

AO SERIES

Air Operated, Normally Open/Closed
Valves



Premier AO Series, Air Operated Valves are designed for both normally open and normally closed use with gas or hydraulic media. Offered in a wide range of process pressures, Cv ratings, and materials, Premier AO valves were designed with the flexibility to integrate seamlessly into your application.

FEATURES

- High operating pressures
- High flow capacities
- Optional solenoid valve actuator
- Robust design for long cycle life
- Customize and optimize to meet your unique requirement (*contact Premier*)

SOME APPLICATIONS WILL REQUIRE A CUSTOM SOLUTION.
CONTACT PREMIER INDUSTRIES TO REQUEST A MODIFICATION
OR A CUSTOM DESIGN.

SPECIFICATIONS

- **MAXIMUM INLET PRESSURE :**
 - P/N: 70-00347: 10000 psig / 689.5 bar
 - P/N: 70-00379: 10000 psig / 689.5 bar
 - P/N: 70-00312: 20000 psig / 1379 bar
 - P/N: 70-00463: 7500 psig / 517.1 bar
- **ACTUATION PRESSURE RANGE:**
 - P/N: 70-00347: 90-110 psig / 6.2-7.6 bar
 - P/N: 70-00379: 90-110 psig / 6.2-7.6 bar
 - P/N: 70-00312: 100-130 psig / 6.9-9.0 bar
 - P/N: 70-00463: 80-125 psig / 5.5-8.6 bar
- **FLOW (Cv):**
 - P/N: 70-00347: 0.80
 - P/N: 70-00379: 2.0
 - P/N: 70-00312: 0.20
(with 1/4" medium pressure ports)
 - P/N: 70-00463: 5.0

MATERIALS OF CONSTRUCTION

PROCESS SIDE WETTED:

- **BODY/INSERT/STEM MATERIAL OPTIONS:**
 - P/N: 70-00347 & 70-00379: See selection charts
 - P/N: 70-00312: 17-4 H1150 Stainless Steel
 - P/N: 70-00463: 316 Stainless Steel
- **MAIN VALVE SEAT:**
 - P/N: 70-00347 & 70-00379: See selection charts
 - P/N: 70-00312: Vespel-SCP5000®
 - P/N: 70-00463: See selection chart
- **O-RING SEAL OPTIONS:**
 - See selection charts
- **LUBRICANT:**
 - Krytox 240AC *(standard)*
 - Molykote 44 medium lubricant *(special mod)*

ACTUATOR SIDE WETTED:

- **PISTON PLUG:**
 - 303 Stainless Steel
- **BONNET:**
 - P/N: 70-00347 & 70-00379: 303 Stainless Steel
 - P/N: 70-00312: 17-4 H900 Stainless Steel

MATERIALS OF CONSTRUCTION CONT.

NON-WETTED:

- **BACK-UP RINGS:**
 - P/N: 70-00347 & 70-00379:
 - PTFE
 - PEEK®
 - P/N: 70-00312:
 - PEEK®
 - P/N: 70-00463:
 - Buna-N

PORTING

- **INLET & OUTLET OPTIONS:**
 - See regulator selection charts
- **ACTUATION PORT:**
 - See regulator selection charts

