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Universal Wellhead Services, LLC “UWS” was formed April 2010. (UWS provides drilling and completion designs, new and remanufactured wellhead equipment, and service personnel to the oil and gas industry.) Our primary focus is the sale and installation of wellhead equipment, ancillary product lines which include valves, manifolds, frac trees, repair, remanufacture, and field service. Our products are used both in the drilling and completion phases of the oil and gas industry. UWS has in-house machine capabilities which allows us to quickly and efficiently repair existing customer owned wellheads. We maintain computer generated inventory programs that enable us to utilize our customers inventory while providing them with detailed accurate inventory reports.

UWS has offices and full service shops based in Corpus Christi, Odessa, Houston, Texas; Shreveport, Louisiana; Meshoppen, Pennsylvania; Newcomerstwon, Ohio.

## Company Overview

### Company Strengths

**Superior Customer Service**
Our qualified technicians are available 24 hours a day, 7 days a week for installation, repair, maintenance of all types of production wellheads, production trees, and valves. UWS provides the resources, employs motivated and knowledgeable personnel to satisfy the customer’s needs in a timely manner.

**Convenience**
Offer clients a wide range of products/services in a flexible and timely manner. In house machine capability allows UWS to quickly manufacture and efficiently remanufacture customer owned components.

**Low Cost Country Manufacturing, and Testing Capabilities**
UWS has a long-term relationship with a manufacturing research and development team in the US and China. This relationship allows us access to engineering, testing and a manufacturing floor in China that gives us the ability to pass on cost savings to our customers.

**Location**
Excellent and easily accessible locations that offer proximity to drilling activity, flexibility for our clients needs while providing a positive, attractive and inviting atmosphere.

**Dependability and Reliability**
Provide a continued research/development program to design and manufacture state-of-the art products. Provide solutions to each and every customer’s unique requirements. Stand behind our products and services throughout the entire business cycle. Improve products and services by analyzing our customer needs. We offer a one year warranty on all new and remanufactured equipment as well as on all full repairs performed in our facilities.

**Safety**
We are a current, active member in ISNetworld and have a thorough, detailed safety training program. All UWS employees are enrolled in ongoing training programs. JSA’s are used on every job site.

**Environmental**
Provide a clean, upscale work environment conducive to maintaining an innovative atmosphere.
The Casing Head is the lowermost head in a wellhead system. It is connected to the surface casing by one of several possible methods. The upper connection of the casing head is usually flanged and connects to the next wellhead - as well as the BOP's during the drilling process.

**Functions:**
- Provides an attachment and sealing point to the surface casing.
- Allows for pressure testing of the weld when a SOW bottom is used.
- Allows for support and testing of a BOP system while drilling out for the next casing string.
- Provides a casing hanger load shoulder and bowl for hanging and sealing of the next casing string.
- The load shoulder and bowl also accommodate BOP test plugs.
- Provides two outlets for annular access and monitoring.
- Provides a means for Wear Bushing installation and retention.
- Can be supported by the conductor pipe via an optional base plate.
- C-29 bowls available for extreme casing loads.
- Either bowl will accept a C-21 Casing Hanger for low weight situations.

**Options:**
- Base Plates are custom made and pre-installed depending on customers needs.
- Bottom Connections available in the following profiles:
  - Slip-on Weld (SOW) with internal o-ring (outside only weld)
  - Slip-on Weld (SOW) no o-ring (outside and inside weld)
  - Threaded female casing thread
  - Threaded male casing thread
  - Slip-Lock (weld-less) Locks to casing with slips energized via studs
- Lock-down Pins
  - Full set of pins to secure mandrel casing hangers (suffix “L”)
  - BP pins (bowl protector) to secure wear bushings while drilling (suffix “BP”)
- Outlets
  - Threaded 2” LP (LPO)
  - Threaded EUE 8rd
  - Side studded outlets (SSO) with internal VR prep
  - Extended flanged outlets (EFO) with internal VR prep

**Standard**
* C-22 with Slip-on Weld Prep with Line Pipe Outlets or Studded Side Outlets

**Optional**
- *C-22-BP* has 2 lockscrews to hold the wear bushing in place

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**UWS C-22 and C-29 Casing Heads**

![Image of Casing Head]

Optional
* Threaded Bottom Prep  
  Slip on Weld Prep with “O” Ring

Optional
* C-22-BP has 2 lockscrews to hold the wear bushing in place
The Casing Spool is a wellhead component that provides a means to support and seal an intermediate casing string. The upper section has a straight type bowl and a 45 degree load shoulder to support the production casing string. The lower section houses a secondary seal to isolate the two casing strings and provide a means to test the wellhead seals.

Functions:
- Provides a sealing point over the intermediate casing.
- Allows for pressure testing of the wellhead seals to isolate the casing strings.
- Allows for support and testing of a BOP system while drilling out for the next casing string.
- Provides a casing hanger load shoulder and bowl for hanging and sealing of the next casing string.
- The load shoulder and bowl also accommodate BOP test plugs.
- Provides two outlets for annular access and monitoring.
- Provides a means for Wear Bushing installation and retention.
- C-29 bowls available for extreme casing loads.
- Both accept C-21 and C-21-P Casing Hangers for low weight situations.

