

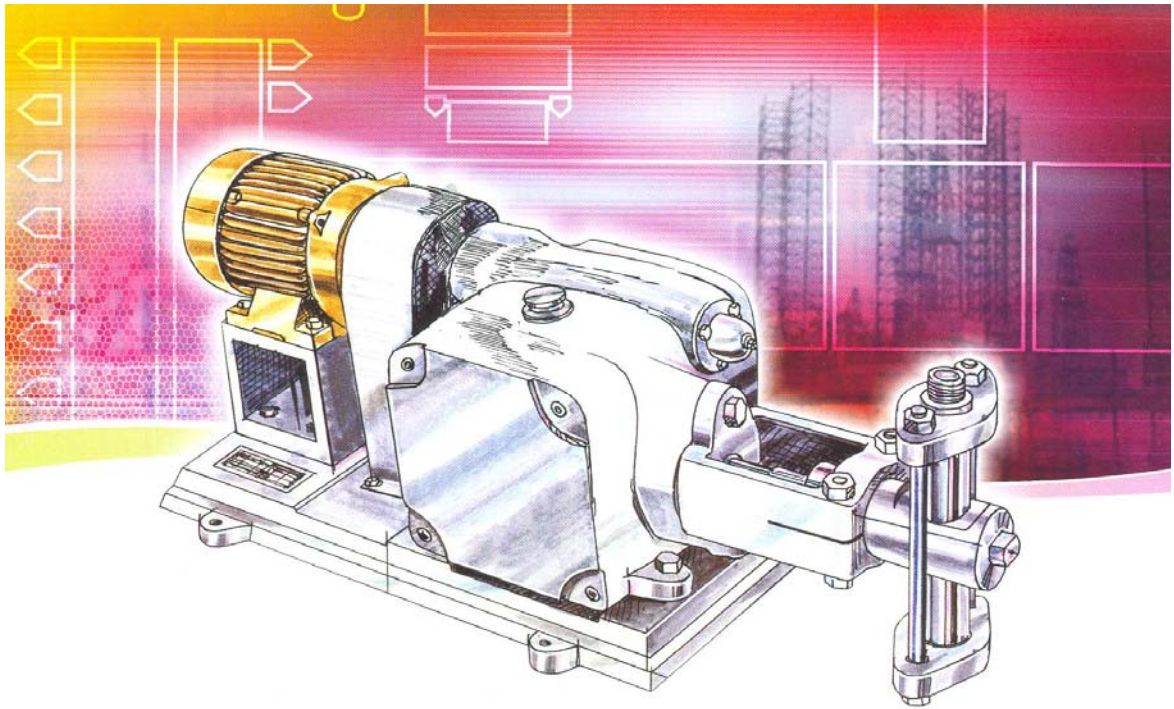
# CRYOGENIC High Pressure Reciprocating Plunger Pump

Series : UMHD-

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## Application :

- Cylinder Filling
- Pumping Cryogenic Liquids from Mobile Tankers, Tank Containers, Liquid Cylinders.
- Pipe Line Back Up.
- Process Feeding.
- Gas Topping.



## Special Features :

- Extremely low NPSH requirement, only 0.1 to 0.5 Mtr
- Gland Packing specially developed for leak less operation, hence reduced product loss.
- Indigenously developed, High Reliability.
- Minimal Maintenance, all parts available off the shelf.
- Quick Cold End Cool Down
- Designed for continuous operation.
- Pump with variable capacity arrangement available for process control.
- Available from 150 Kg/hr to 1500 Kg/hr – largest range available.
- Prompt after Sales Service, assistance for erection, commissioning and operation.

Sold and Serviced by

## **MATZ PUMPS PRIVATE LIMITED**

12/B, Bhavna Society, Gitamandir Road, AHMEDABAD – 380 022 – INDIA

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Manufactured by

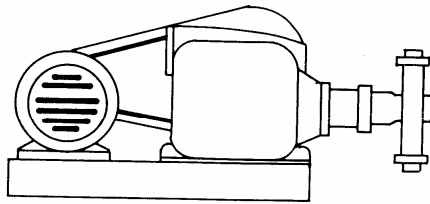
Shree Rajeshwari Engineering Works, 2, Anant Industrial Estate, Rakhial, AHMEDABAD – 380 023

## OPERATION :

Unit employs a single acting simplex reciprocating pump, driven by a 4 / 6 pole induction motor.