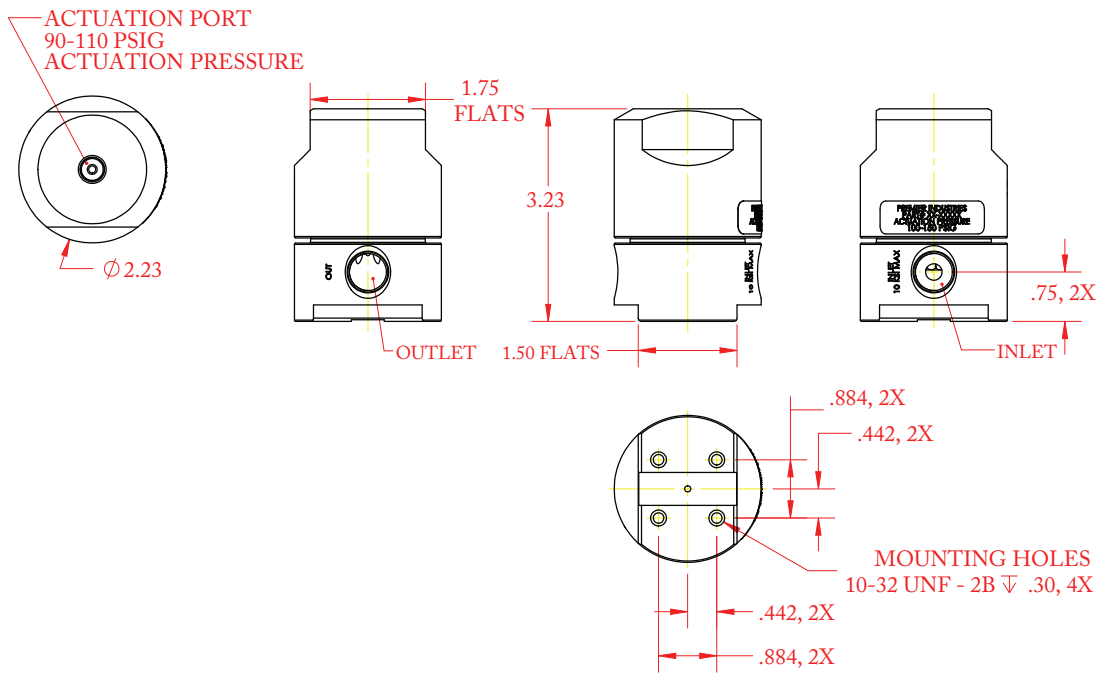
OPTIONS

- Private label
- Solenoid valve
- Indicator switch, P/N: 70-00434
- Gauges

Vespel® is a registered trademark of E.I. du Pont de Nemours and Company.

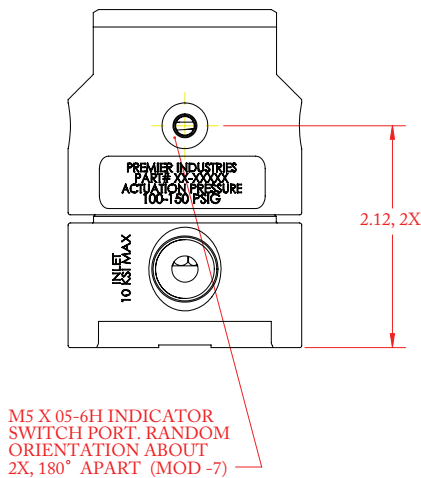
PEEK® is a registered trademark of Victrex PLC

PART NUMBER: 70-00347



INDICATOR SWITCH PORT MOD REFERENCE:

**70-00347-X-XX-XX-7 & 70-00347-X-XX-XX-1
(2X SWITCH PORTS MOD)**



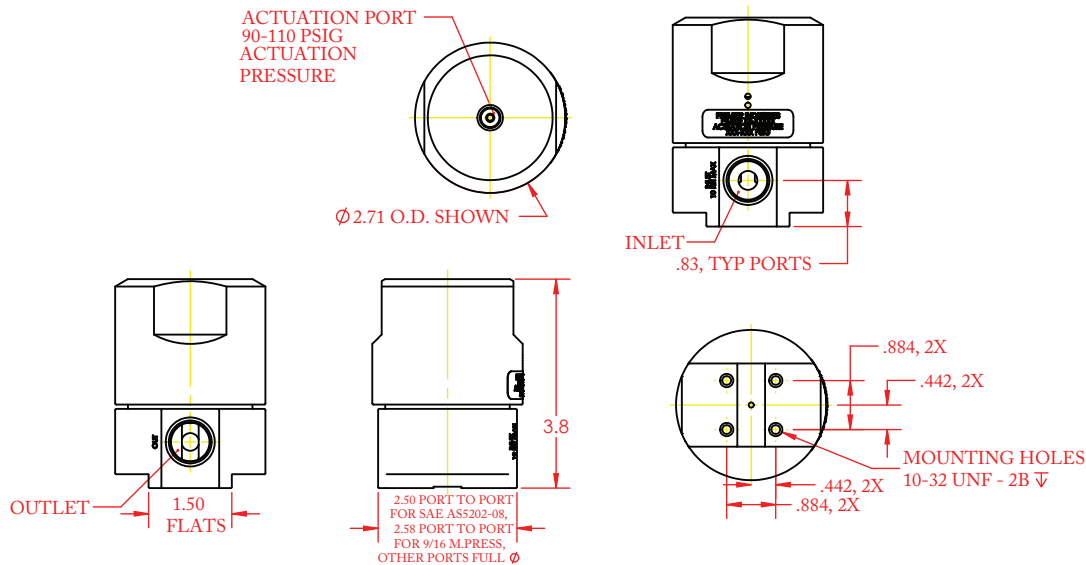
INDICATOR SWITCH NOTES:

DUE TO SHIPPING DAMAGE CONCERNS, THE INDICATOR SWITCH WILL SHIP WITH THE AO VALVES BUT NOT INSTALLED.
CONTACT TURK FOR MORE INFORMATION ON THE SWITCH.
TURK SWITCH PART# BI1-EG05K-AP6X-V1331

INSTRUCTION FOR CUSTOMER INSTALLATION:

1. SCREW NUT ONTO SWITCH ALL THE WAY ON, SLIDE ON LOCK WASHER
2. APPLY 100-150 PSIG TO THE AO VALVE LOADER (PROCESS PRESSURE IS NOT REQUIRED.)
3. GENTLY SCREW SWITCH INTO A SWITCH PORT UNTIL CONTACT OCCURS, THEN BACK OFF 1 TO 1.5 FULL TURNS. WRENCH SNUG NUT AGAINST AO VALVE.
4. APPLY POWER TO THE SWITCH. SWITCH LED SHOULD TURN ON.
5. RELIEVE ALL PRESSURE TO THE LOADER, CONFIRM THAT SWITCH LED TURNS OFF.
6. CYCLE THE LOADER ONE MORE TIME TO ENSURE LED TURNS ON/OFF.

PART NUMBER: 70-00379-X-XX-31

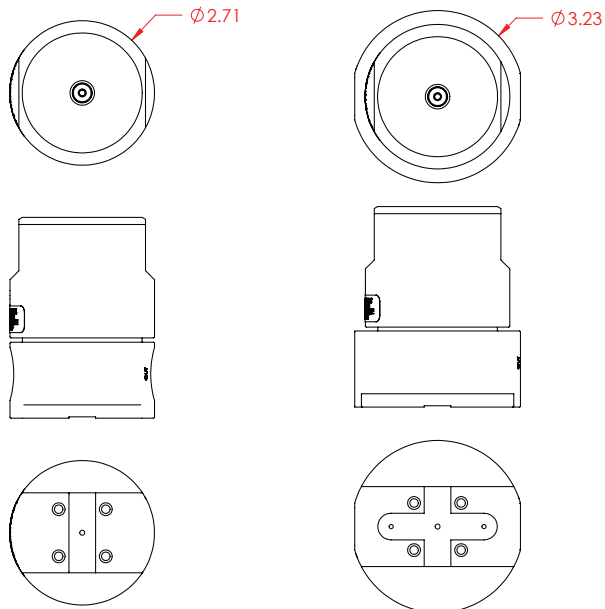


**OD REFERENCE
CONFIGURATIONS:**

70-00379-X-XX-1X (1/2 (F)NPT)
70-00379-X-XX-2X (3/8 (F)NPT)
70-00379-X-XX-3X (SAE AS5202-08)
70-00379-X-XX-5X (SAE AS5202-06)

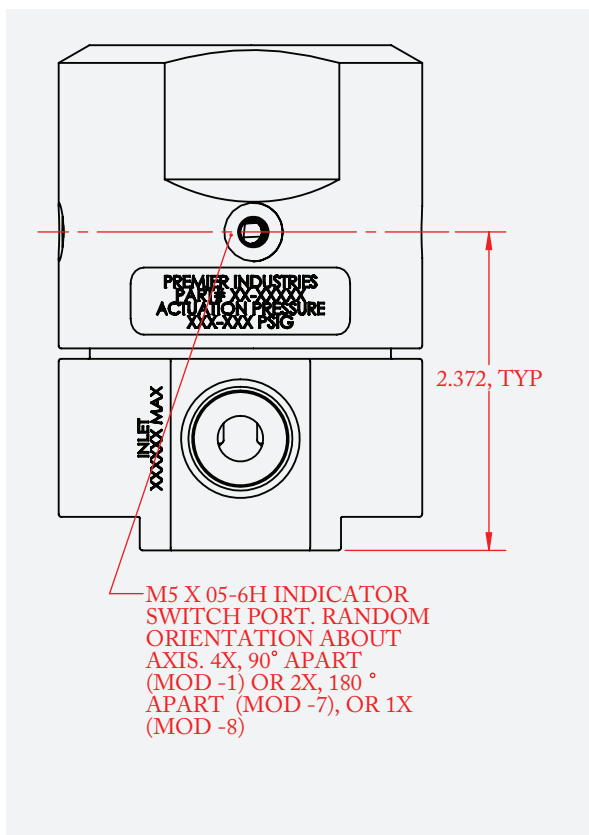
**OD REFERENCE
CONFIGURATIONS:**

70-00379-X-XX-4X (9/16 MED. PRESS.)
70-00379-X-XX-6X (9/16 MED. PRESS INLET AND SAE AS5202-08)



