Latching Assemblies

Voss offers the industry’s widest variety of latch types, permitting optimum coupling for many applications. Each latch design has a specific application. Among the considerations when specifying a latch type are permanence of application, size of installation, frequency of removal, profile height, axial and radial loads, bolt replacement, clamp diameter and economy. Voss offers latch types for applications requiring frequent or no removal are shown immediately below.

Standard Aircraft Coupling Latches

Total In-House Design, Tooling, Testing and Manufacturing Capabilities

Voss Industries has been a leading supplier of high-performance and high-reliability coupling components to the U.S. industry since 1957. During this time Voss has pursued a policy of continuous, in-house manufacturing process which enables us to respond to the quickest deliveries in the industry.

Voss in-house capabilities include a wide range of special processes and production capabilities, such as: tooling, stamping, forming, blanking, forging, grinding, O/C machining, M/L Spd painting, specialty coatings, and product inspection, to 10,000 ppm.

In addition, Voss is the only clamp and coupling manufacturer which produces its own high-quality fasteners. The capability helps ensure on-time delivery even when metric and other specialized fasteners are required.

Complete Industry Support

Quality Assurance

Voss’ product quality is a result of innovative engineering, extensive in-house tooling capability, without production processes, and supplier management. Based on the requirements of best manufacturing processes and supplier management specifications, Voss Aerospace has a Quality Assurance Program that meets FAR 21.303H and ISO 9001:2000. This ensures that all Voss products not only meet the contractual specifications and requirements, but also satisfy, our own rigid standards of quality and performance.

Ducting Joints

Rigid Couplings and Machined Flanges

Voss has developed highly-diversified lines of aircraft ducting components. Information on these products is available upon request. Voss has developed highly-diversified lines of aircraft ducting components. Information on these products is available upon request.

Quality Assurance

Voss’ product quality is a result of innovative engineering, extensive in-house tooling capability, without production processes, and supplier management. Based on the requirements of best manufacturing processes and supplier management specifications, Voss Aerospace has a Quality Assurance Program that meets FAR 21.303H and ISO 9001:2000. This ensures that all Voss products not only meet the contractual specifications and requirements, but also satisfy, our own rigid standards of quality and performance.

Voss’ in-house capabilities include a wide range of special processes and production capabilities, such as: tooling, stamping, forming, blanking, forging, grinding, O/C machining, M/L Spd painting, specialty coatings, and product inspection, to 10,000 ppm.

In addition, Voss is the only clamp and coupling manufacturer which produces its own high-quality fasteners. The capability helps ensure on-time delivery even when metric and other specialized fasteners are required.

Complete Industry Support

Quality Assurance

Voss’ product quality is a result of innovative engineering, extensive in-house tooling capability, without production processes, and supplier management. Based on the requirements of best manufacturing processes and supplier management specifications, Voss Aerospace has a Quality Assurance Program that meets FAR 21.303H and ISO 9001:2000. This ensures that all Voss products not only meet the contractual specifications and requirements, but also satisfy, our own rigid standards of quality and performance.

Ducting Joints

Rigid Couplings and Machined Flanges

Voss has developed highly-diversified lines of aircraft ducting components. Information on these products is available upon request. Voss has developed highly-diversified lines of aircraft ducting components. Information on these products is available upon request.

Quality Assurance

Voss’ product quality is a result of innovative engineering, extensive in-house tooling capability, without production processes, and supplier management. Based on the requirements of best manufacturing processes and supplier management specifications, Voss Aerospace has a Quality Assurance Program that meets FAR 21.303H and ISO 9001:2000. This ensures that all Voss products not only meet the contractual specifications and requirements, but also satisfy, our own rigid standards of quality and performance.

Ducting Joints

Rigid Couplings and Machined Flanges

Voss has developed highly-diversified lines of aircraft ducting components. Information on these products is available upon request. Voss has developed highly-diversified lines of aircraft ducting components. Information on these products is available upon request.

Quality Assurance

Voss’ product quality is a result of innovative engineering, extensive in-house tooling capability, without production processes, and supplier management. Based on the requirements of best manufacturing processes and supplier management specifications, Voss Aerospace has a Quality Assurance Program that meets FAR 21.303H and ISO 9001:2000. This ensures that all Voss products not only meet the contractual specifications and requirements, but also satisfy, our own rigid standards of quality and performance.

Ducting Joints

Rigid Couplings and Machined Flanges

Voss has developed highly-diversified lines of aircraft ducting components. Information on these products is available upon request. Voss has developed highly-diversified lines of aircraft ducting components. Information on these products is available upon request.

