HOLLAND KINGPINS

SAF-HOLLAND Group

PRODUCT LINE

THE IMPORTANCE OF A "SAFE" CONNECTION.

Your fifth wheel and kingpin are two of the most important components on your trucks. That connection is the heart of your operation, and you need to know that it will be safe, reliable and consistent every time you hit the road. Since 1910, Holland kingpins have been designed and manufactured to be the industry's most innovative, safe and reliable tractor-trailer connection components, utilizing a precisely integrated "systems" approach that ensures that every Holland kingpin will perform the right way, every time.

"RAISING THE BAR" ON KINGPIN PERFORMANCE STANDARDS.

All Holland kingpins must meet or exceed industry standards that define the boundries of kingpin design, manufacture and use. The SAF-HOLLAND Performance Advantage continues to set the standard and "raise the bar," making Holland kingpins the first choice of OEMs and fleets that are serious about trucking.

PRECISE METALLURGY.

Kingpin performance is determined by carefully controlled metallurgical composition—as well as by shape and heat treatment—all tightly controlled throughout the manufacturing process. That is why SAF-HOLLAND specifies low alloy steels with balanced chemistry to provide the best combination of machinability, cost and heat-treatability with excellent strength, hardness, and impact resistant characteristics, even at somewhat, elevated hardness levels and low application temperatures. All Holland kingpins contain relatively high nickel and low carbon composition to ensure the best balance of properties.

CAREFULLY-CONTROLLED MANUFACTURING.

At SAF-HOLLAND, we take quality control seriously. From the making of the steel to forging to delivery, SAF-HOLLAND tracks every aspect of manufacturing for every kingpin we make. All Holland kingpins are manufactured following our three-step process:

➤ **PRECISION STEEL SPECIFICATION.** Because the final forging can never be "cleaner" than the original steel, SAF-HOLLAND requires a specific level of cleanliness and chemical composition at the mill. The steel we use must consistently meet those standards, or we won't use it.

➤ **CAREFULLY MONITORED FORGING.** The forging process is carefully specified and continually monitored. Before each forging is released, we conduct demanding dimensional control, magnetic particle and macro-etch tests to make certain surface conditions and grain flow meet our specifications.

➤ **PRECISION, QUALITY MANUFACTURING.** All forgings are carefully inspected at receiving inspection, and at several stages throughout the manufacturing process. All Holland kingpins must meet rigid SPC requirements in the machining process to ensure dimensional tolerance and consistency. All are carefully monitored in the heat treatment process to provide process uniformity and optimum structural integrity.

KINGPIN CONTROL PROCEDURE

PRODUCTION AT STEEL MILL	Chemistry and steel cleanliness
FORGED SHAPE	Dimensional shape/ Grain flow
RECEIVING INSPECTION	Grain flow, surface cleanliness, dimensions,metallurgy
MANUFACTURE OF KINGPIN	Dimensional tolerance, heat treatment
TESTING	Brinell, magnetic particle, ultrasonic, dimensional

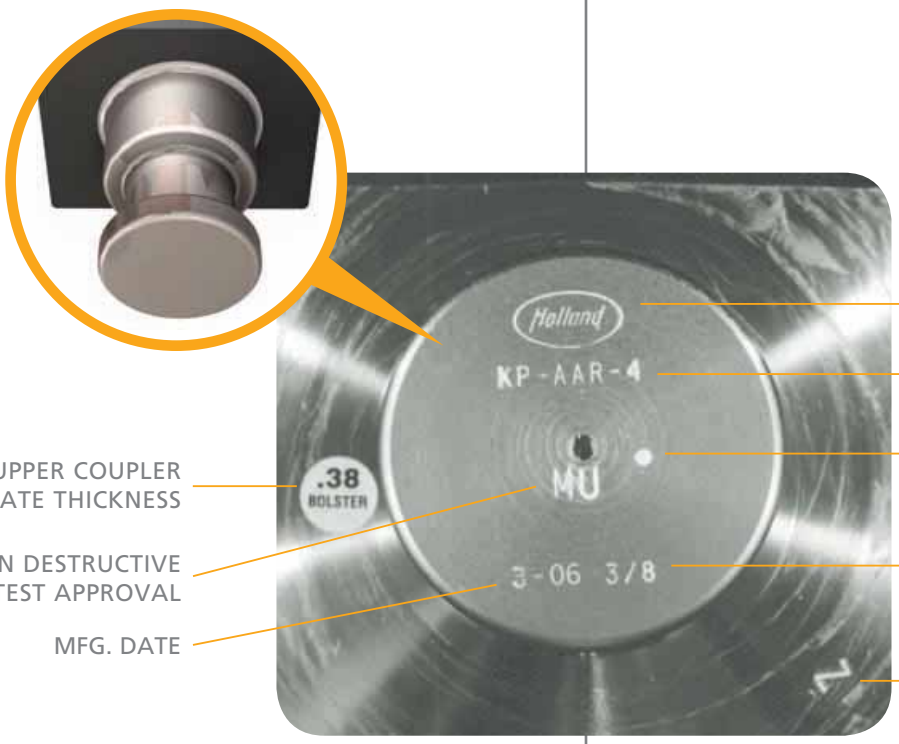
DEMANDING TESTING.