INDICATOR SWITCH PORT MOD REFERENCE:

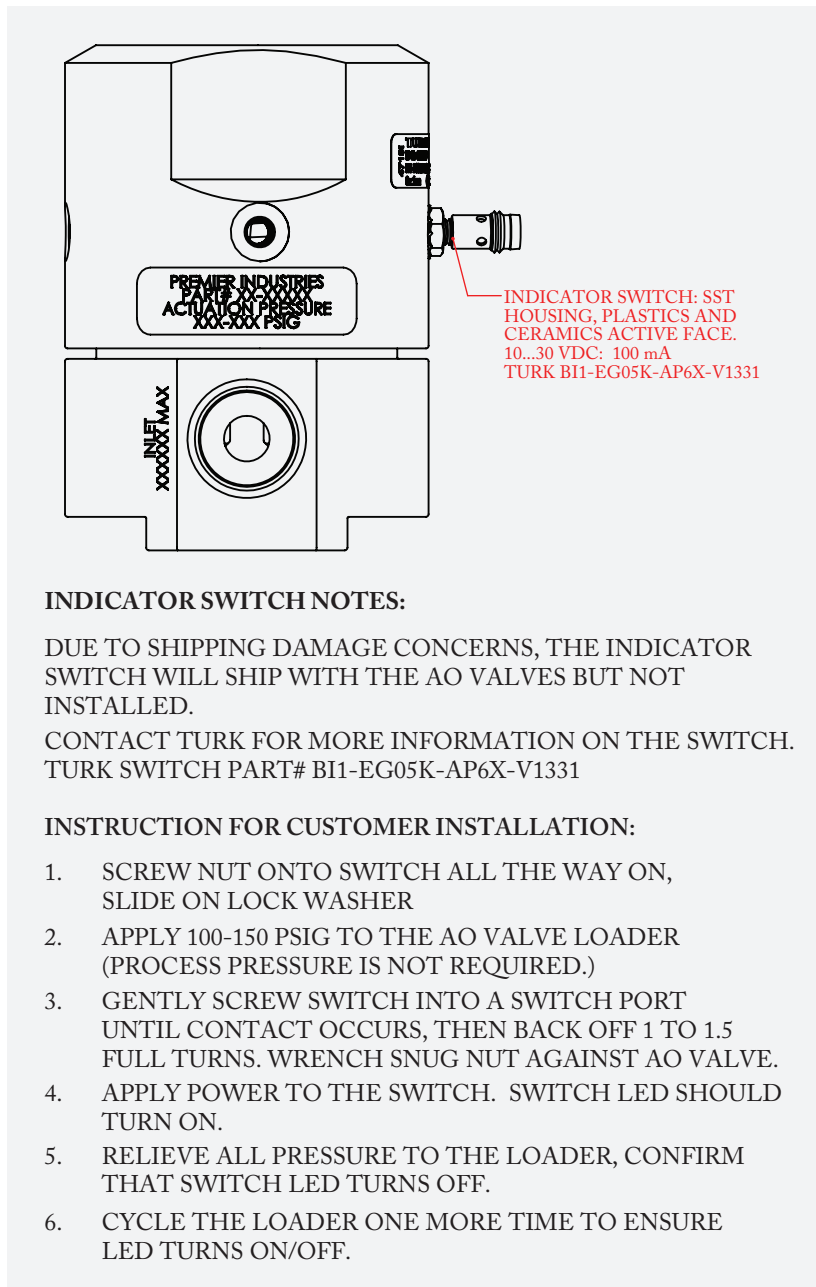
70-00379-X-XX-XX-1 (4X SWITCH PORTS)
70-00379-X-XX-XX-7 (2X SWITCH PORTS)
70-00379-X-XX-XX-8 (1X SWITCH PORT)



INDICATOR SWITCH MOD REFERENCE:

INDICATOR SWITCHES CAN BE ORDERED SEPARATELY.
P/N: 70-00434

70-00379-X-XX-XX-6



INDICATOR SWITCH NOTES:

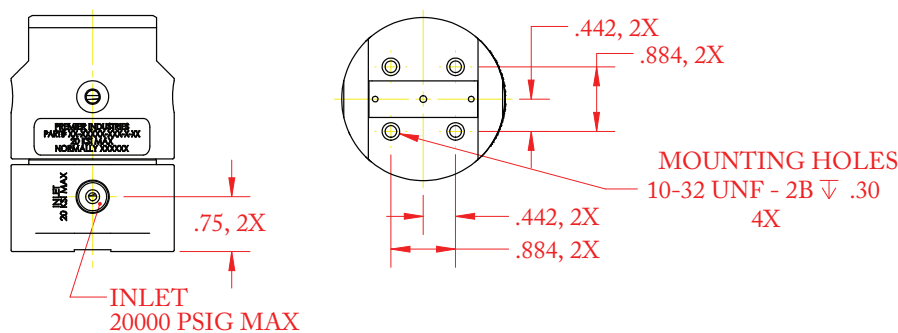
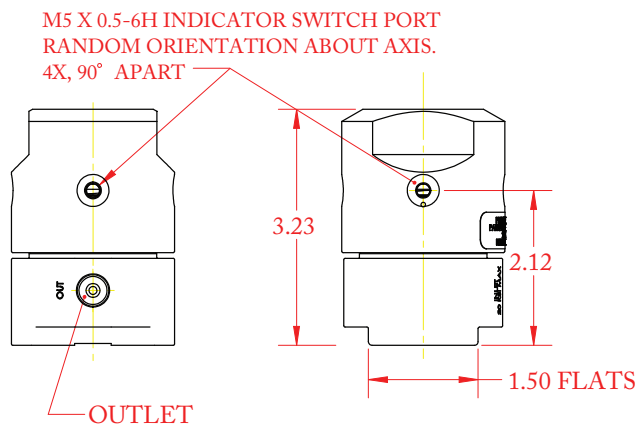
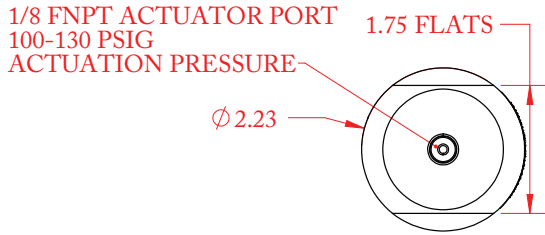
DUE TO SHIPPING DAMAGE CONCERNS, THE INDICATOR SWITCH WILL SHIP WITH THE AO VALVES BUT NOT INSTALLED.

CONTACT TURK FOR MORE INFORMATION ON THE SWITCH.
TURK SWITCH PART# BI1-EG05K-AP6X-V1331

INSTRUCTION FOR CUSTOMER INSTALLATION:

1. SCREW NUT ONTO SWITCH ALL THE WAY ON, SLIDE ON LOCK WASHER
2. APPLY 100-150 PSIG TO THE AO VALVE LOADER (PROCESS PRESSURE IS NOT REQUIRED.)
3. GENTLY SCREW SWITCH INTO A SWITCH PORT UNTIL CONTACT OCCURS, THEN BACK OFF 1 TO 1.5 FULL TURNS. WRENCH SNUG NUT AGAINST AO VALVE.
4. APPLY POWER TO THE SWITCH. SWITCH LED SHOULD TURN ON.
5. RELIEVE ALL PRESSURE TO THE LOADER, CONFIRM THAT SWITCH LED TURNS OFF.
6. CYCLE THE LOADER ONE MORE TIME TO ENSURE LED TURNS ON/OFF.

PART NUMBER: 70-00312



INDICATOR SWITCH PORT MOD REFERENCE:

70-00347-XXX-3

INDICATOR SWITCH NOTES:

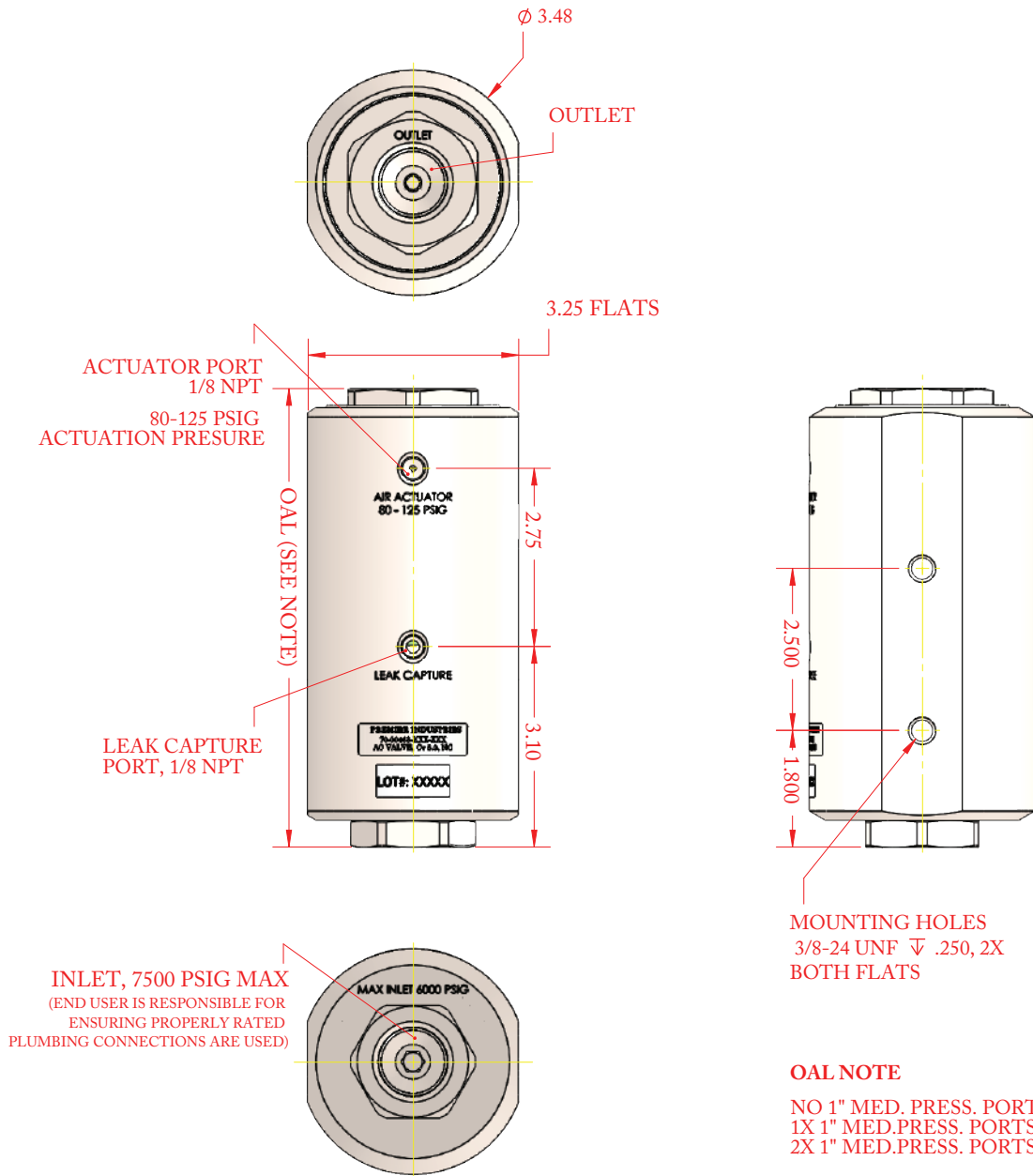
DUE TO SHIPPING DAMAGE CONCERNS, THE INDICATOR SWITCH WILL SHIP WITH THE AO VALVES BUT NOT INSTALLED.

CONTACT TURK FOR MORE INFORMATION ON THE SWITCH.
TURK SWITCH PART# BI1-EG05K-AP6X-V1331

INSTRUCTION FOR CUSTOMER INSTALLATION:

1. SCREW NUT ONTO SWITCH ALL THE WAY ON, SLIDE ON LOCK WASHER
2. APPLY 100-150 PSIG TO THE AO VALVE LOADER (PROCESS PRESSURE IS NOT REQUIRED.)
3. GENTLY SCREW SWITCH INTO A SWITCH PORT UNTIL CONTACT OCCURS, THEN BACK OFF 1 TO 1.5 FULL TURNS. WRENCH SNUG NUT AGAINST AO VALVE.
4. APPLY POWER TO THE SWITCH. SWITCH LED SHOULD TURN ON.
5. RELIEVE ALL PRESSURE TO THE LOADER, CONFIRM THAT SWITCH LED TURNS OFF.
6. CYCLE THE LOADER ONE MORE TIME TO ENSURE LED TURNS ON/OFF.

