



KENNEDY VALVE

5 1/4" GUARDIAN K81-D FIRE HYDRANT

CERTIFICATIONS

ISO 9001

ISO 14001

BS OHSAS 18001

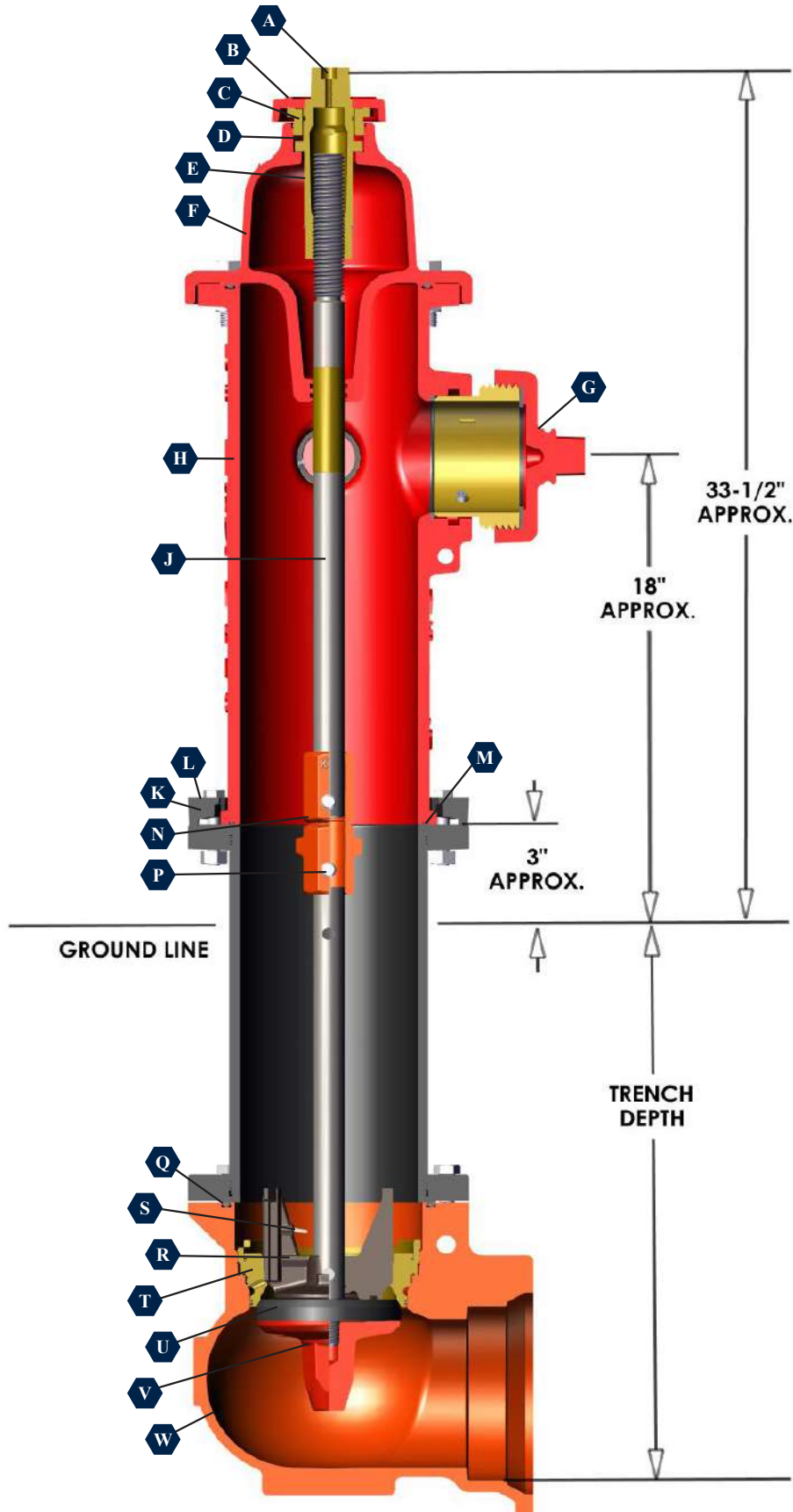


AWWA C502
NSF 61



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A| ALEMITE FITTING

Recessed grease fitting provides convenient access to lubricate operating threads for corrosion protection.