Because our customers depend on Holland kingpins to keep their equipment on the road, our testing process is the most comprehensive and demanding in the world. Every Holland kingpin must pass three major non-destructive test inspections before it receives the SAF-HOLLAND stamp of approval.

➤ **100% BRINELL HARDNESS TEST.** Verifies the hardness level to a required depth within a defined hardness range.

➤ **100% MAGNETIC PARTICLE TEST.** Confirms surface cleanliness and freedom from surface defects.

➤ **100% ULTRASONIC TESTS.** Ensures the integrity of the kingpin below the surface.



UPPER COUPLER PLATE THICKNESS

NON DESTRUCTIVE TEST APPROVAL

MFG. DATE

HOLLAND LOGO – YOUR ASSURANCE OF QUALITY

PART NO.

BRINELL HARDNESS TEST

UPPER COUPLER PLATE THICKNESS

MACHINE OPERATOR'S INITIAL

THE VALUE OF HOLLAND KINGPIN TECHNOLOGY.

Trust takes years to earn, and minutes to lose. SAF-HOLLAND accepts the responsibility to engineer and manufacture kingpins that earn the trust of every customer.

The fact is, over three million Holland kingpins have been manufactured in over 60 years.

Simply, Holland kingpins perform day in, day out, because they are made only one way. The right way.

THE HOLLAND ADVANTAGE.

All Holland kingpins deliver:

HIGH IMPACT RESISTANCE. Proper alloy selection and heat treatment provide the best balance of hardness and impact resistance without brittleness. Even at low temperatures.

MAXIMUM WEAR RESISTANCE. Through proper alloy selection and a carefully controlled hardening process, Holland kingpins provide exceptional wear for years of dependable service.

OPTIMUM STRENGTH AND FATIGUE RESISTANCE. Ultimate strength and yield characteristics meet all SAE and TTMA performance requirements.

EASE OF INSTALLATION. The alloys SAF-HOLLAND uses offer excellent welding characteristics for easy installation or replacement.

APPLICATION-SPECIFIC MODELS. Holland kingpins are available:

- In mushroom, cruciform and double-spool configurations.
- For a variety of upper coupler thicknesses.
- As weld-on or replaceable designs.
- In SAE 2″ and SAE 3.5″ diameter models.
- For AAR applications: Made from AISI 4320H or 4718H alloy steel and hardened to 380-420 BHN. When properly installed, they meet all performance requirements of AAR M-931.
- For non-AAR applications: Made from AISI 8630H alloy steel and hardened to 302-363 BHN. When properly installed, they meet or exceed the following SAE and TTMA standards:
  - SAE J133
  - SAE J2228
  - SAE J700
  - SAE J848

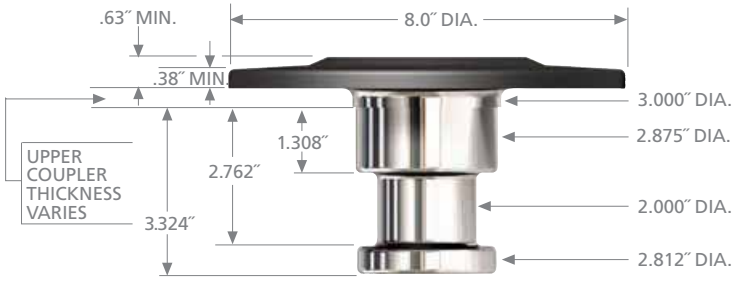
IMMEDIATE AVAILABILITY. Holland kingpins are available worldwide from all major OEM trailer dealer networks, OEM truck dealers and SAF-HOLLAND's independent warehouse distributor locations.