Quality Assurance

Voss’ product quality is a result of innovative engineering, extensive in-house tooling capability, without production processes, and supplier management. Based on the requirements of best manufacturing processes and supplier management specifications, Voss Aerospace has a Quality Assurance Program that meets FAR 21.303H and ISO 9001:2000. This ensures that all Voss products not only meet the contractual specifications and requirements, but also satisfy, our own rigid standards of quality and performance.

Ducting Joints

Rigid Couplings and Machined Flanges

Voss has developed highly-diversified lines of aircraft ducting components. Information on these products is available upon request. Voss has developed highly-diversified lines of aircraft ducting components. Information on these products is available upon request.

Quality Assurance

Voss’ product quality is a result of innovative engineering, extensive in-house tooling capability, without production processes, and supplier management. Based on the requirements of best manufacturing processes and supplier management specifications, Voss Aerospace has a Quality Assurance Program that meets FAR 21.303H and ISO 9001:2000. This ensures that all Voss products not only meet the contractual specifications and requirements, but also satisfy, our own rigid standards of quality and performance.

Ducting Joints

Rigid Couplings and Machined Flanges

Voss has developed highly-diversified lines of aircraft ducting components. Information on these products is available upon request. Voss has developed highly-diversified lines of aircraft ducting components. Information on these products is available upon request.

Quality Assurance

Voss’ product quality is a result of innovative engineering, extensive in-house tooling capability, without production processes, and supplier management. Based on the requirements of best manufacturing processes and supplier management specifications, Voss Aerospace has a Quality Assurance Program that meets FAR 21.303H and ISO 9001:2000. This ensures that all Voss products not only meet the contractual specifications and requirements, but also satisfy, our own rigid standards of quality and performance.

Ducting Joints

Rigid Couplings and Machined Flanges

Voss has developed highly-diversified lines of aircraft ducting components. Information on these products is available upon request. Voss has developed highly-diversified lines of aircraft ducting components. Information on these products is available upon request.

Quality Assurance

Voss’ product quality is a result of innovative engineering, extensive in-house tooling capability, without production processes, and supplier management. Based on the requirements of best manufacturing processes and supplier management specifications, Voss Aerospace has a Quality Assurance Program that meets FAR 21.303H and ISO 9001:2000. This ensures that all Voss products not only meet the contractual specifications and requirements, but also satisfy, our own rigid standards of quality and performance.

Ducting Joints

Rigid Couplings and Machined Flanges

Voss has developed highly-diversified lines of aircraft ducting components. Information on these products is available upon request. Voss has developed highly-diversified lines of aircraft ducting components. Information on these products is available upon request.

Quality Assurance

Voss’ product quality is a result of innovative engineering, extensive in-house tooling capability, without production processes, and supplier management. Based on the requirements of best manufacturing processes and supplier management specifications, Voss Aerospace has a Quality Assurance Program that meets FAR 21.303H and ISO 9001:2000. This ensures that all Voss products not only meet the contractual specifications and requirements, but also satisfy, our own rigid standards of quality and performance.

Ducting Joints

Rigid Couplings and Machined Flanges

Voss has developed highly-diversified lines of aircraft ducting components. Information on these products is available upon request. Voss has developed highly-diversified lines of aircraft ducting components. Information on these products is available upon request.

Quality Assurance

Voss’ product quality is a result of innovative engineering, extensive in-house tooling capability, without production processes, and supplier management. Based on the requirements of best manufacturing processes and supplier management specifications, Voss Aerospace has a Quality Assurance Program that meets FAR 21.303H and ISO 9001:2000. This ensures that all Voss products not only meet the contractual specifications and requirements, but also satisfy, our own rigid standards of quality and performance.

Ducting Joints

Rigid Couplings and Machined Flanges

Voss has developed highly-diversified lines of aircraft ducting components. Information on these products is available upon request. Voss has developed highly-diversified lines of aircraft ducting components. Information on these products is available upon request.

Quality Assurance

Voss’ product quality is a result of innovative engineering, extensive in-house tooling capability, without production processes, and supplier management. Based on the requirements of best manufacturing processes and supplier management specifications, Voss Aerospace has a Quality Assurance Program that meets FAR 21.303H and ISO 9001:2000. This ensures that all Voss products not only meet the contractual specifications and requirements, but also satisfy, our own rigid standards of quality and performance.

