

# MANUAL OPERATED VALVES

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

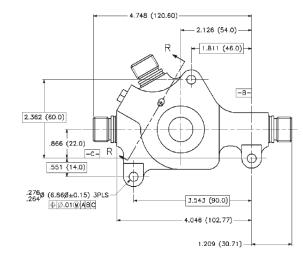


- The manual operation can be achieved via a handle which is ergonomically designed for the human hand. Other designs utilize splines or shafts that connect to different types of linkages or wrenches.
- Many of the manual valves are used on aircraft ground service panels.

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



#### **PERFORMANCE SPECIFICATIONS:**

FLUIDS: PHOSPHATE ESTER PER NSA307110LD, 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

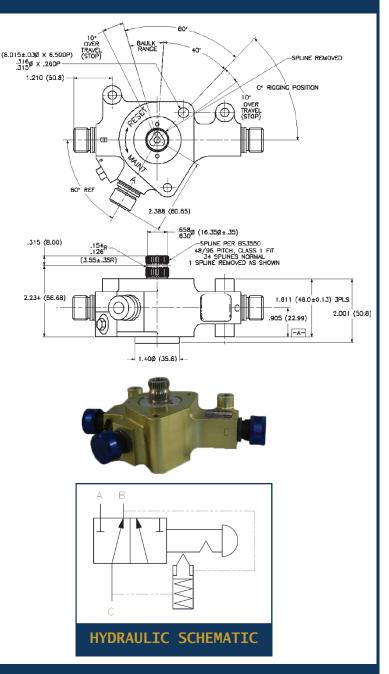
- LEAKAGE: EXTERNAL, 1 DROP MAX IN 25 OPERATING CYCLES AT 0° WITH 2987 PSIG AT PORTS B, 25 CCC/MIN MAX AT PORT A AT 0° WITH 2987 PSIG AT PORT A, 25 CCC/MIN MAX AT PORTS B AT 60° WITH 2987 PSIG AT PORTS A, 25 CCC/MIN MAX AT PORT B
- BAULK FEATURE: IS ENGAGED OVER 40° ROTATION WITH PORT B LESS THAN 725 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.

