

Innovative

# Through Bore Hydrant

For Network Assessment & Improved Asset Management



KM565051

0086-CPR-565052

PIONEERS IN PIPE SOLUTIONS

CRANE

BUILDING SERVICES & UTILITIES



## A Major Step Forward for Pipework Repair & Maintenance

Viking Johnson is a world leader in pipe joint, repair and flow control products for the water & waste water industry.

The new unique Through Bore Hydrant (TBH) provides unobstructed vertical access through a standard type 2 fire hydrant allowing for a wide range of activities to be undertaken whilst the main is still under full pressure. Typical applications include, pipe work inspection and replacement along with the renewal of fittings and monitoring the pressure and quality of water. Internal inspection can be made using a miniature camera, hydrophone or acoustic imaging equipment. In addition, the ability to pinpoint the exact location of a leak is a huge step forward in effective leakage management. Industry targets set by Ofwat include better management of the existing pipe work infrastructure.

Current practice is to isolate the fault and then depressurize & drain pipework as required. Every time this procedure is undertaken the Utility Company has to notify each household affected, accept the loss of treated water and flush the system through before resuming supply. Furthermore, substantial costs can also be incurred in locating the leak and excavating large sections of the road and footpath, and of course with subsequent reinstatement. Other disadvantages include traffic disruption and issues with ensuring Health and Safety procedures are adhered too.

Installing the new TBH can make many current practices redundant as well as enabling cost effective solutions for improving efficiencies within the water supply network or pipework system.

The Through Bore Hydrant, won the coveted SBWWI Water Dragons Innovation Award in 2009. It meets BS750, BS EN 14339 standards and is Kitemark accredited and constructed of WRAS approved materials, for use with potable water.

### Technical Specification

- ▶ Ductile Iron Body, Plug and Gearcasing and Spindle Cap
- ▶ Size DN 80mm
- ▶ To BS750:2012, BS EN 1074-2:2000, BS EN 1074-6, BS EN 14339
- ▶ 2½" Stainless Steel London Round Thread Outlet to BS 750
- ▶ Universal Inlet Flange Drilling to BS EN 1092-2 PN10/16 also BS10 table D & E
- ▶ Stainless Steel Pinion / Non-Rising operating spindle
- ▶ Suitable for buried service
- ▶ Welded nickel machined seat for improved corrosion and erosion resistance, specially profiled for low torque and extended life
- ▶ Exceeds BS750 Flow requirements
  - Minimum Kv 92 2000 litres / min
  - Minimum Kv 350 5830 litres / min (with London Thread Outlet removed)
- ▶ Fusion Bonded Epoxy Coating minimum 250µm DFT
  - WRAS Approved Coatings & Elastomer
- ▶ BSI Kitemarked (KM565051) & CPR certified (0086-CPR-565052)



# Through Bore Hydrant

## Product Design Benefits

### Operating Stem/Pinion Cap

- Ductile iron for added strength
- Securely attached to stem/pinion
- Colored red for ease of identification



### Outlet Fasteners

- Stainless steel bolts and washers offer enhanced corrosion resistance



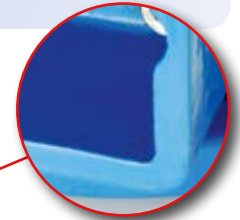
### Hydrant Body

- Ductile iron for added strength
- Offers full unrestricted direct access to the main (80mm)
- Inlet flange drilled to suit PN10/16 & BS Table D/E



### Gearbox

- Ductile iron for added strength
- Fully sealed for submerged duty
- Isolated from the water flow



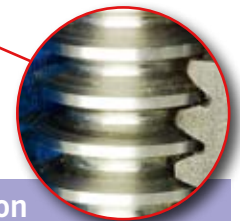
### Nickel Seat

- Welded nickel machined seat for improved corrosion and erosion resistance
- Profiled for low torque and extended valve life
- No potential damage to Epoxy seat experienced in conventional hydrants



### Stem/Pinion

- Non-Rising stainless steel
- Anti-Clockwise to open
- 1.75 turns to commence flow
- 7.5 turns to fully open

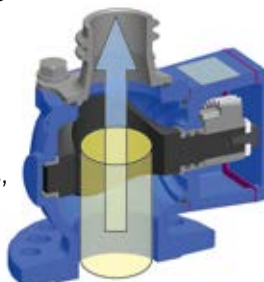


## Customer Benefits

- Unlike current hydrants which have an 'S' shaped water path, TBH has a straight vertical path which provides direct full bore access (80mm\*) to the main enabling a wide range of inspection, repair and maintenance activities
- Enables network mapping / monitoring by the Utility, improving supply efficiencies
- Offers industry leading flowrates at low operating pressures, particularly beneficial to the Emergency Fire and Rescue Services and ultimately public safety

