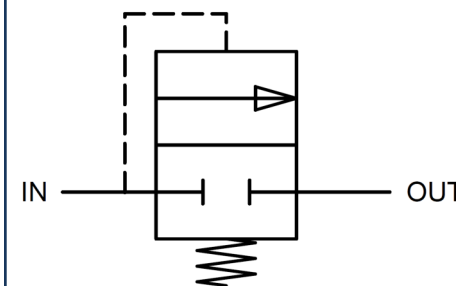
RESEAT: 3300 PSID MINIMUM*

INTERNAL LEAKAGE: 10 CC/MIN MAXIMUM AT 3000 PSID

WEIGHT: 0.240 LBS MAX

*CRACK, FLOW, AND RESEAT CAN MOVE UP OR DOWN BY USING SHIMS OR REPLACING THE SPRING

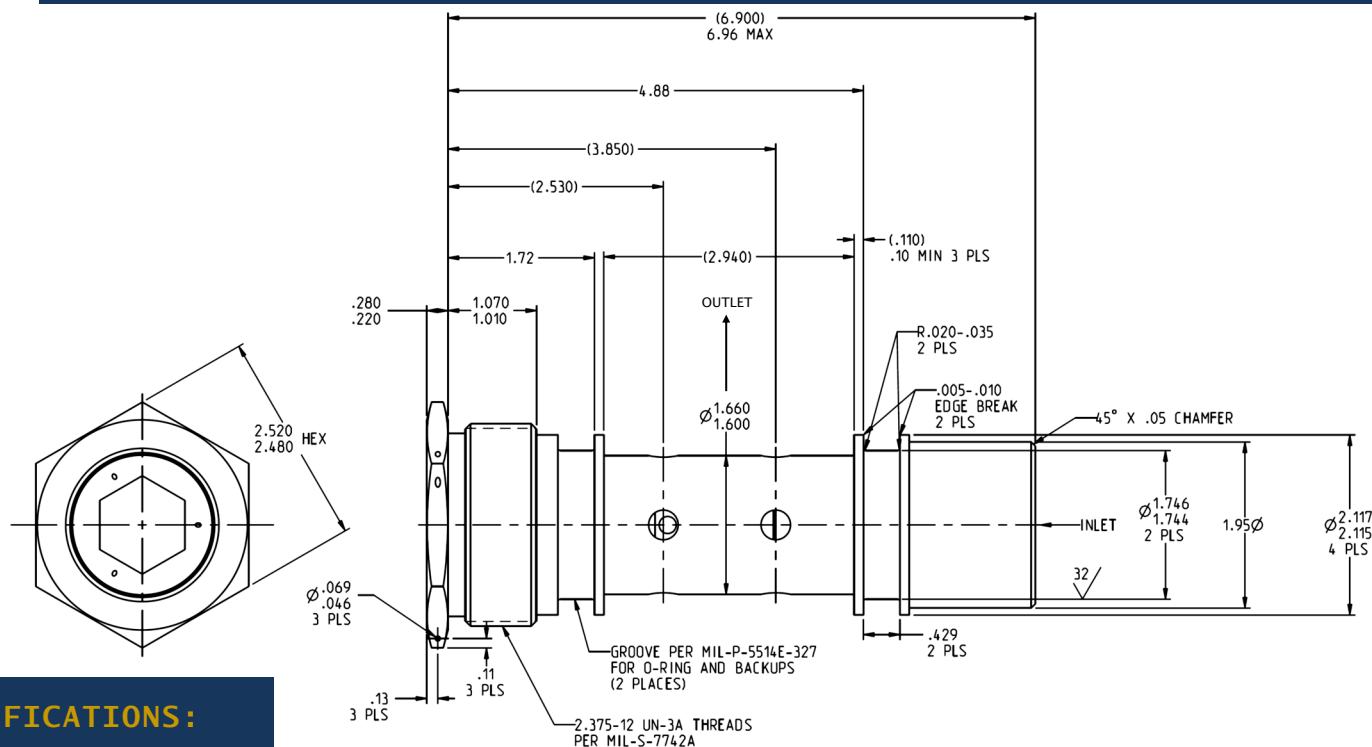
HYDRAULIC SCHEMATIC



CATEGORY 2: RELIEF VALVES, HIGH PRESSURE, PILOT OPERATED



PART NUMBER: 36740-X SYSTEM PRESSURE RELIEF VALVE/CHECK VALVE



PERFORMANCE SPECIFICATIONS:

FLUID: ANY AIRCRAFT HYDRAULIC FLUID

MATERIAL: HOUSING 6061-T6/CF AL

SEAT / POPPET 440C CRES

TEMPERATURE RANGE: -65°F TO 160°F

OPERATING PRESSURE: 3000 PSIG

PROOF PRESSURE: 4500 PSIG

CRACKING PRESSURE (RELIEF): 3450 TO 3650 PSID*

FLOW (RELIEF): 3850 PSID MAX AT 40 GPM*

RESEAT (RELIEF): 3350 PSID MINIMUM*

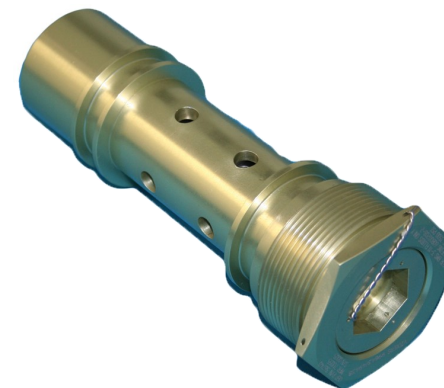
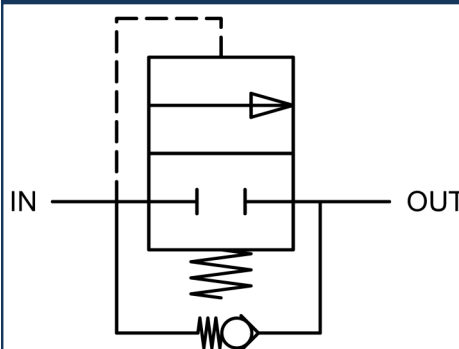
INTERNAL LEAKAGE: 10 CC/MIN MAX AT 3000 PSID

REVERSE FLOW (CHECK VALVE): 500 PSID MAX @ 40 GPM

WEIGHT: 2.20 LBS MAX

*CRACK, FLOW, AND RESEAT CAN MOVE UP OR DOWN BY USING SHIMS OR REPLACING THE SPRING

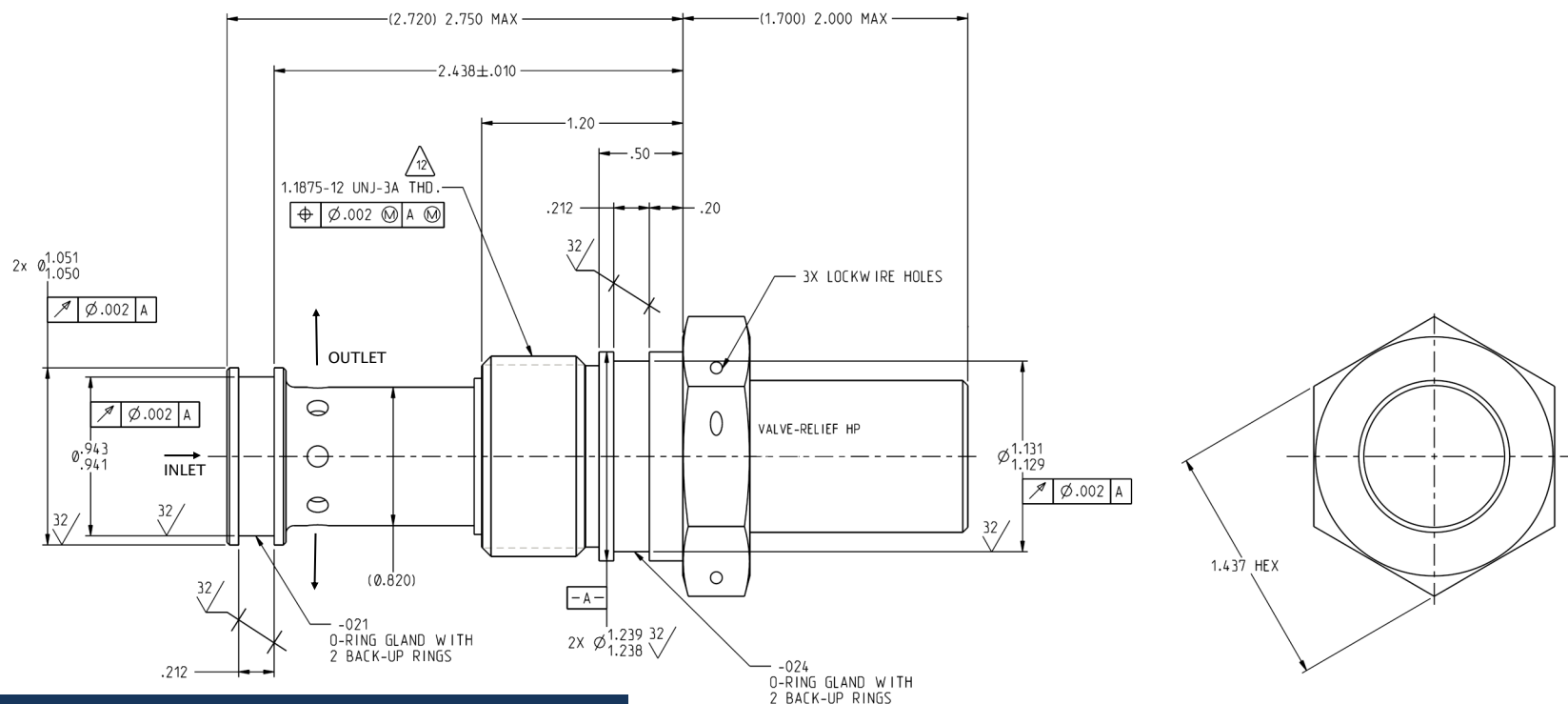
HYDRAULIC SCHEMATIC



CATEGORY 2: RELIEF VALVES, HIGH PRESSURE, PILOT OPERATED



PART NUMBER: 37000-X SYSTEM PRESSURE RELIEF VALVE



PERFORMANCE SPECIFICATIONS:

FLUID: ANY AIRCRAFT HYDRAULIC FLUID

MATERIAL: HOUSING 17-4 PH

SEAT / POPPET 440C CRES

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 5000 PSIG MINIMUM

PROOF PRESSURE: 7500 PSIG MINIMUM

CRACKING PRESSURE: 5650 PSID MINIMUM*

FLOW: 56 GPM MINIMUM AT 6150 PSID MAXIMUM*

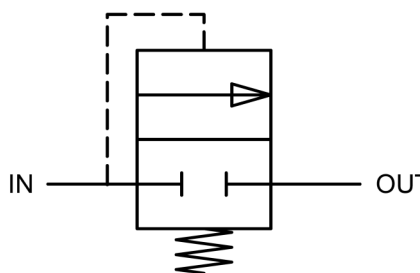
RESEAT: 5400 PSID MINIMUM*

INTERNAL LEAKAGE: 10 CC/MIN MAXIMUM AT 5000 PSID

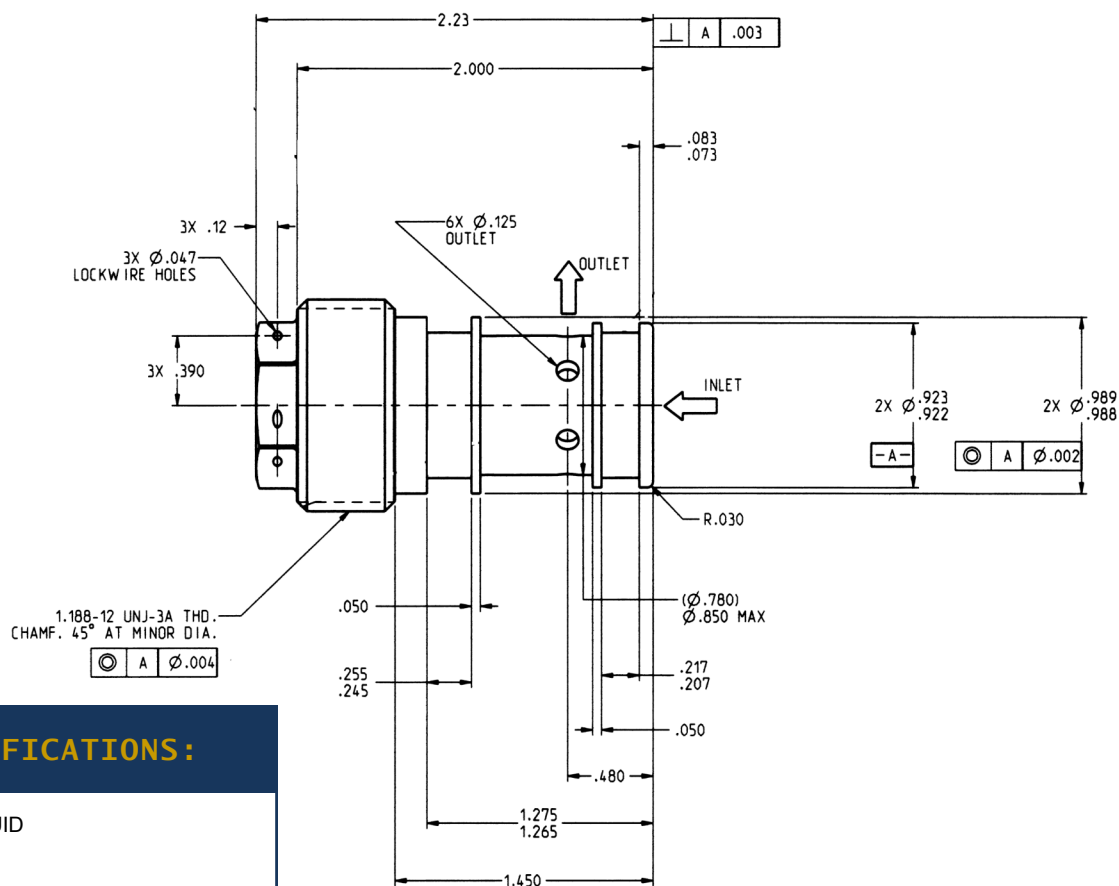
WEIGHT: 1.00 LBS MAX

*CRACK, FLOW, AND RESEAT CAN MOVE UP OR DOWN BY USING SHIMS OR REPLACING THE SPRING

HYDRAULIC SCHEMATIC



CATEGORY 2: RELIEF VALVES, HIGH PRESSURE, PILOT OPERATED



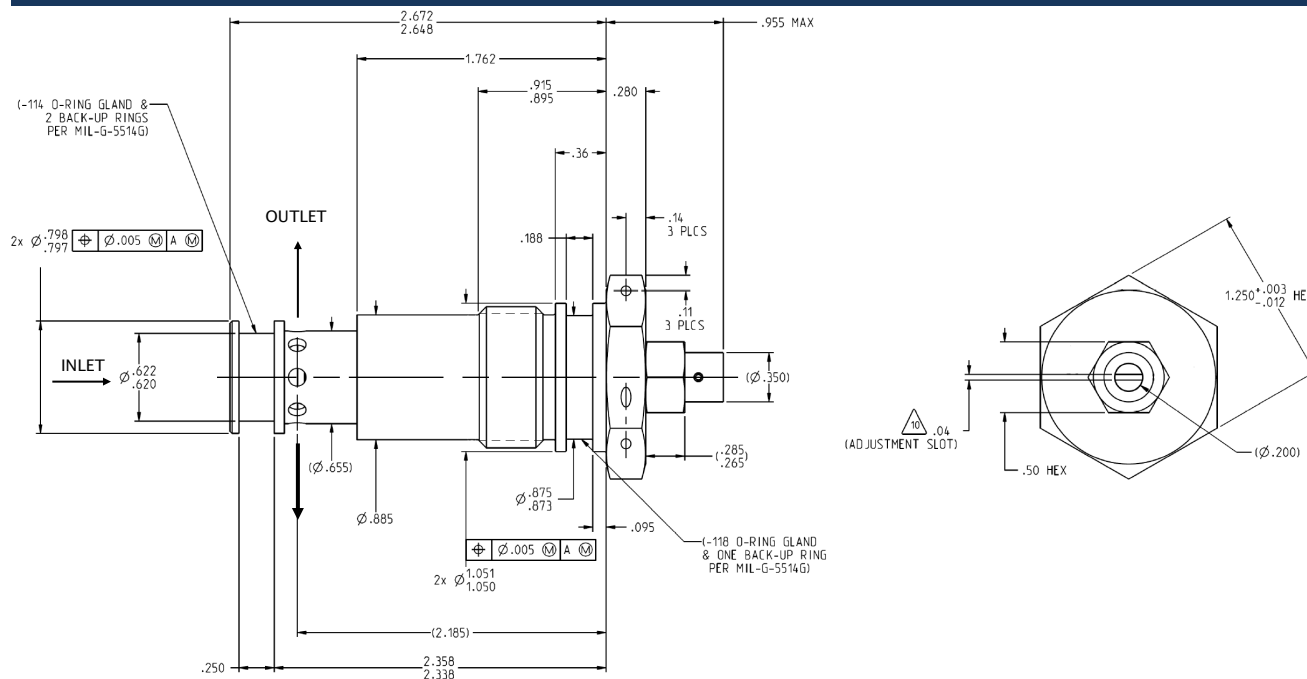
*CRACK, FLOW, AND RESEAT CAN MOVE UP OR DOWN BY USING SHIMS OR REPLACING THE SPRING



CATEGORY 2: RELIEF VALVES, HIGH PRESSURE, PILOT OPERATED



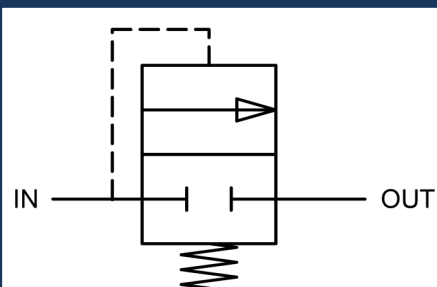
PART NUMBER: 4R0006-X SYSTEM PRESSURE RELIEF VALVE, ADJUSTABLE



PERFORMANCE SPECIFICATIONS:

FLUID: ANY AIRCRAFT HYDRAULIC, LUBRICATION, OR FUEL FLUID
 MATERIAL: HOUSING 15-5PH
 POPPET 440C CRES
 TEMPERATURE RANGE: -65°F TO 275°F
 OPERATING PRESSURE: 3200 PSIG MAX AT PRESSURE PORT
 AND 215 PSIG MAX AT RETURN PORT
 PROOF PRESSURE: 4800 PSIG AT PRESSURE AND RETURN PORT
 CRACKING PRESSURE: 3600 TO 3800 PSID*
 FLOW: 72 GPM AT 3745 PSID MAX*
 (WITH RETURN PRESSURE BETWEEN 55 PSID TO 215 PSID)
 RESEAT: 3350 PSID MINIMUM AT 15 CC/MIN MAX)*
 INTERNAL LEAKAGE: 15 CC/MIN MAX FROM 0 TO 3200 PSID
 AND FROM 3200 TO 0 PSID
 WEIGHT: 0.50 LBS MAX
 *CRACK, FLOW, AND RESEAT CAN MOVE UP OR DOWN
 BY USING SHIMS OR REPLACING THE SPRING

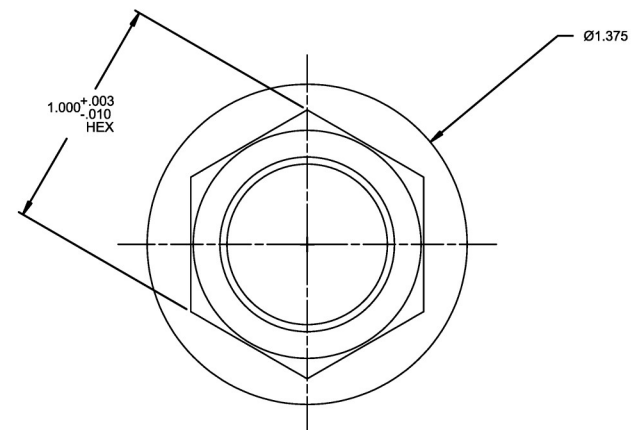
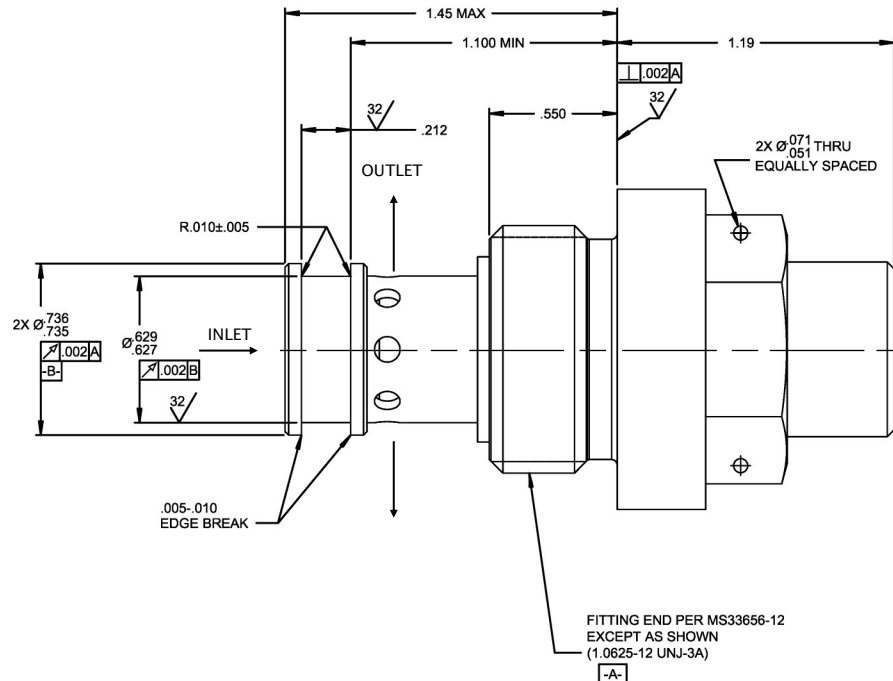
HYDRAULIC SCHEMATIC



CATEGORY 2: RELIEF VALVES, PILOT OPERATED



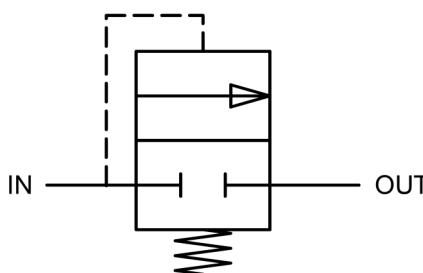
PART NUMBER: 37710-X SYSTEM RELIEF VALVE



PERFORMANCE SPECIFICATIONS:

FLUID: ANY AIRCRAFT HYDRAULIC FLUID
 MATERIAL: HOUSING 2024 AL
 BODY 15-5 PH
 POPPET 440C CRES
 TEMPERATURE RANGE: -40°F TO 275°F (FLUID)
 -67°F TO 200°F (AMBIENT)
 OPERATING PRESSURE: 3050 PSIG NOMINAL
 PROOF PRESSURE: 4575 PSIG
 CRACKING PRESSURE: 3640 PSID MAX AT 20 CC/MIN*
 FLOW: 32.7 GPM 3640 PSID MAX*
 RESEAT: 3200 PSIG MINIMUM AT 12 CC/MIN*
 INTERNAL LEAKAGE: 4 CC/MIN MAX AT ANY DIFFERENTIAL PRESSURE
 FROM 0 TO 3000 PSID
 (FLUID TEMP UP TO 275°F)
 WEIGHT: 0.50 LBS MAX
 *CRACK, FLOW, AND RESEAT CAN MOVE UP OR DOWN BY
 USING SHIMS OR REPLACING THE SPRING

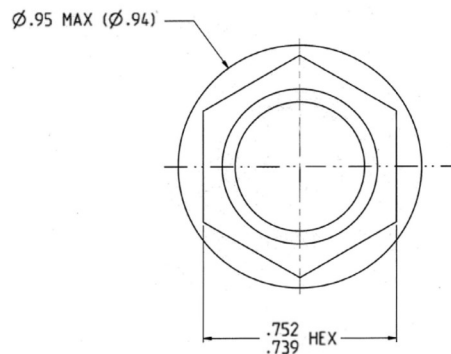
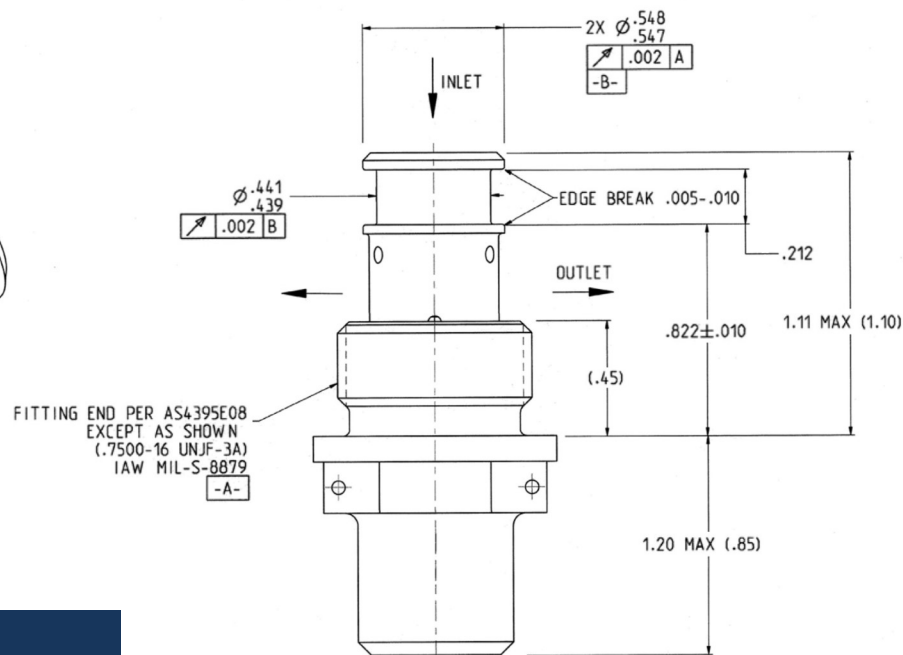
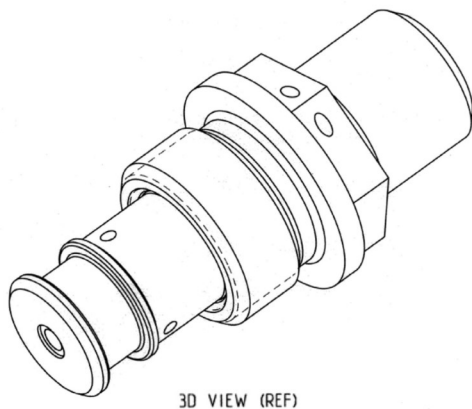
HYDRAULIC SCHEMATIC



CATEGORY 2: RELIEF VALVES, PILOT OPERATED



PART NUMBER: 2R4626 RELIEF VALVE



PERFORMANCE SPECIFICATIONS:

FLUID: ANY AIRCRAFT HYDRAULIC FLUID

MATERIAL: SEAT 440C CRES

POPPET PH13-8MO CRES

CAP 15-5PH CRES

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 3000 PSIG

PROOF PRESSURE: 4500 PSIG

CRACKING PRESSURE: 3425 ± 175 PSID*

FLOW: 3.7 GPM AT 3600 PSID MAX*

RESEAT: 3250 PSID MIN*

INTERNAL LEAKAGE: 4 CC/MIN MAX AT 0 TO 3000 PSID (INLET)

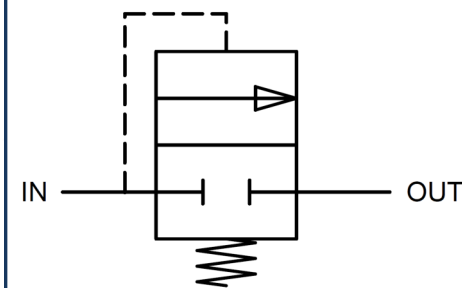
12 CC/MIN MAX AT 3000 TO 3250 PSID (INLET)

12 CC/MIN MAX AT 150 PSID (OUTLET)

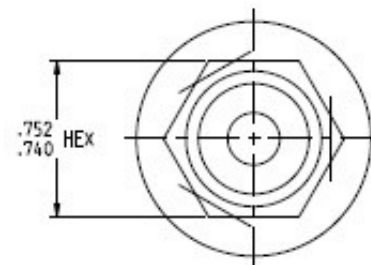
WEIGHT: 0.165 LBS MAX

*CRACK, FLOW AND RESEAT CAN MOVE UP OR DOWN BY USING SHIMS OR REPLACING THE SPRING

HYDRAULIC SCHEMATIC



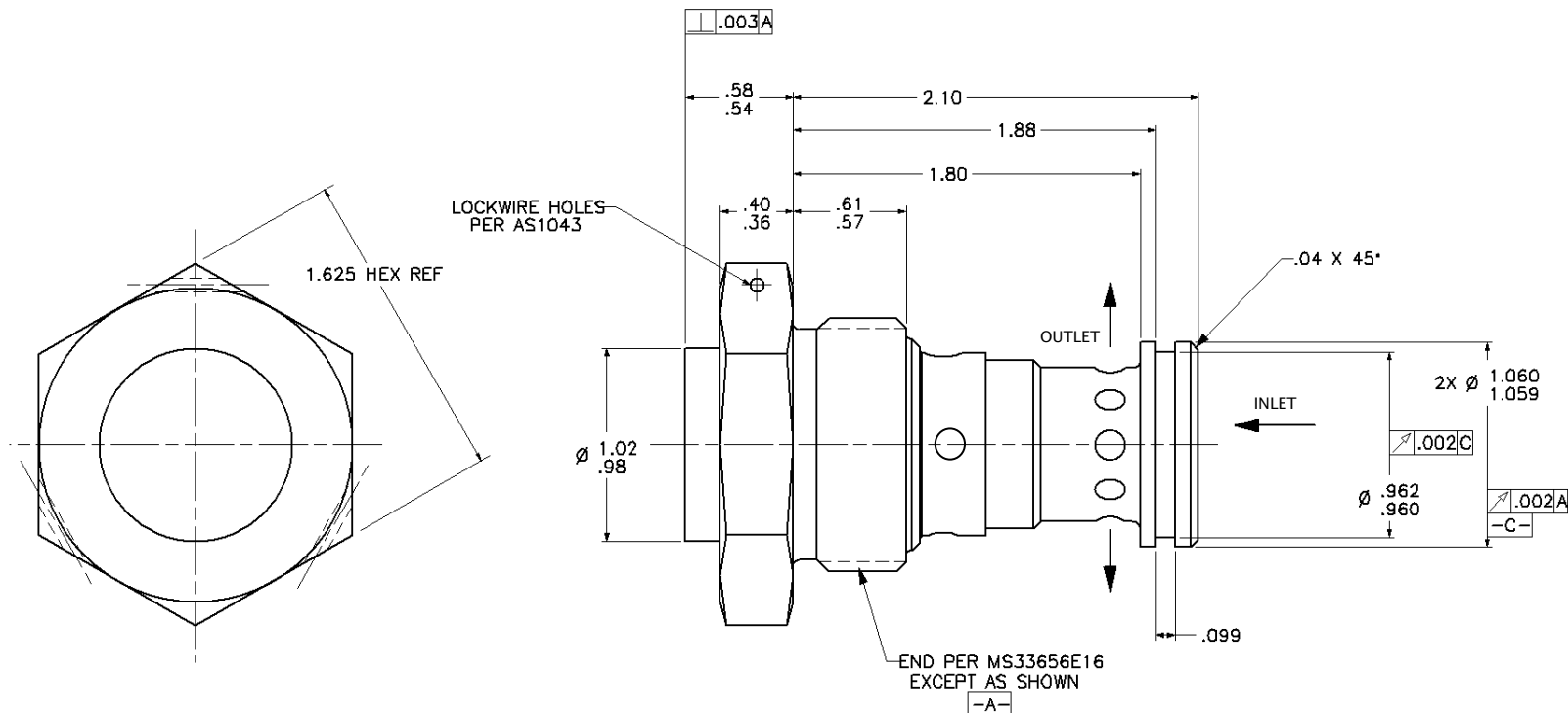
CATEGORY 2: RELIEF VALVES



CATEGORY 2: RELIEF VALVES, DIRECT ACTING



PART NUMBER: 35460-X RELIEF VALVE



PERFORMANCE SPECIFICATIONS:

FLUID: ANY AIRCRAFT HYDRAULIC, LUBRICATION OR FUEL FLUID

MATERIAL: HOUSING 2024-T351 AL

POPPET 15-5 PH CRES

TEMPERATURE RANGE: -65°F TO 400°F

PROOF PRESSURE: 710 PSIG

CRACKING PRESSURE: 480 PSID MINIMUM*

FLOW: 36 GPM AT 635 PSID MAX*

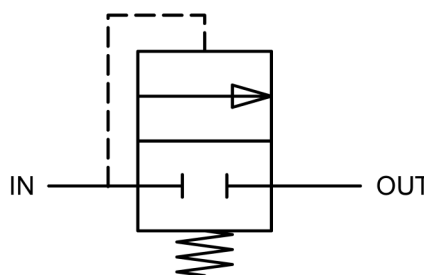
RESEAT: 480 PSID MINIMUM*

INTERNAL LEAKAGE: 300 CC/MIN MAX AT LESS THAN 480 PSID

WEIGHT: 0.35 LBS MAX

*CRACK, FLOW, AND RESEAT CAN MOVE UP OR DOWN BY USING SHIMS OR REPLACING THE SPRING

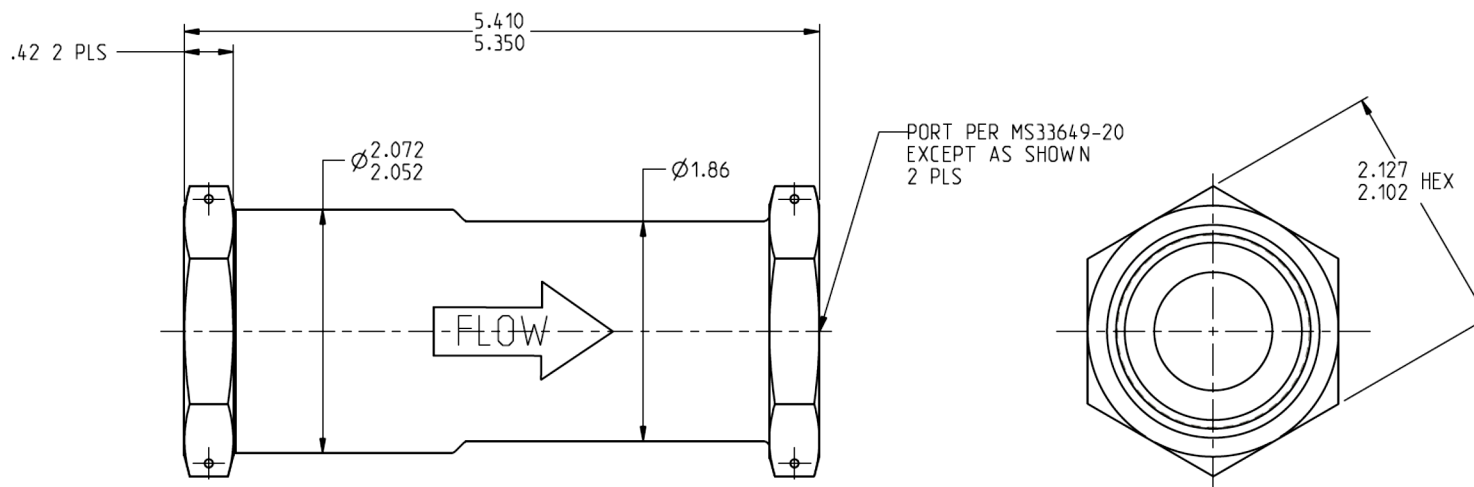
HYDRAULIC SCHEMATIC



CATEGORY 2: RELIEF VALVES, DIRECT ACTING



PART NUMBER: 35600-X RELIEF VALVE



PERFORMANCE SPECIFICATIONS:

FLUID: ETHYLENE GLYCOL/WATER

MATERIAL: BODY 6061-T6 AL

POPPET 6061-T6 AL

TEMPERATURE RANGE: -65 TO 185°F

PROOF PRESSURE: 185 PSIG

CRACKING PRESSURE: 83±4 PSID*

FLOW: 26 GPM AT 95 PSID MAX*

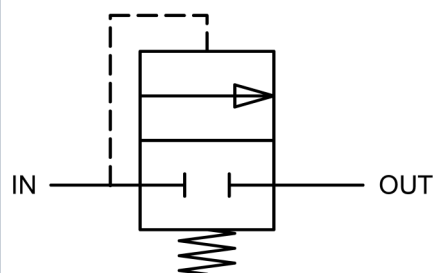
RESEAT: 75 PSID MINIMUM*

INTERNAL LEAKAGE: 0 DPM AT 70 PSID

WEIGHT: 0.88 LBS MAX

*CRACK, FLOW, AND RESEAT CAN MOVE UP OR DOWN
BY USING SHIMS OR REPLACING THE SPRING

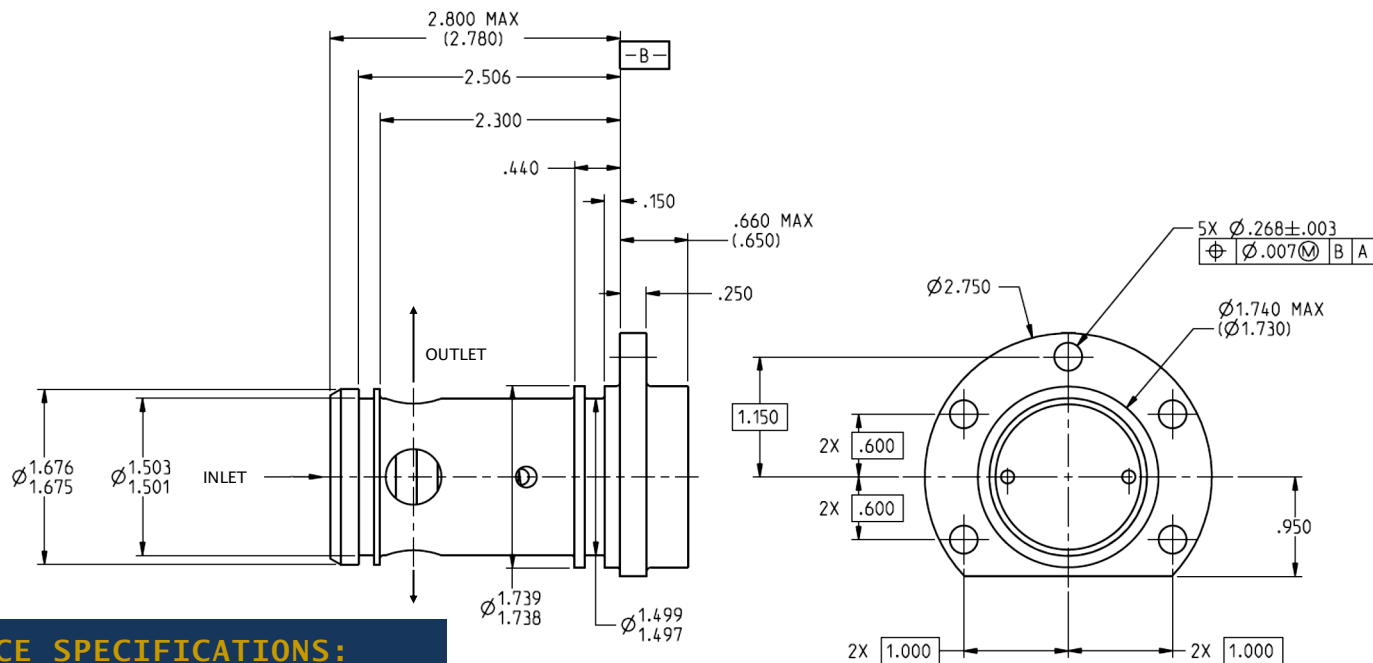
HYDRAULIC SCHEMATIC



CATEGORY 2: RELIEF VALVES, DIRECT ACTING



PART NUMBER: 37270-X RELIEF VALVE



PERFORMANCE SPECIFICATIONS:

FLUID: ANY AIRCRAFT HYDRAULIC FLUID

MATERIAL: BODY 2024-T851 AL

POPPET 440C CRES

TEMPERATURE RANGE: -65 TO 275°F

OPERATING PRESSURE: 1015 PSIG

PROOF PRESSURE: 1500 PSIG

CRACKING PRESSURE: 116 TO 130 PSID*

FLOW: 66 GPM AT 170 PSID MAX*

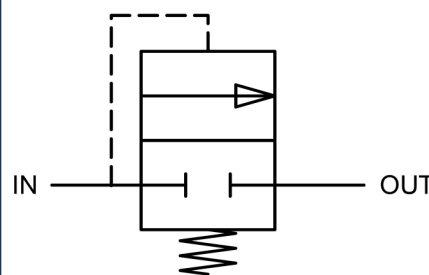
RESEAT: 94 PSID MINIMUM*

INTERNAL LEAKAGE (CHECKED): 1 DPM MAX AT 5 PSID
0 DPM AT 1015 PSID

WEIGHT: 0.74 LBS MAX

*CRACK, FLOW, AND RESEAT CAN MOVE UP OR DOWN
BY USING SHIMS OR REPLACING THE SPRING

HYDRAULIC SCHEMATIC



CATEGORY 2: RELIEF VALVES, DIRECT ACTING

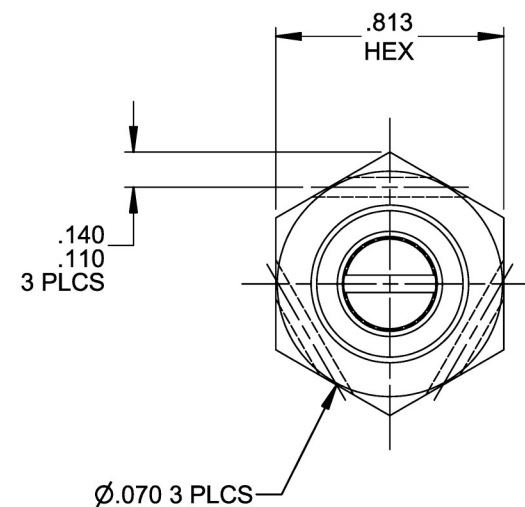
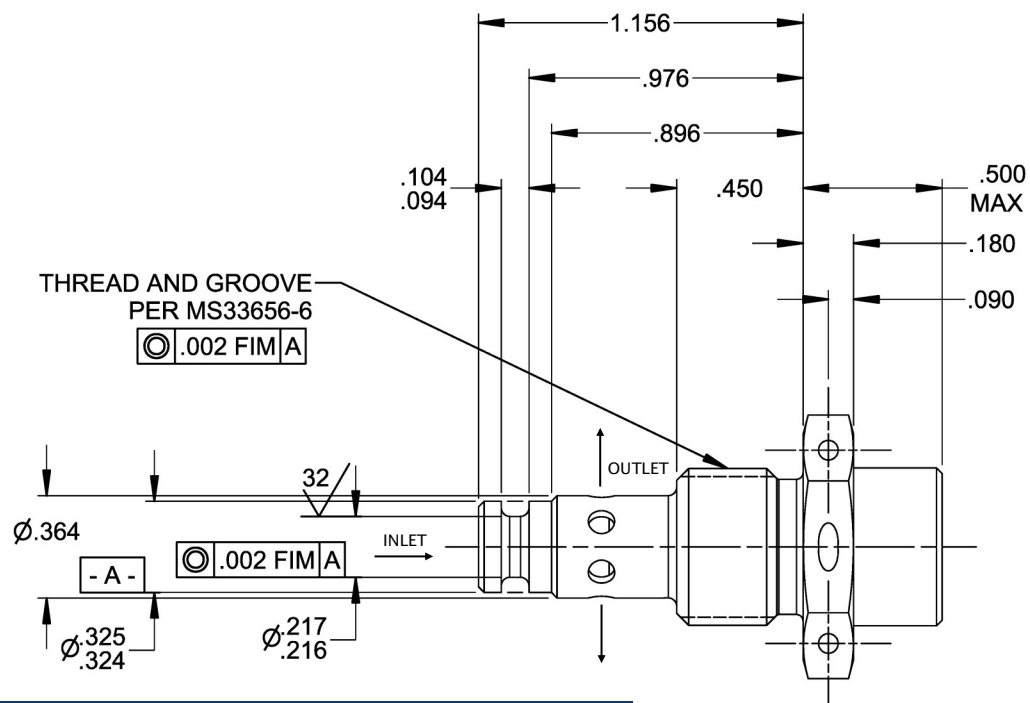


*CRACK, FLOW, AND RESEAT CAN MOVE UP OR DOWN BY USING SHIMS OR REPLACING THE SPRING

CATEGORY 2: RELIEF VALVES, DIRECT ACTING



PART NUMBER: 2R3634-X RELIEF VALVE



PERFORMANCE SPECIFICATIONS:

FLUID: ANY AIRCRAFT HYDRAULIC FLUID

MATERIAL: BODY 2024-T351 AL

POPPET 440C CRES

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 3000 PSIG

PROOF PRESSURE: 4500 PSIG

CRACKING PRESSURE: SEE TABULATION*

FLOW: .06 LIT/MIN AT 1200 PSID MAX*

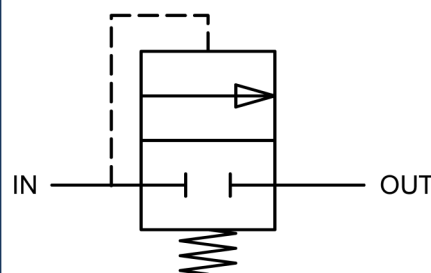
RESEAT: SEE TABULATION*

INTERNAL LEAKAGE: 1 CC/MIN MAX AT MINIMUM RESEAT PRESSURE ON DECREASING PRESSURE

WEIGHT: .035 LBS MAX

*CRACK, FLOW, AND RESEAT CAN MOVE UP OR DOWN BY USING SHIMS OR REPLACING THE SPRING

HYDRAULIC SCHEMATIC



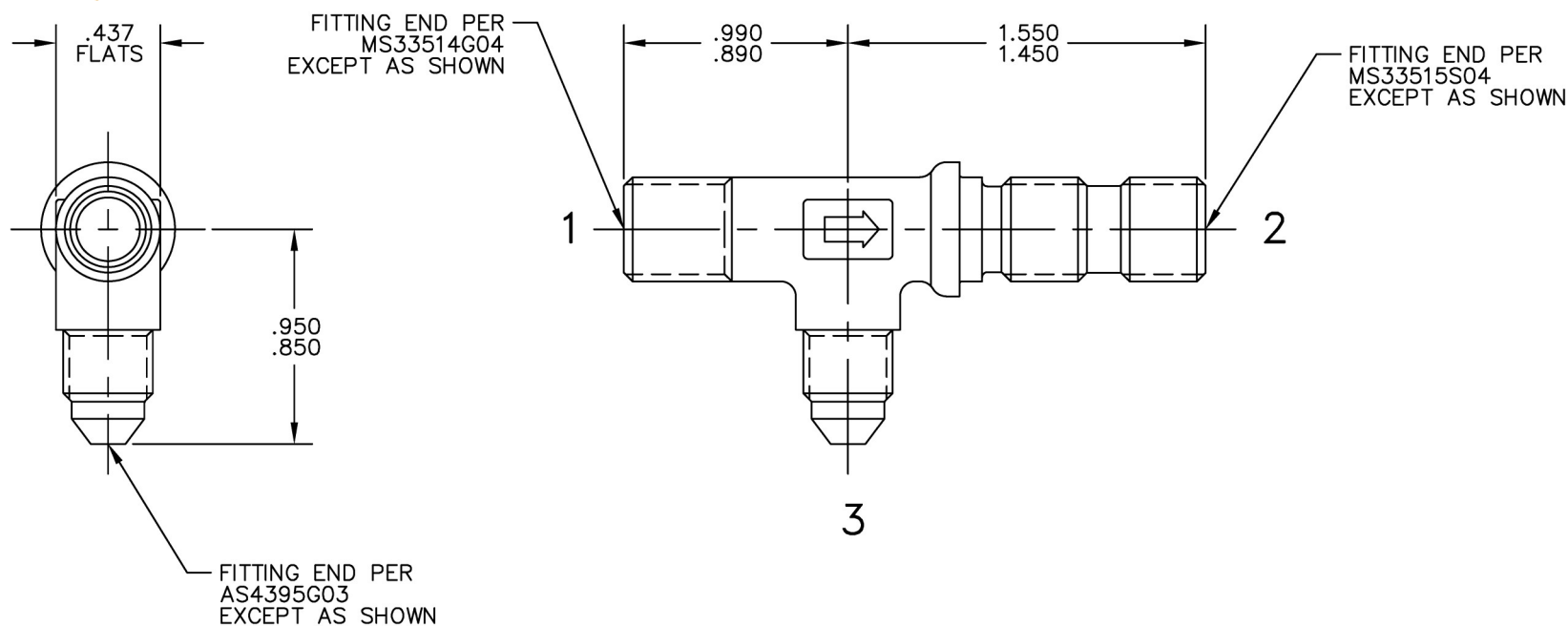
PART NO. OF TABULATION

DASH NO	CRACKING PRESSURE	RESEAT PRESSURE
-1	900 ± 100 PSID	720 PSID MIN
-2	1100 ± 100 PSID	720 PSID MIN
-3	250 ± 50 PSID	180 PSID MIN
-4	700 ± 50 PSID	560 PSID MIN
-5	180 ± 50 PSID	120 PSID MIN

CATEGORY 2: RELIEF VALVES, DIRECT ACTING



PART NUMBER: 2R3746 RELIEF VALVE



PERFORMANCE SPECIFICATIONS:

FLUID: ANY AIRCRAFT HYDRAULIC FLUIDS OR FUELS

MATERIAL: BODY 304 CRES

POPPET 440C CRES

TEMPERATURE RANGE: -65°F TO 400°F

OPERATING PRESSURE: 900 PSIG

PROOF PRESSURE: 2000 PSIG

CRACKING PRESSURE: 125 ± 10 PSID*

FLOW: 0.05 GPM MIN AT 135 PSID (PORT 1 TO PORT 2)*

0.5 GPM MIN AT 200 PSID (PORT 1 TO PORT 2)*

INTERNAL LEAKAGE: 20 DPM MAX AT 100 PSID

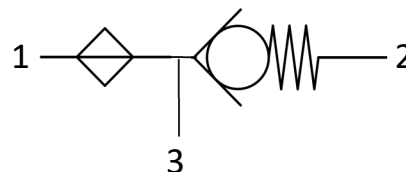
2 CC/MIN MAX AT 115 PSID

FILTER: SINTERED WOVEN MESH 40 MICRON NOMINAL

60 MICRON ABSOLUTE

*CRACK AND FLOW CAN MOVE UP OR DOWN
BY USING SHIMS OR REPLACING THE SPRING

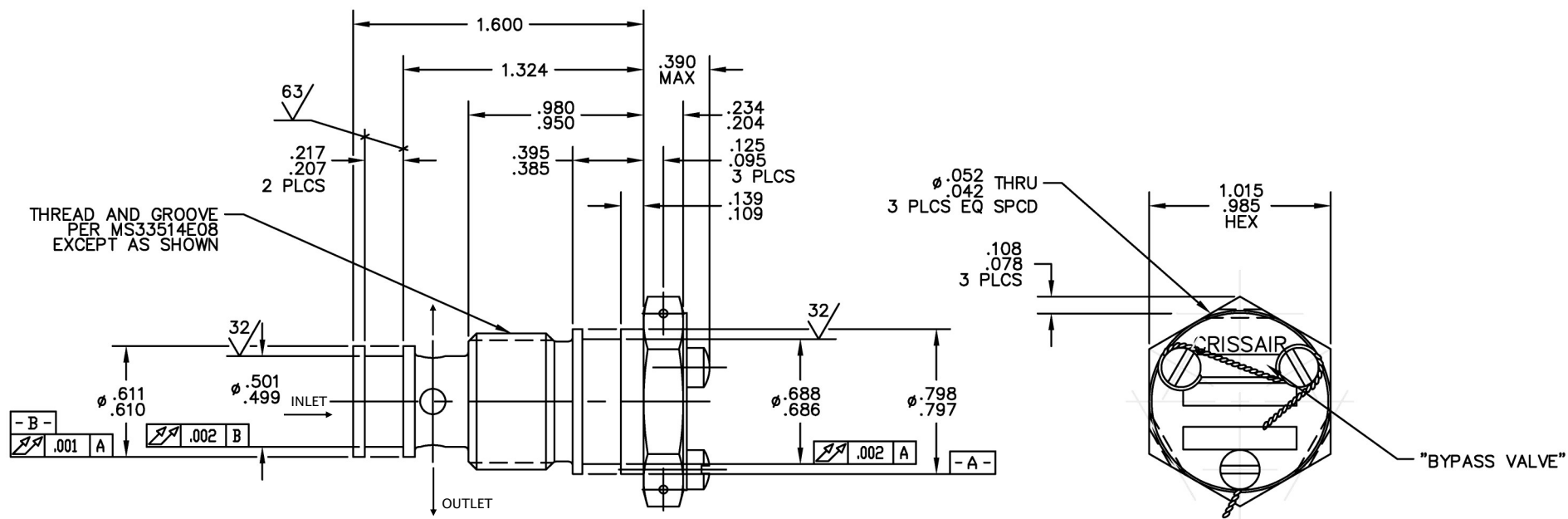
HYDRAULIC SCHEMATIC



CATEGORY 2: RELIEF VALVES, DIRECT ACTING



PART NUMBER: 2R3860 RELIEF VALVE, BYPASS



PERFORMANCE SPECIFICATIONS:

FLUID: HYDRAULIC FLUIDS PER MIL-H-5606

MATERIAL: BODY 17-4PH CRES

POPPET 440C CRES

TEMPERATURE RANGE: FLUID: -67°F TO +230°F (NORMAL OPERATING)
 AMBIENT: -67°F TO +158°F (NORMAL OPERATING)

OPERATING PRESSURE: 1550 PSIG

PROOF PRESSURE: 3100 PSIG

CRACKING PRESSURE: 21 TO 25 PSID*

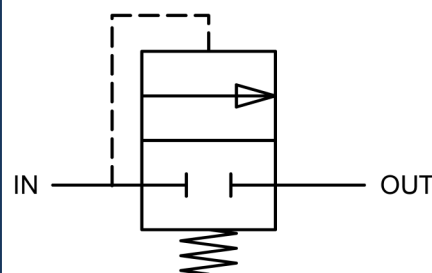
FLOW: 1.0 GPM AT 32 PSID MAX AND 90°F ± 10°F*

INTERNAL LEAKAGE: 3.0 DPM MAX AT 5 PSID
 2.0 DPM AT 1000 TO 3000 PSID AT 70°F

WEIGHT: .15 LBS MAXIMUM DRY

*CRACK AND FLOW CAN MOVE UP OR DOWN
 BY USING SHIMS OR REPLACING THE SPRING

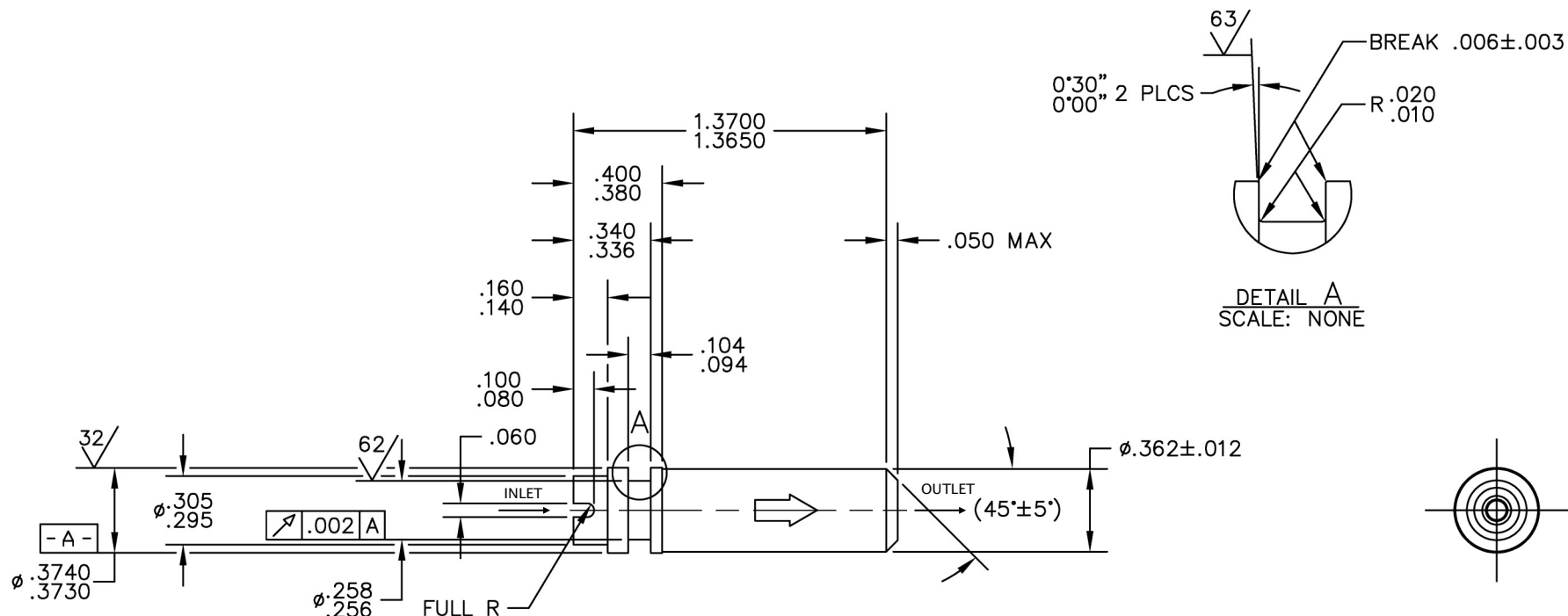
HYDRAULIC SCHEMATIC



CATEGORY 2: RELIEF VALVES, DIRECT ACTING



PART NUMBER: 2R3914 RELIEF VALVE



PERFORMANCE SPECIFICATIONS:

FLUID: JET A/A-1, JP4, JP8 AND MIL-C-7024 AVIATION FUEL

MATERIAL: BODY 303 CRES

POPPET 440C CRES

TEMPERATURE RANGE: -65°F TO 400°F

OPERATING PRESSURE: 900 PSIG

PROOF PRESSURE: 2000 PSIG

CRACKING PRESSURE: 125 ± 10 PSID*

FLOW: 20 DPM MAX AT 100 PSID*

2 CC/MIN MAX AT 115 PSID*

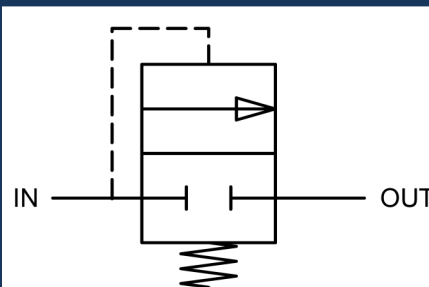
20 LB/HR MIN AT 135 PSID*

200 LB/HR MIN (0.5 GPM) AT 210 PSID*

INTERNAL LEAKAGE: 20 DPM MAX AT 100 PSID

*CRACK AND FLOW CAN MOVE UP OR DOWN
BY USING SHIMS OR REPLACING THE SPRING

HYDRAULIC SCHEMATIC



CATEGORY 2: RELIEF VALVES, DIRECT ACTING

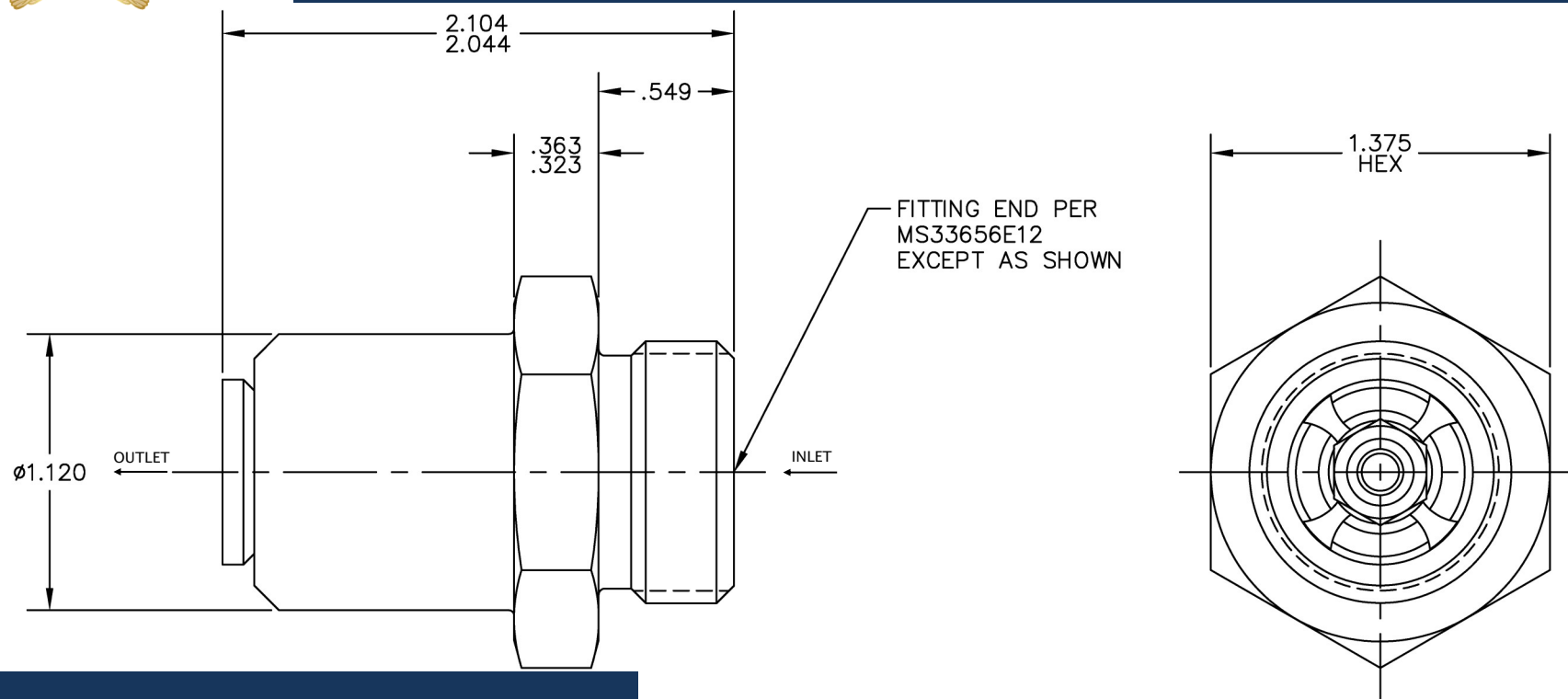


*CRACK, FLOW, AND RESEAT CAN MOVE UP OR DOWN BY USING SHIMS OR REPLACING THE SPRING

CATEGORY 2: RELIEF VALVES, DIRECT ACTING



PART NUMBER: 3R2086 RELIEF VALVE



PERFORMANCE SPECIFICATIONS:

FLUID: AIR

MATERIAL: BODY 2024-T351 AL

POPPET 2024-T351 AL

TEMPERATURE RANGE: -65°F TO 225°F

OPERATING PRESSURE: 100 PSIG

PROOF PRESSURE: 150 PSIG

CRACKING PRESSURE: 5 TO 8 PSID*

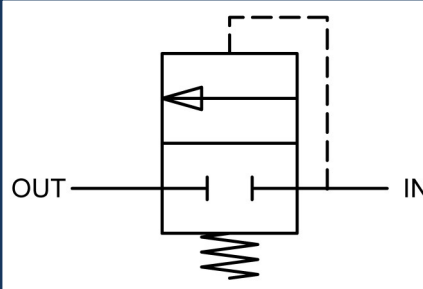
FLOW: 6.0 PPM MIN AT 60 PSID MAX AT 180°F*

INTERNAL LEAKAGE: .038 PPM AT 4 PSID

WEIGHT: .175 LBS MAX

*CRACK AND FLOW CAN MOVE UP OR DOWN
BY USING SHIMS OR REPLACING THE SPRING

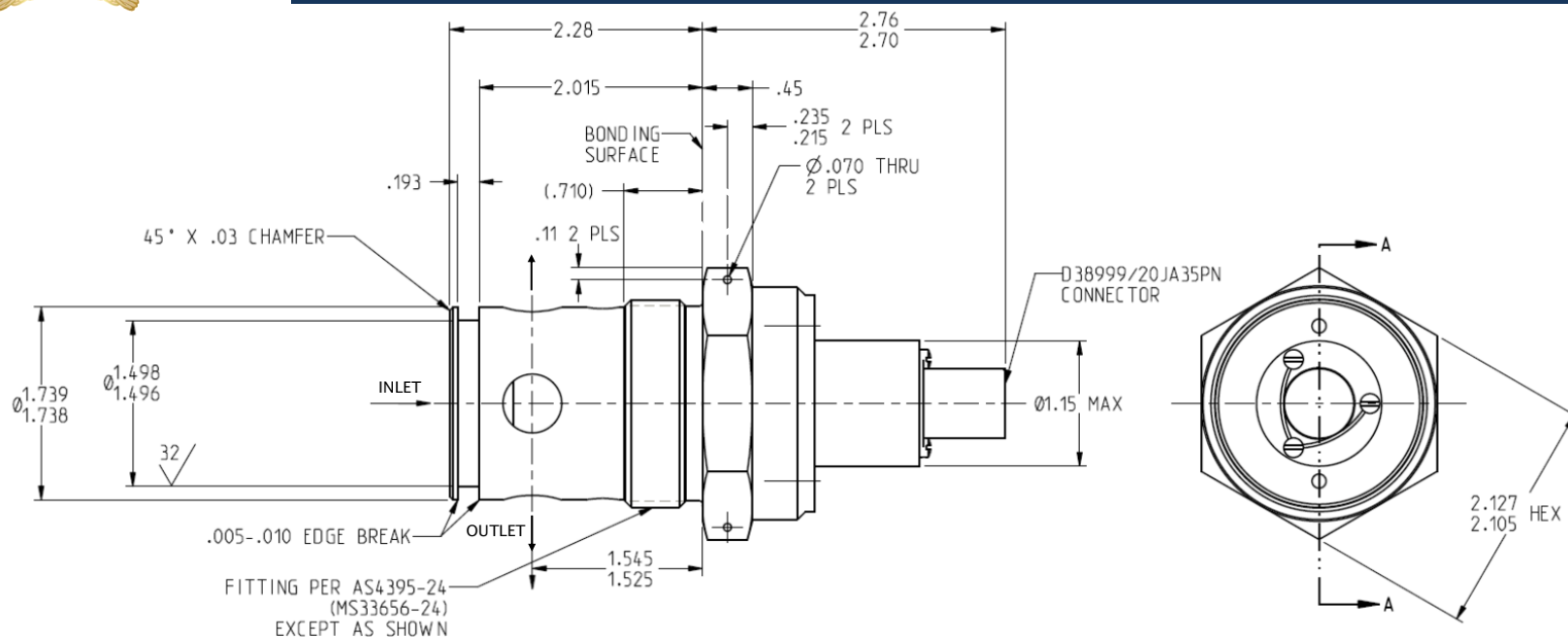
HYDRAULIC SCHEMATIC



CATEGORY 2: RELIEF VALVES, DIRECT ACTING



PART NUMBER: 35620-X BYPASS RELIEF VALVE WITH INDICATION



PERFORMANCE SPECIFICATIONS:

FLUID: ETHYLENE GLYCOL/WATER*

MATERIAL: BODY 6061-T6 AL

POPPET 6061-T6 AL

TEMPERATURE RANGE: -65°F TO 160°F

OPERATING PRESSURE: 123 PSIG

PROOF PRESSURE: 185 PSIG

CRACKING PRESSURE: 2.90 ± 0.14 PSID**

FLOW: 22 GPM AT 4.5 PSID MAX**

RESEAT: 2.3 PSID MINIMUM**

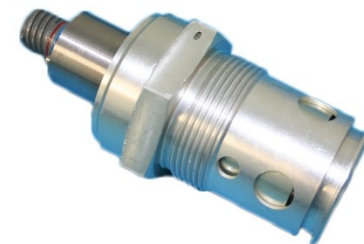
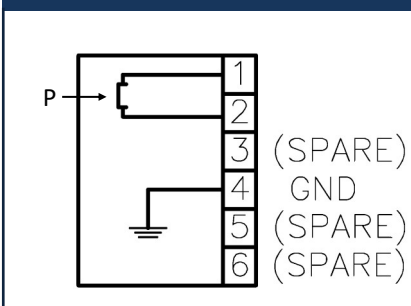
SWITCHING: CONTACTS (1 & 2) OPEN AT 2.6 ± 0.15 PSID (INCREASING PRESSURE)
CONTACTS (1 & 2) CLOSE AT 2.30-2.75 PSID (DECREASING PRESSURE)

WEIGHT: .79 LBS MAX

*OTHER FLUIDS MAY BE ACCEPTABLE WITH ELASTOMER CHANGE

**CRACK, FLOW, AND RESEAT CAN MOVE UP OR DOWN
BY USING SHIMS OR REPLACING THE SPRING

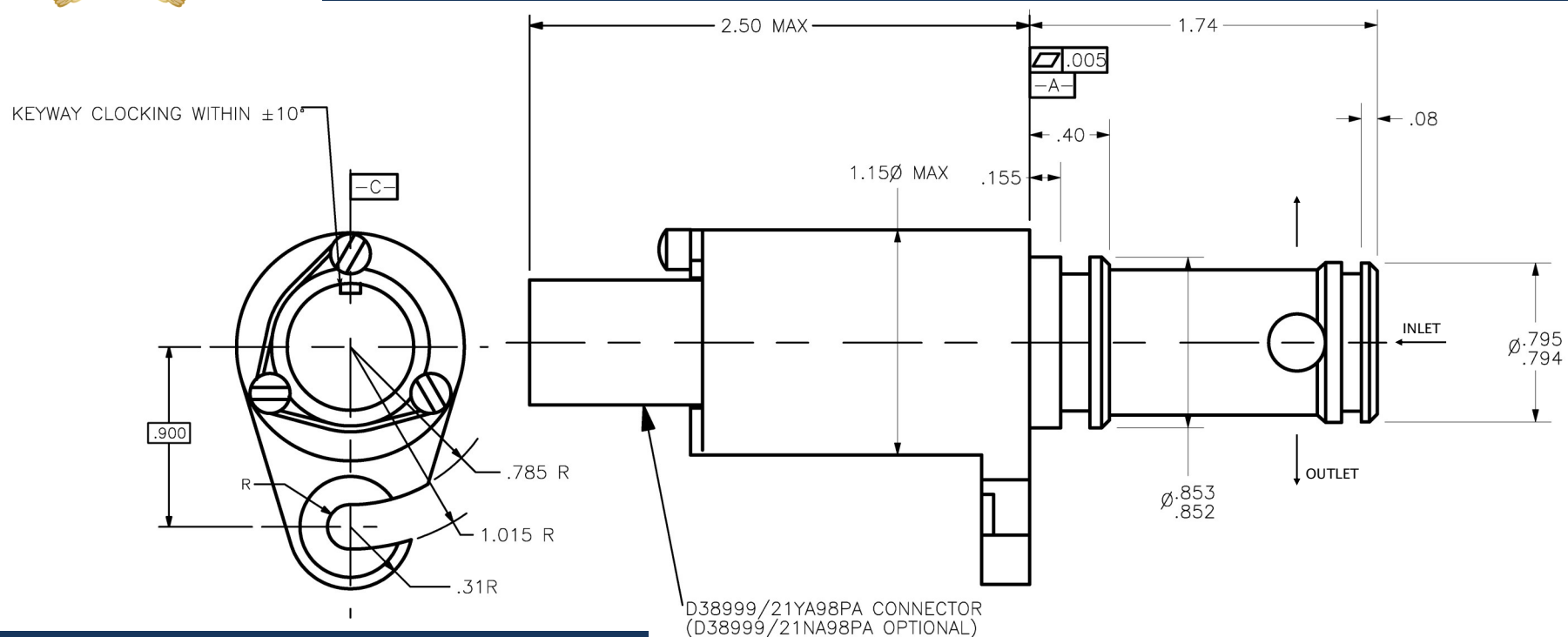
ELECTRICAL SCHEMATIC (NORMALLY CLOSED)



CATEGORY 2: RELIEF VALVES: FILTER BYPASS VALVES



PART NUMBER: 50350-X BYPASS RELIEF VALVE WITH INDICATION



PERFORMANCE SPECIFICATIONS:

FLUID: MIL-L-7808 OR MIL-PRF-23699*

MATERIAL: BODY 6061-T6 AL

POPPET 6061-T6 AL

TEMPERATURE RANGE: -65°F TO 350°F

CRACKING PRESSURE: 50 PSID MINIMUM**

FLOW: 100 PSID MAX @ 12 GPM AT 100 PSID MAX**

RESEAT: 40 PSID MINIMUM**

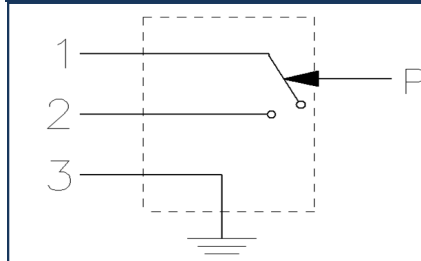
SWITCHING: CONTACTS CLOSE AT 35 ± 5 PSID (INCREASING PRESSURE);
CONTACTS OPEN BELOW 30 PSID (DECREASING PRESSURE)

WEIGHT: .25 LBS MAX

*OTHER FLUIDS MAY BE ACCEPTABLE WITH ELASTOMER CHANGE

**CRACK, FLOW, AND RESEAT CAN MOVE UP OR DOWN
BY USING SHIMS OR REPLACING THE SPRING

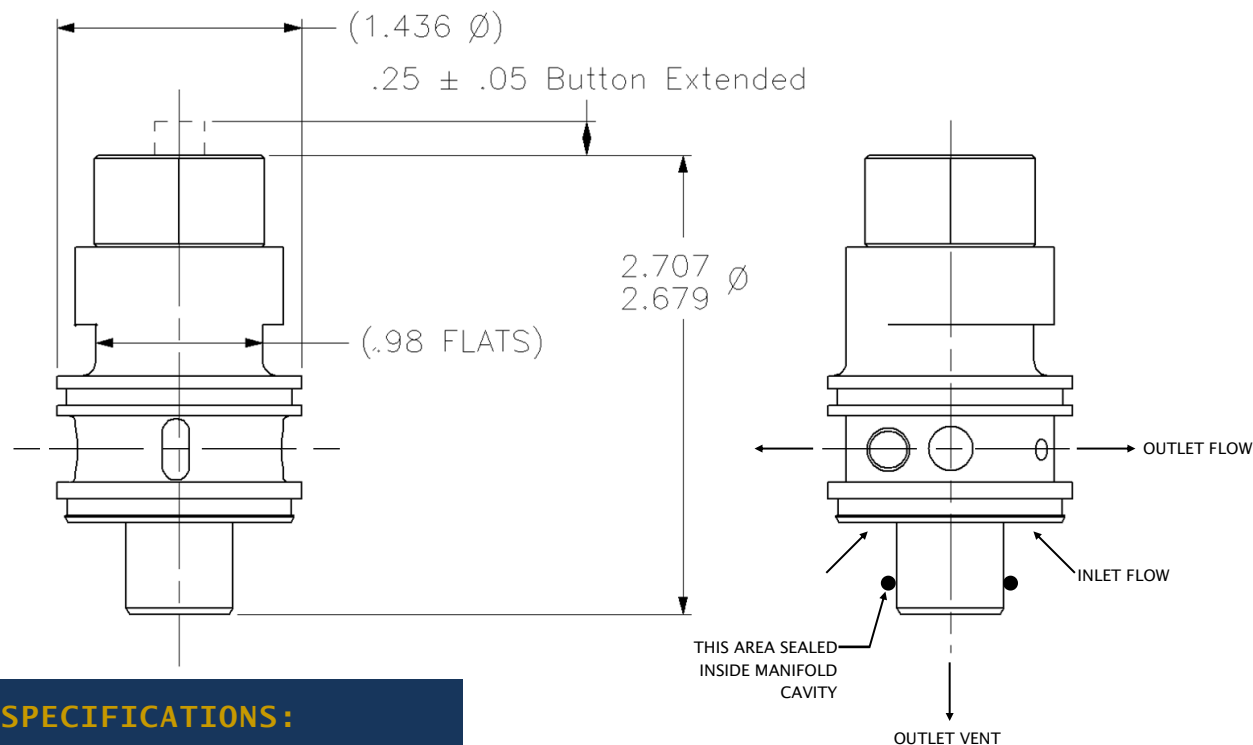
ELECTRICAL SCHEMATIC



CATEGORY 2: RELIEF VALVES: FILTER BYPASS VALVES



PART NUMBER: 50420-X BYPASS VALVE WITH DELTA P INDICATION AND THERMAL LOCKOUT



PERFORMANCE SPECIFICATIONS:

FLUID: MIL-C-7024*

MATERIAL: HOUSING 6061-T4 AL
POPPET 6061-T6 AL

TEMPERATURE RANGE: -55°F TO 325°F

OPERATING PRESSURE: 200 PSIG

PROOF PRESSURE: 300 PSIG

BUTTON ACTION: 70 \pm 10 PSID (TO BE RESET BY HAND)

BYPASS PRESSURE: 116 \pm 10 PSID

FLOW: 2.5 GPM MINIMUM @ 200 PSID

INTERNAL LEAKAGE: 5 CC/MIN MAXIMUM @ 60 PSID

THERMAL LOCKOUT WILL PREVENT DELTA P INDICATION AT COLD TEMPERATURES (BELOW 170°F)

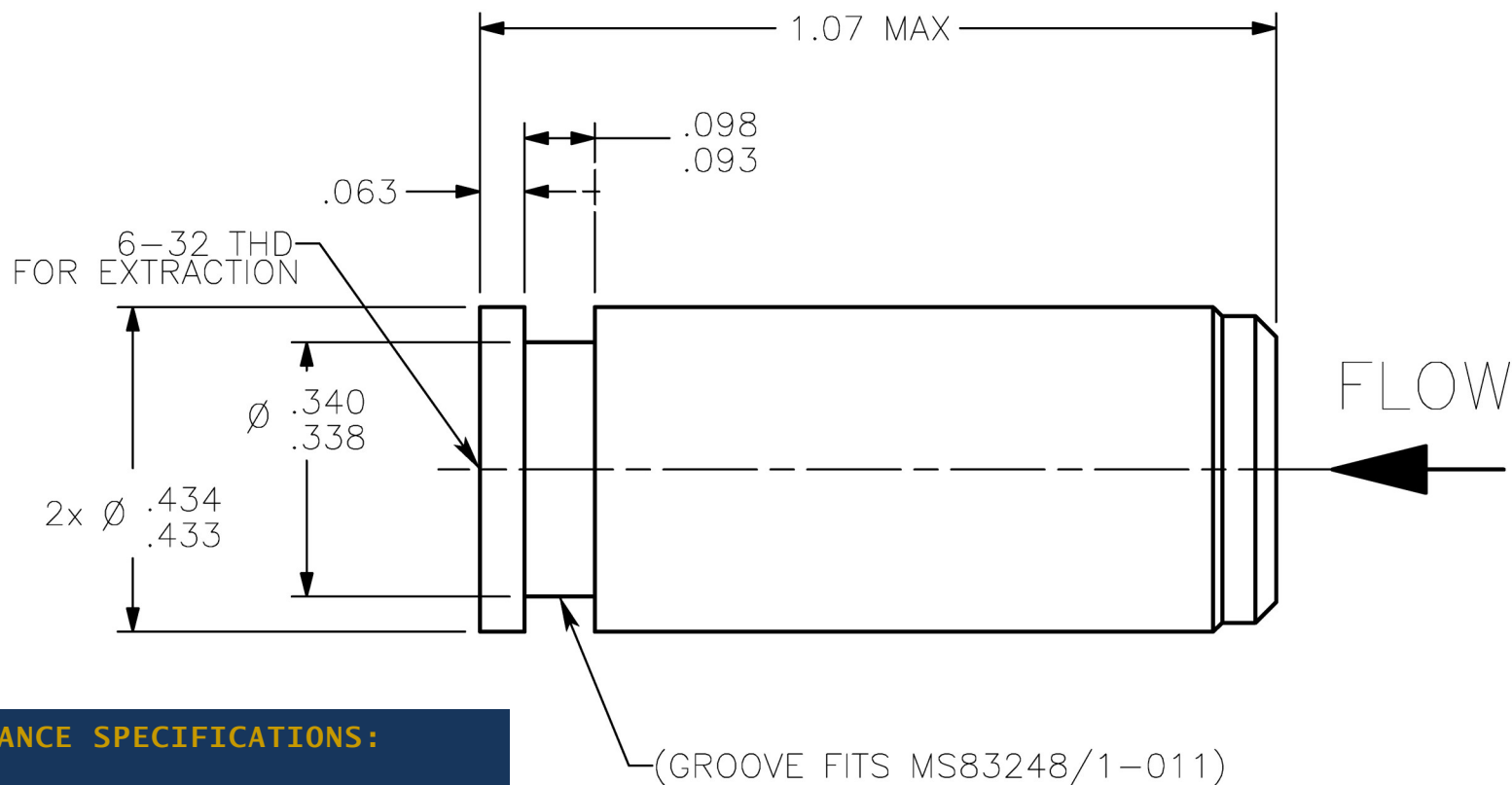
*OTHER FLUIDS MAY BE ACCEPTABLE WITH ELASTOMER CHANGE



CATEGORY 2: RELIEF VALVES: FILTER BYPASS VALVES



PART NUMBER: 32140-X RELIEF VALVE



PERFORMANCE SPECIFICATIONS:

FLUID: ANY AIRCRAFT HYDRAULIC, LUBRICATION OR FUEL FLUID

MATERIAL: BODY 303 CRES

POPPET 303 CRES

TEMPERATURE RANGE: -40°F TO 350°F

PROOF PRESSURE: 3000 PSIG

CRACKING PRESSURE: 500±10 PSID*

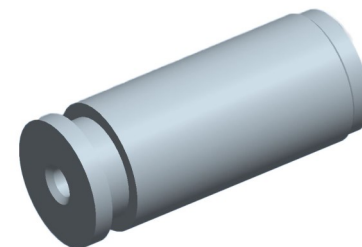
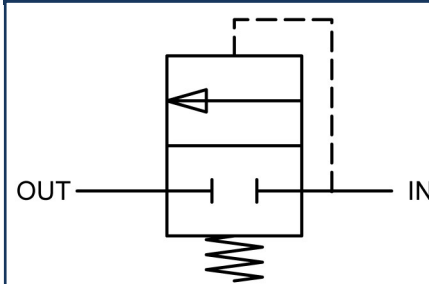
FLOW: 5 GPM AT 1500 PSID MAX*

RESEAT: 400 PSID MINIMUM*

INTERNAL LEAKAGE: 0 DPM AT 250 PSID

*CRACK, FLOW, AND RESEAT CAN MOVE UP OR DOWN
BY USING SHIMS OR REPLACING THE SPRING

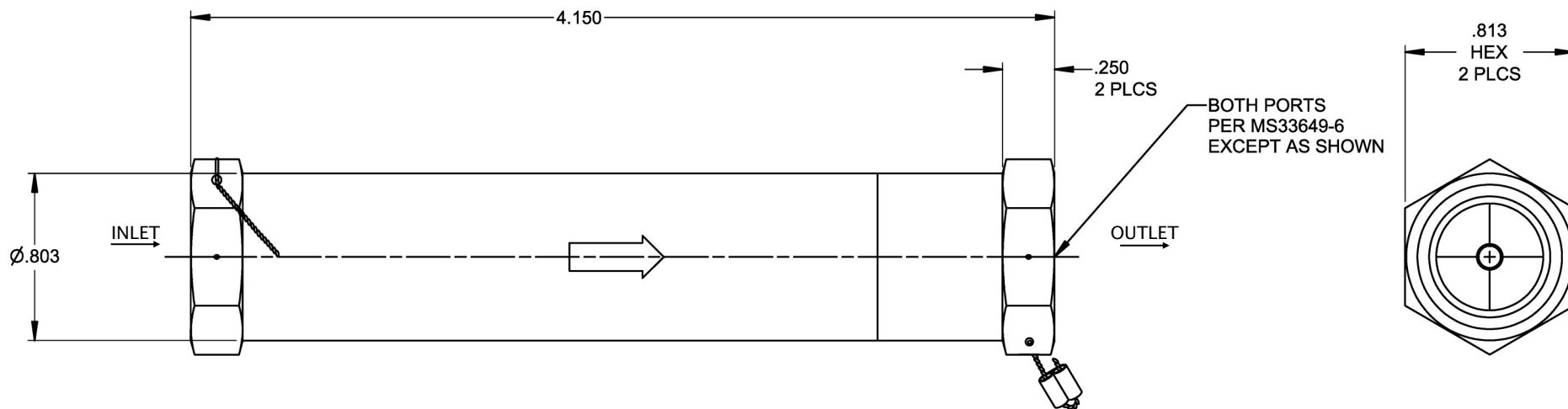
HYDRAULIC SCHEMATIC



CATEGORY 2: RELIEF VALVES, DIRECT ACTING



PART NUMBER: 2R4266 RELIEF VALVE



PERFORMANCE SPECIFICATIONS:

FLUID: HYDRAULIC FLUID PER MIL-H-5606*

MATERIAL: BODY 15-5PH CRES
POPPET PH13-8MO CRES

TEMPERATURE RANGE: -65°F TO 225°F

OPERATING PRESSURE: 3000 PSIG

PROOF PRESSURE: 4900 PSIG

CRACKING PRESSURE: 3480 PSID**

FLOW: 4.4 GPM AT 4100 PSID MAX**

RESEAT: 3260 PSID MIN**

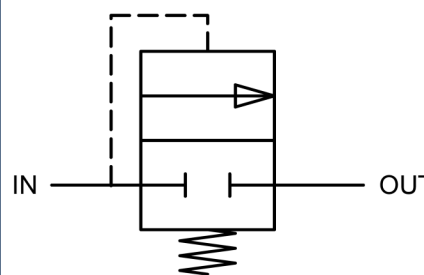
INTERNAL LEAKAGE: 1.5 CC/MIN AT 3075 PSID (INCREASING PRESSURE)
4.5 CC/MIN AT 3263 PSID (DECREASING PRESSURE)

WEIGHT: 0.52 LBS MAX

*OTHER FLUIDS MAY BE ACCEPTABLE WITH ELASTOMER CHANGE

**CRACK, FLOW, AND RESEAT CAN MOVE UP OR
DOWN BY USING SHIMS OR REPLACING THE SPRING

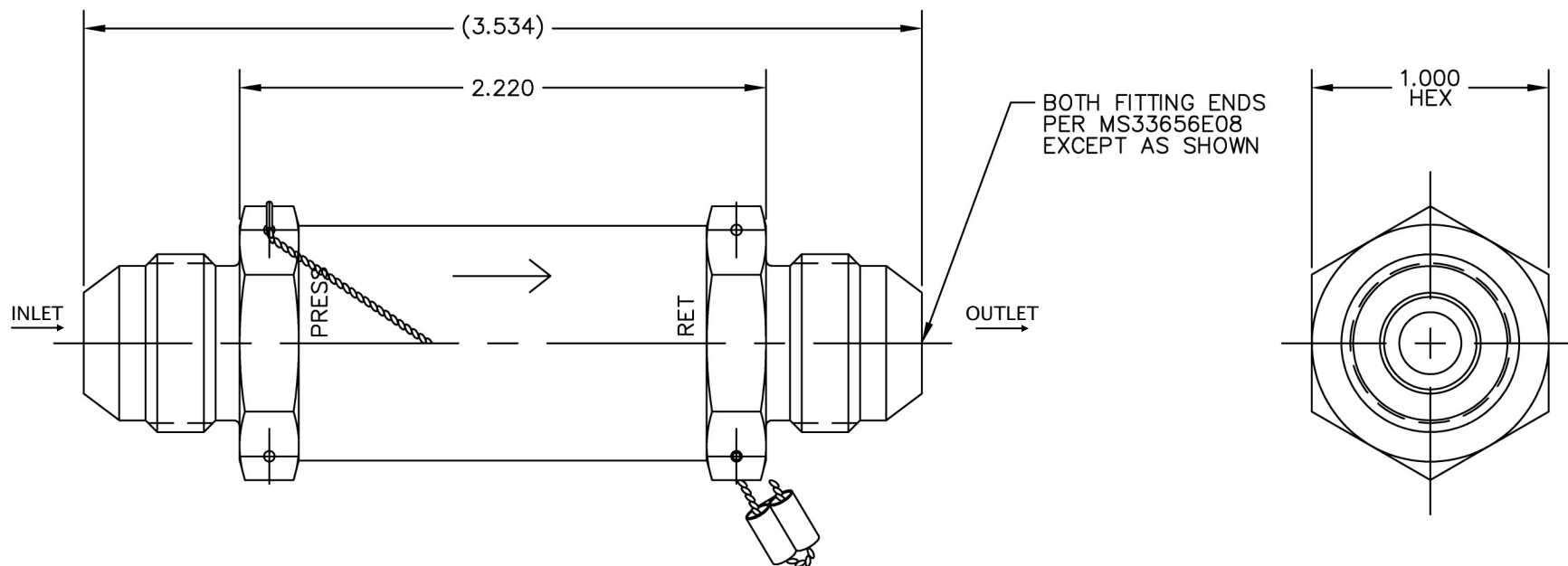
HYDRAULIC SCHEMATIC



CATEGORY 2: RELIEF VALVES



PART NUMBER: 2R3896 RELIEF VALVE



PERFORMANCE SPECIFICATIONS:

FLUID: HYDRAULIC FLUID PER MIL-H-5606*

MATERIAL: BODY 2024-T351 AL
POPPET 440C CRES

TEMPERATURE RANGE: 23°F TO 275°F

OPERATING PRESSURE: 600 PSIG

PROOF PRESSURE: 900 PSIG

CRACKING PRESSURE: 95 TO 105 PSID**

FLOW: 4.75 GPM AT 140 PSID MAX AT ROOM TEMPERATURE**

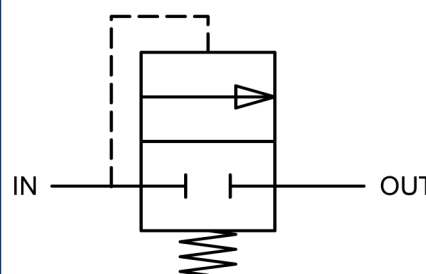
RESEAT: 70 PSID MIN**

INTERNAL LEAKAGE: 3 CC/MIN MAX AT 0 TO 70 PSID

*OTHER FLUIDS MAY BE ACCEPTABLE WITH ELASTOMER CHANGE

**CRACK, FLOW, AND RESEAT CAN MOVE UP OR
DOWN BY USING SHIMS OR REPLACING THE SPRING

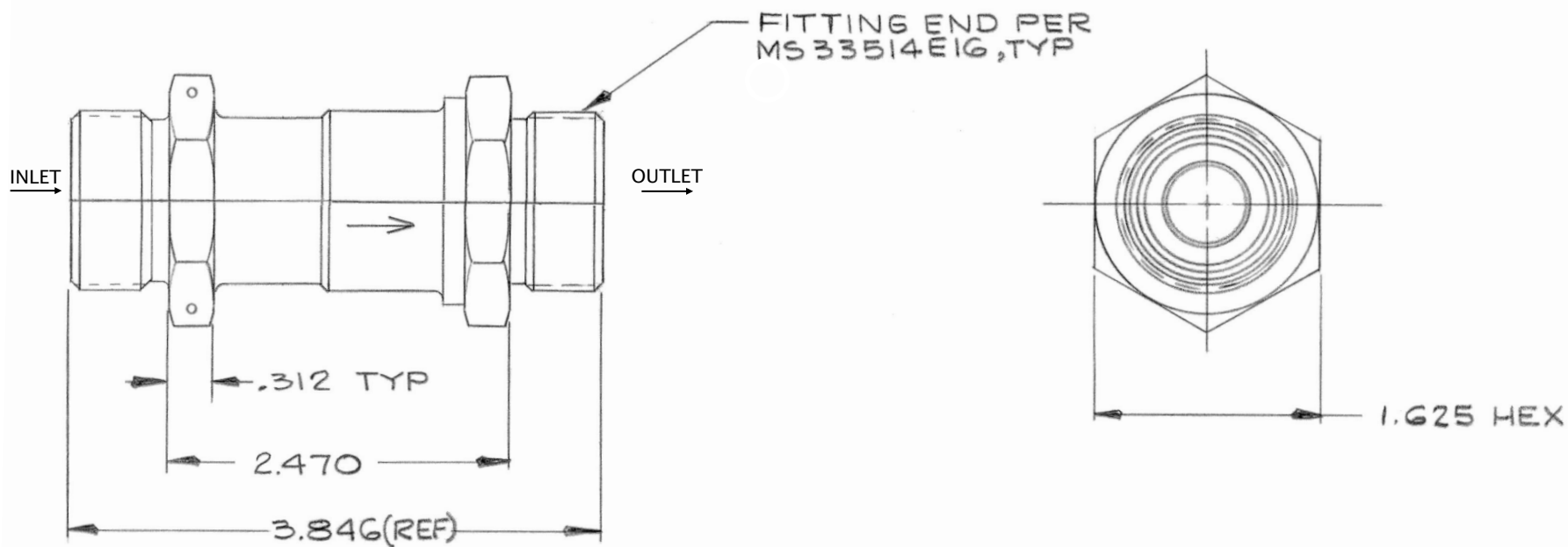
HYDRAULIC SCHEMATIC



CATEGORY 2: RELIEF VALVES



PART NUMBER: 2R2766 RELIEF VALVE



PERFORMANCE SPECIFICATIONS:

FLUID: ANY AIRCRAFT HYDRAULIC FLUID

MATERIAL: BODY 303 CRES

POPPET 440C CRES

TEMPERATURE RANGE: -65°F TO 160°F

OPERATING PRESSURE: 60 PSIG

PROOF PRESSURE: 90 PSIG

CRACKING PRESSURE: 50 PSID*

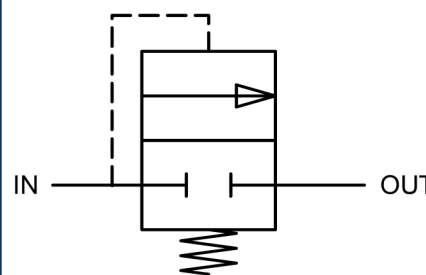
FLOW: 20 GPM AT 60 PSID MAX*

INTERNAL LEAKAGE: 2 CC/MIN AT 30 PSID

WEIGHT: 1.2 LBS MAX

*CRACK AND FLOW CAN MOVE UP OR
DOWN BY USING SHIMS OR REPLACING THE SPRING

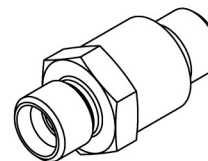
HYDRAULIC SCHEMATIC



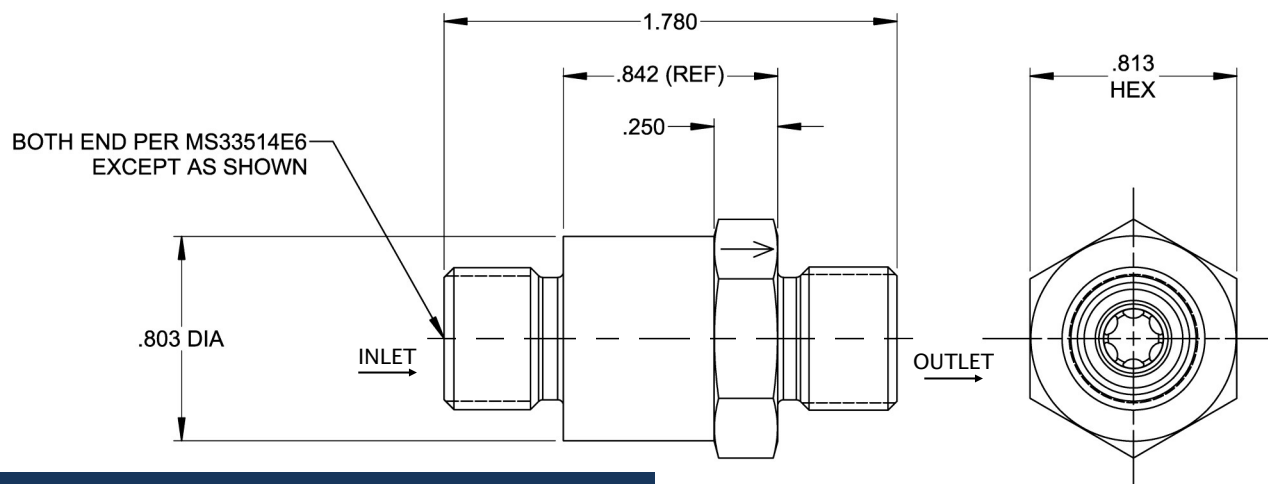
CATEGORY 2: RELIEF VALVES



PART NUMBER: 2R2606 RELIEF VALVE



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FOR REFERENCE ONLY



PERFORMANCE SPECIFICATIONS:

FLUID: ANY AIRCRAFT HYDRAULIC FLUID

MATERIAL: BODY 2024-T351 AL

POPPET 440C CRES

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 3000 PSIG

PROOF PRESSURE: 4500 PSIG

CRACKING PRESSURE: 65 ± 5 PSID*

FLOW: 2.0 GPM AT 80 PSID MAX*

RESEAT: 45 PSID MIN*

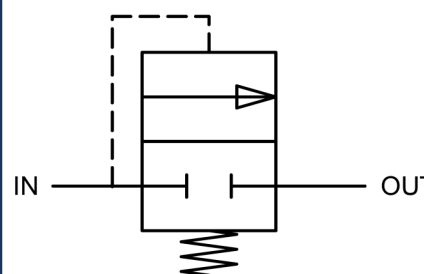
INTERNAL LEAKAGE: NONE AT 0 TO 50 PSID (INCREASING PRESSURE)

NONE BELOW 45 PSID (DECREASING PRESSURE)

WEIGHT: 0.07 LBS MAX

*CRACK, FLOW AND RESEAT CAN MOVE UP OR
DOWN BY USING SHIMS OR REPLACING THE SPRING

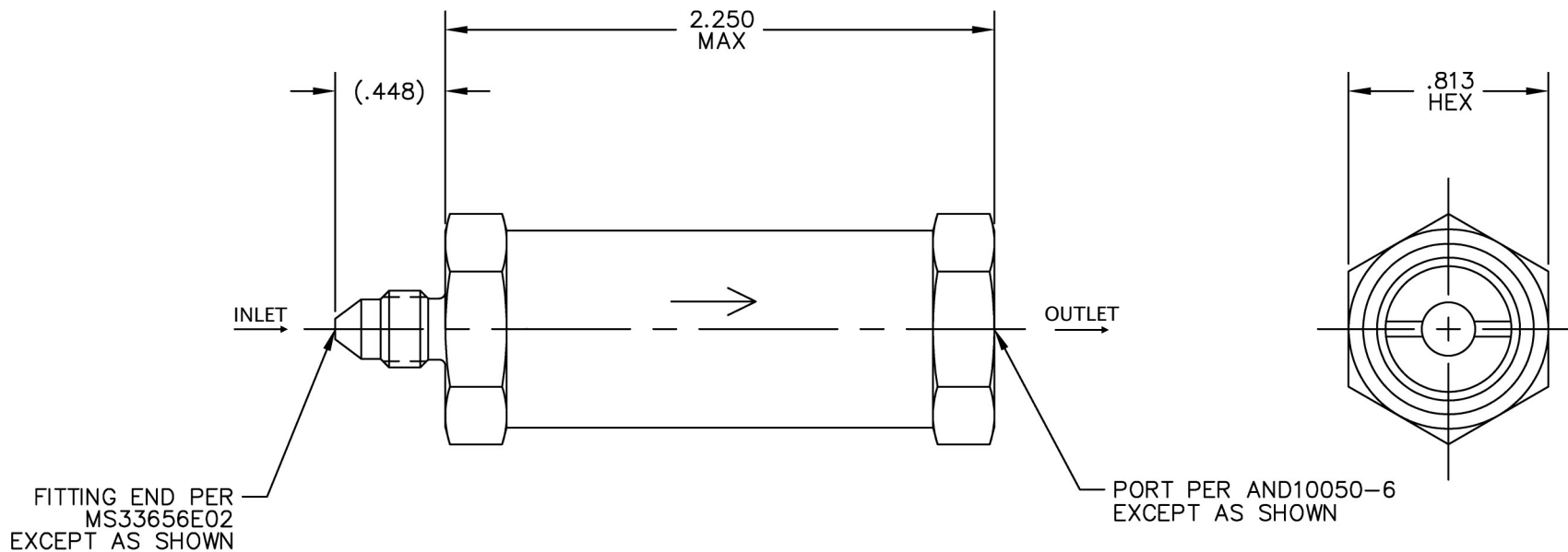
HYDRAULIC SCHEMATIC



CATEGORY 2: RELIEF VALVES



PART NUMBER: 2R2656 RELIEF VALVE



PERFORMANCE SPECIFICATIONS:

FLUID: HYDRAULIC FLUID PER MIL-H-5606*

MATERIAL: BODY 2024-T351 AL
POPPET 303 CRES

TEMPERATURE RANGE: -20°F TO 160°F

PROOF PRESSURE: 2000 PSIG

CRACKING PRESSURE: 450 TO 500 PSID**

FLOW: 0.10 GPM AT 600 PSID MAX**

RESEAT: 400 PSID MIN**

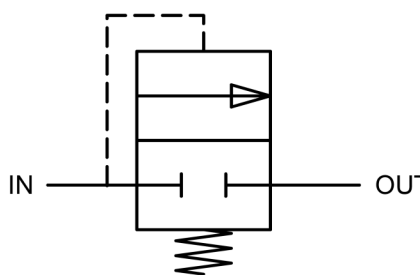
INTERNAL LEAKAGE: NONE AT 0 TO 400 PSID

WEIGHT: 0.10 LBS MAX

*OTHER FLUIDS MAY BE ACCEPTABLE WITH ELASTOMER CHANGE

**CRACK, FLOW, AND RESEAT CAN MOVE UP OR
DOWN BY USING SHIMS OR REPLACING THE SPRING

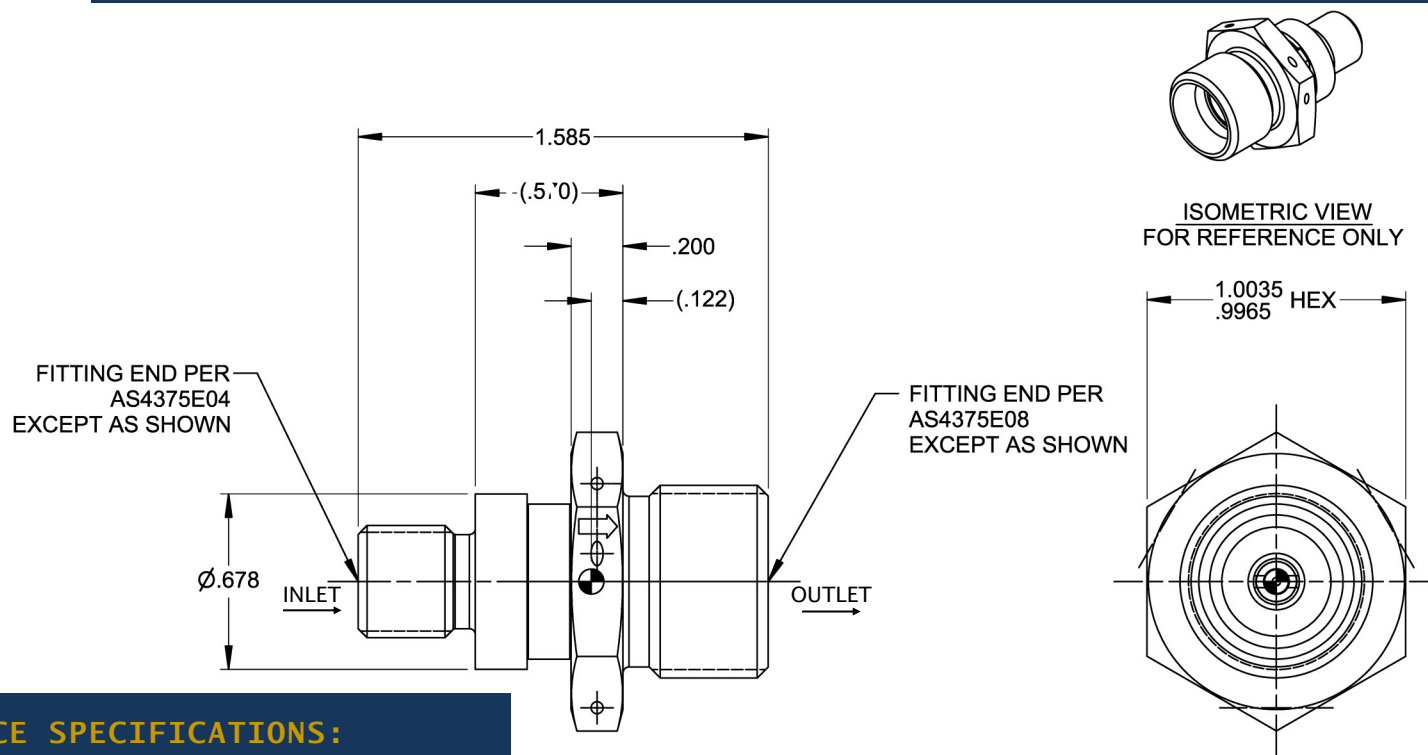
HYDRAULIC SCHEMATIC



CATEGORY 2: RELIEF VALVES



PART NUMBER: 2R4432 RELIEF VALVE



PERFORMANCE SPECIFICATIONS:

FLUID: ANY AIRCRAFT HYDRAULIC FLUID

MATERIAL: BODY 15-5PH CRES
POPPET 440C CRES

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 3000 PSIG

PROOF PRESSURE: 6000 PSIG

CRACKING PRESSURE: 3900-4050 PSID*

FLOW: 15 mL/MIN MINIMUM AT 4300 PSID*

RESEAT: 3285 PSID MIN*

INTERNAL LEAKAGE: 10 DPM MAX AT 3900 PSID

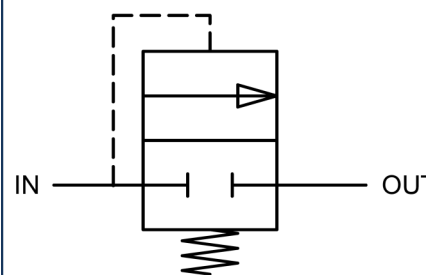
1 DPM MAX AT 3285 PSID (INCREASING PRESSURE)

10 DPM MAX AT 3285 PSID (DECREASING PRESSURE)

WEIGHT: 0.149 LBS MAX

*CRACK, FLOW AND RESEAT CAN MOVE UP OR
DOWN BY USING SHIMS OR REPLACING THE SPRING

HYDRAULIC SCHEMATIC

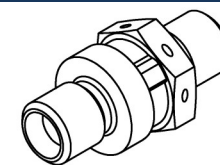
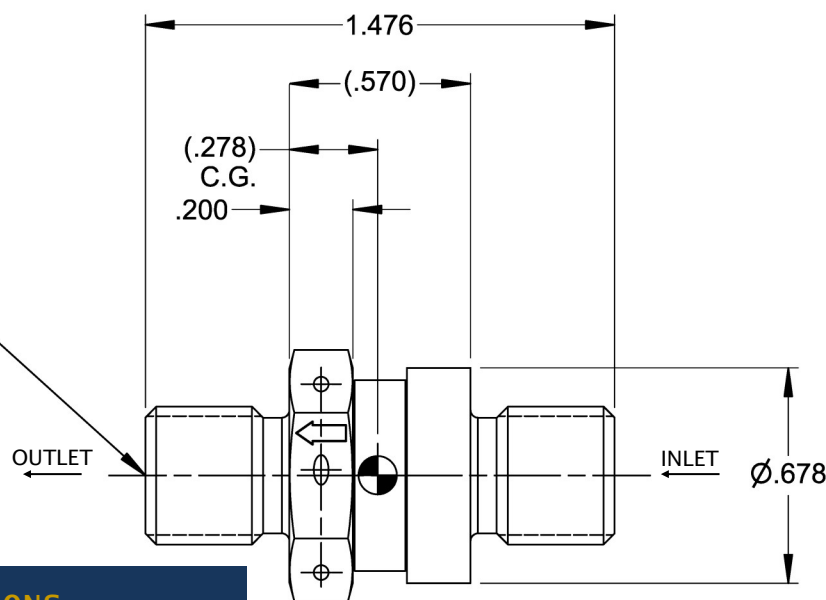


CATEGORY 2: RELIEF VALVES

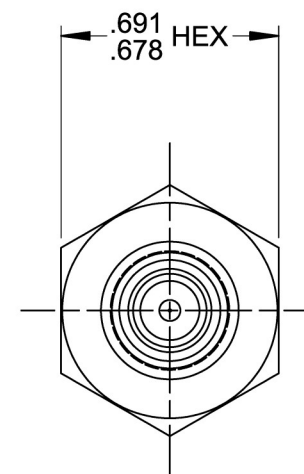


PART NUMBER: 2R4622 RELIEF VALVE

BOTH FITTING ENDS
PER AS4375E04
EXCEPT AS SHOWN



ISOMETRIC VIEW
FOR REFERENCE ONLY



PERFORMANCE SPECIFICATIONS:

FLUID: ANY AIRCRAFT HYDRAULIC FLUID

MATERIAL: BODY 15-5PH CRES
POPPET 440C CRES

TEMPERATURE RANGE: -65°F TO 185°F

OPERATING PRESSURE: 3000 PSIG

PROOF PRESSURE: 6250 PSIG

CRACKING PRESSURE: 3900-4050 PSID*

FLOW: 15 mL/MIN MINIMUM AT 4300 PSID*

RESEAT: 3285 PSID MIN*

INTERNAL LEAKAGE: 1 DPM MAX AT 3285 PSID (INCREASING DIRECTION)

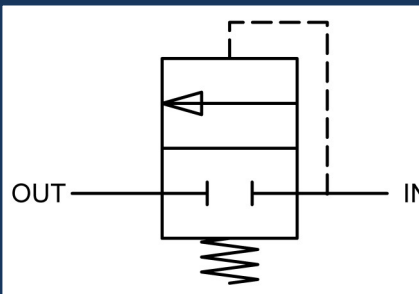
10 DPM MAX AT 3900 PSID (INCREASING PRESSURE)

10 DPM MAX AT 3285 PSID (DECREASING PRESSURE)

WEIGHT: 0.086 LBS MAX

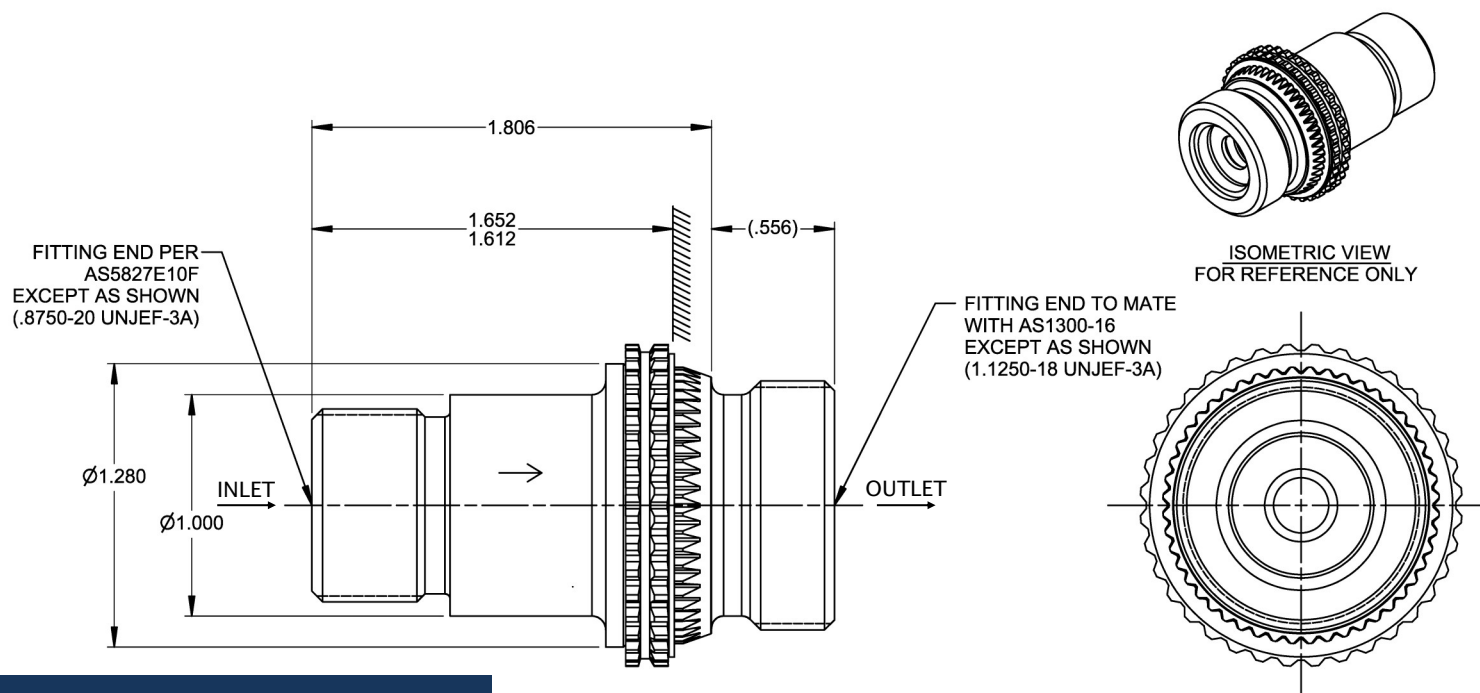
*CRACK, FLOW AND RESEAT CAN MOVE UP OR
DOWN BY USING SHIMS OR REPLACING THE SPRING

HYDRAULIC SCHEMATIC





PART NUMBER: 2R4632 RELIEF VALVE



PERFORMANCE SPECIFICATIONS:

FLUID: ANY AIRCRAFT HYDRAULIC FLUID

MATERIAL: BODY 6AL-4V TI

POPPET PH13-8MO CRES

LOCKRING A-286 CRES

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 5076 PSIG

PROOF PRESSURE: 7614 PSIG

CRACKING PRESSURE: 101 PSID*

FLOW: 1.3 GPM AT 125 PSID MAX*

10.6 GPM AT 140 PSID MAX*

RESEAT: 70 PSID MIN*

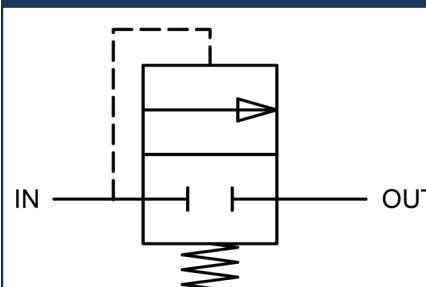
INTERNAL LEAKAGE: 1 CC/MIN MAX AT 5 PSID

5 DPM MAX AT 5076 PSID

WEIGHT: 0.300 LBS MAX

*CRACK, FLOW AND RESEAT CAN MOVE UP OR
DOWN BY USING SHIMS OR REPLACING THE SPRING

HYDRAULIC SCHEMATIC



CATEGORY 2: RELIEF VALVES



CRISSAIR HAS VARIOUS OTHER RELIEF VALVES NOT LISTED IN THE
CATALOG WITH DIFFERENT MATERIALS, FITTINGS, AND SIZE CONFIGURATIONS.

CONTACT CRISSAIR FOR ADDITIONAL INFORMATION/DRAWINGS AT

(661) 367-3300 OR SALES@CRISSAIR.COM.

YOU CAN ALSO VISIT WWW.CRISSAIR.COM.

