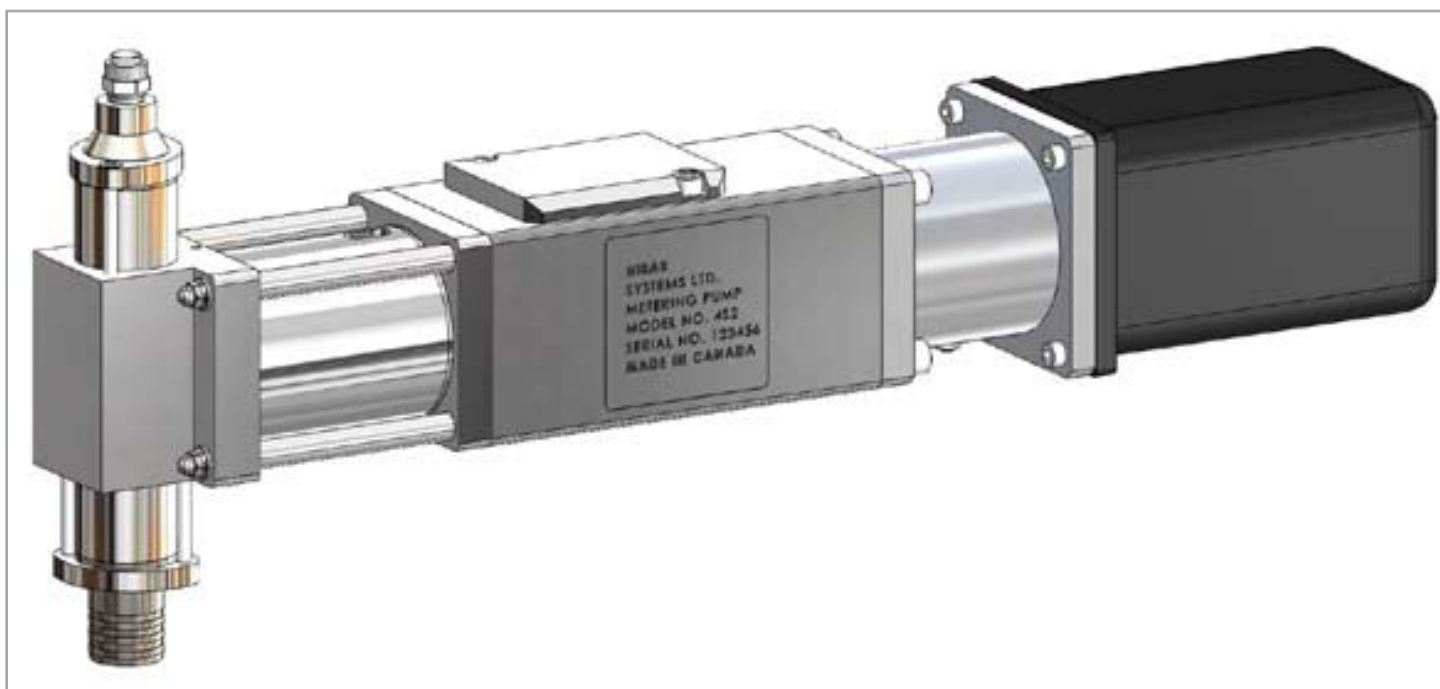


4S Series Check Valve Dispensing Pumps

The 4S Series Check Valve style Dispensing Pumps are ideally suited for low to medium viscosity applications in food, cosmetic, technical and pharmaceutical industries. Dispensing accuracies of $\pm 1/2\%$ or better can be easily maintained without readjustment or recalibration.

The 4S Series Pumps combine this proven dispensing technology with state-of-the-art servomotor drives to provide precise, programmable control over the dispense volume and speeds. The modular design and electronic control simplifies interfacing to existing filling systems.