\* with outlet removed

- Enables major reductions in supply interruptions, excavation and highway disruption, considerably decreasing the overall carbon footprint



- Similar in appearance and operation to existing type 2 hydrants, minimising the need for operator training
- Lower operating torques that minimize potential for operator injury









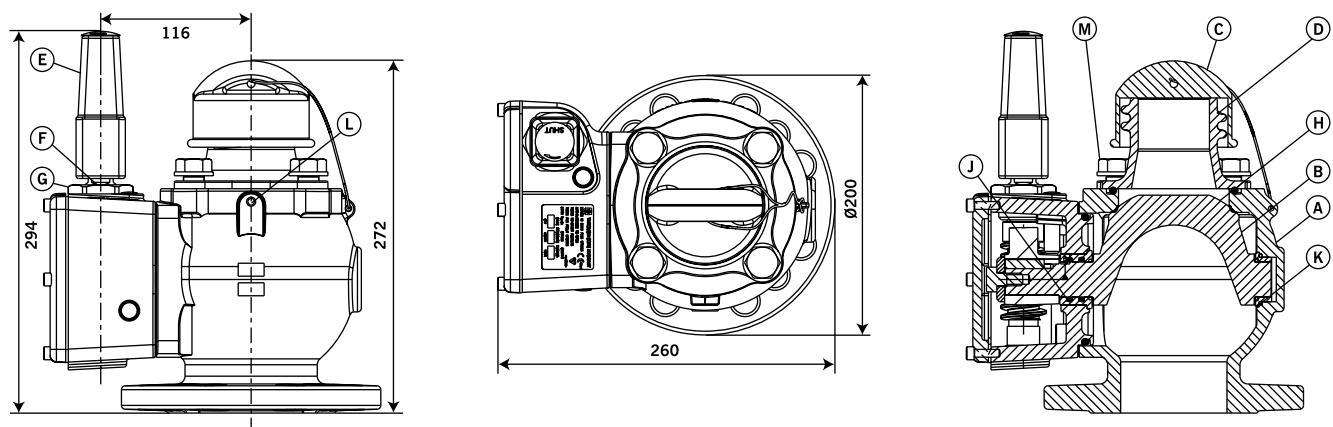
## Through Bore Hydrant

*“Humberside Fire & Rescue Service is very pleased with the improved flow and performance of the Through Bore Hydrant when compared to the traditional swan neck style. We are also benefitting from the reduced potential for product and supply contamination as well as operating cap security. This is definitely a hydrant for the future”*

Neil Mizon – Water Officer & Crew Manager  
Humberside Fire & Rescue Service.

# Through Bore Hydrant DN80

## Specifications



### Through Bore Hydrant

| DN | BS750:2012       |                           |                            |                 |             |
|----|------------------|---------------------------|----------------------------|-----------------|-------------|
|    | Operating Torque | Min Kv with outlet fitted | Min Kv with outlet removed | Max Height (mm) | Weight (kg) |
| 80 | 20 to 30 Nm      | 92                        | 350                        | 294             | 18          |

## Materials & Relevant Standards

### A. Main Body

Ductile Iron, ENGJS-450-10, BSEN1563

### B. Plug Moulding

SG Iron Encapsulated in EPDM, ENGJS-450-10, BSEN1563

### C. Protection Cap

PE/Rubber

### D. London Thread Outlet

Stainless Steel, BSEN 10088-1 (13% Chromium min.)

### E. Stem Cap

Ductile Iron, ENGJS-450-10, BSEN1563

### F. Pinion

Stainless Steel, BSEN 10088-1 (13% Chromium min.)

### G. Pinion Securing Nut

Brass, CuZn39Pb3, BSEN 12164

### H. Outlet O-Ring Seal

EPDM

### J. Bearing Bush

Sintered Stainless Steel, ASTM A743 CF8M

### K. Core Bearing

Sintered Stainless Steel, ASTM A743 CF8M

### L. Drain Boss (Drain Plug Optional)

Ductile Iron, ENGJS-450-10, BSEN1563

### M. Outlet Securing Bolts and Washers

Stainless Steel, A2-70, BSEN 10088-1

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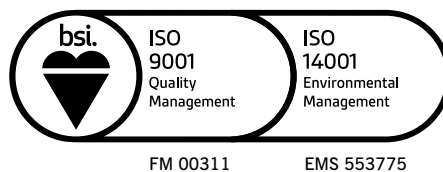




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