Options:
- Outlets
  - Threaded 2” LP (LPO)
  - Threaded EUE 8rd
  - Side Studded Outlets (SSO) with internal VR prep
  - Extended Flanged Outlets (EFO) with internal VR prep
- Bottom profile
  - BG (blank), accepts a wide variety of secondary seals
  - O-ring bottom, made to specific casing sizes
  - P-Seal bottom, made to specific casing sizes and must be energized by plastic packing
  - FS bottom (high pressure) made to specific casing size
- Lock-down Pins
  - ET style pins eliminate exposed lock-down pin threads
  - Full set of pins to secure mandrel casing or tubing hangers (suffix “L”)
  - 2 BP pins (bowl protector) to secure wear bushings while drilling (suffix “BP”)

UWS C-22 and C-29 Casing Spools

Standard
C-22-BG with BG bottom and Studded Side Outlets also available with Line Pipe Outlets

Optional
C-22-BP has 2 lock screws to hold the wear bushing in place

Optional
Optional C-22-L has full set of lock screws to secure a mandrel hanger
The Tubing Head is the uppermost spool in a wellhead assembly. It provides a means to support and seal a tubing string. The upper section has a straight type bowl and a 45 degree load shoulder to support and seal the tubing string by means of a tubing hanger. There is a full set of lock-screws to safely secure the tubing hanger in the head. The lower section houses a secondary seal to isolate the production casing string and provide a means to test the wellhead seals. Threaded or weld-on tubing heads attach directly to the production casing.

**Functions:**
- Provides a sealing point over the production casing.
- Allows for pressure testing of the wellhead seals to isolate the casing strings.
- Provides a tubing hanger load shoulder and bowl for hanging and sealing of the tubing.
- The load shoulder and bowl also accommodate a test plug.
- Full set of lock-down pins to secure tubing hanger.
- ET style pins eliminate exposed lock-down pin threads.
- Provides two outlets for annular access and monitoring.
- Provides a means for Wear Bushing installation and retention.
- TC-60 bowls available for dual completions.
- Accepts Frac Isolation Sleeves for tubing head isolation during high pressure casing frac jobs.

**Options:**
- Outlets
  - Threaded 2" LP (LPO)
  - Threaded EUE 8rd
  - Side Studded Outlets (SSO) with internal VR prep
  - Extended Flanged Outlets (EFO) with internal VR prep
- Bottom Profile
  - BG (blank); accepts a wide variety of secondary seals.
  - O-ring bottom; made to specific casing sizes.
  - P-Seat bottom; made to specific casing sizes and must be energized by plastic packing.
  - FS bottom (high pressure) made to specific casing sizes.
- Bottom Connection
  - Flanged to bolt directly to casing head or spool.
  - Slip-on Weld (SOW) with internal o-ring (outside weld only).
  - Slip-on Weld (SOW) no o-ring (outside and inside weld).
  - Threaded male casing thread.
- Bowl Profile
  - Standard TCM bowl provides a straight bowl with a 45 degree load shoulder that accepts a wide variety of single completion tubing hangers.
  - TC-60 bowl provides a straight bowl with 45 degree load shoulder with the addition of two alignment pins for dual completion tubing hangers.
- Modified for Frac Isolation Sleeve
  - All flanged bottom tubing heads can be modified to accept our Frac isolation sleeve.
  - Sleeve is pre-installed and tested in our facility.
The UWS Multi-Bowl System is a wellhead assembly that provides a means to support and seal two casing strings, without the need to break the BOP stack. The assembly consists of 2 wellheads bolted together (Casing head and Casing spool). The lower section has a straight type bowl and a 45 degree load shoulder to support the lowermost casing string. The casing hanger is fluted to allow returns while cementing. A pack-off is installed creating a second load shoulder to support the next casing string. This pack-off incorporates seals to isolate the two casing strings and provide a means to test the wellhead seals. Emergency slip type casing hangers are brought on all jobs in case the casing becomes stuck. Should this happen, the wellhead assembly is separated and the slip hanger is installed. The MBS System comes complete with a full array of rental tools. Wear bushings, running tools, standard and emergency casing hangers and pack-off support bushings, running tools for the casing hanger, pack-off, wash out tool and BOP test plugs.

**Functions:**
- Provides a sealing point over the intermediate casing.
- Allows for pressure testing of the wellhead seals to isolate the casing strings.
- Allows for support and testing of a BOP system while drilling out both casing strings.
- Provides a casing hanger load shoulder and bowl for hanging and sealing two casing strings.
- Both load shoulders and bowls accommodate BOP test plugs.
- Provides two outlets on both the upper and lower spools for annular access and monitoring.
- Provides a means for Wear Bushing installation and retention in both sections.
- C-29 bowls available for extreme casing loads.
- Accepts C-21 Casing Hangers for low weight situations.