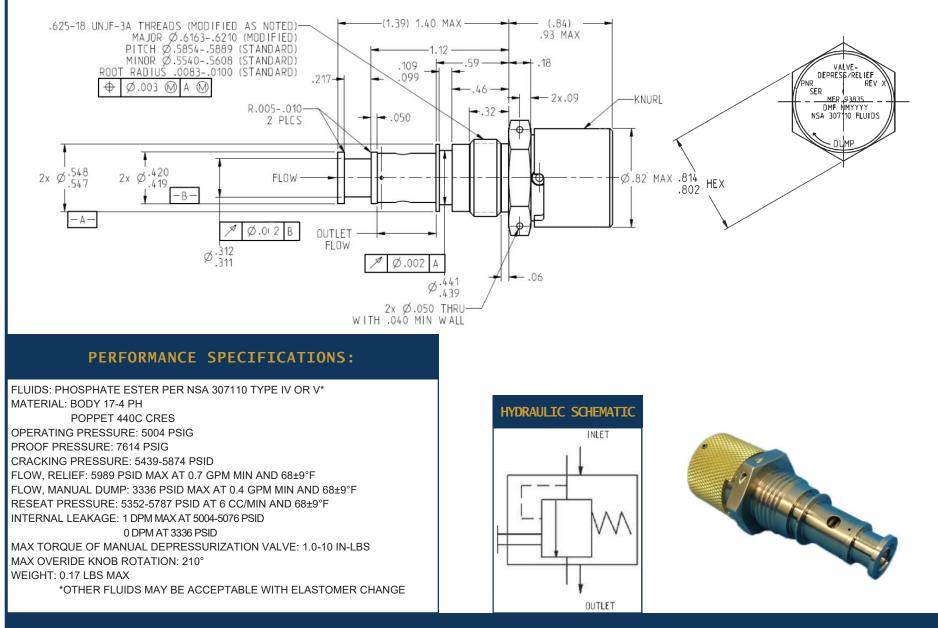
WEIGHT: 1.90 LBS MAX

\*OTHER FLUIDS MAY BE ACCEPTABLE WITH ELASTOMER CHANGE



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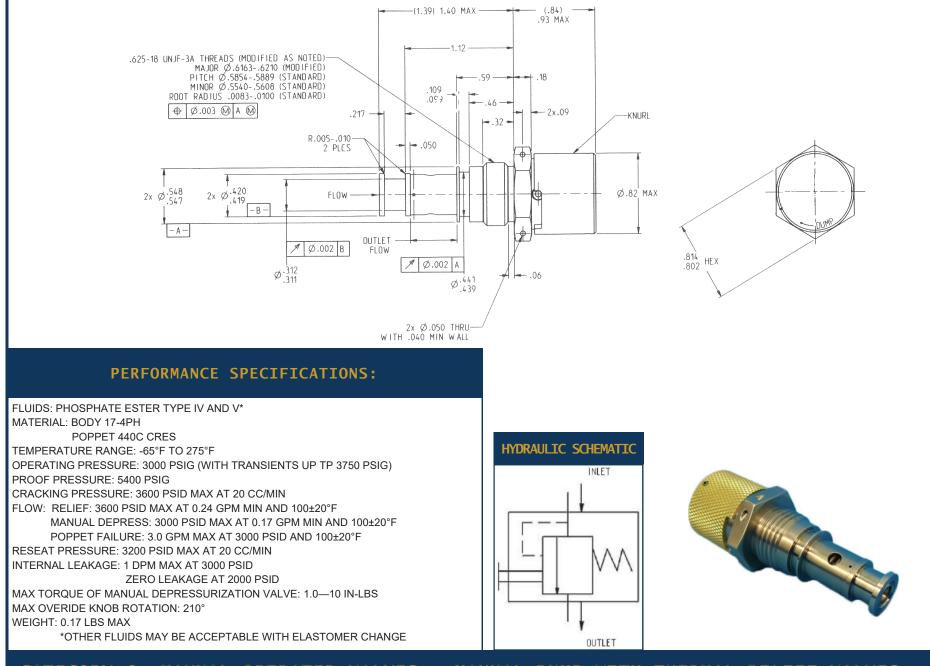
## PART NUMBER: 37030-X, MANUAL DEPRESSURIZATION AND RELIEF VALVE



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



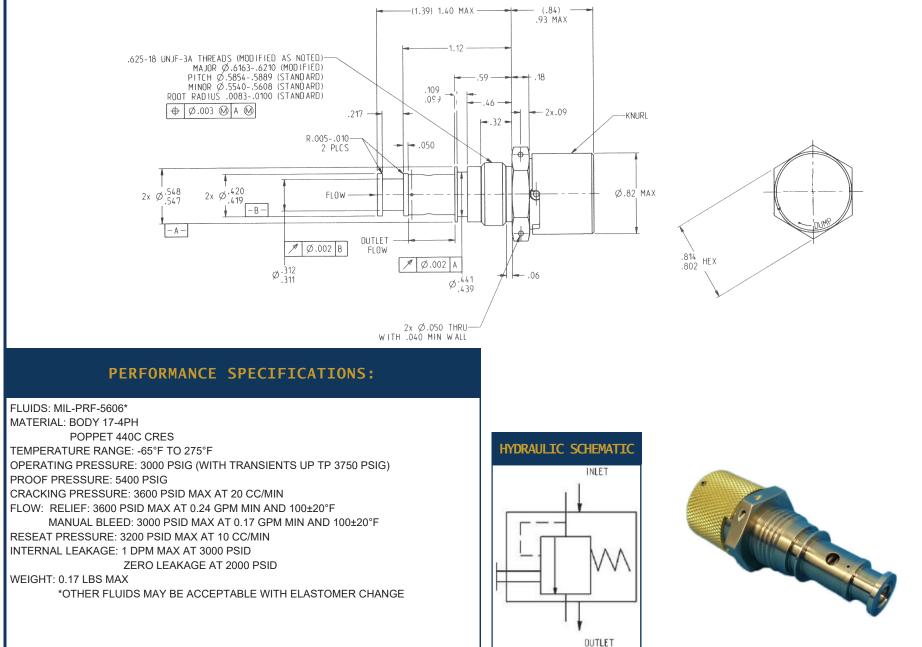
## PART NUMBER: 37160-X, MANUAL DEPRESSURIZATION/RELIEF VALVE



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



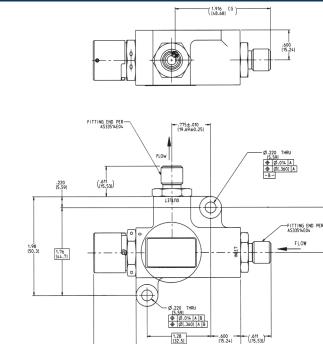
## PART NUMBER: 2P5572, MANUAL DEPRESSURIZATION/RELIEF VALVE



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



## PART NUMBER: 37440-X, DUMP/THERMAL RELIEF VALVE



-(.849 (21.58)



.905±.010 [22.99±0.25]

#### **PERFORMANCE SPECIFICATIONS:**

-A-.600 [15.24]

(.188 CG)