B| DIRT SHIELD

One-piece component deflects moisture & dust exposure. Affords protection against freezing conditions ensuring operational efficiency.

C| STEM LOCK NUT

Corrosion-resistant bronze nut secures stem nut for operating thrust. Lock nut provides additional weather protection with threading attachment to hydrant cap and large o-ring seal.

D| THRUST WASHER

Anti-friction bearing at thrust collar reduces operating torque for smoother open / close cycles.

E| STEM NUT

Specially designed grease slots and part threads allow for constant lubrication to stem nut and stem.

F| HYDRANT CAP / BONNET

Single unit design contains factory applied grease. Two o-ring seals at penetration point of operating stem prevent lubricant to escape and excludes water entry of chamber when hydrant is pressurized.

G| HOSE / PUMPER NOZZLE

Tamper resistant quarter turn hose and steamer nozzles. Designed for ease of maintenance and field replacement.

H| UPPER BARREL / NOZZLE SECTION

Available with two hose and one pumper nozzle, two hose, three hoses, four hoses, or three hoses and one pumper.

J| UPPER STEM

High strength steel stem with an integral machined fitted, brass sleeve (ferrule) that penetrates the cap / bonnet, providing smooth, corrosion-resistant bearing surface for the double O-ring seals.

K| BREAKING RING / TRAFFIC FLANGE

Breaking ring on top for ease of replacement. Upon vehicular impact, it fractures to allow above ground hydrant assembly to separate cleanly from standpipe without damage to internal parts or loss of water. Repair is easily accomplished with economical field repair kit. Also allows upper to have full 360° adjustment.

L| BREAKING RING STRAP

Strap designed to help align hydrant upper to lower barrel during reassembly.

M| BARREL O-RING

Creates positive seal between lower barrel and upper barrel.

N| STEM BREAK COUPLING

Designed to break from collision without bending or damage to main valve or lower rod. Bottom half of coupling is designed to accept seat removal wrench.

P| COUPLING PINS

Updated stainless steel pin design uses spring loaded pin. No need for clevis pins, nuts, or other securing device. No tools required.

Q| ELBOW O-RING

Creates positive seal between lower barrel and hydrant elbow.

R| DRAIN VALVE

After operation, the high strength Aluminum Bronze drain valve automatically drains all water from the barrel of the hydrant preventing cold weather freeze-up. Drain ports are purged during first three operating turns on opening and again on closing.

S| DRAIN VALVE FACING with INSERT

Unique pressure activated drain valve assures positive shut off. The higher the pressure, the tighter the seal. Automatically compensates for wear due to usage. Does not rely on interference fit.

T| ELBOW INSERT RING

Secured in elbow with O-ring seal. Provides bronze to bronze interface for easy seat removal.

U| MAIN VALVE

EPDM material with steel insert to provide rigidity. Integral O-rings provide positive seal between bottom plate and stem.

V| BOTTOM PLATE

One piece cast iron bottom plate securely attaches valve assembly to lower stem. Bottom plate is coated with fusion bonded epoxy and meets A.W.W.A. C550 standard.

W| ELBOW

Fusion bonded epoxy coating inside and out. Meets AWWA C550 standards. 6" Mechanical Joint standard.

Kennedy Hydrants are designed for performance, serviceability, and outstanding longevity. Here's why experienced pros insist on Kennedy's advantages:

INTELLIGENTLY ENGINEERED for LONGER LIFE and FEWER WEAR PARTS

Backed by over 100 years of hydrant design know-how, the K81-D has been carefully engineered for rugged durability and longer life. Extra seals to protect against corrosion. Reinforced rubber main valve and rugged drain valve assembly. Positive stop prevents unintentional damage from over torquing during opening.

