

PROMAINS UNDERGROUND FIRE HYDRANT

OPERATION:

This series of screw-down Tall & Squat fire hydrants are suitable for use with clean water, to a maximum temperature of 40°C. Minimum liquid temperature must be above freezing. Insulation is essential for external temperatures of 0°C and below to a limit of -10°C. They are rated for a maximum working pressure of 16 Bar unless otherwise agreed.

They are normally supplied as CLOCKWISE TO CLOSE denoted by a Direction ARROW on the Stem Cap (14) and a red plastic insert (16) on the Stem Cap (14).

OPENING / CLOSING Normally by standard Tee Key or Ring Key and Bar located on Stem Cap (14). Maximum Operating Torque (MOT) is 75 Nm .

Number of Turns from fully Closed to fully open: - Tall Type 15.25 approximately.
- Squat Type 6.25 approximately

MAINTENANCE:

NZS4522:2010 only requires the provision for replacing Stem Seals under pressure & when the hydrant is in situ.

SAFETY PRECAUTIONS

When changing obturator (stopper) and / or bonnet 'O' ring seal Maintenance Procedures must NOT be carried out whilst the hydrant is installed in a live water main under pressure. Check to ensure that there is no pressure in the main by opening the hydrant prior to commencing work.

Ensure the main will NOT be recharged before all work on the hydrant is completed.

All of the following procedures must be carried out with due regard to relevant Road Traffic Act Guidelines, Health and Safety and COSHH directives.

Refer to attached General Arrangement drawings

1.PROCEDURE for Replacement of STEM SEALS & BRASS BUSH

Safety Precaution :

Ensure hydrant is closed prior to commencing procedure.

TOOLS REQUIRED:

- 6mm & 8mm A/F Hexagon Allen Key.
- Slot headed screwdriver or thin blade

- 1) Remove plastic insert(16) by prising out using a thin blade.
- 2) Remove stem cap fixing bolt (15).
- 3) Remove stem cap (14).
- 4) Remove 3 No. M.10 fixing bolt (10)
- 5) Twist and pull the gland flange (9) upwards to remove from the stem (4). Remove the 'O' rings (16) and Bush (12) and 'O' Ring (17).
- 6) Replace new 'O' rings (17) & (16) and Bush (12) by reversing operation described in clause (5). If necessary, lubricate all 'O' rings with an approved grease,
- 7) Refit 3 No. M10 fixing bolt (10) and tighten.
- 8) Replace stem cap (14), Bolt (15) and Plastic Insert(16).
- 9) Open and close hydrant to check free running of stem.

2. PROCEDURE for Replacement of STOPPER & BONNET 'O' RING SEAL

SAFETY PRECAUTIONS:

This procedure must NOT be carried out with the hydrant under pressure.

TOOLS REQUIRED:

- 14mm A/F hexagon Allen Key.
 - Tee Key (or large adjustable spanner).
- 1) Ensure hydrant is in the partly open position by turning stem cap (14) in direction indicated for opening, one or two turns to lift stopper (2) off seat.
 - 2) Remove 3 No. M.16 fixing bolt (5).
 - 3) The bonnet (8) can now be removed vertically with the stem (4) and stopper (2), it can be easily lifted out of the body (1). Remove 'O' ring (6).
 - 4) Replace O' ring (6) locating in body (1) and if necessary lubricate with an approved grease.
 - 5) Before locating bonnet/stopper (8&2) into body (1), check the stopper (2) is well up the stem (4) by 4 or 5 full turns and ensure the stopper guides are located to prevent the stopper turning on the stem. The stopper guides must both be on one side of the body guide rails.
 - 6) Fit bonnet (8) into Body (1) ensuring the 'O' ring (6) remains in position.
 - 7) Refit bolt (5) and tighten.
 - 8) Remove dust cap (21) from outlet (22)
 - 9) Test hydrant as described on page 3.
 - 10) Refit dust cap (21) to outlet (22)

3. Procedure for Replacement of FLANGED OUTLET and OUTLET 'O' RING SEAL

SAFETY PRECAUTIONS:

Ensure hydrant is closed prior to commencing procedure.

TOOLS REQUIRED:

25mm A/F spanners or Sockets.

PROCEDURE FOR REMOVAL & RE-ASSEMBLY.

- 1) Remove dust cap (21) from outlet (22).
- 2) Remove outlet (22) by removing 4 No. screws (23)
- 3) To replace the outlet (22) and 'O' ring (24), lubricate 'O' ring (24) if necessary using an approved grease then locate it in the groove in body (1). Ensure dust cap (21) retaining ring is located in small groove on body (1) so that a screw(23) passes through the ring. Place outlet (22) in position, ensuring that 'O' ring (24) is still correctly located and secure using 4 No. screws (23).
- 4) Test hydrant as described on page 3.
- 5) Refit dust cap (21) to outlet (22).