.200 2 PLCS

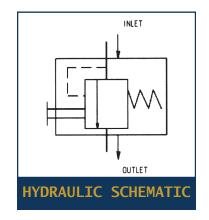
FLUIDS: SKYDROL\*

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



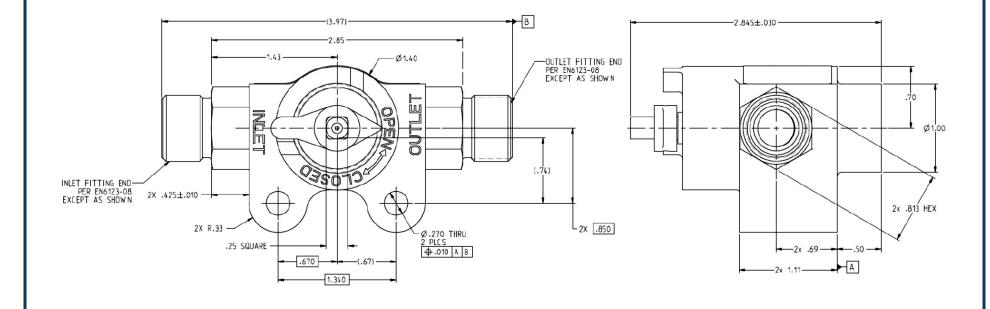
-2.10

## **CATEGORY 6: MANUAL OPERATED VALVES**

3-D VIEW SCALE 1:1



# 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

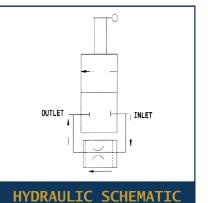
PROOF PRESSURE: 7614 PSIG

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





## **CATEGORY 6: MANUAL OPERATED VALVES**

\*OTHER FLUIDS MAY BE ACCEPTABLE WITH ELASTOMER CHANGE

STOPS 110 IN-LBS MAX

WEIGHT: 0.71 LBS MAX

HANDLE TORQUE: OPERATING 10 IN-LBS MAX AT 100 PSID.

CURRENT: 1.0 AMPS MAX CARRY UP TO 125VAC

DIELECTRIC STRENGTH: 0.5 MILLIAMPS MAX @ 500VAC

1.495

ELECTRICAL: ELECTRICAL CONNECTOR PER EN2997YE01006M7

LEAKAGE: 4 DPM MAX AT CLOSED PORTS WITH 290 PSIG AT INLET PORT

PROOF PRESSURE: 1530 PSIG FLOW: 1.58 GPM MINIMUM AT 22 PSID

**OPERATING PRESSURE: 1015 PSIG** 

TEMPERATURE RANGE: -58°F TO 158°F

MATERIAL: HOUSING 6061-T6

FLUIDS: SKYDROL\*

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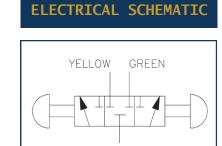
-A-

1.86

1.389

.3 3PLS

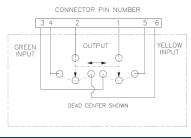
**PERFORMANCE SPECIFICATIONS:** 



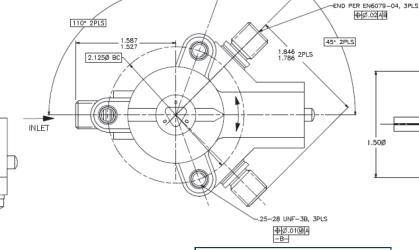
INLET

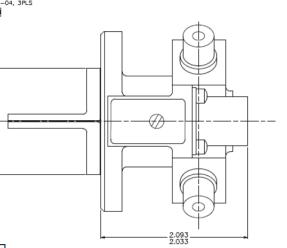
HYDRAULIC SCHEMATIC

## ELECTRICAL SCHEMATIC





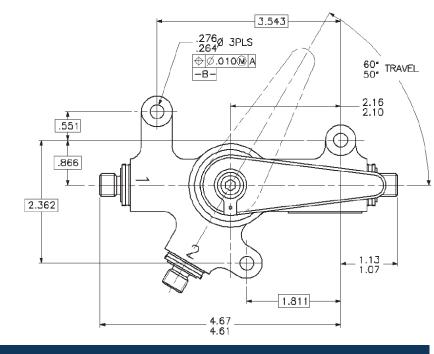


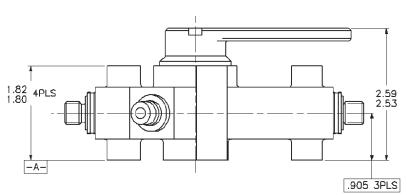


# PART NUMBER: 37050-X, FILL SELECTOR VALVE



# 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

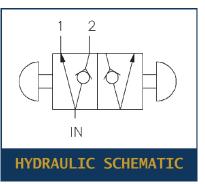
FLOW: PORT "IN" TO "1"; 1 GPM AT 50 PSID MAX PORT "IN" TO "2"; 1 GPM AT 50 PSID MAX