**Features:**
- Improved Safety – Less time working under the BOP stack.
- Significant time savings – No need to break the BOP stack.
- Accepts standard wellhead completion equipment.
- Available in most casing program sizes.
- Emergency slip hangers available in the event the casing becomes stuck.
- Casing Hanger running tool can be tested on the rig floor, prior to landing the casing.
- Cementing is done through the casing hanger running tool as soon as the string is landed in the bowl.
- Casing Hanger is fluted to allow returns around the outside of the hanger.
- MBS assembly can be installed under the rig floor, or lowered through the rotary.
- Back-pressure valve profiles available in all mandrel hangers.
- Upper housing can be removed and a conventional wellhead installed in its place.

**Bottom Connections:**
- Slip-on Weld (SOW) with internal o-ring (outside weld)
- Slip-on Weld (SOW) no o-ring (outside and inside weld)
- Threaded female casing thread
- Threaded male casing thread
- Slip-Lock (weld-less) Locks to casing with slips energized via bolts

**Outlets:**
- Threaded 2” LP (LPO)
- Threaded EUE 8rd
- Side studded outlets (SSO) with internal VR prep
- Extended flanged outlets (EFO) with internal VR prep

**Lock-down Pins:**
- Full set of pins to secure mandrel casing hangers
- Pins also engage the wear bushing to prevent rotation
- ET style pins eliminate exposed lock-down pin threads
The Casing Hanger is a wellhead component that provides a means to support and seal a casing string. These hangers are a wrap-around style and use slip segments that bite into the casing to support the entire casing load. Our hangers are available in all standard API casing sizes.

**Functions:**
- **Slip Type Hangers**
  - Supports the casing by transferring the casing load to the load shoulder in the casing head or spool.
  - Provides a sealing point around the casing and the casing head bowl to isolate the casing strings.
  - Can be lowered through a full opening BOP stack into the wellhead.
  -Latch bolt prevents accidental opening of the hanger during installation.
  - C-22 and C-29 hangers provide an automatic pack-off seal that is energized by casing weight.
  - C-21 hangers are used in conjunction with a separate pack-off plate and are used in low weight situations.
  - C-21-P hangers incorporate a built in seal that is manually activated by bolts on top of the hanger
  - C-22 hangers require as little as 47,000 pounds of casing load to energize the seal (depends on casing size).
  - C-29 hangers have stronger lower support plates and support greater casing loads.

- **Mandrel Type Hangers**
  - Supports the casing by transferring the casing load to the load shoulder in the casing head or spool.
  - Suspend the casing weight by means of threading the pipe to the lowermost threads in the hanger.
  - Lift threads in the top of the hanger are used for landing and retrieving the hanger into the wellhead. ACME threads and a separate running tool can be used in place of the lift threads.
  - Optional flutes allow for fluid bypass or taking returns during cementing.
  - Separate pack-off bushing- seals around the hanger neck and the wellhead bowl. In the MBS system it also serves to provide another load shoulder to support the next casing string.
The secondary seal is a wellhead component that provides a means to isolate and seal a casing string. These seals are installed in the bottom prep of a casing spool or tubing head with a BG bottom prep. They enable you to test the primary seal (casing hanger) via test ports located on the wellhead, and have a built in bit guide to protect the casing. UWS secondary seals are available in all standard API casing sizes.

- **Seal Types**
  - O-rings; we use HNBR 80 to 90 durometer o-rings as our standard o-ring. O-rings are available in Viton, Aflas, Nitrile and HNBR high and low temp.
  - FS Seals; this seal is designed to seal around rough casing. The seal in 9-5/8” and smaller sizes is rated to 15,000 psi. Our standard FS seal is HNBR 85 to 90 durometer. This seal is available in several different materials and for different temp ratings.
  - Springsele (S-Seal); this seal is designed to seal the bushing OD against the wellhead body. They are rated to over 15,000 psi and the standard material is HNBR 85 to 90 durometer. Different materials and temp ratings are available.
  - P-Seals; this seal is designed to seal against rough casing and requires plastic packing applied under pressure to activate it. The seal is available in several different materials and temp ratings.
  - PE seal; this seal has a rubber element that is aprox 2” thick and seals against the casing and the wellhead. This seal is designed for low pressure general purpose use and is available in limited material and temp ratings.

- **Types of bushings for BG bottom heads**
  - 4-0 bushing; has internal and external o-ring seals to seal on the casing and inside the wellhead. Standard seal for general purpose wellheads.
  - FS-S bushing; has FS seals in the ID to seal around the casing and S-Seals on the OD to seal in the wellhead. High pressure seal good up to 15,000 psi.
  - FS-SL bushing; same seal as the FS-S only secured in the wellhead with an ACME threaded lock ring as opposed to a snap ring.
  - PE seal; 4 piece seal consisting of an upper plate, 2” thick seal element, lower plate, and a snap ring. For low pressure applications.
The tubing hanger is a wellhead component that provides a means to suspend and seal a tubing string in a tubing (or casing) head. The tubing hanger lands in the top prep of tubing head and is retained in the tubing head with lock-down pins. It seals the annulus between the tubing and the production casing. UWS tubing hangers are available in all standard API tubing sizes.

