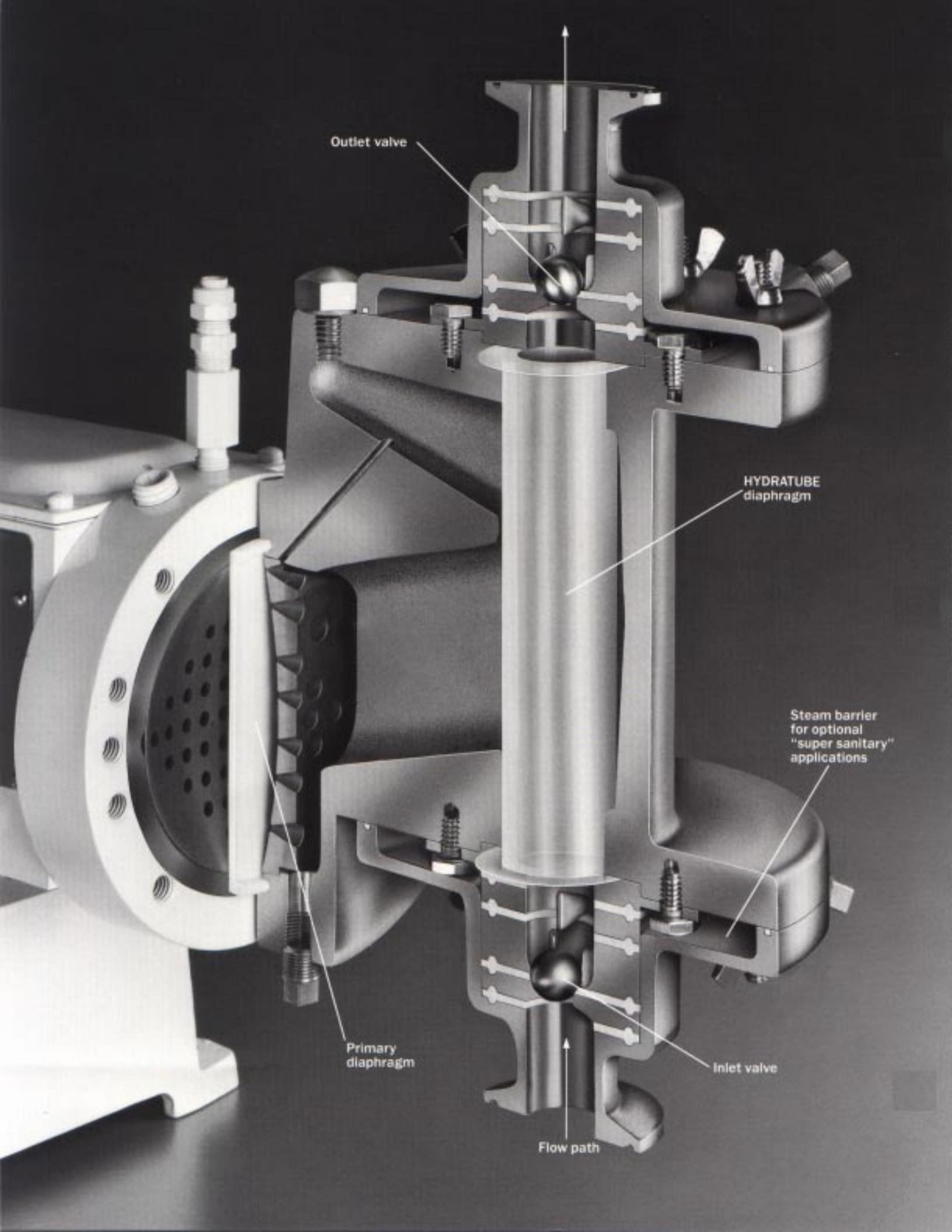
PULSA Series CIP PUMPS

Clean-in-place and steam-in-place ease in a proven Hydratube seal-less design.