Unit is coupled to drive motor through a flexible coupling or V-blet, Rotary motor is converted to reciprocating motion by a Crank through Cross Head, causing to and fro motion of the Plunger.

## DESIGN :



MOTOR MECHANICAL DRIVE COLD END

Unit is Horizontal Foot Mounted, suitable for direct or belt drive.

Unit comprises of a Cold End, Mechanical Drive and a 4 / 6 Pole Drive Motor.

The Mechanical Drive comprises of a heavy duty specially designed crank, supported on liberally sized roller / ball bearings, Crank is housed in a dust and oil tight housing, crank is splash lubricated. Mechanical Drive employs a self lubricating Cross Head design.

Cold end is manufactured out of special grade Stainless Steel suitable for Cryogenic Temperatures, it has a provision for gas venting, Valves and Valve Seats are hard faced for longer trouble free life. Plunger is coated with special wear resistant coating. Plunger packing are designed to provide a long leak-less service.

Drive motor is a 4 / 6 Pole TEFC SCR IP 55 F Class insulation electric motor of reputed make.

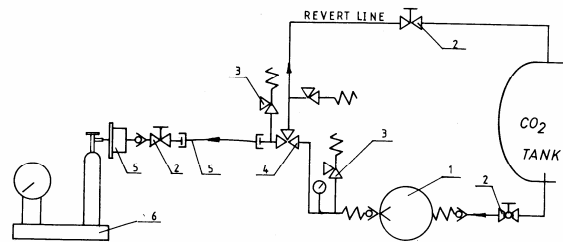
## MATERIAL OF CONSTRUCTION :

Drive end Housing	CI IS 210 FG 260
Cold End	ASTM A 276 Gr. 440C / 431
Crank	Forged Carbon Steel.
Cross Head	CI IS 210 FG 300 or ASTM A 276 Gr. 420
Cross Head Bush	IS 318 LTB – 6

## PERFORMANCE DATA

Model >>>>		UMHD-0	UMHD-1	UMHD-2
FLOW RATE	Kg/Hr	25, 50, 75, 100, 150	250, 300, 400, 500	750, 1000, 1250, 1500
SUCTION TEMP	°C – max	-60	-60	-60
DISCHARGE PRESSURE	Kg/cm <sup>2</sup> Max	300	300	300
SUCTION PRESSURE	Kg/cm <sup>2</sup> Max	60	60	60
NPSH Reqd.	Mtr	0.1	0.3	0.5
S P M	Max	300	300	300
INPUT POWER	H.P. / R.P.M.	0.5 – 3.0 1000	3 – 7.5 1000	7.5 - 15 1000

## CYLINDER FILLING LAYOUT – MANUAL REVERT SYSTEM – TYPICAL

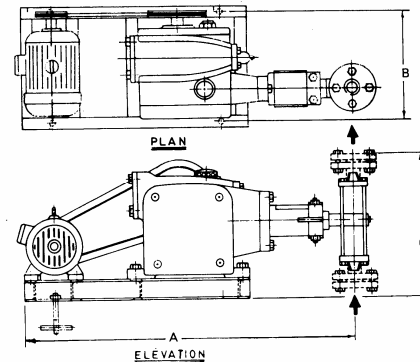


### Legend :

Sl.	Description	Sl.	Description
1	LCO <sub>2</sub> Pump	4	3 Way Manual Valve
2	Ball Valves	5	Cylinder Filling Head
3	Relief Valve	6	Scale

In order to make automatic revert system Item Sl. 4 can be automated with the help of pressure switch, consult us for further details.

## TYPICAL DIMENSION – PUMP LAYOUT.



MODEL	A	B	C
UMHD-0	900	350	300
UMHD-1	1275	450	500
UMHD-2	1400	500	550

ALL DIMENSIONS ARE IN MM AND FOR REFERENCE ONLY

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