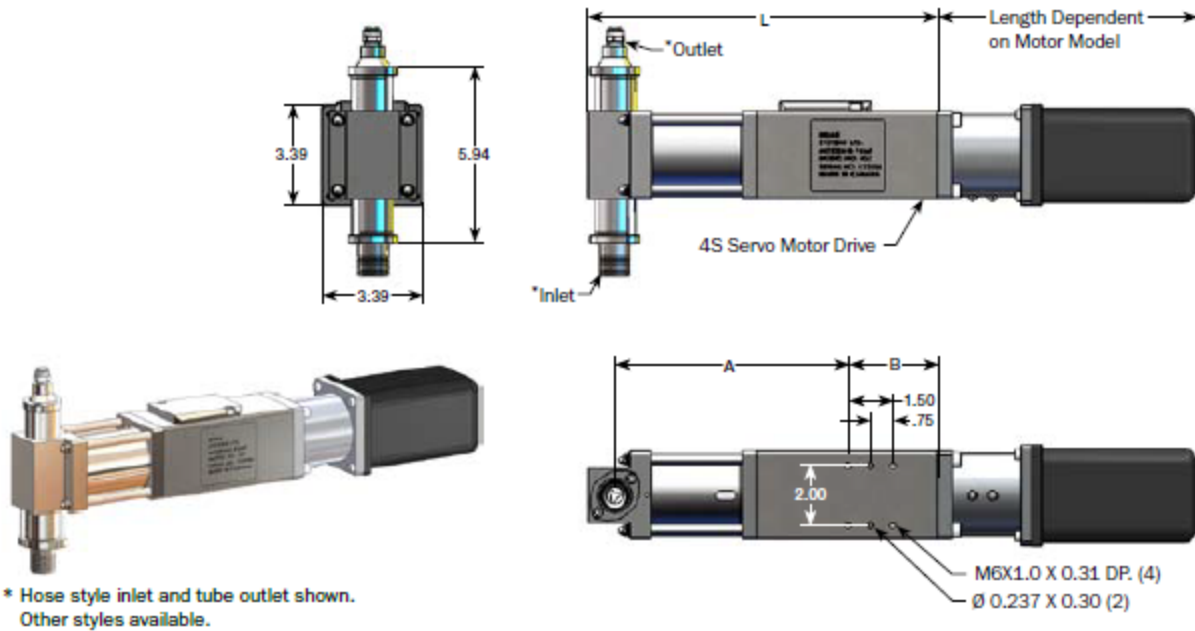
Servomotor Drive Features:

- * **Accuracy**
Dispensing accuracies of up to $\pm 0.1\%$ or better.
- * **Control**
Precise control of the dispense profile provides optimal cut-off at the nozzle while maximizing the cycle rate.
- * **Versatility**
Via a RS232 connection the user can quickly download recipes, including parameters such as acceleration, fill volume and fill speed.
- * **Compact**
The motor, resolver and drive controller are one integral unit mounted on the back of the pump.
- * **Simplicity**
Requires only power and a start signal to perform a complete dispense cycle.

4S Series Pump Features:

- * *High-quality Stainless-Steel construction.*
- * *Integrated check valves handle fluids with viscosities up to 20,000 cps. and containing no solids.*
- * *Easy to disassemble, clean and maintain.*
- * *Modular design makes it easy to integrate with automated filling equipment.*
- * *Compact footprint for easy mounting.*
- * *Long service life lasting for millions of cycles.*
- * *Wide range of fill nozzles & accessories are available to suit specific applications.*

4S Series Check Valve Dispensing Pumps



Model	Plunger Diameter		Stroke	Maximum Dispensing Volume (cc)	Cycle Speed (cpm)	Voltage VDC	External Dimensions inch (mm)			Weight lbs (kg)
	inch	(mm)					inch (mm)	A	B	
4S1-C-10	7/8	(22.23)	1.00 (25.4)	9.9	0-180 ^A	48	6.85 (174)	3 (76.2)	10.77 (273.6)	14.75 (6.7)
4S1-C-30	1 5/8	(41.28)		34			5.85 (148.6)		9.77 (248.2)	
4S1-C-60	2 1/8	(53.98)		58						
4S2-C-20	7/8	(22.23)	2.00 (50.8)	20	0-150 ^A	48	9.85 (250.2)	3 (76.2)	13.77 (349.8)	16.25 (7.4)
4S2-C-65	1 5/8	(41.28)		68			7.85 (199.4)		11.77 (298.8)	
4S2-C-110	2 1/8	(53.98)		116						
4S3-C-30	7/8	(22.23)	3.00 (76.2)	30	0-120 ^A	48	12.85 (326.4)	3 (76.2)	16.77 (426)	17.75 (8)
4S3-C-100	1 5/8	(41.28)		102			9.85 (250.2)		13.77 (349.8)	
4S3-C-170	2 1/8	(53.98)		174						

^A Maximum cycle rate is application dependent

Applications			
Cosmetics	Food	Pharmaceutical	General
<ul style="list-style-type: none"> * Perfume * Creams * Lotions * Shampoos * Oils * Mouthwash * Nail Lacquer * Moisturizer * Skin Cleanser * Make-up Remover 	<ul style="list-style-type: none"> * Ketchup * Vinegar * Honey * Butter * Coffee * Cream * Jelly * Sauces * Juices * Puddings 	<ul style="list-style-type: none"> * Medicine * Culture Media * Biologicals * Antibiotics * Cough Syrup 	<ul style="list-style-type: none"> * Acids * Alkalines * Reagents * Inks * Paints * Glues / Adhesives * Battery Electrolyte * Lighter Fluids * Oils * Solvents