PULSAFEEDER®
A Unit of IDEX Corporation


Outlet valve
HYDRATUBE diaphragm
Steam barrier for optional "super sanitary" applications
Primary diaphragm
Inlet valve
Flow path

PULSA Series CIP Pumps Eliminate Contamination Risks.

PULSA Series clean-in-place and steam-in-place Hydratube design incorporates a simple, straight-through, trap-free flow path. Hold-up volume is minimal. Contamination risks are virtually eliminated.

The 680 CIP, 880 CIP, and 7120 CIP models are exceptionally easy to clean. Each features a tubular diaphragm which can be cleaned or steamed while idle or operating. The Hydratube is designed for extended operating life under repeated steam sterilizing.

Our simple valve assembly and tube design eliminates the need for disassembly and autoclaving between batches. This simnple labor saving design also provides for easy inspection and service.

HYDRATUBE PUMP HEAD

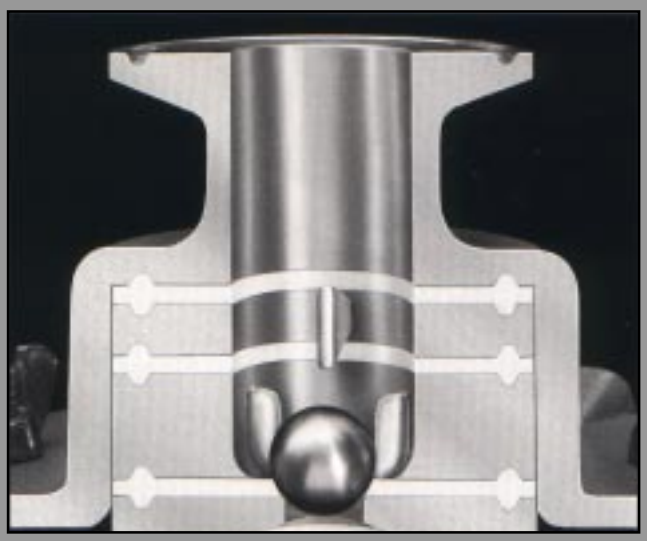
The key to the pump's contamination-free service is the Hydratube head. This design incorporates a cylindrical tube diaphragm with straight-through flow path which is low-shearing and non-trapping. Since the tube is gently squeezed hydraulically in the pumping action, it has life expectancy far greater than other pump designs.

DOUBLE DIAPHRAGM PROTECTION

A gentle, low-shear hydraulic pumping action is produced by a double diaphragm. The primary working diaphragm controls the squeeze on the tubular diaphragm. The Hydratube can be surrounded by any intermediate liquid compatible with the process. These hydraulic mediums can include neutral, non-contaminating liquids such as water. In some cases the process liquid itself can be used.

The stainless Hydratube head utilizes valve materials of electropolished 316 SS with a food-grade Nitrile primary diaphragm. Tube diaphragms are available in food-grade EPDM elastomer or Teflon PFA plastic.

Tubular diaphragms -- available in food grade EPDM elastomer or PFA plastic.



Electropolished 316 SS valve assembly.

Valve gaskets are available in food-grade EPDM or Teflon. The tube diaphragm is designed for easy inspection without loss of the intermediate liquid prime.

Because the liquid to be handled is contained within the tubular diaphragm and valves, product holdup within the head is minimized. There are no eddies or trap areas to permit build-up or contamination.

PROVEN PULSA Series PERFORMANCE

The basic pump is our time proven industrial quality sealed power unit. Each model offers 0 to 100% flow range adjustment up to maximum pressure rating using a basic economical electric motor drive. Metering or transfer capability will not be influenced by ambient conditions or changes in plant air pressure.

This durable pump features flooded lubrication and gives the customer the option to select lubricant. All PULSA Series CIP pumps cone with a durable FDA-approved paint system, and quick release tri-clamp connections are standard. Other sanitary connections are optional.

SEAL-LESS RELIABILITY

There are no mechanical seals or packing, so completely leak-free pumping is possible. The PULSA Series seal-less design feature contributes to excellent metering accuracy ($\pm$1% over full operating range).

