

# RD SERIES DIAPHRAGM PUMPS

## INSTALLATION & MAINTENANCE MANUAL

Revision No.3 8-7-2024



**READ MANUAL BEFORE INSTALLING, OPERATING OR SERVICING DIAPHRAGM PUMP.  
FAILURE TO FOLLOW INSTRUCTIONS MAY RESULT IN PUMP FAILURE & VOID WARRANTY**

### General

Install the pump in a level position and secure using mounting holes in base plate. Remove vent plug from gear reducer oil filler cap. Check oil is visible in the sight glass. Use a high quality 460 grade gear oil. Remko Diaphragm pumps do not require priming and can run dry without damage. For start up ensure all valves are fully open before running the pump. With the pump delivering liquid check the motor current draw is below the full load current on the motor nameplate.

### Electrical

Have the electrical connection installed by a trained, qualified electrician. Connect the motor as per the motor manufacturers instructions and fit a motor overload protection device. Ensure there is unobstructed airflow to the motor cooling fan and the motor is protected from the weather and water. **The correct motor rotation is clockwise viewed from the fan end.**

**Warning**  
Incorrect rotation will damage the pump and void warranty

### PIPEWORK

Correct pipe size is a critical factor affecting pump performance and service life. Refer to pipe selection chart below. Pipework should be airtight, adequately supported and be as short and direct as possible. Use flexible connectors between pump and rigid pipework. Fit an Remko Pulsation dampener if rigid pipework exceeds 3m in length. For flexible installations use reinforced suction hose for both suction and discharge.

**Warning**  
Never restrict the pump or dead head discharge damage will occur  
Use of incorrect pipe sizes will void warranty

### Engine Drives

Refer to manufacturers instructions for commissioning.

**Warning**  
Maximum pump speed must not exceed 40 strokes per minute

### IMPORTANT INFORMATION FOR INSTALLERS INTERNAL PIPE SIZE FOR REMKO DIAPHRAGM PUMPS

#### FOR CLEAN LIQUIDS WITH SAME VISCOSITY AS WATER

PUMP SIZE	SUCTION PIPE LENGTH M		DISCHARGE PIPE LENGTH M		
	0 - 5	5 - 10	0 - 5	5 - 10	10 - 20
D25	25	32	32	40	40
D32	32	40	40	50	50
D38	40	50	50	65	65
D50	50	80	65	80	80
D76	80	80	80	100	100
SUCTION PIPE ID IN MM			DISCHARGE PIPE ID IN MM		

### Maintenance

After 10 Hours operation check the oil level in the gear reducer and re-tension fasteners if required. After 100 Hours drain reducer, flush thoroughly with a light oil and replace with 460 grade gear oil. Replace gear reducer oil every 2500 Hours there after. The operator should not need to carry out further maintenance, rather inspect the pump on a regular basis and be aware of changes to the pumps normal operation. Diaphragm and valve assemblies are consumable items and will require replacement.

### Diaphragm Fitting

Jog pump to take the diaphragm, Item 3 to the bottom of the stroke Disconnect power supply. Remove the four clamping bolts holding the drive support housing, Item 12 to the bowl casing Item 1 and lift the drive support and diaphragm assembly clear. Remove the stainless steel bolt Item 9 for RD25 and RD32 or nut for RD38, RD50 and RD76. Remove the washer set Item 10 and diaphragm plate Item 2. Clean and inspect both diaphragm plates and replace washer set. Replace diaphragm. The correct orientation is with the writing up. See Fig.1 The top outer lip of the diaphragm should be 0 - 2mm from the drive support housing clamp face. See Fig.2 below. The diaphragm position will generally not require adjustment. If required, loosen and adjust the connecting rod nut/s. Mount the drive support and diaphragm assembly onto the bowl casing ensuring the diaphragm is central and located in the groove of the bowl and fit the four clamp bolts.