EASIEST to MAINTAIN and SERVICE

Fewer parts to disassemble and reassemble. Lubricated with grease instead of liquid oil; lubricant stays where it's needed and doesn't evaporate away or make a mess. Dove tail machining provides captive O-rings and breaker coupling spring loaded pins prevent lost parts. No special tools needed to remove / clean valve seat or remove drain valve. Higbee cut starter threads prevent cross-threading when reassembling valve into elbow. Quarter turn hose nozzles are positively retained and can be easily removed for maintenance.

BACKWARDS-COMPATIBLE DESIGN = *JUST ONE SET of REPLACEMENT PARTS*

Whether it's a new unit or one that's an original K81 interchangeability means just one set of parts repairs them all. Simplify training, simplify maintenance, simplify inventories. Only a handful of recommended wear parts to stock.

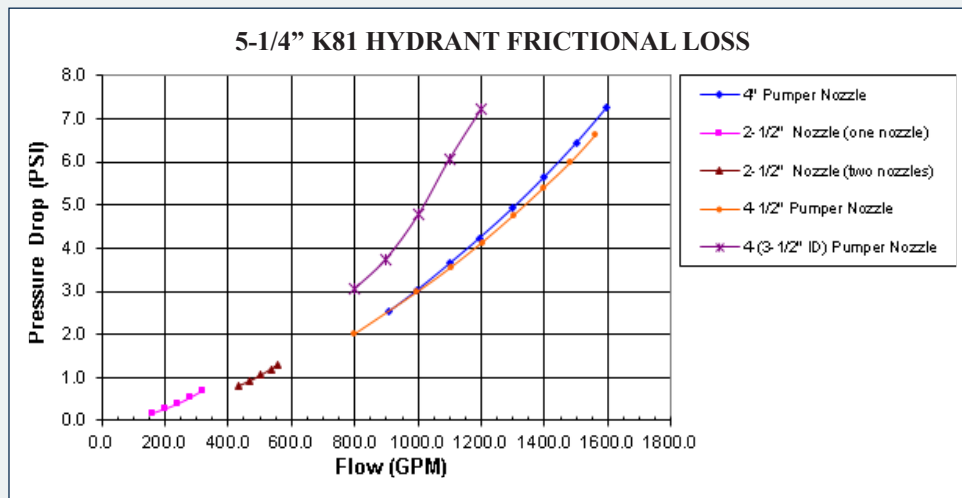
FASTEST, EASIEST COLLISION RESTORATION

Designed for a clean break, reducing fatigue or deformity to stem coupling or damage to barrel. U-slotted lower barrel upper flange allow bolts to escape without damage to flange. Breaker rings on-top for easy visual inspection and replacement. Quick, economical repairs with standard collision kit. Extension kits also install fast and easy.

- Hydrants shall be UL listed and FM approved.
- Hydrants shall conform to AWWA standard C502 latest revision.
- Hydrants shall be of the compression type, closing with line pressure.
- Hydrants shall be of the traffic model breakaway type.
- The combination of 3 O-rings to a crimped brass ferrule around the stem shall seal the cavity from contact with water.
- An Alemite fitting shall be supplied for periodic lubrication of the operating threads with grease.
- Operating nut shall be of one piece bronze construction.
- A dirt shield shall be provided to protect the operating mechanism from grit buildup and corrosion due to moisture.
- A thrust washer shall be supplied between the operating nut and stem lock nut to facilitate operation.
- Nozzles shall be of the tamper resistant, ¼ turn type with O-ring seals and stainless steel retaining screws.
- An O-Ring shall be provided to seal between the upper and lower barrels.
- The main valve shall be of synthetic rubber reinforced with steel.
- The seat shall be of bronze ring threaded to a bronze insert in the hydrant shoe, with O-rings to seal the drain way and barrel from leakage of water in the shoe.
- Drain way shall be of bronze.
- Drain valve facing shall be synthetic rubber with a stainless steel retaining pin.
- Hydrant drain valve shall momentarily force flush with each operation.