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

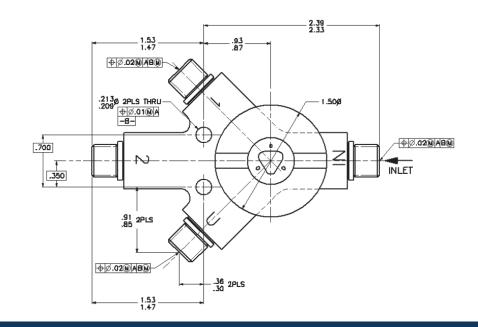
\*OTHER FLUIDS MAY BE ACCEPTABLE WITH ELASTOMER CHANGE

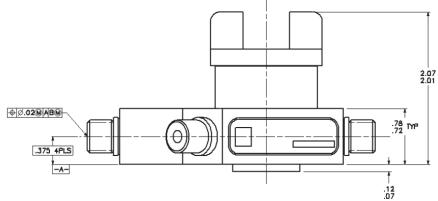






# PART NUMBER: 37320-X, SELECT VALVE, LOW PRESSURE





#### **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

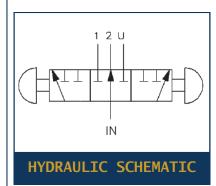
LEAKAGE: EXTERNAL: TO BE 1 DROP MAX IN 25 CYCLES AND ZERO DROPS IN 12 HOURS WITH 7.5  $\pm$  2.5 PSIG APPLIED AT INLET PORT

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

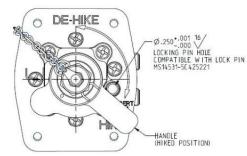
\*OTHER FLUIDS MAY BE ACCEPTABLE WITH ELASTOMER CHANGE

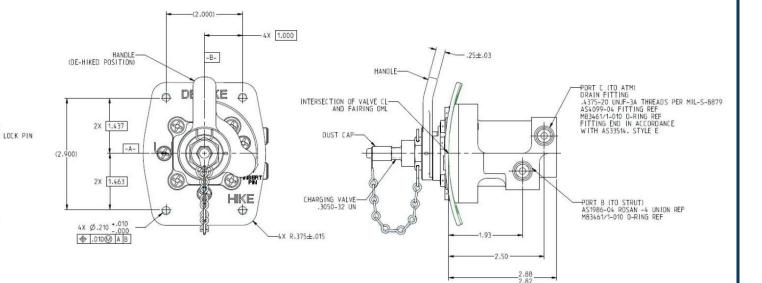






# PART NUMBER: 70400-X, HIKE SELECT VALVE





#### **PERFORMANCE SPECIFICATIONS:**

FLUIDS: DRY AIR OR NITROGEN PER MIL-PRF-27401

MATERIAL: HOUSING 7075-T73 OR 7351

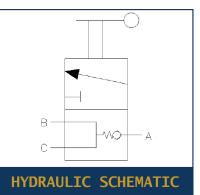
TEMPERATURE RANGE: -65°F TO 275°F

OPERATING PRESSURE: 2800 PSIG

PROOF PRESSURE: 4500 PSIG

- FLOW: PRESSURIZE 110 CUBIC INCHES IN 12 SEC'S (PORT A TO B), DEPRESSURIZE 110 CUBIC INCHES IN 9.5 SEC'S (PORT B TO C)
- LEAKAGE: 5 PSIG MAX LOSS OVER 2 HOURS FROM 110 CUBIC INCHES INITIALLY PRESSURIZED TO 2000 PSIG