AUTOMATIC PUMP CONTROL

CIP pumps can be used for batch or continuous process requirements. External manual flow adjustment can be made whiel the pump is idle or operating. Continuous remote control through the use of advanced solid-state electronics or pneumatic signals is available.

TYPICAL CIP APPLICATIONS

BIOTECH/PHARMACEUTICAL
Tissue culture transfer
Separations
Tablet and capsule coatings
Colorings for tablets and capsules
Acid and caustic addition
Enzyme addition
Sucrose addition
Nutrient addition
Detergent addition

FOOD AND BEVERAGE
Coloring addition
Antiforming addition
Nutrient addition
Coatings
Acid and caustic addition
Ingredient addition
Flavoring addition
Detergent addition
Enzyme addition

CHEMICAL
Filmmaking
Paints

ANIMAL FOOD AND FEED
Nutrient addition
Coatings
Medical addition

CIP Pump Performance Data & Specifications

MODEL	CAPACITY AT RATED PRESSURE[1] GPH (LPH)	RATED PRESSURE see ratings		PISTON DIAMETER (inches)	STROKE RATE OPTIONS	INLET/OUTLET SIZE Tri-Clamp
		psig	kg/cm²			
680 CIP	1.9 to 32.6 (7.5 to 123)	150	7	0.75 to 1.50	44 to 140	1"
880 CIP	15 to 95 (56.8 to 360)	150	7	1.50 to 2.125	58 to 175	2"
7120 CIP	30.9 to 123.8 (117 to 468)	150	7	1.50 to 2.125	70 to 140	2"

NOTE: Above figures are based on use of 60 HZ, 1750 RPM motor. Where 50 Hz, 1450 RPM motor is used, multiply maximum capacity figures by 0.83.

Engineering Data

Ratings: All models are rated for continuous operation at 180 °F (82 °C) with intermittent 266 °F (130 °C) steam cleaning while idle or operating. The metering head assembly can be fully isolated from the pumping mecahnism for placement in a sealed enclosure, clean room, vacuum chamber, steam chamber, cold chamber, submerged bath, etc.

Materials: Metering head and hardware is 300 series stainless. Tube diaphragm is available in PFA (a modified TFE) or food-grade EPDM elastomer. Valve components are electropolished 316 SS with gaskets in TFE or food-grade EPDM elastomer. Primary (disc) diaphragm is food-grade Nitrile.

Motors: 1/2 HP totally enclosed, sanitary design, 1750 RPM single-phase is standard. Three-phase and special duty are optional. 1450 RPM, 50 Hz available (multiply capacity by 0.83)

Connections: TRI-CLAMP connections are standard. Consult factory for options.

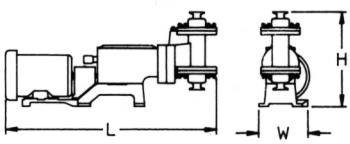
Controls:

680 CIP and 880 CIP Electric Stroke Length Control

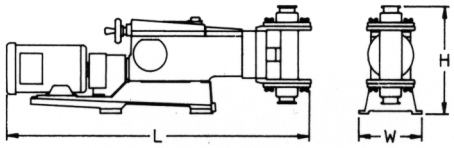
7120 CIP Electric Stroke Length Control

These optional stroke length controls are ideal for those installations that require automatic process control. Output can be varied 0 to 100% through electric or pneumatic signals. The entire circuit and all components are housed in a NEMA 4 water-tight enclosure assembled to pump.

Approximate Overall Dimensions



680 CIP & 880 CIP



7120 CIP

	680 inches (cm)	880 inches (cm)	7120 inches (cm)
Length	30.9 (78.5)	33.2 (84.3)	40.2 (102.2)
Width	9.0 (22.8)	9.0 (22.8)	11.0 (27.9)
Height	12.9 (32.7)	14.5 (36.8)	14.2 (36.0)
Approx. shipping wt.	65 lbs 29.4 kg	76 lbs 34.5 kg	180 lbs 82 kg

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Catalog No. 128
Printed in USA 8/01