FLOW ANALYSIS

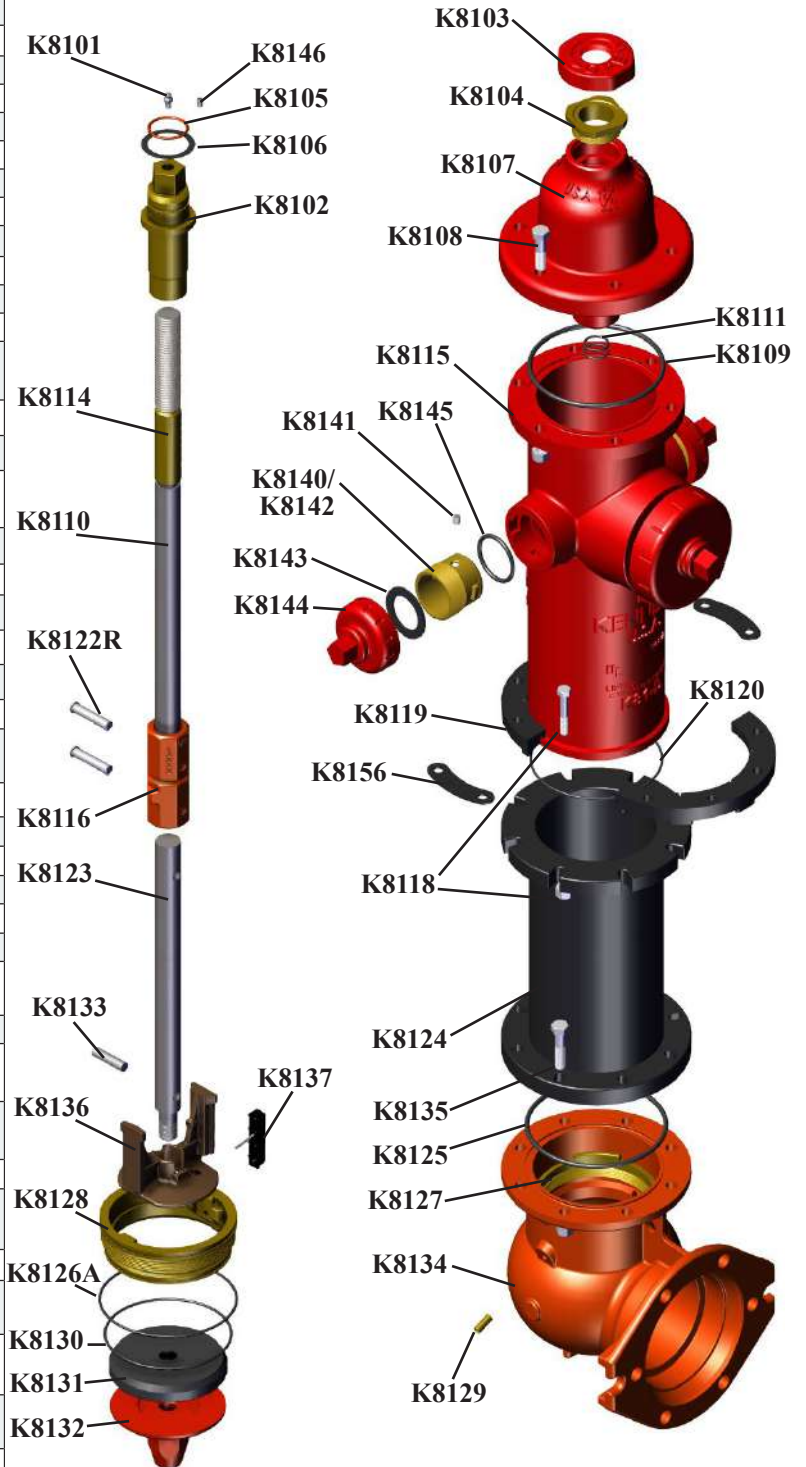
Superior flow with minimal pressure drop.