OPERATING TORQUE (1/4 TURN TO OPEN OR CLOSE): 62 IN-LBS MAX AT 145 PSID WEIGHT: 1.80 LBS MAX

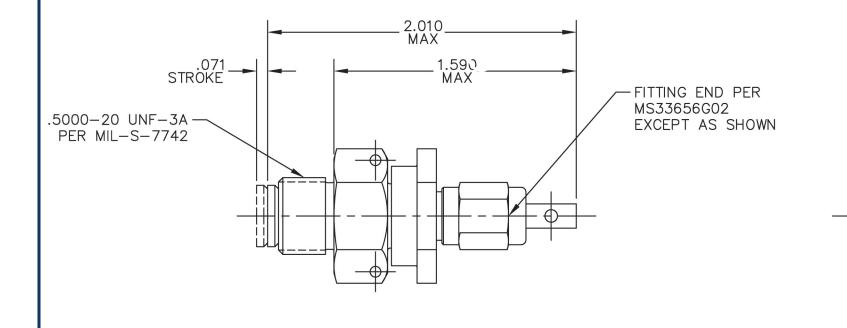






.750 HEX

.375 HEX

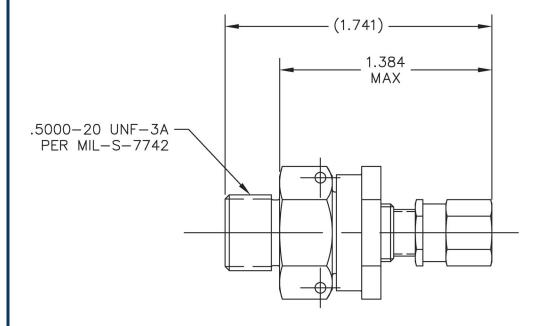


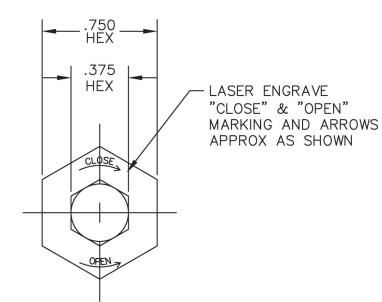
#### **PERFORMANCE SPECIFICATIONS:**

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 H<sub>2</sub>O 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



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





#### **PERFORMANCE SPECIFICATIONS:**

FLUIDS: AIR AND GN<sub>2</sub>

MATERIAL: BODY 304 CRES

NUT 303SE CRES

TEMPERATURE RANGE: -65°F TO 250°F

OPERATING PRESSURE MINIMUM: 5000 PSIG

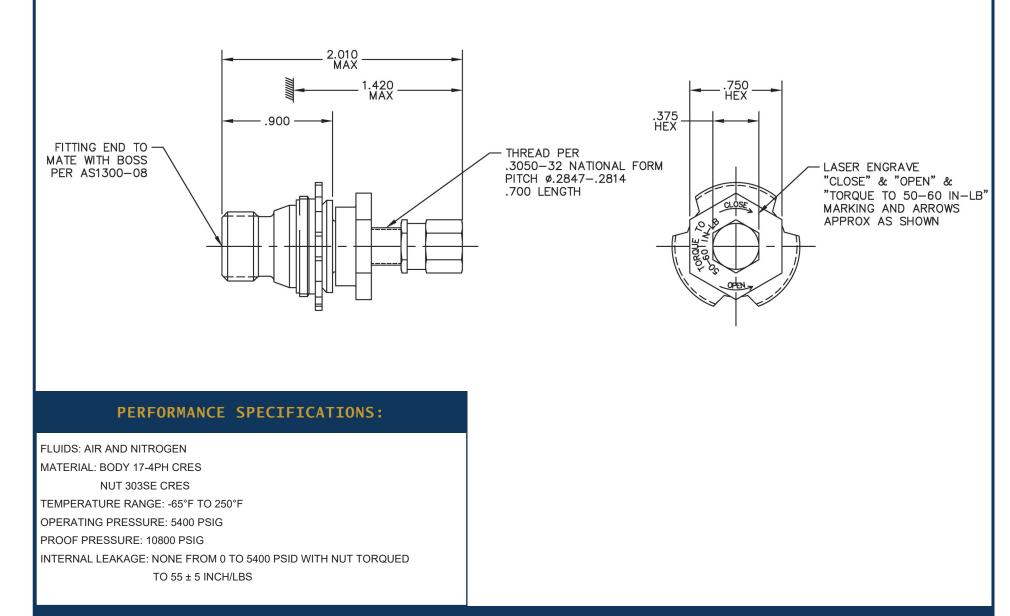
PROOF PRESSURE: 7500 PSIG

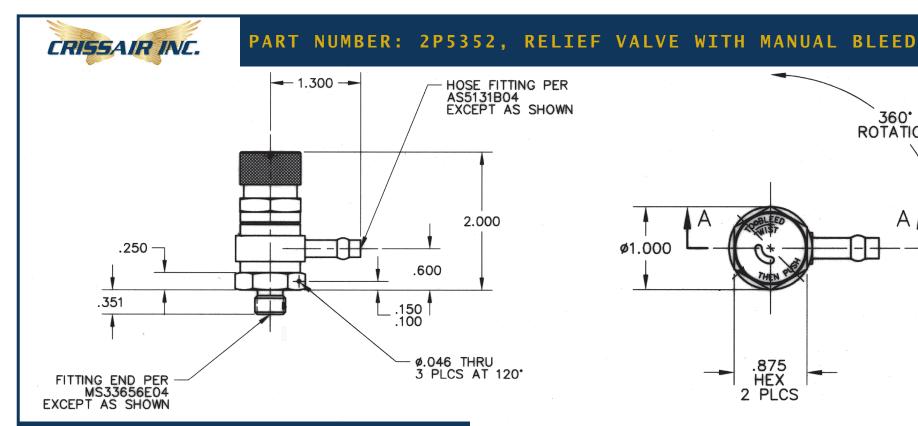
INTERNAL LEAKAGE: ZERO FROM CAP (TORQUED TO 40 IN—LBS) WITH VALVE UNSEATED AT 5000 PSIG

