

## BARCONN® Features & Benefits

Bar Hydraulics has many years of experience supplying and installing non-welded hydraulic piping systems. Most equipment requires hydraulic field piping which is our scope of supply. This piping goes from main hydraulic power unit (HPU) to the equipment. However, this piping has a significant impact on the commissioning and operation of such equipment. The most trouble free installations use a non-welded piping system.

The following are some of the benefits of non-welded piping systems:

### **Time Savings (see chart)**

- Reduced on-site labour. All connection blocks are pre-fabricated.
- Reduced flushing time due to cleaner systems.
- No need to pickle and flush to remove slag.

### **Cost Savings**

- A non-welded piping system can be assembled with one knowledgeable field piping technician and a number of assistants. These assistants do not need to be high paid welders with certificates for pressure welding.
- Bolted systems allow later additions to the piping system with minimal rework.

### **Quality of Installation**

- Standardized materials for ISO rated shops prevents quality issues with materials.
- Materials come oiled and capped preventing corrosion in pipes.
- Systems are installed with long radius bends, reducing shock and the number of connections.

### **Component Life**

- Non-welded piping systems are generally rated for 6000psi. This will handle shocks and pressure spikes normally present in a system.
- Systems stays clean, particles cannot be trapped in poorly fitted joints for later release into the fluid.

### **Environmental**

- Flushing is done with the operating hydraulic fluid. The cost of discarding environmentally unsafe acid pickling fluids is eliminated.
- Virtually leak free. Some systems have been operating for 10 years with no oil leaks.

**All field piping must be torque before final commissioning.**

## BARCONN® Features & Benefits (Continued)

A flared system is recommended around systems with machines in close proximity of each other in order to:

1. Improve the effectiveness of the warm-up cycle and flushing because “dead spots” in the piping are eliminated.
2. Line sizes are optimized for the requirements of the machine based on its demand. This eliminates the erratic operation due to pressure drops.
3. Simplifying the appearance of the piping systems means shorter runs to the individual stations and reduced maintenance costs.
4. Field installation time is eliminated because all the field piping is eliminated.

**All tubing and piping should be bent as opposed to the use of 90° elbows.**

### Time Savings & Productivity Chart

Time savings between non-welded flared flanges compared to weld neck flanges.

**Weld Neck Flanges to Bent Pipe (Butt Weld)**

1. Cutting the pipe and tack welding flanges.
2. Welding Time.
3. Cleaning (X-Ray time not included)
4. Total Time.

**Non-Welded Flanges to Bent Pipe**

5. Flared flanges total fabrication time (3k).
6. Flared flanges total fabrication time (6k).
7. Time Saving.

Flanges for 2000 – 6000 psi.

Pipe Size	1	2	3	4	5	6	7
<b>¾"</b>							
<b>1"</b>	20 min.	35 min.	20 min.	75 min.	5 min.	-	70 min.
<b>1¼"</b>							
<b>1½"</b>	30 min.	45 min.	30 min.	105 min.	10 min.	-	95 min.
<b>2"</b>							
<b>2½"</b>	35 min.	60 min.	35 min.	130 min.	10 min.	-	120 min.
<b>3"</b>	60 min.	180 min.	45 min.	285 min.	10 min.	-	275 min.
<b>4"</b>	75 min.	240 min.	50 min.	365 min.	-	20 min.	345 min.
<b>5"</b>	90 min.	300 min.	60 min.	450 min.	-	25 min.	425 min.

**TOTAL INSTALLED COST REDUCTION  
(Based on average 3000psi installation)**