| No. of Outlet Nozzles | Nominal Dia of Outlet Nozzles (in) | Total Flow from Nozzles (gpm) | AWWA C502 CV REQ | AWWA C502 KV (Metric) REQ | Kennedy Valve CV | Kennedy Valve KV |
|-----------------------|------------------------------------|-------------------------------|------------------|---------------------------|------------------|------------------|
| 1 | 2-1/2" | 250 | 250 | 216 | 379 | 327 |
| 2 | 2-1/2" | 500 | 354 | 306 | 488 | 422 |
| 1 | 4" (3-1/2" ID) | 1000 | 447 | 386 | 455 | 393 |
| 1 | 4" (3-1/2" ID) | 1500 | 416 | 359 | 450 | 389 |
| 1 | 4" | 1000 | 447 | 386 | 583 | 504 |
| 1 | 4" | 1500 | 416 | 386 | 580 | 501 |
| 1 | 4-1/2" | 1500 | 447 | 359 | 602 | 520 |
| 1 | 4-1/2" | 1000 | 416 | 386 | 600 | 518 |

Multiple nozzle connections provide cities with numerous options.

| CALLOUT | DESCRIPTION | MATERIAL ASTM |
|---------|------------------------------------|--|
| K8101 | ALEMITE FITTING | STAINLESS STEEL, ASTM A276 (304) |
| K8102 | OPERATING STEM NUT | BRONZE, ASTM B584 C87850 |
| K8103 | DIRT SHIELD | CAST IRON, ASTM A126, CLASS B |
| K8104 | STEM LOCK NUT | BRONZE, ASTM B584 C87850 |
| K8105 | STEM LOCK NUT O-RING | VITON, ASTM D2000 |
| K8106 | THRUST WASHER | NYLATRON, GS MIL LP-410 |
| K8107 | HYDRANT CAP/BONNET | CAST IRON, ASTM A126, CLASS B |
| K8108 | CAP BOLTS & NUTS | F593C - F594 |
| K8109 | HYDRANT CAP O-RING | BUNA N, ASTM D2000 |
| K8110 | STEM FERRULE | BRASS, ASTM B135 C26000 |
| K8111 | HYDRANT CAP O-RING | BUNA N, ASTM D2000 |
| K8114 | UPPER STEM | COLD ROLLED STEEL, ASTM A108 C1018 |
| K8115 | UPPER BARREL/NOZZLE SECTION | CAST IRON, ASTM A126 CLASS B |
| K8116 | STEM BREAK COUPLING | CAST IRON, ASTM A126, CLASS B |
| K8118 | NUTS AND BOLTS | F593C - F594 |
| K8119 | BREAKING RING/TRAFFIC FLANGE | CAST IRON, ASTM A126, CLASS B |
| K8120 | O-RING | BUNA N, ASTM D2000 |
| K8122R | COUPLING PIN | STAINLESS STEEL, 410 HQ |
| K8123 | LOWER STEM | COLD ROLLED STEEL, ASTM A108 C1018 |
| K8124 | LOWER BARREL | DUCTILE IRON, ANSI/AWWA C151/A21.51 |
| K8125 | ELBOW O-RING | BUNA N, ASTM D2000 |
| K8126A | SEAT RING UPPER O-RING | BUNA N, ASTM D2000 |
| K8127 | SEAT RING INSERT/RETAINING RING | BRONZE, ASTM B584 C87850 |
| K8128 | SEAT RING | BRONZE, ASTM B584 C87850 |
| K8129 | DRAIN TUBE | BRONZE, ASTM B135 C33000 |
| K8130 | SEAT RING LOWER O-RING | BUNA N, ASTM D2000 |
| K8131 | MAIN VALVE | EDPM w/ STEEL INSERT, ASTM D2000 |
| K8132 | BOTTOM PLATE | CAST IRON, ASTM A126, CLASS B |
| K8133 | DRAIN VALVE PIN | STAINLESS STEEL, 410/416 |
| K8134 | ELBOW | DUCTILE IRON, ASTM A536 GRADE 70-50-05 |
| K8135 | ELBOW NUTS AND BOLTS | 18-8 STAINLESS STEEL, F593C/F594 |
| K8136 | DRAIN VALVE | ALUM. BRONZE, ASTM B806 C95400/C95500 |
| K8137 | DRAIN VALVE FACING w/ INSERT | BUNA N, STAINLESS STEEL, ASTM D2000, ASTM A276 (304) |
| K8140 | HOSE NOZZLE | BRONZE, ASTM B806 C91360 |
| K8141 | HOSE/PUMPER NOZZLE RETAINING SCREW | STAINLESS STEEL, ASTM A276 (304) |
| K8142 | PUMPER NOZZLE | BRONZE, ASTM B584 C87850 |
| K8143 | HOSE/PUMPER NOZZLE CAP GASKET | NEOPRENE, ASTM D2000 |
| K8144 | HOSE/PUMPER NOZZLE CAP | CAST IRON, ASTM A126, CLASS B |
| K8145 | HOSE/PUMPER NOZZLE O-RING | BUNA N, ASTM D2000 |
| K8146 | ALLEN HEAD SET SCREW | STAINLESS STEEL, ASTM A276 (410) |
| K8156 | BREAKING RING STRAPS | E-COATED MILD STEEL |