- **Tubing Hanger Types**
  - **TC-1W**: is a wrap around style tubing hanger that is designed to seal the annulus, but not suspend the tubing string itself. It seats inside the tubing head bowl and has a seal that is activated by engaging the lock-down pins. It can be used in conjunction with the BO-2 hanger coupling and B-2P, B-1 or KTH adapters.
  - **BO-2**: is a mandrel hanger coupling threaded on both ends with any API tubing thread (suspension and lift threads) and has an internal back-pressure valve prep. The BO-2 coupling then screws into the BO-2 adapter by rotating the tree assembly. It is used in conjunction with a TC-1W or a stripper rubber. Ideal for situations when you want to pick up the tree and tubing together.
  - **TC-1A**: this is a mandrel type hanger that has female suspension and lift threads. This hanger can be landed through a full opening BOP stack. The seal is activated by tubing weight and the lock-down pins.
  - **TC-1A-B**: this hanger is the same as the TC-1A but includes a back-pressure valve prep. It can be easily snubbed in under pressure.
  - **TC-1A-EN**: same design as the TC-1A-B only with an extended neck that protrudes above the tubing head. The extended neck incorporates 2 or more S-seals. The A-5P tubing head adapter seals over the neck of this hanger offering a second seal point so the hanger can be tested. The body seal is activated by the lockdown pins.
  - **TC-1A-EN-CL**: same hanger as the TC-1A-EN, but includes porting for down-hole control lines. The neck has extra S-seals to isolate the ports and the A-5P adapter has porting to access and test them.
  - **TC-22**: Slip type hanger that will support casing or tubing in the bowl. Seal is weight activated and it is retained in the head by the lock-down pins. Can hang up to 4-1/2” OD casing in a standard 7-1/16” bowl.

- **Seal Material**
  - Standard material for all tubing hangers is HNBR 80 to 90 durometer.
  - Viton, Aflas and high/low temp HNBR are available upon request.

- **Hanger Material**
  - All tubing hangers are available in alloy, stainless or Inconel for all API trim specifications.
The wellhead Christmas tree choke is a device that regulates the flow of liquids and gases. Standard chokes have a 90 degree angle body design and are needle and seat style. Inline, cage style and actuated chokes are available upon request. Chokes are available in either Positive or Adjustable with a variety of trim sizes and designs. They are available in API flange sizes up to 4-1/16”, in pressure ranges from 2,000 psi to 15,000 psi and for all API trim and temperature ratings.

- **Choke Types**
  - 2” LP inlet x 2” LP outlet. For low pressure screwed trees. Available in alloy steel only and in pressures of 2k, 3k and 5k.
  - 2-1/16” 5K Flanged inlet x 2” LP outlet. Low end choke for flanged trees. Available in alloy steel only in pressures of 3k and 5k.
  - Flanged inlet x flanged outlet. Higher end choke, more than twice the body wall thickness in the curve. Available in alloy or 410 SS in pressures of 5k, 10k and 15k. (All 10k and 15k chokes are flanged x flanged.)

- **Adjustable Choke Trims**
  - HS trim (hardened steel) is for standard service.
  - TC trim (tungsten carbide) is an upgrade that incorporates carbide on the tip of the stem and contact area of the seat.

- **Positive Choke Trims**
  - Flow beans are available in increments of 64th of an inch.
  - Ceramic lined flow beans are standard service.
  - Fully lined Carbide flow beans available for extended wear.
  - All flow beans are available with Xylan coating on the threads (recommended for SS chokes)
  - Positive chokes are available with ½” NPT or 9/16” HP tapped port for bleed fitting or needle valve.
  - Choke cap o-rings are available in HNBR-90 (standard), Viton, Aflas and high/low temp HNBR.

- **FL-TC trim (fully lined tungsten carbide)** has carbide on the tip of the stem and the entire seat is lined with carbide.
- **Needle and seat sizes available from ¾” to 2”, depending on choke size.**
- **Choke stem packing and o-rings are available for standard and sour service.**

**UWS Chokes**

Threaded Inlet and Outlet

Flanged Inlet/Threaded Outlet

Flanged Inlet/Flanged Outlet
The tubing head adapter creates a transition between the tubing head and the Christmas tree. The bottom connection bolts to the tubing head and the top connection attaches to the lower master valve. Adapters are available in several types for single or dual completions. They are available in all standard API flange sizes, pressures and trims. Its primary function is to suspend the tubing string and seal the annulus between the tubing and production casing.