TEST

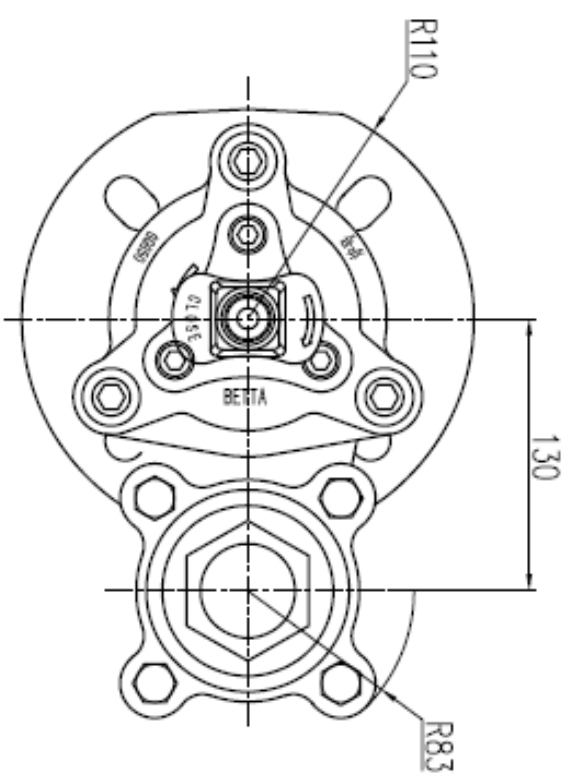
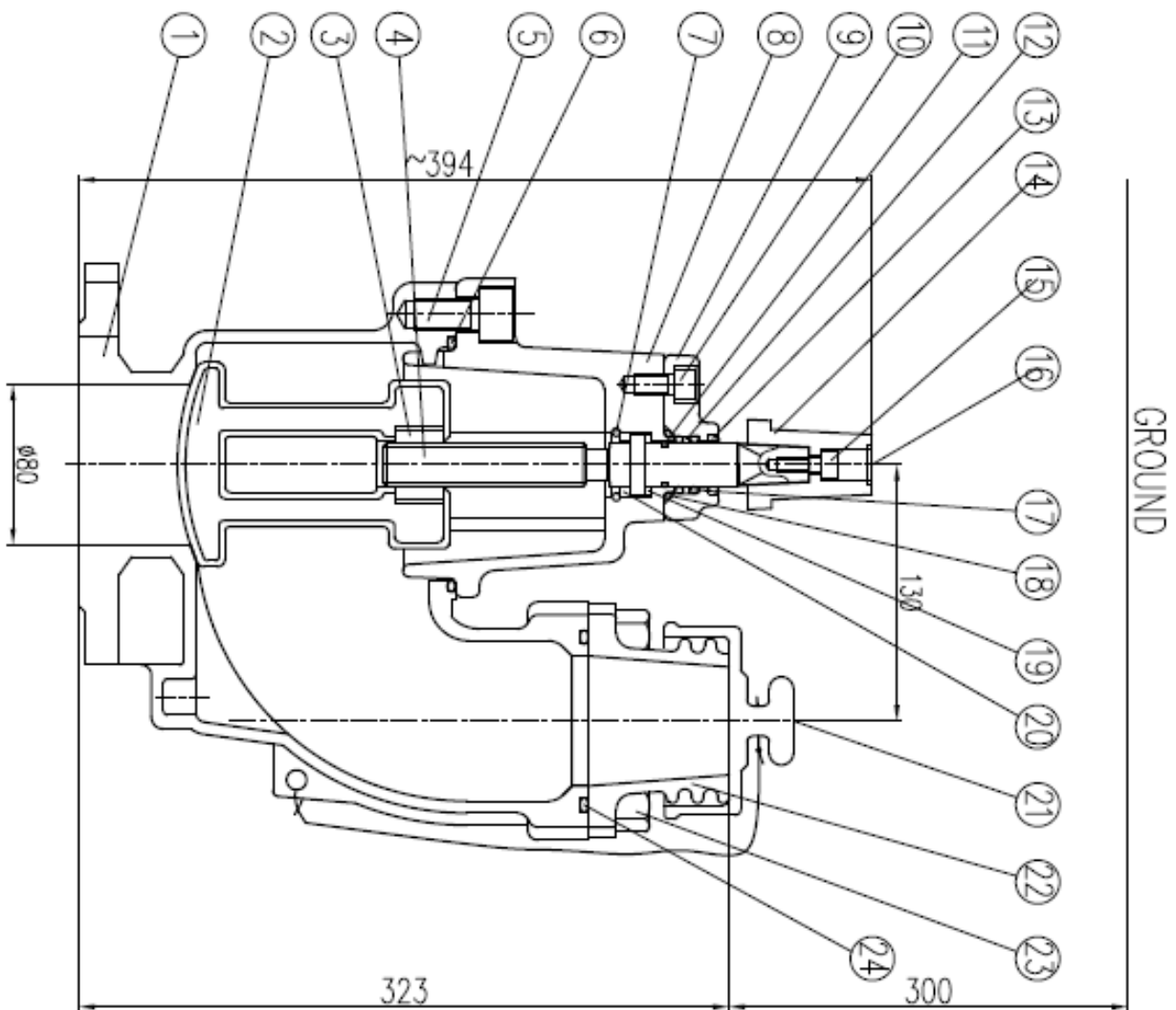
On completion of Maintenance requirements:

- 1). Check all items are located correctly.
- 2).Check that all screws & bolts are secure.
- 3).Remove dust cap (21) from outlet (22).

SAFETY NOTE :

When pressurising the main, it is highly recommended that the hydrant is fractionally open to allow venting of air.

- 4) Check integrity of stopper (2) by closing the hydrant in the direction of the arrow on the stem cap (14).
- 5) Check integrity of the seals by SLOWLY opening the hydrant
- 6) When all tests have proved satisfactory. close the hydrant.
- 7) Ensure dust cap (21) is always refitted to the outlet (22) when hydrant is not in use.
This will prevent the ingress of foreign matter, stones etc.



ITEM	PART
1	BODY
2	STOPPER
3	STEM NUT
4	STEM
5	BODY BONNET BOLT
6	"O" RING
7	THRUST COLLAR
8	BONNET
9	GLANG FLANGE
10	TOP BONNET BOLT
11	"O" RING
12	SEALING PART
13	DUSTPROOF COVER
14	STEM CAP
15	STEM CAP BOLT
16	Plastic cap
17	"O" RING
18	"O" RING
19	UP WASHER
20	DOWN WASHER
21	Plastic cap
22	OUTLET
23	OUTLET SCREENS
24	"O" RING