RESTRICTOR VALVES

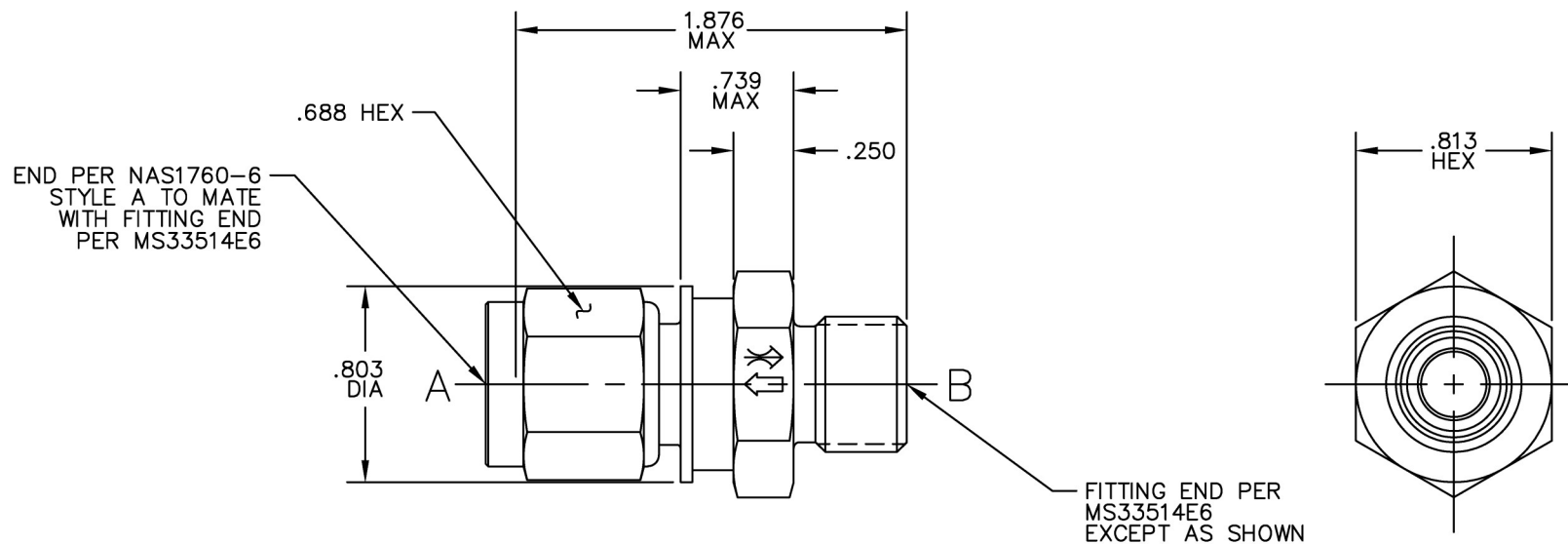
Crissair Inc. designs and manufactures a variety of One-Way and 2-Way Restrictor Valves and configurations which enable system designers to control/reduce the flow through certain circuits. Both groups may be packaged as inline configurations to connect directly to tubing or cartridge configurations that can go into manifolds.

- One-Way Restrictor Valves offer restricted flow in one direction and relatively unrestricted flow in the other direction. Higher restriction restrictors may utilize filters or screens to protect sensitive orifices from damage and contamination.
- 2-Way Restrictor Valves offer restricted flow in both directions, although not always of the same restriction value. High/Low 2-Way Restrictor Valves offer unique restriction values for each direction. Higher restriction restrictors may utilize filters or screens to protect sensitive orifices from damage and contamination.





PART NUMBER: 9R3512 RESTRICTOR VALVE, ONE-WAY, UNFILTERED



PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT HYDRAULIC FLUID

MATERIAL: BODY 17-4PH CRES

POPPET 440C CRES

SWIVEL NUT 6AL-4V TI

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 4000 PSIG

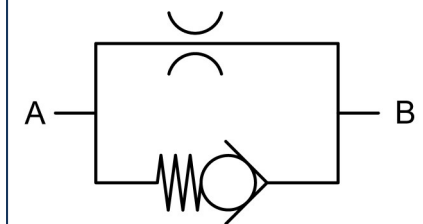
PROOF PRESSURE: 8000 PSIG

RESTRICTED FLOW: SEE TAB BLOCK

FREE FLOW: 1.2 GPM AT 15 PSID MAX

WEIGHT: 0.143 LBS MAX

HYDRAULIC SCHEMATIC

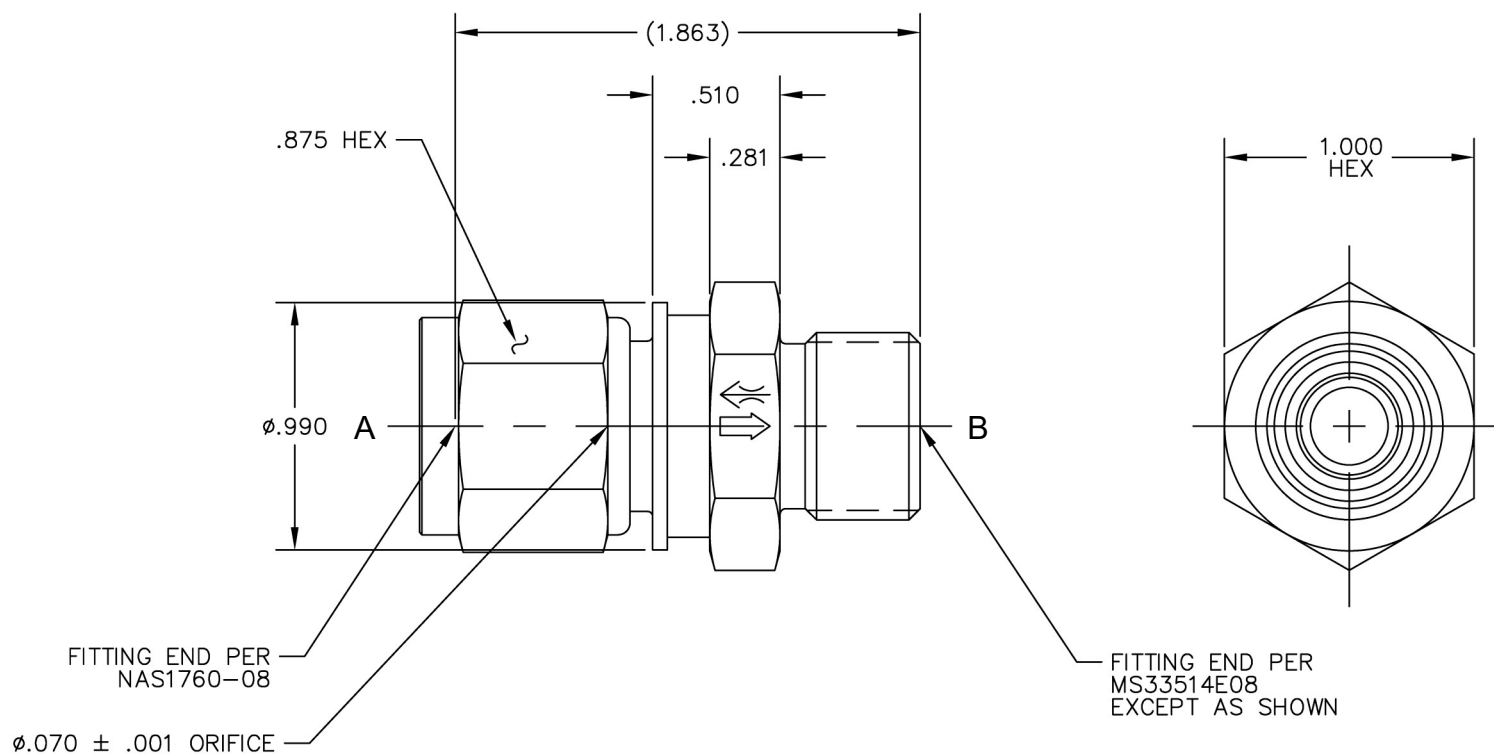


CRISSAIR PART NO.	FLOW RATE (GPM)	ORIFICE SIZE (REF)
9R3512-040	2.2	.040
9R3512-045	2.8	.045
9R3512-050	3.4	.050
9R3512-055	4.2	.055
9R3512-060	5.0	.060

CATEGORY 3: ONE-WAY RESTRICTOR VALVES UNFILTERED



PART NUMBER: 9R3690 RESTRICTOR VALVE, ONE-WAY, UNFILTERED



PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT HYDRAULIC FLUID

MATERIAL: BODY 15-5PH CRES

POPPET 440C CRES

SWIVEL NUT 304 CRES

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 4000 PSIG

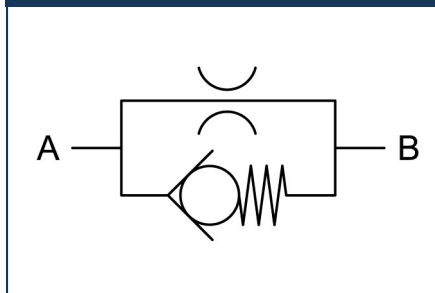
PROOF PRESSURE: 6000 PSIG

RESTRICTED FLOW: 0.070 ± 0.001 ORIFICE

FREE FLOW: 6 GPM AT 15 PSID MAX

WEIGHT: 0.256 LBS MAX

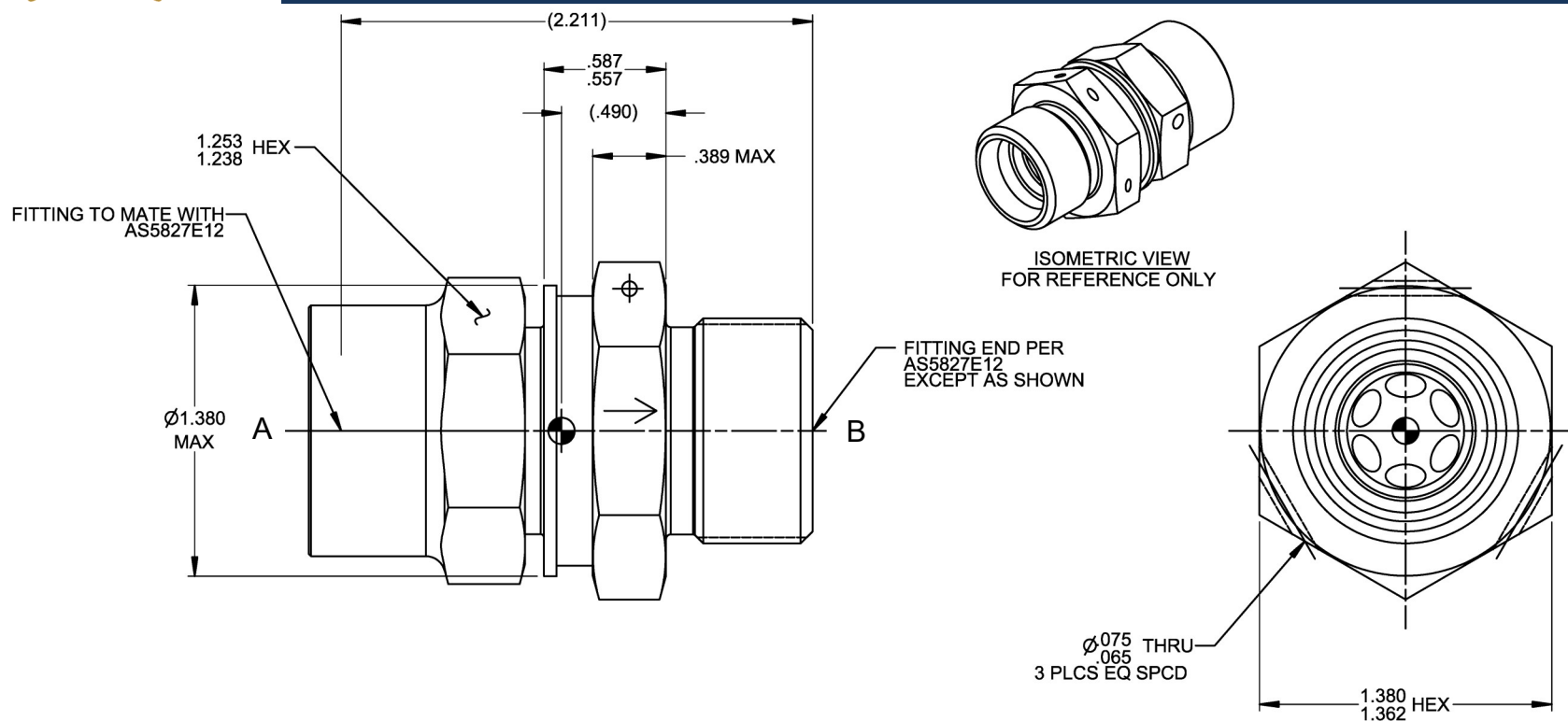
HYDRAULIC SCHEMATIC



CATEGORY 3: ONE-WAY RESTRICTOR VALVES UNFILTERED



PART NUMBER: 9R4072 RESTRICTOR VALVE, ONE-WAY, UNFILTERED



PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT HYDRAULIC FLUID

MATERIAL: BODY 15-5PH CRES

POPPET PH13-8MO CRES

SWIVEL NUT 15-5PH CRES

TEMPERATURE RANGE: AIR -40°F TO 250°F

FLUID -40°F TO 225°F

OPERATING PRESSURE: 5000 PSIG

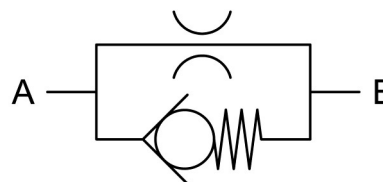
PROOF PRESSURE: 7500 PSIG

RESTRICTED FLOW: 0.43 TO 1.08 GPM AT 5000 PSID AT 100°F

FREE FLOW: 37 GPM AT 65 PSID MAX

WEIGHT: 0.53 LBS MAX

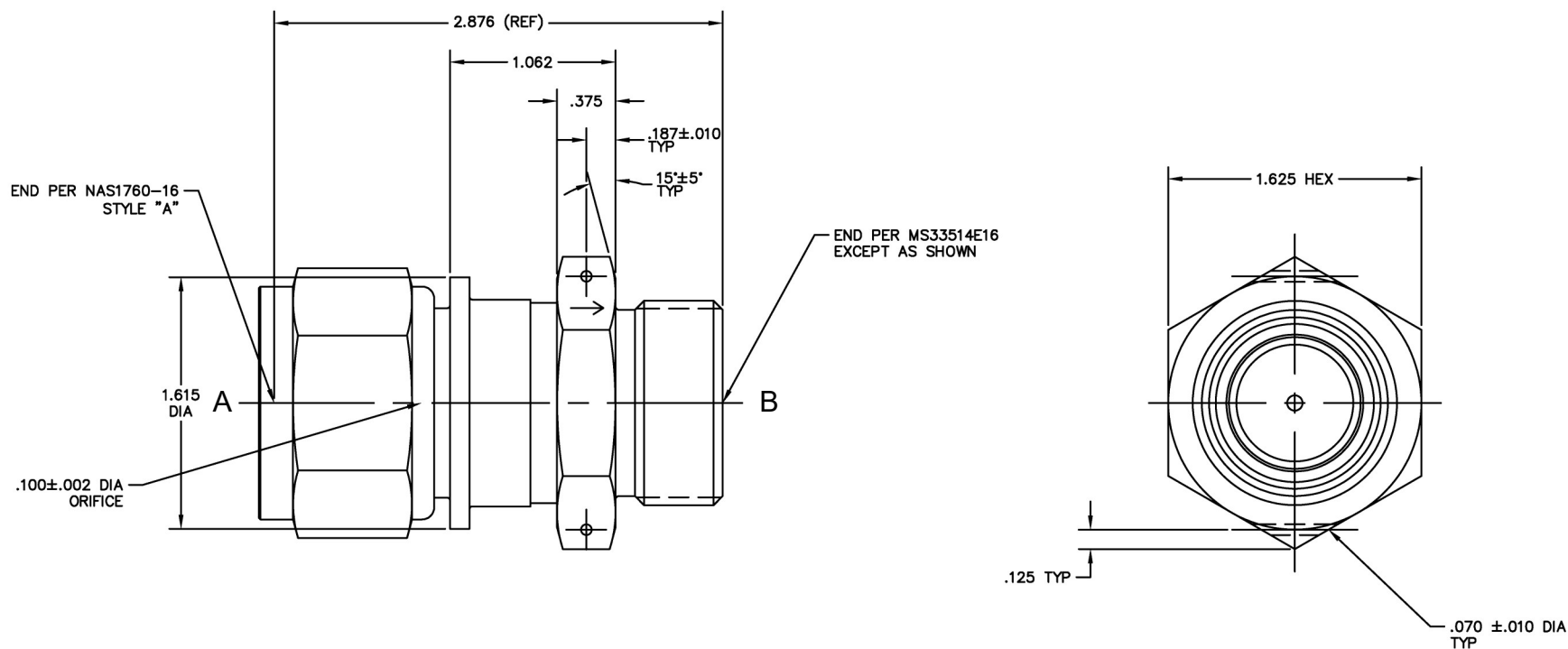
HYDRAULIC SCHEMATIC



CATEGORY 3: ONE-WAY RESTRICTOR VALVES UNFILTERED



PART NUMBER: 9R3396 RESTRICTOR VALVE, ONE-WAY, UNFILTERED



PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT HYDRAULIC FLUID

MATERIAL: BODY 304 CRES

POPPET 440C CRES

SWIVEL NUT 304 CRES

TEMPERATURE RANGE: -65°F TO 275°F

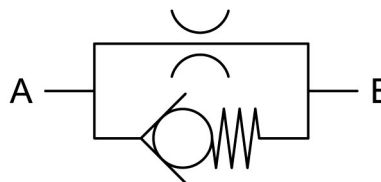
OPERATING PRESSURE: 3000 PSIG

PROOF PRESSURE: 4500 PSIG

RESTRICTED FLOW: 0.100 ± 0.002 DIA ORIFICE

FREE FLOW: 29 GPM AT 40 PSID MAX

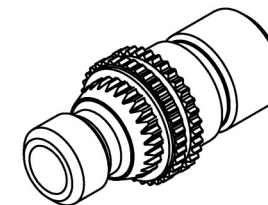
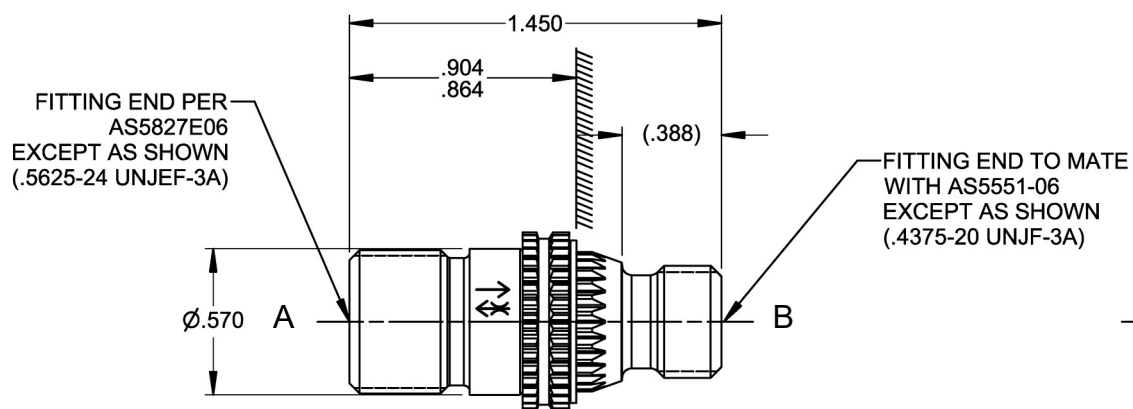
HYDRAULIC SCHEMATIC



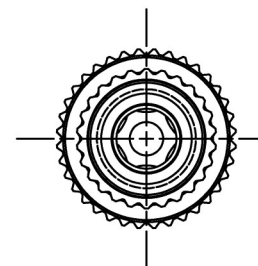
CATEGORY 3: ONE-WAY RESTRICTOR VALVES UNFILTERED



PART NUMBER: 9R4186-X RESTRICTOR VALVE, ONE-WAY, UNFILTERED



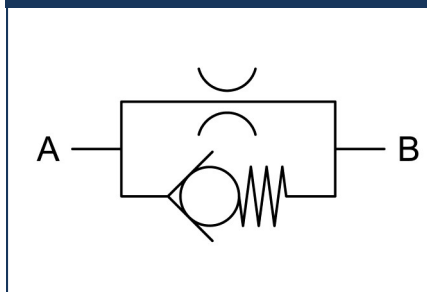
ISOMETRIC VIEW
FOR REFERENCE ONLY



PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT HYDRAULIC FLUID
 MATERIAL: BODY 6AL-4V TI
 POPPET 440C CRES
 LOCKRING A-286 CRES
 TEMPERATURE RANGE: -40°F TO 201°F
 OPERATING PRESSURE: 5075 PSIG
 PROOF PRESSURE: 9990.5 PSIG
 RESTRICTED FLOW: SEE TAB BLOCK AT 5000 PSID
 FREE FLOW: 3.1 GPM AT 25 PSID MAX
 WEIGHT: 0.045 LBS MAX

HYDRAULIC SCHEMATIC

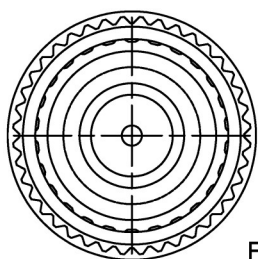


DASH NO.	LOHM (REF)	FLOW (GPM)	ORIFICE (REF)
-1	60	23.9	Ø.131
-2	70	20.5	Ø.121
-3	80	17.7	Ø.113
-4	95	14.9	Ø.104
-5	110	12.85	Ø.096
-6	130	11.00	Ø.089
-7	150	9.43	Ø.082

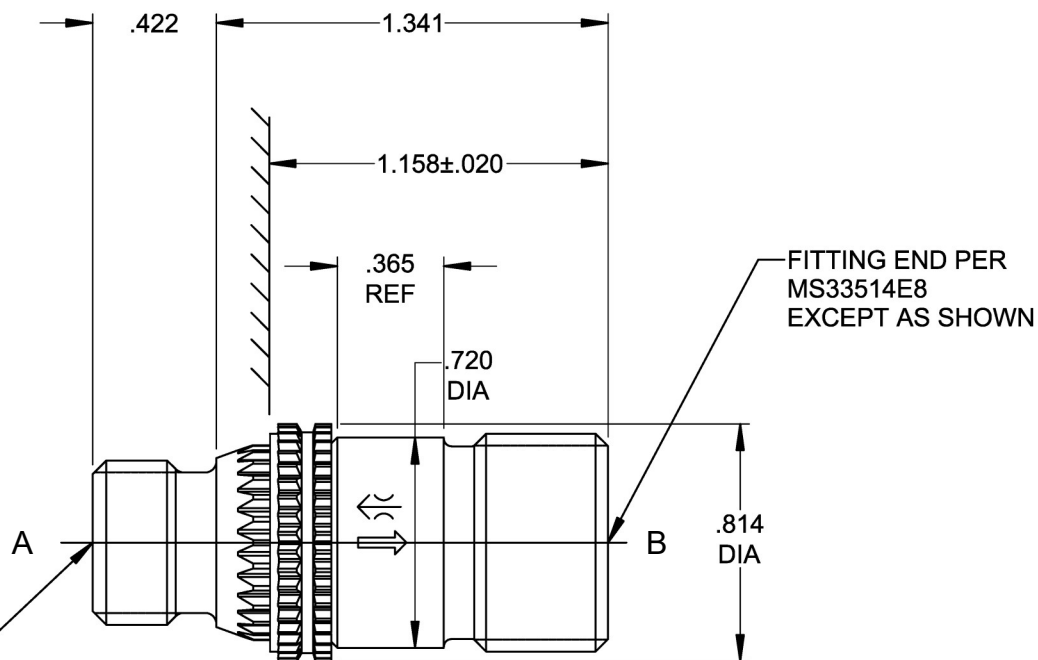
CATEGORY 3: ONE-WAY RESTRICTOR VALVES UNFILTERED



PART NUMBER: 9R3454 RESTRICTOR VALVE, ONE-WAY, UNFILTERED



FITTING END TO MATE
WITH BOSS PER
AS1300-08



PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT HYDRAULIC FLUID

MATERIAL: BODY 6AL-4V TI

POPPET 440C CRES

LOCKRING A-286 CRES

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 4000 PSIG

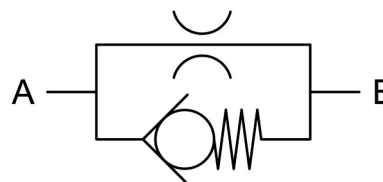
PROOF PRESSURE: 5000 PSIG

RESTRICTED FLOW: 5.6 ± 10% GPM AT 3000 PSID MAX (0.070 DIA ORIFICE REF)

FREE FLOW: 6.0 ± 10% GPM AT 15 PSID MAX

WEIGHT: 0.126 LBS MAX

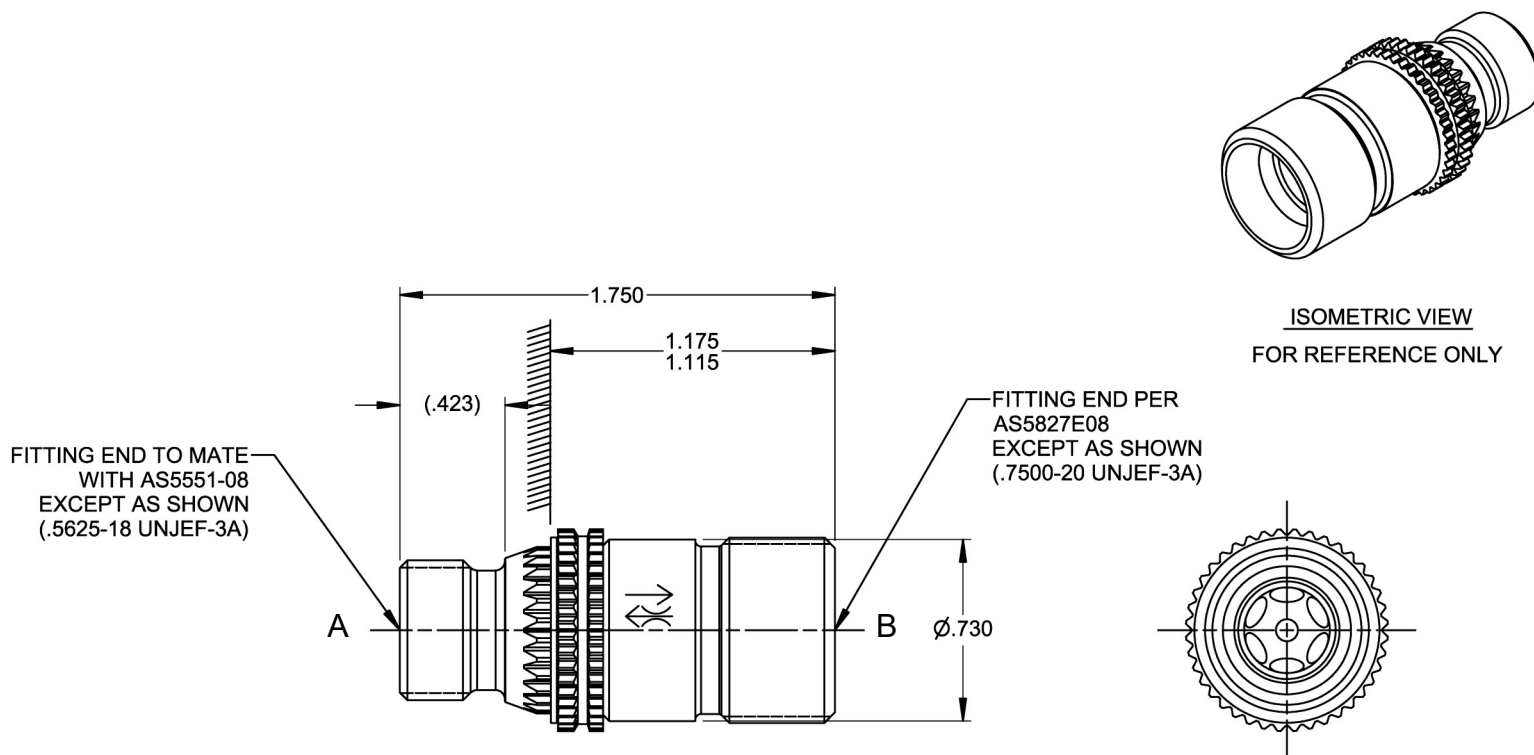
HYDRAULIC SCHEMATIC



CATEGORY 3: ONE-WAY RESTRICTOR VALVES UNFILTERED



PART NUMBER: 9R4152-X RESTRICTOR VALVE, ONE-WAY, UNFILTERED



PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT HYDRAULIC FLUID

MATERIAL: BODY 6AL-4V TI

POPPET 440C CRES

LOCKRING A-286 CRES

TEMPERATURE RANGE: -40°F TO 201°F

OPERATING PRESSURE: 5075 PSIG

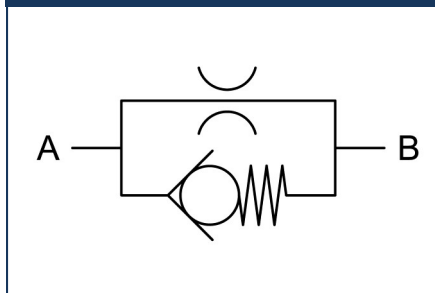
PROOF PRESSURE: 9990.5 PSIG

RESTRICTED FLOW: SEE TAB BLOCK AT 5000 PSID

FREE FLOW: 6 GPM AT 20 PSID MAX

WEIGHT: 0.082 LBS MAX

HYDRAULIC SCHEMATIC

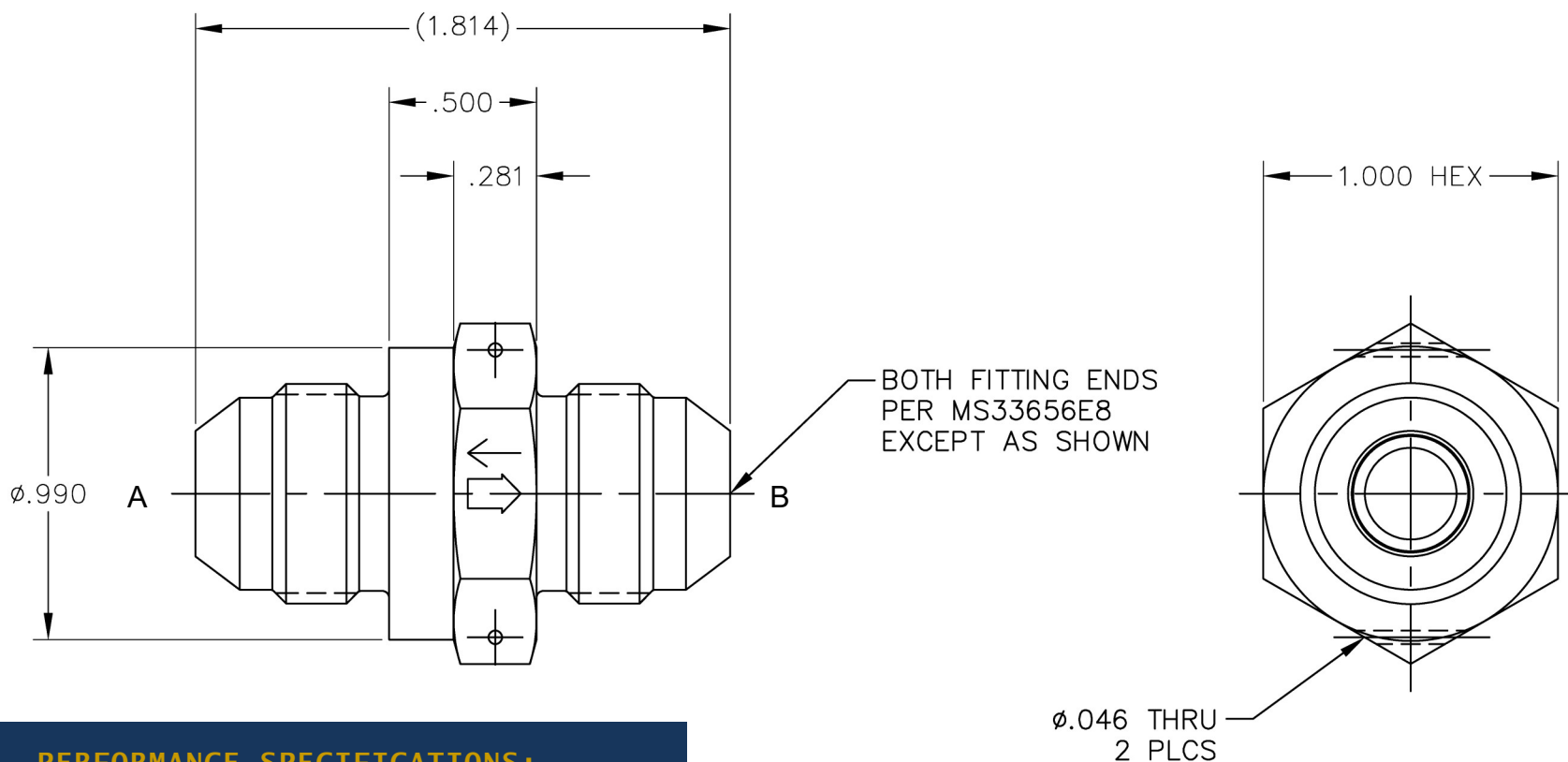


DASH NO.	LOHM (REF)	FLOW (GPM)	ORIFICE (REF)
-1	150	9.43	Ø.082
-2	110	12.85	Ø.096
-3	95	14.90	Ø.104
-4	130	11.00	Ø.089

CATEGORY 3: ONE-WAY RESTRICTOR VALVES UNFILTERED



PART NUMBER: 9R3928 RESTRICTOR VALVE, ONE-WAY, UNFILTERED



PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT HYDRAULIC FLUID

MATERIAL: BODY 2024-T351 AL

POPPET 440C CRES

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 1500 PSIG

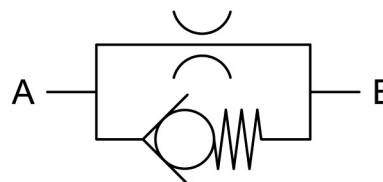
PROOF PRESSURE: 3750 PSIG

RESTRICTED FLOW: 1.6 ± 10% GPM AT 350 PSID MAX (0.066 DIA ORIFICE REF)

FREE FLOW: 2 GPM AT 15 PSID MAX

WEIGHT: 0.077 LBS MAX

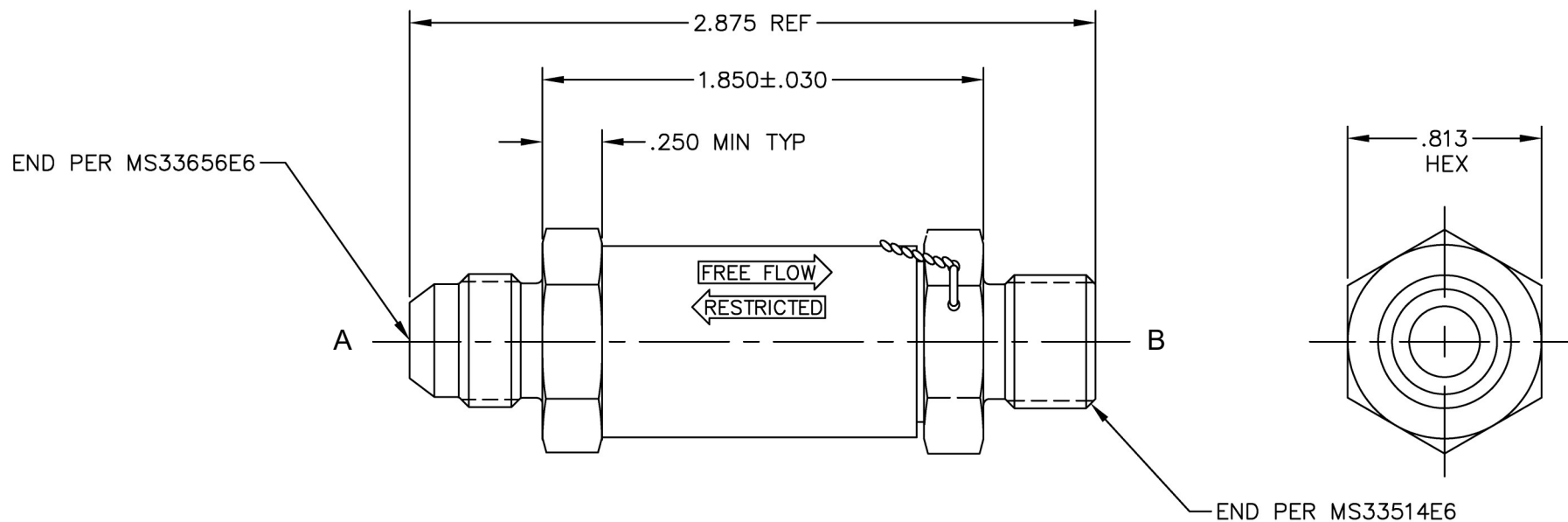
HYDRAULIC SCHEMATIC



CATEGORY 3: ONE-WAY RESTRICTOR VALVES UNFILTERED



PART NUMBER: 6F3068 RESTRICTOR VALVE, ONE-WAY, UNFILTERED



PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT HYDRAULIC FLUID

MATERIAL: BODY 17-4PH CRES

POPPET 440C CRES

TEMPERATURE RANGE: -40°F TO 275°F

OPERATING PRESSURE: 3000 PSIG

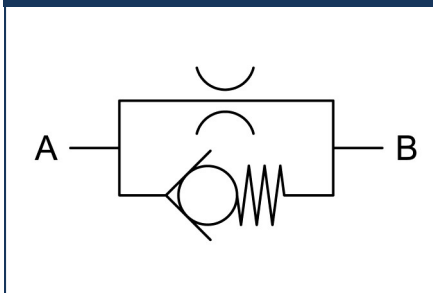
PROOF PRESSURE: 4500 PSIG

RESTRICTED FLOW: $6.5 \pm .5\%$ GPM AT 1050 PSID MAX (0.098 DIA ORIFICE REF)

FREE FLOW: 1.2 GPM AT 10 PSID MAX

WEIGHT: 0.30 LBS MAX

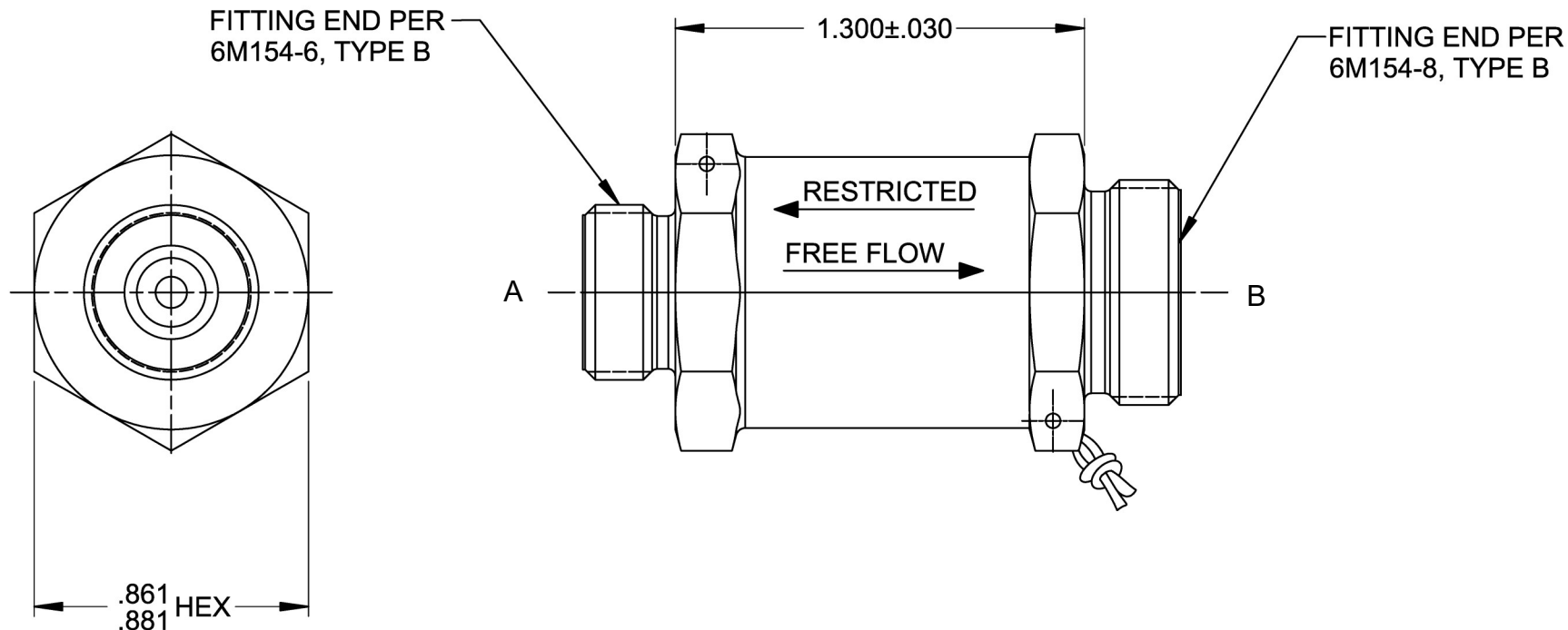
HYDRAULIC SCHEMATIC



CATEGORY 3: ONE-WAY RESTRICTOR VALVES UNFILTERED



PART NUMBER: 9R3300 RESTRICTOR VALVE, ONE-WAY, UNFILTERED



PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT HYDRAULIC FLUID

MATERIAL: BODY 17-4PH CRES

POPPET 440C CRES

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 3000 PSIG

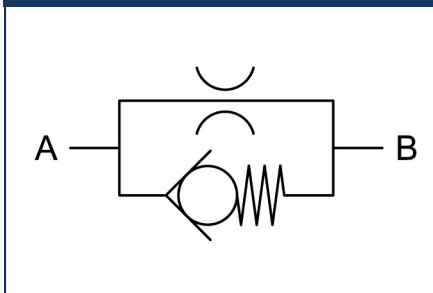
PROOF PRESSURE: 4500 PSIG

RESTRICTED FLOW: 12 ± 10% GPM AT 3000 PSID MAX

FREE FLOW: 10 GPM AT 20 PSID MAX

WEIGHT: 0.21 LBS MAX

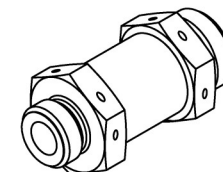
HYDRAULIC SCHEMATIC



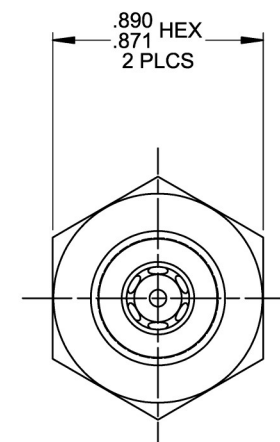
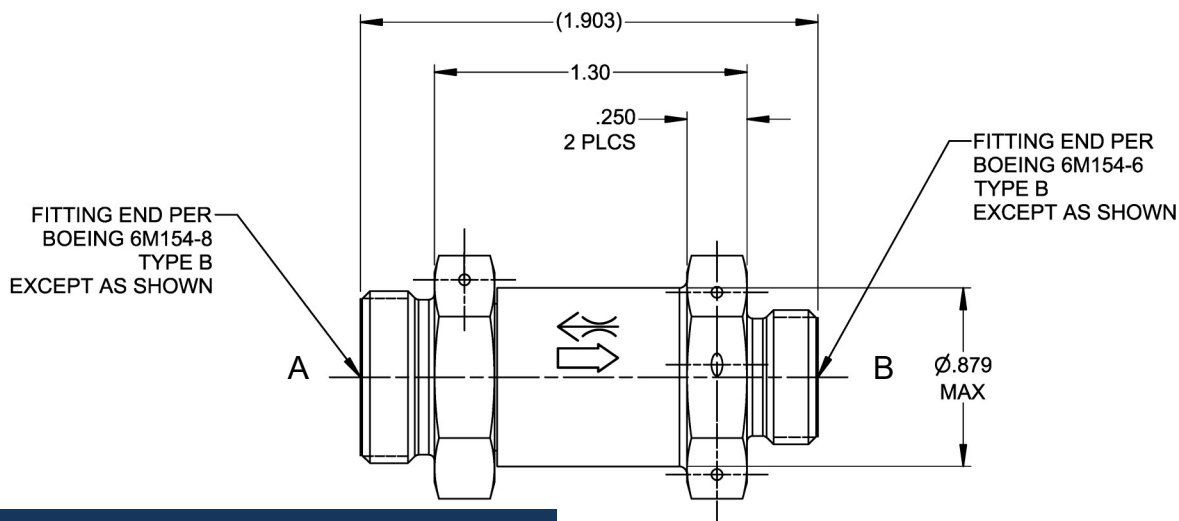
CATEGORY 3: ONE-WAY RESTRICTOR VALVES UNFILTERED



PART NUMBER: 9R4260 RESTRICTOR VALVE, ONE-WAY, UNFILTERED



ISOMETRIC VIEW
FOR REFERENCE ONLY



PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT HYDRAULIC FLUID

MATERIAL: BODY 17-4PH CRES

POPPET 440C CRES

TEMPERATURE RANGE: -40°F TO 275°F

OPERATING PRESSURE: 3000 PSIG

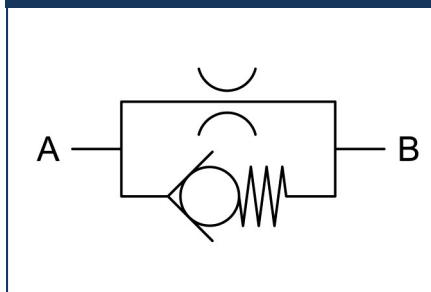
PROOF PRESSURE: 4500 PSIG

RESTRICTED FLOW: $6.25 \pm 0.25\%$ GPM AT 3000 PSID MAX ($\varnothing .071$ ORIFICE)

FREE FLOW: 3.5 GPM AT 15 PSID MAX

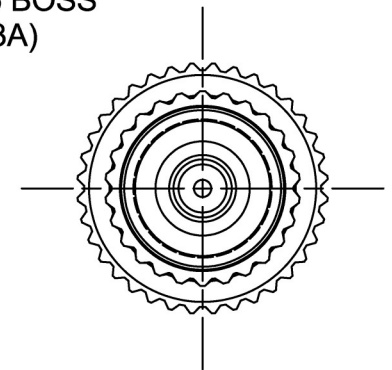
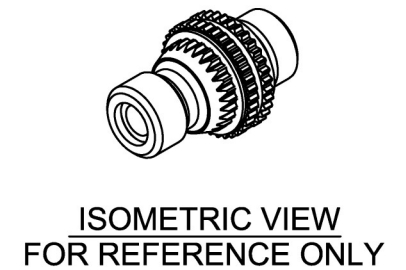
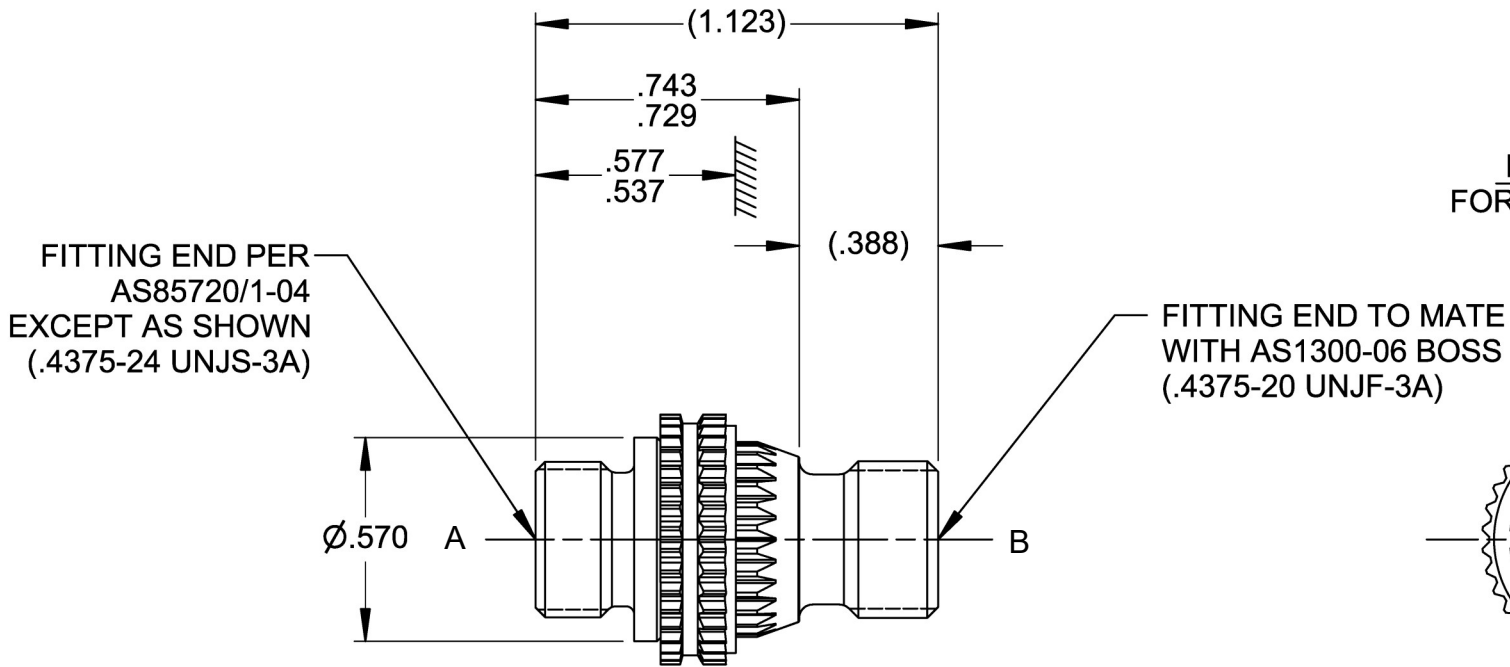
WEIGHT: 0.21 LBS MAX

HYDRAULIC SCHEMATIC



CATEGORY 3: ONE-WAY RESTRICTOR VALVES UNFILTERED

PART NUMBER: 9R4052 RESTRICTOR VALVE, ONE-WAY, UNFILTERED



PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT HYDRAULIC FLUID

MATERIAL: BODY 15-5PH CRES

POPPET 440C CRES

LOCKRING A-286 CRES

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 4000 PSIG

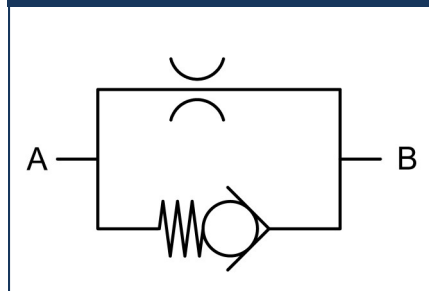
PROOF PRESSURE: 8000 PSIG

FLOW: A TO B 1.6 ± 0.1 GPM AT 1000 PSID MAX (Ø.049 ORIFICE)

B TO A 11.9 TO 15.9 GPM AT 1000 PSID MAX (Ø.134 ORIFICE)

WEIGHT: 0.056 LBS MAX

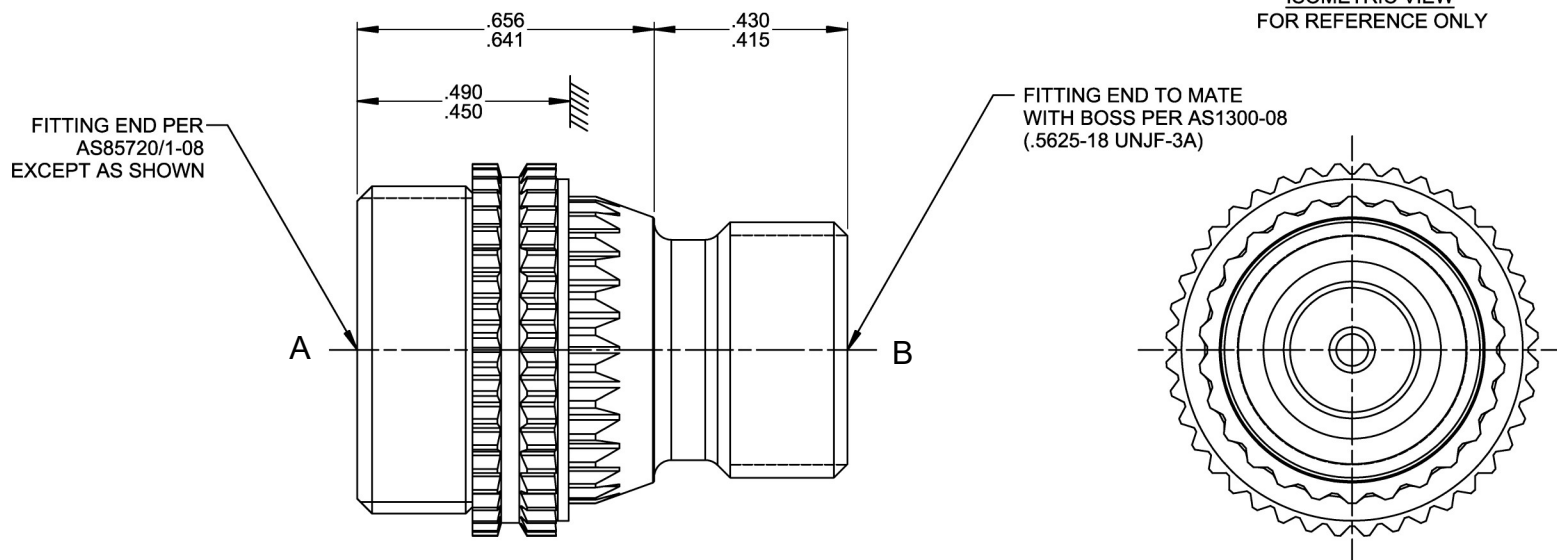
HYDRAULIC SCHEMATIC



CATEGORY 3: ONE-WAY RESTRICTOR VALVES UNFILTERED



PART NUMBER: 9R4170 RESTRICTOR VALVE, ONE-WAY, UNFILTERED



PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT HYDRAULIC FLUID

MATERIAL: BODY 6AL-4V TI

POPPET 440C CRES

LOCKRING A-286 CRES

TEMPERATURE RANGE: -40°F TO 275°F

OPERATING PRESSURE: 4000 PSIG

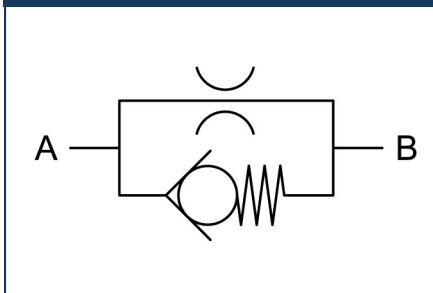
PROOF PRESSURE: 8600 PSIG

FLOW: A TO B 6.00 ± .12 GPM AT 1000 PSID MAX (Ø.100 ORIFICE)

B TO A 2.95 ± .06 GPM AT 1000 PSID MAX (Ø.070 ORIFICE)

WEIGHT: 0.056 LBS MAX

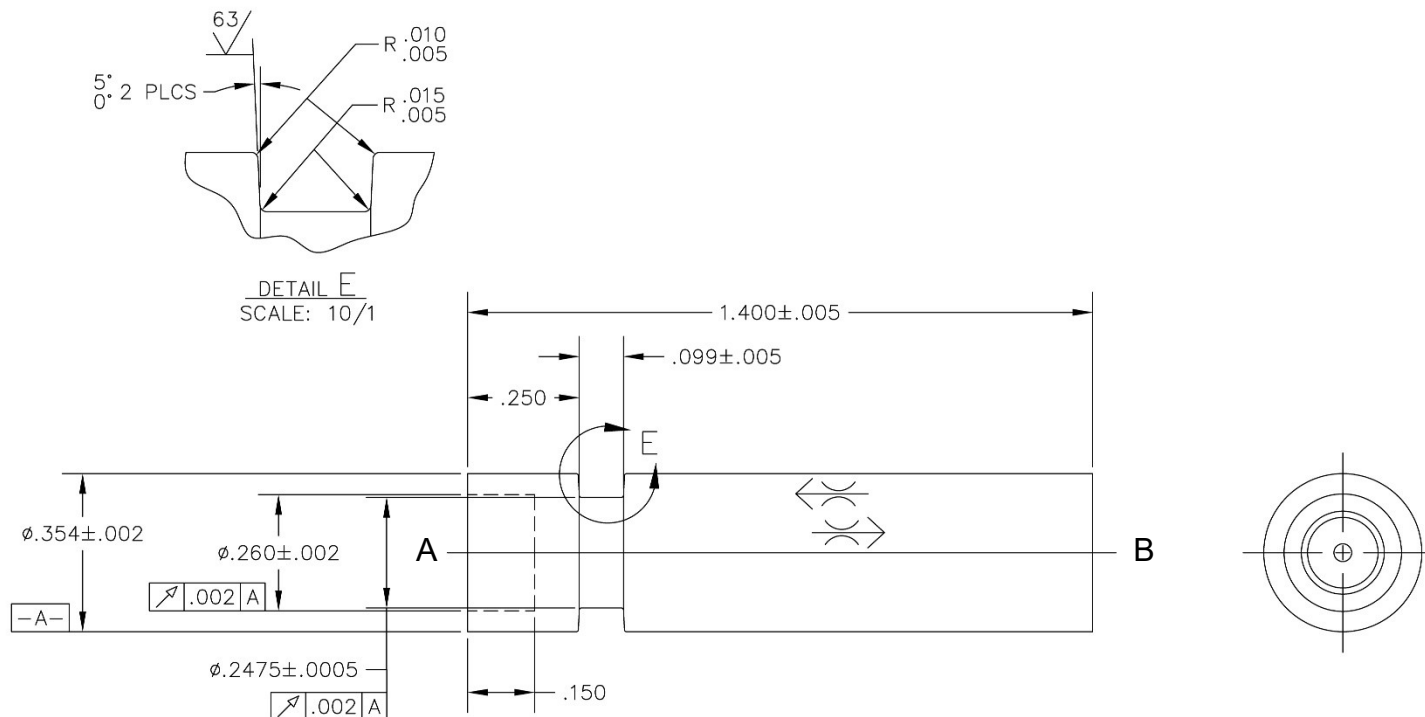
HYDRAULIC SCHEMATIC



CATEGORY 3: ONE-WAY RESTRICTOR VALVES UNFILTERED



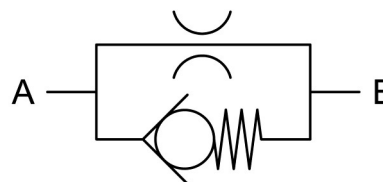
PART NUMBER: 9R3838 RESTRICTOR VALVE, ONE-WAY, UNFILTERED



PERFORMANCE SPECIFICATIONS:

FLUIDS: AIR
 MATERIAL: BODY 17-4PH CRES
 POPPET 440C CRES
 TEMPERATURE RANGE: -65°F TO 400°F
 OPERATING PRESSURE: 100 PSIG
 PROOF PRESSURE: 250 PSIG
 FLOW: SEE TAB BLOCK
 WEIGHT: 0.03 LBS MAX

HYDRAULIC SCHEMATIC



CRISSAIR PART NO.	REST. ORIFICE ±.0005	FREE FLOW ORIFICE ±.0005
9R3838-1	.0180	.040
9R3838-2	.0200	.040
9R3838-3	.0220	.040
9R3838-4	.0240	.040
9R3838-5	.0145	.040

CATEGORY 3: ONE-WAY RESTRICTOR VALVES UNFILTERED



CRISSAIR HAS VARIOUS OTHER RESTRICTOR VALVES NOT LISTED IN THE CATALOG WITH DIFFERENT MATERIALS, FITTINGS, AND SIZE CONFIGURATIONS.

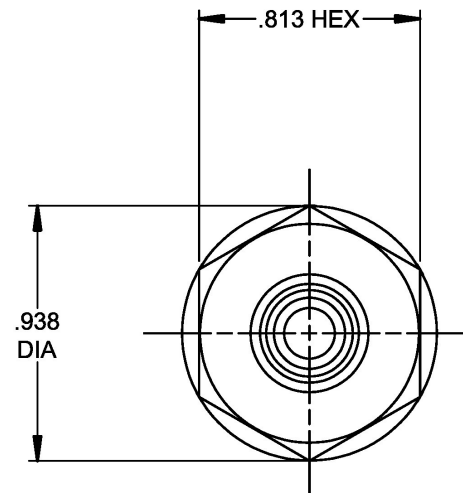
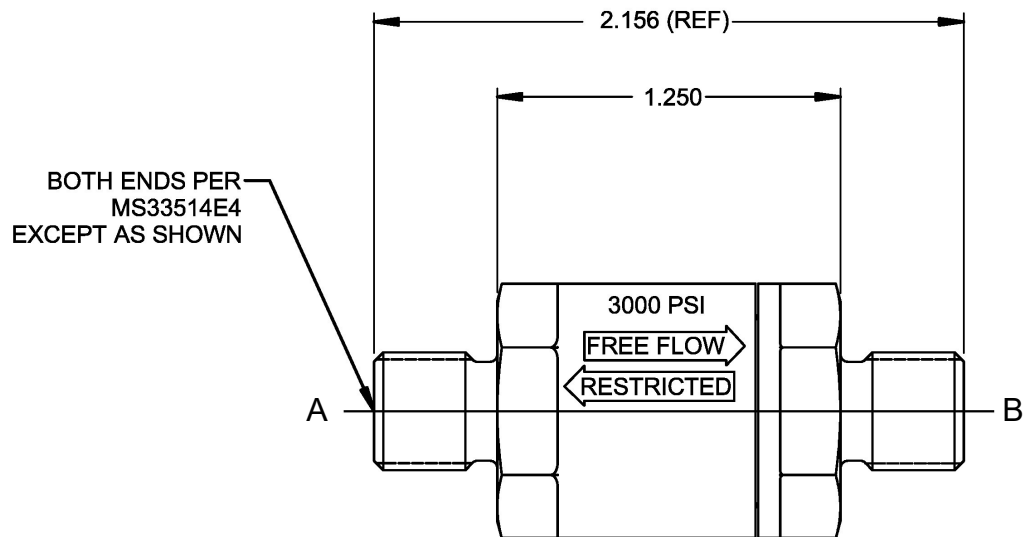
CONTACT CRISSAIR FOR ADDITIONAL INFORMATION/DRAWINGS AT

(661) 367-3300 OR SALES@CRISSAIR.COM.

YOU CAN ALSO VISIT WWW.CRISSAIR.COM.



PART NUMBER: 6F1948 RESTRICTOR VALVE, ONE-WAY, FILTERED



PERFORMANCE SPECIFICATIONS:

FLUIDS: MIL-H-5606 OR MIL-H-6083*

MATERIAL: BODY 2024-T351 AL

POPPET 303 CRES

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 3000 PSIG

PROOF PRESSURE: 4500 PSIG

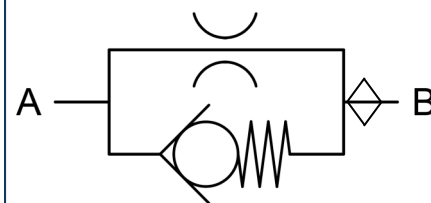
FLOW: SEE TAB BLOCK

FILTRATION: 0.008 TO 0.012 OPENINGS

WEIGHT: .08 LBS MAX

*OTHER FLUIDS MAY BE ACCEPTABLE WITH ELASTOMER CHANGE

HYDRAULIC SCHEMATIC

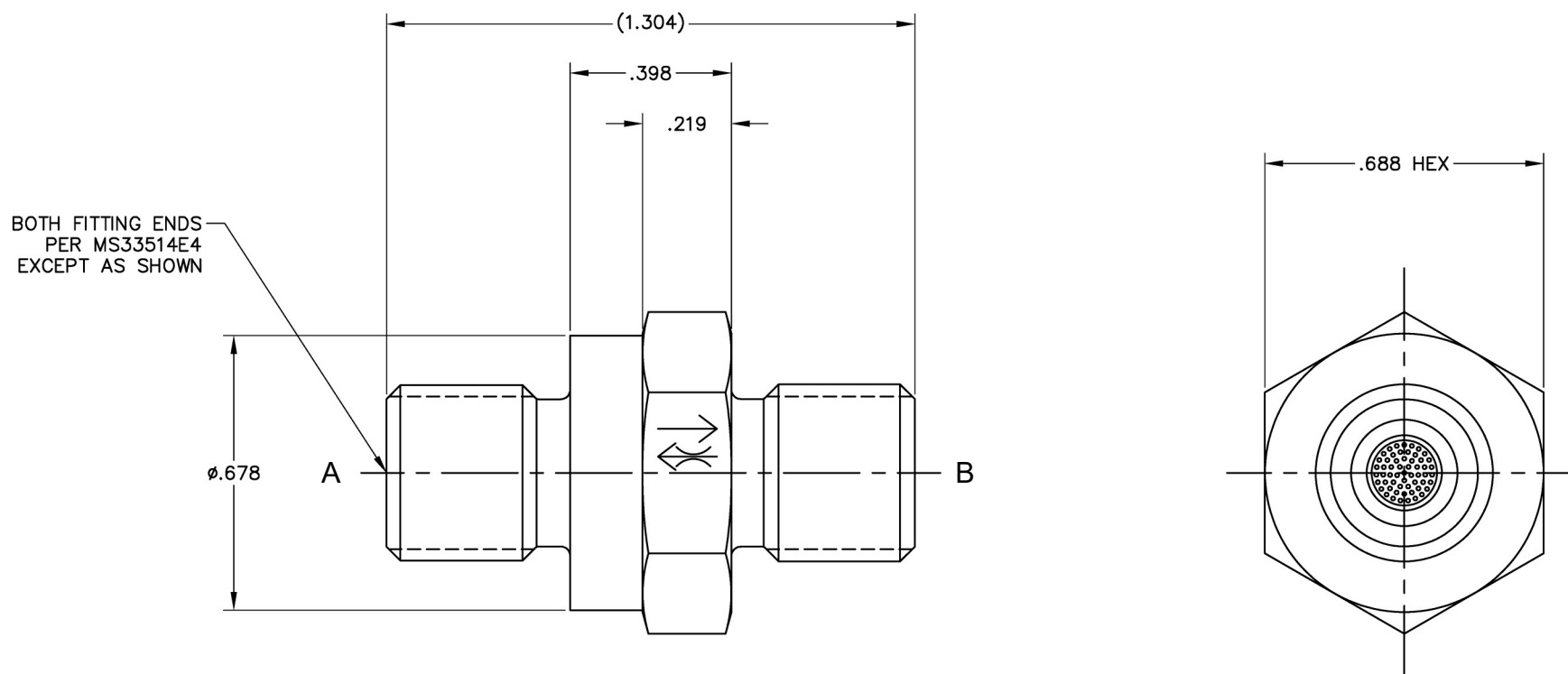


RESTRICTED FLOW (GPM)	PRESS. ΔP (PSID)	FREE FLOW (GPM)	PRESS. ΔP (PSID)
1.25 ± .12	1000	2.0	25
1.77 ± .17	2000	2.0	25
2.16 ± .22	3000	2.0	25

CATEGORY 3: ONE-WAY RESTRICTOR VALVES FILTERED



PART NUMBER: 6F4420 RESTRICTOR VALVE, ONE-WAY, FILTERED



PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT HYDRAULIC FLUID

MATERIAL: BODY 304 CRES

POPPET 440C CRES

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 3000 PSIG

PROOF PRESSURE: 4500 PSIG

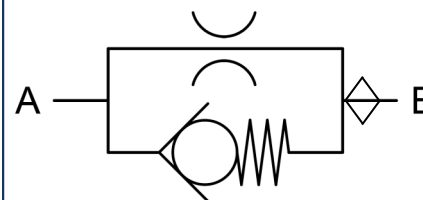
RESTRICTED FLOW: Ø.034 ± 0.001 ORIFICE

FREE FLOW: 1.2 GPM AT 70 PSID MAX

FILTRATION: 0.008 TO 0.012 OPENINGS

WEIGHT: .07 LBS MAX

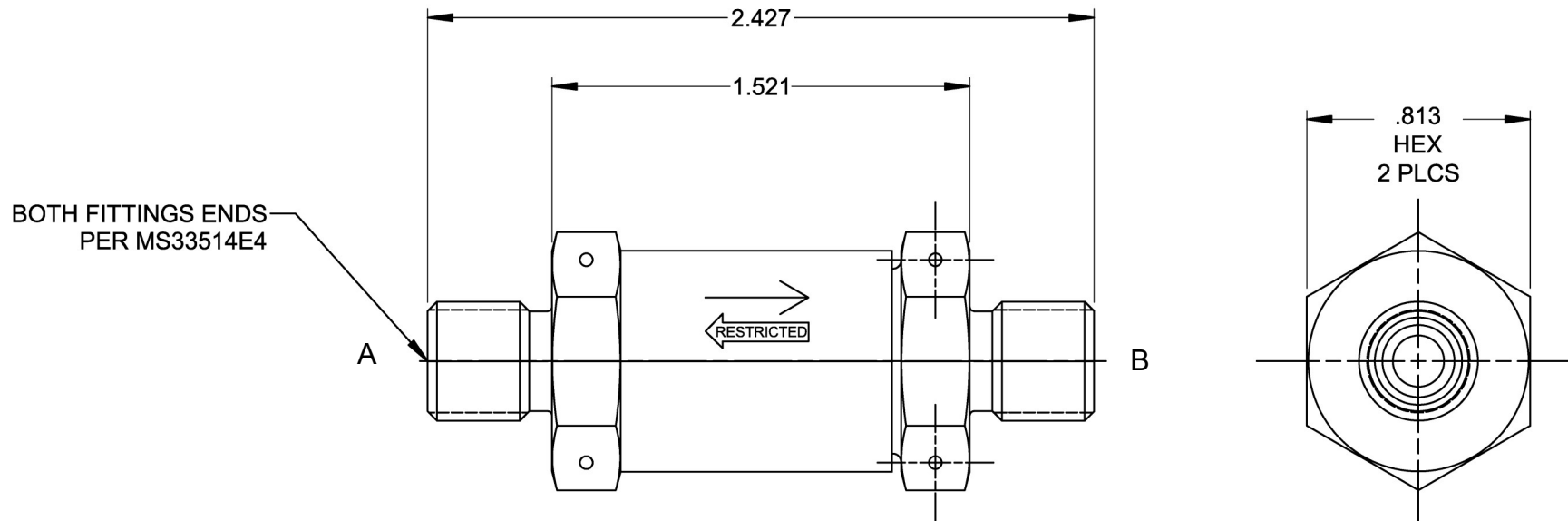
HYDRAULIC SCHEMATIC



CATEGORY 3: ONE-WAY RESTRICTOR VALVES FILTERED



PART NUMBER: 6F4830 RESTRICTOR VALVE, ONE-WAY, FILTERED



PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT HYDRAULIC FLUID

MATERIAL: BODY 7075-T651 AL

POPPET 303 CRES

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 3000 PSIG

PROOF PRESSURE: 4500 PSIG

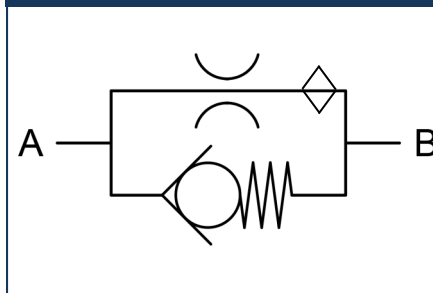
RESTRICTED FLOW: $1.9 \pm .2$ GPM AT 3000 PSID (\varnothing .040 ORIFICE)

FREE FLOW: 8 GPM AT 130 PSID MAX

FILTRATION: 200 MICRON

WEIGHT: .095 LBS MAX

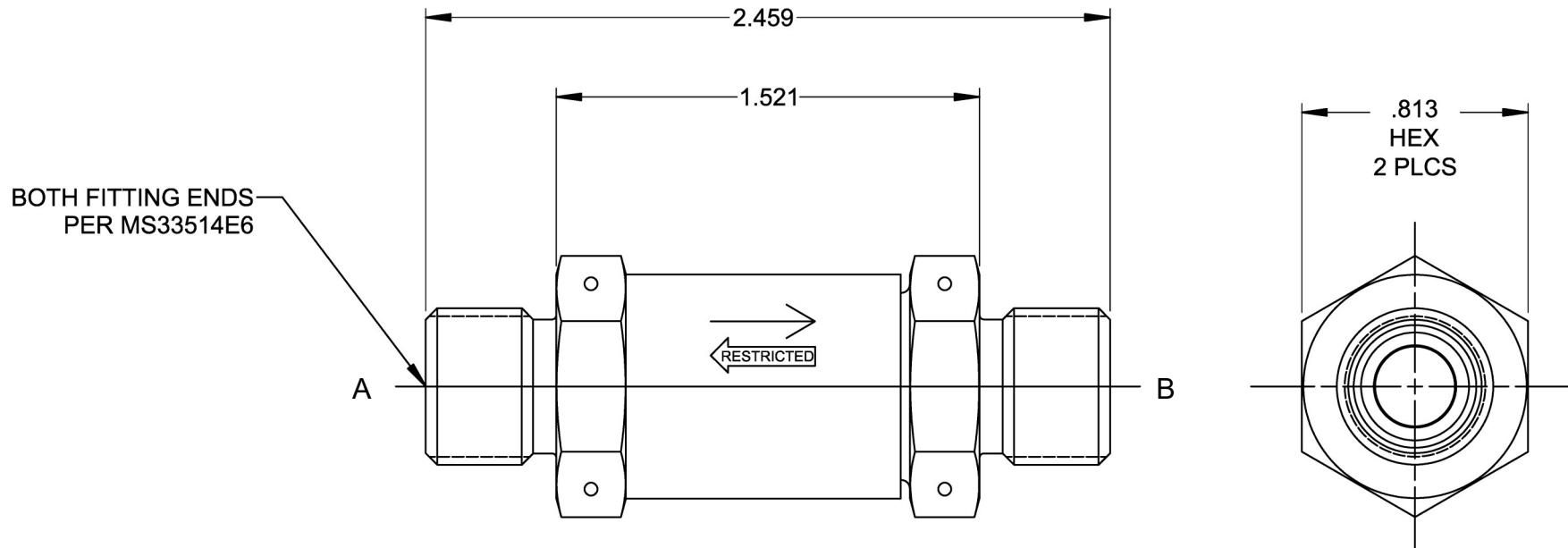
HYDRAULIC SCHEMATIC



CATEGORY 3: ONE-WAY RESTRICTOR VALVES FILTERED



PART NUMBER: 6F4832 RESTRICTOR VALVE, ONE-WAY, FILTERED



PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT HYDRAULIC FLUID

MATERIAL: BODY 7075-T651 AL

POPPET 303 CRES

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 3000 PSIG

PROOF PRESSURE: 4500 PSIG

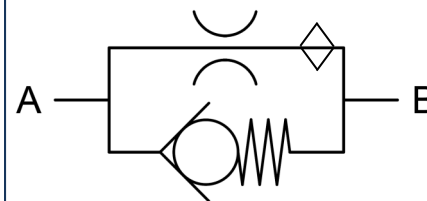
RESTRICTED FLOW: $1.9 \pm .2$ GPM AT 3000 PSID (\varnothing .040 ORIFICE)

FREE FLOW: 8 GPM AT 100 PSID MAX

FILTRATION: 200 MICRON

WEIGHT: .095 LBS MAX

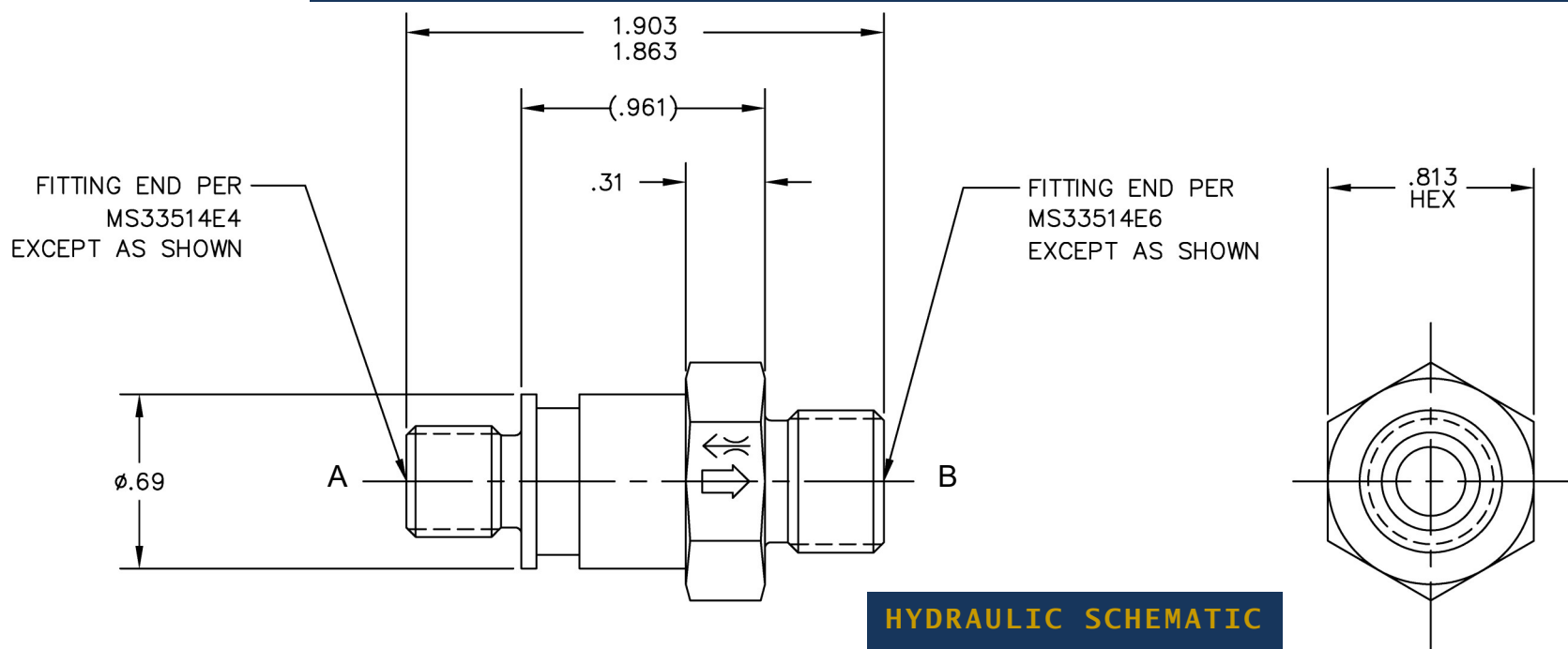
HYDRAULIC SCHEMATIC



CATEGORY 3: ONE-WAY RESTRICTOR VALVES FILTERED



PART NUMBER: 6F4566 RESTRICTOR VALVE, ONE-WAY, FILTERED



PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT HYDRAULIC FLUID

MATERIAL: BODY 303 CRES

POPPET 304 CRES

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 3000 PSIG

PROOF PRESSURE: 4500 PSIG

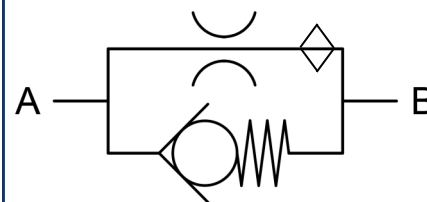
RESTRICTED FLOW: SEE TAB BLOCK

FREE FLOW: SEE TAB BLOCK

FILTRATION: .005 TO .008 OPENINGS

WEIGHT: .14 LBS MAX

HYDRAULIC SCHEMATIC

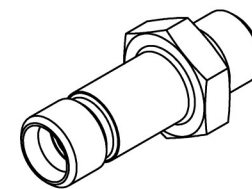


PART NO.	FREE FLOW (GPM)	FREE FLOW ΔP (PSID)	REST. FLOW $\pm 10\%$ (GPM)	REST. FLOW PSID	REST. FLOW (ORIFICE)
6F4566	1.2	15	.35	3000	$\phi .018$
6F4566-1	1.2	15	.44	3000	$\phi .020$

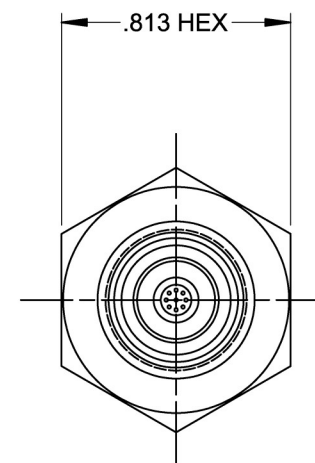
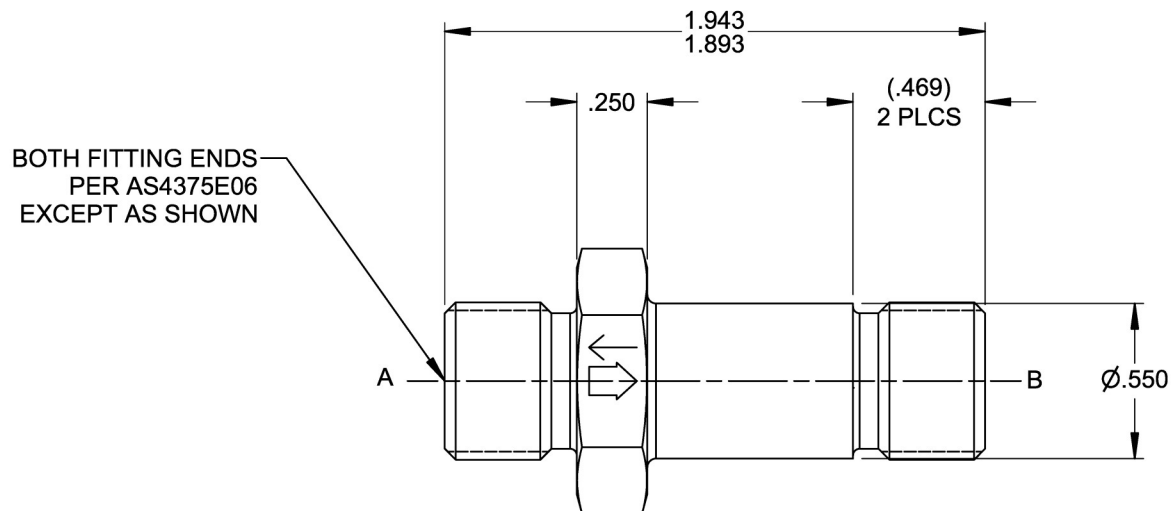
CATEGORY 3: ONE-WAY RESTRICTOR VALVES FILTERED



PART NUMBER: 6F4676 RESTRICTOR VALVE, ONE-WAY, FILTERED, HI-LO



ISOMETRIC VIEW
FOR REFERENCE ONLY



PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT HYDRAULIC FLUID

MATERIAL: BODY 304 CRES

POPPET 440C CRES

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 3000 PSIG

PROOF PRESSURE: 4500 PSIG

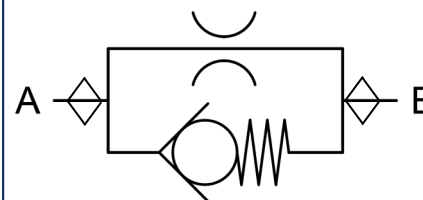
RESTRICTED FLOW: A TO B 1.77± 5% GPM AT 628 PSID (Ø.060 ORIFICE)

B TO A 1.77± 5% GPM AT 1278 PSID (Ø.050 ORIFICE)

FILTRATION: .011 TO .014 OPENINGS

WEIGHT: .123 LBS MAX

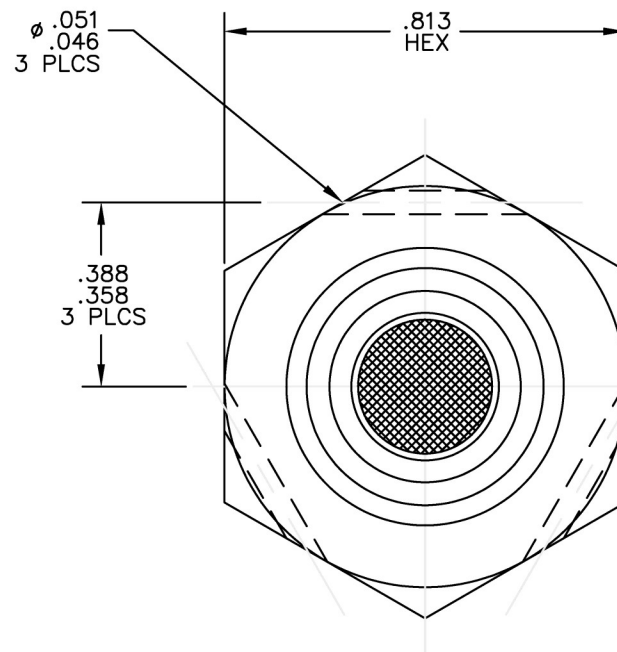
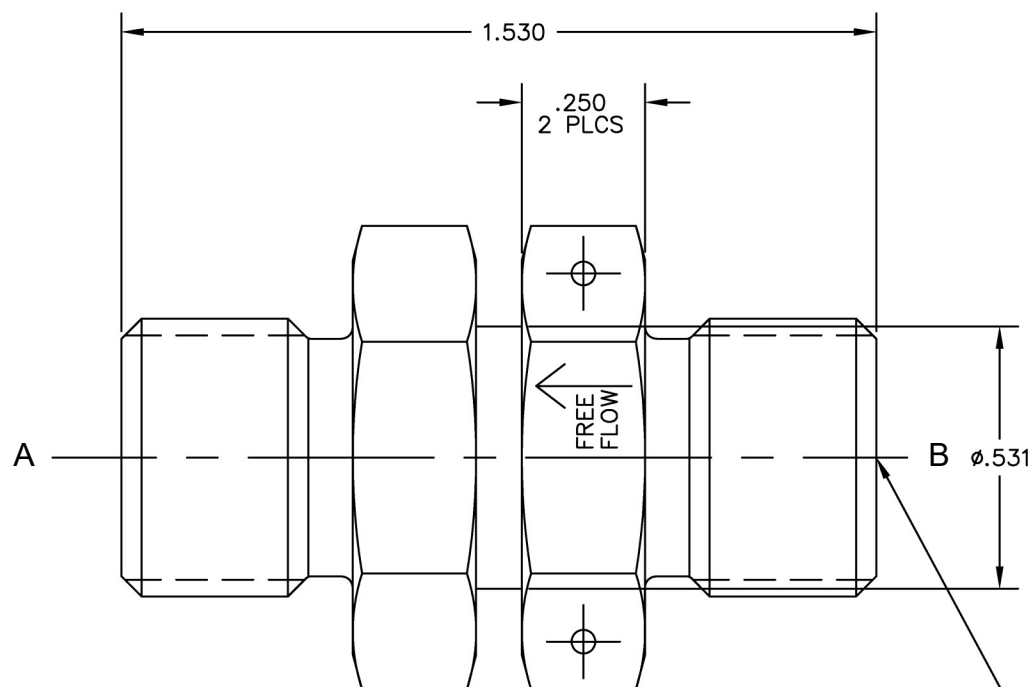
HYDRAULIC SCHEMATIC



CATEGORY 3: ONE-WAY RESTRICTOR VALVES FILTERED



PART NUMBER: 6F3836-1 RESTRICTOR VALVE, ONE-WAY, FILTERED



BOTH FITTING ENDS
PER MS33514E06
EXCEPT AS SHOWN

PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT HYDRAULIC FLUID

MATERIAL: BODY 15-5PH CRES

POPPET 304 CRES

TEMPERATURE RANGE: -117°F TO 275°F

OPERATING PRESSURE: 3050 PSIG

TRANSIENT PRESSURE: 4050 PSIG

PROOF PRESSURE: 6000 PSIG

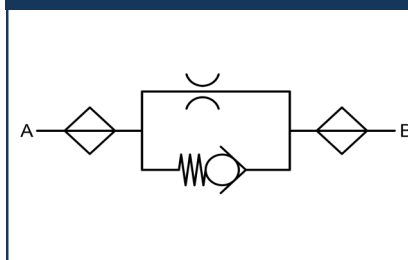
RESTRICTED FLOW: 3.56-3.93 GPM AT 3000 PSID AT 75°F ± 10°F (Ø.057 ORIFICE)

FREE FLOW: 2.0 GPM AT 170 PSID MAX AT 75°F ± 10°F

FILTRATION: .008 TO .012 OPENINGS

WEIGHT: .113 LBS MAX

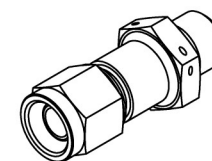
HYDRAULIC SCHEMATIC



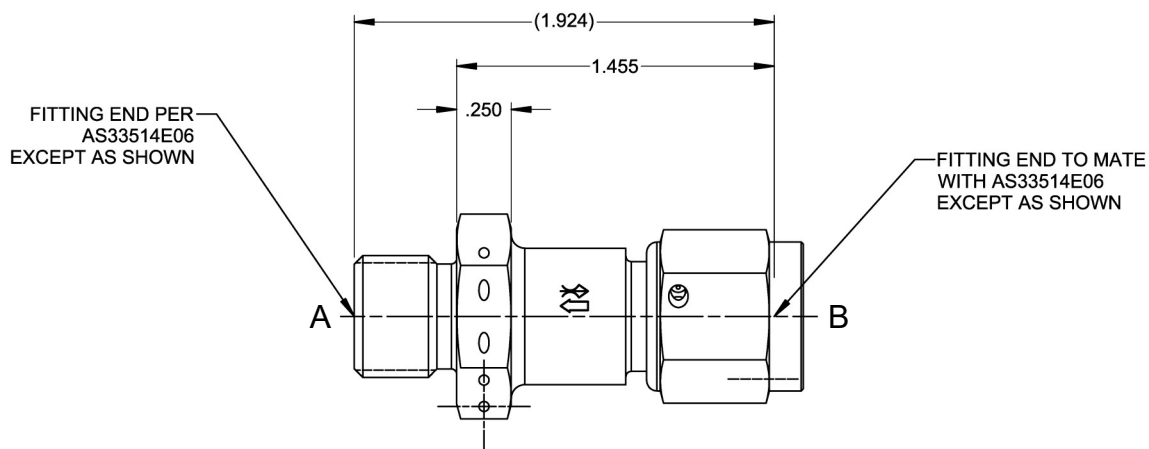
CATEGORY 3: ONE-WAY RESTRICTOR VALVES FILTERED



PART NUMBER: 6F4896 RESTRICTOR VALVE, ONE-WAY, FILTERED



ISOMETRIC VIEW
FOR REFERENCE ONLY



PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT HYDRAULIC FLUID

MATERIAL: BODY 15-5PH CRES

POPPET 304 CRES

SWIVEL NUT 304 CRES

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 3000 PSIG

PROOF PRESSURE: 4500 PSIG

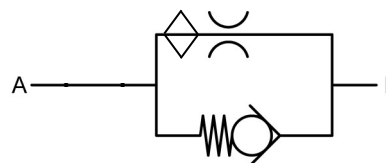
RESTRICTED FLOW: 1.0 ± 5% GPM AT 3000 PSID (Ø.029 ORIFICE)

FREE FLOW: 1.1 GPM AT 35 PSID MAX

FILTRATION: .005 TO .007 OPENINGS

WEIGHT: .162 LBS MAX

HYDRAULIC SCHEMATIC



CATEGORY 3: ONE-WAY RESTRICTOR VALVES FILTERED

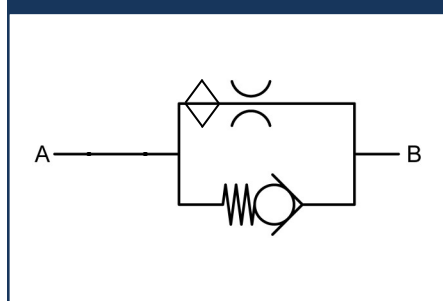


PART NUMBER: 6F4708-X RESTRICTOR VALVE, ONE-WAY, FILTERED

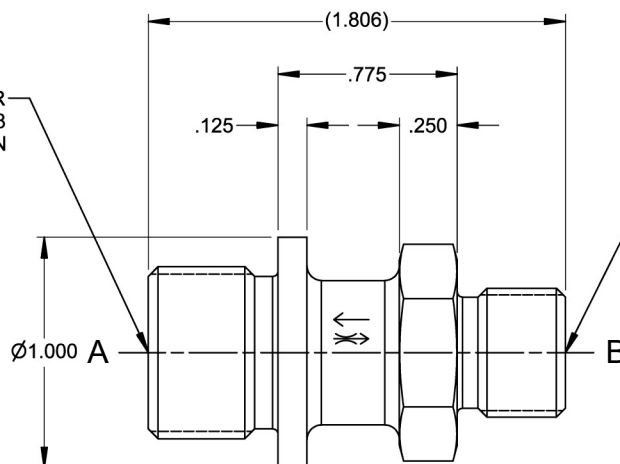


ISOMETRIC VIEW
FOR REFERENCE ONLY

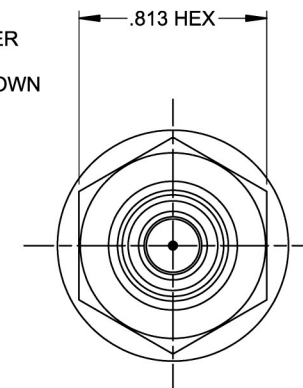
HYDRAULIC SCHEMATIC



FITTING END PER
AS33514E8
EXCEPT AS SHOWN



FITTING END PER
AS33514E6
EXCEPT AS SHOWN



PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT HYDRAULIC FLUID

MATERIAL: BODY 17-4PH CRES

POPPET 304 CRES

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 3000 PSIG

PROOF PRESSURE: 4500 PSIG

RESTRICTED FLOW: SEE TAB BLOCK

FREE FLOW: 5 GPM AT 30 PSID MAX

FILTRATION: .005 TO .007 OPENINGS

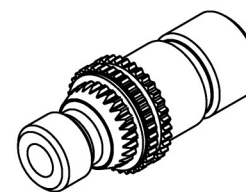
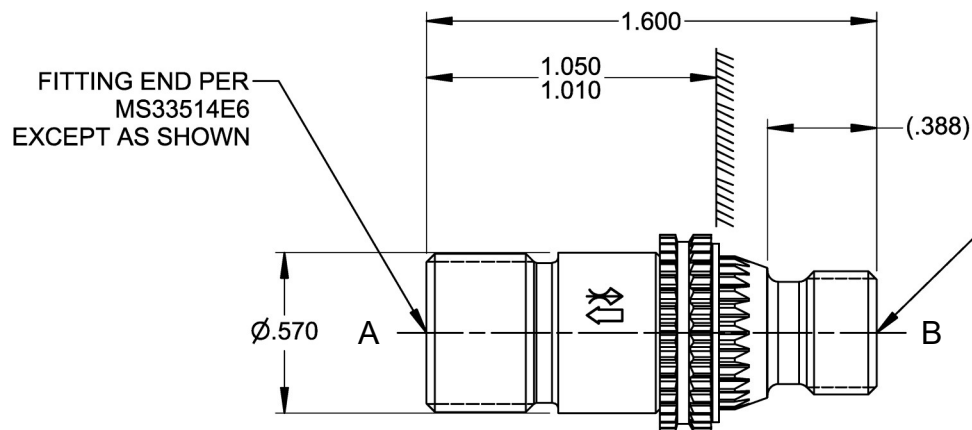
WEIGHT: .16 LBS MAX

PART NO.	FLOW ±5%	RESTRICTION VALUE PSI/(CIS) ²	ORIFICE Ø	PSID
6F4708-001	1.35	75	.0390	2028
6F4708-003	1.35	85	.0378	2298
6F4708-005	1.35	95	.0368	2569

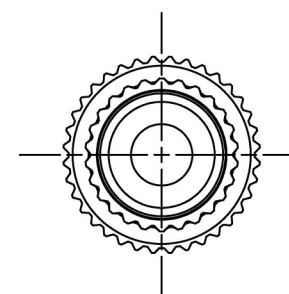
CATEGORY 3: ONE-WAY RESTRICTOR VALVES FILTERED



PART NUMBER: 6F4898 RESTRICTOR VALVE, ONE-WAY, FILTERED



ISOMETRIC VIEW
FOR REFERENCE ONLY



PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT HYDRAULIC FLUID

MATERIAL: BODY 6AL-4V TI

POPPET 304 CRES

LOCKRING A-286 CRES

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 3000 PSIG

PROOF PRESSURE: 4500 PSIG

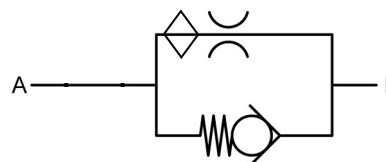
RESTRICTED FLOW: 1.1 \pm 5% GPM AT 3000 PSID ($\varnothing.031$ ORIFICE)

FREE FLOW: 1.1 GPM AT 35 PSID MAX

FILTRATION: .005 TO .007 OPENINGS

WEIGHT: .055 LBS MAX

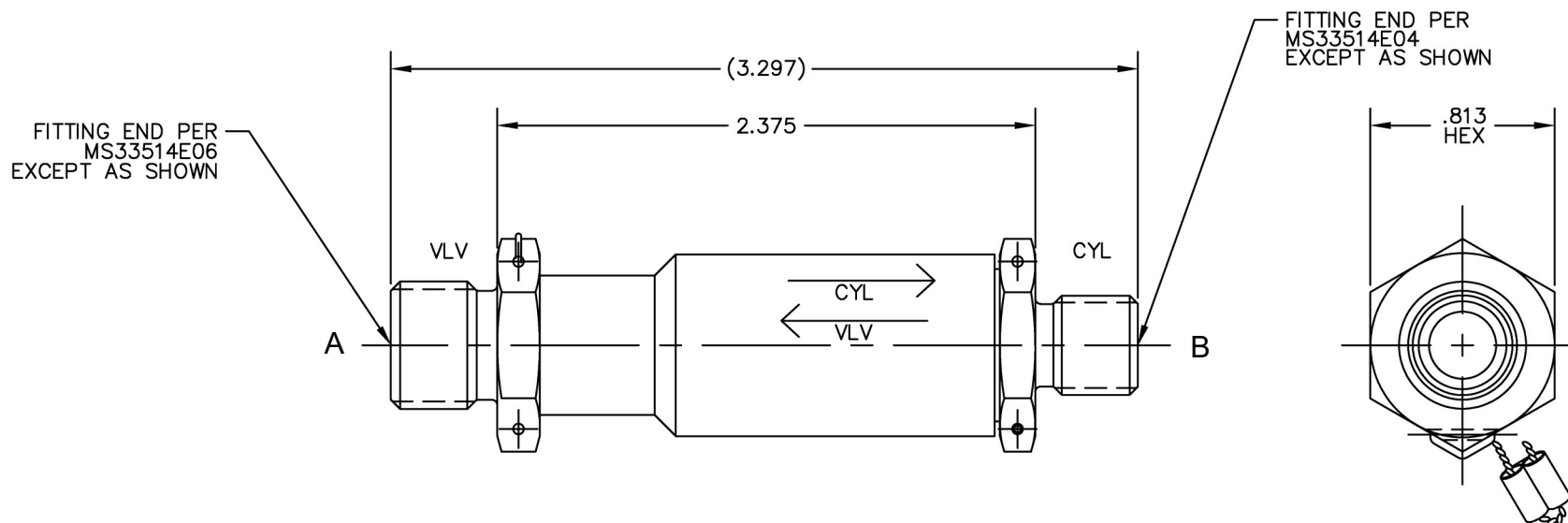
HYDRAULIC SCHEMATIC



CATEGORY 3: ONE-WAY RESTRICTOR VALVES FILTERED



PART NUMBER: 6F3778 RESTRICTOR VALVE, ONE-WAY, FILTERED, HI-LO



PERFORMANCE SPECIFICATIONS:

FLUIDS: HYDRAULIC FLUID PER DMS 2014, TY 3*

MATERIAL: BODY 17-4 CRES

POPPET 303 CRES

TEMPERATURE RANGE: -65°F TO 225°F

OPERATING PRESSURE: 3000 PSIG

PROOF PRESSURE: 4500 PSIG

RESTRICTED FLOW: VLV TO CYL 2.100 ± 10% GPM AT 800 PSID (Ø.0606 ORIFICE)

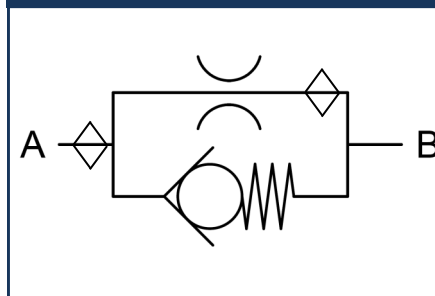
CYL TO VLV 0.350 ± 10% GPM AT 800 PSID (Ø.0250 ORIFICE)

FILTRATION: .003 TO .005 OPENINGS

WEIGHT: .30 LBS MAX

*OTHER FLUIDS MAY BE ACCEPTABLE WITH ELASTOMER CHANGE

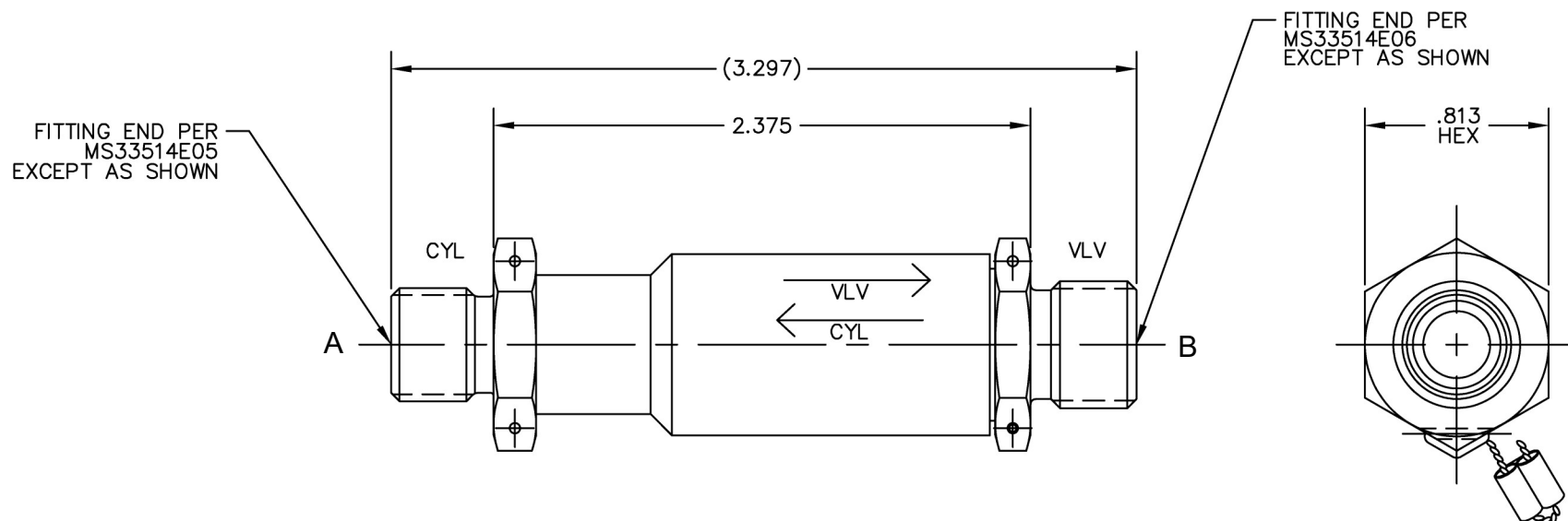
HYDRAULIC SCHEMATIC



CATEGORY 3: ONE-WAY RESTRICTOR VALVES FILTERED



PART NUMBER: 6F3782 RESTRICTOR VALVE, ONE-WAY, FILTERED, HI-LO



PERFORMANCE SPECIFICATIONS:

FLUIDS: HYDRAULIC FLUID PER DMS 2014, TY 3*

MATERIAL: BODY 17-4 CRES

POPPET 303 CRES

TEMPERATURE RANGE: -65°F TO 225°F

OPERATING PRESSURE: 3000 PSIG

PROOF PRESSURE: 4500 PSIG

RESTRICTED FLOW: CYL TO VLV 1.210 ± 10% GPM AT 450 PSID (Ø.0560 ORIFICE)

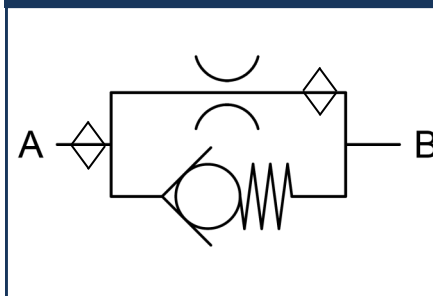
VLV TO CYL 1.140 ± 10% GPM AT 2375 PSID (Ø.0365 ORIFICE)

FILTRATION: .008 TO .012 OPENINGS

WEIGHT: .30 LBS MAX

*OTHER FLUIDS MAY BE ACCEPTABLE WITH ELASTOMER CHANGE

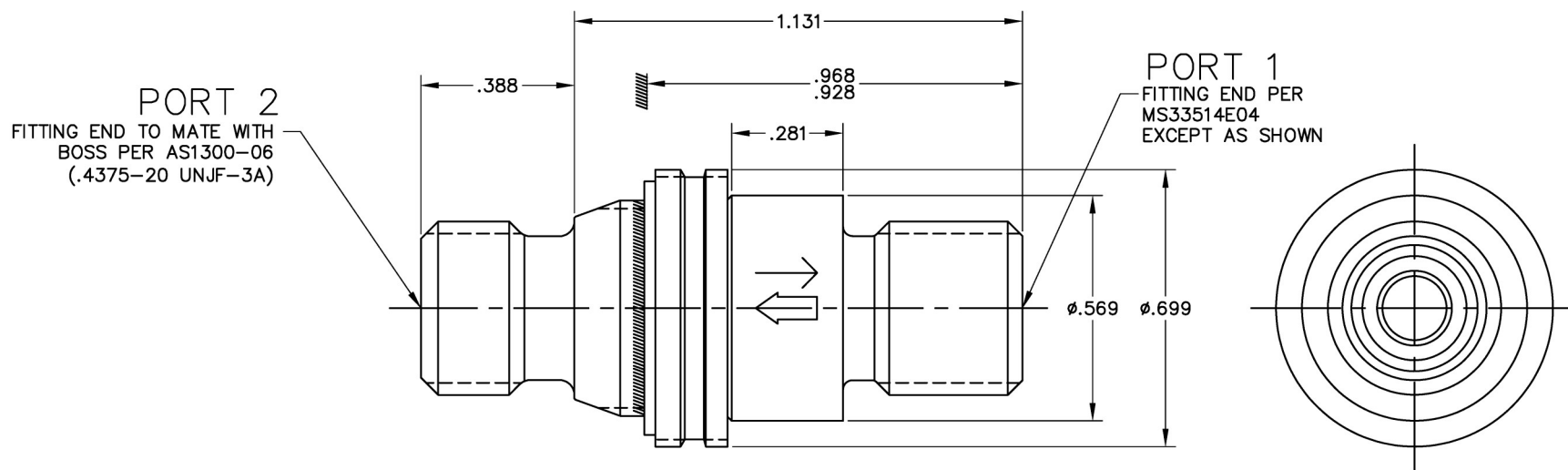
HYDRAULIC SCHEMATIC



CATEGORY 3: ONE-WAY RESTRICTOR VALVES FILTERED



PART NUMBER: 6F4292-X RESTRICTOR VALVE, ONE-WAY, FILTERED, HI-LO



PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT HYDRAULIC FLUID

MATERIAL: BODY 15-5PH CRES

POPPET 440C CRES

LOCKRING A-286 CRES

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 7500 PSIG

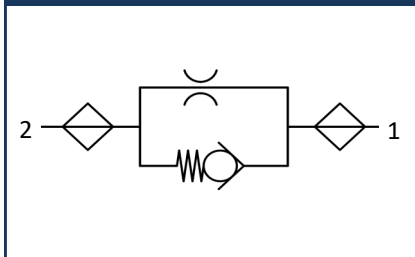
PROOF PRESSURE: 11250 PSIG

RESTRICTED FLOW: SEE TAB BLOCK AT 3000 PSID MAX

FILTRATION: .008 TO .012 OPENINGS

WEIGHT: .08 LBS MAX

HYDRAULIC SCHEMATIC

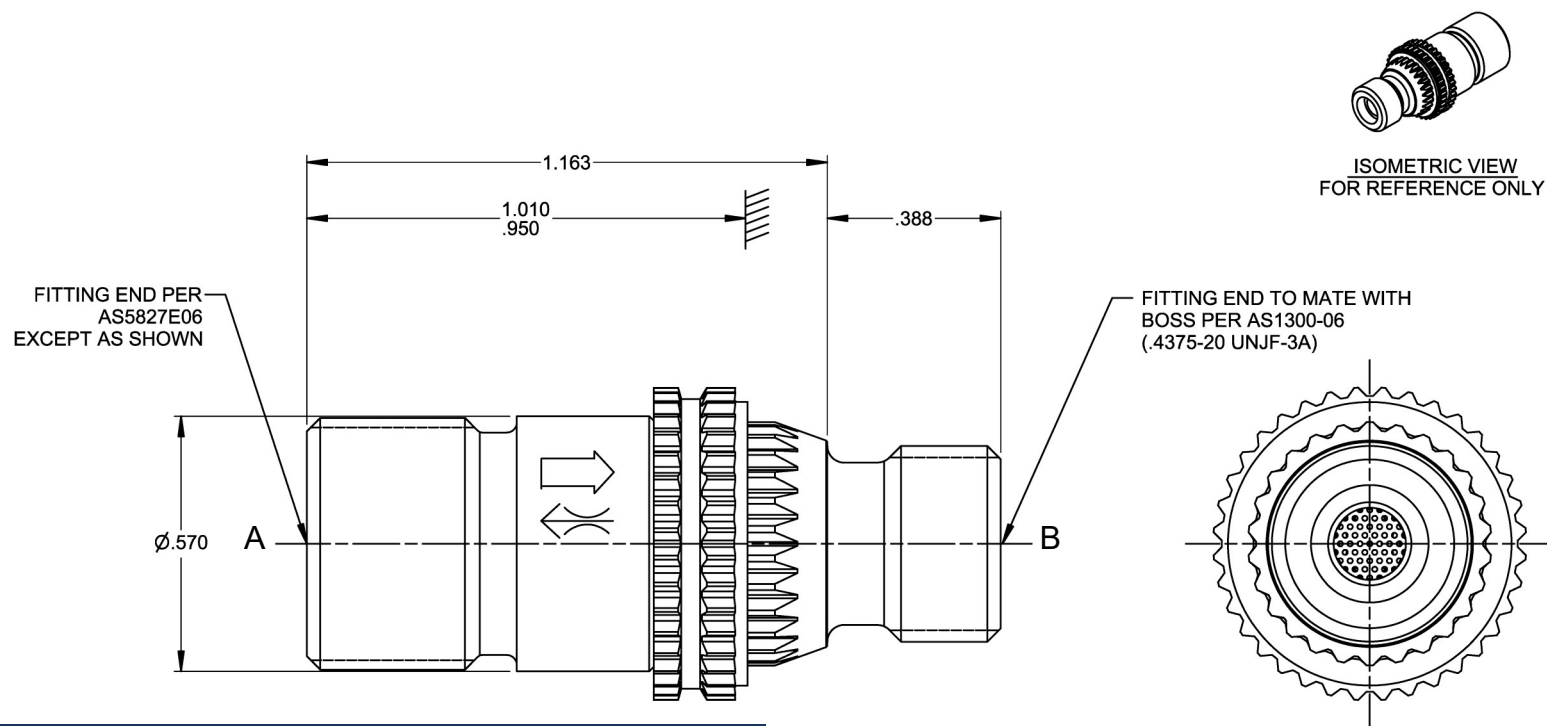


CRISSAIR PART NO.	PORTS	FLOW (GPM) ± 10%	ORIFICE Ø	LOHM
6F4292-1	2 TO 1	1.33	.034	900
	1 TO 2	2.39	.046	500
6F4292-2	2 TO 1	1.37	.035	800
	1 TO 2	1.36	.034	875
6F4292-3	2 TO 1	1.19	.032	1000
	1 TO 2	1.99	.042	600

CATEGORY 3: ONE-WAY RESTRICTOR VALVES FILTERED



PART NUMBER: 6F4712 RESTRICTOR VALVE, ONE-WAY, FILTERED



PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT HYDRAULIC FLUID

MATERIAL: BODY 6AL-4V TI

POPPET 440C CRES

LOCKRING A-286 CRES

TEMPERATURE RANGE: -65°F TO 225°F

OPERATING PRESSURE: 5080 PSIG

PROOF PRESSURE: 7500 PSIG

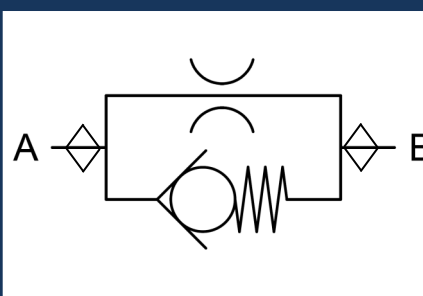
RESTRICTED FLOW: 0.744 ± 5% GPM AT 4000 PSID (Ø.0244 ORIFICE)

FREE FLOW: 0.48 GPM AT 60 PSID MAX

FILTRATION: .008 TO .012 OPENINGS

WEIGHT: .056 LBS MAX

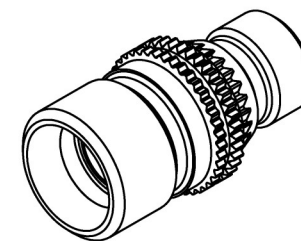
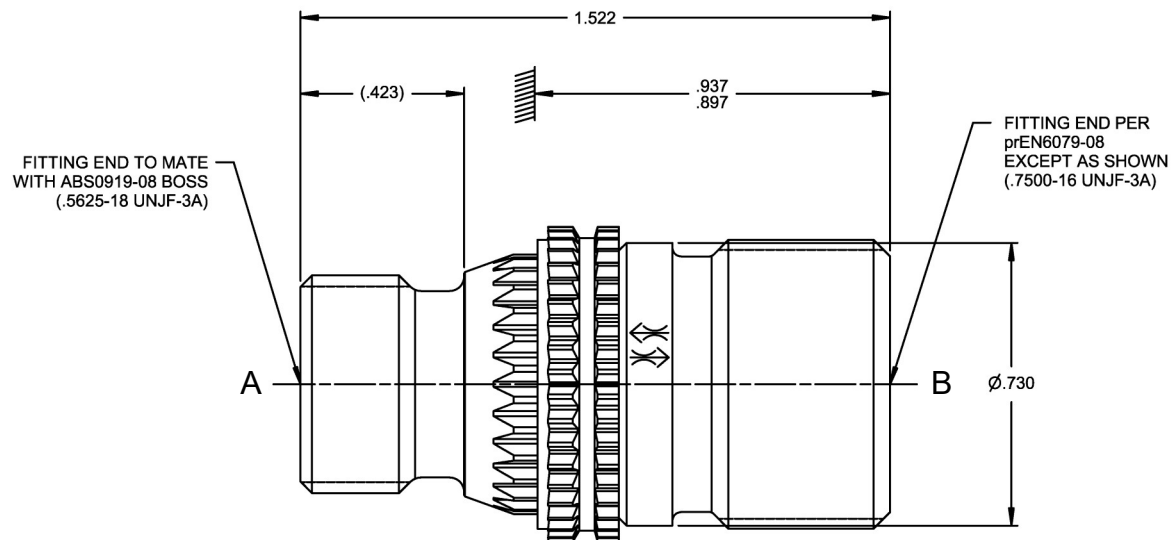
HYDRAULIC SCHEMATIC



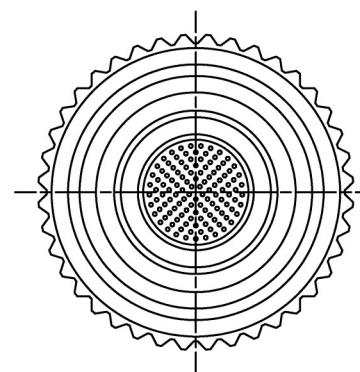
CATEGORY 3: ONE-WAY RESTRICTOR VALVES FILTERED