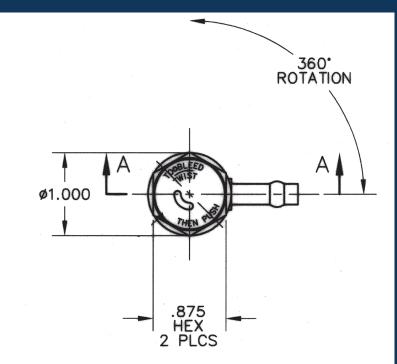
WEIGHT: 0.12 LBS MAX



## PART NUMBER: 2P5184, CHARGING VALVE







#### **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** 

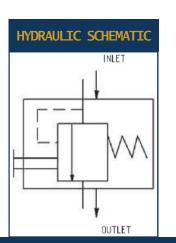
**RESEAT PRESSURE: 36 PSID MIN** 

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)

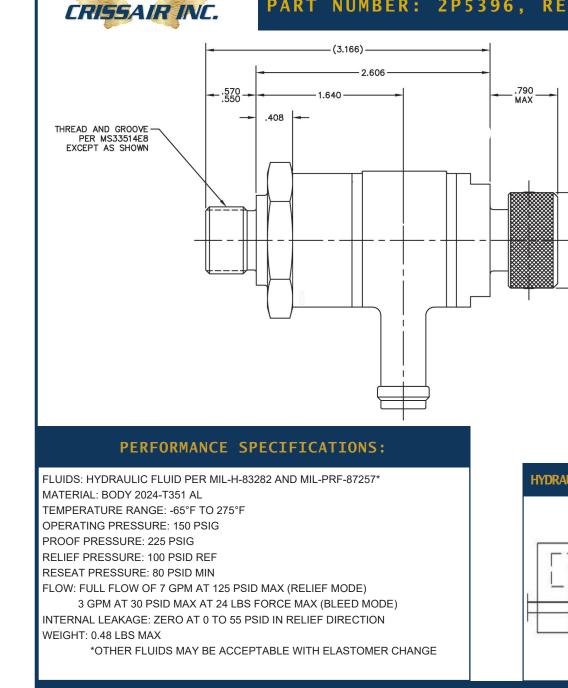
INTERNAL LEAKAGE: ZERO AT 0 TO CRACK ON INCREASING PRESSURE ZERO AT RESEAT ON DECREASING PRESSURE

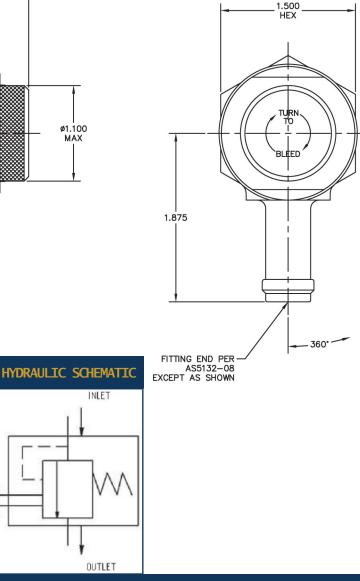
WEIGHT: 0.18 LBS MAX

**\*OTHER FLUIDS MAY BE ACCEPTABLE WITH ELASTOMER CHANGE** 



# **CATEGORY 6: MANUAL OPERATED VALVES**





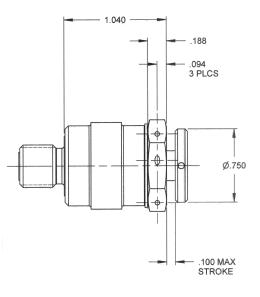
# PART NUMBER: 2P5396, RELIEF VALVE WITH MANUAL BLEED

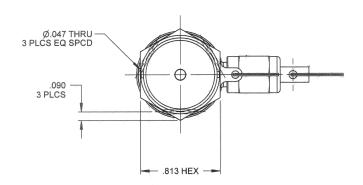


# PART NUMBER: 2P5400, BLEED VALVE



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

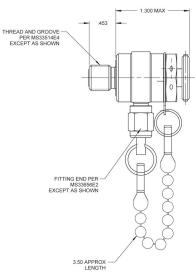
INTERNAL LEAKAGE: 1 DPM MAX AT 5 PSID NONE AT 100 TO 1550 PSID