Ducting Joints

Rigid Couplings and Machined Flanges

Voss has developed highly-diversified lines of aircraft ducting components. Information on these products is available upon request. Voss has developed highly-diversified lines of aircraft ducting components. Information on these products is available upon request.

Quality Assurance

Voss’ product quality is a result of innovative engineering, extensive in-house tooling capability, without production processes, and supplier management. Based on the requirements of best manufacturing processes and supplier management specifications, Voss Aerospace has a Quality Assurance Program that meets FAR 21.303H and ISO 9001:2000. This ensures that all Voss products not only meet the contractual specifications and requirements, but also satisfy, our own rigid standards of quality and performance.
High-Performance V-Band Couplings & Sheet Metal Flanges

Voss aircraft ducting joints consist of a pair of lightweight sheet metal flanges joined by a high-performance V-band coupling.

These joints were developed primarily for connecting pneumatic duct in aircraft cabin pressurization, environmental and de-icing systems—plus other related low-pressure, on-board applications where minimum leakage is permissible.

Voss Aerospace ducting joints have been accepted and standardized by the world’s major airplane, jet engine and component manufacturers, following over 30 years of proven use in commercial and general aviation.

Voss joints are environmentally stable—their proven designs withstand severe vibration, stress, angular deflection, misalignment, pressure surges, temperature and corrosion, and a complete line of ducting materials. These joints may be used to connect 1 to 9-inch diameter ducting, where weight limits may be critical, and temperatures may range from -65 °F to 1,200 °F.

Conforms to Standards
Voss aircraft sheet metal flanges meet specifications of all major aircraft manufacturers. These flanges are necessary to ensure that the ducting in place of sheet metal flanges produced by other manufacturers to similar specifications.

Voss aircraft ducting flanges are designed for joint sealing without the need for gaskets and are produced by the latest manufacturing techniques to ensure highest quality with uniform metal thickness.

Outstanding Advantages
• Lightweight: Used where weight is a critical factor. 
• Voss design minimizes weight over all other methods and the extruded V-type flanges. 
• Voss coupling: Requires no gasket to maintain design specification. 
• Weight savings: Supplies to airframe manufacturers’ standards for use on duct of all major aircraft manufacturers. These flanges are approved to Aerospace standards and meet all ducting environmental conditions and temperatures up to 1,200 °F.

Attachment of Flanges
Voss sheet metal flanges are designed and fabricated for easy attachment to duct ends by welding. They may be supplied preassembled for clip-on and sewn Hybrid Coupling applications.

Sheet Metal Flanges

Voss Hybrid Coupling
Voss Aerospace has developed and tested, a new “hybrid” coupling employing a high-strength, all-in-one design. This coupling combines the strength and safety features of 304 stainless steel and the flexibility and weight savings of a sheet metal V-band coupling. Temperature limits for this product is 1,200 °F.

Hybrid Coupling
Voss Aerospace has developed and tested, a new “hybrid” coupling employing a high-strength, all-in-one design. This coupling combines the strength and safety features of steel, and the flexibility and weight savings of a sheet metal V-band coupling. Temperature limits for this product is 1,200 °F.

Typical Applications of Voss Pneumatic Ducting Components

Conforms to Standards
Voss aircraft sheet metal flanges meet specifications of all major aircraft manufacturers. These flanges are necessary to ensure that the ducting in place of sheet metal flanges produced by other manufacturers to similar specifications.

Voss aircraft ducting flanges are designed for joint sealing without the need for gaskets and are produced by the latest manufacturing techniques to ensure highest quality with uniform metal thickness.

Outstanding Advantages
• Lightweight: Used where weight is a critical factor. 
• Voss design minimizes weight over all other methods and the extruded V-type flanges. 
• Voss coupling: Requires no gasket to maintain design specification. 
• Weight savings: Supplies to airframe manufacturers’ standards for use on duct of all major aircraft manufacturers. These flanges are approved to Aerospace standards and meet all ducting environmental conditions and temperatures up to 1,200 °F.

Attachment of Flanges
Voss sheet metal flanges are designed and fabricated for easy attachment to duct ends by welding. They may be supplied preassembled for clip-on and sewn Hybrid Coupling applications.

Sheet Metal Flanges

Voss Hybrid Coupling
Voss Aerospace has developed and tested, a new “hybrid” coupling employing a high-strength, all-in-one design. This coupling combines the strength and safety features of steel, and the flexibility and weight savings of a sheet metal V-band coupling. Temperature limits for this product is 1,200 °F.