PART NUMBER: 6F4656-X RESTRICTOR VALVE, ONE-WAY, FILTERED, HI-LO



ISOMETRIC VIEW
FOR REFERENCE ONLY



PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT HYDRAULIC FLUID

MATERIAL: BODY 6AL-4V TI

POPPET 440C CRES

LOCKRING A-286 CRES

TEMPERATURE RANGE: -65°F TO 230°F

OPERATING PRESSURE: 3030 PSIG

PROOF PRESSURE: 4570 PSIG

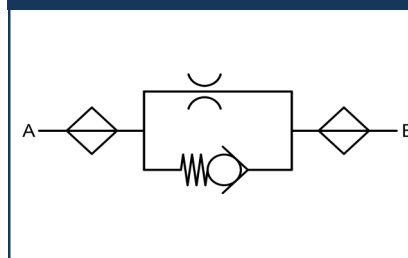
RESTRICTED FLOW: A TO B SEE TAB BLOCK AT 3000 PSID (ON NEXT PAGE)

B TO A 6.29 \pm .31 GPM AT 3000 PSID ($\varnothing .076$ ORIFICE)

FILTRATION: .008 TO .012 OPENINGS

WEIGHT: .078 LBS MAX

HYDRAULIC SCHEMATIC



CATEGORY 3: ONE-WAY RESTRICTOR VALVES FILTERED



PART NUMBER: 6F4656-X RESTRICTOR VALVE, ONE-WAY, FILTERED, HI-LO

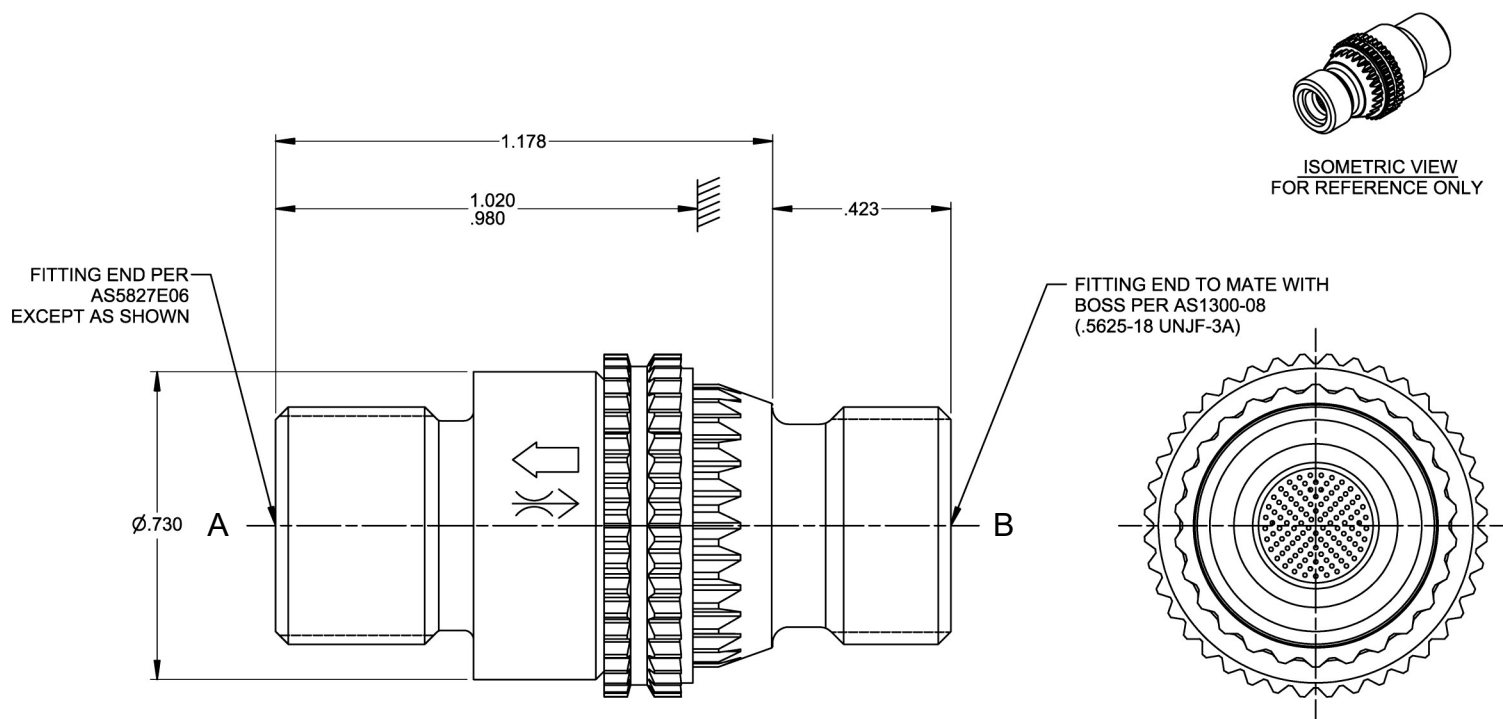
CRISSAIR PART NO.	FLOW GPM ± 5%	ORIFICE Ø
6F4656-022	4.860	.067
6F4656-024	4.450	.064
6F4656-026	4.110	.062
6F4656-028	3.820	.060
6F4656-030	3.560	.057
6F4656-032	3.340	.056
6F4656-034	3.140	.054
6F4656-036	2.970	.052
6F4656-038	2.810	.051
6F4656-040	2.670	.050
6F4656-042	2.540	.049
6F4656-044	2.430	.047
6F4656-046	2.320	.046
6F4656-048	2.230	.045
6F4656-050	2.140	.045
6F4656-055	1.940	.042
6F4656-060	1.780	.041
6F4656-065	1.640	.039
6F4656-070	1.530	.038

CRISSAIR PART NO.	FLOW GPM	ORIFICE Ø
6F4656-075	1.420	.036
6F4656-080	1.340	.035
6F4656-085	1.260	.034
6F4656-090	1.190	.033
6F4656-095	1.120	.032
6F4656-100	1.070	.031
6F4656-105	1.020	.031
6F4656-110	.970	.030
6F4656-115	.930	.029
6F4656-120	.890	.029
6F4656-125	.850	.028
6F4656-130	.820	.028
6F4656-135	.790	.027
6F4656-140	.760	.027
6F4656-145	.740	.026
6F4656-150	.710	.026
6F4656-155	.690	.025
6F4656-160	.670	.025
6F4656-165	.650	.025

CRISSAIR PART NO.	FLOW GPM ± 5%	ORIFICE Ø
6F4656-170	.630	.024
6F4656-175	.610	.024
6F4656-180	.590	.023
6F4656-185	.580	.023
6F4656-190	.560	.023
6F4656-195	.550	.023
6F4656-200	.530	.022
6F4656-210	.510	.022
6F4656-220	.490	.021
6F4656-230	.460	.021
6F4656-240	.450	.020
6F4656-250	.430	.020
6F4656-260	.410	.020
6F4656-270	.400	.019
6F4656-280	.380	.019
6F4656-290	.370	.018
6F4656-300	.360	.018



PART NUMBER: 6F4710 RESTRICTOR VALVE, ONE-WAY, FILTERED



PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT HYDRAULIC FLUID

MATERIAL: BODY 6AL-4V TI

POPPET 440C CRES

LOCKRING A-286 CRES

TEMPERATURE RANGE: -65°F TO 225°F

OPERATING PRESSURE: 5080 PSIG

PROOF PRESSURE: 7500 PSIG

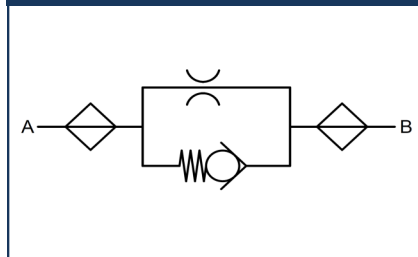
RESTRICTED FLOW: 1.088 ± 5% GPM AT 5000 PSID (Ø.0280 ORIFICE)

FREE FLOW: 0.48 GPM AT 60 PSID MAX

FILTRATION: .008 TO .012 OPENINGS

WEIGHT: .078 LBS MAX

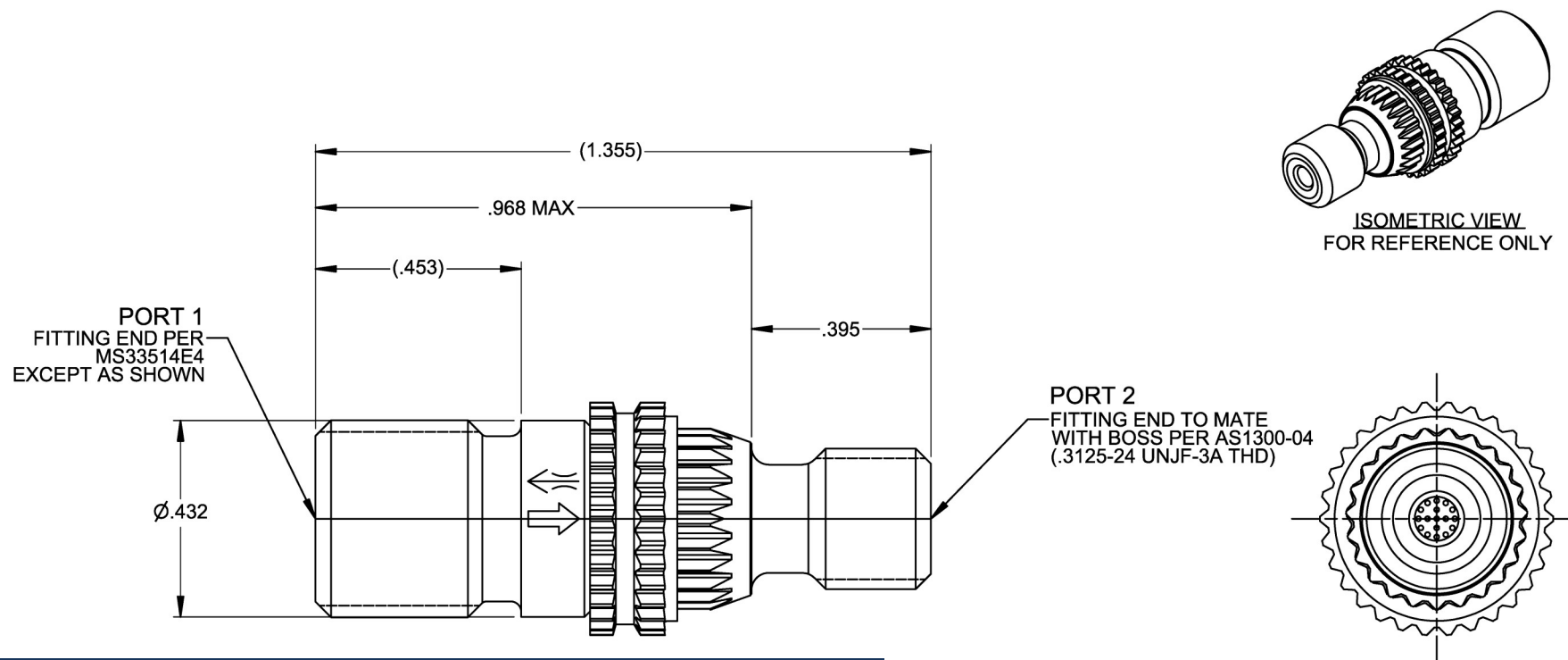
HYDRAULIC SCHEMATIC



CATEGORY 3: ONE-WAY RESTRICTOR VALVES FILTERED



PART NUMBER: 6F4608 RESTRICTOR VALVE, ONE-WAY, FILTERED, HI-LO



PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT HYDRAULIC FLUID

MATERIAL: BODY 15-5PH CRES

POPPET 440C CRES

LOCKRING A-286 CRES

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 3000 PSIG

PROOF PRESSURE: 4500 PSIG

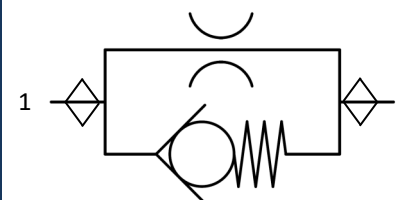
RESTRICTED FLOW: 1 TO 2 - 2.150 ± 5% GPM AT 3000 PSID (555 ± 5% LOHMS) (Ø.037 ORIFICE)

2 TO 1 - 1.190 ± 5% GPM AT 3000 PSID (1000 ± 5% LOHMS) (Ø.028 ORIFICE)

FILTRATION: .008 TO .012 OPENINGS

WEIGHT: .039 LBS MAX

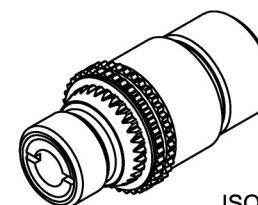
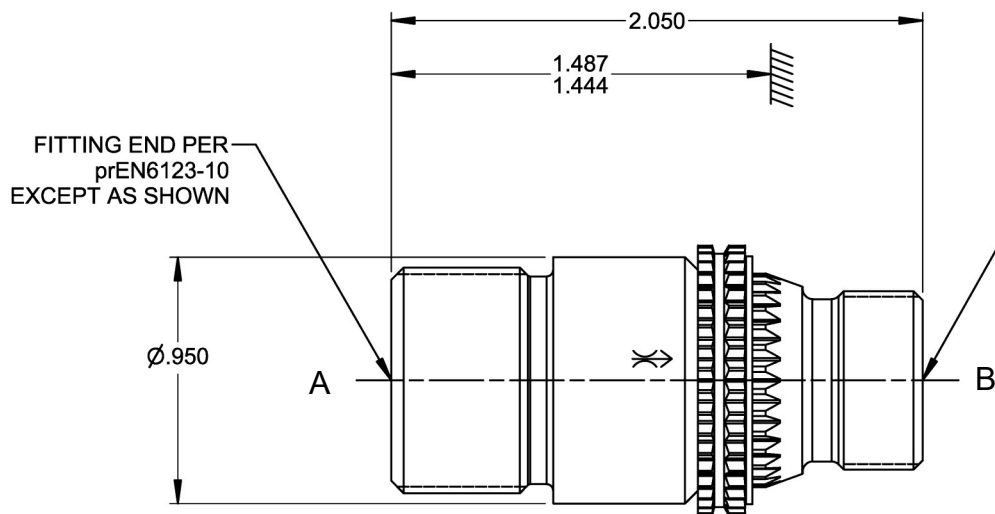
HYDRAULIC SCHEMATIC



CATEGORY 3: ONE-WAY RESTRICTOR VALVES FILTERED

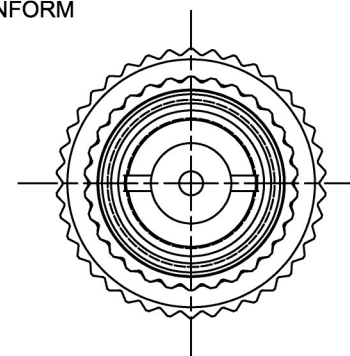


PART NUMBER: 6F4726-1 RESTRICTOR VALVE, ONE-WAY, FILTERED



ISOMETRIC VIEW
FOR REFERENCE ONLY

FITTING END TO CONFORM
WITH ABS0993-10
(.6875-24 UNJEF-3A)
TO MATE WITH
ABS0919-10



PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT HYDRAULIC FLUID

MATERIAL: BODY 15-5PH CRES

POPPET PH13-8MO CRES

LOCKRING A-286 CRES

TEMPERATURE RANGE: -40°F TO 200°F

OPERATING PRESSURE: CHECK DIRECTION 6597 PSIG

FREE FLOW DIRECTION 5075 PSIG

PROOF PRESSURE: CHECK DIRECTION 9895 PSIG

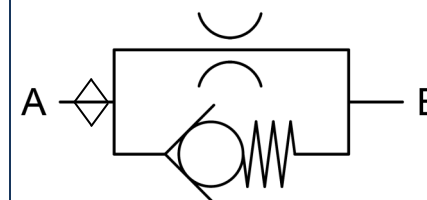
FREE FLOW DIRECTION 7612 PSIG

RESTRICTED FLOW: 11.9 ± 5% GPM AT 5075 PSID AT PORT A AND 65.3 PSID AT PORT B

FILTRATION: 100 MICRONS NOMINAL

WEIGHT: .265 LBS MAX

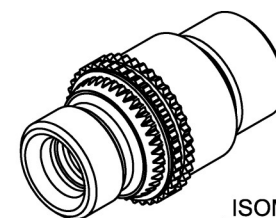
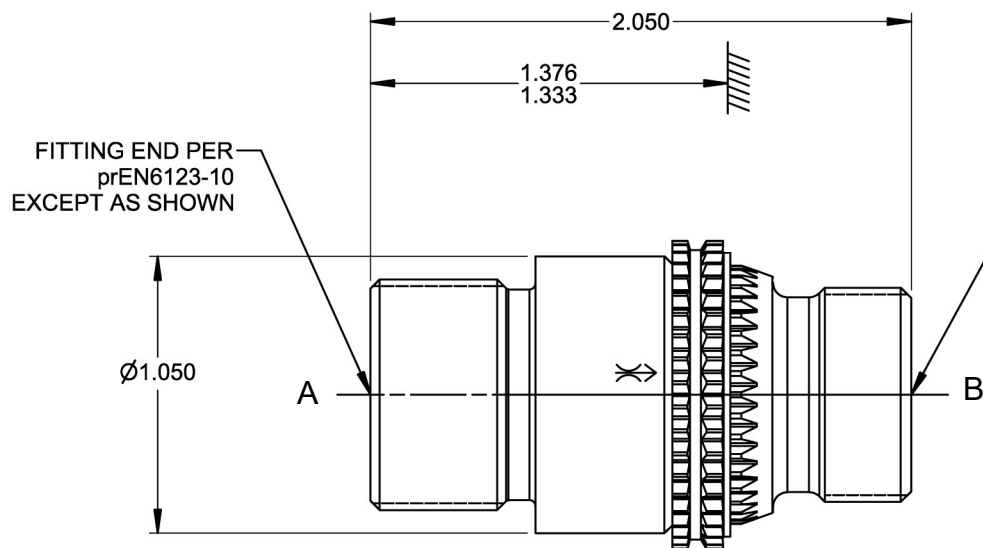
HYDRAULIC SCHEMATIC



CATEGORY 3: ONE-WAY RESTRICTOR VALVES FILTERED

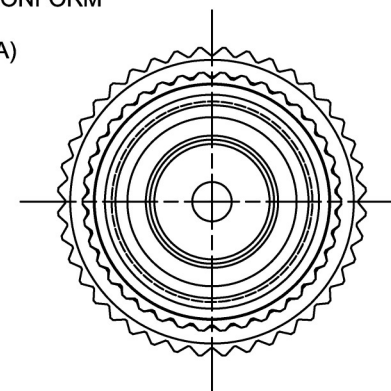


PART NUMBER: 6F4734-1 RESTRICTOR VALVE, ONE-WAY, FILTERED



ISOMETRIC VIEW
FOR REFERENCE ONLY

FITTING END TO CONFORM
WITH ABS0993-12
(.8125-20 UNJEF-3A)
TO MATE WITH
ABS0919-12



PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT HYDRAULIC FLUID

MATERIAL: BODY 15-5PH CRES

POPPET PH13-8MO CRES

LOCKRING A-286 CRES

TEMPERATURE RANGE: -40°F TO 200°F

OPERATING PRESSURE: CHECK DIRECTION 6597 PSIG

FREE FLOW DIRECTION 5075 PSIG

PROOF PRESSURE: CHECK DIRECTION 9895 PSIG

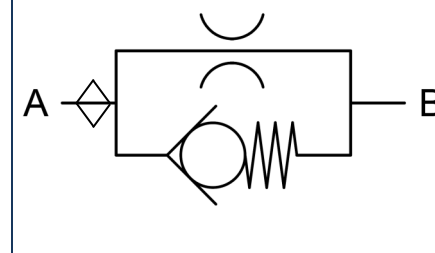
FREE FLOW DIRECTION 7612 PSIG

RESTRICTED FLOW: 31.7 \pm 5% GPM AT 5075 PSID AT PORT A AND 65.3 PSID AT PORT B

FILTRATION: 100 MICRONS NOMINAL

WEIGHT: .298 LBS MAX

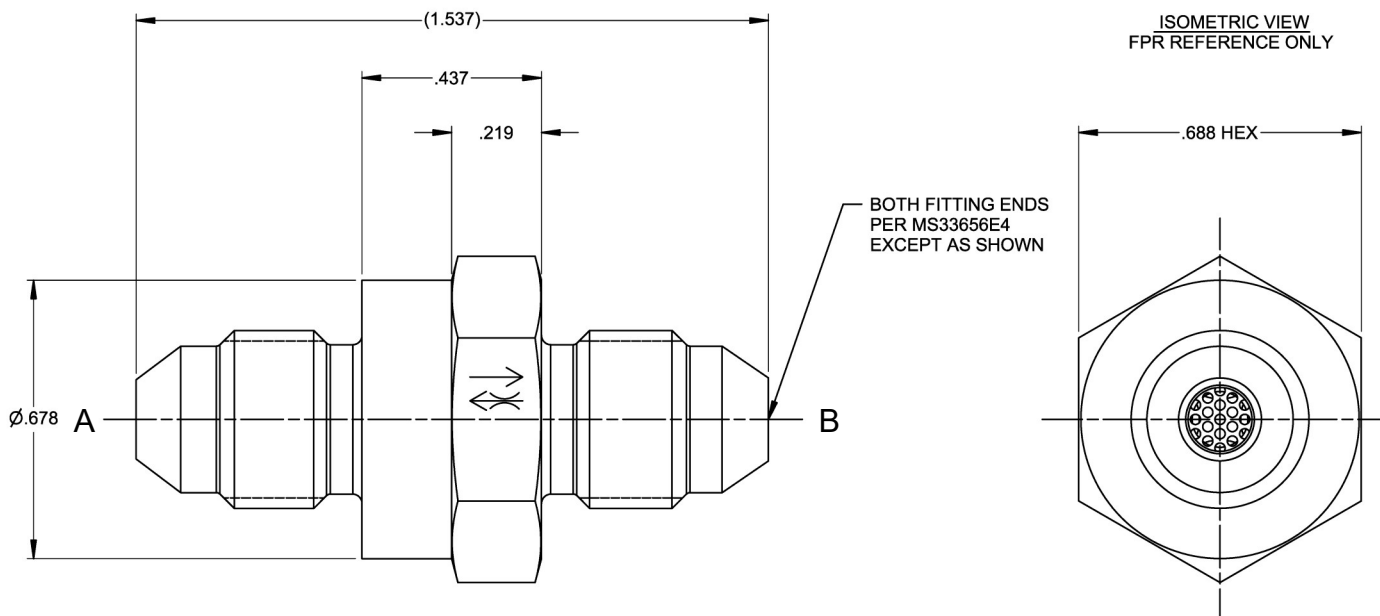
HYDRAULIC SCHEMATIC



CATEGORY 3: ONE-WAY RESTRICTOR VALVES FILTERED



PART NUMBER: 6F4698 RESTRICTOR VALVE, ONE-WAY, FILTERED



PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT HYDRAULIC FLUID

MATERIAL: BODY 17-4PH CRES

POPPET 440C CRES

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 3000 PSIG

PROOF PRESSURE: 4500 PSIG

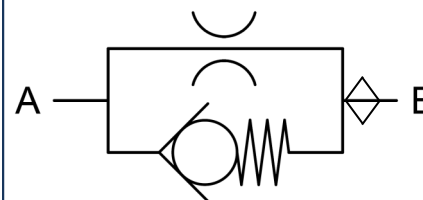
RESTRICTED FLOW: Ø.040 ± 0.001 ORIFICE

FREE FLOW: 1.2 GPM AT 30 PSID MAX

FILTRATION: 0.022 TO 0.028 OPENINGS

WEIGHT: .080 LBS MAX

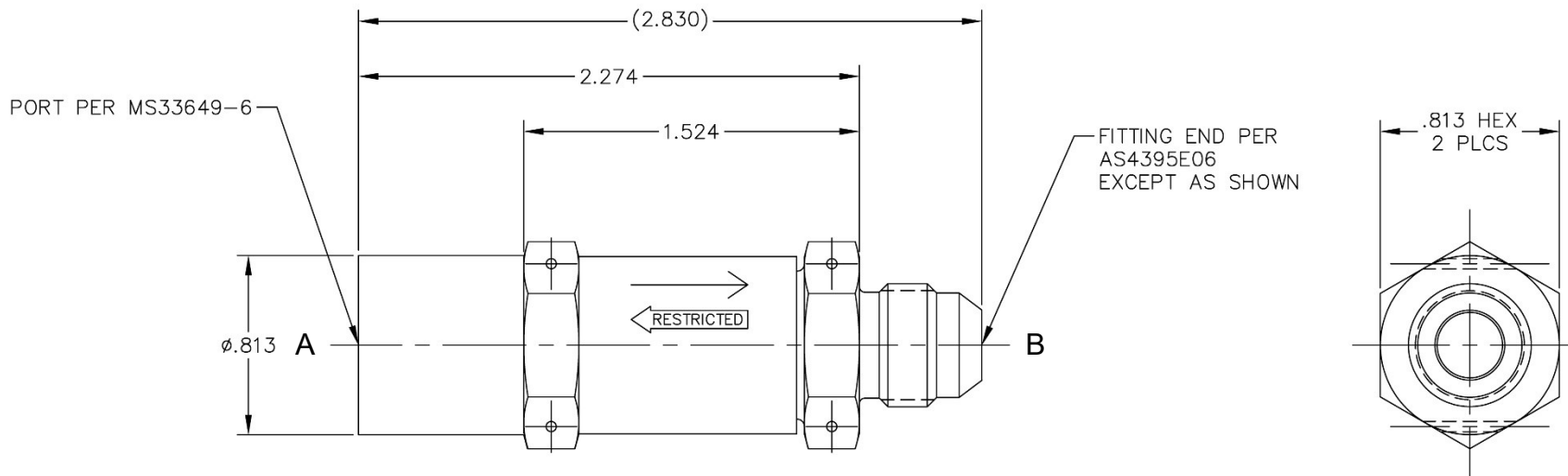
HYDRAULIC SCHEMATIC



CATEGORY 3: ONE-WAY RESTRICTOR VALVES FILTERED



PART NUMBER: 6F4436 RESTRICTOR VALVE, ONE-WAY, FILTERED



PERFORMANCE SPECIFICATIONS:

FLUIDS: HYDRAULIC FLUID PER MIL-H-5606, MIL-PRF-87257 AND MIL-PRF-83282*

MATERIAL: BODY 2024-T351 AL

POPPET 303 CRES

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 1000 PSIG

PROOF PRESSURE: 1500 PSIG

RESTRICTED FLOW: $\phi .046 \pm 0.001$ ORIFICE

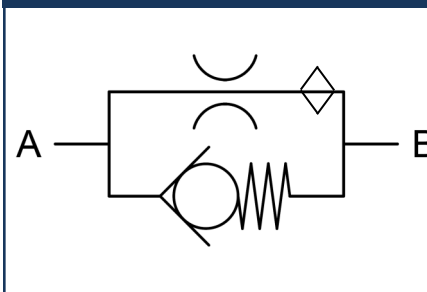
FREE FLOW: 8 GPM AT 105 PSID MAX

FILTRATION: 200 MICRONS

WEIGHT: .103 LBS MAX

*OTHER FLUIDS MAY BE ACCEPTABLE WITH ELASTOMER CHANGE

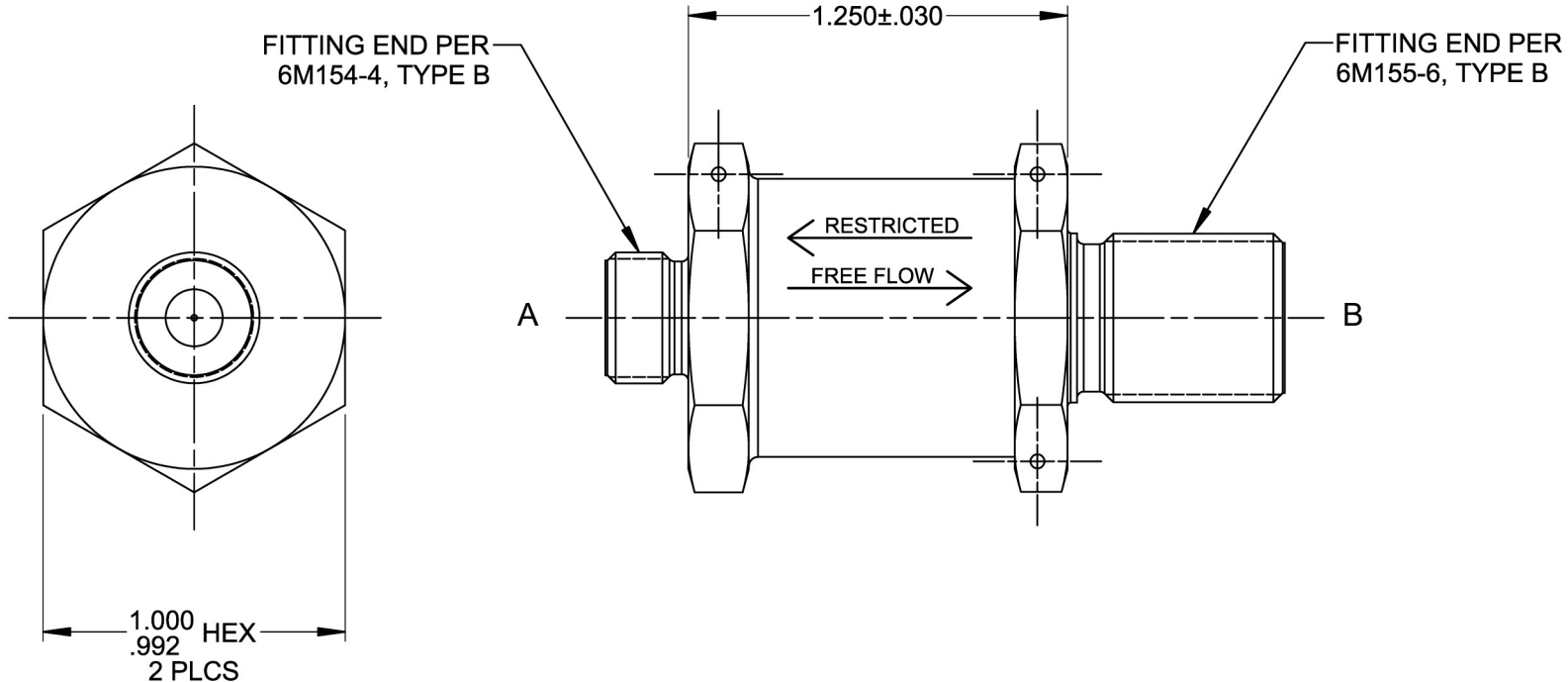
HYDRAULIC SCHEMATIC



CATEGORY 3: ONE-WAY RESTRICTOR VALVES FILTERED



PART NUMBER: 6F3252 RESTRICTOR VALVE, ONE-WAY, FILTERED



PERFORMANCE SPECIFICATIONS:

FLUIDS: HYDRAULIC FLUID PER MIL-H-5606 AND MIL-H-83282*

MATERIAL: BODY 17-4PH CRES

POPPET 440C CRES

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 3000 PSIG

PROOF PRESSURE: 5300 PSIG

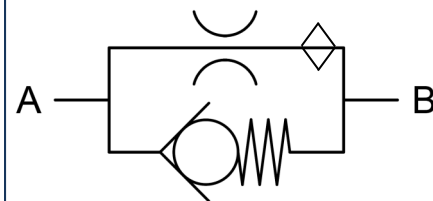
RESTRICTED FLOW: .54 ± 10% GPM AT 3000 PSID MAX

FREE FLOW: 3 GPM AT 20 PSID MAX

WEIGHT: .30 LBS MAX

*OTHER FLUIDS MAY BE ACCEPTABLE WITH ELASTOMER CHANGE

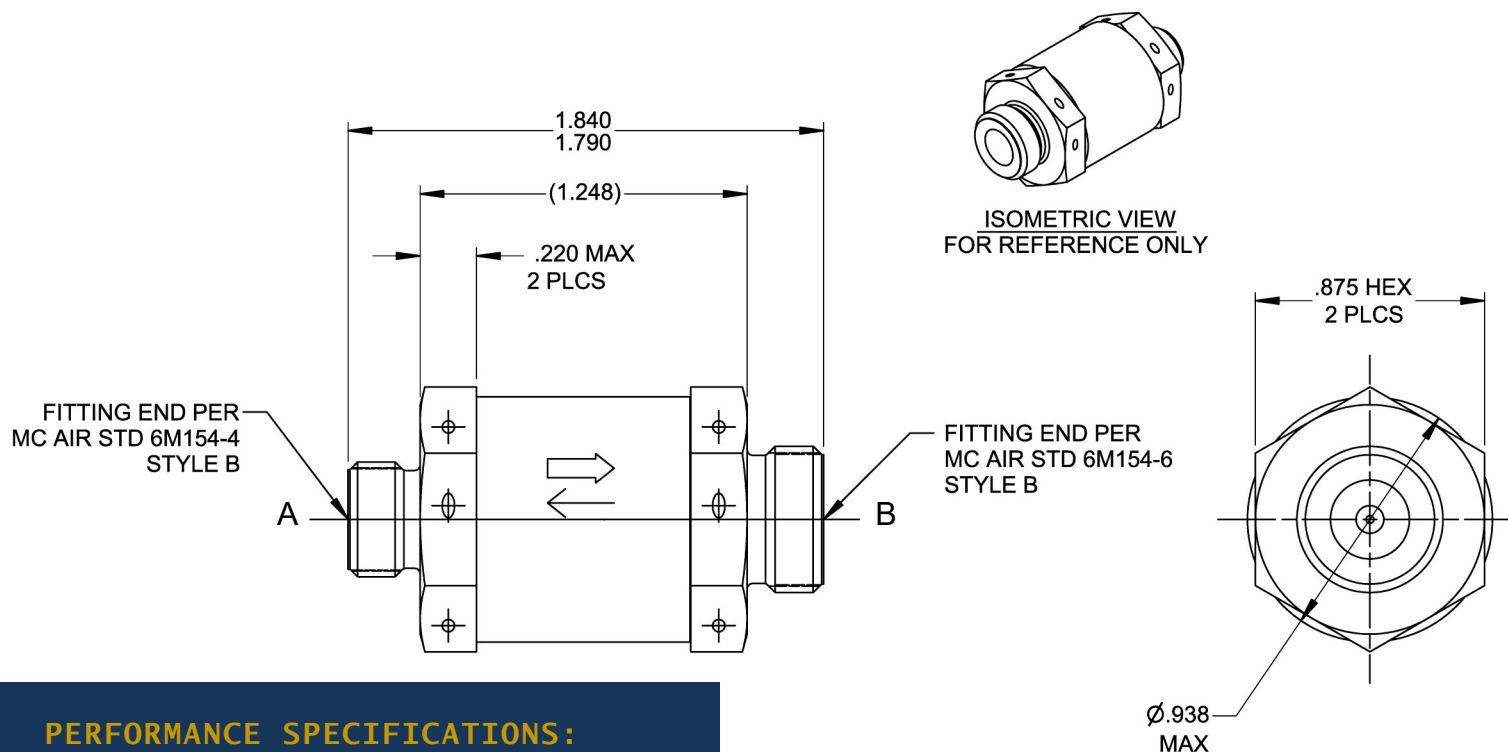
HYDRAULIC SCHEMATIC



CATEGORY 3: ONE-WAY RESTRICTOR VALVES FILTERED



PART NUMBER: 6F4592-X RESTRICTOR VALVE, ONE-WAY, FILTERED



PERFORMANCE SPECIFICATIONS:

FLUIDS: HYDRAULIC FLUID PER MIL-H-5606, MIL-H-46170,
MIL-H-6083 AND MIL-H-83282*

MATERIAL: BODY 17-4PH CRES
POPPET 302 CRES

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 3000 PSIG

PROOF PRESSURE: 4500 PSIG

RESTRICTED FLOW: SEE TAB BLOCK AT 3000 PSID MAX

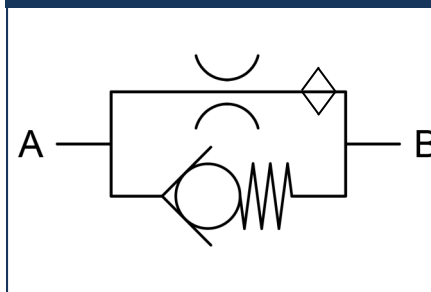
FREE FLOW: 6 GPM AT 40 PSID MAX

FILTRATION: .008 TO .012 OPENINGS

WEIGHT: .25 LBS MAX

*OTHER FLUIDS MAY BE ACCEPTABLE WITH ELASTOMER CHANGE

HYDRAULIC SCHEMATIC

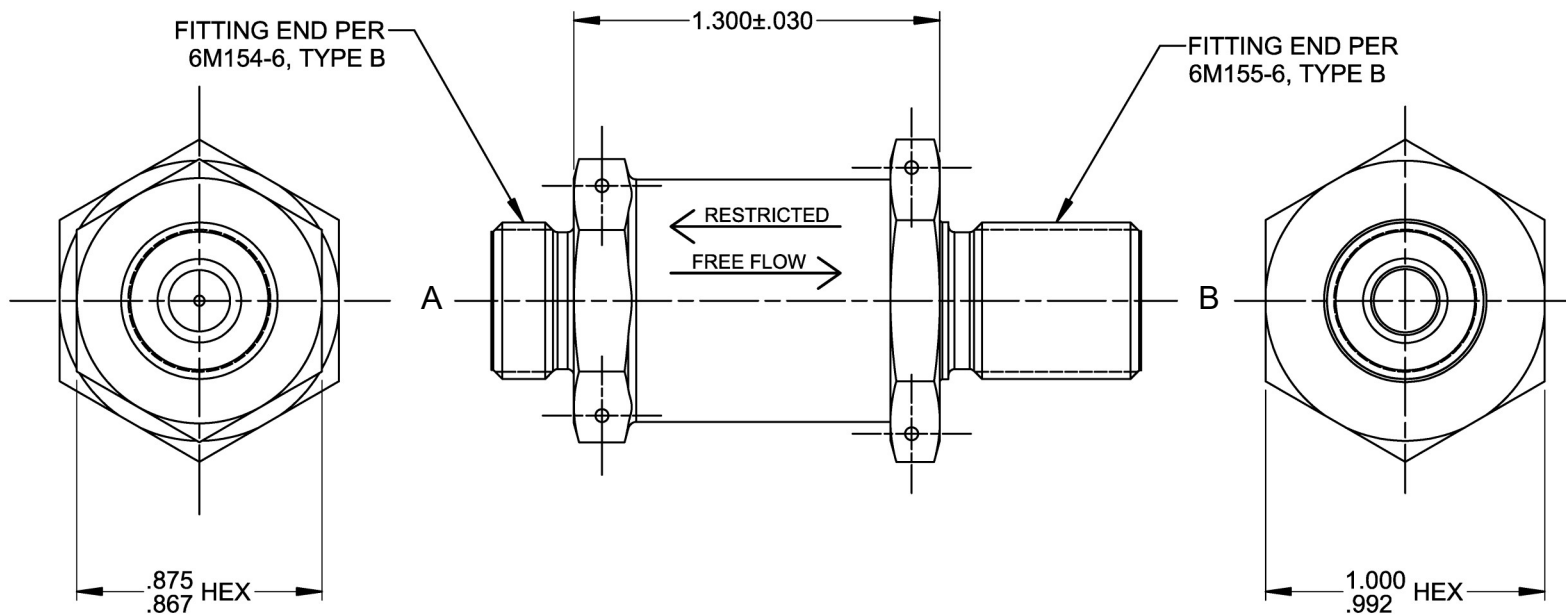


CRISSAIR PART NO.	FLOW (GPM)	ORIFICE Ø
6F4592-1	3.86	.058
6F4592-103	0.435	.020
6F4592-105	1.25	.033
6F4592-109	1.11	.032
6F4592-111	0.924	.029
6F4592-115	2.01	.043
6F4592-121	0.278	.016

CATEGORY 3: ONE-WAY RESTRICTOR VALVES FILTERED



PART NUMBER: 6F3254-1 RESTRICTOR VALVE, ONE-WAY, FILTERED



PERFORMANCE SPECIFICATIONS:

FLUIDS: HYDRAULIC FLUID PER MIL-H-5606 AND MIL-H-83282*

MATERIAL: BODY 17-4PH CRES

POPPET 440C CRES

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 3000 PSIG

PROOF PRESSURE: 4500 PSIG

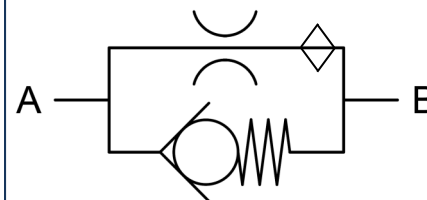
RESTRICTED FLOW: $1.80 \pm 10\%$ GPM AT 3000 PSID MAX

FREE FLOW: 3 GPM AT 20 PSID MAX

WEIGHT: .30 LBS MAX

*OTHER FLUIDS MAY BE ACCEPTABLE WITH ELASTOMER CHANGE

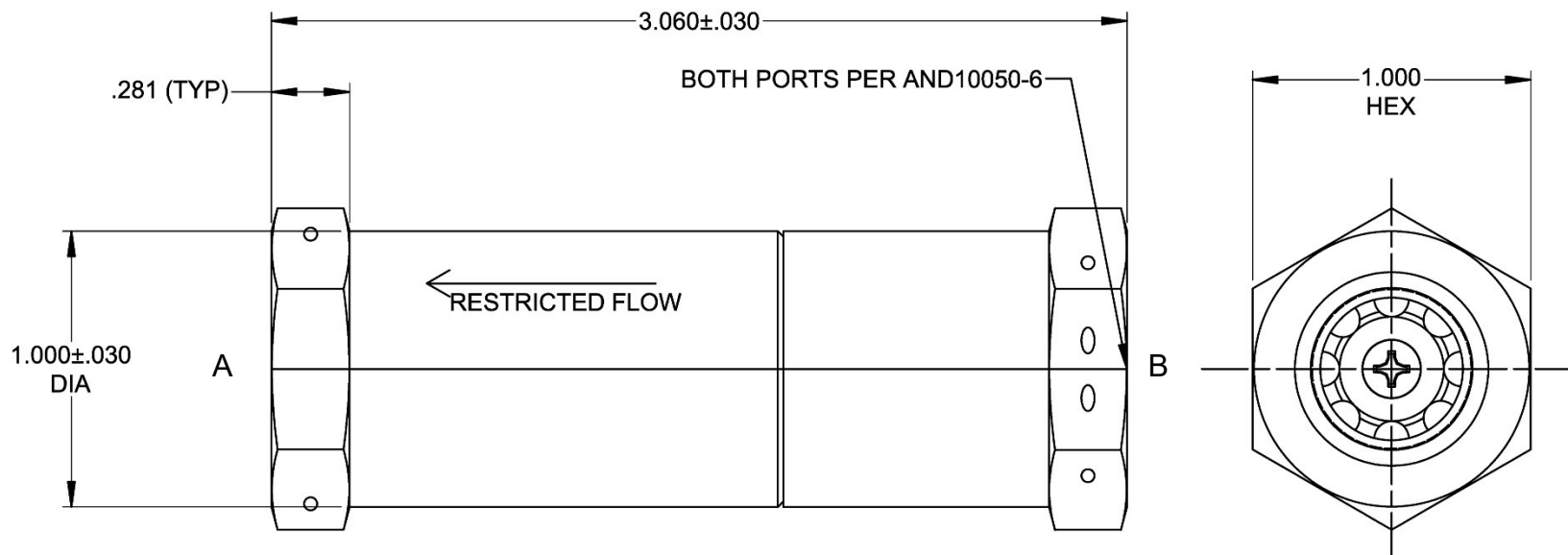
HYDRAULIC SCHEMATIC



CATEGORY 3: ONE-WAY RESTRICTOR VALVES FILTERED



PART NUMBER: 6F2852-X RESTRICTOR VALVE, ONE-WAY, FILTERED



PERFORMANCE SPECIFICATIONS:

FLUIDS: HYDRAULIC FLUID PER MIL-H-5606*

MATERIAL: BODY 303 CRES

POPPET 440C CRES

TEMPERATURE RANGE: -65°F TO 160°F

OPERATING PRESSURE: 3000 PSIG

PROOF PRESSURE: 4500 PSIG

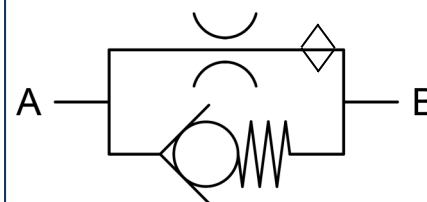
RESTRICTED FLOW: SEE TAB BLOCK AT 3000 PSID MAX

FREE FLOW: 3.5 GPM AT 13 PSID MAX

WEIGHT: .50 LBS MAX

*OTHER FLUIDS MAY BE ACCEPTABLE WITH ELASTOMER CHANGE

HYDRAULIC SCHEMATIC

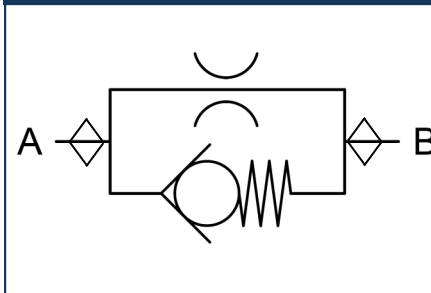


CRISSAIR PART NO.	FLOW (GPM)	ORIFICE Ø
6F2852-7	1.84 - 2.15	.044
6F2852-9	.80 - .96	.027

CATEGORY 3: ONE-WAY RESTRICTOR VALVES FILTERED



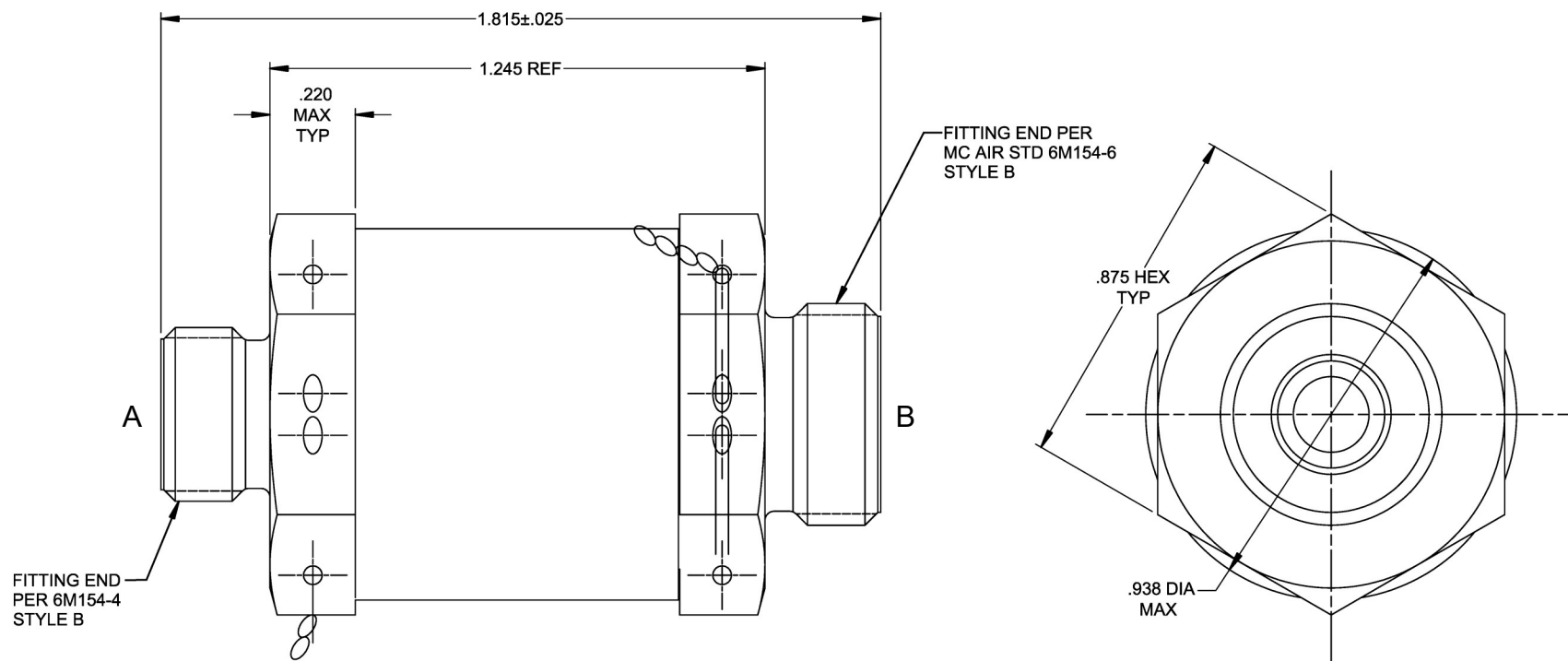
WEIGHT: .050 LBS MAX



CATEGORY 3: ONE-WAY RESTRICTOR VALVES FILTERED



PART NUMBER: 6F3028 RESTRICTOR VALVE, ONE-WAY, FILTERED



PERFORMANCE SPECIFICATIONS:

FLUIDS: HYDRAULIC OIL PER MIL-H-5606, MIL-H-83232, MIL-H-46170, & MIL-H-6083*

MATERIAL: BODY 17-4PH

POPPET 302 CRES

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 3000 PSIG

PROOF PRESSURE: 4500 PSIG

CRACKING PRESSURE: 2 TO 8 PSID

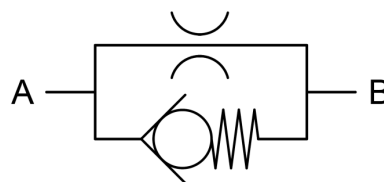
FLOW: FREE FLOW: 6 GPM AT 40 PSID MAX

RESTRICTED—(SEE TAB BLOCK)

FILTRATION: ON ORIFICE DIAS .012-.070 USE -5(.008-.012 OPENINGS)

*OTHER FLUIDS MAY BE ACCEPTABLE WITH ELASTOMER CHANGE

HYDRAULIC SCHEMATIC



CRISSAIR PART NO.	FLOW (GPM) ± 10%	ΔP (PSID)	ORIFICE Ø
6F3028-101	1.56	3000	.037
6F3028-103	1.85	3000	.040
6F3028-105	.30	3000	.016

CATEGORY 3: ONE-WAY RESTRICTOR VALVES FILTERED



CRISSAIR HAS VARIOUS OTHER RESTRICTOR VALVES NOT LISTED IN THE CATALOG WITH DIFFERENT MATERIALS, FITTINGS, AND SIZE CONFIGURATIONS.

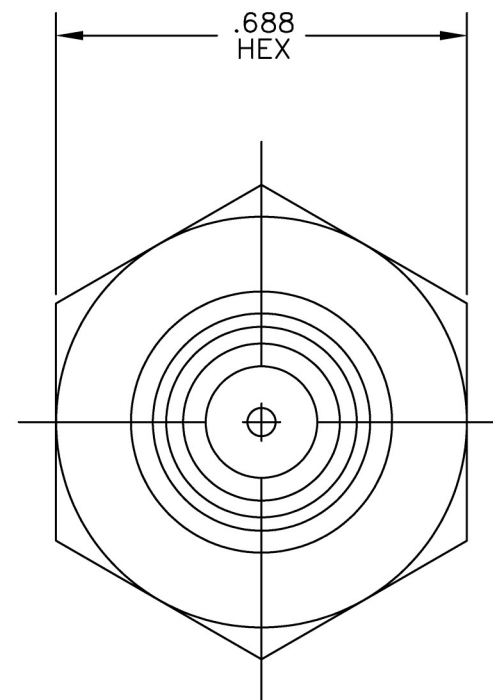
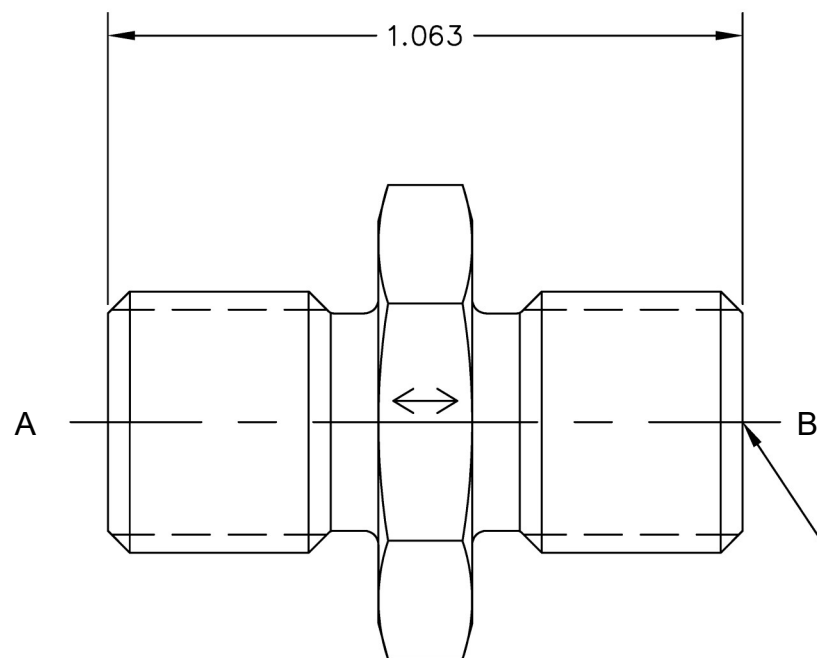
CONTACT CRISSAIR FOR ADDITIONAL INFORMATION/DRAWINGS AT

(661) 367-3300 OR SALES@CRISSAIR.COM.

YOU CAN ALSO VISIT WWW.CRISSAIR.COM.



PART NUMBER: 9R4138 RESTRICTOR VALVE, TWO-WAY, UNFILTERED



BOTH FITTING ENDS
PER AS33514E04
EXCEPT AS SHOWN

PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT FLUIDS OR AIR

MATERIAL: BODY 304 CRES

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 3000 PSIG

PROOF PRESSURE: 4500 PSIG

WEIGHT: 0.045 LBS MAX

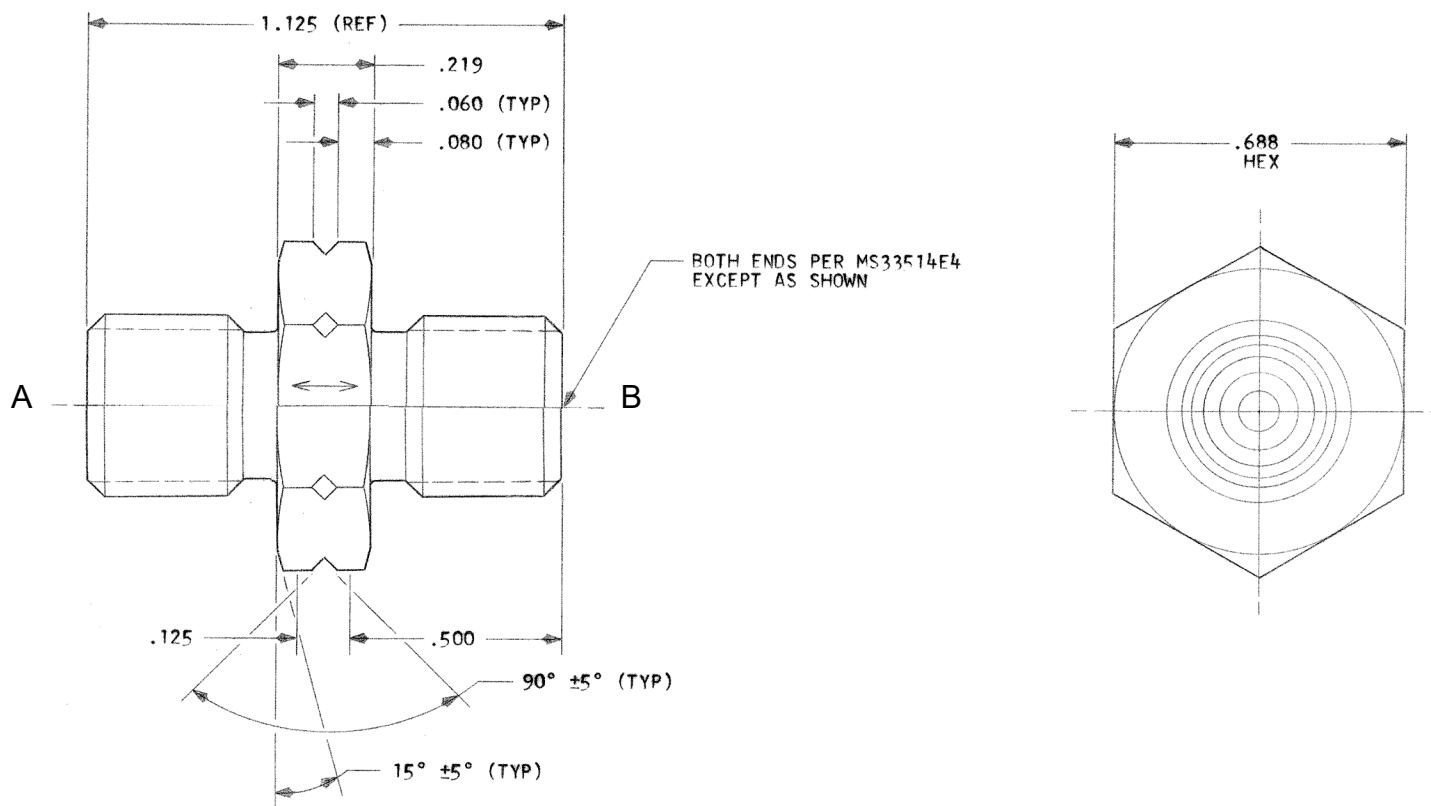
HYDRAULIC SCHEMATIC



CATEGORY 3: TWO-WAY RESTRICTOR VALVES UNFILTERED



PART NUMBER: 9R3372 RESTRICTOR VALVE, TWO-WAY, UNFILTERED



PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT FLUIDS OR AIR

MATERIAL: BODY 17-4PH CRES

TEMPERATURE RANGE: -65°F TO 225°F

OPERATING PRESSURE: 3000 PSIG

PROOF PRESSURE: 4500 PSIG

FLOW: 10.5 ± 10% GPM AT 3000 PSID (.101 DIA REF)

HYDRAULIC SCHEMATIC



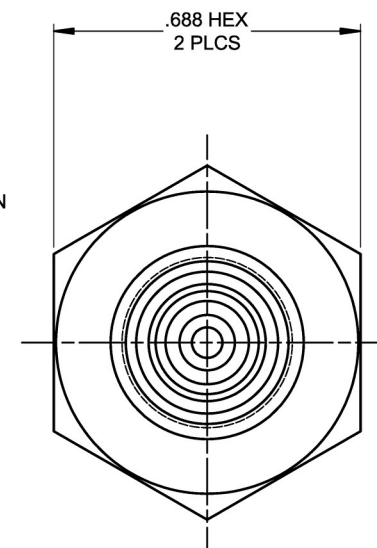
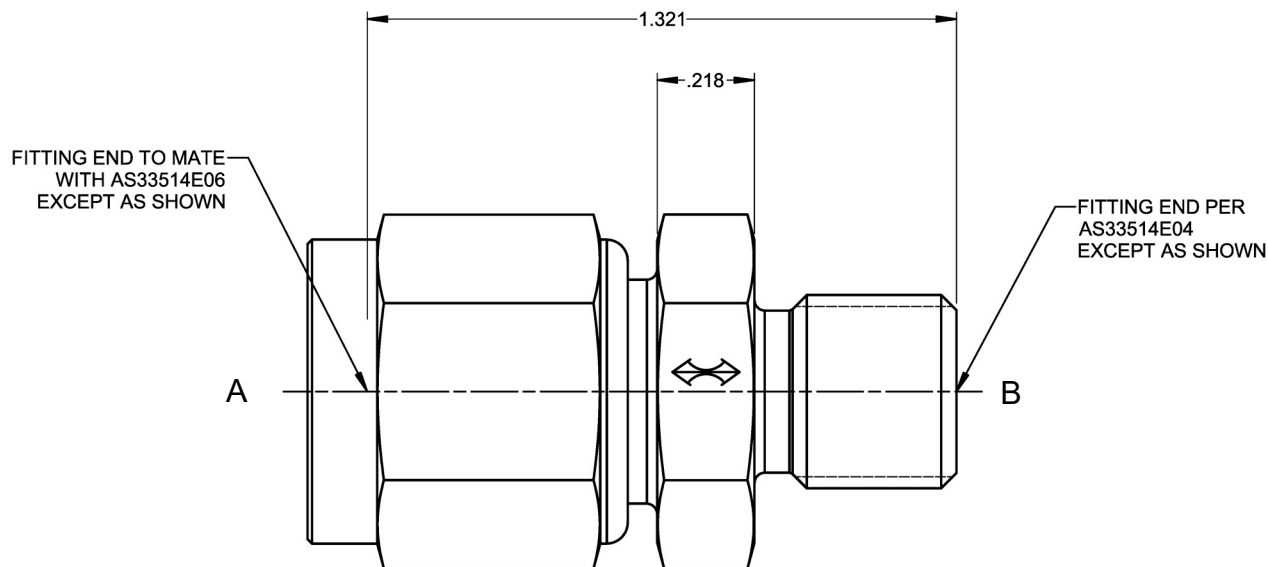
CATEGORY 3: TWO-WAY RESTRICTOR VALVES UNFILTERED



PART NUMBER: 9R4130 RESTRICTOR VALVE, TWO-WAY, UNFILTERED



ISOMETRIC VIEW
FOR REFERENCE ONLY



PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT FLUIDS OR AIR

MATERIAL: BODY 15-5PH CRES

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 3000 PSIG

PROOF PRESSURE: 4500 PSIG

FLOW: 5.0 ± 10% GPM AT 2950 PSID (Ø.069 ORIFICE)

WEIGHT: 0.099 LBS MAX

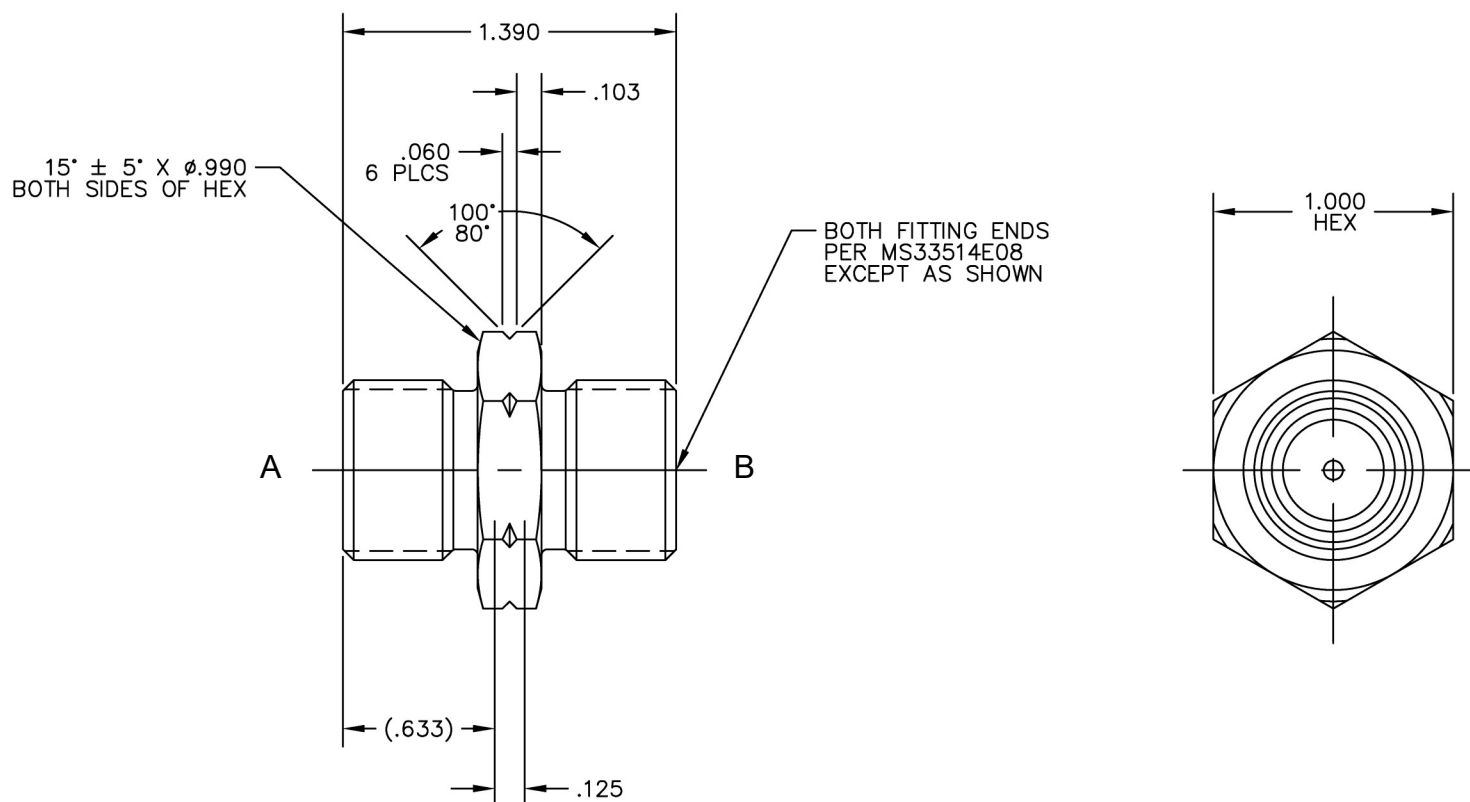
HYDRAULIC SCHEMATIC



CATEGORY 3: TWO-WAY RESTRICTOR VALVES UNFILTERED



PART NUMBER: 9R3688 RESTRICTOR VALVE, TWO-WAY, UNFILTERED



PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT FLUIDS OR AIR

MATERIAL: BODY 17-4PH CRES

TEMPERATURE RANGE: -65°F TO 225°F

OPERATING PRESSURE: 3000 PSIG

PROOF PRESSURE: 4500 PSIG

FLOW: 5.31 ± 5% GPM AT 1400 PSID (Ø.081 ORIFICE)

WEIGHT: 0.16 LBS MAX

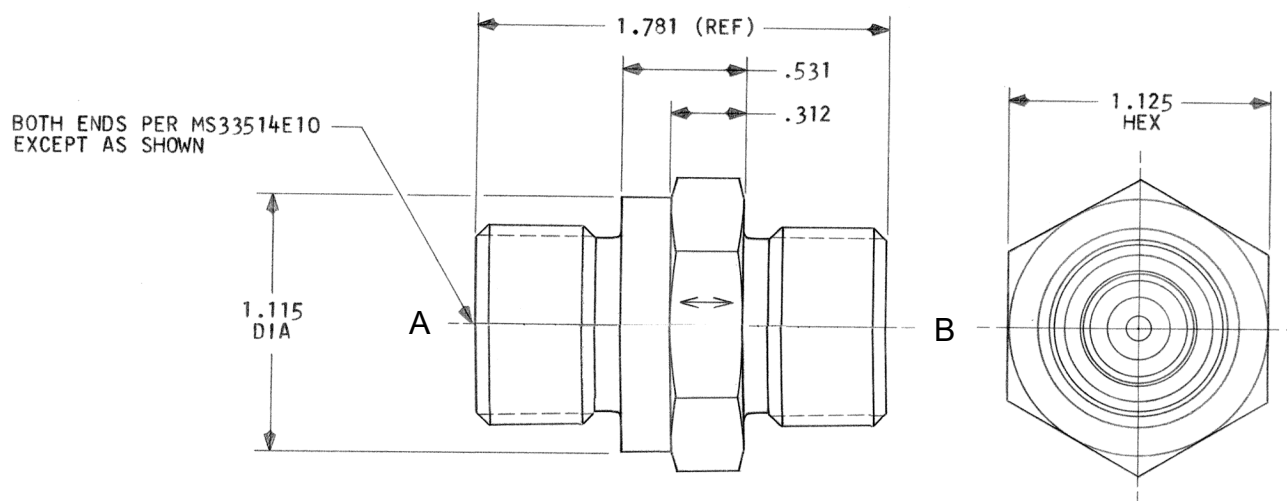
HYDRAULIC SCHEMATIC



CATEGORY 3: TWO-WAY RESTRICTOR VALVES UNFILTERED



PART NUMBER: 9R3212 RESTRICTOR VALVE, TWO-WAY, UNFILTERED



PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT FLUIDS OR AIR

MATERIAL: BODY 15-5PH CRES

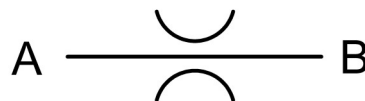
TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 3000 PSIG

PROOF PRESSURE: 4500 PSIG

FLOW: SEE TAB BLOCK

HYDRAULIC SCHEMATIC

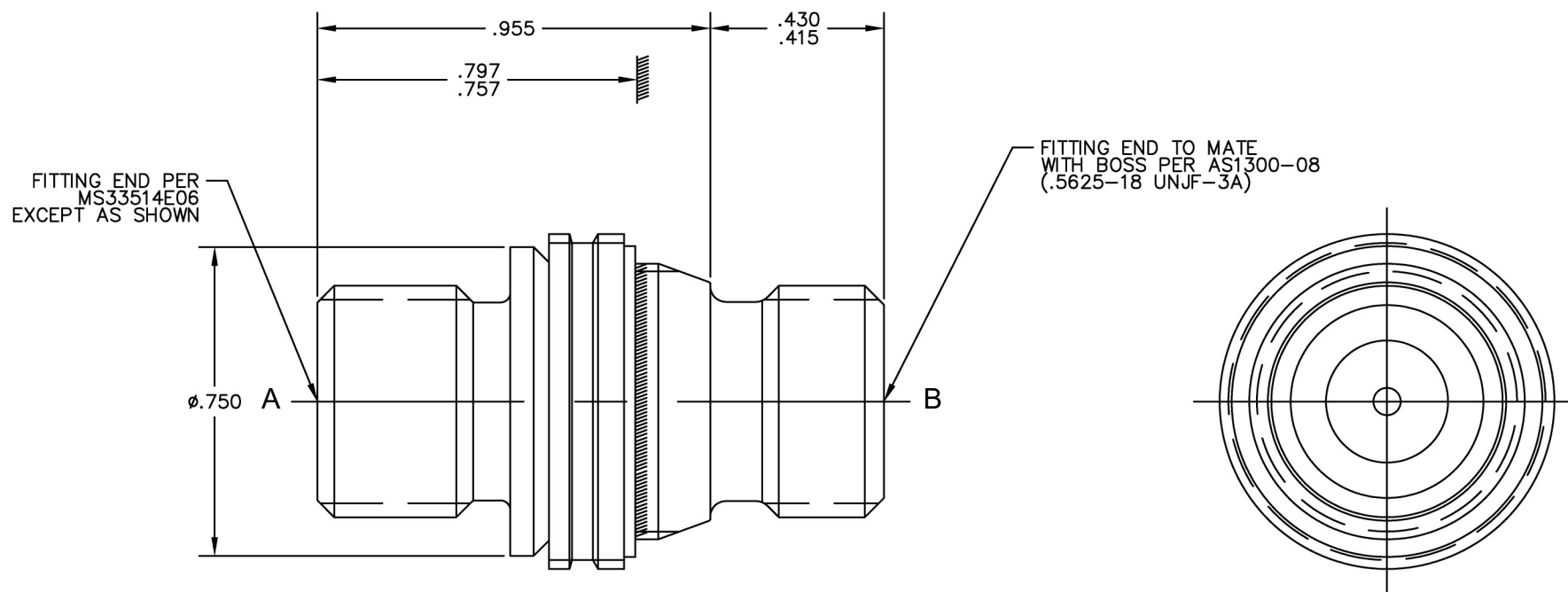


CRISSAIR PART NO.	FLOW (GPM)	PRESS. ΔP (PSID)	ORIFICE DIA (REF)
9R3212	14.23 \pm 1.4	3000	.119
9R3212-1	13.37 \pm 1.3	3000	.114
9R3212-2	7.11 \pm .71	3000	.083
9R3212-3	18.49 \pm 1.8	3000	.135
9R3212-4	10.24 \pm 1.0	3000	.101

CATEGORY 3: TWO-WAY RESTRICTOR VALVES UNFILTERED



PART NUMBER: 9R3732 RESTRICTOR VALVE, TWO-WAY, UNFILTERED



PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT FLUIDS OR AIR

MATERIAL: BODY 15-5PH CRES

LOCKRING A-286 CRES

TEMPERATURE RANGE: -65°F TO 275°F

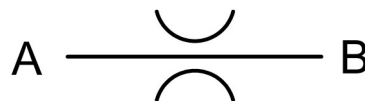
OPERATING PRESSURE: 3000 PSIG

PROOF PRESSURE: 4500 PSIG

FLOW: 2.5 GPM \pm 5% AT 800 PSID ($\phi .067$)

WEIGHT: 0.091 LBS MAX

HYDRAULIC SCHEMATIC

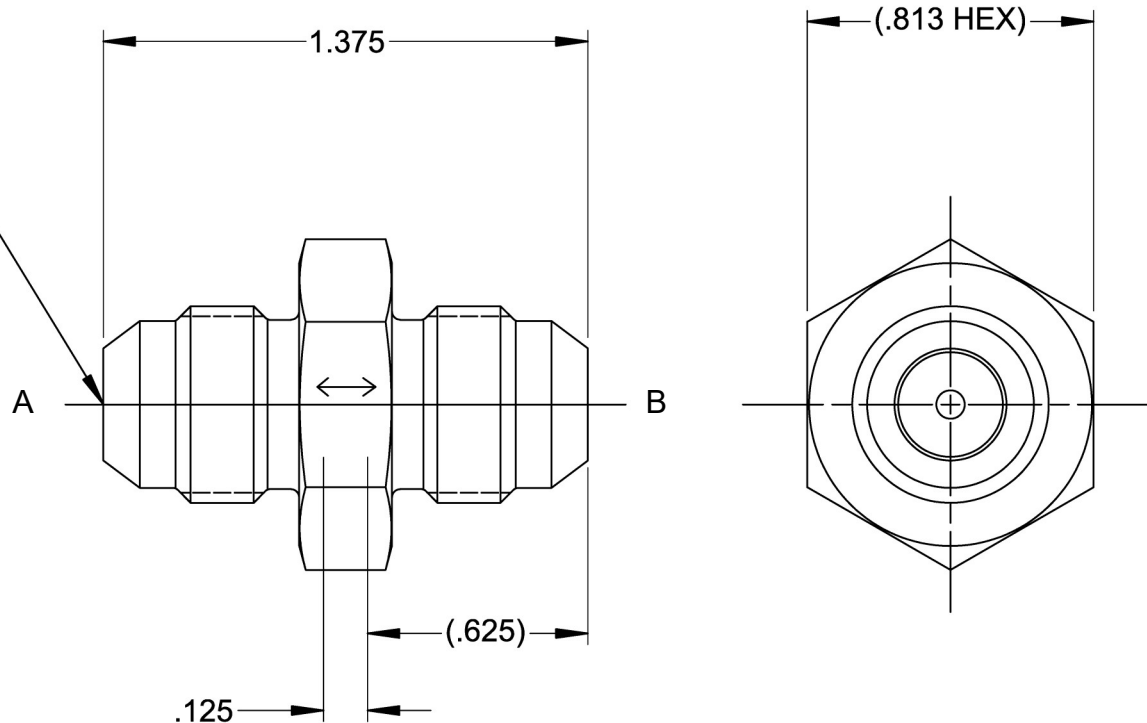


CATEGORY 3: TWO-WAY RESTRICTOR VALVES UNFILTERED



PART NUMBER: 9R4020 RESTRICTOR VALVE, TWO-WAY, UNFILTERED

BOTH FITTING ENDS
PER AS4395E06
EXCEPT AS SHOWN



PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT FLUIDS OR AIR

MATERIAL: BODY 7075-T73 AL

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 3000 PSIG

PROOF PRESSURE: 4500 PSIG

FLOW: 2.4 TO 2.6 GPM AT 350 TO 400 PSID

WEIGHT: 0.031 LBS MAX

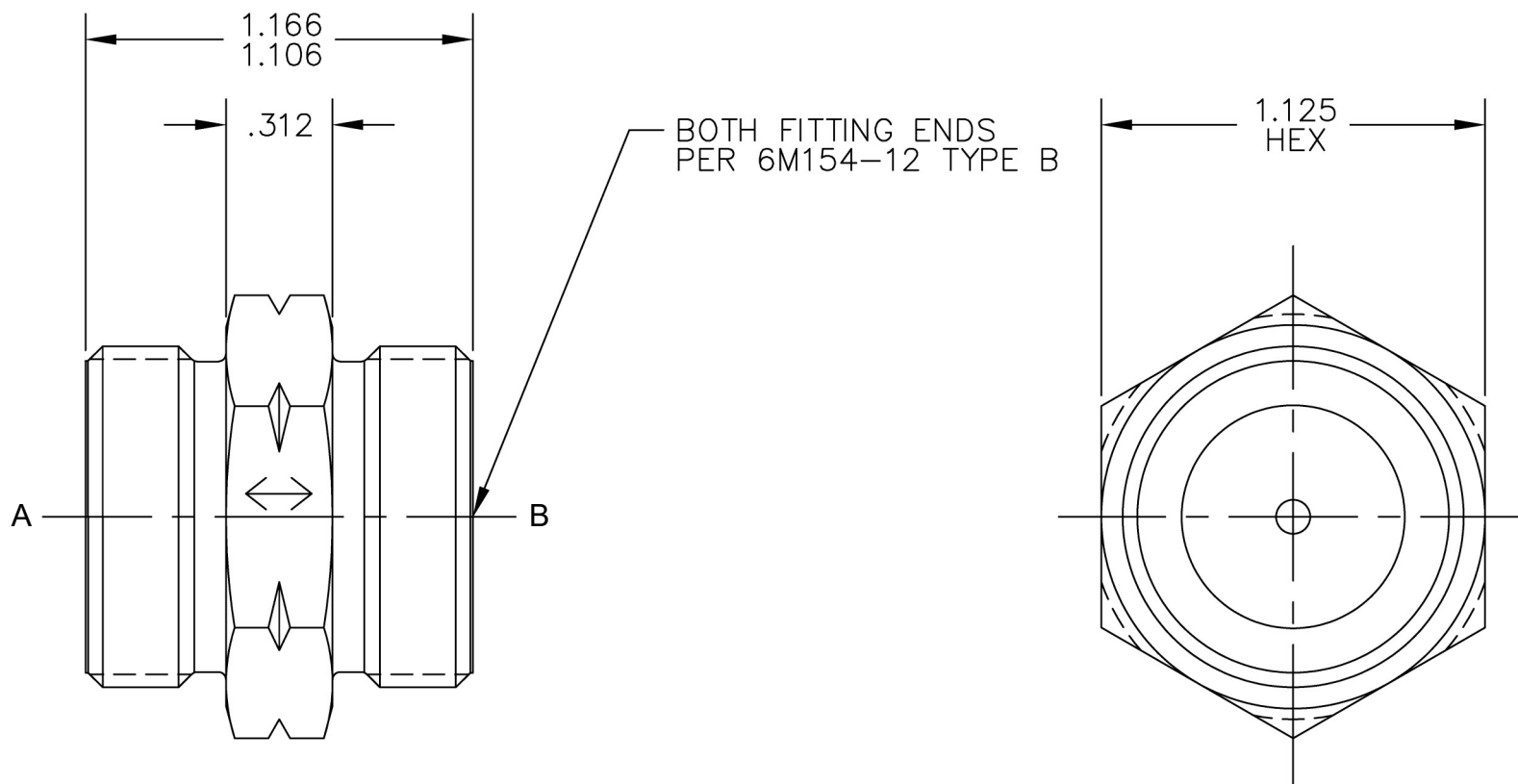
HYDRAULIC SCHEMATIC



CATEGORY 3: TWO-WAY RESTRICTOR VALVES UNFILTERED



PART NUMBER: 9R3626 RESTRICTOR VALVE, TWO-WAY, UNFILTERED



PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT FLUIDS OR AIR

MATERIAL: BODY 6AL-4V TI

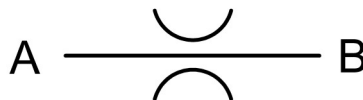
TEMPERATURE RANGE: -40°F TO 160°F

OPERATING PRESSURE: 180 PSIG

PROOF PRESSURE: 270 PSIG

FLOW: SEE TAB BLOCK

HYDRAULIC SCHEMATIC

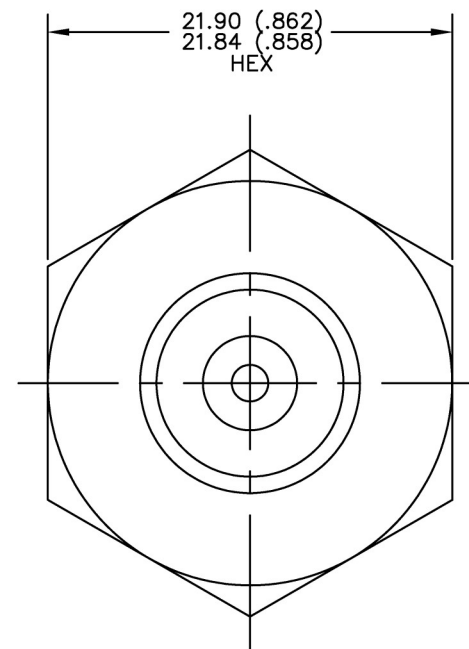
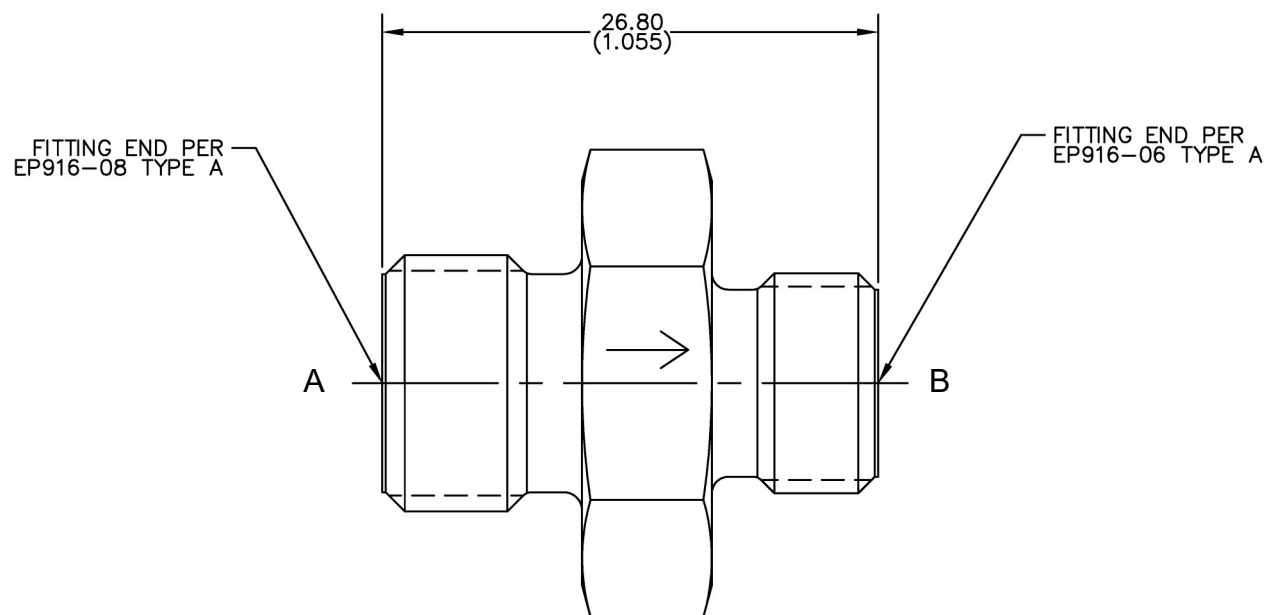


CRISSAIR PART NO.	FLOW (GPM)	PRESS. ΔP (PSID)	ORIFICE DIA (REF)
9R3626-1	5 + 5%	68.7	.160
9R3626-2	-	-	.067 .062
9R3626-3	5.00 \pm 0.13	23.0	.200
9R3626-4	6.34 \pm 0.13	28.2	.180

CATEGORY 3: TWO-WAY RESTRICTOR VALVES UNFILTERED



PART NUMBER: 9R3608 RESTRICTOR VALVE, TWO-WAY, UNFILTERED



PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT FLUIDS OR AIR

MATERIAL: BODY 6AL-4V TI

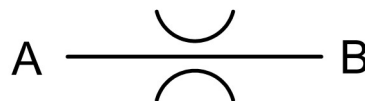
TEMPERATURE RANGE: -40°F TO 275°F

OPERATING PRESSURE: 4000 PSIG

PROOF PRESSURE: 8000 PSIG

FLOW: 4.75 GPM AT 1349 PSID (Ø.078 ORIFICE)

HYDRAULIC SCHEMATIC



CATEGORY 3: TWO-WAY RESTRICTOR VALVES UNFILTERED



CRISSAIR HAS VARIOUS OTHER RESTRICTOR VALVES NOT LISTED IN THE CATALOG WITH DIFFERENT MATERIALS, FITTINGS, AND SIZE CONFIGURATIONS.

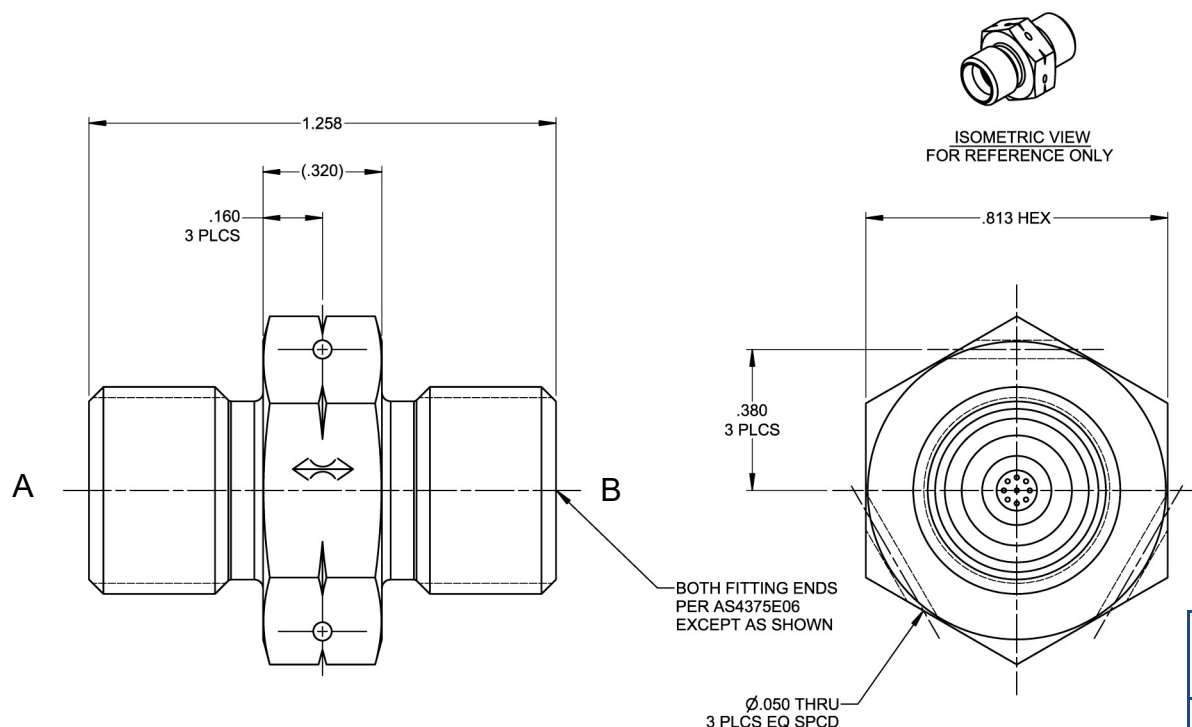
CONTACT CRISSAIR FOR ADDITIONAL INFORMATION/DRAWINGS AT

(661) 367-3300 OR SALES@CRISSAIR.COM.

YOU CAN ALSO VISIT WWW.CRISSAIR.COM.



PART NUMBER: 6F4992-X RESTRICTOR VALVE, TWO-WAY, FILTERED



PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT HYDRAULIC FLUID

MATERIAL: BODY 304 CRES

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 3000 PSIG

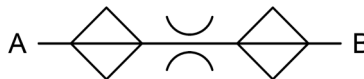
PROOF PRESSURE: 4500 PSIG

FLOW: SEE TAB BLOCK

FILTRATION: .011 TO .014 OPENINGS

WEIGHT: 0.098 LBS MAX

HYDRAULIC SCHEMATIC

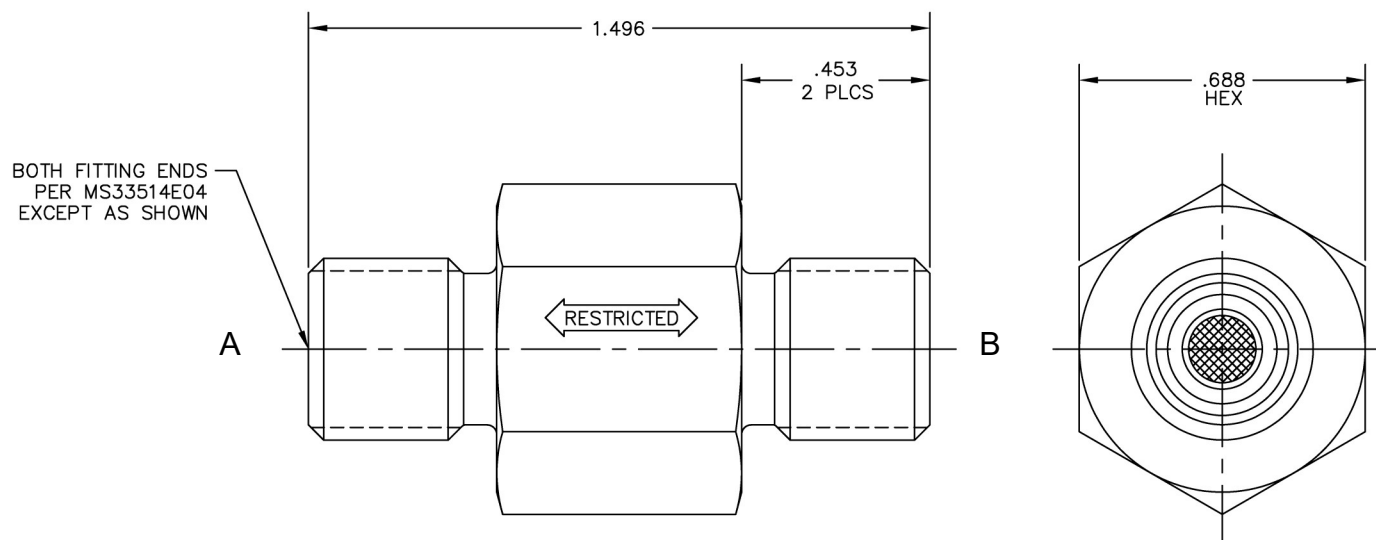


CRISSAIR PART NO.	FLOW (GPM)	PRESSURE (PSID)	ORIFICE SIZE Ø
6F4992-1	1.95	2680	0.0422
6F4992-3	2.14	2360	0.0456
6F4992-5	2.96	2900	0.0510
6F4992-7	2.28	1710	0.0511
6F4992-9	2.80	2360	0.0522
6F4992-11	3.13	2590	0.0539
6F4992-13	2.55	1710	0.0540
6F4992-15	3.52	2380	0.0584
6F4992-17	2.68	1390	0.0583
6F4992-19	4.18	2590	0.0623
6F4992-21	4.46	2380	0.0658
6F4992-23	4.66	2180	0.0687

CATEGORY 3: TWO-WAY RESTRICTOR VALVES FILTERED



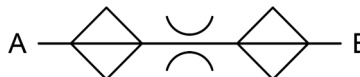
PART NUMBER: 6F3960-X RESTRICTOR VALVE, TWO-WAY, FILTERED



PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT HYDRAULIC FLUID
 MATERIAL: BODY 17-4PH CRES
 TEMPERATURE RANGE: -65°F TO 225°F
 OPERATING PRESSURE: 3000 PSIG
 PROOF PRESSURE: 4500 PSIG
 FLOW: SEE TAB BLOCK
 FILTRATION: .008 TO .012 OPENINGS
 WEIGHT: 0.106 LBS MAX

HYDRAULIC SCHEMATIC

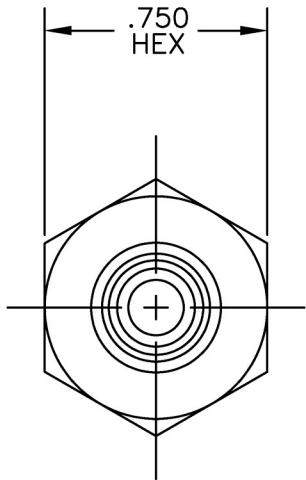
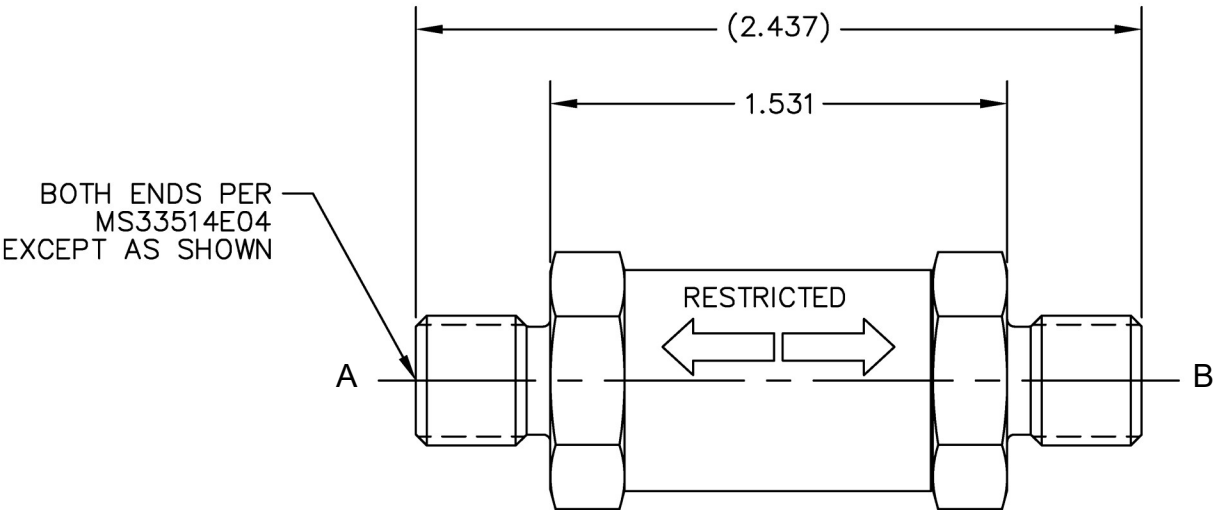


CRISSAIR DASH NO.	FLOW (GPM)	RESTRICTION PSI/(CIS) ²
-1	1	50
-2	1	100
-3	1	140
-4	1	230
-5	1	320
-6	.25 / 1	450
-7	.25 / 1	600
-8	.25	1700
-9	.25	2500
-10	.12 / .25	3300
-11	.12	3800
-12	.12	4600
-13	.12	7000
-14	.12	10100
-15	1	5
-16	1	12
-17	1	26

CATEGORY 3: TWO-WAY RESTRICTOR VALVES FILTERED



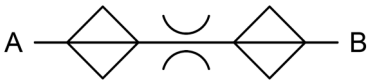
PART NUMBER: 6F1010-X RESTRICTOR VALVE, TWO-WAY, FILTERED



PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT HYDRAULIC FLUID
MATERIAL: BODY 2024-T351 AL
TEMPERATURE RANGE: -65°F TO 275°F
OPERATING PRESSURE: 3000 PSIG
PROOF PRESSURE: 4500 PSIG
FLOW: RATED FLOW (SEE TAB BLOCK) AT 3000 PSID IN EITHER DIRECTION
WEIGHT: .07 LBS MAX

HYDRAULIC SCHEMATIC

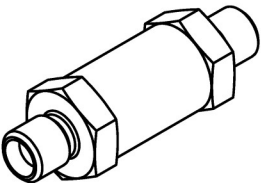


CRISSAIR PART NO.	FLOW GPM (ORIFICE SIZE)
6F1010-010	.125 ± .033
6F1010-016	.29 ± .03
6F1010-018	.41 ± .05
6F1010-020	.60 ± .05
6F1010-025	(Ø.025 ± .001)
6F1010-028	(Ø.028 ± .001)
6F1010-031	1.10 ± .10
6F1010-035	1.40 ± .14
6F1010-037	1.70 ± .20
6F1010-047	(Ø.047 ± .001)
6F1010-059	4.50 ± .50

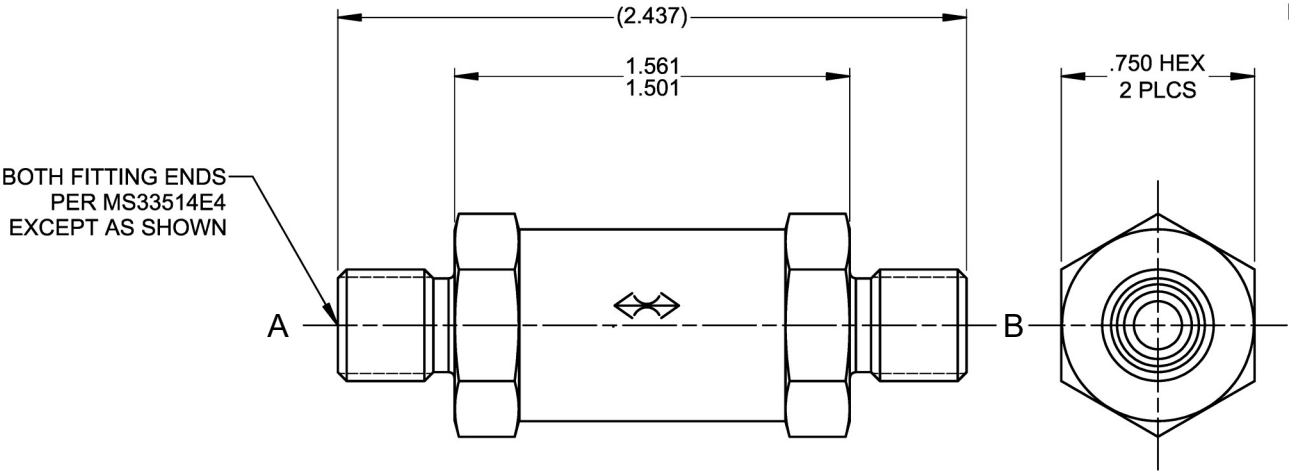
CATEGORY 3: TWO-WAY RESTRICTOR VALVES FILTERED



PART NUMBER: 6F4976-X RESTRICTOR VALVE, TWO-WAY, FILTERED



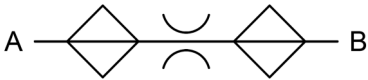
ISOMETRIC VIEW
FOR REFERENCE ONLY



PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT HYDRAULIC FLUID
MATERIAL: BODY 2024-T4 AL
TEMPERATURE RANGE: -65°F TO 275°F
OPERATING PRESSURE: 3000 PSIG
PROOF PRESSURE: 4500 PSIG
FLOW: SEE TAB BLOCK
FILTRATION: .010 NOMINAL OPENINGS
WEIGHT: .076 LBS MAX

HYDRAULIC SCHEMATIC

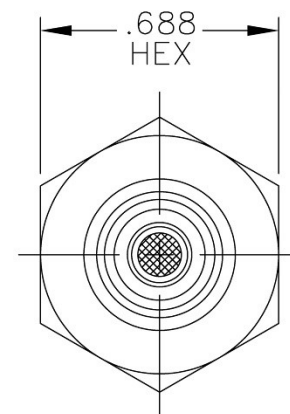
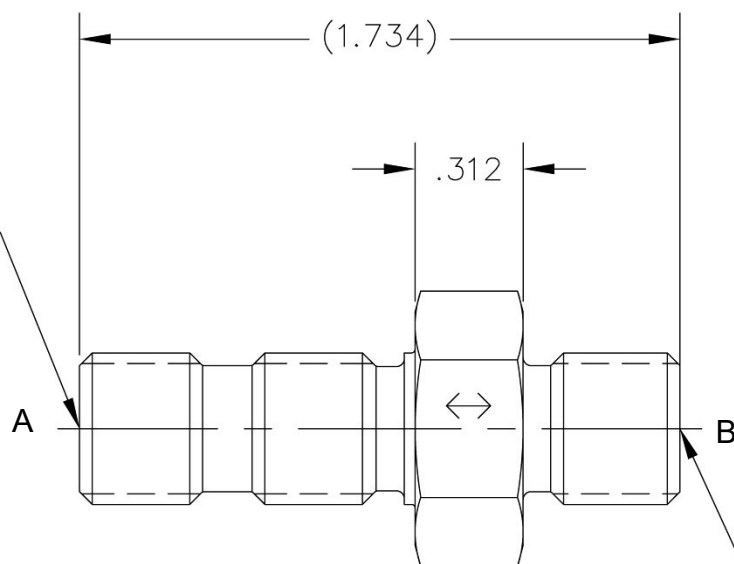


CRISSAIR DASH NO.	ORIFICE SIZE Ø
-021	.022
-030	.031
-032	.033
-037	.038
-038	.039
-042	.043
-050	.051
-094	.096 .092



PART NUMBER: 6F2312 RESTRICTOR VALVE, TWO-WAY, FILTERED

FITTING END PER
MS33515E04
EXCEPT AS SHOWN



FITTING END PER
MS33514E04
EXCEPT AS SHOWN

PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT HYDRAULIC FLUID

MATERIAL: BODY 431 CRES

TEMPERATURE RANGE: -65°F TO 225°F

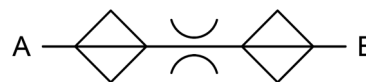
OPERATING PRESSURE: 3000 PSIG

PROOF PRESSURE: 4500 PSIG

FLOW: .344 ± 10% GPM AT 2340 PSID

FILTRATION: .008 TO .012 OPENINGS

HYDRAULIC SCHEMATIC



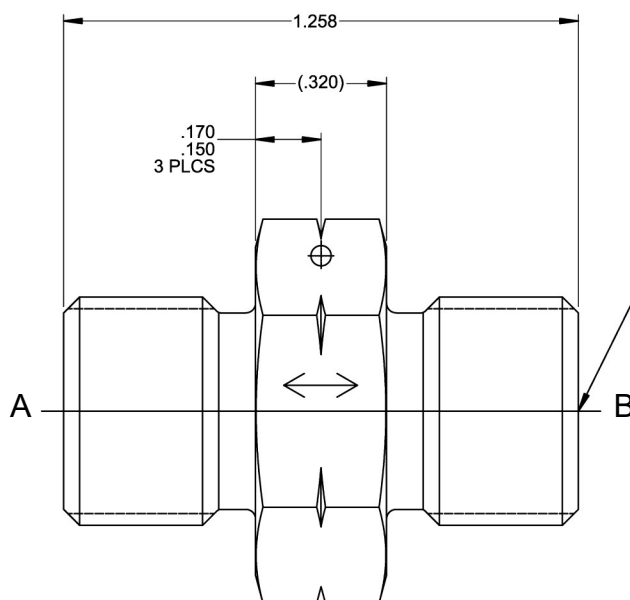
CATEGORY 3: TWO-WAY RESTRICTOR VALVES FILTERED



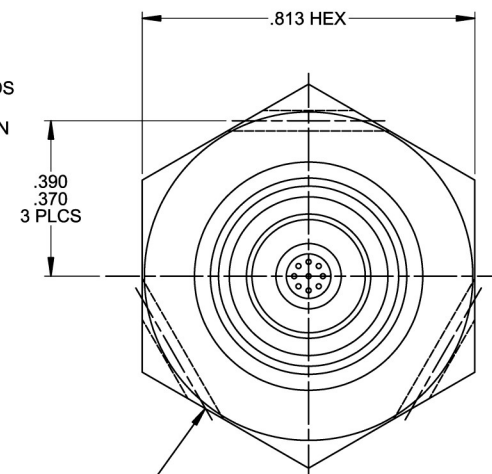
PART NUMBER: 6F4674 RESTRICTOR VALVE, TWO-WAY, FILTERED



ISOMETRIC VIEW
FOR REFERENCE ONLY



BOTH FITTING ENDS
PER AS4375E06
EXCEPT AS SHOWN



Ø.060 THRU
.040
3 PLCS EQ SPCD

PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT HYDRAULIC FLUID

MATERIAL: BODY 304 CRES

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 3000 PSIG

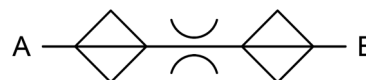
PROOF PRESSURE: 4500 PSIG

FLOW: 3.97 ± 5% GPM AT 1930 PSID (ORIFICE Ø.068)

FILTRATION: .011 TO .014 OPENINGS

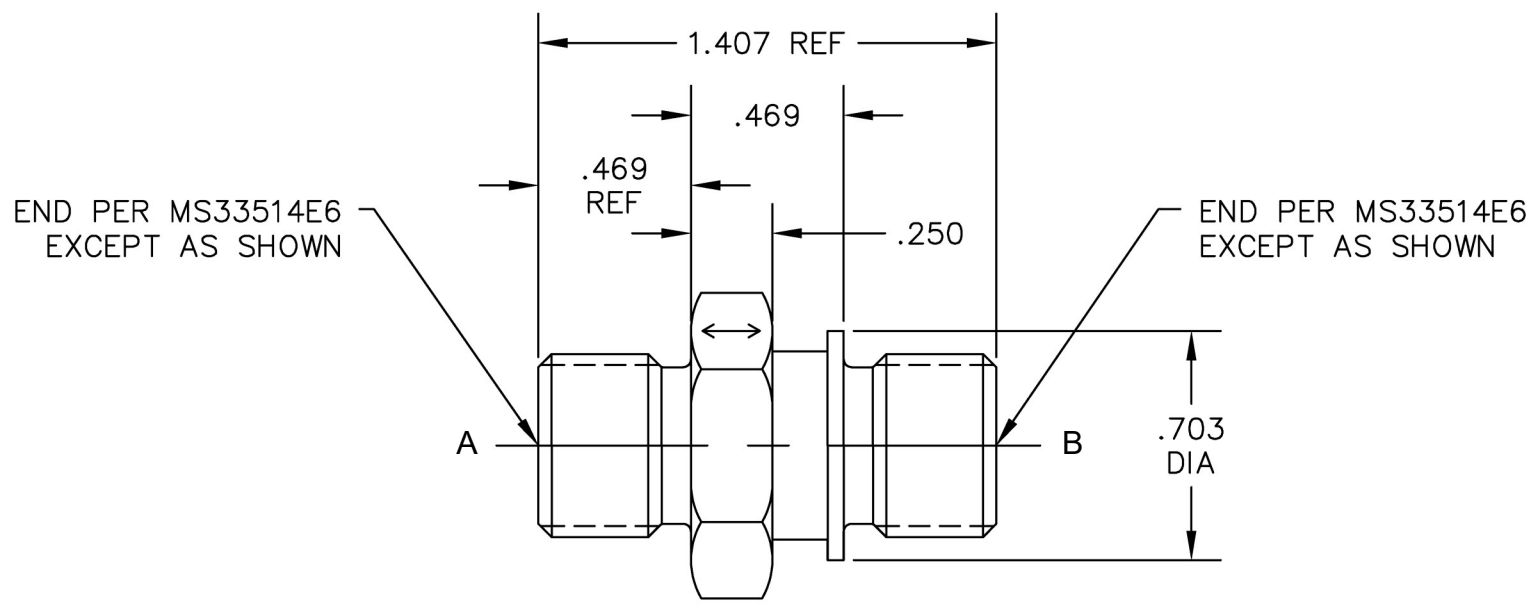
WEIGHT: .098 LBS MAX

HYDRAULIC SCHEMATIC





PART NUMBER: 6F3546, RESTRICTOR VALVE, TWO-WAY, FILTERED



PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT HYDRAULIC FLUID

MATERIAL: BODY 17-4 CRES

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 4000 PSIG

PROOF PRESSURE: 8000 PSIG

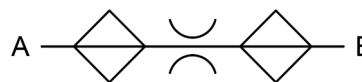
FLOW: 4.4±5% GPM AT 3800±100 PSID REF

(3885 PSIG INLET/85 PSIG OUTLET)

(.058 DIA ORIFICE REF) WITH MIL-H-83282 AT 100°F±10°F

WEIGHT: .095 LBS MAX

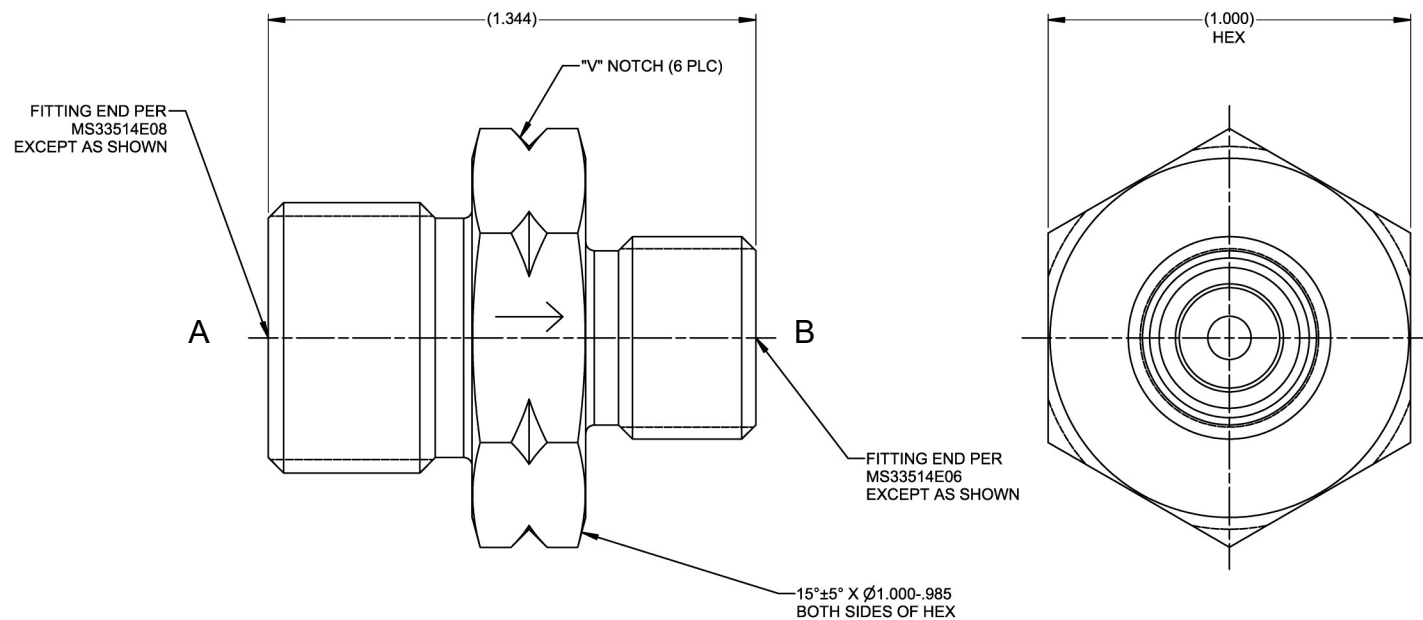
HYDRAULIC SCHEMATIC



CATEGORY 3: TWO-WAY RESTRICTOR VALVES FILTERED



PART NUMBER: 6F3748, RESTRICTOR VALVE, TWO-WAY, FILTERED



PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT HYDRAULIC FLUID

MATERIAL: BODY 15-5 CRES

TEMPERATURE RANGE: -65°F TO 275°F

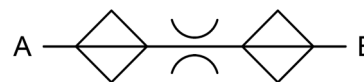
OPERATING PRESSURE: 3000 PSIG

PROOF PRESSURE: 4500 PSIG

FLOW: EQUIVALENT TO A Ø.033 ORIFICE AT 3000 PSID

FILTRATION .008 DIA NOMINAL OPENINGS

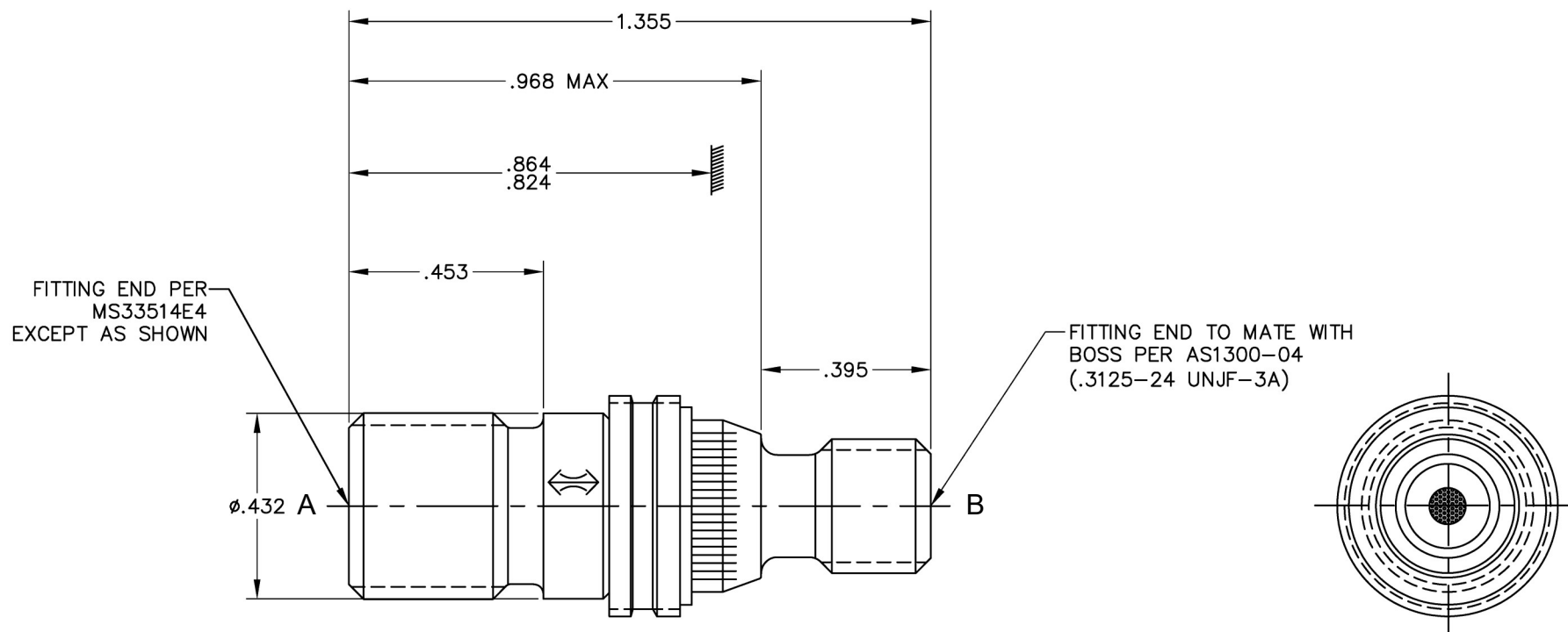
HYDRAULIC SCHEMATIC



CATEGORY 3: TWO-WAY RESTRICTOR VALVES FILTERED



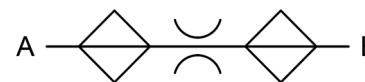
PART NUMBER: 6F4412, RESTRICTOR VALVE, TWO-WAY, FILTERED



PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT HYDRAULIC FLUID
MATERIAL: BODY 15-5PH CRES
LOCKRING A-286 CRES
TEMPERATURE RANGE: -65°F TO 275°F
OPERATING PRESSURE: 3000 PSIG
PROOF PRESSURE: 4500 PSIG
FLOW: 1.40 GPM \pm 5% AT 3000 PSID ($\phi .034$)
FILTRATION: $\phi .008$ TO $\phi .012$ OPENINGS
LEAKAGE: EXTERNAL: NONE
WEIGHT: .039 LBS MAX

