

# Maxseal Solenoid Operated Valves



ICO4S  
1/2" 3/2  
JSMO



## Typical Applications

- 1/2" 3/2 JACK SCREW MANUAL OVERRIDE
- Actuator Control
- Direct Acting Shut Off Valve
- Oil & Gas Applications
- Turbine Fuel Control

## Thompson Valves Ltd

### Description

- Model: ICO4S 1/2" 3/2 JSMO Direct Acting Solenoid Valve
- Low Pressure, High Flow
- Max Inlet Pressure 20 bar (290 psi)
- Reliable and long life, ideal for a one time installation
- Control of pneumatic or hydraulic operated equipment

<input type="checkbox"/> Standard Features	<input type="checkbox"/> ICO4S 1/2" 3/2 JSMO
<input type="checkbox"/> Solenoid Materials of Construction	<input type="checkbox"/> Solenoid Pot - Stainless Steel - BFC 316 <input type="checkbox"/> Top Cover - Stainless Steel- BFC 316 <input type="checkbox"/> Valve Body & Trim Materials - 316 Stainless Steel <input type="checkbox"/> O-Rings Seats & Seals - High Nitrile (NBR) <input type="checkbox"/> Coil Insulation - Class H
<input type="checkbox"/> Maximum Inlet Pressure	<input type="checkbox"/> 20 Bar (290 PSI)
<input type="checkbox"/> Flow Rates	<input type="checkbox"/> $C_v = 4.2$ USgpm for 1 psi $\Delta p$ <input type="checkbox"/> $K_v = 46$ l/min for 1 bar $\Delta p$
<input type="checkbox"/> Temperature Ratings	<input type="checkbox"/> Media (Min/Max -20°C/90°C) - Ambient (Min/Max 0°C/60°C)
<input type="checkbox"/> Valve Size	<input type="checkbox"/> 1/2" Balanced Poppet Valve
<input type="checkbox"/> Process Connections	<input type="checkbox"/> 1/2" NPT
<input type="checkbox"/> Conduit Connection	<input type="checkbox"/> M20 x 1.5 Conduit Thread
<input type="checkbox"/> Media	<input type="checkbox"/> Liquid & Gases
<input type="checkbox"/> Weight	<input type="checkbox"/> 7.5 Kg

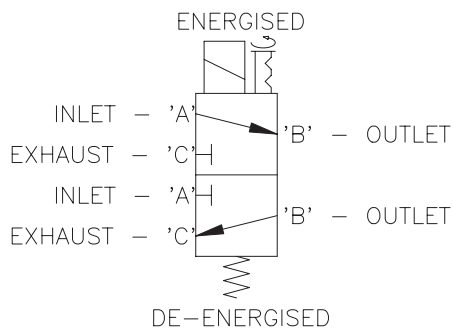
<input type="checkbox"/> Recommended Spares Kits	
<input type="checkbox"/> Soft Spares (O-rings, Springs etc)	<input type="checkbox"/> Standard (Viton® & High Nitrile) Y123A030000-SS <input type="checkbox"/> Low Temperature valves See Valve Data Sheet
<input type="checkbox"/> Spare Coil Assembly	<input type="checkbox"/> Standard 24V DC (15.1 Watts) Y123A0301B0 <input type="checkbox"/> Other Variations See Valve Data Sheet

<input type="checkbox"/> Options	
<input type="checkbox"/> Valve Body & Trim Materials	<input type="checkbox"/> Aluminium Bronze - Sea Water Applications <input type="checkbox"/> Titanium - Extreme Service Applications
<input type="checkbox"/> Low Temperature Options	<input type="checkbox"/> O-Rings - Low Nitrile/Fluorosilicone (Min Med/Amb -40°C/-40°C)
<input type="checkbox"/> High Temperature Options	<input type="checkbox"/> High Temperature Spacer (Max Med/Amb 120°C/60°C) Please Call for Dimensions
<input type="checkbox"/> Process Connections	<input type="checkbox"/> Thread - 1/2" BSPP
<input type="checkbox"/> Conduit Connection	<input type="checkbox"/> 1/2" NPT
<input type="checkbox"/> Product lead time	<input type="checkbox"/> Y123SA3H1BS - 2 WEEKS (SUBJECT TO QUANTITY) <input type="checkbox"/> Other Variations - Please call for possible delivery dates