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

WEIGHT: 0.19 LBS MAX

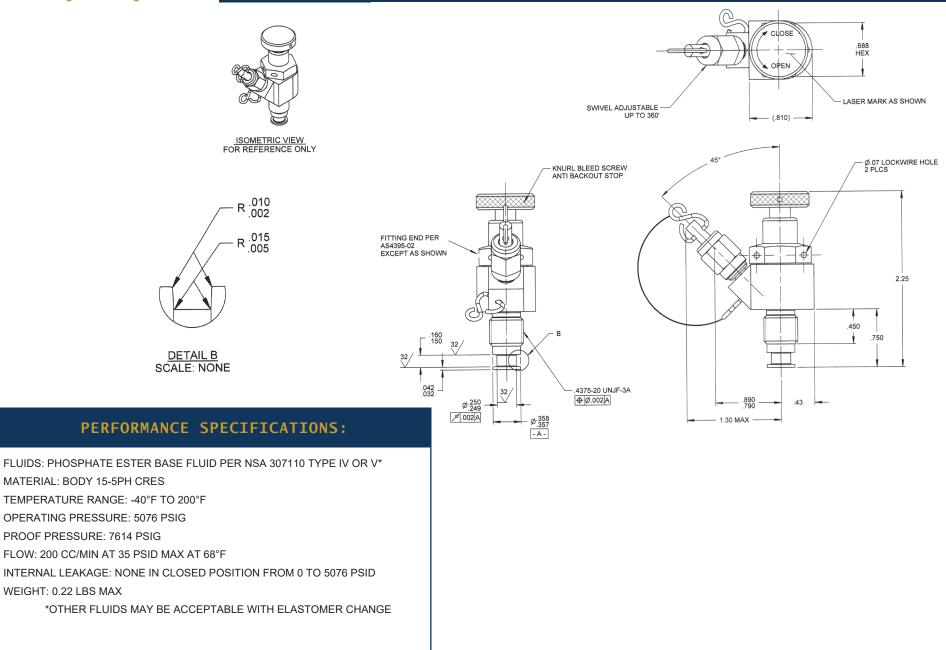
\*OTHER FLUIDS MAY BE ACCEPTABLE WITH ELASTOMER CHANGE





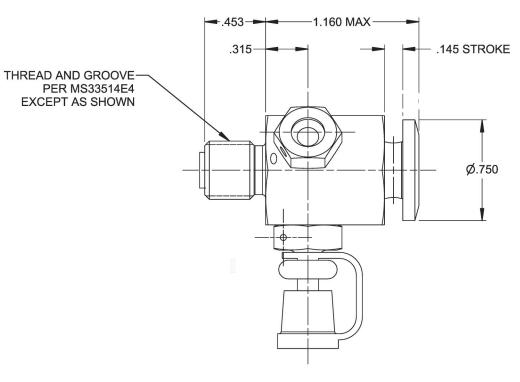


## PART NUMBER: 2P5406, SAMPLING VALVE





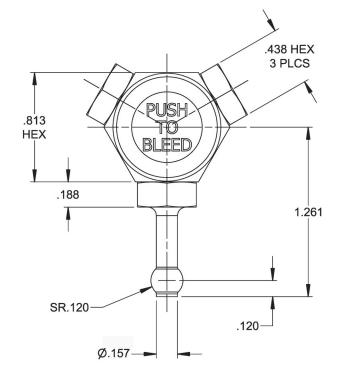
## PART NUMBER: 2P5418, BLEED VALVE



#### **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

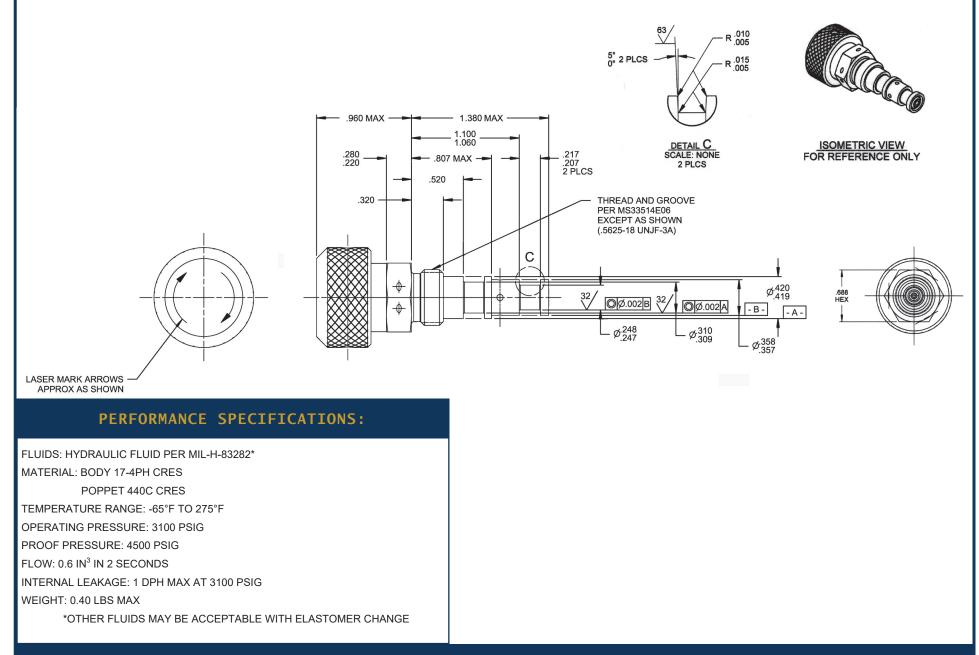
\*OTHER FLUIDS MAY BE ACCEPTABLE WITH ELASTOMER CHANGE