Hybrid Coupling
Voss Aerospace has developed and tested, a new “hybrid” coupling employing a high-strength, all-in-one design. This coupling combines the strength and safety features of steel, and the flexibility and weight savings of a sheet metal V-band coupling. Temperature limits for this product is 1,200 °F.

Typical Applications of Voss Pneumatic Ducting Components

Conforms to Standards
Voss aircraft sheet metal flanges meet specifications of all major aircraft manufacturers. These flanges are necessary to ensure that the ducting in place of sheet metal flanges produced by other manufacturers to similar specifications.

Voss aircraft ducting flanges are designed for joint sealing without the need for gaskets and are produced by the latest manufacturing techniques to ensure highest quality with uniform metal thickness.

Outstanding Advantages
• Lightweight: Used where weight is a critical factor. 
• Voss design minimizes weight over all other methods and the extruded V-type flanges. 
• Voss coupling: Requires no gasket to maintain design specification. 
• Weight savings: Supplies to airframe manufacturers’ standards for use on duct of all major aircraft manufacturers. These flanges are approved to Aerospace standards and meet all ducting environmental conditions and temperatures up to 1,200 °F.

Attachment of Flanges
Voss sheet metal flanges are designed and fabricated for easy attachment to duct ends by welding. They may be supplied preassembled for clip-on and sewn Hybrid Coupling applications.

Sheet Metal Flanges

Voss Hybrid Coupling
Voss Aerospace has developed and tested, a new “hybrid” coupling employing a high-strength, all-in-one design. This coupling combines the strength and safety features of steel, and the flexibility and weight savings of a sheet metal V-band coupling. Temperature limits for this product is 1,200 °F.

Hybrid Coupling
Voss Aerospace has developed and tested, a new “hybrid” coupling employing a high-strength, all-in-one design. This coupling combines the strength and safety features of steel, and the flexibility and weight savings of a sheet metal V-band coupling. Temperature limits for this product is 1,200 °F.

Typical Applications of Voss Pneumatic Ducting Components

Conforms to Standards
Voss aircraft sheet metal flanges meet specifications of all major aircraft manufacturers. These flanges are necessary to ensure that the ducting in place of sheet metal flanges produced by other manufacturers to similar specifications.

Voss aircraft ducting flanges are designed for joint sealing without the need for gaskets and are produced by the latest manufacturing techniques to ensure highest quality with uniform metal thickness.

Outstanding Advantages
• Lightweight: Used where weight is a critical factor. 
• Voss design minimizes weight over all other methods and the extruded V-type flanges. 
• Voss coupling: Requires no gasket to maintain design specification. 
• Weight savings: Supplies to airframe manufacturers’ standards for use on duct of all major aircraft manufacturers. These flanges are approved to Aerospace standards and meet all ducting environmental conditions and temperatures up to 1,200 °F.

Attachment of Flanges
Voss sheet metal flanges are designed and fabricated for easy attachment to duct ends by welding. They may be supplied preassembled for clip-on and sewn Hybrid Coupling applications.

Sheet Metal Flanges

Voss Hybrid Coupling
Voss Aerospace has developed and tested, a new “hybrid” coupling employing a high-strength, all-in-one design. This coupling combines the strength and safety features of steel, and the flexibility and weight savings of a sheet metal V-band coupling. Temperature limits for this product is 1,200 °F.

Hybrid Coupling
Voss Aerospace has developed and tested, a new “hybrid” coupling employing a high-strength, all-in-one design. This coupling combines the strength and safety features of steel, and the flexibility and weight savings of a sheet metal V-band coupling. Temperature limits for this product is 1,200 °F.

Typical Applications of Voss Pneumatic Ducting Components

Conforms to Standards
Voss aircraft sheet metal flanges meet specifications of all major aircraft manufacturers. These flanges are necessary to ensure that the ducting in place of sheet metal flanges produced by other manufacturers to similar specifications.

Voss aircraft ducting flanges are designed for joint sealing without the need for gaskets and are produced by the latest manufacturing techniques to ensure highest quality with uniform metal thickness.

Outstanding Advantages
• Lightweight: Used where weight is a critical factor. 
• Voss design minimizes weight over all other methods and the extruded V-type flanges. 
• Voss coupling: Requires no gasket to maintain design specification. 
• Weight savings: Supplies to airframe manufacturers’ standards for use on duct of all major aircraft manufacturers. These flanges are approved to Aerospace standards and meet all ducting environmental conditions and temperatures up to 1,200 °F.