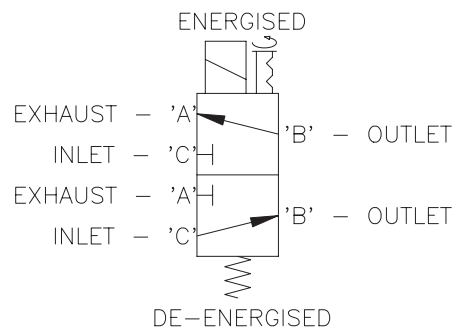
**Technical Specification**

<b>Pressures</b>	
Test (Proof) Pressure	<input type="checkbox"/> 30 bar (435 PSI)
Maximum Inlet Pressure	<input type="checkbox"/> 20 Bar (290 PSI)
<b>ATEX Classification</b>	
ATEX Certificate	<input type="checkbox"/> Complies with ATEX Directive 94/9/EC
ATEX Certificate	<input type="checkbox"/> SIRA 00ATEX1147
<b>Certification</b>	
	<input type="checkbox"/> II 2G
	<input type="checkbox"/> EExd IIC T6 (T <sub>a</sub> = -60°C to + 48°C) or
	<input type="checkbox"/> EExd IIC T4 (T <sub>a</sub> = -60°C to + 90°C)
<b>IECEX</b>	
	<input type="checkbox"/> IECEX BAS 04.0019
	<input type="checkbox"/> EExd IIC T6 (T <sub>a</sub> = -40°C to + 60°C) or
	<input type="checkbox"/> EExd IIC T4 (T <sub>a</sub> = -40°C to + 90°C)
<b>GOST 'K'</b>	
	<input type="checkbox"/> EExd IIC T6 (T <sub>a</sub> = -40°C to + 60°C)
<b>GOST 'R'</b>	
	<input type="checkbox"/> EExd IIC T6 (T <sub>a</sub> = -40°C to + 60°C)
<b>Safety Integrity Level</b>	
	<input type="checkbox"/> Suitable for SIL 3 Application in Simplex Mode
	<input type="checkbox"/> Suitable for SIL 4 Application in Duplex Mode
<b>Ingress Protection</b>	
	<input type="checkbox"/> IP66/X8, NEMA 4X
<b>Voltage Surge Protection</b>	
	<input type="checkbox"/> Surge Suppression Diodes
<b>Coil Insulation</b>	
	<input type="checkbox"/> Class H
<b>Performance</b>	
Pull-in Voltage	<input type="checkbox"/> 87.5% of Nominal
<b>Response Times</b>	
	<input type="checkbox"/> Pull-In <150ms
	<input type="checkbox"/> Drop-Out <80ms
<b>Electromagnetic Compability (EMC)</b>	
	<input type="checkbox"/> EN50081-2/82-1

**Valve Symbol**



VALVE SYMBOL FOR  
ENERGISE TO OPEN  
(DE-ENERGISED TO CLOSE)  
(NORMALLY CLOSED)



VALVE SYMBOL FOR  
ENERGISE TO CLOSE  
(DE-ENERGISED TO OPEN)  
(NORMALLY OPEN)

**Ordering Information**

Model	Operating Pressure	Port Config.	Operation	Process Connection	Seat/Seal Materials	Conduit Connection	Voltage	Body/Trim Materials				
Y1	2	3	S	A3	H	1	B	S				
ICO4S	0-20 Barg (290 psi)	3/2 UNIVERSAL	JACK SCREW MANUAL OVERRIDE	A3	H	1	A 18/33V DC	S 316 SS / 316 SS				
				1/2" NPT	High Nitrile	M20x1.5	B 24V DC	M Alu Brnz / Alu Brnz				
				E3	V	2	C 50V DC					
				1/2" BSPP	Viton®	1/2" NPT	D 110V DC					
											E 125V DC	
											G 25V AC	3 Titanium / Titanium
											J 110V AC	
							M 240V AC					

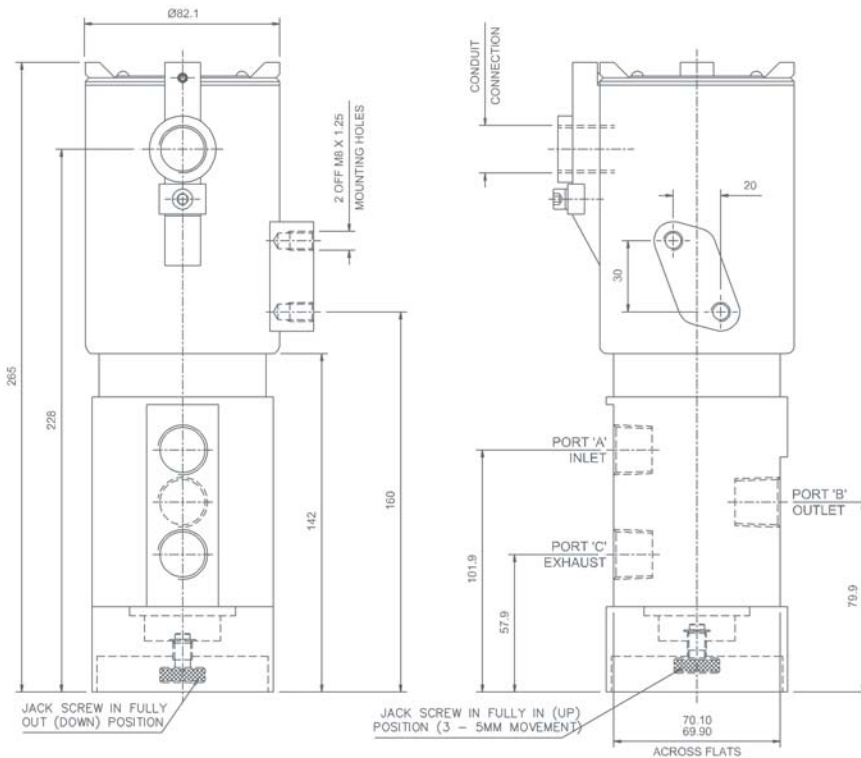
**Ordering Example**

Y1	2	3	S	A3	H	2	M	3
ICO4S	0-20 Barg (290 psi)	3/2 UNI	JSMO	1/2" NPT	High Nitrile	1/2" NPT	240V AC	Titanium / Titanium

**Power Consumption (At Nominal)**

DC Standard		AC Standard	
18 / 33V DC (24V DC)	CALL	25V AC	13.3 W
24V DC	15.1 W	110V AC	14.2 W
50V DC	16.6 W	240V AC	17.9 W
110V DC	15.5 W		
125V DC	15.1 W		

**Profile and Dimensions mm**



- Jack screw in fully out (down) position  
Valve operates as an automatic  
Valve is energised  
Flow occurs between ports 'A' & 'B'  
Valve is de-energised  
Flow occurs between ports 'B' & 'C'
- Jack screw in fully in (up) position  
Flow occurs between ports 'A' & 'B'

When the valve is energised or de-energised, the valve will 'change over' until the jack screw is returned to the fully out position

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