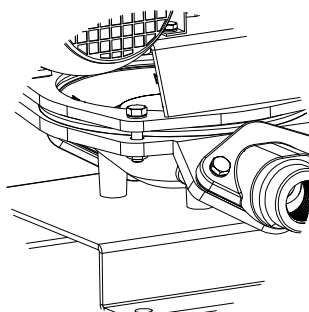


FIG. 1 CORRECT DIAPHRAGM ORIENTATION - WRITING UP

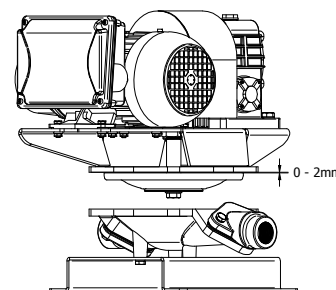


FIG. 2 INSTALLED DIAPHRAGM POSITION AT BOTTOM OF STROKE

**Note**  
All installation, repair and maintenance work should be carried out by trained, qualified personnel.  
For further information contact REMKO - 1800 333 424

Exploded view diagram of the RD025, RD032, RD038, RD050, and RD076 models. The diagram shows the motor (25) connected to the eccentric assembly (12) via a belt drive system (19, 20, 21, 22). The eccentric assembly (12) is shown in two configurations: SINGLE SECTION (RD025, RD032, RD038) and DOUBLE SECTION (RD050, RD076). The diagram includes various components labeled with numbers 12 through 25, including the motor, eccentric assembly, belt drive system, and various fasteners and seals.

MODEL RD025, RD032, RD038 - 1  
MODEL RD050, RD076 - 2 OFF

MODEL RD025, RD032, RD038 - SINGLE SECTION  
MODEL RD050, RD076 - DOUBLE SECTION

RD SERIES PUMP PARTS LIST		
ITEM	DESCRIPTION	QTY.
1	Bowl Casing	1
2	Diaphragm Plate	2
3 *	Diaphragm	1
4	Suction Valve Body	1
5	Discharge Valve Body	1
6 *	Valve Seat - Stainless	2
6G *	Valve Seat Gasket - Rubber	2
7 *	Flap Valve	2
8 *	Flap Valve Weight Set	2
9	SS Bolt / Nut	1 / 2
10 *	Washer Set	1
11	Connecting Rod	1
12	Drive Support Housing	1
13	Gear Reducer	1
14	Eccentric Block Assembly	1
15	Eccentric Housing	1
16	Eccentric Bearing	1 OR 2
17	Eccentric Bolt & Spacer	1
18	Circlip	1
19	Gear Reducer Pulley	1
20	Motor Pulley	1
21 *	V-Belt	1 OR 2
22	Gaurd Assembly	1
23	Carry Frame	OPT.
24	Base Plate	1
25	Motor	1
CSK	Complete Service Kit	1
* Part Included in CSK Service Kit		
For ordering Part No. = Model - Item No.		

**FLUID SIDE**

TOP HALF POSITION  
ALLOWABLE 360°

TORQUE TO 25Nm

DIAPHRAGM ASSEMBLY  
MODEL RD025, RD032

11

2

3

2

10

10

9

TORQUE TO 30Nm  
LOCTITE 243

5

PUMP END ASSEMBLY  
MODEL RD025, RD032, RD038

6G

6

8

7

1

24

6G

6

8

7

5

PUMP END ASSEMBLY  
MODEL RD050, RD076

6G

6

8

7

4

6G

4

6

8

7

11

9

10 304SS

10 FIBRE

2

3

2

10 FIBRE

10 304SS

9

TORQUE TO 60Nm  
LOCTITE 569

1

3

2R

DIAPHRAGM ORIENTATION  
Discharge - Concave (as shown)  
Suction - Convex

PD1 & PD2 PULSATION DAMPENER PARTS LIST	
ITEM	DESCRIPTION
1	Top Half
2	Bottom Half
3	Diaphragm