Attachment of Flanges
Voss sheet metal flanges are designed and fabricated for easy attachment to duct ends by welding. They may be supplied preassembled for clip-on and sewn Hybrid Coupling applications.

Sheet Metal Flanges

Voss Hybrid Coupling
Voss Aerospace has developed and tested, a new “hybrid” coupling employing a high-strength, all-in-one design. This coupling combines the strength and safety features of steel, and the flexibility and weight savings of a sheet metal V-band coupling. Temperature limits for this product is 1,200 °F.
Pneumatic Ducting Joints

Voss aircraft ducting joints consist of a pair of lightweight sheet metal flanges joined by a high-performance V-band coupling.

These joints were developed primarily for connecting pneumatic ducting in aircraft cabin pressurization, environmental and de-icing systems—plus other related low-pressure, on-board applications where minimum leakage is permissible.

Voss Aerospace ducting joints have been accepted and standardized by the world’s major airframe, jet engine and component manufacturers, following over 30 years of proven use in commercial and general aviation.

Voss joints are environmentally stable—their proven designs withstand severe vibration, stress, angular deflection, misalignment, pressure surges, temperature and corrosion. Following over 30 years of use, these joints may be joined to connect 1 to 6-inch diameter ducting, where weight limits may be critical, and temperatures range from -65 °F to 1,200 °F.

Sheet Metal Flanges

Conforms to Standards

Voss aircraft sheet metal flanges meet specifications of all major aircraft manufacturers. These flanges are available for use in the majority of duct applications. Flange materials are produced by other manufacturers to similar specifications.

Voss aircraft flanges are designed for joint sealing without the need for gaskets and are produced by the latest manufacturing techniques to ensure highest quality and uniform metal thinness.

Outstanding Advantages

• Lightweight: Used where weight is critical, savings up to 40% over solid machined couplings.
• Gasket-less: Requires no gasket to maintain design efficiency and function.
• Meets all Operating Conditions—Pneumatic and environmental. Furnished in aerospace alloys to suit all ducting environmental conditions and temperatures up to 1,200 °F.

Hybrid Coupling

Voss Aerospace has developed and tested a new "hybrid" coupling employing a high-strength, all Inconel™ construction. The Hybrid Coupling combines the strength and safety features of AS1895 rigid couplings, with the flexibility and weight savings of a sheet metal V-band coupling. Temperature limitations for this product is 1,200 °F.

V-band's feet seating on the flange skirt (above right). Alignment on Tight Radius Flanges

Conforms to Standards

Voss aircraft sheet metal flanges meet specifications of all major aircraft manufacturers. These flanges are available for use in the majority of duct applications. Flange materials are produced by other manufacturers to similar specifications.

Voss aircraft flanges are designed for joint sealing without the need for gaskets and are produced by the latest manufacturing techniques to ensure highest quality and uniform metal thinness.

Outstanding Advantages

• Lightweight: Used where weight is critical, savings up to 40% over solid machined couplings.
• Gasket-less: Requires no gasket to maintain design efficiency and function.
• Meets all Operating Conditions—Pneumatic and environmental. Furnished in aerospace alloys to suit all ducting environmental conditions and temperatures up to 1,200 °F.

Hybrid Coupling

Voss Aerospace has developed and tested a new "hybrid" coupling employing a high-strength, all Inconel™ construction. The Hybrid Coupling combines the strength and safety features of AS1895 rigid couplings, with the flexibility and weight savings of a sheet metal V-band coupling. Temperature limitations for this product is 1,200 °F.

V-band's feet seating on the flange skirt (above right). Alignment on Tight Radius Flanges

Conforms to Standards

Voss aircraft sheet metal flanges meet specifications of all major aircraft manufacturers. These flanges are available for use in the majority of duct applications. Flange materials are produced by other manufacturers to similar specifications.

Voss aircraft flanges are designed for joint sealing without the need for gaskets and are produced by the latest manufacturing techniques to ensure highest quality and uniform metal thinness.

Outstanding Advantages

• Lightweight: Used where weight is critical, savings up to 40% over solid machined couplings.
• Gasket-less: Requires no gasket to maintain design efficiency and function.
• Meets all Operating Conditions—Pneumatic and environmental. Furnished in aerospace alloys to suit all ducting environmental conditions and temperatures up to 1,200 °F.

