



**USER'S MANUAL**  
**LIQUID COMPARISON TEST PUMP**  
**TYPE T1200**

# **LIQUID COMPARISON TEST PUMP TYPE T1200 USER'S MANUAL**

Manufactured by;

GE RUSKA

RUSKA INSTRUMENT CORPORATION  
10311 WESTPARK DRIVE, HOUSTON, TEXAS 77042  
(713) 975-0547 FAX (713) 975-6338  
ruska@ruska.com

Release: PMAN-112-1D01

Revision: A

Date: 01/28/04

## **WARRANTY**

GE Ruska warrants its products to conform to or exceed the specifications as set forth in its catalogs in use at the time of sale and reserves the right, at its own discretion, without notice and without making similar changes in articles previously manufactured, to make changes in materials, designs, finish, or specifications. GE Ruska warrants products of its own factory against defects of material or workmanship for a period of one year from date of shipment.

Liability of GE Ruska under this warranty shall be limited to replacing, free of charge (FOB Houston, Texas), any such parts proving defective within the period of this warranty, but will not be responsible for transportation charges or consequential damages.

This warranty is not made for products manufactured by others which are illustrated and described in GE Ruska catalogs or incorporated in GE Ruska products in essentially the same form as supplied by the original manufacturer. However, GE Ruska agrees to use its best efforts to have original suppliers make good their warranties.

## **COPYRIGHT NOTICE**

Copyright © 2003 by GE Ruska. All rights reserved. This document may not be reproduced in part or in whole without the express written consent of GE Ruska.

## **DISCLAIMER**

No representations or warranties are made with respect to the contents of this user's manual. Further, GE Ruska reserves the right to revise this manual and to make changes from time to time in the content hereof without obligation to notify any person of such revision.

## **REVISION NOTICE**

RELEASE NUMBER	REVISION	DATE OF REVISION	DESCRIPTION
PMAN-112-1D01	A	01/28/04	Original release.

## **WARNING**

PRESSURIZED VESSELS AND ASSOCIATED EQUIPMENT ARE POTENTIALLY DANGEROUS. THE APPARATUS DESCRIBED IN THIS MANUAL SHOULD BE OPERATED ONLY BY PERSONNEL TRAINED IN PROCEDURES THAT WILL ASSURE SAFETY TO THEMSELVES, TO OTHERS, AND TO THE EQUIPMENT.

**OPERATING INSTRUCTIONS  
COMPARISON TEST PUMP  
TYPE T1200  
(Maximum Pressure Range 700 bar / 10000 PSI)**

**Mounting:**

The pump assembly should be mounted securely to a stable work-bench or similar platform.

Four mounting holes are provided in the Pump Stand for this purpose.

**Connections:**

Connect the reference instrument to one Test Station (23).

Connect the equipment under test (EUT) to the other Test Station.

Screw the appropriate Adaptor (27) fully on to the EUT.

Screw assembly down ANTI-CLOCKWISE onto Test Station.

Note:

The internal thread in the lower half of the Adaptor is LEFT-HANDED.

HAND-TIGHT is sufficient, ensure the bottom face contacts the Test Seal (26) on the Test Station (23).

To adjust the position to face forward, hold the Adaptor and unscrew the EUT ANTI-CLOCKWISE so that it faces forward. Hold the EUT steady whilst turning the Adaptor ANTI-CLOCKWISE until it pulls down on to the Test Seal.

To calibrate rear connection gauges, use our optional T3700 Angle Adaptor.

**IMPORTANT:**

ENSURE THAT ANY EUT FITTED TO THE TEST STATION IS FREE FROM CONTAMINATION.

PARTICLE CONTAMINATION CAN DAMAGE THE VALVE SEAT AND BARREL ASSEMBLY, CAUSING POSSIBLE LEAKAGE.

**Fluid Compatability:**

Any fluid can be used in this equipment, provided that it is compatible with Brass, Anodised Aluminium, Nylon and Nitril Rubber Seals.