CHART I

MUSHROOM SERIES KINGPINS

2″ SAE KINGPINS

MODEL	STEEL ALLOY	BRINELL HARDNESS (BHN)	UPPER COUPLER THICKNESS	HOLES
KP-T-809-CF	8630H	302-363	.25″	No
KP-T-809-EF	8630H	302-363	.31″	No
KP-T-809-F	8630H	302-363	.38″	No
KP-T-809-BF	8630H	302-363	.50″	No
KP-T-809-AF	8630H	302-363	.63″	No
KP-T-809-GF	8630H	302-363	.75″	No
KP-T-809-C	8630H	302-363	.25″	8 equally spaced .53″ holes on 6.75″ diameter for plug welding
KP-T-809-E	8630H	302-363	.31″	
KP-T-809	8630H	302-363	.38″	
KP-T-809-B	8630H	302-363	.50″	
KP-T-809-A	8630H	302-363	.63″	
KP-T-809-G	8630H	302-363	.75″	



3.5″ SAE KINGPINS

MODEL	STEEL ALLOY	BRINELL HARDNESS (BHN)	UPPER COUPLER THICKNESS	HOLES
KP-T-847	8630H	302-363	.38″	4 equally spaced 1.25″ holes on 8.50″ diameter for plug welding
KP-T-847-B	8630H	302-363	.50″	
KP-T-847-F	8630H	302-363	.38″	No
KP-T-847-BF	8630H	302-363	.50″	No

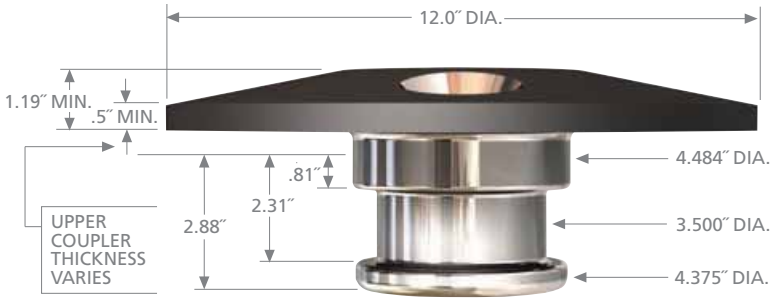


CHART II
DOUBLE SPOOL KINGPINS

2″ SAE KINGPINS

MODEL	STEEL ALLOY	BRINELL HARDNESS (BHN)	UPPER COUPLER THICKNESS	HOLES	DIMENSIONS A	B
KP-T-880-C	8630H	302-363	.25″	No	2.88″	2.12″
KP-T-880-E	8630H	302-363	.31″	No	2.88″	2.12″
KP-T-880	8630H	302-363	.38″	No	2.88″	2.12″
KP-T-880-B	8630H	302-363	.50″	No	2.88″	2.12″
KP-T-880-1-C	8630H	302-363	.25″	No	2.00″	1.50″
KP-T-880-1-E	8630H	302-363	.31″	No	2.00″	1.50″
KP-T-880-1	8630H	302-363	.38″	No	2.00″	1.50″
KP-T-880-1-B	8630H	302-363	.50″	No	2.00″	1.50″
KP-AAR-880-C	4320H or 4718H	380-420	.25″	No	2.88″	2.12″
KP-AAR-880-E	4320H or 4718H	380-420	.31″	No	2.88″	2.12″
KP-AAR-880	4320H or 4718H	380-420	.38″	No	2.88″	2.12″
KP-AAR-880-B	4320H or 4718H	380-420	.50″	No	2.88″	2.12″

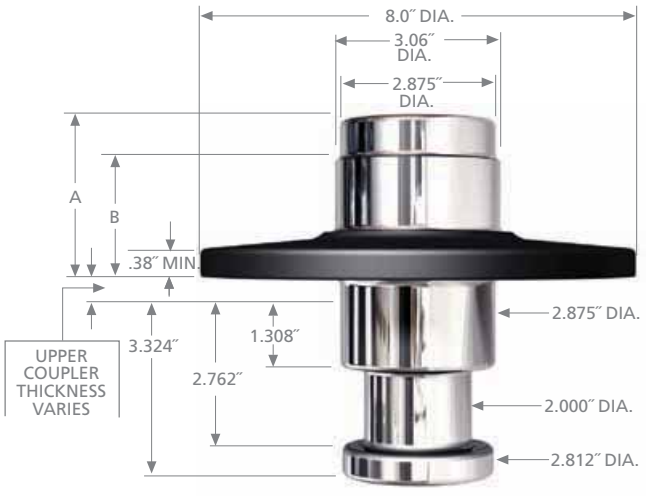
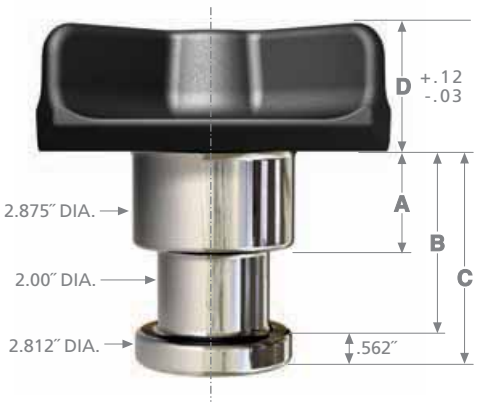