Hybrid Coupling

Voss Aerospace has developed and tested a new "hybrid" coupling employing a high-strength, all Inconel™ construction. The Hybrid Coupling combines the strength and safety features of AS1895 rigid couplings, with the flexibility and weight savings of a sheet metal V-band coupling. Temperature limitations for this product is 1,200 °F.
Voss...committed to innovation, quality and service

More than Half a Century of Service!

Since 1957, Voss has been a leading supplier to the aerospace industry, providing a broad range of products to the aircraft industry worldwide. Voss is a leading supplier of aircraft ducting, sheet metal flanges, and V-band couplings. The company has a large selection of products, and its aircraft ducting joints are used in a variety of applications, including jet engine accessory systems, pressurized cabins, and environmental control systems.

Pneumatic Ducting Joints

High-Performance V-Band & Sheet Metal Flanges

Voss aircraft ducting joints consist of a pair of lightweight sheet metal flanges joined by a high-performance V-band coupling.

These joints were developed primarily for connecting pneumatic ducting in aircraft cabin pressurization, environmental and de-icing systems—plus other related low-pressure, on-board applications where minimum leakage is permissible.

Voss Aerospace ducting joints have been accepted and standardized by the world’s major aircraft, jet engine and component manufacturers, following over 30 years of proven use in commercial and general aviation.

Voss joints are environmentally stable—their proven designs withstand severe vibration, stress, angular deflection, misalignment, pressure surges, temperature and corrosion. The complete line of duct components are interchangeable and can be used with, or in place of, sheet metal flanges produced by other manufacturers to similar specifications.

Voss aircraft ducting joints are designed for joint sealing without the need for gaskets and are produced by the latest manufacturing techniques to ensure highest quality with uniform metal thinness.

Outstanding Advantages

• Lightweight: Used where weight is critical; saves up to 40% over solid machined couplings.
• Gasket-less: Requires no gasket to maintain design sealing specification.
• Meets all Operating Conditions—Furnished in aerospace alloys to suit all ducting environmental conditions and temperatures up to 1200 °F.

Typical Applications of Voss Pneumatic Ducting Components

• Auxiliary Power Units
• Hybrid Systems
• Cabin Environmental Systems
• De-Icing Systems

Sheet Metal Flanges

Voss sheet metal flanges are designed for easy attachment to duct ends by welding. They may be supplied oversized for slip-on and seamed Hybrid Couplings or butt-welded.

Conforms to Standards

Voss aircraft sheet metal flanges meet specifications of all major aircraft manufacturers. These flanges are interchangable with those made by other manufacturers in similar applications.

Voss aircraft ducting flanges are designed for joint sealing without the need for gaskets and are produced by the latest manufacturing techniques to ensure highest quality with uniform metal thinness.

Materials Available

<table>
<thead>
<tr>
<th>Material</th>
<th>Specification</th>
<th>Temperature Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>316 CRES MIL-S-5059</td>
<td>-65 to 800 °F</td>
<td></td>
</tr>
<tr>
<td>321 CRES AMS 5510</td>
<td>-65 to 800 °F</td>
<td></td>
</tr>
<tr>
<td>A-286 CRES AMS 5525</td>
<td>-65 to 1200 °F</td>
<td></td>
</tr>
<tr>
<td>Nitronic 40 CRES AMS 5595</td>
<td>-65 to 800 °F</td>
<td></td>
</tr>
<tr>
<td>Inconel 625 AMS 5599</td>
<td>-65 to 1200 °F</td>
<td></td>
</tr>
</tbody>
</table>

V-band couplings conform to the standards of all major aircraft manufacturers, standards.

Industry’s Widest Selection

Voss offers the aircraft industry’s greatest variety of V-band coupling configurations and mating flanges for dependable joint sealing at any size or configuration of ducting. The couplings are available in a wide range of V-band styles, latch types, and materials. Latch types include conventional T-bolt, quick-disconnect T-bolt and slotted, forged-bolton designs.

Standard profiles and latch types—Voss V-band couplings conform to all major aircraft manufacturers’ standards.

Flange and Coupling Materials

Production versatility and manufacturing skills enable Voss to supply flanges and couplings in a wide range of alloys to meet all ducting joint operating conditions. You may refer to the chart at the right for specifications regarding available metal alloys.

For higher temperature and pressure applications, such as jet engine bleed air systems, Voss also supplies rigid couplings, machined flanges and seals.