- **Adapter Types**
  - **B-1**: is a flanged bottom adapter with female suspension threads and male top threads that connect to the lower master valve. Ideal for pumping or low pressure wells.
  - **KTH**: bolts to the tubing head and has an internal slip and seal assembly to suspend and seal around the tubing. The lower master screws directly to the tubing. Ideal for pumping or low pressure wells where tubing stretch is limited.
  - **B-2P**: has a flanged or studded top and bottom connection and internal female suspension threads to suspend the tubing. No BPV prep is available and it is used in conjunction with the TC-1W.
  - **BO-2**: has a flanged bottom connection, a studded top and internal ACME threads to support a BO-2 hanger coupling. The BO-2 coupling screws on to the tubing and directly into the BO-2 adapter by rotating the tree assembly. The BO-2 coupling has internal back-pressure threads and is used in conjunction with the TC-1W wrap around tubing hanger.
  - **A-5P**: flanged or studded bottom and top connections. It is made to seal over the neck of the TC-1A-EN tubing hanger. Optional ports are available for down-hole control lines. The tubing hanger stays in the tubing head when the tree is picked up.
  - **Dual Completion**: flanged or studded bottom, prepped internally to seal over the TC-60 tubing hanger. Top connection can be prepped for either dual block valves or dual segmented valves.
UWS Tree Caps
The tree cap bolts to the top of Christmas tree and provides quick access to the tubing bore via a nut and plug assembly. Internal tubing threads are used for installing and removing the tree assembly. The top of the nut and plug assembly is tapped for a needle valve and pressure gauge. They are available in all standard API flange sizes, pressures and trims.

UWS Tees and Crosses
UWS offers studded and flanged tees and crosses in all API flange sizes, pressures and trims. Crosses or Tees with 45 degree outlets are available upon request.

UWS DSA’s and Cross-over Spools
UWS offers double studded adapters and cross-over spools in all API flange sizes, pressures and trims.

UWS Flanges
• Companion Flanges; available with all common casing and tubing threads in all API flange sizes, pressures and trims.
• Weld Neck Flanges; prepped to weld to any specified API casing or tubing.
• Gauge or Instrument Flanges; made to be installed in-between any API 6As flange and ported with ½” NPT or 9/16” HP connections.
• Blind Flanges; Available in solid or tapped with ½” NPT or 9/16” HP.
• Union Flanges; API flanges with 1502 or Bowen union halves on one end. (Other unions are available upon request) Available with either male or female union ends. All flanges are 1 piece with no welded connections.
High Pressure Gate Valves
Universal offers BSO (Ball Screw Operators) on most high pressure gate valves. They are available with flanged ends in standard bore sizes from 4-1/16” through 7-1/16” in working pressures of 10,000 psi and 15,000 psi. Double acting hydraulic gate valves are also available.

Reduced Torque
- Reduces torque as much as 50%
- 2 Heavy duty thrust bearings assist in further reducing overall torque

Valve Features
Full-Bore Thru-Conduit Design
- Maximizes valve service life
- Eliminates the collection of destructive particles

Floating Slab Gate and Seats
- "T" slotted gate allows the gate to float, reducing deflection and binding
- Produces a positive pressure energized seal
- Body pressure equalizes across the seat ring/body bushing, eliminating body erosion in the seat pockets

Metal-to-Metal Seals
- Body/bonnet interface, gate/seat ring/body bushing interfaces, body/body bushing interface
- Gate and seat are overlaid with Tungsten Carbide
- Valve bodies and bonnets are forged steel

Metal-to-Metal Backseat
Long Life, Low Maintenance
- Simple routine maintenance program limits repairs, eases operation, protects against corrosion, and extends service life
- In-line Repairability

Frac Components
- Frac Adapters made to customer specifications for all API connections.
- Goat Heads available with four, five or six outlets.
- 1502 union flanges available in any standard API size.
- Flow Crosses available for all frac stacks with outlet sizes ranging from 1-13/16” through 7-1/16”
- Adapters, DSA’s, and Cross overs available in all API sizes.
Universal's M type gate valve features a non-rising stem with an expanding gate design to provide safe, dependable service in a variety of environments. They are available with flanged or threaded ends in standard bore sizes from 2-1/16” through 7-1/16” in working pressures from 2,000 psi through 5,000 psi.

Gate Valves are available in both new API monogrammed and remanufactured - both are warranted for one year.

**M Type Gate Valves**

- **Full-Bore Thru-Conduit Design**
  - Maximizes valve service life
  - Eliminates the collection of destructive particles

- **Expanding Gate**
  - Produces a positive mechanical seal across the seats
  - Isolates the body cavity from bore pressure in both the open and closed position

- **Seats**
  - Press fit or o-ring slip fit seats available. Both have Teflon inserts in the face to form a positive seal against the gate
  - Even in low pressure situations. The seats are tightly wedged in the seat pocket when the valve is in the full open and full closed position.

- **Metal-to-Metal Seals**
  - Body/bonnet interface, and gate/seat interface

- **In-line Repairability**
  - Stem packing can be re-energize while the valve is under pressure

- **Long Life, Low Maintenance**
  - Simple routine maintenance program limits repairs, eases operation, protects against corrosion, and extends service life

- **Material Options**
  - Available in API trims AA, BB, CC, DD, EE, FF and HH
  - Forged body valves available upon request
  - Available in all API temp ratings
  - Internal coating (such as Xylan) available upon request
Universal’s FC and FLS gate valves feature a non-rising stem with a slab gate floating seat design to provide safe dependable service. They are available with flanged ends in standard bore sizes from 1-13/16” through 7-1/16” in working pressures of 10,000 psi and 15,000 psi. Gate Valves are available in both new API monogrammed and remanufactured - both are warranted for one year.