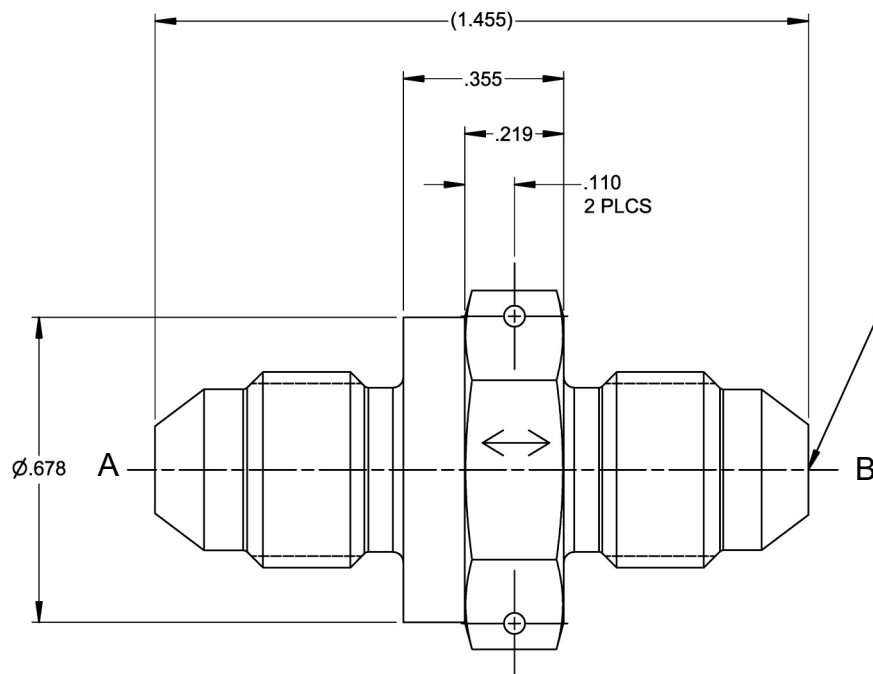
HYDRAULIC SCHEMATIC



CATEGORY 3: TWO-WAY RESTRICTOR VALVES FILTERED

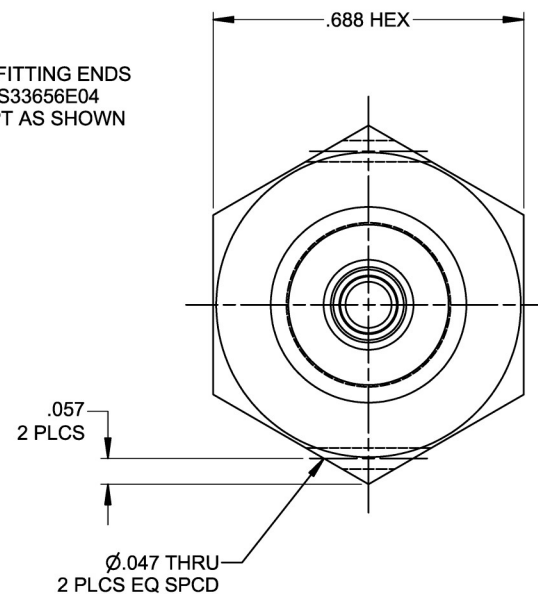


PART NUMBER: 6F4776, RESTRICTOR VALVE, TWO-WAY, FILTERED



ISOMETRIC VIEW
FOR REFERENCE ONLY

BOTH FITTING ENDS
PER MS33656E04
EXCEPT AS SHOWN



PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT HYDRAULIC FLUID

MATERIAL: BODY 2024-T351 AL

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 3000 PSIG

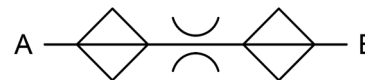
PROOF PRESSURE: 4500 PSIG

FLOW: $\varnothing.030 \pm .001$ ORIFICE (0.56 \pm 5% GPM AT 950 PSID)

FILTRATION: .005 TO .008 OPENINGS

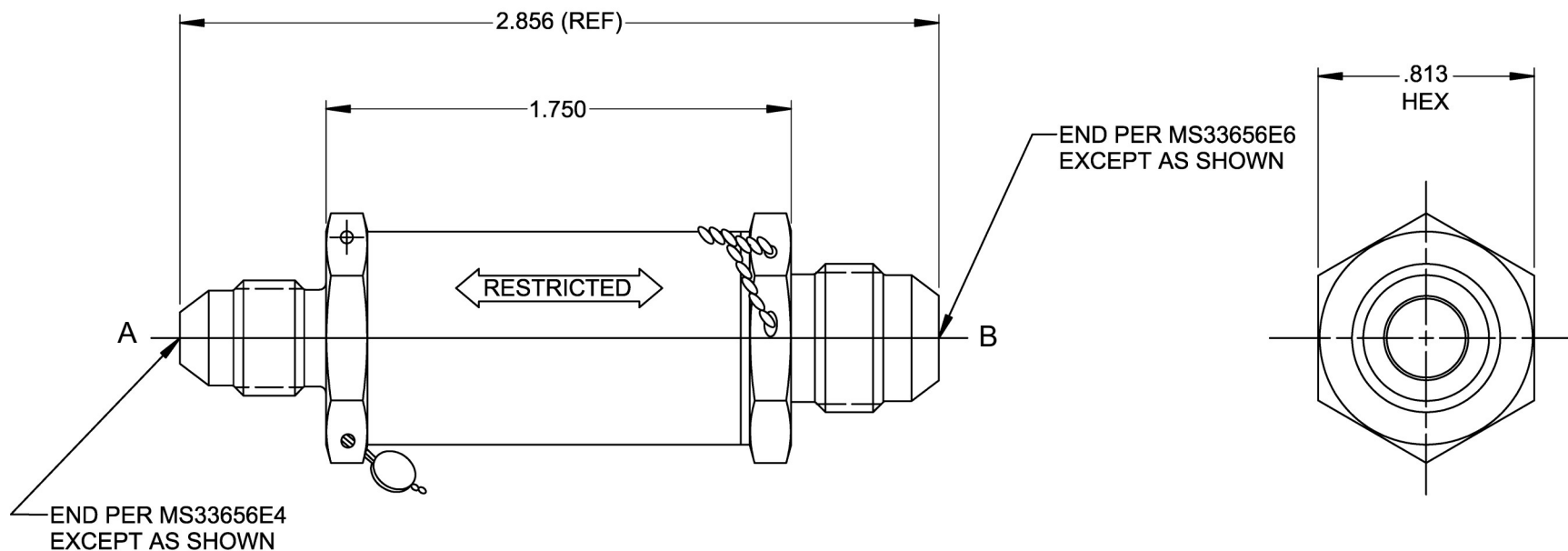
WEIGHT: .028 LBS MAX

HYDRAULIC SCHEMATIC





PART NUMBER: 6F3122, RESTRICTOR VALVE, TWO-WAY, FILTERED



PERFORMANCE SPECIFICATIONS:

FLUIDS: SKYDROL 500 B AND DMS 2014*

MATERIAL: BODY 303 CRES

TEMPERATURE RANGE: -65°F TO 225°F

OPERATING PRESSURE: 3000 PSIG

PROOF PRESSURE: 4500 PSIG

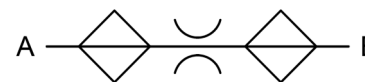
FLOW: 0.52 ± 15% GPM AT 1000 PSID

FILTRATION: .008 TO .012 OPENINGS

WEIGHT: .25 LBS MAX

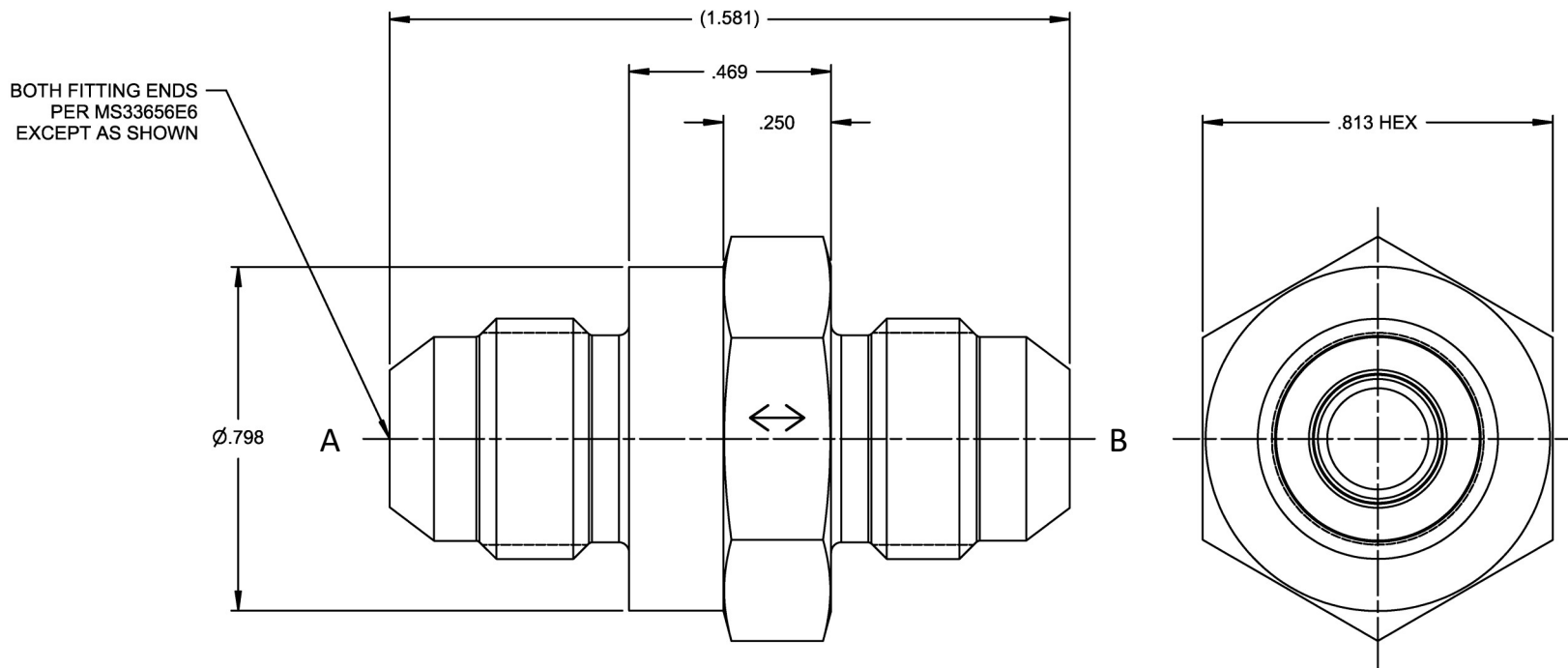
*OTHER FLUIDS MAY BE ACCEPTABLE WITH ELASTOMER CHANGE

HYDRAULIC SCHEMATIC





PART NUMBER: 6F3800-X, RESTRICTOR VALVE, TWO-WAY, FILTERED



PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT HYDRAULIC FLUID

MATERIAL: BODY 2024-T351 AL

TEMPERATURE RANGE: -65°F TO 275°F

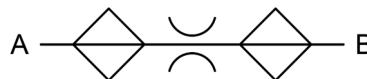
OPERATING PRESSURE: 3000 PSIG

PROOF PRESSURE: 4500 PSIG

FLOW: SEE TAB BLOCK

FILTRATION: .005 TO .008 OPENINGS

HYDRAULIC SCHEMATIC

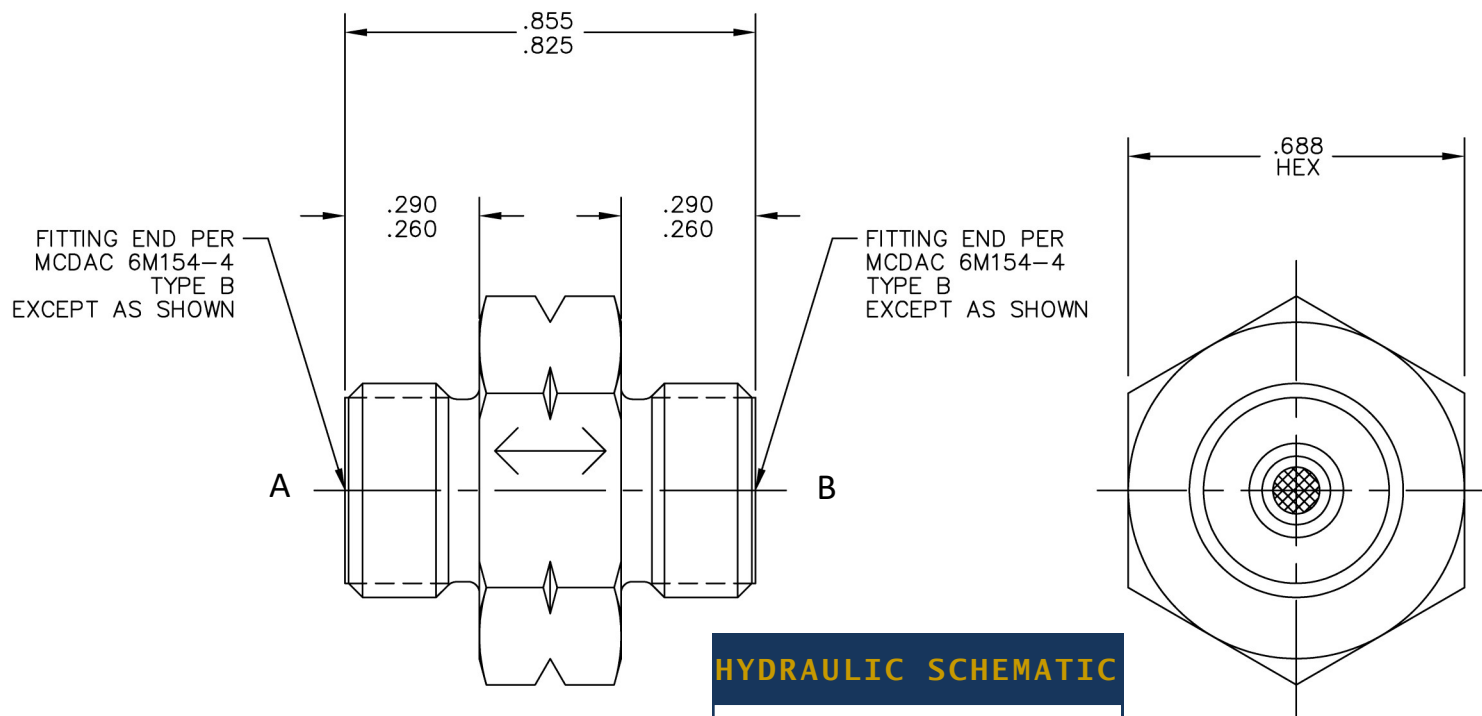


CRISSAIR PART NO.	FLOW (GPM) REF	PRESS. ΔP (PSID)	ORIFICE DIA ±.001
6F3800-1	0.45	550	Ø.030
6F3800-2	2.69	435	Ø.078
6F3800-3	1.80	435	Ø.064
6F3800-4	1.24	435	Ø.053
6F3800-5	1.86	435	Ø.065

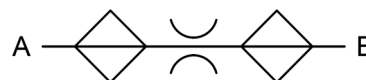
CATEGORY 3: TWO-WAY RESTRICTOR VALVES FILTERED



PART NUMBER: 6FXXXX, RESTRICTOR VALVE, TWO-WAY, FILTERED



HYDRAULIC SCHEMATIC



PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT HYDRAULIC FLUID
 MATERIAL: BODY 6AL -4V TI
 TEMPERATURE RANGE: -65°F TO 275°F
 OPERATING PRESSURE: SEE TAB BLOCK
 PROOF PRESSURE: SEE TAB BLOCK
 FLOW: SEE TAB BLOCK
 FILTRATION: .005 TO .008 OPENINGS
 WEIGHT: .041 LBS MAX

CRISSAIR PART NO.	OPERATING PRESSURE (PSIG)	PROOF PRESSURE (PSIG)	FLOW GPM	PRESS. ΔP (PSID)	ORIFICE DIA
6F4010	3000	4500	0.76 ± 10%	2000	Ø.009
6F4220	5000	7500	.390 ± 10%	4600	Ø.016

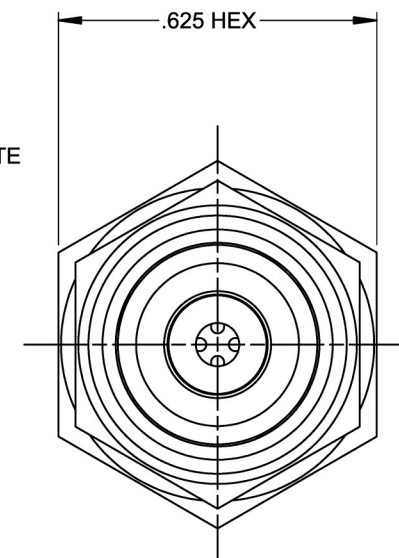
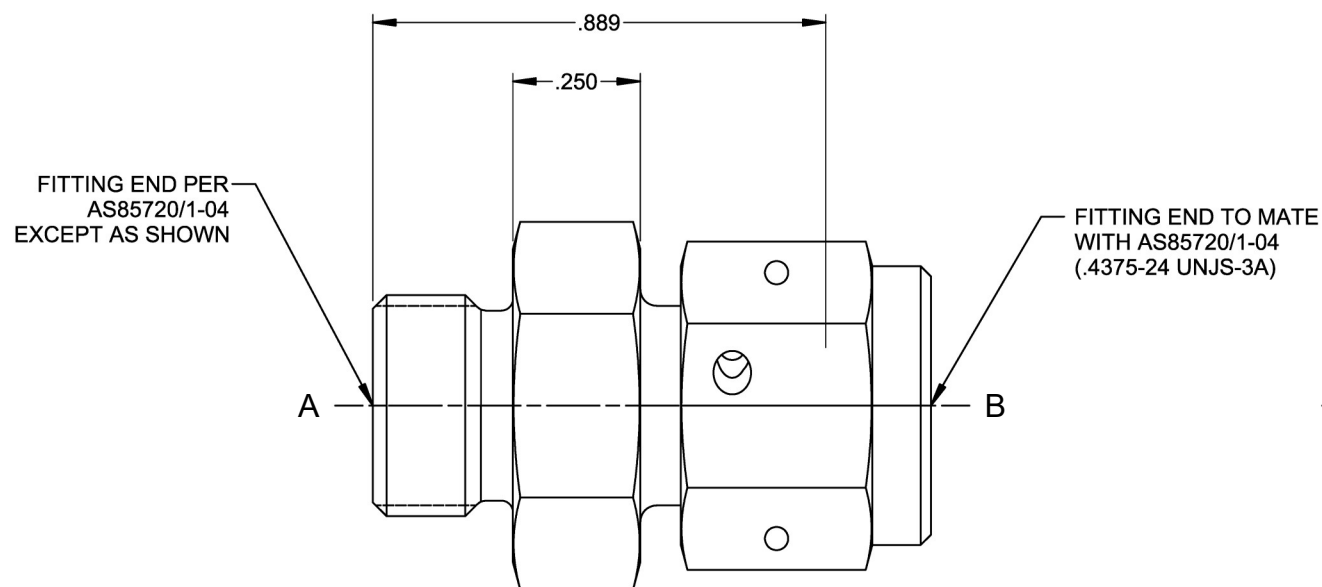
CATEGORY 3: TWO-WAY RESTRICTOR VALVES FILTERED



PART NUMBER: 6F4634, RESTRICTOR VALVE, TWO-WAY, FILTERED



ISOMETRIC VIEW
FOR REFERENCE ONLY



PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT HYDRAULIC FLUID

MATERIAL: BODY 17-4PH CRES

SWIVEL NUT 17-4 PH CRES

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 5000 PSIG

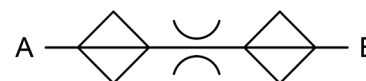
PROOF PRESSURE: 7500 PSIG

FLOW: $3.2 \pm 5\%$ GPM AT 5000 PSID ($\varnothing.047$ ORIFICE)

FILTRATION .025 TO .028 OPENINGS (25 HOLES MIN)

WEIGHT: .064 LBS MAX

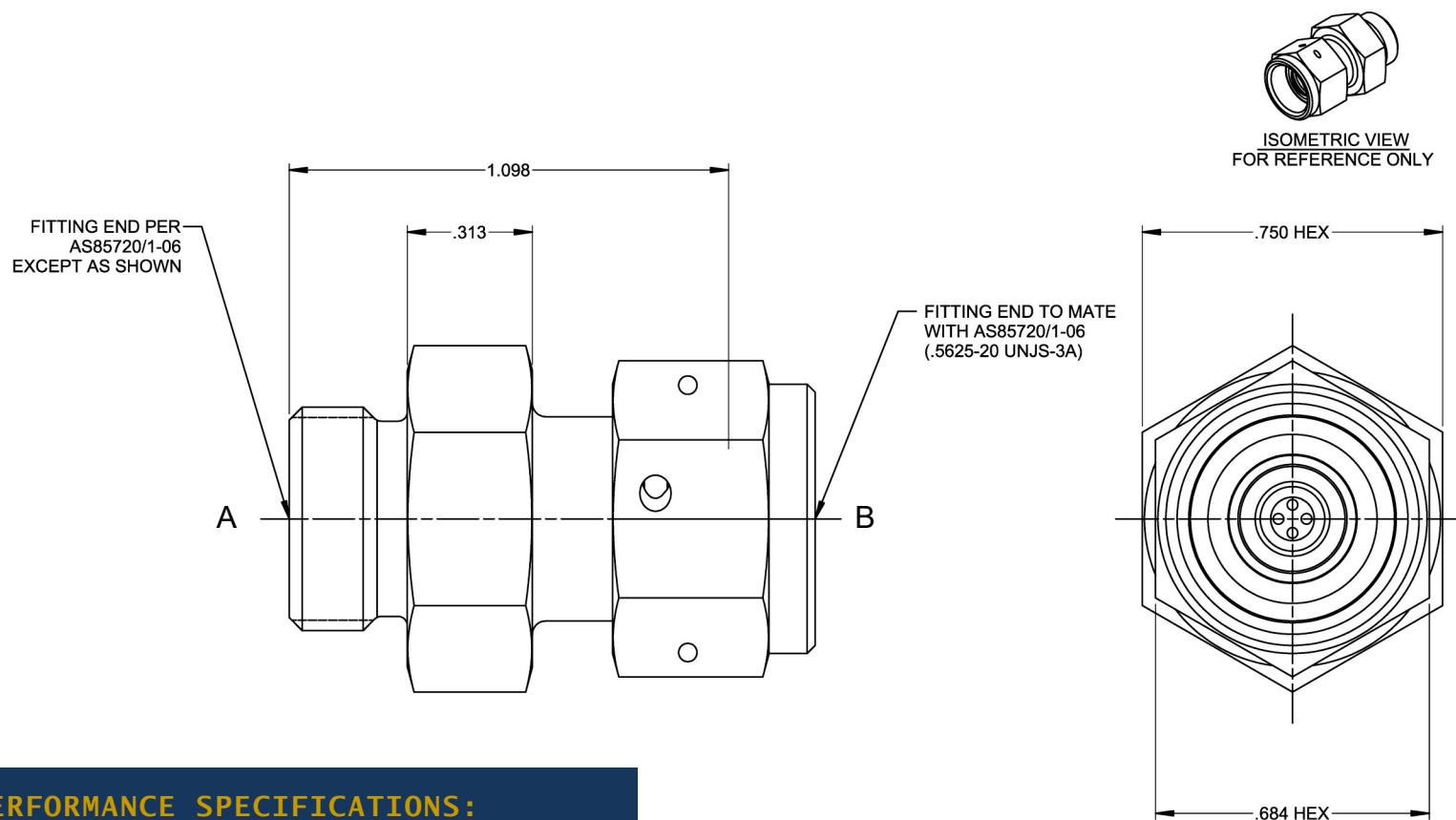
HYDRAULIC SCHEMATIC



CATEGORY 3: TWO-WAY RESTRICTOR VALVES FILTERED



PART NUMBER: 6F4636, RESTRICTOR VALVE, TWO-WAY, FILTERED



PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT HYDRAULIC FLUID

MATERIAL: BODY 17-4PH CRES

SWIVEL NUT 17-4 PH CRES

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 5000 PSIG

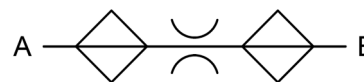
PROOF PRESSURE: 7500 PSIG

FLOW: $3.2 \pm 5\%$ GPM AT 5000 PSID ($\varnothing.047$ ORIFICE)

FILTRATION .025 TO .028 OPENINGS (25 HOLES MIN)

WEIGHT: .115 LBS MAX

HYDRAULIC SCHEMATIC

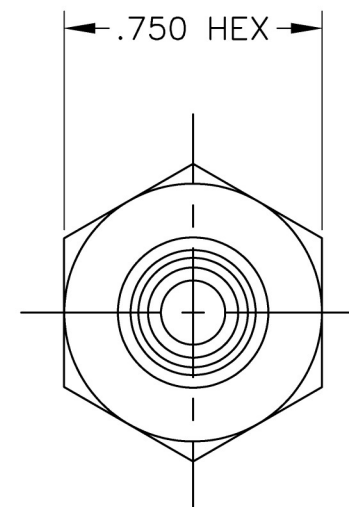
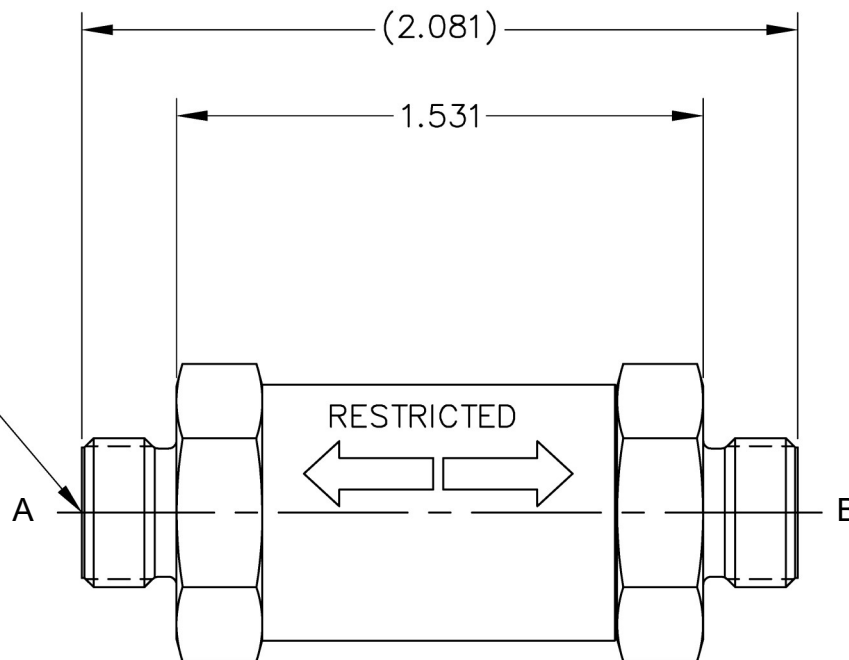


CATEGORY 3: TWO-WAY RESTRICTOR VALVES FILTERED



PART NUMBER: 6F4380, RESTRICTOR VALVE, TWO-WAY, FILTERED

BOTH ENDS PER
DYNATUBE R44090-4
(.4375-24 UNJS-3A)
EXCEPT AS SHOWN



PERFORMANCE SPECIFICATIONS:

FLUIDS: HYDRAULIC FLUID PER MIL-H-5606*

MATERIAL: BODY 17-4PH CRES

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 3000 PSIG

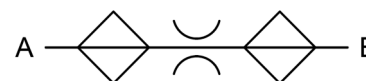
PROOF PRESSURE: 4500 PSIG

FLOW: .85 ± 10% GPM AT 3000 PSID (Ø.027 ORIFICE)

WEIGHT: .177 LBS MAX

*OTHER FLUIDS MAY BE ACCEPTABLE WITH ELASTOMER CHANGE

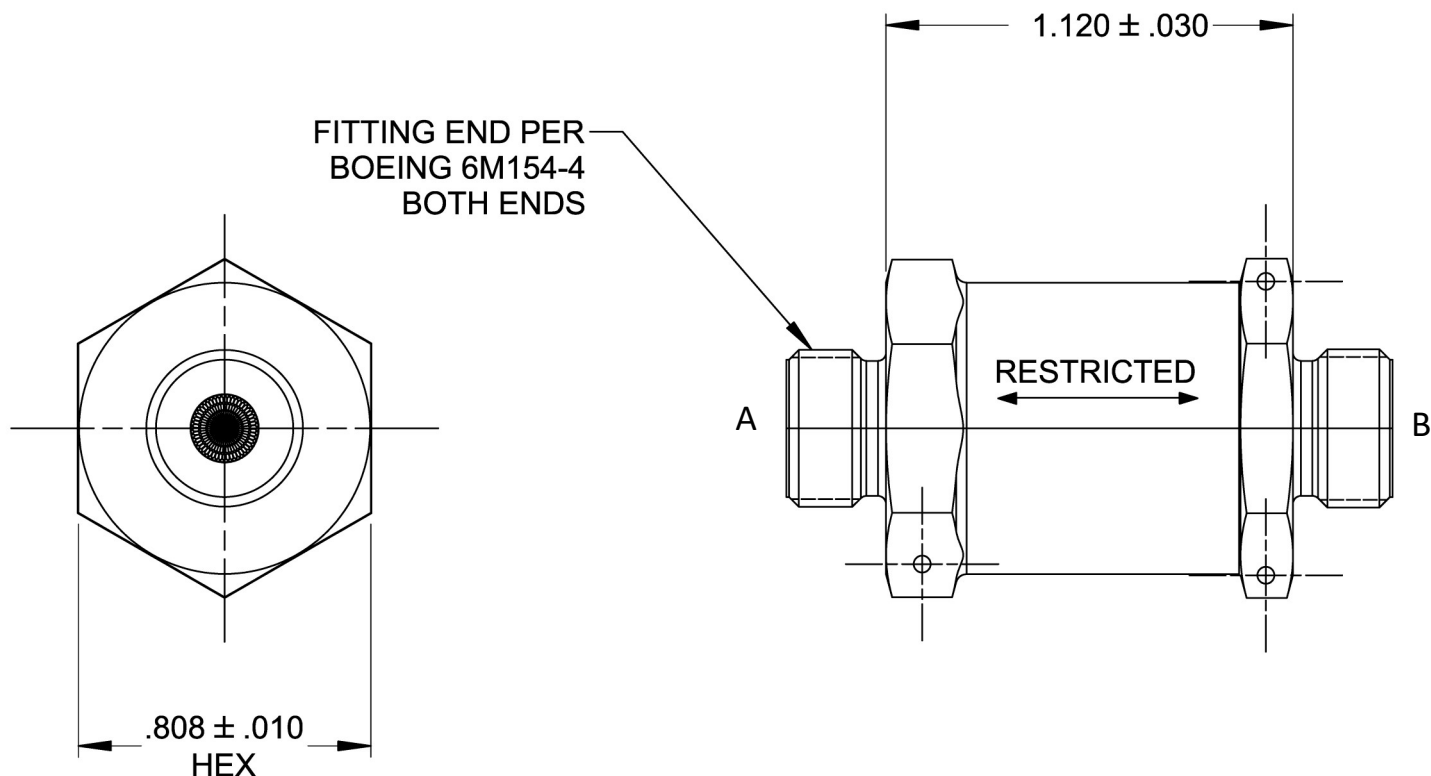
HYDRAULIC SCHEMATIC



CATEGORY 3: TWO-WAY RESTRICTOR VALVES FILTERED



PART NUMBER: 6F3258-X, RESTRICTOR VALVE, TWO-WAY, FILTERED



PERFORMANCE SPECIFICATIONS:

FLUIDS: HYDRAULIC FLUID PER MIL-H-5606 AND MIL-H-83282*

MATERIAL: BODY 17-4PH CRES

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 3000 PSIG

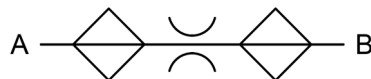
PROOF PRESSURE: 4500 PSIG

FLOW: SEE TAB BLOCK AT 3000 PSID MAX

WEIGHT: .15 LBS MAX

*OTHER FLUIDS MAY BE ACCEPTABLE WITH ELASTOMER CHANGE

HYDRAULIC SCHEMATIC



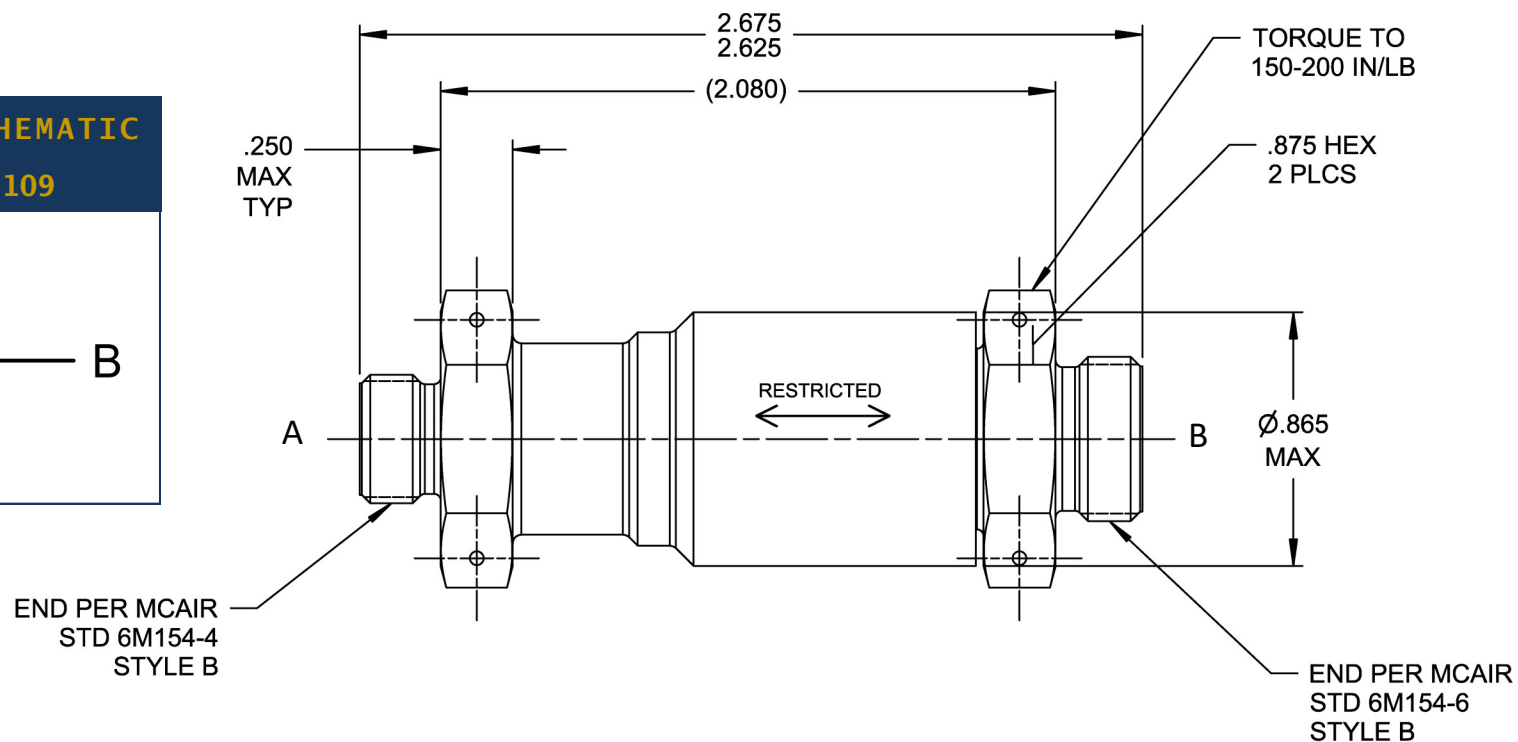
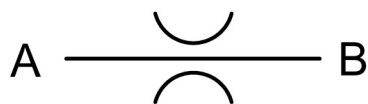
CRISSAIR PART NO.	FLOW (GPM)
6F3258-1	0.41 ± 10%
6F3258-2	1.90 ± 10%
6F3258-3	0.20 ± 10%
6F3258-4	1.20 ± 10%

CATEGORY 3: TWO-WAY RESTRICTOR VALVES FILTERED



PART NUMBER: 6F3010, TWO-WAY FILTERED HYDRAULIC RESTRICTOR

HYDRAULIC SCHEMATIC -101 AND -109



PERFORMANCE SPECIFICATIONS:

FLUIDS: HYDRAULIC RED OIL PER MIL-H5606,
MIL-H46170, MIL-H-83282 & MIL-H-6083*

MATERIAL: BODY 17-4PH CRES

Temperature range: -65°F to 275°F

operating PRESSURE: 3000 PSIG

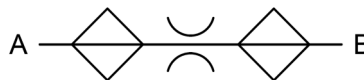
PROOF PRESSURE: 4500 PSIG

FLOW: SEE TAB BLOCK

WEIGHT: .30 LBS MAX

*OTHER FLUIDS MAY BE ACCEPTABLE WITH ELASTOMER CHANGE

HYDRAULIC SCHEMATIC -103 AND -105

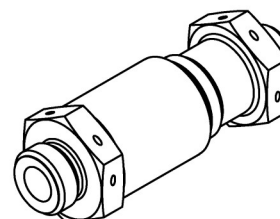


CRISSAIR PART NO.	FLOW (GPM)	PRESS. ΔP (PSID)	ORIFICE DIA (REF)
6F3010-101	4.77 ± 10%	200	.104
6F3010-103	4.59 ± 10%	3000	.063
6F3010-105	2.66 ± 10%	3000	.048
6F3010-109	6.50 ± 10%	3000	.075

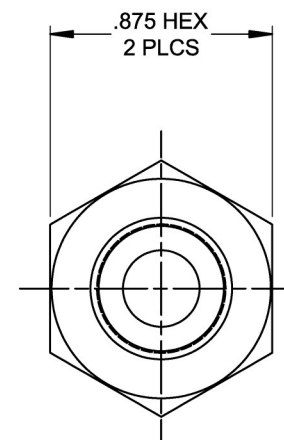
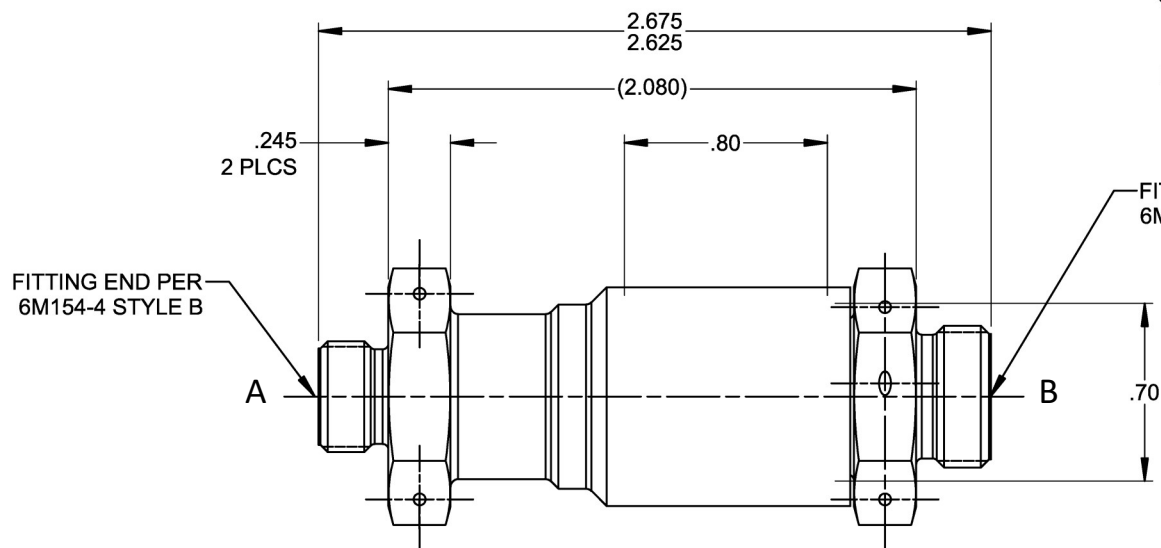
CATEGORY 3: TWO-WAY RESTRICTOR VALVES FILTERED



PART NUMBER: 6F4934-X, RESTRICTOR VALVE, TWO-WAY, FILTERED



ISOMETRIC VIEW
FOR REFERENCE ONLY



PERFORMANCE SPECIFICATIONS:

FLUIDS: AIRCRAFT HYDRAULIC FLUID PER MIL-PRF-83282*

MATERIAL: BODY 17-4PH CRES

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 3000 PSIG

PROOF PRESSURE: 4500 PSIG

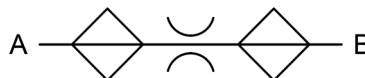
FLOW: SEE TAB BLOCK

FILTRATION: .008 TO .012 OPENINGS

WEIGHT: 0.294 LBS MAX

*OTHER FLUIDS MAY BE ACCEPTABLE WITH ELASTOMER CHANGE

HYDRAULIC SCHEMATIC

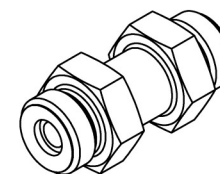


CRISSAIR PART NO.	FLOW GPM ±10%	PRESS. ΔP (PSID)	ORIFICE Ø
6F4934-1	0.50	500	.0324
6F4934-3	1.00	550	.0448
6F4934-4	1.00	1400	.0354
6F4934-5	1.00	1600	.0343
6F4934-6	1.25	1600	.0383
6F4934-7	1.50	450	.0577
6F4934-8	1.50	1500	.0427
6F4934-9	1.75	1600	.0454
6F4934-10	3.25	3000	.0528

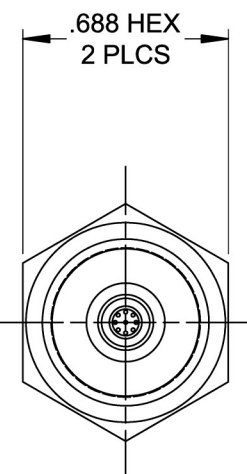
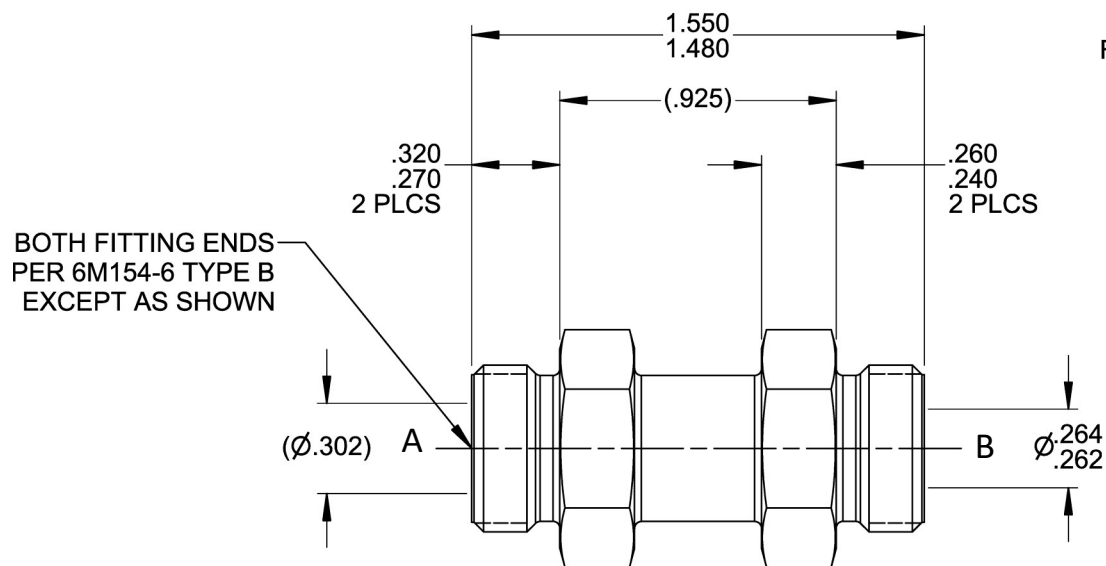
CATEGORY 3: TWO-WAY RESTRICTOR VALVES FILTERED



PART NUMBER: 6F4932-X, RESTRICTOR VALVE, TWO-WAY, FILTERED



ISOMETRIC VIEW
FOR REFERENCE ONLY



PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT HYDRAULIC FLUID

MATERIAL: BODY 6AL-4V TI

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 3000 PSIG

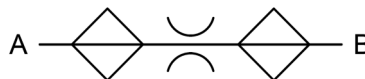
PROOF PRESSURE: 7500 PSIG

FLOW: SEE TAB BLOCK

FILTRATION: .011 TO .014 OPENINGS

WEIGHT: 0.065 LBS MAX

HYDRAULIC SCHEMATIC

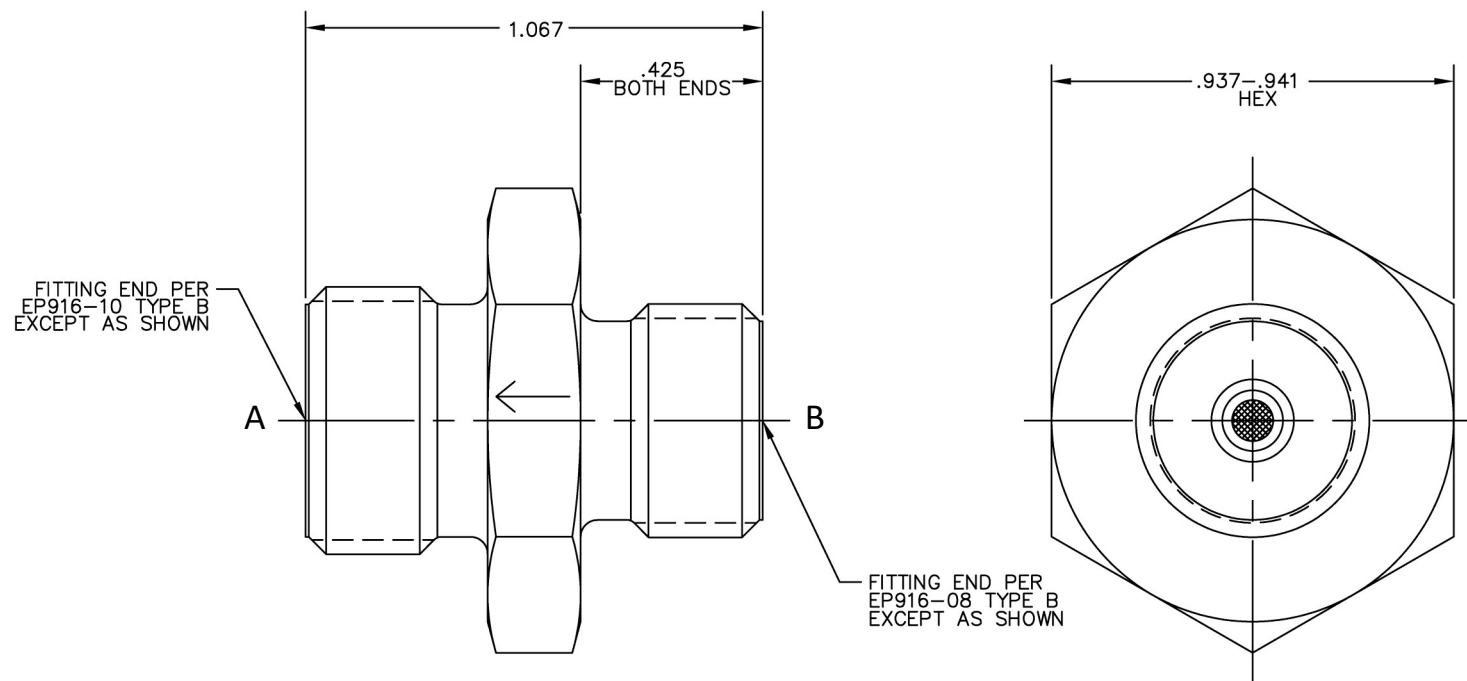


CRISSAIR PART NO.	FLOW GPM ±10%	PRESS. ΔP (PSID)	ORIFICE Ø
6F4932-1	1.00	450	.0471
6F4932-2	1.75	600	.0579
6F4932-3	1.75	800	.0539
6F4932-4	1.75	1600	.0454

CATEGORY 3: TWO-WAY RESTRICTOR VALVES FILTERED



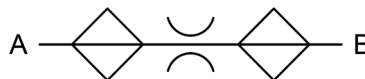
PART NUMBER: 6F3576, RESTRICTOR VALVE, TWO-WAY, FILTERED



PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT HYDRAULIC FLUID
MATERIAL: BODY 6AL-4V TI
TEMPERATURE RANGE: -65°F TO 275°F
OPERATING PRESSURE: 3000 PSIG
PROOF PRESSURE: 8000 PSIG
FLOW: .13 GPM AT 2837 PSID (Ø.011 ORIFICE)
FILTRATION: .005 TO .008 OPENINGS
WEIGHT: 0.077 LBS MAX

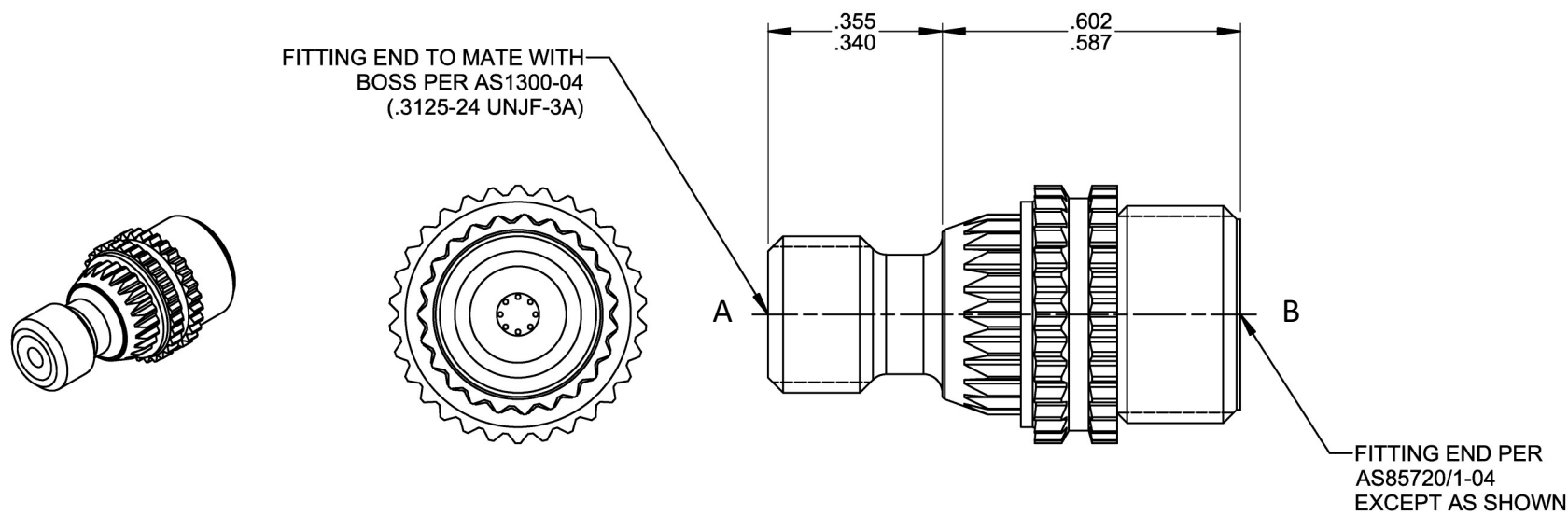
HYDRAULIC SCHEMATIC



CATEGORY 3: TWO-WAY RESTRICTOR VALVES FILTERED



PART NUMBER: 6F4834, RESTRICTOR VALVE, TWO-WAY, FILTERED



PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT HYDRAULIC FLUID

MATERIAL: BODY 6AL-4V TI

LOCKRING 1-286 CRES

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 4000 PSIG

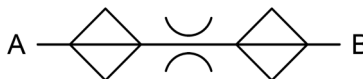
PROOF PRESSURE: 6000 PSIG

FLOW: 1.0 ± 5% GPM AT 3900 PSID (Ø.028 ORIFICE)

FILTRATION: .008 NOMINAL OPENINGS

WEIGHT: 0.02 LBS MAX

HYDRAULIC SCHEMATIC



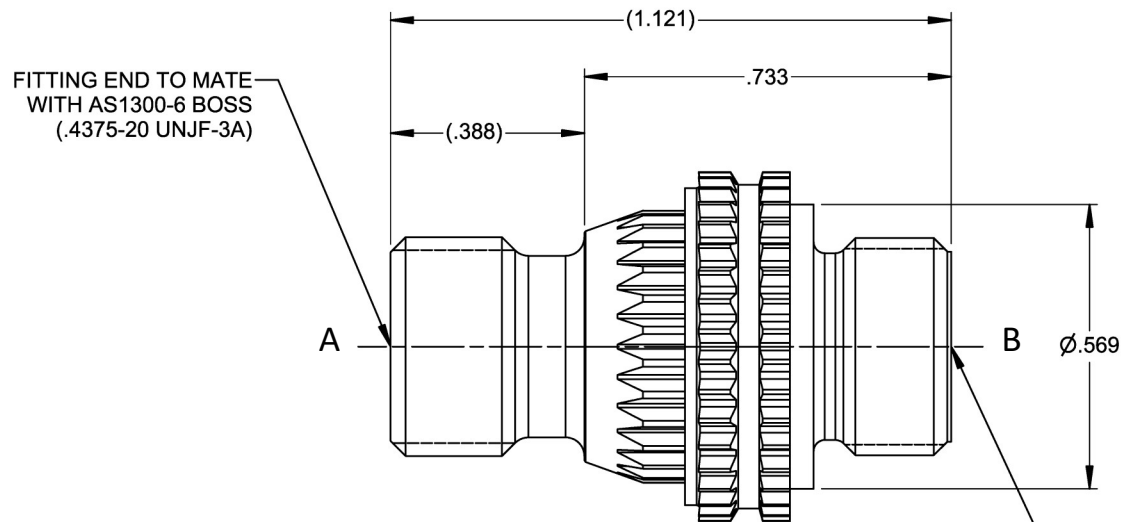
CATEGORY 3: TWO-WAY RESTRICTOR VALVES FILTERED



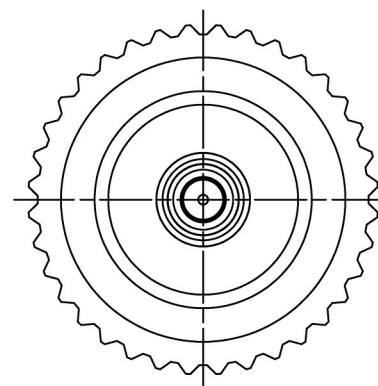
PART NUMBER: 6F4602-X, RESTRICTOR VALVE, TWO-WAY, FILTERED



ISOMETRIC VIEW
FOR REFERENCE ONLY



FITTING END PER
AS85720/1-04
(.4375-24 UNJS-3A)



PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT HYDRAULIC FLUID

MATERIAL: BODY 6AL-4V TI

LOCKRING A-286 CRES

TEMPERATURE RANGE: -65°F TO 275°F

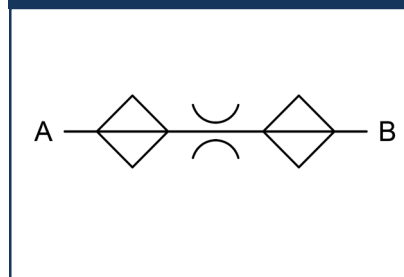
OPERATING PRESSURE: 4000 PSIG

PROOF PRESSURE: 6000 PSIG

FLOW: SEE TAB BLOCK AT 4000 PSID MAX

WEIGHT: 0.04 LBS MAX

HYDRAULIC SCHEMATIC

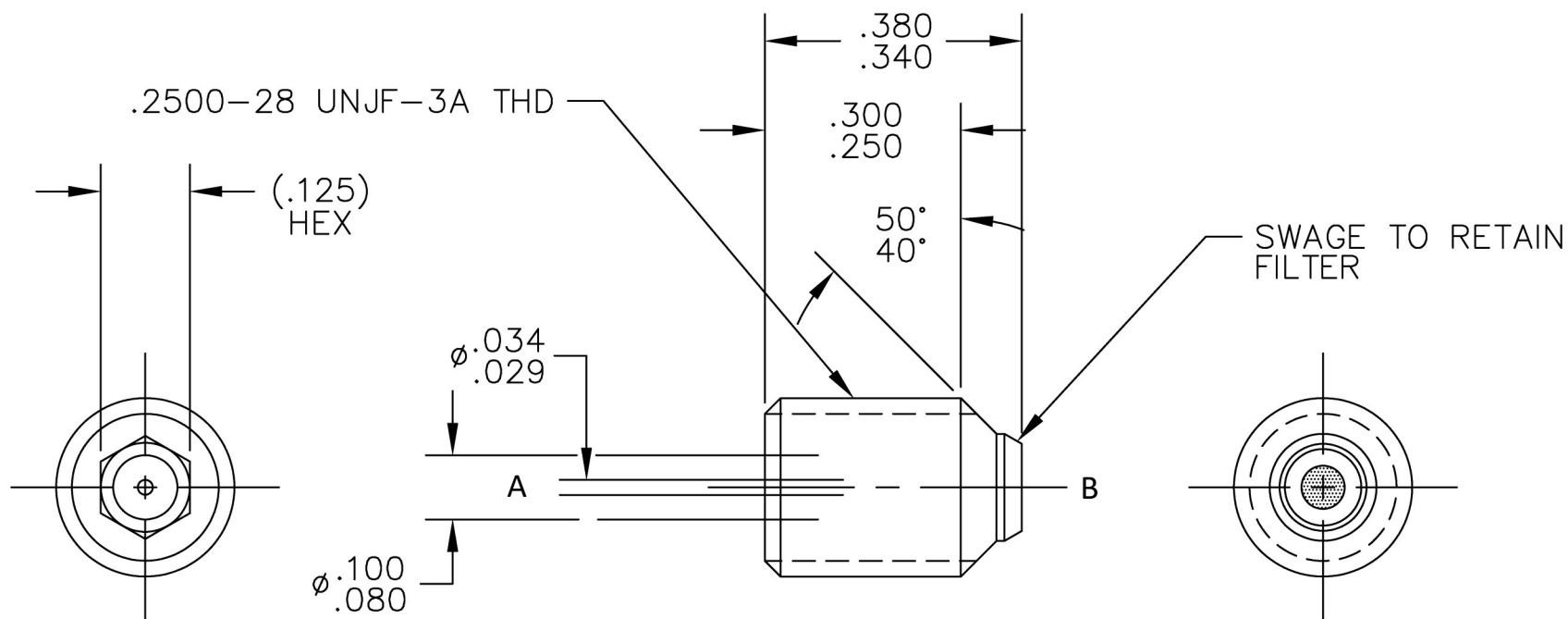


CRISSAIR PART NO.	FLOW GPM ± 5%	ORIFICE Ø	LOHM (REF)
6F4602-1	2.12	.040	650 ± 5%
6F4602-3	1.72	.036	800 ± 5%
6F4602-5	1.38	.032	1000 ± 5%

CATEGORY 3: TWO-WAY RESTRICTOR VALVES FILTERED



PART NUMBER: 6F4274, RESTRICTOR VALVE, TWO-WAY, FILTERED



PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT HYDRAULIC FLUID

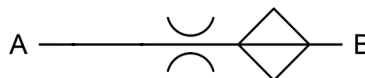
MATERIAL: BODY 304L CRES

TEMPERATURE RANGE: -65°F TO 275°F

FLOW: $\phi .029$ - $\phi .034$ ORIFICE

WEIGHT: 0.0041 LBS MAX

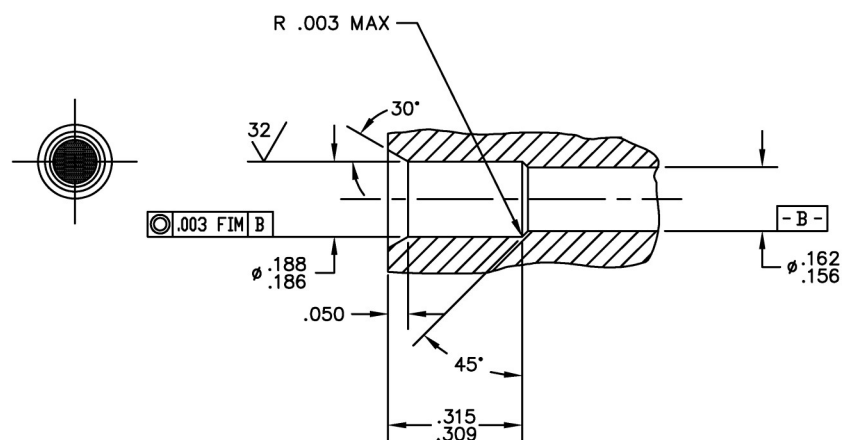
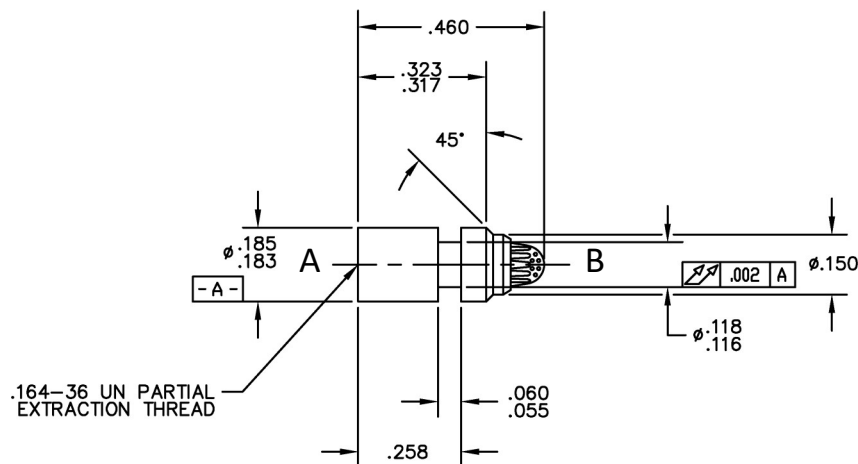
HYDRAULIC SCHEMATIC



CATEGORY 3: TWO-WAY RESTRICTOR VALVES FILTERED



PART NUMBER: 6F3956-X, RESTRICTOR VALVE, TWO-WAY, FILTERED



INSTALLATION CAVITY

PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT HYDRAULIC FLUID

MATERIAL: BODY 304 CRES

TEMPERATURE RANGE: -65°F TO 275°F

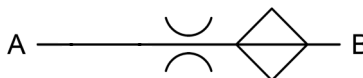
OPERATING PRESSURE: 1000 PSIG

PROOF PRESSURE: 1500 PSIG

FLOW: SEE TAB BLOCK AT 100 PSID MAX

FILTRATION: .006 NOMINAL OPENINGS

HYDRAULIC SCHEMATIC



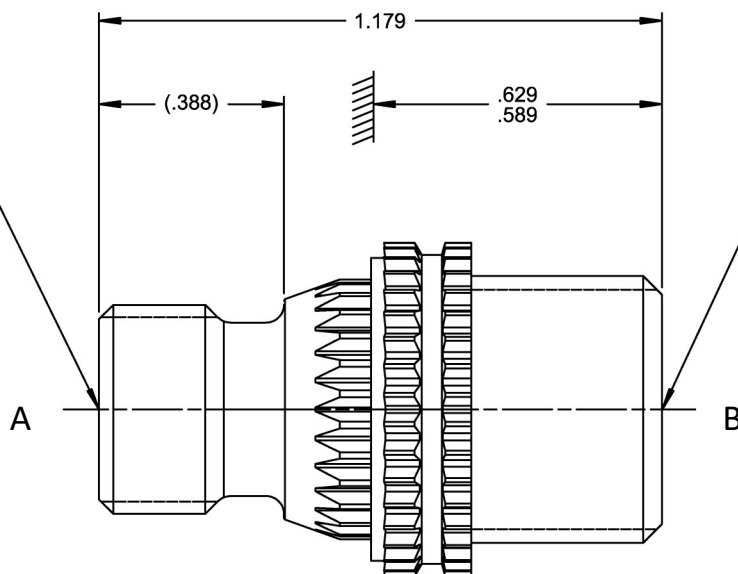
CRISSAIR PART NO.	FLOW LBS/HR	ORIFICE Ø
6F3956-1	12	.012
6F3956-2	15	.013
6F3956-3	18	.014
6F3956-4	23	.016

CATEGORY 3: TWO-WAY RESTRICTOR VALVES FILTERED

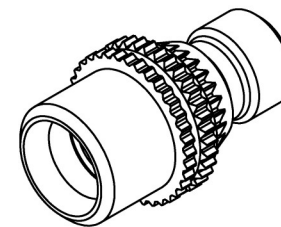


PART NUMBER: 6F4652-X, RESTRICTOR VALVE, TWO-WAY, FILTERED

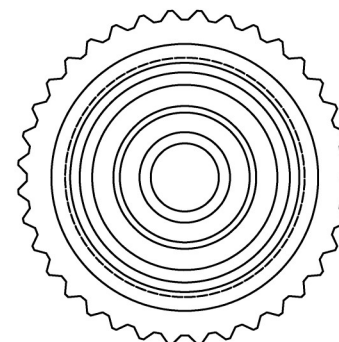
FITTING END TO MATE
WITH ABS0919-06 BOSS
(.4375-20 UNJF-3A)



FITTING END PER
prEN6079-06
EXCEPT AS SHOWN
(.5625-18 UNJF-3A)



ISOMETRIC VIEW
FOR REFERENCE ONLY



PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT HYDRAULIC FLUID

MATERIAL: BODY 6AL-4V TI

LOCKRING A-286 CRES

TEMPERATURE RANGE: -65°F TO 230°F

OPERATING PRESSURE: 3030 PSIG

PROOF PRESSURE: 4570 PSIG

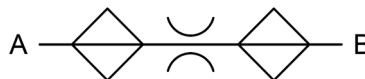
FLOW: SEE TAB BLOCK $\pm 5\%$ GPM AT 3000 PSID MAX (ON NEXT PAGE)

FILTRATION: FOR -.020 THRU -.075: .008 TO .012 OPENINGS

FOR -.080 THRU -.300: .004 TO .006 OPENINGS

WEIGHT: .039 LBS MAX

HYDRAULIC SCHEMATIC



CATEGORY 3: TWO-WAY RESTRICTOR VALVES FILTERED



PART NUMBER: 6F4652-X, RESTRICTOR VALVE, TWO-WAY, FILTERED

CRISSAIR PART NO.	FLOW GPM	ORIFICE Ø	LOHM (REF)
6F4652-020	5.340	.070	200
6F4652-022	4.860	.067	220
6F4652-024	4.450	.064	240
6F4652-026	4.110	.062	260
6F4652-028	3.820	.060	280
6F4652-030	3.560	.057	300
6F4652-032	3.340	.056	320
6F4652-034	3.140	.054	340
6F4652-036	2.970	.052	360
6F4652-038	2.810	.051	380
6F4652-040	2.670	.050	400
6F4652-042	2.540	.049	420
6F4652-044	2.430	.047	440
6F4652-046	2.320	.046	460
6F4652-048	2.230	.045	480
6F4652-050	2.140	.045	500
6F4652-055	1.940	.042	550
6F4652-060	1.780	.041	600
6F4652-065	1.640	.039	650
6F4652-070	1.530	.038	700

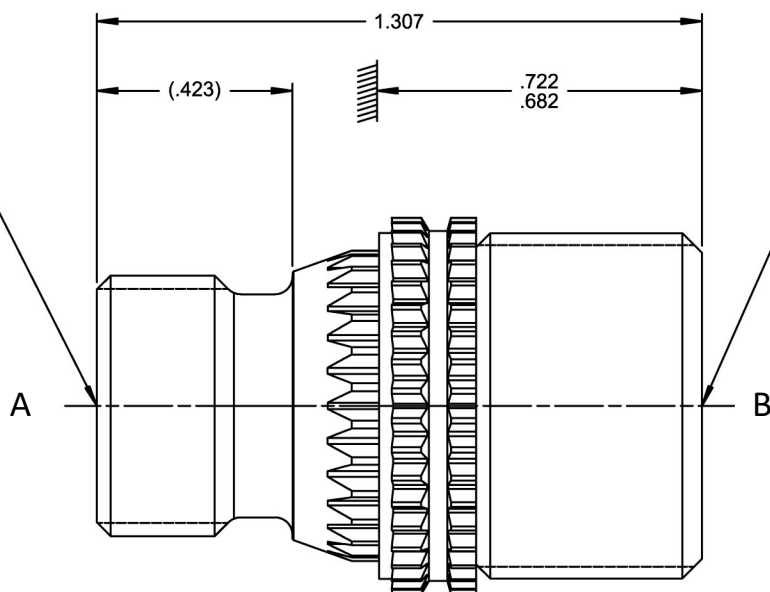
CRISSAIR PART NO.	FLOW GPM	ORIFICE Ø	LOHM (REF)
6F4652-075	1.420	.036	750
6F4652-080	1.340	.035	800
6F4652-085	1.260	.034	850
6F4652-090	1.190	.033	900
6F4652-095	1.120	.032	950
6F4652-100	1.070	.031	1000
6F4652-105	1.020	.031	1050
6F4652-110	.970	.030	1100
6F4652-115	.930	.029	1150
6F4652-120	.890	.029	1200
6F4652-125	.850	.028	1250
6F4652-130	.820	.028	1300
6F4652-135	.790	.027	1350
6F4652-140	.760	.027	1400
6F4652-145	.740	.026	1450
6F4652-150	.710	.026	1500
6F4652-155	.690	.025	1550
6F4652-160	.670	.025	1600
6F4652-165	.650	.025	1650
6F4652-170	.630	.024	1700

CRISSAIR PART NO.	FLOW GPM	ORIFICE Ø	LOHM (REF)
6F4652-175	.610	.024	1750
6F4652-180	.590	.023	1800
6F4652-185	.580	.023	1850
6F4652-190	.560	.023	1900
6F4652-195	.550	.023	1950
6F4652-200	.530	.022	2000
6F4652-210	.510	.022	2100
6F4652-220	.490	.021	2200
6F4652-230	.460	.021	2300
6F4652-240	.450	.020	3400
6F4652-250	.430	.020	2500
6F4652-260	.410	.020	2600
6F4652-270	.400	.019	2700
6F4652-280	.380	.019	2800
6F4652-290	.370	.018	2900
6F4652-300	.360	.018	3000

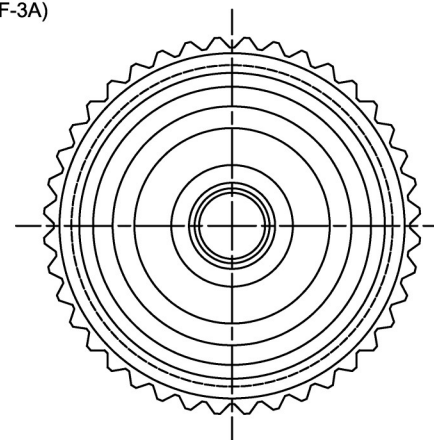
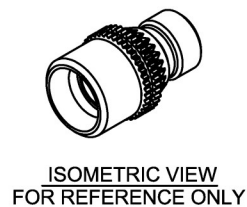


PART NUMBER: 6F4654-X, RESTRICTOR VALVE, TWO-WAY, FILTERED

FITTING END TO MATE
WITH ABS0919-08 BOSS
(.5625-18 UNJF-3A)



FITTING END PER
prEN6079-08
EXCEPT AS SHOWN
(.7500-16 UNJF-3A)



PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT HYDRAULIC FLUID

MATERIAL: BODY 6AL-4V TI

LOCKRING A-286 CRES

TEMPERATURE RANGE: -65°F TO 230°F

OPERATING PRESSURE: 3030 PSIG

PROOF PRESSURE: 4570 PSIG

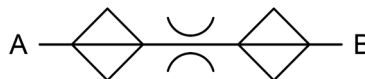
FLOW: SEE TAB BLOCK $\pm 5\%$ GPM AT 3000 PSID MAX (ON NEXT PAGE)

FILTRATION: FOR -.020 THRU -.105: .008 TO .012 OPENINGS

FOR -.110 THRU -.300: .004 TO .006 OPENINGS

WEIGHT: .069 LBS MAX

HYDRAULIC SCHEMATIC



CATEGORY 3: TWO-WAY RESTRICTOR VALVES FILTERED



PART NUMBER: 6F4654-X, RESTRICTOR VALVE, TWO-WAY, FILTERED

CRISSAIR PART NO.	FLOW GPM	ORIFICE Ø	LOHM (REF)
6F4654-020	5.340	.070	200
6F4654-022	4.860	.067	220
6F4654-024	4.450	.064	240
6F4654-026	4.110	.062	260
6F4654-028	3.820	.060	280
6F4654-030	3.560	.057	300
6F4654-032	3.340	.056	320
6F4654-034	3.140	.054	340
6F4654-036	2.970	.052	360
6F4654-038	2.810	.051	380
6F4654-040	2.670	.050	400
6F4654-042	2.540	.049	420
6F4654-044	2.430	.047	440
6F4654-046	2.320	.046	460
6F4654-048	2.230	.045	480
6F4654-050	2.140	.045	500
6F4654-055	1.940	.042	550
6F4654-060	1.780	.041	600
6F4654-065	1.640	.039	650
6F4654-070	1.530	.038	700

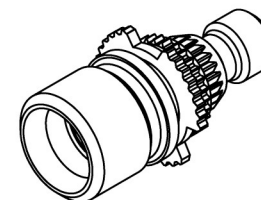
CRISSAIR PART NO.	FLOW GPM	ORIFICE Ø	LOHM (REF)
6F4654-075	1.420	.036	750
6F4654-080	1.340	.035	800
6F4654-085	1.260	.034	850
6F4654-090	1.190	.033	900
6F4654-095	1.120	.032	950
6F4654-100	1.070	.031	1000
6F4654-105	1.020	.031	1050
6F4654-110	.970	.030	1100
6F4654-115	.930	.029	1150
6F4654-120	.890	.029	1200
6F4654-125	.850	.028	1250
6F4654-130	.820	.028	1300
6F4654-135	.790	.027	1350
6F4654-140	.760	.027	1400
6F4654-145	.740	.026	1450
6F4654-150	.710	.026	1500
6F4654-155	.690	.025	1550
6F4654-160	.670	.025	1600
6F4654-165	.650	.025	1650
6F4654-170	.630	.024	1700

CRISSAIR PART NO.	FLOW GPM	ORIFICE Ø	LOHM (REF)
6F4654-175	.610	.024	1750
6F4654-180	.590	.023	1800
6F4654-185	.580	.023	1850
6F4654-190	.560	.023	1900
6F4654-195	.550	.023	1950
6F4654-200	.530	.022	2000
6F4654-210	.510	.022	2100
6F4654-220	.490	.021	2200
6F4654-230	.460	.021	2300
6F4654-240	.450	.020	3400
6F4654-250	.430	.020	2500
6F4654-260	.410	.020	2600
6F4654-270	.400	.019	2700
6F4654-280	.380	.019	2800
6F4654-290	.370	.018	2900
6F4654-300	.360	.018	3000

CATEGORY 3: TWO-WAY RESTRICTOR VALVES FILTERED



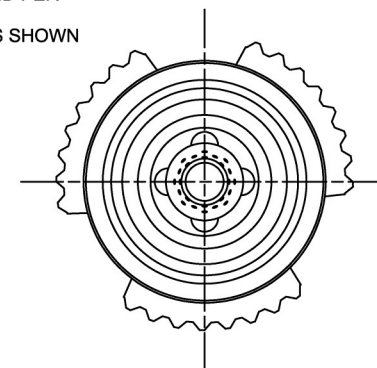
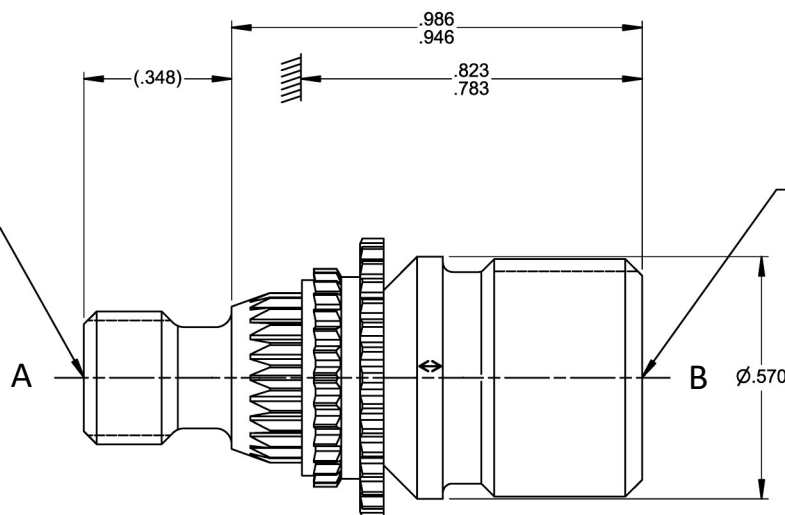
PART NUMBER: 6F4724-X, RESTRICTOR VALVE, TWO-WAY, FILTERED



ISOMETRIC VIEW
FOR REFERENCE ONLY

FITTING END TO MATE
WITH AS1300-4 BOSS
(.3125-24 UNJF-3A)

FITTING END PER
AS5827B6
EXCEPT AS SHOWN



HYDRAULIC SCHEMATIC



PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT HYDRAULIC FLUID
MATERIAL: BODY 6AL -4V TI
TEMPERATURE RANGE: -65°F TO 275°F
OPERATING PRESSURE: 5000 PSIG
PROOF PRESSURE: 7500 PSIG
FLOW: SEE TAB BLOCK
FILTRATION: .008 TO .012 OPENINGS
WEIGHT: .033 LBS MAX

CRISSAIR PART NO.	FLOW GPM	FLOW COEFF VALUE CIS/(PSI) ^{1/2}	FLOW COEFF IN ³ /SEC	ORIFICE Ø	PSID	INLET PSI	BACK PSI
6F4724-1	0.805 ± 5%	0.0817 ± 5%	-	.033	1439	-	-
6F4724-2	1.960 ± 5%	0.1462 ± 5%	-	.044	2673	-	-
6F4724-3	0.774 ± 5%	0.0579 ± 5%	-	.028	2651	-	-
6F4724-4	2.835 ± 5%	0.1984 ± 5%	-	.051	3006	-	-
6F4724-5	1.169 ± 5%	-	4.5 ± 5%	.032	-	3290	50
6F4724-6	4.415 ± 5%	-	17.0 ± 5%	.056	-	5000	50

CATEGORY 3: TWO-WAY RESTRICTOR VALVES FILTERED



CRISSAIR HAS VARIOUS OTHER RESTRICTOR VALVES NOT LISTED IN THE CATALOG WITH DIFFERENT MATERIALS, FITTINGS, AND SIZE CONFIGURATIONS.

CONTACT CRISSAIR FOR ADDITIONAL INFORMATION/DRAWINGS AT

(661) 367-3300 OR SALES@CRISSAIR.COM.

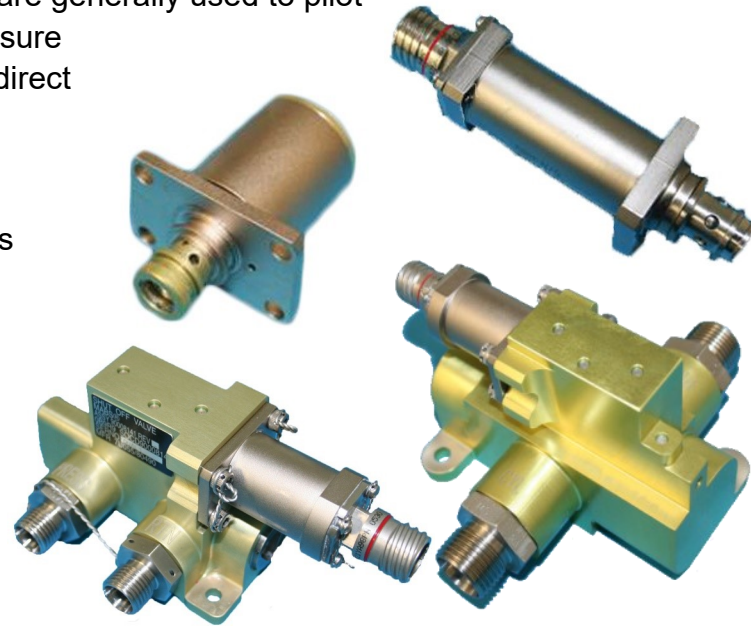
YOU CAN ALSO VISIT WWW.CRISSAIR.COM.



SOLENOID OPERATED VALVES

Crissair Inc. designs and manufactures a variety of Solenoid Operated Valves: Direct Acting Solenoid Valves and Piloted Operated Shutoff Valves.

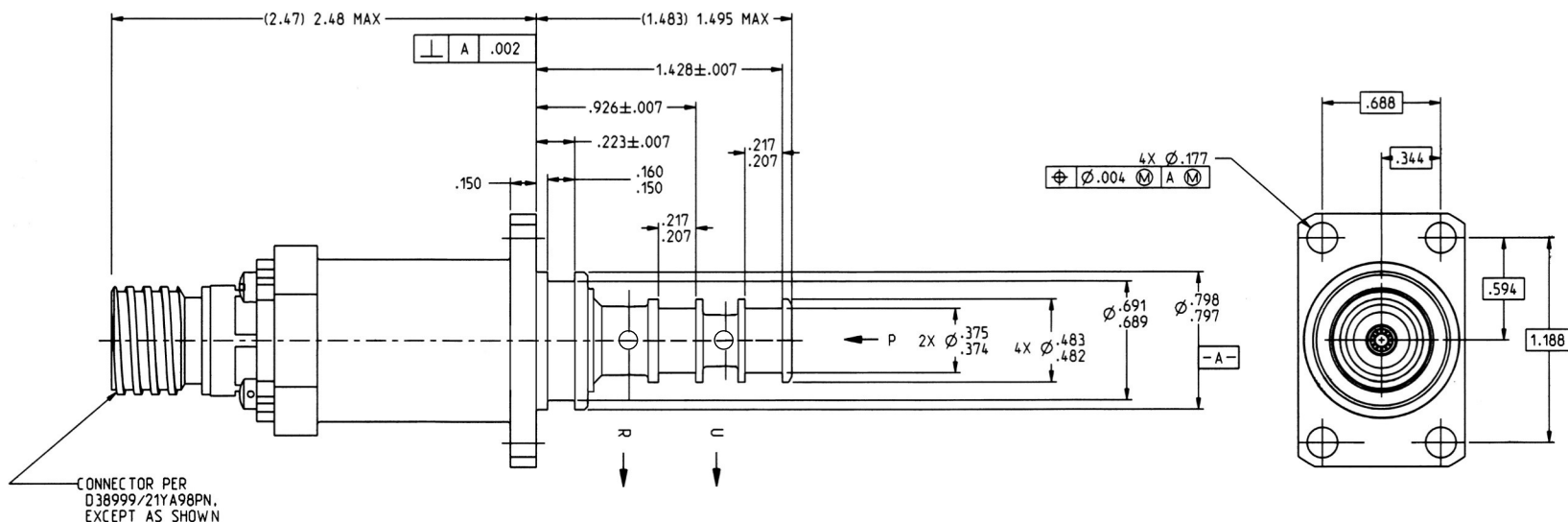
- Direct Acting Solenoid Valves have many uses in fluid control systems. For high pressure systems, they are generally used to pilot larger cylinders and spools. For lower pressure systems, they can be used to shut-off or redirect supply pressure.
- Pilot Operated Shut-off Valves are more complex in nature. A Pilot Solenoid Valve is packaged into a manifold which drives a larger Spool or Piston to redirect or shutoff system pressure and flow. In some cases, restriction and damping is added to improve and better control transient characteristics of pressure spikes and flow rates.



This catalog contains a small sample of drawings. Please contact Crissair for additional drawings and/or configurations.



PART NUMBER: 80370-X SOLENOID VALVE, 2POS 3WAY, NORMALLY CLOSED



PERFORMANCE SPECIFICATIONS:

FLUIDS: PHOSPHATE ESTER PER AS1241 TYPE IV CLASS 1 AND 2 AND AS1241 TYPE V*

MATERIAL: VALVE BODY 15-5PH CRES

NOMINAL SUPPLY PRESSURE: 3000 PSIG

TEMPERATURE RANGE: -67° TO 200°F

ENERGIZED FLOW: 0.5 GPM MINIMUM FROM PORT P TO U AT 3000 PSID

DE-ENERGIZED FLOW: 0.5 GPM MINIMUM FROM PORT U TO R AT 3000 PSID

INTERNAL LEAKAGE AT 3000 PSID IN ANY POSITION: 1 CC/MIN MAX

OPERATING VOLTAGE RANGE: 16 TO 32 VDC NOMINAL

COIL RESISTANCE: 42±2 OHMS AT 70°F

PULL-IN VOLTAGE: 13.5 VDC MAX AT 3000 PSID AND 80±20°F

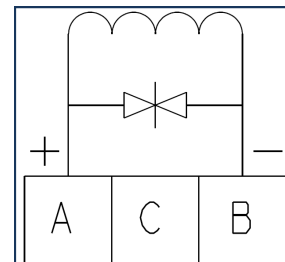
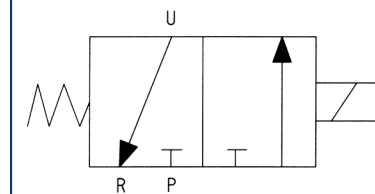
DROP-OUT VOLTAGE: 1.5 TO 7.5 VDC AT 3000 PSID AND 80±20°F

PEAK INVERSE VOLTAGE: ±60 VDC MAX

DUTY CYCLE: CONTINUOUS

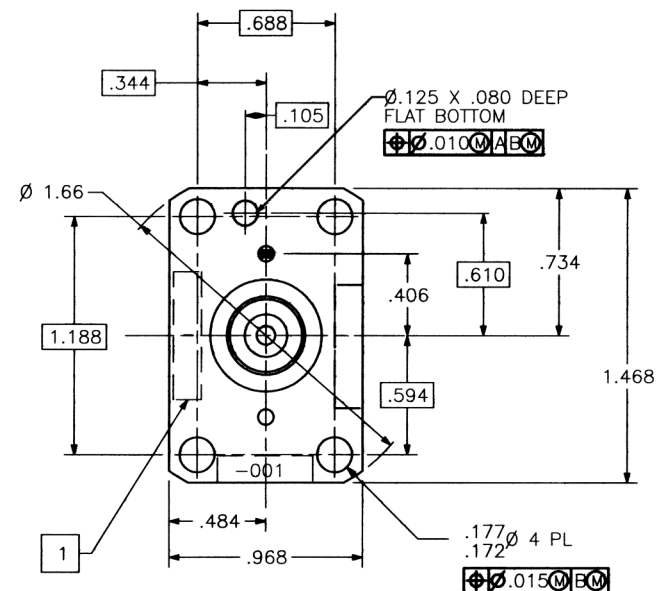
*OTHER FLUIDS ACCEPTABLE WITH ELASTOMER CHANGE

HYDRAULIC SCHEMATIC



ELECTRICAL SCHEMATIC

CATEGORY 4: DIRECT ACTING SOLENOID VALVES



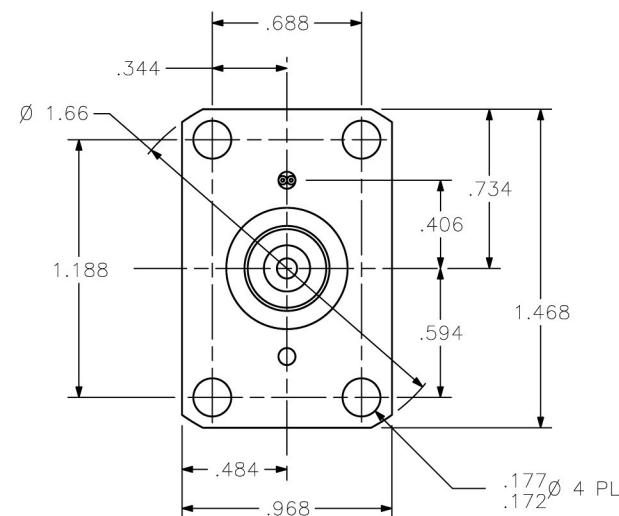
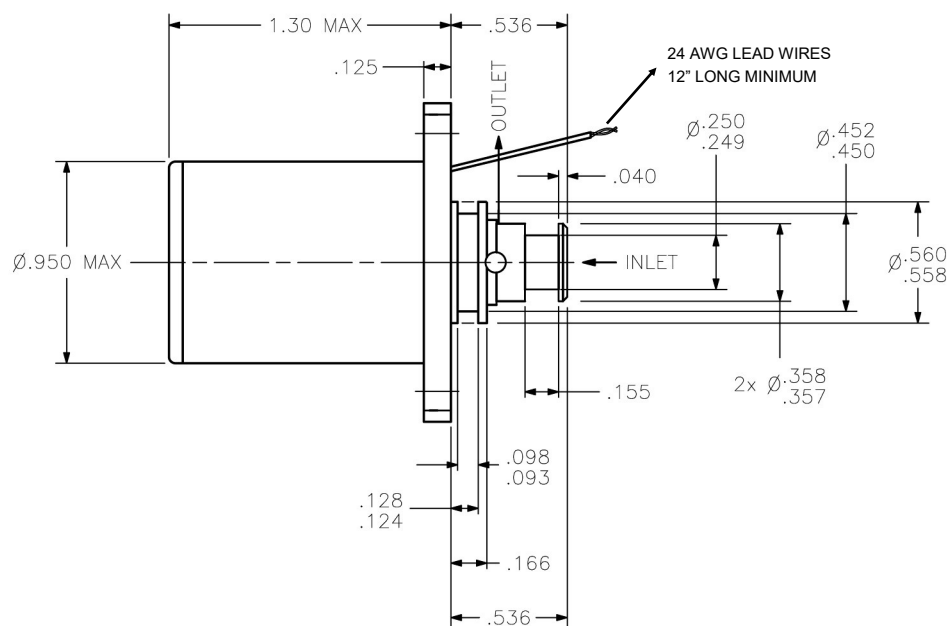
A hydraulic schematic of a cylinder. The cylinder is represented by a rectangle divided into two horizontal chambers. The top chamber is connected to a vertical line representing a fluid source. The bottom chamber is connected to a spring, represented by a zigzag line. The left side of the cylinder is labeled 'P' and 'R', and the right side is labeled 'C'. Arrows indicate fluid flow: one arrow points right from the top chamber, and another arrow points left from the bottom chamber.



CATEGORY 4: DIRECT ACTING SOLENOID VALVES



PART NUMBER: 50710 SOLENOID VALVE, 2POS 2WAY, NORMALLY OPEN



PERFORMANCE SPECIFICATIONS:

FLUIDS: MIL-PRF-5606, MIL-H-6083, MIL-H-83282*

MATERIAL: VALVE BODY 303 CRES

NOMINAL SUPPLY PRESSURE: 3000 PSIG

TEMPERATURE RANGE: -65 TO 275°F

FLOW (ENERGIZED): 0.25 GPM MINIMUM AT 200 PSID

INTERNAL LEAKAGE (DE-ENERGIZED): 5 CC/MIN MAX AT 3000 PSID

OPERATING VOLTAGE RANGE: 18 TO 32 VDC NOMINAL

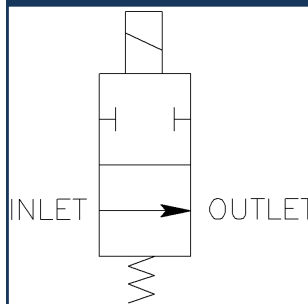
COIL CURRENT: 0.75 AMP MAX AT 28 VDC

RESPONSE TIME (ENERGIZED AND DE-ENERGIZED): 30 MSEC MAX

DUTY CYCLE: CONTINUOUS

*PHOSPHATE ESTER FLUID ACCEPTABLE WITH ELASTOMER CHANGE

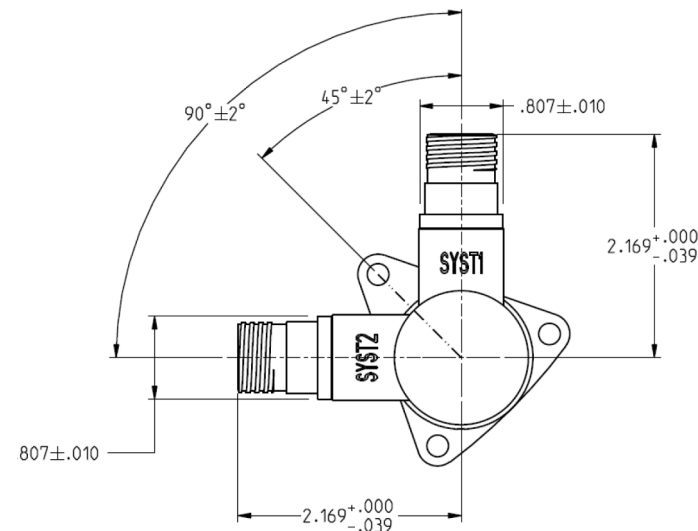
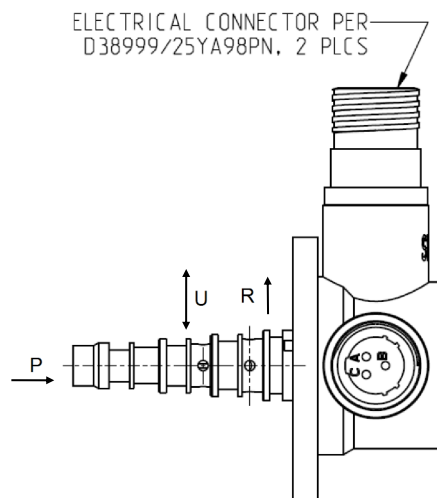
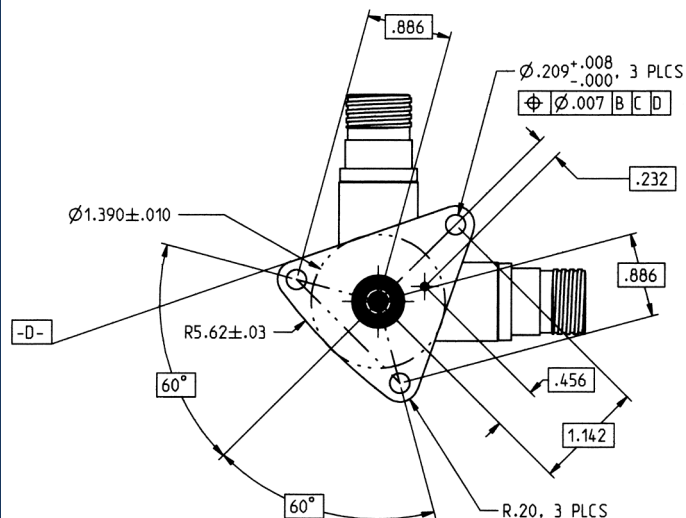
HYDRAULIC SCHEMATIC



CATEGORY 4: DIRECT ACTING SOLENOID VALVES



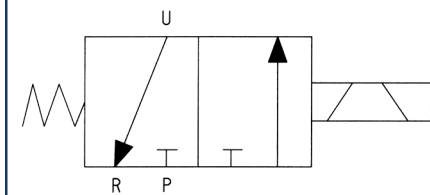
PART NUMBER: 80050-X SOLENOID VALVE, 2POS 3WAY, NORMALLY CLOSED



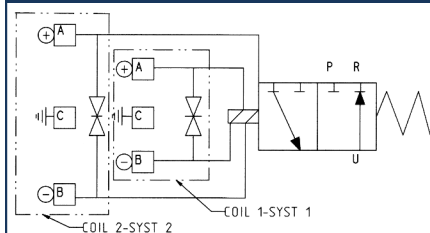
PERFORMANCE SPECIFICATIONS:

FLUIDS: LOW DENSITY PHOSPHATE ESTER FLUID TYPE IV, V*
 MATERIAL: VALVE BODY 15-5PH CRES
 NOMINAL SUPPLY PRESSURE: 3000 PSIG
 ENERGIZED FLOW (P TO U): 0.198±0.026 GPM AT 3000 PSID MAX
 DE-ENERGIZED FLOW (U TO R): 0.79 GPM MINIMUM AT 3000 PSID MAX
 INTERNAL LEAKAGE AT 3000 PSID IN ANY POSITION: 1.0 CC/MIN MAX
 OPERATING VOLTAGE RANGE: 26 TO 32 VDC
 COIL RESISTANCE: 42±2 OHMS
 PULL-IN VOLTAGE: 13.5 VDC MAX AT 3000 PSID AND 80±20°F
 DROP-OUT VOLTAGE: 1.0 VDC MIN AT 1015 PSID AND 80±20°F
 PEAK INVERSE VOLTAGE: ±60 VDC MAX
 DUTY CYCLE: CONTINUOUS
 WEIGHT: 0.595 LBS MAX
 *MIL-PRF-83282 ACCEPTABLE WITH ELASTOMER CHANGE

HYDRAULIC SCHEMATIC



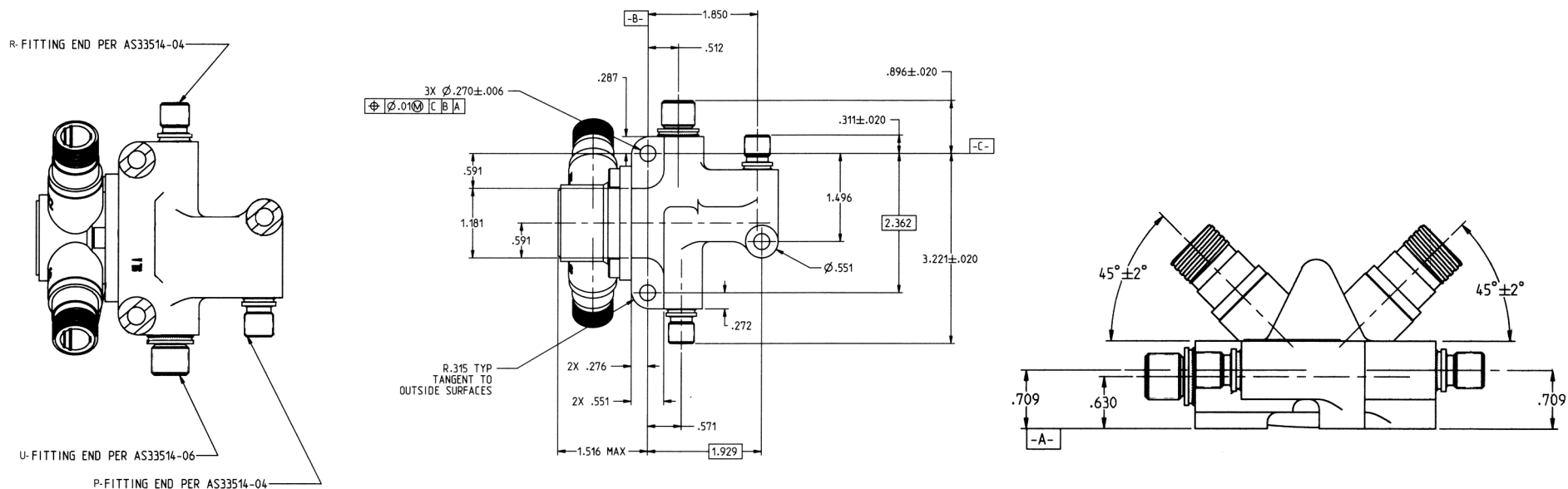
ELECTRICAL SCHEMATIC



CATEGORY 4: DIRECT ACTING SOLENOID VALVES



PART NUMBER: 80080-X, SOLENOID VALVE, 2POS 3WAY, NORMALLY CLOSED



PERFORMANCE SPECIFICATIONS:

FLUIDS: LOW DENSITY PHOSPHATE ESTER FLUID TYPE IV, V*

MATERIAL: MANIFOLD 6061-T6 AL

NOMINAL SUPPLY PRESSURE: 3000 PSIG

ENERGIZED FLOW (P TO U): 0.198±0.026 GPM AT 3000 PSID MAX

DE-ENERGIZED FLOW (U TO R): 0.79 GPM MINIMUM AT 3000 PSID MAX

INTERNAL LEAKAGE AT 3000 PSID IN ANY POSITION: 1.0 CC/MIN MAX

OPERATING VOLTAGE RANGE: 26 TO 32 VDC

COIL RESISTANCE: 42±2 OHMS

PULL-IN VOLTAGE: 13.5 VDC MAX AT 3000 PSID AND 80±20°F

DROP-OUT VOLTAGE: 1.0 VDC MIN AT 1015 PSID AND 80±20°F

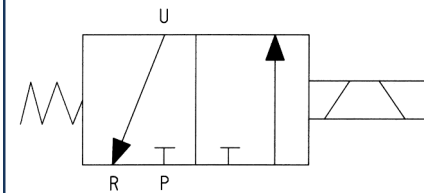
PEAK INVERSE VOLTAGE: ±60 VDC MAX

DUTY CYCLE: CONTINUOUS

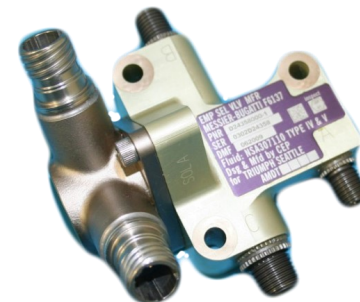
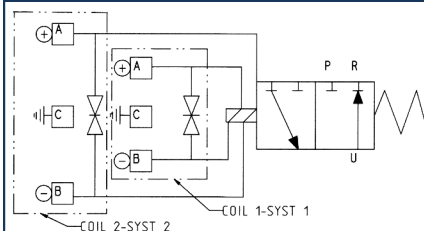
WEIGHT: 1.08 LBS MAX

*MIL-PRF-83282 ACCEPTABLE WITH ELASTOMER CHANGE

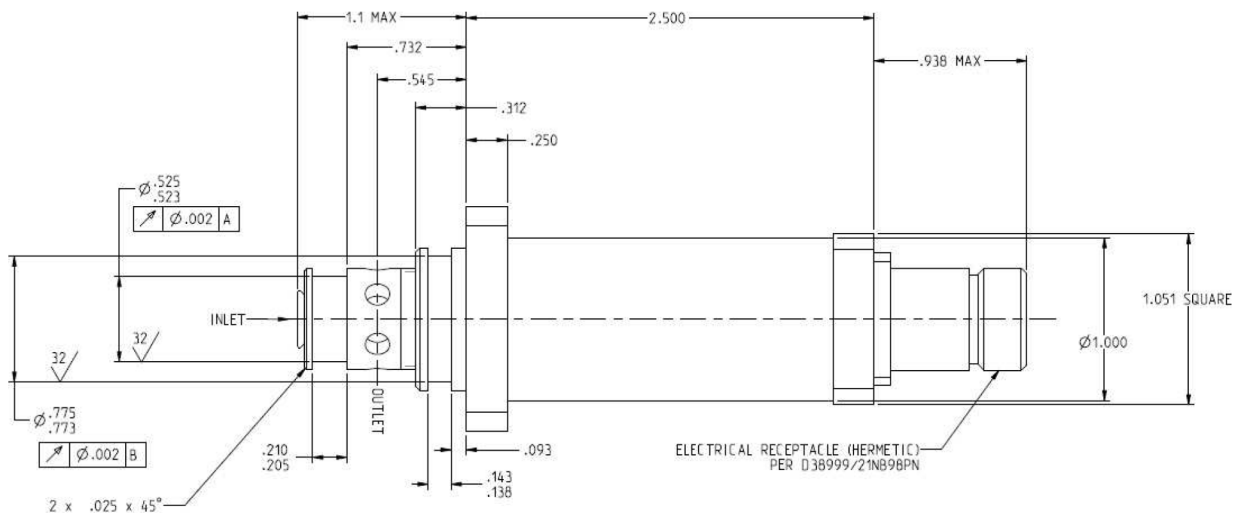
HYDRAULIC SCHEMATIC



ELECTRICAL SCHEMATIC

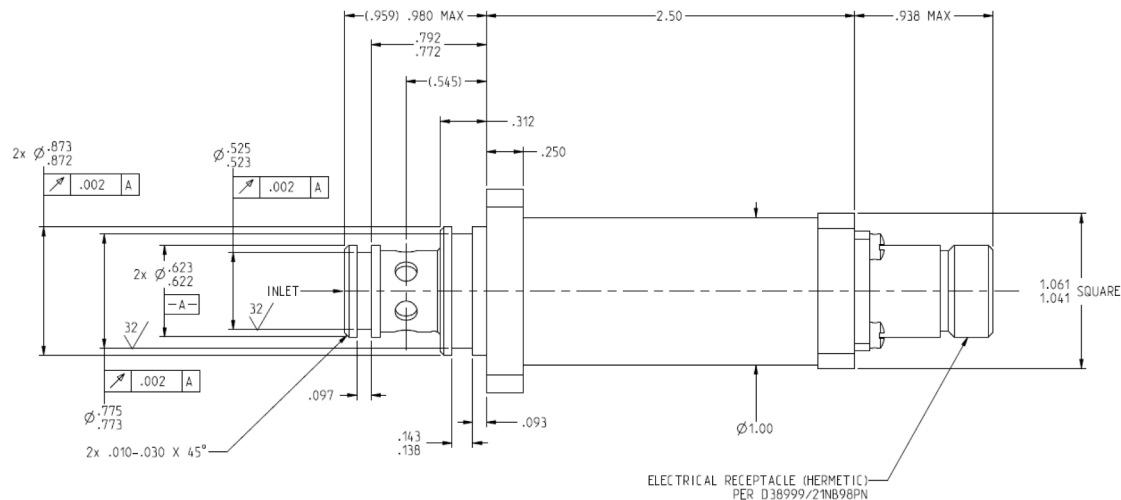


CATEGORY 4: DIRECT ACTING SOLENOID VALVES



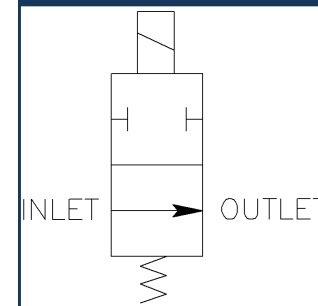
*PHOSPHATE ESTER FLUID ACCEPTABLE WITH ELASTOMER CHANGE

CATEGORY 4: DIRECT ACTING SOLENOID VALVES



WEIGHT: 0.70 LBS MAX

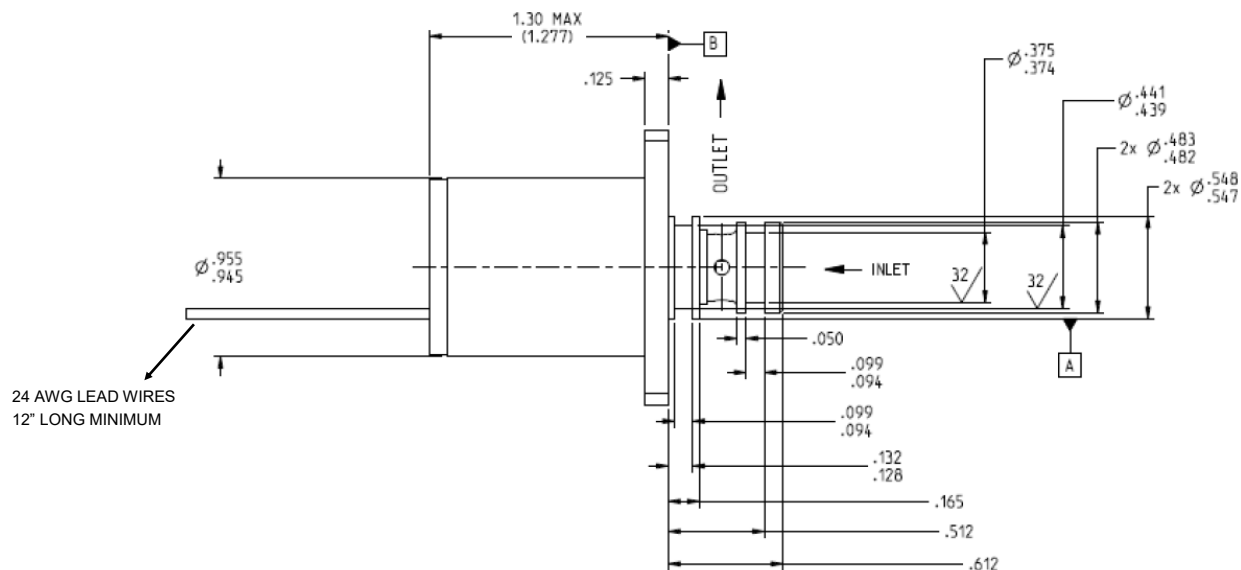
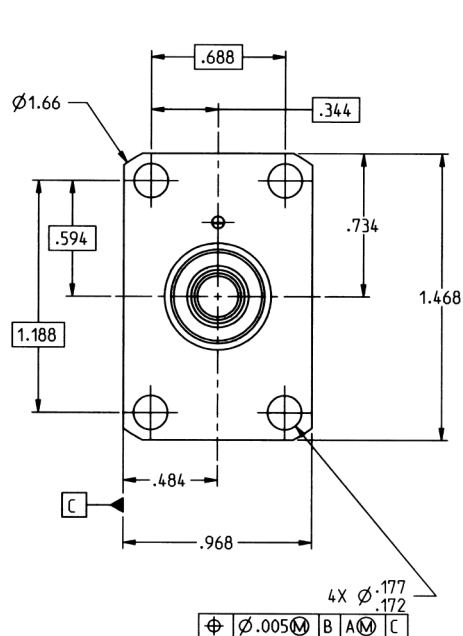
Diagram illustrating the wiring for a JANTXIN5806 tube socket. The diagram shows a COIL connected to the RED (+) and BLACK (-) pins. The socket pins are labeled B, C, D, F, A, and E. CABLE DISC. is indicated for pins C and D.



CATEGORY 4: DIRECT ACTING SOLENOID VALVES



PART NUMBER: 50770-X SOLENOID VALVE, 2POS 2WAY, NORMALLY CLOSED



PERFORMANCE SPECIFICATIONS:

FLUIDS: ETHYLENE GLYCOL/WATER*

MATERIAL: VALVE BODY 6061-T6 AL

NOMINAL SUPPLY PRESSURE: 75 PSIG

TEMPERATURE RANGE: -60° TO 194°F

FLOW (ENERGIZED): 0.53 GPM AT 5 PSID MAX

INTERNAL LEAKAGE (DE-ENERGIZED): 1 DPM MAX AT 75 PSID

OPERATING VOLTAGE RANGE: 18 TO 32 VDC NOMINAL

COIL CURRENT: 0.6 AMPS MAX AT 24 VDC AND 80°F

PULL-IN VOLTAGE: 16 VDC MAX AT 75 PSID AND 70°F

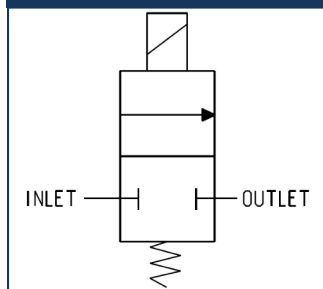
DROP-OUT VOLTAGE: 1.5 VDC MINIMUM AT 5 PSID AND 70°F

DUTY CYCLE: CONTINUOUS

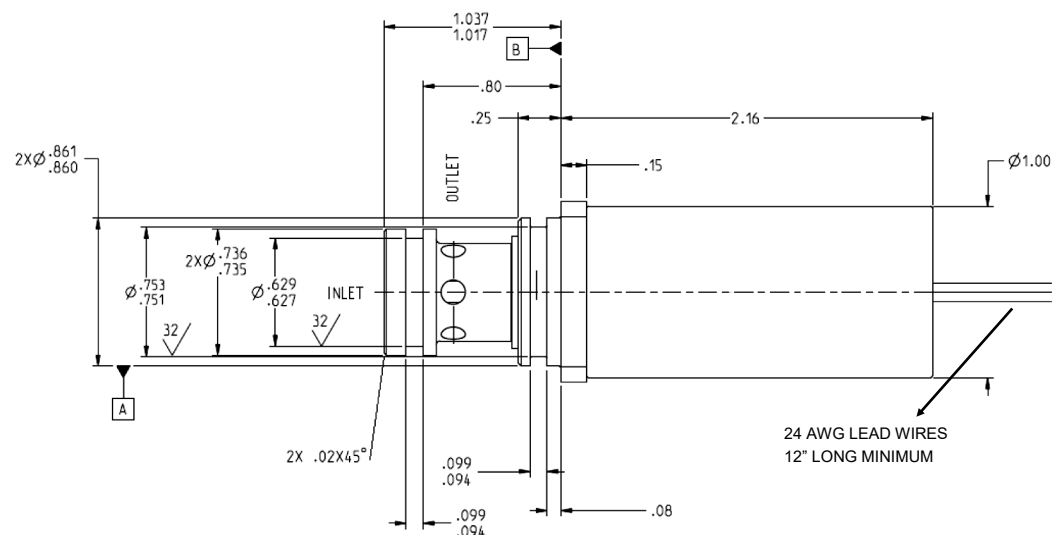
WEIGHT: 0.24 LBS MAX

*OTHER FLUIDS ACCEPTABLE WITH ELASTOMER CHANGE

HYDRAULIC SCHEMATIC



CATEGORY 4: DIRECT ACTING SOLENOID VALVES



FLUIDS: ETHYLENE GLYCOL/WATER*

MATERIAL: VALVE BODY 6061-T6 AL

NOMINAL SUPPLY PRESSURE: 75 PSIG

TEMPERATURE RANGE: -60° TO 194°F

FLOW (ENERGIZED): 2.2 GPM AT 5 PSID MAX

INTERNAL LEAKAGE (DE-ENERGIZED): 1 DPM MAX AT 75 PSID

- OPERATING VOLTAGE RANGE: 18 TO 32 VDC NOMINAL
- COIL CURRENT: 1.0 AMPS MAX AT 28 VDC AND 80°F
- PULL-IN VOLTAGE: 16 VDC MAX AT 75 PSID AND 70°F
- DROP-OUT VOLTAGE: 1.5 VDC MINIMUM AT 5 PSID AND 70°F
- DUTY CYCLE: CONTINUOUS

WEIGHT: 0.575 LBS MAX

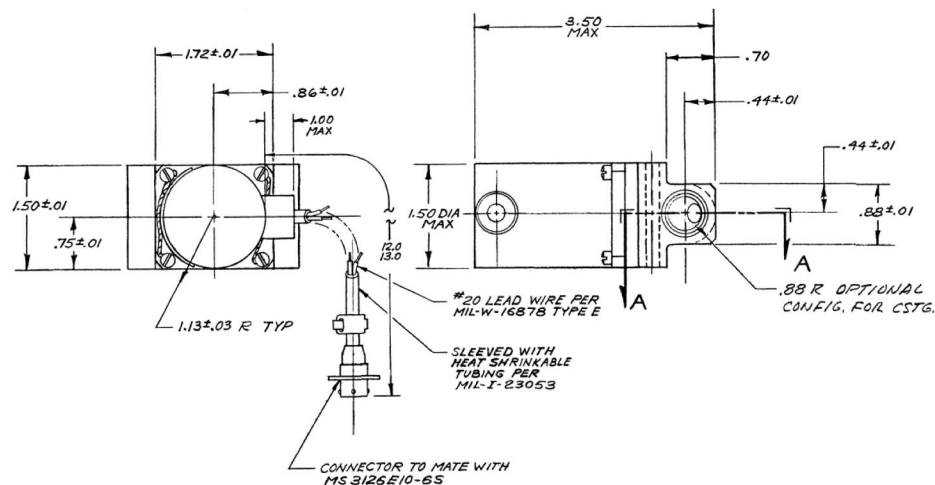
*OTHER FLUIDS ACCEPTABLE WITH ELASTOMER CHANGE

A schematic diagram of a hydraulic cylinder. It consists of a vertical rectangular body with a piston rod extending from the top. The cylinder is divided into two chambers by a horizontal line representing the piston. The left chamber is labeled 'INLET' and the right chamber is labeled 'OUTLET'. A spring symbol is shown at the bottom of the cylinder, indicating a return spring mechanism.