Hybrid Coupling

Voss Aerospace has developed and tested a new “hybrid” coupling employing a high-strength, all Inconel™ construction. The “hybrid” coupling combines the strength and safety features of AS1895 rigid couplings, with the flexibility and weight savings of a sheet metal V-band coupling. Temperature limitations for this product is 1200 °F.
Latching Assemblies

Standard Aircraft Coupling Latches

Voss offers the industry’s largest variety of latch types, permitting optimum coupling for many applications. Each latch design has a specific advantage. Among the considerations when specifying a latch type are permanence of application, view of installation, frequency of removal, profile height, axial and radial load, bolt replacement, clamp diameter and economy. Each Standard Aircraft Coupling Latch is designed for applications requiring intermittent or no removal are driven immediately. For diameters over 6 inches.

Standard T-bolt Latch

For applications where coupling removal is not normally necessary, the T-bolt is an engine and light-duty type. Must be loosened to open the coupling. For use with any type clamping.

Socket Head Capscrew

Uses barrel trunnion and barrel nut hardware: This type of latch is the simplest and lightest latch available on the market. Capscrew must be removed to open the coupling.

Quick-Release Latches

These latch types are ideal for installation in confined areas, and where frequent or occasional removal of ducts and accessories may be necessary. Quick-release latches do not require removal of the nut from the T-bolt. In extremely confined areas, these latches may be installed or removed with the hand without tools. These three popular quick-release latch types are shown below in installed and open positions.

Standard Quick-Release Latch with T-bolt

Can be opened simply and quickly, by loosening the nut and raising the hinged latch. This design permits fast replacements for couplings over 2 in. diameter.

Sledged Forged Trunnion Latch with T-bolt Safety Catch

This latch has a compact profile. It is strong, light-weight and is designed especially for smaller diameters and confined areas. It is opened by (1) centering the nut, (2) depressing the safety catch, (3) lifting the bolt from the trunnion. Can be installed without safety catch.

Saddie Latch with T-bolt

This quick-release type is for light-to-medium-duty applications. When the nut is loosened, the T-bolt can be lifted from the saddle latch. It is not recommended for diameters over 6 inches.

Installations

Total In-House Design, Tooling, Testing and Manufacturing Capabilities

Voss Industries has been a leading supplier of high-performance aluminum and titanium couplings and components to U.S. industry since 1957. During this time Voss has pursued a policy of vertically-integrated, in-house manufacturing process which enables us to respond to the quickest deliveries in these areas.

Voss in-house capabilities include a wide range of special processes and production capabilities, such as forging, stamping, draw forming, tube bending, forming, rolling, CNC machining, MIG, Spot welding, specialty coatings, and product finishing to MIL-SPEC 12295. In addition, Voss is the only clamp and coupling manufacturer which produces its own high-quality fasteners in-house. This capability helps ensure on-time delivery even when metric and other specialized fasteners are required.

Complete Industry Support

Voss Aerospace application engineers are prepared to help solve your specific needs—from product inception, through manufacturing to customer support. Voss also offers complete project management capabilities, or can work directly with a prime contractor. Above all, Voss Aerospace has the experience, expertise and R&D capability to help meet your unique aircraft component design requirements.

Quality Assurance

Voss’ product quality is a result of innovative engineering, extensive in-house manufacturing capability, without production processes and supplier management. Based on the requirements of DOD, NASA and other military and industrial specifications, Voss Aerospace has a Quality Assurance Program that meets MIL-STD-105D and ISO 9001:2000. This ensures that all Voss products not only meet the contractual specifications and requirements, but also satisfy, or even exceed standards of quality and performance.

Rigid Couplings and Machined Flanges

Voss engineered and manufactures a full line of rigid couplings, flanges and machined flanges designed to meet both commercial and aerospace applications. Standard AS1895. Forged or rigid couplings, used with machined flanges and metal seals, are required for high pressure and high temperature aircraft ducting applications, such as jet engine bleed air systems. Voss rigid couplings and flanges are available in both standard and low profile designs. For detailed specifications, please request the Voss Rig V-Clamping and flange brochure.

Additional Voss Pneumatic Ducting Products

Voss has developed highly advanced lines of aircraft ducting components. Information on these products is available upon request.

Ducting Joints

A Division of Voss Industries, Inc.

1618 West 25th Street
Cleveland, Ohio 44113

Tel: 216-771-7655 Fax: 216-771-2887

Email: voss@vossind.com

A Division of Voss Industries, Inc.