### Priming:

- 1) Screw the Capstan (3) fully in.
- 2) Lift the Reservoir Cover (21) against the Spring (22), and rotate through 180°.
- 3) Fill the Reservoir (20) approximately 3/4 full with the relevant fluid.
- 4) Close the Reservoir Valve (18).
- 5) Screw the Capstan fully out, then open the Reservoir Valve.
- 6) Leave the Reservoir Valve open, and screw the Capstan fully in. During this operation, bubbles will appear from the base of the Valve assembly in the Reservoir.
- 7) Repeat steps 4 to 6 above until no bubbles appear in the Reservoir.

### IMPORTANT:

THE ABOVE PRIMING SEQUENCE WILL GENERATE A PARTIAL VACUUM WITHIN THE SYSTEM (POSSIBLY UPTO 85% VACUUM).

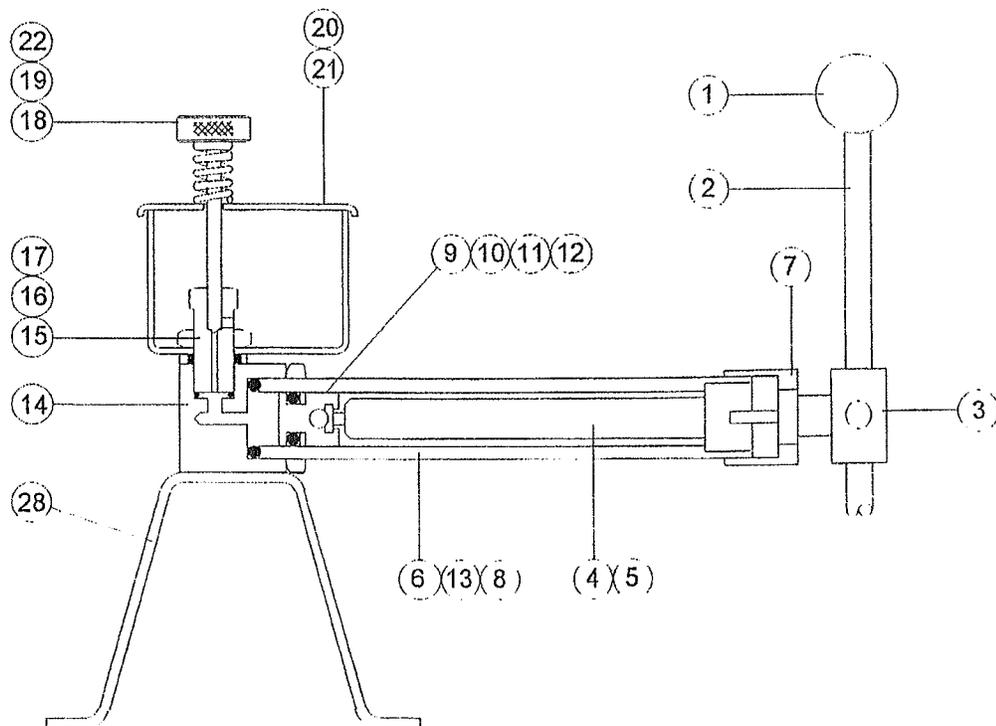
IF THE EUT FITTED TO THE TEST STATION IS SENSITIVE TO VACUUM, THEN PRIME AS ABOVE BUT LEAVE THE RESERVOIR VALVE OPEN.

