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# Complete Piping Solutions

Featuring the Parflange® F37 Non-Welded System



ENGINEERING YOUR SUCCESS.

# Non-Welded Technology

## Parflange® F37 Non-Welded Flange System Reduces Total Installed Piping System Cost



Flare Flange



Retaining Ring



Light Duty

Robust **technology** is the foundation of Parker CPS. Parflange F37 non-welded piping systems utilize standard SAE Code 61/62, ISO 6162 and ISO 6164 flange interfaces. Parflange F37 is fully complemented with Parker's fabrication equipment and a broad range of interconnect components, valves, clamps and seamless tubes.

Parker's Parflange F37 product range includes certified components capable of providing non-welded piping systems up to 273 mm with wall thicknesses to 25 mm (10" x 1").

The Parflange F37 system utilizes two core connection technologies to achieve leak-free non-welded connections: F37 Flare and F37 Retaining Ring. The Flare Flange produces a smooth, clean, high-strength flared tube end that is fitted with a soft sealed tube insert. For higher-pressure systems, Parker's F37 Retaining Ring Flange system utilizes a retaining ring for flange retention along with a highly engineered seal carrier for leak-free performance. For low-pressure applications, Parker offers an F37 RR Light Duty series retaining ring flange system specifically designed for weight and space savings, while providing comparable non-welded piping system advantages.

### Key F37 Features and Advantages:

- Reduces dependency upon welding piping up to 273 mm/10"
- Heat code traceable components (HCT)
- Reduces system flushing time due to inherently clean piping with no weld-induced contaminants
- Minimizes concerns of stress corrosion cracking of weld joints
- Chrome-6 free carbon steel products for corrosion protection
- Full range of accessories (seamless tube, clamps, adapters, flange components) required for a more complete non-welded system
- Compliant with SAE/ISO 6162-1/2 and ISO 6164 dimensions and flange patterns
- DNV and ABS type approved system



## Why Non-Welded Piping and Prefabricated Assemblies from Parker:

A comparison of three approaches to a 2"-4" piping system:

### Welded System

- Welds: 6
- Elbow Fittings: 2
- Welding Fabrication Time: High
- System Flushing Time: High
- Flow Characteristics: Abrupt
- Total Installed Cost: High

### Parflange F37 System

- Welds: 0
- Block Elbow Fitting: 1
- Swept Elbow Fitting: 1
- Welding Fabrication Time: N/A
- System Flushing Time: Low
- Flow Characteristics: Moderate
- Installation Time: Lower
- Total Installed Cost: Moderate

### Parker CPS System with Cold Bent 90

- Welds: 0
- Elbow Fittings: 0
- Cold bends: 2
- Welding Fabrication Time: N/A
- System Flushing Time: Low
- Flow Characteristics: Best
- Installed Time: Lowest
- Total Installed Cost: Lowest

**Summary:** Parker's Parflange F37 System reduces installed cost by reducing welding and fabrication time. Since no weld contaminants are introduced to the system, flushing time can be dramatically reduced as well. Combining this with Parker CPS center's cold bending capabilities, additional improvements in installation time and flow characteristics are evident.

# Complete Piping Solutions (CPS)



The Gulf Coast facility in Houston, Texas, is one of five Parker CPS centers located worldwide.

*More than a superior component supplier, Parker is positioned globally as a system partner for non-welded piping systems. We have combined the innovative Parflange F37 non-welded piping system with a broad array of piping services in Parker's Complete Piping Solutions (CPS). For industries ranging from energy and mining to metals processing, testing systems and more, Parker CPS tailors piping solutions to maximize our customers' profitability.*



Parker's CPS team is on the jobsite providing the necessary expertise throughout the entire piping project.

## **Moving the technology forward**

Parker is the worldwide leader in tube fitting and adapter technology. Numerous connector innovations and advancements are attributed to our engineering and customer-centric collaborations. Our Parflange® F37 system is the proven alternative to time-consuming and costly welding, and we continue to expand this product range to solve new customer challenges.

## **The complete services advantage**

By coupling the best non-welded piping system with a complete engineered piping services package, CPS offers incomparable assurance, efficiency and value for our customers. Our Parflange F37 **technology** is supported with engineering **consultation, design**, state-of-the art piping **fabrication** facilities and on-site **installation**. Currently, Parker operates five CPS centers located worldwide with additional centers opening soon.

## **Application Specific Piping Solutions**

Some projects may require significant consultation and design services, while others may only need prefabricated pipe assemblies from a customer supplied print. Customers have the ability to choose from the breadth of services provided through the Parker CPS center – whether this is prefabricated piping assemblies delivered to the jobsite, on-site piping fabrication or a more turnkey approach including installation.

# Consultation and Design

## Consultation and Design

The Parker CPS team of engineers offers expert consultation and design services.



A Parker CPS engineer discusses the framework of the piping project on site.

During **consultation**, the customer's project requirements are reviewed with the CPS engineering team to determine the best-suited services. Technical and commercial requirements are

reviewed. Line sizing, clamping requirements, routing, and environmental and safety concerns are considered during this early stage, as well as early commercial options.