Ducting Joints

Quality Assurance

Voss’ product quality is a result of innovative engineering, extensive in-house manufacturing capability, without production processes and supplier management. -A wide variety of standard specifications and requirements, but also satisfy, or even exceed standards of quality and performance.

Rigid Couplings and Machined Flanges

Voss engineered and manufactures a full line of rigid couplings, flanges and machined flanges designed to meet both commercial and aerospace applications. Standard AS1895. Forged or rigid couplings, used with machined flanges and metal seals, are required for high pressure and high temperature aircraft ducting applications, such as jet engine bleed air systems. Voss rigid couplings and flanges are available in both standard and low profile designs. For detailed specifications, please request the Voss Rig V-Clamping and flange brochure.

Additional Voss Pneumatic Ducting Products

Voss has developed highly advanced lines of aircraft ducting components. Information on these products is available upon request.

Ducting Joints

A Division of Voss Industries, Inc.

1618 West 25th Street
Cleveland, Ohio 44113

Tel: 216-771-7655 Fax: 216-771-2887

Email: voss@vossind.com

A Division of Voss Industries, Inc.

Ducting Joints

Quality Assurance

Voss’ product quality is a result of innovative engineering, extensive in-house manufacturing capability, without production processes and supplier management. -A wide variety of standard specifications and requirements, but also satisfy, or even exceed standards of quality and performance.

Rigid Couplings and Machined Flanges

Voss engineered and manufactures a full line of rigid couplings, flanges and machined flanges designed to meet both commercial and aerospace applications. Standard AS1895. Forged or rigid couplings, used with machined flanges and metal seals, are required for high pressure and high temperature aircraft ducting applications, such as jet engine bleed air systems. Voss rigid couplings and flanges are available in both standard and low profile designs. For detailed specifications, please request the Voss Rig V-Clamping and flange brochure.

Additional Voss Pneumatic Ducting Products

Voss has developed highly advanced lines of aircraft ducting components. Information on these products is available upon request.
Standard T-bolt Latch
For applications where coupling removal is not normally necessary. This is an engineered and high-quality latch. Nut must be removed to open the coupling. Can be supplied with or without safety catch.

Socket Head
Uses barrel trunnion and barrel nut hardware. This type of latch is recommended for smaller diameters and confined areas. It is opened by: (1) loosening the nut and raising the T-bolt, (2) depressing the safety catch, and (3) lifting the bolt from the coupling.

Quick-Release Latches
These latch types are ideal for installation in confined areas and where frequent or occasional removal of ducts and accessories may be necessary. Quick-release latches do not require removal of the nut from the T-bolt. In extremely confined areas, these latches may be installed or removed using hand tools. Three popular quick-release latch types are shown below in installed and open positions.

Standard Quick-Release Latch with T-bolt
Can be opened simply and quickly by loosening the nut and raising the hinged latch. This design permits T-bolt replacement for couplings over 2 in. diameter.

Slidted Forged Trunnion Latch with T-bolt Safety Catch
This latch has a compact profile, is lightweight and is designed especially for smaller diameters and confined areas. It is opened by (1) loosening the nut, (2) depressing the safety catch, and (3) lifting the bolt from the coupling. Can also be supplied without safety catch.

Saddle Latch with T-bolt
This quick-release type is for light-to-medium-duty applications. When the nut is loosened, the T-bolt can be lifted from the saddle latch. It is not recommended for diameters over 6 inches.

Latching Assemblies
Voss offers the industry’s widest variety of latch types permitting optimum coupling for many applications. Each latch design has a specific characteristic and advantage; the considerations when specifying a latch type are permanence of application, use of installation tools, and excessive wear to the mating surfaces. Most latch designs are available in a variety of materials including stainless steel, 316, 440, and other alloys. Specifications and options are available upon request.

Complete Industry Support
Voss Aerospace application engineers are prepared to help solve your specific needs—from product inception, through manufacturing, to customer support. Voss also can provide project management capabilities, or can work directly with a prime contractor. Since 1965, Voss Aerospace has been the leader in aerospace component design. As an industry leader, Voss Aerospace has the experience, expertise and R&D capability to help meet your unique aircraft component design requirements.

Quality Assurance
Voss’ product quality is a result of innovative engineering, extensive in-house testing capability, optimum production processes and supplier management. Based on the requirements of leading system suppliers and large in-house manufacturer specifications, Voss Aerospace has a Quality Assurance Program that meets FAA 21.2581 and ISO 9001. This ensures that all Voss products not only meet contractual specifications and requirements, but also satisfy our own rigid standards of quality and performance.