CHART III
CRUCIFORM SERIES KINGPINS

2″ SAE KINGPINS

MODEL	STEEL ALLOY	BRINELL HARDNESS (BHN)	UPPER COUPLER THICKNESS	DIMENSIONS A	B	C	D
KP-T-3-C	8630H	302-363	.25″	1.558″	3.012″	3.574″	1.94″
KP-T-4	8630H	302-363	.38″	1.683″	3.137″	3.699″	3.62″
KP-T-4-C	8630H	302-363	.25″	1.558″	3.012″	3.574″	3.62″
KP-T-4-E	8630H	302-363	.31″	1.620″	3.074″	3.636″	3.625″
KP-T-5-C	8630H	302-363	.25″	1.558″	3.012″	3.574″	2.44″
KP-AAR-3	4718H or 4320H	380-420	.38″	1.683″	3.137″	3.699″	1.937″
KP-AAR-3-C	4718H or 4320H	380-420	.25″	1.558″	3.012″	3.574″	1.937″
KP-AAR-3-E	4718H or 4320H	380-420	.31″	1.620″	3.074″	3.636″	1.937″
KP-AAR-4	4718H or 4320H	380-420	.38″	1.683″	3.137″	3.699″	3.625″
KP-AAR-4-C	4718H or 4320H	380-420	.25″	1.558″	3.012″	3.574″	3.625″
KP-AAR-4-E	4718H or 4320H	380-420	.31″	1.620″	3.074″	3.636″	3.625″
KP-AAR-5	4718H or 4320H	380-420	.38″	1.683″	3.137″	3.699″	2.437″
KP-AAR-5-C	4718H or 4320H	380-420	.25″	1.558″	3.012″	3.574″	2.437″
KP-AAR-5-E	4718H or 4320H	380-420	.31″	1.620″	3.074″	3.636″	2.437″



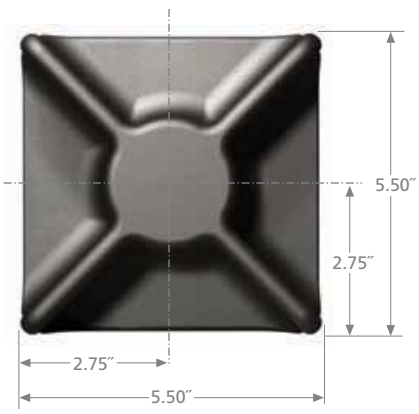
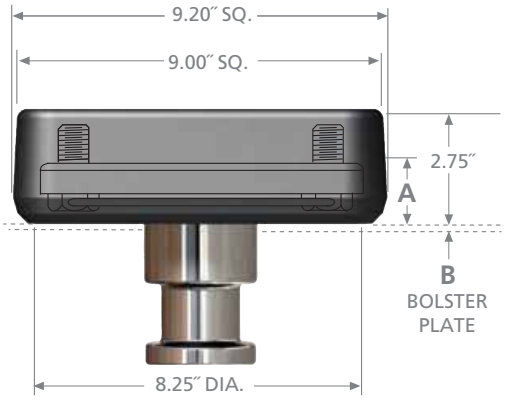


CHART IV

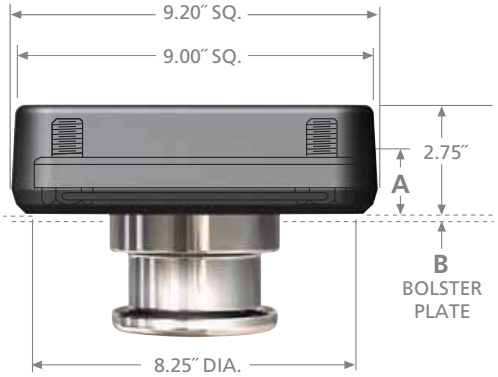
REPLACEABLE SERIES KINGPINS

2″ AND 3.5″ SAE KINGPINS

MODEL	KINGPIN DIAMETER	STEEL ALLOY KINGPIN	STEEL ALLOY HOUSING	BRINELL HARDNESS (BHN)	UPPER COUPLER (B)	COUNTER BORE (A)
KP-0880	2″	8630H	4130H	302-363	.25″	1.56″
KP-0881	2″	8630H	4130H	302-363	.31″	1.50″
KP-0882	2″	8630H	4130H	302-363	.38″	1.44″
KP-0883	2″	8630H	4130H	302-363	.50″	1.31″
KP-0884	3.5″	8630H	4130H	302-363	.38″	1.44″
KP-0885	3.5″	8630H	4130H	302-363	.50″	1.31″