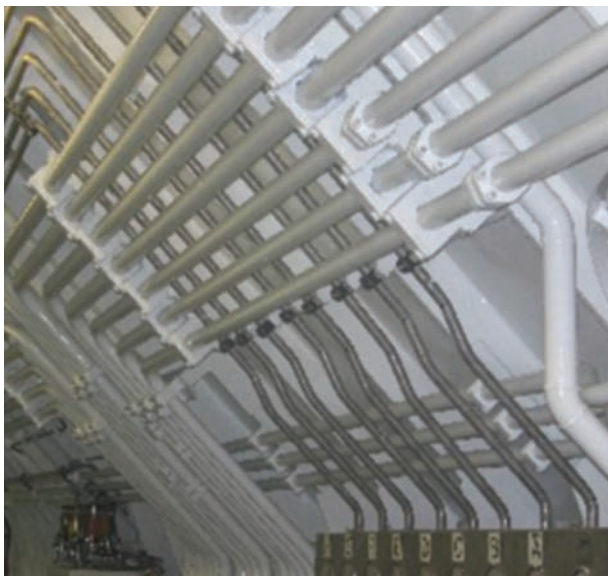
Parker's CPS team provides a tailored proposal to match the customer's technical and commercial requirements whether the project is a line expansion, retrofit of existing piping system or for OEM piping assemblies. This key collaborative planning provides a solid foundation for subsequent design work, as well as for fabrication of piping assemblies at a CPS center or on site.

As the project enters the **design** stage, Parker's engineer-to-engineer collaboration with the customer ensures that all technical requirements are met.

Depending on the scope of work, piping assemblies are designed either on the jobsite or at the CPS center. Our piping designers are experts in on-site measurement/surveying, development or modification of detailed piping drawings, and steadfast review of customer technical specifications and applicable standards.



A Parker CPS engineer designs piping assemblies either on the jobsite or at the CPS center.



The hull of this offshore service vessel (*left*) incorporates hydraulic control lines with SAE/ISO 6162 Flare Flange system while the larger plumbing on the hydraulic winch system (*right*) relies on ISO 6164 Retaining Ring Flange system. Both hydraulic systems utilize Parker's Parflange F37 non-welded technology. Parker CPS center fabricated and delivered these piping assemblies to the customer, saving days of on-site fabrication.

# Prefabricated Assemblies and Installation



## Prefabricated Assemblies and Installations

Parker's CPS team migrates the upfront piping engineering to factory prefabricated pipe assemblies with several installation options.

With state-of-the-art CNC large- and small-capacity bending equipment, as well as all complementary pipe end finishing equipment, the CPS team expertly manufactures ***prefabricated piping assemblies***.

By using cold drawn seamless tubes, the non-welded Parflange F37 system is inherently cleaner than welded piping systems, providing the benefit of reduced system flushing time. The CPS center employs Parker filtration and condition monitoring technologies to bring piping cleanliness to documented customer requirements. On-site leak-proof testing services can also be specified.



Parker's CPS centers maintain a high-level of seamless tube, flange components, clamps and accessory components for pipe assembly fabrication and to support installation.

Parker delivers fabricated pipe assemblies to the worksite. These pipe assemblies will be protected, labeled and ready for installation by the customer or Parker.

With the largest CNC cold bending capabilities in the industry, Parker's CPS team specializes in the factory fabrication of pre-bent piping assemblies. These assemblies reduce much of the on-site design and fabrication and allow for the most efficient installation on the jobsite. When the project does not allow for prefabrication of assemblies, Parker's CPS technicians dispatch these capabilities to the job.

Parker is fully engaged in the on-site ***installation*** of piping assemblies. A Parker CPS project manager leads the team of trained installers to maximize installation throughput and quality of installation work. Parker's lead role in overseeing the project from start to finish, and in ensuring that the installed piping system meets all requirements, instills a high degree of customer confidence.

The on-site piping installation service also enables quick reaction to unforeseen project obstacles or design changes. Costly project delays and downtime are dramatically minimized.



The Parker Tracking System (PTS) is employed to provide traceability throughout the pipe assembly's life cycle.



CPS Houston has invested in large-diameter CNC cold bending technology providing the cleanest and quickest-to-install prefabricated piping assemblies in the business.

*Parker provides best-in-class non-welded piping systems. Whether the scope of the project requires the complete redesign of a welded piping system or the fabrication and delivery of a pre-engineered non-welded piping assembly, Parker CPS will engineer a solution to maximize customer value.*

# Parker Fluid Connectors Group

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Available in inch and metric sizes covering SAE, BSP, DIN, GAZ, JIS and ISO thread configurations, manufactured from steel, stainless steel, brass, aluminum, nylon and thermoplastic.

### **Hose, Tubing and Bundles:**

Available in a wide variety of sizes and materials including rubber, wire-reinforced, thermoplastic, hybrid and custom compounds.

### **Worldwide Availability:**

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