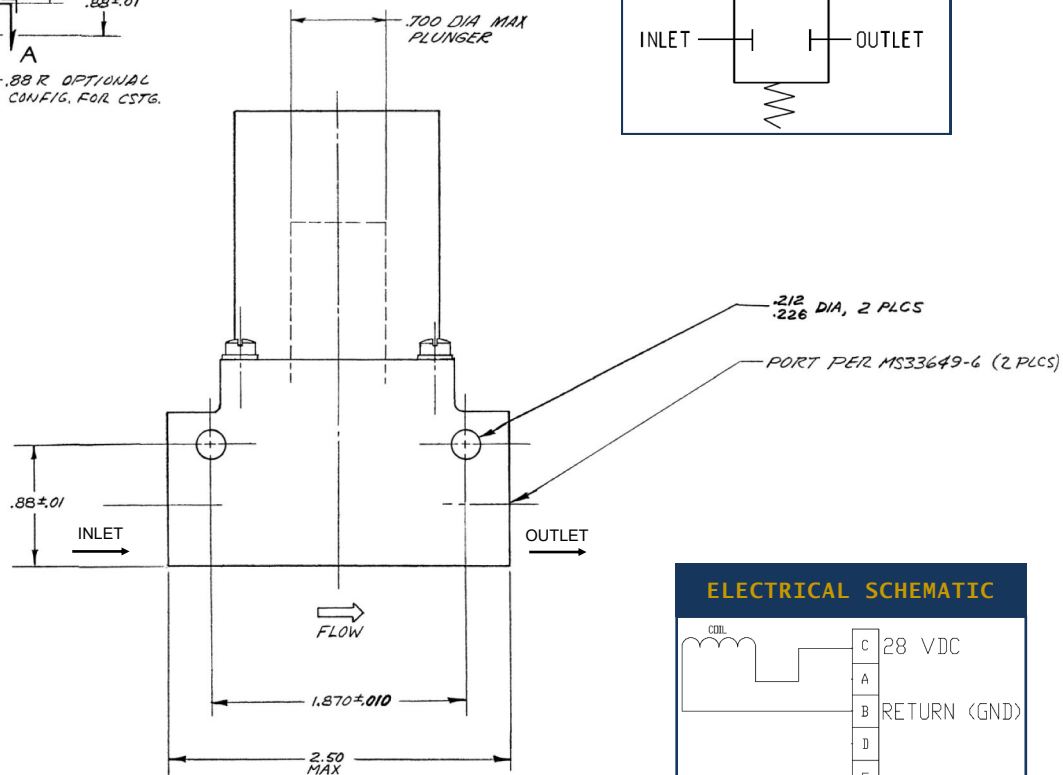
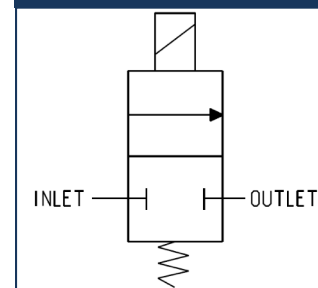




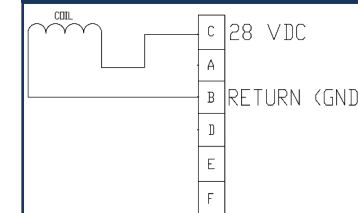
PART NUMBER: 4S1076 SOLENOID VALVE, NORMALLY CLOSED



HYDRAULIC SCHEMATIC



ELECTRICAL SCHEMATIC



PERFORMANCE SPECIFICATIONS:

FLUIDS: AIR OR CORVIS OIL*

MATERIAL: VALVE BODY 2024-T351 AL

ELASTOMER VITON

NOMINAL SUPPLY PRESSURE: 25 PSIG

TEMPERATURE RANGE: -65° TO 250°F

FLOW (ENERGIZED): 1.5±0.25 GPM AT 3 PSID

INTERNAL LEAKAGE (DE-ENERGIZED): 0 AT 50 PSID IN FLOW DIRECTION

OPERATING VOLTAGE RANGE: 22 TO 30 VDC NOMINAL

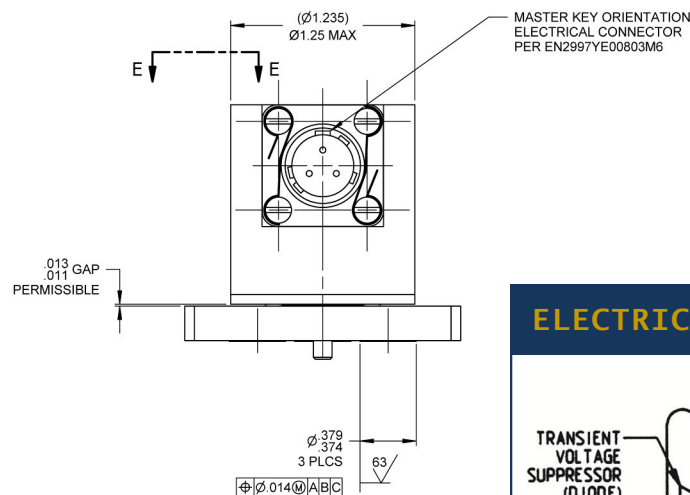
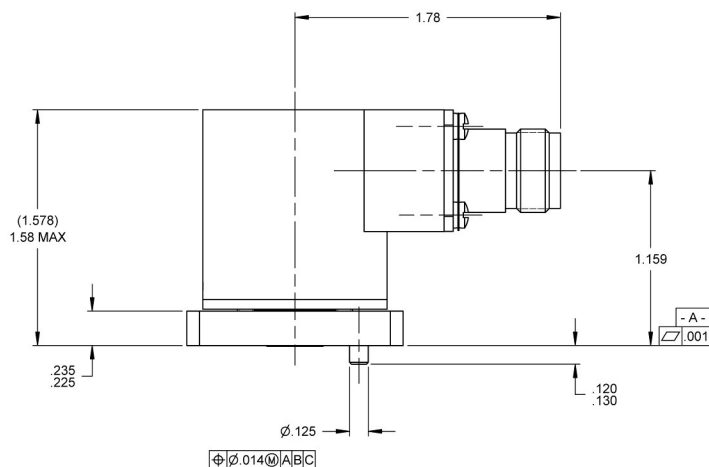
WEIGHT: 1.5 LBS MAX

*OTHER FLUIDS ACCEPTABLE WITH ELASTOMER CHANGE

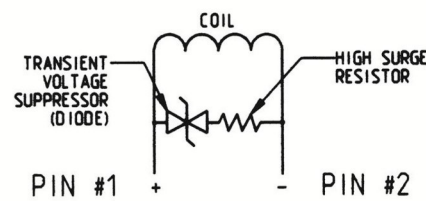
CATEGORY 4: DIRECT ACTING SOLENOID VALVES



PART NUMBER: 4S1096 SOLENOID VALVE, NORMALLY CLOSED

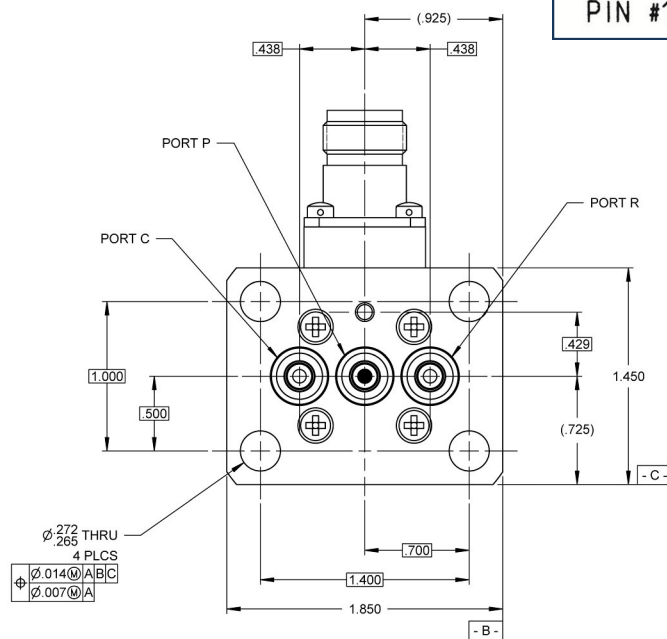


ELECTRICAL SCHEMATIC

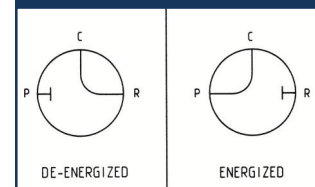


PERFORMANCE SPECIFICATIONS:

FLUIDS: PHOSPHATE ESTER BASED TYPE IV, V*
 MATERIAL: VALVE BODY 17-4PH CRES
 NOMINAL SUPPLY PRESSURE: 5076 PSIG (PORT P AND PORT C)
 1015 PSIG (PORT R)
 TEMPERATURE RANGE: -40°F TO 203°F
 FLOW (ENERGIZED): 0.156 ± .053 GPM AT 5076 PSID
 (DE-ENERGIZED): 0.396 GPM MINIMUM AT 5076 PSID
 INTERNAL LEAKAGE IN ANY POSITION: 1 CC/MIN MAX FROM PORT R WITH 5076 PSID AT PORT P WITH PORT C CAPPED
 OPERATING VOLTAGE RANGE: 18 TO 32.5 VDC NOMINAL
 COIL CURRENT: 1.0 AMPS MAX AT -40°F TO 203°F
 PULL-IN VOLTAGE: 17 VDC MAX UNDER ALL SPECIFIED TEMP
 12 VDC MAX AT AMBIENT TEMP
 DROP-OUT VOLTAGE: 2.0 VDC MINIMUM AT -65°F
 2.8 TO 6.0 VDC AT AMBIENT TEMP
 DUTY CYCLE: CONTINUOUS
 WEIGHT: 0.52 LBS MAX
 *MIL-PRF-83282 ACCEPTABLE WITH ELASTOMER CHANGE



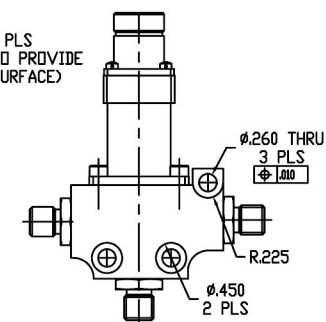
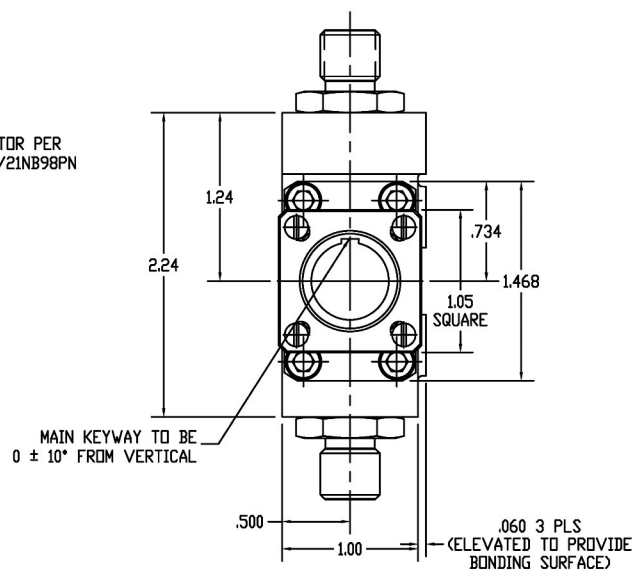
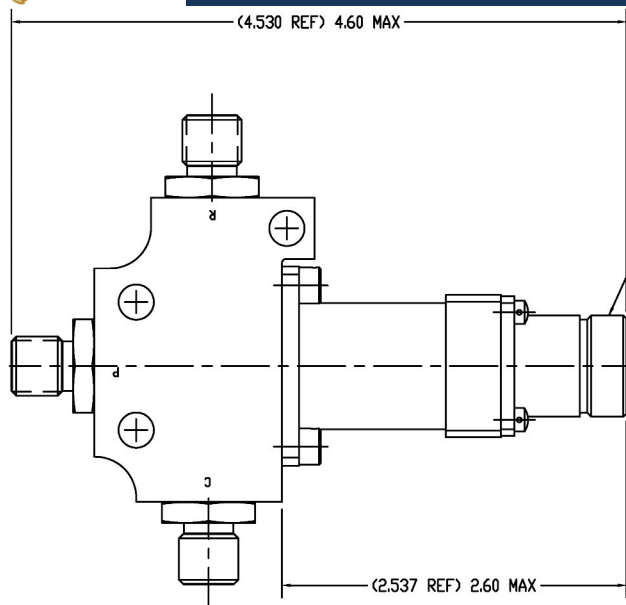
FLOW SCHEMATIC



CATEGORY 4: DIRECT ACTING SOLENOID VALVES



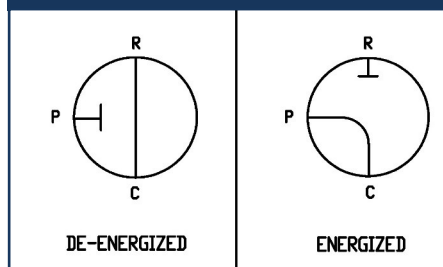
PART NUMBER: 36660-X SOLENOID VALVE



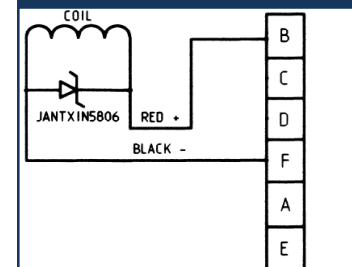
PERFORMANCE SPECIFICATIONS:

FLUIDS: PHOSPHATE ESTER PER AS 1241 TYPE IV*
 MATERIAL: HOUSING 6061-T6 AL
 NOMINAL SUPPLY PRESSURE: 3150 PSIG
 TEMPERATURE RANGE: -67° TO 165°F
 FLOW (ENERGIZED): 0.4±0.4 GPM AT 3000 PSID
 INTERNAL LEAKAGE IN ANY POSITION: 10 CC/MIN MAX AT 3000 PSID
 OPERATING VOLTAGE RANGE: 18 TO 32 VDC NOMINAL
 COIL CURRENT: 0.6 AMPS MAX AT 24 VDC AND 70°F TO 90°F
 DUTY CYCLE: CONTINUOUS
 WEIGHT: 1.0 LBS MAX
 *OTHER FLUIDS ACCEPTABLE WITH ELASTOMER CHANGE

HYDRAULIC SCHEMATIC



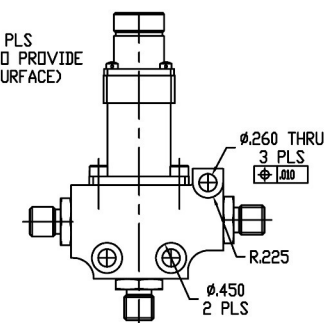
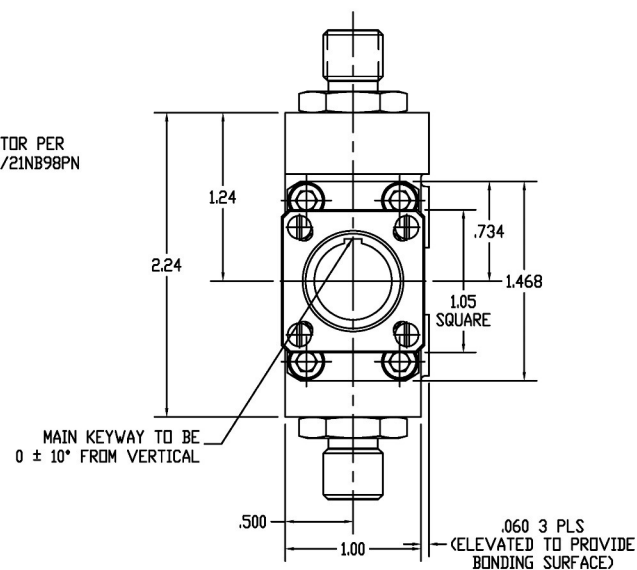
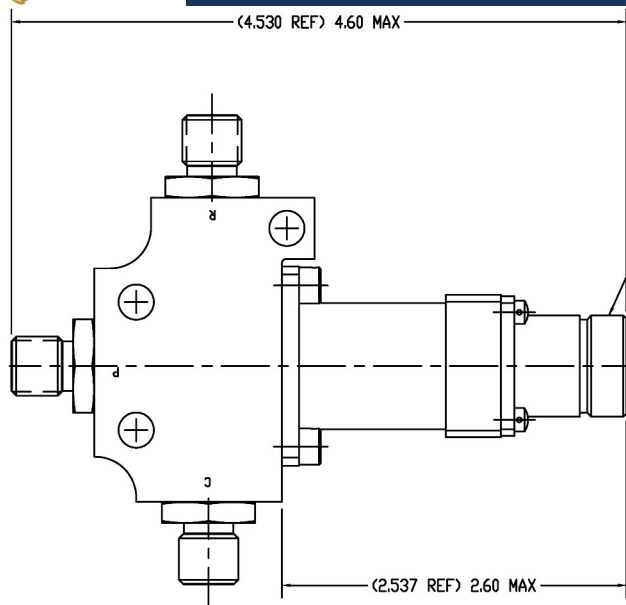
ELECTRICAL SCHEMATIC



CATEGORY 4: DIRECT ACTING SOLENOID VALVES



PART NUMBER: 1M1346 SOLENOID VALVE



PERFORMANCE SPECIFICATIONS:

FLUIDS: ENGINE BLEED AIR

MATERIAL: HOUSING 7075-T73

NOMINAL SUPPLY PRESSURE: 27.5 PSIG

TEMPERATURE RANGE: -40° TO 392°F

FLOW (DE-ENERGIZED): 0.398 SCFM AT 24 PSID

INTERNAL LEAKAGE IN ANY POSITION: 200 SCCM MAX AT 24 PSID

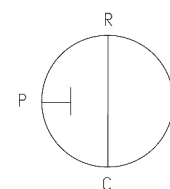
OPERATING VOLTAGE RANGE: 18 TO 32 VDC NOMINAL

COIL CURRENT: 0.6 AMPS MAX AT 24 VDC AND 70°F TO 90°F

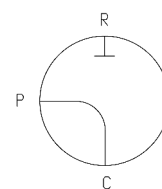
DUTY CYCLE: CONTINUOUS

WEIGHT: 1.0 LBS MAX

HYDRAULIC SCHEMATIC

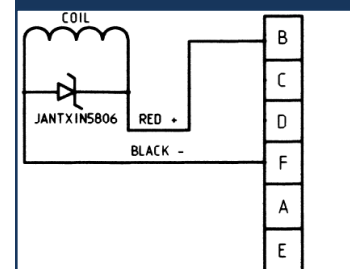


ENERGIZED



DE-ENERGIZED

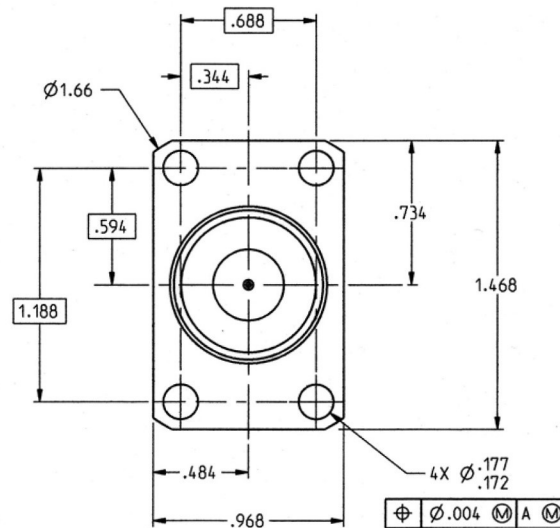
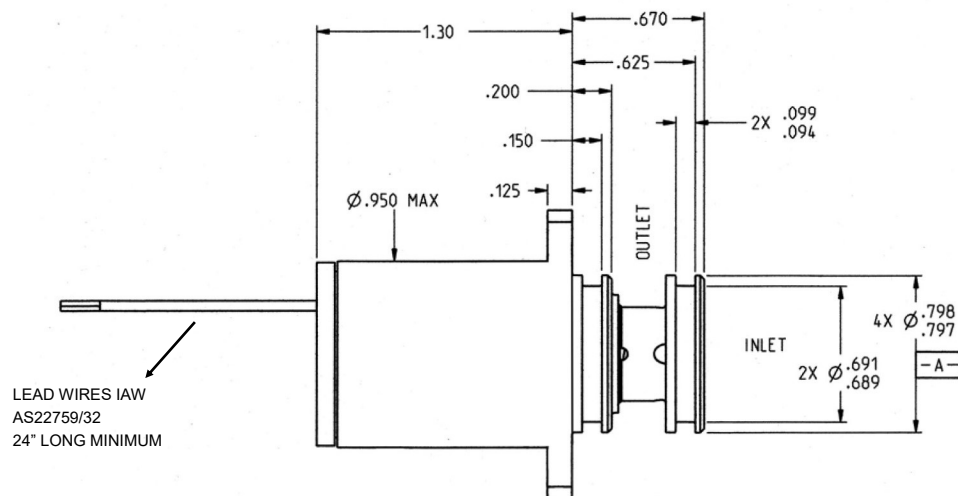
ELECTRICAL SCHEMATIC



CATEGORY 4: DIRECT ACTING SOLENOID VALVES



PART NUMBER: 80470 SOLENOID VALVE, PROPORTIONAL, NORMALLY CLOSED



PERFORMANCE SPECIFICATIONS:

FLUIDS: MIL-PRF-87252*

MATERIAL: VALVE BODY 303 CRES

NOMINAL SUPPLY PRESSURE: 200 PSIG

TEMPERATURE RANGE: -106° TO 246°F

FLOW (ENERGIZED): 1.05 GPM AT 5 PSID MAX AT 125°F

VALVE POSITION: PROPORTIONAL TO PWM SIGNAL SUPPLIED AT FIXED FREQUENCY GREATER THAN 1000 HZ

INTERNAL LEAKAGE (DE-ENERGIZED): 2 CC/MIN MAX AT 15 PSID

OPERATING VOLTAGE RANGE: 22 TO 32 VDC (28 VDC NOMINAL)

PULL-IN VOLTAGE: 18 VDC MAX AT 15 PSID AND 70°F

DROP-OUT VOLTAGE: 1.5 VDC AT 5 PSID AND 70°F

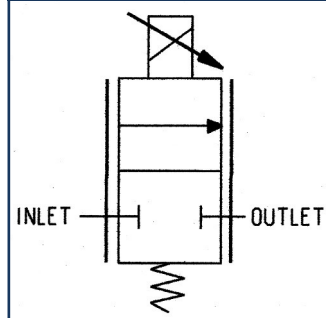
COIL CURRENT: 0.6 AMPS MAX AT 24 VDC AND 70°F

DUTY CYCLE: CONTINUOUS

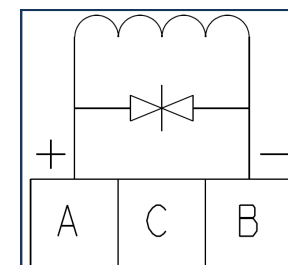
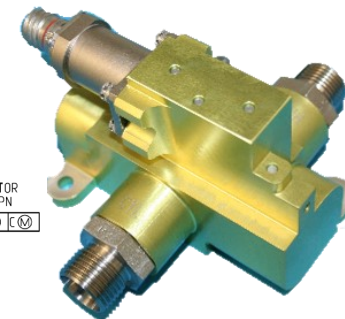
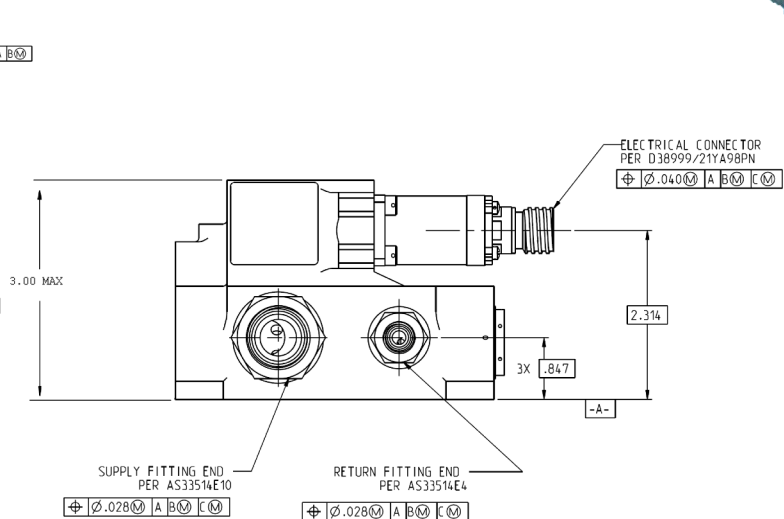
WEIGHT: 0.350 LBS MAX

*OTHER FLUIDS ACCEPTABLE WITH ELASTOMER CHANGE

HYDRAULIC SCHEMATIC



CATEGORY 4: DIRECT ACTING SOLENOID VALVES

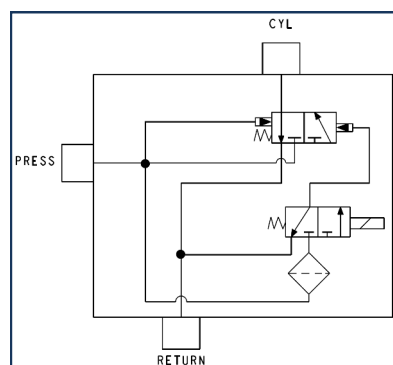


ELECTRICAL SCHEMATIC

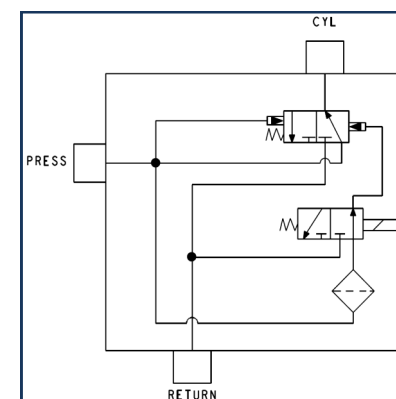
PERFORMANCE SPECIFICATIONS:

WEIGHT: 2.60 LBS MAX

*MIL-PRF-83282 ACCEPTABLE WITH ELASTOMER CHANGE

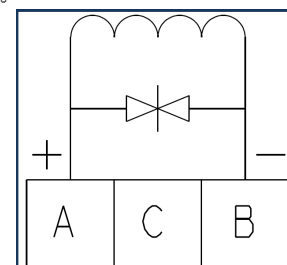
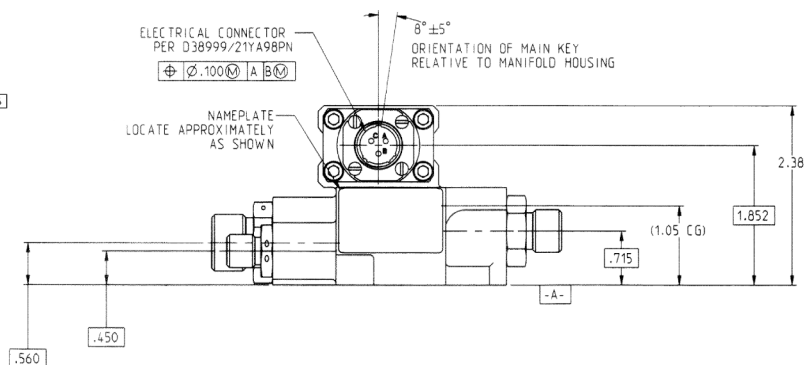


HYDRAULIC SCHEMATIC (SHOWN DE-ENERGIZED)



HYDRAULIC SCHEMATIC (SHOWN ENERGIZED)

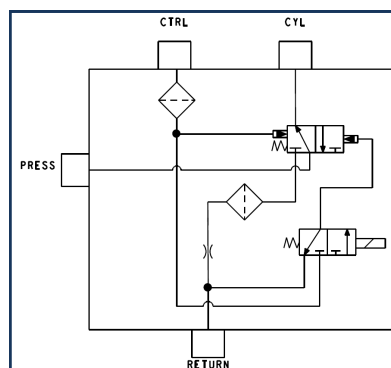
CATEGORY 4: SHUT-OFF VALVES, PILOT SOLENOID OPERATED



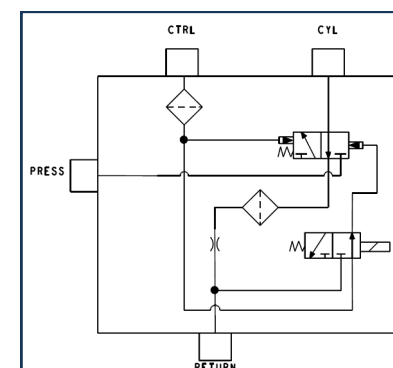
ELECTRICAL SCHEMATIC

PERFORMANCE SPECIFICATIONS:

*MIL-PRF-83282 ACCEPTABLE WITH ELASTOMER CHANGE



HYDRAULIC SCHEMATIC (SHOWN DE-ENERGIZED)

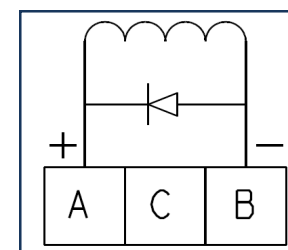
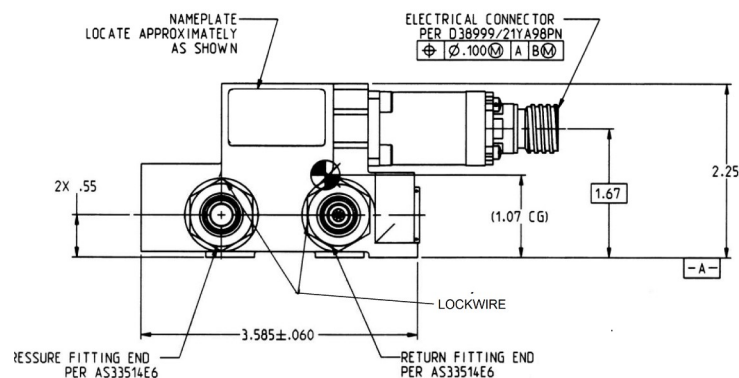
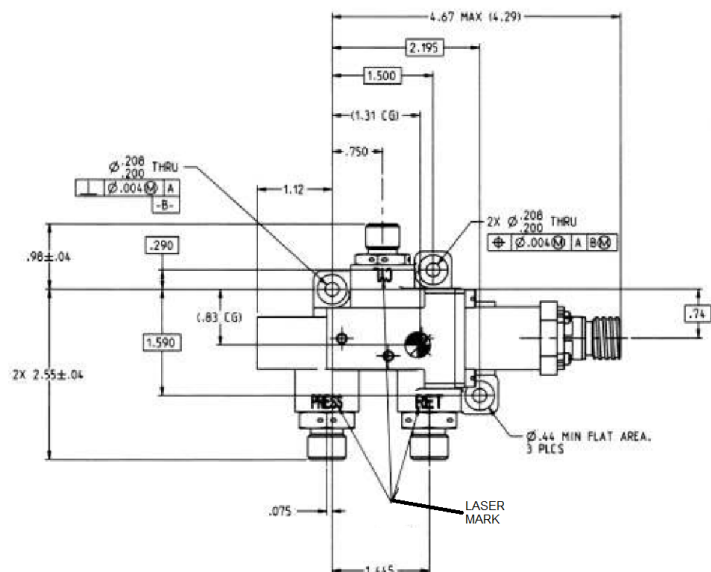


HYDRAULIC SCHEMATIC (SHOWN ENERGIZED)

CATEGORY 4: SHUT-OFF VALVES, PILOT SOLENOID OPERATED



PART NUMBER: 80490-X SHUT-OFF VALVE



ELECTRICAL SCHEMATIC

PERFORMANCE SPECIFICATIONS:

FLUIDS: MII-PRF-5606 OR MIL-PRF-83232*

MATERIAL: MANIFOLD 7075-T73 AL

NOMINAL SUPPLY PRESSURE: 3000 PSIG

ENERGIZED FLOW (PRESS TO CYL): 3 GPM AT 250±25 PSID AND 100°F

DE-ENERGIZED FLOW (CYL TO RET): 3 GPM AT 300 PSID MAX AND 100°F

INTERNAL LEAKAGE AT 3000 PSID IN ANY POSITION: 0.5 CC/MIN MAX

OPERATING VOLTAGE RANGE: 16 TO 32 VDC

COIL RESISTANCE: 100±8 OHMS

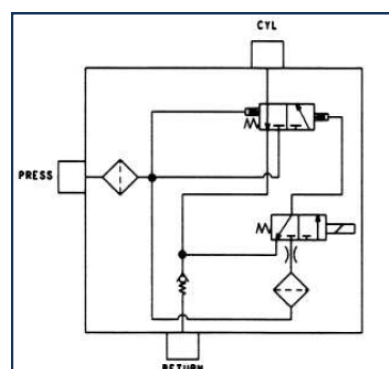
OPENING TRANSIENT: 60 MSEC MAX

CLOSING TRANSIENT: 100 MSEC MAX

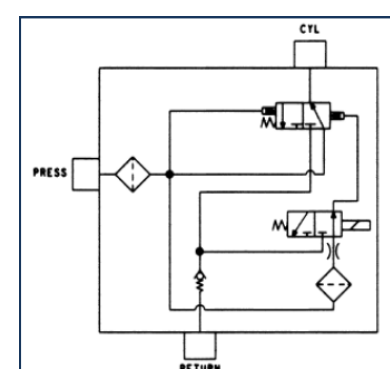
PEAK INVERSE VOLTAGE: ±600 VDC

WEIGHT: 1.40 LBS MAX

*PHOSPHATE ESTER BASE ACCEPTABLE WITH ELASTOMER CHANGE



HYDRAULIC SCHEMATIC
(SHOWN DE-ENERGIZED)

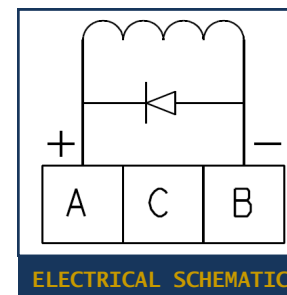
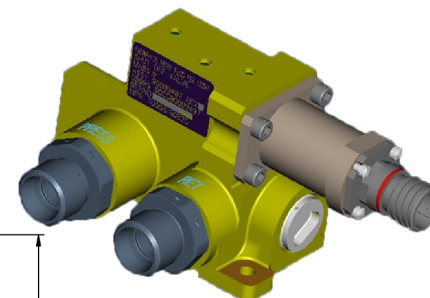
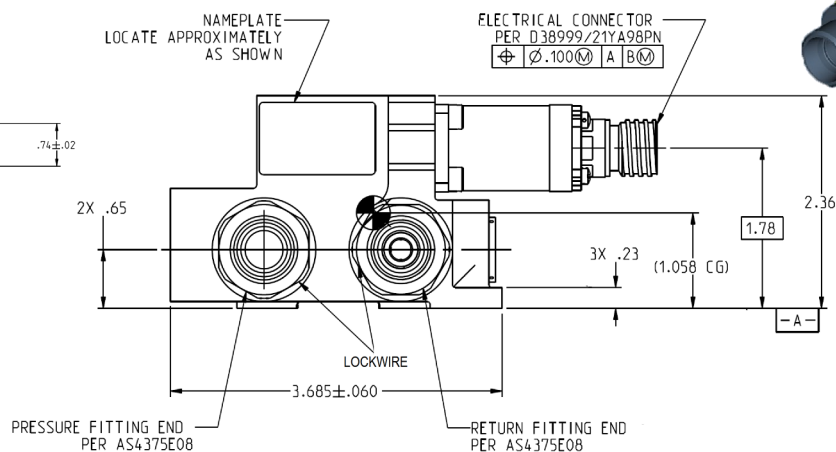
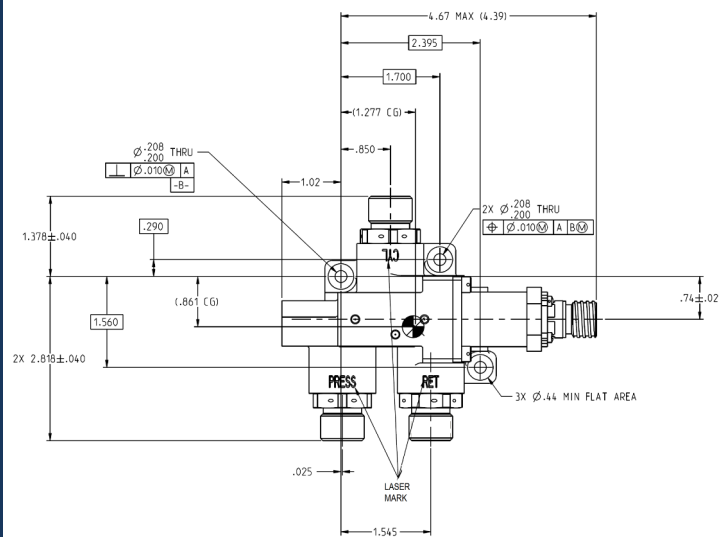


HYDRAULIC SCHEMATIC
(SHOWN ENERGIZED)

CATEGORY 4: SHUT-OFF VALVES, PILOT SOLENOID OPERATED



PART NUMBER: 80520-X SHUT-OFF VALVE



PERFORMANCE SPECIFICATIONS:

FLUIDS: LOW DENSITY PHOSPHATE ESTER FLUID TYPE IV, V*

MATERIAL: MANIFOLD 7075-T73 AL

NOMINAL SUPPLY PRESSURE: 3000 PSIG

ENERGIZED FLOW (PRESS TO CYL): 6 GPM AT 377±23 PSID AND 100°F

DE-ENERGIZED FLOW (CYL TO RET): 3 GPM AT 110 PSID MAX AND 100°F

INTERNAL LEAKAGE AT 3000 PSID IN ANY POSITION: 0.25 CC/MIN MAX

OPERATING VOLTAGE RANGE: 16 TO 32 VDC

COIL RESISTANCE: 100±8 OHMS

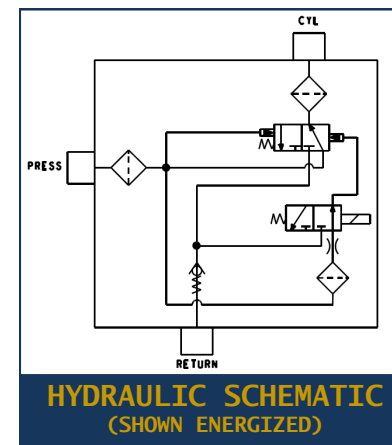
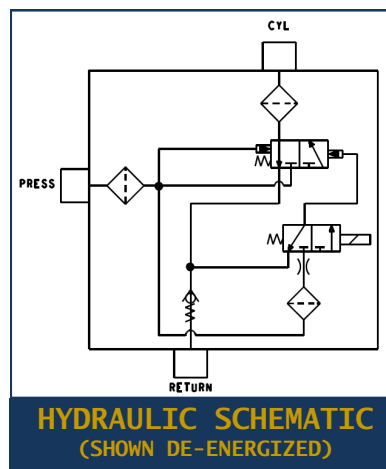
OPENING TRANSIENT: 60 MSEC MAX

CLOSING TRANSIENT: 100 MSEC MAX

PEAK INVERSE VOLTAGE: ±600 VDC

WEIGHT: 1.77 LBS MAX

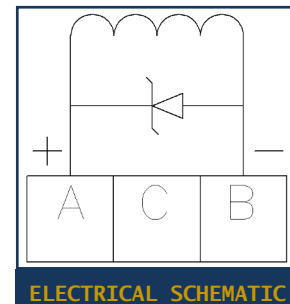
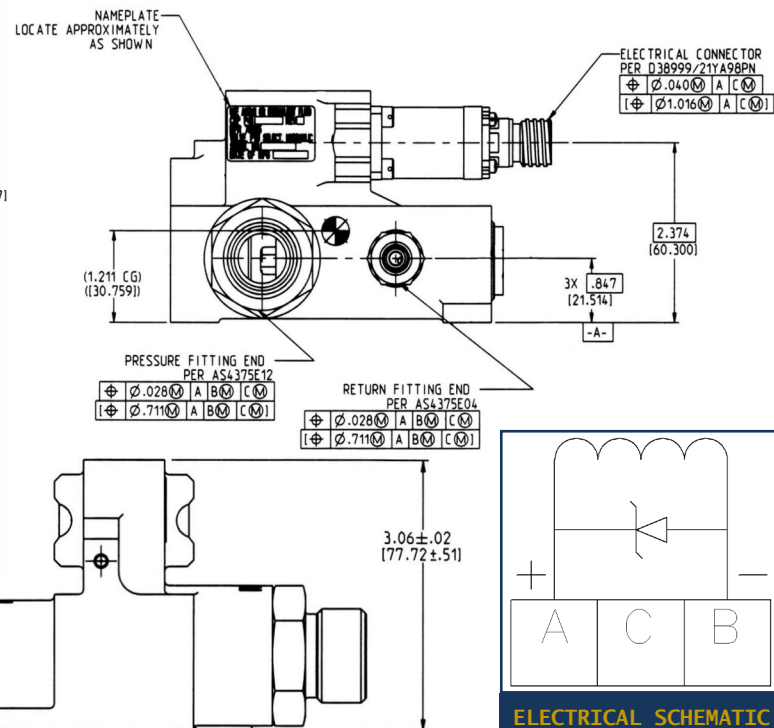
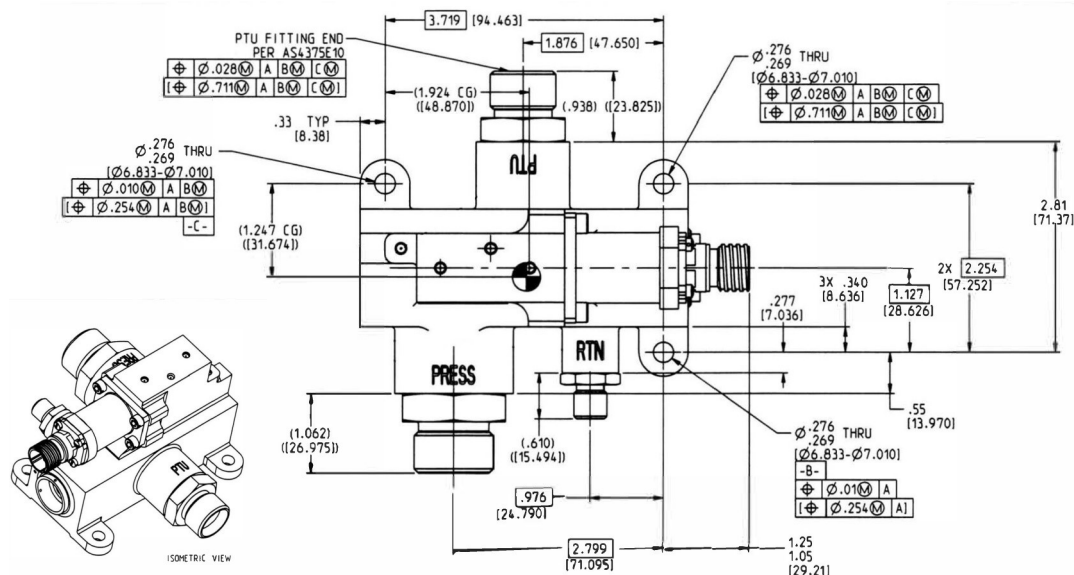
*MIL-PRF-83282 ACCEPTABLE WITH ELASTOMER CHANGE



CATEGORY 4: SHUT-OFF VALVES, PILOT SOLENOID OPERATED



PART NUMBER: 80440 SHUT-OFF VALVE



PERFORMANCE SPECIFICATIONS:

FLUIDS: SKYDROL AS1241 TYPE IV CLASS 1 OR 2 AND TYPE V*

MATERIAL: MANIFOLD 7075-T73 AL

NOMINAL SUPPLY PRESSURE: 3000 PSIG

TEMPERATURE RANGE: -65° TO 185°F

ENERGIZED FLOW (PRESS TO PTU): 18 GPM AT 50 PSID MAX

ENERGIZED LEAKAGE (PTU TO RTN): 15 CC/MIN MAX AT 3000 PSID

DE-ENERGIZED FLOW (PTU TO RET): 2 GPM AT 60 PSID MAX

DE-ENERGIZED LEAKAGE (PRESS TO PTU): 15 CC/MIN MAX AT 3000 PSID

OPERATING VOLTAGE RANGE: 16 TO 32 VDC

PULL-IN VOLTAGE: 13.5 VDC MAX AT 3000 PSID AND 80°F±20°F

DROP-OUT VOLTAGE: 3 VDC AT 3000 PSID AND 70°F

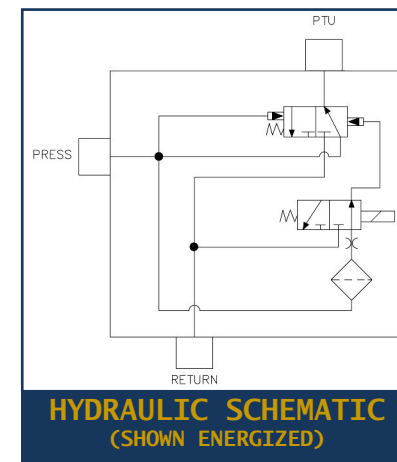
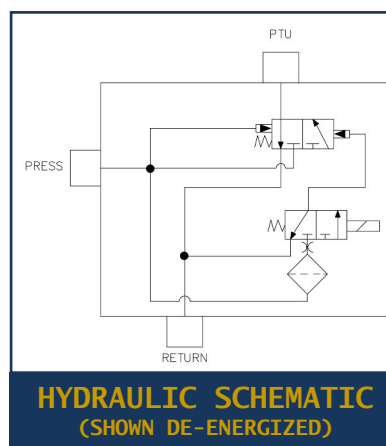
PEAK INVERSE VOLTAGE: ±60 VDC MAX

COIL CURRENT: 0.6 AMPS MAX AT 24 VDC AND 70°F

DUTY CYCLE: 500,000 ACTUATION CYCLES MINIMUM

WEIGHT: 3.09 LBS MAX

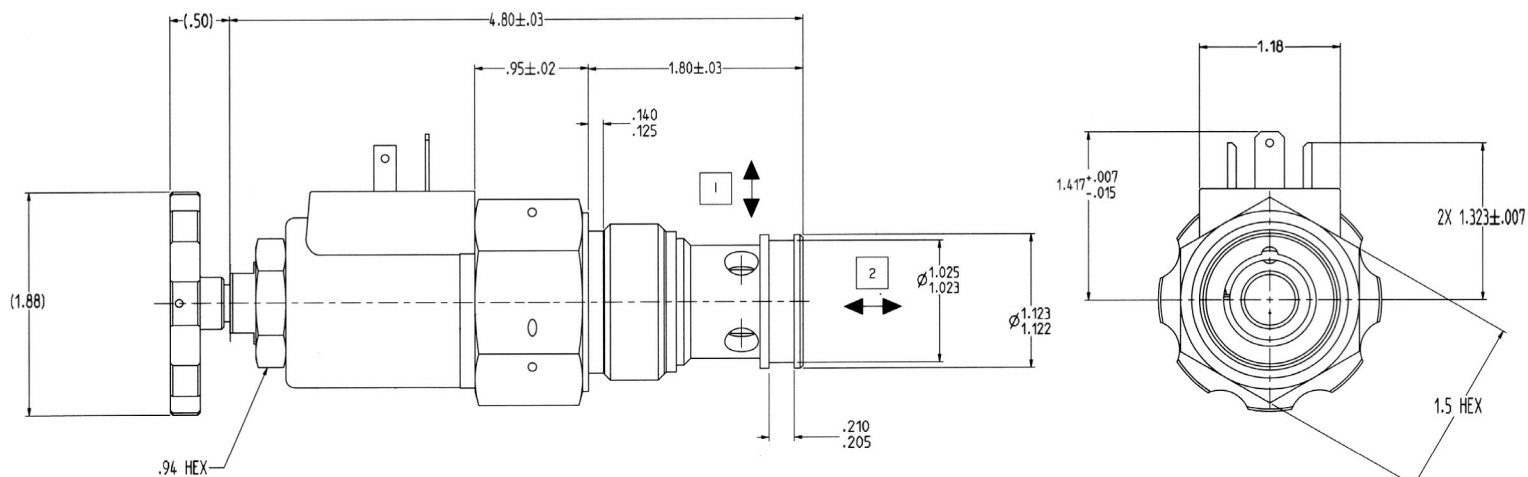
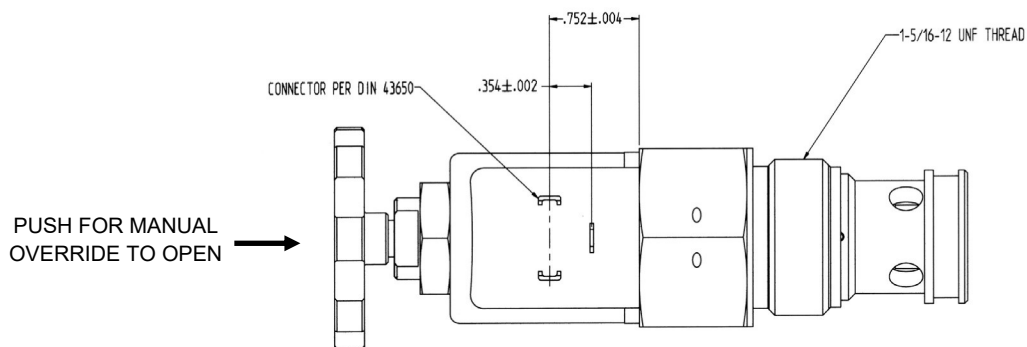
*OTHER FLUIDS ACCEPTABLE WITH ELASTOMER CHANGE



CATEGORY 4: SHUT-OFF VALVES, PILOT SOLENOID OPERATED



PART NUMBER: 80300 SOLENOID VALVE, BI-DIRECTIONAL, 2POS 2WAY, NORMALLY OPEN



PERFORMANCE SPECIFICATIONS:

FLUIDS: MIL-PRF-83282*

MATERIAL: VALVE BODY 17-4PH CRES

NOMINAL SUPPLY PRESSURE: 3000 PSIG

FLOW (DE-ENERGIZED): (1 TO 2) 29.1 GPM AT 70 PSID AND $80^{\circ}\text{F} \pm 20^{\circ}\text{F}$

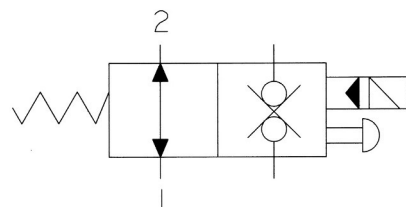
(2 TO 1) 9.2 GPM AT 70 PSID AND $80^{\circ}\text{F} \pm 20^{\circ}\text{F}$

INTERNAL LEAKAGE (ENERGIZED): 1 CC/MIN MAX AT 3000 PSID AND $80^{\circ}\text{F} \pm 20^{\circ}\text{F}$

OPERATING VOLTAGE: 100 VDC

*PHOSPHATE ESTER BASE ACCEPTABLE WITH ELASTOMER CHANGE

HYDRAULIC SCHEMATIC



CATEGORY 4: SHUT-OFF VALVES, PILOT SOLENOID OPERATED



CRISSAIR HAS VARIOUS OTHER SOLENOID VALVES NOT LISTED IN THE CATALOG WITH DIFFERENT MATERIALS, FITTINGS, AND SIZE CONFIGURATIONS.

CONTACT CRISSAIR FOR ADDITIONAL INFORMATION/DRAWINGS AT

(661) 367-3300 OR SALES@CRISSAIR.COM.

YOU CAN ALSO VISIT WWW.CRISSAIR.COM.



SHUTTLE VALVES

Crissair Inc. designs and manufactures a variety of Shuttle Valve configurations which may be packaged as inline configurations to connect directly to tubing, cartridge configurations that can go into manifolds, or as complete manifold configurations. Shuttle Valves provide automatic mechanical switching between two separate pressure sources based on the pressure from the supply source.

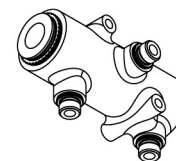
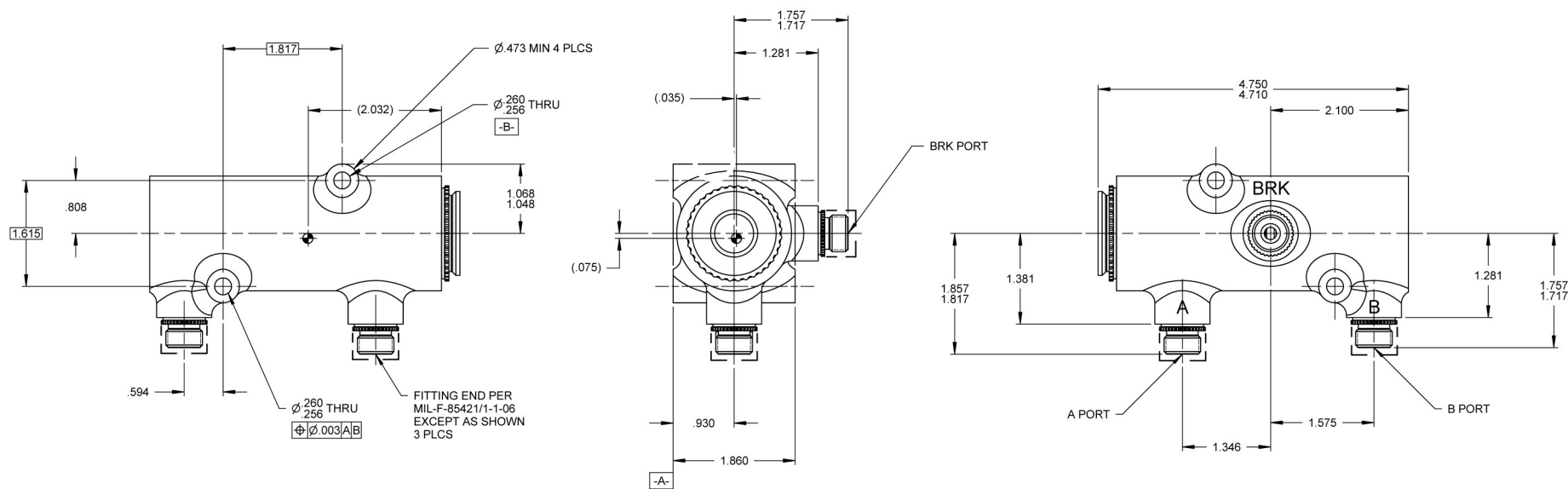
- Detented Shuttle Valves maintain their last commanded position by means of physical, spring loaded elements.
- Biased Shuttle Valves will always move back to the first position when pressure drops below a specified value.



This catalog contains a small sample of drawings. Please contact Crissair for additional drawings and/or configurations.



PART NUMBER: 1M1332-X, SHUTTLE VALVE



ISOMETRIC VIEW
FOR REFERENCE ONLY

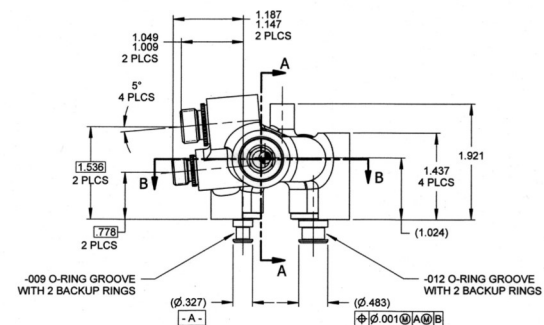
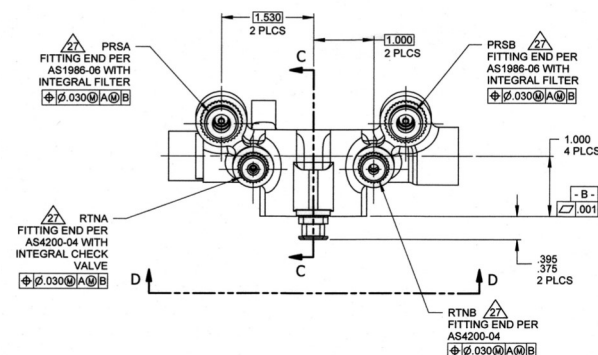
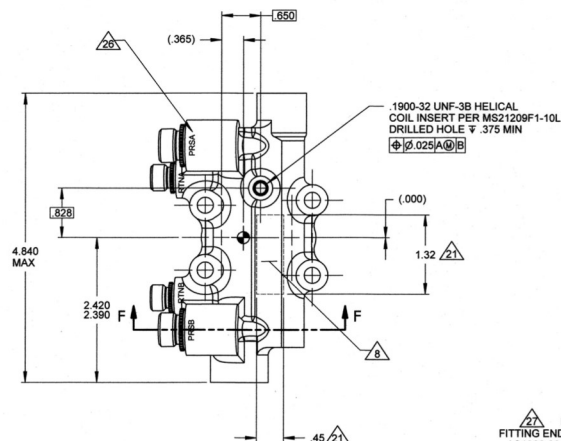
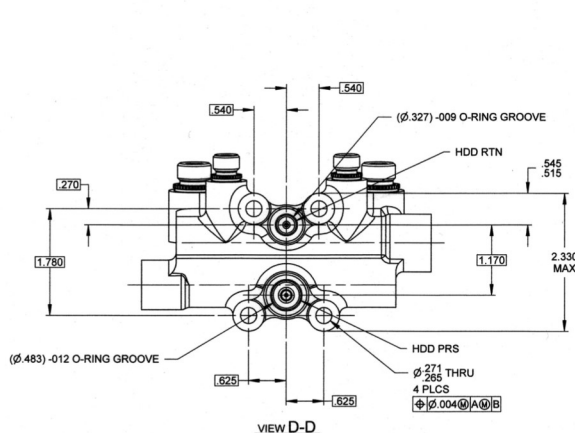
PERFORMANCE SPECIFICATIONS:

FLUIDS: AIRCRAFT HYDRAULIC FLUID MIL-PRF-5606 AND MIL-PRF-83282
 MATERIAL: MANIFOLD 2024-T351 AL ALLOY
 TEMPERATURE RANGE: -65°F TO 130°F
 OPERATING PRESSURE: 3000 PSIG
 PROOF PRESSURE: 4500 PSIG
 SHUTTLING PRESSURE: 30 TO 70 PSIG
 FLOW: 9 GPM MINIMUM AT 40 PSID
 INTERNAL LEAKAGE: 1 DPH MAX AT 3000 PSID
 WEIGHT: 1.56 LBS MAX

CATEGORY 5: SHUTTLE VALVES



PART NUMBER: 1M1290-X, SHUTTLE VALVE



PERFORMANCE SPECIFICATIONS:

FLUIDS: AIRCRAFT HYDRAULIC FLUID PER MIL-PRF-83282

MATERIAL: MANIFOLD 6AL-4V TI

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 4100 PSIG

PROOF PRESSURE: 11500 PSIG

SHUTTLE PRESSURE: 200 TO 700 PSID (HDD RTN)

550 TO 900 PSID (HDD PRS)

CRACKING PRESSURE: 2 TO 8 PSID (RTNA)

FLOW: HDD RTN TO RTNA OR RTNB - 0.1 GPM AT 4000 ± 2% PSID AT 20°F

PRSA OR PRSB TO HDD PRS - 4 GPM AT 1025 PSID MAX AT 20°F

HDD PRS TO PRSA OR PRSB 1.35 GPM AT 5150 PSID MAX AT 20°F

INTERNAL LEAKAGE: 1 DPM MAX AT 5 PSID AT 235°F WITH 0 PSIG AT PRSB OR PRSA

10 DPH MAX FROM 1000 TO 4000 PSID AT 235°F WITH 4100 PSIG AT PRSB OR PRSA

1 CC/MIN MAX AT 4075 PSID AT 235°F (PRSB OR PRSA TO RTNB OR RTNA)

3 CC/MIN PER SHUTTLE ACTUATION (RTNB TO RTNA)

1 DPM MAX AT 5 PSID AT 235°F (PRSB OR PRSA TO HDD PRS)

10 DPH MAX FROM 1000 TO 4000 PSID AT 235°F (PRSB OR PRSA TO HDD PRS)

3 CC PER SHUTTLE ACTUATION (PRSB TO PRSA)

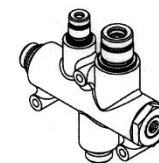
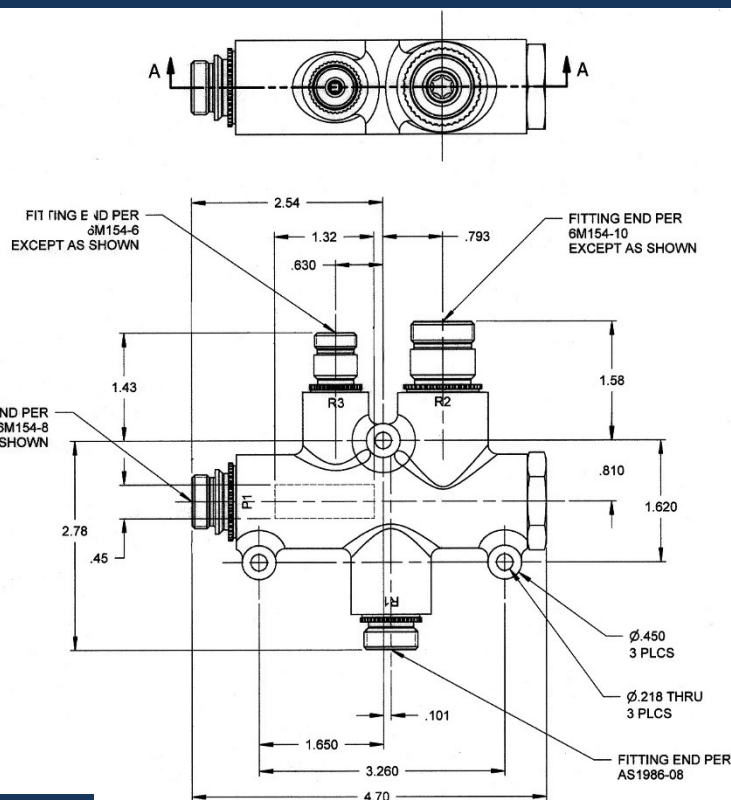
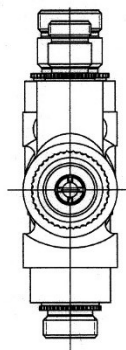
1 DPM MAX AT 5 PSID AT 235°F (RTNA TO HDD RTN)

WEIGHT: 1.40 LBS MAX

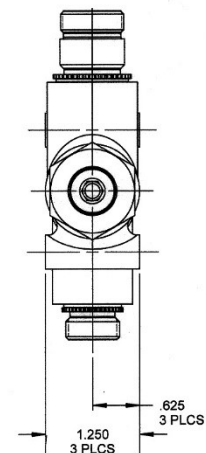
CATEGORY 5: SHUTTLE VALVES



PART NUMBER: 1M1288-X, SHUTTLE VALVE



ISOMETRIC VIEW
FOR REFERENCE ONLY



PERFORMANCE SPECIFICATIONS:

FLUIDS: AIRCRAFT HYDRAULIC FLUID PER MIL-PRF-83282

MATERIAL: MANIFOLD 15-5PH CRES

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 3000 PSIG

PROOF PRESSURE: 4500 PSIG

SHUTTling PRESSURE: 900 PSIG MAX INCREASING PRESSURE
300 PSIG MIN DECREASING PRESSURE

FLOW: 6 GPM AT 40 PSID MAX AT 100°F ± 30°F (R1 TO R2)

1 GPM AT 20 PSID MAX AT 100°F ± 30°F (R1 TO R3)

INTERNAL LEAKAGE: 1.0 CC/HR MAX AT R3 WITH 5 PSID AT R1

1.0 CC/HR MAX AT R2 WITH 2800 PSID AT P1 AND 5 PSID AT R1

1.0 CC/HR MAX AT P1 WITH 1500 PSID AT R1 AND R2

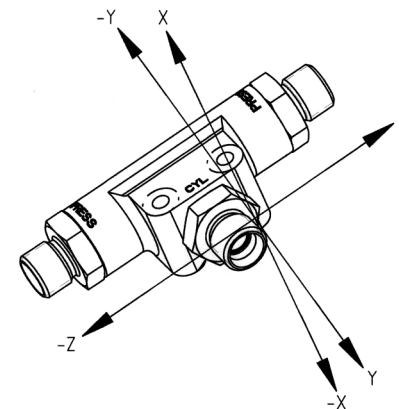
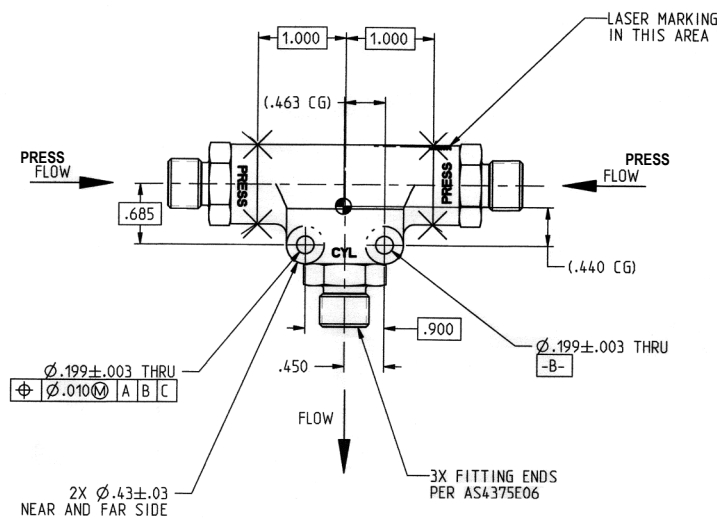
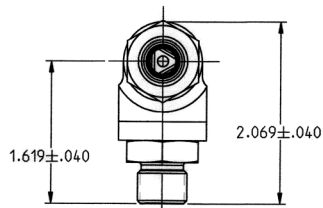
5 CC MAX PER SHUTTLE CYCLE

WEIGHT: 2.34 LBS MAX

CATEGORY 5: SHUTTLE VALVES



PART NUMBER: 37570-X, SHUTTLE VALVE



PERFORMANCE SPECIFICATIONS:

FLUIDS: LOW DENSITY PHOSPHATE-ESTER FLUID PER AS1247

TYPE IV AND V CLASS 1 (SKYDROL)

MATERIAL: HOUSING 7075-T6

TEMPERATURE RANGE: -40°F TO 200°F

OPERATING PRESSURE: 3050 PSIG

PROOF PRESSURE: 4575 PSIG

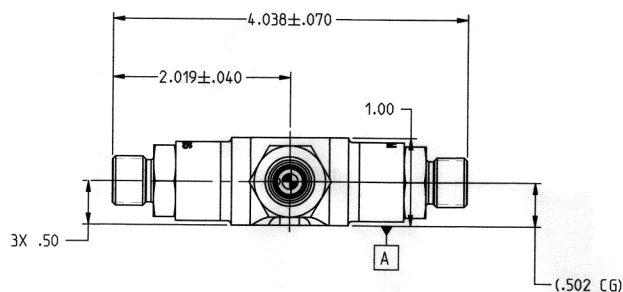
FLOW: 6 GPM AT 560-675 PSID FROM "PRESS" PORT TO "CYL" PORT

(EACH "PRESS" PORT IS TO BE TESTED WITH THE OPPOSITE "PRESS" PORT VENTED TO ATMOSPHERE)

INTERNAL LEAKAGE: WITH THE "CYL" PORT BLOCKED AND 3050 PSID APPLIED TO THE "PRESS" PORT. THE LEAKAGE AT THE OPPOSITE "PRESS" PORT SHALL NOT EXCEED 0.025 CC/HR (1 DROP IN 12 MINUTES).

INTERNAL LEAKAGE: WITH THE "CYL" PORT BLOCKED AND 5 PSID APPLIED TO THE "PRESS" PORT, THE LEAKAGE AT THE OPPOSITE "PRESS" PORT SHALL NOT EXCEED 0.05 CC/MIN (1 DPM) FOR THE LAST 3 MINUTES DURING A 5 MINUTE PERIOD.

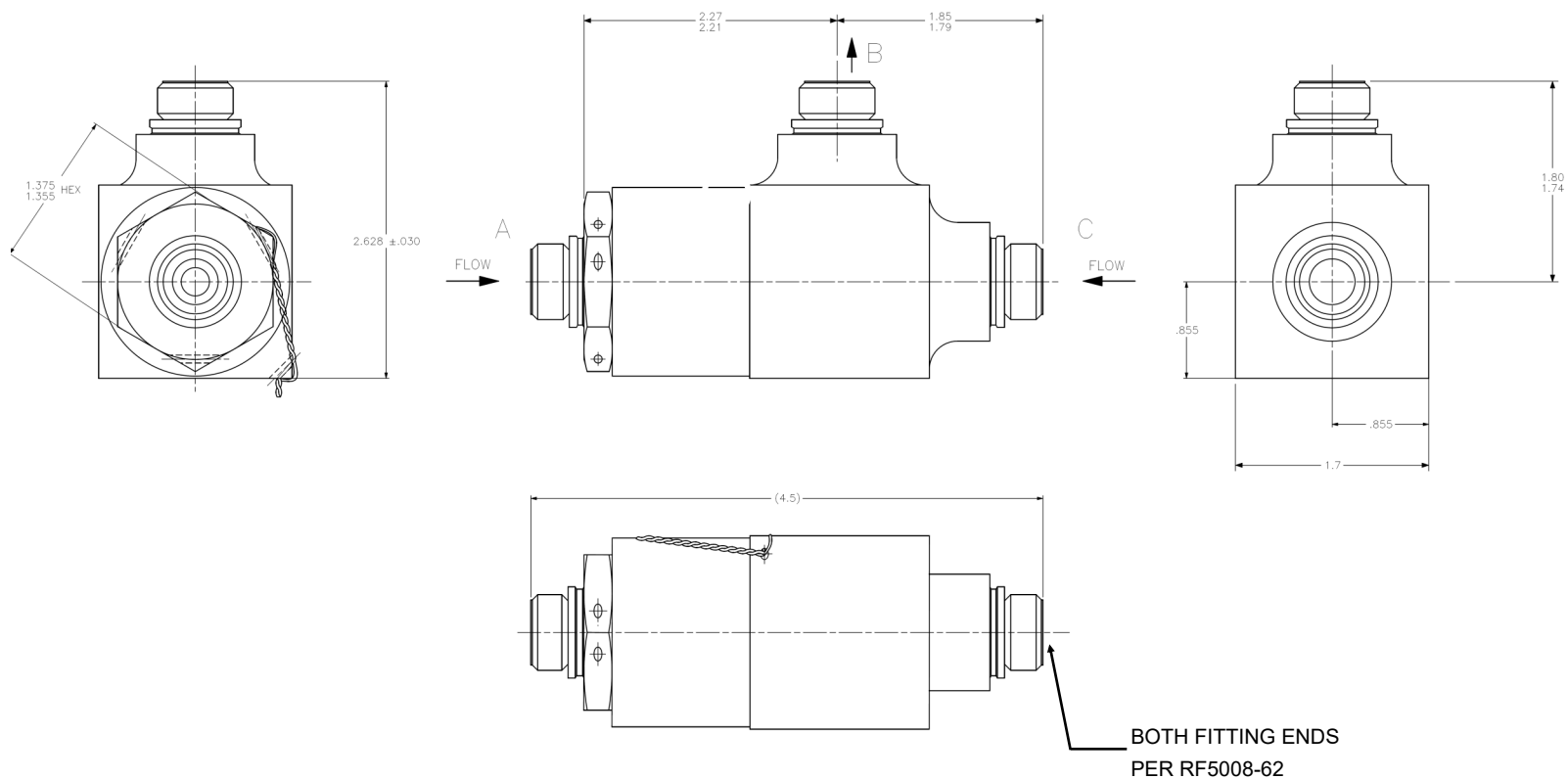
WEIGHT: 0.42 LBS MAX



CATEGORY 5: SHUTTLE VALVES



PART NUMBER: 35730-X, SHUTTLE VALVE, SPRING BIAS



PERFORMANCE SPECIFICATIONS:

FLUIDS: MIL-H-83282 OR MIL-H-5606

MATERIAL: HOUSING 6061-T6

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 3000 PSIG

PROOF PRESSURE: 4500 PSIG

CRACKING PRESSURE: 5 PSID MAXIMUM FROM C TO B

FLOW: 10 GPM AT 50 PSID MAX FROM A TO B AND C TO B

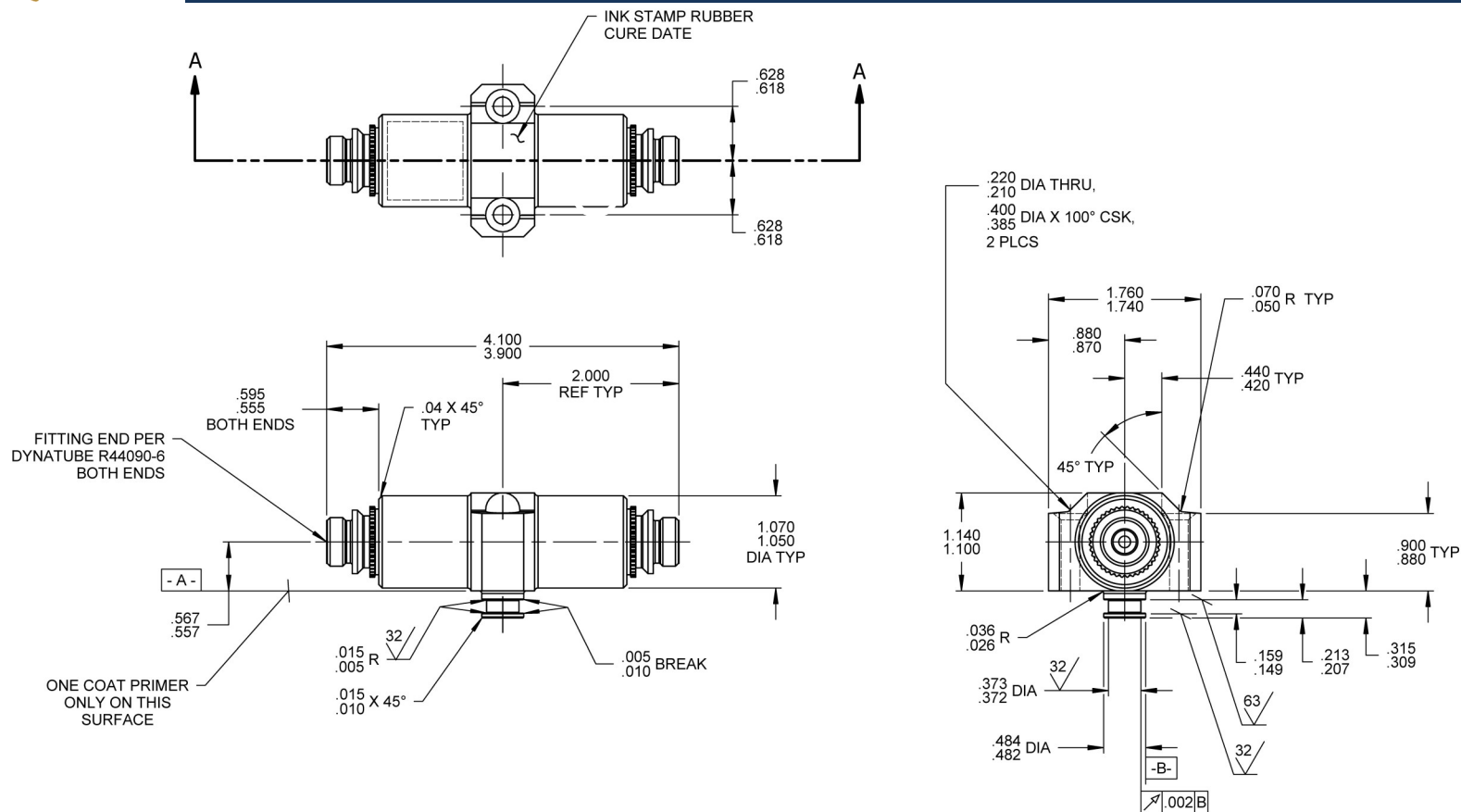
INTERNAL LEAKAGE AT PORT C (CHECKED DIRECTION): 10 DPM MAX AT 1000 PSID

WEIGHT: 1.50 LBS MAX

CATEGORY 5: SHUTTLE VALVES



PART NUMBER: 3S1000-X, SHUTTLE VALVE



PERFORMANCE SPECIFICATIONS:

FLUIDS: HYDRAULIC OIL PER MIL-PRF-83282 AND AIR

MATERIAL: BODY 7075-T73 AL, -T73510 OR T73511 PER QQ-A-200/11 OR QQ-A-225/9

TEMPERATURE RANGE: -65°F TO 160°F

OPERATING PRESSURE: 3000 PSIG

PROOF PRESSURE: 4500 PSIG

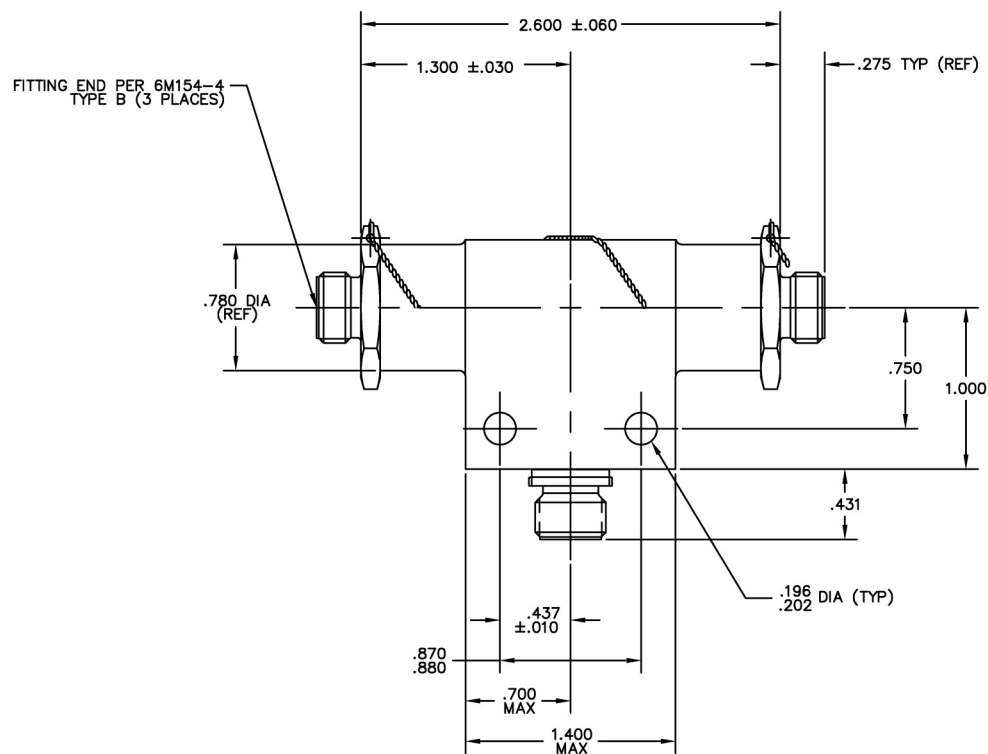
FLOW: 3.5 GPM AT 10 PSID

WEIGHT: 0.45 LBS MAX

CATEGORY 5: SHUTTLE VALVES



PART NUMBER: 3S1024, SHUTTLE VALVE



PERFORMANCE SPECIFICATIONS:

FLUIDS: HYDRAULIC FLUIDS PER MIL-H-83282 AND MIL-H-5606

MATERIAL: BODY 7075-T351

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 3000 PSIG

PROOF PRESSURE: 4500 PSIG

SHUTTling PRESSURE: 25 TO 100 PSIG

FLOW: 1.2 GPM AT 10 PSID MAX

INTERNAL LEAKAGE: (A) LEAKAGE THRU A SINGLE SHUTTLE SHALL NOT EXCEED 3 CC

(B) LEAKAGE FOR A 30 MINUTE PERIOD AFTER A 2 MINUTE SEATING PERIOD SHALL NOT EXCEED 0.25 CC/MIN FROM THE UNCONNECTED INLET PORT, WITH THE OUTLET PORT BLOCKED AND 5 PSIG APPLIED TO THE CONNECTED INLET PORT

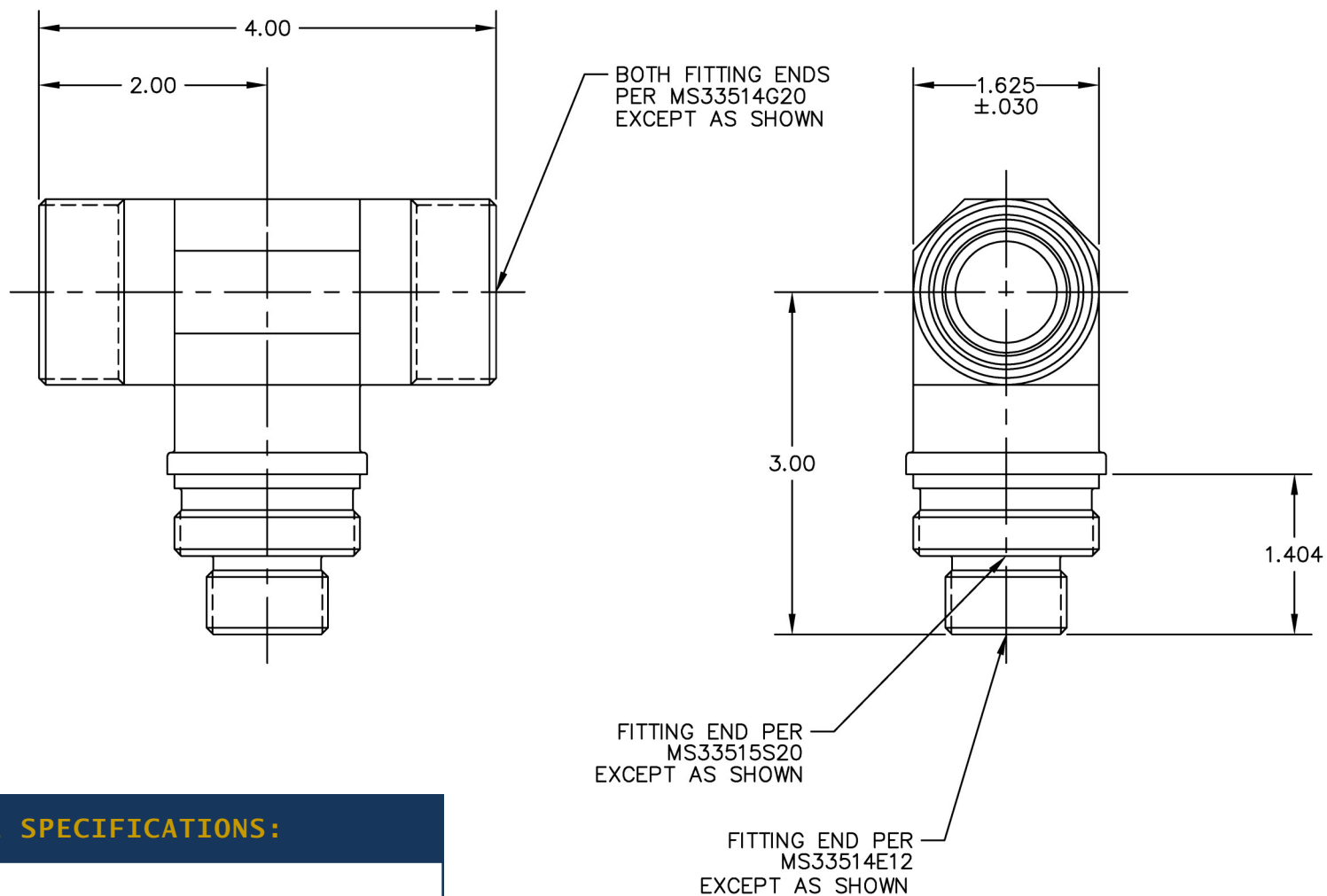
(C) UNDER THE SAME CONDITON AS (B) THERE SHALL BE NO LEAKAGE AT 3000 PSIG

WEIGHT: 0.36 LBS MAX

CATEGORY 5: SHUTTLE VALVES



PART NUMBER: 3S1070, SHUTTLE VALVE



PERFORMANCE SPECIFICATIONS:

FLUIDS: HALON AND NITROGEN

MATERIAL: BODY 2024-T351 AL

TEMPERATURE RANGE: -65°F TO 160°F

OPERATING PRESSURE: 1200 PSIG

PROOF PRESSURE: 2000 PSIG

INTERNAL LEAKAGE: 1 SCFM MAX AT 300 AND 1200 PSIG

WEIGHT: 1.12 LBS MAX

CATEGORY 5: SHUTTLE VALVES

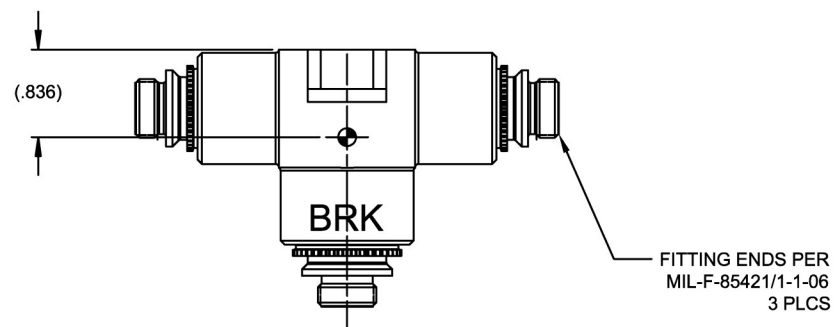
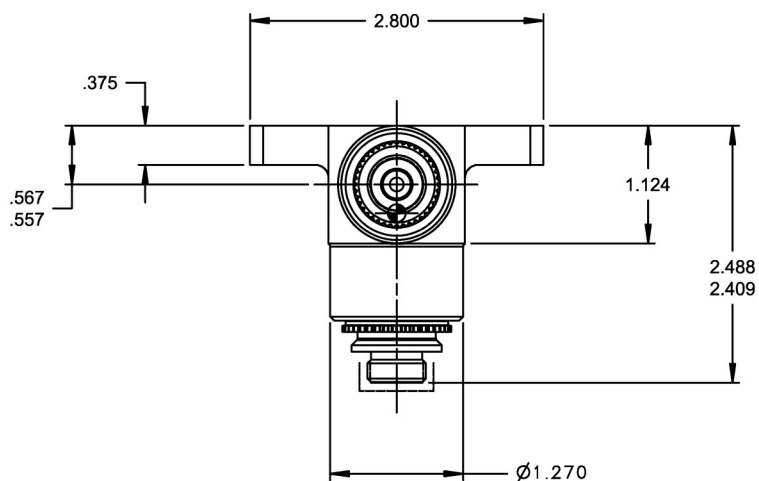


NONE AT 1000 TO 3000 PSIG

CATEGORY 5: SHUTTLE VALVES

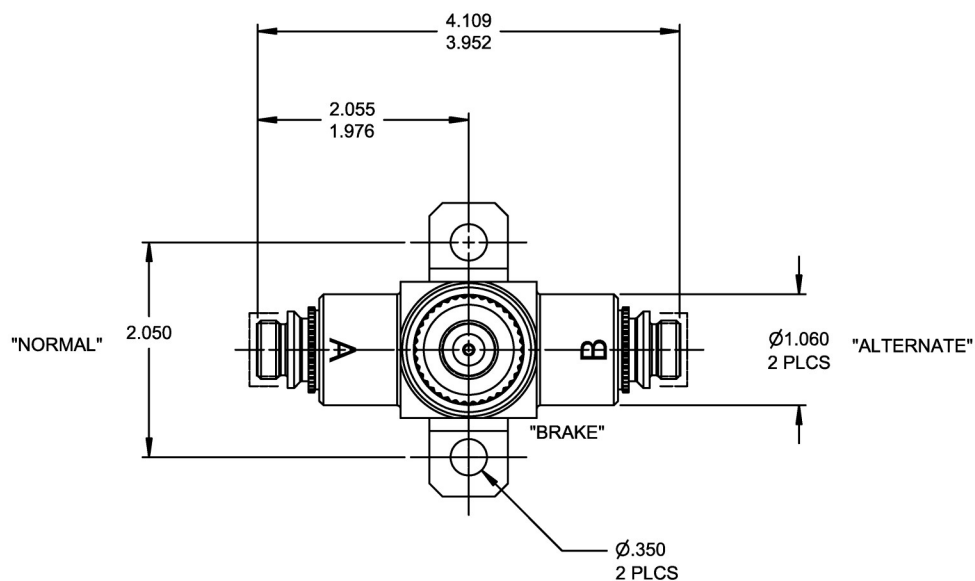


PART NUMBER: 3S1170, SHUTTLE VALVE



PERFORMANCE SPECIFICATIONS:

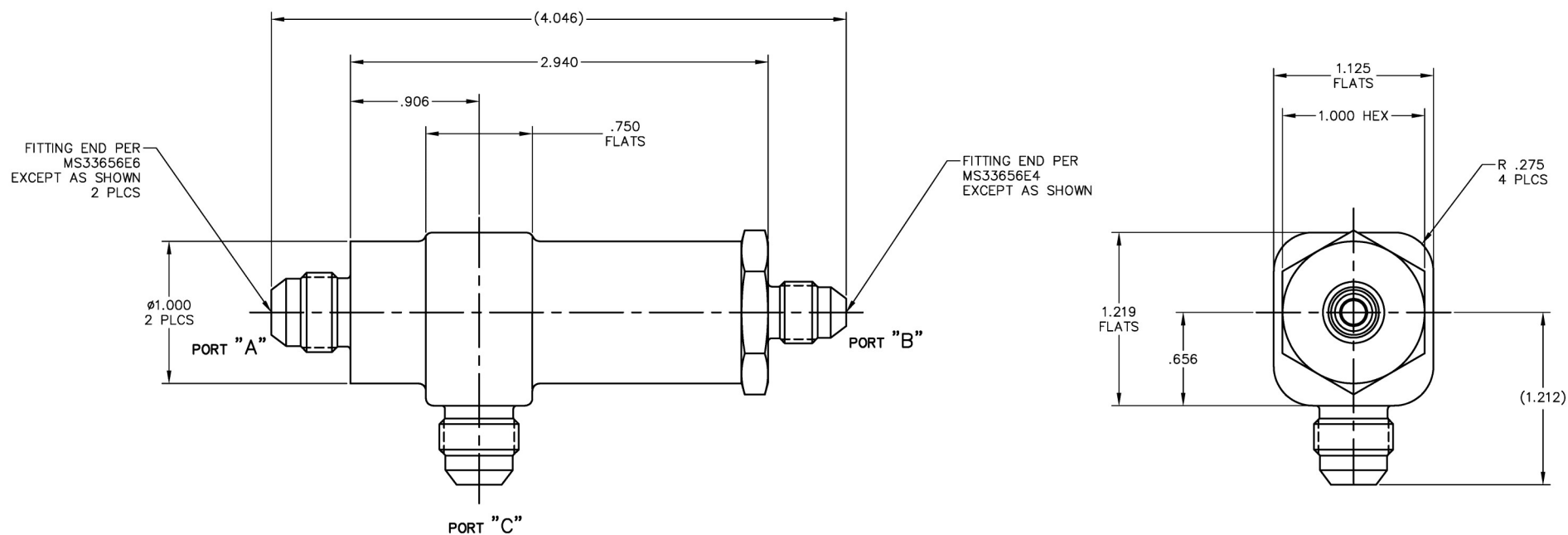
FLUIDS: HYDRAULIC FLUID PER MIL-PRF-83282 AND MIL-H-5606
 MATERIAL: BODY 7075-T73 AL, -T73510 OR -T73511 PER QQ-A-200/11 OR QQ-A-225/9
 TEMPERATURE RANGE: -65°F TO 275°F
 OPERATING PRESSURE: 3000 PSIG
 PROOF PRESSURE: 4500 PSIG
 SHUTTLING PRESSURE: 30 TO 60 PSIG
 FLOW: 3.0 GPM AT 25 PSID MAX
 INTERNAL LEAKAGE: NONE AT 3000 PSIG
 WEIGHT: 0.88 LBS MAX



CATEGORY 5: SHUTTLE VALVES



PART NUMBER: 3S1172, SHUTTLE VALVE



PERFORMANCE SPECIFICATIONS:

FLUIDS: MIL-PRF-83282, MIL-PRF-87257 AND AIR

MATERIAL: BODY 2024-T351 AL

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 3000 PSIG

PROOF PRESSURE: 4500 PSIG

SHUTTLING PRESSURE: 20 TO 100 PSID

FLOW: 1.5 GPM AT 15 PSID MAX FROM PORT A TO PORT C

12 SCFM AT 19 PSID MAX FROM PORT B TO PORT C

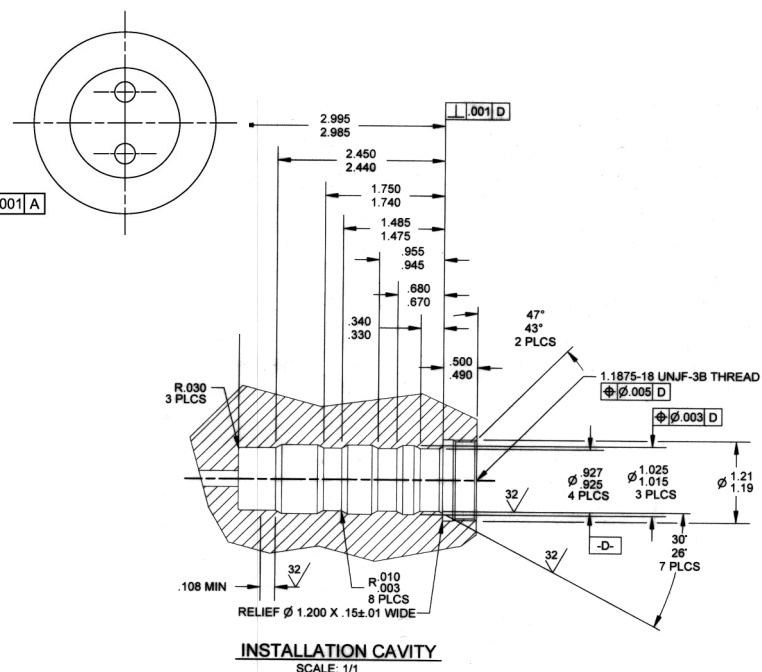
INTERNAL LEAKAGE: 0 DPM AT 0 TO 4500 PSIG

WEIGHT: 0.35 LBS MAX

CATEGORY 5: SHUTTLE VALVES



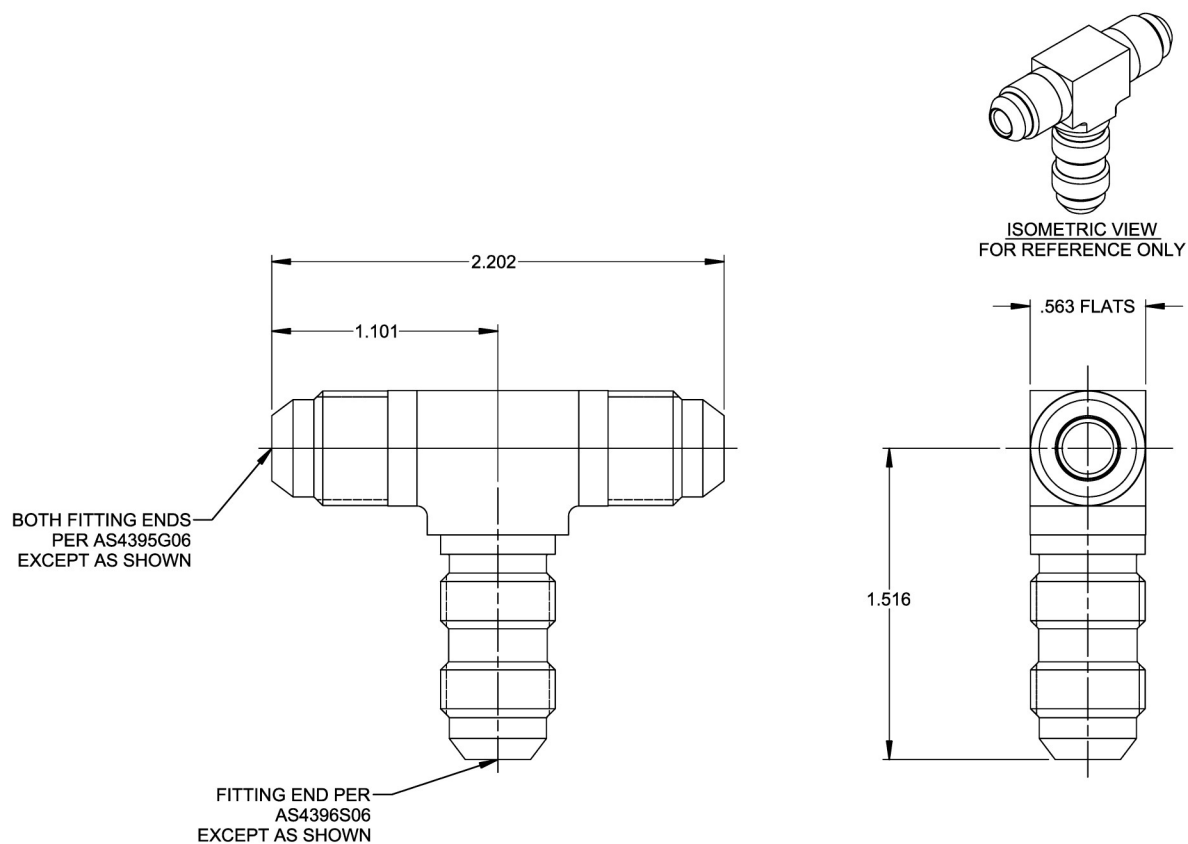
WEIGHT: 0.364 LBS MAX



CATEGORY 5: SHUTTLE VALVES



PART NUMBER: 3S1196, SHUTTLE VALVE



PERFORMANCE SPECIFICATIONS:

FLUIDS: AIR

MATERIAL: BODY 316 CRES

TEMPERATURE RANGE: 0°F TO 450°F

OPERATING PRESSURE: 100 PSIG

PROOF PRESSURE: 150 PSIG

FLOW: 0.25 LB/MIN AT 1.5 PSID

INTERNAL LEAKAGE: 0.025 LB/MIN MAX AT 24 PSID

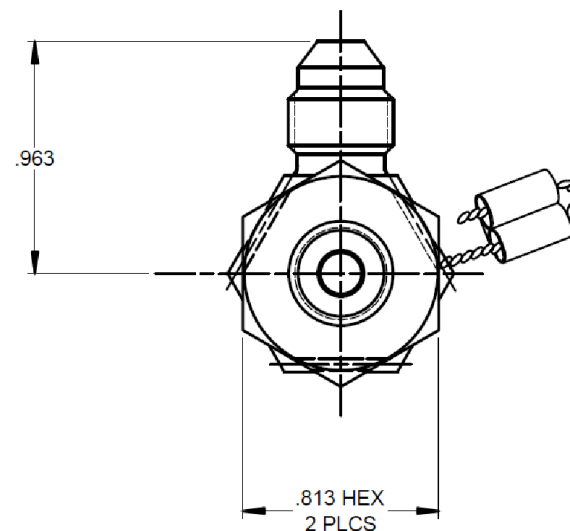
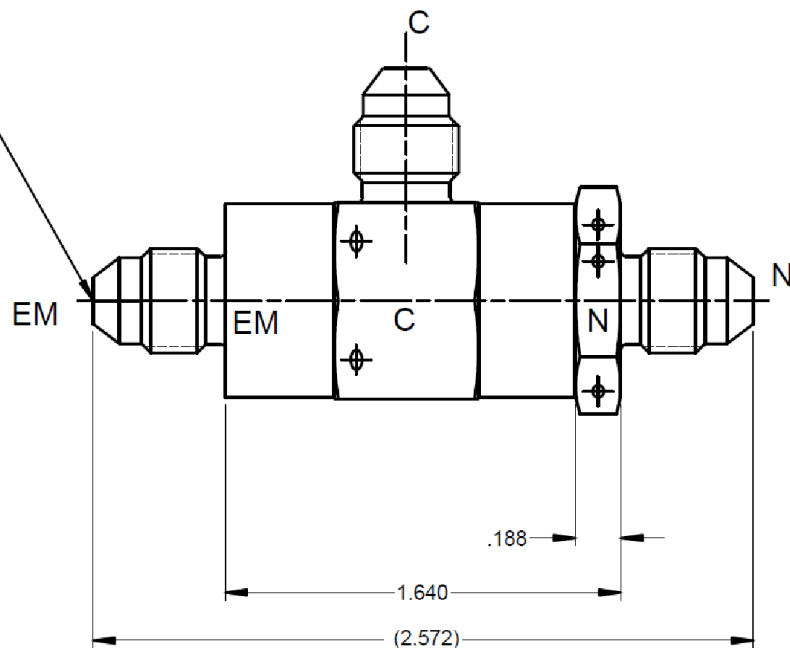
WEIGHT: 0.20 LBS MAX

CATEGORY 5: SHUTTLE VALVES



PART NUMBER: 3S1200, SHUTTLE VALVE

ALL FITTING ENDS
PER MS33656E04
EXCEPT AS SHOWN



PERFORMANCE SPECIFICATIONS:

FLUIDS: AIRCRAFT HYDRAULIC FLUID PER MIL-H-5606

MATERIAL: BODY 15-5PH CRES

POPPET 440C CRES

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 3000 PSIG

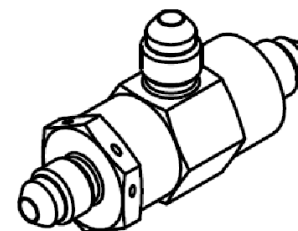
PROOF PRESSURE: 4500 PSIG

CRACKING PRESSURE: 50 TO 100 PSID

FLOW: 1.0 LPM AT 1000 PSID MAX
(PORT N TO PORT C & PORT EM TO PORT C)

INTERNAL LEAKAGE: 5 DPM MAX WITH 3000 PSID AT PORT EM AND C

WEIGHT: 0.28 LBS MAX

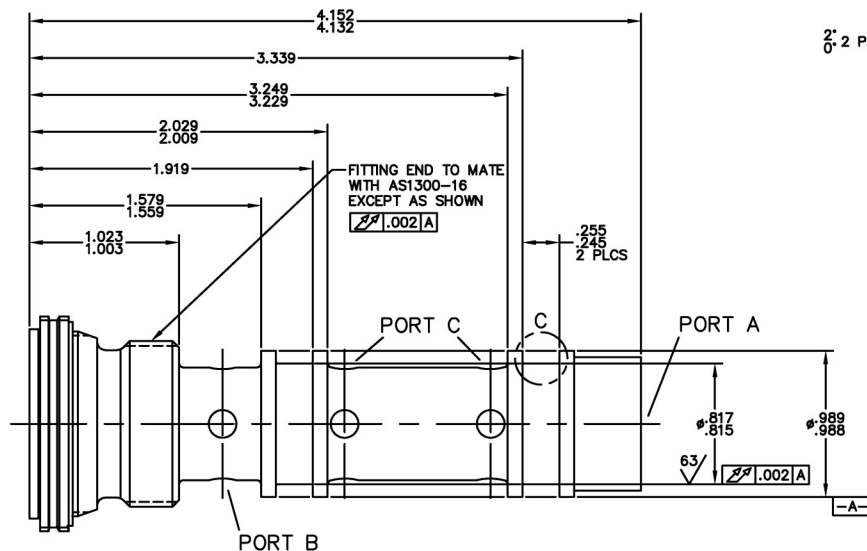


ISOMETRIC VIEW
FOR REFERENCE ONLY

CATEGORY 5: SHUTTLE VALVES



PART NUMBER: 3S1206-1, SHUTTLE VALVE



PERFORMANCE SPECIFICATIONS:

FLUIDS: PHOSPHATE ESTER FLUID TYPE IV OR TYPE V

MATERIAL: BODY 15-5PH CRES

TEMPERATURE RANGE: -40°F TO 203°F (NORMAL OPERATING)
 -67°F TO 230°F (MAXIMUM OPERATING)
 -67°F TO 248°F (MAXIMUM NON-OPERATING)
 -67°F TO 185°F (STORAGE)

OPERATING PRESSURE: 5075 PSIG

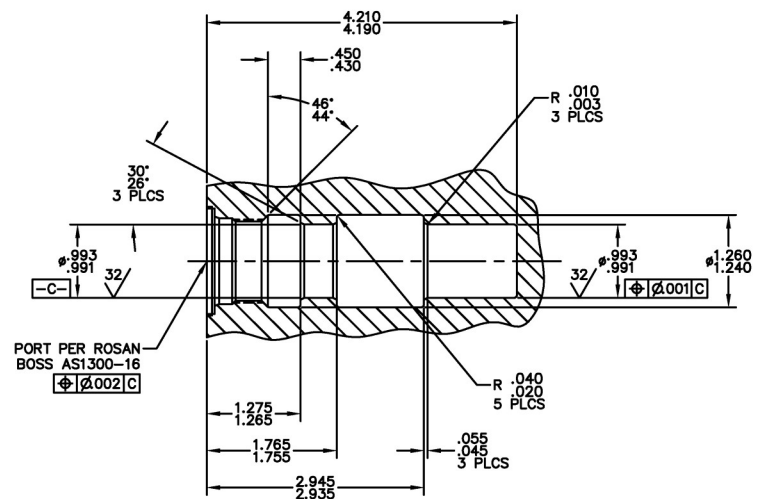
PROOF PRESSURE: 8700 PSIG

SHUTTLING PRESSURE: 10 TO 27.6 PSIG

FLOW: 5.28 GPM AT 11 PSID MAX FROM A TO C AND B TO C

INTERNAL LEAKAGE: 1 DPM MAX AT 5075 PSIG

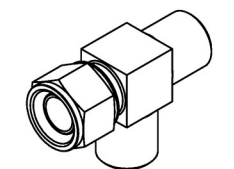
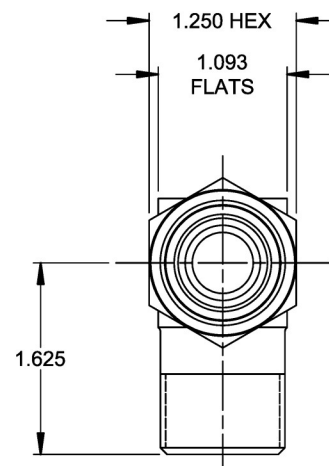
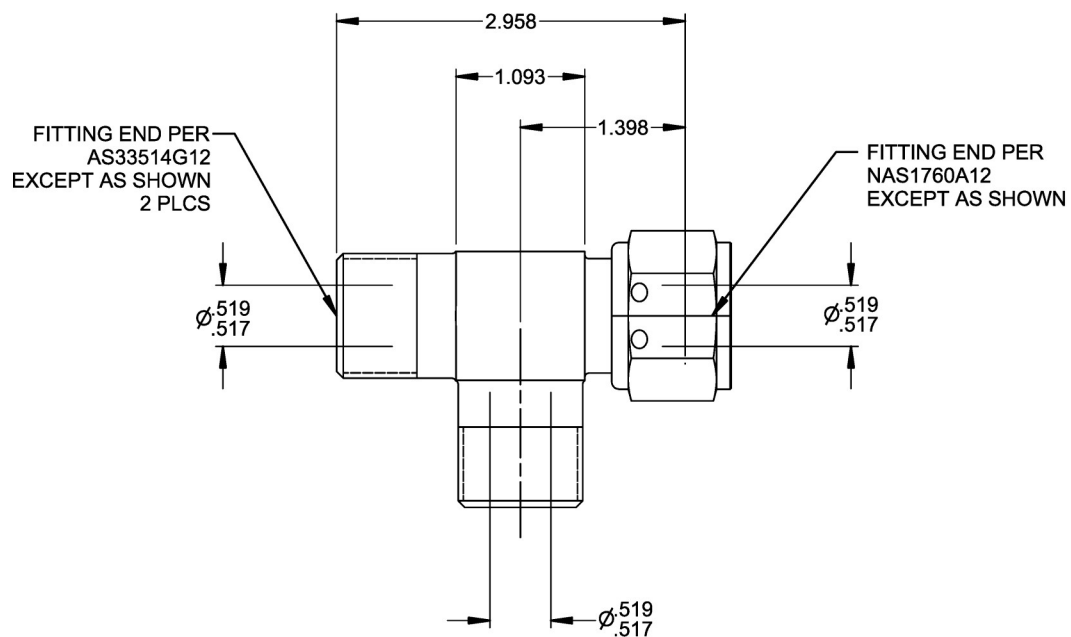
WEIGHT: 0.65 LBS MAX



CATEGORY 5: SHUTTLE VALVES



PART NUMBER: 3S1232, SHUTTLE VALVE



ISOMETRIC VIEW
FOR REFERENCE ONLY

PERFORMANCE SPECIFICATIONS:

FLUIDS: HALON AND NITROGEN

MATERIAL: BODY 2024-T351 AL

TEMPERATURE RANGE: -65°F TO 250°F

OPERATING PRESSURE: 1200 PSIG AT 250°F

PROOF PRESSURE: 2000 PSIG

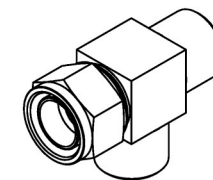
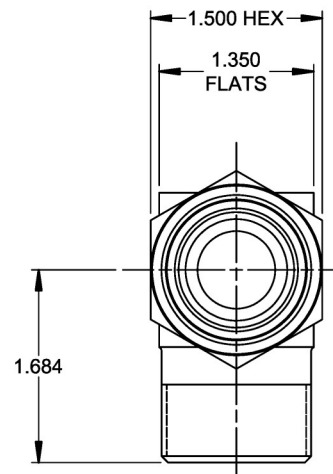
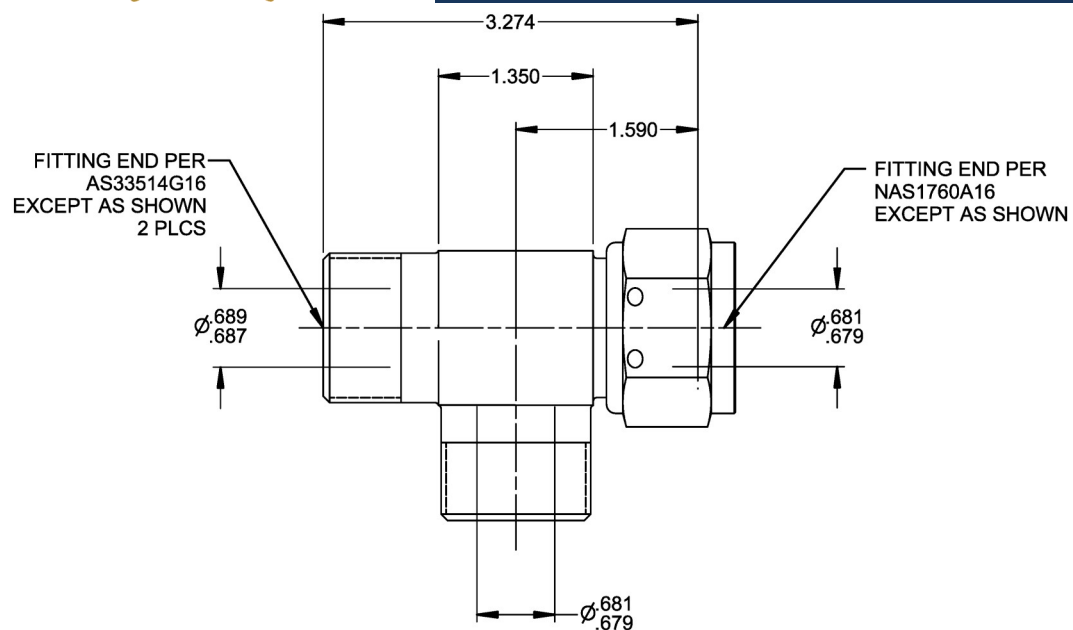
INTERNAL LEAKAGE: 1.0 SCFM MAX AT 50 AND 250 PSIG

WEIGHT: 0.37 LBS MAX

CATEGORY 5: SHUTTLE VALVES



PART NUMBER: 3S1234, SHUTTLE VALVE



ISOMETRIC VIEW
FOR REFERENCE ONLY

PERFORMANCE SPECIFICATIONS:

FLUIDS: HALON AND NITROGEN

MATERIAL: BODY 2024-T351 AL

TEMPERATURE RANGE: -65°F TO 250°F

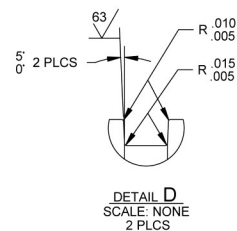
OPERATING PRESSURE: 1200 PSIG AT 250°F

PROOF PRESSURE: 2000 PSIG

INTERNAL LEAKAGE: 1.0 SCFM MAX AT 50 AND 250 PSIG

WEIGHT: 0.59 LBS MAX

CATEGORY 5: SHUTTLE VALVES

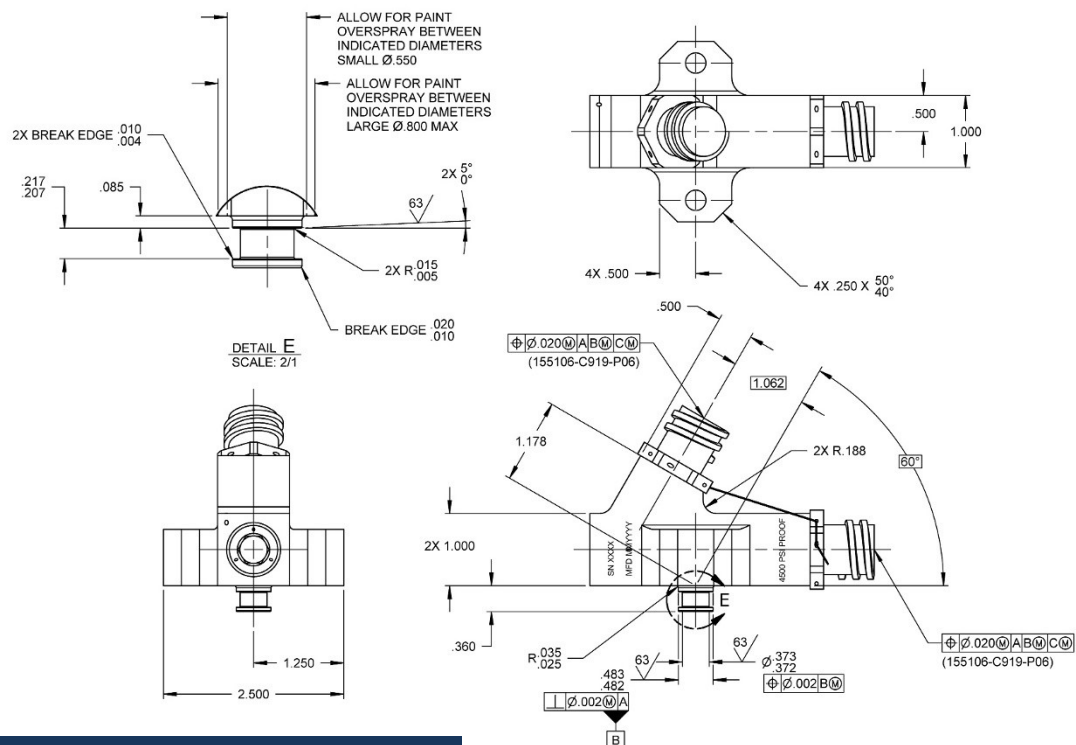


WEIGHT: 0.30 LBS MAX

CATEGORY 5: SHUTTLE VALVES



PART NUMBER: 3S1266, SHUTTLE VALVE



PERFORMANCE SPECIFICATIONS:

FLUIDS: PHOSPHATE ESTER BASED HYDRAULIC FLUID PER AS 1241, TYPE IV CLASS 1

MATERIAL: BODY 2024-T351 AL

TEMPERATURE RANGE: -40°F TO 275°F

OPERATING PRESSURE: 3000 PSIG

PROOF PRESSURE: 4500 PSIG

SHUTTling PRESSURE: 25 TO 100 PSIG

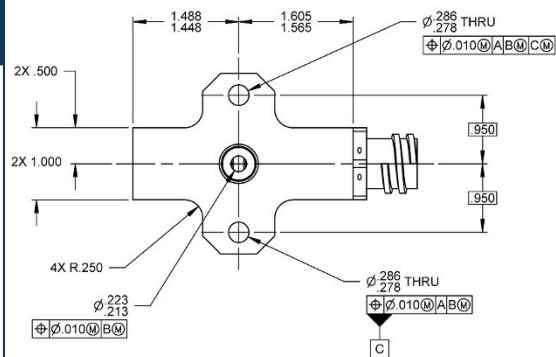
FLOW: 3.5 GPM AT 75 PSID MAX

INTERNAL LEAKAGE: -SHUTTling INTERFLOW 3 CC/CYCLE MAX

-REVERSE FLOW UNSETTING 10 DPM MAX

-OPEN INLET PORT TWO DROPS MAX FOR 5 MINUTES AT 500-3000 PSID AFTER TWO MINUTE STABILIZATION PERIOD (BOTH DIRECTIONS)

WEIGHT: 0.50 LBS MAX WITHOUT FITTINGS



CATEGORY 5: SHUTTLE VALVES



CRISSAIR HAS VARIOUS OTHER SHUTTLE VALVES NOT LISTED IN THE CATALOG WITH DIFFERENT MATERIALS, FITTINGS, AND SIZE CONFIGURATIONS.

CONTACT CRISSAIR FOR ADDITIONAL INFORMATION/DRAWINGS AT

(661) 367-3300 OR SALES@CRISSAIR.COM.

YOU CAN ALSO VISIT WWW.CRISSAIR.COM.



MANUAL OPERATED VALVES

Crissair Inc. designs and manufactures several manually operated, rotary-type valves that shut-off or redirect supply pressure and flow.