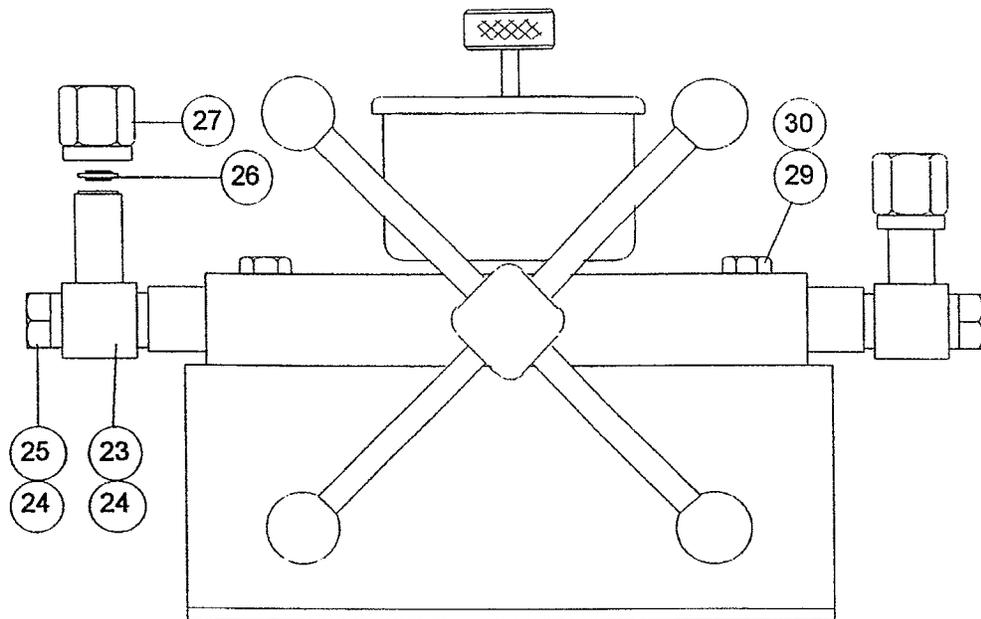
### Operation:

- 1) Open the Reservoir Valve and screw the Capstan fully out.
- 2) Close the Reservoir Valve.
- 3) Screw the Capstan in to increase the system pressure, and out to decrease.

### IMPORTANT:

ALWAYS REDUCE THE SYSTEM PRESSURE BY SCREWING THE CAPSTAN FULLY OUT. **NEVER** OPEN THE RESERVOIR VALVE TO REDUCE PRESSURE, AS THE SUDDEN DROP IN SYSTEM PRESSURE MAY CAUSE DAMAGE TO THE ATTACHED INSTRUMENTS.





- |    |       |                      |
|----|-------|----------------------|
| 1  | B1021 | KNOB                 |
| 2  | D1020 | SPOKE                |
| 3  | D1024 | HUB                  |
| 4  | D3901 | RAM SCREW/NUT        |
| 5  | D1053 | KEY                  |
| 6  | D3903 | BARREL               |
| 7  | D1019 | BARREL UNION         |
| 8  | D1023 | BARREL LOCKNUT       |
| 9  | D3904 | RAMBLER              |
| 10 | B1022 | BALL                 |
| 11 | B4707 | RAMBLER SEAL         |
| 12 | B3906 | ANTI-EXTRUSION RING  |
| 13 | B1054 | BARREL SEAL          |
| 14 | D1201 | MANIFOLD             |
| 15 | D1205 | RESERVOIR VALVE BODY |
| 16 | B1025 | 'O' RING             |
| 17 | D1206 | LOCKNUT              |
| 18 | D1203 | VALVE SCREW          |
| 19 | D1207 | VALVE SCREW CAP      |
| 20 | D1208 | RESERVOIR            |
| 21 | D1209 | RESERVOIR COVER      |
| 22 | B1213 | SPRING               |
| 23 | D1202 | TEST STATION BANJO   |
| 24 | B1211 | BONDED SEAL          |
| 25 | D1210 | BANJO BOLT           |
| 26 | B1066 | TEST SEAL            |
| 27 | D1018 | ADAPTOR              |
| 28 | D1212 | PUMP STAND           |
| 29 | B1215 | BOLT                 |
| 30 | B1216 | NYLOK NUT            |