

## Quart /Litre Stroke Pump

QSP



Heavy Duty Industrial Pump that dispenses measured quantity: 1 quart (1 Litre) per stroke

Extremely useful in applications requiring metered delivery

The pump works on a precision rack & pinion mechanism

### Pump comes with

- Spring Loaded Drain Back Tube for overflow media
- Lockable handle which allows the pump to be pad locked, when not in use
- Lock Nut for positioning the pump outlet in any direction
- Built in 2" Bung Adaptor
- Complete with a telescopic steel suction tube for use with 50-205 litre (15-55 gallon) drums

### WETTED COMPONENTS

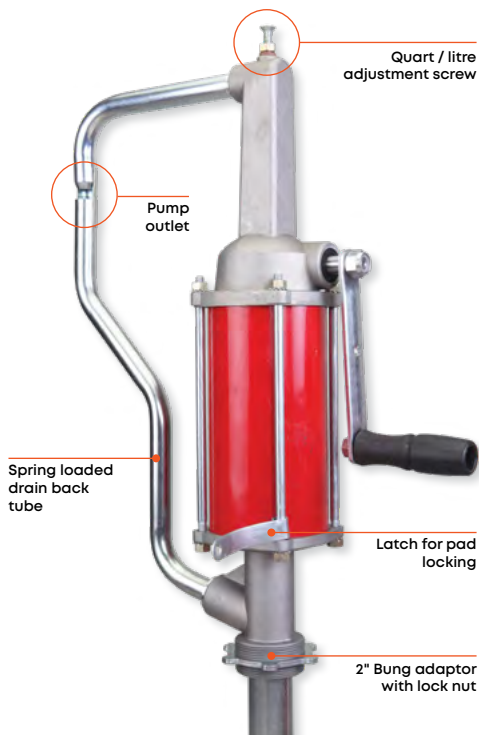
Steel, Aluminum, Nitrile Rubber & Acetal

### RECOMMENDED USE

Gear & Lube Oil, Petroleum based Media, Diesel & Kerosene

### DO NOT USE WITH

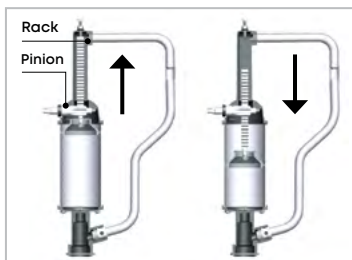
Water Based & other corrosive fluids



### SPECIFICATIONS

DELIVERS	1 LITRE / STROKE	1 QUART / STROKE
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CAT NR.	ORD NR.	BOX QTY.
QSP/01	44187	4



## SAFETY INFORMATION

- Keep the work area clean and dry. Damp or wet work areas can result in injury.
- When not in use, tools and equipment should be stored in a dry location to inhibit rust and keep out of reach of children.
- Use the right tool for the job. Do not modify this equipment.
- Check for damaged parts. Before using this product, replace damaged or worn parts immediately.

## WARNING!

- Read carefully all the safety guidelines and the instructions.
- Failure to follow all instructions listed above may result in improper functioning of pump and can cause serious injury.

## PACKAGE CONTENT

DESCRIPTION	QUANTITY
Pump	1
Handle	1
Block Nut	1
Suction tube	1
O.I.P.M.	1

## Working of the pump

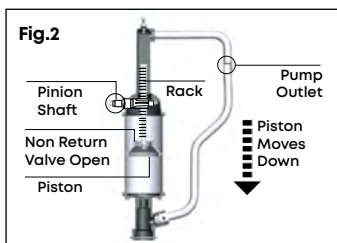
One stroke is defined as movement of the pump handle, with the pinion moving from one end of the rack to the other & then back.

The pump has a rack & pinion mechanism to control the overall stroke length & is designed to dispense approx 1 litre / 1 quart per stroke.

## Each stroke is divided into two stages:

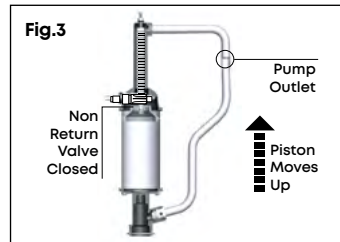
### Downward or Refilling Stage (Refer Fig. 2)

1. On operating the handle counter clockwise a few times, the pinion gear moves the rack downwards
2. A non-return valve opens
3. The media is forced upwards to fill the pump.
4. When the rack reaches its down most limit, the pump gets entirely filled with media and the handle stops moving any further.



### Upward or Delivery Stage (Refer Fig. 3)

1. On operating the handle clockwise a few times, the pinion gear moves the rack upwards
2. The non-return valve stays closed
3. The entrapped media is forced out via the pump outlet.
4. When the rack reaches its topmost limit, the pump gets emptied and the handle stops moving any further.



## PUMP ASSEMBLY

**Note: Use oil resistant pipe compound or a thread sealant such as PTFE on all threaded joints.**

1. Fasten the telescopic suction tube (2) onto the female threads on the pump inlet. Hand tighten the connection.
2. Extend the telescopic suction tube (2) to its full length and insert the suction tube (connected with the pump) into the drum from the 2" threaded opening.
3. Once the base of the telescopic suction tube (2) touches the bottom of the drum, securely fasten the Bung Adaptor (7) onto the drum.
4. Using the lock nut on the bung, tighten the pump on the drum to have the pump outlet (8) in the desired direction.
5. Install the handle assembly (3) on the pinion shaft and tighten the hexagonal clinch nut in the correct position.