**Hose Gate Valve 2-1/2”
Nozzle Outlet**

Utilized when throttling hydrant flow. Available in bolt-on and screw-on options.



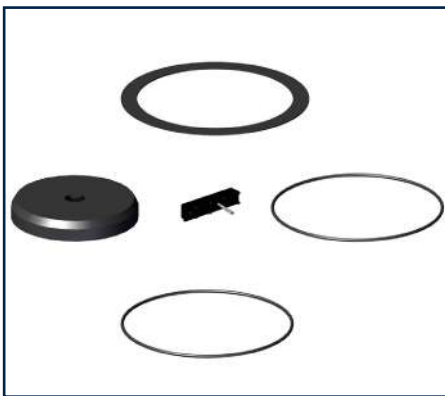
**Tamper Resistant
Guardian Shield**

Deep socket design deters unauthorized use.



**Storz Nozzle 4” or 5”
Pumper Outlet**

Quick, universal 1/4 turn hose to hydrant connection for ease of operation.



K8151 Main Valve Repair Kit

Components to repair damaged main valve assembly.



K8149 Collision Repair Kit

Components to restore hydrant to service following a collision.



K8150 Extension Kit

Components to increase bury depth of hydrant. Order in 6” increments.



K8147 Seat Removal Wrench

Engages stem coupling for removing main valve seat. Used on 4-1/2” or 5-1/4” hydrant.



**K81-DI 350 Monitor Hydrant
& K81-AM Monitor Hydrant**

Provides the ability to mount a monitor nozzle in 3” or 4” flange pattern.



**K8148 Pumper and Hose
Nozzle Wrench**

Slots engage drive lugs in nozzle I.D. for removal. Order nozzle wrenches by I.D.



KENNEDY VALVE

ORDERING INFORMATION

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ORDERING DETAILS

When placing orders, requesting quotes or submittals, please supply information below:

- Size of the main valve opening
- Quantity and threading details of hose and steamer nozzles
- Type of inlet with size connection
 - Elbow
 - Straight Shoe
- Type of inlet connection
- Mechanical Joint
 - Flanged
 - Tyton
 - HDPE
- Depth of bury from bottom of pipe to ground line
- Op-Nut Size & Shape
- Open Direction
- Color Scheme

KENNEDY VALVE

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For Generations

K81 D REV 4: NOV 2019