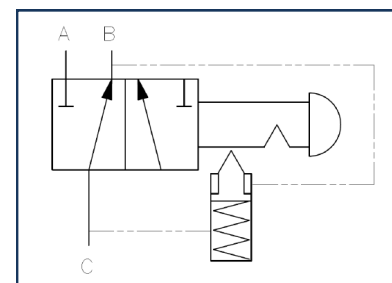
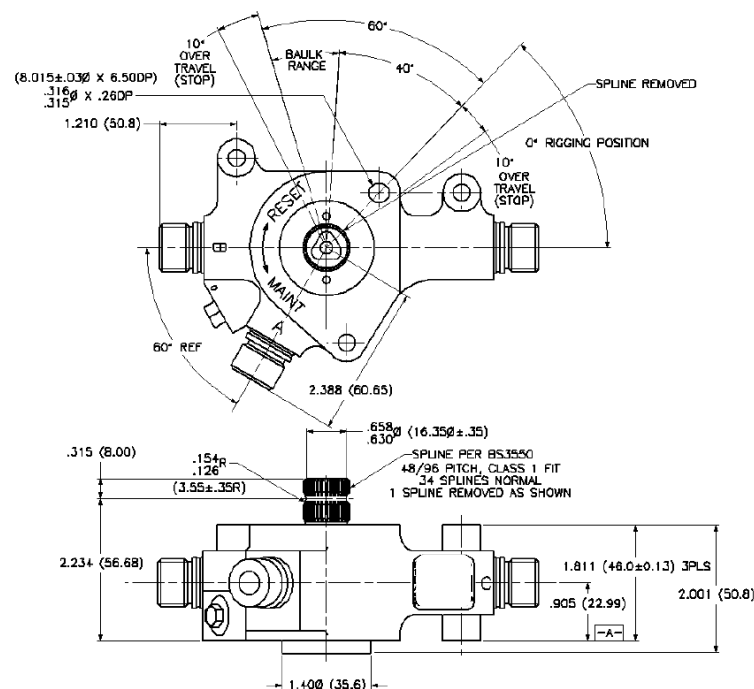
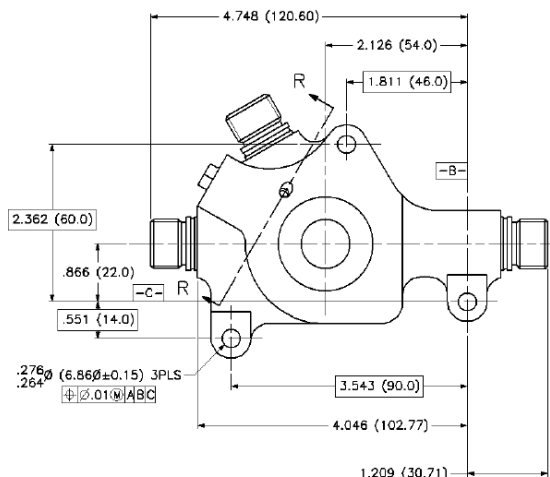
- The manual operation can be achieved via a handle which is ergonomically designed for the human hand. Other designs utilize splines or shafts that connect to different types of linkages or wrenches.
- Many of the manual valves are used on aircraft ground service panels.



This catalog contains a small sample of drawings. Please contact Crissair for additional drawings and/or configurations.



PART NUMBER: 36710-X, NOSE DOOR BYPASS VALVE



HYDRAULIC SCHEMATIC

PERFORMANCE SPECIFICATIONS:

FLUIDS: PHOSPHATE ESTER PER NSA30711OLD, TYPE IV OR V*

MATERIAL: HOSUING 7075-T73

OPERATING PRESSURE: 2987 PSIG

PROOF PRESSURE: 4538 PSIG

FLOW (0°C): AT 0°(RIGGING) POSITION 6.08 GPM AT 58 PSID MAX, PORT B TO C
AT 60° CW (FULL OPEN) POSITION, 4.23 GPM AT 58 PSID MAX, PORT A TO PORT C

LEAKAGE: EXTERNAL, 1 DROP MAX IN 25 OPERATING CYCLES

AT 0° WITH 2987 PSIG AT PORTS B, 25 CCC/MIN MAX AT PORT A

AT 0° WITH 2987 PSIG AT PORT A, 25 CCC/MIN MAX AT PORTS B

AT 60° WITH 2987 PSIG AT PORTS A, 25 CCC/MIN MAX AT PORT B

BAULK FEATURE: IS ENGAGED OVER 40° ROTATION WITH PORT B LESS THAN 725 PSIG
IS DISENGAGED OVER FULL RANGE WITH PORT B AT GREATER THAN 1015 PSIG

SHAFT OPERATING TORQUE: NOT GREATER THAN 44.4 IN-LBS AT ALL POSITIONS AND PRESSURES
NOT LESS THAN 8.8 IN-LBS FROM 0° POSITION (DETENT FUNCTION)

ULTIMATE TORQUE: SHAFT SHALL WITHSTAND 112 FT-LBS MINIMUM.

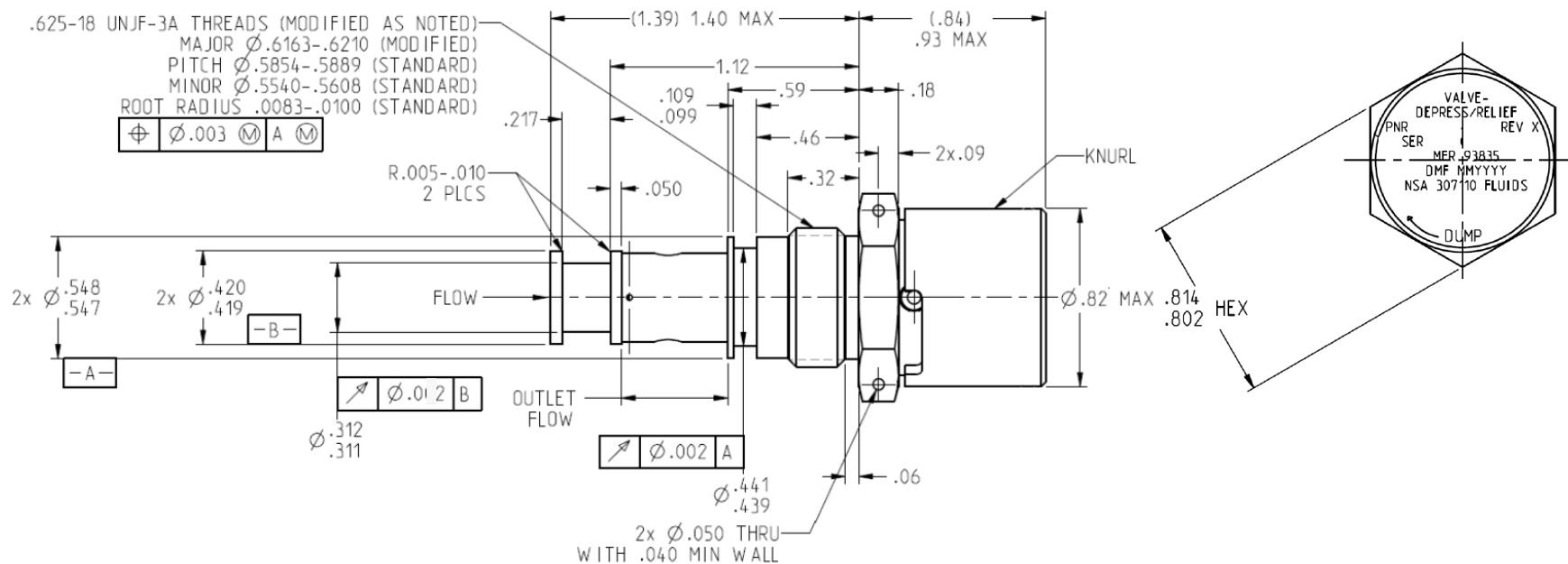
WEIGHT: 1.90 LBS MAX

*OTHER FLUIDS MAY BE ACCEPTABLE WITH ELASTOMER CHANGE

CATEGORY 6: MANUAL OPERATED VALVES



PART NUMBER: 37030-X, MANUAL DEPRESSURIZATION AND RELIEF VALVE



PERFORMANCE SPECIFICATIONS:

FLUIDS: PHOSPHATE ESTER PER NSA 307110 TYPE IV OR V*

MATERIAL: BODY 17-4 PH

POPPET 440C CRES

OPERATING PRESSURE: 5004 PSIG

PROOF PRESSURE: 7614 PSIG

CRACKING PRESSURE: 5439-5874 PSID

FLOW, RELIEF: 5989 PSID MAX AT 0.7 GPM MIN AND 68±9°F

FLOW, MANUAL DUMP: 3336 PSID MAX AT 0.4 GPM MIN AND 68±9°F

RESEAT PRESSURE: 5352-5787 PSID AT 6 CC/MIN AND 68±9°F

INTERNAL LEAKAGE: 1 DPM MAX AT 5004-5076 PSID

0 DPM AT 3336 PSID

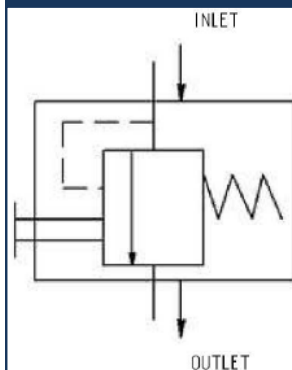
MAX TORQUE OF MANUAL DEPRESSURIZATION VALVE: 1.0-10 IN-LBS

MAX OVERRIDE KNOB ROTATION: 210°

WEIGHT: 0.17 LBS MAX

*OTHER FLUIDS MAY BE ACCEPTABLE WITH ELASTOMER CHANGE

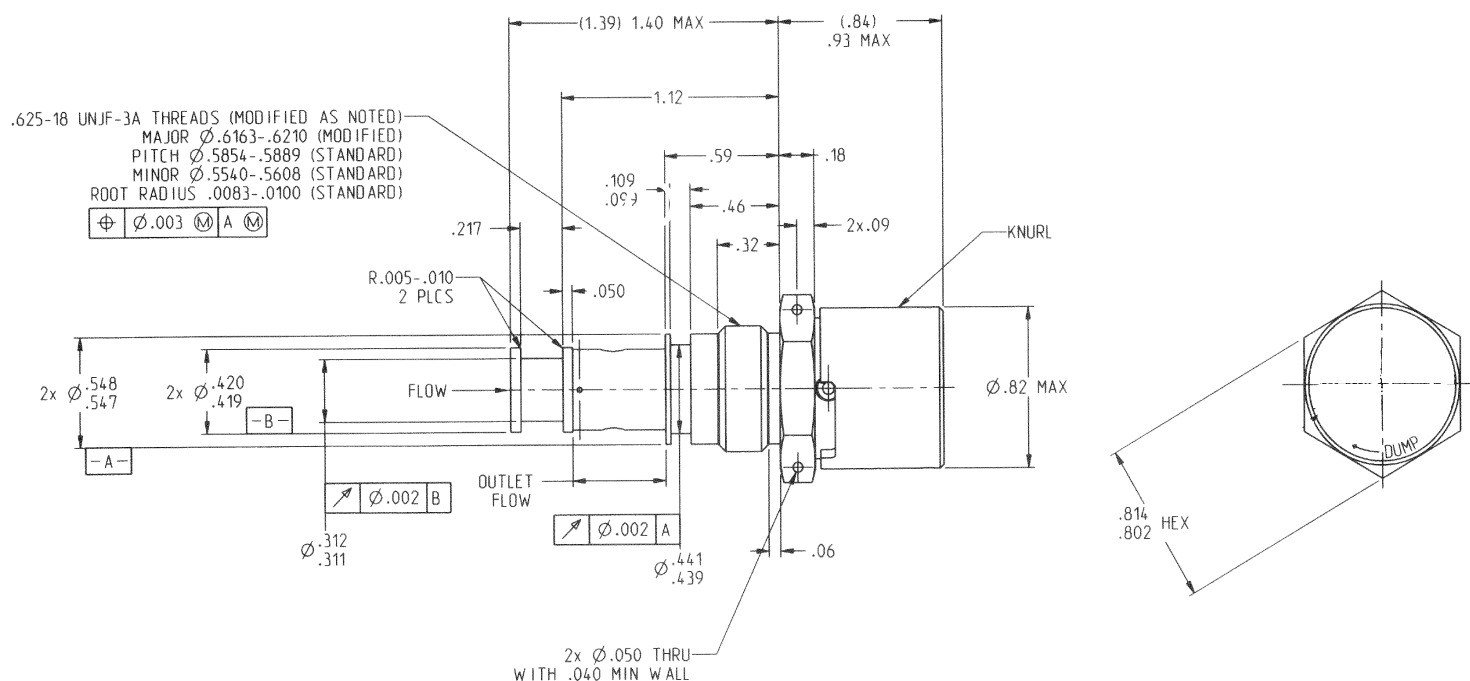
HYDRAULIC SCHEMATIC



CATEGORY 6: MANUAL OPERATED VALVES - MANUAL DUMP WITH THERMAL RELIEF VALVES



PART NUMBER: 37160-X, MANUAL DEPRESSURIZATION/RELIEF VALVE



PERFORMANCE SPECIFICATIONS:

FLUIDS: PHOSPHATE ESTER TYPE IV AND V*

MATERIAL: BODY 17-4PH

POPPET 440C CRES

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 3000 PSIG (WITH TRANSIENTS UP TO 3750 PSIG)

PROOF PRESSURE: 5400 PSIG

CRACKING PRESSURE: 3600 PSID MAX AT 20 CC/MIN

FLOW: RELIEF: 3600 PSID MAX AT 0.24 GPM MIN AND 100±20°F

MANUAL DEPRESS: 3000 PSID MAX AT 0.17 GPM MIN AND 100±20°F

POPPET FAILURE: 3.0 GPM MAX AT 3000 PSID AND 100±20°F

RESEAT PRESSURE: 3200 PSID MAX AT 20 CC/MIN

INTERNAL LEAKAGE: 1 DPM MAX AT 3000 PSID

ZERO LEAKAGE AT 2000 PSID

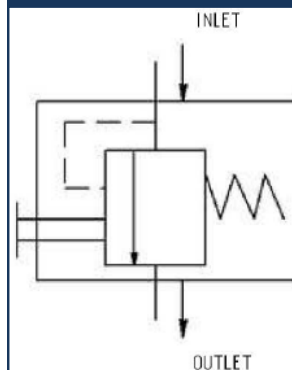
MAX TORQUE OF MANUAL DEPRESSURIZATION VALVE: 1.0—10 IN-LBS

MAX OVERRIDE KNOB ROTATION: 210°

WEIGHT: 0.17 LBS MAX

*OTHER FLUIDS MAY BE ACCEPTABLE WITH ELASTOMER CHANGE

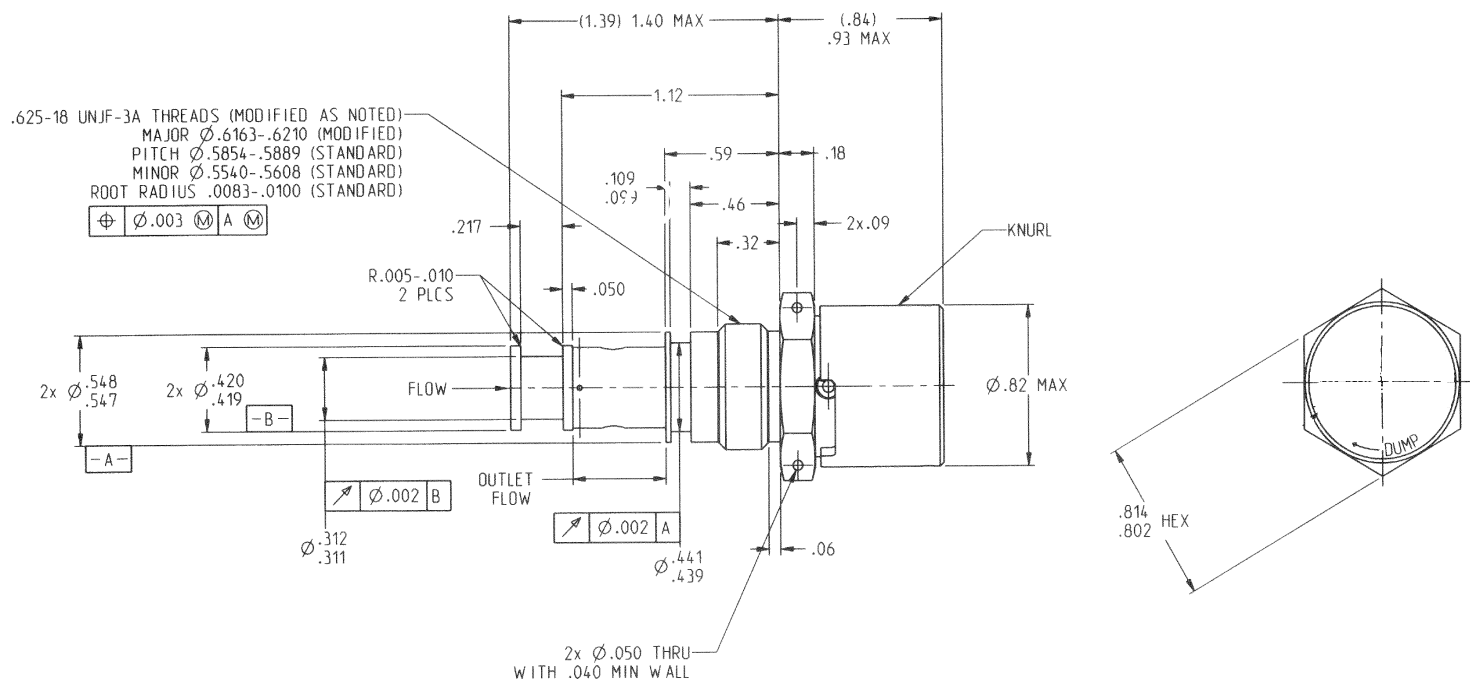
HYDRAULIC SCHEMATIC



CATEGORY 6: MANUAL OPERATED VALVES - MANUAL DUMP WITH THERMAL RELIEF VALVES



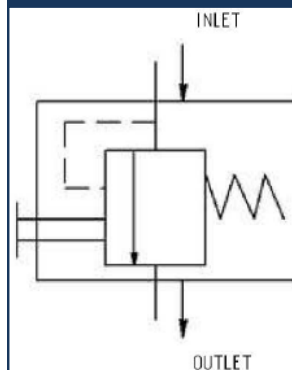
PART NUMBER: 2P5572, MANUAL DEPRESSURIZATION/RELIEF VALVE



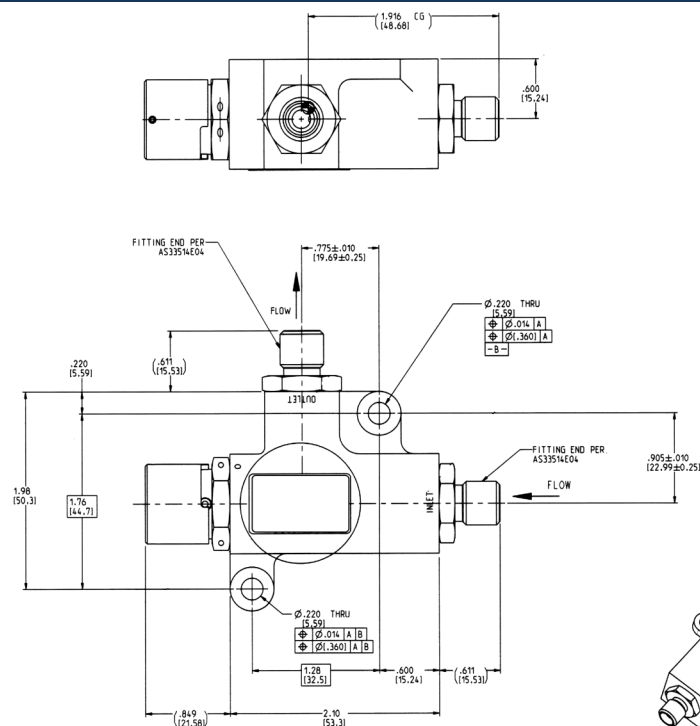
PERFORMANCE SPECIFICATIONS:

FLUIDS: MIL-PRF-5606*
 MATERIAL: BODY 17-4PH
 POPPET 440C CRES
 TEMPERATURE RANGE: -65°F TO 275°F
 OPERATING PRESSURE: 3000 PSIG (WITH TRANSIENTS UP TO 3750 PSIG)
 PROOF PRESSURE: 5400 PSIG
 CRACKING PRESSURE: 3600 PSID MAX AT 20 CC/MIN
 FLOW: RELIEF: 3600 PSID MAX AT 0.24 GPM MIN AND 100±20°F
 MANUAL BLEED: 3000 PSID MAX AT 0.17 GPM MIN AND 100±20°F
 RESEAT PRESSURE: 3200 PSID MAX AT 10 CC/MIN
 INTERNAL LEAKAGE: 1 DPM MAX AT 3000 PSID
 ZERO LEAKAGE AT 2000 PSID
 WEIGHT: 0.17 LBS MAX
 *OTHER FLUIDS MAY BE ACCEPTABLE WITH ELASTOMER CHANGE

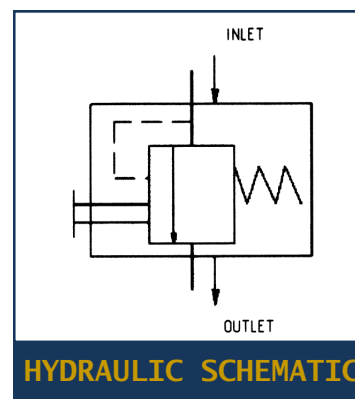
HYDRAULIC SCHEMATIC



CATEGORY 6: MANUAL OPERATED VALVES - MANUAL DUMP WITH THERMAL RELIEF VALVES



FLUIDS: SKYDROL*
 MATERIAL: HOUSING 7075-T73 AL
 TEMPERATURE RANGE: -65°F TO 225°F
 OPERATING PRESSURE: 3000 PSIG
 TRANSIENT PRESSURE (DURING NORMAL OPERATION: 3750 PSIG
 PROOF PRESSURE: 4500 PSIG
 CRACKING PRESSURE: 3600 PSID MIN
 FLOW: RELIEF: 0.24 GPM MIN AT 3750 PSID
 MANUAL DUMP: 0.6 GPM MINIMUM AT 3000 PSID
 RESEAT PRESSURE: 3250 PSID MIN
 INTERNAL LEAKAGE: FOR INCREASING AND DECREASING PRESSURES. 0-3000 PSID
 AND 3000-0 PSID SHALL BE 0.05 CC/MIN MAX (1 DPM MAX)
 MAX TORQUE OF MANUAL DEPRESSURIZATION VALVE: 10 IN-LBS
 WEIGHT: 0.50 LBS MAX
 *OTHER FLUIDS MAY BE ACCEPTABLE WITH ELASTOMER CHANGE

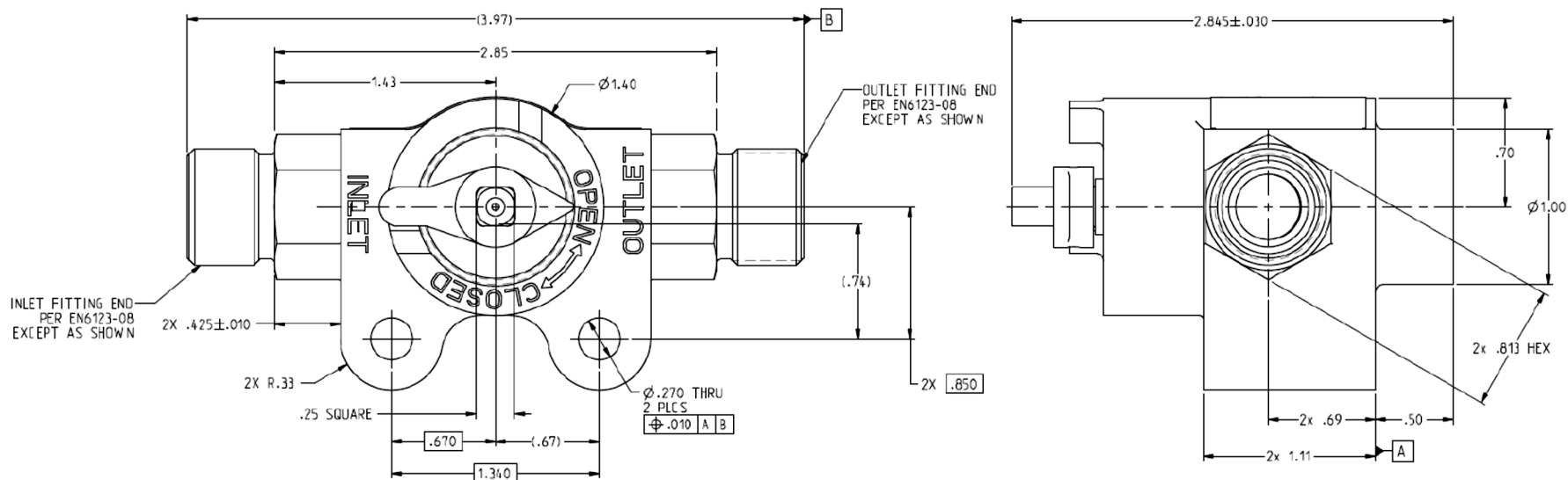


HYDRAULIC SCHEMATIC

CATEGORY 6: MANUAL OPERATED VALVES



PART NUMBER: 37100-X, RUDDER ISOLATION VALVE



PERFORMANCE SPECIFICATIONS:

FLUIDS: PHOSPHATE ESTER TYPE IV AND V*

MATERIAL: HOUSING 6AL-4V TI

TEMPERATURE RANGE: -58°F TO 158°F

OPERATING PRESSURE: 5076 PSIG

PROOF PRESSURE: 7614 PSIG

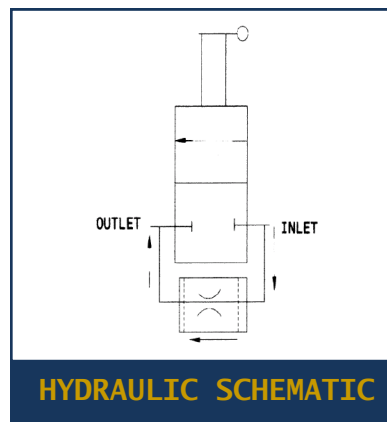
FLOW: 7.92 GPM AT 7.25 PSID MAX

INLET TO OUTLET CONTROLLED LEAKAGE: 50—100 CC/MIN AT 5004 PSID

OPERATING TORQUE (1/4 TURN TO OPEN OR CLOSE): 62 IN-LBS MAX AT 145 PSID

WEIGHT: 1.050 LBS MAX

*OTHER FLUIDS MAY BE ACCEPTABLE WITH ELASTOMER CHANGE



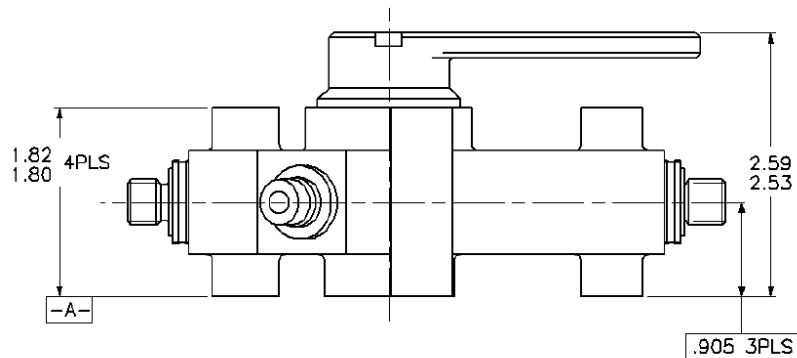
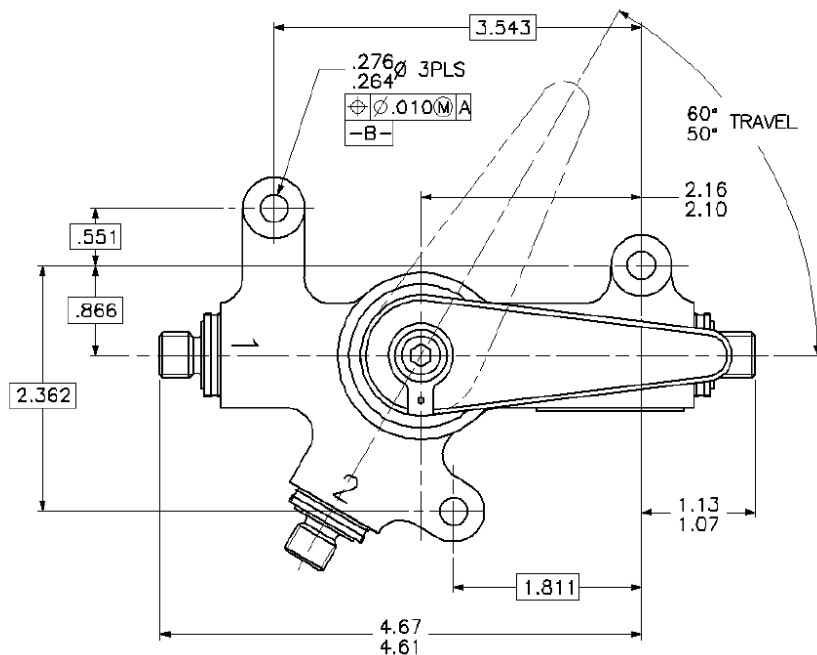
HYDRAULIC SCHEMATIC



CATEGORY 6: MANUAL OPERATED VALVES



PART NUMBER: 37310-X, SELECT VALVE, HIGH PRESSURE



PERFORMANCE SPECIFICATIONS:

FLUIDS: MIL-PRF-83282*

MATERIAL: HOUSING 6AL-4V TI

TEMPERATURE RANGE: -40°F TO 275°F

OPERATING PRESSURE: 4000 PSIG

PROOF PRESSURE: 6000 PSIG

FLOW: PORT "IN" TO "1"; 1 GPM AT 50 PSID MAX

PORT "IN" TO "2"; 1 GPM AT 50 PSID MAX

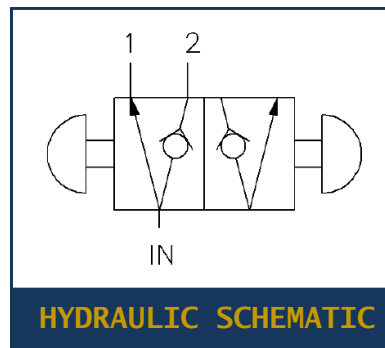
INTERNAL LEAKAGE: WITH PORT "IN" AT 4000 PSID, CLOSED PORT 25 CC/MIN MAX

SHAFT OPERATING TORQUE: NOT GREATER THAN 45 IN-LBS AT 4000 PSID

NOT LESS THAN 6 IN-LBS AT 0 PSID

WEIGHT: 2.4 LBS MAX

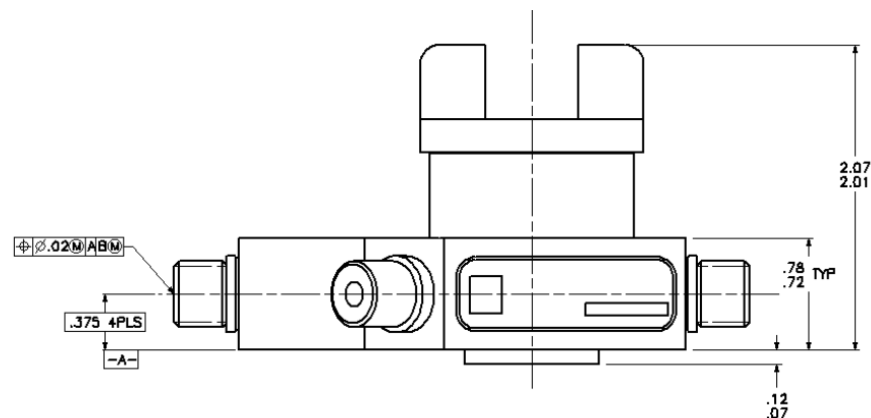
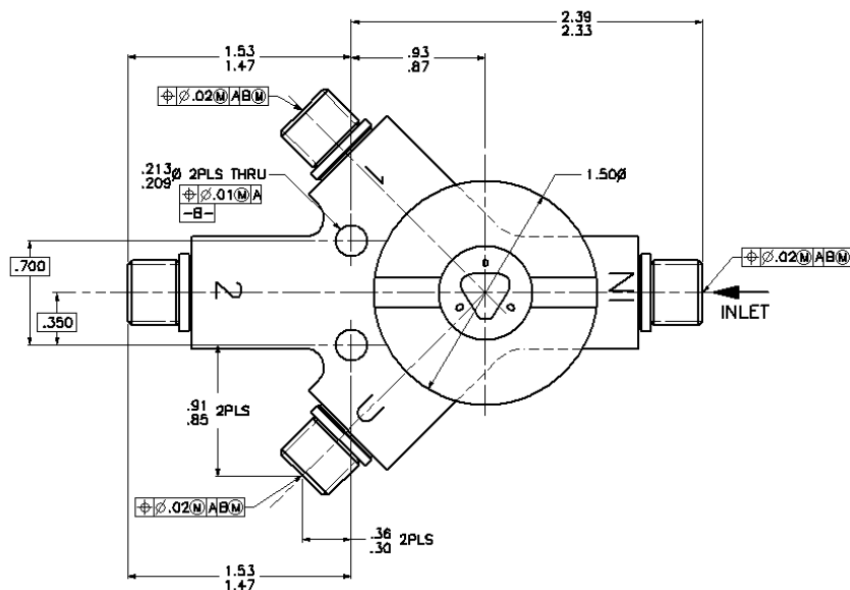
*OTHER FLUIDS MAY BE ACCEPTABLE WITH ELASTOMER CHANGE



CATEGORY 6: MANUAL OPERATED VALVES



PART NUMBER: 37320-X, SELECT VALVE, LOW PRESSURE



PERFORMANCE SPECIFICATIONS:

FLUIDS: MIL-PRF-83282*

MATERIAL: HOUSING 6061-T6

TEMPERATURE RANGE: -40°F TO 275°F

OPERATING PRESSURE: 300 PSIG

PROOF PRESSURE: 450 PSIG

FLOW: 1.5 GPM MINIMUM @ 30 PSID

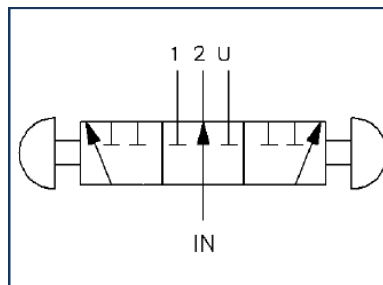
LEAKAGE: EXTERNAL: TO BE 1 DROP MAX IN 25 CYCLES AND ZERO DROPS IN 12 HOURS WITH 7.5 ± 2.5 PSIG APPLIED AT INLET PORT

INTERNAL: TO BE 10 CC/MIN MAX AT CLOSED PORTS WITH 300 PSIG AT INLET PORT

TORQUE: 20 IN-LBS MAX TO ANY PORT WITH 300 PSIG AT INLET
6 IN-LBS MINIMUM WITH ZERO PRESSURE ON ALL PORTS

WEIGHT: 0.44 LBS MAX

*OTHER FLUIDS MAY BE ACCEPTABLE WITH ELASTOMER CHANGE



HYDRAULIC SCHEMATIC



CATEGORY 6: MANUAL OPERATED VALVES



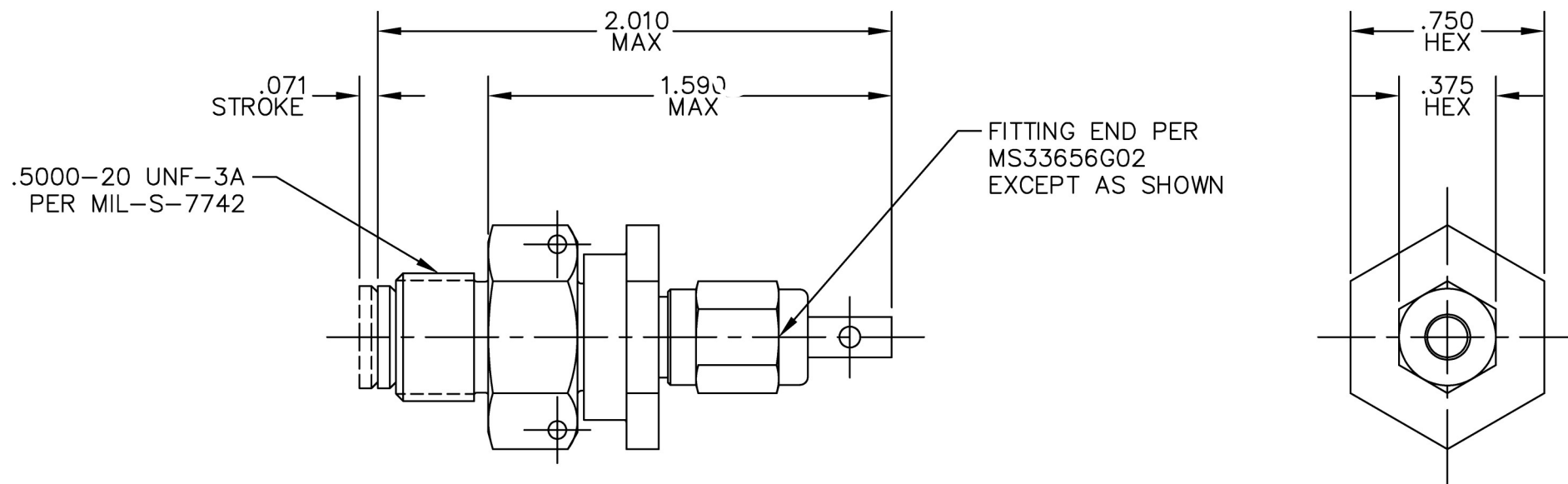
WEIGHT: 1.80 LBS MAX



CATEGORY 6: MANUAL OPERATED VALVES



PART NUMBER: 2P5160, FILL VALVE



PERFORMANCE SPECIFICATIONS:

FLUIDS: HYDRAZINE BLEND

MATERIAL: BODY 347 CRES

NUT 303SE CRES

TEMPERATURE RANGE: -65°F TO 250°F

OPERATING PRESSURE MINIMUM: -15 PSIG

OPERATING PRESSURE MAXIMUM: 400 PSIG

PROOF PRESSURE: 800 PSIG

FLOW: 5 LB/MIN H₂O AT 4 PSID MAX AT 70°F ± 20°F

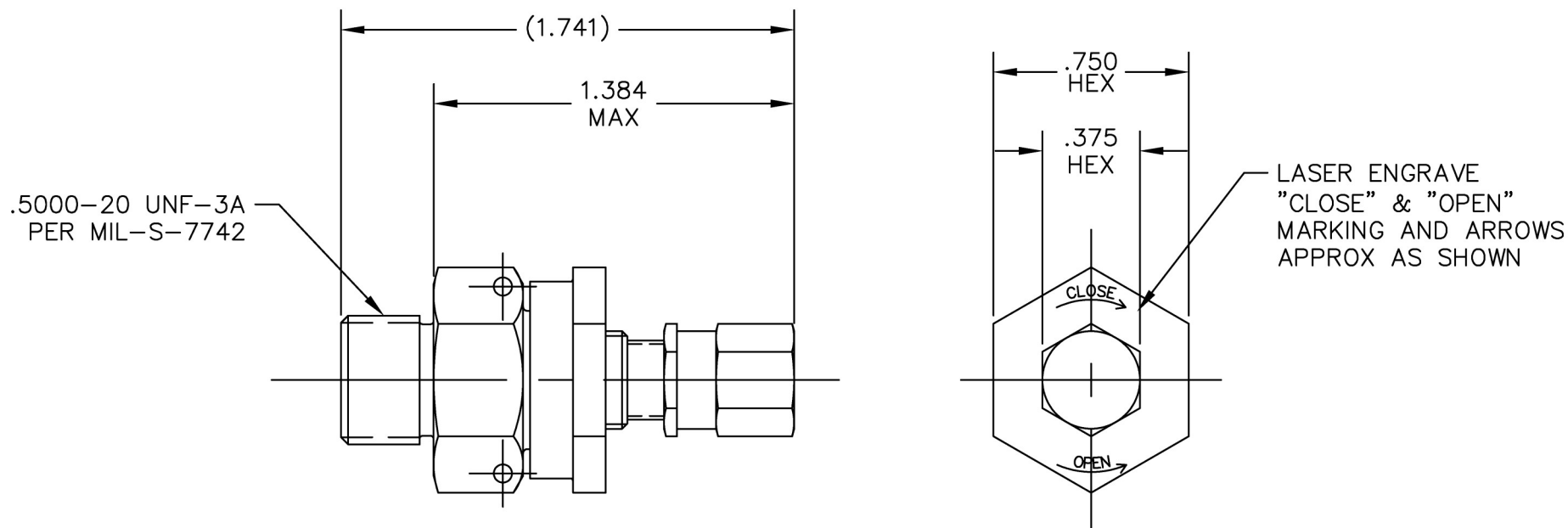
INTERNAL LEAKAGE: ZERO FROM CAP AT 40 IN—LBS WITH VALVE UNSEATED AND 400 PSIG

WEIGHT: 0.12 LBS MAX

CATEGORY 6: MANUAL OPERATED VALVES



PART NUMBER: 2P5164, AIR, HIGH PRESSURE CHARGING VALVE



PERFORMANCE SPECIFICATIONS:

FLUIDS: AIR AND GN₂

MATERIAL: BODY 304 CRES

NUT 303SE CRES

TEMPERATURE RANGE: -65°F TO 250°F

OPERATING PRESSURE MINIMUM: 5000 PSIG

PROOF PRESSURE: 7500 PSIG

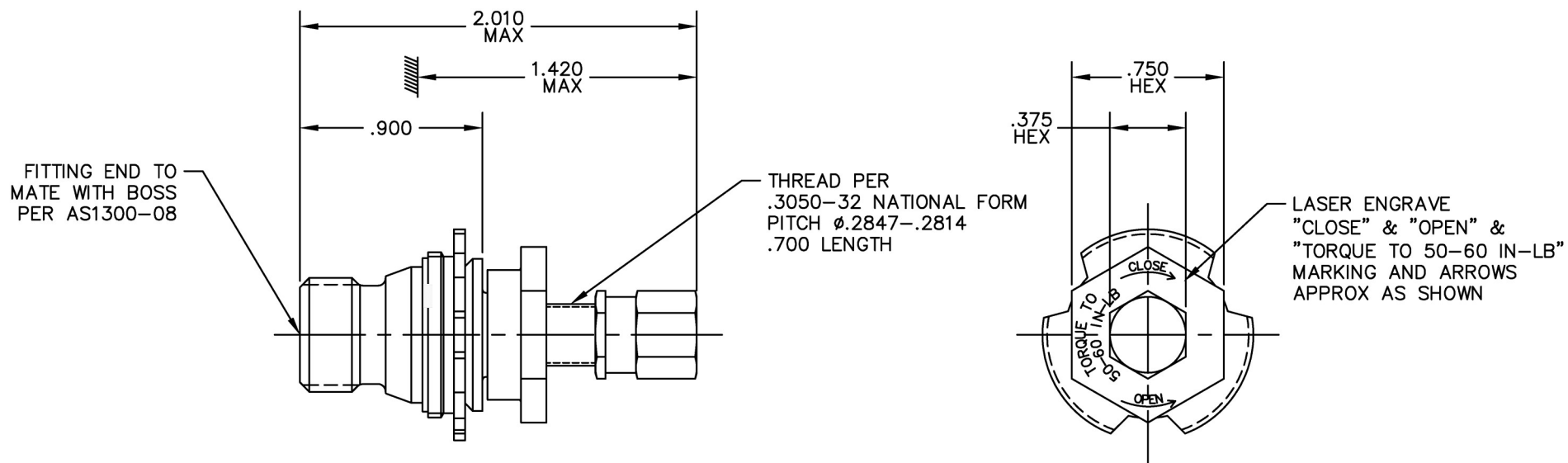
INTERNAL LEAKAGE: ZERO FROM CAP (TORQUED TO 40 IN—LBS)
WITH VALVE UNSEATED AT 5000 PSIG

WEIGHT: 0.12 LBS MAX

CATEGORY 6: MANUAL OPERATED VALVES



PART NUMBER: 2P5184, CHARGING VALVE



PERFORMANCE SPECIFICATIONS:

FLUIDS: AIR AND NITROGEN

MATERIAL: BODY 17-4PH CRES

NUT 303SE CRES

TEMPERATURE RANGE: -65°F TO 250°F

OPERATING PRESSURE: 5400 PSIG

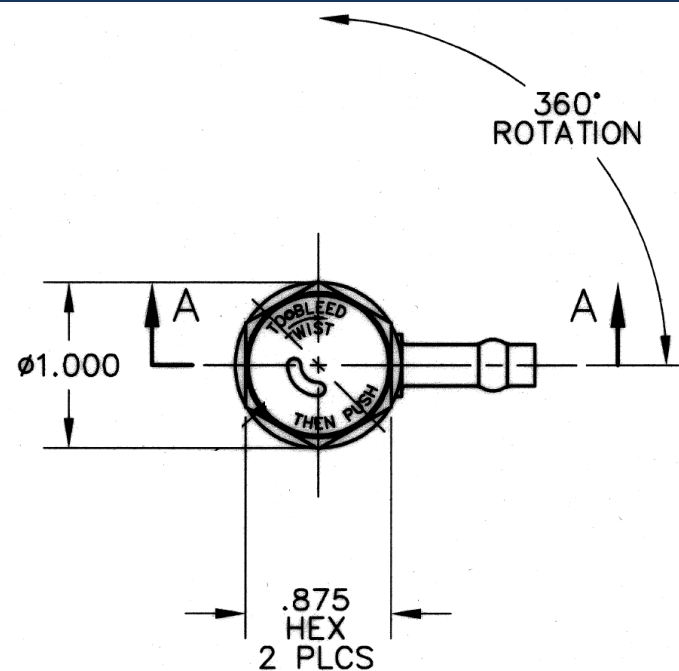
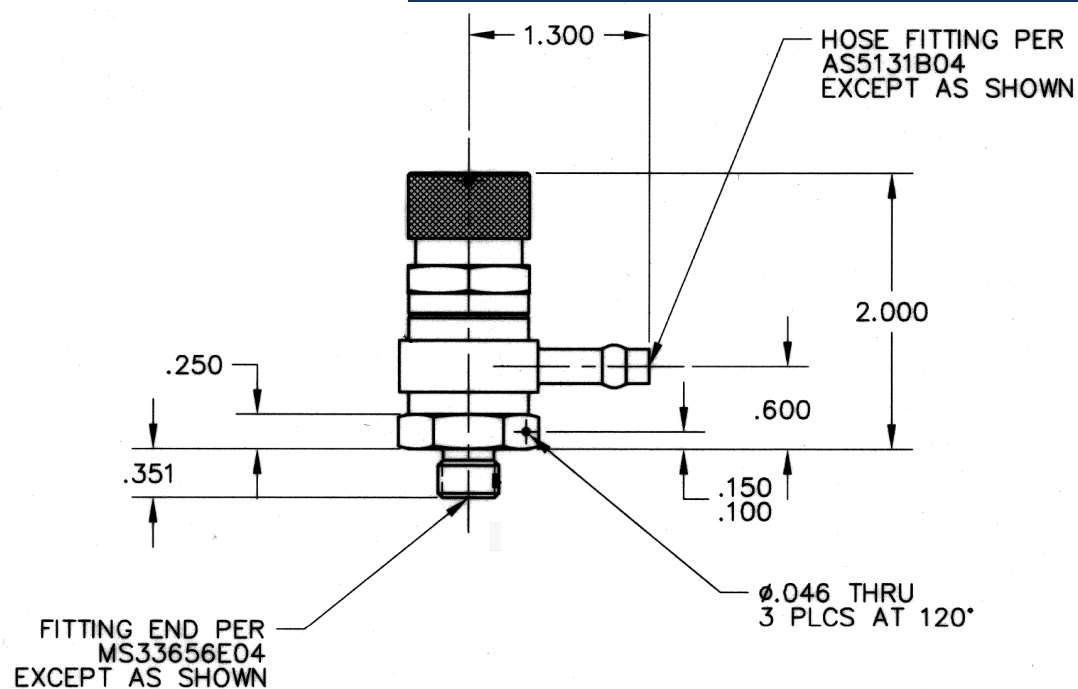
PROOF PRESSURE: 10800 PSIG

INTERNAL LEAKAGE: NONE FROM 0 TO 5400 PSID WITH NUT TORQUED
TO 55 ± 5 INCH/LBS

CATEGORY 6: MANUAL OPERATED VALVES



PART NUMBER: 2P5352, RELIEF VALVE WITH MANUAL BLEED



PERFORMANCE SPECIFICATIONS:

FLUIDS: HYDRAULIC FLUID PER MIL-PRF-83282 AND MIL-PRF-87257*

MATERIAL: BODY 6061-T651 AL

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 45 PSIG

PROOF PRESSURE: 75 PSIG

RELIEF PRESSURE: 40 PSID MIN

RESEAT PRESSURE: 36 PSID MIN

FLOW: 8.0 GPM AT 300 PSID MAX AT 77°F (RELIEF MODE)

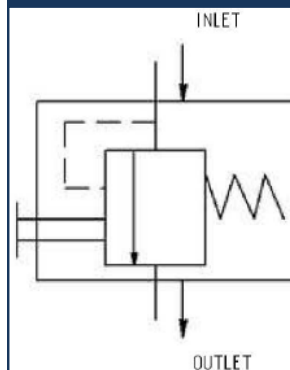
1.8 GPM MIN AT 50 PSID MAX AT 77°F (BLEED MODE)

INTERNAL LEAKAGE: ZERO AT 0 TO CRACK ON INCREASING PRESSURE
ZERO AT RESEAT ON DECREASING PRESSURE

WEIGHT: 0.18 LBS MAX

*OTHER FLUIDS MAY BE ACCEPTABLE WITH ELASTOMER CHANGE

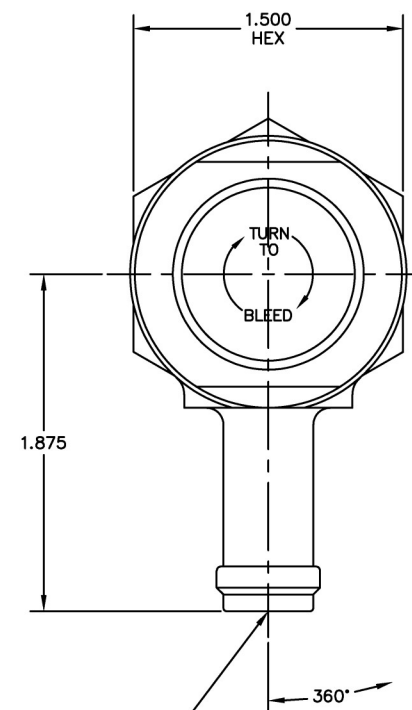
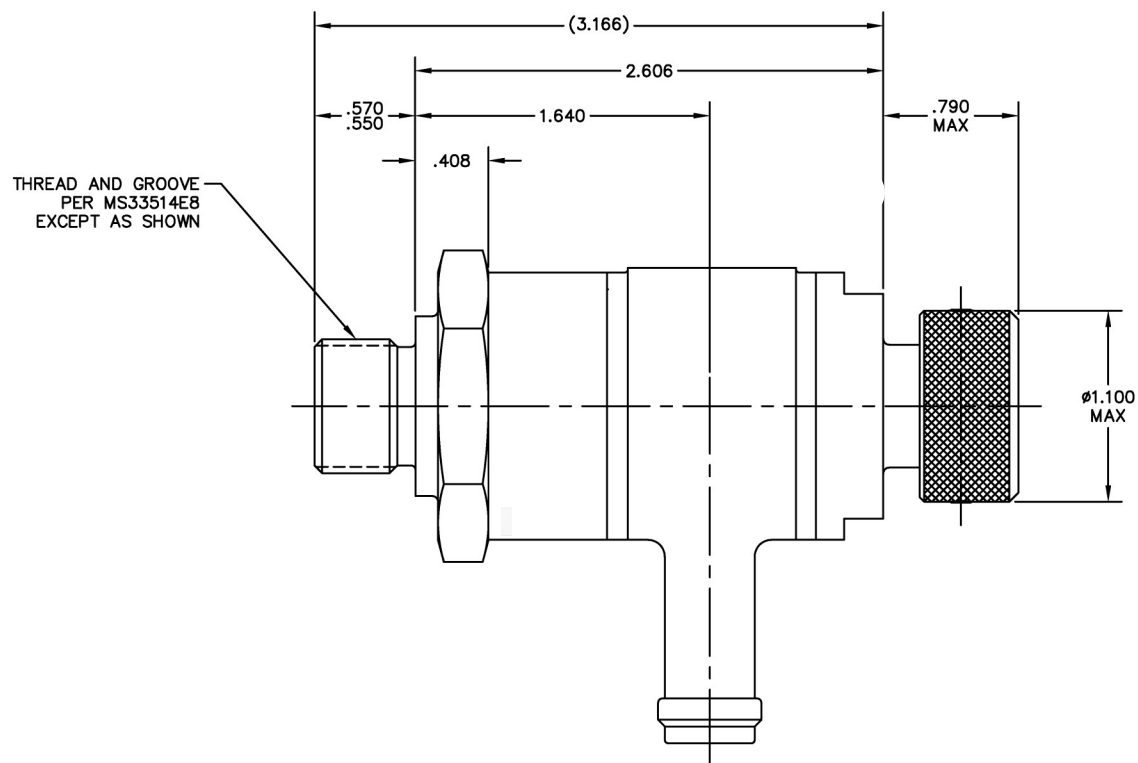
HYDRAULIC SCHEMATIC



CATEGORY 6: MANUAL OPERATED VALVES



PART NUMBER: 2P5396, RELIEF VALVE WITH MANUAL BLEED



FITTING END PER AS5132-08 EXCEPT AS SHOWN

PERFORMANCE SPECIFICATIONS:

FLUIDS: HYDRAULIC FLUID PER MIL-H-83282 AND MIL-PRF-87257*

MATERIAL: BODY 2024-T351 AL

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 150 PSIG

PROOF PRESSURE: 225 PSIG

RELIEF PRESSURE: 100 PSID REF

RESEAT PRESSURE: 80 PSID MIN

FLOW: FULL FLOW OF 7 GPM AT 125 PSID MAX (RELIEF MODE)

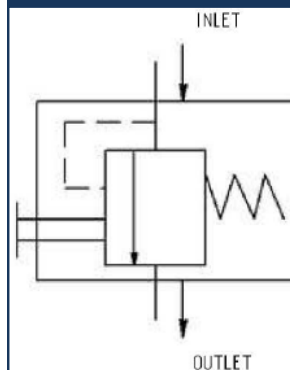
3 GPM AT 30 PSID MAX AT 24 LBS FORCE MAX (BLEED MODE)

INTERNAL LEAKAGE: ZERO AT 0 TO 55 PSID IN RELIEF DIRECTION

WEIGHT: 0.48 LBS MAX

*OTHER FLUIDS MAY BE ACCEPTABLE WITH ELASTOMER CHANGE

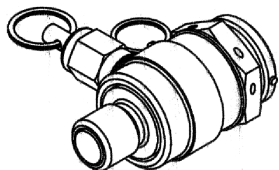
HYDRAULIC SCHEMATIC



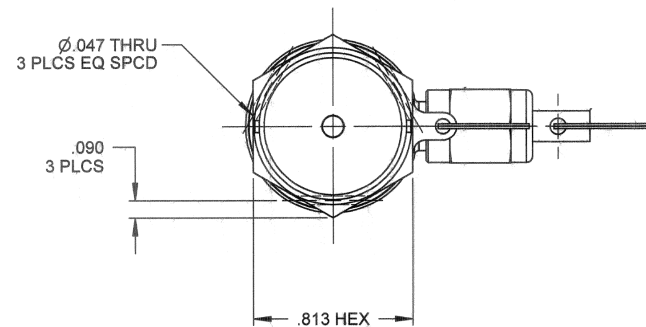
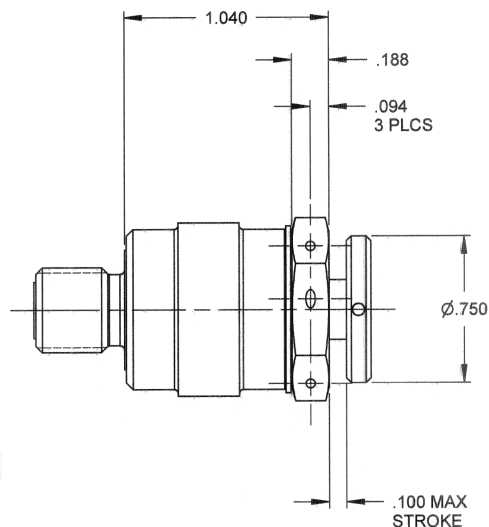
CATEGORY 6: MANUAL OPERATED VALVES



PART NUMBER: 2P5400, BLEED VALVE



ISOMETRIC VIEW
FOR REFERENCE ONLY



PERFORMANCE SPECIFICATIONS:

FLUIDS: SKYDROL*

MATERIAL: BODY 303 CRES

TEMPERATURE RANGE: -65°F TO 225°F

OPERATING PRESSURE: 1550 PSIG

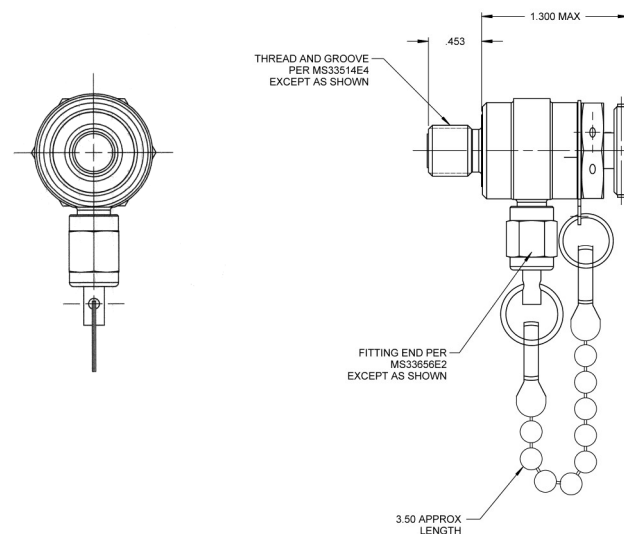
PROOF PRESSURE: 3100 PSIG

INTERNAL LEAKAGE: 1 DPM MAX AT 5 PSID
NONE AT 100 TO 1550 PSID

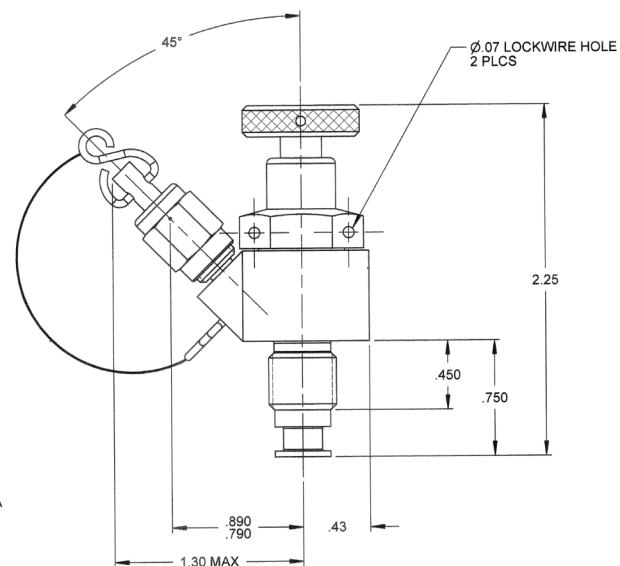
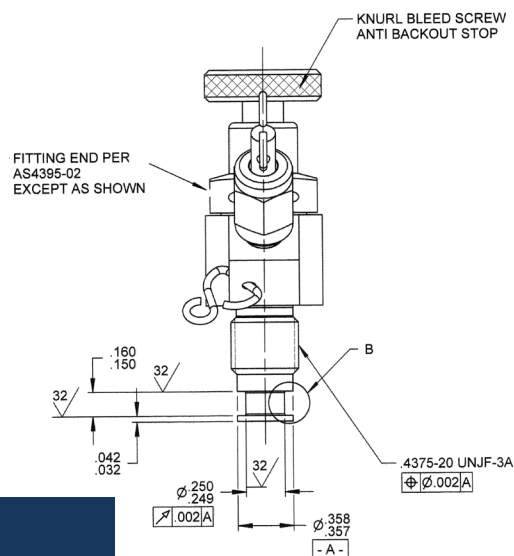
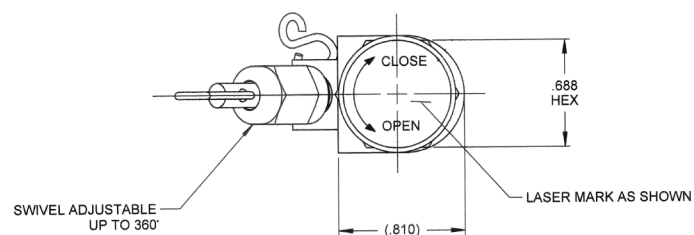
ACTUATION FORCE: 30 LBS MAX AT 500 PSI SYSTEM PRESSURE
94 LBS MAX AT 1550 PSI SYSTEM PRESSURE

WEIGHT: 0.19 LBS MAX

*OTHER FLUIDS MAY BE ACCEPTABLE WITH ELASTOMER CHANGE



CATEGORY 6: MANUAL OPERATED VALVES



PERFORMANCE SPECIFICATIONS:

MATERIAL: BODY 15-5PH CRES

TEMPERATURE RANGE: -40°F TO 200°F

OPERATING PRESSURE: 5076 PSIG

PROOF PRESSURE: 7614 PSIG

FLOW: 200 CC/MIN AT 35 PSID MAX AT 68°F

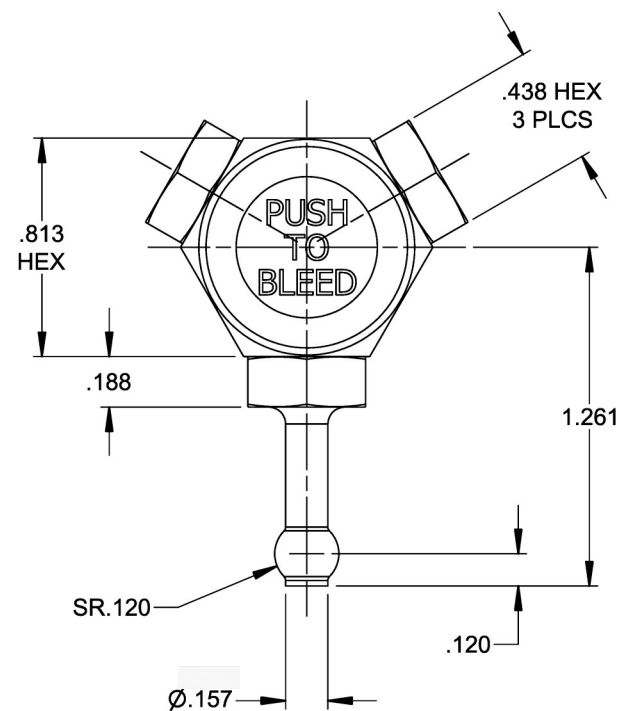
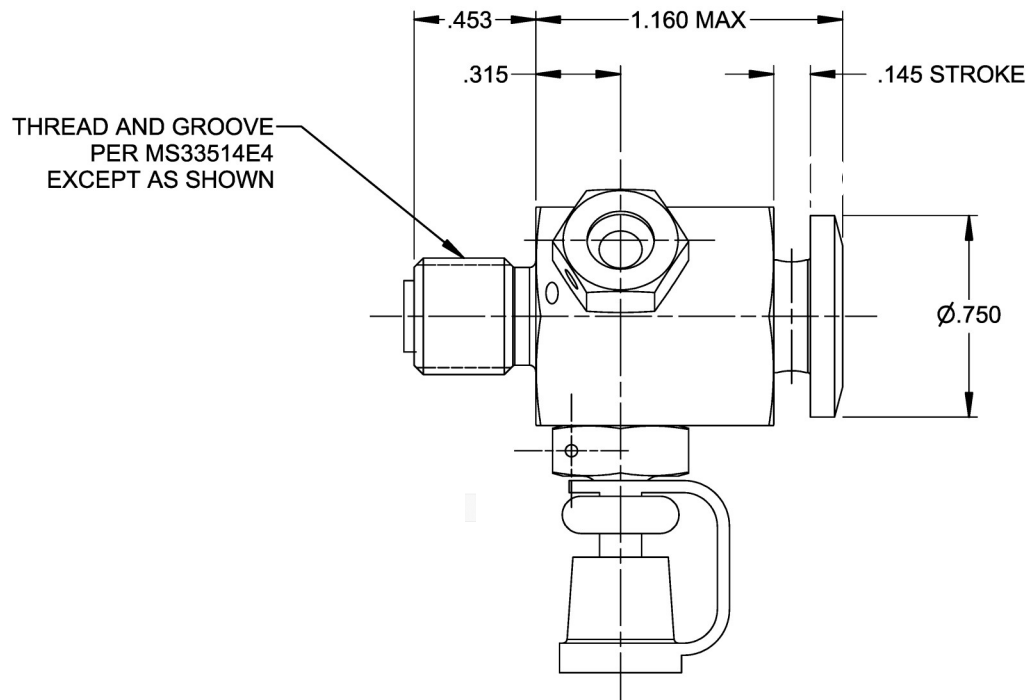
INTERNAL LEAKAGE: NONE IN CLOSED POSITION FROM 0 TO 5076 PSID

WEIGHT: 0.22 LBS MAX

*OTHER FLUIDS MAY BE ACCEPTABLE WITH ELASTOMER CHANGE



PART NUMBER: 2P5418, BLEED VALVE



PERFORMANCE SPECIFICATIONS:

FLUIDS: SKYDROL*

MATERIAL: BODY 2024-T351 AL

TEMPERATURE RANGE: -65°F TO 275°F

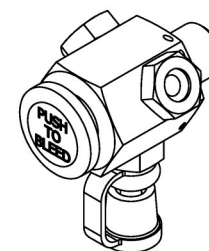
OPERATING PRESSURE: 1500 PSIG

PROOF PRESSURE: 2250 PSIG

INTERNAL LEAKAGE: NONE AT 5 TO 1500 PSID

WEIGHT: 0.079 LBS MAX

*OTHER FLUIDS MAY BE ACCEPTABLE WITH ELASTOMER CHANGE

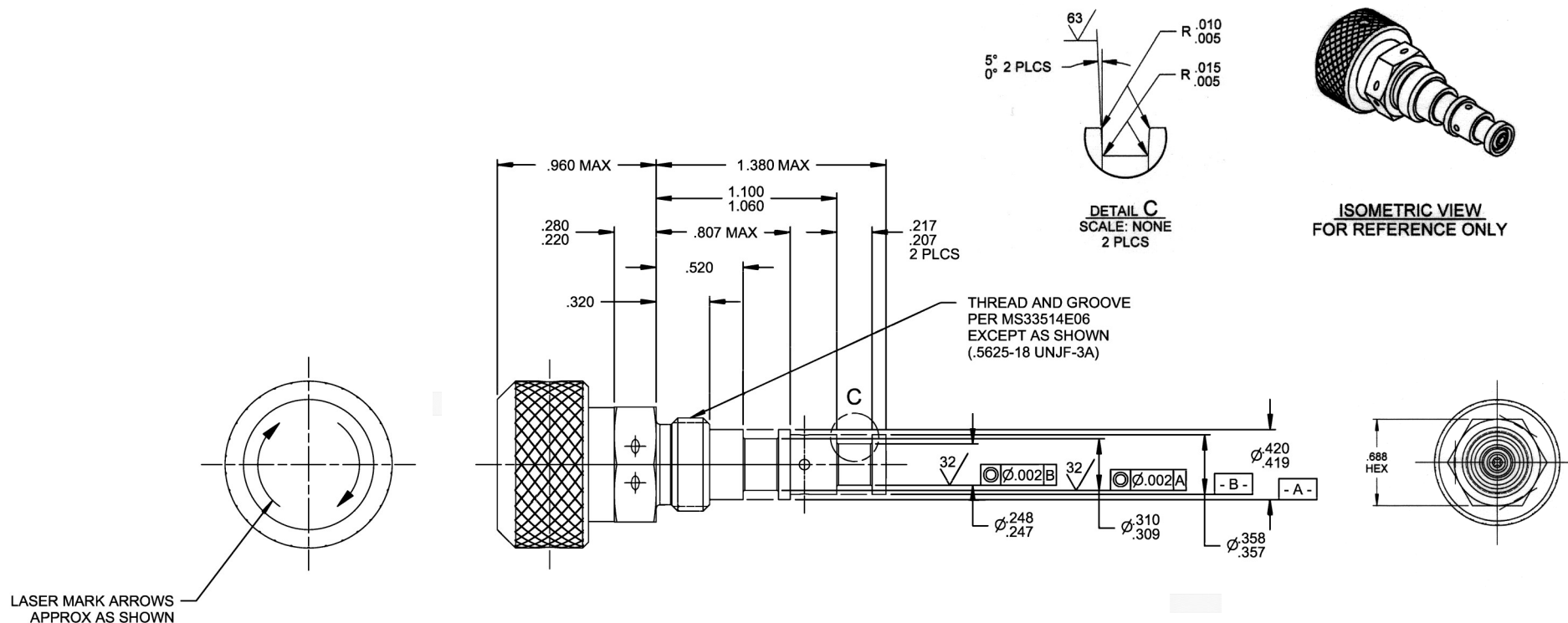


ISOMETRIC VIEW
FOR REFERENCE ONLY

CATEGORY 6: MANUAL OPERATED VALVES



PART NUMBER: 2P5472, ACCUMULATOR FILL VALVE



PERFORMANCE SPECIFICATIONS:

FLUIDS: HYDRAULIC FLUID PER MIL-H-83282*

MATERIAL: BODY 17-4PH CRES

POPPET 440C CRES

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 3100 PSIG

PROOF PRESSURE: 4500 PSIG

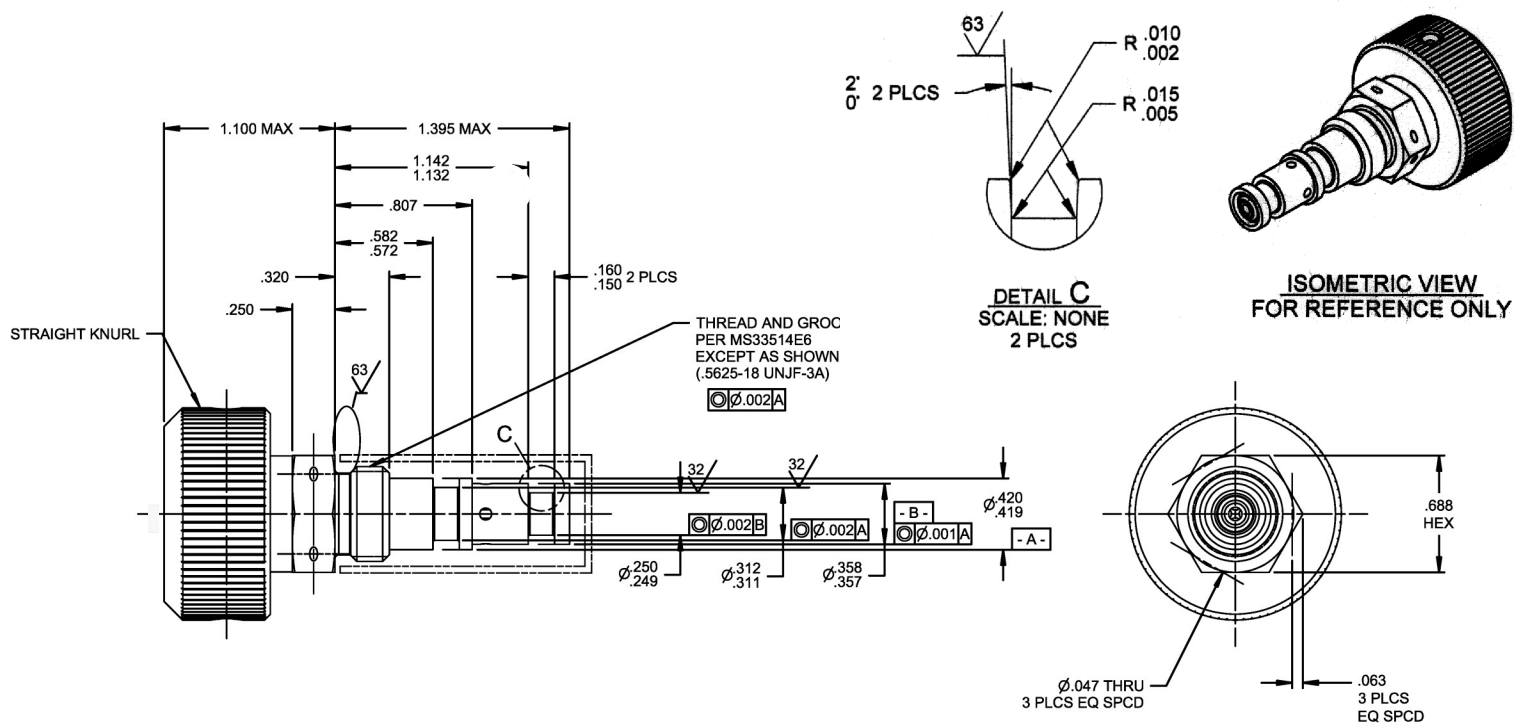
FLOW: 0.6 IN³ IN 2 SECONDS

INTERNAL LEAKAGE: 1 DPH MAX AT 3100 PSIG

WEIGHT: 0.40 LBS MAX

*OTHER FLUIDS MAY BE ACCEPTABLE WITH ELASTOMER CHANGE

CATEGORY 6: MANUAL OPERATED VALVES



FLUIDS: PHOSPHATE ESTER FLUID TYPE IV OR TYPE V PER NSA 307110*

MATERIAL: BODY: 15-5PH CRES

POPPET 440C CRES

TEMPERATURE RANGE: -104°F TO 203°F

OPERATING PRESSURE: 5075 PSIG

PROOF RETURN PRESSURE: 5075 PSIG

PROOF SUPPLY PRESSURE: 8700 PSIG

FLOW: 3.2 GPM MINIMUM AT 5075 PSIG SUPPLY, 174 PSIG
RETURN AND FLUID TEMPERATURE OF 100°F

INTERNAL LEAKAGE: 1 DPM MAX AT (5075 PSIG) SUPPLY AND ZERO RETURN

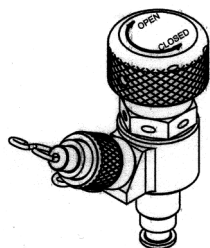
WEIGHT: 0.20 LBS MAX

*OTHER FLUIDS MAY BE ACCEPTABLE WITH ELASTOMER CHANGE



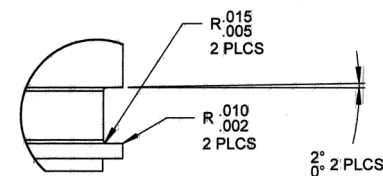
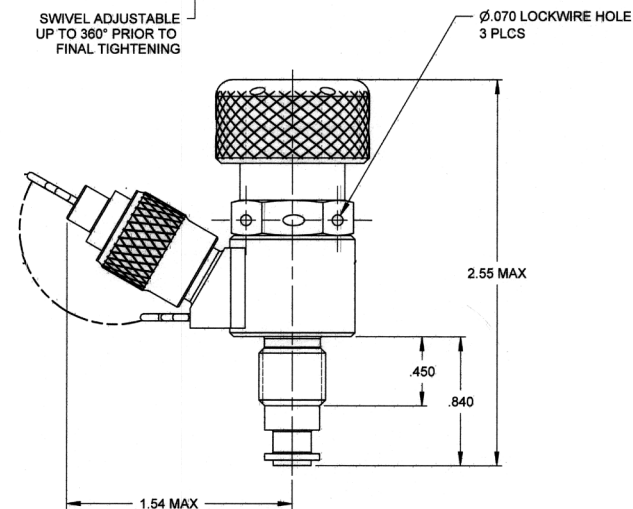
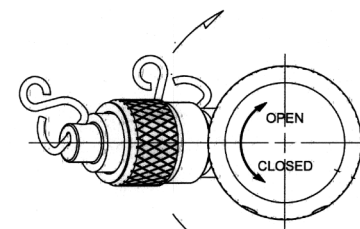
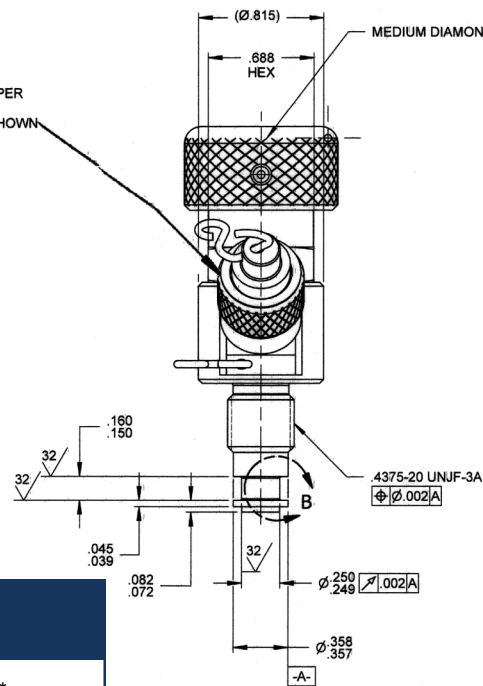


PART NUMBER: 2P5524, SAMPLING VALVE



ISOMETRIC VIEW
FOR REFERENCE ONLY

FITTING END PER
EN8123-04E
EXCEPT AS SHOWN



DETAIL B
SCALE 4 : 1

PERFORMANCE SPECIFICATIONS:

FLUIDS: PHOSPHATE ESTER BASE FLUID PER NSA 307110 TYPE IV OR V*

MATERIAL: BODY 15-5PH CRES

POPPET VESPEL SP-1

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 5076 PSIG

PROOF PRESSURE: 7614 PSIG

FLOW: 150 TO 400 CC/MIN AT 5076 PSID MAX AT 68°F

INTERNAL LEAKAGE: NONE IN CLOSED POSITION FROM 0 TO 5076 PSID

WEIGHT: 0.31 LBS MAX

*OTHER FLUIDS MAY BE ACCEPTABLE WITH ELASTOMER CHANGE

CATEGORY 6: MANUAL OPERATED VALVES



CRISSAIR HAS VARIOUS OTHER MANUAL/ROTARY SHUTOFF VALVES NOT LISTED IN THE CATALOG WITH DIFFERENT MATERIALS, FITTINGS, AND SIZE CONFIGURATIONS.

CONTACT CRISSAIR FOR ADDITIONAL INFORMATION/DRAWINGS AT

(661) 367-3300 OR SALES@CRISSAIR.COM.

YOU CAN ALSO VISIT WWW.CRISSAIR.COM.

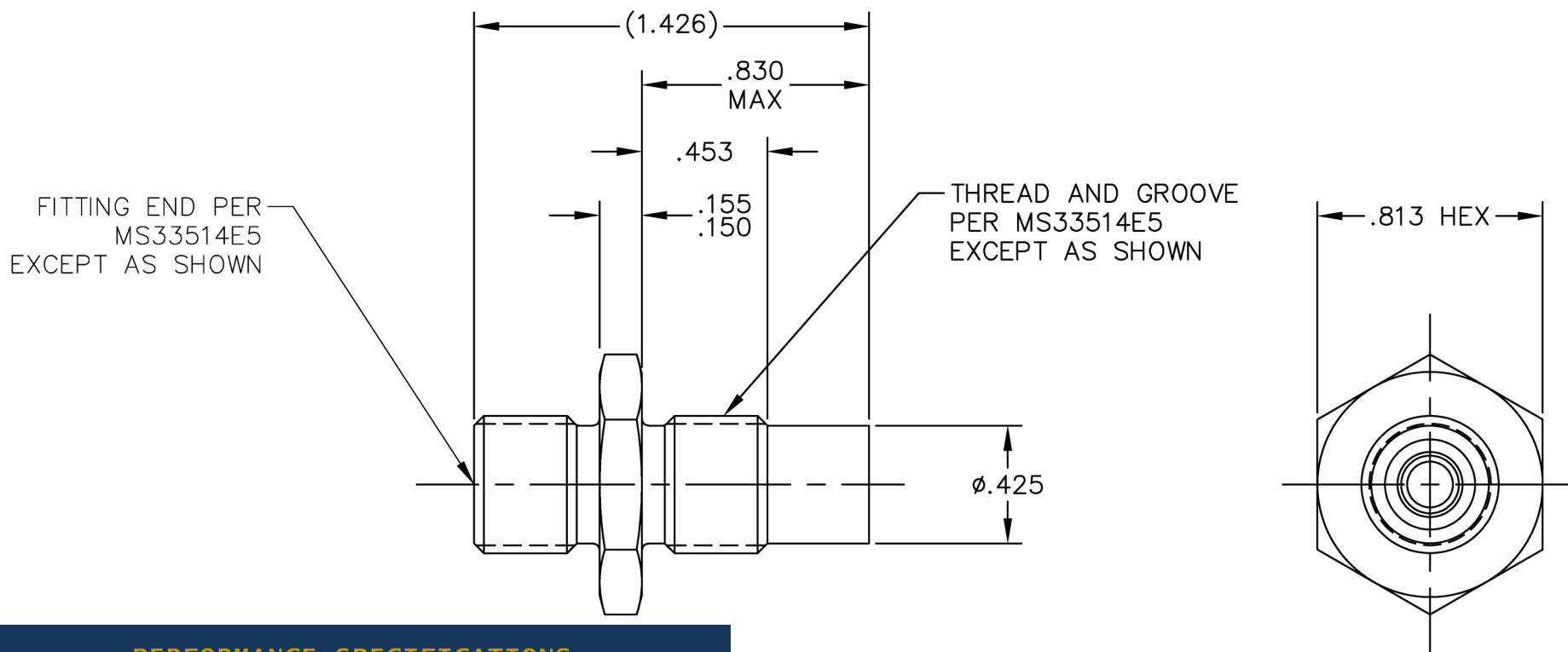
FUSES/DRAIN VALVES

- Flow Fuses, also called Drain Valves for some applications, are designed to remain open and allow free flow until the differential pressure across the valve increases beyond a specified value.
- Flow Fuses are used to stop the flow of fluid in the event of a sudden increase in flow beyond allowable limits, often times caused by a line or component failure downstream. The Flow Fuse Valve will protect the system from rapidly losing fluid.
- Drain Valve applications generally drain residual fluid from depressurized systems, but close and remain closed when system pressures are in the normal operating ranges.





PART NUMBER: 2D2386, FLOW FUSE



PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT HYDRAULIC, LUBRICATION, OR FUEL FLUID

MATERIAL: BODY 15-5PH CRES

POPPET PH13-8MO CRES

TEMPERATURE RANGE: (FLUID OPERATING) -67°F TO 230°F

(AMBIENT OPERATING) -67°F TO 158°F

(FLUID NON-OPERATING) -67°F TO 248°

(AMBIENT NON-OPERATING) -67°F TO 185°F

OPERATING PRESSURE: 2150-2350 PSIG

8500 PSIG SPIKES

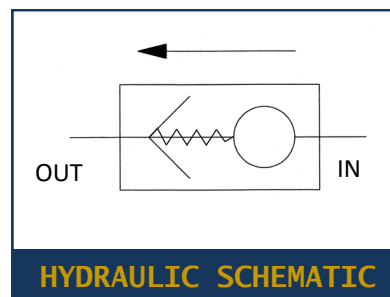
PROOF PRESSURE: 8500 PSIG FOR 3 MINUTES

CLOSING PRESSURE: 5 TO 15 PSID

FLOW: 2.6 GPM AT 50 PSID MAX USING MIL-PRF-87257 AT 70°F

INTERNAL LEAKAGE: 1 CC/H MAX AT 1000 PSID

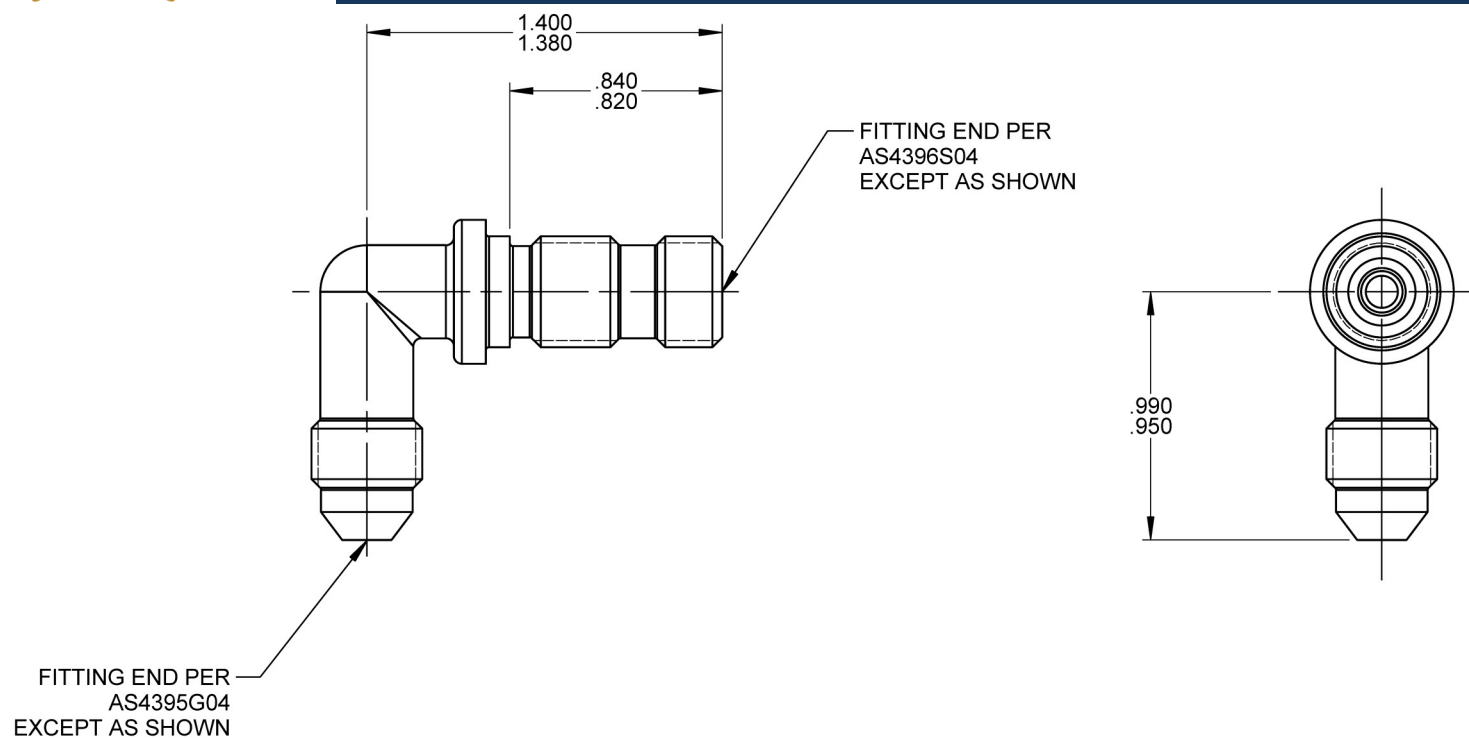
WEIGHT: 0.070 LBS MAX



CATEGORY 7: FUSE/DRAIN VALVES

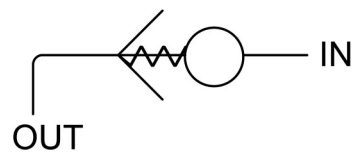


PART NUMBER: 2D2406, FLOW FUSE



PERFORMANCE SPECIFICATIONS:

FLUIDS: ALL AIRCRAFT HYDRAULIC FLUIDS & AIR
MATERIAL: BODY 304 CRES
POPPET 440C CRES
TEMPERATURE RANGE: -65°F TO 500°F
OPERATING PRESSURE: 70 PSIG
PROOF PRESSURE: 105 PSIG
CLOSING PRESSURE: 2 TO 5 PSID
INTERNAL LEAKAGE: 200 CC/MIN OF AIR AT 70 PSID
WEIGHT: 0.087 LBS MAX

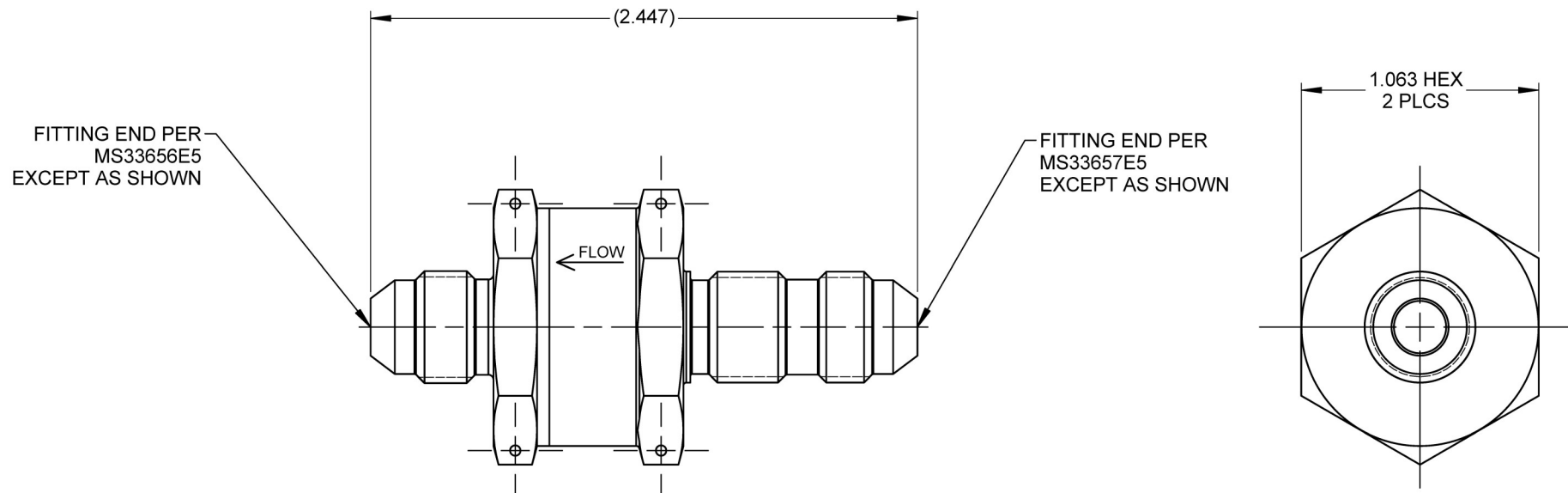


HYDRAULIC SCHEMATIC

CATEGORY 7: FUSE/DRAIN VALVES



PART NUMBER: 2D2408, DRAIN VALVE



PERFORMANCE SPECIFICATIONS:

FLUIDS: ALL AIRCRAFT HYDRAULIC FLUIDS AND AIR

MATERIAL: BODY 321 CRES

POPPET 440C CRES

TEMPERATURE RANGE: -65°F TO 900°F

OPERATING PRESSURE: 0 TO 325 PSIG

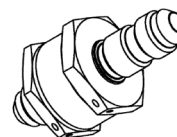
PROOF PRESSURE: 650 PSIG AT 900°F

CLOSING PRESSURE: 8 PSID MINIMUM

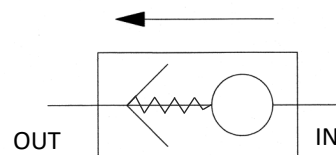
REOPEN PRESSURE: 4 TO 8 PSID

INTERNAL LEAKAGE: 400 SCC/MIN MAX AT 325 PSID

WEIGHT: 0.26 LBS MAX



ISOMETRIC VIEW
FOR REFERENCE ONLY

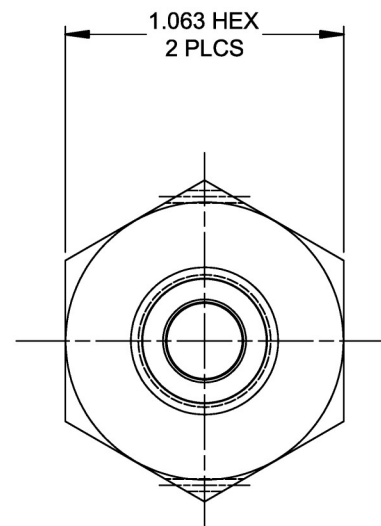
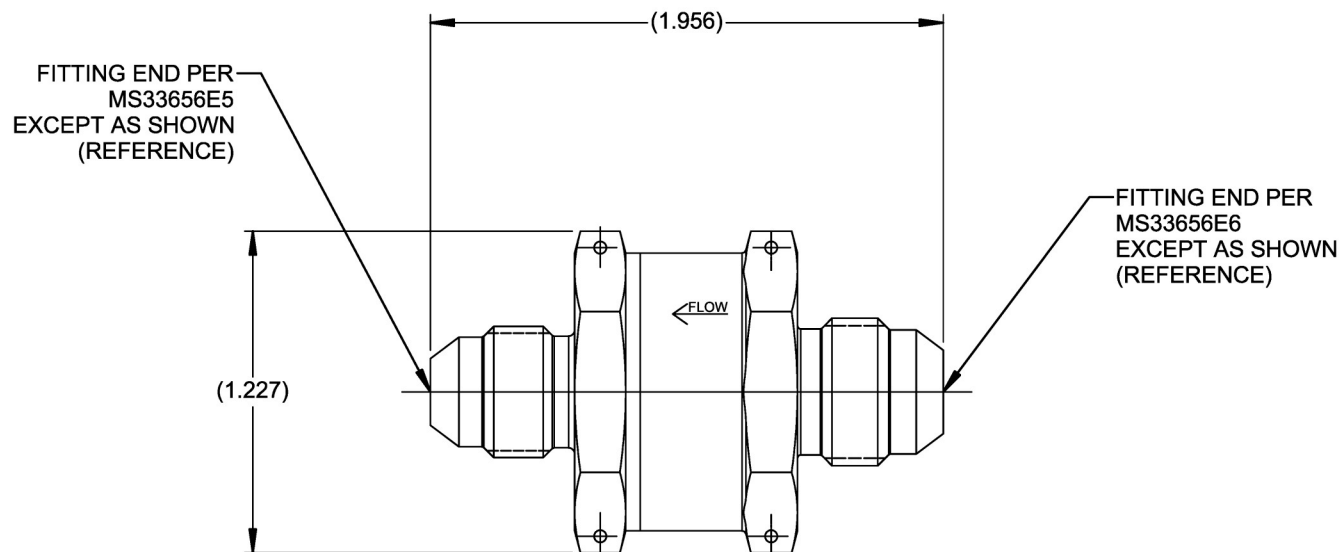


HYDRAULIC SCHEMATIC

CATEGORY 7: FUSE/DRAIN VALVES



PART NUMBER: 2D2410, DRAIN VALVE



PERFORMANCE SPECIFICATIONS:

FLUIDS: ALL AIRCRAFT HYDRAULIC FLUID AND AIR

MATERIAL: BODY 321 CRES

POPPET 440C CRES

TEMPERATURE RANGE: -65°F TO 900°F

OPERATING PRESSURE: 0 TO 325 PSIG

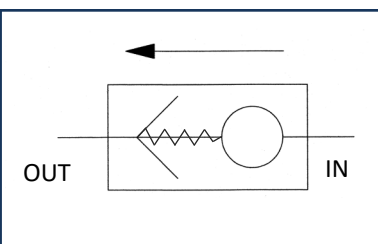
PROOF PRESSURE: 650 PSIG AT 900°F

CLOSING PRESSURE: 8 PSID MINIMUM

REOPEN PRESSURE: 4 TO 8 PSID

INTERNAL LEAKAGE: 400 SCC/MIN MAX AT 325 PSID AIR

WEIGHT: 0.24 LBS MAX

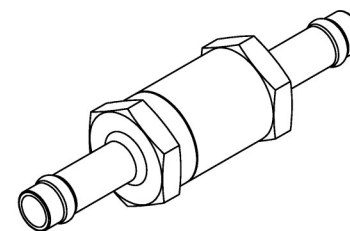


HYDRAULIC SCHEMATIC

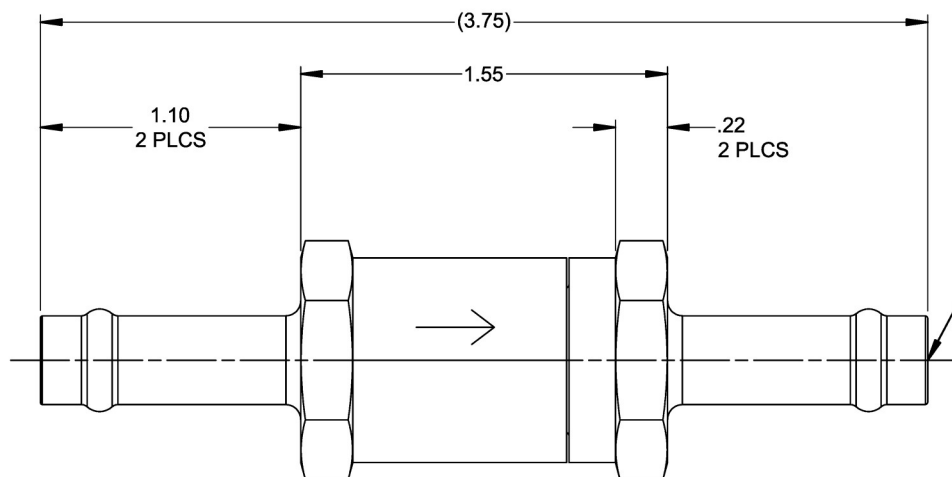
CATEGORY 7: FUSE/DRAIN VALVES



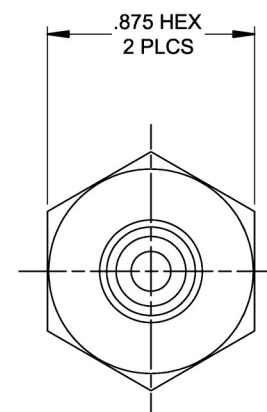
PART NUMBER: 2D2412, DRAIN VALVE



ISOMETRIC VIEW
FOR REFERENCE ONLY



BOTH FITTING ENDS
PER AS5131B06
EXCEPT AS SHOWN



PERFORMANCE SPECIFICATIONS:

FLUIDS: WATER AND AIR

MATERIAL: BODY 2024-T351 AL

TEMPERATURE RANGE: -4°F TO 131°F

OPERATING PRESSURE: -4 TO 9 PSID

PROOF PRESSURE: 13.6 PSID

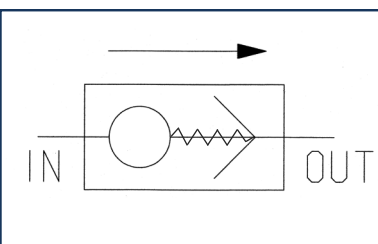
CLOSING PRESSURE: 5 PSID MIN

REOPEN PRESSURE: 5 PSID MAX

FLOW: 20 GPH AT 1 PSIG MIN (WATER FLOWING TO AMBIENT)

INTERNAL LEAKAGE: 1 DPM MAX AT 9 PSIG

WEIGHT: 0.096 LBS MAX

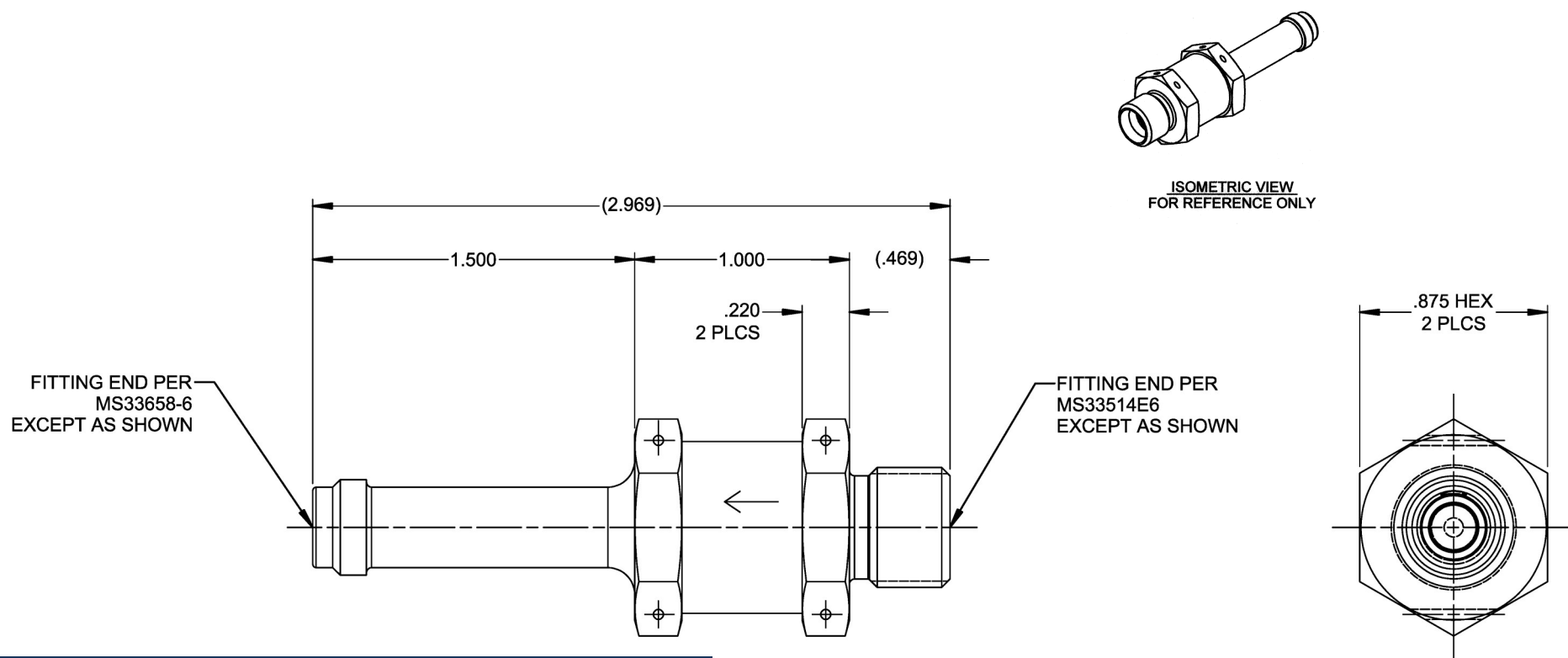


HYDRAULIC SCHEMATIC

CATEGORY 7: FUSE/DRAIN VALVES



PART NUMBER: 2D2416, DRAIN VALVE



PERFORMANCE SPECIFICATIONS:

FLUIDS: WATER AND AIR

MATERIAL: BODY 7075-T73 AL

POPPET 7075-T73 AL

TEMPERATURE RANGE: -65°F TO 122°F

OPERATING PRESSURE: 20 PSIG

PROOF PRESSURE: 30 PSIG

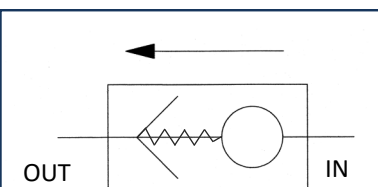
CLOSING PRESSURE: SHALL BE CLOSED FROM 1 TO 30 PSID

RE-OPEN PRESSURE: SHALL BE OPEN BELOW 2 PSID

FLOW: 500 MILLILITERS PER MINUTE MINIMUM AT 20 PSID (WATER)

INTERNAL LEAKAGE: 0 AT 10 PSID

WEIGHT: 0.07 LBS MAX

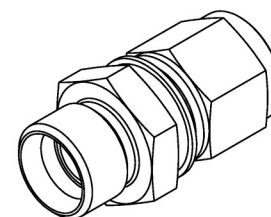
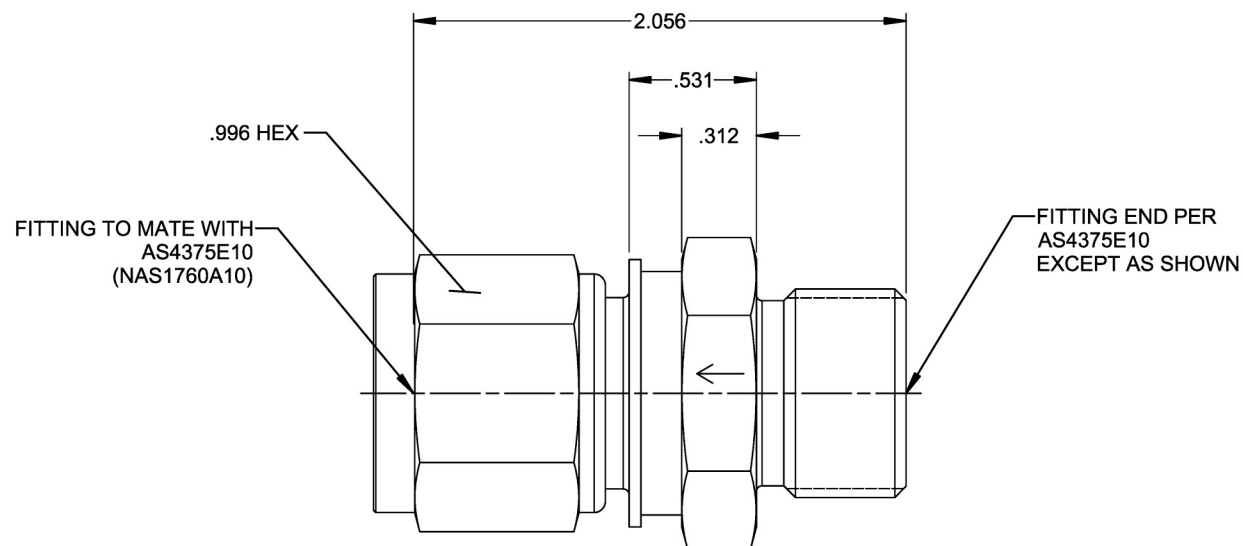


HYDRAULIC SCHEMATIC

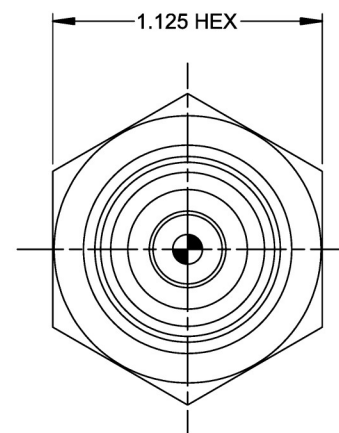
CATEGORY 7: FUSE/DRAIN VALVES



PART NUMBER: 2D2420, DRAIN VALVE



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FOR REFERENCE ONLY



PERFORMANCE SPECIFICATIONS:

FLUIDS: ALL AIRCRAFT HYDRAULIC FLUIDS

MATERIAL: BODY 15-5PH CRES

POPPET 440C CRES

SWIVEL NUT 304 CRES

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 80 PSIG (FLOW DIRECTION)

3000 PSIG (CHECK DIRECTION)

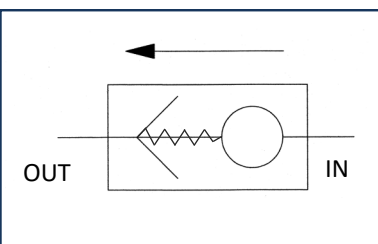
PROOF PRESSURE: 4500 PSIG

CLOSING PRESSURE: 10 TO 15 PSID (CHECK DIRECTION)

FLOW: 16 GPM AT 80 PSID MAX

INTERNAL LEAKAGE (CHECK DIRECTION): 5 DPM MAX AT 15 TO 3000 PSID

WEIGHT: 0.372 LBS MAX

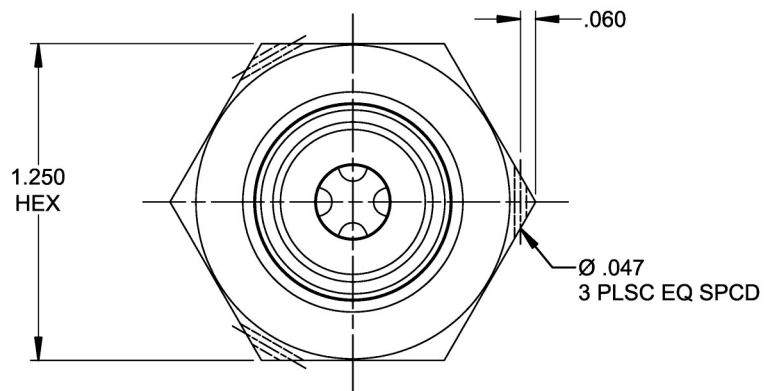
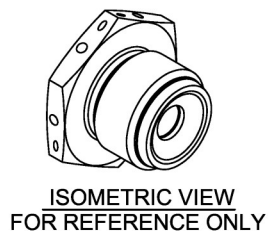
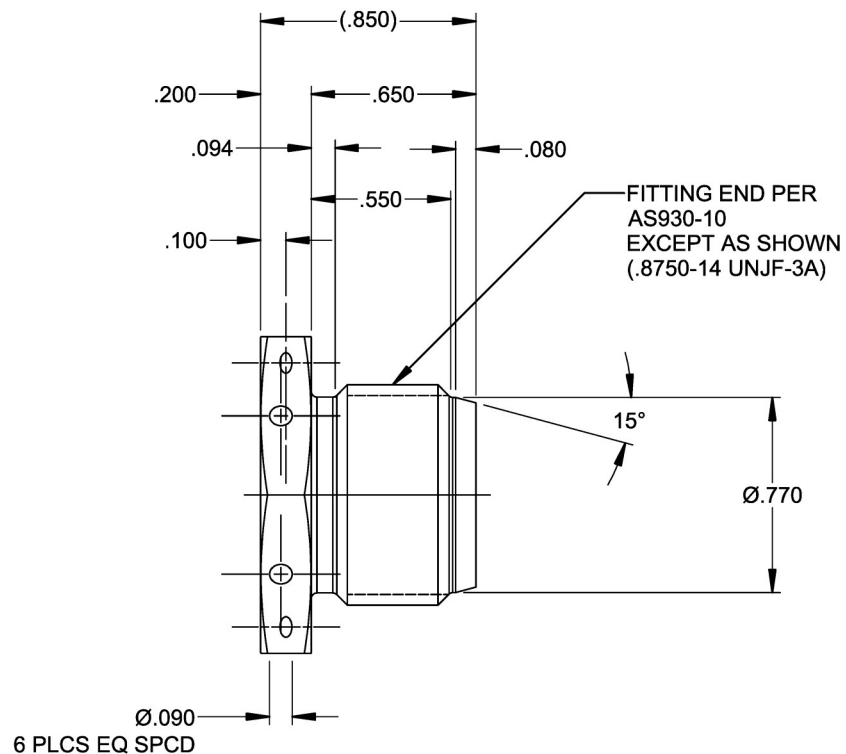


HYDRAULIC SCHEMATIC

CATEGORY 7: FUSE/DRAIN VALVES



PART NUMBER: 2D2424, DUCT DRAIN BLEED



PERFORMANCE SPECIFICATIONS:

FLUIDS: BLEED AIR AND WATER

MATERIAL: BODY 304L CRES

POPPET PH13-8MO CRES

TEMPERATURE RANGE: -67°F TO 500°F

OPERATING PRESSURE: 56 PSIG MAX AT 450°F

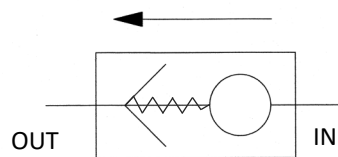
PROOF PRESSURE: 210 PSIG AT 450°F

CLOSING PRESSURE: 6 PSID MAX

REOPENING PRESSURE: 6 PSID MAX

INTERNAL LEAKAGE: 20 CC/MIN MAX AT 10 TO 50 PSID

WEIGHT: 0.151 LBS MAX

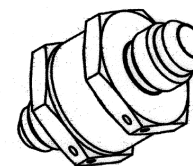


HYDRAULIC SCHEMATIC

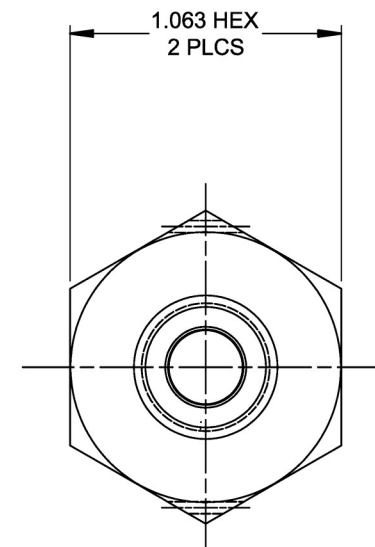
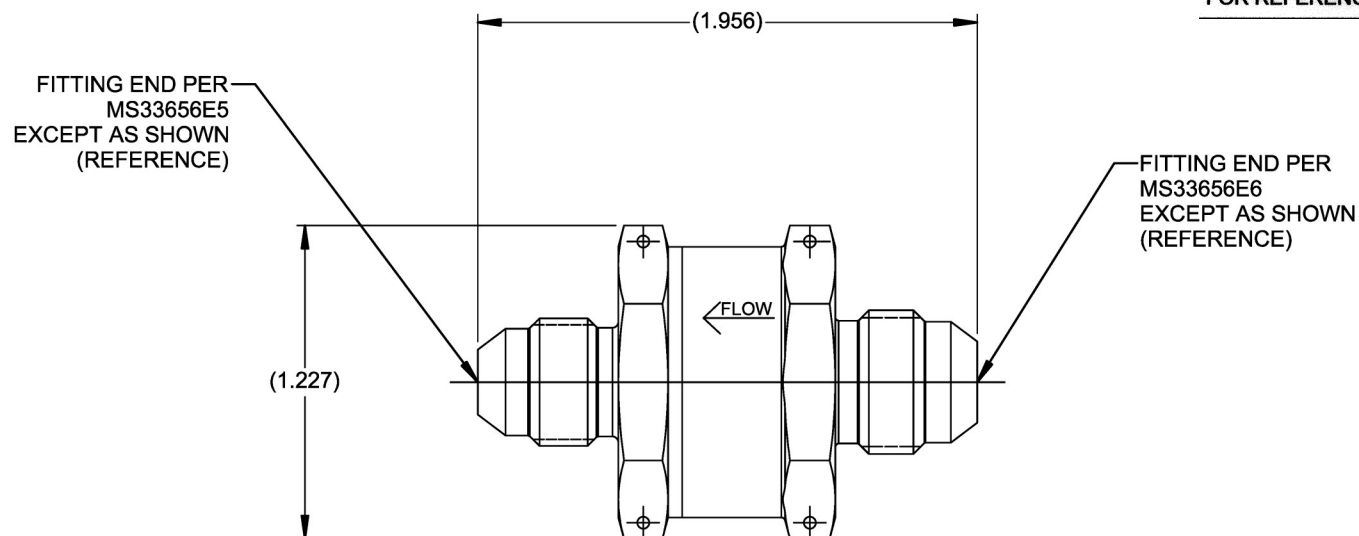
CATEGORY 7: FUSE/DRAIN VALVES



PART NUMBER: 2D2426, DUCT DRAIN BLEED



ISOMETRIC VIEW
FOR REFERENCE ONLY



PERFORMANCE SPECIFICATIONS:

FLUIDS: AIR

MATERIAL: BODY 321 CRES

POPPET 440C CRES

TEMPERATURE RANGE: -65°F TO 900°F

OPERATING PRESSURE: 0 TO 325 PSIG

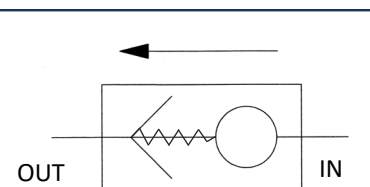
PROOF PRESSURE: 650 PSIG AT 900°F

CLOSING PRESSURE: 8 TO 15 PSID

REOPENING PRESSURE: 20 PSID MAX

INTERNAL LEAKAGE: 400 SCC/MIN MAX AT 325 PSID (AIR)

WEIGHT: 0.24 LBS MAX

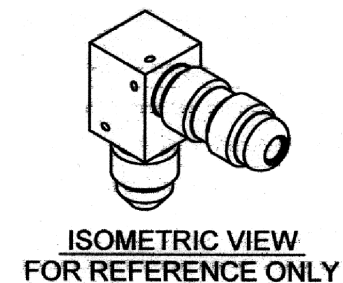
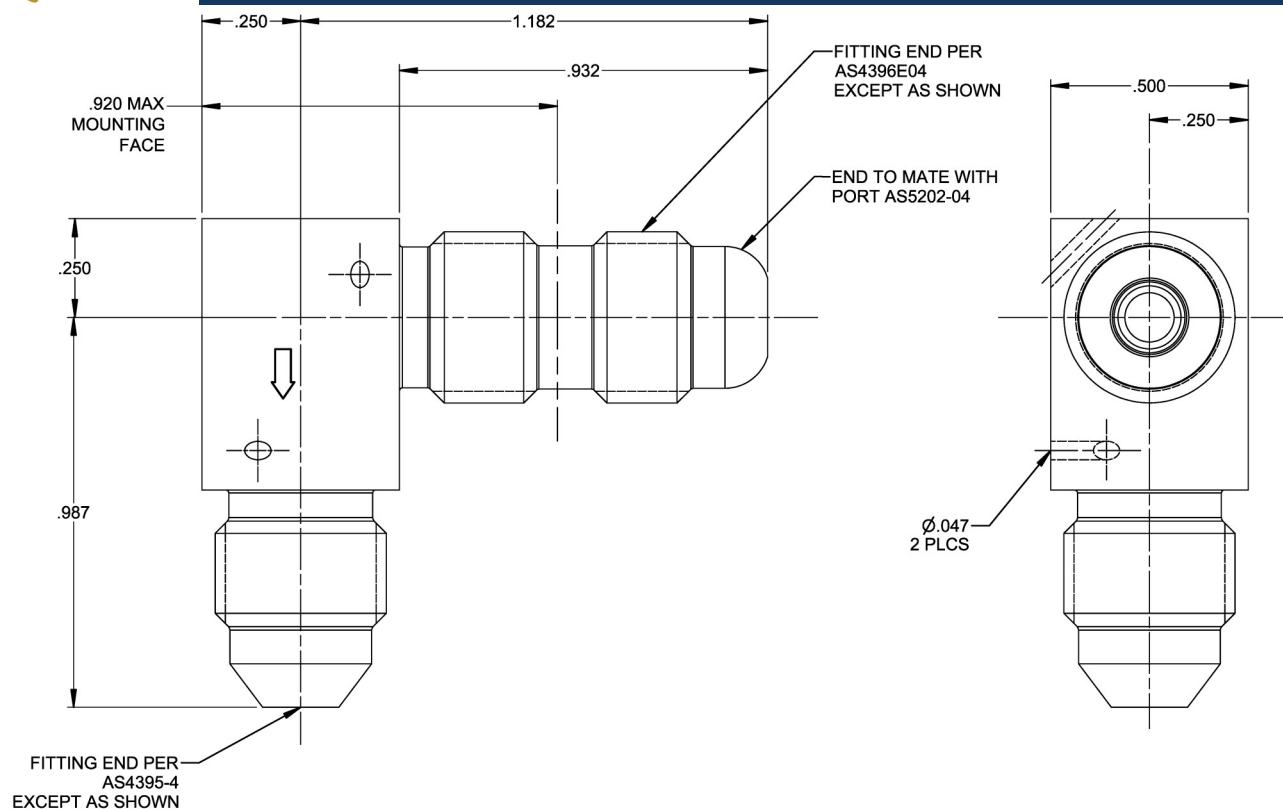


HYDRAULIC SCHEMATIC

CATEGORY 7: FUSE/DRAIN VALVES

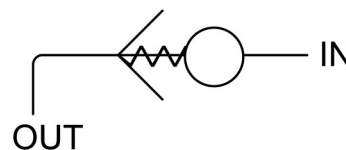


PART NUMBER: 2D2428, ELBOW DRAIN VALVE



PERFORMANCE SPECIFICATIONS:

FLUIDS: AVIATION FUELS, FUEL VAPORS AND AIR
MATERIAL: BODY 304 CRES
POPPET 440C CRES
TEMPERATURE RANGE: -65°F TO 800°F
OPERATING PRESSURE: 200 PSIG
PROOF PRESSURE: 300 PSIG
CLOSING PRESSURE: 2.0 TO 5.0 PSID ON GRADUAL APPLICATION
OF SYSTEM PRESSURE
INTERNAL LEAKAGE: 1 DPM MAX AT 200 PSID
WEIGHT: 0.144 LBS MAX

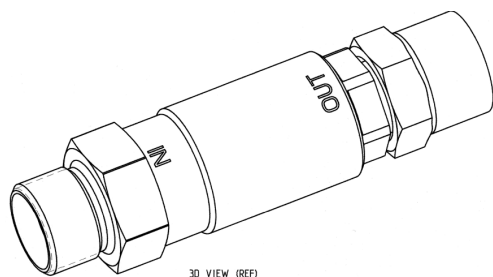


HYDRAULIC SCHEMATIC

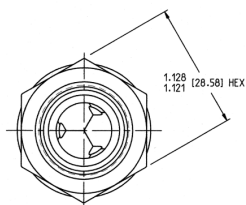
CATEGORY 7: FUSE/DRAIN VALVES



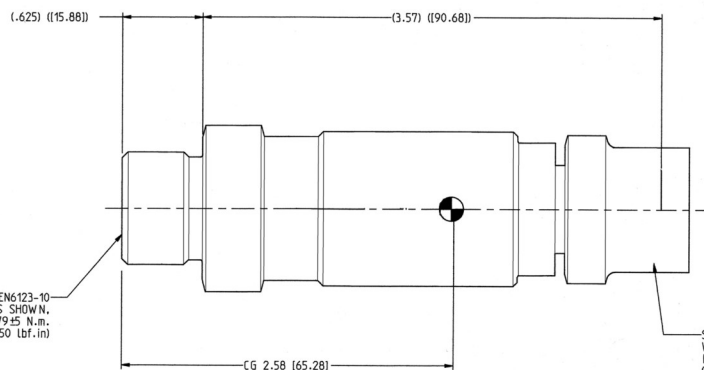
PART NUMBER: 5F0002-X, FLOW FUSE



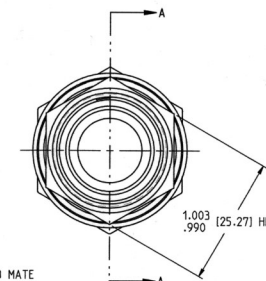
3D VIEW (REF)



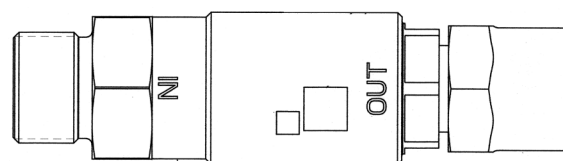
END PER EN6123-10
EXCEPT AS SHOWN.
INSTALLATION TORQUE 79±5 N.m.
(700±50 lbf.in)



SECTION A-A



SWIVEL FITTING TO MATE
WITH EN6123-10.
INSTALLATION TORQUE 79±5 N.m.
(700±50 lbf.in)



PERFORMANCE SPECIFICATIONS:

FLUIDS: SKYDROL*

MATERIAL: BODY 17-4PH CRES

POPPET PH13-8 MO CRES

TEMPERATURE RANGE: (FLUID) -67°F TO 158°F
(AMBIENT) -67°F TO 185°F

OPERATION: VALVE IS OPEN UP TO 21.9 GPM
VALVE IS CLOSED BY 26.4 GPM
CLOSING VOLUME IS 2.64 GALLONS MAX
VALVE REOPENS BELOW 29 PSID

OPERATING PRESSURE: 5075 PSIG

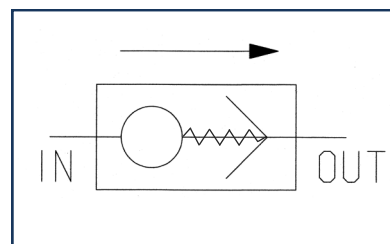
PROOF PRESSURE: 7613 PSIG

FLOW: 18.5 GPM AT 43.5 PSID MAX AND 68°F TO 95°F

INTERNAL LEAKAGE: 2 CC/MIN MAXIMUM AT 72.5 PSID
1 CC/MIN MAXIMUM AT 5075 PSID

WEIGHT: 0.88 LBS MAX

*OTHER FLUIDS MAY BE ACCEPTABLE WITH ELASTOMER CHANGE



HYDRAULIC SCHEMATIC

CATEGORY 7: FUSE/DRAIN VALVES



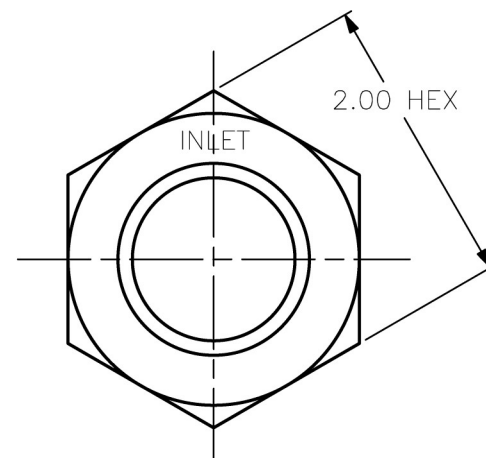
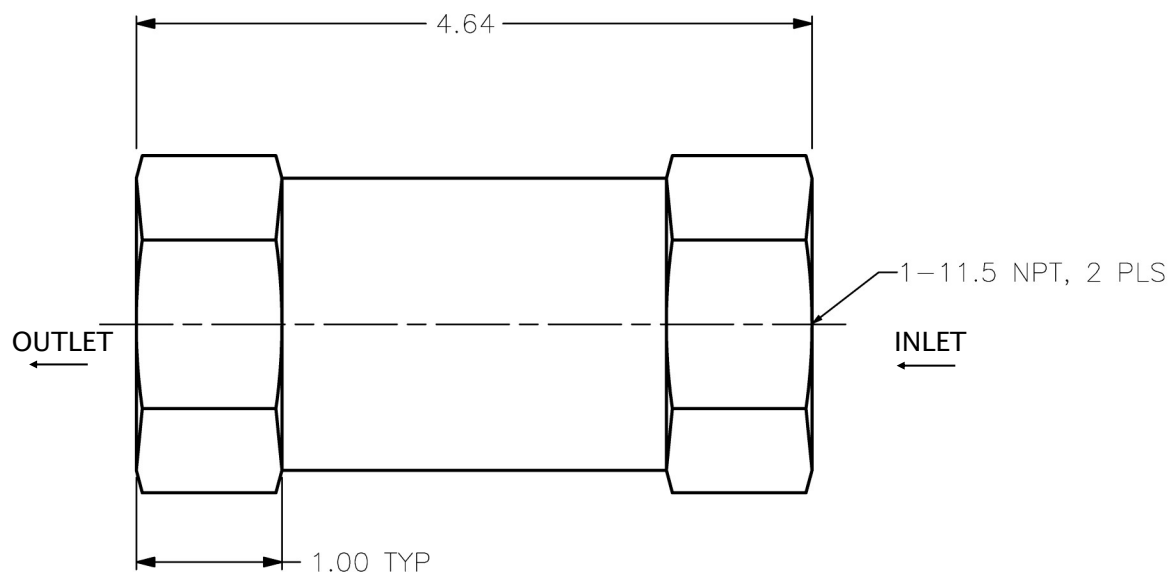
WEIGHT: 0.084 LBS MAX



CATEGORY 7: FUSE/DRAIN VALVES



PART NUMBER: 32130, FLOW FUSE



PERFORMANCE SPECIFICATIONS:

FLUIDS: MIL-L-23699*

MATERIAL: BODY 303 CRES

POPPET 15-5PH CRES

TEMPERATURE RANGE: -65°F TO 200°F

OPERATION: VALVE IS OPEN AT 5 PSI MINIMUM ON FALLING PRESSURE

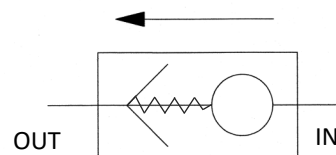
VALVE IS CLOSING AT 1.3 GPM AND 5 PSID

VALVE IS CLOSED BY 7 ± 1 PSID

PROOF PRESSURE: 4500 PSIG

INTERNAL LEAKAGE: 0.05 CC MAXIMUM IN 5 MINUTES AT 10 TO 3000 PSID

*OTHER FLUIDS MAY BE ACCEPTABLE WITH ELASTOMER CHANGE



HYDRAULIC SCHEMATIC

CATEGORY 7: FUSE/DRAIN VALVES



CRISSAIR HAS VARIOUS OTHER FUSE AND DRAIN VALVES NOT LISTED IN THE CATALOG WITH DIFFERENT MATERIALS, FITTINGS, AND SIZE CONFIGURATIONS.