**Note : The triangulated shape on the nut should be visible from the outside**

**FIG. 4**

6. Calibrate the pump as mentioned in the next section.

## Calibration

The calibration is needed:

- Before first time use
- When changing unit of measure (Litres to Quarts or vice versa)

- When pumping a different fluid

## Calibration Procedure

In-order to calibrate, you would need an accurate graduated container with a volume of approx. 5 Litres / 5 Quarts or more

1. Pump handle should be in a position such that you cannot move it any further in the clockwise direction.
2. Now start to operate the pump handle in counter clockwise direction, till it stops moving any further.
3. Keep the graduated container below the pump outlet.
4. Move the pump handle in clockwise direction, till it stops moving any further.
5. Note the amount of fluid dispensed into the graduated container. It should be near about 1 litre / 1 quart.
  - If it is less than 1 litre / 1 quart as shown by the graduations on the container, then turn the adjustment screw on top of the pump in counter clockwise direction. This will increase the stroke length allowing for increased discharge.
  - If the reading on the graduated container is more than 1 litre / 1 quart, then rotate the adjustment screw in clockwise direction. This will reduce the stroke length allowing for reduced discharge.
6. Repeat steps 2, 3, 4 & 5 till the reading on the graduated container equals 1 litre / 1 quart, depending on what you wish to set the pump to dispense.

## Priming

When using pump for the first time or after an extended period of time, you would need to prime the pump.

Priming refers to getting the pump lubricated & started. Priming simply requires operating the pump handle for a few strokes till pump starts dispensing media.

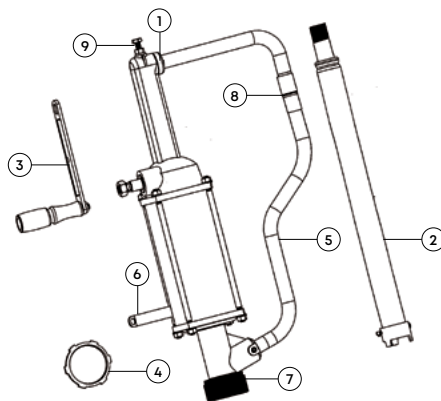
## MAINTENANCE

Pumps needing repair should be taken to an authorized dealer or returned to factory for service. Pumps must be thoroughly flushed before being taken in for repair.

## WARNING!

- Always wear protection gear like safety gloves, goggles, apron, and ear plugs during operation.
- DO NOT smoke near pump or use pump near an open flame / spark. Fire could result.
- This product is not suited for use with water or fluids for human consumption.

## EXPLODED VIEW



## PARTS LIST

REF. NO.	PARTS DESCRIPTION	QTY.
1	Quart Stroke Pump (Sub. Assembly)	1
2	Telescopic Suction Tube	1
3	Handle Assembly	1
4	Lock Nut	1
5	Spring Loaded Drain Back Tube	1
6	Latch Pad	1
7	Bung Adaptor	1
8	Pump Outlet	1
9	Adjustment Screw	1

## TROUBLESHOOTING

PROBLEM	CAUSE	SOLUTION
Pump not dispensing media	The suction pipe could be loose	Check for leak at suction pipe joint
	Possible leakage from the gasket	Tighten the stud
	Leakage from piston assembly	Check the non return valve
Pump having low discharge	The suction pipe could be loose	Clean the suction pipe filter
	Leakage from non return valve	Check piston sub assembly
Fluid leaking	Leakage from shaft seal	Replace seal
	Possible leakage from the gasket	Tighten the stud



## **GROZ WARRANTY POLICY**

Groz makes all efforts to ensure that its products meet the highest standards of quality and durability and warrants to the original purchaser its range of products for a period of 12 months from Groz Invoice date, against defects in materials and workmanship. If the Groz product is part of a set, only the portion that is defective is subject to this warranty.

This warranty does not apply to damage due directly or indirectly, to misuse, abuse, wear and tear, negligence or accident, repairs or alterations outside Groz plants, or to lack of maintenance. Groz shall in no event be liable for death, injuries to persons or property or for incidental, contingent, special or consequential damages arising from the use of its products. It is upto the user to determine suitability and safety of the product for their intended use, and the user assumes all risks and liability herewith.

In no event, shall Groz's liability exceed the invoiced cost of the product. In case of identification of defect covered under this warranty, the same must be notified in writing to Groz /Groz designated authorized service location. Proof of purchase date must accompany the complaint. Groz reserves the right to call back the faulty unit, all charges including transportation prepaid. On verification of the defect, the unit will be repaired or replaced with a new or reconditioned product or part of equal utility or a full refund given at Groz's discretion. The repaired /replaced units will be returned to the user freight prepaid, using most economical freight carrier. However if determined that the defect resulted from causes not within the scope of the warranty, then the cost of returning the product would be to buyer's account.

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