ISOMETRIC VIEW FOR REFERENCE ONLY

PART NUMBER: 2P5472, ACCUMULATOR FILL VALVE

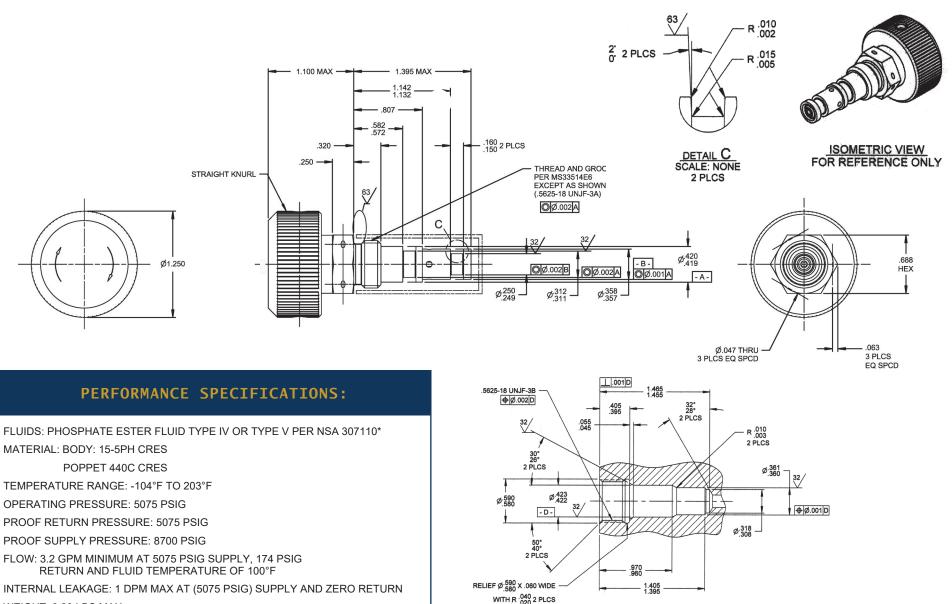


#### **CATEGORY 6: MANUAL OPERATED VALVES**

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## PART NUMBER: 2P5506, MANUAL DECOMPRESSION VALVE



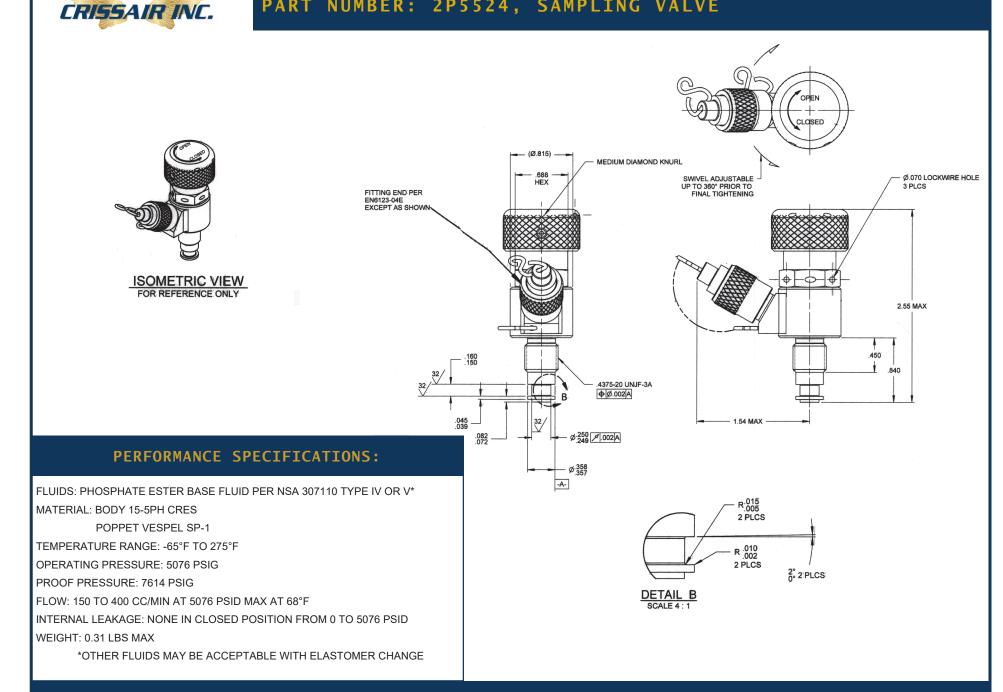


INSTALLATION CAVITY

WEIGHT: 0.20 LBS MAX

\*OTHER FLUIDS MAY BE ACCEPTABLE WITH ELASTOMER CHANGE

## PART NUMBER: 2P5524, SAMPLING VALVE





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.