CONTACT CRISSAIR FOR ADDITIONAL INFORMATION/DRAWINGS AT

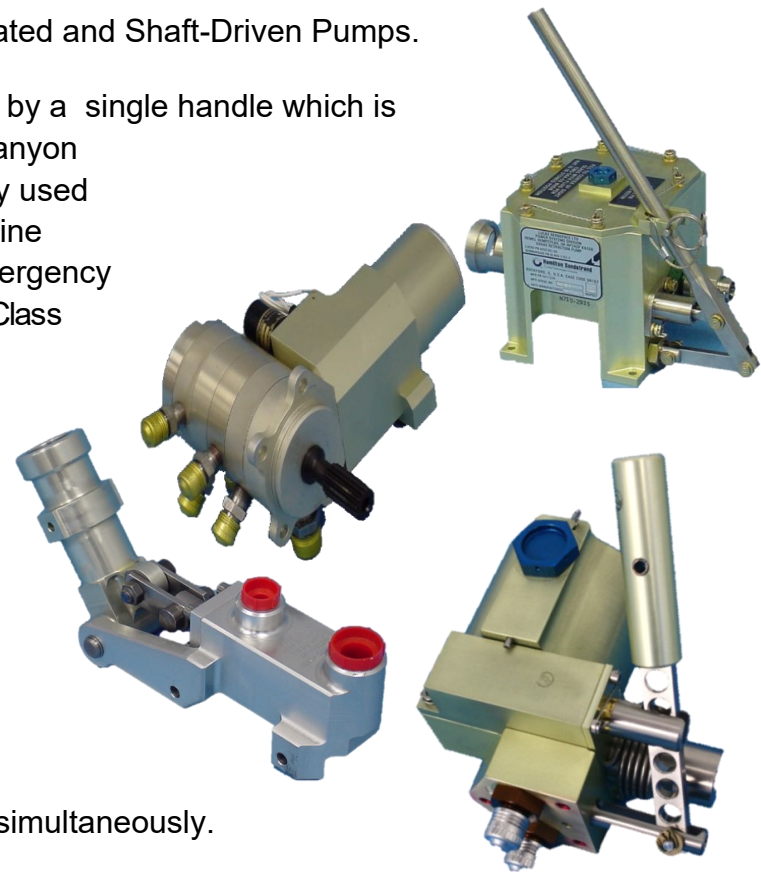
(661) 367-3300 OR SALES@CRISSAIR.COM.

YOU CAN ALSO VISIT WWW.CRISSAIR.COM.

PUMPS

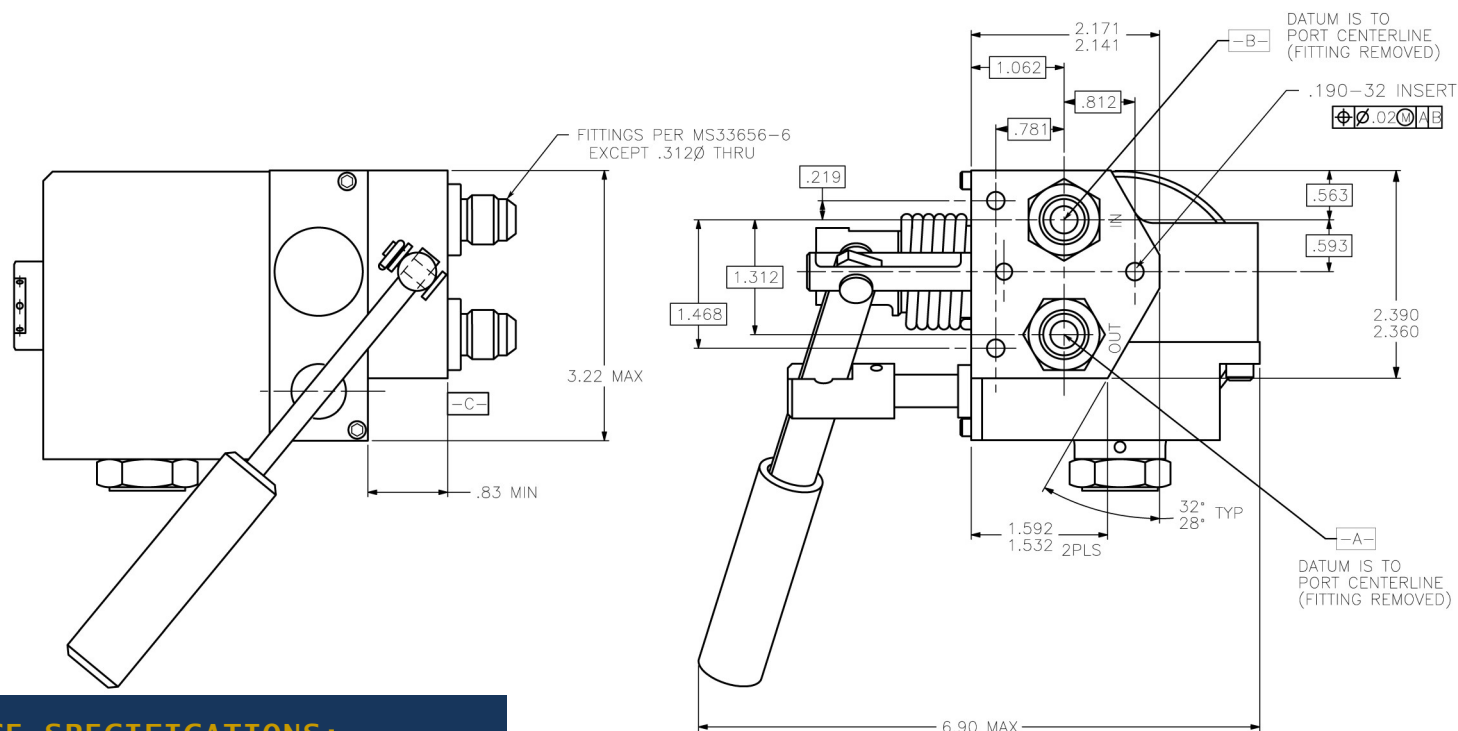
Crissair Inc. designs and manufactures Hand-Operated and Shaft-Driven Pumps.

- Hand-Operated Pumps are generally driven by a single handle which is designed for specific extension adapters. Canyon has several Restow Pumps which are widely used on regional jets to Restow the Ram Air Turbine (RAT). Other Hand Pumps are used for emergency power and are designed per MIL-P-5515 D, Class 3000; and AN 6248-3.
- Shaft-Driven Pumps mainly include rotary gear pumps (G-Rotor Pumps). They are mostly used in Gearbox applications where they are considered Lube and Scavenge Pumps. However, in some applications, these pumps are also used to pressurize the lubrication reservoir by pumping air into it. Other applications have used these pumps to pressurize lubrication oil and fuel simultaneously.





PART NUMBER: 40130-X, RESTOW PUMP, DUAL STAGE



PERFORMANCE SPECIFICATIONS:

FLUIDS: PHOSPHATE ESTER FLUID TYPE IV AND V*

MATERIAL: HOUSING 6061-T6

OPERATING TEMPERATURE: -65°F TO 122°F

OPERATING PRESSURE: 1375 PSIG

PUMP FLOW: 0.30 CUBIC INCHES PER STROKE (1ST STAGE—LOW PRESSURE)
0.075 CUBIC INCHES PER STROKE (2ND STAGE—HIGH PRESSURE)

PUMP PRESSURE: 400 PSIG MAX (1ST STAGE—LOW PRESSURE)
1375 PSIG MAX (2ND STAGE—HIGH PRESSURE)

RELIEF VALVE CRACKING PRESSURE: 1350 \pm 25 PSIG

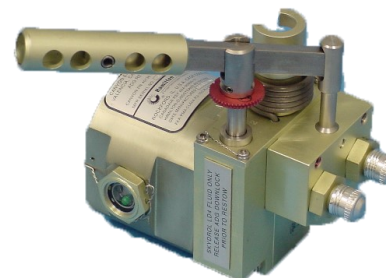
RESERVOIR CAPACITY: 12.5 \pm 0.5 CUBIC INCHES

BYPASS FLOW: (INLET TO OUTLET WITH PUMP DISENGAGED):
8 GPM @ 32 PSID MAX

HANDLE FORCE: 50 LBS MAX

WEIGHT: 3.0 LBS MAX

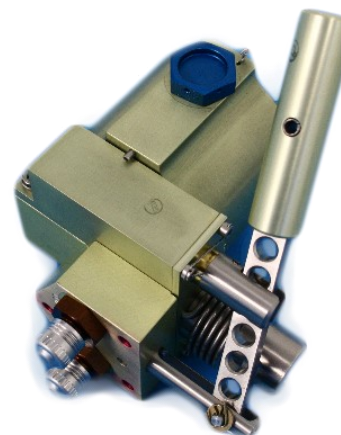
*MIL-PRF-83282 ACCEPTABLE WITH ELASTOMER CHANGE



CATEGORY 8: HAND PUMPS

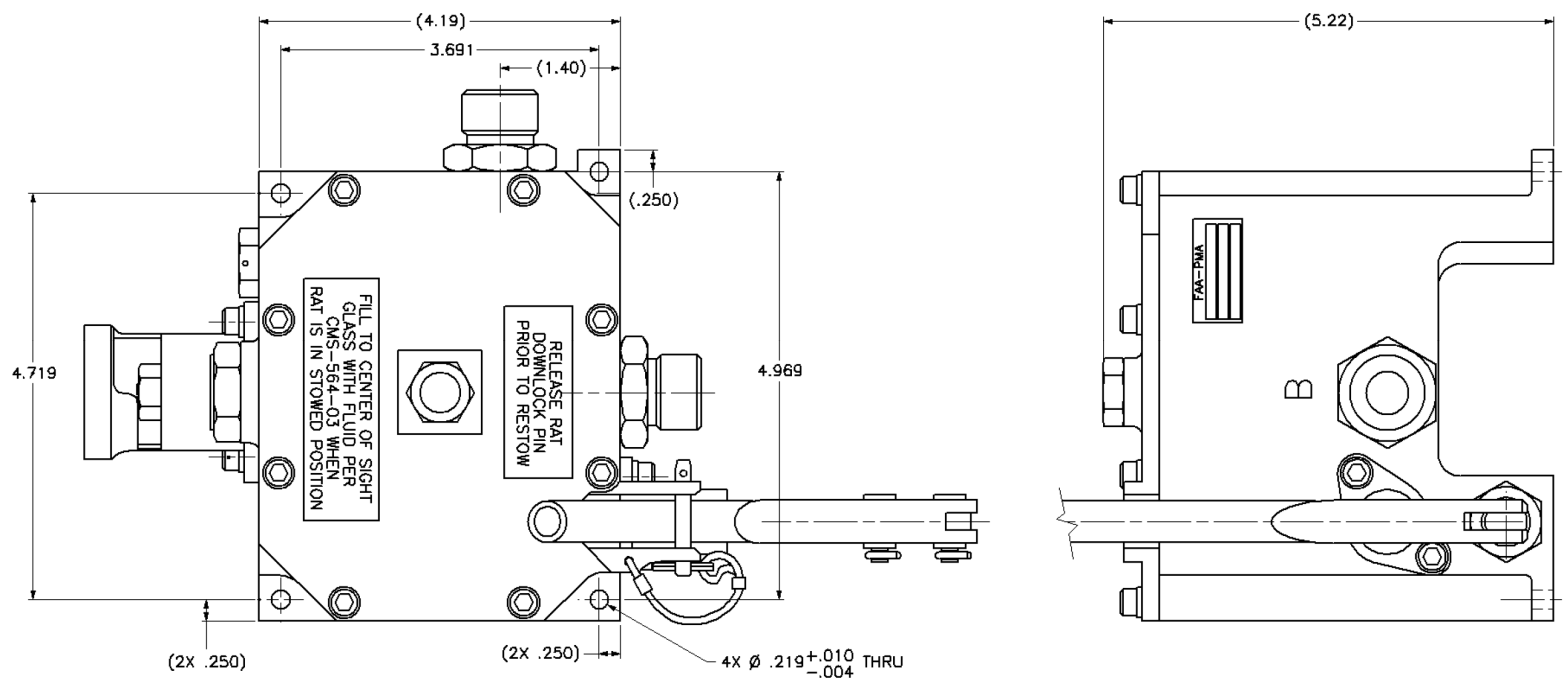


*FOR PHOSPHATE ESTER BASE TYPE IV OR V CHOOSE PART NUMBER 40400-X





PART NUMBER: 40280-X, HAND PUMP, SINGLE STAGE



PERFORMANCE SPECIFICATIONS:

FLUIDS: PHOSPHATE ESTER FLUID TYPE IV AND V*

MATERIAL: HOUSING 6061-T651

OPERATING TEMPERATURE: -65°F TO 165°F

OPERATING PRESSURE: 550 PSIG

PUMP FLOW: 0.69 CUBIC INCHES PER STROKE

PUMP PRESSURE: 550 PSIG

RELIEF VALVE CRACKING PRESSURE: 500-550 PSIG

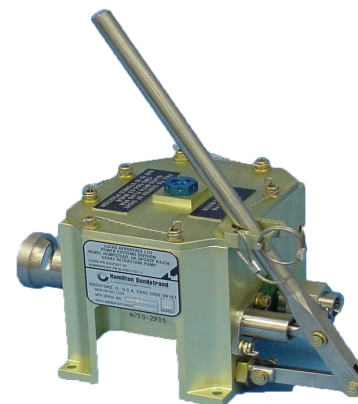
RESERVOIR CAPACITY: 27.5 CUBIC INCHES

BYPASS FLOW: (INLET TO OUTLET WITH PRUMP DISENGAGED):
0.196 SQUARE INCHES MINIMUM

HANDLE FORCE: 50 LBS MAX

WEIGHT: 5.4 LBS MAX

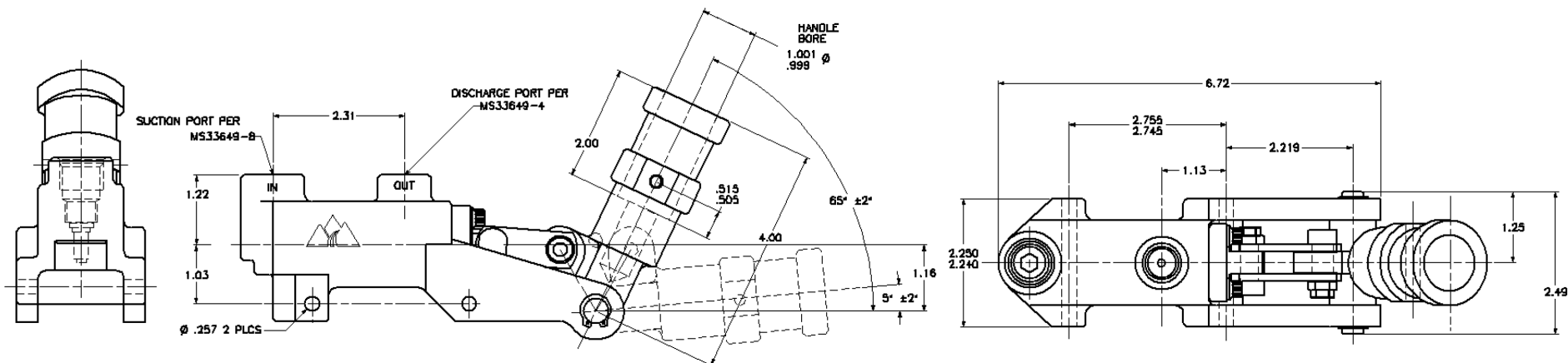
*MIL-PRF-83282 ACCEPTABLE WITH ELASTOMER CHANGE



CATEGORY 8: HAND PUMPS



PART NUMBER: 40310, HYDRAULIC HAND PUMP



PERFORMANCE SPECIFICATIONS:

FLUIDS: PHOSPHATE ESTER FLUID TYPE IV AND V*

MATERIAL: BODY 6061-T6

OPERATING TEMPERATURE: -65°F TO 165°F

OPERATING PRESSURE: 3000 PSIG

PUMP FLOW: 0.70 CUBIC INCHES PER STROKE

PUMP PRESSURE: 3000 PSIG MAX

LEAKAGE: 1 DPM MAX AT 3000 PSID

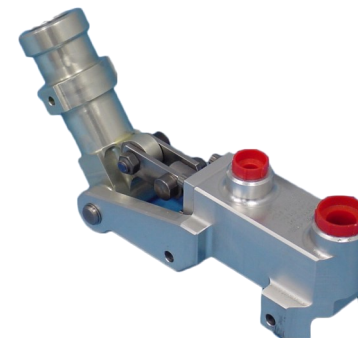
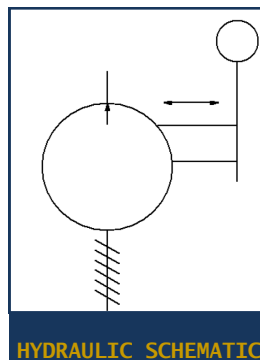
RELIEF VALVE CRACKING PRESSURE: 500-550 PSIG

MEETS OR EXCEEDS MIL-P-5515-P D, CLASS 3000; AND AN 6248-3

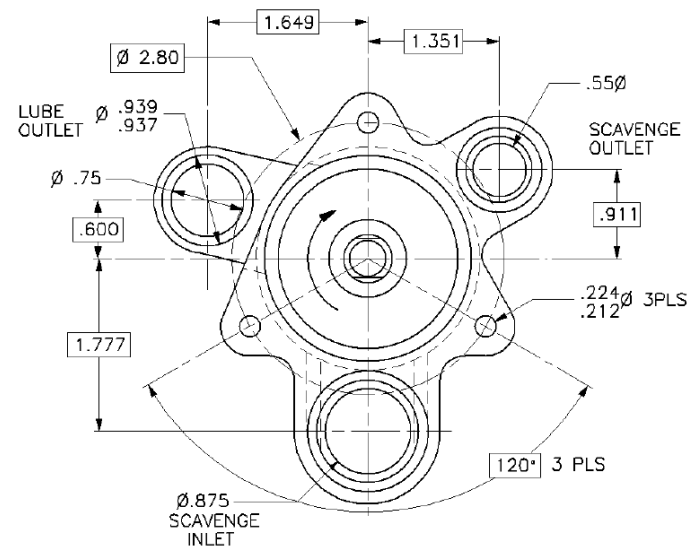
HANDLE FORCE: 50LBS MAX

WEIGHT: 2.1 LBS MAX

*MIL-PRF-83282 FLUID CHOOSE PART NUMBER 40770

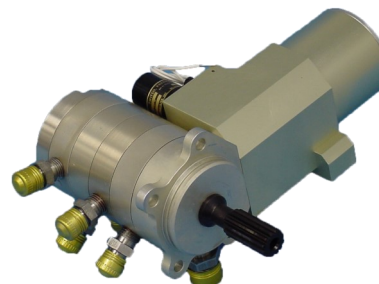


CATEGORY 8: HAND PUMPS



CATEGORY 8: G-ROTOR PUMPS





ELEMENT	SPEED (RPM)	INLET PRESSURE (PSIA)	DISCHARGE (PSIG)	FLOW (GPM)
LUBRICATION	4500-6000	14.7	53	3.2 REFERENCE
	4500-6000	8.3	53	2.4 MINIMUM
SCAVENGE	4500-6000	14.7	15	2.5 REFERENCE
	4500-6000	8.3	15	2.0 MINIMUM

CATEGORY 8: G-ROTOR PUMPS



CATEGORY 8: G-ROTOR PUMPS



CRISSAIR HAS VARIOUS OTHER PUMPS NOT LISTED IN THE
CATALOG WITH DIFFERENT MATERIALS, FITTINGS, AND SIZE CONFIGURATIONS.

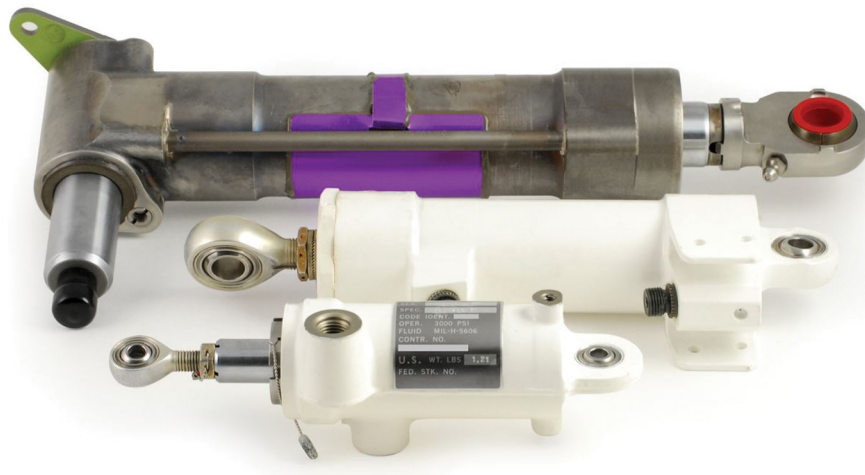
CONTACT CRISSAIR FOR ADDITIONAL INFORMATION/DRAWINGS AT

(661) 367-3300 OR SALES@CRISSAIR.COM.

YOU CAN ALSO VISIT WWW.CRISSAIR.COM.

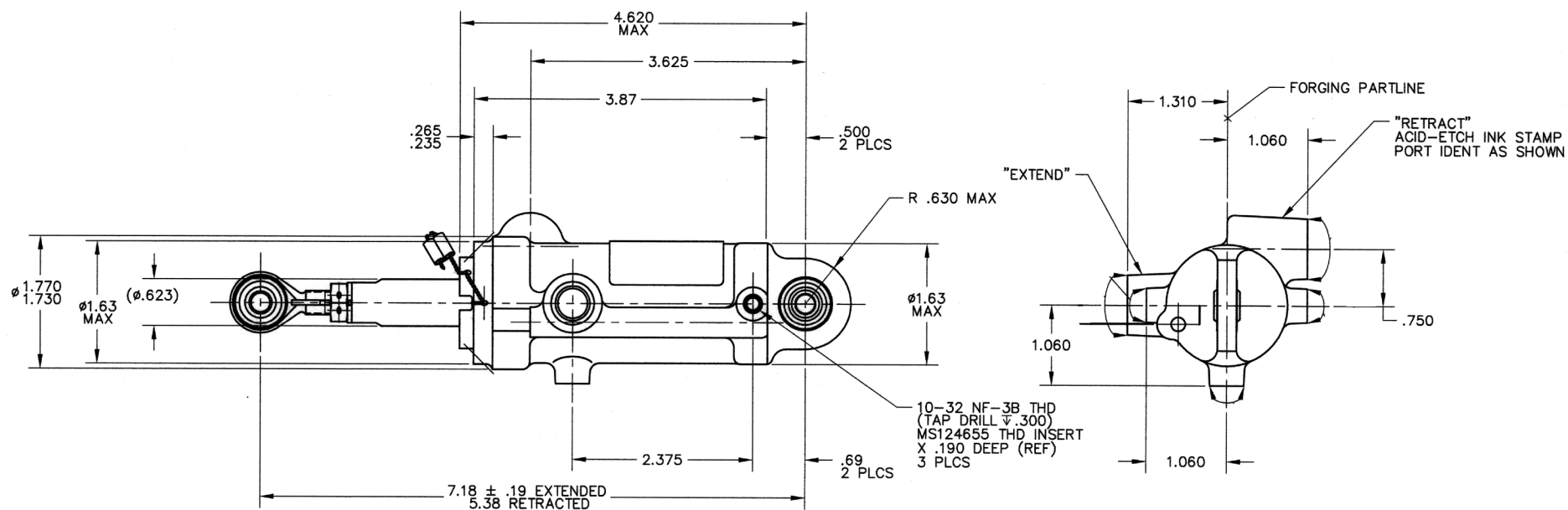
ACTUATORS

Crissair Inc. designs and manufactures small to medium-sized actuators for hydraulic systems. Applications include, but are not limited to, side brace support for large commercial airplane landing gear and spoiler control on military fighter jets.





PART NUMBER: 2A1020-X, ACTUATOR, HYDRAULIC



PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT HYDRAULIC FLUIDS

MATERIAL: BODY 7075-T73 AL

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 3000 PSIG

PROOF PRESSURE: 4500 PSIG

STALL LOAD: 3500 LBS AT 2900 PSID IN EXTENDED POSITION

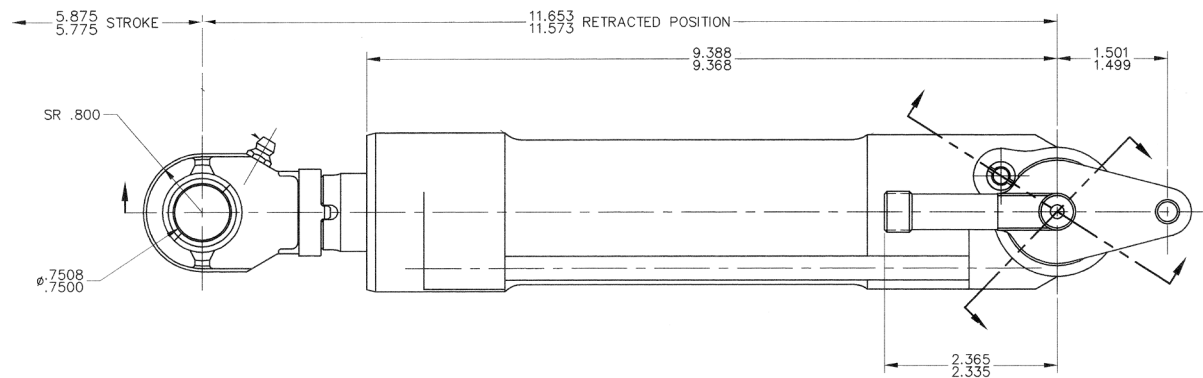
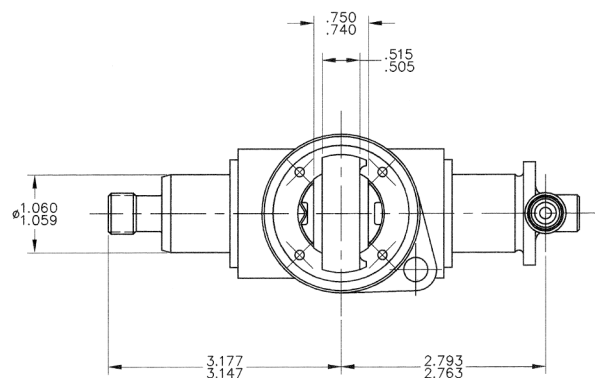
INTERNAL LEAKAGE: 1 DROP PER 25 CYCLES

WEIGHT: 1.30 LBS MAX

CATEGORY 9: ACTUATORS



PART NUMBER: 2A1070-X, ACTUATOR



PERFORMANCE SPECIFICATIONS:

FLUIDS: SKYDROL

MATERIAL: HOUSING 15-5PH CRES

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 3000 PSIG

PROOF PRESSURE: 4500 PSIG

INTERNAL LEAKAGE: 1 CC/MIN MAX AT 5 TO 15 PSID
1 CC/MIN MAX AT 3000 PSID

WEIGHT: 8.0 LBS MAX

CATEGORY 9: ACTUATORS



CRISSAIR HAS VARIOUS OTHER ACTUATORS NOT LISTED IN THE
CATALOG WITH DIFFERENT MATERIALS, FITTINGS, AND SIZE CONFIGURATIONS.

CONTACT CRISSAIR FOR ADDITIONAL INFORMATION/DRAWINGS AT

(661) 367-3300 OR SALES@CRISSAIR.COM.

YOU CAN ALSO VISIT WWW.CRISSAIR.COM.

OTHER AEROSPACE VALVES

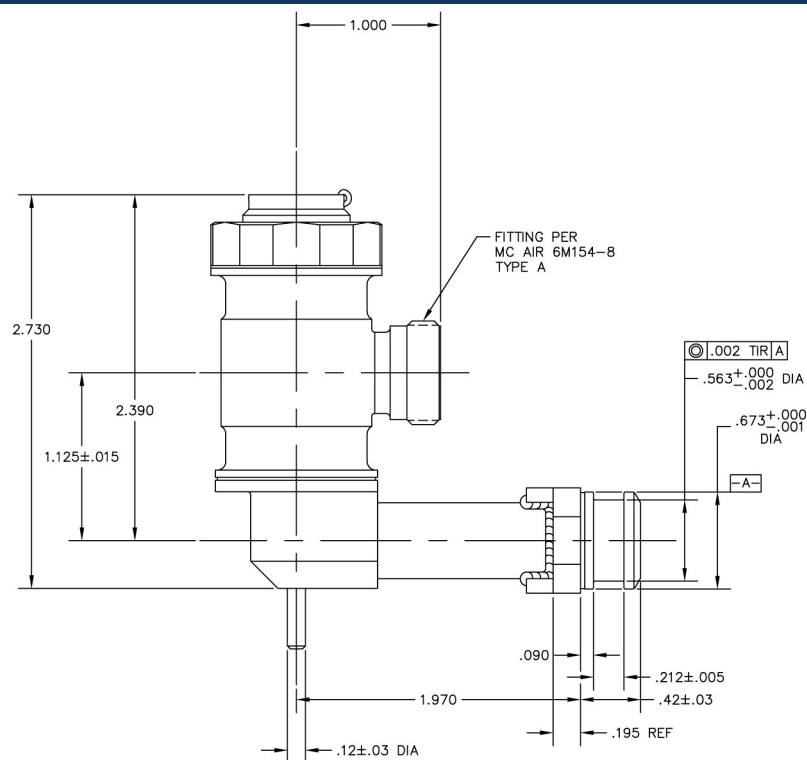
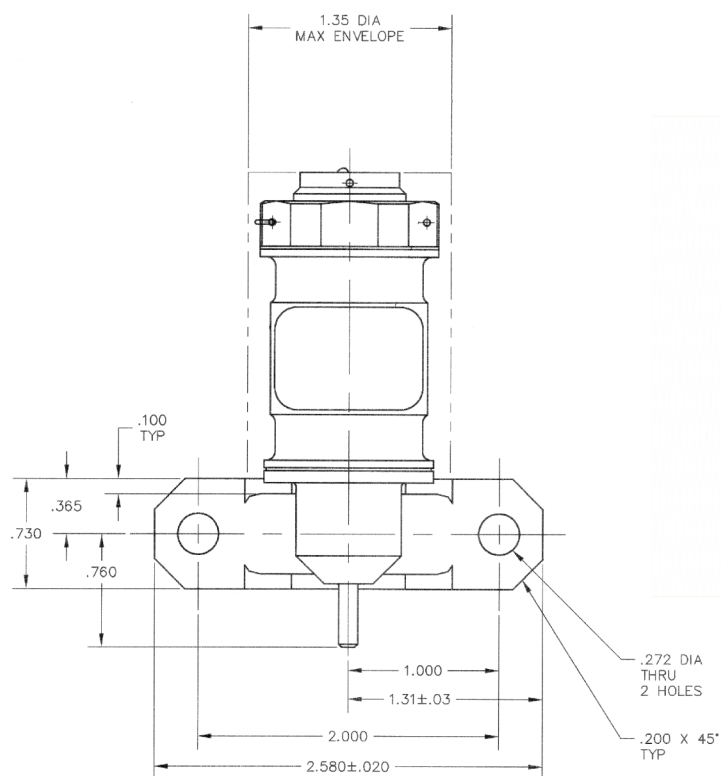
In addition to the standard valves previously listed in this catalog, Crissair Inc. designs and manufactures various other components, valves, and assemblies that fall outside of the previous categories.

- Swivel Joints
- Attenuators
- Flow Controls
- Thermal Controls
- Pressure Regulators
- Priority Valves
- Flow Dividers
- Float Valves





PART NUMBER: 2E2100-3, SWIVEL JOINT, HYDRAULIC



PERFORMANCE SPECIFICATIONS:

FLUIDS: HYDRAULIC OIL PER MIL-H-83282*

MATERIAL: BODY 17-4PH CRES

TEMPERATURE RANGE: -40°F TO 275°F

OPERATING PRESSURE: 3000 PSIG

PROOF PRESSURE: 6000 PSIG

PRESSURE DROP: 35 PSID MAX AT 15 GPM AND 100°F AT ANY SWIVEL POSITION

SWIVEL TORQUE: 45 IN/LBS MAX AT 3000 PSIG WITH ECCENTRIC LOAD OF

4.0 ± 0.4 LBS AT 1.70 ± 0.05 FROM ϕ OF SHAFT

LEAKAGE: EXTERNAL AT STATIC SEALS OR BOSSES—NONE

EXTERNAL AT DYNAMIC SEALS—ONE DROP MAX PER 100 REV

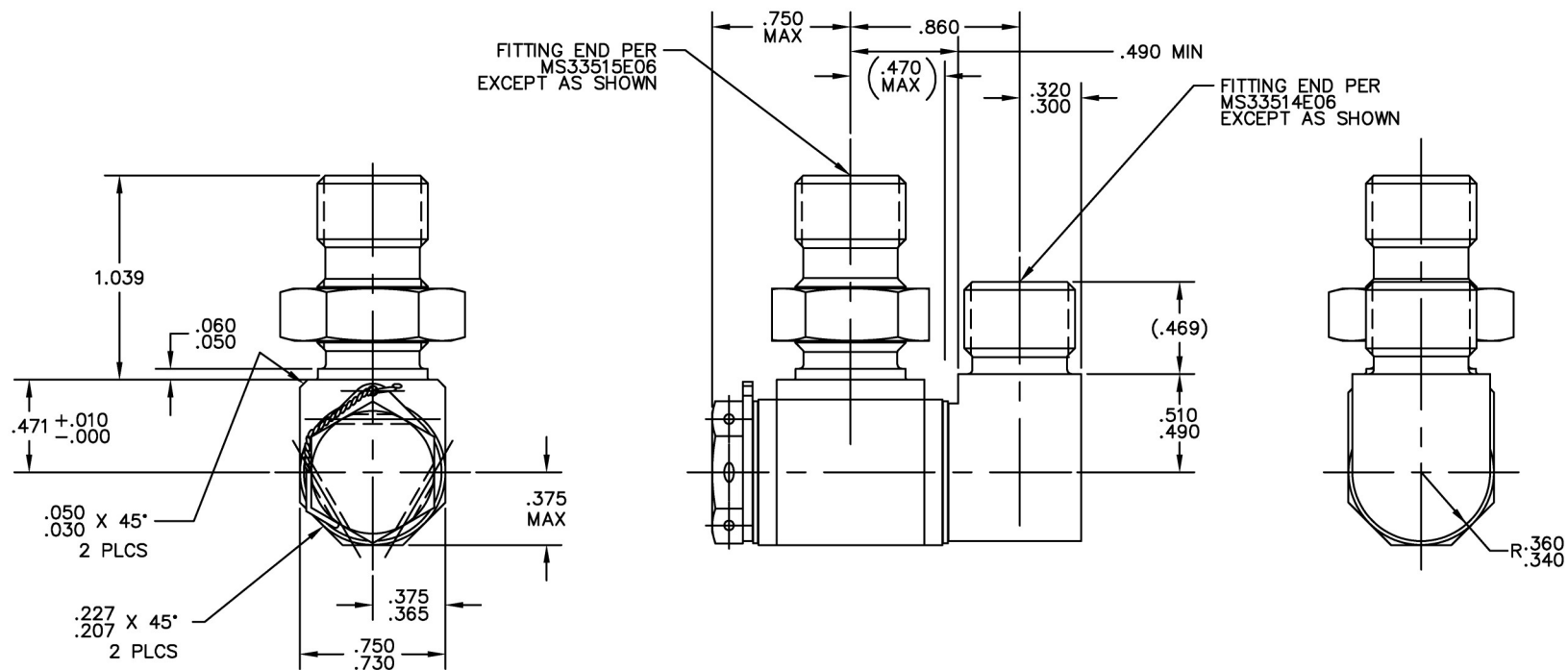
WEIGHT: 0.60 LBS MAX

*OTHER FLUIDS MAY BE ACCEPTABLE WITH ELASTOMER CHANGE

CATEGORY 10 OTHER AEROSPACE VALVES: SWIVEL JOINTS



PART NUMBER: 2E2172-X, SWIVEL JOINT, SIZE 6



PERFORMANCE SPECIFICATIONS:

FLUIDS: HYDRAULIC FLUID PER BMS 311 (SKYDROL)*

MATERIAL: BODY 15-5PH CRES

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 3000 PSIG

PROOF PRESSURE: 6000 PSIG

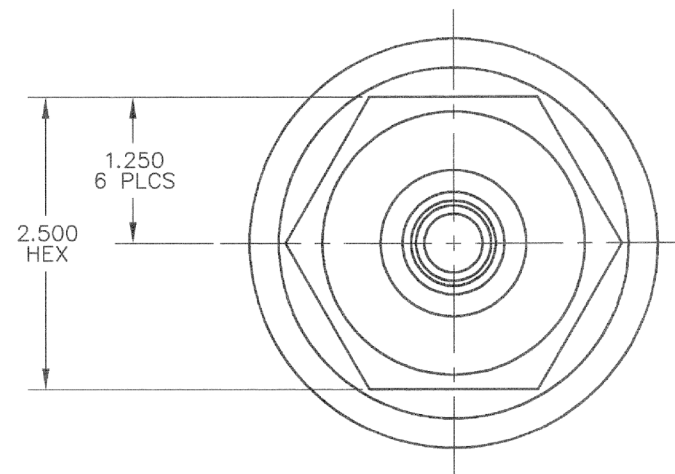
FLOW: 3.5 GPM AT 20 PSID MAX AT 70°F TO 110°F FLUID TEMPERATURE

LEAKAGE: EXTERNAL: 1 DROP MAX PER 100 REVOLUTIONS

INTERNAL: NOT APPLICABLE

WEIGHT: 0.41 LBS MAX

*OTHER FLUIDS MAY BE ACCEPTABLE WITH ELASTOMER CHANGE

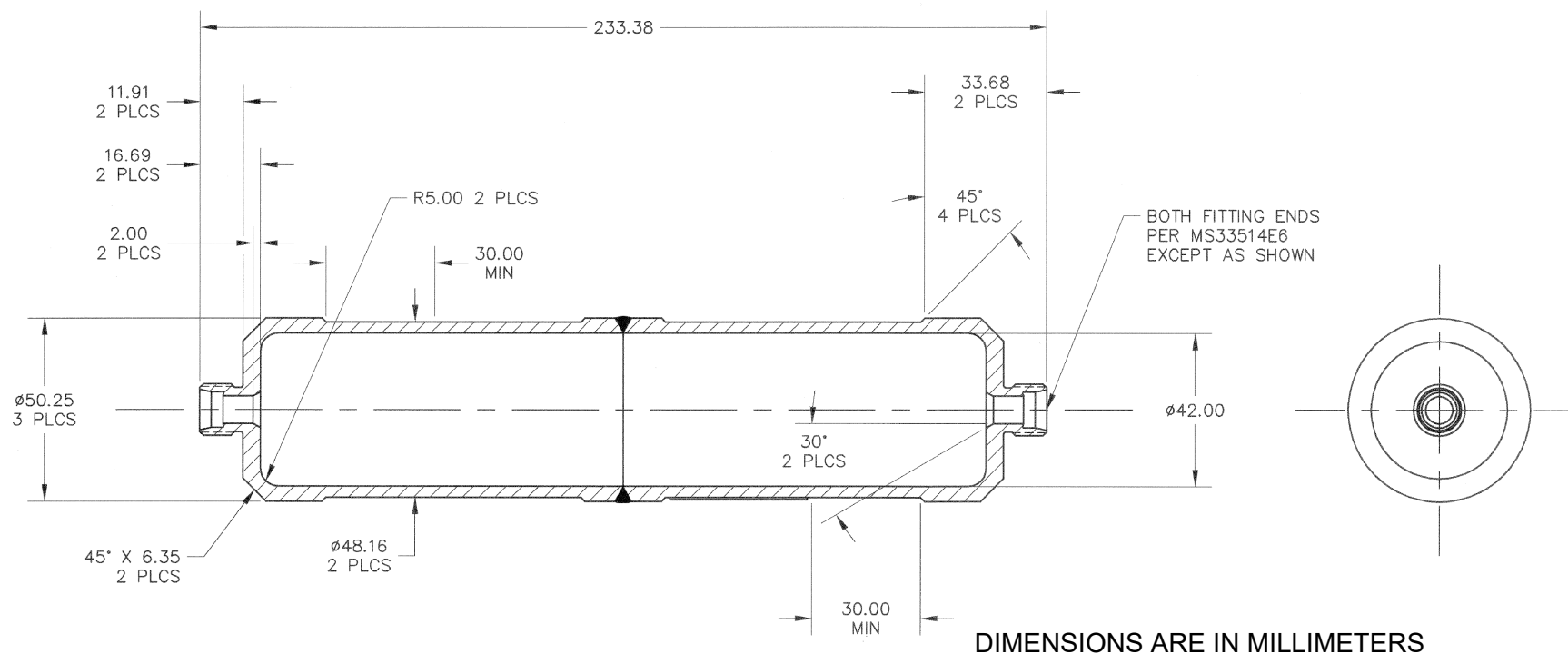


1 DRY FILM LUBE ON THREADS ONLY

CATEGORY 10 OTHER AEROSPACE VALVES: ATTENUATORS



PART NUMBER: 3A1014-X, PULSATION DAMPER



PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT HYDRAULIC FLUID

MATERIAL: BODY 15-5PH CRES

TEMPERATURE RANGE: -40°F TO 212°F

OPERATING PRESSURE: 3000 PSIG

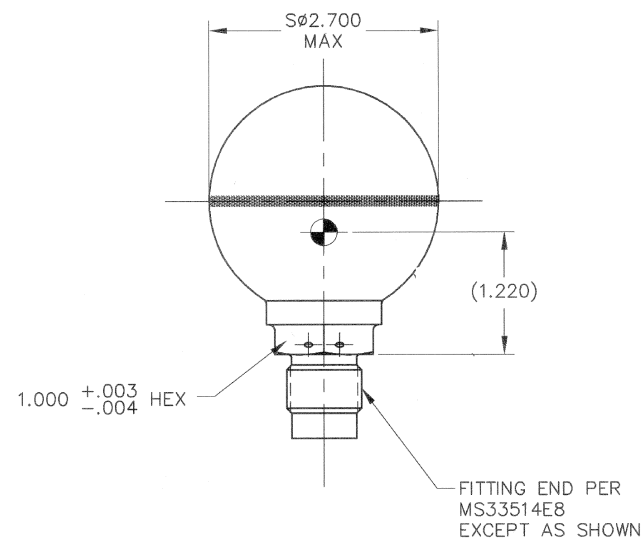
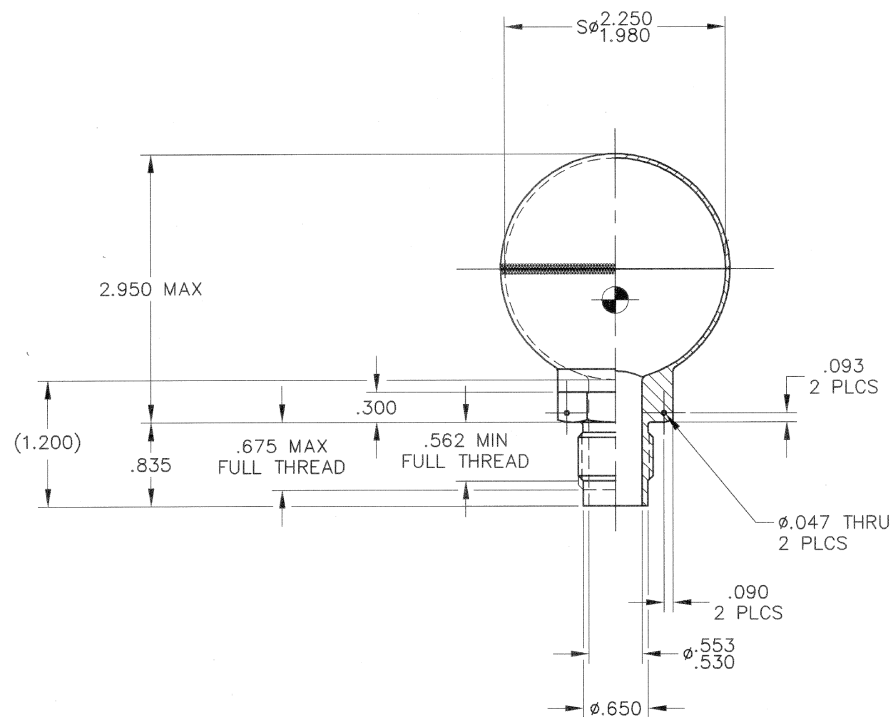
PROOF PRESSURE: 4500 PSIG

WEIGHT: 1.94 LBS MAX

CATEGORY 10 OTHER AEROSPACE VALVES: ATTENUATORS



PART NUMBER: 3A1018-X, ATTENUATOR BALL



PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT HYDRAULIC FLUID

MATERIAL: BODY 15-5PH CRES

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 72 PSIG

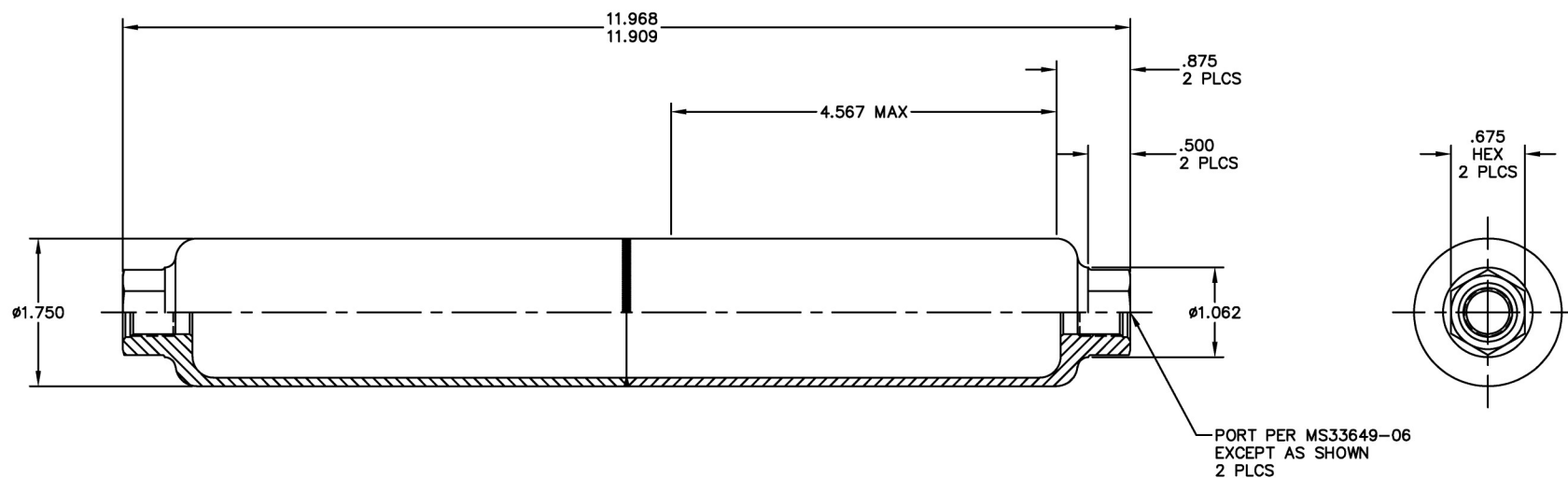
PROOF PRESSURE: 150 PSIG

WEIGHT: 0.38 LBS MAX

CATEGORY 10 OTHER AEROSPACE VALVES: ATTENUATORS



PART NUMBER: 3A1036-X, ATTENUATOR



PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT HYDRAULIC FLUID

MATERIAL: BODY 15-5PH CRES

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 3000 PSIG

PROOF PRESSURE: 4500 PSIG

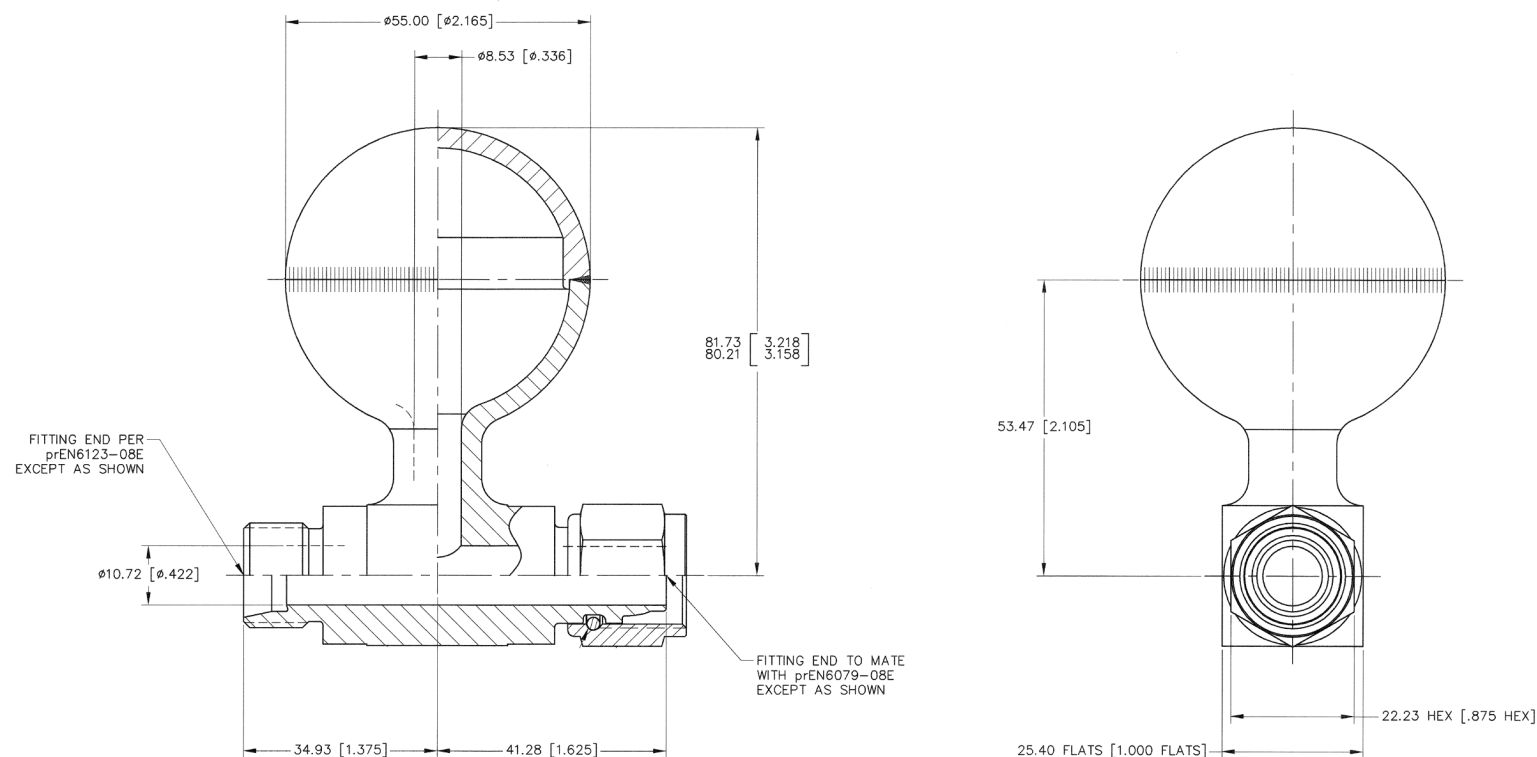
FLOW: 6.1 GPM AT 75 PSID MAX PRESSURE DROP WITH 3000 PSI AT 100°F

FIRE RESISTANCE: WITHSTAND A 2000°F FLAME FOR 5 MINUTES

WEIGHT: 2.02 LBS MAX



PART NUMBER: 3A1046-X, RIPPLE DAMPER



PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT HYDRAULIC FLUID

MATERIAL: BODY 15-5PH CRES

SWIVEL NUT 17-4PH CRES

TEMPERATURE RANGE: NORMAL: -40°F TO 201°F

EXTREME: -65°F TO 230°F

STORAGE: -67°F TO 185°F

SURVIVAL: -76°F TO 248°F

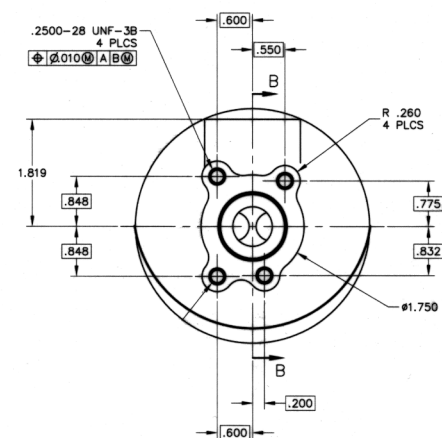
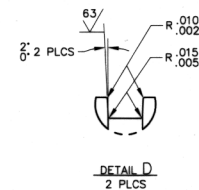
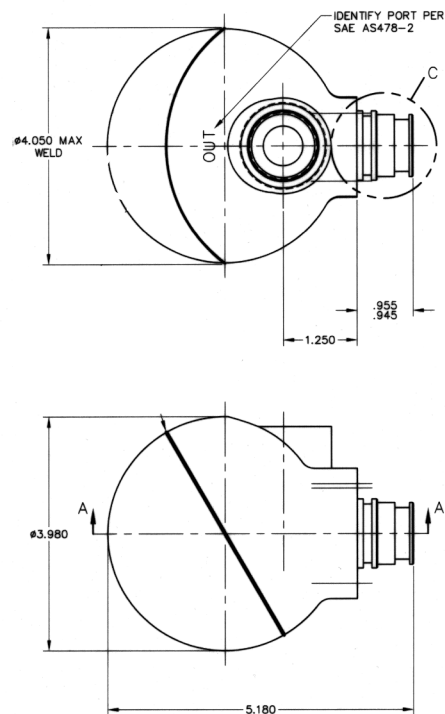
OPERATING PRESSURE: 5000 PSIG

PROOF PRESSURE: 7500 PSIG

FLOW: 13 GPM AT 19.4 PSID MAX

WEIGHT: 1.16 LBS MAX

CATEGORY 10 OTHER AEROSPACE VALVES: ATTENUATORS

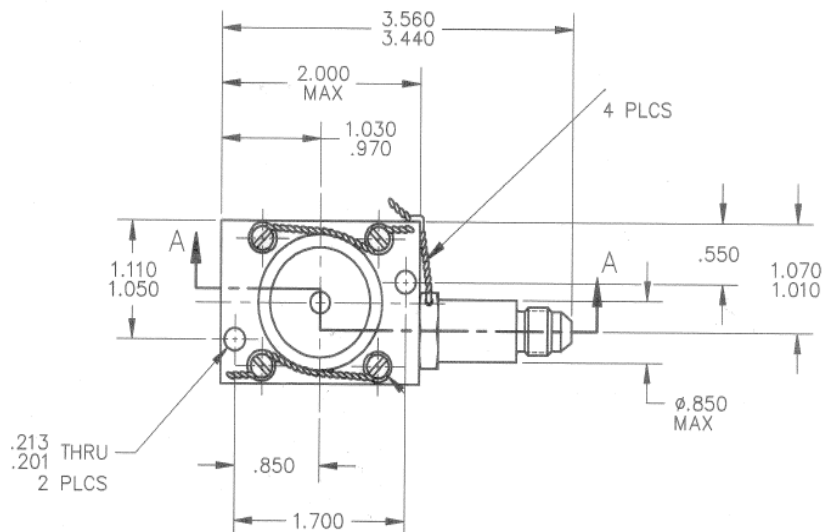
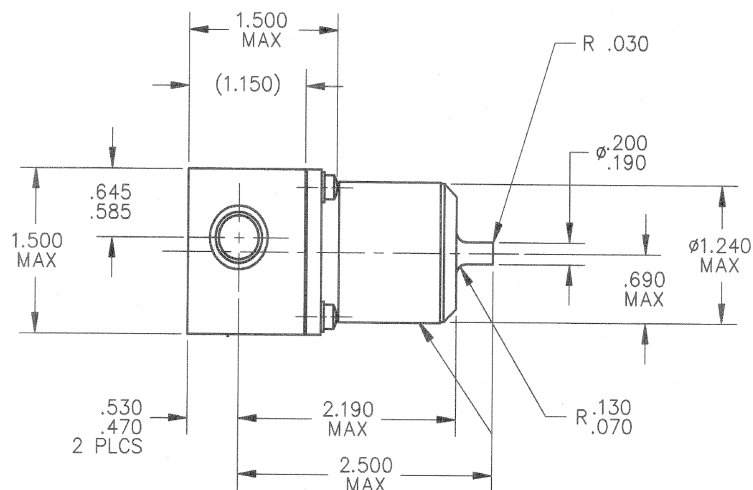


FLUIDS: ANY AIRCRAFT HYDRAULIC FLUID
MATERIAL: BODY 6AL-4V TI
TEMPERATURE RANGE: -65°F TO 300°F
OPERATING PRESSURE: 5050 PSIG
PROOF PRESSURE: 7620 PSIG
WEIGHT: 1.97 LBS MAX

CATEGORY 10 OTHER AEROSPACE VALVES: ATTENUATORS



PART NUMBER: 3R1698-X, PRESSURE REGULATOR AND INTEGRAL RELIEF ASSY



PERFORMANCE SPECIFICATIONS:

FLUIDS: AIR (OPERATING); WATER, CORVIS OIL (NON-OPERATING)

MATERIAL: BODY 2024-T351 AL

TEMPERATURE RANGE: AMBIENT: -80°F TO 185°F (STORAGE)

-65°F TO 250°F (OPERATING)

FLUID: 100°F TO 450°F AND 120 PSIG (AIR)

ROOM TEMPERATURE AND 125 PSIG MAX (WATER)

350°F AND 25 PSIG MAX (CORVIS OIL)

PRESSURES:	INLET	OUTLET	VENT
OPERATING:	20-105 PSIG (ACT)	20±2 PSIG (PRESET)	25 PSIG MAX
	120 PSIG MAX		
PROOF:	250 PSIG	50 PSIG	50 PSIG

FLOW: 0.7 SCFM MIN AT 25±1 PSIG INLET PRESSURE, AND 20±2 PSIG OUTLET PRESSURE (AT SEA LEVEL)

LEAKAGE: REGULATING FUNCTION: 1.5 SCIM

INTERNAL RELIEF FUNCTION: 1.5 SCIM

REVERSE FLOW FUNCTION: BUBBLE TIGHT

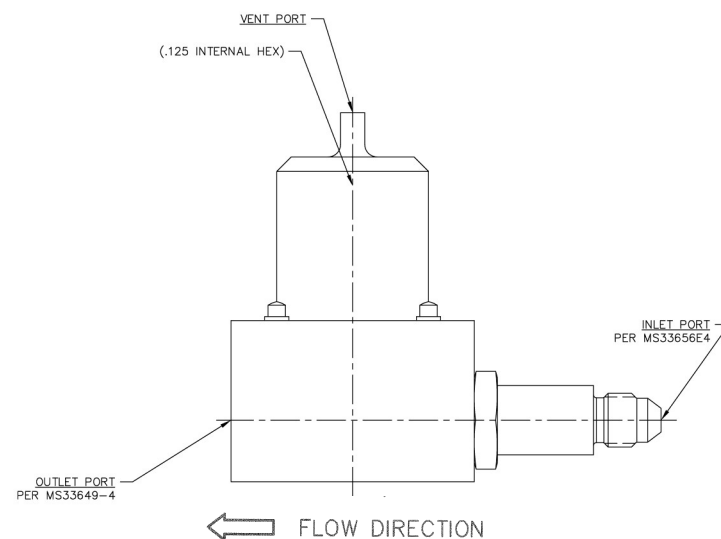
INTERNAL RELIEF FUNCTION: OUTLET PRESSURE RELIEF FUNCTION SHALL REMAIN CLOSED

AT 22 PSIG MIN AND BEGIN VENTING AT 25 PSIG MAX.

OUTLET PRESSURE EXCEEDING 25 PSIG SHALL BE EXHAUSTED

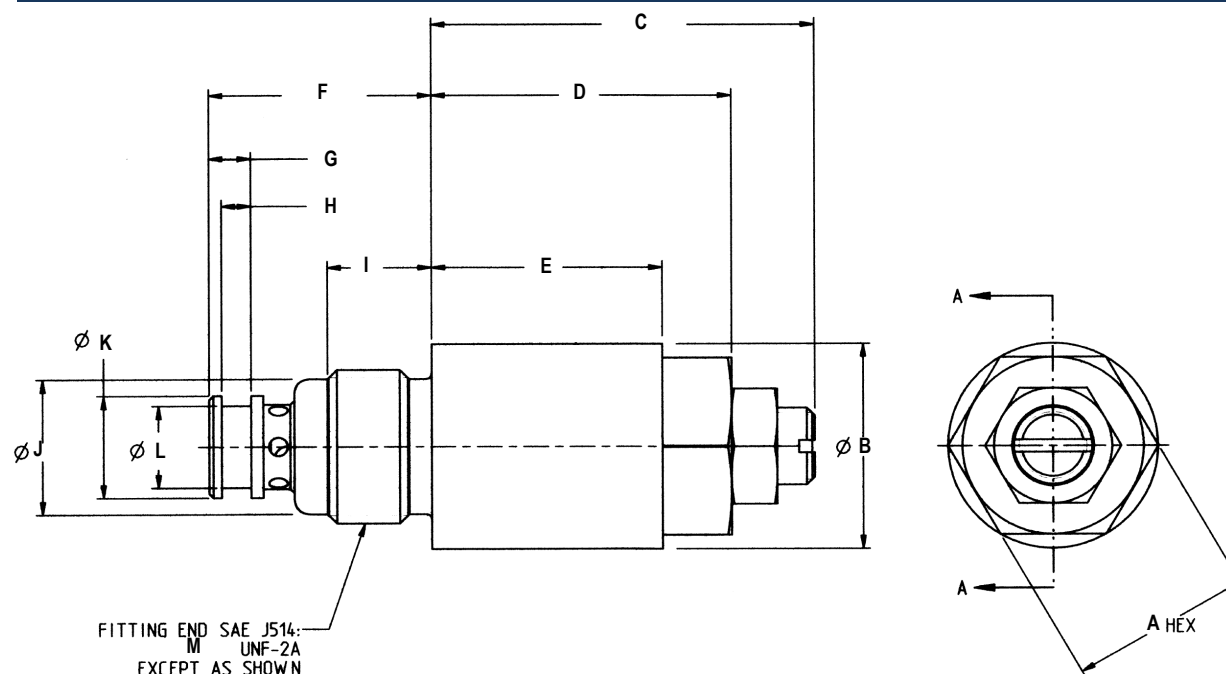
AT A FLOWRATE OF 1.0 SCFM MIN THROUGH THE VENT.

WEIGHT: 1.0 LBS MAX





PRESSURE COMPENSATED FLOW CONTROLS, HIGH PRESSURE, ADJUSTABLE



PERFORMANCE SPECIFICATIONS:

FLUIDS: MIL-PRF-83282*

MATERIAL: BODY 15-5PH CRES

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 3000 PSIG

PROOF PRESSURE: 4500 PSIG

FLOW RANGE: (SEE TABLE)

PART NUMBER	FLOW RANGE (GPM)	FLOW POINT TOLERANCE (FROM SET POINT)	PRESSURE RANGE (PSID)
35370-X	0.30-0.36	+/- .023 GPM	200-3000
35360-X	0.44-0.59	+/- 0.04 GPM	200-3000
35350-X	0.97-1.21	+/- 0.11 GPM	200-3000
35340-X	1.22-2.09	+/- 0.13 GPM	350-3000
35330-X	2.93-3.58	+/- 0.23 GPM	200-3000
35320-X	5.44-6.64	+/- 0.48 GPM	500-3000
35310-X	8.05-9.83	+/- 0.72 GPM	500-3000

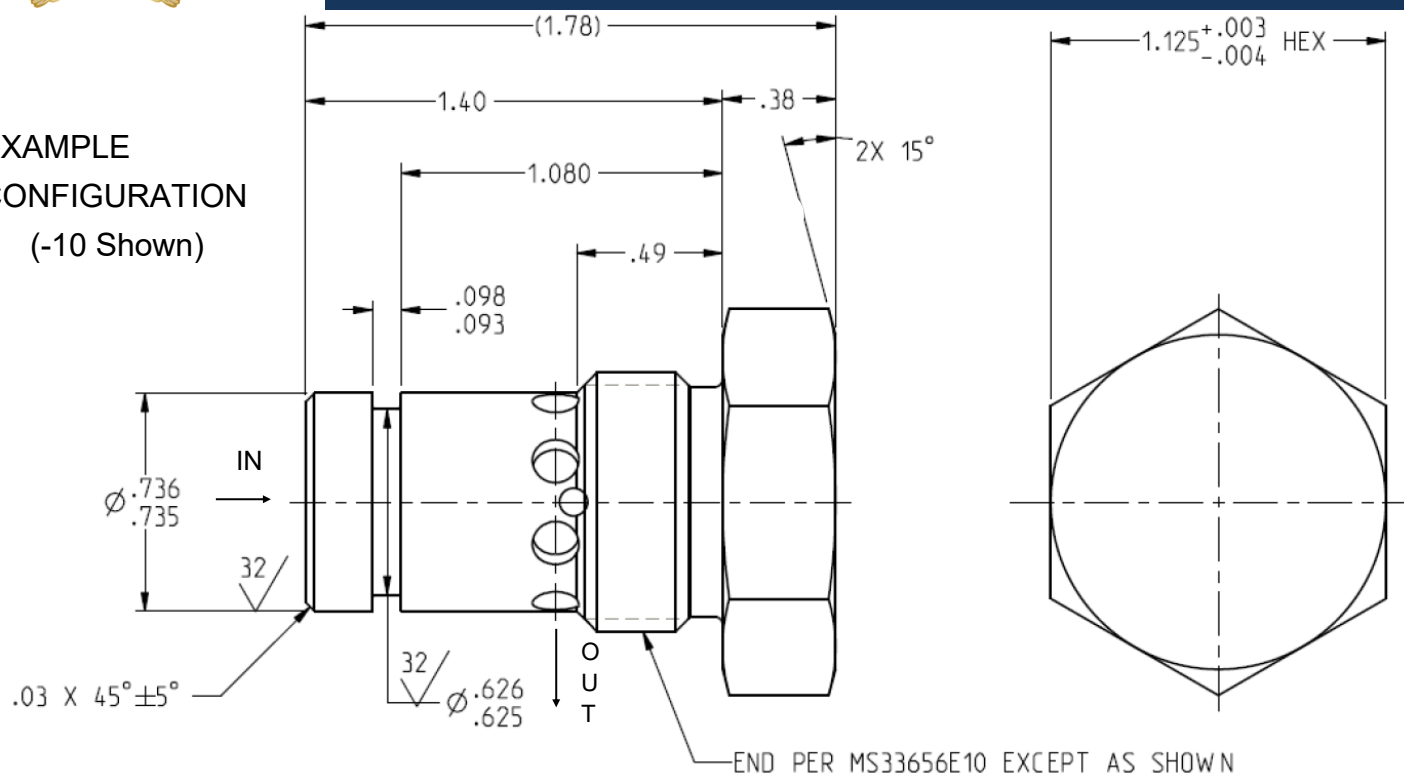
Part No.	A	B	C	D	E	F	G	H	I	J	K	L	M
35370-X	.87	1.00	1.81	1.43	1.10	1.06 ±.02	.200	.143 .138	.50	.660	.498 .497	.400 .398	3/4 - 16
35360-X	.87	1.00	1.81	1.43	1.10	1.06 ±.02	.200	.143 .138	.50	.660	.498 .497	.400 .398	3/4 - 16
35350-X	.87	1.00	1.96	1.43	1.10	1.06 ±.02	.200	.143 .138	.50	.660	.498 .497	.400 .398	3/4 - 16
35340-X	.87	1.00	1.96	1.43	1.10	1.06 ±.02	.200	.143 .138	.50	.660	.498 .497	.400 .398	3/4 - 16
35330-X	.87	1.00	1.96	1.43	1.10	1.06 ±.02	.200	.143 .138	.50	.660	.498 .497	.400 .398	3/4 - 16
35320-X	1.00	1.15	2.26	—	—	1.26	.185	.144 .139	.50	.770	.623 .622	.525 .523	7/8 - 14
35310-X	1.00	1.15	2.26	—	—	1.26	.185	.144 .139	.50	.770	.623 .622	.525 .523	7/8 - 14

CATEGORY 10 OTHER AEROSPACE VALVES: FLOW CONTROL VALVES (FLOW REGULATORS)



LDP (LOW DELTA P) PRESSURE COMPENSATED FLOW CONTROL VALVES

EXAMPLE
CONFIGURATION
(-10 Shown)



PERFORMANCE SPECIFICATIONS:

FLUIDS: HYDRAULIC OIL, LUBRICATION OIL, PAO, ETHYLENE GLYCOL & OTHER (CONTAINS NO ELASTOMERS)

TEMPERATURE RANGE: -65°F TO 400°F

FLOW RANGE: (SEE TABLE) FLOW REGULATED WITHIN ITS PERCENTAGE OF DESIRED SET POINT.

CARTRIDGE SIZE PER AS4395	AVAILABLE FLOW SET POINT RANGE (GPM)	PRESSURE RANGE (PSID)	MATERIAL TYPE
-6	.03-.20	50-150	CRES
-8	.20-.50	25-150	ALUMINUM
-10	.50-2.0	20-150	ALUMINUM
-12	2.0-6.0	10-150	ALUMINUM
-16	6.0-15.0	10-150	ALUMINUM
-20	15.0-25.0	8-100	ALUMINUM

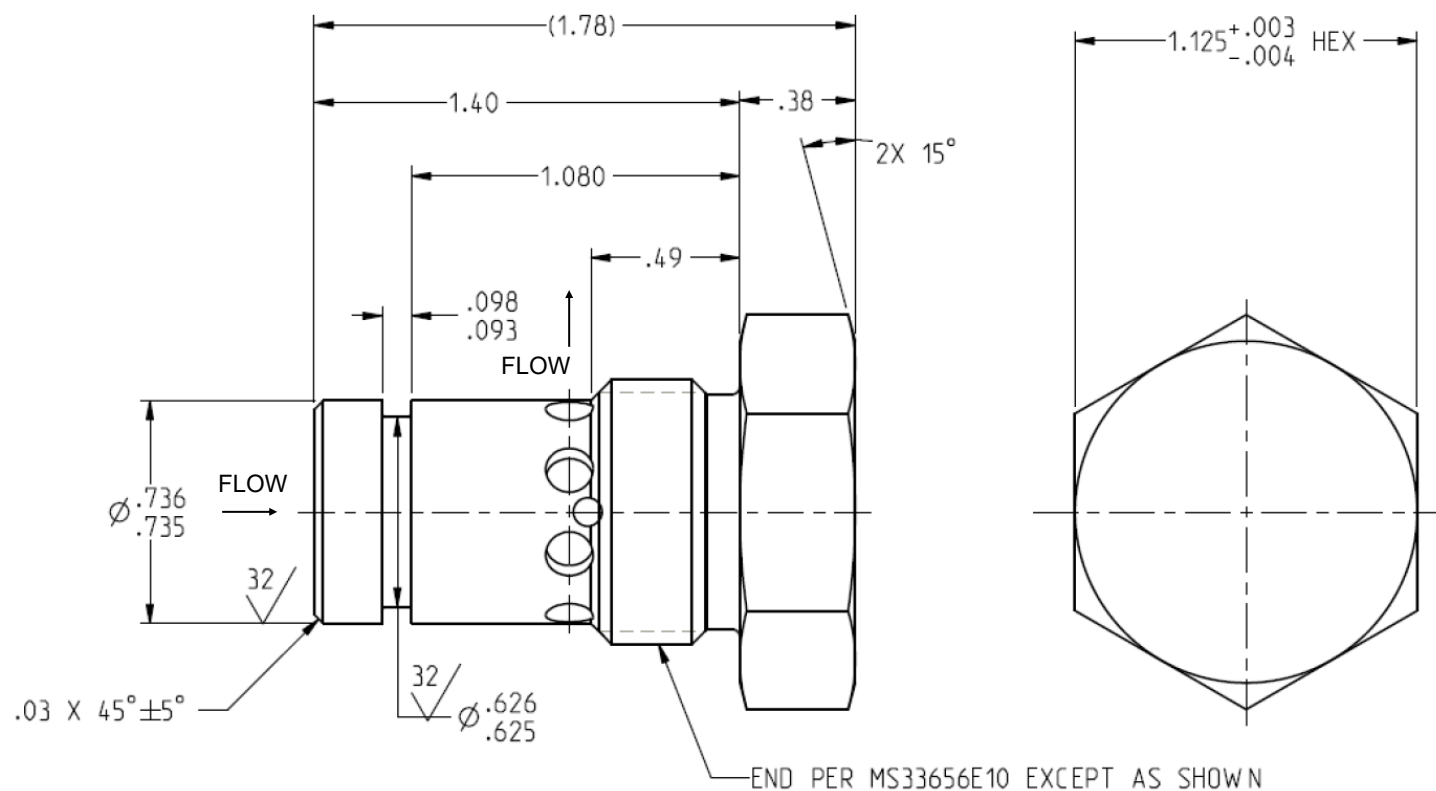
Note: Specific dimensions per
cartridge are available.
Please request additional
information if needed.



CATEGORY 10 OTHER AEROSPACE VALVES: FLOW CONTROL VALVES (FLOW REGULATORS)



PART NUMBER: 34120-X, FLOW CONTROL VALVE



PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT HYDRAULIC FLUID

MATERIAL: BODY 6061 AL

TEMPERATURE RANGE: 150°F +10/-0°F

OPERATING PRESSURE: 1800 PSIG

PROOF PRESSURE: 2400 PSIG

FLOW REGULATION: 4.44 GPM + 4/-2% AT 20 TO 50 PSID

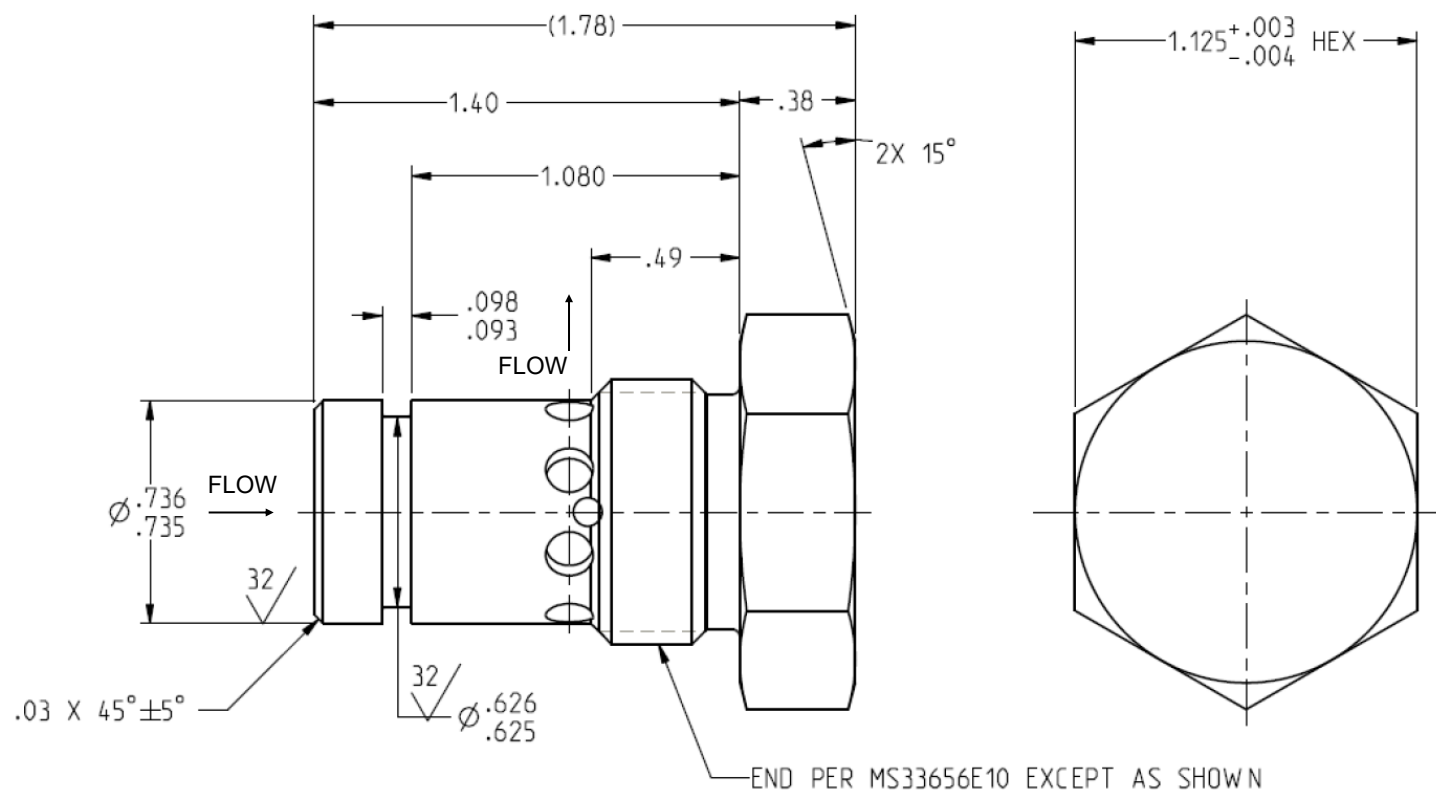
4.44 GPM ± 2% AT 50 TO 120 PSID



CATEGORY 10 OTHER AEROSPACE VALVES: FLOW CONTROL VALVES (FLOW REGULATORS)



PART NUMBER: 34130-X, FLOW CONTROL VALVE



PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT HYDRAULIC FLUID

MATERIAL: BODY 6061 AL

TEMPERATURE RANGE: 150°F +10/-0°F

OPERATING PRESSURE: 1800 PSIG MAX

PROOF PRESSURE: 2400 PSIG MINIMUM

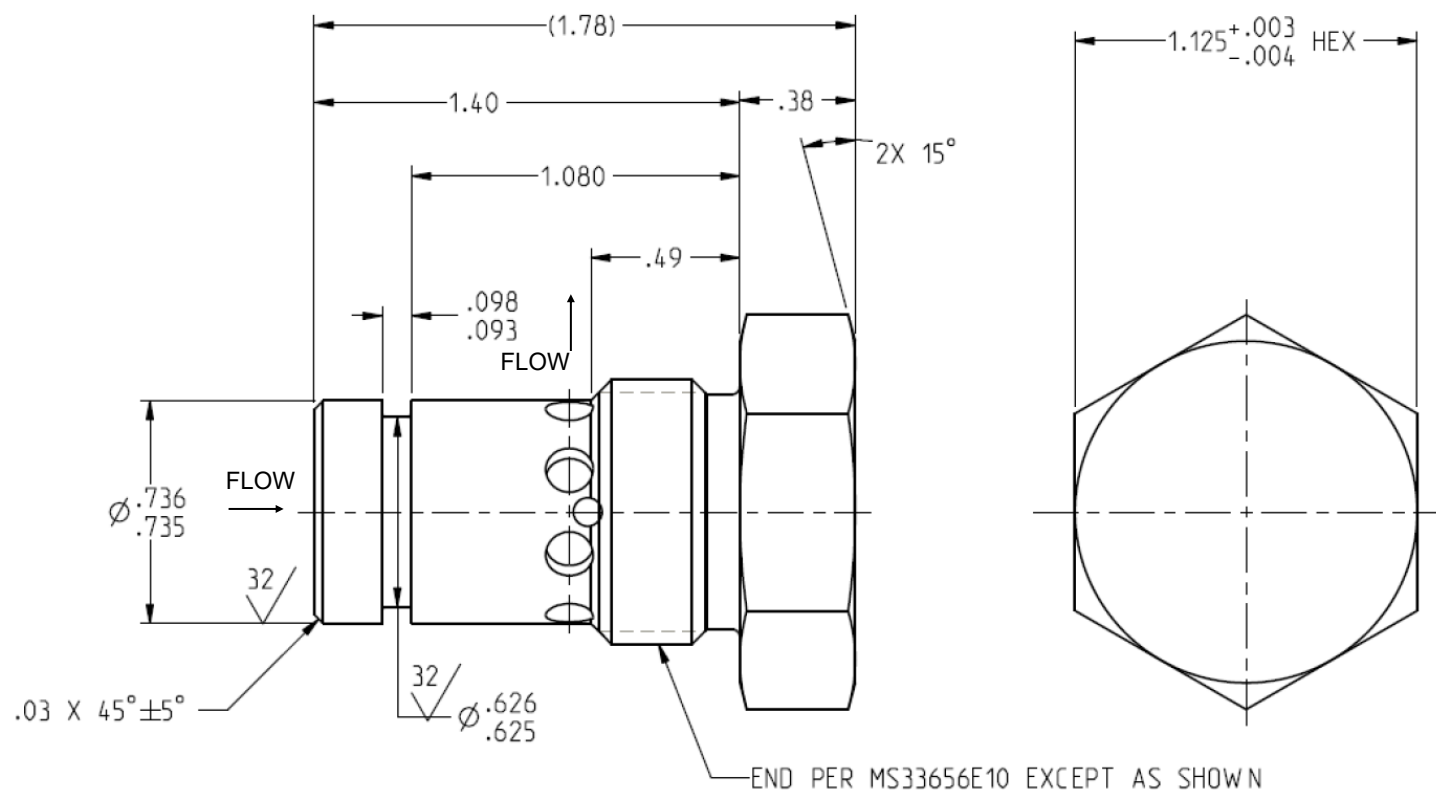
FLOW REGULATION: 0.72 GPM ± 2% AT 20 TO 120 PSID



CATEGORY 10 OTHER AEROSPACE VALVES: FLOW CONTROL VALVES (FLOW REGULATORS)



PART NUMBER: 34140-X, FLOW CONTROL VALVE



PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT HYDRAULIC FLUID

MATERIAL: BODY 6061 AL

TEMPERATURE RANGE: 150°F +10/-0°F

OPERATING PRESSURE: 1800 PSIG MAX

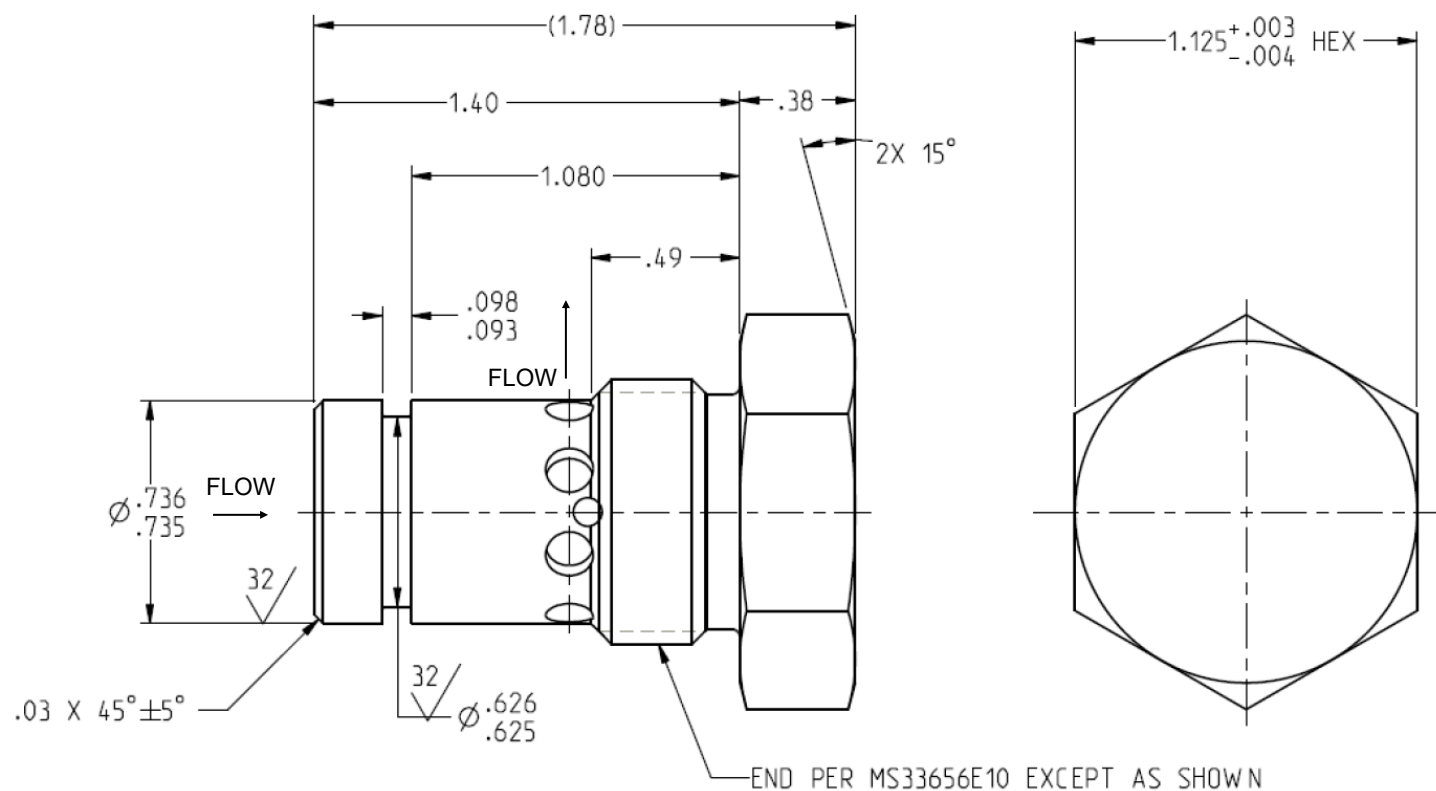
PROOF PRESSURE: 2400 PSIG MINIMUM

FLOW REGULATION: 1.30 GPM \pm 2% AT 20 TO 150 PSID

CATEGORY 10 OTHER AEROSPACE VALVES: FLOW CONTROL VALVES (FLOW REGULATORS)



PART NUMBER: 34160-X, FLOW CONTROL VALVE



PERFORMANCE SPECIFICATIONS:

FLUIDS: ANY AIRCRAFT HYDRAULIC FLUID

MATERIAL: BODY 6061 AL

TEMPERATURE RANGE: 150°F +10/-0°F

OPERATING PRESSURE: 1800 PSIG MAX

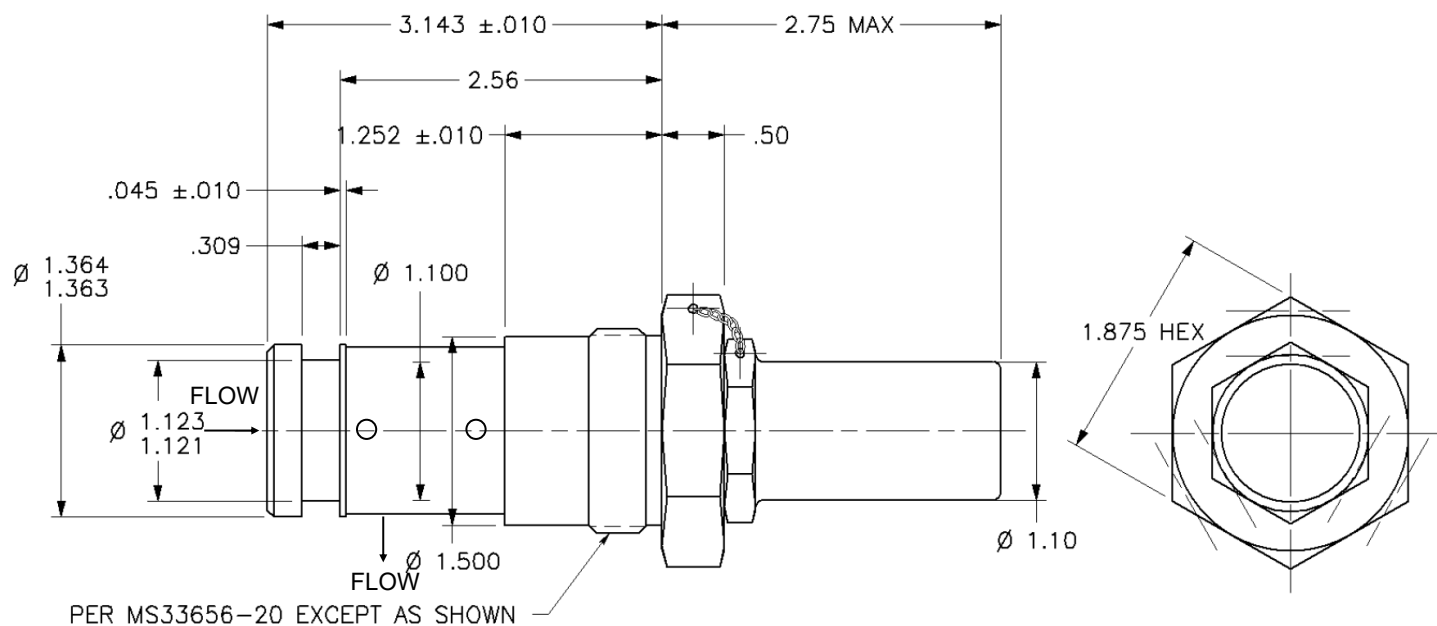
PROOF PRESSURE: 2400 PSIG MINIMUM

FLOW REGULATION: 0.91 GPM $\pm 2\%$ AT 600-1100 PSID

CATEGORY 10 OTHER AEROSPACE VALVES: FLOW CONTROL VALVES (FLOW REGULATORS)



PART NUMBER: 34260-X, FLOW CONTROL VALVE



PERFORMANCE SPECIFICATIONS:

FLUIDS: MIL-PRF-83282*

MATERIAL: BODY 15-5PH CRES

TEMPERATURE RANGE: -25°F TO 275°F

OPERATING PRESSURE: 3000 PSIG

PROOF PRESSURE: 4500 PSIG

FLOW REGULATION: 10.0 GPM ±10% AT 200-3000 PSID

ADJUSTMENT RANGE: +1.0 / -3.0 GPM AROUND NOMINAL SETTING

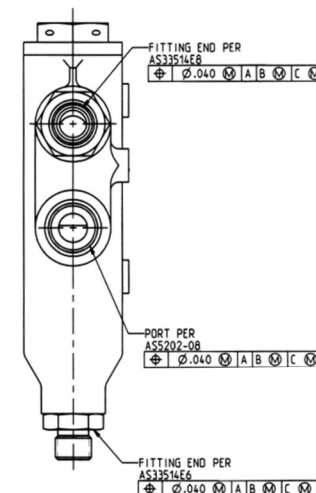
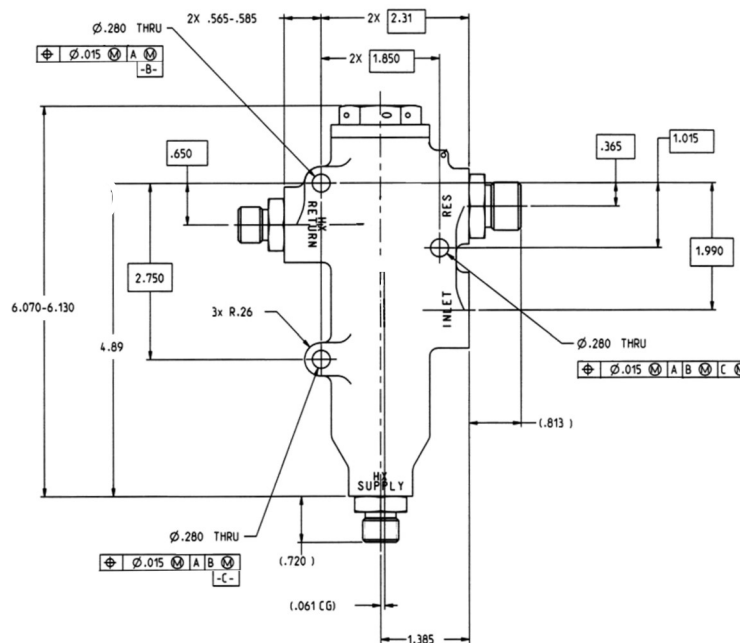
*OTHER FLUIDS MAY BE ACCEPTABLE WITH ELASTOMER CHANGE



CATEGORY 10 OTHER AEROSPACE VALVES: FLOW CONTROL VALVES (FLOW REGULATORS)

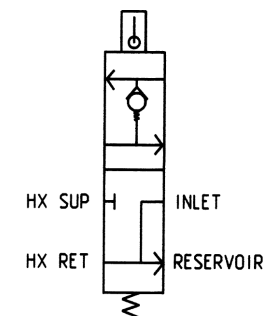


CATEGORY 10 OTHER AEROSPACE VALVES: THERMAL CONTROL VALVES



PERFORMANCE SPECIFICATIONS:

*OTHER FLUIDS MAY BE ACCEPTABLE WITH ELASTOMER CHANGE

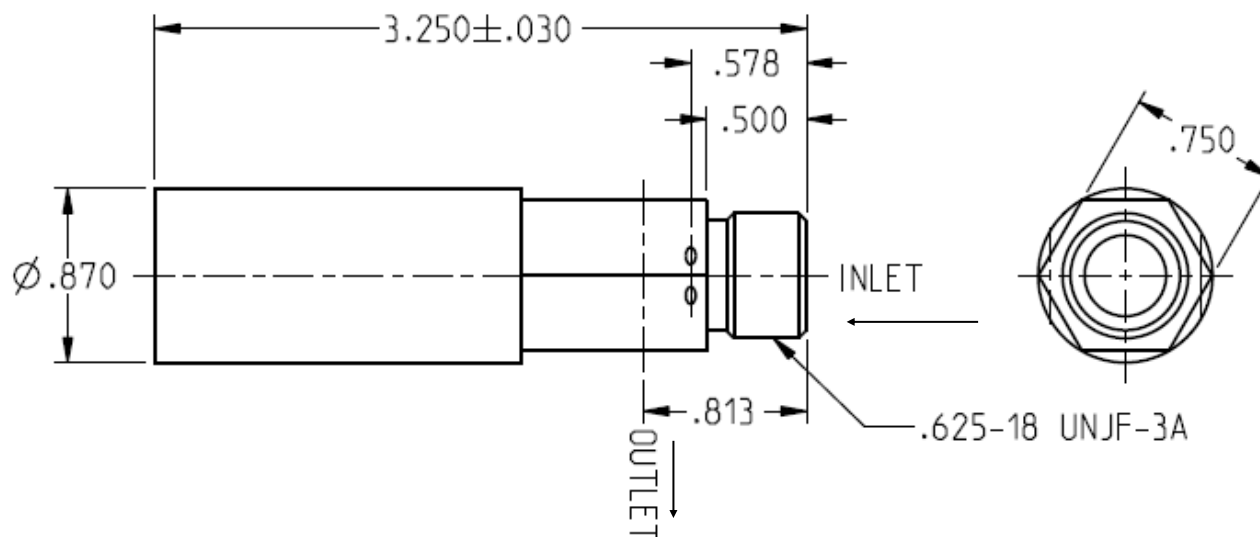


HYDRAULIC SCHEMATIC

CATEGORY 10 OTHER AEROSPACE VALVES: THERMAL CONTROL VALVES



PART NUMBER: 32730-X, THERMAL/PRESSURE BYPASS VALVE



PERFORMANCE SPECIFICATIONS:

TEST FLUID: MIL-L-23699

MATERIAL: BODY 6061-T6

POPPET 6061-T6

OPERATING PRESSURE: 150 PSIG

PROOF PRESSURE: 250 PSIG

THERMAL OPERATION: FULL BYPASS CONDITION: 6.44 GPM MIN MAX AT 40 PSID MAX AND 125°F

CLOSED CONDITION LEAKAGE: 200 CC/MIN MAX AT 40 PSID AND 155°F

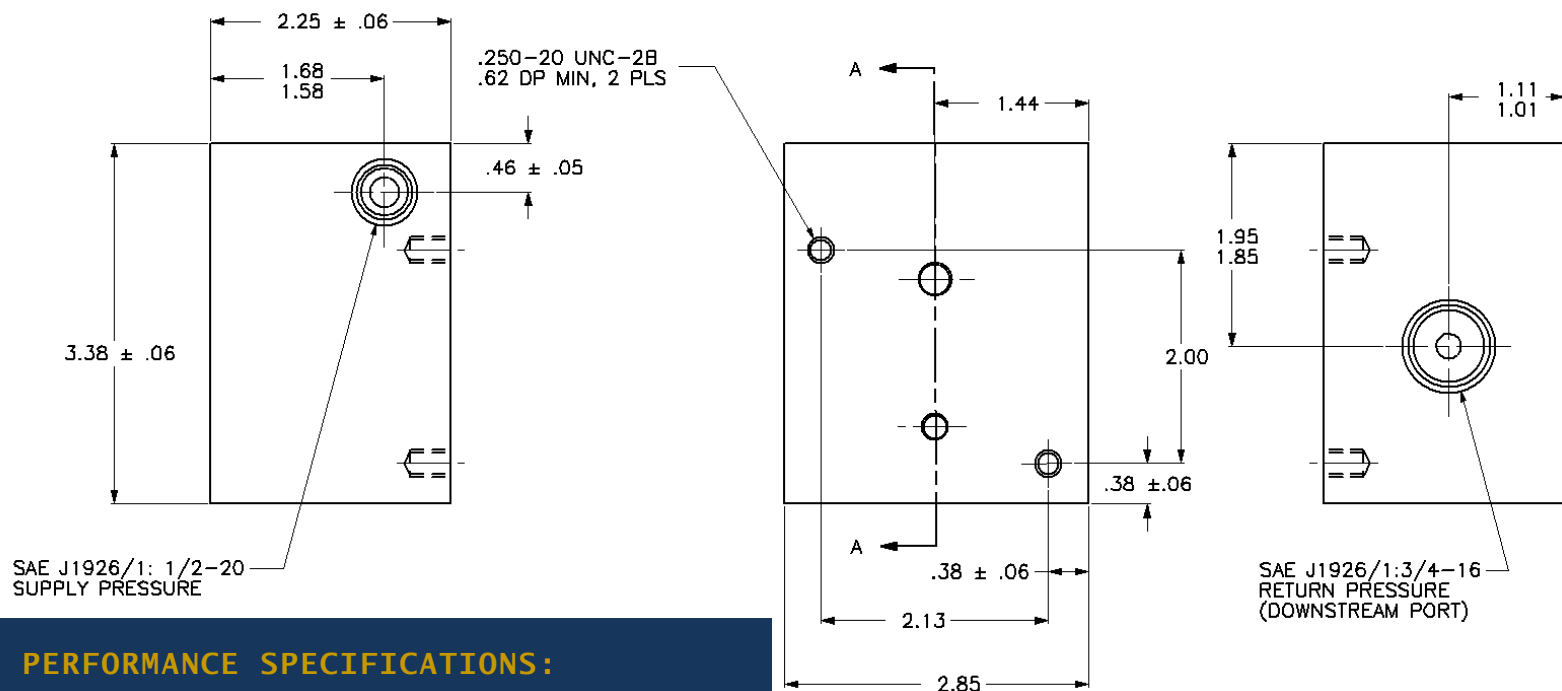
RELIEF VALVE: CRACKING PRESSURE: 50 ± 5 PSID AT 155°F AND A MINIMUM FLOW OF 500 CC/MIN

FULL FLOW: 7.15 GPM AT 80 PSID MAX AND 155°F

RESEAT PRESSURE: 35 PSID MIN UNDER DECREASING PRESSURE CONDITION AT 155°F AND A MAX FLOW RATE OF 200 CC/MIN



PART NUMBER: 34060-X, DOWNSTREAM PRESSURE REGULATOR



PERFORMANCE SPECIFICATIONS:

FLUIDS: MIL-L-2104 OR MIL-L-46167*

MATERIAL: HOUSING 6061-T6

TEMPERATURE RANGE: -20°F TO 275°F

OPERATING PRESSURE: 300 PSIG MAX

PROOF PRESSURE: 450 PSIG

OPERATION: RETURN PRESSURE (DOWNSTREAM PORT) REGULATED TO 9.5±2.0 PSIG

FOR SUPPLY PRESSURES OF 140 TO 300 PSIG AT 20±0.1 GPM

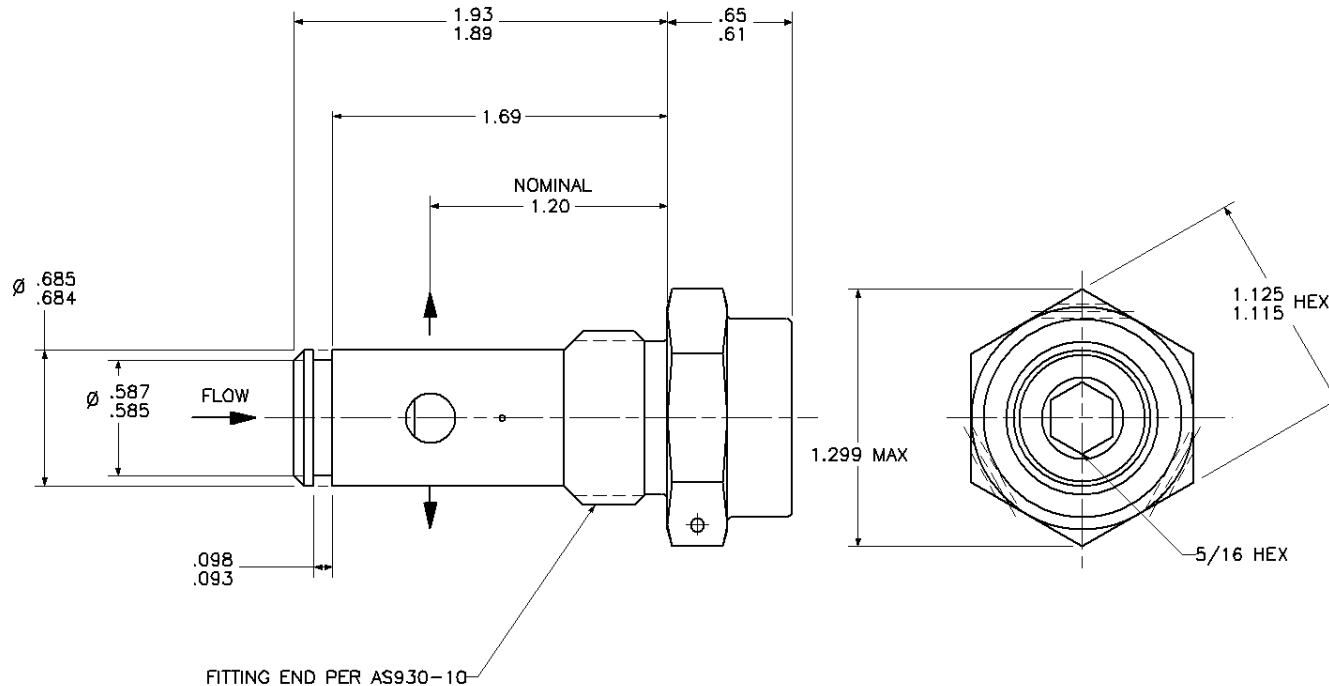
WEIGHT: 2.50 LBS MAX

*OTHER FLUIDS MAY BE ACCEPTABLE WITH ELASTOMER CHANGE





PART NUMBER: 36010-X, PRESSURE REGULATOR (BYPASS VALVE)



PERFORMANCE SPECIFICATIONS:

FLUIDS: MIL-PRF-23699*

MATERIAL: BODY 6061-T6

POPPET 15-5PH

TEMPERATURE RANGE: -65°F TO 343°F

OPERATING PRESSURE: 600 PSIG MAX

PROOF PRESSURE 975 PSIG

CRACKING PRESSURE: 250±10 PSID

FLOW: 6 GPM AT 310 PSID MAX

RESEAT PRESSURE: 200 PSID MINIMUM

INTERNAL LEAKAGE: 5 CC/MIN MAXIMUM AT PRESSURES BELOW RESEAT

WEIGHT: 0.20 LBS MAX

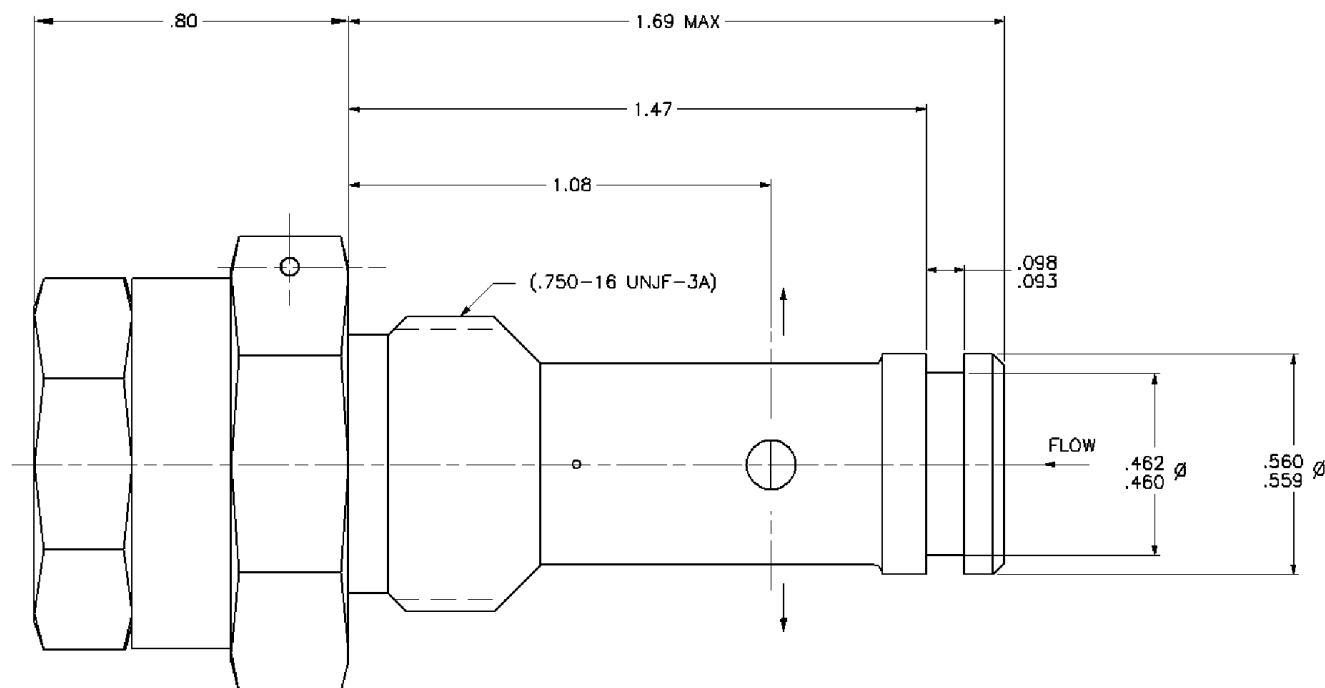
*OTHER FLUIDS MAY BE ACCEPTABLE WITH ELASTOMER CHANGE



CATEGORY 10 OTHER AEROSPACE VALVES: PRESSURE REGULATOR VALVES



PART NUMBER: 36030-X, PRESSURE REGULATOR



PERFORMANCE SPECIFICATIONS:

FLUIDS: MIL-PRF-83282*

MATERIAL: BODY 6061-T6

POPPET 15-5PH

TEMPERATURE RANGE: -65°F TO 343°F

OPERATING PRESSURE: 1500 PSIG MAX

PROOF PRESSURE: 2100 PSIG

CRACKING PRESSURE: 800 ± 50 PSID

FLOW: 1.5 GPM AT 1020 TO 1180 PSID

3.0 GPM AT 1320 TO 1500 PSID

RESEAT PRESSURE: 640 PSID MINIMUM

INTERNAL LEAKAGE: 5 CC/MIN MAXIMUM AT PRESSURES BELOW RESEAT

WEIGHT: 0.20 LBS MAX

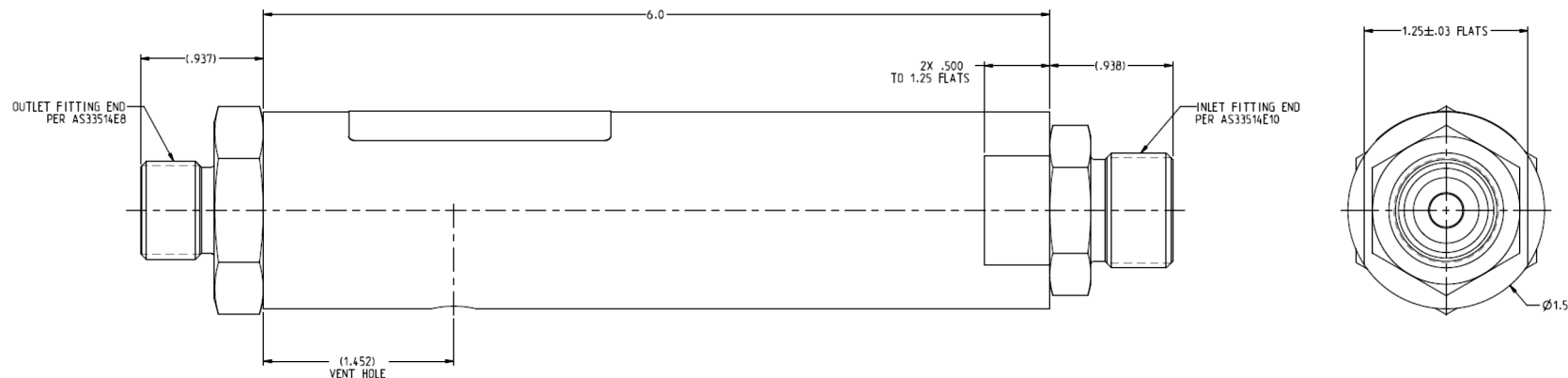
*OTHER FLUIDS MAY BE ACCEPTABLE WITH ELASTOMER CHANGE



CATEGORY 10 OTHER AEROSPACE VALVES: PRESSURE REGULATOR VALVES



PART NUMBER: 37070-X, PRIORITY VALVE



PERFORMANCE SPECIFICATIONS:

FLUIDS: LOW DENSITY PHOSPHATE ESTER FLUID TYPE IV AND V (SKYDROL)*

MATERIAL: HOUSING 2024-T351

POPPET 440C CRES

TEMPERATURE RANGE: -67°F TO 185°F

OPERATING PRESSURE: 3000 PSIG

PROOF PRESSURE: 4500 PSIG

CRACK: 2450 PSIG MAX AT 10 CC/MIN

FLOW: 2450 PSIG MAX AND 100 PSID MAX AT 7.3 GPM

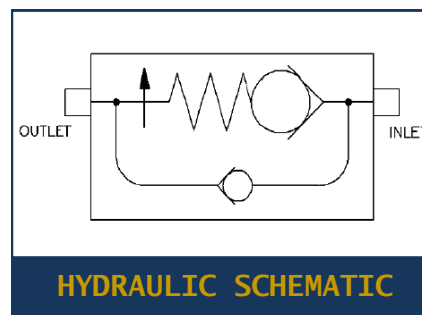
RESEAT PRESSURE: 2000 PSIG MINIMUM AT 1 CC/MIN

INTERNAL LEAKAGE: 7.0 DPM MAX AT 0 TO 2000 PSIG

REVERSE FLOW: 100 PSID MAX AT 7.3 GPM

WEIGHT: 1.50 LBS MAX

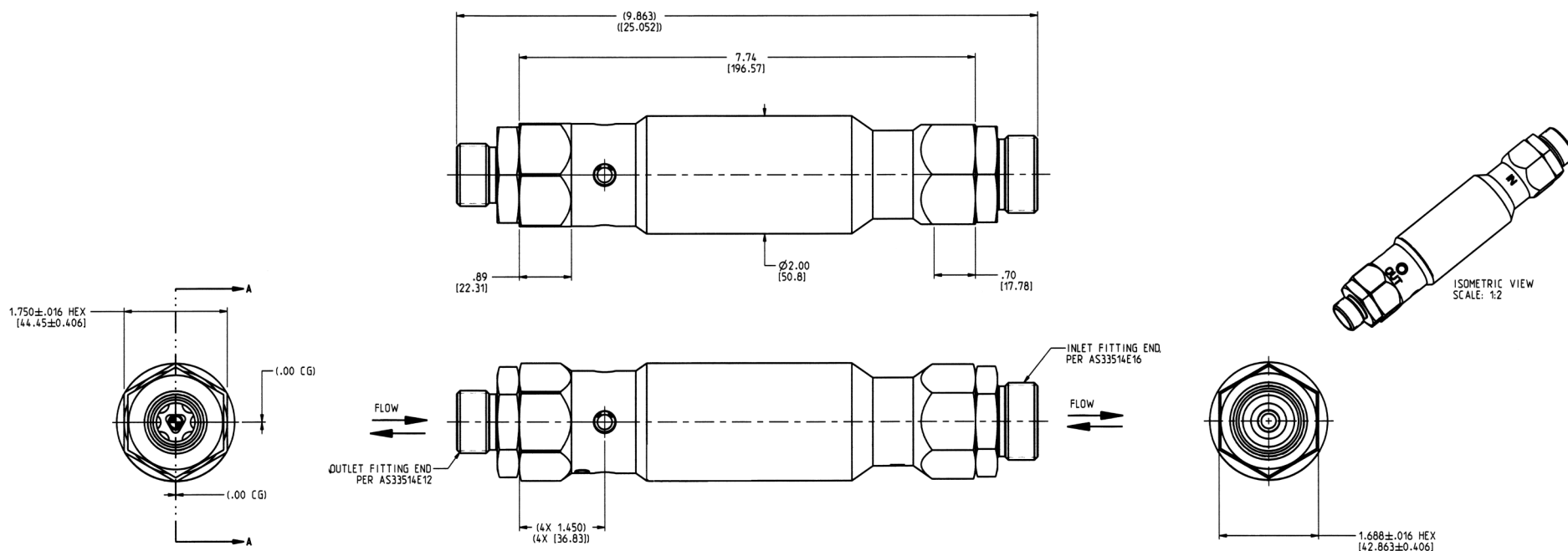
*OTHER FLUIDS MAY BE ACCEPTABLE WITH ELASTOMER CHANGE



HYDRAULIC SCHEMATIC

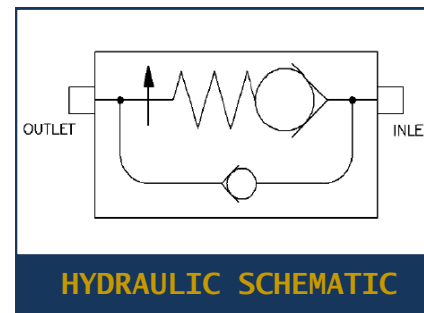


PART NUMBER: 37430-X, PRIORITY VALVE



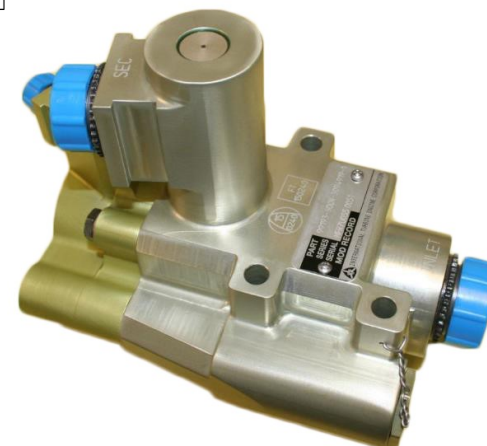
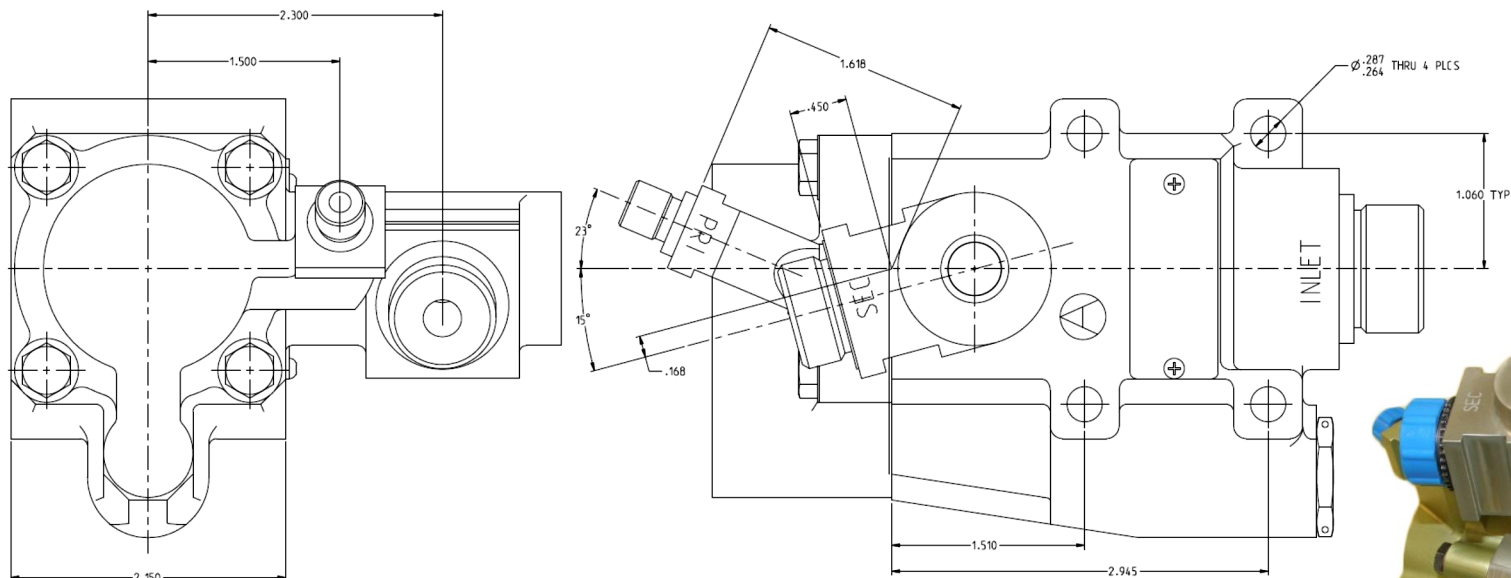
PERFORMANCE SPECIFICATIONS:

FLUIDS: SKYDROL*
 MATERIAL: HOUSING 2024-T351
 POPPET 17-4 PH
 TEMPERATURE RANGE: 20°F TO 225°F
 OPERATING PRESSURE: 3000 PSIG
 TRANSIENT PRESSURE DURING NORMAL OPERATION: 3750 PSIG
 PROOF PRESSURE: 4500 PSIG
 PERFORMANCE (INLET TO OUTLET)
 REFERENCE CRACKING PRESSURE: 2400 PSIG MINIMUM
 FLOW: 20 GPM AT 180 PSID MAX WITH 2700 ± 50 PSIG AT THE INLET
 RESEAT PRESSURE: 7 DPM MAXIMUM AT 2113 TO 0 PSIG
 INTERNAL LEAKAGE: 7.0 DPM MAXIMUM AT 0 TO 2113 PSIG
 PERFORMANCE (OUTLET TO INLET)
 FLOW: 1.0 GPM MINIMUM AT 100 PSID
 RESPONSE, VALVE: THE VALVE SHALL REACT TO THE FLOW DEMAND AND REGULATE
 THE INLET PRESSURE AT 2113 PSIG MINIMUM WITHIN 300 MILLISECONDS
 WEIGHT: 2.72 LBS MAX
 *OTHER FLUIDS MAY BE ACCEPTABLE WITH ELASTOMER CHANGE





PART NUMBER: 33700-X, FUEL FLOW DIVIDER



PERFORMANCE SPECIFICATIONS:

FLUIDS: JP4, JP5, OR EQUIVALENT

MATERIAL: HOUSING 17-4 PH

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 1000 PSIG MAX

PERFORMANCE: SEE FLOW CURVE

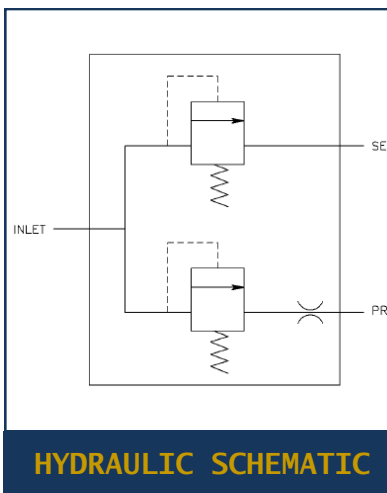
PRIMARY CRACK: 20 PSID MAX

PRIMARY FLOW: SEE CURVE

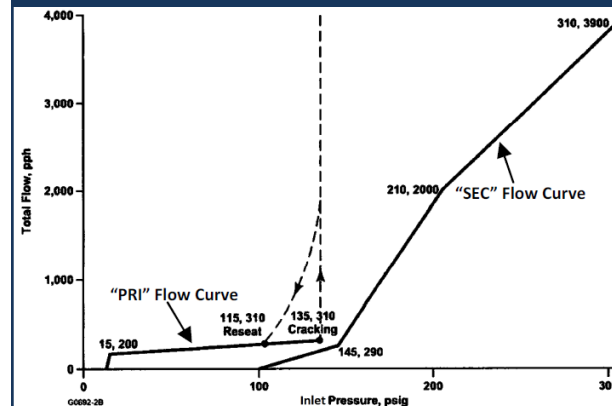
SECONDARY CRACK: 145 PSID MAX

SECONDARY FLOW: SEE CURVE

WEIGHT: 2.50 LBS MAX



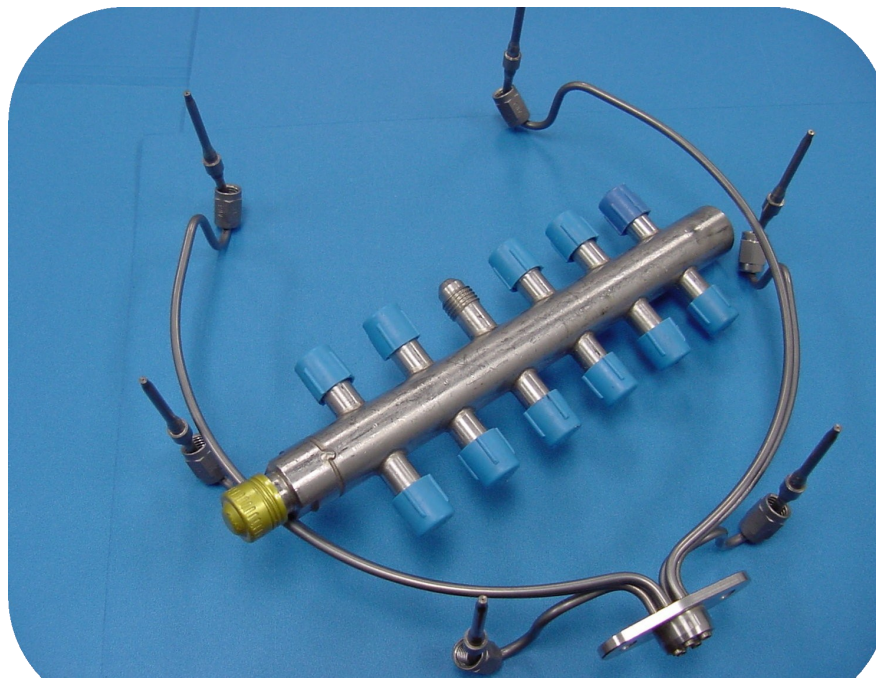
FLOW CURVE, LAB TESTED



CATEGORY 10 OTHER AEROSPACE VALVES: FUEL FLOW DIVIDERS



PART NUMBER: MULTI-PORT FUEL DISTRIBUTION MANIFOLDS



PERFORMANCE SPECIFICATIONS:

FLUIDS: DIESEL OILS, JET FUELS & OTHER

TEMPERATURE RANGE: -65°F TO 500°F (HIGH TEMPERATURE MATERIALS AVAILABLE FOR EXTREME ENVIRONMENTS)

OPERATING PRESSURE: UP TO 1000 PSI

FLOW TOLERANCE RANGE $\pm 1\%$ TO 10% NOZZLE TO NOZZLE/PORT TO PORT

FLOW RATES: UP TO 10 GPM

NOTES: CRISSAIR HAS A VARIETY OF CONFIGURATIONS AND FLOW RATES FOR AEROSPACE, COMMERCIAL, AND INDUSTRIAL APPLICATIONS.

CATEGORY 10 OTHER AEROSPACE VALVES: FUEL MANIFOLDS



CRISSAIR HAS VARIOUS OTHER VALVES NOT LISTED IN THE
CATALOG WITH DIFFERENT MATERIALS, FITTINGS, AND SIZE CONFIGURATIONS.

CONTACT CRISSAIR FOR ADDITIONAL INFORMATION/DRAWINGS AT

(661) 367-3300 OR SALES@CRISSAIR.COM.

YOU CAN ALSO VISIT WWW.CRISSAIR.COM.



MANIFOLD ASSEMBLIES

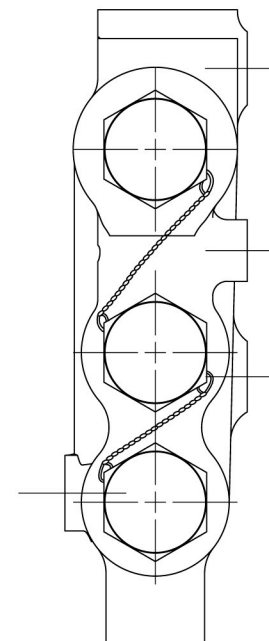
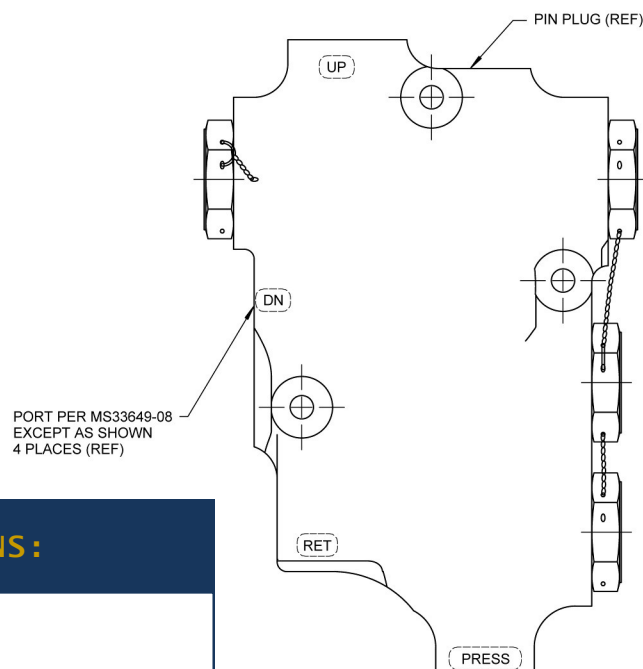
The greatest value proposition at Crissair lies within Manifold Assemblies. With the product range to cover all necessary fluid control components for certain manifold applications, Crissair's engineers optimize performance, weight, cost, and schedule simultaneously.



This catalog contains a small sample of drawings. Please contact Crissair for additional drawings and/or configurations.



PART NUMBER: 1M1046-X, HYDRAULIC RETURN MANIFOLD



PERFORMANCE SPECIFICATIONS:

FLUIDS: BMS-11*

MATERIAL: MANIFOLD 7075-T73 AL

TEMPERATURE RANGE: -65°F TO 225°F

OPERATING PRESSURE: 2950 PSIG TO 3050 PSIG

PROOF PRESSURE: 4450 PSIG TO 4550 PSIG

RETURN PRESSURE: 45 PSIG TO 100 PSIG

CRACKING PRESSURE: 3 PSID TO 5 PSID

FLOW: FROM GEAR UP PORT TO PRESSURE PORT:

13 GPM WITH 150 PSID MAX PRESUURE DROP

FROM GEAR DOWN PORT TO PRESSURE PORT:

13 GPM WITH 150 PSID MAX PRESUURE DROP

FROM RETURN PORT TO GEAR DOWN PORT:

11 GPM WITH 250 PSID MAX PRESUURE DROP

FROM RETURN PORT TO GEAR UP PORT:

11 GPM WITH 200 PSID MAX PRESUURE DROP

INTERNAL LEAKAGE: NONE @ 3000 PSID FROM:

PRESSURE PORT TO GEAR UP PORT

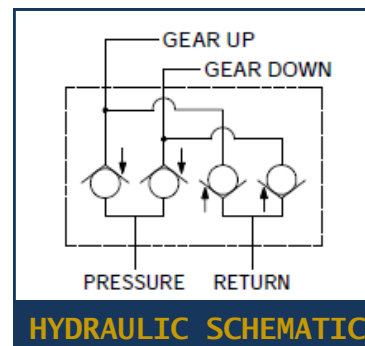
PRESSURE PORT TO GEAR DOWN PORT

GEAR UP PORT TO RETURN PORT

GEAR DDWM PORT TO RETURN PORT

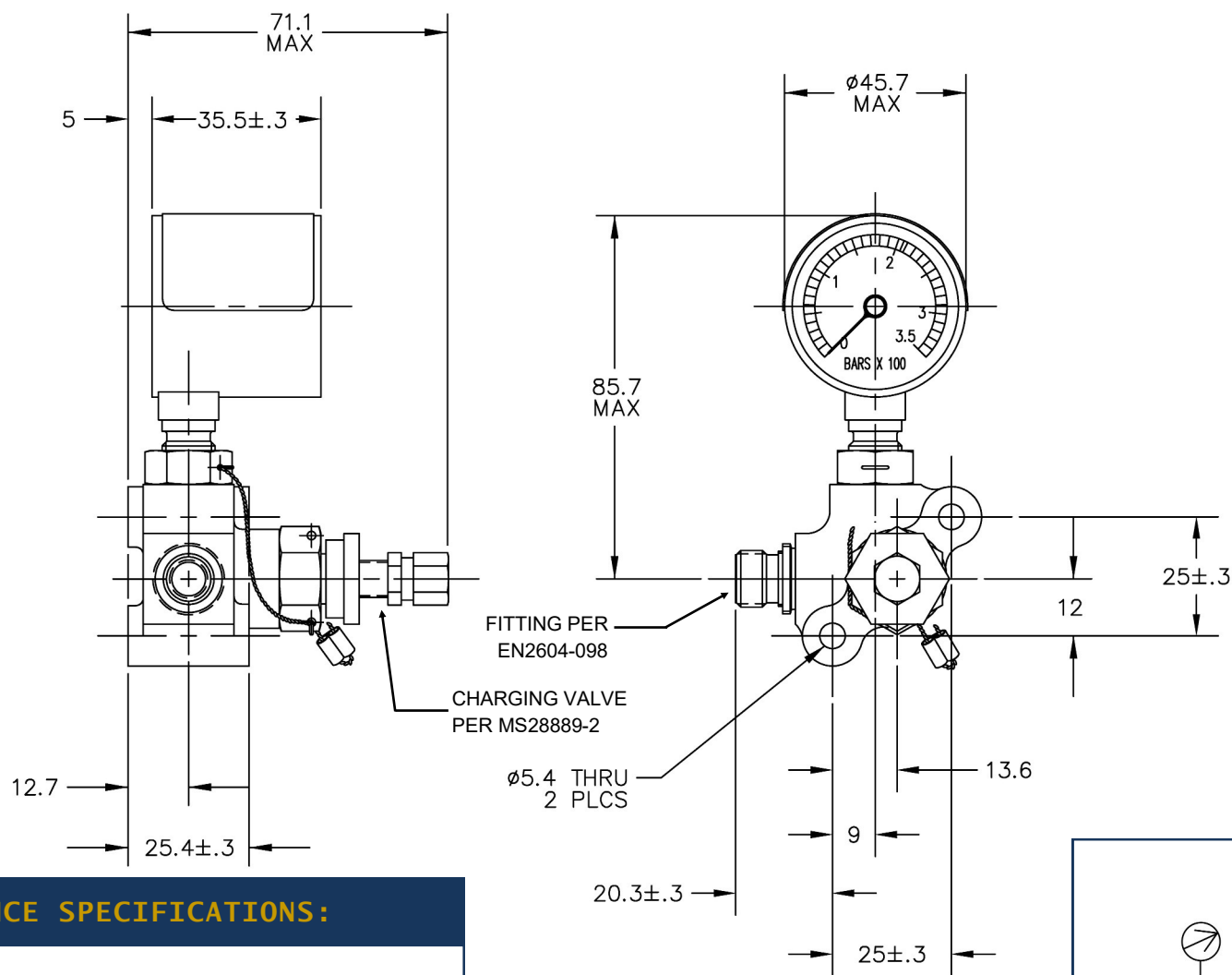
*OTHER FLUIDS MAY BE ACCEPTABLE WITH ELASTOMER CHANGE

CATALOG USE ONLY





PART NUMBER: 1M1072-X, CHARGING MANIFOLD



PERFORMANCE SPECIFICATIONS:

FLUIDS: MIL-H-83282*

MATERIAL: MANIFOLD 2024-T351 AL

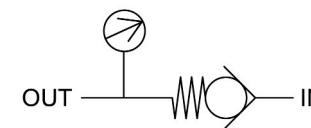
TEMPERATURE RANGE: -22°F TO 248°F

OPERATING PRESSURE: 3000 PSIG

PROOF PRESSURE: 6000 PSIG

INTERNAL LEAKAGE: NONE

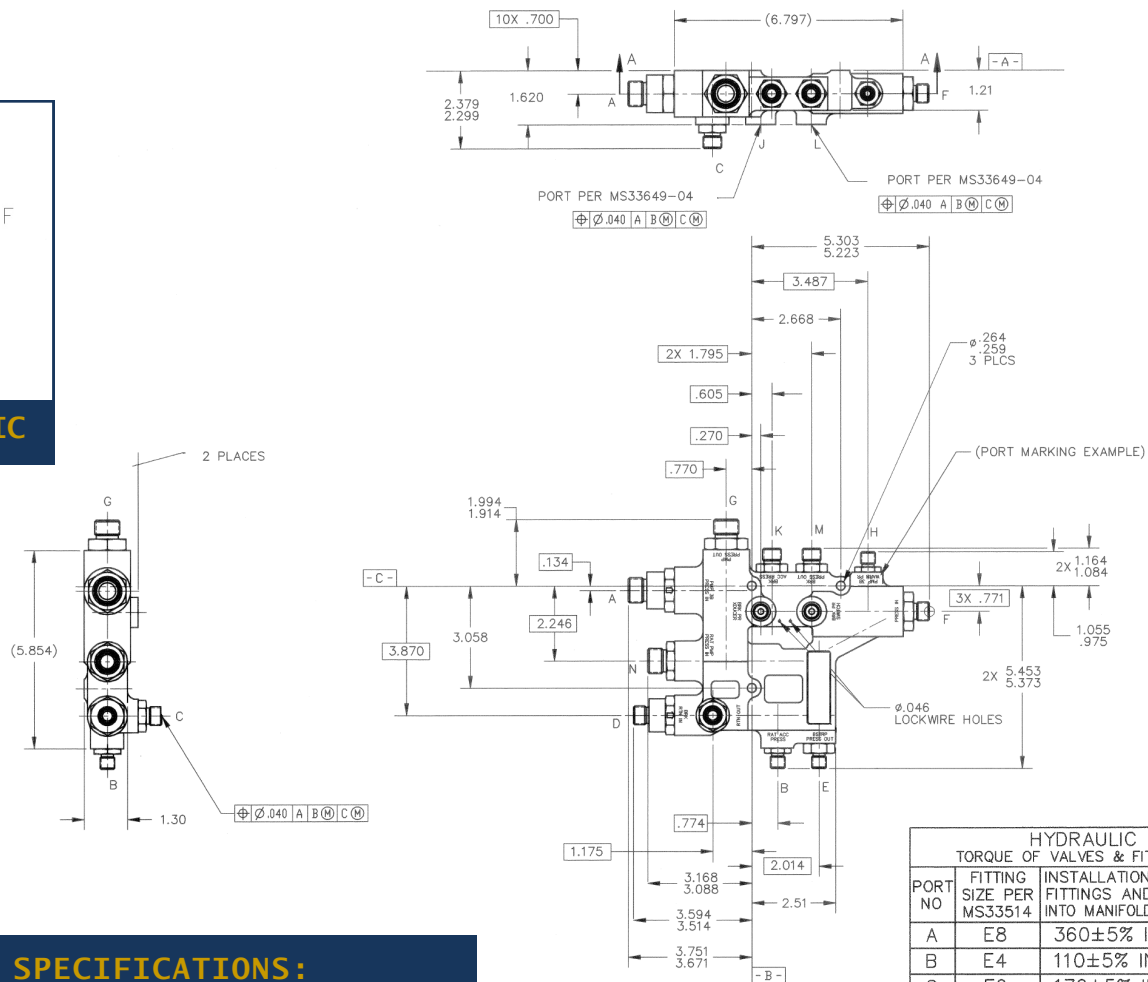
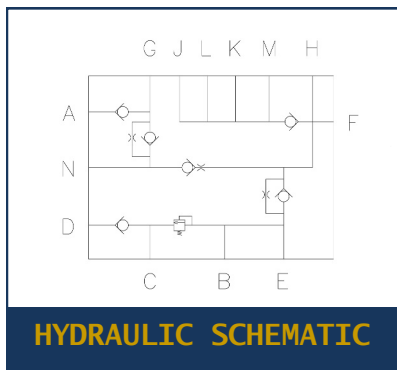
*OTHER FLUIDS MAY BE ACCEPTABLE WITH ELASTOMER CHANGE



HYDRAULIC SCHEMATIC



PART NUMBER: 1M1086-X, MANIFOLD ASSEMBLY VALVE



PERFORMANCE SPECIFICATIONS:

FLUIDS: PHOSPHATE ESTER TYPE IV, CLASS 1 (SKYDROL LD-4)*

MATERIAL: MANIFOLD 2024-T851 AL


TEMPERATURE RANGE: -65° TO 275°F

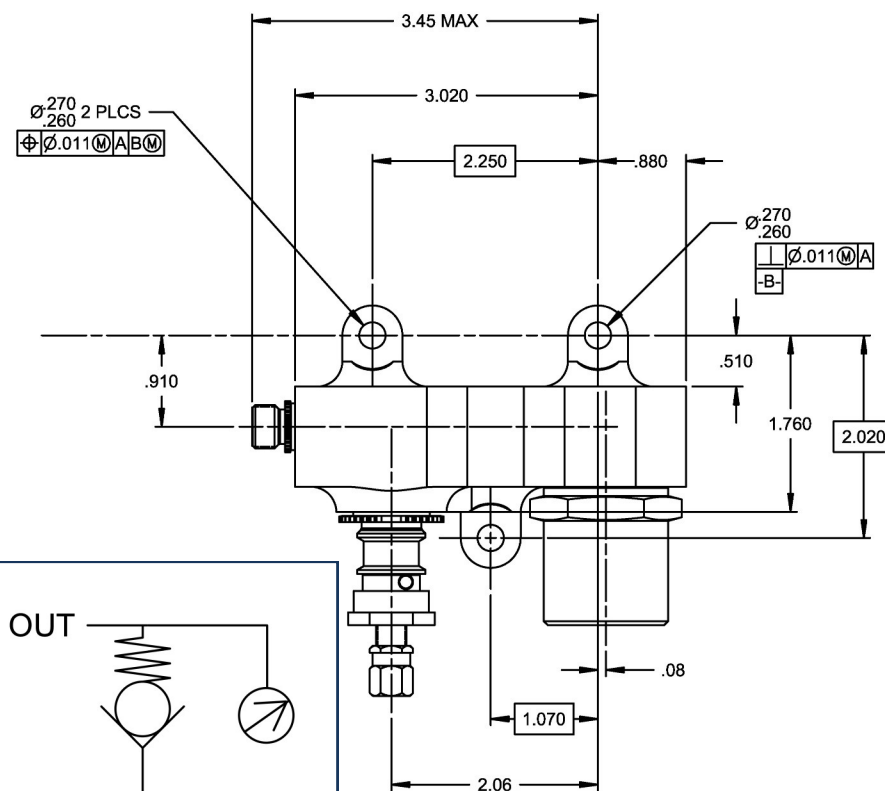
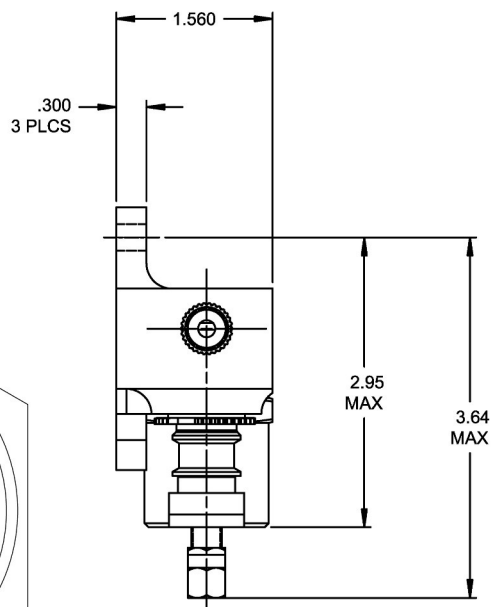
OPERATING PRESSURE: 3050 PSIG

PROOF PRESSURE: 4500 PSIG

WEIGHT: 3.90 LBS MAX

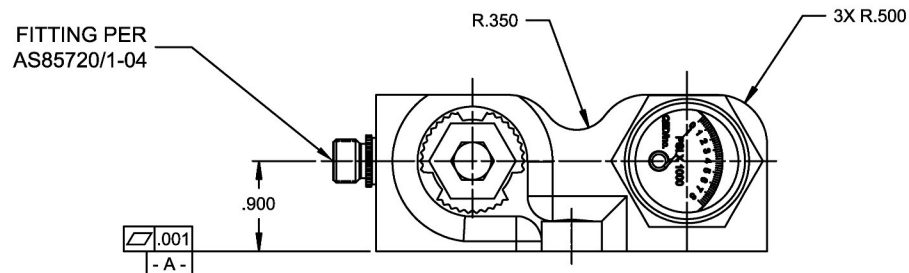
*OTHER FLUIDS MAY BE ACCEPTABLE WITH ELASTOMER CHANGE

HYDRAULIC INTERFACE SIZES, TORQUE OF VALVES & FITTINGS AND PORT IDENTIFICATION				
PORT NO	FITTING SIZE PER MS33514	INSTALLATION TORQUE FITTINGS AND VALVES INTO MANIFOLD (ARP994)	PORT MARKING 	PORT SIZE PER MS33649
A	E8	360±5% IN/LBS	PMP 3B PRESS IN	-10
B	E4	110±5% IN/LBS	RAT ACC PRESS	-04
C	E6	170±5% IN/LBS	RTN OUT	-06
D	E6	280±5% IN/LBS	BRK RTN IN	-08
E	E4	170±5% IN/LBS	BSTRP PRESS OUT	-06
F	E6	280±5% IN/LBS	PRESS IN	-08
G	E8	360±5% IN/LBS	PMP PRESS OUT	-10
H	E4	110±5% IN/LBS	PMP 3B WARM PR	-04
J	-	-	BRK PR XDUCE	-04
K	E6	170±5% IN/LBS	BRK ACC PRESS	-06
L	-	-	BRK PR SWITCH	-04
M	E6	170±5% IN/LBS	BRK PRESS OUT	-06
N	E8	280±5% IN/LBS	RAT PMP PRESS IN	-08



"SAFETY CRITICAL ITEM"

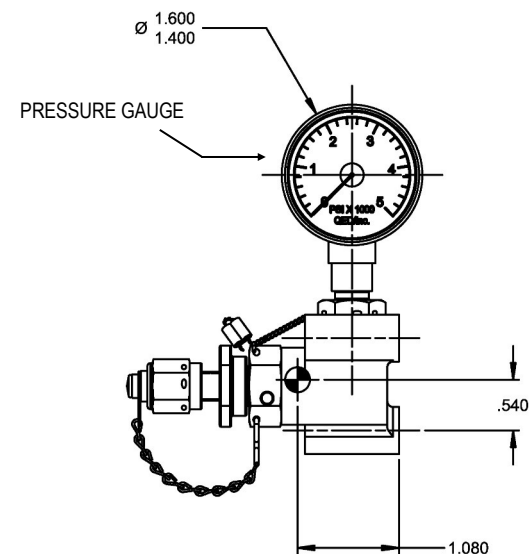
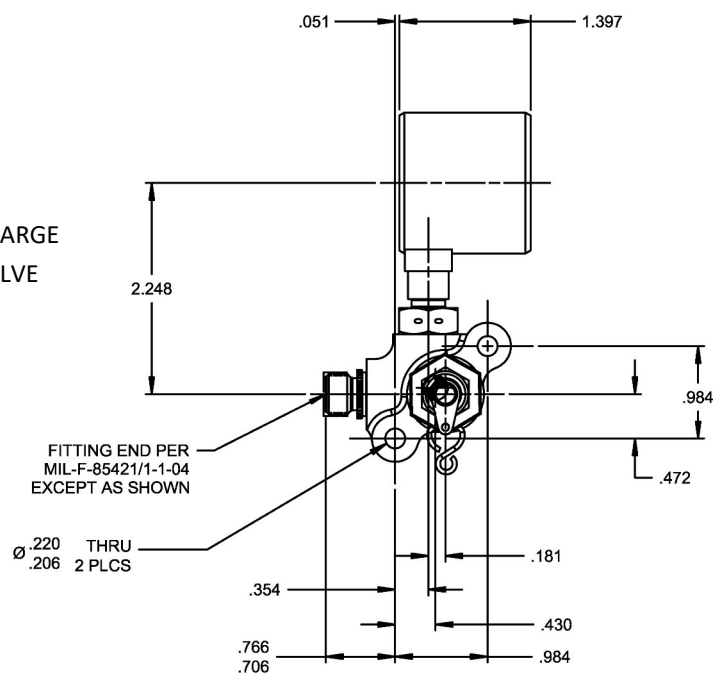
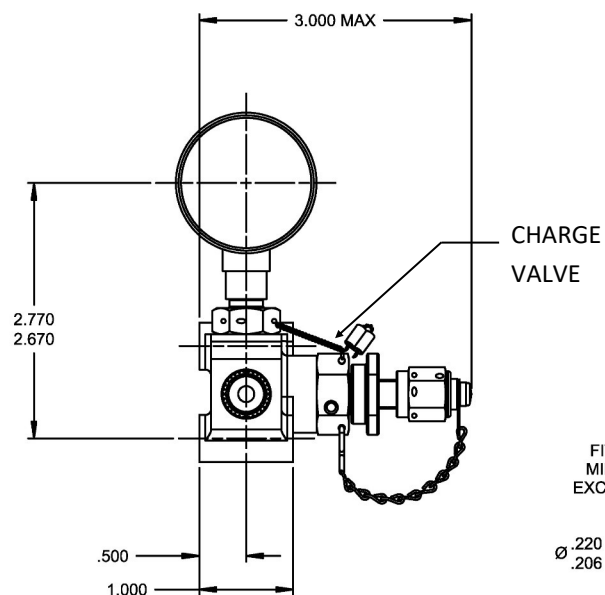
FLUIDS: AIR AND NITROGEN
MATERIAL: MANIFOLD 6AL-4V TI
TEMPERATURE RANGE: -65°F TO 250°F
OPERATING PRESSURE: 5400 PSIG
PROOF PRESSURE: 10800 PSIG
INTERNAL LEAKAGE: NONE FROM 0 TO 5400 PSID WITH NUT ON ITEM 2
TORQUED TO 50-60 INCH/LBS



CATEGORY 11: MANIFOLD ASSEMBLIES

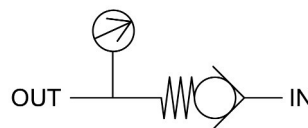


PART NUMBER: 1M1190-X, CHARGING MANIFOLD

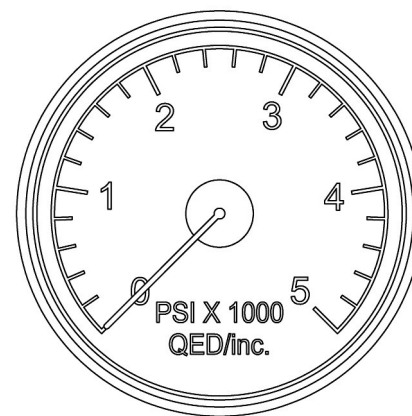


PERFORMANCE SPECIFICATIONS:

FLUIDS: NITROGEN
 MATERIAL: MANIFOLD 6AL-4V TI
 TEMPERATURE RANGE: -65°F TO 185°F
 OPERATING PRESSURE: 4000 PSIG
 PROOF PRESSURE: 6000 PSIG
 FLOW: 80 L/MIN MINIMUM
 INTERNAL LEAKAGE: NOT APPLICABLE
 WEIGHT: 2.45 LBS MAX

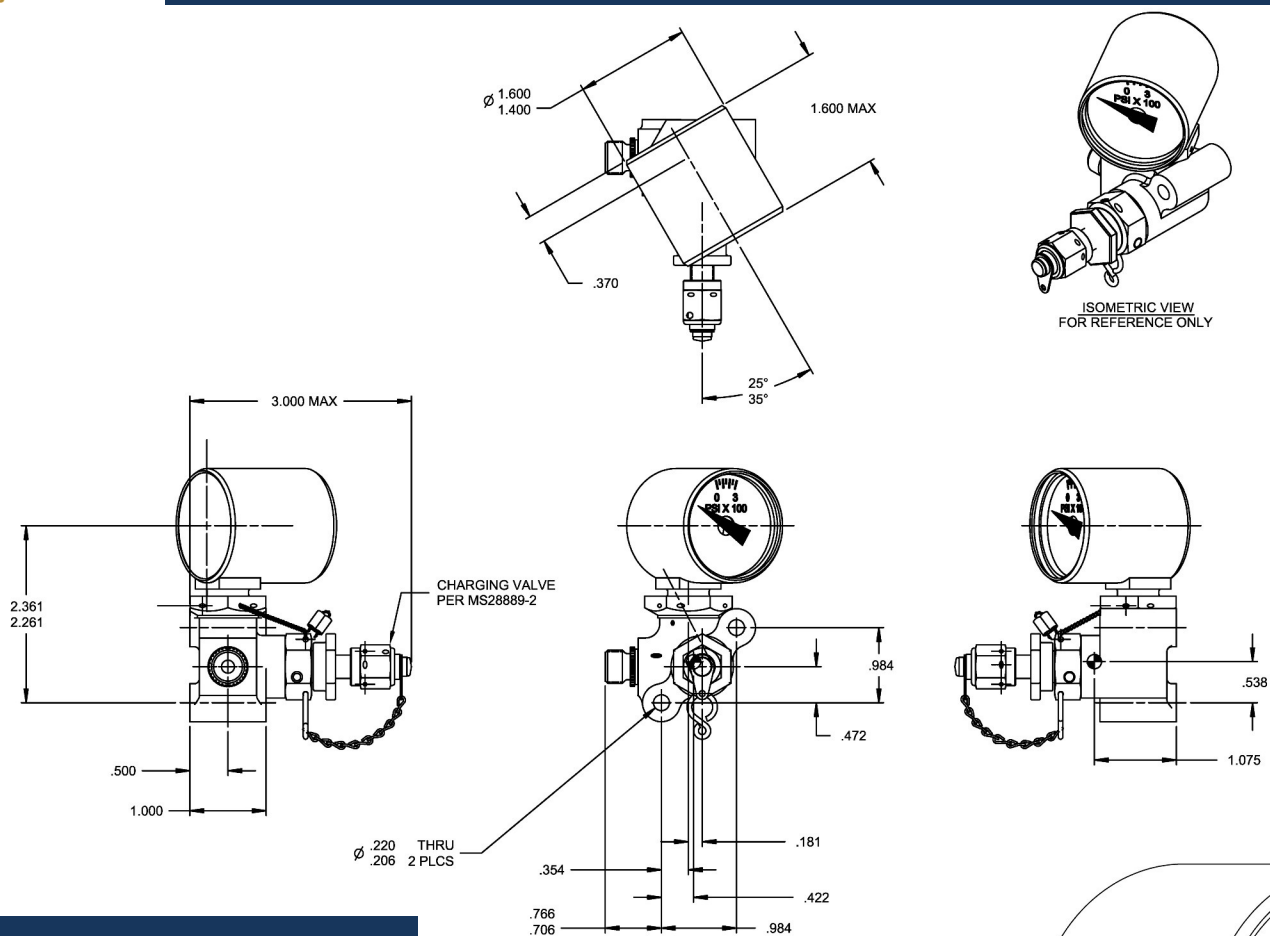


HYDRAULIC SCHEMATIC



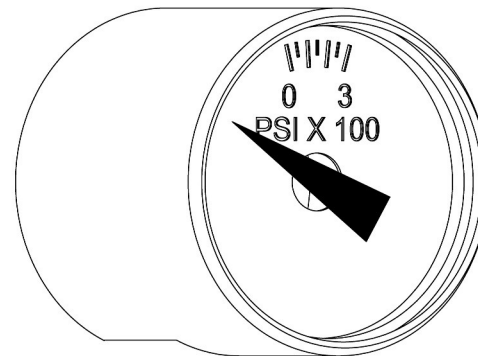
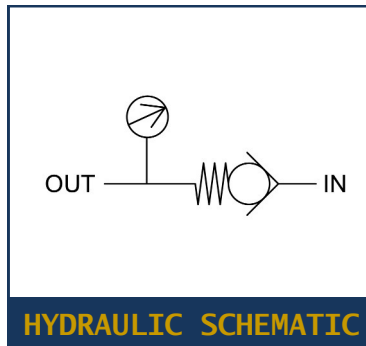


PART NUMBER: 1M1204



PERFORMANCE SPECIFICATIONS:

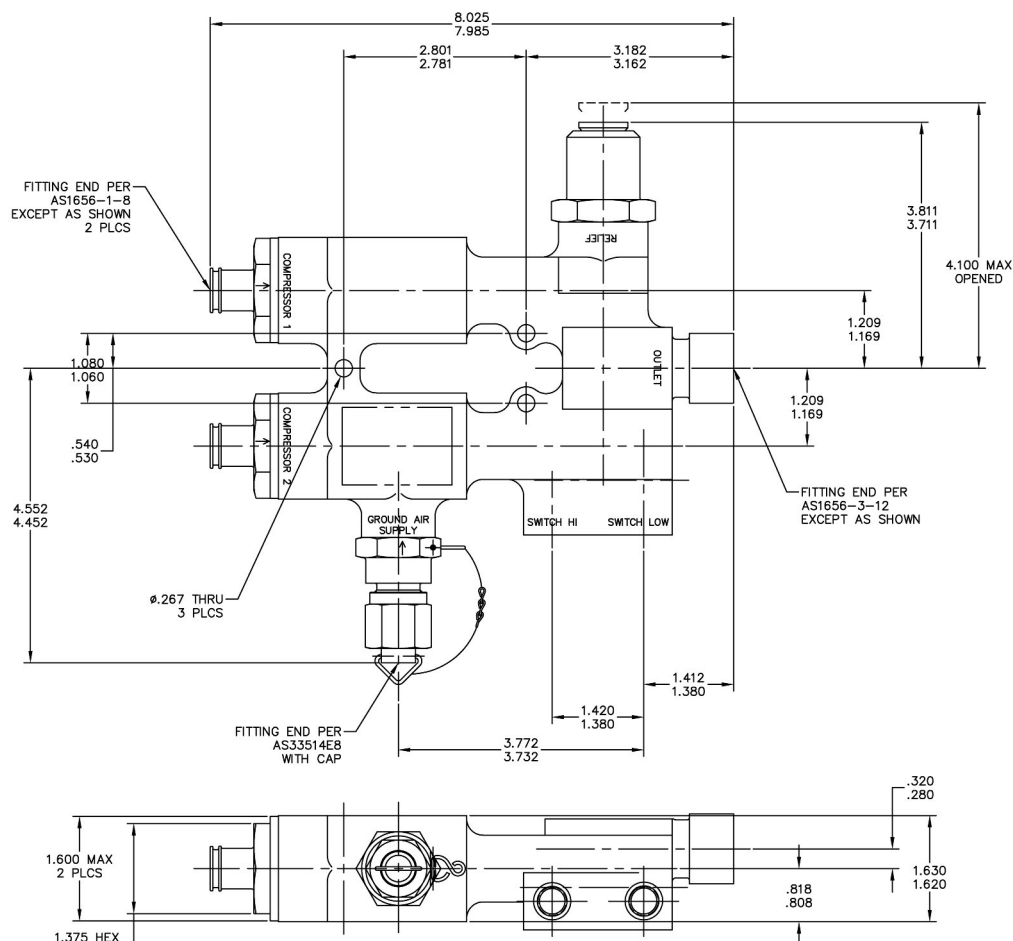
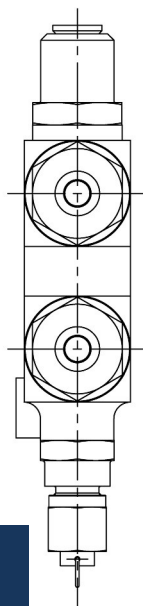
FLUIDS: NITROGEN
MATERIAL: MANIFOLD 6AL-4V TI
TEMPERATURE RANGE: -65°F TO 185°F
OPERATING PRESSURE: 3000 PSIG
PROOF PRESSURE: 4500 PSIG
FLOW: 80 L/MIN MINIMUM
INTERNAL LEAKAGE: NOT APPLICABLE
WEIGHT: 0.88 LBS MAX



CATEGORY 11: MANIFOLD ASSEMBLIES



PART NUMBER: 1M1246-X, MANIFOLD ASSEMBLY



PERFORMANCE SPECIFICATIONS:

FLUIDS: COMPRESSED AIR AND WATER

MATERIAL: MANIFOLD 2024-T351 AL

TEMPERATURE RANGE: -80°F TO 400°F

OPERATING PRESSURE: 125 PSIG

PROOF PRESSURE: 188 PSIG

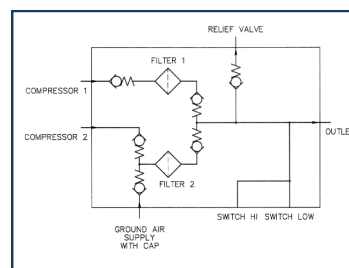
CRACKING PRESSURE: 1.5 TO 8 PSID

RELIEF PRESSURE: CRACKING 127.5 TO 137.5 PSID
RESEAT 110 PSID MINIMUM

FLOW: 16 GPM AT 35 PSID (COMPRESSOR INLET)
16-32 GPM AT 35 PSID (MANIFOLD OUTLET)
32 ± 5% GPM AT 150 PSID MAX (RELIEF OUTLET)
2.1 CFM AIRFLOW AT 4.2 PSID MAX
(COMPRESSOR 1 TO OUTLET) (AMBIENT)
2.1 CFM AIRFLOW AT 4.2 PSID MAX
(COMPRESSOR 2 TO OUTLET) (AMBIENT)

INTERNAL LEAKAGE: 10 CC/MIN MAX FROM 0 TO 10 PSID
NONE FROM 11 TO 125 PSID

WEIGHT: 2.70 LBS MAX

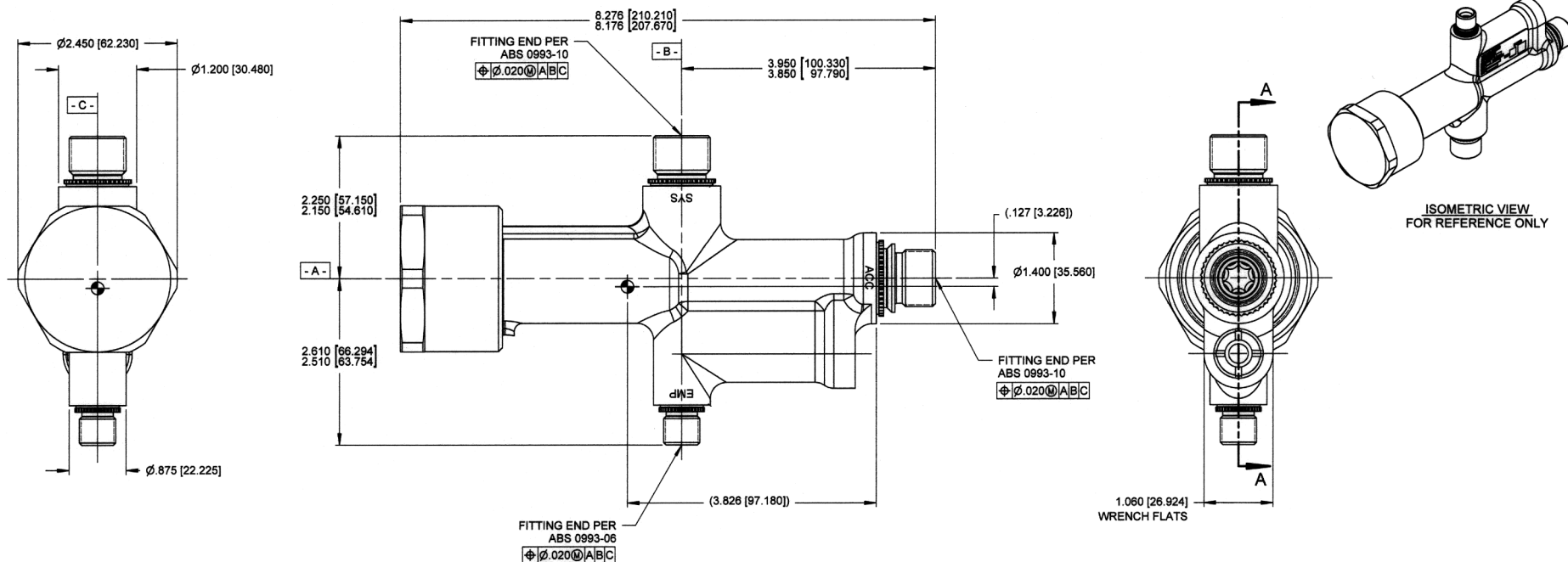


HYDRAULIC SCHEMATIC

CATEGORY 11: MANIFOLD ASSEMBLIES



PART NUMBER: 1M1250-X, PRESSURE MAINTAINING VALVE MANIFOLD



PERFORMANCE SPECIFICATIONS:

FLUIDS: SKYDROL*

MATERIAL: MANIFOLD 15-5PH CRES

TEMPERATURE RANGE: -40°F TO 203°F

OPERATING PRESSURE: 5002 TO 5076 PSIG

PROOF PRESSURE: 7614 PSIG

CHECK VALVES

CRACKING PRESSURE: 2 TO 7.2 PSID

PILOT OPERATION

OPENING: 4060 PSIG

RESEAT PRESSURE: 3074 PSIG

FLOW: 6.6 GPM AT 45 PSID MAX AT 68°F FROM EMP AND ACCUM

28.5 GPM AT 126 PSID MAX AT 68°F FROM SYS TO ACCUM AND ACCUM TO SYS

INTERNAL LEAKAGE: 2 DPM MAX FROM 1000 TO 5076 PSID
FROM ACCUM TO EMP AND ACCUM TO SYS

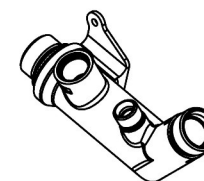
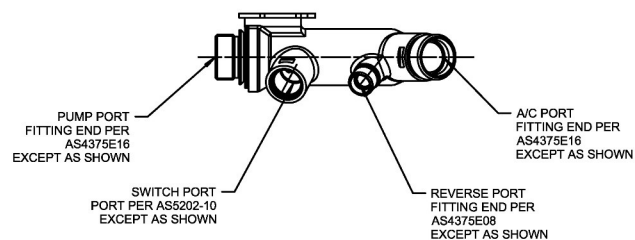
WEIGHT: 3.93 LBS MAX

*OTHER FLUIDS MAY BE ACCEPTABLE WITH ELASTOMER CHANGE

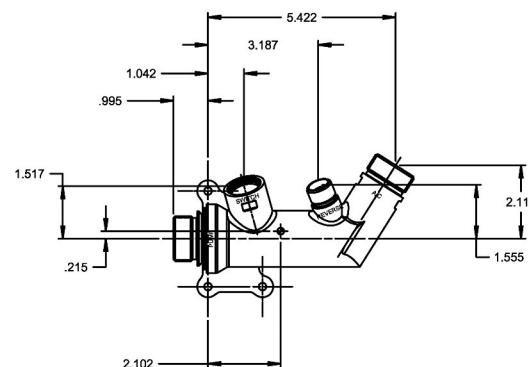
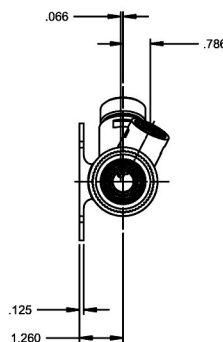
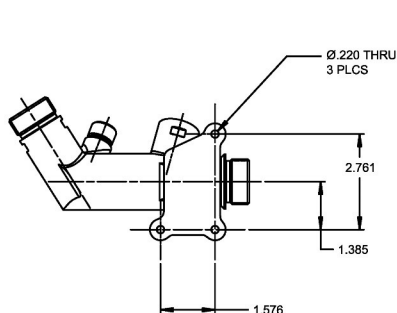
CATEGORY 11: MANIFOLD ASSEMBLIES



PART NUMBER: 1M1280-X, CHECK VALVE MANIFOLD



ISOMETRIC VIEW
FOR REFERENCE ONLY



PERFORMANCE SPECIFICATIONS:

FLUIDS: PHOSPHATE ESTER BASED FLUID TYPE IV OR V*

MATERIAL: MANIFOLD 6AL-4V TI

TEMPERATURE RANGE: -5°F TO 158°F

OPERATING PRESSURE: 2988 PSIG

PROOF PRESSURE: 4547 PSIG

CRACKING PRESSURE: 2 TO 7.2 PSID

FLOW: 11.1 GPM AT 20.3 PSID MAX FROM PUMP TO REVERSE

46 GPM AT 45 PSID MAX FROM PUMP TO A/C

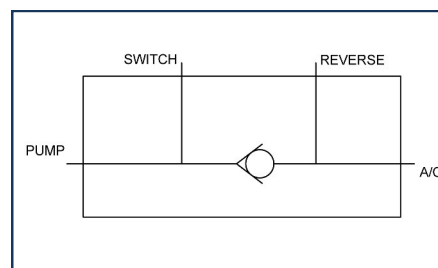
INTERNAL LEAKAGE: 2 DPM MAX AT 2.9 TO 72 PSID

1 DPM MAX AT 87 TO 1001 PSID

0 DPM AT 1015 TO 4547 PSID

WEIGHT: 1.65 LBS MAX

*OTHER FLUIDS MAY BE ACCEPTABLE WITH ELASTOMER CHANGE

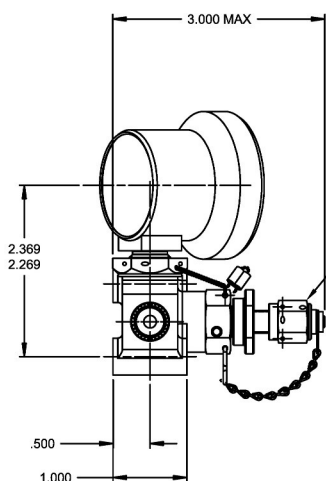


HYDRAULIC SCHEMATIC

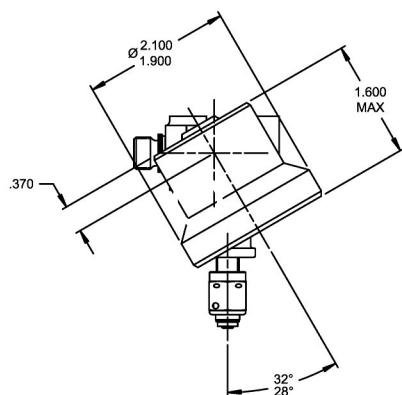
CATEGORY 11: MANIFOLD ASSEMBLIES



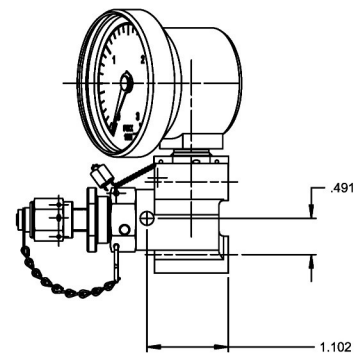
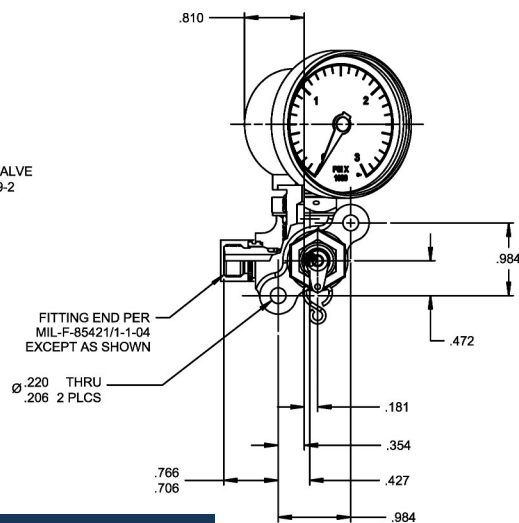
PART NUMBER: 1M1298-X, CHARGING MANIFOLD



CHARGING VALVE
PER MS28889-2



ISOMETRIC VIEW
FOR REFERENCE ONLY



PERFORMANCE SPECIFICATIONS:

FLUIDS: NITROGEN

MATERIAL: MANIFOLD 6AL-4V TI

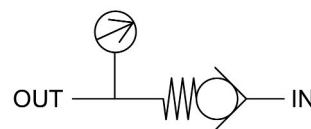
TEMPERATURE RANGE: -65°F TO 185°F

OPERATING PRESSURE: 3000 PSIG

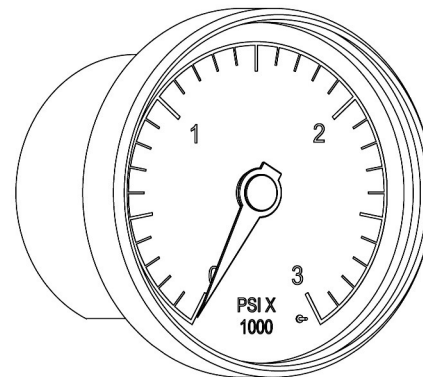
PROOF PRESSURE: 4500 PSIG

INTERNAL LEAKAGE: NOT APPLICABLE

WEIGHT: 0.88 LBS MAX



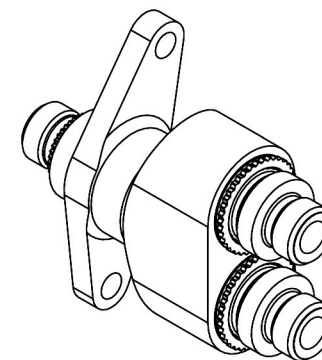
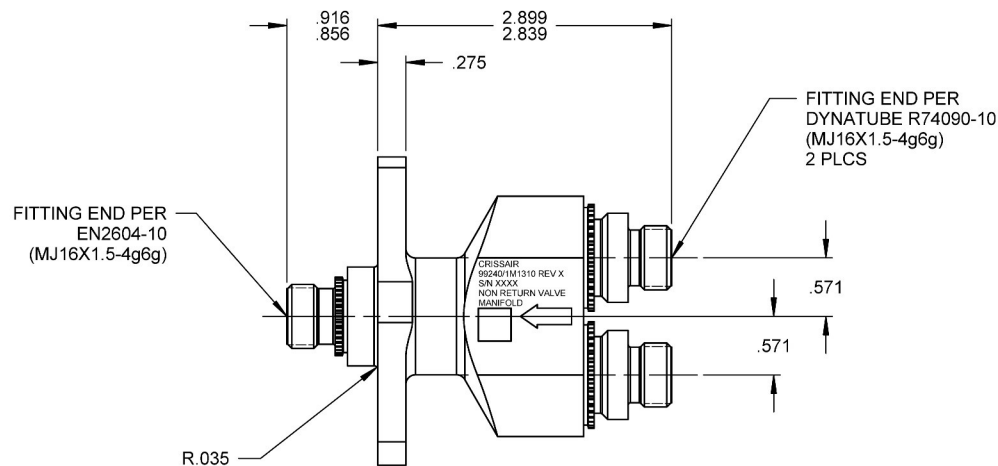
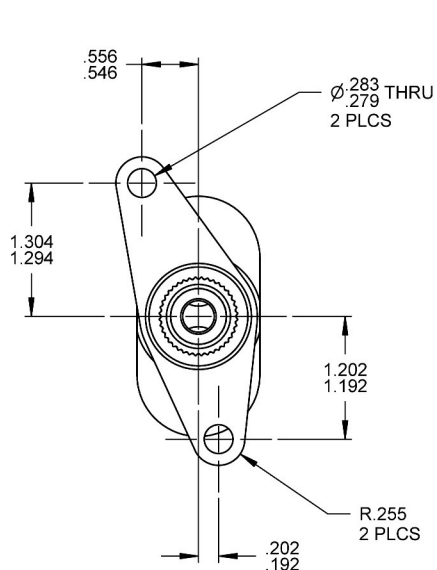
HYDRAULIC SCHEMATIC



CATEGORY 11: MANIFOLD ASSEMBLIES



PART NUMBER: 1M1310-X, 2 INTO 1 CHECK VALVE MANIFOLD



ISOMETRIC VIEW
FOR REFERENCE ONLY

PERFORMANCE SPECIFICATIONS:

FLUIDS: AIRCRAFT HYDRAULIC FLUID PER MIL-PRF-83282 AND MIL-PRF-87257

MATERIAL: MANIFOLD 7075-T73 AL

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 3200 PSIG

PROOF PRESSURE: 4800 PSIG

CRACKING PRESSURE: 2 TO 8 PSID

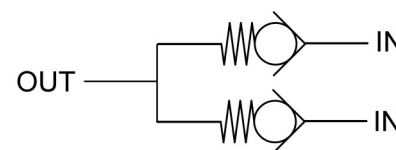
FLOW: 8 GPM AT 35 PSID MAX

9.5 GPM AT 51 PSID MAX

INTERNAL LEAKAGE: 1 DPM MAX AT 5 PSID

NONE AT 1000 TO 3200 PSID

WEIGHT: 0.60 LBS MAX

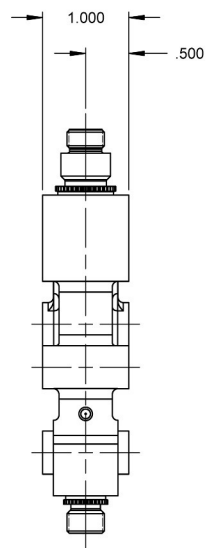


HYDRAULIC SCHEMATIC

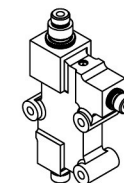
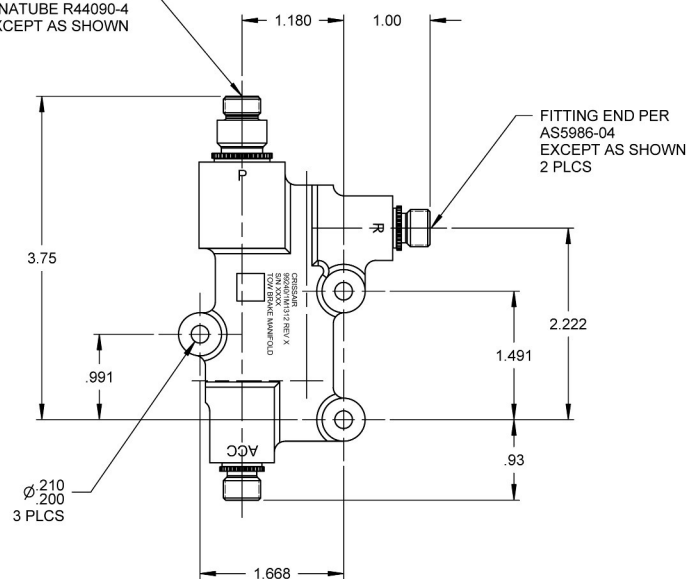
CATEGORY 11: MANIFOLD ASSEMBLIES



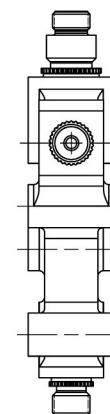
PART NUMBER: 1M1312-X, CHARGING MANIFOLD



FITTING END PER
DYNATUBE R44090-4
EXCEPT AS SHOWN



ISOMETRIC VIEW
FOR REFERENCE ONLY



PERFORMANCE SPECIFICATIONS:

FLUIDS: AIRCRAFT HYDRAULIC FLUID PER MIL-PRF-83282 AND MIL-PRF-87257*

MATERIAL: MANIFOLD 7075-T73511 AL

TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 3100 PSIG

PROOF PRESSURE: 4650 PSIG

CRACKING PRESSURE: 2 TO 8 PSID

RELIEF PRESSURE: 3500 PSID

RESEAT PRESSURE: 3200 PSID

FLOW: 0.8 TO 1.0 GPM FROM 200 TO 3000 PSID (REGULATED FLOW)

15 CC/MIN MINIMUM AT 4050 PSID (RELIEF FLOW)

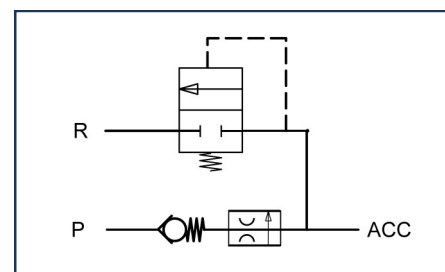
INTERNAL LEAKAGE: 1 DPM MAX AT 5 PSID

NONE AT 1000 TO 3000 PSID

40 DPH MAX AT 3200 PSID (DECREASING PRESSURE)

WEIGHT: 0.56 LBS MAX

*OTHER FLUIDS MAY BE ACCEPTABLE WITH ELASTOMER CHANGE



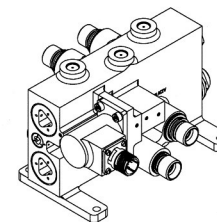
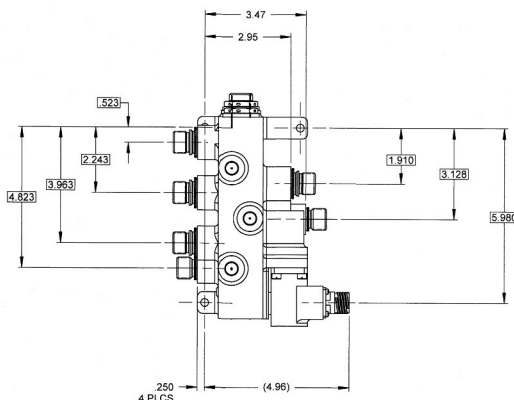
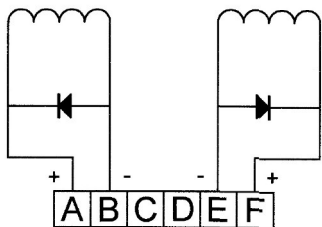
HYDRAULIC SCHEMATIC

CATEGORY 11: MANIFOLD ASSEMBLIES

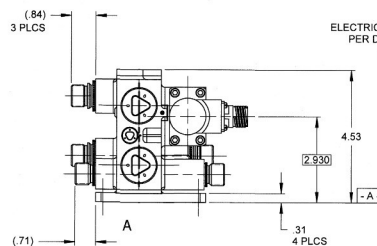
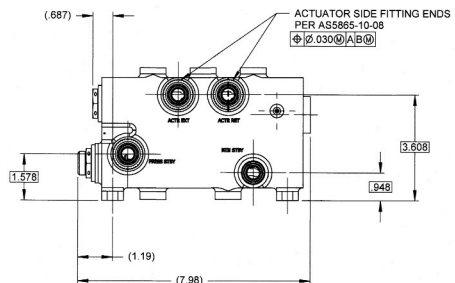


PART NUMBER: 1M1374-X, SOLENOID OPERATED SPOOL MANIFOLD

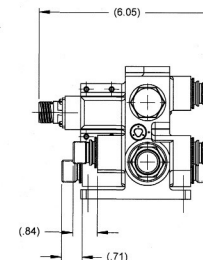
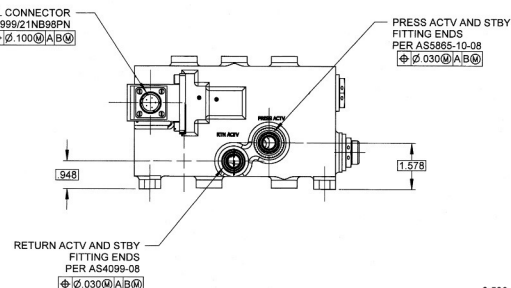
ELECTRICAL SCHEMATIC



ISOMETRIC VIEW
FOR REFERENCE ONLY



ELECTRICAL CONNECTOR
PER D38999/21NB98PN
Ø .100 (A/B)



PERFORMANCE SPECIFICATIONS:

FLUIDS: AIRCRAFT HYDRAULIC FLUID PER MIL-PRF-83282*

MATERIAL: MANIFOLD 6AL-4V TI AL

TEMPERATURE RANGE: -40°F TO 275°F

OPERATING PRESSURE: 5050 PSIG

PROOF PRESSURE: 7725 PSIG

FLOW: 15.3 GPM AT 150 PSID MAX BETWEEN ANY FLOW PATH

INTERNAL LEAKAGE: 25 CC/MIN MAX AT 5050 PSID AND 80°F TO 120°F

OPERATING VOLTAGE RANGE: 16 TO 31 VDC (28 VDC NOMINAL)

COIL RESISTANCE: 33-37 OHMS AT 70°F TO 90°F PER COIL

PULL-IN VOLTAGE: 16 VDC MAX AT 70°F TO 90°F

DROP-OUT VOLTAGE: 2.8 VDC MIN AT 70°F TO 90°F

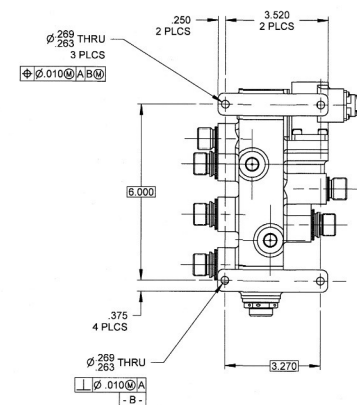
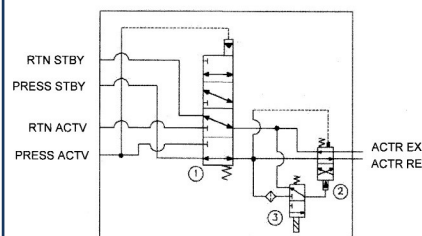
PEAK INVERSE VOLTAGE: 600 VDC

DUTY CYCLE: CONTINUOUS

WEIGHT: 9.6 LBS MAX

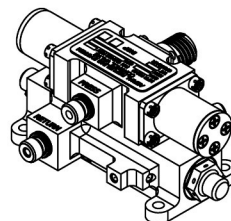
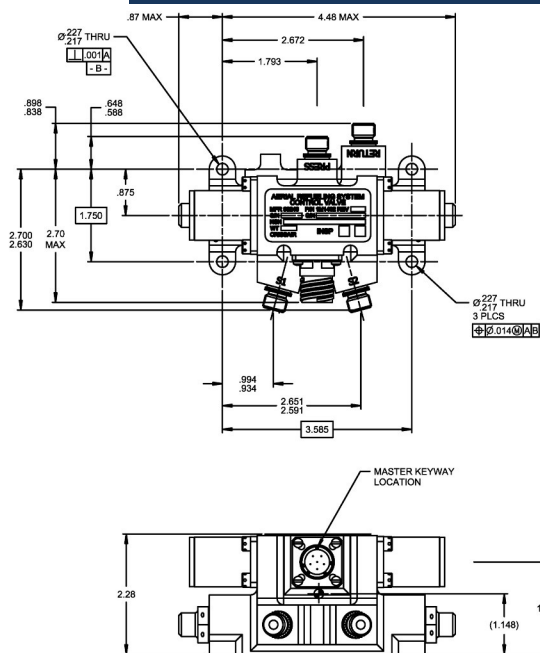
*OTHER FLUIDS MAY BE ACCEPTABLE WITH ELASTOMER CHANGE

HYDRAULIC SCHEMATIC

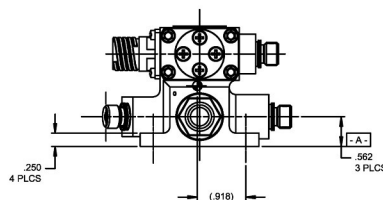




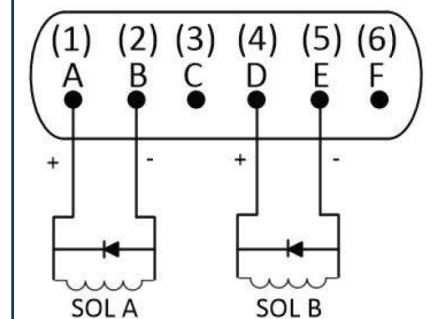
PART NUMBER: 1M1402-X



ISOMETRIC VIEW
FOR REFERENCE ONLY



ELECTRICAL SCHEMATIC



PERFORMANCE SPECIFICATIONS:

FLUIDS: AIRCRAFT HYDRAULIC FLUID PER MIL-PRF-83282*

MATERIAL: MANIFOLD 7075-T7351 AL

TEMPERATURE RANGE: -40°F TO 275°F

OPERATING PRESSURE: 3100 PSIG PRESSURE PORT

1500 PSIG RETURN PORT

PROOF PRESSURE: 4500 PSIG PRESSURE PORT

3000 PSIG RETURN PORT

FLOW: P TO S1 OR S2 - 0.79 GPM AT 60 PSID MAX

S1 OR S2 TO R - 0.79 GPM AT 60 PSID MAX

INTERNAL LEAKAGE: 17 CC/MIN MAX AT 3100 PSID AND 100°F

OPERATING VOLTAGE RANGE: 18 TO 32 VDC (28 VDC NOMINAL)

INSULATION RESISTANCE: 100 MEGAOHMS MIN AT 500 VDC FOR 1 MIN

FOLLOWING THE DIELECTRIC STRENGTH TEST

PULL-IN VOLTAGE: 18 VDC MAX UNDER ALL SPECIFIED TEMP

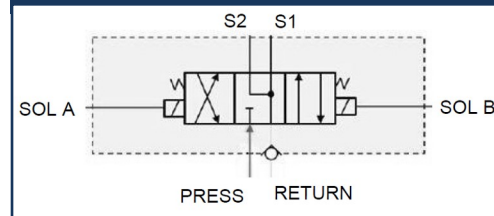
DROP-OUT VOLTAGE: 2.0 VDC MIN AT -65°F

DUTY CYCLE: CONTINUOUS

WEIGHT: 2.2 LBS MAX

*OTHER FLUIDS MAY BE ACCEPTABLE WITH ELASTOMER CHANGE

HYDRAULIC SCHEMATIC



CATEGORY 11: MANIFOLD ASSEMBLIES



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CATALOG WITH DIFFERENT MATERIALS, FITTINGS, AND SIZE CONFIGURATIONS.

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(661) 367-3300 OR SALES@CRISSAIR.COM.

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INDUSTRIAL PRODUCT LINE

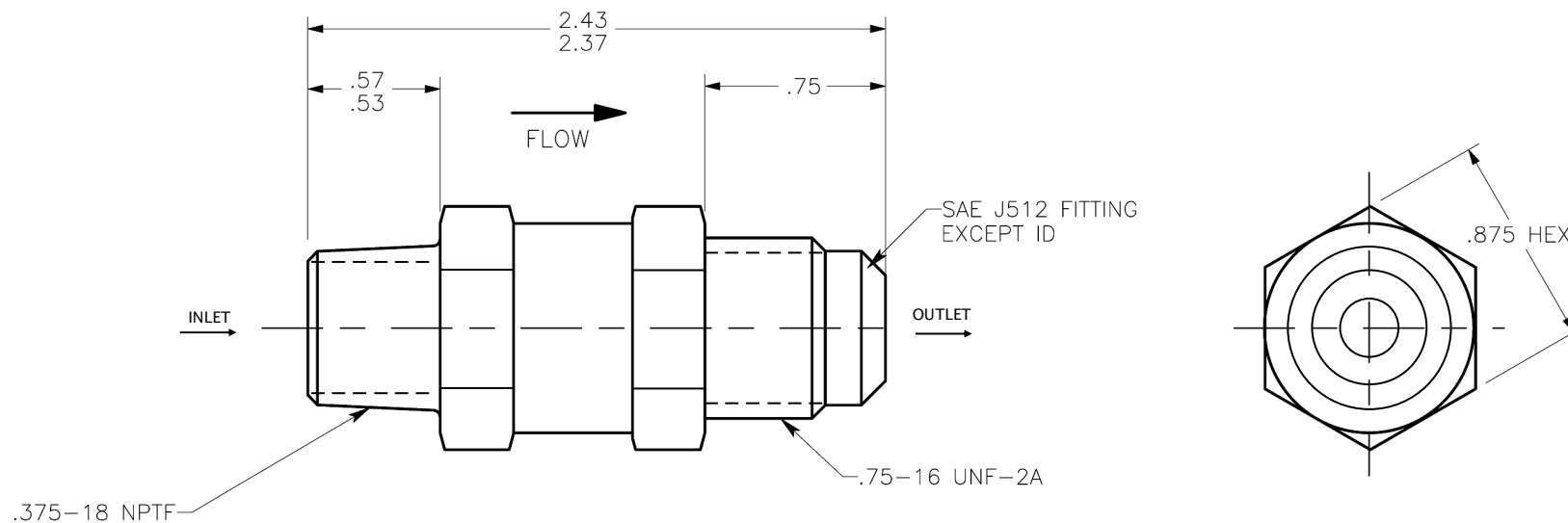
Crissair Inc. designs and manufactures several products for the Industrial Fluid Control Market: Diesel Engine Fuel Systems, Natural Gas Internal Combustion Engines for Power Generation, and Oil Tool Industry.

- Check Valves for Diesel Engine Fuel Systems are designed with a soft seat to ensure zero leakage at low differential pressures after engine shut-down.
- Gas Admission Valves allow natural gas to free flow into the cylinders of large internal combustion engines used for power generation. The poppet and seat materials are designed to withstand extreme/high temperatures and high cycle life.
- Other Industrial Products include, but are not limited to, water check valves, fuel atomizing nozzles, oil valves, etc.





PART NUMBER: 32000-X, CHECK VALVE



PERFORMANCE SPECIFICATIONS:

FLUIDS: AIR

MATERIAL: BODY 303 CRES

POPPET 303 CRES

TEMPERATURE RANGE: -40°F TO 225°F

OPERATING PRESSURE: 500 PSIG

CRACKING PRESSURE: 2.0 ± 0.5 PSID

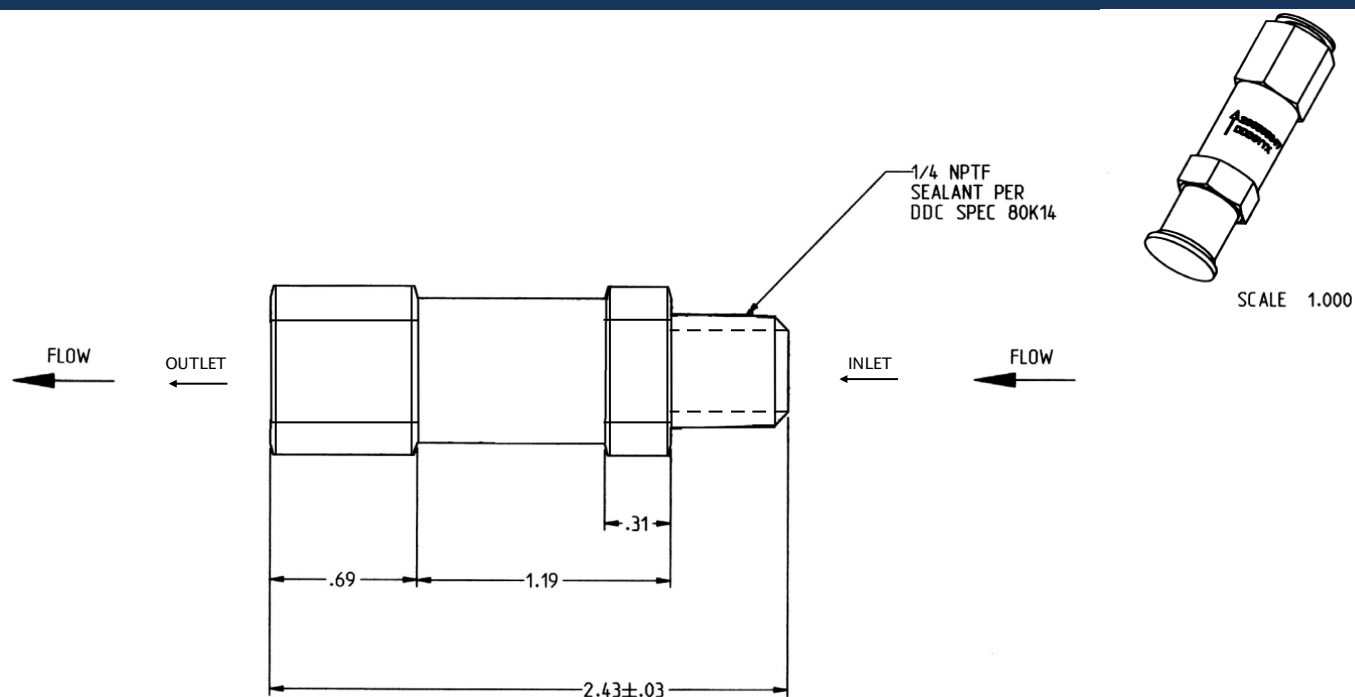
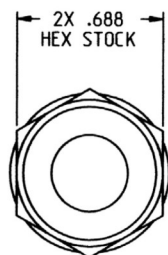
FLOW: 0.5 GPM MINIMUM AT 3.0 PSID AND $80 \pm 10^\circ\text{F}$

LEAKAGE (CHECKED DIRECTION): 1 DPM MAX AT 5 PSID AND $80 \pm 10^\circ\text{F}$

CATEGORY 12 INDUSTRIAL PRODUCT LINE



PART NUMBER: 36840-X, CHECK VALVE



PERFORMANCE SPECIFICATIONS:

FLUIDS: DIESEL # 2

MATERIAL: BODY 303 CRES

POPPET 303 CRES

TEMPERATURE: -40°F TO 225°F

OPERATING PRESSURE: 500 PSIG MAX

CRACKING PRESSURE: 1.25 ± 0.25 PSID

FLOW: 0.5 GPM MINIMUM AT 3 PSID OVER CRACKING PRESSURE

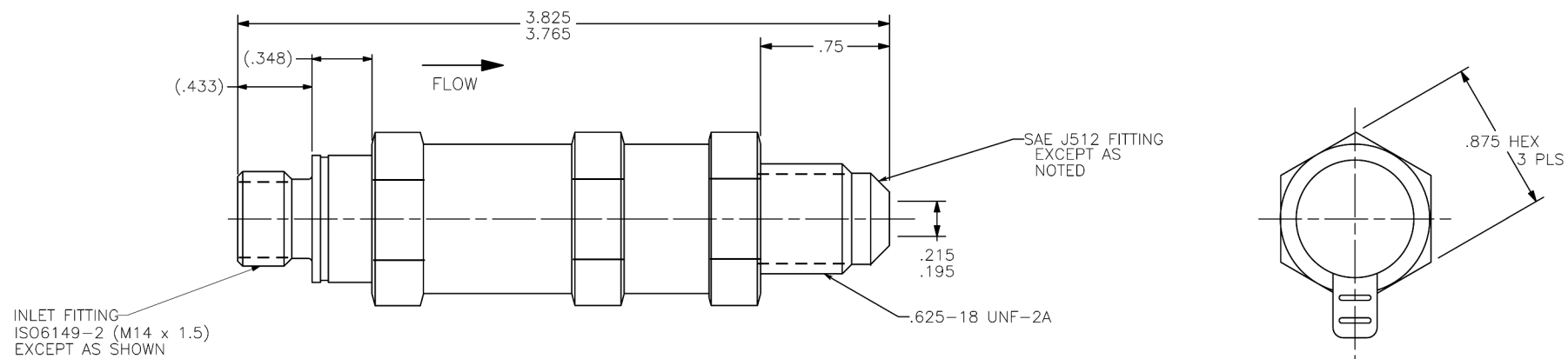
RESEAT: 0.5 PSID MINIMUM

LEAKAGE (IN THE CHECKED DIRECTION): 0 DPM AT 100 PSID FOR 90 SECONDS

CATEGORY 12 INDUSTRIAL PRODUCT LINE



PART NUMBER: 35830-X, REGULATOR, CHECKED



PERFORMANCE SPECIFICATIONS:

FLUIDS: DIESEL FUEL OR EQUIVALENT

MATERIAL: BODY 303 CRES

POPPET 303 CRES

TEMPERATURE RANGE: -40°F TO 225°F

OPERATING PRESSURE: 100 PSIG

CRACKING PRESSURE: 2 ± 0.5 PSID

FLOW POINTS: 14.5 ± 1.5 PSID AT 0.30 GPM

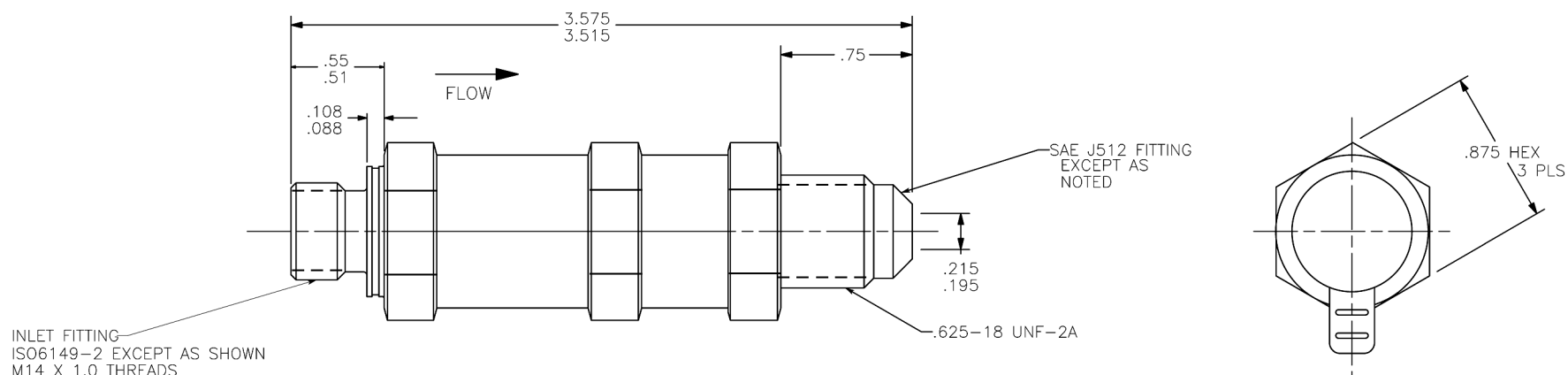
29 PSID MAX AT 2.5 GPM

LEAKAGE (CHECKED DIRECTION): 1 DPM MAX AT 5 PSID

CATEGORY 12 INDUSTRIAL PRODUCT LINE



PART NUMBER: 36090-X, REGULATOR, CHECKED



PERFORMANCE SPECIFICATIONS:

FLUIDS: DIESEL FUEL OR EQUIVALENT

MATERIAL: BODY 303 CRES

POPPET 303 CRES

TEMPERATURE RANGE: -40°F TO 225°F

OPERATING PRESSURE: 100 PSIG

CRACKING PRESSURE: $2 \pm .5$ PSID

FLOW 1: 70 \pm 3 PSID AT 0.23 GPM

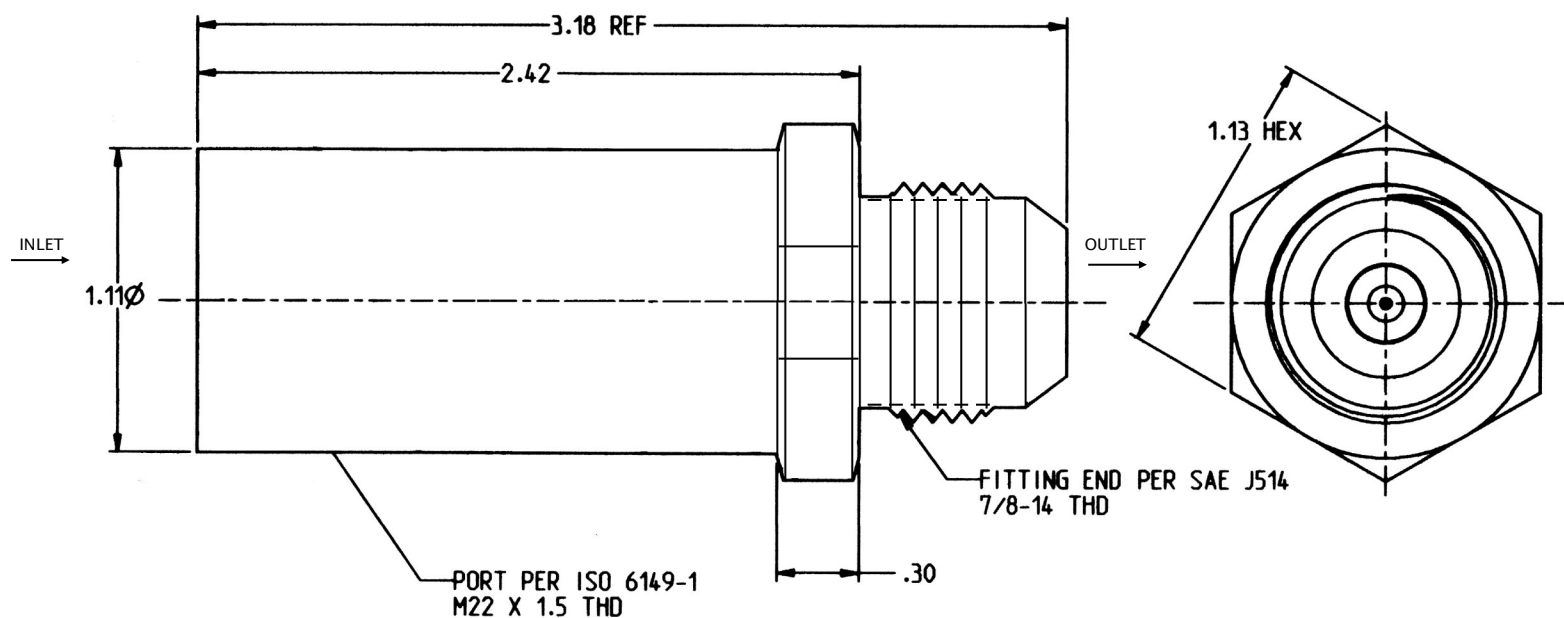
FLOW 2: 75 PSID MAX AT 2.0 GPM

LEAKAGE (CHECKED DIRECTION): 1 DPM MAX AT 5 PSID

CATEGORY 12 INDUSTRIAL PRODUCT LINE



PART NUMBER: 33930, PRESSURE REGULATOR VALVE



PERFORMANCE SPECIFICATIONS:

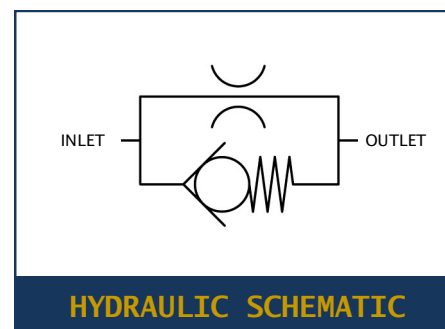
FLUIDS: DIESEL FUEL AT 266°F MAX

MATERIAL: BODY 303 CRES

POPPET 15-5PH

CRACKING PRESSURE: 123 ± 5 PSID

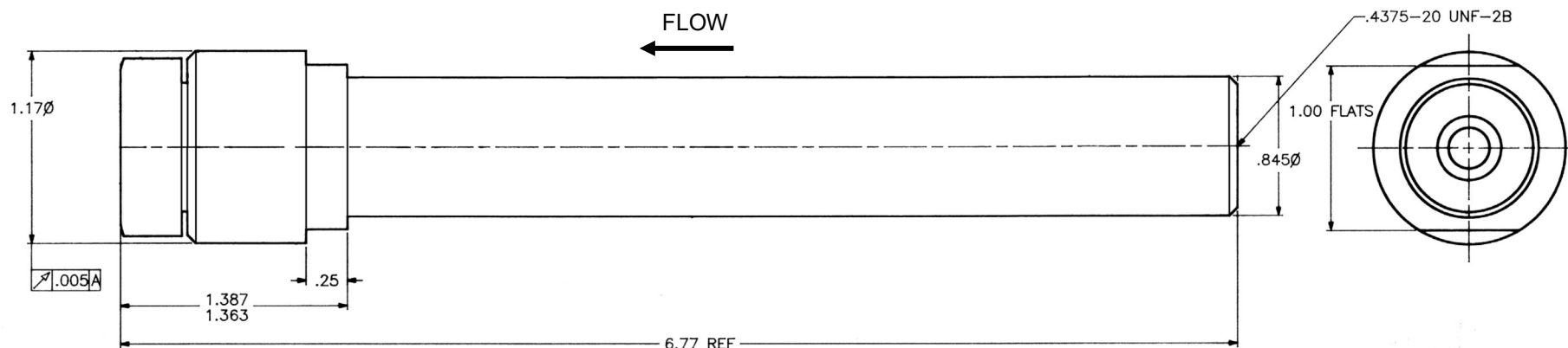
FLOW: 7 GPM AT 150 PSID MAX



CATEGORY 12 INDUSTRIAL PRODUCT LINE



PART NUMBER: 33380-X, EXTENDED LIFE ADMISSION VALVE



PERFORMANCE SPECIFICATIONS:

FLUIDS: NATURAL GAS

MATERIAL: BODY 303 CRES

POPPET 321 CRES

TEMPERATURE RANGE: INLET 200°F, OUTLET 1500°F MAX

OPERATING PRESSURE: 200 PSIG

CRACKING PRESSURE: 1.0 PSID (REF)

FLOW: 1 CFM AT 2.5 PSID (REF)

CATEGORY 12 INDUSTRIAL PRODUCT LINE

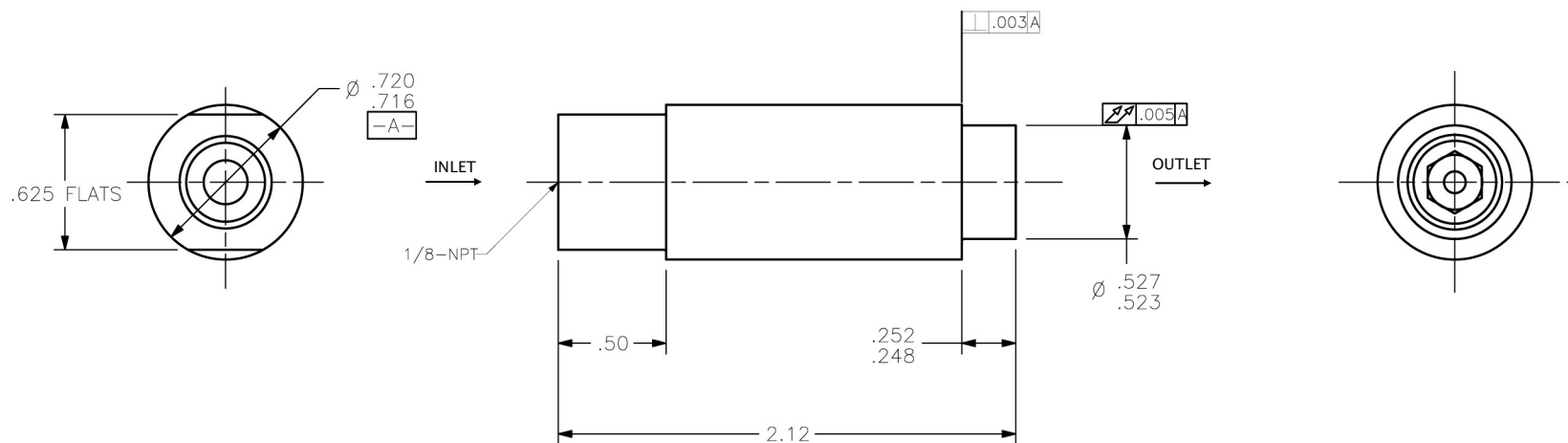


FLOW: 1 CFM AT 2.5 PSID (REF)

CATEGORY 12 INDUSTRIAL PRODUCT LINE



PART NUMBER: 32290-X, GAS ADMISSION VALVE



PERFORMANCE SPECIFICATIONS:

FLUIDS: NATURAL GAS

MATERIAL: BODY 303 CRES

POPPET 321 CRES

TEMPERATURE: 932°F MAX

CRACKING PRESSURE: 1.0 ± 5 PSID

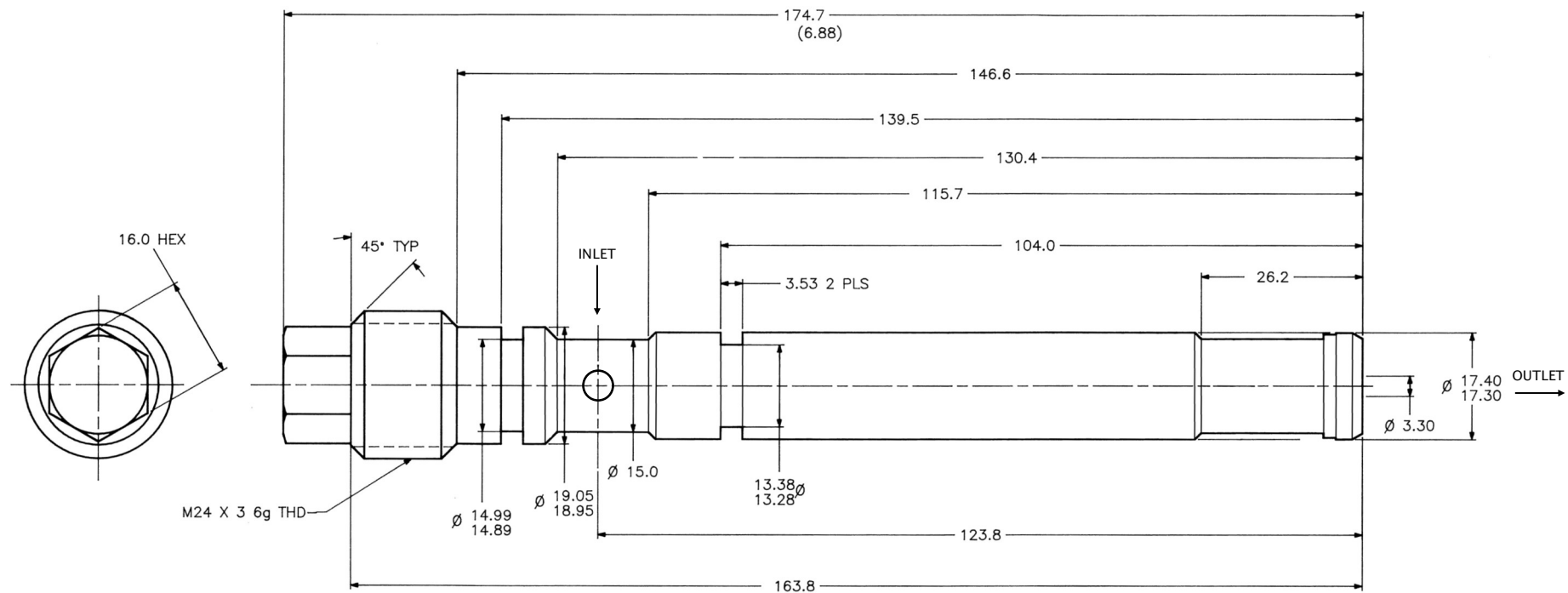
FLOW: 1.5 SCFM AT 15 PSIG MAX

LEAKAGE (CHECKED DIRECTION): 10 PSID LOSS MAX IN 10 SEC USING A 4.5 CUBIC INCH VOLUME, STARTING PRESSURE 30 PSIG

CATEGORY 12 INDUSTRIAL PRODUCT LINE



PART NUMBER: 70040-X, GAS ADMISSION VALVE



DIMENSIONS ARE IN MILLIMETERS

PERFORMANCE SPECIFICATIONS:

FLUIDS: NATURAL GAS

MATERIAL: BODY 15-5 PH

POPPET INCONEL 718

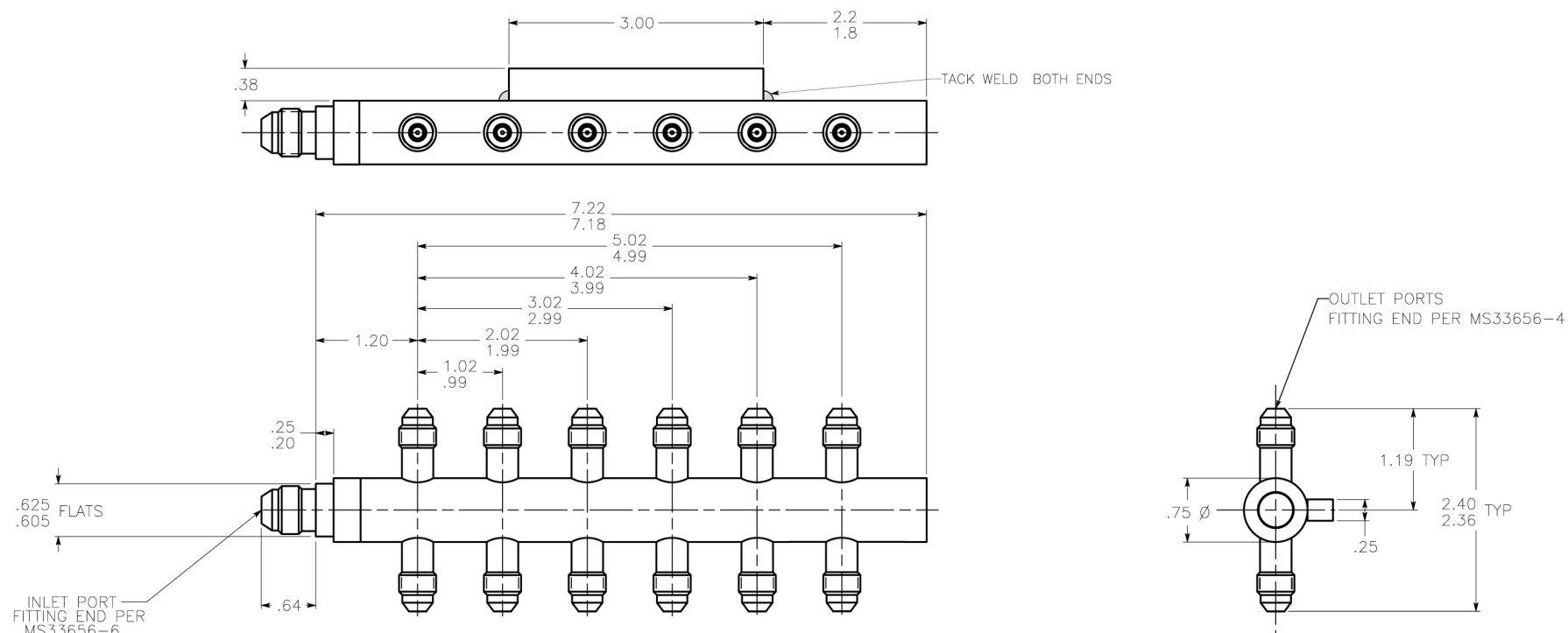
FLOW: 1.5 SCFM AT 15 PSID MAX

LEAKAGE: 10 PSID LOSS MAX IN 5 SECONDS USING AN 8 CUBIC INCH VOLUME,
STARTING PRESSURE 100 PSIG

CATEGORY 12 INDUSTRIAL PRODUCT LINE



PART NUMBER: 60420-X, FUEL MANIFOLD



PERFORMANCE SPECIFICATIONS:

FLUIDS: # 2 DIESEL FUEL

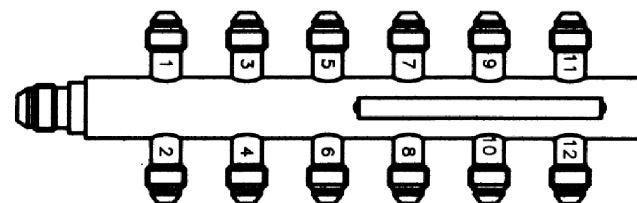
MATERIAL: BODY 316L CRES

TEMPERATURE: -40 ° F TO 225 ° F

OPERATING PRESSURE: 500 PSIG

PROOF PRESSURE: 750 PSIG FOR 10 MINUTES WITH NO LEAKS

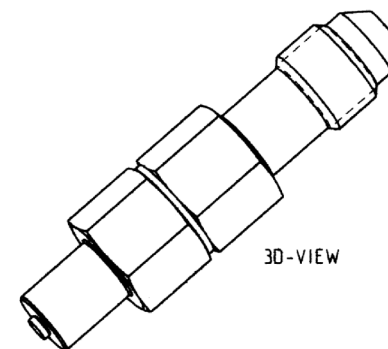
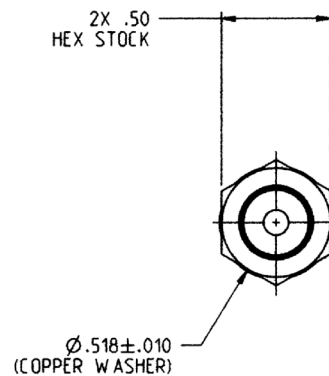
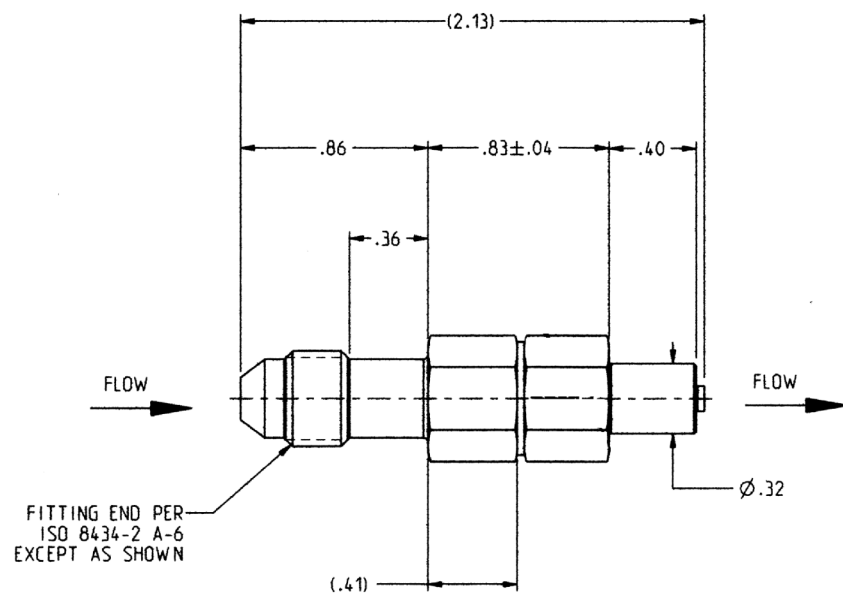
FLOW: 0.321 \pm 2% GPM AT 500 PSID PER PORT



MARKING VIEW
SCALE 1:2



PART NUMBER: 40830-X, INJECTOR NOZZLE



PERFORMANCE SPECIFICATIONS:

FLUIDS: DIESEL FUEL/BIO-FUEL - 80/20
MATERIAL: BODY 321 CRES
TEMPERATURE: 932°F MAX
CRACKING PRESSURE: 40 ± 7 PSID (REF)
NOMINAL FLOW: 14 GPH AT 116 PSID

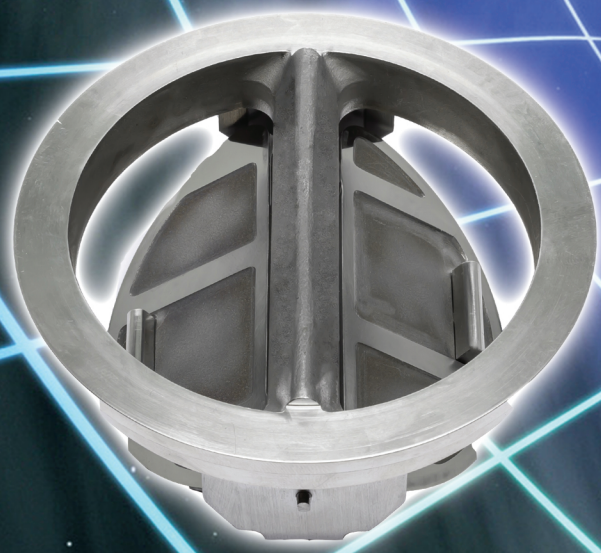


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FAX 661.294.1025

CRISSAIR INC.

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