**Full-Bore Thru-Conduit Design**
- Maximizes valve service life
- Eliminates the collection of destructive particles

**Floating Slab Gate and Seats**
- Produces a positive pressure energized seal
- Body pressure equalizes across the seat ring/body bushing, eliminating body erosion in the seat pockets

**Metal-to-Metal Seals**
- Body/bonnet interface, gate/seat ring/body bushing interfaces, body/body bushing interface
- Gate and seat are overlaid with Tungston Carbide
- Valve bodies and bonnets are forged steel

**In-line Repairability**
- Seat rings, body bushings, gate, stem and stem packing are easily replaced in the field

**Metal-to-Metal Backseat**
- Allows for body pressure containment in the case of stem packing leak

**Long Life, Low Maintenance**
- Simple routine maintenance program limits repairs, eases operation, protects against corrosion, and extends service life

**Also Available**
- 5,000 psi wp gate valves
- BSO (Ball Screw Operator) available on the 4-1/16”, 5-1/8” and 7-1/16” 10,000 psi and 15,000 psi FC and FLS gate valves

**Material Class**
- Available in API trims EE, FF, and HH
- Internal coating (such as Xylan) available upon request

**Temperature Rating**
- Available in all API temp ratings
Universal's actuated safety valves feature a slab gate profile, bi-directional sealing technology and are available with manual over-rides. Our rugged safety valves are available with flanged or threaded ends in standard bore sizes from 1-13/16” through 7-1/16” in working pressures from 2,000 psi through 15,000 psi. Our actuated valves are available in Fail Safe Open or Fail Safe Closed and in most API trims. Safety valves are available in both new API monogrammed and remanufactured – both come with a one year warranty.

Full-Bore Thru Conduit Design
- Maximizes valve service life
- Eliminates the collection of destructive particles

Wide Variety of Actuator Types and Sizes
- Pneumatic Diaphram style
- Pneumatic Piston style
- Hydraulic Single Acting
- Hydraulic Double Acting

Manual Over-rides
- Manual over-rides are available for all actuator types and sizes
- Lock-open caps available for all valves

Floating Slab Gate and Seats
- Produces a positive pressure energized seal
- Body pressure equalizes across the seat ring / body bushing eliminating body erosion in the seat pockets

Metal to Metal Seals
- Body to bonnet interface, gate to seat interface and seat to body interface are metal to metal sealing areas

In-Line Repairability
- Seat rings, body bushings, gate, stem are easily replaced in the field
- Stem packing can be replaced under pressure with our back-seat capability
- Piston o-rings and diaphragms are also easily replaced in the field

Long Life, Low maintenance
- Simple routine maintenance programs limit repairs, ease operation, protect from corrosion and extend service life

Material Class
- Available in API trims EE, FF, and HH
- Internal coating (such as Xylan) available upon request

Temperature Rating
- Available in all API temp ratings
Valve Replacement Parts
Complete line gate valve components, for both expanding and slab gate valves. These are available in a wide variety of trims, sizes, and working pressures. Valve parts are available for most major manufacturers valve types and many obsolete models.

Elastomers
• Secondary Seals
• Casing Hangers
• Tubing Hangers
• B02 Adapter
• Tree cap and choke o-rings
• Seal kits for gate valves
• Seal kits and diaphragms for safety valves

Threaded Fittings
• High quality XXH Bull Plugs and Nipples
• Flow tees
• Grease and packing fittings
• Needle Valves
• Pressure gauges

API-6A Metal Ring Gaskets
Universal stocks API-6A Monogrammed R, BX, RX, and combination ring joint gaskets. All ring gaskets are available in low carbon steel and 316 stainless steel (Inconel available upon request). Petromec Rubber-Tip test rings (R and BX) and other types of materials are available upon request.

Stud Bolts and Nuts
Universal stocks alloy steel stud bolts in 5/8” through 3” diameter and to any length required. All stud bolts are pre-nutted.
• Studs ASTM A193 B7; Nuts ASTM A194 2H HEX
• B7 Black Studs and 2H Nuts
• B7 Zinc Yellow Studs and 2H Nuts
• B7 Teflon coated Studs and 2H nuts available upon request

Consumables
Universal is a stocking distributor for ePilot and Alann pressure sensors. These systems eliminate fuel gas freeze ups and costly SS tubing runs. We have experienced technicians to design, install and repair safety systems and safety system accessories.