SAE 2.00″ KING PIN



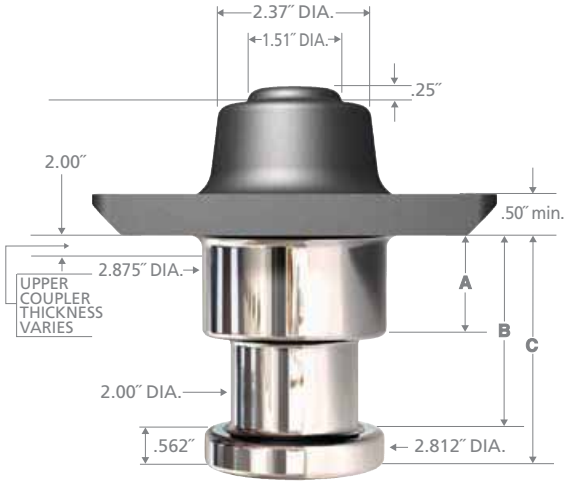
SAE 3.50″ KING PIN

CHART V

"L" SERIES 2″ KINGPINS

2″ SAE KINGPINS

MODEL	STEEL ALLOY	BRINELL HARDNESS (BHN)	UPPER COUPLER THICKNESS	DIMENSIONS A	B	C
KP-AAR-L	4320H or 4718H	380-420	.38″	1.683″	3.137″	3.699″
KP-AAR-L-C	4320H or 4718H	380-420	.25″	1.558″	3.012″	3.574″
KP-AAR-L-E	4320H or 4718H	380-420	.31″	1.620″	3.074″	3.636″



ACCESSORIES

TF-0110

KINGPIN GAGE

The TF-0110 kingpin gage is a simple, multipurpose, economical gage for indicating undersized 2″ and 3-1/2″ SAE kingpins in need of replacement. This unique gage can also be used to check kingpin length and for checking straightness and flatness of the upper coupler or bolster plate.

GL-030-3000

KINGPIN LOCK

The GL-030-3000 kingpin lock is constructed from a durable one-piece ductile iron casting. With a 5/8″ diameter locking bolt, it resists prying and helps prevent trailer theft. The body is zinc plated and the shuttered keyway is stainless steel to make it corrosion-resistant. Each kingpin lock comes with two keys.

A premium quality kingpin lock at a competitive price.

SAF's legacy started in 1881 when Paul Zill, a blacksmith from Keilberg, Germany developed the Zill two-way plow for the agricultural industry. Mr. Zill's blacksmith shop expanded into a small family operation as popularity for his plow grew and agricultural axles were added to the product line. Time passed - and the family operation evolved to became Otto Sauer Achsen Fabrik (SAF), a leader in the design and manufacture of integrated axle and suspension systems for commercial trailers.

Similar to SAF, Holland's legacy also started in the agricultural industry in 1910 with the introduction of a safety release hitch for horse drawn plows. Founding father, Gerrit Den Besten, began the "Safety Release Clevis Company" in Corsica, South Dakota. The company found new market opportunities in the automotive industry and moved operations to Holland, Michigan. Renamed The Holland Hitch Company, the family owned business grew into a global supplier in the commercial transportation industry.

Today - these two historical companies are together as SAF-HOLLAND, a global leader in the design, manufacture, and distribution of quality engineered components, systems, and services to the commercial vehicle industry.

SAF-HOLLAND specializes in coupling, lifting, and suspension systems for trucks, buses, tractors, and trailers. SAF-HOLLAND products are sold and serviced under the SAF and Holland brand names from over 4,600 distributor and OEM locations around the world.

SAF Holland ORIGINAL PARTS™

From fifth wheel rebuild kits to suspension bushing repair kits, SAF-HOLLAND Original Parts are the same quality components used in the original component assembly. SAF-HOLLAND Original Parts are tested and designed to provide maximum performance and durability. Will-fits, look-alikes or, worse yet, counterfeit parts will only limit the performance potential and could possibly void SAF-HOLLAND's warranty. Always be sure to spec SAF-HOLLAND Original Parts when servicing your SAF-HOLLAND product.

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