PART NUMBER: 70-00463
NORMALLY CLOSED ONLY



PART #	-	1	-	2	3	-	4	5	-	MODS (OPTIONAL)
70-00347	-		-			-			-	

Cv 0.8, 10000 PSIG MAX INLET

1	TYPE
1	NORMALLY CLOSED
2	NORMALLY OPEN
2	BODY/INSERT/STEM SEAT MATERIAL
1	303 STAINLESS STEEL <i>VESPEL SP-1</i>
2	316 STAINLESS STEEL <i>VESPEL SP-1</i>
3	MONEL® 400 <i>VESPEL SP-21 615 CLEANED</i>
4	C693 ECO BRASS <i>VESPEL SP-21 615 CLEANED</i>
ALL BRASS IS C693 ECO BRASS STANDARD. IF MOD 8 IS SELECTED, BODY IS C360 BRASS AND INSERT/STEM ARE C693 ECO BRASS	
3	O-RING MATERIAL
1	BUNA-N
2	VITON-A®
3	EPDM
4	FFKM <i>Contact Premier for pricing</i>
5	POLYURETHANE
6	LOW TEMP VITON®

4	PROCESS PORTS (& GAGE)
1	1/4 FNPT
2	3/8 FNPT
3	SAE AS5202-04
4	1/4 MEDIUM PRESSURE <i>(MEDIUM PRESSURE PORTING IS ONLY AVAILABLE W/ CV 0.2)</i>
6	SAE AS5202-06
7	1/8 FNPT
8	1/4 HIGH PRESSURE <i>(HIGH PRESSURE PORTING IS ONLY AVAILABLE W/ CV 0.16)</i>
5	ACTUATION PORT
1	1/8 FNPT
2	SAE AS5202-04

*Viton® is a registered trademark of
E.I. duPont de Nemours and Company.*

*Monel® is a registered trademark of Specialty
Metals Corporation*

SPECIAL MODS**	
OMITTED	NONE
2	SOLENOID VALVE ACTUATOR <i>(1/8" ACTUATION PORT ONLY)</i>
3	GAUGE PORTS
4	MOLYKOTE 44 MEDIUM LUBRICANT
5	CLEAN TO CGA G4.1 (PI WI615)
7	2X INDICATOR SWITCH PORTS <i>(SEE PAGE 3)</i>
8	PTFE SEAT <i>(DERATES VALVE TO 3000 PSIG)</i>
P	PEEK 1000 SEAT
Z	4X INDICATOR SWITCH PORTS

****CONSULT PREMIER INDUSTRIES
IF ORDERING SPECIAL MODS,
OR IF UNLISTED CONFIGURATIONS
ARE REQUIRED.**

**ADD ALL MODS TO END OF PART#
(EX. 70-00347-1-12-41-4)**

PART #	-	1	-	2	3	-	4	5	-	MODS
70-00379	-		-			-			-	

**Cv 2.0, 10000 PSIG MAX INLET
VESPEL SP-1 SEAT (STANDARD)**

1	TYPE
1	NORMALLY OPEN
2	NORMALLY CLOSED
2	BODY/INSERT/STEM MATERIAL
2	316 STAINLESS STEEL
3	C693 ECO BRASS
5	MONEL®
3	O-RING MATERIAL
1	BUNA-N
2	VITON-A®
3	EPDM
4	FFKM (CONTACT PREMIER FOR PRICING)
5	POLYURETHANE
6	LOW-TEMP BUNA
L	LOW-TEMP VITON

4	PROCESS PORTS
1	1/2 (F)NPT
2	3/8 (F)NPT
3	SAE AS5202-08 (1/2" TUBE)
4	9/16 MEDIUM PRESSURE
5	SAE AS5202-06
6	9/16 MP INLET AND AS5202-08 OUTLET
7	SAE AS5202-16 (1" TUBE)
5	ACTUATION PORT
1	1/8 (F)NPT
2	AS5202-04

SPECIAL MODS**	
BLANK	NONE
1	4X INDICATOR SWITCH PORTS SEE PAGE 5 
2	SOLENOID VALVE (1/8" ACTUATION PORT ONLY)
3	GAUGE PORTS (1/4" FNPT STANDARD) 
4	MOLYKOTE 44 MEDIUM LUBRICANT
5	CLEAN WETTED PARTS TO CGA G4.1
7	2X INDICATOR SWITCH PORTS SEE PAGE 5 
8	1X INDICATOR SWITCH PORT SEE PAGE 5 
9	PTFE SEAT (DERATES VALVE TO 3000 PSIG) 
P	PEEK 1000 SEAT MATERIAL
C	IEST-STD-CC1246 200R4 CLEANING
V	VESPEL SP-21 SEAT
A	AUXILLARY INLET PORT (SIZE/TYPE MATCHES PROCESS PORTS.) 
B	AUXILLARY AS5202-08 INLET PORT 
N	PCTFE SEAT (DERATES VALVE TO 6000 PSIG)
T	ANTI-VIBRATION GLAND ASSEMBLY (MEDIUM PRESSURE PORTS ONLY)

Viton® is a registered trademark of
E.I.duPont de Nemours and Company.