**ePilot Pressure Sensors**
- High and Low pressure settings available in ranges from 1,000 psi to 15,000 psi
- Unit is in a full SS weather proof enclosure
- Can be configured to monitor pressure, temperature, or fluid level
- Simple block and bleed system has few moving parts and is trouble free
- Operated by a 14v Lithium battery with an average 2 year life span
- Unit automatically shuts in when battery is too low to operate

**Alann IV Pressure Sensors**
- Solar powered with a 12v DC sealed lead acid battery
- Up to 8 separate channels per module – can monitor multiple sensors simultaneously
- Lighted panel indicates tripped sensor, eliminating guess work
- Audible alarm alerts operator to abnormal condition or tripped sensor
- Weather proof housing with LED indicators to quickly determine status
- Optional accessories available such as: telephone dialers, remote shut in stations, tank level switches, sand and gas probes, etc.
Conventional Wellhead Configuration Chart

Tubing Head Adapters

Hanger Coupling

B-1
BO-2
B-2P
A-5P

B02 Coupling

Tubing Hangers

TC1W
TC1A
TC1AB
TC1AEN

Tubing Spools

Secondary Seals

Casing Hangers

Casing Spools

Secondary Seals

Lockscrews (Optional)

Casing Hangers

Casing Heads

Lockscrews (Optional)

Slip on Weld Prep
Threaded Bottom Prep
Slip on Weld Prep With “O” Ring

PE Seal
4-0 Bushing

PE Seal
4-0 Bushing
1. **Purchase Orders:** Any purchase order received by UWS shall be construed as a written acceptance of our offer to sell and shall be filled in accordance with the terms and conditions of sale set forth herein. No other terms and conditions shall apply unless specifically accepted by UWS in writing.

2. **Quotations:** All quotations are made for prompt acceptance and any terms quoted therein are subject to change without notice after thirty (30) days from the date thereon unless specifically stated otherwise on the quotation.

3. **Cancellations:** When an order has been accepted by UWS it may not be cancelled without our written permission. Cancellation terms will include compensation as necessary, to us for expenses incurred after such an order has been accepted. Orders for products or parts of special design, size, or materials are not subject to cancellation after we have accepted order. Orders cancelled due to U. S. Department of Commerce not granting an export license are subject to cancellation charges.

4. **Returns:** Written permission must be obtained before returning material to us for credit. When written permission is acquired, shipment must be returned freight prepaid to UWS designated location before credit can be issued. A restocking charge will be made on all orders returned for credit and costs that may be necessary to return material to saleable condition will also be charged. No material will be accepted for credit after thirty (30) days from date of purchase. Products of special design or equipment altered to fit Buyer’s specifications will not be accepted for credit.

5. **Warranties.** UWS warrants that if the products covered by this contract are not free from defects in material or manufacture for a period of twelve months from the date of shipment it will, at its option and in its complete discretion, either repair or replace the same or refund the purchase price of such products under the following terms and conditions. If, with that period, UWS receives written notice of any alleged defect or non-conformance of any product and if in UWS’s sole judgment the product does not conform or is found to be defective in material or workmanship, then Buyer shall, at UWS’s request, return the part or product, freight prepaid, to UWS’ designated plant. UWS, at its option and in the exercise of its complete discretion, shall repair or replace the defective part or product or repay to Buyer the full price paid for such part or product by Buyer. Any repayment of purchase price shall be without interest. UWS’s sole responsibility and Buyer’s exclusive remedy under this warranty and for any other claim of any nature stemming from the purchase and/or use of a UWS product shall be limited to such repair, replacement of the product, or repayment of the purchase price as above provided. If a defective product or a part thereof was not manufactured by UWS, UWS’s warranty to Buyer and Buyer’s exclusive remedy shall be the pursuit of warranties issued by the manufacturer or intermediate supplier and only to the extent that UWS is able to recover from its manufacturer or supplier for the same defects. THERE ARE NO OTHER WARRANTIES, EXPRESS, IMPLIED OR STATUTORY, INCLUDING THOSE OF MERCHANTABILITY AND OF FITNESS FOR A PARTICULAR PURPOSE. NOR ARE THERE ANY AFFIRMATIONS OF FACT OR REPRESENTATIONS WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF. UWS SHALL NOT BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, OR CONSEQUENTIAL DAMAGES ARISING OUT OF ANY DEFECTS OR FROM ANY CAUSE WHATSOEVER. BUYER WAIRS TO UWS THAT IT HAS NOT RELIED UPON ANY ACT OR STATEMENT ON THE PART OF ANY EMPLOYEE OR AGENT OF UWS IN MAKING ITS DECISION TO ENTER INTO THIS CONTRACT. BUYER WAIVES AND RELEASES ANY SUCH CLAIM OF RELIANCE UPON SUCH ACTS OR STATEMENT(S). When the phrase “not conform” is used in this agreement, it means that in some material fashion the product(s) does not conform to the written specifications shown on the Buyers order. UWS makes no warranty that the goods do conform. The remedy set out above describes the Buyer’s remedy, and the limitations on that remedy, if such an event occurs. In the event that the Buyer receives non-conforming product(s), all of the terms and conditions and limitation of remedies set out above shall apply.

6. **Technical advice:** UWS shall not be responsible for the results of any technical advice or services rendered by any employee of UWS in connection with the design, installation, use, or repair of the products sold hereunder.

7. **Design Modification:** UWS reserves the right to change or modify the design and construction of any of its products, in due course of our manufacturing procedure, without incurring any obligation to furnish or install such changes or modifications on products previously or subsequently sold.