Monel® is a registered trademark of
Specialty Metals Corporation

CONSULT PREMIER INDUSTRIES IF ORDERING
SPECIAL MODS, OR IF UNLISTED CONFIGURATIONS
ARE REQUIRED. ADD ALL MODS TO END OF PART#
(EX. 70-00379-1-12-41-1)

 VALVES ORDERED WITH BOTH NORMALLY OPEN
AND PTFE SEAT MODIFIER MAY NOT HAVE
SWITCH/SWITCH PORT MODIFIERS.

PART #	-	1	2	3	-	MODS
70-00312	-				-	

Cv 0.20, 20000 PSIG MAX INLET
VESPEL SCP5000 SEAT

1	TYPE
1	NORMALLY CLOSED
2	NORMALLY OPEN
2	PORTING
1	1/4" MEDIUM PRESSURE
3	O-RING MATERIAL
1	BUNA-N
2	VITON®
3	EPDM
4	NEOPRENE
5	FFKM <i>CONTACT FACTORY FOR PRICING</i>
6	POLYURETHANE

MODIFICATIONS**	
BLANK	NONE
1	GAUGE PORTS 
2	SOLENOID VALVE <i>(1/8" ACTUATION PORT ONLY)</i>
4	MOLYKOTE 44 MEDIUM LUBRICANT
5	CLEAN WETTED COMPONENTS TO CGA G4.1 (PI WI615)

CONSULT PREMIER INDUSTRIES IF
ORDERING SPECIAL MODS, OR IF
UNLISTED CONFIGURATIONS ARE
REQUIRED. ADD ALL MODS TO END
OF PART# (EX. 70-00312-113-1)

*Viton® is a registered trademark of E.I. du Pont de Nemours
and Company.*

PART #	-	1	2	3	-	4	5	6	-	MODS
70-00463	-				-				-	

**Cv 5.0, 7500 PSIG MAX INLET
NORMALLY CLOSED ONLY**

1	WETTED MATERIAL / BODY MATERIAL (NON-WETTED)
1	316 STAINLESS STEEL & 17-4PH H1150 SST (WETTED) 316L SST (BODY)
2	316 STAINLESS STEEL & 17-4PH H1150 SST (WETTED) 6061-T6 ALUMINUM, CLEAR ANODIZED (BODY)
2	SEALS / WETTED BACKUP RINGS
1	BUNA-N / BUNA-N
2	VITON® / VITON®
3	EPDM / PTFE
4	FFKM / PTFE <i>Contact Premier for pricing</i>
5	POLYURETHANE / PTFE
6	LOW TEMP NITRILE / PTFE (-61°F TR-10)
3	SEAT MATERIAL
1	VESPEL® SP-1
2	PEEK 1000®
3	PCTFE (DERATES TO 3000 PSIG)

4	INLET PORT:
1	3/4" AS5202 (-12 TUBE SIZE)
2	1" AS5202 (-16 TUBE SIZE)
3	3/4" FNPT
4	1" FNPT
5	1" MEDIUM PRESSURE
5	OUTLET PORT:
1	3/4" AS5202 (-12 TUBE SIZE)
2	1" AS5202 (-16 TUBE SIZE)
3	3/4" FNPT
4	1" FNPT
5	1" MEDIUM PRESSURE

6	AIR AND LEAK PORTS:
1	1/8" FNPT
2	J1926, SAE SIZE-2 (1/8" TUBE)
MODIFICATIONS**	
BLANK	None

CONSULT PREMIER INDUSTRIES IF
ORDERING SPECIAL MODS, OR IF
UNLISTED CONFIGURATIONS ARE
REQUIRED. ADD ALL MODS TO END
OF PART# (EX. 70-00463-113-1)

*Vespel® and Viton® are registered trademarks of
E.I. duPont de Nemours and Company.
PEEK® is a registered trademark of Victrex PLC*