8. **Delivery:** Promises of delivery are given as accurately as conditions permit and every effort will be made to make deliveries as scheduled. All shipping dates are based on receipt of a firm order with complete information contained therein. In addition, the shipping dates are based on standard quality control checks as a part of the normal production sequence. Additional inspection or testing required by Buyer which affects normal production sequence will be considered as extending the shipping dates accordingly. UWS assumes no liability for damages arising out of failure to deliver material as promised. UWS shall not be liable for failure or delay in delivery due to acts of God, orders bearing priority rating established pursuant to law, differences with workmen, local labor shortages, fire, flood or other casualty, governmental regulations or requirements, shortages or failure of raw materials, supplies, fuel, power or transportation, breakdown of equipment, or any other causes beyond UWS reasonable control, whether of similar or dissimilar nature to those enumerated. UWS shall have such additional time within which to perform as may be reasonably necessary under the circumstances and shall have the right to apportion its production among its customers in such a manner as it may consider to be equitable. In no event shall UWS be liable for any consequential damages or claims for labor resulting from failure or delay in delivery. UWS reserves the right to make delivery in lots. Upon delivery of each lot, UWS shall have the right to immediately invoice an appropriate portion of the total selling price. Should shipment be held beyond
scheduled date for the convenience of the Buyer, UWS reserves the right to bill immediately for the goods and to charge the Buyer for warehousing, insurance, trucking charges, and all other expenses incident to such delay.

9. **Shipping:** UWS endeavors to pack or prepare all shipments so that they will not break, **rust, or deteriorate in transit, but does not guarantee against such damage.** Unless requested in writing by the Buyer, no shipments are insured by UWS against damage or loss in transit. UWS will place insurance as nearly as possible in accordance with the Buyers written instructions but in such case UWS acts only as agent between the insurance company and the Buyer and assumes no liability whatsoever.

10. **Transportation:** Unless otherwise specified in our sales quotation:
   a. transportation charges shall be based upon point of manufacture and shall be paid by the Buyer;
   b. customs duties, consular fees, insurance charges, and other applicable charges shall be borne by the Buyer;
   c. responsibility for goods sold shall pass to the Buyer F.O.B. point of manufacture, unless otherwise specifically accepted by UWS in writing.

11. **Insurance:** UWS will place insurance as nearly as possible in accordance with the written instructions of its Buyers, but will assume no liability for the placing of such insurance or as to the ultimate recovery in case of breakage, damage, or loss.

12. **Claims for Shortages:** Any claims for shipping loss, breakage, or damage (obvious or concealed) are Buyer’s responsibility and should be made to the carrier. UWS will **render Buyer reasonable assistance in securing satisfactory adjustment of such claims. Any notices of shortages or other errors must be made in writing to UWS within fifteen (15) days after receipt of shipment. Failure to give such notice shall constitute unqualified acceptance and a waiver of all claims by Buyer. Risk of loss for damages to the products sold hereunder passes to Buyer upon delivery to the carrier regardless of who pays shipping costs.**

13. **Taxes:** Any tax or other charge imposed by law on the sale or production of goods or the performance of services shall be paid by the Buyer unless the law specifically provides that such payment must be made by UWS.

14. **Consular Fees:** Consular fees for legalizing invoices, stamping bills of lading, or other documents required by the laws of any country or destination are not included in quotation or selling prices. If instructed in writing, UWS will make arrangements for consular documents and declarations as agent of the Buyer, but UWS assumes no liability whatsoever as a result of making arrangements.

ALL OTHER REPRESENTATIONS, WARRANTIES, AND CONDITIONS, EXPRESSED OR IMPLIED, STATUTORY OR OTHERWISE, RELATING TO MATERIAL OR APPARATUS SUPPLIED BY UWS OR PROVIDED BY UWS IN CONNECTION THEREWITH ARE EXCLUDED, UNLESS SPECIFICALLY AGREED TO IN WRITING BY UWS.
Service Coverage

Represents the states in which UWS has service coverage.

UWS full service shops are based in Houston, Corpus Christi, Odessa, Texas; Shreveport, Louisiana; Meshoppen, Pennsylvania; Newcomerstown, Ohio.

** Corpus Christi**
5729 Leopard St., Bldg 9
Corpus Christi, TX 78408
**Main line:** 361-299-1100
**Fax:** 361-299-1116

** Shreveport**
1710 N. Hearne Ave.
Sheveport, LA 71107
**Main line:** 318-779-1829
**Fax:** 318-779-1912

** Houston**
6401 Cunningham Rd.
Houston, TX 77041
**Main line:** 713-849-3003
**Fax:** 713-849-3004

** Newcomerstown**
126 New Pace Rd.
Newcomerstown, OH
**Main line:** 740-492-0403
**Fax:** 740-492-0410

** Odessa**
1541 Windcrest
Odessa, TX 79763
**Main line:** 432-332-3039
**Fax:** 432-332-4758

** Meshoppen**
2058 State Route 3001
Meshoppen, PA 18630
**Main line:** 570-833-4141
**Fax:** 570-833-4143